



REPORT

Revision 1 - 2021 Annual Groundwater Monitoring and Corrective Action Report

LCPA Surface Impoundment, Labadie Energy Center, Franklin County, Missouri, USA

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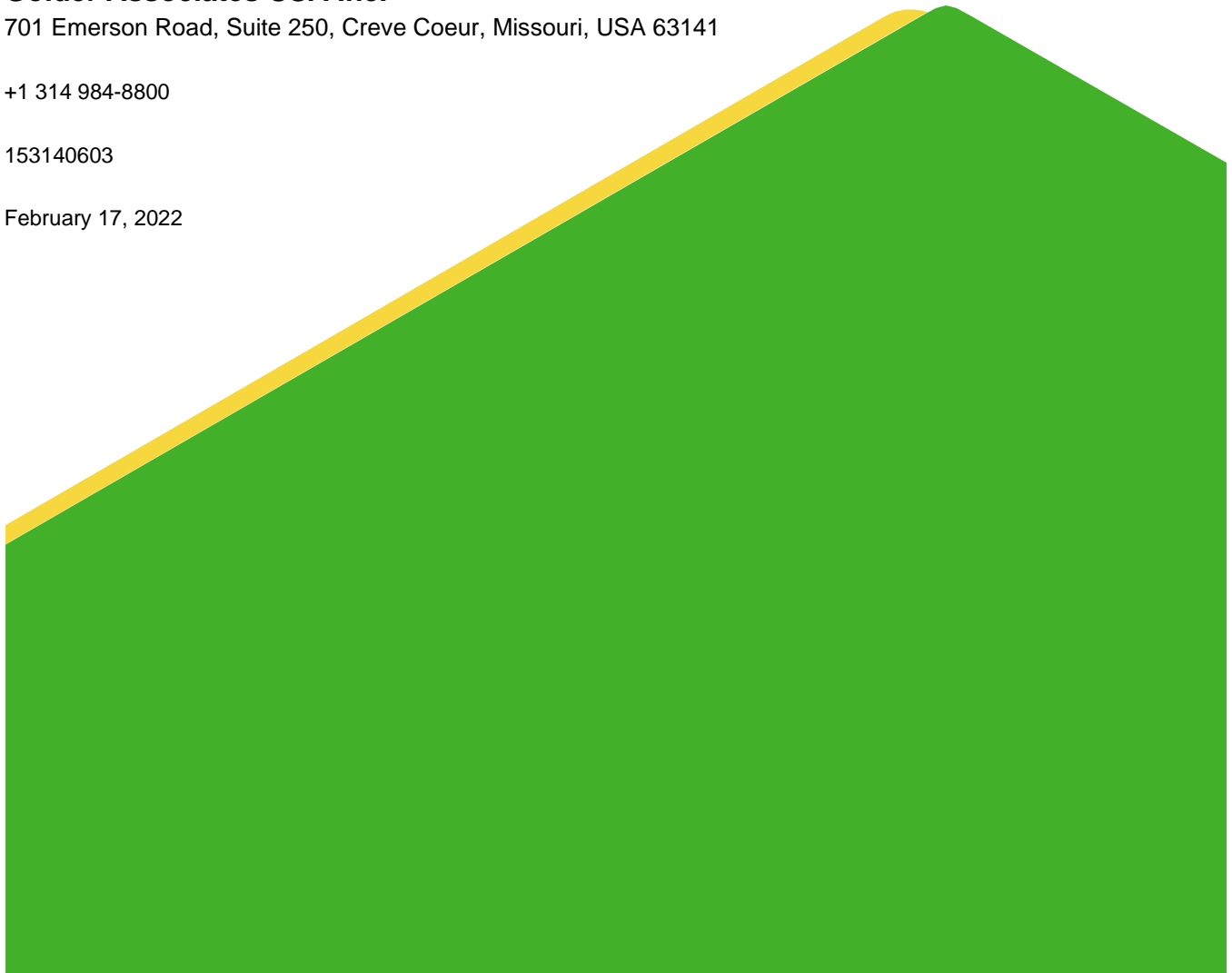
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February 17, 2022



1.0 EXECUTIVE SUMMARY AND STATUS OF THE LCPA 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 LCPA Coal Combustion Residuals (CCR) Surface Impoundment at the Labadie Energy Center (LEC or Site) is subject to the requirements of the CCR Rule. This Annual Report for the LCPA describes CCR Rule groundwater monitoring activities from January 1, 2021, through December 31, 2021, including verification results related to late 2020 sampling.

Throughout 2021, the LCPA has been in Corrective Action Monitoring with Detection and Assessment Monitoring continuing concurrently. Semi-annual groundwater sampling associated with Detection Monitoring has been ongoing since it was initiated on October 17, 2017, as required by the CCR Rule. As a part of Detection Monitoring, statistical evaluations are completed after each sampling event to determine if there are any values at a Statistically Significant Increase (SSI) over background. SSIs have been determined for each sampling event and a summary of the SSIs for the past year is provided in **Table 1**.

The Assessment Monitoring program was established at the LCPA 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 2021 LCPA Sampling Events, Previous Year Verification, and Statistical Evaluations 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 2020 Sampling Event	Detection & Assessment Monitoring, November 2-5, 2020	December 4, 2020	Appendix III, Detected Appendix IV (See Note 1), & Major Cations and Anions	pH: UMW-3D(r), UMW-5D, UMW-6D Boron: UMW-1D, UMW-2D, UMW-3D(r), UMW-4D, UMW-5D, UMW-6D, UMW-7D, UMW-8D Calcium: UMW-3D(r), UMW-7D, UMW-8D Chloride: UMW-2D, UMW-4D, UMW-5D, UMW-6D, UMW-9D Fluoride: UMW-1D, UMW-2D, UMW-4D Sulfate: UMW-2D, UMW-3D(r), UMW-4D, UMW-5D, UMW-6D, UMW-7D, UMW-8D TDS: UMW-1D, UMW-2D, UMW-3D(r), UMW-4D, UMW-6D, UMW-7D, UMW-8D	Molybdenum: UMW-3D(r), UMW-4D, UMW-5D, UMW-6D, UMW-7D	March 4, 2021
	Verification Sampling, January 4-6, 2021	January 14, 2021	Detected Appendix III parameters (See Note 2)			
February/April 2021 Sampling Event	Detection & Assessment Monitoring, February 18, April 15-21, 2021 (See Note 4)	March 11, 2021 and June 2, 2021	Appendix III, Appendix IV, & Major Cations and Anions	pH: UMW-3D(r), UMW-4D, UMW-5D, UMW-6D Boron: UMW-1D, UMW-2D, UMW-3D(r), UMW-4D, UMW-5D, UMW-6D, UMW-7D, UMW-8D Calcium: UMW-7D, UMW-8D Chloride: UMW-2D, UMW-3D(r), UMW-4D, UMW-5D, UMW-6D, UMW-9D Fluoride: UMW-2D, UMW-4D Sulfate: UMW-2D, UMW-3D(r), UMW-4D, UMW-5D, UMW-6D, UMW-7D, UMW-8D TDS: UMW-1D, UMW-2D, UMW-3D(r), UMW-6D, UMW-7D, UMW-8D	Molybdenum: UMW-3D(r), UMW-4D, UMW-5D, UMW-6D, UMW-7D	August 31, 2021
	Verification Sampling, June 7-8, 2021	June 21, 2021	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
November 2021 Sampling Event	Detection & Assessment Monitoring, November 1-5, 2021	December 27, 2021	Appendix III, Detected Appendix IV (See Note 3), & Major Cations and Anions	To be determined after statistical analysis and Verification Sampling are completed in 2022.		

Notes:

- 1) Testing was completed for Appendix IV analytes that were detected above the PQL during the April 2020 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 February/April 2021 sampling event.
- 4) Background Monitoring Wells BMW-1D and BMW-2D were sampled in February 2021 for statistical analysis purposes. The remaining LCPA monitoring wells were sampled during April 2021.
- 5) SSI – Statistically Significant Increase.
- 6) SSL – Statistically Significant Limit.
- 7) TDS – Total Dissolved Solids.

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 29, 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 1×10^{-7} centimeters per second (cm/sec) versus 1×10^{-5} cm/sec required by the CCR Rule).
- 2) Once source control is achieved, monitor the natural attenuation of groundwater concentrations to address limited and localized CCR-related impacts. Ongoing monitoring and modelling evaluations will document that concentrations are decreasing as modelled. MNA occurs due to naturally occurring processes within the aquifer.

Ameren commenced phase 1 of the corrective action remedial plan in September 2019 by initiating closure at the LCPA. Substantial closure of the LCPA was completed in 2020, with the geomembrane cover system completed on December 30, 2020. Additional aspects of closure were completed in spring 2021 and the unit is now closed. Closure of the LCPA triggered the transition of the LCPA into the post-closure care requirements of the CCR Rule. As outlined in §257.104 (Post-closure Care Requirements) of the CCR Rule, the monitoring system and programs must be maintained for at least 30 years. After 30 years, if the unit is in Detection Monitoring, the unit may cease groundwater sampling activities, otherwise post-closure care must continue until the unit can return to Detection Monitoring in accordance with §257.95 (Assessment Monitoring Program).

Phase 2 of the corrective measures remedial plan as outlined in the Remedy Selection Report began with the February/April 2021 Corrective Action Sampling Event on February 18, 2021. The associated statistical analysis for this event was completed in August 2021 and a summary of the results is provided in **Table 2**.

Table 2 – Summary of 2021 LCPA Sampling Events, Previous Year Verification, and Statistical Evaluations for Corrective Action Monitoring Well Network

Event Name	Type of Event and Sampling Dates	Laboratory Analytical Data Receipt Date	Parameters Collected	Constituents Statistically Exceeding the GWPS as a Part of Corrective Action Statistical Evaluations	Date Exceedance of GWPS was determined	ASD Completion Date
February/April 2021 Sampling Event	Phase 2 – Corrective Action Sampling February 18, 2021 & April 15-21, 2021	March 11, 2021 and June 2, 2021	Appendix III, Appendix IV, & Major Cations and Anions	<p>Arsenic: LMW-2S</p> <p>Lithium: LMW-4S, LMW-7S</p> <p>Molybdenum: LMW-2S, LMW-4S, LMW-7S, LMW-8S, AM-1D, TP-2D, TP-3D, TP-3M, AMW-8, MW-33[D], MW-34[D], MW-35[D]</p> <p>Radium 226 & 228: TP-1D</p>	August 31, 2021 and revised February 15, 2022	November 29, 2021
November 2021 Sampling Event	Phase 2 – Corrective Action Sampling November 1-5, 2021	December 21, 2021	Appendix III, Detected Appendix IV (See Note 1), & Major Cations and Anions	Statistical analyses to evaluate statistical exceedances of the GWPS were not completed in 2021. Results of the statistical evaluation will be included in the 2022 Annual Report.		

- 1) Testing was completed for Appendix IV analytes that were detected above the PQL during the February/April 2021 sampling event.
- 2) An ASD was completed for Radium 226 & 228 at monitoring well TP-1D. Radium 226 & 228 has not historically been identified as an SSL in Assessment Monitoring and therefore an Alternative Source Demonstration (ASD) was required.

While there are exceedances of the GWPS using corrective action statistical analysis methods for Arsenic, Lithium, and Molybdenum, variability in the initial groundwater sampling results during and directly after closure of the LCPA are expected, especially at wells in close proximity to the LCPA CCR Unit (i.e. LMW-2S). These preliminary results are expected to show decreases in concentration over time after stabilization occurs from closure activities. The performance and effectiveness of the closure of the LCPA will be evaluated in subsequent annual reports once sufficient data become available.

Supplemental Corrective Measures

In addition to MNA as a Corrective Action Remedy at Labadie, Ameren is currently evaluating the implementation of a groundwater treatment system similar to the system at the Rush Island Energy Center (RIEC). Results of the pilot study at the RIEC have shown to be effective at significantly reducing key CCR parameters. Based on the success of this treatment system at Rush Island, a pilot study at the LEC is planned to commence in 2022 and pending results of this study, a groundwater treatment system similar to the RIEC system is anticipated to be operational in 2023.

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FIGURES

Figure 1 - Labadie Energy Center Groundwater Monitoring Programs and Monitoring Well Location Map

APPENDICES

APPENDIX A

Laboratory Analytical Data

APPENDIX B

November 2020 Assessment Monitoring Statistical Evaluation

APPENDIX C

February/April 2021 Assessment Monitoring Statistical Evaluation

APPENDIX D

February/April 2021 Corrective Action Statistical Evaluation

APPENDIX E

Alternative Source Demonstration - February/April 2021 Corrective Action Sampling Event

APPENDIX F

2021 Potentiometric Surface Maps

2.0 INSTALLATION OR DECOMMISSIONING OF MONITORING WELLS

There are currently two (2) different networks used for monitoring the LCPA 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 2021. 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 LCPA.

3.0 GROUNDWATER SAMPLING RESULTS AND DISCUSSION

The following sections discuss the sampling events completed for the LCPA CCR Unit in 2021. **Tables 4 and 5** provide a summary of the groundwater samples collected in 2021 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.

3.1 Detection Monitoring Program

A Detection Monitoring sampling event was completed November 2-5, 2020. Verification sampling and the statistical analysis to evaluate for SSIs for the November 2020 event were not completed until 2021 and are therefore included in this report. Detections of Appendix III analytes triggered a Verification sampling event, which was completed on January 4-6, 2021, and verified SSIs. As outlined in the Statistical Analysis Plan for the Site, updates to the statistical limits are completed once four (4) to eight (8) new sample results are available. During the statistical analysis of the November 2020 sampling event, the statistical limits used to determine an SSI were updated according to the Statistical Analysis Plan. **Table 6** summarizes the results and the statistical analysis of the November 2020 Detection Monitoring event.

Detection Monitoring samples were collected at background monitoring wells BMW-1D and BMW-2D on February 18, 2021, and at monitoring wells UMW-1D – UMW-9D from April 15-21, 2021. Testing was completed for all Appendix III analytes as well as major cations and anions. Statistical analysis of the data determined SSIs. Detections of Appendix III analytes triggered Verification sampling, which was completed June 7-8, 2021, and the testing results verified SSIs. **Table 7** summarizes the results and the statistical analysis of the February/April 2021 Detection Monitoring event.

A Detection Monitoring sampling event was completed November 1-5, 2021, and testing was performed for all Appendix III analytes, as well as major cations and anions. Statistical analyses to evaluate for SSIs in the November 2021 data were not completed in 2021 and will be included in the 2022 Annual Report. **Table 8** summarizes the results of the November 2021 Detection Monitoring event.

3.2 Assessment Monitoring Program

An Assessment Monitoring sampling event was completed November 2-5, 2020, and testing was completed for Appendix IV analytes that were detected above the Practical Quantitation Limit (PQL) during the April 2020 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 2021 and therefore is included in this report. During the statistical analysis of the November 2020 sampling event, the site specific GWPSs used to determine SSLs were updated in accordance with the Statistical Analysis Plan. **Table 9** summarizes the results of the November 2020 Assessment Monitoring event. The results from this analysis and a table that displays the site-specific GWPS are provided in **Appendix B**. The SSLs for the LCPA continue to be:

- Molybdenum at UMW-3D(r), UMW-4D, UMW-5D, UMW-6D, and UMW-7D

An Assessment Monitoring sampling event was completed at background monitoring wells BMW-1D and BMW-2D on February 18, 2021, and at monitoring wells UMW-1D-UMW-9D from April 15-21, 2021. Testing was completed for all Appendix IV analytes, major cations and anions, and other selected MNA parameters. Statistical analysis of the data is provided in **Appendix C** and determined that there were no new SSLs. **Table 10** summarizes the results of the February/April 2021 Assessment Monitoring event.

An Assessment Monitoring sampling event was completed November 1-5, 2021, and testing was completed for Appendix IV analytes that were detected above the PQL during the February/April 2021 sampling event from either the Detection and Assessment or Corrective Action Groundwater Monitoring Well Networks as well as major cations and anions. **Table 11** summarizes the results of the November 2021 Assessment Monitoring event; however, statistical analyses to evaluate SSLs were not completed in 2021. Results of the statistical evaluation will be included in the 2022 Annual Report.

3.3 Corrective Action Monitoring

A Corrective Action sampling event was completed at background monitoring wells BMW-1S and BMW-2S on February 18, 2021, and at the remaining Corrective Action monitoring wells from April 15-21, 2021. Testing was completed for all Appendix III and IV analytes, major cations and anions, and other selected MNA parameters. A summary of the February/April 2021 Corrective Action sampling event results is provided in **Table 12**. The results from this statistical evaluation are provided in **Appendix D** and based on the analysis, several wells displayed statistical exceedances of the GWPS using Corrective Action statistical methods¹ as follows:

- Arsenic at LMW-2S.
- Lithium at LMW-4S and LMW-7S.
- Molybdenum at LMW-2S, LMW-4S, LMW-7S, LMW-8S, AM-1D, TP-2D, TP-3D, TP-3M, AMW-8, MW-33[D], MW-34[D], and MW-35[D].
- Radium 226 & 228 at TP-1D.

As stated in the Corrective Action GMP, if the statistical evaluation determines that a constituent exceeds the GWPS that was not identified as an SSL in Assessment Monitoring, the data must be evaluated to determine the source of the exceedance. Radium 226 & 228 has not historically been identified as an SSL in Assessment monitoring and a review of the data determined that the statistical exceedance at monitoring well TP-1D is not caused by the LCPA CCR Unit. Therefore, an Alternative Source Demonstration (ASD) was completed and is provided in **Appendix E**. Additionally, during assessment monitoring, Arsenic and Lithium have not been identified as SSLs at the LCPA. Further evaluation of these results indicates that, if Assessment Monitoring statistical methods were applied, these analyte well pairs would not be present at an SSL. However, because the statistical methods used during Corrective Action Monitoring rely on the value of the upper confidence limit

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

(instead of the value of lower confidence limit) relative to the GWPS, some well and analyte pairs that were not SSLs in Assessment Monitoring are now considered exceedances in Corrective Action Monitoring.

While there are exceedances of the GWPS using corrective action statistical analysis methods for Arsenic, Lithium, and Molybdenum, variability in the initial groundwater sampling results during and directly after closure of the LCPA is expected, especially at wells in close proximity to the LCPA CCR Unit (i.e. LMW-2S). The concentrations reported in these preliminary results are expected to decrease over time as a result of the closure activities, as stabilization occurs and groundwater treatment corrective measures are put into service.

A Corrective Action sampling event was completed November 1-5, 2021, and testing was completed for all Appendix III analytes, Appendix IV analytes that were detected above the PQL during the April 2021 sampling event from either the Assessment or Corrective Action Groundwater Monitoring Well Networks, as well as major cations and anions. **Table 13** summarizes the results of the November 2021 Corrective Action event; however, statistical analyses to evaluate statistical exceedances of the GWPS were not completed in 2021. Results of the statistical evaluation will be included in the 2022 Annual Report.

3.4 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 F**. 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 Missouri River. Water flows into and out of the alluvial aquifer because of fluctuating river water levels that produce “bank recharge” and “bank discharge” conditions. Overall, based on the potentiometric surface maps, a general flow direction from the south/southwest (bluffs area) to the north/northeast (Missouri River) is observed under normal river conditions. However, during periods of high river levels, groundwater flow can temporarily reverse. During these times of high river stage and temporary flow direction changes, horizontal groundwater gradients generally decrease, and little net movement of groundwater occurs.

Groundwater flow direction and hydraulic gradient were estimated for the alluvial aquifer wells at the LEC using commercially available software. Results from this assessment indicate that while groundwater flow direction is variable, the overall net groundwater flow in the alluvial aquifer at the LEC is from the bluffs toward the river. Horizontal gradients calculated by the program range from 0.0001 to 0.0008 feet/foot with an estimated net annual groundwater movement of approximately 18 feet in the prevailing downgradient direction.

3.5 Sampling Issues

No notable sampling issues were encountered at the LCPA in 2021.

4.0 ACTIVITIES PLANNED FOR 2022

Detection and Assessment Monitoring are scheduled to continue on a semi-annual basis in the second and fourth quarters of 2022. Statistical analysis of the November 2021 Detection and Assessment Monitoring data will be completed in 2022 and will be included in the 2022 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 2022. Statistical

analysis of the November 2021 Corrective Action Monitoring data will be completed in 2022 and will be included in the 2022 Annual Report. Monitoring and statistical evaluation of MNA will be completed in accordance with the corrective measures remedial plan discussed in the Remedy Selection Report.

Additionally, a pilot study for a groundwater treatment system is expected to begin in 2022. Pending the results of this pilot study, drilling and implementation of the system may commence in late 2022 or 2023.

Tables

Table 3
Summary of Well Construction Details
LCPA Surface Impoundment
Labadie Energy Center, Franklin 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	11/19/2015	988822.5	723129.4	489.72	487.8	407.6	397.4	90.4
UMW-2D	11/21/2015	990437.2	722248.6	484.81	482.7	412.7	402.5	80.3
UMW-3D(R)	10/25/2018	991823.5	723545.1	491.13	488.9	409.4	399.2	89.7
UMW-4D	11/24/2015	992512.3	724538.1	494.95	493.2	407.9	397.7	95.5
UMW-5D	11/23/2015	992027.2	725067.9	496.76	494.9	408.2	398.0	96.9
UMW-6D*	11/22/2015	991382.8	725540.9	493.59	492.0	410.4	400.2	91.8
UMW-7D	11/20/2015	990722.8	726032.4	469.79	468.0	412.6	402.4	65.6
UMW-8D	11/19/2015	989892.7	725179.5	469.47	467.5	407.0	396.8	70.6
UMW-9D	11/19/2015	989220.0	724447.8	470.61	468.8	408.9	398.7	70.1
BMW-1D	2/1/2016	988310.6	715138.4	473.54	471.2	410.5	400.3	70.9
BMW-2D	2/2/2016	987204.3	715104.2	474.39	472.4	413.0	402.8	69.6
CORRECTIVE ACTION MONITORING WELL NETWORK								
BMW-1S	2/1/2016	988310.0	715131.6	473.49	471.2	450.7	440.5	30.7
BMW-2S	2/2/2016	987210.1	715104.3	474.56	472.5	454.6	444.4	28.1
LMW-1S	11/20/2015	990727.7	726039.1	470.06	468.1	454.5	444.3	23.8
LMW-2S	11/23/2015	992017.5	725074.2	496.64	494.9	445.8	440.6	54.3
LMW-4S	11/18/2015	994194.9	725624.1	472.88	470.7	448.3	438.1	32.7
LMW-7S	11/20/2015	992330.1	726371.1	468.43	466.7	453.4	443.2	23.5
LMW-8S	11/20/2015	991371.2	726351.3	467.24	465.2	452.2	442.0	23.2
MW-24	3/20/2013	991819.3	727992.3	467.10	464.6	457.3	447.1	17.5
MW-26	3/20/2013	993976.5	726910.9	469.20	466.7	456.4	446.2	20.5
S-1	4/5/2017	994676.8	726055.1	472.64	470.4	453.2	442.9	27.5
TP-1D	6/3/2018	997122.3	734100.3	469.09	465.8	380.1	375.0	90.8
TP-2M	6/2/2018	993865.6	722603.7	471.22	468.2	412.9	407.8	60.5
TP-2D	6/2/2018	993865.6	722603.7	471.22	468.2	374.6	369.5	98.7
TP-3M	6/17/2018	996343.6	725783.7	475.64	472.6	417.8	412.7	59.9
TP-3D	6/17/2018	996343.6	725783.7	475.63	472.6	382.5	377.4	95.2
TP-4D	6/13/2018	999139.8	728578.3	472.08	469.1	379.0	373.9	95.2
MW-33(D)	3/6/2014	995742.0	727409.0	472.15	469.4	402.1	391.9	77.5
MW-34(D)	2/25/2014	995561.0	728820.0	470.19	467.4	401.5	391.3	76.1
MW-35(D)	3/8/2014	992693.0	727536.0	468.59	465.9	398.5	388.3	77.6
AM-1D (UMW-10D)	5/31/2018	995298.6	723827.3	482.78	480.0	409.8	399.6	80.4
AM-1S (UMW-10S)	5/31/2018	995288.1	723817.1	483.00	480.2	454.8	444.6	35.6
AMW-8	6/13/2018	994225.9	726113.0	471.06	468.4	411.1	400.9	67.5

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-6D was modified on October 15th, 2020 due to construction requirements associated with the closure of the LCPA.

Prepared by: BTT
Checked by: KAB
Reviewed by: MNH

Table 4
Summary of Detection and Assessment Groundwater Network Sampling Dates
LCPA Surface Impoundment
Labadie Energy Center, Franklin County, MO

Groundwater Monitoring Wells	Date of Sample Collection				
	January 2021 Verification Sampling	February-April 2021 Assessment/ Detection Monitoring	June 2021 Verification Sampling	November 2021 Assessment/ Detection Monitoring	Total Number of Samples
CCR Rule Compliance Monitoring Well Network					
BMW-1D	-	2/18/2021	-	11/1/2021	2
BMW-2D	-	2/18/2021	6/9/2021	11/1/2021	3
UMW-1D	1/5/2021	4/19/2021	6/8/2021	11/2/2021	4
UMW-2D	1/4/2021	4/19/2021	-	11/2/2021	3
UMW-3D(R)	1/4/2021	4/19/2021	6/7/2021	11/3/2021	4
UMW-4D	-	4/20/2021	6/8/2021	11/3/2021	3
UMW-5D	-	4/21/2021	6/8/2021	11/2/2021	3
UMW-6D	-	4/21/2021	-	11/2/2021	2
UMW-7D	-	4/15/2021	6/8/2021	11/4/2021	3
UMW-8D	1/6/2021	4/19/2021	6/8/2021	11/5/2021	4
UMW-9D	1/6/2021	4/19/2021	-	11/5/2021	3
Detection or Assessment Monitoring	Detection	Assessment/ Detection	Detection	Assessment/ Detection	NA

Notes:

- 1.) Detection Monitoring results provided in Tables 6-8.
- 2.) Verification Sampling results provided in Tables 6-7.
- 3.) Assessment Monitoring results provided in Tables 9-11.
- 4.) "-" No sample collected.
- 5.) NA - Not Applicable.
- 6.) Background wells sampled in February 2021 to perform statistical analysis.

Table 5
Summary of Corrective Action Groundwater Network Sampling Dates
LCPA Surface Impoundment
Labadie Energy Center, Franklin County, MO

Groundwater Monitoring Wells	Date of Sample Collection		
	February-April 2021 Sampling Event	November 2021 Sampling Event	Total Number of Samples
Corrective Action Monitoring Well Network			
BMW-1S	2/18/2021	11/1/2021	2
BMW-2S	2/18/2021	11/1/2021	2
LMW-1S	4/15/2021	11/4/2021	2
LMW-2S	4/21/2021	11/2/2021	2
LMW-4S	4/20/2021	11/3/2021	2
LMW-7S	4/15/2021	11/5/2021	2
LMW-8S	4/15/2021	11/5/2021	2
MW-24	4/16/2021	11/4/2021	2
MW-26	4/16/2021	11/4/2021	2
S-1	4/16/2021	11/2/2021	2
TP-1D	4/19/2021	11/4/2021	2
TP-2M	4/20/2021	11/4/2021	2
TP-2D	4/20/2021	11/4/2021	2
TP-3M	4/16/2021	11/3/2021	2
TP-3D	4/16/2021	11/3/2021	2
TP-4D	4/16/2021	11/3/2021	2
MW-33(D)	4/16/2021	11/3/2021	2
MW-34(D)	4/16/2021	11/3/2021	2
MW-35(D)	4/16/2021	11/4/2021	2
AMW-8	4/20/2021	11/3/2021	2
AM-1D (UMW-10D)	4/20/2021	11/2/2021	2
AM-1S (UMW-10S)	4/20/2021	11/2/2021	2
Event Type	Corrective Action	Corrective Action	NA

Notes:

- 1.) NA - Not Applicable.
- 2.) Background wells sampled in February 2021 to perform statistical analysis.

Table 6
November 2020 Detection Monitoring Results
LCPA Surface Impoundment
Labadie Energy Center, Franklin County, MO

ANALYTE	UNITS	PREDICTION LIMITS	BACKGROUND		GROUNDWATER MONITORING WELLS									
			BMW-1D	BMW-2D	UMW-1D	UMW-2D	UMW-3D(R)	UMW-4D	UMW-5D	UMW-6D	UMW-7D	UMW-8D	UMW-9D	
November 2020 Detection Monitoring Event														
DATE	NA	NA	11/2/2020	11/2/2020	11/4/2020	11/2/2020	11/4/2020	11/4/2020	11/4/2020	11/5/2020	11/4/2020	11/5/2020	11/2/2020	11/2/2020
pH	SU	6.815-7.507	7.27	7.47	6.95	7.59	7.76	7.41	9.20	8.60	7.30	7.21	7.20	
BORON, TOTAL	µg/L	DQR	82.5 J	67.2 J	675	1,570	10,800	3,370	5,290	12,100	7,380	2,430	96.9 J	
CALCIUM, TOTAL	µg/L	150,175	147,000	138,000	147,000	120,000	161,000	68,900	67,500	103,000	201,000	201,000	120,000 J	
CHLORIDE, TOTAL	mg/L	17.29	10.3	6.0	12.5	27.4	17.0	22.3	18.6	19.4	11.0	10.1	21.9	
FLUORIDE, TOTAL	mg/L	0.3163	0.31	0.38	0.32 J	0.47	0.35	0.47	0.27	0.23	0.24	0.33	0.36	
SULFATE, TOTAL	mg/L	54.83	35.1	35.0	53.7	138	469	351	262	455	431	130	0.29 J	
TOTAL DISSOLVED SOLIDS	mg/L	577	586	490	601	625	847	613	510	756	1,030	996	483	
January 2021 Verification Sampling Event														
DATE	NA	NA			1/5/2021	1/4/2021	1/4/2021						1/6/2021	1/6/2021
pH	SU	6.815-7.507				7.36								
BORON, TOTAL	µg/L	DQR												
CALCIUM, TOTAL	µg/L	150,175					192,000 J							
CHLORIDE, TOTAL	mg/L	17.29												
FLUORIDE, TOTAL	mg/L	0.3163			0.32		0.29 J						0.28	0.26
SULFATE, TOTAL	mg/L	54.83												
TOTAL DISSOLVED SOLIDS	mg/L	577				811 J								

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. Values highlighted in green indicate an initial exceedance above the prediction limit that was not confirmed by Verification Sampling (not an SSI).
7. Only analytes/wells that were detected above the prediction limit and that had not already been verified were tested during Verification Sampling.
8. If all background values are less than the Practical Quantitation Limit (PQL) then the Double Quantification Rule (DQR) is used.

Prepared By: JSI
Checked By: EMS
Reviewed By: SCP

Table 7
February/April 2021 Detection Monitoring Results
LCPA Surface Impoundment
Labadie Energy Center, Franklin County, MO

ANALYTE	UNITS	PREDICTION LIMITS	BACKGROUND		GROUNDWATER MONITORING WELLS								
			BMW-1D	BMW-2D	UMW-1D	UMW-2D	UMW-3D(R)	UMW-4D	UMW-5D	UMW-6D	UMW-7D	UMW-8D	UMW-9D
February - April 2021 Detection Monitoring Event													
DATE	NA	NA	2/18/2021	2/18/2021	4/19/2021	4/19/2021	4/19/2021	4/20/2021	4/21/2021	4/21/2021	4/15/2021	4/19/2021	4/19/2021
pH	SU	6.815-7.507	6.90	7.29	7.10	7.44	8.63	8.01	9.39	8.25	7.27	7.12	7.10
BORON, TOTAL	µg/L	DQR	78.1 J	67.6 J	439	1,340	10,300	4,560	5,940	11,500	5,170	3,390	ND
CALCIUM, TOTAL	µg/L	150,175	133,000	128,000	148,000	129,000	137,000	73,600	62,100	96,000	192,000	173,000	122,000
CHLORIDE, TOTAL	mg/L	17.29	10.8	3.6	6.7	20.6	21.2	21.5 J	19.9	19.3	7.5	10.8	22.5
FLUORIDE, TOTAL	mg/L	0.3163	0.20 J	0.22	0.30	0.37	0.17 J	0.39	0.21	0.19 J	0.33	0.25	0.26
SULFATE, TOTAL	mg/L	54.83	30.1	29.9	9.0	104	362	358	231	470	222	260	ND
TOTAL DISSOLVED SOLIDS	mg/L	577	501	463	608	661	776	324	493	837	825	804 J	500
June 2021 Verification Sampling Event													
DATE	NA	NA					6/7/2021	6/8/2021			6/8/2021		
pH	SU	6.815-7.507						8.11					
BORON, TOTAL	µg/L	DQR											
CALCIUM, TOTAL	µg/L	150,175											
CHLORIDE, TOTAL	mg/L	17.29					21.3						
FLUORIDE, TOTAL	mg/L	0.3163									0.25		
SULFATE, TOTAL	mg/L	54.83											
TOTAL DISSOLVED SOLIDS	mg/L	577											

- 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.
 9. If all background values are less than the Practical Quantitation Limit (PQL) then the Double Quantification Rule (DQR) is used.

Prepared By: EMS
Checked By: LMS
Reviewed By: SCP

Table 8
November 2021 Detection Monitoring Results
LCPA Surface Impoundment
Labadie Energy Center, Franklin County, MO

ANALYTE	UNITS	BACKGROUND		GROUNDWATER MONITORING WELLS								
		BMW-1D	BMW-2D	UMW-1D	UMW-2D	UMW-3D(R)	UMW-4D	UMW-5D	UMW-6D	UMW-7D	UMW-8D	UMW-9D
November 2021 Detection Monitoring Event												
DATE	NA	11/1/2021	11/1/2021	11/2/2021	11/2/2021	11/3/2021	11/3/2021	11/2/2021	11/2/2021	11/4/2021	11/5/2021	11/5/2021
pH	SU	7.09	7.25	8.89	7.37	7.92	8.10	9.32	8.16	7.15	7.04	7.03
BORON, TOTAL	µg/L	72.6 J	63.0 J	611	1,040	10,300	3,460	7,940	13,200	2,220	6,170	95.7 J
CALCIUM, TOTAL	µg/L	133,000	149,000	156,000	124,000	140,000	65,500	78,400	126,000	165,000	143,000	117,000
CHLORIDE, TOTAL	mg/L	7.4	3.0 J	11.1	26.6	19.1	21.7	18.8	19.9	5.7	8.4	24.8
FLUORIDE, TOTAL	mg/L	0.20 J	0.21	0.21	0.35	0.28	0.42	0.19 J	ND	0.33	0.23	0.24
SULFATE, TOTAL	mg/L	23.5	39.2	39.2	115	396	377	271	514	58.3	336	ND
TOTAL DISSOLVED SOLIDS	mg/L	502 J	524 J	617	616	743	631	544	901	555	829	439

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: GTM
Reviewed By: MNH

Table 9
November 2020 Assessment Monitoring Results
LCPA Surface Impoundment
Labadie Energy Center, Franklin County, MO

ANALYTE	UNITS	BACKGROUND		GROUNDWATER MONITORING WELLS								
		BMW-1D	BMW-2D	UMW-1D	UMW-2D	UMW-3D(R)	UMW-4D	UMW-5D	UMW-6D	UMW-7D	UMW-8D	UMW-9D
FIELD PARAMETERS												
DATE	NA	11/2/2020	11/2/2020	11/4/2020	11/2/2020	11/4/2020	11/4/2020	11/5/2020	11/4/2020	11/5/2020	11/2/2020	11/2/2020
DISSOLVED OXYGEN	mg/L	2.69	0.95	6.87	0.99	0.16	6.42	6.26	0.42	0.15	0.25	0.23
pH	SU	7.27	7.47	6.95	7.59	7.76	7.41	9.20	8.60	7.30	7.21	7.20
REDOX POTENTIAL	mV	-16.0	-104.4	-44.8	-66.9	-119.3	-8.1	-135.2	-32.3	-52.8	-124.0	-116.6
SPECIFIC CONDUCTIVITY	mS/cm	0.931	0.848	1.037	0.930	1.135	0.900	0.711	1.066	1.436	1.356	0.882
TURBIDITY	NTU	2.36	4.62	3.90	4.77	2.85	2.84	2.11	3.12	1.36	0.59	0.97
APPENDIX IV PARAMETERS												
ANTIMONY, TOTAL	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ARSENIC, TOTAL	µg/L	2.2	35.0	48.5	2.0	1.3	0.11 J	18.8	29.6	26.7	29.6	33.2
BARIUM, TOTAL	µg/L	1,270	322	513	132	128	88.0	59.6	115	69.9	431	520
CHROMIUM, TOTAL	µg/L	0.28 J	0.32 J	0.23 J	ND	ND	ND	ND	0.29 J	ND	ND	ND
FLUORIDE, TOTAL	mg/L	0.31	0.38	0.32 J	0.47	0.35	0.47	0.27	0.23	0.24	0.33	0.36
LITHIUM, TOTAL	µg/L	35.3	46.0	30.0	23.7	25.9	33.0	22.1	16.1	25.8	38.2	17.5
MOLYBDENUM, TOTAL	µg/L	2.6 J	2.4 J	2.4 J	33.4	154	88.9	174	597	286	12.7 J	2.2 J
RADIUM [226 + 228]	pCi/L	4.140 J	ND	ND	2.146 J	2.114 J	ND	ND	ND	2.150	4.074 J	ND
SELENIUM, TOTAL	µg/L	ND	ND	ND	ND	ND	ND	ND	0.24 J	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 for the November 2020 Assessment Monitoring Data is provided in Appendix B.

Table 10
February/April 2021 Assessment Monitoring Results
LCPA Surface Impoundment
Labadie Energy Center, Franklin County, MO

ANALYTE	UNITS	BACKGROUND		GROUNDWATER MONITORING WELLS								
		BMW-1D	BMW-2D	UMW-1D	UMW-2D	UMW-3D(R)	UMW-4D	UMW-5D	UMW-6D	UMW-7D	UMW-8D	UMW-9D
FIELD PARAMETERS												
DATE	NA	2/18/2021	2/18/2021	4/19/2021	4/19/2021	4/19/2021	4/20/2021	4/21/2021	4/21/2021	4/15/2021	4/19/2021	4/19/2021
DISSOLVED OXYGEN	mg/L	0.31	0.29	0.46	0.56	0.55	0.29	0.16	0.82	0.15	0.32	0.36
pH	SU	6.90	7.29	7.10	7.44	8.63	8.01	9.39	8.25	7.27	7.12	7.10
REDOX POTENTIAL	mV	-84.1	-88.3	-12.7	-51.9	-79.3	-181.2	-151.6	-79.6	-33.0	53.1	0.1
SPECIFIC CONDUCTIVITY	mS/cm	0.859	0.751	1.022	1.001	1.024	0.840	0.714	1.170	1.109	1.188	0.916
TURBIDITY	NTU	0.66	3.64	1.14	3.85	0.87	1.81	1.28	3.26	1.13	1.54	2.12
APPENDIX IV PARAMETERS												
ANTIMONY, TOTAL	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ARSENIC, TOTAL	µg/L	1.9	35.7	37.1	1.5	25.6	0.17 J	16.9	11.7	22.3	28.8	34.4
BARIUM, TOTAL	µg/L	1,080	302	514	144	112	94.1	60.2	93.4	81.5	191	540
BERYLLIUM, TOTAL	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CADMIUM, TOTAL	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CHROMIUM, TOTAL	µg/L	ND	0.34 J	0.36 J	ND	0.37 J	0.49 J	ND	ND	ND	0.33 J	ND
COBALT, TOTAL	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FLUORIDE, TOTAL	mg/L	0.20 J	0.22	0.30	0.37	0.17 J	0.39	0.21	0.19 J	0.33	0.25	0.26
LEAD, TOTAL	µg/L	ND	ND	ND	7.0 J	5.0 J	ND	ND	ND	6.8 J	6.7 J	7.4 J
LITHIUM, TOTAL	µg/L	27.8	40.4	29.4	29.3	22.8	33.4	20.4	12.8	23.7	35.8	15.0
MERCURY, TOTAL	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MOLYBDENUM, TOTAL	µg/L	ND	ND	4.5 J	33.5	148	138	176	477	199	16.7 J	ND
RADIUM [226 + 228]	pCi/L	ND	ND	2.154 J	ND	ND	ND	ND	ND	1.891 J	ND	ND
SELENIUM, TOTAL	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
THALLIUM, TOTAL	µg/L	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. 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 for the February/April 2021 Assessment Monitoring Data is provided in Appendix C.

Prepared By: EMS
Checked By: RR
Reviewed By: SCP

Table 11
November 2021 Assessment Monitoring Results
LCPA Surface Impoundment
Labadie Energy Center, Franklin County, MO

ANALYTE	UNITS	BACKGROUND		GROUNDWATER MONITORING WELLS								
		BMW-1D	BMW-2D	UMW-1D	UMW-2D	UMW-3D(R)	UMW-4D	UMW-5D	UMW-6D	UMW-7D	UMW-8D	UMW-9D
FIELD PARAMETERS												
DATE	NA	11/1/2021	11/1/2021	11/2/2021	11/2/2021	11/3/2021	11/3/2021	11/2/2021	11/2/2021	11/4/2021	11/5/2021	11/5/2021
DISSOLVED OXYGEN	mg/L	0.27	0.18	8.13	0.51	0.16	0.39	0.32	0.59	0.11	4.22	0.94
pH	SU	7.09	7.25	8.89	7.37	7.92	8.10	9.32	8.16	7.15	7.04	7.03
REDOX POTENTIAL	mV	-108.4	-109.7	-93.3	-138.3	-165.0	-128.1	-79.6	-144.6	-108.8	-164.5	-151.2
SPECIFIC CONDUCTIVITY	mS/cm	0.840	0.817	1.061	0.983	0.968	0.874	0.727	1.105	0.921	1.277	0.877
TURBIDITY	NTU	1.21	3.96	1.12	4.25	2.16	2.61	2.13	0.83	1.38	1.25	1.90
APPENDIX IV PARAMETERS												
ARSENIC, TOTAL	µg/L	2.1	31.8	46.6	1.2	1.8	0.11 J	19.1	14.6	25.1	27.0	29.4
BARIUM, TOTAL	µg/L	1,090	343	539	138	110	84.0	76.9	112	81.5	111	491
CHROMIUM, TOTAL	µg/L	0.35 J	0.37 J	0.28 J	0.33 J	0.25 J	ND	0.29 J	ND	0.30 J	ND	0.29 J
FLUORIDE, TOTAL	mg/L	0.20 J	0.21	0.21	0.35	0.28	0.42	0.19 J	ND	0.33	0.23	0.24
LITHIUM, TOTAL	µg/L	ND	ND	ND	ND	ND	30.0	19.6	ND	ND	ND	ND
MOLYBDENUM, TOTAL	µg/L	ND	2.7 J	3.5 J	36.5	166	124	584	518	131	77.6	ND
RADIUM [226 + 228]	pCi/L	2.050	2.077	1.983	3.417 J	ND	1.893	4.861	ND	2.098 J	ND	ND
SELENIUM, TOTAL	µg/L	ND	ND	ND	ND	ND	ND	0.18 J	0.18 J	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.

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

Table 12
February/April 2021 Corrective Action Monitoring Results
LCPA Surface Impoundment
Labadie Energy Center, Franklin County, MO

ANALYTE	UNITS	BMW-1S	BMW-2S	LMW-1S	LMW-2S	LMW-4S	LMW-7S	LMW-8S	MW-24	MW-26	S-1	AM-1S	TP-1D	TP-2M	TP-2D	TP-3M	TP-3D	TP-4D	MW-33(D)	MW-34(D)	MW-35(D)	AMW-8	AM-1D
FIELD PARAMETERS																							
DATE	NA	2/18/2021	2/18/2021	4/15/2021	4/21/2021	4/20/2021	4/15/2021	4/15/2021	4/16/2021	4/16/2021	4/16/2021	4/20/2021	4/19/2021	4/20/2021	4/20/2021	4/16/2021	4/16/2021	4/16/2021	4/16/2021	4/16/2021	4/16/2021	4/20/2021	4/20/2021
DISSOLVED OXYGEN	mg/L	0.57	0.88	0.19	0.13	0.54	0.29	1.52	1.32	0.46	0.39	0.14	0.33	0.28	5.89	0.20	0.41	0.44	0.23	0.32	0.32	0.67	0.22
REDOX POTENTIAL	mV	89.1	20.6	-96.2	-83.0	-50.6	-72.0	-48.3	31.8	29.3	46.1	-61.1	-140.6	-172.6	-139.5	-20.6	10.6	93.7	-37.3	-24.9	-151.7	-38.6	-182.8
SPECIFIC CONDUCTIVITY	mS/cm	1.358	0.778	0.719	0.584	1.010	1.047	1.487	0.834	0.861	0.881	1.307	0.980	0.755	0.749	0.895	1.169	0.914	0.875	0.958	1.357	0.729	1.035
TURBIDITY	NTU	1.70	0.79	9.68	1.90	9.67	7.73	7.69	2.16	2.48	6.02	10.40	0.99	0.66	0.71	0.85	0.26	2.12	1.42	0.35	0.50	2.72	1.47
APPENDIX III PARAMETERS																							
BORON, TOTAL	µg/L	97.3 J	42.0 J	687	3,440	8,780	12,800	8,550	71.6 J	164	277	346	78.3 J	1,670	8,670	5,290	11,200	6,780	10,200	12,000	9,440	6,950	8,340
CALCIUM, TOTAL	µg/L	212,000	133,000	129,000	53,500	115,000	128,000	224,000	133,000	138,000	147,000	196,000	145,000	95,300	117,000	117,000	103,000	135,000	72,900	98,000	146,000	65,900	109,000
CHLORIDE, TOTAL	mg/L	5.1	4.0	1.9	19.0	25.4 J	21.8	18.0	5.4	7.7	ND	99.4	4.6 J	20.8 J	22.0	18.3	25.8	14.3	22.7	20.3	19.6	20.4 J	39.8 J
pH	SU	6.73	7.16	7.03	9.38	7.07	6.88	7.08	6.88	7.03	6.86	6.80	7.11	7.58	7.53	6.99	7.47	7.14	7.38	7.31	7.29	7.79	7.52
SULFATE, TOTAL	mg/L	70.4	60.6	53.7	199	225	294	604	29.1	24.1	15.9	13.6	11.7	150	155	195	432	161	249	288	634	105	340
TOTAL DISSOLVED SOLIDS	mg/L	792	483	542	402	392	812	1,270	485	512	608	350	569	282	288	665	888	637	651	705	994	274	456
APPENDIX IV PARAMETERS																							
ANTIMONY, TOTAL	µg/L	ND	0.24 J	ND	ND	ND	ND	ND	0.13 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ARSENIC, TOTAL	µg/L	25.5	0.54 J	12.2	44.7	23.6	15.3	14.0	0.51 J	0.54 J	0.71 J	3.9	1.2	0.63 J	22.5	0.71 J	8.0	8.1	1.2	3.8	0.20 J	0.28 J	3.5
BARIUM, TOTAL	µg/L	347	237	116	30.3	159	233	153	189	197	356	597	1,520	123	158	267	78.2	470	93.0	101	49.8	110	75.2
BERYLLIUM, TOTAL	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CADMIUM, TOTAL	µg/L	ND	ND	ND	ND	ND	ND	0.095 J	ND	0.22 J	ND	0.085 J	ND	ND	ND	0.074 J	0.15 J	ND	0.27 J	0.27 J	0.17 J	ND	ND
CHROMIUM, TOTAL	µg/L	ND	ND	ND	ND	0.28 J	ND	ND	ND	ND	ND	0.36 J	0.32 J	0.24 J	0.34 J	ND	ND	ND	ND	ND	ND	0.56 J	1.6
COBALT, TOTAL	µg/L	1.9 J	ND	ND	ND	0.98 J	3.6 J	1.3 J	ND	ND	1.7 J	4.3 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FLUORIDE, TOTAL	mg/L	ND	0.14 J	0.32	0.21	0.30	ND	ND	0.26	0.29	0.25	0.32 J	0.22	0.48	0.45	0.33	0.17 J	0.32	0.43	0.34	ND	0.41	0.40
LEAD, TOTAL	µg/L	ND	ND	ND	ND	ND	7.1 J	4.1 J	3.9 J	5.8 J	4.9 J	6.0 J	ND	4.2 J	ND	5.4 J	ND	5.8 J	ND	ND	ND	ND	6.1 J
LITHIUM, TOTAL	µg/L	18.0	13.0	18.0	11.0	42.2	45.5	ND	19.4	28.3	31.0	30.8 J	17.7	29.4	42.8	35.2	28.5	23.3	25.3	33.9	24.4	17.0	36.1
MERCURY, TOTAL	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MOLYBDENUM, TOTAL	µg/L	ND	ND	6.6 J	106	149	137	236	ND	ND	ND	4.6 J	ND	83.4	147	298	641	2.7 J	1,100	1,170	684	337	390
RADIUM [226 + 228]	pCi/L	2.078	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.111	1.697 J	1.899	2.098	ND	2.196	ND	1.537 J	ND	1.824	1.641
SELENIUM, TOTAL	µg/L	ND	2.4	ND	ND	ND	ND	ND	10.4	0.32 J	ND	0.20 J	ND	ND	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	ND	ND	ND
ADDITIONAL PARAMETERS																							
ALKALINITY	mg/L	682	365	370	35.6	338	277	264	431	440	456	659	528	253	247	269	123	335	146	158	139	85.1	150
IRON, FERRIC, TOTAL	mg/L	25.9	0.017 J	6.0	0.019 J	9.0	4.9	9.9	0.017 J	ND	0.29	4.8	8.0	2.7	9.2	9.2	4.5	5.9	3.7	5.1	5.6	1.5	4.9
IRON, FERROUS, TOTAL	mg/L	0.23 J	ND	0.096 J	ND	0.35 J	0.22 J	0.19 J	ND	ND	ND	0.22 J	0.32 J	0.11 J	0.13 J	0.33 J	0.29 J	0.20 J	0.24 J	0.26 J	0.24 J	0.13 J	0.19 J
IRON, TOTAL	µg/L	26,200	30.9 J	6,100	ND	9,360	5,110	10,100	ND	ND	299	4,980	8,300	2,800	9,310	9,540	4,790	6,120	3,970	5,400	5,880	1,600	5,100
MAGNESIUM, TOTAL	µg/L	43,200	20,200	23,400	92.0	25,900	30,300	40,800	27,700	28,000	23,600	42,100	37,900	14,300	25,600	24,700	23,800	37,200	16,600	24,100	33,200	8,790	14,400
MANGANESE, TOTAL	µg/L	2,570	1.1 J	1,200	2.7 J	1,880	1,390	2,710	7.4	1,120	575	1,870	245	412	1,850	1,620	174	350	219	247	443	290	285
POTASSIUM, TOTAL	µg/L	5,560	5,560	4,090	8,470	6,620	6,680	7,020 J	4,980	4,440	26,700	7,300	4,640	6,740	6,640	5,130	7,370	5,310	6,040	7,410	6,290	6,500	8,840
SODIUM, TOTAL	µg/L	15,000	4,060	7,580	58,200	85,800	72,600	101,000	7,900	7,550	5,010	64,000	12,500	63,500	85,900	46,200	124,000	28,800	87,000	85,200	109,000	90,000	118,000
SULFIDE, TOTAL	mg/L	0.034 J	0.028 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.035 J	ND	ND	0.027 J	0.033 J	ND	0.028 J	ND	0.028 J	ND	ND

NOTES

- 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.
- J - Result is an estimated value.
- 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.
- 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.
- NA - Not Applicable.
- Statistical Analysis for the February/April 2021 Corrective Action Data is provided in Appendix D.

**Table 13
November 2021 Corrective Action Monitoring Results
LCPA Surface Impoundment
Labadie Energy Center, Franklin County, MO**

ANALYTE	UNITS	BMW-1S	BMW-2S	LMW-1S	LMW-2S	LMW-4S	LMW-7S	LMW-8S	MW-24	MW-26	S-1	AM-1S	TP-1D	TP-2M	TP-2D	TP-3M	TP-3D	TP-4D	MW-33(D)	MW-34(D)	MW-35(D)	AMW-8	AM-1D
FIELD PARAMETERS																							
DATE	NA	11/1/2021	11/1/2021	11/4/2021	11/2/2021	11/3/2021	11/5/2021	11/5/2021	11/4/2021	11/4/2021	11/2/2021	11/2/2021	11/4/2021	11/4/2021	11/4/2021	11/3/2021	11/3/2021	11/3/2021	11/3/2021	11/3/2021	11/3/2021	11/3/2021	11/2/2021
DISSOLVED OXYGEN	mg/L	0.57	4.69	0.33	0.49	0.60	0.17	0.59	0.77	0.87	0.56	0.13	3.57	0.19	7.39	0.65	0.37	0.51	0.61	0.47	0.55	1.06	0.13
REDOX POTENTIAL	mV	-63.5	21.4	-44.4	-66.1	-107.0	-43.3	-96.8	114.7	34.9	10.6	-104.3	-117.5	-128.9	-117.5	-136.0	-158.1	-142.2	-147.9	-141.2	-135.1	-154.5	-156.6
SPECIFIC CONDUCTIVITY	mS/cm	1.480	0.739	0.834	0.664	1.079	1.209	1.246	0.777	0.788	0.817	1.536	0.865	0.807	0.793	0.877	1.171	0.888	0.931	0.904	1.084	0.748	1.159
TURBIDITY	NTU	1.18	0.36	4.40	1.17	9.20	5.22	4.60	2.98	3.46	1.67	6.20	1.25	0.73	2.40	0.56	0.57	0.41	2.07	0.77	0.89	4.13	4.78
APPENDIX III PARAMETERS																							
BORON, TOTAL	µg/L	77.0 J	40.7 J	3,970	3,180	8,060	7,540	4,990	96.8 J	68.7 J	74.0 J	262	79.6 J	2,580	1,930	6,550	10,400	6,680	9,640	10,100	8,700	6,150	7,500
CALCIUM, TOTAL	µg/L	260,000	140,000	147,000	68,700	131,000	181,000	169,000	141,000	146,000	146,000	201,000	143,000	94,300	94,000	93,100	108,000	128,000	84,100	87,500	130,000	64,700	120,000
CHLORIDE, TOTAL	mg/L	13.7	1.7 J	2.5 J	17.8	22.8	18.6	12.0	5.0 J	6.2 J	1.1 J	164	4.5 J	22.4	22.9	18.9	25.2	14.3	25.3	23.5	18.2	ND	44.8
pH	SU	6.68	6.97	6.93	9.48	6.97	6.73	7.12	6.74	6.81	6.75	6.78	6.94	7.48	7.64	7.01	7.33	7.09	7.28	7.21	7.10	7.64	7.38
SULFATE, TOTAL	mg/L	146	46.2	114	255	208	215	383	29.8	29.3	21.7	24.9	12.9	158	152	246	469 J	166	328	270	410	271	377
TOTAL DISSOLVED SOLIDS	mg/L	953 J	475 J	547	473	722	799	850	513	490	505	851	521	525	520	561	860	637	ND	661	855	536	790
APPENDIX IV PARAMETERS																							
ARSENIC, TOTAL	µg/L	38.4	0.52 J	6.1	45.5	23.8	6.8	7.9	0.58 J	0.50 J	0.71 J	7.8	1.4	0.61 J	11.1	0.34 J	7.7	7.7	2.5	3.6	0.16 J	0.56 J	2.9
BARIUM, TOTAL	µg/L	412	245	118	44.3	151	271	126	199	216	352	655	1,430	123	117	219	72.7	431	105	88.4	43.6	192	75.6
CHROMIUM, TOTAL	µg/L	0.33 J	0.25 J	0.29 J	0.25 J	0.45 J	0.40 J	0.24 J	0.34 J	0.33 J	0.34 J	0.24 J	0.32 J	0.27 J	0.25 J	0.33 J	0.33 J	ND	ND	0.31 J	ND	0.40 J	0.34 J
FLUORIDE, TOTAL	mg/L	ND	0.14 J	0.18 J	0.15 J	0.25 J	0.19 J	0.43	0.14 J	0.24	0.15 J	ND	0.17 J	0.42	0.39	0.36	ND	0.19 J	0.31	0.27	0.25	0.33	0.32
LITHIUM, TOTAL	µg/L	ND	ND	ND	11.5	ND	ND	ND	ND	ND	ND	ND	ND	32.8	42.0	30.9	ND	ND	32.6	34.0	ND	16.2	ND
MOLYBDENUM, TOTAL	µg/L	2.3 J	2.6 J	4.3 J	164	142	76.1	190	2.9 J	ND	ND	6.5 J	5.1 J	92.3	129	424	531	4.0 J	917	960	584	291	311
RADIUM [226 + 228]	pCi/L	2.496	ND	ND	ND	ND	2.789	ND	ND	ND	ND	ND	4.310	ND	ND	ND	ND	2.082	1.890	ND	ND	ND	ND
SELENIUM, TOTAL	µg/L	ND	2.9	ND	0.21 J	ND	ND	ND	3.6	2.9 J	0.27 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ADDITIONAL PARAMETERS																							
ALKALINITY	mg/L	696	357	332	30.9	344	416	249	415	390	427	537	472	222	232	188	110	291	110	159	159	64.6	152
IRON, TOTAL	µg/L	29,800	ND	2,270	ND	8,510	2,820	4,230	81.9	43.7 J	132	12,800	7,890	2,830	3,440	6,750	4,790	5,580	4,300	4,840	5,300	8,930	5,620
MAGNESIUM, TOTAL	µg/L	57,800	20,400	24,900	87.0	25,500	37,100	29,000	28,000	26,300	20,100	37,700	35,100	14,400	17,100	20,500	23,700	33,100	18,200	21,200	27,600	10,100	15,500
MANGANESE, TOTAL	µg/L	2,940	4.3 J	979	1.0 J	1,690	1,570	2,030	60.2	464	664	2,500	220	398	309	1,020	180	336	219	219	383	313	305
POTASSIUM, TOTAL	µg/L	5,850	5,460	4,220	9,350	6,880	7,320	6,360	5,800	4,310	25,400	7,290	4,170	6,520	5,620	5,040	6,910	4,800	6,660	6,460	5,540	5,880	8,650
SODIUM, TOTAL	µg/L	24,900	3,990	9,430	66,300	91,300	48,700	63,700	8,420	6,070	3,330	81,600	13,200	65,500	59,800	73,700	126,000	28,500	91,800	78,200	97,500	79,000	121,000

NOTES

- 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.
- J - Result is an estimated value.
- 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.
- 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.
- NA - Not Applicable.

Figures

APPENDIX A

Laboratory Analytical Data

January 14, 2021

Jeffrey Ingram
Golder Associates
13515 Barrett Parkway Drive
Suite 260
Ballwin, MO 63021

RE: Project: AMEREN LCPA
Pace Project No.: 60358561

Dear Jeffrey Ingram:

Enclosed are the analytical results for sample(s) received by the laboratory on January 07, 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 - 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



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: AMEREN LCPA

Pace Project No.: 60358561

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 #: 200030

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

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SAMPLE SUMMARY

Project: AMEREN LCPA

Pace Project No.: 60358561

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60358561001	L-UMW-1D	Water	01/05/21 09:45	01/07/21 04:40
60358561002	L-UMW-2D	Water	01/04/21 11:10	01/07/21 04:40
60358561003	L-UMW-3D	Water	01/04/21 10:05	01/07/21 04:40
60358561004	L-UMW-8D	Water	01/06/21 10:45	01/07/21 04:40
60358561005	L-UMW-9D	Water	01/06/21 11:35	01/07/21 04:40
60358561006	L-UMW-FB-1	Water	01/04/21 10:25	01/07/21 04:40
60358561007	L-UMW-DUP-1	Water	01/06/21 08:00	01/07/21 04:40

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SAMPLE ANALYTE COUNT

Project: AMEREN LCPA

Pace Project No.: 60358561

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60358561001	L-UMW-1D	EPA 300.0	CRN2	1	PASI-K
60358561002	L-UMW-2D	SM 2540C	VRP	1	PASI-K
60358561003	L-UMW-3D	EPA 200.7	MRV	1	PASI-K
		SM 2540C	VRP	1	PASI-K
60358561004	L-UMW-8D	EPA 300.0	CRN2	1	PASI-K
		EPA 200.7	MRV	1	PASI-K
		SM 2540C	VRP	1	PASI-K
60358561005	L-UMW-9D	EPA 300.0	CRN2	1	PASI-K
60358561006	L-UMW-FB-1	EPA 200.7	MRV	1	PASI-K
		SM 2540C	VRP	1	PASI-K
60358561007	L-UMW-DUP-1	EPA 300.0	CRN2	1	PASI-K
		EPA 200.7	MRV	1	PASI-K
		SM 2540C	VRP	1	PASI-K
		EPA 300.0	CRN2	1	PASI-K

PASI-K = Pace Analytical Services - Kansas City

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LCPA

Pace Project No.: 60358561

Sample: L-UMW-1D **Lab ID: 60358561001** Collected: 01/05/21 09:45 Received: 01/07/21 04:40 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	0.32	mg/L	0.20	0.075	1		01/12/21 15:18	16984-48-8	

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ANALYTICAL RESULTS

Project: AMEREN LCPA

Pace Project No.: 60358561

Sample: L-UMW-2D **Lab ID: 60358561002** Collected: 01/04/21 11:10 Received: 01/07/21 04:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Kansas City									
Total Dissolved Solids	811	mg/L	10.0	10.0	1		01/11/21 10:27		

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ANALYTICAL RESULTS

Project: AMEREN LCPA

Pace Project No.: 60358561

Sample: L-UMW-3D **Lab ID: 60358561003** Collected: 01/04/21 10:05 Received: 01/07/21 04:40 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								
Calcium	192000	ug/L	200	32.4	1	01/08/21 12:35	01/11/21 14:46	7440-70-2	M1
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	974	mg/L	10.0	10.0	1		01/11/21 10:27		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Fluoride	0.29	mg/L	0.20	0.075	1		01/12/21 15:33	16984-48-8	M1

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ANALYTICAL RESULTS

Project: AMEREN LCPA

Pace Project No.: 60358561

Sample: L-UMW-8D **Lab ID: 60358561004** Collected: 01/06/21 10:45 Received: 01/07/21 04:40 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								
Calcium	197000	ug/L	200	32.4	1	01/08/21 12:35	01/11/21 15:02	7440-70-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	1050	mg/L	13.3	13.3	1		01/13/21 09:59		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Fluoride	0.28	mg/L	0.20	0.075	1		01/12/21 16:16	16984-48-8	

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ANALYTICAL RESULTS

Project: AMEREN LCPA

Pace Project No.: 60358561

Sample: L-UMW-9D **Lab ID: 60358561005** Collected: 01/06/21 11:35 Received: 01/07/21 04:40 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	0.26	mg/L	0.20	0.075	1		01/12/21 17:00	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LCPA

Pace Project No.: 60358561

Sample: L-UMW-FB-1 **Lab ID: 60358561006** Collected: 01/04/21 10:25 Received: 01/07/21 04:40 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									
Calcium	<32.4	ug/L	200	32.4	1	01/08/21 12:35	01/11/21 15:05	7440-70-2	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C Pace Analytical Services - Kansas City									
Total Dissolved Solids	20.5	mg/L	5.0	5.0	1		01/11/21 10:27		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City									
Fluoride	<0.075	mg/L	0.20	0.075	1		01/12/21 17:15	16984-48-8	

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ANALYTICAL RESULTS

Project: AMEREN LCPA

Pace Project No.: 60358561

Sample: L-UMW-DUP-1 **Lab ID: 60358561007** Collected: 01/06/21 08:00 Received: 01/07/21 04:40 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								
Calcium	204000	ug/L	200	32.4	1	01/08/21 12:35	01/11/21 15:08	7440-70-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	1010	mg/L	13.3	13.3	1		01/13/21 09:59		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Fluoride	0.29	mg/L	0.20	0.075	1		01/12/21 17:29	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN LCPA

Pace Project No.: 60358561

QC Batch:	698560	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: 60358561003, 60358561004, 60358561006, 60358561007

METHOD BLANK: 2818202 Matrix: Water
Associated Lab Samples: 60358561003, 60358561004, 60358561006, 60358561007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	ug/L	<32.4	200	32.4	01/11/21 13:58	

LABORATORY CONTROL SAMPLE: 2818203

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	ug/L	10000	10100	101	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2818204 2818205

Parameter	Units	60358559001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Calcium	ug/L	175000	10000	10000	175000	176000	0	7	70-130	0	20	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2818209 2818210

Parameter	Units	60358561003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Calcium	ug/L	192000	10000	10000	194000	201000	19	95	70-130	4	20	M1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN LCPA

Pace Project No.: 60358561

QC Batch: 698684

Analysis Method: SM 2540C

QC Batch Method: SM 2540C

Analysis Description: 2540C Total Dissolved Solids

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60358561002, 60358561003, 60358561006

METHOD BLANK: 2818810

Matrix: Water

Associated Lab Samples: 60358561002, 60358561003, 60358561006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	01/11/21 10:26	

LABORATORY CONTROL SAMPLE: 2818811

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	1020	102	80-120	

SAMPLE DUPLICATE: 2818812

Parameter	Units	60358228001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	3290	3090	6	10	

SAMPLE DUPLICATE: 2818813

Parameter	Units	60358561003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	974	997	2	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN LCPA

Pace Project No.: 60358561

QC Batch: 698750	Analysis Method: SM 2540C
QC Batch Method: SM 2540C	Analysis Description: 2540C Total Dissolved Solids
	Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60358561004, 60358561007

METHOD BLANK: 2819086 Matrix: Water

Associated Lab Samples: 60358561004, 60358561007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	01/13/21 09:58	

LABORATORY CONTROL SAMPLE: 2819087

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	1010	101	80-120	

SAMPLE DUPLICATE: 2819090

Parameter	Units	60358558002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	983	1030	5	10	

SAMPLE DUPLICATE: 2819091

Parameter	Units	60358559001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	707	719	2	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN LCPA

Pace Project No.: 60358561

QC Batch: 698910 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: 60358561001, 60358561003, 60358561004, 60358561005, 60358561006, 60358561007

METHOD BLANK: 2819498 Matrix: Water
 Associated Lab Samples: 60358561001, 60358561003, 60358561004, 60358561005, 60358561006, 60358561007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Fluoride	mg/L	<0.075	0.20	0.075	01/12/21 09:08	

METHOD BLANK: 2821241 Matrix: Water
 Associated Lab Samples: 60358561001, 60358561003, 60358561004, 60358561005, 60358561006, 60358561007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Fluoride	mg/L	<0.075	0.20	0.075	01/13/21 08:59	

LABORATORY CONTROL SAMPLE: 2819499

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	2.5	2.4	96	90-110	

LABORATORY CONTROL SAMPLE: 2821242

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	2.5	2.5	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2819500 2819501

Parameter	Units	60358560003		2819501		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result							
Fluoride	mg/L	0.26	2.5	2.5	2.3	2.4	82	84	80-120	2	15	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2819502 2819503

Parameter	Units	60358561003		2819503		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result							
Fluoride	mg/L	0.29	2.5	2.5	2.1	1.8	72	62	80-120	12	15 M1	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: AMEREN LCPA

Pace Project No.: 60358561

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.

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN LCPA

Pace Project No.: 60358561

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60358561003	L-UMW-3D	EPA 200.7	698560	EPA 200.7	698593
60358561004	L-UMW-8D	EPA 200.7	698560	EPA 200.7	698593
60358561006	L-UMW-FB-1	EPA 200.7	698560	EPA 200.7	698593
60358561007	L-UMW-DUP-1	EPA 200.7	698560	EPA 200.7	698593
60358561002	L-UMW-2D	SM 2540C	698684		
60358561003	L-UMW-3D	SM 2540C	698684		
60358561004	L-UMW-8D	SM 2540C	698750		
60358561006	L-UMW-FB-1	SM 2540C	698684		
60358561007	L-UMW-DUP-1	SM 2540C	698750		
60358561001	L-UMW-1D	EPA 300.0	698910		
60358561003	L-UMW-3D	EPA 300.0	698910		
60358561004	L-UMW-8D	EPA 300.0	698910		
60358561005	L-UMW-9D	EPA 300.0	698910		
60358561006	L-UMW-FB-1	EPA 300.0	698910		
60358561007	L-UMW-DUP-1	EPA 300.0	698910		

REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

WO#: 60358561



Client Name: Colder 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 OPC

Thermometer Used: TAGIL Type of Ice: Wet Blue None

Cooler Temperature (°C): As-read 15.1.7 Corr. Factor -0.1 Corrected 15.0.7

Date and initials of person examining contents: 01/07/21 MLJ

Temperature should be above freezing to 6°C

Chain of Custody present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Chain of Custody relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Samples arrived within holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Short Hold Time analyses (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<u>Limited volume - 1 BP20 for</u>
Correct containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<u>TDS & ANIONS</u>
Pace containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Sample labels match COC: Date / time / ID / analyses	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Samples contain multiple phases? Matrix: <u>WT</u>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Containers requiring pH preservation in compliance? (HNO ₃ , H ₂ SO ₄ , HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO) LOT# <u>10031TB</u>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> 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)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Potassium iodide test strip turns blue/purple? (Preserve)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Trip Blank present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Samples from USDA Regulated Area: State:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> 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 3:46 pm, 1/7/21

Project Manager Review: _____ Date: _____



GOLDER

DMEMORANDUM

DATE January 27, 2021

Project No. 153140602

TO Project File
Golder Associates

CC Amanda Derhake, Jeff Ingram

FROM Annie Muehlfarth

EMAIL AMuehlfarth@golder.com

DATA VALIDATION SUMMARY, LABADIE ENERGY CENTER – LCPA – VERIFICATION SAMPLING - DATA PACKAGE 60358561

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

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

Company Name: Golder Associates Inc.
 Project Name: Ameren - LEC - LCPA
 Reviewer: A. Muehlfarth

Project Manager: J. Ingram
 Project Number: 153140602
 Validation Date: 01/27/2021

Laboratory: Pace Analytical Services, LLC SDG #: 60358561
 Analytical Method (type and no.): EPA 200.7 (Total Metals); SM2540C (TDS); EPA 300.0 (Anions)
 Matrix: Air Soil/Sed. Water Waste _____
 Sample Names L-UMW-1D, L-UMW-2D, L-UMW-3D, L-UMW-8D, L-UMW-9D, L-UMW-FB-1, L-UMW-DUP-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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>01/04/2021 - 01/06/2021</u>
b) Sampling team indicated?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>EMS/BTT</u>
c) Sample location noted?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
d) Sample depth indicated (Soils)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____
e) Sample type indicated (grab/composite)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>Grab</u>
f) Field QC noted?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>See Notes</u>
g) Field parameters collected (note types)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>pH, Sp.Cond, ORP, Temp, DO, Turb</u>
h) Field Calibration within control limits?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
i) Notations of unacceptable field conditions/performances from field logs or field notes?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
j) Does the laboratory narrative indicate deficiencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____
Note Deficiencies: _____				

Chain-of-Custody (COC)	YES	NO	NA	COMMENTS
a) Was the COC properly completed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b) Was the COC signed by both field and laboratory personnel?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c) Were samples received in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

General (reference QAPP or Method)	YES	NO	NA	COMMENTS
a) Were hold times met for sample pretreatment?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b) Were hold times met for sample analysis?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c) Were the correct preservatives used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
d) Was the correct method used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
e) Were appropriate reporting limits achieved?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
f) Were any sample dilutions noted?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
g) Were any matrix problems noted?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>See Notes</u>

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

Blanks	YES	NO	NA	COMMENTS
a) Were analytes detected in the method blank(s)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
b) Were analytes detected in the field blank(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Notes _____
c) Were analytes detected in the equipment blank(s)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____
d) Were analytes detected in the trip blank(s)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____

Laboratory Control Sample (LCS)	YES	NO	NA	COMMENTS
a) Was a LCS analyzed once per SDG?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b) Were the proper analytes included in the LCS?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c) Was the LCS accuracy criteria met?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

Duplicates	YES	NO	NA	COMMENTS
a) Were field duplicates collected (note original and duplicate sample names)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
				L-UMW-DUP-1 @ L-UMW-2D
b) Were field dup. precision criteria met (note RPD)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Notes _____
c) Were lab duplicates analyzed (note original and duplicate samples)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
d) Were lab dup. precision criteria met (note RPD)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Max RPD: 6% (<10%) _____

Blind Standards	YES	NO	NA	COMMENTS
a) Was a blind standard used (indicate name, analytes included and concentrations)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
b) Was the %D within control limits?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____

Matrix Spike/Matrix Spike Duplicate (MS/MSD)	YES	NO	NA	COMMENTS
a) Was MS accuracy criteria met?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Notes _____
Recovery could not be calculated since sample contained high concentration of analyte?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____
b) Was MSD accuracy criteria met?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Notes _____
Recovery could not be calculated since sample contained high concentration of analyte?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____
c) Were MS/MSD precision criteria met?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

Comments/Notes:

The Sample Condition Upon Receipt indicates that a limited volume was used for sample analyses (1 bottle for TDS and anions).

Blanks:

L-UMW-FB-1 @ L-UMW-3D: TDS (20.5). Sample result > 10x blank result, no qualification necessary.

DUP:

L-UMW-DUP-1: RPD exceeds limit (20%) for TDS (21.9%).

QA LEVEL IV - INORGANIC DATA EVALUATION CHECKLIST

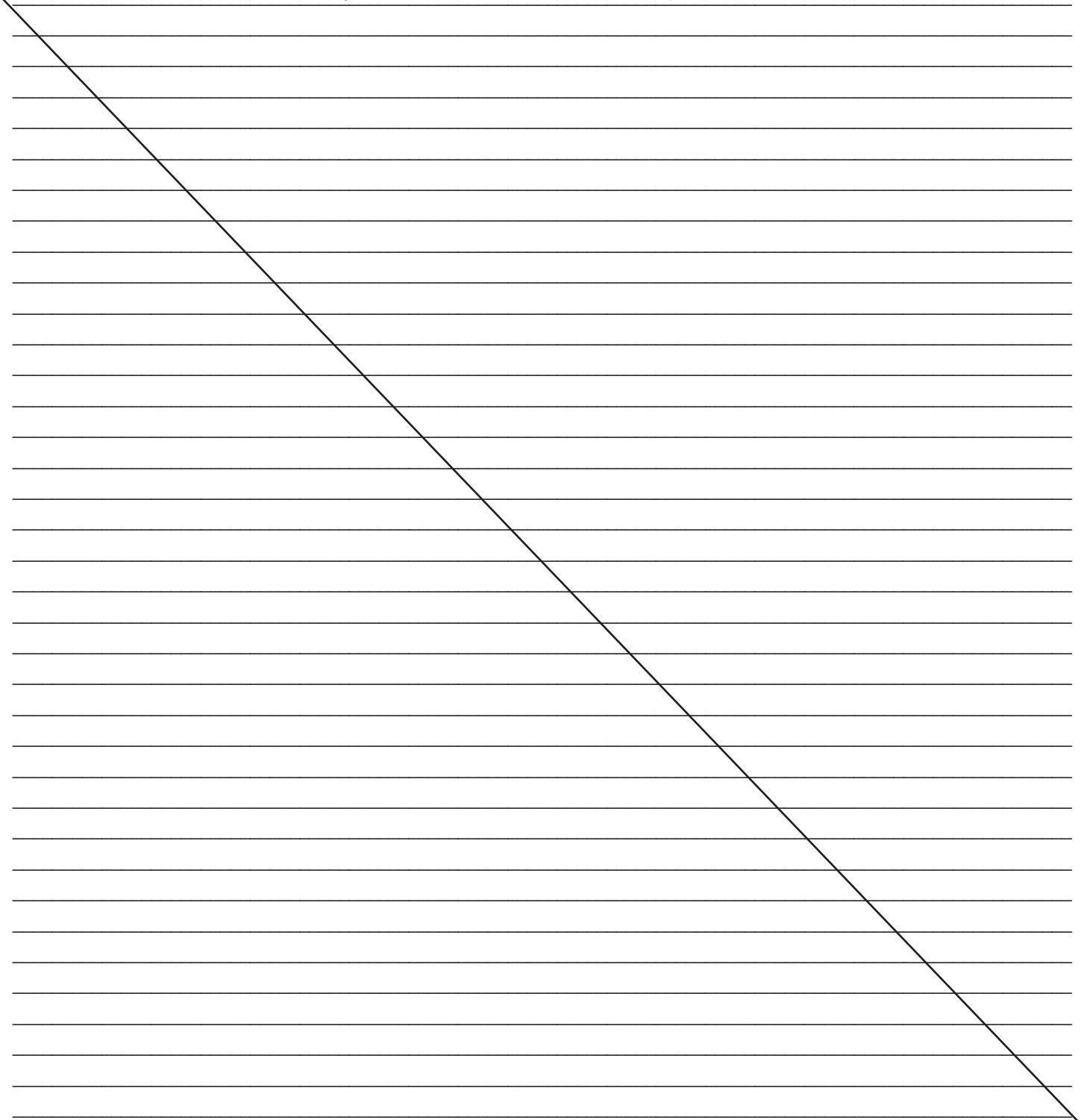
Comments/Notes:

MS/MSD:

2818204/2818205: MS/MSD % recovery low (<30%) for Calcium. MS/MSD performed on unrelated sample, no qualification necessary.

2818209/2818210: MS % recovery low (<30%) for Calcium. Associated with sample 60358561003.

2819502/2819503: MS/MSD % recovery low for Fluoride. Associated with sample 60358561003.



March 11, 2021

Jeffrey Ingram
Golder Associates
13515 Barrett Parkway Drive
Suite 260
Ballwin, MO 63021

RE: Project: AMEREN LABADIE LCPA
Pace Project No.: 60361519

Dear Jeffrey Ingram:

Enclosed are the analytical results for sample(s) received by the laboratory on February 19, 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 - Kansas City
- Pace Analytical Services - Greensburg

REV-1, 3/11/21: L-BMW-1S and L-BMW-2S moved from SDG 60361519 to 60363499

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



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: AMEREN LABADIE LCPA

Pace Project No.: 60361519

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 #: 9526

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 #: 200030

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

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SAMPLE SUMMARY

Project: AMEREN LABADIE LCPA

Pace Project No.: 60361519

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60361519001	L-BMW-1D	Water	02/18/21 10:48	02/19/21 03:53
60361519002	L-BMW-2D	Water	02/18/21 12:26	02/19/21 03:53

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: AMEREN LABADIE LCPA

Pace Project No.: 60361519

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory		
60361519001	L-BMW-1D	EPA 200.7	HKC	13	PASI-K		
		EPA 200.8	JGP	6	PASI-K		
		EPA 7470	JDE	1	PASI-K		
		EPA 903.1	MK1	1	PASI-PA		
		EPA 904.0	VAL	1	PASI-PA		
		SM 2320B	MAP	1	PASI-K		
		SM 2540C	VRP	1	PASI-K		
		SM 3500-Fe B#4	LDB	1	PASI-K		
		SM 3500-Fe B#4	MAP	1	PASI-K		
		SM 4500-S-2 D	MAP	1	PASI-K		
		EPA 300.0	LDB	3	PASI-K		
		60361519002	L-BMW-2D	EPA 200.7	HKC	13	PASI-K
				EPA 200.8	JGP	6	PASI-K
EPA 7470	JDE			1	PASI-K		
EPA 903.1	MK1			1	PASI-PA		
EPA 904.0	VAL			1	PASI-PA		
SM 2320B	MAP			1	PASI-K		
SM 2540C	VRP			1	PASI-K		
SM 3500-Fe B#4	LDB			1	PASI-K		
SM 3500-Fe B#4	MAP			1	PASI-K		
SM 4500-S-2 D	MAP			1	PASI-K		
EPA 300.0	LDB			3	PASI-K		

PASI-K = Pace Analytical Services - Kansas City

PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE LCPA

Pace Project No.: 60361519

Sample: L-BMW-1D Lab ID: 60361519001 Collected: 02/18/21 10:48 Received: 02/19/21 03:53 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	1080	ug/L	5.0	1.8	1	02/19/21 13:31	02/22/21 13:16	7440-39-3	
Beryllium	<0.39	ug/L	1.0	0.39	1	02/19/21 13:31	02/22/21 13:16	7440-41-7	
Boron	78.1J	ug/L	100	8.6	1	02/19/21 13:31	02/22/21 13:16	7440-42-8	
Calcium	133000	ug/L	200	75.4	1	02/19/21 13:31	02/22/21 13:16	7440-70-2	
Cobalt	<0.95	ug/L	5.0	0.95	1	02/19/21 13:31	02/22/21 13:16	7440-48-4	
Iron	10900	ug/L	50.0	21.4	1	02/19/21 13:31	02/22/21 13:16	7439-89-6	
Lead	<3.8	ug/L	10.0	3.8	1	02/19/21 13:31	02/22/21 13:16	7439-92-1	
Lithium	27.8	ug/L	10.0	7.7	1	02/19/21 13:31	02/22/21 13:16	7439-93-2	
Magnesium	30000	ug/L	50.0	31.4	1	02/19/21 13:31	02/22/21 13:16	7439-95-4	
Manganese	623	ug/L	5.0	0.74	1	02/19/21 13:31	02/22/21 13:16	7439-96-5	
Molybdenum	<2.2	ug/L	20.0	2.2	1	02/19/21 13:31	02/22/21 13:16	7439-98-7	
Potassium	4480	ug/L	500	146	1	02/19/21 13:31	02/22/21 13:16	7440-09-7	
Sodium	10100	ug/L	500	254	1	02/19/21 13:31	02/22/21 13:16	7440-23-5	
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8									
Pace Analytical Services - Kansas City									
Antimony	<0.10	ug/L	1.0	0.10	1	02/19/21 13:31	02/22/21 14:34	7440-36-0	
Arsenic	1.9	ug/L	1.0	0.11	1	02/19/21 13:31	02/22/21 14:34	7440-38-2	
Cadmium	<0.062	ug/L	0.50	0.062	1	02/19/21 13:31	02/22/21 14:34	7440-43-9	
Chromium	<0.23	ug/L	1.0	0.23	1	02/19/21 13:31	02/22/21 14:34	7440-47-3	
Selenium	<0.18	ug/L	1.0	0.18	1	02/19/21 13:31	02/22/21 14:34	7782-49-2	
Thallium	<0.094	ug/L	1.0	0.094	1	02/19/21 13:31	02/22/21 14:34	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470 Preparation Method: EPA 7470									
Pace Analytical Services - Kansas City									
Mercury	<0.096	ug/L	0.20	0.096	1	02/23/21 08:45	02/23/21 12:30	7439-97-6	
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Kansas City									
Alkalinity, Total as CaCO3	440	mg/L	20.0	7.5	1		02/23/21 16:55		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Kansas City									
Total Dissolved Solids	501	mg/L	10.0	10.0	1		02/23/21 09:11		
Iron, Ferric (Calculation)									
Analytical Method: SM 3500-Fe B#4									
Pace Analytical Services - Kansas City									
Iron, Ferric	10.8	mg/L	0.050		1		02/24/21 12:58	7439-89-6	
Iron, Ferrous									
Analytical Method: SM 3500-Fe B#4									
Pace Analytical Services - Kansas City									
Iron, Ferrous	0.11J	mg/L	0.20	0.048	1		02/22/21 09:05		H6

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE LCPA

Pace Project No.: 60361519

Sample: L-BMW-1D **Lab ID: 60361519001** Collected: 02/18/21 10:48 Received: 02/19/21 03:53 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	0.045J	mg/L	0.050	0.026	1		02/20/21 09:13	18496-25-8	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0									
Pace Analytical Services - Kansas City									
Chloride	10.8	mg/L	1.0	0.39	1		02/22/21 18:18	16887-00-6	
Fluoride	0.20J	mg/L	0.20	0.086	1		02/22/21 18:18	16984-48-8	
Sulfate	30.1	mg/L	5.0	2.1	5		02/22/21 18:33	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LABADIE LCPA

Pace Project No.: 60361519

Sample: L-BMW-2D **Lab ID: 60361519002** Collected: 02/18/21 12:26 Received: 02/19/21 03:53 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	1.8	1	02/19/21 13:31	02/22/21 13:23	7440-39-3	
Beryllium	<0.39	ug/L	1.0	0.39	1	02/19/21 13:31	02/22/21 13:23	7440-41-7	
Boron	67.6J	ug/L	100	8.6	1	02/19/21 13:31	02/22/21 13:23	7440-42-8	
Calcium	128000	ug/L	200	75.4	1	02/19/21 13:31	02/22/21 13:23	7440-70-2	
Cobalt	<0.95	ug/L	5.0	0.95	1	02/19/21 13:31	02/22/21 13:23	7440-48-4	
Iron	6370	ug/L	50.0	21.4	1	02/19/21 13:31	02/22/21 13:23	7439-89-6	
Lead	<3.8	ug/L	10.0	3.8	1	02/19/21 13:31	02/22/21 13:23	7439-92-1	
Lithium	40.4	ug/L	10.0	7.7	1	02/19/21 13:31	02/22/21 13:23	7439-93-2	
Magnesium	23700	ug/L	50.0	31.4	1	02/19/21 13:31	02/22/21 13:23	7439-95-4	
Manganese	248	ug/L	5.0	0.74	1	02/19/21 13:31	02/22/21 13:23	7439-96-5	
Molybdenum	<2.2	ug/L	20.0	2.2	1	02/19/21 13:31	02/22/21 13:23	7439-98-7	
Potassium	3700	ug/L	500	146	1	02/19/21 13:31	02/22/21 13:23	7440-09-7	
Sodium	5360	ug/L	500	254	1	02/19/21 13:31	02/22/21 13:23	7440-23-5	
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8									
Pace Analytical Services - Kansas City									
Antimony	<0.10	ug/L	1.0	0.10	1	02/19/21 13:31	02/22/21 14:40	7440-36-0	
Arsenic	35.7	ug/L	1.0	0.11	1	02/19/21 13:31	02/22/21 14:40	7440-38-2	
Cadmium	<0.062	ug/L	0.50	0.062	1	02/19/21 13:31	02/22/21 14:40	7440-43-9	
Chromium	0.34J	ug/L	1.0	0.23	1	02/19/21 13:31	02/22/21 14:40	7440-47-3	
Selenium	<0.18	ug/L	1.0	0.18	1	02/19/21 13:31	02/22/21 14:40	7782-49-2	
Thallium	<0.094	ug/L	1.0	0.094	1	02/19/21 13:31	02/22/21 14:40	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470 Preparation Method: EPA 7470									
Pace Analytical Services - Kansas City									
Mercury	<0.096	ug/L	0.20	0.096	1	02/23/21 08:45	02/23/21 12:37	7439-97-6	
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Kansas City									
Alkalinity, Total as CaCO3	406	mg/L	20.0	7.5	1		02/23/21 15:40		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Kansas City									
Total Dissolved Solids	463	mg/L	10.0	10.0	1		02/23/21 09:12		
Iron, Ferric (Calculation)									
Analytical Method: SM 3500-Fe B#4									
Pace Analytical Services - Kansas City									
Iron, Ferric	6.4	mg/L	0.050		1		02/24/21 12:58	7439-89-6	
Iron, Ferrous									
Analytical Method: SM 3500-Fe B#4									
Pace Analytical Services - Kansas City									
Iron, Ferrous	<0.048	mg/L	0.20	0.048	1		02/22/21 09:06		H6

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE LCPA

Pace Project No.: 60361519

Sample: L-BMW-2D **Lab ID: 60361519002** Collected: 02/18/21 12:26 Received: 02/19/21 03:53 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	0.040J	mg/L	0.050	0.026	1		02/20/21 09:14	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	3.6	mg/L	1.0	0.39	1		02/22/21 18:47	16887-00-6	
Fluoride	0.22	mg/L	0.20	0.086	1		02/22/21 18:47	16984-48-8	
Sulfate	29.9	mg/L	5.0	2.1	5		02/22/21 19:02	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN LABADIE LCPA

Pace Project No.: 60361519

QC Batch: 705266

Analysis Method: EPA 7470

QC Batch Method: EPA 7470

Analysis Description: 7470 Mercury

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60361519001, 60361519002

METHOD BLANK: 2840422

Matrix: Water

Associated Lab Samples: 60361519001, 60361519002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	<0.096	0.20	0.096	02/23/21 12:21	

LABORATORY CONTROL SAMPLE: 2840423

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.8	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2840424 2840425

Parameter	Units	2840424		2840425		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		60361519003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Mercury	ug/L	<0.096	5	5	4.8	4.9	96	97	75-125	1	20

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN LABADIE LCPA
Pace Project No.: 60361519

QC Batch: 705001 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: 60361519001, 60361519002

METHOD BLANK: 2839697 Matrix: Water

Associated Lab Samples: 60361519001, 60361519002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Barium	ug/L	<1.8	5.0	1.8	02/22/21 13:11	
Beryllium	ug/L	<0.39	1.0	0.39	02/22/21 13:11	
Boron	ug/L	<8.6	100	8.6	02/22/21 13:11	
Calcium	ug/L	<75.4	200	75.4	02/22/21 13:11	
Cobalt	ug/L	<0.95	5.0	0.95	02/22/21 13:11	
Iron	ug/L	<21.4	50.0	21.4	02/22/21 13:11	
Lead	ug/L	<3.8	10.0	3.8	02/22/21 13:11	
Lithium	ug/L	<7.7	10.0	7.7	02/22/21 13:11	
Magnesium	ug/L	<31.4	50.0	31.4	02/22/21 13:11	
Manganese	ug/L	<0.74	5.0	0.74	02/22/21 13:11	
Molybdenum	ug/L	<2.2	20.0	2.2	02/22/21 13:11	
Potassium	ug/L	<146	500	146	02/22/21 13:11	
Sodium	ug/L	<254	500	254	02/22/21 13:11	

LABORATORY CONTROL SAMPLE: 2839698

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	1000	974	97	85-115	
Beryllium	ug/L	1000	980	98	85-115	
Boron	ug/L	1000	976	98	85-115	
Calcium	ug/L	10000	9950	100	85-115	
Cobalt	ug/L	1000	1010	101	85-115	
Iron	ug/L	10000	9930	99	85-115	
Lead	ug/L	1000	1010	101	85-115	
Lithium	ug/L	1000	984	98	85-115	
Magnesium	ug/L	10000	9950	100	85-115	
Manganese	ug/L	1000	964	96	85-115	
Molybdenum	ug/L	1000	1010	101	85-115	
Potassium	ug/L	10000	9880	99	85-115	
Sodium	ug/L	10000	9810	98	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2839699 2839700

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		60361519001 Result	Spike Conc.	Spike Conc.	Result						
Barium	ug/L	1080	1000	1000	2080	100	102	70-130	1	20	
Beryllium	ug/L	<0.39	1000	1000	997	100	102	70-130	2	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN LABADIE LCPA

Pace Project No.: 60361519

Parameter	Units	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2839699		2839700		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		60361519001 Result	MS Spike Conc.	MSD Spike Conc.									
Boron	ug/L	78.1J	1000	1000	1080	1090	101	101	70-130	0	20		
Calcium	ug/L	133000	10000	10000	145000	146000	122	125	70-130	0	20		
Cobalt	ug/L	<0.95	1000	1000	1000	1010	100	101	70-130	1	20		
Iron	ug/L	10900	10000	10000	20700	20600	98	98	70-130	0	20		
Lead	ug/L	<3.8	1000	1000	988	999	99	100	70-130	1	20		
Lithium	ug/L	27.8	1000	1000	1030	1030	100	100	70-130	0	20		
Magnesium	ug/L	30000	10000	10000	40300	40000	104	100	70-130	1	20		
Manganese	ug/L	623	1000	1000	1600	1590	97	96	70-130	1	20		
Molybdenum	ug/L	<2.2	1000	1000	1040	1040	103	104	70-130	1	20		
Potassium	ug/L	4480	10000	10000	14800	15100	103	106	70-130	2	20		
Sodium	ug/L	10100	10000	10000	20000	20000	99	99	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 LABADIE LCPA

Pace Project No.: 60361519

QC Batch: 705002

Analysis Method: EPA 200.8

QC Batch Method: EPA 200.8

Analysis Description: 200.8 MET

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60361519001, 60361519002

METHOD BLANK: 2839701

Matrix: Water

Associated Lab Samples: 60361519001, 60361519002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	<0.10	1.0	0.10	02/22/21 14:29	
Arsenic	ug/L	<0.11	1.0	0.11	02/22/21 14:29	
Cadmium	ug/L	<0.062	0.50	0.062	02/22/21 14:29	
Chromium	ug/L	<0.23	1.0	0.23	02/22/21 14:29	
Selenium	ug/L	<0.18	1.0	0.18	02/22/21 14:29	
Thallium	ug/L	<0.094	1.0	0.094	02/22/21 14:29	

LABORATORY CONTROL SAMPLE: 2839702

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	40	39.5	99	85-115	
Arsenic	ug/L	40	41.1	103	85-115	
Cadmium	ug/L	40	40.3	101	85-115	
Chromium	ug/L	40	42.6	106	85-115	
Selenium	ug/L	40	40.8	102	85-115	
Thallium	ug/L	40	39.0	98	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2839703 2839704

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		60361519002 Result	Spike Conc.	Spike Conc.	Result						
Antimony	ug/L	<0.10	40	40	38.8	38.7	97	97	70-130	0	20
Arsenic	ug/L	35.7	40	40	77.2	77.1	104	104	70-130	0	20
Cadmium	ug/L	<0.062	40	40	39.1	38.9	98	97	70-130	1	20
Chromium	ug/L	0.34J	40	40	40.8	40.6	101	101	70-130	1	20
Selenium	ug/L	<0.18	40	40	39.3	38.8	98	97	70-130	1	20
Thallium	ug/L	<0.094	40	40	40.6	39.8	101	99	70-130	2	20

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN LABADIE LCPA

Pace Project No.: 60361519

QC Batch: 705268	Analysis Method: SM 2320B
QC Batch Method: SM 2320B	Analysis Description: 2320B Alkalinity
	Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60361519001, 60361519002

METHOD BLANK: 2840426 Matrix: Water

Associated Lab Samples: 60361519001, 60361519002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	<7.5	20.0	7.5	02/23/21 15:15	

LABORATORY CONTROL SAMPLE: 2840427

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	500	524	105	90-110	

SAMPLE DUPLICATE: 2840428

Parameter	Units	60361519001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	440	430	2	10	

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QUALITY CONTROL DATA

Project: AMEREN LABADIE LCPA

Pace Project No.: 60361519

QC Batch: 705155

Analysis Method: SM 2540C

QC Batch Method: SM 2540C

Analysis Description: 2540C Total Dissolved Solids

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60361519001, 60361519002

METHOD BLANK: 2840218

Matrix: Water

Associated Lab Samples: 60361519001, 60361519002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	02/23/21 09:10	

LABORATORY CONTROL SAMPLE: 2840219

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	1080	108	80-120	

SAMPLE DUPLICATE: 2840220

Parameter	Units	60361519001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	501	524	4	10	

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QUALITY CONTROL DATA

Project: AMEREN LABADIE LCPA

Pace Project No.: 60361519

QC Batch: 705068

Analysis Method: SM 3500-Fe B#4

QC Batch Method: SM 3500-Fe B#4

Analysis Description: Iron, Ferrous

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60361519001, 60361519002

METHOD BLANK: 2839984

Matrix: Water

Associated Lab Samples: 60361519001, 60361519002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Iron, Ferrous	mg/L	<0.048	0.20	0.048	02/22/21 09:02	H6

LABORATORY CONTROL SAMPLE: 2839985

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron, Ferrous	mg/L	2	2.1	103	90-110	H6

SAMPLE DUPLICATE: 2839986

Parameter	Units	60361508014 Result	Dup Result	RPD	Max RPD	Qualifiers
Iron, Ferrous	mg/L	<0.20	0.18J		20	H6

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QUALITY CONTROL DATA

Project: AMEREN LABADIE LCPA

Pace Project No.: 60361519

QC Batch: 705038	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: 60361519001, 60361519002

METHOD BLANK: 2839847 Matrix: Water

Associated Lab Samples: 60361519001, 60361519002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide, Total	mg/L	<0.026	0.050	0.026	02/20/21 09:07	

LABORATORY CONTROL SAMPLE: 2839848

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	0.5	0.50	101	80-120	

MATRIX SPIKE SAMPLE: 2839849

Parameter	Units	60361426001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	0.43	0.5	0.91	97	75-125	

SAMPLE DUPLICATE: 2839850

Parameter	Units	60361519002 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	0.040J	0.041J		20	

SAMPLE DUPLICATE: 2839851

Parameter	Units	60361508016 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	<0.050	0.031J		20	

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QUALITY CONTROL DATA

Project: AMEREN LABADIE LCPA

Pace Project No.: 60361519

QC Batch: 704993

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: 60361519001, 60361519002

METHOD BLANK: 2839665

Matrix: Water

Associated Lab Samples: 60361519001, 60361519002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.39	1.0	0.39	02/22/21 12:03	
Fluoride	mg/L	<0.086	0.20	0.086	02/22/21 12:03	
Sulfate	mg/L	<0.42	1.0	0.42	02/22/21 12:03	

METHOD BLANK: 2840545

Matrix: Water

Associated Lab Samples: 60361519001, 60361519002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.39	1.0	0.39	02/23/21 09:13	
Fluoride	mg/L	<0.086	0.20	0.086	02/23/21 09:13	
Sulfate	mg/L	<0.42	1.0	0.42	02/23/21 09:13	

LABORATORY CONTROL SAMPLE: 2839666

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2839667

2839668

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Result	Conc.						
Chloride	mg/L	197	100	100	299	301	102	103	80-120	1	15
Fluoride	mg/L	0.82	2.5	2.5	2.8	2.9	78	81	80-120	3	15 M1
Sulfate	mg/L	782	500	500	1260	1260	96	96	80-120	0	15

SAMPLE DUPLICATE: 2839669

Parameter	Units	60361288001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chloride	mg/L	197	196	1	15	
Fluoride	mg/L	0.82	0.84	2	15	
Sulfate	mg/L	782	755	4	15	

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REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE LCPA

Pace Project No.: 60361519

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: L-BMW-1D Lab ID: 60361519001 Collected: 02/18/21 10:48 Received: 02/19/21 03:53 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	1.42 ± 0.667 (0.532) C:NA T:99%	pCi/L	03/05/21 13:29	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	1.38 ± 0.483 (0.670) C:76% T:89%	pCi/L	03/05/21 14:15	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE LCPA

Pace Project No.: 60361519

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: L-BMW-2D Lab ID: 60361519002 Collected: 02/18/21 12:26 Received: 02/19/21 03:53 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.167 ± 0.438 (0.802) C:NA T:90%	pCi/L	03/05/21 13:29	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.629 ± 0.412 (0.781) C:71% T:88%	pCi/L	03/05/21 14:15	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN LABADIE LCPA

Pace Project No.: 60361519

QC Batch: 436163

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: 60361519001, 60361519002

METHOD BLANK: 2105105

Matrix: Water

Associated Lab Samples: 60361519001, 60361519002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	-0.0995 ± 0.321 (0.713) C:NA T:93%	pCi/L	03/05/21 13:07	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN LABADIE LCPA

Pace Project No.: 60361519

QC Batch:	436164	Analysis Method:	EPA 904.0
QC Batch Method:	EPA 904.0	Analysis Description:	904.0 Radium 228
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 60361519001, 60361519002

METHOD BLANK: 2105108 Matrix: Water

Associated Lab Samples: 60361519001, 60361519002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.0985 ± 0.325 (0.735) C:69% T:89%	pCi/L	03/05/21 14:16	

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QUALIFIERS

Project: AMEREN LABADIE LCPA

Pace Project No.: 60361519

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.

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

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.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN LABADIE LCPA

Pace Project No.: 60361519

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60361519001	L-BMW-1D	EPA 200.7	705001	EPA 200.7	705058
60361519002	L-BMW-2D	EPA 200.7	705001	EPA 200.7	705058
60361519001	L-BMW-1D	EPA 200.8	705002	EPA 200.8	705059
60361519002	L-BMW-2D	EPA 200.8	705002	EPA 200.8	705059
60361519001	L-BMW-1D	EPA 7470	705266	EPA 7470	705327
60361519002	L-BMW-2D	EPA 7470	705266	EPA 7470	705327
60361519001	L-BMW-1D	EPA 903.1	436163		
60361519002	L-BMW-2D	EPA 903.1	436163		
60361519001	L-BMW-1D	EPA 904.0	436164		
60361519002	L-BMW-2D	EPA 904.0	436164		
60361519001	L-BMW-1D	SM 2320B	705268		
60361519002	L-BMW-2D	SM 2320B	705268		
60361519001	L-BMW-1D	SM 2540C	705155		
60361519002	L-BMW-2D	SM 2540C	705155		
60361519001	L-BMW-1D	SM 3500-Fe B#4	705571		
60361519002	L-BMW-2D	SM 3500-Fe B#4	705571		
60361519001	L-BMW-1D	SM 3500-Fe B#4	705068		
60361519002	L-BMW-2D	SM 3500-Fe B#4	705068		
60361519001	L-BMW-1D	SM 4500-S-2 D	705038		
60361519002	L-BMW-2D	SM 4500-S-2 D	705038		
60361519001	L-BMW-1D	EPA 300.0	704993		
60361519002	L-BMW-2D	EPA 300.0	704993		

REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

WO#: 60361519



Client Name: Goldier 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 Zpk

Thermometer Used: T295 Type of Ice: Wet Blue None Cooler # 2

Cooler Temperature (°C): As-read 0.9 Corr. Factor +0.2 Corrected 1.1

Date and initials of person examining contents: 2/19/21

Temperature should be above freezing to 6°C 8.9 +0.2 9.1

Chain of Custody present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Chain of Custody relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Samples arrived within holding time:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Short Hold Time analyses (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<u>Fc+2</u>
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Correct containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Sample labels match COC: Date / time / ID / analyses	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Samples contain multiple phases? Matrix: <u>wt</u>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Containers requiring pH preservation in compliance? (HNO ₃ , H ₂ SO ₄ , HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	List sample IDs, volumes, lot #'s of preservative and the date/time added.
Cyanide water sample checks:		LOT# <u>W03173 W03222</u>
Lead acetate strip turns dark? (Record only)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Potassium iodide test strip turns blue/purple? (Preserve)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Trip Blank present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Samples from USDA Regulated Area: State:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> 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 9:49 am, 2/19/21

Project Manager Review Date: _____



MEMORANDUM

DATE March 17, 2021

Project No. 153140603

TO Project File
Golder Associates

CC Amanda Derhake, Jeff Ingram

FROM Annie Muehlfarth

EMAIL AMuehlfarth@golder.com

DATA VALIDATION SUMMARY, LABADIE ENERGY CENTER – LPCA – BACKGROUND SAMPLES - DATA PACKAGE 60361519REV1

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

- When a compound was detected in a sample result between the 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 results were recorded at the detection value and qualified as estimates (J).

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

Company Name: Golder Associates
 Project Name: Ameren - LEC - LCPA
 Reviewer: A. Muehlfarth

Project Manager: J. Ingram
 Project Number: 153140603
 Validation Date: 03/17/2021

Laboratory: Pace Analytical Services, LLC

SDG #: 60361519

Analytical Method (type and no.): EPA 200.7/200.8 (Total Metals); EPA 7470 (Mercury); EPA 903.1/904.0 (Rad-226/Rad-228); SM2320B (Alkalinity); SM2540C (TDS);

Matrix: Air Soil/Sed. Water Waste SM 3500-FE B#4 (Ferric/Ferrous Iron); SM 4500-S-2-D (Total Sulfide); EPA 300.0 (Anions)

Sample Names L-BMW-1D, L-BMW-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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>2/18/2021</u>
b) Sampling team indicated?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>BTT</u>
c) Sample location noted?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u></u>
d) Sample depth indicated (Soils)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u></u>
e) Sample type indicated (grab/composite)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>Grab</u>
f) Field QC noted?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u></u>
g) Field parameters collected (note types)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>pH, Sp.Cond, ORP, Temp, DO, Turb</u>
h) Field Calibration within control limits?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u></u>
i) Notations of unacceptable field conditions/performances from field logs or field notes?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u></u>
j) Does the laboratory narrative indicate deficiencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u></u>

Note Deficiencies: _____

Chain-of-Custody (COC)	YES	NO	NA	COMMENTS
a) Was the COC properly completed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u></u>
b) Was the COC signed by both field and laboratory personnel?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u></u>
c) Were samples received in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u></u>

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

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

Blanks	YES	NO	NA	COMMENTS
a) Were analytes detected in the method blank(s)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
b) Were analytes detected in the field blank(s)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____
c) Were analytes detected in the equipment blank(s)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____
d) Were analytes detected in the trip blank(s)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____

Laboratory Control Sample (LCS)	YES	NO	NA	COMMENTS
a) Was a LCS analyzed once per SDG?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b) Were the proper analytes included in the LCS?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c) Was the LCS accuracy criteria met?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

Duplicates	YES	NO	NA	COMMENTS
a) Were field duplicates collected (note original and duplicate sample names)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
b) Were field dup. precision criteria met (note RPD)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____
c) Were lab duplicates analyzed (note original and duplicate samples)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
d) Were lab dup. precision criteria met (note RPD)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Max RPD: 4% (<10%) _____

Blind Standards	YES	NO	NA	COMMENTS
a) Was a blind standard used (indicate name, analytes included and concentrations)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
b) Was the %D within control limits?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____

Matrix Spike/Matrix Spike Duplicate (MS/MSD)	YES	NO	NA	COMMENTS
a) Was MS accuracy criteria met?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Recovery could not be calculated since sample contained high concentration of analyte?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____
b) Was MSD accuracy criteria met?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Recovery could not be calculated since sample contained high concentration of analyte?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____
c) Were MS/MSD precision criteria met?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

Comments/Notes:

Ferrous Iron analyzed outside of hold time in all samples.

Dilutions: Sulfate was diluted in all samples, no qualification necessary.

MS/MSD:

2839667/2839668: MS % recovery low for Fluoride. MS/MSD performed on unrelated sample, no qualification necessary.

June 02, 2021

Jeffrey Ingram
Golder Associates
13515 Barrett Parkway Drive
Suite 260
Ballwin, MO 63021

RE: Project: AMEREN LEC LCPA
Pace Project No.: 60367051

Dear Jeffrey Ingram:

Enclosed are the analytical results for sample(s) received by the laboratory between April 17, 2021 and April 24, 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 - 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



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

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 #: 9526

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 #: 200030

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

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SAMPLE SUMMARY

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60367051001	L-UMW-7D	Water	04/15/21 10:18	04/17/21 03:35
60367051002	L-UMW-MS-1	Water	04/15/21 10:18	04/17/21 03:35
60367051003	L-UMW-MSD-1	Water	04/15/21 10:18	04/17/21 03:35
60367051004	L-UMW-8D	Water	04/19/21 10:16	04/21/21 03:49
60367051005	L-UMW-9D	Water	04/19/21 11:23	04/21/21 03:49
60367051006	L-UMW-1D	Water	04/19/21 13:00	04/21/21 03:49
60367051007	L-UMW-2D	Water	04/19/21 14:23	04/21/21 03:49
60367051008	L-UMW-3D	Water	04/19/21 15:40	04/21/21 03:49
60367051009	L-UMW-FB-1	Water	04/19/21 11:45	04/21/21 03:49
60367051010	L-UMW-FB-2	Water	04/19/21 14:45	04/21/21 03:49
60367051011	L-UMW-DUP-1	Water	04/19/21 00:00	04/21/21 03:49
60367051012	L-UMW-DUP-2	Water	04/19/21 00:00	04/21/21 03:49
60367051013	L-UMW-4D	Water	04/20/21 15:30	04/21/21 03:49
60367051014	L-UMW-5D	Water	04/21/21 11:58	04/24/21 03:10
60367051015	L-UMW-6D	Water	04/21/21 09:47	04/24/21 03:10

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60367051001	L-UMW-7D	EPA 200.7	JLH	13	PASI-K
		EPA 200.8	JDE	6	PASI-K
		EPA 7470	OMT	1	PASI-K
		EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		SM 2320B	MAP	1	PASI-K
		SM 2540C	AJS	1	PASI-K
		SM 3500-Fe B#4	LDB	1	PASI-K
		SM 3500-Fe B#4	MAW	1	PASI-K
		SM 4500-S-2 D	MAW	1	PASI-K
60367051002	L-UMW-MS-1	EPA 300.0	CRN2, VRP	3	PASI-K
		EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
60367051003	L-UMW-MSD-1	EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
60367051004	L-UMW-8D	EPA 200.7	JLH	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	OMT	1	PASI-K
		EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		SM 2320B	MAP	1	PASI-K
		SM 2540C	LDB	1	PASI-K
		SM 3500-Fe B#4	LDB	1	PASI-K
		SM 3500-Fe B#4	MAW	1	PASI-K
		SM 4500-S-2 D	MAW	1	PASI-K
60367051005	L-UMW-9D	EPA 300.0	VRP	3	PASI-K
		EPA 200.7	JLH	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	OMT	1	PASI-K
		EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		SM 2320B	MAP	1	PASI-K
		SM 2540C	LDB	1	PASI-K
		SM 3500-Fe B#4	LDB	1	PASI-K
		SM 3500-Fe B#4	MAW	1	PASI-K
SM 4500-S-2 D	MAW	1	PASI-K		
	EPA 300.0	VRP	3	PASI-K	

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SAMPLE ANALYTE COUNT

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory		
60367051006	L-UMW-1D	EPA 200.7	JLH	13	PASI-K		
		EPA 200.8	JGP	6	PASI-K		
		EPA 7470	OMT	1	PASI-K		
		EPA 903.1	SLC	1	PASI-PA		
		EPA 904.0	VAL	1	PASI-PA		
		SM 2320B	MAP	1	PASI-K		
		SM 2540C	LDB	1	PASI-K		
		SM 3500-Fe B#4	LDB	1	PASI-K		
		SM 3500-Fe B#4	MAW	1	PASI-K		
		SM 4500-S-2 D	MAW	1	PASI-K		
		EPA 300.0	VRP	3	PASI-K		
		60367051007	L-UMW-2D	EPA 200.7	JLH	13	PASI-K
				EPA 200.8	JGP	6	PASI-K
EPA 7470	OMT			1	PASI-K		
EPA 903.1	SLC			1	PASI-PA		
EPA 904.0	VAL			1	PASI-PA		
SM 2320B	MAP			1	PASI-K		
SM 2540C	LDB			1	PASI-K		
SM 3500-Fe B#4	LDB			1	PASI-K		
SM 3500-Fe B#4	MAW			1	PASI-K		
SM 4500-S-2 D	MAW			1	PASI-K		
EPA 300.0	VRP			3	PASI-K		
60367051008	L-UMW-3D			EPA 200.7	JLH	13	PASI-K
				EPA 200.8	JGP	6	PASI-K
		EPA 7470	OMT	1	PASI-K		
		EPA 903.1	SLC	1	PASI-PA		
		EPA 904.0	VAL	1	PASI-PA		
		SM 2320B	MAP	1	PASI-K		
		SM 2540C	LDB	1	PASI-K		
		SM 3500-Fe B#4	LDB	1	PASI-K		
		SM 3500-Fe B#4	MAW	1	PASI-K		
		SM 4500-S-2 D	MAW	1	PASI-K		
		EPA 300.0	VRP	3	PASI-K		
		60367051009	L-UMW-FB-1	EPA 200.7	JLH	13	PASI-K
				EPA 200.8	JGP	6	PASI-K
EPA 7470	OMT			1	PASI-K		
EPA 903.1	SLC			1	PASI-PA		

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SAMPLE ANALYTE COUNT

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 904.0	VAL	1	PASI-PA
		SM 2320B	MAP	1	PASI-K
		SM 2540C	LDB	1	PASI-K
		SM 3500-Fe B#4	LDB	1	PASI-K
		SM 3500-Fe B#4	MAW	1	PASI-K
		SM 4500-S-2 D	MAW	1	PASI-K
		EPA 300.0	VRP	3	PASI-K
60367051010	L-UMW-FB-2	EPA 200.7	JLH	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	OMT	1	PASI-K
		EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		SM 2320B	MAP	1	PASI-K
		SM 2540C	LDB	1	PASI-K
		SM 3500-Fe B#4	LDB	1	PASI-K
		SM 3500-Fe B#4	MAW	1	PASI-K
		SM 4500-S-2 D	MAW	1	PASI-K
		EPA 300.0	VRP	3	PASI-K
60367051011	L-UMW-DUP-1	EPA 200.7	JLH	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	OMT	1	PASI-K
		EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		SM 2320B	MAP	1	PASI-K
		SM 2540C	LDB	1	PASI-K
		SM 3500-Fe B#4	LDB	1	PASI-K
		SM 3500-Fe B#4	MAW	1	PASI-K
		SM 4500-S-2 D	MAW	1	PASI-K
		EPA 300.0	VRP	3	PASI-K
60367051012	L-UMW-DUP-2	EPA 200.7	JLH	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	OMT	1	PASI-K
		EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		SM 2320B	MAP	1	PASI-K
		SM 2540C	LDB	1	PASI-K
		SM 3500-Fe B#4	LDB	1	PASI-K

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60367051013	L-UMW-4D	SM 3500-Fe B#4	MAW	1	PASI-K
		SM 4500-S-2 D	MAW	1	PASI-K
		EPA 300.0	VRP	3	PASI-K
		EPA 200.7	JLH	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	OMT	1	PASI-K
		EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		SM 2320B	MAP	1	PASI-K
		SM 2540C	LDB	1	PASI-K
60367051014	L-UMW-5D	SM 3500-Fe B#4	LDB	1	PASI-K
		SM 3500-Fe B#4	MAW	1	PASI-K
		SM 4500-S-2 D	MAW	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
		EPA 200.7	JLH	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	JDE	1	PASI-K
		EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		SM 2320B	MAP	1	PASI-K
60367051015	L-UMW-6D	SM 2540C	LDB	1	PASI-K
		SM 3500-Fe B#4	LDB	1	PASI-K
		SM 3500-Fe B#4	MAW	1	PASI-K
		SM 4500-S-2 D	MAW	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
		EPA 200.7	JLH	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	JDE	1	PASI-K
		EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
60367051015	L-UMW-6D	SM 2320B	MAP	1	PASI-K
		SM 2540C	LDB	1	PASI-K
		SM 3500-Fe B#4	LDB	1	PASI-K
		SM 3500-Fe B#4	MAW	1	PASI-K
		SM 4500-S-2 D	MAW	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: AMEREN LEC LCPA
Pace Project No.: 60367051

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
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PASI-K = Pace Analytical Services - Kansas City
PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

Sample: L-UMW-7D **Lab ID: 60367051001** Collected: 04/15/21 10:18 Received: 04/17/21 03:35 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total									
Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City									
Barium	81.5	ug/L	5.0	1.8	1	04/28/21 14:32	05/10/21 19:09	7440-39-3	
Beryllium	<0.39	ug/L	1.0	0.39	1	04/28/21 14:32	05/10/21 19:09	7440-41-7	
Boron	5170	ug/L	100	8.6	1	04/28/21 14:32	05/10/21 19:09	7440-42-8	M1
Calcium	192000	ug/L	200	75.4	1	04/28/21 14:32	05/10/21 19:09	7440-70-2	M1
Cobalt	<0.95	ug/L	5.0	0.95	1	04/28/21 14:32	05/10/21 19:09	7440-48-4	
Iron	9520	ug/L	50.0	21.4	1	04/28/21 14:32	05/10/21 19:09	7439-89-6	
Lead	6.8J	ug/L	10.0	3.8	1	04/28/21 14:32	05/10/21 19:09	7439-92-1	
Lithium	23.7	ug/L	10.0	7.7	1	04/28/21 14:32	05/10/21 19:09	7439-93-2	
Magnesium	25400	ug/L	50.0	31.4	1	04/28/21 14:32	05/10/21 19:09	7439-95-4	
Manganese	1720	ug/L	5.0	0.74	1	04/28/21 14:32	05/10/21 19:09	7439-96-5	
Molybdenum	199	ug/L	20.0	2.2	1	04/28/21 14:32	05/13/21 14:16	7439-98-7	
Potassium	6480	ug/L	500	146	1	04/28/21 14:32	05/10/21 19:09	7440-09-7	
Sodium	56000	ug/L	500	254	1	04/28/21 14:32	05/10/21 19:09	7440-23-5	
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City									
Antimony	<0.10	ug/L	1.0	0.10	1	04/28/21 14:32	05/07/21 14:10	7440-36-0	
Arsenic	22.3	ug/L	1.0	0.11	1	04/28/21 14:32	05/07/21 14:10	7440-38-2	
Cadmium	<0.062	ug/L	0.50	0.062	1	04/28/21 14:32	05/07/21 14:10	7440-43-9	
Chromium	0.33J	ug/L	1.0	0.23	1	04/28/21 14:32	05/07/21 14:10	7440-47-3	B
Selenium	<0.18	ug/L	1.0	0.18	1	04/28/21 14:32	05/07/21 14:10	7782-49-2	
Thallium	<0.094	ug/L	1.0	0.094	1	04/28/21 14:32	05/07/21 14:10	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City									
Mercury	<0.096	ug/L	0.20	0.096	1	05/07/21 19:24	05/10/21 16:22	7439-97-6	
2320B Alkalinity									
Analytical Method: SM 2320B Pace Analytical Services - Kansas City									
Alkalinity, Total as CaCO3	450	mg/L	20.0	7.5	1		04/27/21 11:50		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C Pace Analytical Services - Kansas City									
Total Dissolved Solids	825	mg/L	10.0	10.0	1		04/22/21 13:05		
Iron, Ferric (Calculation)									
Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City									
Iron, Ferric	9.3	mg/L	0.050		1		05/14/21 14:45	7439-89-6	
Iron, Ferrous									
Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City									
Iron, Ferrous	0.20J	mg/L	0.20	0.048	1		04/26/21 11:03		H6

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

Sample: L-UMW-7D **Lab ID: 60367051001** Collected: 04/15/21 10:18 Received: 04/17/21 03:35 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	0.031J	mg/L	0.050	0.026	1		04/22/21 16:18	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	7.5	mg/L	1.0	0.39	1		04/30/21 09:21	16887-00-6	
Fluoride	0.33	mg/L	0.20	0.086	1		04/30/21 09:21	16984-48-8	
Sulfate	222	mg/L	20.0	8.4	20		05/01/21 12:11	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

Sample: L-UMW-8D **Lab ID: 60367051004** Collected: 04/19/21 10:16 Received: 04/21/21 03:49 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	191	ug/L	5.0	1.8	1	04/30/21 13:00	05/10/21 21:26	7440-39-3	
Beryllium	<0.39	ug/L	1.0	0.39	1	04/30/21 13:00	05/10/21 21:26	7440-41-7	
Boron	3390	ug/L	100	8.6	1	04/30/21 13:00	05/10/21 21:26	7440-42-8	
Calcium	173000	ug/L	200	75.4	1	04/30/21 13:00	05/10/21 21:26	7440-70-2	
Cobalt	<0.95	ug/L	5.0	0.95	1	04/30/21 13:00	05/10/21 21:26	7440-48-4	
Iron	26600	ug/L	50.0	21.4	1	04/30/21 13:00	05/10/21 21:26	7439-89-6	
Lead	6.7J	ug/L	10.0	3.8	1	04/30/21 13:00	05/10/21 21:26	7439-92-1	
Lithium	35.8	ug/L	10.0	7.7	1	04/30/21 13:00	05/10/21 21:26	7439-93-2	
Magnesium	44900	ug/L	50.0	31.4	1	04/30/21 13:00	05/10/21 21:26	7439-95-4	
Manganese	1070	ug/L	5.0	0.74	1	04/30/21 13:00	05/10/21 21:26	7439-96-5	
Molybdenum	16.7J	ug/L	20.0	2.2	1	04/30/21 13:00	05/10/21 21:26	7439-98-7	
Potassium	6020	ug/L	500	146	1	04/30/21 13:00	05/10/21 21:26	7440-09-7	
Sodium	31600	ug/L	500	254	1	04/30/21 13:00	05/10/21 21:26	7440-23-5	
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8									
Pace Analytical Services - Kansas City									
Antimony	<0.10	ug/L	1.0	0.10	1	05/06/21 15:30	06/02/21 09:46	7440-36-0	
Arsenic	28.8	ug/L	1.0	0.11	1	05/06/21 15:30	06/01/21 19:24	7440-38-2	
Cadmium	<0.062	ug/L	0.50	0.062	1	05/06/21 15:30	06/01/21 19:24	7440-43-9	
Chromium	0.33J	ug/L	1.0	0.23	1	05/06/21 15:30	06/01/21 19:24	7440-47-3	
Selenium	<0.18	ug/L	1.0	0.18	1	05/06/21 15:30	06/01/21 19:24	7782-49-2	
Thallium	<0.094	ug/L	1.0	0.094	1	05/06/21 15:30	06/01/21 19:24	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470 Preparation Method: EPA 7470									
Pace Analytical Services - Kansas City									
Mercury	<0.096	ug/L	0.20	0.096	1	05/10/21 17:40	05/11/21 14:01	7439-97-6	
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Kansas City									
Alkalinity, Total as CaCO3	360	mg/L	20.0	7.5	1		04/30/21 16:56		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Kansas City									
Total Dissolved Solids	804	mg/L	10.0	10.0	1		04/26/21 11:00		
Iron, Ferric (Calculation)									
Analytical Method: SM 3500-Fe B#4									
Pace Analytical Services - Kansas City									
Iron, Ferric	25.5	mg/L	0.050		1		05/14/21 14:46	7439-89-6	
Iron, Ferrous									
Analytical Method: SM 3500-Fe B#4									
Pace Analytical Services - Kansas City									
Iron, Ferrous	1.1	mg/L	0.20	0.048	1		04/26/21 11:18		H6

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

Sample: L-UMW-8D **Lab ID: 60367051004** Collected: 04/19/21 10:16 Received: 04/21/21 03:49 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	0.034J	mg/L	0.050	0.026	1		04/23/21 14:25	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	10.8	mg/L	1.0	0.39	1		04/29/21 03:13	16887-00-6	
Fluoride	0.25	mg/L	0.20	0.086	1		04/29/21 03:13	16984-48-8	
Sulfate	260	mg/L	50.0	21.0	50		04/29/21 14:16	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

Sample: L-UMW-9D **Lab ID: 60367051005** Collected: 04/19/21 11:23 Received: 04/21/21 03:49 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	540	ug/L	5.0	1.8	1	04/30/21 13:00	05/10/21 21:29	7440-39-3	
Beryllium	<0.39	ug/L	1.0	0.39	1	04/30/21 13:00	05/10/21 21:29	7440-41-7	
Boron	95.6J	ug/L	100	8.6	1	04/30/21 13:00	05/10/21 21:29	7440-42-8	
Calcium	122000	ug/L	200	75.4	1	04/30/21 13:00	05/10/21 21:29	7440-70-2	
Cobalt	<0.95	ug/L	5.0	0.95	1	04/30/21 13:00	05/10/21 21:29	7440-48-4	
Iron	23800	ug/L	50.0	21.4	1	04/30/21 13:00	05/10/21 21:29	7439-89-6	
Lead	7.4J	ug/L	10.0	3.8	1	04/30/21 13:00	05/10/21 21:29	7439-92-1	
Lithium	15.0	ug/L	10.0	7.7	1	04/30/21 13:00	05/10/21 21:29	7439-93-2	
Magnesium	34300	ug/L	50.0	31.4	1	04/30/21 13:00	05/10/21 21:29	7439-95-4	
Manganese	408	ug/L	5.0	0.74	1	04/30/21 13:00	05/10/21 21:29	7439-96-5	
Molybdenum	<2.2	ug/L	20.0	2.2	1	04/30/21 13:00	05/10/21 21:29	7439-98-7	
Potassium	4460	ug/L	500	146	1	04/30/21 13:00	05/10/21 21:29	7440-09-7	
Sodium	14000	ug/L	500	254	1	04/30/21 13:00	05/10/21 21:29	7440-23-5	
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8									
Pace Analytical Services - Kansas City									
Antimony	<0.10	ug/L	1.0	0.10	1	05/06/21 15:30	06/02/21 09:47	7440-36-0	
Arsenic	34.4	ug/L	1.0	0.11	1	05/06/21 15:30	06/01/21 19:26	7440-38-2	
Cadmium	<0.062	ug/L	0.50	0.062	1	05/06/21 15:30	06/01/21 19:26	7440-43-9	
Chromium	0.38J	ug/L	1.0	0.23	1	05/06/21 15:30	06/01/21 19:26	7440-47-3	
Selenium	<0.18	ug/L	1.0	0.18	1	05/06/21 15:30	06/01/21 19:26	7782-49-2	
Thallium	<0.094	ug/L	1.0	0.094	1	05/06/21 15:30	06/01/21 19:26	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470 Preparation Method: EPA 7470									
Pace Analytical Services - Kansas City									
Mercury	<0.096	ug/L	0.20	0.096	1	05/10/21 17:40	05/11/21 14:08	7439-97-6	
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Kansas City									
Alkalinity, Total as CaCO3	417	mg/L	20.0	7.5	1		04/30/21 17:02		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Kansas City									
Total Dissolved Solids	500	mg/L	10.0	10.0	1		04/26/21 11:00		
Iron, Ferric (Calculation)									
Analytical Method: SM 3500-Fe B#4									
Pace Analytical Services - Kansas City									
Iron, Ferric	22.9	mg/L	0.050		1		05/14/21 14:46	7439-89-6	
Iron, Ferrous									
Analytical Method: SM 3500-Fe B#4									
Pace Analytical Services - Kansas City									
Iron, Ferrous	0.91	mg/L	0.20	0.048	1		04/26/21 11:18		H6

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

Sample: L-UMW-9D **Lab ID: 60367051005** Collected: 04/19/21 11:23 Received: 04/21/21 03:49 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		04/23/21 14:25	18496-25-8	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0									
Pace Analytical Services - Kansas City									
Chloride	22.5	mg/L	2.0	0.78	2		04/29/21 03:45	16887-00-6	
Fluoride	0.26	mg/L	0.20	0.086	1		04/29/21 03:29	16984-48-8	
Sulfate	<0.42	mg/L	1.0	0.42	1		04/29/21 03:29	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

Sample: L-UMW-1D Lab ID: 60367051006 Collected: 04/19/21 13:00 Received: 04/21/21 03:49 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	514	ug/L	5.0	1.8	1	04/30/21 13:00	05/10/21 21:31	7440-39-3	
Beryllium	<0.39	ug/L	1.0	0.39	1	04/30/21 13:00	05/10/21 21:31	7440-41-7	
Boron	439	ug/L	100	8.6	1	04/30/21 13:00	05/10/21 21:31	7440-42-8	
Calcium	148000	ug/L	200	75.4	1	04/30/21 13:00	05/10/21 21:31	7440-70-2	
Cobalt	<0.95	ug/L	5.0	0.95	1	04/30/21 13:00	05/10/21 21:31	7440-48-4	
Iron	17800	ug/L	50.0	21.4	1	04/30/21 13:00	05/10/21 21:31	7439-89-6	
Lead	<3.8	ug/L	10.0	3.8	1	04/30/21 13:00	05/10/21 21:31	7439-92-1	
Lithium	29.4	ug/L	10.0	7.7	1	04/30/21 13:00	05/10/21 21:31	7439-93-2	
Magnesium	37000	ug/L	50.0	31.4	1	04/30/21 13:00	05/10/21 21:31	7439-95-4	
Manganese	440	ug/L	5.0	0.74	1	04/30/21 13:00	05/10/21 21:31	7439-96-5	
Molybdenum	4.5J	ug/L	20.0	2.2	1	04/30/21 13:00	05/10/21 21:31	7439-98-7	
Potassium	6530	ug/L	500	146	1	04/30/21 13:00	05/10/21 21:31	7440-09-7	
Sodium	18100	ug/L	500	254	1	04/30/21 13:00	05/10/21 21:31	7440-23-5	
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8									
Pace Analytical Services - Kansas City									
Antimony	<0.10	ug/L	1.0	0.10	1	05/06/21 15:30	06/02/21 09:48	7440-36-0	
Arsenic	37.1	ug/L	1.0	0.11	1	05/06/21 15:30	06/01/21 19:28	7440-38-2	
Cadmium	<0.062	ug/L	0.50	0.062	1	05/06/21 15:30	06/01/21 19:28	7440-43-9	
Chromium	0.36J	ug/L	1.0	0.23	1	05/06/21 15:30	06/01/21 19:28	7440-47-3	
Selenium	<0.18	ug/L	1.0	0.18	1	05/06/21 15:30	06/01/21 19:28	7782-49-2	
Thallium	<0.094	ug/L	1.0	0.094	1	05/06/21 15:30	06/01/21 19:28	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470 Preparation Method: EPA 7470									
Pace Analytical Services - Kansas City									
Mercury	<0.096	ug/L	0.20	0.096	1	05/10/21 17:40	05/11/21 14:10	7439-97-6	
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Kansas City									
Alkalinity, Total as CaCO3	576	mg/L	20.0	7.5	1		04/30/21 17:09		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Kansas City									
Total Dissolved Solids	608	mg/L	10.0	10.0	1		04/26/21 11:00		
Iron, Ferric (Calculation)									
Analytical Method: SM 3500-Fe B#4									
Pace Analytical Services - Kansas City									
Iron, Ferric	17.3	mg/L	0.050		1		05/14/21 14:46	7439-89-6	
Iron, Ferrous									
Analytical Method: SM 3500-Fe B#4									
Pace Analytical Services - Kansas City									
Iron, Ferrous	0.57	mg/L	0.20	0.048	1		04/26/21 11:18		H6

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

Sample: L-UMW-1D **Lab ID: 60367051006** Collected: 04/19/21 13:00 Received: 04/21/21 03:49 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		04/23/21 14:25	18496-25-8	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0									
Pace Analytical Services - Kansas City									
Chloride	6.7	mg/L	1.0	0.39	1		04/29/21 04:01	16887-00-6	
Fluoride	0.30	mg/L	0.20	0.086	1		04/29/21 04:01	16984-48-8	
Sulfate	9.0	mg/L	1.0	0.42	1		04/29/21 04:01	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

Sample: L-UMW-2D **Lab ID: 60367051007** Collected: 04/19/21 14:23 Received: 04/21/21 03:49 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total		Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City							
Barium	144	ug/L	5.0	1.8	1	04/30/21 13:00	05/10/21 21:42	7440-39-3	
Beryllium	<0.39	ug/L	1.0	0.39	1	04/30/21 13:00	05/10/21 21:42	7440-41-7	
Boron	1340	ug/L	100	8.6	1	04/30/21 13:00	05/10/21 21:42	7440-42-8	
Calcium	129000	ug/L	200	75.4	1	04/30/21 13:00	05/10/21 21:42	7440-70-2	
Cobalt	<0.95	ug/L	5.0	0.95	1	04/30/21 13:00	05/10/21 21:42	7440-48-4	
Iron	3420	ug/L	50.0	21.4	1	04/30/21 13:00	05/10/21 21:42	7439-89-6	
Lead	7.0J	ug/L	10.0	3.8	1	04/30/21 13:00	05/10/21 21:42	7439-92-1	
Lithium	29.3	ug/L	10.0	7.7	1	04/30/21 13:00	05/10/21 21:42	7439-93-2	
Magnesium	27400	ug/L	50.0	31.4	1	04/30/21 13:00	05/10/21 21:42	7439-95-4	
Manganese	417	ug/L	5.0	0.74	1	04/30/21 13:00	05/10/21 21:42	7439-96-5	
Molybdenum	33.5	ug/L	20.0	2.2	1	04/30/21 13:00	05/10/21 21:42	7439-98-7	
Potassium	8330	ug/L	500	146	1	04/30/21 13:00	05/10/21 21:42	7440-09-7	
Sodium	58300	ug/L	500	254	1	04/30/21 13:00	05/10/21 21:42	7440-23-5	
200.8 MET ICPMS		Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City							
Antimony	<0.10	ug/L	1.0	0.10	1	05/06/21 15:30	06/02/21 09:50	7440-36-0	
Arsenic	1.5	ug/L	1.0	0.11	1	05/06/21 15:30	06/01/21 19:29	7440-38-2	
Cadmium	<0.062	ug/L	0.50	0.062	1	05/06/21 15:30	06/01/21 19:29	7440-43-9	
Chromium	0.32J	ug/L	1.0	0.23	1	05/06/21 15:30	06/01/21 19:29	7440-47-3	
Selenium	<0.18	ug/L	1.0	0.18	1	05/06/21 15:30	06/01/21 19:29	7782-49-2	
Thallium	<0.094	ug/L	1.0	0.094	1	05/06/21 15:30	06/01/21 19:29	7440-28-0	
7470 Mercury		Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City							
Mercury	<0.096	ug/L	0.20	0.096	1	05/10/21 17:40	05/11/21 14:12	7439-97-6	
2320B Alkalinity		Analytical Method: SM 2320B Pace Analytical Services - Kansas City							
Alkalinity, Total as CaCO3	404	mg/L	20.0	7.5	1		04/30/21 17:15		
2540C Total Dissolved Solids		Analytical Method: SM 2540C Pace Analytical Services - Kansas City							
Total Dissolved Solids	661	mg/L	10.0	10.0	1		04/26/21 11:00		
Iron, Ferric (Calculation)		Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City							
Iron, Ferric	3.2	mg/L	0.050		1		05/14/21 14:46	7439-89-6	
Iron, Ferrous		Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City							
Iron, Ferrous	0.18J	mg/L	0.20	0.048	1		04/26/21 11:19		H6

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

Sample: L-UMW-2D **Lab ID: 60367051007** Collected: 04/19/21 14:23 Received: 04/21/21 03:49 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		04/23/21 14:26	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	20.6	mg/L	5.0	1.9	5		04/29/21 04:48	16887-00-6	
Fluoride	0.37	mg/L	0.20	0.086	1		04/29/21 04:32	16984-48-8	
Sulfate	104	mg/L	10.0	4.2	10		04/29/21 14:31	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

Sample: L-UMW-3D Lab ID: 60367051008 Collected: 04/19/21 15:40 Received: 04/21/21 03:49 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	112	ug/L	5.0	1.8	1	04/30/21 13:00	05/10/21 21:44	7440-39-3	
Beryllium	<0.39	ug/L	1.0	0.39	1	04/30/21 13:00	05/10/21 21:44	7440-41-7	
Boron	10300	ug/L	100	8.6	1	04/30/21 13:00	05/10/21 21:44	7440-42-8	
Calcium	137000	ug/L	200	75.4	1	04/30/21 13:00	05/10/21 21:44	7440-70-2	
Cobalt	<0.95	ug/L	5.0	0.95	1	04/30/21 13:00	05/10/21 21:44	7440-48-4	
Iron	96.7	ug/L	50.0	21.4	1	04/30/21 13:00	05/10/21 21:44	7439-89-6	
Lead	5.0J	ug/L	10.0	3.8	1	04/30/21 13:00	05/10/21 21:44	7439-92-1	
Lithium	22.8	ug/L	10.0	7.7	1	04/30/21 13:00	05/10/21 21:44	7439-93-2	
Magnesium	5350	ug/L	50.0	31.4	1	04/30/21 13:00	05/10/21 21:44	7439-95-4	
Manganese	149	ug/L	5.0	0.74	1	04/30/21 13:00	05/10/21 21:44	7439-96-5	
Molybdenum	148	ug/L	20.0	2.2	1	04/30/21 13:00	05/10/21 21:44	7439-98-7	
Potassium	13700	ug/L	500	146	1	04/30/21 13:00	05/10/21 21:44	7440-09-7	
Sodium	74700	ug/L	500	254	1	04/30/21 13:00	05/10/21 21:44	7440-23-5	
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8									
Pace Analytical Services - Kansas City									
Antimony	<0.10	ug/L	1.0	0.10	1	05/06/21 15:30	06/02/21 09:51	7440-36-0	
Arsenic	25.6	ug/L	1.0	0.11	1	05/06/21 15:30	06/01/21 19:31	7440-38-2	
Cadmium	<0.062	ug/L	0.50	0.062	1	05/06/21 15:30	06/01/21 19:31	7440-43-9	
Chromium	0.37J	ug/L	1.0	0.23	1	05/06/21 15:30	06/01/21 19:31	7440-47-3	
Selenium	<0.18	ug/L	1.0	0.18	1	05/06/21 15:30	06/01/21 19:31	7782-49-2	
Thallium	<0.094	ug/L	1.0	0.094	1	05/06/21 15:30	06/01/21 19:31	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470 Preparation Method: EPA 7470									
Pace Analytical Services - Kansas City									
Mercury	<0.096	ug/L	0.20	0.096	1	05/10/21 17:40	05/11/21 14:15	7439-97-6	
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Kansas City									
Alkalinity, Total as CaCO3	136	mg/L	20.0	7.5	1		04/30/21 17:20		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Kansas City									
Total Dissolved Solids	776	mg/L	10.0	10.0	1		04/26/21 11:00		
Iron, Ferric (Calculation)									
Analytical Method: SM 3500-Fe B#4									
Pace Analytical Services - Kansas City									
Iron, Ferric	0.051	mg/L	0.050		1		05/14/21 14:46	7439-89-6	
Iron, Ferrous									
Analytical Method: SM 3500-Fe B#4									
Pace Analytical Services - Kansas City									
Iron, Ferrous	<0.048	mg/L	0.20	0.048	1		04/26/21 11:20		H6

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

Sample: L-UMW-3D **Lab ID: 60367051008** Collected: 04/19/21 15:40 Received: 04/21/21 03:49 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	0.18	mg/L	0.050	0.026	1		04/23/21 14:26	18496-25-8	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0									
Pace Analytical Services - Kansas City									
Chloride	21.2	mg/L	2.0	0.78	2		04/29/21 14:47	16887-00-6	
Fluoride	0.17J	mg/L	0.20	0.086	1		04/29/21 05:20	16984-48-8	
Sulfate	362	mg/L	50.0	21.0	50		04/29/21 05:36	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

Sample: L-UMW-FB-1 Lab ID: 60367051009 Collected: 04/19/21 11:45 Received: 04/21/21 03:49 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	04/30/21 13:00	05/10/21 21:47	7440-39-3	
Beryllium	<0.39	ug/L	1.0	0.39	1	04/30/21 13:00	05/10/21 21:47	7440-41-7	
Boron	13.4J	ug/L	100	8.6	1	04/30/21 13:00	05/10/21 21:47	7440-42-8	
Calcium	<75.4	ug/L	200	75.4	1	04/30/21 13:00	05/10/21 21:47	7440-70-2	
Cobalt	<0.95	ug/L	5.0	0.95	1	04/30/21 13:00	05/10/21 21:47	7440-48-4	
Iron	<21.4	ug/L	50.0	21.4	1	04/30/21 13:00	05/10/21 21:47	7439-89-6	
Lead	<3.8	ug/L	10.0	3.8	1	04/30/21 13:00	05/10/21 21:47	7439-92-1	
Lithium	<7.7	ug/L	10.0	7.7	1	04/30/21 13:00	05/10/21 21:47	7439-93-2	
Magnesium	<31.4	ug/L	50.0	31.4	1	04/30/21 13:00	05/10/21 21:47	7439-95-4	
Manganese	<0.74	ug/L	5.0	0.74	1	04/30/21 13:00	05/10/21 21:47	7439-96-5	
Molybdenum	<2.2	ug/L	20.0	2.2	1	04/30/21 13:00	05/10/21 21:47	7439-98-7	
Potassium	<146	ug/L	500	146	1	04/30/21 13:00	05/10/21 21:47	7440-09-7	
Sodium	<254	ug/L	500	254	1	04/30/21 13:00	05/10/21 21:47	7440-23-5	
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8									
Pace Analytical Services - Kansas City									
Antimony	<0.10	ug/L	1.0	0.10	1	05/06/21 15:30	06/02/21 09:57	7440-36-0	
Arsenic	<0.11	ug/L	1.0	0.11	1	05/06/21 15:30	06/01/21 19:39	7440-38-2	
Cadmium	<0.062	ug/L	0.50	0.062	1	05/06/21 15:30	06/01/21 19:39	7440-43-9	
Chromium	0.35J	ug/L	1.0	0.23	1	05/06/21 15:30	06/01/21 19:39	7440-47-3	
Selenium	<0.18	ug/L	1.0	0.18	1	05/06/21 15:30	06/01/21 19:39	7782-49-2	
Thallium	<0.094	ug/L	1.0	0.094	1	05/06/21 15:30	06/01/21 19:39	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470 Preparation Method: EPA 7470									
Pace Analytical Services - Kansas City									
Mercury	<0.096	ug/L	0.20	0.096	1	05/10/21 17:40	05/11/21 14:17	7439-97-6	
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Kansas City									
Alkalinity, Total as CaCO3	<7.5	mg/L	20.0	7.5	1		04/30/21 17:35		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Kansas City									
Total Dissolved Solids	11.5	mg/L	5.0	5.0	1		04/26/21 11:00		
Iron, Ferric (Calculation)									
Analytical Method: SM 3500-Fe B#4									
Pace Analytical Services - Kansas City									
Iron, Ferric	0.0000000 0010J	mg/L	0.050		1		05/14/21 14:46	7439-89-6	
Iron, Ferrous									
Analytical Method: SM 3500-Fe B#4									
Pace Analytical Services - Kansas City									
Iron, Ferrous	<0.048	mg/L	0.20	0.048	1		04/26/21 11:18		H6

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

Sample: L-UMW-FB-1 **Lab ID: 60367051009** Collected: 04/19/21 11:45 Received: 04/21/21 03:49 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		04/23/21 14:27	18496-25-8	
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		04/29/21 06:23	16887-00-6	
Fluoride	<0.086	mg/L	0.20	0.086	1		04/29/21 06:23	16984-48-8	
Sulfate	<0.42	mg/L	1.0	0.42	1		04/29/21 06:23	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

Sample: L-UMW-FB-2 Lab ID: 60367051010 Collected: 04/19/21 14:45 Received: 04/21/21 03:49 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	04/30/21 13:00	05/10/21 21:49	7440-39-3	
Beryllium	<0.39	ug/L	1.0	0.39	1	04/30/21 13:00	05/10/21 21:49	7440-41-7	
Boron	<8.6	ug/L	100	8.6	1	04/30/21 13:00	05/10/21 21:49	7440-42-8	
Calcium	<75.4	ug/L	200	75.4	1	04/30/21 13:00	05/10/21 21:49	7440-70-2	
Cobalt	<0.95	ug/L	5.0	0.95	1	04/30/21 13:00	05/10/21 21:49	7440-48-4	
Iron	<21.4	ug/L	50.0	21.4	1	04/30/21 13:00	05/10/21 21:49	7439-89-6	
Lead	<3.8	ug/L	10.0	3.8	1	04/30/21 13:00	05/10/21 21:49	7439-92-1	
Lithium	<7.7	ug/L	10.0	7.7	1	04/30/21 13:00	05/10/21 21:49	7439-93-2	
Magnesium	<31.4	ug/L	50.0	31.4	1	04/30/21 13:00	05/10/21 21:49	7439-95-4	
Manganese	<0.74	ug/L	5.0	0.74	1	04/30/21 13:00	05/10/21 21:49	7439-96-5	
Molybdenum	<2.2	ug/L	20.0	2.2	1	04/30/21 13:00	05/10/21 21:49	7439-98-7	
Potassium	154J	ug/L	500	146	1	04/30/21 13:00	05/10/21 21:49	7440-09-7	B
Sodium	<254	ug/L	500	254	1	04/30/21 13:00	05/10/21 21:49	7440-23-5	
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8									
Pace Analytical Services - Kansas City									
Antimony	<0.10	ug/L	1.0	0.10	1	05/06/21 15:30	06/02/21 09:58	7440-36-0	
Arsenic	<0.11	ug/L	1.0	0.11	1	05/06/21 15:30	06/01/21 19:41	7440-38-2	
Cadmium	<0.062	ug/L	0.50	0.062	1	05/06/21 15:30	06/01/21 19:41	7440-43-9	
Chromium	0.33J	ug/L	1.0	0.23	1	05/06/21 15:30	06/01/21 19:41	7440-47-3	
Selenium	<0.18	ug/L	1.0	0.18	1	05/06/21 15:30	06/01/21 19:41	7782-49-2	
Thallium	<0.094	ug/L	1.0	0.094	1	05/06/21 15:30	06/01/21 19:41	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470 Preparation Method: EPA 7470									
Pace Analytical Services - Kansas City									
Mercury	<0.096	ug/L	0.20	0.096	1	05/10/21 17:40	05/11/21 14:24	7439-97-6	
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Kansas City									
Alkalinity, Total as CaCO3	<7.5	mg/L	20.0	7.5	1		04/30/21 17:39		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Kansas City									
Total Dissolved Solids	15.0	mg/L	5.0	5.0	1		04/26/21 11:00		
Iron, Ferric (Calculation)									
Analytical Method: SM 3500-Fe B#4									
Pace Analytical Services - Kansas City									
Iron, Ferric	0.0032J	mg/L	0.050		1		05/14/21 14:46	7439-89-6	
Iron, Ferrous									
Analytical Method: SM 3500-Fe B#4									
Pace Analytical Services - Kansas City									
Iron, Ferrous	<0.048	mg/L	0.20	0.048	1		04/26/21 11:19		H6

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

Sample: L-UMW-FB-2 **Lab ID: 60367051010** Collected: 04/19/21 14:45 Received: 04/21/21 03:49 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		04/26/21 14:45	18496-25-8	
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		04/29/21 06:39	16887-00-6	
Fluoride	<0.086	mg/L	0.20	0.086	1		04/29/21 06:39	16984-48-8	
Sulfate	<0.42	mg/L	1.0	0.42	1		04/29/21 06:39	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

Sample: L-UMW-DUP-1 Lab ID: 60367051011 Collected: 04/19/21 00:00 Received: 04/21/21 03:49 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	192	ug/L	5.0	1.8	1	04/30/21 13:00	05/10/21 21:52	7440-39-3	
Beryllium	<0.39	ug/L	1.0	0.39	1	04/30/21 13:00	05/10/21 21:52	7440-41-7	
Boron	3370	ug/L	100	8.6	1	04/30/21 13:00	05/10/21 21:52	7440-42-8	
Calcium	171000	ug/L	200	75.4	1	04/30/21 13:00	05/10/21 21:52	7440-70-2	
Cobalt	<0.95	ug/L	5.0	0.95	1	04/30/21 13:00	05/10/21 21:52	7440-48-4	
Iron	27000	ug/L	50.0	21.4	1	04/30/21 13:00	05/10/21 21:52	7439-89-6	
Lead	6.7J	ug/L	10.0	3.8	1	04/30/21 13:00	05/10/21 21:52	7439-92-1	
Lithium	30.3	ug/L	10.0	7.7	1	04/30/21 13:00	05/10/21 21:52	7439-93-2	
Magnesium	44300	ug/L	50.0	31.4	1	04/30/21 13:00	05/10/21 21:52	7439-95-4	
Manganese	1050	ug/L	5.0	0.74	1	04/30/21 13:00	05/10/21 21:52	7439-96-5	
Molybdenum	15.5J	ug/L	20.0	2.2	1	04/30/21 13:00	05/10/21 21:52	7439-98-7	
Potassium	5890	ug/L	500	146	1	04/30/21 13:00	05/10/21 21:52	7440-09-7	
Sodium	30800	ug/L	500	254	1	04/30/21 13:00	05/10/21 21:52	7440-23-5	
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8									
Pace Analytical Services - Kansas City									
Antimony	<0.10	ug/L	1.0	0.10	1	05/06/21 15:30	06/02/21 09:59	7440-36-0	
Arsenic	28.6	ug/L	1.0	0.11	1	05/06/21 15:30	06/01/21 19:43	7440-38-2	
Cadmium	<0.062	ug/L	0.50	0.062	1	05/06/21 15:30	06/01/21 19:43	7440-43-9	
Chromium	0.79J	ug/L	1.0	0.23	1	05/06/21 15:30	06/01/21 19:43	7440-47-3	
Selenium	<0.18	ug/L	1.0	0.18	1	05/06/21 15:30	06/01/21 19:43	7782-49-2	
Thallium	<0.094	ug/L	1.0	0.094	1	05/06/21 15:30	06/01/21 19:43	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470 Preparation Method: EPA 7470									
Pace Analytical Services - Kansas City									
Mercury	<0.096	ug/L	0.20	0.096	1	05/10/21 17:40	05/11/21 14:26	7439-97-6	
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Kansas City									
Alkalinity, Total as CaCO3	371	mg/L	20.0	7.5	1		04/30/21 17:46		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Kansas City									
Total Dissolved Solids	869	mg/L	10.0	10.0	1		04/26/21 11:01		
Iron, Ferric (Calculation)									
Analytical Method: SM 3500-Fe B#4									
Pace Analytical Services - Kansas City									
Iron, Ferric	25.8	mg/L	0.050		1		05/14/21 14:46	7439-89-6	
Iron, Ferrous									
Analytical Method: SM 3500-Fe B#4									
Pace Analytical Services - Kansas City									
Iron, Ferrous	1.1	mg/L	0.20	0.048	1		04/26/21 11:14		H6

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

Sample: L-UMW-DUP-1 **Lab ID: 60367051011** Collected: 04/19/21 00:00 Received: 04/21/21 03:49 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide, Total									
Analytical Method: SM 4500-S-2 D									
Pace Analytical Services - Kansas City									
Sulfide, Total	0.028J	mg/L	0.050	0.026	1		04/26/21 14:48	18496-25-8	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0									
Pace Analytical Services - Kansas City									
Chloride	10.8	mg/L	1.0	0.39	1		04/29/21 06:55	16887-00-6	
Fluoride	0.25	mg/L	0.20	0.086	1		04/29/21 06:55	16984-48-8	
Sulfate	267	mg/L	20.0	8.4	20		04/29/21 07:11	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

Sample: L-UMW-DUP-2 **Lab ID: 60367051012** Collected: 04/19/21 00:00 Received: 04/21/21 03:49 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	514	ug/L	5.0	1.8	1	04/30/21 13:00	05/10/21 21:54	7440-39-3	
Beryllium	<0.39	ug/L	1.0	0.39	1	04/30/21 13:00	05/10/21 21:54	7440-41-7	
Boron	455	ug/L	100	8.6	1	04/30/21 13:00	05/10/21 21:54	7440-42-8	
Calcium	148000	ug/L	200	75.4	1	04/30/21 13:00	05/10/21 21:54	7440-70-2	
Cobalt	<0.95	ug/L	5.0	0.95	1	04/30/21 13:00	05/10/21 21:54	7440-48-4	
Iron	17400	ug/L	50.0	21.4	1	04/30/21 13:00	05/10/21 21:54	7439-89-6	
Lead	4.9J	ug/L	10.0	3.8	1	04/30/21 13:00	05/10/21 21:54	7439-92-1	
Lithium	25.0	ug/L	10.0	7.7	1	04/30/21 13:00	05/10/21 21:54	7439-93-2	
Magnesium	37900	ug/L	50.0	31.4	1	04/30/21 13:00	05/10/21 21:54	7439-95-4	
Manganese	435	ug/L	5.0	0.74	1	04/30/21 13:00	05/10/21 21:54	7439-96-5	
Molybdenum	5.0J	ug/L	20.0	2.2	1	04/30/21 13:00	05/10/21 21:54	7439-98-7	
Potassium	6620	ug/L	500	146	1	04/30/21 13:00	05/10/21 21:54	7440-09-7	
Sodium	17800	ug/L	500	254	1	04/30/21 13:00	05/10/21 21:54	7440-23-5	
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8									
Pace Analytical Services - Kansas City									
Antimony	<0.10	ug/L	1.0	0.10	1	05/06/21 15:30	06/02/21 10:01	7440-36-0	
Arsenic	38.0	ug/L	1.0	0.11	1	05/06/21 15:30	06/01/21 19:44	7440-38-2	
Cadmium	<0.062	ug/L	0.50	0.062	1	05/06/21 15:30	06/01/21 19:44	7440-43-9	
Chromium	0.38J	ug/L	1.0	0.23	1	05/06/21 15:30	06/01/21 19:44	7440-47-3	
Selenium	<0.18	ug/L	1.0	0.18	1	05/06/21 15:30	06/01/21 19:44	7782-49-2	
Thallium	<0.094	ug/L	1.0	0.094	1	05/06/21 15:30	06/01/21 19:44	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470 Preparation Method: EPA 7470									
Pace Analytical Services - Kansas City									
Mercury	<0.096	ug/L	0.20	0.096	1	05/10/21 17:40	05/11/21 14:28	7439-97-6	
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Kansas City									
Alkalinity, Total as CaCO3	538	mg/L	20.0	7.5	1		04/30/21 17:52		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Kansas City									
Total Dissolved Solids	591	mg/L	10.0	10.0	1		04/26/21 11:01		
Iron, Ferric (Calculation)									
Analytical Method: SM 3500-Fe B#4									
Pace Analytical Services - Kansas City									
Iron, Ferric	16.5	mg/L	0.050		1		05/14/21 14:46	7439-89-6	
Iron, Ferrous									
Analytical Method: SM 3500-Fe B#4									
Pace Analytical Services - Kansas City									
Iron, Ferrous	0.84	mg/L	0.20	0.048	1		04/26/21 11:14		H6

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

Sample: L-UMW-DUP-2 **Lab ID: 60367051012** Collected: 04/19/21 00:00 Received: 04/21/21 03:49 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		04/26/21 14:49	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	6.9	mg/L	1.0	0.39	1		04/29/21 07:27	16887-00-6	
Fluoride	0.30	mg/L	0.20	0.086	1		04/29/21 07:27	16984-48-8	
Sulfate	10.0	mg/L	1.0	0.42	1		04/29/21 07:27	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

Sample: L-UMW-4D Lab ID: 60367051013 Collected: 04/20/21 15:30 Received: 04/21/21 03:49 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total									
Analytical Method: EPA 200.7 Preparation Method: EPA 200.7									
Pace Analytical Services - Kansas City									
Barium	94.1	ug/L	5.0	1.8	1	04/30/21 13:00	05/10/21 21:57	7440-39-3	
Beryllium	<0.39	ug/L	1.0	0.39	1	04/30/21 13:00	05/10/21 21:57	7440-41-7	
Boron	4560	ug/L	100	8.6	1	04/30/21 13:00	05/10/21 21:57	7440-42-8	
Calcium	73600	ug/L	200	75.4	1	04/30/21 13:00	05/10/21 21:57	7440-70-2	M1
Cobalt	<0.95	ug/L	5.0	0.95	1	04/30/21 13:00	05/10/21 21:57	7440-48-4	
Iron	295	ug/L	50.0	21.4	1	04/30/21 13:00	05/10/21 21:57	7439-89-6	
Lead	<3.8	ug/L	10.0	3.8	1	04/30/21 13:00	05/10/21 21:57	7439-92-1	
Lithium	33.4	ug/L	10.0	7.7	1	04/30/21 13:00	05/10/21 21:57	7439-93-2	
Magnesium	8730	ug/L	50.0	31.4	1	04/30/21 13:00	05/10/21 21:57	7439-95-4	
Manganese	316	ug/L	5.0	0.74	1	04/30/21 13:00	05/10/21 21:57	7439-96-5	
Molybdenum	138	ug/L	20.0	2.2	1	04/30/21 13:00	05/10/21 21:57	7439-98-7	
Potassium	9650	ug/L	500	146	1	04/30/21 13:00	05/10/21 21:57	7440-09-7	
Sodium	105000	ug/L	500	254	1	04/30/21 13:00	05/10/21 21:57	7440-23-5	M1
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8									
Pace Analytical Services - Kansas City									
Antimony	<0.10	ug/L	1.0	0.10	1	05/06/21 15:30	06/02/21 10:02	7440-36-0	
Arsenic	0.17J	ug/L	1.0	0.11	1	05/06/21 15:30	06/01/21 19:46	7440-38-2	
Cadmium	<0.062	ug/L	0.50	0.062	1	05/06/21 15:30	06/01/21 19:46	7440-43-9	
Chromium	0.49J	ug/L	1.0	0.23	1	05/06/21 15:30	06/01/21 19:46	7440-47-3	
Selenium	<0.18	ug/L	1.0	0.18	1	05/06/21 15:30	06/01/21 19:46	7782-49-2	
Thallium	<0.094	ug/L	1.0	0.094	1	05/06/21 15:30	06/01/21 19:46	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470 Preparation Method: EPA 7470									
Pace Analytical Services - Kansas City									
Mercury	<0.096	ug/L	0.20	0.096	1	05/10/21 17:40	05/11/21 14:31	7439-97-6	
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Kansas City									
Alkalinity, Total as CaCO3	55.0	mg/L	20.0	7.5	1		05/03/21 20:34		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Kansas City									
Total Dissolved Solids	324	mg/L	5.0	5.0	1		04/26/21 11:04		
Iron, Ferric (Calculation)									
Analytical Method: SM 3500-Fe B#4									
Pace Analytical Services - Kansas City									
Iron, Ferric	0.23	mg/L	0.050		1		05/14/21 14:46	7439-89-6	
Iron, Ferrous									
Analytical Method: SM 3500-Fe B#4									
Pace Analytical Services - Kansas City									
Iron, Ferrous	0.062J	mg/L	0.20	0.048	1		04/26/21 11:23		H6

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

Sample: L-UMW-4D **Lab ID: 60367051013** Collected: 04/20/21 15:30 Received: 04/21/21 03:49 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide, Total									
Analytical Method: SM 4500-S-2 D									
Pace Analytical Services - Kansas City									
Sulfide, Total	0.035J	mg/L	0.050	0.026	1		04/26/21 15:16	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	0.78	2		04/28/21 17:47	16887-00-6	
Fluoride	0.39	mg/L	0.20	0.086	1		04/28/21 17:31	16984-48-8	
Sulfate	358	mg/L	50.0	21.0	50		04/28/21 18:03	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

Sample: L-UMW-5D **Lab ID: 60367051014** Collected: 04/21/21 11:58 Received: 04/24/21 03:10 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total									
Analytical Method: EPA 200.7 Preparation Method: EPA 200.7									
Pace Analytical Services - Kansas City									
Barium	60.2	ug/L	5.0	1.8	1	05/10/21 09:56	05/13/21 23:20	7440-39-3	
Beryllium	<0.39	ug/L	1.0	0.39	1	05/10/21 09:56	05/13/21 23:20	7440-41-7	
Boron	5940	ug/L	100	8.6	1	05/10/21 09:56	05/13/21 23:20	7440-42-8	
Calcium	62100	ug/L	200	75.4	1	05/10/21 09:56	05/13/21 23:20	7440-70-2	
Cobalt	<0.95	ug/L	5.0	0.95	1	05/10/21 09:56	05/13/21 23:20	7440-48-4	
Iron	36.3J	ug/L	50.0	21.4	1	05/10/21 09:56	05/13/21 23:20	7439-89-6	
Lead	<3.8	ug/L	10.0	3.8	1	05/10/21 09:56	05/13/21 23:20	7439-92-1	
Lithium	20.4	ug/L	10.0	7.7	1	05/10/21 09:56	05/13/21 23:20	7439-93-2	
Magnesium	<31.4	ug/L	50.0	31.4	1	05/10/21 09:56	05/13/21 23:20	7439-95-4	
Manganese	7.4	ug/L	5.0	0.74	1	05/10/21 09:56	05/13/21 23:20	7439-96-5	
Molybdenum	176	ug/L	20.0	2.2	1	05/10/21 09:56	05/13/21 23:20	7439-98-7	
Potassium	11800	ug/L	500	146	1	05/10/21 09:56	05/13/21 23:20	7440-09-7	
Sodium	63900	ug/L	500	254	1	05/10/21 09:56	05/13/21 23:20	7440-23-5	
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8									
Pace Analytical Services - Kansas City									
Antimony	<0.10	ug/L	1.0	0.10	1	05/10/21 09:56	06/02/21 08:41	7440-36-0	
Arsenic	16.9	ug/L	1.0	0.11	1	05/10/21 09:56	06/01/21 17:56	7440-38-2	
Cadmium	<0.062	ug/L	0.50	0.062	1	05/10/21 09:56	06/01/21 17:56	7440-43-9	
Chromium	0.49J	ug/L	1.0	0.23	1	05/10/21 09:56	06/01/21 17:56	7440-47-3	B
Selenium	<0.18	ug/L	1.0	0.18	1	05/10/21 09:56	06/01/21 17:56	7782-49-2	
Thallium	<0.094	ug/L	1.0	0.094	1	05/10/21 09:56	06/01/21 17:56	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470 Preparation Method: EPA 7470									
Pace Analytical Services - Kansas City									
Mercury	<0.096	ug/L	0.20	0.096	1	05/10/21 17:40	05/14/21 12:25	7439-97-6	
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Kansas City									
Alkalinity, Total as CaCO3	66.7	mg/L	20.0	7.5	1		05/04/21 10:17		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Kansas City									
Total Dissolved Solids	493	mg/L	6.7	6.7	1		04/28/21 11:34		
Iron, Ferric (Calculation)									
Analytical Method: SM 3500-Fe B#4									
Pace Analytical Services - Kansas City									
Iron, Ferric	0.032J	mg/L	0.050		1		05/14/21 14:46	7439-89-6	
Iron, Ferrous									
Analytical Method: SM 3500-Fe B#4									
Pace Analytical Services - Kansas City									
Iron, Ferrous	<0.048	mg/L	0.20	0.048	1		05/10/21 12:04		H6

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

Sample: L-UMW-5D **Lab ID: 60367051014** Collected: 04/21/21 11:58 Received: 04/24/21 03:10 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide, Total		Analytical Method: SM 4500-S-2 D Pace Analytical Services - Kansas City							
Sulfide, Total	0.67	mg/L	0.050	0.026	1		04/27/21 10:21	18496-25-8	
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Chloride	19.9	mg/L	1.0	0.39	1		05/07/21 17:19	16887-00-6	
Fluoride	0.21	mg/L	0.20	0.086	1		05/07/21 17:19	16984-48-8	
Sulfate	231	mg/L	20.0	8.4	20		05/07/21 17:51	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

Sample: L-UMW-6D Lab ID: 60367051015 Collected: 04/21/21 09:47 Received: 04/24/21 03:10 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total									
Analytical Method: EPA 200.7 Preparation Method: EPA 200.7									
Pace Analytical Services - Kansas City									
Barium	93.4	ug/L	5.0	1.8	1	05/10/21 09:56	05/13/21 23:23	7440-39-3	
Beryllium	<0.39	ug/L	1.0	0.39	1	05/10/21 09:56	05/13/21 23:23	7440-41-7	
Boron	11500	ug/L	100	8.6	1	05/10/21 09:56	05/13/21 23:23	7440-42-8	
Calcium	96000	ug/L	200	75.4	1	05/10/21 09:56	05/13/21 23:23	7440-70-2	
Cobalt	<0.95	ug/L	5.0	0.95	1	05/10/21 09:56	05/13/21 23:23	7440-48-4	
Iron	521	ug/L	50.0	21.4	1	05/10/21 09:56	05/13/21 23:23	7439-89-6	
Lead	<3.8	ug/L	10.0	3.8	1	05/10/21 09:56	05/13/21 23:23	7439-92-1	
Lithium	12.8	ug/L	10.0	7.7	1	05/10/21 09:56	05/13/21 23:23	7439-93-2	
Magnesium	4630	ug/L	50.0	31.4	1	05/10/21 09:56	05/13/21 23:23	7439-95-4	
Manganese	384	ug/L	5.0	0.74	1	05/10/21 09:56	05/13/21 23:23	7439-96-5	
Molybdenum	477	ug/L	20.0	2.2	1	05/10/21 09:56	05/13/21 23:23	7439-98-7	
Potassium	20800	ug/L	500	146	1	05/10/21 09:56	05/13/21 23:23	7440-09-7	
Sodium	102000	ug/L	500	254	1	05/10/21 09:56	05/13/21 23:23	7440-23-5	
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8									
Pace Analytical Services - Kansas City									
Antimony	<0.10	ug/L	1.0	0.10	1	05/10/21 09:56	06/02/21 08:42	7440-36-0	
Arsenic	11.7	ug/L	1.0	0.11	1	05/10/21 09:56	06/01/21 17:58	7440-38-2	
Cadmium	<0.062	ug/L	0.50	0.062	1	05/10/21 09:56	06/01/21 17:58	7440-43-9	
Chromium	0.36J	ug/L	1.0	0.23	1	05/10/21 09:56	06/01/21 17:58	7440-47-3	B
Selenium	<0.18	ug/L	1.0	0.18	1	05/10/21 09:56	06/01/21 17:58	7782-49-2	
Thallium	<0.094	ug/L	1.0	0.094	1	05/10/21 09:56	06/01/21 17:58	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470 Preparation Method: EPA 7470									
Pace Analytical Services - Kansas City									
Mercury	<0.096	ug/L	0.20	0.096	1	05/10/21 17:40	05/14/21 12:27	7439-97-6	
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Kansas City									
Alkalinity, Total as CaCO3	62.5	mg/L	20.0	7.5	1		05/04/21 10:22		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Kansas City									
Total Dissolved Solids	837	mg/L	10.0	10.0	1		04/28/21 11:35		
Iron, Ferric (Calculation)									
Analytical Method: SM 3500-Fe B#4									
Pace Analytical Services - Kansas City									
Iron, Ferric	0.16	mg/L	0.050		1		05/14/21 14:46	7439-89-6	
Iron, Ferrous									
Analytical Method: SM 3500-Fe B#4									
Pace Analytical Services - Kansas City									
Iron, Ferrous	0.36	mg/L	0.20	0.048	1		05/10/21 12:03		H6

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

Sample: L-UMW-6D **Lab ID: 60367051015** Collected: 04/21/21 09:47 Received: 04/24/21 03:10 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D Pace Analytical Services - Kansas City								
Sulfide, Total	0.051	mg/L	0.050	0.026	1		04/27/21 10:21	18496-25-8	
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		05/07/21 18:07	16887-00-6	
Fluoride	0.19J	mg/L	0.20	0.086	1		05/07/21 18:07	16984-48-8	
Sulfate	470	mg/L	50.0	21.0	50		05/07/21 18:38	14808-79-8	

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

QC Batch: 718988

Analysis Method: EPA 7470

QC Batch Method: EPA 7470

Analysis Description: 7470 Mercury

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60367051001

METHOD BLANK: 2891611

Matrix: Water

Associated Lab Samples: 60367051001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	<0.096	0.20	0.096	05/10/21 16:16	

LABORATORY CONTROL SAMPLE: 2891612

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.6	91	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2891613 2891614

Parameter	Units	2891613		2891614		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	ug/L	<0.096	5	5	4.8	4.7	96	94	75-125	2	20

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

QC Batch: 719264

Analysis Method: EPA 7470

QC Batch Method: EPA 7470

Analysis Description: 7470 Mercury

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60367051004, 60367051005, 60367051006, 60367051007, 60367051008, 60367051009, 60367051010, 60367051011, 60367051012, 60367051013

METHOD BLANK: 2892513

Matrix: Water

Associated Lab Samples: 60367051004, 60367051005, 60367051006, 60367051007, 60367051008, 60367051009, 60367051010, 60367051011, 60367051012, 60367051013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	<0.096	0.20	0.096	05/11/21 13:56	

LABORATORY CONTROL SAMPLE: 2892514

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.7	94	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2892515 2892516

Parameter	Units	2892515		2892516		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		60367051004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Mercury	ug/L	<0.096	5	5	4.9	4.9	98	98	75-125	0	20

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

QC Batch: 719267

Analysis Method: EPA 7470

QC Batch Method: EPA 7470

Analysis Description: 7470 Mercury

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60367051014, 60367051015

METHOD BLANK: 2892529

Matrix: Water

Associated Lab Samples: 60367051014, 60367051015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	<0.096	0.20	0.096	05/14/21 11:53	

LABORATORY CONTROL SAMPLE: 2892530

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.0	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2892531 2892532

Parameter	Units	60367582003		2892531		2892532		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec				
Mercury	ug/L	<0.096	5	5	4.8	4.8	96	94	75-125	2	20

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA
Pace Project No.: 60367051

QC Batch: 717296 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: 60367051001

METHOD BLANK: 2885311 Matrix: Water
Associated Lab Samples: 60367051001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Barium	ug/L	<1.8	5.0	1.8	05/10/21 13:50	
Beryllium	ug/L	<0.39	1.0	0.39	05/10/21 13:50	
Boron	ug/L	<8.6	100	8.6	05/10/21 13:50	
Calcium	ug/L	<75.4	200	75.4	05/10/21 13:50	
Cobalt	ug/L	<0.95	5.0	0.95	05/10/21 13:50	
Iron	ug/L	<21.4	50.0	21.4	05/10/21 13:50	
Lead	ug/L	<3.8	10.0	3.8	05/10/21 13:50	
Lithium	ug/L	<7.7	10.0	7.7	05/10/21 13:50	
Magnesium	ug/L	<31.4	50.0	31.4	05/10/21 13:50	
Manganese	ug/L	<0.74	5.0	0.74	05/10/21 13:50	
Molybdenum	ug/L	<2.2	20.0	2.2	05/10/21 13:50	
Potassium	ug/L	<146	500	146	05/10/21 13:50	
Sodium	ug/L	<254	500	254	05/10/21 13:50	

LABORATORY CONTROL SAMPLE: 2885312

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	1000	1130	113	85-115	
Beryllium	ug/L	1000	1130	113	85-115	
Boron	ug/L	1000	1050	105	85-115	
Calcium	ug/L	10000	10500	105	85-115	
Cobalt	ug/L	1000	1130	113	85-115	
Iron	ug/L	10000	10700	107	85-115	
Lead	ug/L	1000	1120	112	85-115	
Lithium	ug/L	1000	1090	109	85-115	
Magnesium	ug/L	10000	10900	109	85-115	
Manganese	ug/L	1000	1060	106	85-115	
Molybdenum	ug/L	1000	1150	115	85-115	
Potassium	ug/L	10000	10700	107	85-115	
Sodium	ug/L	10000	10900	109	85-115	

MATRIX SPIKE SAMPLE: 2885313

Parameter	Units	60366962003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	101	1000	1210	111	70-130	
Beryllium	ug/L	<0.39	1000	1120	112	70-130	
Boron	ug/L	12000	1000	12300	29	70-130 M1	

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

MATRIX SPIKE SAMPLE: 2885313		60366962003	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
Calcium	ug/L	98000	10000	105000	72	70-130	
Cobalt	ug/L	<0.95	1000	1070	107	70-130	
Iron	ug/L	5400	10000	15400	100	70-130	
Lead	ug/L	<3.8	1000	1040	104	70-130	
Lithium	ug/L	33.9	1000	1110	108	70-130	
Magnesium	ug/L	24100	10000	32700	86	70-130	
Manganese	ug/L	247	1000	1230	98	70-130	
Molybdenum	ug/L	1170	1000	2220	105	70-130	
Potassium	ug/L	7410	10000	17800	104	70-130	
Sodium	ug/L	85200	10000	93800	87	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2885314		2885315									
Parameter	Units	60367051001	MS	MSD	MS	MSD	MS	MSD	% Rec	Max	Qual
		Result	Spike	Spike	Result	Result	% Rec	% Rec	Limits	RPD	
Barium	ug/L	81.5	1000	1000	1110	1160	103	108	70-130	5	20
Beryllium	ug/L	<0.39	1000	1000	1080	1090	108	109	70-130	1	20
Boron	ug/L	5170	1000	1000	5770	6060	60	90	70-130	5	20 M1
Calcium	ug/L	192000	10000	10000	200000	198000	87	64	70-130	1	20 M1
Cobalt	ug/L	<0.95	1000	1000	1020	1000	102	100	70-130	2	20
Iron	ug/L	9520	10000	10000	20300	19500	108	100	70-130	4	20
Lead	ug/L	6.8J	1000	1000	1050	1070	104	106	70-130	2	20
Lithium	ug/L	23.7	1000	1000	1090	1080	107	106	70-130	1	20
Magnesium	ug/L	25400	10000	10000	33500	34900	82	96	70-130	4	20
Manganese	ug/L	1720	1000	1000	2740	2700	102	99	70-130	1	20
Molybdenum	ug/L	199	1000	1000	1280	1260	108	106	70-130	2	20
Potassium	ug/L	6480	10000	10000	16900	16900	104	105	70-130	0	20
Sodium	ug/L	56000	10000	10000	66800	66600	108	106	70-130	0	20

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

QC Batch:	717917	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: 60367051004, 60367051005, 60367051006, 60367051007, 60367051008, 60367051009, 60367051010, 60367051011, 60367051012, 60367051013

METHOD BLANK: 2887521 Matrix: Water

Associated Lab Samples: 60367051004, 60367051005, 60367051006, 60367051007, 60367051008, 60367051009, 60367051010, 60367051011, 60367051012, 60367051013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Barium	ug/L	<1.8	5.0	1.8	05/10/21 21:21	
Beryllium	ug/L	<0.39	1.0	0.39	05/10/21 21:21	
Boron	ug/L	<8.6	100	8.6	05/10/21 21:21	
Calcium	ug/L	<75.4	200	75.4	05/10/21 21:21	
Cobalt	ug/L	<0.95	5.0	0.95	05/10/21 21:21	
Iron	ug/L	<21.4	50.0	21.4	05/10/21 21:21	
Lead	ug/L	<3.8	10.0	3.8	05/10/21 21:21	
Lithium	ug/L	<7.7	10.0	7.7	05/10/21 21:21	
Magnesium	ug/L	<31.4	50.0	31.4	05/10/21 21:21	
Manganese	ug/L	<0.74	5.0	0.74	05/10/21 21:21	
Molybdenum	ug/L	<2.2	20.0	2.2	05/10/21 21:21	
Potassium	ug/L	189J	500	146	05/10/21 21:21	
Sodium	ug/L	<254	500	254	05/10/21 21:21	

LABORATORY CONTROL SAMPLE: 2887522

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	1000	1080	108	85-115	
Beryllium	ug/L	1000	1080	108	85-115	
Boron	ug/L	1000	1050	105	85-115	
Calcium	ug/L	10000	10100	101	85-115	
Cobalt	ug/L	1000	1120	112	85-115	
Iron	ug/L	10000	9810	98	85-115	
Lead	ug/L	1000	1090	109	85-115	
Lithium	ug/L	1000	1060	106	85-115	
Magnesium	ug/L	10000	10900	109	85-115	
Manganese	ug/L	1000	1030	103	85-115	
Molybdenum	ug/L	1000	1140	114	85-115	
Potassium	ug/L	10000	10600	106	85-115	
Sodium	ug/L	10000	10400	104	85-115	

MATRIX SPIKE SAMPLE: 2887523

Parameter	Units	60367051013 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	94.1	1000	1180	109	70-130	
Beryllium	ug/L	<0.39	1000	1090	109	70-130	

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

MATRIX SPIKE SAMPLE: 2887523		60367051013	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
Boron	ug/L	4560	1000	5740	118	70-130	
Calcium	ug/L	73600	10000	87300	137	70-130	M1
Cobalt	ug/L	<0.95	1000	1070	107	70-130	
Iron	ug/L	295	10000	10400	102	70-130	
Lead	ug/L	<3.8	1000	1050	105	70-130	
Lithium	ug/L	33.4	1000	1100	106	70-130	
Magnesium	ug/L	8730	10000	19400	106	70-130	
Manganese	ug/L	316	1000	1360	104	70-130	
Molybdenum	ug/L	138	1000	1260	112	70-130	
Potassium	ug/L	9650	10000	20600	109	70-130	
Sodium	ug/L	105000	10000	121000	155	70-130	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2887524		2887525									
Parameter	Units	60366962021	MS	MSD	MS	MSD	MS	MSD	% Rec	Max	Qual
		Result	Spike	Spike	Result	Result	% Rec	% Rec	Limits	RPD	
Barium	ug/L	1520	1000	1000	2610	2640	109	112	70-130	1	20
Beryllium	ug/L	<0.39	1000	1000	1090	1100	109	110	70-130	0	20
Boron	ug/L	78.3J	1000	1000	1130	1130	105	105	70-130	0	20
Calcium	ug/L	145000	10000	10000	157000	159000	124	147	70-130	1	20 M1
Cobalt	ug/L	<0.95	1000	1000	1050	1050	105	105	70-130	0	20
Iron	ug/L	8300	10000	10000	18500	18700	102	104	70-130	1	20
Lead	ug/L	<3.8	1000	1000	1070	1070	107	107	70-130	0	20
Lithium	ug/L	17.7	1000	1000	1100	1110	109	109	70-130	0	20
Magnesium	ug/L	37900	10000	10000	48700	49300	108	114	70-130	1	20
Manganese	ug/L	245	1000	1000	1290	1300	104	105	70-130	1	20
Molybdenum	ug/L	<2.2	1000	1000	1110	1120	111	112	70-130	0	20
Potassium	ug/L	4640	10000	10000	15300	15500	106	109	70-130	2	20
Sodium	ug/L	12500	10000	10000	23200	23600	107	110	70-130	1	20

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

QC Batch: 719402	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: 60367051014, 60367051015

METHOD BLANK: 2893278 Matrix: Water

Associated Lab Samples: 60367051014, 60367051015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Barium	ug/L	<1.8	5.0	1.8	05/13/21 22:07	
Beryllium	ug/L	<0.39	1.0	0.39	05/13/21 22:07	
Boron	ug/L	11.4J	100	8.6	05/13/21 22:07	
Calcium	ug/L	<75.4	200	75.4	05/13/21 22:07	
Cobalt	ug/L	<0.95	5.0	0.95	05/13/21 22:07	
Iron	ug/L	<21.4	50.0	21.4	05/13/21 22:07	
Lead	ug/L	<3.8	10.0	3.8	05/13/21 22:07	
Lithium	ug/L	<7.7	10.0	7.7	05/13/21 22:07	
Magnesium	ug/L	<31.4	50.0	31.4	05/13/21 22:07	
Manganese	ug/L	<0.74	5.0	0.74	05/13/21 22:07	
Molybdenum	ug/L	<2.2	20.0	2.2	05/13/21 22:07	
Potassium	ug/L	<146	500	146	05/13/21 22:07	
Sodium	ug/L	<254	500	254	05/13/21 22:07	

LABORATORY CONTROL SAMPLE: 2893279

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	1000	967	97	85-115	
Beryllium	ug/L	1000	981	98	85-115	
Boron	ug/L	1000	958	96	85-115	
Calcium	ug/L	10000	9660	97	85-115	
Cobalt	ug/L	1000	980	98	85-115	
Iron	ug/L	10000	9540	95	85-115	
Lead	ug/L	1000	1030	103	85-115	
Lithium	ug/L	1000	997	100	85-115	
Magnesium	ug/L	10000	9870	99	85-115	
Manganese	ug/L	1000	1000	100	85-115	
Molybdenum	ug/L	1000	992	99	85-115	
Potassium	ug/L	10000	9820	98	85-115	
Sodium	ug/L	10000	9620	96	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2893280 2893281

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		60367582003 Result	Spike Conc.	Spike Conc.	MS Result						
Barium	ug/L	22.1	1000	1000	976	968	95	95	70-130	1	20
Beryllium	ug/L	<0.39	1000	1000	985	970	98	97	70-130	1	20

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2893280												2893281	
Parameter	Units	60367582003		MS	MSD	MS	MSD	MS	MSD	% Rec	Max	Qual	
		Result	Conc.	Spike	Conc.	Result	Result	% Rec	% Rec	Limits	RPD		
Boron	ug/L	14600	1000	1000	15400	15300	84	74	70-130	1	20		
Calcium	ug/L	7180	10000	10000	16500	16400	93	92	70-130	1	20		
Cobalt	ug/L	<0.95	1000	1000	962	949	96	95	70-130	1	20		
Iron	ug/L	203	10000	10000	9700	9540	95	93	70-130	2	20		
Lead	ug/L	4.2J	1000	1000	990	973	99	97	70-130	2	20		
Lithium	ug/L	<7.7	1000	1000	965	953	96	95	70-130	1	20		
Magnesium	ug/L	345	10000	10000	9860	9700	95	94	70-130	2	20		
Manganese	ug/L	11.0	1000	1000	1000	983	99	97	70-130	2	20		
Molybdenum	ug/L	789	1000	1000	1770	1760	98	97	70-130	1	20		
Potassium	ug/L	2050	10000	10000	11800	11600	97	96	70-130	1	20		
Sodium	ug/L	237000	10000	10000	242000	240000	57	36	70-130	1	20	M1	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2893282												2893283	
Parameter	Units	60367583001		MS	MSD	MS	MSD	MS	MSD	% Rec	Max	Qual	
		Result	Conc.	Spike	Conc.	Result	Result	% Rec	% Rec	Limits	RPD		
Barium	ug/L	166	1000	1000	1110	1100	94	93	70-130	1	20		
Beryllium	ug/L	<0.39	1000	1000	966	958	97	96	70-130	1	20		
Boron	ug/L	4240	1000	1000	5140	5110	89	86	70-130	1	20		
Calcium	ug/L	62800	10000	10000	70900	70200	81	73	70-130	1	20		
Cobalt	ug/L	<0.95	1000	1000	928	922	93	92	70-130	1	20		
Iron	ug/L	8720	10000	10000	17600	17400	89	87	70-130	1	20		
Lead	ug/L	4.1J	1000	1000	973	965	97	96	70-130	1	20		
Lithium	ug/L	13.9	1000	1000	961	958	95	94	70-130	0	20		
Magnesium	ug/L	21700	10000	10000	30800	30400	90	87	70-130	1	20		
Manganese	ug/L	353	1000	1000	1300	1290	95	94	70-130	1	20		
Molybdenum	ug/L	9.2J	1000	1000	980	975	97	97	70-130	1	20		
Potassium	ug/L	5470	10000	10000	15100	15000	96	95	70-130	1	20		
Sodium	ug/L	25600	10000	10000	34100	33800	84	82	70-130	1	20		

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

QC Batch: 717299

Analysis Method: EPA 200.8

QC Batch Method: EPA 200.8

Analysis Description: 200.8 MET

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60367051001

METHOD BLANK: 2885326

Matrix: Water

Associated Lab Samples: 60367051001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	<0.10	1.0	0.10	05/07/21 13:30	
Arsenic	ug/L	<0.11	1.0	0.11	05/07/21 13:30	
Cadmium	ug/L	<0.062	0.50	0.062	05/07/21 13:30	
Chromium	ug/L	0.47J	1.0	0.23	05/07/21 13:30	
Selenium	ug/L	<0.18	1.0	0.18	05/07/21 13:30	
Thallium	ug/L	<0.094	1.0	0.094	05/07/21 13:30	

LABORATORY CONTROL SAMPLE: 2885327

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	40	41.4	104	85-115	
Arsenic	ug/L	40	41.5	104	85-115	
Cadmium	ug/L	40	42.5	106	85-115	
Chromium	ug/L	40	40.9	102	85-115	
Selenium	ug/L	40	41.4	103	85-115	
Thallium	ug/L	40	39.7	99	85-115	

MATRIX SPIKE SAMPLE: 2885328

Parameter	Units	60366962004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	<0.10	40	38.2	95	70-130	
Arsenic	ug/L	0.20J	40	40.0	100	70-130	
Cadmium	ug/L	0.17J	40	37.6	93	70-130	
Chromium	ug/L	0.36J	40	39.3	97	70-130	
Selenium	ug/L	<0.18	40	37.3	93	70-130	
Thallium	ug/L	<0.094	40	38.5	96	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2885329 2885330

Parameter	Units	60367051001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	<0.10	40	40	39.8	39.4	99	98	70-130	1	20	
Arsenic	ug/L	22.3	40	40	64.0	63.1	104	102	70-130	1	20	
Cadmium	ug/L	<0.062	40	40	38.7	38.4	97	96	70-130	1	20	
Chromium	ug/L	0.33J	40	40	42.6	42.0	106	104	70-130	1	20	
Selenium	ug/L	<0.18	40	40	37.8	37.5	94	94	70-130	1	20	

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2885329 2885330												
Parameter	Units	60367051001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Thallium	ug/L	<0.094	40	40	39.5	39.0	99	98	70-130	1	20	

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA
Pace Project No.: 60367051

QC Batch: 718918 Analysis Method: EPA 200.8
QC Batch Method: EPA 200.8 Analysis Description: 200.8 MET
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60367051004, 60367051005, 60367051006, 60367051007, 60367051008, 60367051009, 60367051010, 60367051011, 60367051012, 60367051013

METHOD BLANK: 2891297 Matrix: Water
Associated Lab Samples: 60367051004, 60367051005, 60367051006, 60367051007, 60367051008, 60367051009, 60367051010, 60367051011, 60367051012, 60367051013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	<0.10	1.0	0.10	06/02/21 09:43	
Arsenic	ug/L	<0.11	1.0	0.11	06/01/21 19:21	
Cadmium	ug/L	<0.062	0.50	0.062	06/01/21 19:21	
Chromium	ug/L	<0.23	1.0	0.23	06/01/21 19:21	
Selenium	ug/L	<0.18	1.0	0.18	06/01/21 19:21	
Thallium	ug/L	<0.094	1.0	0.094	06/01/21 19:21	

LABORATORY CONTROL SAMPLE: 2891298

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	40	43.3	108	85-115	
Arsenic	ug/L	40	42.1	105	85-115	
Cadmium	ug/L	40	43.6	109	85-115	
Chromium	ug/L	40	44.7	112	85-115	
Selenium	ug/L	40	43.2	108	85-115	
Thallium	ug/L	40	40.6	102	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2891299 2891300

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		60367051008 Result	Spike Conc.	Spike Conc.	Result						
Antimony	ug/L	<0.10	40	40	41.2	41.5	103	104	70-130	1	20
Arsenic	ug/L	25.6	40	40	66.1	66.0	101	101	70-130	0	20
Cadmium	ug/L	<0.062	40	40	39.2	39.2	98	98	70-130	0	20
Chromium	ug/L	0.37J	40	40	41.2	40.8	102	101	70-130	1	20
Selenium	ug/L	<0.18	40	40	39.2	38.4	98	96	70-130	2	20
Thallium	ug/L	<0.094	40	40	40.8	40.2	102	101	70-130	1	20

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA
Pace Project No.: 60367051

QC Batch: 719408 Analysis Method: EPA 200.8
QC Batch Method: EPA 200.8 Analysis Description: 200.8 MET
Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60367051014, 60367051015

METHOD BLANK: 2893284 Matrix: Water
Associated Lab Samples: 60367051014, 60367051015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	<0.10	1.0	0.10	06/02/21 08:17	
Arsenic	ug/L	<0.11	1.0	0.11	06/01/21 17:23	
Cadmium	ug/L	<0.062	0.50	0.062	06/01/21 17:23	
Chromium	ug/L	0.44J	1.0	0.23	06/01/21 17:23	
Selenium	ug/L	<0.18	1.0	0.18	06/01/21 17:23	
Thallium	ug/L	<0.094	1.0	0.094	06/01/21 17:23	

LABORATORY CONTROL SAMPLE: 2893285

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	40	43.0	107	85-115	
Arsenic	ug/L	40	41.8	104	85-115	
Cadmium	ug/L	40	42.1	105	85-115	
Chromium	ug/L	40	42.8	107	85-115	
Selenium	ug/L	40	42.7	107	85-115	
Thallium	ug/L	40	39.1	98	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2893286 2893287

Parameter	Units	60367582003		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
Antimony	ug/L	<0.10	40	40	42.3	41.4	106	103	70-130	2	20		
Arsenic	ug/L	34.2	40	40	74.3	74.7	100	101	70-130	1	20		
Cadmium	ug/L	0.13J	40	40	40.2	39.8	100	99	70-130	1	20		
Chromium	ug/L	0.79J	40	40	41.3	40.9	101	100	70-130	1	20		
Selenium	ug/L	0.73J	40	40	38.2	38.0	94	93	70-130	1	20		
Thallium	ug/L	<0.094	40	40	42.1	41.6	105	104	70-130	1	20		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2893288 2893289

Parameter	Units	60367583001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
Antimony	ug/L	<0.10	40	40	41.7	42.2	104	105	70-130	1	20		
Arsenic	ug/L	157	40	40	186	194	72	94	70-130	5	20		
Cadmium	ug/L	<0.062	40	40	38.8	40.1	97	100	70-130	3	20		
Chromium	ug/L	0.44J	40	40	40.3	41.7	100	103	70-130	3	20		

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2893288												2893289	
Parameter	Units	60367583001 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
			Spike Conc.	Spike Conc.									
Selenium	ug/L	<0.18	40	40	38.8	39.5	97	98	70-130	2	20		
Thallium	ug/L	<0.094	40	40	38.6	40.1	96	100	70-130	4	20		

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

QC Batch: 716898

Analysis Method: SM 2320B

QC Batch Method: SM 2320B

Analysis Description: 2320B Alkalinity

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60367051001

METHOD BLANK: 2884099

Matrix: Water

Associated Lab Samples: 60367051001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	<7.5	20.0	7.5	04/27/21 09:18	

LABORATORY CONTROL SAMPLE: 2884100

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	500	503	101	90-110	

SAMPLE DUPLICATE: 2884101

Parameter	Units	60366969001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	371	369	1	10	

SAMPLE DUPLICATE: 2884102

Parameter	Units	60367012001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	155	155	0	10	

SAMPLE DUPLICATE: 2884103

Parameter	Units	60367051001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	450	466	3	10	

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

QC Batch: 717897

Analysis Method: SM 2320B

QC Batch Method: SM 2320B

Analysis Description: 2320B Alkalinity

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60367051004, 60367051005, 60367051006, 60367051007, 60367051008, 60367051009, 60367051010, 60367051011, 60367051012

METHOD BLANK: 2887339

Matrix: Water

Associated Lab Samples: 60367051004, 60367051005, 60367051006, 60367051007, 60367051008, 60367051009, 60367051010, 60367051011, 60367051012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	<7.5	20.0	7.5	04/30/21 16:27	

LABORATORY CONTROL SAMPLE: 2887340

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	500	505	101	90-110	

SAMPLE DUPLICATE: 2887341

Parameter	Units	60366962021 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	528	539	2	10	

SAMPLE DUPLICATE: 2887342

Parameter	Units	60367255001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	581	604	4	10	

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

QC Batch: 718221

Analysis Method: SM 2320B

QC Batch Method: SM 2320B

Analysis Description: 2320B Alkalinity

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60367051013

METHOD BLANK: 2888655

Matrix: Water

Associated Lab Samples: 60367051013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<7.5	20.0	7.5	05/03/21 19:30	

LABORATORY CONTROL SAMPLE: 2888656

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	500	496	99	90-110	

SAMPLE DUPLICATE: 2888657

Parameter	Units	60367741003 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	262	265	1	10	

SAMPLE DUPLICATE: 2888658

Parameter	Units	60366962023 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	247	257	4	10	

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

QC Batch: 718267

Analysis Method: SM 2320B

QC Batch Method: SM 2320B

Analysis Description: 2320B Alkalinity

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60367051014, 60367051015

METHOD BLANK: 2888781

Matrix: Water

Associated Lab Samples: 60367051014, 60367051015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	<7.5	20.0	7.5	05/04/21 09:11	

LABORATORY CONTROL SAMPLE: 2888782

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	500	505	101	90-110	

SAMPLE DUPLICATE: 2888784

Parameter	Units	60366962033 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	35.6	36.8	3	10	

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

QC Batch: 716210	Analysis Method: SM 2540C
QC Batch Method: SM 2540C	Analysis Description: 2540C Total Dissolved Solids
	Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60367051001

METHOD BLANK: 2881078 Matrix: Water

Associated Lab Samples: 60367051001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	04/22/21 13:02	

LABORATORY CONTROL SAMPLE: 2881079

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	1050	105	80-120	

SAMPLE DUPLICATE: 2881080

Parameter	Units	60367012001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	899	907	1	10	

SAMPLE DUPLICATE: 2881081

Parameter	Units	60367013003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	17.0	13.5	23	10	D6

SAMPLE DUPLICATE: 2881082

Parameter	Units	60367051001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	825	836	1	10	

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

QC Batch: 716655	Analysis Method: SM 2540C
QC Batch Method: SM 2540C	Analysis Description: 2540C Total Dissolved Solids
	Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60367051004, 60367051005, 60367051006

METHOD BLANK: 2883298 Matrix: Water

Associated Lab Samples: 60367051004, 60367051005, 60367051006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	04/26/21 10:58	

LABORATORY CONTROL SAMPLE: 2883299

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	1020	102	80-120	

SAMPLE DUPLICATE: 2883300

Parameter	Units	60366371005 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	624	1130	58	10	D6,H1

SAMPLE DUPLICATE: 2883301

Parameter	Units	60367229005 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	646	662	2	10	

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

QC Batch:	716657	Analysis Method:	SM 2540C
QC Batch Method:	SM 2540C	Analysis Description:	2540C Total Dissolved Solids
		Laboratory:	Pace Analytical Services - Kansas City

Associated Lab Samples: 60367051007, 60367051008, 60367051009, 60367051010, 60367051011, 60367051012

METHOD BLANK: 2883304 Matrix: Water

Associated Lab Samples: 60367051007, 60367051008, 60367051009, 60367051010, 60367051011, 60367051012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	04/26/21 11:00	

LABORATORY CONTROL SAMPLE: 2883305

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	1060	106	80-120	

SAMPLE DUPLICATE: 2883306

Parameter	Units	60366962021 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	569	565	1	10	

SAMPLE DUPLICATE: 2883307

Parameter	Units	60367255001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	735	709	4	10	

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

QC Batch: 716658

Analysis Method: SM 2540C

QC Batch Method: SM 2540C

Analysis Description: 2540C Total Dissolved Solids

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60367051013

METHOD BLANK: 2883313

Matrix: Water

Associated Lab Samples: 60367051013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	04/26/21 11:04	

LABORATORY CONTROL SAMPLE: 2883314

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	1010	101	80-120	

SAMPLE DUPLICATE: 2883315

Parameter	Units	60366962023 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	288	302	5	10	

SAMPLE DUPLICATE: 2883316

Parameter	Units	60367221009 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	355	336	5	10	

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

QC Batch: 717180

Analysis Method: SM 2540C

QC Batch Method: SM 2540C

Analysis Description: 2540C Total Dissolved Solids

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60367051014, 60367051015

METHOD BLANK: 2884921

Matrix: Water

Associated Lab Samples: 60367051014, 60367051015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	04/28/21 11:31	

LABORATORY CONTROL SAMPLE: 2884922

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	1000	100	80-120	

SAMPLE DUPLICATE: 2884923

Parameter	Units	60367383017 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	321	303	6	10	

SAMPLE DUPLICATE: 2884924

Parameter	Units	60367513003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	577	599	4	10	

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

QC Batch: 716370

Analysis Method: SM 3500-Fe B#4

QC Batch Method: SM 3500-Fe B#4

Analysis Description: Iron, Ferrous

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60367051001

METHOD BLANK: 2881774

Matrix: Water

Associated Lab Samples: 60367051001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Iron, Ferrous	mg/L	<0.048	0.20	0.048	04/26/21 10:53	H6

LABORATORY CONTROL SAMPLE: 2881775

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron, Ferrous	mg/L	2	2.0	102	90-110	H6

SAMPLE DUPLICATE: 2881776

Parameter	Units	60367051001 Result	Dup Result	RPD	Max RPD	Qualifiers
Iron, Ferrous	mg/L	0.20J	0.23		20	H6

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

QC Batch: 716373

Analysis Method: SM 3500-Fe B#4

QC Batch Method: SM 3500-Fe B#4

Analysis Description: Iron, Ferrous

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60367051004, 60367051005, 60367051006, 60367051007, 60367051008, 60367051009, 60367051010, 60367051011, 60367051012

METHOD BLANK: 2881777

Matrix: Water

Associated Lab Samples: 60367051004, 60367051005, 60367051006, 60367051007, 60367051008, 60367051009, 60367051010, 60367051011, 60367051012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Iron, Ferrous	mg/L	<0.048	0.20	0.048	04/26/21 11:09	H6

LABORATORY CONTROL SAMPLE: 2881778

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron, Ferrous	mg/L	2	2.0	102	90-110	H6

SAMPLE DUPLICATE: 2881779

Parameter	Units	60366962021 Result	Dup Result	RPD	Max RPD	Qualifiers
Iron, Ferrous	mg/L	0.32	0.29	10	20	H6

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

QC Batch: 716375

Analysis Method: SM 3500-Fe B#4

QC Batch Method: SM 3500-Fe B#4

Analysis Description: Iron, Ferrous

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60367051013

METHOD BLANK: 2881784

Matrix: Water

Associated Lab Samples: 60367051013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Iron, Ferrous	mg/L	<0.048	0.20	0.048	04/26/21 11:21	H6

LABORATORY CONTROL SAMPLE: 2881785

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron, Ferrous	mg/L	2	2.0	102	90-110	H6

SAMPLE DUPLICATE: 2881786

Parameter	Units	60366962023 Result	Dup Result	RPD	Max RPD	Qualifiers
Iron, Ferrous	mg/L	0.13J	0.14J		20	H6

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

QC Batch: 718252	Analysis Method: SM 3500-Fe B#4
QC Batch Method: SM 3500-Fe B#4	Analysis Description: Iron, Ferrous
	Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60367051014, 60367051015

METHOD BLANK: 2888724 Matrix: Water

Associated Lab Samples: 60367051014, 60367051015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Iron, Ferrous	mg/L	<0.048	0.20	0.048	05/10/21 12:02	H6

LABORATORY CONTROL SAMPLE: 2888725

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron, Ferrous	mg/L	2	2.0	102	90-110	H6

SAMPLE DUPLICATE: 2888726

Parameter	Units	60367051015 Result	Dup Result	RPD	Max RPD	Qualifiers
Iron, Ferrous	mg/L	0.36	0.37	2	20	H6

SAMPLE DUPLICATE: 2888727

Parameter	Units	60367583001 Result	Dup Result	RPD	Max RPD	Qualifiers
Iron, Ferrous	mg/L	1.0	1.1	4	20	H6

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA
Pace Project No.: 60367051

QC Batch: 716128	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: 60367051001

METHOD BLANK: 2880660 Matrix: Water
Associated Lab Samples: 60367051001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide, Total	mg/L	<0.026	0.050	0.026	04/22/21 15:40	

LABORATORY CONTROL SAMPLE: 2880661

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	0.5	0.53	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2880662 2880663

Parameter	Units	60367051001		2880663		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Sulfide, Total	mg/L	0.031J	0.5	0.5	0.45	0.43	84	79	75-125	5	20

SAMPLE DUPLICATE: 2880664

Parameter	Units	60367051001 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	0.031J	0.034J		20	

SAMPLE DUPLICATE: 2880665

Parameter	Units	60366962002 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	0.028J	0.028J		20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

QC Batch: 716368 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: 60367051004, 60367051005, 60367051006, 60367051007, 60367051008, 60367051009

METHOD BLANK: 2881768 Matrix: Water
 Associated Lab Samples: 60367051004, 60367051005, 60367051006, 60367051007, 60367051008, 60367051009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide, Total	mg/L	<0.026	0.050	0.026	04/23/21 13:25	

LABORATORY CONTROL SAMPLE: 2881769

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	0.5	0.50	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2881770 2881771

Parameter	Units	60366962013		2881770		2881771		% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS % Rec	MSD % Rec				
Sulfide, Total	mg/L	<0.026	0.5	0.5	0.49	0.51	94	97	75-125	3	20

SAMPLE DUPLICATE: 2881772

Parameter	Units	60367034001 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	ND	0.88J		20	

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA
Pace Project No.: 60367051

QC Batch: 716615 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: 60367051010, 60367051011, 60367051012, 60367051013

METHOD BLANK: 2883179 Matrix: Water
Associated Lab Samples: 60367051010, 60367051011, 60367051012, 60367051013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide, Total	mg/L	<0.026	0.050	0.026	04/26/21 14:44	

LABORATORY CONTROL SAMPLE: 2883180

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	0.5	0.48	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2883181 2883182

Parameter	Units	60367051010		60367051011		60367051012		60367051013		% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.				
Sulfide, Total	mg/L	<0.026	0.5	0.5	0.53	0.51	104	99	75-125	4	20		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2883736 2883737

Parameter	Units	60366962021		60366962022		60366962023		60366962024		% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.				
Sulfide, Total	mg/L	0.035J	0.5	0.5	0.50	0.47	93	87	75-125	6	20		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2883739 2883740

Parameter	Units	60366962023		60366962024		60366962025		60366962026		% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.				
Sulfide, Total	mg/L	<0.026	0.5	0.5	0.43	0.44	83	83	75-125	1	20		

SAMPLE DUPLICATE: 2883183

Parameter	Units	60367051011 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	0.028J	0.026J		20	

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

SAMPLE DUPLICATE: 2883738

Parameter	Units	60366962021 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	0.035J	0.042J		20	

SAMPLE DUPLICATE: 2883741

Parameter	Units	60366962023 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 LEC LCPA

Pace Project No.: 60367051

QC Batch: 716875

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: 60367051014, 60367051015

METHOD BLANK: 2884002

Matrix: Water

Associated Lab Samples: 60367051014, 60367051015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide, Total	mg/L	<0.026	0.050	0.026	04/27/21 10:12	

LABORATORY CONTROL SAMPLE: 2884003

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	0.5	0.54	108	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2884004 2884005

Parameter	Units	60366962027		60366962032		60366962033		% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.				
Sulfide, Total	mg/L	0.032J	0.5	0.5	0.53	0.52	99	98	75-125	1	20

SAMPLE DUPLICATE: 2884006

Parameter	Units	60366962032 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	<0.026	<0.026		20	

SAMPLE DUPLICATE: 2884007

Parameter	Units	60366962033 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 LEC LCPA

Pace Project No.: 60367051

QC Batch:	716975	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: 60367051004, 60367051005, 60367051006, 60367051007, 60367051008, 60367051009, 60367051010, 60367051011, 60367051012

METHOD BLANK: 2884356 Matrix: Water
Associated Lab Samples: 60367051004, 60367051005, 60367051006, 60367051007, 60367051008, 60367051009, 60367051010, 60367051011, 60367051012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.39	1.0	0.39	04/28/21 09:21	
Fluoride	mg/L	<0.086	0.20	0.086	04/28/21 09:21	
Sulfate	mg/L	<0.42	1.0	0.42	04/28/21 09:21	

METHOD BLANK: 2887050 Matrix: Water
Associated Lab Samples: 60367051004, 60367051005, 60367051006, 60367051007, 60367051008, 60367051009, 60367051010, 60367051011, 60367051012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.39	1.0	0.39	04/29/21 09:28	
Fluoride	mg/L	<0.086	0.20	0.086	04/29/21 09:28	
Sulfate	mg/L	<0.42	1.0	0.42	04/29/21 09:28	

LABORATORY CONTROL SAMPLE: 2884357

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	5.0	99	90-110	
Fluoride	mg/L	2.5	2.4	98	90-110	
Sulfate	mg/L	5	5.0	100	90-110	

LABORATORY CONTROL SAMPLE: 2887051

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.9	99	90-110	
Fluoride	mg/L	2.5	2.4	95	90-110	
Sulfate	mg/L	5	4.9	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2884359 2884360

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Spike Conc.	Result	Spike Conc.	Result						
Chloride	mg/L	129	50	50	190	185	120	112	80-120	2	15
Fluoride	mg/L	0.64	2.5	2.5	2.9	2.8	88	88	80-120	1	15

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2884359												2884360	
Parameter	Units	60367012001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
Sulfate	mg/L	322	250	250	567	568	98	98	80-120	0	15		

MATRIX SPIKE SAMPLE: 2884361		60367217001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	82.8	250	313	92	80-120	
Fluoride	mg/L	0.34	2.5	2.6	92	80-120	
Sulfate	mg/L	521	250	772	100	80-120	

SAMPLE DUPLICATE: 2884358						
Parameter	Units	60367012001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chloride	mg/L	129	129	0	15	
Fluoride	mg/L	0.64	0.52	22	15	D6
Sulfate	mg/L	322	317	1	15	

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

QC Batch: 716978

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: 60367051013

METHOD BLANK: 2884377

Matrix: Water

Associated Lab Samples: 60367051013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.39	1.0	0.39	04/28/21 16:59	
Fluoride	mg/L	<0.086	0.20	0.086	04/28/21 16:59	
Sulfate	mg/L	<0.42	1.0	0.42	04/28/21 16:59	

METHOD BLANK: 2887096

Matrix: Water

Associated Lab Samples: 60367051013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	4.9J	10.0	3.9	04/29/21 11:19	
Fluoride	mg/L	<0.86	2.0	0.86	04/29/21 11:19	
Sulfate	mg/L	<4.2	10.0	4.2	04/29/21 11:19	

LABORATORY CONTROL SAMPLE: 2884378

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	5.0	99	90-110	
Fluoride	mg/L	2.5	2.5	101	90-110	
Sulfate	mg/L	5	4.9	99	90-110	

LABORATORY CONTROL SAMPLE: 2887097

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	5.0	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2884379

2884380

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		60366962021	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	4.6	5	5	9.3	9.3	94	93	80-120	0	15		
Fluoride	mg/L	0.22	2.5	2.5	2.7	2.7	100	99	80-120	1	15		
Sulfate	mg/L	11.7	5	5	16.8	16.7	102	99	80-120	1	15		

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

MATRIX SPIKE SAMPLE: 2884382

Parameter	Units	60367347001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	22.1	25	46.1	96	80-120	
Fluoride	mg/L	0.41	2.5	2.9	99	80-120	
Sulfate	mg/L	2500	2000	4540	102	80-120	

SAMPLE DUPLICATE: 2884381

Parameter	Units	60366962021 Result	Dup Result	RPD	Max RPD	Qualifiers
Chloride	mg/L	4.6	4.6	0	15	
Fluoride	mg/L	0.22	0.23	4	15	
Sulfate	mg/L	11.7	11.9	1	15	

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

QC Batch: 717418	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: 60367051001

METHOD BLANK: 2885546 Matrix: Water

Associated Lab Samples: 60367051001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.39	1.0	0.39	04/29/21 19:48	
Fluoride	mg/L	<0.086	0.20	0.086	04/29/21 19:48	
Sulfate	mg/L	<0.42	1.0	0.42	04/29/21 19:48	

METHOD BLANK: 2888400 Matrix: Water

Associated Lab Samples: 60367051001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.39	1.0	0.39	05/01/21 07:52	
Fluoride	mg/L	<0.086	0.20	0.086	05/01/21 07:52	
Sulfate	mg/L	<0.42	1.0	0.42	05/01/21 07:52	

METHOD BLANK: 2888421 Matrix: Water

Associated Lab Samples: 60367051001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.39	1.0	0.39	05/03/21 09:16	
Fluoride	mg/L	<0.086	0.20	0.086	05/03/21 09:16	
Sulfate	mg/L	<0.42	1.0	0.42	05/03/21 09:16	

LABORATORY CONTROL SAMPLE: 2885547

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	2.5	99	90-110	
Sulfate	mg/L	5	5.0	100	90-110	

LABORATORY CONTROL SAMPLE: 2888401

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	5.1	102	90-110	
Fluoride	mg/L	2.5	2.5	100	90-110	
Sulfate	mg/L	5	4.8	96	90-110	

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

LABORATORY CONTROL SAMPLE: 2888422

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	5.2	103	90-110	
Fluoride	mg/L	2.5	2.5	100	90-110	
Sulfate	mg/L	5	4.9	98	90-110	

MATRIX SPIKE SAMPLE: 2885548

Parameter	Units	60367806002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	33.6	50	82.7	98	80-120	
Fluoride	mg/L	0.41	2.5	2.9	99	80-120	
Sulfate	mg/L	181	100	284	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2885549 2885550

Parameter	Units	60367051001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	7.5	5	5	13.0	13.0	109	109	80-120	0	15	
Fluoride	mg/L	0.33	2.5	2.5	2.9	2.9	102	102	80-120	0	15	
Sulfate	mg/L	222	200	200	386	397	82	88	80-120	3	15	

SAMPLE DUPLICATE: 2885551

Parameter	Units	60367051001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chloride	mg/L	7.5	7.5	0	15	
Fluoride	mg/L	0.33	0.33	0	15	
Sulfate	mg/L	222	221	1	15	

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

QC Batch:	718360	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: 60367051014, 60367051015

METHOD BLANK: 2889298 Matrix: Water

Associated Lab Samples: 60367051014, 60367051015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.39	1.0	0.39	05/07/21 11:54	
Fluoride	mg/L	<0.086	0.20	0.086	05/07/21 11:54	
Sulfate	mg/L	<0.42	1.0	0.42	05/07/21 11:54	

METHOD BLANK: 2896324 Matrix: Water

Associated Lab Samples: 60367051014, 60367051015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.39	1.0	0.39	05/11/21 07:30	
Fluoride	mg/L	<0.086	0.20	0.086	05/11/21 07:30	
Sulfate	mg/L	<0.42	1.0	0.42	05/11/21 07:30	

LABORATORY CONTROL SAMPLE: 2889299

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	2.3	93	90-110	
Sulfate	mg/L	5	4.9	98	90-110	

LABORATORY CONTROL SAMPLE: 2896325

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	2.5	100	90-110	
Sulfate	mg/L	5	4.8	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2889301 2889302

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Spike Conc.	Result	Spike Conc.	Result						
Chloride	mg/L	23.1	25	25	46.8	49.4	95	105	80-120	5	15
Fluoride	mg/L	0.38	2.5	2.5	3.5	2.7	125	91	80-120	27	15 M1,R1
Sulfate	mg/L	15.8	25	25	39.3	42.0	94	105	80-120	7	15

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

MATRIX SPIKE SAMPLE: 2889303

Parameter	Units	60368243002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	696	500	1200	100	80-120	
Fluoride	mg/L	ND	250	267	102	80-120	
Sulfate	mg/L	555	500	1070	102	80-120	

SAMPLE DUPLICATE: 2889300

Parameter	Units	60367583001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chloride	mg/L	23.1	22.9	1	15	
Fluoride	mg/L	0.38	0.39	3	15	
Sulfate	mg/L	15.8	15.6	1	15	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

Sample: L-UMW-7D **Lab ID: 60367051001** Collected: 04/15/21 10:18 Received: 04/17/21 03:35 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	0.781 ± 0.458 (0.525) C:NA T:95%	pCi/L	05/24/21 12:09	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	1.11 ± 0.439 (0.649) C:71% T:90%	pCi/L	05/21/21 11:15	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: L-UMW-MS-1 Lab ID: 60367051002 Collected: 04/15/21 10:18 Received: 04/17/21 03:35 Matrix: Water PWS: Site ID: Sample Type:						
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	74.88 %REC ± NA (NA) C:NA T:NA	pCi/L	05/24/21 12:09	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	97.32 %REC ± NA (NA) C:NA T:NA	pCi/L	05/21/21 11:15	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

Sample: L-UMW-MSD-1 **Lab ID: 60367051003** Collected: 04/15/21 10:18 Received: 04/17/21 03:35 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	89.37 %REC 17.64 RPD ± NA (NA) C:NA T:NA	pCi/L	05/24/21 12:09	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	81.36 %REC 17.86 RPD ± NA (NA) C:NA T:NA	pCi/L	05/21/21 11:15	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: L-UMW-8D Lab ID: 60367051004 Collected: 04/19/21 10:16 Received: 04/21/21 03:49 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.120 ± 0.289 (0.559) C:NA T:100%	pCi/L	05/24/21 12:09	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.484 ± 0.342 (0.656) C:77% T:86%	pCi/L	05/21/21 11:15	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: L-UMW-9D Lab ID: 60367051005 Collected: 04/19/21 11:23 Received: 04/21/21 03:49 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.225 ± 0.493 (0.891) C:NA T:103%	pCi/L	05/24/21 12:09	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	1.12 ± 0.425 (0.616) C:73% T:93%	pCi/L	05/21/21 11:15	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: L-UMW-1D Lab ID: 60367051006 Collected: 04/19/21 13:00 Received: 04/21/21 03:49 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.174 ± 0.302 (0.539) C:NA T:99%	pCi/L	05/24/21 12:09	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	1.98 ± 0.587 (0.710) C:77% T:90%	pCi/L	05/21/21 11:15	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: L-UMW-2D Lab ID: 60367051007 Collected: 04/19/21 14:23 Received: 04/21/21 03:49 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.629 ± 0.528 (0.756) C:NA T:96%	pCi/L	05/24/21 12:09	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.889 ± 0.445 (0.766) C:74% T:81%	pCi/L	05/21/21 11:16	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: L-UMW-3D Lab ID: 60367051008 Collected: 04/19/21 15:40 Received: 04/21/21 03:49 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.000 ± 0.331 (0.717) C:NA T:99%	pCi/L	05/24/21 12:24	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.572 ± 0.383 (0.726) C:77% T:82%	pCi/L	05/21/21 11:16	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: L-UMW-FB-1 Lab ID: 60367051009 Collected: 04/19/21 11:45 Received: 04/21/21 03:49 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.180 ± 0.391 (0.720) C:NA T:97%	pCi/L	05/24/21 12:24	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.823 ± 0.431 (0.760) C:79% T:83%	pCi/L	05/21/21 14:27	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.314 ± 0.478 (0.823) C:NA T:92%	pCi/L	05/24/21 12:24	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.253 ± 0.371 (0.800) C:77% T:89%	pCi/L	05/21/21 14:27	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: L-UMW-DUP-1 Lab ID: 60367051011 Collected: 04/19/21 00:00 Received: 04/21/21 03:49 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.0572 ± 0.337 (0.687) C:NA T:97%	pCi/L	05/24/21 12:24	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.990 ± 0.453 (0.747) C:76% T:83%	pCi/L	05/21/21 14:27	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

Sample: L-UMW-DUP-2 **Lab ID: 60367051012** Collected: 04/19/21 00:00 Received: 04/21/21 03:49 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	0.175 ± 0.526 (0.974) C:NA T:101%	pCi/L	05/24/21 12:24	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	1.62 ± 0.543 (0.710) C:73% T:88%	pCi/L	05/21/21 14:27	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

Sample: L-UMW-4D **Lab ID: 60367051013** Collected: 04/20/21 15:30 Received: 04/21/21 03:49 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	0.582 ± 0.527 (0.777) C:NA T:96%	pCi/L	05/24/21 12:24	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.966 ± 0.500 (0.883) C:78% T:78%	pCi/L	05/21/21 14:27	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: L-UMW-5D Lab ID: 60367051014 Collected: 04/21/21 11:58 Received: 04/24/21 03:10 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.253 ± 0.290 (0.171) C:NA T:93%	pCi/L	05/24/21 12:24	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.491 ± 0.369 (0.720) C:75% T:90%	pCi/L	05/21/21 14:27	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: L-UMW-6D Lab ID: 60367051015 Collected: 04/21/21 09:47 Received: 04/24/21 03:10 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.128 ± 0.308 (0.594) C:NA T:96%	pCi/L	05/24/21 12:42	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.666 ± 0.430 (0.794) C:69% T:79%	pCi/L	05/21/21 14:27	15262-20-1	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

QC Batch: 446788

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: 60367051001, 60367051002, 60367051003, 60367051004, 60367051005, 60367051006, 60367051007, 60367051008, 60367051009, 60367051010, 60367051011, 60367051012, 60367051013, 60367051014, 60367051015

METHOD BLANK: 2156069

Matrix: Water

Associated Lab Samples: 60367051001, 60367051002, 60367051003, 60367051004, 60367051005, 60367051006, 60367051007, 60367051008, 60367051009, 60367051010, 60367051011, 60367051012, 60367051013, 60367051014, 60367051015

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.418 ± 0.437 (0.684) C:NA T:92%	pCi/L	05/24/21 12:09	

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 LEC LCPA

Pace Project No.: 60367051

QC Batch: 446787

Analysis Method: EPA 904.0

QC Batch Method: EPA 904.0

Analysis Description: 904.0 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 60367051001, 60367051002, 60367051003, 60367051004, 60367051005, 60367051006, 60367051007, 60367051008, 60367051009, 60367051010, 60367051011, 60367051012, 60367051013, 60367051014, 60367051015

METHOD BLANK: 2156067

Matrix: Water

Associated Lab Samples: 60367051001, 60367051002, 60367051003, 60367051004, 60367051005, 60367051006, 60367051007, 60367051008, 60367051009, 60367051010, 60367051011, 60367051012, 60367051013, 60367051014, 60367051015

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.850 ± 0.368 (0.565) C:75% T:88%	pCi/L	05/21/21 11:15	

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.

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QUALIFIERS

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

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.

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.

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.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60367051001	L-UMW-7D	EPA 200.7	717296	EPA 200.7	717436
60367051004	L-UMW-8D	EPA 200.7	717917	EPA 200.7	718060
60367051005	L-UMW-9D	EPA 200.7	717917	EPA 200.7	718060
60367051006	L-UMW-1D	EPA 200.7	717917	EPA 200.7	718060
60367051007	L-UMW-2D	EPA 200.7	717917	EPA 200.7	718060
60367051008	L-UMW-3D	EPA 200.7	717917	EPA 200.7	718060
60367051009	L-UMW-FB-1	EPA 200.7	717917	EPA 200.7	718060
60367051010	L-UMW-FB-2	EPA 200.7	717917	EPA 200.7	718060
60367051011	L-UMW-DUP-1	EPA 200.7	717917	EPA 200.7	718060
60367051012	L-UMW-DUP-2	EPA 200.7	717917	EPA 200.7	718060
60367051013	L-UMW-4D	EPA 200.7	717917	EPA 200.7	718060
60367051014	L-UMW-5D	EPA 200.7	719402	EPA 200.7	719547
60367051015	L-UMW-6D	EPA 200.7	719402	EPA 200.7	719547
60367051001	L-UMW-7D	EPA 200.8	717299	EPA 200.8	717438
60367051004	L-UMW-8D	EPA 200.8	718918	EPA 200.8	719002
60367051005	L-UMW-9D	EPA 200.8	718918	EPA 200.8	719002
60367051006	L-UMW-1D	EPA 200.8	718918	EPA 200.8	719002
60367051007	L-UMW-2D	EPA 200.8	718918	EPA 200.8	719002
60367051008	L-UMW-3D	EPA 200.8	718918	EPA 200.8	719002
60367051009	L-UMW-FB-1	EPA 200.8	718918	EPA 200.8	719002
60367051010	L-UMW-FB-2	EPA 200.8	718918	EPA 200.8	719002
60367051011	L-UMW-DUP-1	EPA 200.8	718918	EPA 200.8	719002
60367051012	L-UMW-DUP-2	EPA 200.8	718918	EPA 200.8	719002
60367051013	L-UMW-4D	EPA 200.8	718918	EPA 200.8	719002
60367051014	L-UMW-5D	EPA 200.8	719408	EPA 200.8	719549
60367051015	L-UMW-6D	EPA 200.8	719408	EPA 200.8	719549
60367051001	L-UMW-7D	EPA 7470	718988	EPA 7470	719366
60367051004	L-UMW-8D	EPA 7470	719264	EPA 7470	719614
60367051005	L-UMW-9D	EPA 7470	719264	EPA 7470	719614
60367051006	L-UMW-1D	EPA 7470	719264	EPA 7470	719614
60367051007	L-UMW-2D	EPA 7470	719264	EPA 7470	719614
60367051008	L-UMW-3D	EPA 7470	719264	EPA 7470	719614
60367051009	L-UMW-FB-1	EPA 7470	719264	EPA 7470	719614
60367051010	L-UMW-FB-2	EPA 7470	719264	EPA 7470	719614
60367051011	L-UMW-DUP-1	EPA 7470	719264	EPA 7470	719614
60367051012	L-UMW-DUP-2	EPA 7470	719264	EPA 7470	719614
60367051013	L-UMW-4D	EPA 7470	719264	EPA 7470	719614
60367051014	L-UMW-5D	EPA 7470	719267	EPA 7470	719617
60367051015	L-UMW-6D	EPA 7470	719267	EPA 7470	719617
60367051001	L-UMW-7D	EPA 903.1	446788		
60367051002	L-UMW-MS-1	EPA 903.1	446788		
60367051003	L-UMW-MSD-1	EPA 903.1	446788		
60367051004	L-UMW-8D	EPA 903.1	446788		
60367051005	L-UMW-9D	EPA 903.1	446788		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60367051006	L-UMW-1D	EPA 903.1	446788		
60367051007	L-UMW-2D	EPA 903.1	446788		
60367051008	L-UMW-3D	EPA 903.1	446788		
60367051009	L-UMW-FB-1	EPA 903.1	446788		
60367051010	L-UMW-FB-2	EPA 903.1	446788		
60367051011	L-UMW-DUP-1	EPA 903.1	446788		
60367051012	L-UMW-DUP-2	EPA 903.1	446788		
60367051013	L-UMW-4D	EPA 903.1	446788		
60367051014	L-UMW-5D	EPA 903.1	446788		
60367051015	L-UMW-6D	EPA 903.1	446788		
60367051001	L-UMW-7D	EPA 904.0	446787		
60367051002	L-UMW-MS-1	EPA 904.0	446787		
60367051003	L-UMW-MSD-1	EPA 904.0	446787		
60367051004	L-UMW-8D	EPA 904.0	446787		
60367051005	L-UMW-9D	EPA 904.0	446787		
60367051006	L-UMW-1D	EPA 904.0	446787		
60367051007	L-UMW-2D	EPA 904.0	446787		
60367051008	L-UMW-3D	EPA 904.0	446787		
60367051009	L-UMW-FB-1	EPA 904.0	446787		
60367051010	L-UMW-FB-2	EPA 904.0	446787		
60367051011	L-UMW-DUP-1	EPA 904.0	446787		
60367051012	L-UMW-DUP-2	EPA 904.0	446787		
60367051013	L-UMW-4D	EPA 904.0	446787		
60367051014	L-UMW-5D	EPA 904.0	446787		
60367051015	L-UMW-6D	EPA 904.0	446787		
60367051001	L-UMW-7D	SM 2320B	716898		
60367051004	L-UMW-8D	SM 2320B	717897		
60367051005	L-UMW-9D	SM 2320B	717897		
60367051006	L-UMW-1D	SM 2320B	717897		
60367051007	L-UMW-2D	SM 2320B	717897		
60367051008	L-UMW-3D	SM 2320B	717897		
60367051009	L-UMW-FB-1	SM 2320B	717897		
60367051010	L-UMW-FB-2	SM 2320B	717897		
60367051011	L-UMW-DUP-1	SM 2320B	717897		
60367051012	L-UMW-DUP-2	SM 2320B	717897		
60367051013	L-UMW-4D	SM 2320B	718221		
60367051014	L-UMW-5D	SM 2320B	718267		
60367051015	L-UMW-6D	SM 2320B	718267		
60367051001	L-UMW-7D	SM 2540C	716210		
60367051004	L-UMW-8D	SM 2540C	716655		
60367051005	L-UMW-9D	SM 2540C	716655		
60367051006	L-UMW-1D	SM 2540C	716655		
60367051007	L-UMW-2D	SM 2540C	716657		
60367051008	L-UMW-3D	SM 2540C	716657		
60367051009	L-UMW-FB-1	SM 2540C	716657		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60367051010	L-UMW-FB-2	SM 2540C	716657		
60367051011	L-UMW-DUP-1	SM 2540C	716657		
60367051012	L-UMW-DUP-2	SM 2540C	716657		
60367051013	L-UMW-4D	SM 2540C	716658		
60367051014	L-UMW-5D	SM 2540C	717180		
60367051015	L-UMW-6D	SM 2540C	717180		
60367051001	L-UMW-7D	SM 3500-Fe B#4	720612		
60367051004	L-UMW-8D	SM 3500-Fe B#4	720613		
60367051005	L-UMW-9D	SM 3500-Fe B#4	720613		
60367051006	L-UMW-1D	SM 3500-Fe B#4	720613		
60367051007	L-UMW-2D	SM 3500-Fe B#4	720613		
60367051008	L-UMW-3D	SM 3500-Fe B#4	720613		
60367051009	L-UMW-FB-1	SM 3500-Fe B#4	720613		
60367051010	L-UMW-FB-2	SM 3500-Fe B#4	720613		
60367051011	L-UMW-DUP-1	SM 3500-Fe B#4	720613		
60367051012	L-UMW-DUP-2	SM 3500-Fe B#4	720613		
60367051013	L-UMW-4D	SM 3500-Fe B#4	720613		
60367051014	L-UMW-5D	SM 3500-Fe B#4	720613		
60367051015	L-UMW-6D	SM 3500-Fe B#4	720613		
60367051001	L-UMW-7D	SM 3500-Fe B#4	716370		
60367051004	L-UMW-8D	SM 3500-Fe B#4	716373		
60367051005	L-UMW-9D	SM 3500-Fe B#4	716373		
60367051006	L-UMW-1D	SM 3500-Fe B#4	716373		
60367051007	L-UMW-2D	SM 3500-Fe B#4	716373		
60367051008	L-UMW-3D	SM 3500-Fe B#4	716373		
60367051009	L-UMW-FB-1	SM 3500-Fe B#4	716373		
60367051010	L-UMW-FB-2	SM 3500-Fe B#4	716373		
60367051011	L-UMW-DUP-1	SM 3500-Fe B#4	716373		
60367051012	L-UMW-DUP-2	SM 3500-Fe B#4	716373		
60367051013	L-UMW-4D	SM 3500-Fe B#4	716375		
60367051014	L-UMW-5D	SM 3500-Fe B#4	718252		
60367051015	L-UMW-6D	SM 3500-Fe B#4	718252		
60367051001	L-UMW-7D	SM 4500-S-2 D	716128		
60367051004	L-UMW-8D	SM 4500-S-2 D	716368		
60367051005	L-UMW-9D	SM 4500-S-2 D	716368		
60367051006	L-UMW-1D	SM 4500-S-2 D	716368		
60367051007	L-UMW-2D	SM 4500-S-2 D	716368		
60367051008	L-UMW-3D	SM 4500-S-2 D	716368		
60367051009	L-UMW-FB-1	SM 4500-S-2 D	716368		
60367051010	L-UMW-FB-2	SM 4500-S-2 D	716615		
60367051011	L-UMW-DUP-1	SM 4500-S-2 D	716615		
60367051012	L-UMW-DUP-2	SM 4500-S-2 D	716615		
60367051013	L-UMW-4D	SM 4500-S-2 D	716615		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN LEC LCPA

Pace Project No.: 60367051

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60367051014	L-UMW-5D	SM 4500-S-2 D	716875		
60367051015	L-UMW-6D	SM 4500-S-2 D	716875		
60367051001	L-UMW-7D	EPA 300.0	717418		
60367051004	L-UMW-8D	EPA 300.0	716975		
60367051005	L-UMW-9D	EPA 300.0	716975		
60367051006	L-UMW-1D	EPA 300.0	716975		
60367051007	L-UMW-2D	EPA 300.0	716975		
60367051008	L-UMW-3D	EPA 300.0	716975		
60367051009	L-UMW-FB-1	EPA 300.0	716975		
60367051010	L-UMW-FB-2	EPA 300.0	716975		
60367051011	L-UMW-DUP-1	EPA 300.0	716975		
60367051012	L-UMW-DUP-2	EPA 300.0	716975		
60367051013	L-UMW-4D	EPA 300.0	716978		
60367051014	L-UMW-5D	EPA 300.0	718360		
60367051015	L-UMW-6D	EPA 300.0	718360		

REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

WO#: 60367051



Client Name: Cooler 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 XZPIC

Thermometer Used: T 298 Type of Ice: Wet Blue None

Cooler Temperature (°C): As-read 1.4 Corr. Factor 40.0 Corrected 1.4, 17.2 Date and initials of person examining contents: 4.20.21
Temperature should be above freezing to 6°C 17.2, 1.1, 18.5, 1.7 1.1, 18.5, 1.7

Chain of Custody present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Chain of Custody relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Samples arrived within holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<u>all coolers out of temp</u>
Short Hold Time analyses (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<u>(contained) Only radium</u>
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Correct containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers intact:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Sample labels match COC: Date / time / ID / analyses	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Samples contain multiple phases? Matrix: <u>WT</u>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Containers requiring pH preservation in compliance? (HNO ₃ , H ₂ SO ₄ , HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO) LOT# <u>603175, 603200</u>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> 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)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Potassium iodide test strip turns blue/purple? (Preserve)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Trip Blank present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Samples from USDA Regulated Area: State:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> 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 5:26 pm, 4/21/21

Project Manager Review: _____ Date: _____



Sample Condition Upon Receipt

WO#: 60367051



Client Name: Egolder 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 epic

Thermometer Used: T298 Type of Ice: Wet Blue None

Cooler Temperature (°C): As-read 13.0, 17.0 Corr. Factor 0.0 Corrected 13.0, 17.0 Date and initials of person examining contents: 4.21 ML
0.9, 0.5

Temperature should be above freezing to 6°C

Chain of Custody present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	• all radium samples in cooler 1 & 2. (out of temp)
Chain of Custody relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Samples arrived within holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Short Hold Time analyses (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Correct containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Sample labels match COC: Date / time / ID / analyses	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Samples contain multiple phases? Matrix: <u>WT</u>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Containers requiring pH preservation in compliance? (HNO ₃ , H ₂ SO ₄ , HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO) LOT# <u>603173</u>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Cyanide water sample checks:		
Lead acetate strip turns dark? (Record only)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Potassium iodide test strip turns blue/purple? (Preserve)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Trip Blank present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Samples from USDA Regulated Area: State: _____	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> 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 5:25 pm, 4/21/21

Project Manager Review: _____ Date: _____



Sample Condition Upon Receipt

WO#: 60367051



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 Zpic

Thermometer Used: T298 Type of Ice: Wet Blue None Radiums

Cooler Temperature (°C): As-read 0.9 Corr. Factor 0.0 Corrected 0.9
Temperature should be above freezing to 6°C 14.9 0.0 14.9

Date and initials of person examining contents: 4/24/21/ck

Chain of Custody present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Chain of Custody relinquished:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Samples arrived within holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Short Hold Time analyses (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<u>Fe+2</u>
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Correct containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Sample labels match COC: Date / time / ID / analyses	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Samples contain multiple phases? Matrix: <u>W+</u>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Containers requiring pH preservation in compliance? (HNO ₃ , H ₂ SO ₄ , HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> 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)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Potassium iodide test strip turns blue/purple? (Preserve)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Trip Blank present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Samples from USDA Regulated Area: State: _____	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> 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 8:05 am, 4/26/21

Project Manager Review: _____ Date: _____

MEMORANDUM**DATE** July 6, 2021**Project No.** 153140603**TO** Project File
Golder Associates**CC** Amanda Derhake, Jeff Ingram**FROM** Annie Muehlfarth**EMAIL** AMuehlfarth@golder.com**DATA VALIDATION SUMMARY, LABADIE ENERGY CENTER – LCPA – DETECTION MONITORING AND ASSESSMENT MONITORING - DATA PACKAGE 60367051**

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 a compound was analyzed outside of hold time, sample results were qualified as estimates (J for detects, UJ for non-detects).
- 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 Associates
 Project Name: Ameren - LEC - LCPA
 Reviewer: A. Muehlfarth

Project Manager: J. Ingram
 Project Number: 153140603
 Validation Date: 7/6/2021

Laboratory: Pace Analytical

SDG #: 60367051

Analytical Method (type and no.): EPA 200.7/200.8 (Total Metals); EPA 7470 (Mercury); SM2320B (Alkalinity); SM2540C (TDS); EPA 300.0 (Anions);

Matrix: Air Soil/Sed. Water Waste SM 3500-FE B#4 (Ferric/Ferrous Iron); SM 4500-S-2 D (Sulfide); EPA 903.1/904.0 (Radium 226/228)

Sample Names L-UMW-7D, L-UMW-MS-1, L-UMW-MSD-1, L-UMW-8D, L-UMW-9D, L-UMW-1D, L-UMW-2D, L-UMW-3D, L-UMW-FB-1, L-UMW-FB-2, L-UMW-DUP-1, L-UMW-DUP-2, L-UMW-4D, L-UMW-5D, L-UMW-6D

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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>4/15/2021 - 4/20/2021</u>
b) Sampling team indicated?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>BTT/AMM/RR/SMK</u>
c) Sample location noted?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u></u>
d) Sample depth indicated (Soils)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u></u>
e) Sample type indicated (grab/composite)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>Grab</u>
f) Field QC noted?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>See Notes</u>
g) Field parameters collected (note types)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>pH, Sp.Cond, ORP, Temp, DO, Turbidity</u>
h) Field Calibration within control limits?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u></u>
i) Notations of unacceptable field conditions/performances from field logs or field notes?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u></u>
j) Does the laboratory narrative indicate deficiencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u></u>

Note Deficiencies:

Chain-of-Custody (COC)	YES	NO	NA	COMMENTS
a) Was the COC properly completed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u></u>
b) Was the COC signed by both field and laboratory personnel?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u></u>
c) Were samples received in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u></u>

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

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

Blanks	YES	NO	NA	COMMENTS
a) Were analytes detected in the method blank(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Notes
b) Were analytes detected in the field blank(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Notes
c) Were analytes detected in the equipment blank(s)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
d) Were analytes detected in the trip blank(s)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Laboratory Control Sample (LCS)	YES	NO	NA	COMMENTS
a) Was a LCS analyzed once per SDG?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
b) Were the proper analytes included in the LCS?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
c) Was the LCS accuracy criteria met?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Duplicates	YES	NO	NA	COMMENTS
a) Were field duplicates collected (note original and duplicate sample names)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Notes
b) Were field dup. precision criteria met (note RPD)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Notes
c) Were lab duplicates analyzed (note original and duplicate samples)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Notes
d) Were lab dup. precision criteria met (note RPD)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Notes

Blind Standards	YES	NO	NA	COMMENTS
a) Was a blind standard used (indicate name, analytes included and concentrations)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
b) Was the %D within control limits?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Matrix Spike/Matrix Spike Duplicate (MS/MSD)	YES	NO	NA	COMMENTS
a) Was MS accuracy criteria met?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Notes
Recovery could not be calculated since sample contained high concentration of analyte?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
b) Was MSD accuracy criteria met?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Notes
Recovery could not be calculated since sample contained high concentration of analyte?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
c) Were MS/MSD precision criteria met?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Notes

Comments/Notes:

Ferrous Iron analyzed outside of hold time in all samples. All results were qualified as estimated.

Sulfate and Chloride analyzed at a dilution in several samples, no qualification necessary.

Method Blanks:

2887521: Potassium (189J); associated with samples -004 through -013. Sample -010 qualified non-detect (result < RL), no other qualifications necessary.

QA LEVEL IV - INORGANIC DATA EVALUATION CHECKLIST

Comments/Notes:

2893278: Boron (11.4J); associated with samples -014, -015. Sample results >RL and 10x blank, no qualification necessary.

2885326: Chromium (0.47J); associated with sample -001. Sample result qualified non-detect (result < RL).

2893284: Chromium (0.44J); associated with samples -014, -015. Sample results qualified non-detect (result < RL).

2887096: Chloride (4.9J); associated with sample -013. 10x blank > sample result > RL, qualified based on professional judgement.

2156067: Radium-228 (0.850 ± 0.368); associated with samples -001 through -015. Detects were qualified as estimated.

Field Blanks:

L-UMW-FB-1 @ L-UMW-9D: Boron (13.4J), Chromium (0.35J), TDS (11.5), Ferric Iron (0.0000000010J), Radium-228 (0.823 ± 0.431). Parent sample detections qualified non-detect when compound detected in FB and parent sample detection <RL.

L-UMW-FB-2 @ L-UMW-2D: Potassium (154J), Chromium (0.33J), TDS (15.0), Ferric Iron (0.0032J). Chromium qualified non-detect in 2D (detection <RL).

Duplicates:

L-UMW-DUP-1 @ L-UMW-8D: DUP RPD exceeds limit (20%) for Chromium (82.1%), TDS (53.9%), Radium-226 (70.9%); Radium-228 detected in DUP, ND in sample. Compounds qualified as estimated in both samples.

L-UMW-DUP-2 @ L-UMW-1D: DUP RPD exceeds limit (20%) for Ferrous Iron (38.3%); Lead detected in DUP, ND in sample. Compounds qualified as estimated in both samples.

Laboratory analyzed sample duplicates for Alkalinity, TDS, Ferrous Iron, Sulfide, Anions

2881081: DUP RPD exceeds limit (10%) for TDS (23%). Associated with unrelated sample, no qualification necessary.

2883300: DUP RPD exceeds limit (10%) for TDS (58%). Associated with unrelated sample, no qualification necessary.

2884358: DUP RPD exceeds limit (15%) for Fluoride (22%). Associated with unrelated sample, no qualification necessary.

MS/MSD:

2885313: MS % recovery low for Boron. MS performed on unrelated sample, no qualification necessary.

2885314/2885315: MS % recovery low for Boron; MSD % recovery low for Calcium; associated with sample -001. Only one QC indicator outside control limits for each analyte, no qualification necessary.

2887523: MS % recovery high for Calcium, Sodium; associated with sample -013. Only one QC indicator outside control limits, no qualification necessary.

2887524/2887525: MSD % recovery high from Calcium. MS/MSD performed on unrelated sample, no qualification necessary.

2893280/2893281: MS/MSD % recovery low for Sodium. MS/MSD performed on unrelated sample, no qualification necessary.

2889301/2889302: MS % recovery high and RPD exceeds limit for Fluoride. MS/MSD performed on unrelated sample, no qualification necessary.

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

Data Qualification:

Sample Name	Constituent(s)	Result	Qualifier	Reason
L-UMW-7D	Ferrous Iron	0.20	J	Analyzed outside of hold time
L-UMW-8D	"	1.1	J	"
L-UMW-9D	"	0.91	J	"
L-UMW-2D	"	0.18	J	"
L-UMW-DUP-1	"	1.1	J	"
L-UMW-4D	"	0.062	J	"
L-UMW-6D	"	0.36	J	"
L-UMW-1D	"	0.57	J	Analyzed outside of hold time; DUP RPD exceeds limit
L-UMW-DUP-2	"	0.84	J	"
L-UMW-3D	"	0.048	UJ	Analyzed outside of hold time, non-detect
L-UMW-FB-1	"	0.048	UJ	"
L-UMW-FB-2	"	0.048	UJ	"
L-UMW-5D	"	0.048	UJ	"
L-UMW-FB-2	Potassium	500	U	Detected in MB, RL > sample result
L-UMW-7D	Chromium	1.0	U	"
L-UMW-5D	"	1.0	U	"
L-UMW-6D	"	1.0	U	"
L-UMW-4D	Chloride	21.5	J	Detected in MB, 10x blank > sample result > RL
L-UMW-7D	Radium-228	1.11 ± 0.439	J	Detected in MB
L-UMW-1D	"	1.98 ± 0.587	J	"
L-UMW-2D	"	0.889 ± 0.445	J	"
L-UMW-FB-1	"	0.823 ± 0.431	J	"
L-UMW-DUP-2	"	1.62 ± 0.543	J	"
L-UMW-4D	"	0.966 ± 0.500	J	"
L-UMW-9D	"	1.12 ± 0.425	J	Detected in MB, FB
L-UMW-DUP-1	"	0.990 ± 0.453	J	Detected in MB; Detected in DUP, ND in sample
L-UMW-9D	Boron	100	U	Detected in FB, RL > sample result
"	Chromium	1.0	U	"
L-UMW-2D	"	1.0	U	"
L-UMW-8D	"	0.33	J	DUP RPD exceeds limit
"	TDS	804	J	"
"	Radium-228	0.484 ± 0.342	UJ	Detected in DUP, ND in sample
L-UMW-DUP-1	Chromium	0.79	J	DUP RPD exceeds limit
"	TDS	869	J	"

June 02, 2021

Jeffrey Ingram
Golder Associates
13515 Barrett Parkway Drive
Suite 260
Ballwin, MO 63021

RE: Project: AMEREN LEC LCPA-CA
Pace Project No.: 60366962

Dear Jeffrey Ingram:

Enclosed are the analytical results for sample(s) received by the laboratory between April 17, 2021 and April 24, 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 - 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



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

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 #: 9526

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 #: 200030

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

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SAMPLE SUMMARY

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60366962001	L-MW-24	Water	04/16/21 13:26	04/17/21 03:35
60366962002	L-MW-33(D)	Water	04/16/21 13:33	04/17/21 03:35
60366962003	L-MW-34(D)	Water	04/16/21 14:43	04/17/21 03:35
60366962004	L-MW-35(D)	Water	04/16/21 12:32	04/17/21 03:35
60366962005	L-S-1	Water	04/16/21 15:15	04/17/21 03:35
60366962006	L-TP-3M	Water	04/16/21 12:13	04/17/21 03:35
60366962007	L-TP-3D	Water	04/16/21 11:22	04/17/21 03:35
60366962008	L-TP-4D	Water	04/16/21 09:46	04/17/21 03:35
60366962009	L-CA-DUP-1	Water	04/16/21 00:00	04/17/21 03:35
60366962010	L-CA-FB-1	Water	04/15/21 15:50	04/17/21 03:35
60366962011	L-CA-FB-2	Water	04/16/21 11:40	04/17/21 03:35
60366962012	L-CA-FB-3	Water	04/16/21 15:35	04/17/21 03:35
60366962013	L-MW-26	Water	04/16/21 11:16	04/17/21 03:35
60366962014	L-LMW-1S	Water	04/15/21 13:19	04/17/21 03:35
60366962015	L-LMW-7S	Water	04/15/21 15:13	04/17/21 03:35
60366962016	L-LMW-8S	Water	04/15/21 15:32	04/17/21 03:35
60366962020	L-AMW-8	Water	04/20/21 10:40	04/21/21 03:49
60366962021	L-TP-1D	Water	04/19/21 09:45	04/21/21 03:49
60366962022	L-TP-2M	Water	04/20/21 12:55	04/21/21 03:49
60366962023	L-TP-2D	Water	04/20/21 14:00	04/21/21 03:49
60366962024	L-AM-1S	Water	04/20/21 10:05	04/21/21 03:49
60366962025	L-AM-1D	Water	04/20/21 11:20	04/21/21 03:49
60366962026	L-CA-DUP-2	Water	04/20/21 00:00	04/21/21 03:49
60366962027	L-CA-DUP-3	Water	04/20/21 00:00	04/21/21 03:49
60366962028	L-CA-MS-1	Water	04/19/21 09:45	04/21/21 03:49
60366962029	L-CA-MSD-1	Water	04/19/21 09:45	04/21/21 03:49
60366962030	L-CA-MS-2	Water	04/20/21 14:00	04/21/21 03:49
60366962031	L-CA-MSD-2	Water	04/20/21 14:00	04/21/21 03:49
60366962032	L-LMW-4S	Water	04/20/21 14:00	04/21/21 03:49
60366962033	L-LMW-2S	Water	04/21/21 11:02	04/24/21 03:10

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory		
60366962001	L-MW-24	EPA 200.7	JLH	13	PASI-K		
		EPA 200.8	JDE	6	PASI-K		
		EPA 7470	OMT	1	PASI-K		
		EPA 903.1	MK1	1	PASI-PA		
		EPA 904.0	JC2	1	PASI-PA		
		SM 2320B	MAP	1	PASI-K		
		SM 2540C	AJS	1	PASI-K		
		SM 3500-Fe B#4	LDB	1	PASI-K		
		SM 3500-Fe B#4	MAW	1	PASI-K		
		SM 4500-S-2 D	MAW	1	PASI-K		
		EPA 300.0	CRN2	3	PASI-K		
		60366962002	L-MW-33(D)	EPA 200.7	JLH	13	PASI-K
				EPA 200.8	JDE	6	PASI-K
EPA 7470	OMT			1	PASI-K		
EPA 903.1	MK1			1	PASI-PA		
EPA 904.0	JC2			1	PASI-PA		
SM 2320B	MAP			1	PASI-K		
SM 2540C	AJS			1	PASI-K		
SM 3500-Fe B#4	LDB			1	PASI-K		
SM 3500-Fe B#4	MAW			1	PASI-K		
SM 4500-S-2 D	MAW			1	PASI-K		
EPA 300.0	CRN2			3	PASI-K		
60366962003	L-MW-34(D)			EPA 200.7	JLH	13	PASI-K
				EPA 200.8	JDE	6	PASI-K
		EPA 7470	OMT	1	PASI-K		
		EPA 903.1	MK1	1	PASI-PA		
		EPA 904.0	JC2	1	PASI-PA		
		SM 2320B	MAP	1	PASI-K		
		SM 2540C	AJS	1	PASI-K		
		SM 3500-Fe B#4	LDB	1	PASI-K		
		SM 3500-Fe B#4	MAW	1	PASI-K		
		SM 4500-S-2 D	MAW	1	PASI-K		
		EPA 300.0	CRN2	3	PASI-K		
		60366962004	L-MW-35(D)	EPA 200.7	JLH	13	PASI-K
				EPA 200.8	JDE	6	PASI-K
EPA 7470	OMT			1	PASI-K		
EPA 903.1	MK1			1	PASI-PA		

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 904.0	JC2	1	PASI-PA
		SM 2320B	MAP	1	PASI-K
		SM 2540C	AJS	1	PASI-K
		SM 3500-Fe B#4	LDB	1	PASI-K
		SM 3500-Fe B#4	MAW	1	PASI-K
		SM 4500-S-2 D	MAW	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
60366962005	L-S-1	EPA 200.7	JLH	13	PASI-K
		EPA 200.8	JDE	6	PASI-K
		EPA 7470	OMT	1	PASI-K
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
		SM 2320B	MAP	1	PASI-K
		SM 2540C	VRP	1	PASI-K
		SM 3500-Fe B#4	LDB	1	PASI-K
		SM 3500-Fe B#4	MAW	1	PASI-K
		SM 4500-S-2 D	MAW	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
60366962006	L-TP-3M	EPA 200.7	JLH	13	PASI-K
		EPA 200.8	JDE	6	PASI-K
		EPA 7470	OMT	1	PASI-K
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
		SM 2320B	MAP	1	PASI-K
		SM 2540C	VRP	1	PASI-K
		SM 3500-Fe B#4	LDB	1	PASI-K
		SM 3500-Fe B#4	MAW	1	PASI-K
		SM 4500-S-2 D	MAW	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
60366962007	L-TP-3D	EPA 200.7	JLH	13	PASI-K
		EPA 200.8	JDE	6	PASI-K
		EPA 7470	OMT	1	PASI-K
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
		SM 2320B	MAP	1	PASI-K
		SM 2540C	VRP	1	PASI-K
		SM 3500-Fe B#4	LDB	1	PASI-K

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SAMPLE ANALYTE COUNT

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60366962008	L-TP-4D	SM 3500-Fe B#4	MAW	1	PASI-K
		SM 4500-S-2 D	MAW	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
		EPA 200.7	JLH	13	PASI-K
		EPA 200.8	JDE	6	PASI-K
		EPA 7470	OMT	1	PASI-K
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
		SM 2320B	MAP	1	PASI-K
		SM 2540C	VRP	1	PASI-K
60366962009	L-CA-DUP-1	SM 3500-Fe B#4	LDB	1	PASI-K
		SM 3500-Fe B#4	MAW	1	PASI-K
		SM 4500-S-2 D	MAW	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
		EPA 200.7	JLH	13	PASI-K
		EPA 200.8	JDE	6	PASI-K
		EPA 7470	OMT	1	PASI-K
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
		SM 2320B	MAP	1	PASI-K
60366962010	L-CA-FB-1	SM 2540C	VRP	1	PASI-K
		SM 3500-Fe B#4	LDB	1	PASI-K
		SM 3500-Fe B#4	MAW	1	PASI-K
		SM 4500-S-2 D	MAW	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
		EPA 200.7	JLH	13	PASI-K
		EPA 200.8	JDE	6	PASI-K
		EPA 7470	OMT	1	PASI-K
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
60366962011	L-CA-FB-2	SM 2320B	MAP	1	PASI-K
		SM 2540C	AJS	1	PASI-K
		SM 3500-Fe B#4	LDB	1	PASI-K
		SM 3500-Fe B#4	MAW	1	PASI-K
		SM 4500-S-2 D	MAW	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
		EPA 200.7	JLH	13	PASI-K

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SAMPLE ANALYTE COUNT

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60366962012	L-CA-FB-3	EPA 200.8	JDE	6	PASI-K
		EPA 7470	OMT	1	PASI-K
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
		SM 2320B	MAP	1	PASI-K
		SM 2540C	VRP	1	PASI-K
		SM 3500-Fe B#4	LDB	1	PASI-K
		SM 3500-Fe B#4	MAW	1	PASI-K
		SM 4500-S-2 D	MAW	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
		EPA 200.7	JLH	13	PASI-K
		EPA 200.8	JDE	6	PASI-K
		EPA 7470	OMT	1	PASI-K
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
		SM 2320B	MAP	1	PASI-K
		SM 2540C	VRP	1	PASI-K
SM 3500-Fe B#4	LDB	1	PASI-K		
SM 3500-Fe B#4	MAW	1	PASI-K		
SM 4500-S-2 D	MAW	1	PASI-K		
60366962013	L-MW-26	EPA 300.0	CRN2	3	PASI-K
		EPA 200.7	JLH	13	PASI-K
		EPA 200.8	JDE	6	PASI-K
		EPA 7470	OMT	1	PASI-K
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
		SM 2320B	MAP	1	PASI-K
		SM 2540C	VRP	1	PASI-K
		SM 3500-Fe B#4	LDB	1	PASI-K
		SM 3500-Fe B#4	MAW	1	PASI-K
		SM 4500-S-2 D	MAW	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
		EPA 200.7	JLH	13	PASI-K
		EPA 200.8	JDE	6	PASI-K
		EPA 7470	OMT	1	PASI-K
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
60366962014	L-LMW-1S	EPA 300.0	CRN2	3	PASI-K
		EPA 200.7	JLH	13	PASI-K
		EPA 200.8	JDE	6	PASI-K
		EPA 7470	OMT	1	PASI-K
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA

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SAMPLE ANALYTE COUNT

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60366962015	L-LMW-7S	SM 2320B	MAP	1	PASI-K
		SM 2540C	AJS	1	PASI-K
		SM 3500-Fe B#4	LDB	1	PASI-K
		SM 3500-Fe B#4	MAW	1	PASI-K
		SM 4500-S-2 D	MAW	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
		EPA 200.7	JLH	13	PASI-K
		EPA 200.8	JDE	6	PASI-K
		EPA 7470	OMT	1	PASI-K
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
		SM 2320B	MAP	1	PASI-K
		SM 2540C	AJS	1	PASI-K
		SM 3500-Fe B#4	LDB	1	PASI-K
		SM 3500-Fe B#4	MAW	1	PASI-K
SM 4500-S-2 D	MAW	1	PASI-K		
60366962016	L-LMW-8S	EPA 300.0	CRN2	3	PASI-K
		EPA 200.7	JLH	13	PASI-K
		EPA 200.8	JDE	6	PASI-K
		EPA 7470	OMT	1	PASI-K
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
		SM 2320B	MAP	1	PASI-K
		SM 2540C	AJS	1	PASI-K
		SM 3500-Fe B#4	LDB	1	PASI-K
		SM 3500-Fe B#4	MAW	1	PASI-K
		SM 4500-S-2 D	MAW	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
		EPA 200.7	JLH	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	OMT	1	PASI-K
EPA 903.1	MK1	1	PASI-PA		
EPA 904.0	JC2	1	PASI-PA		
60366962020	L-AMW-8	SM 2320B	MAP	1	PASI-K
		SM 2540C	LDB	1	PASI-K
		SM 3500-Fe B#4	LDB	1	PASI-K
		SM 3500-Fe B#4	MAW	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
		EPA 200.7	JLH	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	OMT	1	PASI-K
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
		SM 2320B	MAP	1	PASI-K
		SM 2540C	LDB	1	PASI-K
		SM 3500-Fe B#4	LDB	1	PASI-K
		SM 3500-Fe B#4	MAW	1	PASI-K

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60366962021	L-TP-1D	SM 4500-S-2 D	MAW	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
		EPA 200.7	JLH	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	OMT	1	PASI-K
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
		SM 2320B	MAP	1	PASI-K
		SM 2540C	LDB	1	PASI-K
		SM 3500-Fe B#4	LDB	1	PASI-K
60366962022	L-TP-2M	SM 3500-Fe B#4	MAW	1	PASI-K
		SM 4500-S-2 D	MAW	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
		EPA 200.7	JLH	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	OMT	1	PASI-K
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
		SM 2320B	MAP	1	PASI-K
		SM 2540C	LDB	1	PASI-K
60366962023	L-TP-2D	SM 3500-Fe B#4	LDB	1	PASI-K
		SM 3500-Fe B#4	MAW	1	PASI-K
		SM 4500-S-2 D	MAW	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
		EPA 200.7	JLH	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	OMT	1	PASI-K
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
		SM 2320B	MAP	1	PASI-K
60366962024	L-AM-1S	SM 2540C	LDB	1	PASI-K
		SM 3500-Fe B#4	LDB	1	PASI-K
		SM 3500-Fe B#4	MAW	1	PASI-K
		SM 4500-S-2 D	MAW	1	PASI-K
		EPA 300.0	VRP	3	PASI-K
		EPA 200.7	JLH	13	PASI-K
		EPA 200.8	JGP	6	PASI-K

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SAMPLE ANALYTE COUNT

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 7470	OMT	1	PASI-K
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
		SM 2320B	MAP	1	PASI-K
		SM 2540C	LDB	1	PASI-K
		SM 3500-Fe B#4	LDB	1	PASI-K
		SM 3500-Fe B#4	MAW	1	PASI-K
		SM 4500-S-2 D	MAW	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
60366962025	L-AM-1D	EPA 200.7	JLH	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	OMT	1	PASI-K
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
		SM 2320B	MAP	1	PASI-K
		SM 2540C	LDB	1	PASI-K
		SM 3500-Fe B#4	LDB	1	PASI-K
		SM 3500-Fe B#4	MAW	1	PASI-K
		SM 4500-S-2 D	MAW	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
60366962026	L-CA-DUP-2	EPA 200.7	JLH	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	OMT	1	PASI-K
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
		SM 2320B	MAP	1	PASI-K
		SM 2540C	LDB	1	PASI-K
		SM 3500-Fe B#4	LDB	1	PASI-K
		SM 3500-Fe B#4	MAW	1	PASI-K
		SM 4500-S-2 D	MAW	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
60366962027	L-CA-DUP-3	EPA 200.7	JLH	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	OMT	1	PASI-K
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
		SM 2320B	MAP	1	PASI-K

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SAMPLE ANALYTE COUNT

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		SM 2540C	LDB	1	PASI-K
		SM 3500-Fe B#4	LDB	1	PASI-K
		SM 3500-Fe B#4	MAW	1	PASI-K
		SM 4500-S-2 D	MAW	1	PASI-K
60366962028	L-CA-MS-1	EPA 300.0	CRN2	3	PASI-K
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
60366962029	L-CA-MSD-1	EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
60366962030	L-CA-MS-2	EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
60366962031	L-CA-MSD-2	EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
60366962032	L-LMW-4S	EPA 200.7	JLH	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	OMT	1	PASI-K
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
		SM 2320B	MAP	1	PASI-K
		SM 2540C	LDB	1	PASI-K
		SM 3500-Fe B#4	LDB	1	PASI-K
		SM 3500-Fe B#4	MAW	1	PASI-K
		SM 4500-S-2 D	MAW	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
60366962033	L-LMW-2S	EPA 200.7	JLH	13	PASI-K
		EPA 200.8	JGP	6	PASI-K
		EPA 7470	JDE	1	PASI-K
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
		SM 2320B	MAP	1	PASI-K
		SM 2540C	LDB	1	PASI-K
		SM 3500-Fe B#4	LDB	1	PASI-K
		SM 3500-Fe B#4	MAW	1	PASI-K
		SM 4500-S-2 D	MAW	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K

PASI-K = Pace Analytical Services - Kansas City

PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Sample: L-MW-24 Lab ID: 60366962001 Collected: 04/16/21 13:26 Received: 04/17/21 03:35 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total									
Analytical Method: EPA 200.7 Preparation Method: EPA 200.7									
Pace Analytical Services - Kansas City									
Barium	189	ug/L	5.0	1.8	1	04/28/21 14:32	05/10/21 13:55	7440-39-3	
Beryllium	<0.39	ug/L	1.0	0.39	1	04/28/21 14:32	05/10/21 13:55	7440-41-7	
Boron	71.6J	ug/L	100	8.6	1	04/28/21 14:32	05/10/21 13:55	7440-42-8	
Calcium	133000	ug/L	200	75.4	1	04/28/21 14:32	05/10/21 13:55	7440-70-2	
Cobalt	<0.95	ug/L	5.0	0.95	1	04/28/21 14:32	05/10/21 13:55	7440-48-4	
Iron	<21.4	ug/L	50.0	21.4	1	04/28/21 14:32	05/10/21 13:55	7439-89-6	
Lead	3.9J	ug/L	10.0	3.8	1	04/28/21 14:32	05/10/21 13:55	7439-92-1	
Lithium	19.4	ug/L	10.0	7.7	1	04/28/21 14:32	05/10/21 13:55	7439-93-2	
Magnesium	27700	ug/L	50.0	31.4	1	04/28/21 14:32	05/10/21 13:55	7439-95-4	
Manganese	7.4	ug/L	5.0	0.74	1	04/28/21 14:32	05/10/21 13:55	7439-96-5	
Molybdenum	<2.2	ug/L	20.0	2.2	1	04/28/21 14:32	05/10/21 13:55	7439-98-7	
Potassium	4980	ug/L	500	146	1	04/28/21 14:32	05/10/21 13:55	7440-09-7	
Sodium	7900	ug/L	500	254	1	04/28/21 14:32	05/10/21 13:55	7440-23-5	
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8									
Pace Analytical Services - Kansas City									
Antimony	0.13J	ug/L	1.0	0.10	1	04/28/21 14:32	05/07/21 13:34	7440-36-0	
Arsenic	0.51J	ug/L	1.0	0.11	1	04/28/21 14:32	05/07/21 13:34	7440-38-2	
Cadmium	<0.062	ug/L	0.50	0.062	1	04/28/21 14:32	05/07/21 13:34	7440-43-9	
Chromium	0.49J	ug/L	1.0	0.23	1	04/28/21 14:32	05/07/21 13:34	7440-47-3	B
Selenium	10.4	ug/L	1.0	0.18	1	04/28/21 14:32	05/07/21 13:34	7782-49-2	
Thallium	<0.094	ug/L	1.0	0.094	1	04/28/21 14:32	05/07/21 13:34	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470 Preparation Method: EPA 7470									
Pace Analytical Services - Kansas City									
Mercury	<0.096	ug/L	0.20	0.096	1	05/10/21 17:40	05/12/21 12:46	7439-97-6	
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Kansas City									
Alkalinity, Total as CaCO3	431	mg/L	20.0	7.5	1		04/27/21 18:51		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Kansas City									
Total Dissolved Solids	485	mg/L	10.0	10.0	1		04/22/21 13:05		
Iron, Ferric (Calculation)									
Analytical Method: SM 3500-Fe B#4									
Pace Analytical Services - Kansas City									
Iron, Ferric	0.017J	mg/L	0.050		1		05/14/21 14:46	7439-89-6	
Iron, Ferrous									
Analytical Method: SM 3500-Fe B#4									
Pace Analytical Services - Kansas City									
Iron, Ferrous	<0.048	mg/L	0.20	0.048	1		04/26/21 11:12		H6

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Sample: L-MW-24 **Lab ID: 60366962001** Collected: 04/16/21 13:26 Received: 04/17/21 03:35 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		04/22/21 16:19	18496-25-8	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0									
Pace Analytical Services - Kansas City									
Chloride	5.4	mg/L	1.0	0.39	1		04/28/21 14:48	16887-00-6	
Fluoride	0.26	mg/L	0.20	0.086	1		04/28/21 14:48	16984-48-8	
Sulfate	29.1	mg/L	2.0	0.84	2		04/28/21 15:02	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Sample: L-MW-33(D) **Lab ID: 60366962002** Collected: 04/16/21 13:33 Received: 04/17/21 03:35 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	93.0	ug/L	5.0	1.8	1	04/28/21 14:32	05/10/21 13:57	7440-39-3	
Beryllium	<0.39	ug/L	1.0	0.39	1	04/28/21 14:32	05/10/21 13:57	7440-41-7	
Boron	10200	ug/L	100	8.6	1	04/28/21 14:32	05/10/21 13:57	7440-42-8	
Calcium	72900	ug/L	200	75.4	1	04/28/21 14:32	05/10/21 13:57	7440-70-2	
Cobalt	<0.95	ug/L	5.0	0.95	1	04/28/21 14:32	05/10/21 13:57	7440-48-4	
Iron	3970	ug/L	50.0	21.4	1	04/28/21 14:32	05/10/21 13:57	7439-89-6	
Lead	<3.8	ug/L	10.0	3.8	1	04/28/21 14:32	05/10/21 13:57	7439-92-1	
Lithium	25.3	ug/L	10.0	7.7	1	04/28/21 14:32	05/10/21 13:57	7439-93-2	
Magnesium	16600	ug/L	50.0	31.4	1	04/28/21 14:32	05/10/21 13:57	7439-95-4	
Manganese	219	ug/L	5.0	0.74	1	04/28/21 14:32	05/10/21 13:57	7439-96-5	
Molybdenum	1100	ug/L	20.0	2.2	1	04/28/21 14:32	05/10/21 13:57	7439-98-7	
Potassium	6040	ug/L	500	146	1	04/28/21 14:32	05/10/21 13:57	7440-09-7	
Sodium	87000	ug/L	500	254	1	04/28/21 14:32	05/10/21 13:57	7440-23-5	
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City									
Antimony	<0.10	ug/L	1.0	0.10	1	04/28/21 14:32	05/07/21 13:35	7440-36-0	
Arsenic	1.2	ug/L	1.0	0.11	1	04/28/21 14:32	05/07/21 13:35	7440-38-2	
Cadmium	0.27J	ug/L	0.50	0.062	1	04/28/21 14:32	05/07/21 13:35	7440-43-9	
Chromium	0.26J	ug/L	1.0	0.23	1	04/28/21 14:32	05/07/21 13:35	7440-47-3	B
Selenium	<0.18	ug/L	1.0	0.18	1	04/28/21 14:32	05/07/21 13:35	7782-49-2	
Thallium	<0.094	ug/L	1.0	0.094	1	04/28/21 14:32	05/07/21 13:35	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City									
Mercury	<0.096	ug/L	0.20	0.096	1	05/10/21 17:40	05/12/21 12:49	7439-97-6	
2320B Alkalinity									
Analytical Method: SM 2320B Pace Analytical Services - Kansas City									
Alkalinity, Total as CaCO3	146	mg/L	20.0	7.5	1		04/27/21 18:56		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C Pace Analytical Services - Kansas City									
Total Dissolved Solids	651	mg/L	10.0	10.0	1		04/22/21 13:05		
Iron, Ferric (Calculation)									
Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City									
Iron, Ferric	3.7	mg/L	0.050		1		05/14/21 14:46	7439-89-6	
Iron, Ferrous									
Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City									
Iron, Ferrous	0.24	mg/L	0.20	0.048	1		04/26/21 11:13		H6

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Sample: L-MW-33(D) **Lab ID: 60366962002** Collected: 04/16/21 13:33 Received: 04/17/21 03:35 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide, Total									
Analytical Method: SM 4500-S-2 D									
Pace Analytical Services - Kansas City									
Sulfide, Total	0.028J	mg/L	0.050	0.026	1		04/22/21 16:20	18496-25-8	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0									
Pace Analytical Services - Kansas City									
Chloride	22.7	mg/L	2.0	0.78	2		04/29/21 14:53	16887-00-6	
Fluoride	0.43	mg/L	0.20	0.086	1		04/28/21 15:17	16984-48-8	
Sulfate	249	mg/L	50.0	21.0	50		04/28/21 15:31	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Sample: L-MW-34(D) Lab ID: 60366962003 Collected: 04/16/21 14:43 Received: 04/17/21 03:35 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	101	ug/L	5.0	1.8	1	04/28/21 14:32	05/10/21 14:00	7440-39-3	
Beryllium	<0.39	ug/L	1.0	0.39	1	04/28/21 14:32	05/10/21 14:00	7440-41-7	
Boron	12000	ug/L	100	8.6	1	04/28/21 14:32	05/10/21 14:00	7440-42-8	M1
Calcium	98000	ug/L	200	75.4	1	04/28/21 14:32	05/10/21 14:00	7440-70-2	
Cobalt	<0.95	ug/L	5.0	0.95	1	04/28/21 14:32	05/10/21 14:00	7440-48-4	
Iron	5400	ug/L	50.0	21.4	1	04/28/21 14:32	05/10/21 14:00	7439-89-6	
Lead	<3.8	ug/L	10.0	3.8	1	04/28/21 14:32	05/10/21 14:00	7439-92-1	
Lithium	33.9	ug/L	10.0	7.7	1	04/28/21 14:32	05/10/21 14:00	7439-93-2	
Magnesium	24100	ug/L	50.0	31.4	1	04/28/21 14:32	05/10/21 14:00	7439-95-4	
Manganese	247	ug/L	5.0	0.74	1	04/28/21 14:32	05/10/21 14:00	7439-96-5	
Molybdenum	1170	ug/L	20.0	2.2	1	04/28/21 14:32	05/10/21 14:00	7439-98-7	
Potassium	7410	ug/L	500	146	1	04/28/21 14:32	05/10/21 14:00	7440-09-7	
Sodium	85200	ug/L	500	254	1	04/28/21 14:32	05/10/21 14:00	7440-23-5	
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8									
Pace Analytical Services - Kansas City									
Antimony	<0.10	ug/L	1.0	0.10	1	04/28/21 14:32	05/07/21 13:37	7440-36-0	
Arsenic	3.8	ug/L	1.0	0.11	1	04/28/21 14:32	05/07/21 13:37	7440-38-2	
Cadmium	0.27J	ug/L	0.50	0.062	1	04/28/21 14:32	05/07/21 13:37	7440-43-9	
Chromium	0.39J	ug/L	1.0	0.23	1	04/28/21 14:32	05/07/21 13:37	7440-47-3	B
Selenium	<0.18	ug/L	1.0	0.18	1	04/28/21 14:32	05/07/21 13:37	7782-49-2	
Thallium	<0.094	ug/L	1.0	0.094	1	04/28/21 14:32	05/07/21 13:37	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470 Preparation Method: EPA 7470									
Pace Analytical Services - Kansas City									
Mercury	<0.096	ug/L	0.20	0.096	1	05/10/21 17:40	05/12/21 12:51	7439-97-6	
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Kansas City									
Alkalinity, Total as CaCO3	158	mg/L	20.0	7.5	1		04/27/21 19:00		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Kansas City									
Total Dissolved Solids	705	mg/L	10.0	10.0	1		04/22/21 13:05		
Iron, Ferric (Calculation)									
Analytical Method: SM 3500-Fe B#4									
Pace Analytical Services - Kansas City									
Iron, Ferric	5.1	mg/L	0.050		1		05/17/21 11:39	7439-89-6	
Iron, Ferrous									
Analytical Method: SM 3500-Fe B#4									
Pace Analytical Services - Kansas City									
Iron, Ferrous	0.26	mg/L	0.20	0.048	1		04/26/21 11:13		H6

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Sample: L-MW-34(D) **Lab ID: 60366962003** Collected: 04/16/21 14:43 Received: 04/17/21 03:35 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		04/22/21 16:21	18496-25-8	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0									
Pace Analytical Services - Kansas City									
Chloride	20.3	mg/L	2.0	0.78	2		04/29/21 15:08	16887-00-6	
Fluoride	0.34	mg/L	0.20	0.086	1		04/28/21 15:46	16984-48-8	
Sulfate	288	mg/L	50.0	21.0	50		04/28/21 16:00	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Sample: L-MW-35(D) Lab ID: 60366962004 Collected: 04/16/21 12:32 Received: 04/17/21 03:35 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	49.8	ug/L	5.0	1.8	1	04/28/21 14:32	05/10/21 18:19	7440-39-3	
Beryllium	<0.39	ug/L	1.0	0.39	1	04/28/21 14:32	05/10/21 18:19	7440-41-7	
Boron	9440	ug/L	100	8.6	1	04/28/21 14:32	05/10/21 18:19	7440-42-8	
Calcium	146000	ug/L	200	75.4	1	04/28/21 14:32	05/10/21 18:19	7440-70-2	
Cobalt	<0.95	ug/L	5.0	0.95	1	04/28/21 14:32	05/10/21 18:19	7440-48-4	
Iron	5880	ug/L	50.0	21.4	1	04/28/21 14:32	05/10/21 18:19	7439-89-6	
Lead	<3.8	ug/L	10.0	3.8	1	04/28/21 14:32	05/10/21 18:19	7439-92-1	
Lithium	24.4	ug/L	10.0	7.7	1	04/28/21 14:32	05/10/21 18:19	7439-93-2	
Magnesium	33200	ug/L	50.0	31.4	1	04/28/21 14:32	05/10/21 18:19	7439-95-4	
Manganese	443	ug/L	5.0	0.74	1	04/28/21 14:32	05/10/21 18:19	7439-96-5	
Molybdenum	684	ug/L	20.0	2.2	1	04/28/21 14:32	05/10/21 18:19	7439-98-7	
Potassium	6290	ug/L	500	146	1	04/28/21 14:32	05/10/21 18:19	7440-09-7	
Sodium	109000	ug/L	500	254	1	04/28/21 14:32	05/10/21 18:19	7440-23-5	
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8									
Pace Analytical Services - Kansas City									
Antimony	<0.10	ug/L	1.0	0.10	1	04/28/21 14:32	05/07/21 13:39	7440-36-0	
Arsenic	0.20J	ug/L	1.0	0.11	1	04/28/21 14:32	05/07/21 13:39	7440-38-2	
Cadmium	0.17J	ug/L	0.50	0.062	1	04/28/21 14:32	05/07/21 13:39	7440-43-9	
Chromium	0.36J	ug/L	1.0	0.23	1	04/28/21 14:32	05/07/21 13:39	7440-47-3	B
Selenium	<0.18	ug/L	1.0	0.18	1	04/28/21 14:32	05/07/21 13:39	7782-49-2	
Thallium	<0.094	ug/L	1.0	0.094	1	04/28/21 14:32	05/07/21 13:39	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470 Preparation Method: EPA 7470									
Pace Analytical Services - Kansas City									
Mercury	<0.096	ug/L	0.20	0.096	1	05/10/21 17:40	05/12/21 12:53	7439-97-6	
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Kansas City									
Alkalinity, Total as CaCO3	139	mg/L	20.0	7.5	1		04/27/21 19:16		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Kansas City									
Total Dissolved Solids	994	mg/L	10.0	10.0	1		04/22/21 13:05		
Iron, Ferric (Calculation)									
Analytical Method: SM 3500-Fe B#4									
Pace Analytical Services - Kansas City									
Iron, Ferric	5.6	mg/L	0.050		1		05/17/21 11:39	7439-89-6	
Iron, Ferrous									
Analytical Method: SM 3500-Fe B#4									
Pace Analytical Services - Kansas City									
Iron, Ferrous	0.24	mg/L	0.20	0.048	1		04/26/21 11:12		H6

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Sample: L-MW-35(D) **Lab ID: 60366962004** Collected: 04/16/21 12:32 Received: 04/17/21 03:35 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide, Total									
Analytical Method: SM 4500-S-2 D									
Pace Analytical Services - Kansas City									
Sulfide, Total	0.028J	mg/L	0.050	0.026	1		04/22/21 16:21	18496-25-8	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0									
Pace Analytical Services - Kansas City									
Chloride	19.6	mg/L	1.0	0.39	1		04/28/21 16:43	16887-00-6	
Fluoride	<0.086	mg/L	0.20	0.086	1		04/28/21 16:43	16984-48-8	
Sulfate	634	mg/L	100	42.1	100		04/28/21 16:57	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Sample: L-S-1 **Lab ID: 60366962005** Collected: 04/16/21 15:15 Received: 04/17/21 03:35 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	356	ug/L	5.0	1.8	1	04/28/21 14:32	05/10/21 18:22	7440-39-3	
Beryllium	<0.39	ug/L	1.0	0.39	1	04/28/21 14:32	05/10/21 18:22	7440-41-7	
Boron	277	ug/L	100	8.6	1	04/28/21 14:32	05/10/21 18:22	7440-42-8	
Calcium	147000	ug/L	200	75.4	1	04/28/21 14:32	05/10/21 18:22	7440-70-2	
Cobalt	1.7J	ug/L	5.0	0.95	1	04/28/21 14:32	05/10/21 18:22	7440-48-4	
Iron	299	ug/L	50.0	21.4	1	04/28/21 14:32	05/10/21 18:22	7439-89-6	
Lead	4.9J	ug/L	10.0	3.8	1	04/28/21 14:32	05/10/21 18:22	7439-92-1	
Lithium	31.0	ug/L	10.0	7.7	1	04/28/21 14:32	05/10/21 18:22	7439-93-2	
Magnesium	23600	ug/L	50.0	31.4	1	04/28/21 14:32	05/10/21 18:22	7439-95-4	
Manganese	575	ug/L	5.0	0.74	1	04/28/21 14:32	05/10/21 18:22	7439-96-5	
Molybdenum	<2.2	ug/L	20.0	2.2	1	04/28/21 14:32	05/10/21 18:22	7439-98-7	
Potassium	26700	ug/L	500	146	1	04/28/21 14:32	05/10/21 18:22	7440-09-7	
Sodium	5010	ug/L	500	254	1	04/28/21 14:32	05/10/21 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	<0.10	ug/L	1.0	0.10	1	04/28/21 14:32	05/07/21 13:46	7440-36-0	
Arsenic	0.71J	ug/L	1.0	0.11	1	04/28/21 14:32	05/07/21 13:46	7440-38-2	
Cadmium	<0.062	ug/L	0.50	0.062	1	04/28/21 14:32	05/07/21 13:46	7440-43-9	
Chromium	0.48J	ug/L	1.0	0.23	1	04/28/21 14:32	05/07/21 13:46	7440-47-3	B
Selenium	<0.18	ug/L	1.0	0.18	1	04/28/21 14:32	05/07/21 13:46	7782-49-2	
Thallium	<0.094	ug/L	1.0	0.094	1	04/28/21 14:32	05/07/21 13:46	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City									
Mercury	<0.096	ug/L	0.20	0.096	1	05/10/21 17:40	05/12/21 12:55	7439-97-6	
2320B Alkalinity									
Analytical Method: SM 2320B Pace Analytical Services - Kansas City									
Alkalinity, Total as CaCO3	456	mg/L	20.0	7.5	1		04/27/21 19:23		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C Pace Analytical Services - Kansas City									
Total Dissolved Solids	608	mg/L	10.0	10.0	1		04/23/21 15:58		
Iron, Ferric (Calculation)									
Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City									
Iron, Ferric	0.29	mg/L	0.050		1		05/17/21 11:39	7439-89-6	
Iron, Ferrous									
Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City									
Iron, Ferrous	<0.048	mg/L	0.20	0.048	1		04/26/21 11:13		H6

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Sample: L-S-1 **Lab ID: 60366962005** Collected: 04/16/21 15:15 Received: 04/17/21 03:35 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		04/22/21 16:21	18496-25-8	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0									
Pace Analytical Services - Kansas City									
Chloride	1.8	mg/L	1.0	0.39	1		04/28/21 17:11	16887-00-6	B
Fluoride	0.25	mg/L	0.20	0.086	1		04/28/21 17:11	16984-48-8	
Sulfate	15.9	mg/L	1.0	0.42	1		04/28/21 17:11	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Sample: L-TP-3M **Lab ID: 60366962006** Collected: 04/16/21 12:13 Received: 04/17/21 03:35 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	267	ug/L	5.0	1.8	1	04/28/21 14:32	05/13/21 14:04	7440-39-3	
Beryllium	<0.39	ug/L	1.0	0.39	1	04/28/21 14:32	05/13/21 14:04	7440-41-7	
Boron	5290	ug/L	100	8.6	1	04/28/21 14:32	05/13/21 14:04	7440-42-8	
Calcium	117000	ug/L	200	75.4	1	04/28/21 14:32	05/13/21 14:04	7440-70-2	
Cobalt	<0.95	ug/L	5.0	0.95	1	04/28/21 14:32	05/13/21 14:04	7440-48-4	
Iron	9540	ug/L	50.0	21.4	1	04/28/21 14:32	05/13/21 14:04	7439-89-6	
Lead	5.4J	ug/L	10.0	3.8	1	04/28/21 14:32	05/13/21 14:04	7439-92-1	
Lithium	35.2	ug/L	10.0	7.7	1	04/28/21 14:32	05/13/21 14:04	7439-93-2	
Magnesium	24700	ug/L	50.0	31.4	1	04/28/21 14:32	05/13/21 14:04	7439-95-4	
Manganese	1620	ug/L	5.0	0.74	1	04/28/21 14:32	05/13/21 14:04	7439-96-5	
Molybdenum	298	ug/L	20.0	2.2	1	04/28/21 14:32	05/13/21 14:04	7439-98-7	
Potassium	5130	ug/L	500	146	1	04/28/21 14:32	05/13/21 14:04	7440-09-7	
Sodium	46200	ug/L	500	254	1	04/28/21 14:32	05/13/21 14:04	7440-23-5	
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8									
Pace Analytical Services - Kansas City									
Antimony	<0.10	ug/L	1.0	0.10	1	04/28/21 14:32	05/07/21 13:47	7440-36-0	
Arsenic	0.71J	ug/L	1.0	0.11	1	04/28/21 14:32	05/07/21 13:47	7440-38-2	
Cadmium	0.074J	ug/L	0.50	0.062	1	04/28/21 14:32	05/07/21 13:47	7440-43-9	
Chromium	0.34J	ug/L	1.0	0.23	1	04/28/21 14:32	05/07/21 13:47	7440-47-3	B
Selenium	<0.18	ug/L	1.0	0.18	1	04/28/21 14:32	05/07/21 13:47	7782-49-2	
Thallium	<0.094	ug/L	1.0	0.094	1	04/28/21 14:32	05/07/21 13:47	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470 Preparation Method: EPA 7470									
Pace Analytical Services - Kansas City									
Mercury	<0.096	ug/L	0.20	0.096	1	05/10/21 17:40	05/12/21 12:58	7439-97-6	
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Kansas City									
Alkalinity, Total as CaCO3	269	mg/L	20.0	7.5	1		04/27/21 19:27		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Kansas City									
Total Dissolved Solids	665	mg/L	10.0	10.0	1		04/23/21 15:59		
Iron, Ferric (Calculation)									
Analytical Method: SM 3500-Fe B#4									
Pace Analytical Services - Kansas City									
Iron, Ferric	9.2	mg/L	0.050		1		05/17/21 11:39	7439-89-6	
Iron, Ferrous									
Analytical Method: SM 3500-Fe B#4									
Pace Analytical Services - Kansas City									
Iron, Ferrous	0.33	mg/L	0.20	0.048	1		04/26/21 11:12		H6

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Sample: L-TP-3M **Lab ID: 60366962006** Collected: 04/16/21 12:13 Received: 04/17/21 03:35 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	0.027J	mg/L	0.050	0.026	1		04/22/21 16:21	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	0.39	1		04/27/21 13:19	16887-00-6	
Fluoride	0.33	mg/L	0.20	0.086	1		04/27/21 13:19	16984-48-8	
Sulfate	195	mg/L	20.0	8.4	20		04/27/21 13:33	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Sample: L-TP-3D **Lab ID: 60366962007** Collected: 04/16/21 11:22 Received: 04/17/21 03:35 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	78.2	ug/L	5.0	1.8	1	04/28/21 14:32	05/10/21 18:27	7440-39-3	
Beryllium	<0.39	ug/L	1.0	0.39	1	04/28/21 14:32	05/10/21 18:27	7440-41-7	
Boron	11200	ug/L	100	8.6	1	04/28/21 14:32	05/10/21 18:27	7440-42-8	
Calcium	103000	ug/L	200	75.4	1	04/28/21 14:32	05/10/21 18:27	7440-70-2	
Cobalt	<0.95	ug/L	5.0	0.95	1	04/28/21 14:32	05/10/21 18:27	7440-48-4	
Iron	4790	ug/L	50.0	21.4	1	04/28/21 14:32	05/10/21 18:27	7439-89-6	
Lead	<3.8	ug/L	10.0	3.8	1	04/28/21 14:32	05/10/21 18:27	7439-92-1	
Lithium	28.5	ug/L	10.0	7.7	1	04/28/21 14:32	05/10/21 18:27	7439-93-2	
Magnesium	23800	ug/L	50.0	31.4	1	04/28/21 14:32	05/10/21 18:27	7439-95-4	
Manganese	174	ug/L	5.0	0.74	1	04/28/21 14:32	05/10/21 18:27	7439-96-5	
Molybdenum	641	ug/L	20.0	2.2	1	04/28/21 14:32	05/10/21 18:27	7439-98-7	
Potassium	7370	ug/L	500	146	1	04/28/21 14:32	05/10/21 18:27	7440-09-7	
Sodium	124000	ug/L	500	254	1	04/28/21 14:32	05/10/21 18:27	7440-23-5	
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City									
Antimony	<0.10	ug/L	1.0	0.10	1	04/28/21 14:32	05/07/21 13:49	7440-36-0	
Arsenic	8.0	ug/L	1.0	0.11	1	04/28/21 14:32	05/07/21 13:49	7440-38-2	
Cadmium	0.15J	ug/L	0.50	0.062	1	04/28/21 14:32	05/07/21 13:49	7440-43-9	
Chromium	0.51J	ug/L	1.0	0.23	1	04/28/21 14:32	05/07/21 13:49	7440-47-3	B
Selenium	<0.18	ug/L	1.0	0.18	1	04/28/21 14:32	05/07/21 13:49	7782-49-2	
Thallium	<0.094	ug/L	1.0	0.094	1	04/28/21 14:32	05/07/21 13:49	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City									
Mercury	<0.096	ug/L	0.20	0.096	1	05/10/21 17:40	05/12/21 13:09	7439-97-6	
2320B Alkalinity									
Analytical Method: SM 2320B Pace Analytical Services - Kansas City									
Alkalinity, Total as CaCO3	123	mg/L	20.0	7.5	1		04/27/21 19:32		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C Pace Analytical Services - Kansas City									
Total Dissolved Solids	888	mg/L	10.0	10.0	1		04/23/21 15:59		
Iron, Ferric (Calculation)									
Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City									
Iron, Ferric	4.5	mg/L	0.050		1		05/17/21 11:39	7439-89-6	
Iron, Ferrous									
Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City									
Iron, Ferrous	0.29	mg/L	0.20	0.048	1		04/26/21 11:08		H6

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Sample: L-TP-3D **Lab ID: 60366962007** Collected: 04/16/21 11:22 Received: 04/17/21 03:35 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	0.033J	mg/L	0.050	0.026	1		04/22/21 16:21	18496-25-8	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0									
Pace Analytical Services - Kansas City									
Chloride	25.8	mg/L	5.0	1.9	5		04/27/21 14:02	16887-00-6	
Fluoride	0.17J	mg/L	0.20	0.086	1		04/27/21 13:47	16984-48-8	
Sulfate	432	mg/L	100	42.1	100		04/27/21 14:16	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Sample: L-TP-4D **Lab ID: 60366962008** Collected: 04/16/21 09:46 Received: 04/17/21 03:35 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	470	ug/L	5.0	1.8	1	04/28/21 14:32	05/10/21 18:38	7440-39-3	
Beryllium	<0.39	ug/L	1.0	0.39	1	04/28/21 14:32	05/10/21 18:38	7440-41-7	
Boron	6780	ug/L	100	8.6	1	04/28/21 14:32	05/10/21 18:38	7440-42-8	
Calcium	135000	ug/L	200	75.4	1	04/28/21 14:32	05/10/21 18:38	7440-70-2	
Cobalt	<0.95	ug/L	5.0	0.95	1	04/28/21 14:32	05/10/21 18:38	7440-48-4	
Iron	6120	ug/L	50.0	21.4	1	04/28/21 14:32	05/10/21 18:38	7439-89-6	
Lead	5.8J	ug/L	10.0	3.8	1	04/28/21 14:32	05/10/21 18:38	7439-92-1	
Lithium	23.3	ug/L	10.0	7.7	1	04/28/21 14:32	05/10/21 18:38	7439-93-2	
Magnesium	37200	ug/L	50.0	31.4	1	04/28/21 14:32	05/10/21 18:38	7439-95-4	
Manganese	350	ug/L	5.0	0.74	1	04/28/21 14:32	05/10/21 18:38	7439-96-5	
Molybdenum	2.7J	ug/L	20.0	2.2	1	04/28/21 14:32	05/10/21 18:38	7439-98-7	
Potassium	5310	ug/L	500	146	1	04/28/21 14:32	05/10/21 18:38	7440-09-7	
Sodium	28800	ug/L	500	254	1	04/28/21 14:32	05/10/21 18:38	7440-23-5	
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City									
Antimony	<0.10	ug/L	1.0	0.10	1	04/28/21 14:32	05/07/21 13:51	7440-36-0	
Arsenic	8.1	ug/L	1.0	0.11	1	04/28/21 14:32	05/07/21 13:51	7440-38-2	
Cadmium	<0.062	ug/L	0.50	0.062	1	04/28/21 14:32	05/07/21 13:51	7440-43-9	
Chromium	0.39J	ug/L	1.0	0.23	1	04/28/21 14:32	05/07/21 13:51	7440-47-3	B
Selenium	<0.18	ug/L	1.0	0.18	1	04/28/21 14:32	05/07/21 13:51	7782-49-2	
Thallium	<0.094	ug/L	1.0	0.094	1	04/28/21 14:32	05/07/21 13:51	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City									
Mercury	<0.096	ug/L	0.20	0.096	1	05/10/21 17:40	05/12/21 13:11	7439-97-6	
2320B Alkalinity									
Analytical Method: SM 2320B Pace Analytical Services - Kansas City									
Alkalinity, Total as CaCO3	335	mg/L	20.0	7.5	1		04/27/21 19:42		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C Pace Analytical Services - Kansas City									
Total Dissolved Solids	637	mg/L	10.0	10.0	1		04/23/21 15:59		
Iron, Ferric (Calculation)									
Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City									
Iron, Ferric	5.9	mg/L	0.050		1		05/17/21 11:39	7439-89-6	
Iron, Ferrous									
Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City									
Iron, Ferrous	0.20J	mg/L	0.20	0.048	1		04/26/21 11:07		H6

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Sample: L-TP-4D **Lab ID: 60366962008** Collected: 04/16/21 09:46 Received: 04/17/21 03:35 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		04/22/21 16:22	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	14.3	mg/L	1.0	0.39	1		04/27/21 14:30	16887-00-6	
Fluoride	0.32	mg/L	0.20	0.086	1		04/27/21 14:30	16984-48-8	
Sulfate	161	mg/L	20.0	8.4	20		04/27/21 14:45	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Sample: L-CA-DUP-1 **Lab ID: 60366962009** Collected: 04/16/21 00:00 Received: 04/17/21 03:35 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	93.1	ug/L	5.0	1.8	1	04/28/21 14:32	05/10/21 18:41	7440-39-3	
Beryllium	<0.39	ug/L	1.0	0.39	1	04/28/21 14:32	05/10/21 18:41	7440-41-7	
Boron	11200	ug/L	100	8.6	1	04/28/21 14:32	05/10/21 18:41	7440-42-8	
Calcium	90500	ug/L	200	75.4	1	04/28/21 14:32	05/10/21 18:41	7440-70-2	
Cobalt	<0.95	ug/L	5.0	0.95	1	04/28/21 14:32	05/10/21 18:41	7440-48-4	
Iron	4990	ug/L	50.0	21.4	1	04/28/21 14:32	05/10/21 18:41	7439-89-6	
Lead	5.8J	ug/L	10.0	3.8	1	04/28/21 14:32	05/10/21 18:41	7439-92-1	
Lithium	32.4	ug/L	10.0	7.7	1	04/28/21 14:32	05/10/21 18:41	7439-93-2	
Magnesium	22400	ug/L	50.0	31.4	1	04/28/21 14:32	05/10/21 18:41	7439-95-4	
Manganese	228	ug/L	5.0	0.74	1	04/28/21 14:32	05/10/21 18:41	7439-96-5	
Molybdenum	1020	ug/L	20.0	2.2	1	04/28/21 14:32	05/13/21 14:06	7439-98-7	
Potassium	6890	ug/L	500	146	1	04/28/21 14:32	05/10/21 18:41	7440-09-7	
Sodium	79000	ug/L	500	254	1	04/28/21 14:32	05/10/21 18:41	7440-23-5	
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8									
Pace Analytical Services - Kansas City									
Antimony	<0.10	ug/L	1.0	0.10	1	04/28/21 14:32	05/07/21 13:53	7440-36-0	
Arsenic	3.6	ug/L	1.0	0.11	1	04/28/21 14:32	05/07/21 13:53	7440-38-2	
Cadmium	0.26J	ug/L	0.50	0.062	1	04/28/21 14:32	05/07/21 13:53	7440-43-9	
Chromium	0.30J	ug/L	1.0	0.23	1	04/28/21 14:32	05/07/21 13:53	7440-47-3	B
Selenium	<0.18	ug/L	1.0	0.18	1	04/28/21 14:32	05/07/21 13:53	7782-49-2	
Thallium	<0.094	ug/L	1.0	0.094	1	04/28/21 14:32	05/07/21 13:53	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470 Preparation Method: EPA 7470									
Pace Analytical Services - Kansas City									
Mercury	<0.096	ug/L	0.20	0.096	1	05/10/21 17:40	05/12/21 13:14	7439-97-6	
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Kansas City									
Alkalinity, Total as CaCO3	168	mg/L	20.0	7.5	1		04/27/21 19:47		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Kansas City									
Total Dissolved Solids	790	mg/L	10.0	10.0	1		04/23/21 15:59		
Iron, Ferric (Calculation)									
Analytical Method: SM 3500-Fe B#4									
Pace Analytical Services - Kansas City									
Iron, Ferric	4.8	mg/L	0.050		1		05/17/21 11:39	7439-89-6	
Iron, Ferrous									
Analytical Method: SM 3500-Fe B#4									
Pace Analytical Services - Kansas City									
Iron, Ferrous	0.16J	mg/L	0.20	0.048	1		04/26/21 11:06		H6

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Sample: L-CA-DUP-1 **Lab ID: 60366962009** Collected: 04/16/21 00:00 Received: 04/17/21 03:35 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		04/22/21 16:22	18496-25-8	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0									
Pace Analytical Services - Kansas City									
Chloride	20.6	mg/L	2.0	0.78	2		04/27/21 15:13	16887-00-6	
Fluoride	0.39	mg/L	0.20	0.086	1		04/27/21 14:59	16984-48-8	
Sulfate	297	mg/L	20.0	8.4	20		04/27/21 15:28	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Sample: L-CA-FB-1 **Lab ID:** 60366962010 Collected: 04/15/21 15:50 Received: 04/17/21 03:35 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	04/28/21 14:32	05/10/21 18:43	7440-39-3	
Beryllium	<0.39	ug/L	1.0	0.39	1	04/28/21 14:32	05/10/21 18:43	7440-41-7	
Boron	21.9J	ug/L	100	8.6	1	04/28/21 14:32	05/10/21 18:43	7440-42-8	
Calcium	<75.4	ug/L	200	75.4	1	04/28/21 14:32	05/10/21 18:43	7440-70-2	
Cobalt	<0.95	ug/L	5.0	0.95	1	04/28/21 14:32	05/10/21 18:43	7440-48-4	
Iron	<21.4	ug/L	50.0	21.4	1	04/28/21 14:32	05/10/21 18:43	7439-89-6	
Lead	<3.8	ug/L	10.0	3.8	1	04/28/21 14:32	05/10/21 18:43	7439-92-1	
Lithium	<7.7	ug/L	10.0	7.7	1	04/28/21 14:32	05/10/21 18:43	7439-93-2	
Magnesium	<31.4	ug/L	50.0	31.4	1	04/28/21 14:32	05/10/21 18:43	7439-95-4	
Manganese	<0.74	ug/L	5.0	0.74	1	04/28/21 14:32	05/10/21 18:43	7439-96-5	
Molybdenum	<2.2	ug/L	20.0	2.2	1	04/28/21 14:32	05/10/21 18:43	7439-98-7	
Potassium	<146	ug/L	500	146	1	04/28/21 14:32	05/10/21 18:43	7440-09-7	
Sodium	<254	ug/L	500	254	1	04/28/21 14:32	05/10/21 18:43	7440-23-5	
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8									
Pace Analytical Services - Kansas City									
Antimony	<0.10	ug/L	1.0	0.10	1	04/28/21 14:32	05/07/21 13:54	7440-36-0	
Arsenic	<0.11	ug/L	1.0	0.11	1	04/28/21 14:32	05/07/21 13:54	7440-38-2	
Cadmium	<0.062	ug/L	0.50	0.062	1	04/28/21 14:32	05/07/21 13:54	7440-43-9	
Chromium	0.25J	ug/L	1.0	0.23	1	04/28/21 14:32	05/07/21 13:54	7440-47-3	B
Selenium	<0.18	ug/L	1.0	0.18	1	04/28/21 14:32	05/07/21 13:54	7782-49-2	
Thallium	<0.094	ug/L	1.0	0.094	1	04/28/21 14:32	05/07/21 13:54	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470 Preparation Method: EPA 7470									
Pace Analytical Services - Kansas City									
Mercury	<0.096	ug/L	0.20	0.096	1	05/10/21 17:40	05/12/21 13:16	7439-97-6	
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Kansas City									
Alkalinity, Total as CaCO3	<7.5	mg/L	20.0	7.5	1		04/27/21 10:13		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Kansas City									
Total Dissolved Solids	21.5	mg/L	5.0	5.0	1		04/22/21 13:02		
Iron, Ferric (Calculation)									
Analytical Method: SM 3500-Fe B#4									
Pace Analytical Services - Kansas City									
Iron, Ferric	0.000000 0010J	mg/L	0.050		1		05/17/21 11:39	7439-89-6	
Iron, Ferrous									
Analytical Method: SM 3500-Fe B#4									
Pace Analytical Services - Kansas City									
Iron, Ferrous	<0.048	mg/L	0.20	0.048	1		04/26/21 11:06		H6

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Sample: L-CA-FB-1 **Lab ID: 60366962010** Collected: 04/15/21 15:50 Received: 04/17/21 03:35 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		04/22/21 15:39	18496-25-8	
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		04/27/21 16:11	16887-00-6	
Fluoride	<0.086	mg/L	0.20	0.086	1		04/27/21 16:11	16984-48-8	
Sulfate	<0.42	mg/L	1.0	0.42	1		04/27/21 16:11	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Sample: L-CA-FB-2 Lab ID: 60366962011 Collected: 04/16/21 11:40 Received: 04/17/21 03:35 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	04/28/21 14:32	05/10/21 18:46	7440-39-3	
Beryllium	<0.39	ug/L	1.0	0.39	1	04/28/21 14:32	05/10/21 18:46	7440-41-7	
Boron	11.6J	ug/L	100	8.6	1	04/28/21 14:32	05/10/21 18:46	7440-42-8	
Calcium	<75.4	ug/L	200	75.4	1	04/28/21 14:32	05/10/21 18:46	7440-70-2	
Cobalt	<0.95	ug/L	5.0	0.95	1	04/28/21 14:32	05/10/21 18:46	7440-48-4	
Iron	<21.4	ug/L	50.0	21.4	1	04/28/21 14:32	05/10/21 18:46	7439-89-6	
Lead	<3.8	ug/L	10.0	3.8	1	04/28/21 14:32	05/10/21 18:46	7439-92-1	
Lithium	<7.7	ug/L	10.0	7.7	1	04/28/21 14:32	05/10/21 18:46	7439-93-2	
Magnesium	<31.4	ug/L	50.0	31.4	1	04/28/21 14:32	05/10/21 18:46	7439-95-4	
Manganese	<0.74	ug/L	5.0	0.74	1	04/28/21 14:32	05/10/21 18:46	7439-96-5	
Molybdenum	<2.2	ug/L	20.0	2.2	1	04/28/21 14:32	05/10/21 18:46	7439-98-7	
Potassium	<146	ug/L	500	146	1	04/28/21 14:32	05/10/21 18:46	7440-09-7	
Sodium	<254	ug/L	500	254	1	04/28/21 14:32	05/10/21 18:46	7440-23-5	
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8									
Pace Analytical Services - Kansas City									
Antimony	<0.10	ug/L	1.0	0.10	1	04/28/21 14:32	05/07/21 13:56	7440-36-0	
Arsenic	<0.11	ug/L	1.0	0.11	1	04/28/21 14:32	05/07/21 13:56	7440-38-2	
Cadmium	<0.062	ug/L	0.50	0.062	1	04/28/21 14:32	05/07/21 13:56	7440-43-9	
Chromium	0.37J	ug/L	1.0	0.23	1	04/28/21 14:32	05/07/21 13:56	7440-47-3	B
Selenium	<0.18	ug/L	1.0	0.18	1	04/28/21 14:32	05/07/21 13:56	7782-49-2	
Thallium	<0.094	ug/L	1.0	0.094	1	04/28/21 14:32	05/07/21 13:56	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470 Preparation Method: EPA 7470									
Pace Analytical Services - Kansas City									
Mercury	<0.096	ug/L	0.20	0.096	1	05/10/21 17:40	05/12/21 13:18	7439-97-6	
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Kansas City									
Alkalinity, Total as CaCO3	<7.5	mg/L	20.0	7.5	1		04/27/21 19:51		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Kansas City									
Total Dissolved Solids	27.0	mg/L	5.0	5.0	1		04/23/21 15:59		
Iron, Ferric (Calculation)									
Analytical Method: SM 3500-Fe B#4									
Pace Analytical Services - Kansas City									
Iron, Ferric	0.0J	mg/L	0.050		1		05/17/21 11:39	7439-89-6	
Iron, Ferrous									
Analytical Method: SM 3500-Fe B#4									
Pace Analytical Services - Kansas City									
Iron, Ferrous	<0.048	mg/L	0.20	0.048	1		04/26/21 11:09		H6

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Sample: L-CA-FB-2 **Lab ID: 60366962011** Collected: 04/16/21 11:40 Received: 04/17/21 03:35 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		04/22/21 16:23	18496-25-8	
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		04/27/21 16:25	16887-00-6	
Fluoride	<0.086	mg/L	0.20	0.086	1		04/27/21 16:25	16984-48-8	
Sulfate	<0.42	mg/L	1.0	0.42	1		04/27/21 16:25	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Sample: L-CA-FB-3 Lab ID: 60366962012 Collected: 04/16/21 15:35 Received: 04/17/21 03:35 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	04/28/21 14:32	05/10/21 18:48	7440-39-3	
Beryllium	<0.39	ug/L	1.0	0.39	1	04/28/21 14:32	05/10/21 18:48	7440-41-7	
Boron	10.4J	ug/L	100	8.6	1	04/28/21 14:32	05/10/21 18:48	7440-42-8	
Calcium	<75.4	ug/L	200	75.4	1	04/28/21 14:32	05/10/21 18:48	7440-70-2	
Cobalt	<0.95	ug/L	5.0	0.95	1	04/28/21 14:32	05/10/21 18:48	7440-48-4	
Iron	<21.4	ug/L	50.0	21.4	1	04/28/21 14:32	05/10/21 18:48	7439-89-6	
Lead	<3.8	ug/L	10.0	3.8	1	04/28/21 14:32	05/10/21 18:48	7439-92-1	
Lithium	<7.7	ug/L	10.0	7.7	1	04/28/21 14:32	05/10/21 18:48	7439-93-2	
Magnesium	<31.4	ug/L	50.0	31.4	1	04/28/21 14:32	05/10/21 18:48	7439-95-4	
Manganese	<0.74	ug/L	5.0	0.74	1	04/28/21 14:32	05/10/21 18:48	7439-96-5	
Molybdenum	<2.2	ug/L	20.0	2.2	1	04/28/21 14:32	05/10/21 18:48	7439-98-7	
Potassium	<146	ug/L	500	146	1	04/28/21 14:32	05/10/21 18:48	7440-09-7	
Sodium	<254	ug/L	500	254	1	04/28/21 14:32	05/10/21 18:48	7440-23-5	
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8									
Pace Analytical Services - Kansas City									
Antimony	<0.10	ug/L	1.0	0.10	1	04/28/21 14:32	05/07/21 14:01	7440-36-0	
Arsenic	<0.11	ug/L	1.0	0.11	1	04/28/21 14:32	05/07/21 14:01	7440-38-2	
Cadmium	<0.062	ug/L	0.50	0.062	1	04/28/21 14:32	05/07/21 14:01	7440-43-9	
Chromium	0.32J	ug/L	1.0	0.23	1	04/28/21 14:32	05/07/21 14:01	7440-47-3	B
Selenium	<0.18	ug/L	1.0	0.18	1	04/28/21 14:32	05/07/21 14:01	7782-49-2	
Thallium	<0.094	ug/L	1.0	0.094	1	04/28/21 14:32	05/07/21 14:01	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470 Preparation Method: EPA 7470									
Pace Analytical Services - Kansas City									
Mercury	<0.096	ug/L	0.20	0.096	1	05/10/21 17:40	05/12/21 13:21	7439-97-6	
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Kansas City									
Alkalinity, Total as CaCO3	<7.5	mg/L	20.0	7.5	1		04/27/21 19:55		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Kansas City									
Total Dissolved Solids	46.5	mg/L	5.0	5.0	1		04/23/21 15:59		
Iron, Ferric (Calculation)									
Analytical Method: SM 3500-Fe B#4									
Pace Analytical Services - Kansas City									
Iron, Ferric	0.00022J	mg/L	0.050		1		05/17/21 11:39	7439-89-6	
Iron, Ferrous									
Analytical Method: SM 3500-Fe B#4									
Pace Analytical Services - Kansas City									
Iron, Ferrous	<0.048	mg/L	0.20	0.048	1		04/26/21 11:14		H6

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Sample: L-CA-FB-3 **Lab ID: 60366962012** Collected: 04/16/21 15:35 Received: 04/17/21 03:35 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		04/22/21 16:23	18496-25-8	
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		04/27/21 16:39	16887-00-6	
Fluoride	<0.086	mg/L	0.20	0.086	1		04/27/21 16:39	16984-48-8	
Sulfate	<0.42	mg/L	1.0	0.42	1		04/27/21 16:39	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Sample: L-MW-26 **Lab ID: 60366962013** Collected: 04/16/21 11:16 Received: 04/17/21 03:35 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	197	ug/L	5.0	1.8	1	04/28/21 14:32	05/10/21 18:51	7440-39-3	
Beryllium	<0.39	ug/L	1.0	0.39	1	04/28/21 14:32	05/10/21 18:51	7440-41-7	
Boron	164	ug/L	100	8.6	1	04/28/21 14:32	05/10/21 18:51	7440-42-8	
Calcium	138000	ug/L	200	75.4	1	04/28/21 14:32	05/10/21 18:51	7440-70-2	
Cobalt	<0.95	ug/L	5.0	0.95	1	04/28/21 14:32	05/10/21 18:51	7440-48-4	
Iron	<21.4	ug/L	50.0	21.4	1	04/28/21 14:32	05/10/21 18:51	7439-89-6	
Lead	5.8J	ug/L	10.0	3.8	1	04/28/21 14:32	05/10/21 18:51	7439-92-1	
Lithium	28.3	ug/L	10.0	7.7	1	04/28/21 14:32	05/10/21 18:51	7439-93-2	
Magnesium	28000	ug/L	50.0	31.4	1	04/28/21 14:32	05/10/21 18:51	7439-95-4	
Manganese	1120	ug/L	5.0	0.74	1	04/28/21 14:32	05/10/21 18:51	7439-96-5	
Molybdenum	<2.2	ug/L	20.0	2.2	1	04/28/21 14:32	05/10/21 18:51	7439-98-7	
Potassium	4440	ug/L	500	146	1	04/28/21 14:32	05/10/21 18:51	7440-09-7	
Sodium	7550	ug/L	500	254	1	04/28/21 14:32	05/10/21 18:51	7440-23-5	
200.8 MET ICPMS		Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City							
Antimony	<0.10	ug/L	1.0	0.10	1	04/28/21 14:32	05/07/21 14:03	7440-36-0	
Arsenic	0.54J	ug/L	1.0	0.11	1	04/28/21 14:32	05/07/21 14:03	7440-38-2	
Cadmium	0.22J	ug/L	0.50	0.062	1	04/28/21 14:32	05/07/21 14:03	7440-43-9	
Chromium	0.36J	ug/L	1.0	0.23	1	04/28/21 14:32	05/07/21 14:03	7440-47-3	B
Selenium	0.32J	ug/L	1.0	0.18	1	04/28/21 14:32	05/07/21 14:03	7782-49-2	
Thallium	<0.094	ug/L	1.0	0.094	1	04/28/21 14:32	05/07/21 14:03	7440-28-0	
7470 Mercury		Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City							
Mercury	<0.096	ug/L	0.20	0.096	1	05/10/21 17:40	05/12/21 13:23	7439-97-6	
2320B Alkalinity		Analytical Method: SM 2320B Pace Analytical Services - Kansas City							
Alkalinity, Total as CaCO3	440	mg/L	20.0	7.5	1		04/27/21 20:01		
2540C Total Dissolved Solids		Analytical Method: SM 2540C Pace Analytical Services - Kansas City							
Total Dissolved Solids	512	mg/L	10.0	10.0	1		04/23/21 15:59		
Iron, Ferric (Calculation)		Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City							
Iron, Ferric	0.0J	mg/L	0.050		1		05/17/21 11:39	7439-89-6	
Iron, Ferrous		Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City							
Iron, Ferrous	<0.048	mg/L	0.20	0.048	1		04/26/21 11:08		H6

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Sample: L-MW-26 **Lab ID: 60366962013** Collected: 04/16/21 11:16 Received: 04/17/21 03:35 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		04/23/21 13:25	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	7.7	mg/L	1.0	0.39	1		04/27/21 16:54	16887-00-6	
Fluoride	0.29	mg/L	0.20	0.086	1		04/27/21 16:54	16984-48-8	
Sulfate	24.1	mg/L	2.0	0.84	2		04/27/21 17:08	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Sample: L-LMW-1S Lab ID: 60366962014 Collected: 04/15/21 13:19 Received: 04/17/21 03:35 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	04/28/21 14:32	05/13/21 14:09	7440-39-3	
Beryllium	<0.39	ug/L	1.0	0.39	1	04/28/21 14:32	05/13/21 14:09	7440-41-7	
Boron	687	ug/L	100	8.6	1	04/28/21 14:32	05/13/21 14:09	7440-42-8	
Calcium	129000	ug/L	200	75.4	1	04/28/21 14:32	05/13/21 14:09	7440-70-2	
Cobalt	<0.95	ug/L	5.0	0.95	1	04/28/21 14:32	05/13/21 14:09	7440-48-4	
Iron	6100	ug/L	50.0	21.4	1	04/28/21 14:32	05/13/21 14:09	7439-89-6	
Lead	<3.8	ug/L	10.0	3.8	1	04/28/21 14:32	05/13/21 14:09	7439-92-1	
Lithium	18.0	ug/L	10.0	7.7	1	04/28/21 14:32	05/13/21 14:09	7439-93-2	
Magnesium	23400	ug/L	50.0	31.4	1	04/28/21 14:32	05/13/21 14:09	7439-95-4	
Manganese	1200	ug/L	5.0	0.74	1	04/28/21 14:32	05/13/21 14:09	7439-96-5	
Molybdenum	6.6J	ug/L	20.0	2.2	1	04/28/21 14:32	05/13/21 14:09	7439-98-7	
Potassium	4090	ug/L	500	146	1	04/28/21 14:32	05/13/21 14:09	7440-09-7	
Sodium	7580	ug/L	500	254	1	04/28/21 14:32	05/13/21 14:09	7440-23-5	
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8									
Pace Analytical Services - Kansas City									
Antimony	<0.10	ug/L	1.0	0.10	1	04/28/21 14:32	05/07/21 14:05	7440-36-0	
Arsenic	12.2	ug/L	1.0	0.11	1	04/28/21 14:32	05/07/21 14:05	7440-38-2	
Cadmium	<0.062	ug/L	0.50	0.062	1	04/28/21 14:32	05/07/21 14:05	7440-43-9	
Chromium	0.39J	ug/L	1.0	0.23	1	04/28/21 14:32	05/07/21 14:05	7440-47-3	B
Selenium	<0.18	ug/L	1.0	0.18	1	04/28/21 14:32	05/07/21 14:05	7782-49-2	
Thallium	<0.094	ug/L	1.0	0.094	1	04/28/21 14:32	05/07/21 14:05	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470 Preparation Method: EPA 7470									
Pace Analytical Services - Kansas City									
Mercury	<0.096	ug/L	0.20	0.096	1	05/10/21 17:40	05/12/21 13:25	7439-97-6	
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Kansas City									
Alkalinity, Total as CaCO3	370	mg/L	20.0	7.5	1		04/27/21 10:30		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Kansas City									
Total Dissolved Solids	542	mg/L	10.0	10.0	1		04/22/21 13:02		
Iron, Ferric (Calculation)									
Analytical Method: SM 3500-Fe B#4									
Pace Analytical Services - Kansas City									
Iron, Ferric	6.0	mg/L	0.050		1		05/17/21 11:39	7439-89-6	
Iron, Ferrous									
Analytical Method: SM 3500-Fe B#4									
Pace Analytical Services - Kansas City									
Iron, Ferrous	0.096J	mg/L	0.20	0.048	1		04/26/21 11:04		H6

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Sample: L-LMW-1S **Lab ID: 60366962014** Collected: 04/15/21 13:19 Received: 04/17/21 03:35 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		04/22/21 15:39	18496-25-8	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0									
Pace Analytical Services - Kansas City									
Chloride	1.9	mg/L	1.0	0.39	1		04/27/21 17:22	16887-00-6	
Fluoride	0.32	mg/L	0.20	0.086	1		04/27/21 17:22	16984-48-8	
Sulfate	53.7	mg/L	5.0	2.1	5		04/28/21 15:09	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Sample: L-LMW-7S **Lab ID: 60366962015** Collected: 04/15/21 15:13 Received: 04/17/21 03:35 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	233	ug/L	5.0	1.8	1	04/28/21 14:32	05/13/21 14:11	7440-39-3	
Beryllium	<0.39	ug/L	1.0	0.39	1	04/28/21 14:32	05/13/21 14:11	7440-41-7	
Boron	12800	ug/L	100	8.6	1	04/28/21 14:32	05/13/21 14:11	7440-42-8	
Calcium	128000	ug/L	200	75.4	1	04/28/21 14:32	05/13/21 14:11	7440-70-2	
Cobalt	3.6J	ug/L	5.0	0.95	1	04/28/21 14:32	05/13/21 14:11	7440-48-4	
Iron	5110	ug/L	50.0	21.4	1	04/28/21 14:32	05/13/21 14:11	7439-89-6	
Lead	7.1J	ug/L	10.0	3.8	1	04/28/21 14:32	05/13/21 14:11	7439-92-1	
Lithium	45.5	ug/L	10.0	7.7	1	04/28/21 14:32	05/13/21 14:11	7439-93-2	
Magnesium	30300	ug/L	50.0	31.4	1	04/28/21 14:32	05/13/21 14:11	7439-95-4	
Manganese	1390	ug/L	5.0	0.74	1	04/28/21 14:32	05/13/21 14:11	7439-96-5	
Molybdenum	137	ug/L	20.0	2.2	1	04/28/21 14:32	05/13/21 14:11	7439-98-7	
Potassium	6680	ug/L	500	146	1	04/28/21 14:32	05/13/21 14:11	7440-09-7	
Sodium	72600	ug/L	500	254	1	04/28/21 14:32	05/13/21 14:11	7440-23-5	
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8									
Pace Analytical Services - Kansas City									
Antimony	<0.10	ug/L	1.0	0.10	1	04/28/21 14:32	05/07/21 14:06	7440-36-0	
Arsenic	15.3	ug/L	1.0	0.11	1	04/28/21 14:32	05/07/21 14:06	7440-38-2	
Cadmium	<0.062	ug/L	0.50	0.062	1	04/28/21 14:32	05/07/21 14:06	7440-43-9	
Chromium	0.26J	ug/L	1.0	0.23	1	04/28/21 14:32	05/07/21 14:06	7440-47-3	B
Selenium	<0.18	ug/L	1.0	0.18	1	04/28/21 14:32	05/07/21 14:06	7782-49-2	
Thallium	<0.094	ug/L	1.0	0.094	1	04/28/21 14:32	05/07/21 14:06	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470 Preparation Method: EPA 7470									
Pace Analytical Services - Kansas City									
Mercury	<0.096	ug/L	0.20	0.096	1	05/10/21 17:40	05/12/21 13:27	7439-97-6	
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Kansas City									
Alkalinity, Total as CaCO3	277	mg/L	20.0	7.5	1		04/27/21 10:35		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Kansas City									
Total Dissolved Solids	812	mg/L	10.0	10.0	1		04/22/21 13:02		
Iron, Ferric (Calculation)									
Analytical Method: SM 3500-Fe B#4									
Pace Analytical Services - Kansas City									
Iron, Ferric	4.9	mg/L	0.050		1		05/17/21 11:39	7439-89-6	
Iron, Ferrous									
Analytical Method: SM 3500-Fe B#4									
Pace Analytical Services - Kansas City									
Iron, Ferrous	0.22	mg/L	0.20	0.048	1		04/26/21 11:05		H6

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Sample: L-LMW-7S **Lab ID: 60366962015** Collected: 04/15/21 15:13 Received: 04/17/21 03:35 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		04/22/21 15:39	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	21.8	mg/L	2.0	0.78	2		04/28/21 15:40	16887-00-6	
Fluoride	<0.086	mg/L	0.20	0.086	1		04/27/21 18:20	16984-48-8	
Sulfate	294	mg/L	20.0	8.4	20		04/27/21 19:03	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Sample: L-LMW-8S Lab ID: 60366962016 Collected: 04/15/21 15:32 Received: 04/17/21 03:35 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	153	ug/L	100	36.8	20	04/28/21 14:32	05/13/21 14:13	7440-39-3	
Beryllium	<7.8	ug/L	20.0	7.8	20	04/28/21 14:32	05/13/21 14:13	7440-41-7	D3
Boron	8550	ug/L	2000	171	20	04/28/21 14:32	05/13/21 14:13	7440-42-8	
Calcium	224000	ug/L	4000	1510	20	04/28/21 14:32	05/13/21 14:13	7440-70-2	
Cobalt	1.3J	ug/L	5.0	0.95	1	04/28/21 14:32	05/10/21 18:59	7440-48-4	
Iron	10100	ug/L	1000	428	20	04/28/21 14:32	05/13/21 14:13	7439-89-6	
Lead	4.1J	ug/L	10.0	3.8	1	04/28/21 14:32	05/10/21 18:59	7439-92-1	
Lithium	<153	ug/L	200	153	20	04/28/21 14:32	05/13/21 14:13	7439-93-2	D3
Magnesium	40800	ug/L	1000	628	20	04/28/21 14:32	05/13/21 14:13	7439-95-4	
Manganese	2710	ug/L	100	14.7	20	04/28/21 14:32	05/13/21 14:13	7439-96-5	
Molybdenum	236	ug/L	20.0	2.2	1	04/28/21 14:32	05/10/21 18:59	7439-98-7	
Potassium	7020J	ug/L	10000	2920	20	04/28/21 14:32	05/13/21 14:13	7440-09-7	
Sodium	101000	ug/L	10000	5080	20	04/28/21 14:32	05/13/21 14:13	7440-23-5	
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8									
Pace Analytical Services - Kansas City									
Antimony	<0.10	ug/L	1.0	0.10	1	04/28/21 14:32	05/07/21 14:08	7440-36-0	
Arsenic	14.0	ug/L	1.0	0.11	1	04/28/21 14:32	05/07/21 14:08	7440-38-2	
Cadmium	0.095J	ug/L	0.50	0.062	1	04/28/21 14:32	05/07/21 14:08	7440-43-9	
Chromium	0.31J	ug/L	1.0	0.23	1	04/28/21 14:32	05/07/21 14:08	7440-47-3	B
Selenium	<0.18	ug/L	1.0	0.18	1	04/28/21 14:32	05/07/21 14:08	7782-49-2	
Thallium	<0.094	ug/L	1.0	0.094	1	04/28/21 14:32	05/07/21 14:08	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470 Preparation Method: EPA 7470									
Pace Analytical Services - Kansas City									
Mercury	<0.096	ug/L	0.20	0.096	1	05/10/21 17:40	05/12/21 13:30	7439-97-6	
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Kansas City									
Alkalinity, Total as CaCO3	264	mg/L	20.0	7.5	1		04/27/21 10:39		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Kansas City									
Total Dissolved Solids	1270	mg/L	13.3	13.3	1		04/22/21 13:03		
Iron, Ferric (Calculation)									
Analytical Method: SM 3500-Fe B#4									
Pace Analytical Services - Kansas City									
Iron, Ferric	9.9	mg/L	0.050		1		05/17/21 11:39	7439-89-6	
Iron, Ferrous									
Analytical Method: SM 3500-Fe B#4									
Pace Analytical Services - Kansas City									
Iron, Ferrous	0.19J	mg/L	0.20	0.048	1		04/26/21 11:06		H6

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Sample: L-LMW-8S **Lab ID: 60366962016** Collected: 04/15/21 15:32 Received: 04/17/21 03:35 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		04/22/21 15:40	18496-25-8	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0									
Pace Analytical Services - Kansas City									
Chloride	18.0	mg/L	1.0	0.39	1		04/27/21 19:17	16887-00-6	
Fluoride	<0.086	mg/L	0.20	0.086	1		04/27/21 19:17	16984-48-8	
Sulfate	604	mg/L	50.0	21.0	50		04/27/21 19:32	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Sample: L-AMW-8 **Lab ID: 60366962020** Collected: 04/20/21 10:40 Received: 04/21/21 03:49 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	1.8	1	04/30/21 13:00	05/10/21 22:23	7440-39-3	
Beryllium	<0.39	ug/L	1.0	0.39	1	04/30/21 13:00	05/10/21 22:23	7440-41-7	
Boron	6950	ug/L	100	8.6	1	04/30/21 13:00	05/10/21 22:23	7440-42-8	
Calcium	65900	ug/L	200	75.4	1	04/30/21 13:00	05/10/21 22:23	7440-70-2	
Cobalt	<0.95	ug/L	5.0	0.95	1	04/30/21 13:00	05/10/21 22:23	7440-48-4	
Iron	1600	ug/L	50.0	21.4	1	04/30/21 13:00	05/10/21 22:23	7439-89-6	
Lead	<3.8	ug/L	10.0	3.8	1	04/30/21 13:00	05/10/21 22:23	7439-92-1	
Lithium	17.0	ug/L	10.0	7.7	1	04/30/21 13:00	05/10/21 22:23	7439-93-2	
Magnesium	8790	ug/L	50.0	31.4	1	04/30/21 13:00	05/10/21 22:23	7439-95-4	
Manganese	290	ug/L	5.0	0.74	1	04/30/21 13:00	05/10/21 22:23	7439-96-5	
Molybdenum	337	ug/L	20.0	2.2	1	04/30/21 13:00	05/10/21 22:23	7439-98-7	
Potassium	6500	ug/L	500	146	1	04/30/21 13:00	05/10/21 22:23	7440-09-7	
Sodium	90000	ug/L	500	254	1	04/30/21 13:00	05/10/21 22:23	7440-23-5	
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8									
Pace Analytical Services - Kansas City									
Antimony	<0.10	ug/L	1.0	0.10	1	05/06/21 15:30	06/02/21 09:23	7440-36-0	
Arsenic	0.28J	ug/L	1.0	0.11	1	05/06/21 15:30	06/01/21 18:53	7440-38-2	
Cadmium	<0.062	ug/L	0.50	0.062	1	05/06/21 15:30	06/01/21 18:53	7440-43-9	
Chromium	0.56J	ug/L	1.0	0.23	1	05/06/21 15:30	06/01/21 18:53	7440-47-3	
Selenium	<0.18	ug/L	1.0	0.18	1	05/06/21 15:30	06/01/21 18:53	7782-49-2	
Thallium	<0.094	ug/L	1.0	0.094	1	05/06/21 15:30	06/01/21 18:53	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470 Preparation Method: EPA 7470									
Pace Analytical Services - Kansas City									
Mercury	<0.096	ug/L	0.20	0.096	1	05/10/21 17:40	05/11/21 09:39	7439-97-6	
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Kansas City									
Alkalinity, Total as CaCO3	85.1	mg/L	20.0	7.5	1		05/03/21 20:49		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Kansas City									
Total Dissolved Solids	274	mg/L	5.0	5.0	1		04/26/21 11:04		
Iron, Ferric (Calculation)									
Analytical Method: SM 3500-Fe B#4									
Pace Analytical Services - Kansas City									
Iron, Ferric	1.5	mg/L	0.050		1		05/27/21 14:17	7439-89-6	
Iron, Ferrous									
Analytical Method: SM 3500-Fe B#4									
Pace Analytical Services - Kansas City									
Iron, Ferrous	0.13J	mg/L	0.20	0.048	1		04/26/21 11:21		H6

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Sample: L-AMW-8 **Lab ID: 60366962020** Collected: 04/20/21 10:40 Received: 04/21/21 03:49 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		04/26/21 15:16	18496-25-8	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0									
Pace Analytical Services - Kansas City									
Chloride	20.4	mg/L	5.0	1.9	5		04/28/21 18:35	16887-00-6	
Fluoride	0.41	mg/L	0.20	0.086	1		04/28/21 18:19	16984-48-8	
Sulfate	105	mg/L	20.0	8.4	20		04/28/21 18:50	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Sample: L-TP-1D Lab ID: 60366962021 Collected: 04/19/21 09:45 Received: 04/21/21 03:49 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	1520	ug/L	5.0	1.8	1	04/30/21 13:00	05/10/21 22:25	7440-39-3	
Beryllium	<0.39	ug/L	1.0	0.39	1	04/30/21 13:00	05/10/21 22:25	7440-41-7	
Boron	78.3J	ug/L	100	8.6	1	04/30/21 13:00	05/10/21 22:25	7440-42-8	
Calcium	145000	ug/L	200	75.4	1	04/30/21 13:00	05/10/21 22:25	7440-70-2	M1
Cobalt	<0.95	ug/L	5.0	0.95	1	04/30/21 13:00	05/10/21 22:25	7440-48-4	
Iron	8300	ug/L	50.0	21.4	1	04/30/21 13:00	05/10/21 22:25	7439-89-6	
Lead	<3.8	ug/L	10.0	3.8	1	04/30/21 13:00	05/10/21 22:25	7439-92-1	
Lithium	17.7	ug/L	10.0	7.7	1	04/30/21 13:00	05/10/21 22:25	7439-93-2	
Magnesium	37900	ug/L	50.0	31.4	1	04/30/21 13:00	05/10/21 22:25	7439-95-4	
Manganese	245	ug/L	5.0	0.74	1	04/30/21 13:00	05/10/21 22:25	7439-96-5	
Molybdenum	<2.2	ug/L	20.0	2.2	1	04/30/21 13:00	05/10/21 22:25	7439-98-7	
Potassium	4640	ug/L	500	146	1	04/30/21 13:00	05/10/21 22:25	7440-09-7	
Sodium	12500	ug/L	500	254	1	04/30/21 13:00	05/10/21 22:25	7440-23-5	
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8									
Pace Analytical Services - Kansas City									
Antimony	<0.10	ug/L	1.0	0.10	1	05/06/21 15:30	06/02/21 09:24	7440-36-0	
Arsenic	1.2	ug/L	1.0	0.11	1	05/06/21 15:30	06/01/21 18:54	7440-38-2	
Cadmium	<0.062	ug/L	0.50	0.062	1	05/06/21 15:30	06/01/21 18:54	7440-43-9	
Chromium	0.32J	ug/L	1.0	0.23	1	05/06/21 15:30	06/01/21 18:54	7440-47-3	
Selenium	<0.18	ug/L	1.0	0.18	1	05/06/21 15:30	06/01/21 18:54	7782-49-2	
Thallium	<0.094	ug/L	1.0	0.094	1	05/06/21 15:30	06/01/21 18:54	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470 Preparation Method: EPA 7470									
Pace Analytical Services - Kansas City									
Mercury	<0.096	ug/L	0.20	0.096	1	05/10/21 17:40	05/11/21 09:42	7439-97-6	
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Kansas City									
Alkalinity, Total as CaCO3	528	mg/L	20.0	7.5	1		04/30/21 18:10		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Kansas City									
Total Dissolved Solids	569	mg/L	10.0	10.0	1		04/26/21 11:01		
Iron, Ferric (Calculation)									
Analytical Method: SM 3500-Fe B#4									
Pace Analytical Services - Kansas City									
Iron, Ferric	8.0	mg/L	0.050		1		05/27/21 14:17	7439-89-6	
Iron, Ferrous									
Analytical Method: SM 3500-Fe B#4									
Pace Analytical Services - Kansas City									
Iron, Ferrous	0.32	mg/L	0.20	0.048	1		04/26/21 11:17		H6

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Sample: L-TP-1D **Lab ID: 60366962021** Collected: 04/19/21 09:45 Received: 04/21/21 03:49 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D Pace Analytical Services - Kansas City								
Sulfide, Total	0.035J	mg/L	0.050	0.026	1		04/26/21 14:49	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	4.6	mg/L	1.0	0.39	1		04/28/21 19:06	16887-00-6	
Fluoride	0.22	mg/L	0.20	0.086	1		04/28/21 19:06	16984-48-8	
Sulfate	11.7	mg/L	1.0	0.42	1		04/28/21 19:06	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Sample: L-TP-2M Lab ID: 60366962022 Collected: 04/20/21 12:55 Received: 04/21/21 03:49 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	123	ug/L	5.0	1.8	1	04/30/21 13:00	05/10/21 22:32	7440-39-3	
Beryllium	<0.39	ug/L	1.0	0.39	1	04/30/21 13:00	05/10/21 22:32	7440-41-7	
Boron	1670	ug/L	100	8.6	1	04/30/21 13:00	05/10/21 22:32	7440-42-8	
Calcium	95300	ug/L	200	75.4	1	04/30/21 13:00	05/10/21 22:32	7440-70-2	
Cobalt	<0.95	ug/L	5.0	0.95	1	04/30/21 13:00	05/10/21 22:32	7440-48-4	
Iron	2800	ug/L	50.0	21.4	1	04/30/21 13:00	05/10/21 22:32	7439-89-6	
Lead	4.2J	ug/L	10.0	3.8	1	04/30/21 13:00	05/10/21 22:32	7439-92-1	
Lithium	29.4	ug/L	10.0	7.7	1	04/30/21 13:00	05/10/21 22:32	7439-93-2	
Magnesium	14300	ug/L	50.0	31.4	1	04/30/21 13:00	05/10/21 22:32	7439-95-4	
Manganese	412	ug/L	5.0	0.74	1	04/30/21 13:00	05/10/21 22:32	7439-96-5	
Molybdenum	83.4	ug/L	20.0	2.2	1	04/30/21 13:00	05/10/21 22:32	7439-98-7	
Potassium	6740	ug/L	500	146	1	04/30/21 13:00	05/10/21 22:32	7440-09-7	
Sodium	63500	ug/L	500	254	1	04/30/21 13:00	05/10/21 22:32	7440-23-5	
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8									
Pace Analytical Services - Kansas City									
Antimony	<0.10	ug/L	1.0	0.10	1	05/06/21 15:30	06/02/21 09:28	7440-36-0	
Arsenic	0.63J	ug/L	1.0	0.11	1	05/06/21 15:30	06/01/21 18:59	7440-38-2	
Cadmium	<0.062	ug/L	0.50	0.062	1	05/06/21 15:30	06/01/21 18:59	7440-43-9	
Chromium	0.24J	ug/L	1.0	0.23	1	05/06/21 15:30	06/01/21 18:59	7440-47-3	
Selenium	<0.18	ug/L	1.0	0.18	1	05/06/21 15:30	06/01/21 18:59	7782-49-2	
Thallium	<0.094	ug/L	1.0	0.094	1	05/06/21 15:30	06/01/21 18:59	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470 Preparation Method: EPA 7470									
Pace Analytical Services - Kansas City									
Mercury	<0.096	ug/L	0.20	0.096	1	05/10/21 17:40	05/11/21 09:53	7439-97-6	
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Kansas City									
Alkalinity, Total as CaCO3	253	mg/L	20.0	7.5	1		05/03/21 20:54		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Kansas City									
Total Dissolved Solids	282	mg/L	5.0	5.0	1		04/26/21 11:04		
Iron, Ferric (Calculation)									
Analytical Method: SM 3500-Fe B#4									
Pace Analytical Services - Kansas City									
Iron, Ferric	2.7	mg/L	0.050		1		05/27/21 14:17	7439-89-6	
Iron, Ferrous									
Analytical Method: SM 3500-Fe B#4									
Pace Analytical Services - Kansas City									
Iron, Ferrous	0.11J	mg/L	0.20	0.048	1		04/26/21 11:22		H6

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Sample: L-TP-2M **Lab ID: 60366962022** Collected: 04/20/21 12:55 Received: 04/21/21 03:49 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		04/26/21 15:17	18496-25-8	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0									
Pace Analytical Services - Kansas City									
Chloride	20.8	mg/L	5.0	1.9	5		04/28/21 20:57	16887-00-6	
Fluoride	0.48	mg/L	0.20	0.086	1		04/28/21 20:42	16984-48-8	
Sulfate	150	mg/L	20.0	8.4	20		04/28/21 21:13	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Sample: L-TP-2D **Lab ID: 60366962023** Collected: 04/20/21 14:00 Received: 04/21/21 03:49 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	158	ug/L	5.0	1.8	1	05/10/21 09:56	05/14/21 16:44	7440-39-3	
Beryllium	<0.39	ug/L	1.0	0.39	1	05/10/21 09:56	05/14/21 16:44	7440-41-7	
Boron	8670	ug/L	100	8.6	1	05/10/21 09:56	05/14/21 16:44	7440-42-8	
Calcium	117000	ug/L	200	75.4	1	05/10/21 09:56	05/14/21 16:44	7440-70-2	
Cobalt	<0.95	ug/L	5.0	0.95	1	05/10/21 09:56	05/14/21 16:44	7440-48-4	
Iron	9310	ug/L	50.0	21.4	1	05/10/21 09:56	05/14/21 16:44	7439-89-6	
Lead	<3.8	ug/L	10.0	3.8	1	05/10/21 09:56	05/14/21 16:44	7439-92-1	
Lithium	42.8	ug/L	10.0	7.7	1	05/10/21 09:56	05/14/21 16:44	7439-93-2	
Magnesium	25600	ug/L	50.0	31.4	1	05/10/21 09:56	05/14/21 16:44	7439-95-4	
Manganese	1850	ug/L	5.0	0.74	1	05/10/21 09:56	05/14/21 16:44	7439-96-5	
Molybdenum	147	ug/L	20.0	2.2	1	05/10/21 09:56	05/14/21 16:44	7439-98-7	
Potassium	6640	ug/L	500	146	1	05/10/21 09:56	05/14/21 16:44	7440-09-7	
Sodium	85900	ug/L	500	254	1	05/10/21 09:56	05/14/21 16:44	7440-23-5	
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8									
Pace Analytical Services - Kansas City									
Antimony	<0.10	ug/L	1.0	0.10	1	05/06/21 15:30	06/02/21 09:29	7440-36-0	
Arsenic	22.5	ug/L	1.0	0.11	1	05/06/21 15:30	06/01/21 19:01	7440-38-2	
Cadmium	<0.062	ug/L	0.50	0.062	1	05/06/21 15:30	06/01/21 19:01	7440-43-9	
Chromium	0.34J	ug/L	1.0	0.23	1	05/06/21 15:30	06/01/21 19:01	7440-47-3	
Selenium	<0.18	ug/L	1.0	0.18	1	05/06/21 15:30	06/01/21 19:01	7782-49-2	
Thallium	<0.094	ug/L	1.0	0.094	1	05/06/21 15:30	06/01/21 19:01	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470 Preparation Method: EPA 7470									
Pace Analytical Services - Kansas City									
Mercury	<0.096	ug/L	0.20	0.096	1	05/10/21 17:40	05/11/21 09:55	7439-97-6	
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Kansas City									
Alkalinity, Total as CaCO3	247	mg/L	20.0	7.5	1		05/03/21 20:59		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Kansas City									
Total Dissolved Solids	288	mg/L	5.0	5.0	1		04/26/21 11:04		
Iron, Ferric (Calculation)									
Analytical Method: SM 3500-Fe B#4									
Pace Analytical Services - Kansas City									
Iron, Ferric	9.2	mg/L	0.050		1		05/27/21 14:17	7439-89-6	
Iron, Ferrous									
Analytical Method: SM 3500-Fe B#4									
Pace Analytical Services - Kansas City									
Iron, Ferrous	0.13J	mg/L	0.20	0.048	1		04/26/21 11:22		H6

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Sample: L-TP-2D **Lab ID: 60366962023** Collected: 04/20/21 14:00 Received: 04/21/21 03:49 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		04/26/21 15:17	18496-25-8	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0									
Pace Analytical Services - Kansas City									
Chloride	22.0	mg/L	2.0	0.78	2		05/01/21 04:47	16887-00-6	
Fluoride	0.45	mg/L	0.20	0.086	1		05/01/21 03:12	16984-48-8	
Sulfate	155	mg/L	10.0	4.2	10		05/01/21 05:51	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Sample: L-AM-1S Lab ID: 60366962024 Collected: 04/20/21 10:05 Received: 04/21/21 03:49 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	597	ug/L	5.0	1.8	1	04/30/21 13:00	05/10/21 22:43	7440-39-3	
Beryllium	<0.39	ug/L	1.0	0.39	1	04/30/21 13:00	05/10/21 22:43	7440-41-7	
Boron	346	ug/L	100	8.6	1	04/30/21 13:00	05/10/21 22:43	7440-42-8	
Calcium	196000	ug/L	200	75.4	1	04/30/21 13:00	05/10/21 22:43	7440-70-2	
Cobalt	4.3J	ug/L	5.0	0.95	1	04/30/21 13:00	05/10/21 22:43	7440-48-4	
Iron	4980	ug/L	50.0	21.4	1	04/30/21 13:00	05/10/21 22:43	7439-89-6	
Lead	6.0J	ug/L	10.0	3.8	1	04/30/21 13:00	05/10/21 22:43	7439-92-1	
Lithium	30.8	ug/L	10.0	7.7	1	04/30/21 13:00	05/10/21 22:43	7439-93-2	
Magnesium	42100	ug/L	50.0	31.4	1	04/30/21 13:00	05/10/21 22:43	7439-95-4	
Manganese	1870	ug/L	5.0	0.74	1	04/30/21 13:00	05/10/21 22:43	7439-96-5	
Molybdenum	4.6J	ug/L	20.0	2.2	1	04/30/21 13:00	05/10/21 22:43	7439-98-7	
Potassium	7300	ug/L	500	146	1	04/30/21 13:00	05/10/21 22:43	7440-09-7	
Sodium	64000	ug/L	500	254	1	04/30/21 13:00	05/10/21 22:43	7440-23-5	
200.8 MET ICPMS		Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City							
Antimony	<0.10	ug/L	1.0	0.10	1	05/06/21 15:30	06/02/21 09:35	7440-36-0	
Arsenic	3.9	ug/L	1.0	0.11	1	05/06/21 15:30	06/01/21 19:09	7440-38-2	
Cadmium	0.085J	ug/L	0.50	0.062	1	05/06/21 15:30	06/01/21 19:09	7440-43-9	
Chromium	0.36J	ug/L	1.0	0.23	1	05/06/21 15:30	06/01/21 19:09	7440-47-3	
Selenium	0.20J	ug/L	1.0	0.18	1	05/06/21 15:30	06/01/21 19:09	7782-49-2	
Thallium	<0.094	ug/L	1.0	0.094	1	05/06/21 15:30	06/01/21 19:09	7440-28-0	
7470 Mercury		Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Kansas City							
Mercury	<0.096	ug/L	0.20	0.096	1	05/10/21 17:40	05/11/21 10:02	7439-97-6	
2320B Alkalinity		Analytical Method: SM 2320B Pace Analytical Services - Kansas City							
Alkalinity, Total as CaCO3	659	mg/L	20.0	7.5	1		05/03/21 21:11		
2540C Total Dissolved Solids		Analytical Method: SM 2540C Pace Analytical Services - Kansas City							
Total Dissolved Solids	350	mg/L	5.0	5.0	1		04/26/21 11:05		
Iron, Ferric (Calculation)		Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City							
Iron, Ferric	4.8	mg/L	0.050		1		05/27/21 14:17	7439-89-6	
Iron, Ferrous		Analytical Method: SM 3500-Fe B#4 Pace Analytical Services - Kansas City							
Iron, Ferrous	0.22	mg/L	0.20	0.048	1		04/26/21 11:20		H6

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Sample: L-AM-1S **Lab ID: 60366962024** Collected: 04/20/21 10:05 Received: 04/21/21 03:49 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		04/26/21 15:18	18496-25-8	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0									
Pace Analytical Services - Kansas City									
Chloride	99.4	mg/L	10.0	3.9	10		04/28/21 21:45	16887-00-6	
Fluoride	0.32	mg/L	0.20	0.086	1		04/28/21 21:29	16984-48-8	
Sulfate	13.6	mg/L	1.0	0.42	1		04/28/21 21:29	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Sample: L-AM-1D Lab ID: 60366962025 Collected: 04/20/21 11:20 Received: 04/21/21 03:49 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	75.2	ug/L	5.0	1.8	1	04/30/21 13:00	05/10/21 22:45	7440-39-3	
Beryllium	<0.39	ug/L	1.0	0.39	1	04/30/21 13:00	05/10/21 22:45	7440-41-7	
Boron	8340	ug/L	100	8.6	1	04/30/21 13:00	05/10/21 22:45	7440-42-8	
Calcium	109000	ug/L	200	75.4	1	04/30/21 13:00	05/10/21 22:45	7440-70-2	
Cobalt	<0.95	ug/L	5.0	0.95	1	04/30/21 13:00	05/10/21 22:45	7440-48-4	
Iron	5100	ug/L	50.0	21.4	1	04/30/21 13:00	05/10/21 22:45	7439-89-6	
Lead	6.1J	ug/L	10.0	3.8	1	04/30/21 13:00	05/10/21 22:45	7439-92-1	
Lithium	36.1	ug/L	10.0	7.7	1	04/30/21 13:00	05/10/21 22:45	7439-93-2	
Magnesium	14400	ug/L	50.0	31.4	1	04/30/21 13:00	05/10/21 22:45	7439-95-4	
Manganese	285	ug/L	5.0	0.74	1	04/30/21 13:00	05/10/21 22:45	7439-96-5	
Molybdenum	390	ug/L	20.0	2.2	1	04/30/21 13:00	05/10/21 22:45	7439-98-7	
Potassium	8840	ug/L	500	146	1	04/30/21 13:00	05/10/21 22:45	7440-09-7	
Sodium	118000	ug/L	500	254	1	04/30/21 13:00	05/10/21 22:45	7440-23-5	
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8									
Pace Analytical Services - Kansas City									
Antimony	<0.10	ug/L	1.0	0.10	1	05/06/21 15:30	06/02/21 09:36	7440-36-0	
Arsenic	3.5	ug/L	1.0	0.11	1	05/06/21 15:30	06/01/21 19:11	7440-38-2	
Cadmium	<0.062	ug/L	0.50	0.062	1	05/06/21 15:30	06/01/21 19:11	7440-43-9	
Chromium	1.6	ug/L	1.0	0.23	1	05/06/21 15:30	06/01/21 19:11	7440-47-3	
Selenium	<0.18	ug/L	1.0	0.18	1	05/06/21 15:30	06/01/21 19:11	7782-49-2	
Thallium	<0.094	ug/L	1.0	0.094	1	05/06/21 15:30	06/01/21 19:11	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470 Preparation Method: EPA 7470									
Pace Analytical Services - Kansas City									
Mercury	<0.096	ug/L	0.20	0.096	1	05/10/21 17:40	05/11/21 10:04	7439-97-6	
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Kansas City									
Alkalinity, Total as CaCO3	150	mg/L	20.0	7.5	1		05/03/21 21:17		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Kansas City									
Total Dissolved Solids	456	mg/L	5.0	5.0	1		04/26/21 11:05		
Iron, Ferric (Calculation)									
Analytical Method: SM 3500-Fe B#4									
Pace Analytical Services - Kansas City									
Iron, Ferric	4.9	mg/L	0.050		1		05/27/21 14:17	7439-89-6	
Iron, Ferrous									
Analytical Method: SM 3500-Fe B#4									
Pace Analytical Services - Kansas City									
Iron, Ferrous	0.19J	mg/L	0.20	0.048	1		04/26/21 11:21		H6

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Sample: L-AM-1D **Lab ID: 60366962025** Collected: 04/20/21 11:20 Received: 04/21/21 03:49 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		04/26/21 15:19	18496-25-8	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0									
Pace Analytical Services - Kansas City									
Chloride	39.8	mg/L	5.0	1.9	5		04/28/21 22:16	16887-00-6	
Fluoride	0.40	mg/L	0.20	0.086	1		04/28/21 22:00	16984-48-8	
Sulfate	340	mg/L	50.0	21.0	50		04/28/21 22:32	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Sample: L-CA-DUP-2 Lab ID: 60366962026 Collected: 04/20/21 00:00 Received: 04/21/21 03:49 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	593	ug/L	5.0	1.8	1	05/10/21 09:56	05/14/21 16:52	7440-39-3	
Beryllium	<0.39	ug/L	1.0	0.39	1	05/10/21 09:56	05/14/21 16:52	7440-41-7	
Boron	346	ug/L	100	8.6	1	05/10/21 09:56	05/14/21 16:52	7440-42-8	
Calcium	184000	ug/L	200	75.4	1	05/10/21 09:56	05/14/21 16:52	7440-70-2	
Cobalt	3.6J	ug/L	5.0	0.95	1	05/10/21 09:56	05/14/21 16:52	7440-48-4	
Iron	4920	ug/L	50.0	21.4	1	05/10/21 09:56	05/14/21 16:52	7439-89-6	
Lead	<3.8	ug/L	10.0	3.8	1	05/10/21 09:56	05/14/21 16:52	7439-92-1	
Lithium	38.3	ug/L	10.0	7.7	1	05/10/21 09:56	05/14/21 16:52	7439-93-2	
Magnesium	40900	ug/L	50.0	31.4	1	05/10/21 09:56	05/14/21 16:52	7439-95-4	
Manganese	1860	ug/L	5.0	0.74	1	05/10/21 09:56	05/14/21 16:52	7439-96-5	
Molybdenum	3.5J	ug/L	20.0	2.2	1	05/10/21 09:56	05/14/21 16:52	7439-98-7	
Potassium	6720	ug/L	500	146	1	05/10/21 09:56	05/14/21 16:52	7440-09-7	
Sodium	61900	ug/L	500	254	1	05/10/21 09:56	05/14/21 16:52	7440-23-5	
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8									
Pace Analytical Services - Kansas City									
Antimony	<0.10	ug/L	1.0	0.10	1	05/06/21 15:30	06/02/21 09:37	7440-36-0	
Arsenic	3.8	ug/L	1.0	0.11	1	05/06/21 15:30	06/01/21 19:13	7440-38-2	
Cadmium	0.082J	ug/L	0.50	0.062	1	05/06/21 15:30	06/01/21 19:13	7440-43-9	
Chromium	0.29J	ug/L	1.0	0.23	1	05/06/21 15:30	06/01/21 19:13	7440-47-3	
Selenium	<0.18	ug/L	1.0	0.18	1	05/06/21 15:30	06/01/21 19:13	7782-49-2	
Thallium	<0.094	ug/L	1.0	0.094	1	05/06/21 15:30	06/01/21 19:13	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470 Preparation Method: EPA 7470									
Pace Analytical Services - Kansas City									
Mercury	<0.096	ug/L	0.20	0.096	1	05/10/21 17:40	05/11/21 10:07	7439-97-6	
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Kansas City									
Alkalinity, Total as CaCO3	637	mg/L	20.0	7.5	1		05/03/21 21:23		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Kansas City									
Total Dissolved Solids	344	mg/L	5.0	5.0	1		04/26/21 11:05		
Iron, Ferric (Calculation)									
Analytical Method: SM 3500-Fe B#4									
Pace Analytical Services - Kansas City									
Iron, Ferric	4.8	mg/L	0.050		1		05/27/21 14:17	7439-89-6	
Iron, Ferrous									
Analytical Method: SM 3500-Fe B#4									
Pace Analytical Services - Kansas City									
Iron, Ferrous	0.076J	mg/L	0.20	0.048	1		04/26/21 11:20		H6

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Sample: L-CA-DUP-2 **Lab ID: 60366962026** Collected: 04/20/21 00:00 Received: 04/21/21 03:49 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		04/26/21 15:19	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	99.1	mg/L	20.0	7.8	20		04/28/21 23:36	16887-00-6	
Fluoride	<0.086	mg/L	0.20	0.086	1		04/28/21 23:20	16984-48-8	
Sulfate	13.6	mg/L	1.0	0.42	1		04/28/21 23:20	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Sample: L-CA-DUP-3 **Lab ID: 60366962027** Collected: 04/20/21 00:00 Received: 04/21/21 03:49 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	125	ug/L	5.0	1.8	1	05/10/21 09:56	05/14/21 16:54	7440-39-3	
Beryllium	<0.39	ug/L	1.0	0.39	1	05/10/21 09:56	05/14/21 16:54	7440-41-7	
Boron	1620	ug/L	100	8.6	1	05/10/21 09:56	05/14/21 16:54	7440-42-8	
Calcium	90000	ug/L	200	75.4	1	05/10/21 09:56	05/14/21 16:54	7440-70-2	
Cobalt	<0.95	ug/L	5.0	0.95	1	05/10/21 09:56	05/14/21 16:54	7440-48-4	
Iron	2830	ug/L	50.0	21.4	1	05/10/21 09:56	05/14/21 16:54	7439-89-6	
Lead	<3.8	ug/L	10.0	3.8	1	05/10/21 09:56	05/14/21 16:54	7439-92-1	
Lithium	32.1	ug/L	10.0	7.7	1	05/10/21 09:56	05/14/21 16:54	7439-93-2	
Magnesium	13800	ug/L	50.0	31.4	1	05/10/21 09:56	05/14/21 16:54	7439-95-4	
Manganese	421	ug/L	5.0	0.74	1	05/10/21 09:56	05/14/21 16:54	7439-96-5	
Molybdenum	80.4	ug/L	20.0	2.2	1	05/10/21 09:56	05/14/21 16:54	7439-98-7	
Potassium	6150	ug/L	500	146	1	05/10/21 09:56	05/14/21 16:54	7440-09-7	
Sodium	62000	ug/L	500	254	1	05/10/21 09:56	05/14/21 16:54	7440-23-5	
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8									
Pace Analytical Services - Kansas City									
Antimony	<0.10	ug/L	1.0	0.10	1	05/06/21 15:30	06/02/21 09:39	7440-36-0	
Arsenic	0.61J	ug/L	1.0	0.11	1	05/06/21 15:30	06/01/21 19:14	7440-38-2	
Cadmium	<0.062	ug/L	0.50	0.062	1	05/06/21 15:30	06/01/21 19:14	7440-43-9	
Chromium	0.45J	ug/L	1.0	0.23	1	05/06/21 15:30	06/01/21 19:14	7440-47-3	
Selenium	<0.18	ug/L	1.0	0.18	1	05/06/21 15:30	06/01/21 19:14	7782-49-2	
Thallium	<0.094	ug/L	1.0	0.094	1	05/06/21 15:30	06/01/21 19:14	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470 Preparation Method: EPA 7470									
Pace Analytical Services - Kansas City									
Mercury	<0.096	ug/L	0.20	0.096	1	05/10/21 17:40	05/11/21 10:09	7439-97-6	
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Kansas City									
Alkalinity, Total as CaCO3	257	mg/L	20.0	7.5	1		05/03/21 21:39		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Kansas City									
Total Dissolved Solids	281	mg/L	5.0	5.0	1		04/26/21 11:05		
Iron, Ferric (Calculation)									
Analytical Method: SM 3500-Fe B#4									
Pace Analytical Services - Kansas City									
Iron, Ferric	2.7	mg/L	0.050		1		05/27/21 14:17	7439-89-6	
Iron, Ferrous									
Analytical Method: SM 3500-Fe B#4									
Pace Analytical Services - Kansas City									
Iron, Ferrous	0.13J	mg/L	0.20	0.048	1		04/26/21 11:20		H6

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Sample: L-CA-DUP-3 **Lab ID: 60366962027** Collected: 04/20/21 00:00 Received: 04/21/21 03:49 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	0.032J	mg/L	0.050	0.026	1		04/27/21 10:12	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	0.78	2		04/29/21 00:07	16887-00-6	
Fluoride	0.48	mg/L	0.20	0.086	1		04/28/21 23:51	16984-48-8	
Sulfate	158	mg/L	50.0	21.0	50		04/29/21 00:23	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Sample: L-LMW-4S **Lab ID: 60366962032** Collected: 04/20/21 14:00 Received: 04/21/21 03:49 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	159	ug/L	5.0	1.8	1	05/10/21 09:56	05/14/21 16:56	7440-39-3	
Beryllium	<0.39	ug/L	1.0	0.39	1	05/10/21 09:56	05/14/21 16:56	7440-41-7	
Boron	8780	ug/L	100	8.6	1	05/10/21 09:56	05/14/21 16:56	7440-42-8	M1
Calcium	115000	ug/L	200	75.4	1	05/10/21 09:56	05/14/21 16:56	7440-70-2	M1
Cobalt	0.98J	ug/L	5.0	0.95	1	05/10/21 09:56	05/14/21 16:56	7440-48-4	
Iron	9360	ug/L	50.0	21.4	1	05/10/21 09:56	05/14/21 16:56	7439-89-6	
Lead	<3.8	ug/L	10.0	3.8	1	05/10/21 09:56	05/14/21 16:56	7439-92-1	
Lithium	42.2	ug/L	10.0	7.7	1	05/10/21 09:56	05/14/21 16:56	7439-93-2	
Magnesium	25900	ug/L	50.0	31.4	1	05/10/21 09:56	05/14/21 16:56	7439-95-4	
Manganese	1880	ug/L	5.0	0.74	1	05/10/21 09:56	05/14/21 16:56	7439-96-5	
Molybdenum	149	ug/L	20.0	2.2	1	05/10/21 09:56	05/14/21 16:56	7439-98-7	
Potassium	6620	ug/L	500	146	1	05/10/21 09:56	05/14/21 16:56	7440-09-7	
Sodium	85800	ug/L	500	254	1	05/10/21 09:56	05/14/21 16:56	7440-23-5	M1
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8									
Pace Analytical Services - Kansas City									
Antimony	<0.10	ug/L	1.0	0.10	1	05/06/21 15:30	06/02/21 09:40	7440-36-0	
Arsenic	23.6	ug/L	1.0	0.11	1	05/06/21 15:30	06/01/21 19:16	7440-38-2	
Cadmium	<0.062	ug/L	0.50	0.062	1	05/06/21 15:30	06/01/21 19:16	7440-43-9	
Chromium	0.28J	ug/L	1.0	0.23	1	05/06/21 15:30	06/01/21 19:16	7440-47-3	
Selenium	<0.18	ug/L	1.0	0.18	1	05/06/21 15:30	06/01/21 19:16	7782-49-2	
Thallium	<0.094	ug/L	1.0	0.094	1	05/06/21 15:30	06/01/21 19:16	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470 Preparation Method: EPA 7470									
Pace Analytical Services - Kansas City									
Mercury	<0.096	ug/L	0.20	0.096	1	05/10/21 17:40	05/11/21 10:11	7439-97-6	
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Kansas City									
Alkalinity, Total as CaCO3	338	mg/L	20.0	7.5	1		05/03/21 21:46		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Kansas City									
Total Dissolved Solids	392	mg/L	5.0	5.0	1		04/26/21 11:05		
Iron, Ferric (Calculation)									
Analytical Method: SM 3500-Fe B#4									
Pace Analytical Services - Kansas City									
Iron, Ferric	9.0	mg/L	0.050		1		05/27/21 14:17	7439-89-6	
Iron, Ferrous									
Analytical Method: SM 3500-Fe B#4									
Pace Analytical Services - Kansas City									
Iron, Ferrous	0.35	mg/L	0.20	0.048	1		04/26/21 11:23		H6

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Sample: L-LMW-4S **Lab ID: 60366962032** Collected: 04/20/21 14:00 Received: 04/21/21 03:49 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		04/27/21 10:13	18496-25-8	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0									
Pace Analytical Services - Kansas City									
Chloride	25.4	mg/L	5.0	1.9	5		04/29/21 00:55	16887-00-6	
Fluoride	0.30	mg/L	0.20	0.086	1		04/29/21 00:39	16984-48-8	
Sulfate	225	mg/L	20.0	8.4	20		04/29/21 01:11	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Sample: L-LMW-2S Lab ID: 60366962033 Collected: 04/21/21 11:02 Received: 04/24/21 03:10 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total									
Analytical Method: EPA 200.7 Preparation Method: EPA 200.7									
Pace Analytical Services - Kansas City									
Barium	30.3	ug/L	5.0	1.8	1	05/10/21 09:56	05/13/21 23:25	7440-39-3	
Beryllium	<0.39	ug/L	1.0	0.39	1	05/10/21 09:56	05/13/21 23:25	7440-41-7	
Boron	3440	ug/L	100	8.6	1	05/10/21 09:56	05/13/21 23:25	7440-42-8	
Calcium	53500	ug/L	200	75.4	1	05/10/21 09:56	05/13/21 23:25	7440-70-2	
Cobalt	<0.95	ug/L	5.0	0.95	1	05/10/21 09:56	05/13/21 23:25	7440-48-4	
Iron	<21.4	ug/L	50.0	21.4	1	05/10/21 09:56	05/13/21 23:25	7439-89-6	
Lead	<3.8	ug/L	10.0	3.8	1	05/10/21 09:56	05/13/21 23:25	7439-92-1	
Lithium	11.0	ug/L	10.0	7.7	1	05/10/21 09:56	05/13/21 23:25	7439-93-2	
Magnesium	92.0	ug/L	50.0	31.4	1	05/10/21 09:56	05/13/21 23:25	7439-95-4	
Manganese	2.7J	ug/L	5.0	0.74	1	05/10/21 09:56	05/13/21 23:25	7439-96-5	
Molybdenum	106	ug/L	20.0	2.2	1	05/10/21 09:56	05/13/21 23:25	7439-98-7	
Potassium	8470	ug/L	500	146	1	05/10/21 09:56	05/13/21 23:25	7440-09-7	
Sodium	58200	ug/L	500	254	1	05/10/21 09:56	05/13/21 23:25	7440-23-5	
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8									
Pace Analytical Services - Kansas City									
Antimony	<0.10	ug/L	1.0	0.10	1	05/10/21 09:56	06/02/21 08:46	7440-36-0	
Arsenic	44.7	ug/L	1.0	0.11	1	05/10/21 09:56	06/01/21 18:03	7440-38-2	
Cadmium	<0.062	ug/L	0.50	0.062	1	05/10/21 09:56	06/01/21 18:03	7440-43-9	
Chromium	0.23J	ug/L	1.0	0.23	1	05/10/21 09:56	06/01/21 18:03	7440-47-3	B
Selenium	<0.18	ug/L	1.0	0.18	1	05/10/21 09:56	06/01/21 18:03	7782-49-2	
Thallium	<0.094	ug/L	1.0	0.094	1	05/10/21 09:56	06/01/21 18:03	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470 Preparation Method: EPA 7470									
Pace Analytical Services - Kansas City									
Mercury	<0.096	ug/L	0.20	0.096	1	05/13/21 17:27	05/16/21 11:33	7439-97-6	
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Kansas City									
Alkalinity, Total as CaCO3	35.6	mg/L	20.0	7.5	1		05/04/21 10:26		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Kansas City									
Total Dissolved Solids	402	mg/L	5.0	5.0	1		04/28/21 11:35		
Iron, Ferric (Calculation)									
Analytical Method: SM 3500-Fe B#4									
Pace Analytical Services - Kansas City									
Iron, Ferric	0.019J	mg/L	0.050		1		05/27/21 14:17	7439-89-6	
Iron, Ferrous									
Analytical Method: SM 3500-Fe B#4									
Pace Analytical Services - Kansas City									
Iron, Ferrous	<0.048	mg/L	0.20	0.048	1		05/10/21 12:04		H6

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ANALYTICAL RESULTS

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Sample: L-LMW-2S **Lab ID: 60366962033** Collected: 04/21/21 11:02 Received: 04/24/21 03:10 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500S2D Sulfide, Total	Analytical Method: SM 4500-S-2 D Pace Analytical Services - Kansas City								
Sulfide, Total	<0.026	mg/L	0.050	0.026	1		04/27/21 10:21	18496-25-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	19.0	mg/L	2.0	0.78	2		05/07/21 22:36	16887-00-6	
Fluoride	0.21	mg/L	0.20	0.086	1		05/07/21 21:49	16984-48-8	
Sulfate	199	mg/L	50.0	21.0	50		05/07/21 22:51	14808-79-8	

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA-CA
Pace Project No.: 60366962

QC Batch: 719266 Analysis Method: EPA 7470
QC Batch Method: EPA 7470 Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60366962020, 60366962021, 60366962022, 60366962023, 60366962024, 60366962025, 60366962026, 60366962027, 60366962032

METHOD BLANK: 2892521 Matrix: Water
Associated Lab Samples: 60366962020, 60366962021, 60366962022, 60366962023, 60366962024, 60366962025, 60366962026, 60366962027, 60366962032

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	<0.096	0.20	0.096	05/11/21 09:23	

LABORATORY CONTROL SAMPLE: 2892522

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.1	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2892523 2892524

Parameter	Units	60366962021 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	<0.096	5	5	5.1	5.1	102	101	75-125	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2892525 2892526

Parameter	Units	60366962023 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	<0.096	5	5	4.8	4.8	96	96	75-125	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2892527 2892528

Parameter	Units	60366962032 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	<0.096	5	5	4.6	4.7	92	95	75-125	3	20	

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

QC Batch: 719627

Analysis Method: EPA 7470

QC Batch Method: EPA 7470

Analysis Description: 7470 Mercury

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60366962033

METHOD BLANK: 2893785

Matrix: Water

Associated Lab Samples: 60366962033

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	<0.096	0.20	0.096	05/16/21 11:28	

LABORATORY CONTROL SAMPLE: 2893786

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.6	92	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2893787 2893788

Parameter	Units	60366962033		2893787		2893788		% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Result				
Mercury	ug/L	<0.096	5	5	4.6	4.7	92	93	75-125	2	20

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

QC Batch:	717296	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: 60366962001, 60366962002, 60366962003, 60366962004, 60366962005, 60366962006, 60366962007, 60366962008, 60366962009, 60366962010, 60366962011, 60366962012, 60366962013, 60366962014, 60366962015, 60366962016

METHOD BLANK: 2885311 Matrix: Water

Associated Lab Samples: 60366962001, 60366962002, 60366962003, 60366962004, 60366962005, 60366962006, 60366962007, 60366962008, 60366962009, 60366962010, 60366962011, 60366962012, 60366962013, 60366962014, 60366962015, 60366962016

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Barium	ug/L	<1.8	5.0	1.8	05/10/21 13:50	
Beryllium	ug/L	<0.39	1.0	0.39	05/10/21 13:50	
Boron	ug/L	<8.6	100	8.6	05/10/21 13:50	
Calcium	ug/L	<75.4	200	75.4	05/10/21 13:50	
Cobalt	ug/L	<0.95	5.0	0.95	05/10/21 13:50	
Iron	ug/L	<21.4	50.0	21.4	05/10/21 13:50	
Lead	ug/L	<3.8	10.0	3.8	05/10/21 13:50	
Lithium	ug/L	<7.7	10.0	7.7	05/10/21 13:50	
Magnesium	ug/L	<31.4	50.0	31.4	05/10/21 13:50	
Manganese	ug/L	<0.74	5.0	0.74	05/10/21 13:50	
Molybdenum	ug/L	<2.2	20.0	2.2	05/10/21 13:50	
Potassium	ug/L	<146	500	146	05/10/21 13:50	
Sodium	ug/L	<254	500	254	05/10/21 13:50	

LABORATORY CONTROL SAMPLE: 2885312

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	1000	1130	113	85-115	
Beryllium	ug/L	1000	1130	113	85-115	
Boron	ug/L	1000	1050	105	85-115	
Calcium	ug/L	10000	10500	105	85-115	
Cobalt	ug/L	1000	1130	113	85-115	
Iron	ug/L	10000	10700	107	85-115	
Lead	ug/L	1000	1120	112	85-115	
Lithium	ug/L	1000	1090	109	85-115	
Magnesium	ug/L	10000	10900	109	85-115	
Manganese	ug/L	1000	1060	106	85-115	
Molybdenum	ug/L	1000	1150	115	85-115	
Potassium	ug/L	10000	10700	107	85-115	
Sodium	ug/L	10000	10900	109	85-115	

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

MATRIX SPIKE SAMPLE:		2885313					
Parameter	Units	60366962003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	101	1000	1210	111	70-130	
Beryllium	ug/L	<0.39	1000	1120	112	70-130	
Boron	ug/L	12000	1000	12300	29	70-130	M1
Calcium	ug/L	98000	10000	105000	72	70-130	
Cobalt	ug/L	<0.95	1000	1070	107	70-130	
Iron	ug/L	5400	10000	15400	100	70-130	
Lead	ug/L	<3.8	1000	1040	104	70-130	
Lithium	ug/L	33.9	1000	1110	108	70-130	
Magnesium	ug/L	24100	10000	32700	86	70-130	
Manganese	ug/L	247	1000	1230	98	70-130	
Molybdenum	ug/L	1170	1000	2220	105	70-130	
Potassium	ug/L	7410	10000	17800	104	70-130	
Sodium	ug/L	85200	10000	93800	87	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:		2885314			2885315							
Parameter	Units	60367051001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	ug/L	81.5	1000	1000	1110	1160	103	108	70-130	5	20	
Beryllium	ug/L	<0.39	1000	1000	1080	1090	108	109	70-130	1	20	
Boron	ug/L	5170	1000	1000	5770	6060	60	90	70-130	5	20	M1
Calcium	ug/L	192000	10000	10000	200000	198000	87	64	70-130	1	20	M1
Cobalt	ug/L	<0.95	1000	1000	1020	1000	102	100	70-130	2	20	
Iron	ug/L	9520	10000	10000	20300	19500	108	100	70-130	4	20	
Lead	ug/L	6.8J	1000	1000	1050	1070	104	106	70-130	2	20	
Lithium	ug/L	23.7	1000	1000	1090	1080	107	106	70-130	1	20	
Magnesium	ug/L	25400	10000	10000	33500	34900	82	96	70-130	4	20	
Manganese	ug/L	1720	1000	1000	2740	2700	102	99	70-130	1	20	
Molybdenum	ug/L	199	1000	1000	1280	1260	108	106	70-130	2	20	
Potassium	ug/L	6480	10000	10000	16900	16900	104	105	70-130	0	20	
Sodium	ug/L	56000	10000	10000	66800	66600	108	106	70-130	0	20	

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA-CA
Pace Project No.: 60366962

QC Batch: 717917 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: 60366962020, 60366962021, 60366962022, 60366962024, 60366962025

METHOD BLANK: 2887521 Matrix: Water
Associated Lab Samples: 60366962020, 60366962021, 60366962022, 60366962024, 60366962025

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Barium	ug/L	<1.8	5.0	1.8	05/10/21 21:21	
Beryllium	ug/L	<0.39	1.0	0.39	05/10/21 21:21	
Boron	ug/L	<8.6	100	8.6	05/10/21 21:21	
Calcium	ug/L	<75.4	200	75.4	05/10/21 21:21	
Cobalt	ug/L	<0.95	5.0	0.95	05/10/21 21:21	
Iron	ug/L	<21.4	50.0	21.4	05/10/21 21:21	
Lead	ug/L	<3.8	10.0	3.8	05/10/21 21:21	
Lithium	ug/L	<7.7	10.0	7.7	05/10/21 21:21	
Magnesium	ug/L	<31.4	50.0	31.4	05/10/21 21:21	
Manganese	ug/L	<0.74	5.0	0.74	05/10/21 21:21	
Molybdenum	ug/L	<2.2	20.0	2.2	05/10/21 21:21	
Potassium	ug/L	189J	500	146	05/10/21 21:21	
Sodium	ug/L	<254	500	254	05/10/21 21:21	

LABORATORY CONTROL SAMPLE: 2887522

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	1000	1080	108	85-115	
Beryllium	ug/L	1000	1080	108	85-115	
Boron	ug/L	1000	1050	105	85-115	
Calcium	ug/L	10000	10100	101	85-115	
Cobalt	ug/L	1000	1120	112	85-115	
Iron	ug/L	10000	9810	98	85-115	
Lead	ug/L	1000	1090	109	85-115	
Lithium	ug/L	1000	1060	106	85-115	
Magnesium	ug/L	10000	10900	109	85-115	
Manganese	ug/L	1000	1030	103	85-115	
Molybdenum	ug/L	1000	1140	114	85-115	
Potassium	ug/L	10000	10600	106	85-115	
Sodium	ug/L	10000	10400	104	85-115	

MATRIX SPIKE SAMPLE: 2887523

Parameter	Units	60367051013 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	94.1	1000	1180	109	70-130	
Beryllium	ug/L	<0.39	1000	1090	109	70-130	
Boron	ug/L	4560	1000	5740	118	70-130	

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

MATRIX SPIKE SAMPLE: 2887523		60367051013	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
Calcium	ug/L	73600	10000	87300	137	70-130	M1
Cobalt	ug/L	<0.95	1000	1070	107	70-130	
Iron	ug/L	295	10000	10400	102	70-130	
Lead	ug/L	<3.8	1000	1050	105	70-130	
Lithium	ug/L	33.4	1000	1100	106	70-130	
Magnesium	ug/L	8730	10000	19400	106	70-130	
Manganese	ug/L	316	1000	1360	104	70-130	
Molybdenum	ug/L	138	1000	1260	112	70-130	
Potassium	ug/L	9650	10000	20600	109	70-130	
Sodium	ug/L	105000	10000	121000	155	70-130	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2887524		2887525									
Parameter	Units	60366962021	MS	MSD	MS	MSD	MS	MSD	% Rec	Max	Qual
		Result	Spike	Spike	Result	Result	% Rec	% Rec	Limits	RPD	
Barium	ug/L	1520	1000	1000	2610	2640	109	112	70-130	1	20
Beryllium	ug/L	<0.39	1000	1000	1090	1100	109	110	70-130	0	20
Boron	ug/L	78.3J	1000	1000	1130	1130	105	105	70-130	0	20
Calcium	ug/L	145000	10000	10000	157000	159000	124	147	70-130	1	20 M1
Cobalt	ug/L	<0.95	1000	1000	1050	1050	105	105	70-130	0	20
Iron	ug/L	8300	10000	10000	18500	18700	102	104	70-130	1	20
Lead	ug/L	<3.8	1000	1000	1070	1070	107	107	70-130	0	20
Lithium	ug/L	17.7	1000	1000	1100	1110	109	109	70-130	0	20
Magnesium	ug/L	37900	10000	10000	48700	49300	108	114	70-130	1	20
Manganese	ug/L	245	1000	1000	1290	1300	104	105	70-130	1	20
Molybdenum	ug/L	<2.2	1000	1000	1110	1120	111	112	70-130	0	20
Potassium	ug/L	4640	10000	10000	15300	15500	106	109	70-130	2	20
Sodium	ug/L	12500	10000	10000	23200	23600	107	110	70-130	1	20

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

QC Batch:	719400	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: 60366962023, 60366962026, 60366962027, 60366962032

METHOD BLANK: 2893271 Matrix: Water

Associated Lab Samples: 60366962023, 60366962026, 60366962027, 60366962032

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Barium	ug/L	<1.8	5.0	1.8	05/14/21 16:40	
Beryllium	ug/L	<0.39	1.0	0.39	05/14/21 16:40	
Boron	ug/L	<8.6	100	8.6	05/14/21 16:40	
Calcium	ug/L	<75.4	200	75.4	05/14/21 16:40	
Cobalt	ug/L	<0.95	5.0	0.95	05/14/21 16:40	
Iron	ug/L	<21.4	50.0	21.4	05/14/21 16:40	
Lead	ug/L	<3.8	10.0	3.8	05/14/21 16:40	
Lithium	ug/L	<7.7	10.0	7.7	05/14/21 16:40	
Magnesium	ug/L	<31.4	50.0	31.4	05/14/21 16:40	
Manganese	ug/L	<0.74	5.0	0.74	05/14/21 16:40	
Molybdenum	ug/L	<2.2	20.0	2.2	05/14/21 16:40	
Potassium	ug/L	<146	500	146	05/14/21 16:40	
Sodium	ug/L	<254	500	254	05/14/21 16:40	

LABORATORY CONTROL SAMPLE: 2893272

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	1000	1070	107	85-115	
Beryllium	ug/L	1000	1070	107	85-115	
Boron	ug/L	1000	992	99	85-115	
Calcium	ug/L	10000	9780	98	85-115	
Cobalt	ug/L	1000	1050	105	85-115	
Iron	ug/L	10000	10200	102	85-115	
Lead	ug/L	1000	1090	109	85-115	
Lithium	ug/L	1000	1060	106	85-115	
Magnesium	ug/L	10000	10300	103	85-115	
Manganese	ug/L	1000	1050	105	85-115	
Molybdenum	ug/L	1000	1070	107	85-115	
Potassium	ug/L	10000	9880	99	85-115	
Sodium	ug/L	10000	10200	102	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2893273 2893274

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		60366962023	Result	Spike Conc.	Spike Conc.						
Barium	ug/L	158	1000	1000	1220	1210	106	105	70-130	1	20
Beryllium	ug/L	<0.39	1000	1000	1070	1060	107	106	70-130	0	20

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2893273												2893274	
Parameter	Units	60366962032 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
			Spike Conc.	Spike Conc.									
Boron	ug/L	8670	1000	1000	9620	9650	95	98	70-130	0	20		
Calcium	ug/L	117000	10000	10000	126000	128000	86	105	70-130	1	20		
Cobalt	ug/L	<0.95	1000	1000	1020	1020	102	102	70-130	0	20		
Iron	ug/L	9310	10000	10000	19200	19300	99	100	70-130	1	20		
Lead	ug/L	<3.8	1000	1000	1040	1040	104	104	70-130	0	20		
Lithium	ug/L	42.8	1000	1000	1080	1080	104	104	70-130	0	20		
Magnesium	ug/L	25600	10000	10000	35300	35400	97	99	70-130	0	20		
Manganese	ug/L	1850	1000	1000	2860	2860	101	101	70-130	0	20		
Molybdenum	ug/L	147	1000	1000	1220	1220	107	108	70-130	0	20		
Potassium	ug/L	6640	10000	10000	16500	16700	98	100	70-130	1	20		
Sodium	ug/L	85900	10000	10000	95400	96500	96	106	70-130	1	20		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2893275												2893276	
Parameter	Units	60366962032 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
			Spike Conc.	Spike Conc.									
Barium	ug/L	159	1000	1000	1200	1220	104	106	70-130	2	20		
Beryllium	ug/L	<0.39	1000	1000	1060	1070	106	107	70-130	2	20		
Boron	ug/L	8780	1000	1000	9250	9540	47	76	70-130	3	20	M1	
Calcium	ug/L	115000	10000	10000	119000	126000	40	105	70-130	5	20	M1	
Cobalt	ug/L	0.98J	1000	1000	1020	1030	102	103	70-130	1	20		
Iron	ug/L	9360	10000	10000	18600	19500	93	102	70-130	5	20		
Lead	ug/L	<3.8	1000	1000	1040	1060	104	105	70-130	1	20		
Lithium	ug/L	42.2	1000	1000	1070	1100	102	105	70-130	3	20		
Magnesium	ug/L	25900	10000	10000	34300	35200	84	93	70-130	3	20		
Manganese	ug/L	1880	1000	1000	2790	2850	92	98	70-130	2	20		
Molybdenum	ug/L	149	1000	1000	1210	1240	106	109	70-130	2	20		
Potassium	ug/L	6620	10000	10000	16000	16600	94	100	70-130	3	20		
Sodium	ug/L	85800	10000	10000	91100	95600	53	98	70-130	5	20	M1	

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

QC Batch:	719402	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: 60366962033

METHOD BLANK: 2893278 Matrix: Water

Associated Lab Samples: 60366962033

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Barium	ug/L	<1.8	5.0	1.8	05/13/21 22:07	
Beryllium	ug/L	<0.39	1.0	0.39	05/13/21 22:07	
Boron	ug/L	11.4J	100	8.6	05/13/21 22:07	
Calcium	ug/L	<75.4	200	75.4	05/13/21 22:07	
Cobalt	ug/L	<0.95	5.0	0.95	05/13/21 22:07	
Iron	ug/L	<21.4	50.0	21.4	05/13/21 22:07	
Lead	ug/L	<3.8	10.0	3.8	05/13/21 22:07	
Lithium	ug/L	<7.7	10.0	7.7	05/13/21 22:07	
Magnesium	ug/L	<31.4	50.0	31.4	05/13/21 22:07	
Manganese	ug/L	<0.74	5.0	0.74	05/13/21 22:07	
Molybdenum	ug/L	<2.2	20.0	2.2	05/13/21 22:07	
Potassium	ug/L	<146	500	146	05/13/21 22:07	
Sodium	ug/L	<254	500	254	05/13/21 22:07	

LABORATORY CONTROL SAMPLE: 2893279

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	1000	967	97	85-115	
Beryllium	ug/L	1000	981	98	85-115	
Boron	ug/L	1000	958	96	85-115	
Calcium	ug/L	10000	9660	97	85-115	
Cobalt	ug/L	1000	980	98	85-115	
Iron	ug/L	10000	9540	95	85-115	
Lead	ug/L	1000	1030	103	85-115	
Lithium	ug/L	1000	997	100	85-115	
Magnesium	ug/L	10000	9870	99	85-115	
Manganese	ug/L	1000	1000	100	85-115	
Molybdenum	ug/L	1000	992	99	85-115	
Potassium	ug/L	10000	9820	98	85-115	
Sodium	ug/L	10000	9620	96	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2893280 2893281

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		60367582003	Result	Spike Conc.	Spike Conc.								
Barium	ug/L	22.1	1000	1000	976	968	95	95	70-130	1	20		
Beryllium	ug/L	<0.39	1000	1000	985	970	98	97	70-130	1	20		

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2893280												2893281	
Parameter	Units	60367582003 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
			Spike Conc.	Spike Conc.									
Boron	ug/L	14600	1000	1000	15400	15300	84	74	70-130	1	20		
Calcium	ug/L	7180	10000	10000	16500	16400	93	92	70-130	1	20		
Cobalt	ug/L	<0.95	1000	1000	962	949	96	95	70-130	1	20		
Iron	ug/L	203	10000	10000	9700	9540	95	93	70-130	2	20		
Lead	ug/L	4.2J	1000	1000	990	973	99	97	70-130	2	20		
Lithium	ug/L	<7.7	1000	1000	965	953	96	95	70-130	1	20		
Magnesium	ug/L	345	10000	10000	9860	9700	95	94	70-130	2	20		
Manganese	ug/L	11.0	1000	1000	1000	983	99	97	70-130	2	20		
Molybdenum	ug/L	789	1000	1000	1770	1760	98	97	70-130	1	20		
Potassium	ug/L	2050	10000	10000	11800	11600	97	96	70-130	1	20		
Sodium	ug/L	237000	10000	10000	242000	240000	57	36	70-130	1	20	M1	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2893282												2893283	
Parameter	Units	60367583001 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
			Spike Conc.	Spike Conc.									
Barium	ug/L	166	1000	1000	1110	1100	94	93	70-130	1	20		
Beryllium	ug/L	<0.39	1000	1000	966	958	97	96	70-130	1	20		
Boron	ug/L	4240	1000	1000	5140	5110	89	86	70-130	1	20		
Calcium	ug/L	62800	10000	10000	70900	70200	81	73	70-130	1	20		
Cobalt	ug/L	<0.95	1000	1000	928	922	93	92	70-130	1	20		
Iron	ug/L	8720	10000	10000	17600	17400	89	87	70-130	1	20		
Lead	ug/L	4.1J	1000	1000	973	965	97	96	70-130	1	20		
Lithium	ug/L	13.9	1000	1000	961	958	95	94	70-130	0	20		
Magnesium	ug/L	21700	10000	10000	30800	30400	90	87	70-130	1	20		
Manganese	ug/L	353	1000	1000	1300	1290	95	94	70-130	1	20		
Molybdenum	ug/L	9.2J	1000	1000	980	975	97	97	70-130	1	20		
Potassium	ug/L	5470	10000	10000	15100	15000	96	95	70-130	1	20		
Sodium	ug/L	25600	10000	10000	34100	33800	84	82	70-130	1	20		

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA-CA
Pace Project No.: 60366962

QC Batch: 717299 Analysis Method: EPA 200.8
QC Batch Method: EPA 200.8 Analysis Description: 200.8 MET
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60366962001, 60366962002, 60366962003, 60366962004, 60366962005, 60366962006, 60366962007, 60366962008, 60366962009, 60366962010, 60366962011, 60366962012, 60366962013, 60366962014, 60366962015, 60366962016

METHOD BLANK: 2885326 Matrix: Water
Associated Lab Samples: 60366962001, 60366962002, 60366962003, 60366962004, 60366962005, 60366962006, 60366962007, 60366962008, 60366962009, 60366962010, 60366962011, 60366962012, 60366962013, 60366962014, 60366962015, 60366962016

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	<0.10	1.0	0.10	05/07/21 13:30	
Arsenic	ug/L	<0.11	1.0	0.11	05/07/21 13:30	
Cadmium	ug/L	<0.062	0.50	0.062	05/07/21 13:30	
Chromium	ug/L	0.47J	1.0	0.23	05/07/21 13:30	
Selenium	ug/L	<0.18	1.0	0.18	05/07/21 13:30	
Thallium	ug/L	<0.094	1.0	0.094	05/07/21 13:30	

LABORATORY CONTROL SAMPLE: 2885327

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	40	41.4	104	85-115	
Arsenic	ug/L	40	41.5	104	85-115	
Cadmium	ug/L	40	42.5	106	85-115	
Chromium	ug/L	40	40.9	102	85-115	
Selenium	ug/L	40	41.4	103	85-115	
Thallium	ug/L	40	39.7	99	85-115	

MATRIX SPIKE SAMPLE: 2885328

Parameter	Units	60366962004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	<0.10	40	38.2	95	70-130	
Arsenic	ug/L	0.20J	40	40.0	100	70-130	
Cadmium	ug/L	0.17J	40	37.6	93	70-130	
Chromium	ug/L	0.36J	40	39.3	97	70-130	
Selenium	ug/L	<0.18	40	37.3	93	70-130	
Thallium	ug/L	<0.094	40	38.5	96	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2885329 2885330

Parameter	Units	60367051001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	<0.10	40	40	39.8	39.4	99	98	70-130	1	20	

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Parameter	Units	2885329		2885330		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		60367051001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Arsenic	ug/L	22.3	40	40	64.0	63.1	104	102	70-130	1	20		
Cadmium	ug/L	<0.062	40	40	38.7	38.4	97	96	70-130	1	20		
Chromium	ug/L	0.33J	40	40	42.6	42.0	106	104	70-130	1	20		
Selenium	ug/L	<0.18	40	40	37.8	37.5	94	94	70-130	1	20		
Thallium	ug/L	<0.094	40	40	39.5	39.0	99	98	70-130	1	20		

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

QC Batch:	718923	Analysis Method:	EPA 200.8
QC Batch Method:	EPA 200.8	Analysis Description:	200.8 MET
Associated Lab Samples:		Laboratory:	Pace Analytical Services - Kansas City
60366962020, 60366962021, 60366962022, 60366962023, 60366962024, 60366962025, 60366962026, 60366962027, 60366962032			

METHOD BLANK:	2891303	Matrix:	Water
Associated Lab Samples:		60366962020, 60366962021, 60366962022, 60366962023, 60366962024, 60366962025, 60366962026, 60366962027, 60366962032	

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	<0.10	1.0	0.10	06/02/21 09:20	
Arsenic	ug/L	<0.11	1.0	0.11	06/01/21 18:49	
Cadmium	ug/L	<0.062	0.50	0.062	06/01/21 18:49	
Chromium	ug/L	<0.23	1.0	0.23	06/01/21 18:49	
Selenium	ug/L	<0.18	1.0	0.18	06/01/21 18:49	
Thallium	ug/L	<0.094	1.0	0.094	06/01/21 18:49	

LABORATORY CONTROL SAMPLE: 2891304

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	40	42.5	106	85-115	
Arsenic	ug/L	40	41.0	103	85-115	
Cadmium	ug/L	40	42.3	106	85-115	
Chromium	ug/L	40	42.9	107	85-115	
Selenium	ug/L	40	42.2	105	85-115	
Thallium	ug/L	40	39.1	98	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2891305 2891306

Parameter	Units	60366962021		60366962023		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Antimony	ug/L	<0.10	40	40	40.3	41.8	101	104	70-130	4	20		
Arsenic	ug/L	1.2	40	40	40.8	41.4	99	100	70-130	1	20		
Cadmium	ug/L	<0.062	40	40	39.2	40.1	98	100	70-130	2	20		
Chromium	ug/L	0.32J	40	40	41.2	42.1	102	105	70-130	2	20		
Selenium	ug/L	<0.18	40	40	38.6	38.9	97	97	70-130	1	20		
Thallium	ug/L	<0.094	40	40	40.2	41.1	100	103	70-130	2	20		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2891307 2891308

Parameter	Units	60366962023		60366962027		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Antimony	ug/L	<0.10	40	40	42.3	42.7	106	107	70-130	1	20		
Arsenic	ug/L	22.5	40	40	62.8	63.2	101	102	70-130	1	20		

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2891307											
2891308											
Parameter	Units	60366962023 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	Max	Qual
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	
Cadmium	ug/L	<0.062	40	40	40.1	40.2	100	101	70-130	0	20
Chromium	ug/L	0.34J	40	40	41.0	41.2	102	102	70-130	0	20
Selenium	ug/L	<0.18	40	40	39.0	39.2	97	98	70-130	0	20
Thallium	ug/L	<0.094	40	40	41.3	41.8	103	105	70-130	1	20

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

QC Batch: 719408

Analysis Method: EPA 200.8

QC Batch Method: EPA 200.8

Analysis Description: 200.8 MET

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60366962033

METHOD BLANK: 2893284

Matrix: Water

Associated Lab Samples: 60366962033

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	<0.10	1.0	0.10	06/02/21 08:17	
Arsenic	ug/L	<0.11	1.0	0.11	06/01/21 17:23	
Cadmium	ug/L	<0.062	0.50	0.062	06/01/21 17:23	
Chromium	ug/L	0.44J	1.0	0.23	06/01/21 17:23	
Selenium	ug/L	<0.18	1.0	0.18	06/01/21 17:23	
Thallium	ug/L	<0.094	1.0	0.094	06/01/21 17:23	

LABORATORY CONTROL SAMPLE: 2893285

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	40	43.0	107	85-115	
Arsenic	ug/L	40	41.8	104	85-115	
Cadmium	ug/L	40	42.1	105	85-115	
Chromium	ug/L	40	42.8	107	85-115	
Selenium	ug/L	40	42.7	107	85-115	
Thallium	ug/L	40	39.1	98	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2893286 2893287

Parameter	Units	60367582003		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
Antimony	ug/L	<0.10	40	40	42.3	41.4	106	103	70-130	2	20		
Arsenic	ug/L	34.2	40	40	74.3	74.7	100	101	70-130	1	20		
Cadmium	ug/L	0.13J	40	40	40.2	39.8	100	99	70-130	1	20		
Chromium	ug/L	0.79J	40	40	41.3	40.9	101	100	70-130	1	20		
Selenium	ug/L	0.73J	40	40	38.2	38.0	94	93	70-130	1	20		
Thallium	ug/L	<0.094	40	40	42.1	41.6	105	104	70-130	1	20		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2893288 2893289

Parameter	Units	60367583001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
Antimony	ug/L	<0.10	40	40	41.7	42.2	104	105	70-130	1	20		
Arsenic	ug/L	157	40	40	186	194	72	94	70-130	5	20		
Cadmium	ug/L	<0.062	40	40	38.8	40.1	97	100	70-130	3	20		
Chromium	ug/L	0.44J	40	40	40.3	41.7	100	103	70-130	3	20		

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Parameter	Units	2893288		2893289		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		60367583001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Selenium	ug/L	<0.18	40	40	38.8	39.5	97	98	70-130	2	20		
Thallium	ug/L	<0.094	40	40	38.6	40.1	96	100	70-130	4	20		

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

QC Batch:	716898	Analysis Method:	SM 2320B
QC Batch Method:	SM 2320B	Analysis Description:	2320B Alkalinity
		Laboratory:	Pace Analytical Services - Kansas City

Associated Lab Samples: 60366962010, 60366962014, 60366962015, 60366962016

METHOD BLANK: 2884099 Matrix: Water
Associated Lab Samples: 60366962010, 60366962014, 60366962015, 60366962016

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<7.5	20.0	7.5	04/27/21 09:18	

LABORATORY CONTROL SAMPLE: 2884100

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

SAMPLE DUPLICATE: 2884101

Parameter	Units	60366969001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	371	369	1	10	

SAMPLE DUPLICATE: 2884102

Parameter	Units	60367012001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	155	155	0	10	

SAMPLE DUPLICATE: 2884103

Parameter	Units	60367051001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	450	466	3	10	

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

QC Batch:	717133	Analysis Method:	SM 2320B
QC Batch Method:	SM 2320B	Analysis Description:	2320B Alkalinity
		Laboratory:	Pace Analytical Services - Kansas City

Associated Lab Samples: 60366962001, 60366962002, 60366962003, 60366962004, 60366962005, 60366962006, 60366962007, 60366962008, 60366962009, 60366962011, 60366962012, 60366962013

METHOD BLANK: 2884780 Matrix: Water

Associated Lab Samples: 60366962001, 60366962002, 60366962003, 60366962004, 60366962005, 60366962006, 60366962007, 60366962008, 60366962009, 60366962011, 60366962012, 60366962013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<7.5	20.0	7.5	04/27/21 18:12	

LABORATORY CONTROL SAMPLE: 2884781

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	500	518	104	90-110	

SAMPLE DUPLICATE: 2884782

Parameter	Units	60367468001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	1110	1050	5	10	

SAMPLE DUPLICATE: 2884783

Parameter	Units	60366962007 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	123	125	2	10	

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

QC Batch: 717897	Analysis Method: SM 2320B
QC Batch Method: SM 2320B	Analysis Description: 2320B Alkalinity
	Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60366962021

METHOD BLANK: 2887339 Matrix: Water

Associated Lab Samples: 60366962021

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<7.5	20.0	7.5	04/30/21 16:27	

LABORATORY CONTROL SAMPLE: 2887340

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	500	505	101	90-110	

SAMPLE DUPLICATE: 2887341

Parameter	Units	60366962021 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	528	539	2	10	

SAMPLE DUPLICATE: 2887342

Parameter	Units	60367255001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	581	604	4	10	

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

QC Batch: 718221 Analysis Method: SM 2320B
 QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity
 Laboratory: Pace Analytical Services - Kansas City
 Associated Lab Samples: 60366962020, 60366962022, 60366962023, 60366962024, 60366962025, 60366962026, 60366962027, 60366962032

METHOD BLANK: 2888655 Matrix: Water
 Associated Lab Samples: 60366962020, 60366962022, 60366962023, 60366962024, 60366962025, 60366962026, 60366962027, 60366962032

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<7.5	20.0	7.5	05/03/21 19:30	

LABORATORY CONTROL SAMPLE: 2888656

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	500	496	99	90-110	

SAMPLE DUPLICATE: 2888657

Parameter	Units	60367741003 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	262	265	1	10	

SAMPLE DUPLICATE: 2888658

Parameter	Units	60366962023 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	247	257	4	10	

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

QC Batch: 718267

Analysis Method: SM 2320B

QC Batch Method: SM 2320B

Analysis Description: 2320B Alkalinity

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60366962033

METHOD BLANK: 2888781

Matrix: Water

Associated Lab Samples: 60366962033

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	<7.5	20.0	7.5	05/04/21 09:11	

LABORATORY CONTROL SAMPLE: 2888782

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	500	505	101	90-110	

SAMPLE DUPLICATE: 2888784

Parameter	Units	60366962033 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	35.6	36.8	3	10	

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

QC Batch:	716210	Analysis Method:	SM 2540C
QC Batch Method:	SM 2540C	Analysis Description:	2540C Total Dissolved Solids
		Laboratory:	Pace Analytical Services - Kansas City
Associated Lab Samples:	60366962001, 60366962002, 60366962003, 60366962004, 60366962010, 60366962014, 60366962015, 60366962016		

METHOD BLANK:	2881078	Matrix:	Water
Associated Lab Samples:	60366962001, 60366962002, 60366962003, 60366962004, 60366962010, 60366962014, 60366962015, 60366962016		

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	04/22/21 13:02	

LABORATORY CONTROL SAMPLE: 2881079						
Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	1050	105	80-120	

SAMPLE DUPLICATE: 2881080						
Parameter	Units	60367012001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	899	907	1	10	

SAMPLE DUPLICATE: 2881081						
Parameter	Units	60367013003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	17.0	13.5	23	10 D6	

SAMPLE DUPLICATE: 2881082						
Parameter	Units	60367051001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	825	836	1	10	

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

QC Batch: 716543

Analysis Method: SM 2540C

QC Batch Method: SM 2540C

Analysis Description: 2540C Total Dissolved Solids

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60366962005, 60366962006, 60366962007, 60366962008, 60366962009, 60366962011, 60366962012, 60366962013

METHOD BLANK: 2882556

Matrix: Water

Associated Lab Samples: 60366962005, 60366962006, 60366962007, 60366962008, 60366962009, 60366962011, 60366962012, 60366962013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	04/23/21 15:58	

LABORATORY CONTROL SAMPLE: 2882557

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	1040	104	80-120	

SAMPLE DUPLICATE: 2882558

Parameter	Units	60366969001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	607	613	1	10	

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

QC Batch: 716657

Analysis Method: SM 2540C

QC Batch Method: SM 2540C

Analysis Description: 2540C Total Dissolved Solids

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60366962021

METHOD BLANK: 2883304

Matrix: Water

Associated Lab Samples: 60366962021

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	04/26/21 11:00	

LABORATORY CONTROL SAMPLE: 2883305

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	1060	106	80-120	

SAMPLE DUPLICATE: 2883306

Parameter	Units	60366962021 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	569	565	1	10	

SAMPLE DUPLICATE: 2883307

Parameter	Units	60367255001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	735	709	4	10	

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

QC Batch: 716658

Analysis Method: SM 2540C

QC Batch Method: SM 2540C

Analysis Description: 2540C Total Dissolved Solids

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60366962020, 60366962022, 60366962023, 60366962024, 60366962025, 60366962026, 60366962027, 60366962032

METHOD BLANK: 2883313

Matrix: Water

Associated Lab Samples: 60366962020, 60366962022, 60366962023, 60366962024, 60366962025, 60366962026, 60366962027, 60366962032

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	04/26/21 11:04	

LABORATORY CONTROL SAMPLE: 2883314

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	1010	101	80-120	

SAMPLE DUPLICATE: 2883315

Parameter	Units	60366962023 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	288	302	5	10	

SAMPLE DUPLICATE: 2883316

Parameter	Units	60367221009 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	355	336	5	10	

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

QC Batch: 717180	Analysis Method: SM 2540C
QC Batch Method: SM 2540C	Analysis Description: 2540C Total Dissolved Solids
	Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60366962033

METHOD BLANK: 2884921 Matrix: Water

Associated Lab Samples: 60366962033

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	04/28/21 11:31	

LABORATORY CONTROL SAMPLE: 2884922

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	1000	100	80-120	

SAMPLE DUPLICATE: 2884923

Parameter	Units	60367383017 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	321	303	6	10	

SAMPLE DUPLICATE: 2884924

Parameter	Units	60367513003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	577	599	4	10	

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

QC Batch:	716370	Analysis Method:	SM 3500-Fe B#4
QC Batch Method:	SM 3500-Fe B#4	Analysis Description:	Iron, Ferrous
		Laboratory:	Pace Analytical Services - Kansas City
Associated Lab Samples:	60366962007, 60366962008, 60366962009, 60366962010, 60366962011, 60366962013, 60366962014, 60366962015, 60366962016		

METHOD BLANK:	2881774	Matrix:	Water
Associated Lab Samples:	60366962007, 60366962008, 60366962009, 60366962010, 60366962011, 60366962013, 60366962014, 60366962015, 60366962016		

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Iron, Ferrous	mg/L	<0.048	0.20	0.048	04/26/21 10:53	H6

LABORATORY CONTROL SAMPLE: 2881775

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron, Ferrous	mg/L	2	2.0	102	90-110	H6

SAMPLE DUPLICATE: 2881776

Parameter	Units	60367051001 Result	Dup Result	RPD	Max RPD	Qualifiers
Iron, Ferrous	mg/L	0.20J	0.23		20	H6

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

QC Batch: 716373

Analysis Method: SM 3500-Fe B#4

QC Batch Method: SM 3500-Fe B#4

Analysis Description: Iron, Ferrous

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60366962001, 60366962002, 60366962003, 60366962004, 60366962005, 60366962006, 60366962012, 60366962021, 60366962024, 60366962026, 60366962027

METHOD BLANK: 2881777

Matrix: Water

Associated Lab Samples: 60366962001, 60366962002, 60366962003, 60366962004, 60366962005, 60366962006, 60366962012, 60366962021, 60366962024, 60366962026, 60366962027

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Iron, Ferrous	mg/L	<0.048	0.20	0.048	04/26/21 11:09	H6

LABORATORY CONTROL SAMPLE: 2881778

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron, Ferrous	mg/L	2	2.0	102	90-110	H6

SAMPLE DUPLICATE: 2881779

Parameter	Units	60366962021 Result	Dup Result	RPD	Max RPD	Qualifiers
Iron, Ferrous	mg/L	0.32	0.29	10	20	H6

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

QC Batch: 716375

Analysis Method: SM 3500-Fe B#4

QC Batch Method: SM 3500-Fe B#4

Analysis Description: Iron, Ferrous

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60366962020, 60366962022, 60366962023, 60366962025, 60366962032

METHOD BLANK: 2881784

Matrix: Water

Associated Lab Samples: 60366962020, 60366962022, 60366962023, 60366962025, 60366962032

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Iron, Ferrous	mg/L	<0.048	0.20	0.048	04/26/21 11:21	H6

LABORATORY CONTROL SAMPLE: 2881785

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron, Ferrous	mg/L	2	2.0	102	90-110	H6

SAMPLE DUPLICATE: 2881786

Parameter	Units	60366962023 Result	Dup Result	RPD	Max RPD	Qualifiers
Iron, Ferrous	mg/L	0.13J	0.14J		20	H6

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

QC Batch: 718252	Analysis Method: SM 3500-Fe B#4
QC Batch Method: SM 3500-Fe B#4	Analysis Description: Iron, Ferrous
	Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60366962033

METHOD BLANK: 2888724 Matrix: Water

Associated Lab Samples: 60366962033

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Iron, Ferrous	mg/L	<0.048	0.20	0.048	05/10/21 12:02	H6

LABORATORY CONTROL SAMPLE: 2888725

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron, Ferrous	mg/L	2	2.0	102	90-110	H6

SAMPLE DUPLICATE: 2888726

Parameter	Units	60367051015 Result	Dup Result	RPD	Max RPD	Qualifiers
Iron, Ferrous	mg/L	0.36	0.37	2	20	H6

SAMPLE DUPLICATE: 2888727

Parameter	Units	60367583001 Result	Dup Result	RPD	Max RPD	Qualifiers
Iron, Ferrous	mg/L	1.0	1.1	4	20	H6

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

QC Batch: 716124

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: 60366962010, 60366962014, 60366962015, 60366962016

METHOD BLANK: 2880654

Matrix: Water

Associated Lab Samples: 60366962010, 60366962014, 60366962015, 60366962016

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide, Total	mg/L	<0.026	0.050	0.026	04/22/21 14:28	

LABORATORY CONTROL SAMPLE: 2880655

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	0.5	0.53	107	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2880656 2880657

Parameter	Units	60366754001		2880657		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Sulfide, Total	mg/L	1.2	10	10	11.0	10.9	98	97	75-125	1	20

SAMPLE DUPLICATE: 2880658

Parameter	Units	60366760001 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	1.0	1.0	0	20	

SAMPLE DUPLICATE: 2880659

Parameter	Units	60366750002 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	0.51	0.50	1	20	

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

QC Batch:	716128	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:	60366962001, 60366962002, 60366962003, 60366962004, 60366962005, 60366962006, 60366962007, 60366962008, 60366962009, 60366962011, 60366962012		

METHOD BLANK:	2880660	Matrix:	Water
Associated Lab Samples:	60366962001, 60366962002, 60366962003, 60366962004, 60366962005, 60366962006, 60366962007, 60366962008, 60366962009, 60366962011, 60366962012		

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide, Total	mg/L	<0.026	0.050	0.026	04/22/21 15:40	

LABORATORY CONTROL SAMPLE: 2880661

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	0.5	0.53	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2880662 2880663

Parameter	Units	60367051001 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	0.031J	0.5	0.5	0.45	0.43	84	79	75-125	5	20	

SAMPLE DUPLICATE: 2880664

Parameter	Units	60367051001 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	0.031J	0.034J		20	

SAMPLE DUPLICATE: 2880665

Parameter	Units	60366962002 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	0.028J	0.028J		20	

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA-CA
Pace Project No.: 60366962

QC Batch: 716368	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: 60366962013

METHOD BLANK: 2881768 Matrix: Water
Associated Lab Samples: 60366962013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide, Total	mg/L	<0.026	0.050	0.026	04/23/21 13:25	

LABORATORY CONTROL SAMPLE: 2881769

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	0.5	0.50	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2881770 2881771

Parameter	Units	60366962013		2881770		2881771		% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Result				
Sulfide, Total	mg/L	<0.026	0.5	0.5	0.49	0.51	94	97	75-125	3	20

SAMPLE DUPLICATE: 2881772

Parameter	Units	60367034001 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	ND	0.88J		20	

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA-CA
Pace Project No.: 60366962

QC Batch: 716615 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: 60366962020, 60366962021, 60366962022, 60366962023, 60366962024, 60366962025, 60366962026

METHOD BLANK: 2883179 Matrix: Water
Associated Lab Samples: 60366962020, 60366962021, 60366962022, 60366962023, 60366962024, 60366962025, 60366962026

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide, Total	mg/L	<0.026	0.050	0.026	04/26/21 14:44	

LABORATORY CONTROL SAMPLE: 2883180

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	0.5	0.48	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2883181 2883182

Parameter	Units	60367051010		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
Sulfide, Total	mg/L	<0.026	0.5	0.5	0.53	0.51	104	99	75-125	4	20		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2883736 2883737

Parameter	Units	60366962021		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
Sulfide, Total	mg/L	0.035J	0.5	0.5	0.50	0.47	93	87	75-125	6	20		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2883739 2883740

Parameter	Units	60366962023		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
Sulfide, Total	mg/L	<0.026	0.5	0.5	0.43	0.44	83	83	75-125	1	20		

SAMPLE DUPLICATE: 2883183

Parameter	Units	60367051011 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	0.028J	0.026J		20	

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

SAMPLE DUPLICATE: 2883738

Parameter	Units	60366962021 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	0.035J	0.042J		20	

SAMPLE DUPLICATE: 2883741

Parameter	Units	60366962023 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 LEC LCPA-CA

Pace Project No.: 60366962

QC Batch: 716875	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: 60366962027, 60366962032, 60366962033

METHOD BLANK: 2884002 Matrix: Water

Associated Lab Samples: 60366962027, 60366962032, 60366962033

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfide, Total	mg/L	<0.026	0.050	0.026	04/27/21 10:12	

LABORATORY CONTROL SAMPLE: 2884003

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Total	mg/L	0.5	0.54	108	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2884004 2884005

Parameter	Units	60366962027		60366962032		60366962033		% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.				
Sulfide, Total	mg/L	0.032J	0.5	0.5	0.53	0.52	99	98	75-125	1	20

SAMPLE DUPLICATE: 2884006

Parameter	Units	60366962032 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Total	mg/L	<0.026	<0.026		20	

SAMPLE DUPLICATE: 2884007

Parameter	Units	60366962033 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 LEC LCPA-CA

Pace Project No.: 60366962

QC Batch:	716874	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: 60366962001, 60366962002, 60366962003, 60366962004, 60366962005

METHOD BLANK: 2883996 Matrix: Water
Associated Lab Samples: 60366962001, 60366962002, 60366962003, 60366962004, 60366962005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.49J	1.0	0.39	04/27/21 17:15	
Fluoride	mg/L	<0.086	0.20	0.086	04/27/21 17:15	
Sulfate	mg/L	<0.42	1.0	0.42	04/27/21 17:15	

METHOD BLANK: 2886138 Matrix: Water
Associated Lab Samples: 60366962001, 60366962002, 60366962003, 60366962004, 60366962005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.39	1.0	0.39	04/28/21 09:17	
Fluoride	mg/L	<0.086	0.20	0.086	04/28/21 09:17	
Sulfate	mg/L	<0.42	1.0	0.42	04/28/21 09:17	

METHOD BLANK: 2887077 Matrix: Water
Associated Lab Samples: 60366962001, 60366962002, 60366962003, 60366962004, 60366962005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.39	1.0	0.39	04/29/21 08:44	
Fluoride	mg/L	<0.086	0.20	0.086	04/29/21 08:44	
Sulfate	mg/L	<0.42	1.0	0.42	04/29/21 08:44	

LABORATORY CONTROL SAMPLE: 2883997

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	5.0	99	90-110	
Fluoride	mg/L	2.5	2.5	101	90-110	
Sulfate	mg/L	5	4.9	99	90-110	

LABORATORY CONTROL SAMPLE: 2886139

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	5.1	101	90-110	
Fluoride	mg/L	2.5	2.5	99	90-110	
Sulfate	mg/L	5	4.8	97	90-110	

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

LABORATORY CONTROL SAMPLE: 2887078

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	5.1	102	90-110	
Fluoride	mg/L	2.5	2.4	96	90-110	
Sulfate	mg/L	5	4.9	97	90-110	

MATRIX SPIKE SAMPLE: 2883998

Parameter	Units	60367157006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	137	50	188	103	80-120	
Fluoride	mg/L	ND	25	25.5	98	80-120	
Sulfate	mg/L	89.4	50	138	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2883999 2884000

Parameter	Units	60367255001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	3.9	5	5	8.7	8.5	96	93	80-120	2	15	
Fluoride	mg/L	0.29	2.5	2.5	2.9	2.8	104	100	80-120	4	15	
Sulfate	mg/L	78.7	50	50	130	132	103	107	80-120	1	15	

SAMPLE DUPLICATE: 2884001

Parameter	Units	60367255001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chloride	mg/L	3.9	3.9	0	15	
Fluoride	mg/L	0.29	0.28	1	15	
Sulfate	mg/L	78.7	81.5	3	15	

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

QC Batch:	716877	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:	60366962006, 60366962007, 60366962008, 60366962009, 60366962010, 60366962011, 60366962012, 60366962013, 60366962014, 60366962015, 60366962016		

METHOD BLANK:	2884030	Matrix:	Water
Associated Lab Samples:	60366962006, 60366962007, 60366962008, 60366962009, 60366962010, 60366962011, 60366962012, 60366962013, 60366962014, 60366962015, 60366962016		

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.39	1.0	0.39	04/27/21 08:08	
Fluoride	mg/L	<0.086	0.20	0.086	04/27/21 08:08	
Sulfate	mg/L	<0.42	1.0	0.42	04/27/21 08:08	

METHOD BLANK:	2886241	Matrix:	Water
Associated Lab Samples:	60366962006, 60366962007, 60366962008, 60366962009, 60366962010, 60366962011, 60366962012, 60366962013, 60366962014, 60366962015, 60366962016		

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.39	1.0	0.39	04/28/21 09:21	
Fluoride	mg/L	<0.086	0.20	0.086	04/28/21 09:21	
Sulfate	mg/L	<0.42	1.0	0.42	04/28/21 09:21	

LABORATORY CONTROL SAMPLE:	2884031					
Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	5.3	106	90-110	
Fluoride	mg/L	2.5	2.6	103	90-110	
Sulfate	mg/L	5	4.9	97	90-110	

LABORATORY CONTROL SAMPLE:	2886242					
Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	5.0	99	90-110	
Fluoride	mg/L	2.5	2.5	98	90-110	
Sulfate	mg/L	5	5.0	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:	2884033			2884034								
Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		Spike Conc.	Result	Spike Conc.	Result							
Chloride	mg/L	120	100	100	227	231	107	111	80-120	2	15	
Fluoride	mg/L	<0.086	2.5	2.5	2.2	2.4	86	97	80-120	11	15	

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2884033												2884034	
Parameter	Units	60366138006	MS	MSD	MS	MSD	MS	MSD	% Rec	Limits	RPD	Max RPD	Qual
		Result	Spike Conc.	Spike Conc.	Result	Result	Result	% Rec	% Rec				
Sulfate	mg/L	258	100	100	367	368	109	110	80-120	0	15		

MATRIX SPIKE SAMPLE: 2884035		60366962014	Spike	MS	MS	% Rec	Qualifiers
Parameter	Units	Result	Conc.	Result	% Rec	Limits	
Chloride	mg/L	1.9	5	7.6	113	80-120	
Fluoride	mg/L	0.32	2.5	2.9	104	80-120	
Sulfate	mg/L	53.7	50	94.7	82	80-120	

SAMPLE DUPLICATE: 2884032							
Parameter	Units	60366138006	Dup	RPD	Max	Qualifiers	
		Result	Result		RPD		
Chloride	mg/L	120	119	0	15		
Fluoride	mg/L	<0.086	<0.086		15		
Sulfate	mg/L	258	258	0	15		

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA-CA
Pace Project No.: 60366962

QC Batch: 716978 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: 60366962020, 60366962021, 60366962022, 60366962024, 60366962025, 60366962026, 60366962027, 60366962032

METHOD BLANK: 2884377 Matrix: Water
Associated Lab Samples: 60366962020, 60366962021, 60366962022, 60366962024, 60366962025, 60366962026, 60366962027, 60366962032

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.39	1.0	0.39	04/28/21 16:59	
Fluoride	mg/L	<0.086	0.20	0.086	04/28/21 16:59	
Sulfate	mg/L	<0.42	1.0	0.42	04/28/21 16:59	

METHOD BLANK: 2887096 Matrix: Water
Associated Lab Samples: 60366962020, 60366962021, 60366962022, 60366962024, 60366962025, 60366962026, 60366962027, 60366962032

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	4.9J	10.0	3.9	04/29/21 11:19	
Fluoride	mg/L	<0.86	2.0	0.86	04/29/21 11:19	
Sulfate	mg/L	<4.2	10.0	4.2	04/29/21 11:19	

LABORATORY CONTROL SAMPLE: 2884378

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	5.0	99	90-110	
Fluoride	mg/L	2.5	2.5	101	90-110	
Sulfate	mg/L	5	4.9	99	90-110	

LABORATORY CONTROL SAMPLE: 2887097

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	5.0	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2884379 2884380

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Spike Conc.	Result	Spike Conc.	Result						
Chloride	mg/L	4.6	5	5	9.3	9.3	94	93	80-120	0	15
Fluoride	mg/L	0.22	2.5	2.5	2.7	2.7	100	99	80-120	1	15

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2884379												2884380	
Parameter	Units	60366962021 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
Sulfate	mg/L	11.7	5	5	16.8	16.7	102	99	80-120	1	15		

MATRIX SPIKE SAMPLE: 2884382		60367347001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	22.1	25	46.1	96	80-120	
Fluoride	mg/L	0.41	2.5	2.9	99	80-120	
Sulfate	mg/L	2500	2000	4540	102	80-120	

SAMPLE DUPLICATE: 2884381							
Parameter	Units	60366962021 Result	Dup Result	RPD	Max RPD	Qualifiers	
Chloride	mg/L	4.6	4.6	0	15		
Fluoride	mg/L	0.22	0.23	4	15		
Sulfate	mg/L	11.7	11.9	1	15		

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

QC Batch: 717700	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: 60366962023

METHOD BLANK: 2886614 Matrix: Water

Associated Lab Samples: 60366962023

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.39	1.0	0.39	04/30/21 18:03	
Fluoride	mg/L	<0.086	0.20	0.086	04/30/21 18:03	
Sulfate	mg/L	<0.42	1.0	0.42	04/30/21 18:03	

METHOD BLANK: 2888963 Matrix: Water

Associated Lab Samples: 60366962023

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.39	1.0	0.39	05/03/21 09:20	
Fluoride	mg/L	<0.086	0.20	0.086	05/03/21 09:20	
Sulfate	mg/L	<0.42	1.0	0.42	05/03/21 09:20	

METHOD BLANK: 2889425 Matrix: Water

Associated Lab Samples: 60366962023

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.39	1.0	0.39	05/04/21 09:48	
Fluoride	mg/L	<0.086	0.20	0.086	05/04/21 09:48	
Sulfate	mg/L	<0.42	1.0	0.42	05/04/21 09:48	

LABORATORY CONTROL SAMPLE: 2886615

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	2.4	97	90-110	
Sulfate	mg/L	5	4.8	97	90-110	

LABORATORY CONTROL SAMPLE: 2888964

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	2.4	97	90-110	
Sulfate	mg/L	5	4.9	99	90-110	

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

LABORATORY CONTROL SAMPLE: 2889426

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	5.2	103	90-110	
Fluoride	mg/L	2.5	2.5	99	90-110	
Sulfate	mg/L	5	4.9	98	90-110	

MATRIX SPIKE SAMPLE: 2886616

Parameter	Units	60367827001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	187	100	322	135	80-120	M1
Fluoride	mg/L	ND	50	69.3	134	80-120	
Sulfate	mg/L	97.1	100	221	123	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2886617 2886618

Parameter	Units	60366962023 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	22.0	10	10	33.7	33.7	117	117	80-120	0	15	
Fluoride	mg/L	0.45	2.5	2.5	3.1	3.1	104	105	80-120	1	15	
Sulfate	mg/L	155	50	50	212	211	113	113	80-120	0	15	E

SAMPLE DUPLICATE: 2886619

Parameter	Units	60366962023 Result	Dup Result	RPD	Max RPD	Qualifiers
Chloride	mg/L	22.0	21.9	0	15	
Fluoride	mg/L	0.45	0.46	1	15	
Sulfate	mg/L	155	155	0	15	

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

QC Batch:	718360	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: 60366962033

METHOD BLANK: 2889298 Matrix: Water

Associated Lab Samples: 60366962033

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.39	1.0	0.39	05/07/21 11:54	
Fluoride	mg/L	<0.086	0.20	0.086	05/07/21 11:54	
Sulfate	mg/L	<0.42	1.0	0.42	05/07/21 11:54	

METHOD BLANK: 2896324 Matrix: Water

Associated Lab Samples: 60366962033

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.39	1.0	0.39	05/11/21 07:30	
Fluoride	mg/L	<0.086	0.20	0.086	05/11/21 07:30	
Sulfate	mg/L	<0.42	1.0	0.42	05/11/21 07:30	

LABORATORY CONTROL SAMPLE: 2889299

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	2.3	93	90-110	
Sulfate	mg/L	5	4.9	98	90-110	

LABORATORY CONTROL SAMPLE: 2896325

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	2.5	100	90-110	
Sulfate	mg/L	5	4.8	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2889301 2889302

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		60367583001 Result	Spike Conc.	Spike Conc.	Result						
Chloride	mg/L	23.1	25	25	46.8	49.4	95	105	80-120	5	15
Fluoride	mg/L	0.38	2.5	2.5	3.5	2.7	125	91	80-120	27	15 M1,R1
Sulfate	mg/L	15.8	25	25	39.3	42.0	94	105	80-120	7	15

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QUALITY CONTROL DATA

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

MATRIX SPIKE SAMPLE: 2889303		60368243002	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
Chloride	mg/L	696	500	1200	100	80-120	
Fluoride	mg/L	ND	250	267	102	80-120	
Sulfate	mg/L	555	500	1070	102	80-120	

SAMPLE DUPLICATE: 2889300

Parameter	Units	60367583001	Dup	RPD	Max	Qualifiers
		Result	Result		RPD	
Chloride	mg/L	23.1	22.9	1	15	
Fluoride	mg/L	0.38	0.39	3	15	
Sulfate	mg/L	15.8	15.6	1	15	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Sample: L-MW-24 **Lab ID: 60366962001** Collected: 04/16/21 13:26 Received: 04/17/21 03:35 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	0.0257 ± 0.442 (0.793) C:NA T:89%	pCi/L	05/28/21 16:56	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	-0.289 ± 0.346 (0.857) C:74% T:84%	pCi/L	05/28/21 12:49	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: L-MW-33(D) Lab ID: 60366962002 Collected: 04/16/21 13:33 Received: 04/17/21 03:35 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	-0.166 ± 0.481 (0.925) C:NA T:97%	pCi/L	05/28/21 16:56	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	1.09 ± 0.498 (0.855) C:76% T:83%	pCi/L	05/28/21 12:49	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Sample: L-MW-34(D) **Lab ID: 60366962003** Collected: 04/16/21 14:43 Received: 04/17/21 03:35 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 ± 0.443 (0.730) C:NA T:97%	pCi/L	05/28/21 16:56	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	1.33 ± 0.524 (0.804) C:72% T:78%	pCi/L	05/28/21 12:47	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.356 ± 0.626 (0.999) C:NA T:74%	pCi/L	05/28/21 16:56	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.331 ± 0.347 (0.722) C:75% T:89%	pCi/L	05/28/21 12:47	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Sample: L-S-1 **Lab ID: 60366962005** Collected: 04/16/21 15:15 Received: 04/17/21 03:35 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	0.198 ± 0.524 (0.874) C:NA T:100%	pCi/L	05/28/21 16:56	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.950 ± 0.392 (0.612) C:75% T:93%	pCi/L	05/28/21 12:48	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Sample: L-TP-3M **Lab ID: 60366962006** Collected: 04/16/21 12:13 Received: 04/17/21 03:35 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	0.518 ± 0.534 (0.766) C:NA T:91%	pCi/L	05/28/21 16:56	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	1.58 ± 0.512 (0.655) C:75% T:83%	pCi/L	05/28/21 12:48	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Sample: L-TP-3D **Lab ID: 60366962007** Collected: 04/16/21 11:22 Received: 04/17/21 03:35 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	0.247 ± 0.508 (0.822) C:NA T:99%	pCi/L	05/28/21 16:56	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.765 ± 0.398 (0.702) C:73% T:90%	pCi/L	05/28/21 12:48	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Sample: L-TP-4D **Lab ID: 60366962008** Collected: 04/16/21 09:46 Received: 04/17/21 03:35 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	1.39 ± 0.893 (1.15) C:NA T:88%	pCi/L	05/28/21 17:17	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	0.806 ± 0.426 (0.754) C:71% T:83%	pCi/L	05/28/21 12:48	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: L-CA-DUP-1 Lab ID: 60366962009 Collected: 04/16/21 00:00 Received: 04/17/21 03:35 Matrix: Water PWS: Site ID: Sample Type:						
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	1.59 ± 0.730 (0.728) C:NA T:90%	pCi/L	05/28/21 17:17	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	1.04 ± 0.467 (0.734) C:72% T:71%	pCi/L	05/28/21 12:48	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: L-CA-FB-1 Lab ID: 60366962010 Collected: 04/15/21 15:50 Received: 04/17/21 03:35 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.247 ± 0.508 (0.822) C:NA T:95%	pCi/L	05/28/21 17:17	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.149 ± 0.285 (0.627) C:73% T:94%	pCi/L	05/28/21 12:48	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: L-CA-FB-2 Lab ID: 60366962011 Collected: 04/16/21 11:40 Received: 04/17/21 03:35 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	-0.181 ± 0.295 (0.638) C:NA T:104%	pCi/L	05/28/21 17:17	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.381 ± 0.326 (0.656) C:72% T:95%	pCi/L	05/28/21 16:10	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Sample: L-CA-FB-3 **Lab ID: 60366962012** Collected: 04/16/21 15:35 Received: 04/17/21 03:35 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	0.222 ± 0.562 (0.926) C:NA T:98%	pCi/L	05/28/21 17:17	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	0.613 ± 0.331 (0.577) C:74% T:94%	pCi/L	05/28/21 16:11	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Sample: L-MW-26 **Lab ID: 60366962013** Collected: 04/16/21 11:16 Received: 04/17/21 03:35 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	0.325 ± 0.654 (1.05) C:NA T:95%	pCi/L	05/28/21 17:17	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.510 ± 0.364 (0.699) C:72% T:86%	pCi/L	05/28/21 16:11	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: L-LMW-1S Lab ID: 60366962014 Collected: 04/15/21 13:19 Received: 04/17/21 03:35 Matrix: Water PWS: Site ID: Sample Type:						
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	0.0269 ± 0.463 (0.832) C:NA T:94%	pCi/L	05/28/21 17:17	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	1.25 ± 0.517 (0.826) C:70% T:82%	pCi/L	05/28/21 16:09	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Sample: L-LMW-7S **Lab ID: 60366962015** Collected: 04/15/21 15:13 Received: 04/17/21 03:35 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	0.358 ± 0.546 (0.851) C:NA T:93%	pCi/L	05/28/21 17:17	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.603 ± 0.364 (0.672) C:74% T:84%	pCi/L	05/28/21 16:09	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: L-LMW-8S Lab ID: 60366962016 Collected: 04/15/21 15:32 Received: 04/17/21 03:35 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.225 ± 0.485 (0.808) C:NA T:79%	pCi/L	05/28/21 17:35	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.963 ± 0.411 (0.648) C:70% T:88%	pCi/L	05/28/21 16:09	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Sample: L-AMW-8 **Lab ID: 60366962020** Collected: 04/20/21 10:40 Received: 04/21/21 03:49 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 ± 0.495 (0.675) C:NA T:93%	pCi/L	05/28/21 17:35	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	1.26 ± 0.547 (0.889) C:70% T:74%	pCi/L	05/28/21 16:09	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Sample: L-TP-1D **Lab ID: 60366962021** Collected: 04/19/21 09:45 Received: 04/21/21 03:49 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	0.931 ± 0.497 (0.544) C:NA T:94%	pCi/L	05/28/21 17:35	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	3.18 ± 0.766 (0.637) C:75% T:92%	pCi/L	05/28/21 16:09	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Sample: L-TP-2M **Lab ID: 60366962022** Collected: 04/20/21 12:55 Received: 04/21/21 03:49 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	0.247 ± 0.298 (0.455) C:NA T:90%	pCi/L	05/20/21 13:23	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	1.45 ± 0.583 (0.926) C:71% T:77%	pCi/L	05/18/21 14:54	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Sample: L-TP-2D **Lab ID: 60366962023** Collected: 04/20/21 14:00 Received: 04/21/21 03:49 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	0.649 ± 0.510 (0.709) C:NA T:87%	pCi/L	05/20/21 13:23	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	1.25 ± 0.509 (0.802) C:72% T:83%	pCi/L	05/18/21 14:55	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Sample: L-AM-1S **Lab ID: 60366962024** Collected: 04/20/21 10:05 Received: 04/21/21 03:49 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	0.841 ± 0.642 (0.912) C:NA T:90%	pCi/L	05/20/21 13:23	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	1.15 ± 0.509 (0.849) C:70% T:85%	pCi/L	05/18/21 14:55	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Sample: L-AM-1D **Lab ID: 60366962025** Collected: 04/20/21 11:20 Received: 04/21/21 03:49 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	0.261 ± 0.444 (0.784) C:NA T:91%	pCi/L	05/20/21 13:40	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	1.38 ± 0.547 (0.843) C:71% T:77%	pCi/L	05/18/21 14:55	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Sample: L-CA-DUP-2 **Lab ID: 60366962026** Collected: 04/20/21 00:00 Received: 04/21/21 03:49 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	0.739 ± 0.460 (0.453) C:NA T:100%	pCi/L	05/20/21 13:40	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	1.31 ± 0.530 (0.828) C:68% T:83%	pCi/L	05/18/21 14:55	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Sample: L-CA-DUP-3 **Lab ID: 60366962027** Collected: 04/20/21 00:00 Received: 04/21/21 03:49 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	0.472 ± 0.515 (0.810) C:NA T:87%	pCi/L	05/20/21 13:40	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	1.01 ± 0.507 (0.889) C:70% T:81%	pCi/L	05/18/21 14:55	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: L-CA-MS-1 Lab ID: 60366962028 Collected: 04/19/21 09:45 Received: 04/21/21 03:49 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	87.24 %REC ± NA (NA) C:NA T:NA%	pCi/L	05/28/21 17:35	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	85.96 %REC ± NA (NA) C:NA T:NA	pCi/L	05/28/21 19:31	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	81.77 %REC 6.47 RPD ± NA (NA) C:NA T:NA%	pCi/L	05/28/21 17:35	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	94.44 %REC 9.40 RPD ± NA (NA) C:NA T:NA	pCi/L	05/28/21 19:31	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Sample: L-CA-MS-2 **Lab ID: 60366962030** Collected: 04/20/21 14:00 Received: 04/21/21 03:49 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	105.47 %REC ± NA (NA) C:NA T:NA	pCi/L	05/20/21 13:40	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	131.32 %REC ± NA (NA) C:NA T:NA	pCi/L	05/18/21 14:55	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	112.82 %REC 6.73 RPD ± NA (NA) C:NA T:NA	pCi/L	05/20/21 13:40	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	126.58 %REC 3.67 RPD ± NA (NA) C:NA T:NA	pCi/L	05/18/21 14:55	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.0615 ± 0.362 (0.738) C:NA T:95%	pCi/L	05/20/21 13:40	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.965 ± 0.514 (0.922) C:68% T:78%	pCi/L	05/18/21 14:55	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: L-LMW-2S Lab ID: 60366962033 Collected: 04/21/21 11:02 Received: 04/24/21 03:10 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.000 ± 0.557 (1.13) C:NA T:88%	pCi/L	05/20/21 13:40	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.514 ± 0.425 (0.848) C:69% T:80%	pCi/L	05/18/21 14:55	15262-20-1	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

QC Batch:	446796	Analysis Method:	EPA 904.0
QC Batch Method:	EPA 904.0	Analysis Description:	904.0 Radium 228
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 60366962022, 60366962023, 60366962024, 60366962025, 60366962026, 60366962027, 60366962030, 60366962031, 60366962032, 60366962033

METHOD BLANK: 2156084 Matrix: Water

Associated Lab Samples: 60366962022, 60366962023, 60366962024, 60366962025, 60366962026, 60366962027, 60366962030, 60366962031, 60366962032, 60366962033

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.632 ± 0.392 (0.722) C:69% T:81%	pCi/L	05/18/21 14:56	

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 LEC LCPA-CA

Pace Project No.: 60366962

QC Batch: 446783

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: 60366962001, 60366962002, 60366962003, 60366962004, 60366962005, 60366962006, 60366962007, 60366962008, 60366962009, 60366962010, 60366962011, 60366962012, 60366962013, 60366962014, 60366962015, 60366962016, 60366962020, 60366962021, 60366962028, 60366962029

METHOD BLANK: 2156054

Matrix: Water

Associated Lab Samples: 60366962001, 60366962002, 60366962003, 60366962004, 60366962005, 60366962006, 60366962007, 60366962008, 60366962009, 60366962010, 60366962011, 60366962012, 60366962013, 60366962014, 60366962015, 60366962016, 60366962020, 60366962021, 60366962028, 60366962029

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	-0.0558 ± 0.228 (0.468) C:NA T:101%	pCi/L	05/28/21 16:56	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

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.

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.

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.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60366962001	L-MW-24	EPA 200.7	717296	EPA 200.7	717436
60366962002	L-MW-33(D)	EPA 200.7	717296	EPA 200.7	717436
60366962003	L-MW-34(D)	EPA 200.7	717296	EPA 200.7	717436
60366962004	L-MW-35(D)	EPA 200.7	717296	EPA 200.7	717436
60366962005	L-S-1	EPA 200.7	717296	EPA 200.7	717436
60366962006	L-TP-3M	EPA 200.7	717296	EPA 200.7	717436
60366962007	L-TP-3D	EPA 200.7	717296	EPA 200.7	717436
60366962008	L-TP-4D	EPA 200.7	717296	EPA 200.7	717436
60366962009	L-CA-DUP-1	EPA 200.7	717296	EPA 200.7	717436
60366962010	L-CA-FB-1	EPA 200.7	717296	EPA 200.7	717436
60366962011	L-CA-FB-2	EPA 200.7	717296	EPA 200.7	717436
60366962012	L-CA-FB-3	EPA 200.7	717296	EPA 200.7	717436
60366962013	L-MW-26	EPA 200.7	717296	EPA 200.7	717436
60366962014	L-LMW-1S	EPA 200.7	717296	EPA 200.7	717436
60366962015	L-LMW-7S	EPA 200.7	717296	EPA 200.7	717436
60366962016	L-LMW-8S	EPA 200.7	717296	EPA 200.7	717436
60366962020	L-AMW-8	EPA 200.7	717917	EPA 200.7	718060
60366962021	L-TP-1D	EPA 200.7	717917	EPA 200.7	718060
60366962022	L-TP-2M	EPA 200.7	717917	EPA 200.7	718060
60366962023	L-TP-2D	EPA 200.7	719400	EPA 200.7	719546
60366962024	L-AM-1S	EPA 200.7	717917	EPA 200.7	718060
60366962025	L-AM-1D	EPA 200.7	717917	EPA 200.7	718060
60366962026	L-CA-DUP-2	EPA 200.7	719400	EPA 200.7	719546
60366962027	L-CA-DUP-3	EPA 200.7	719400	EPA 200.7	719546
60366962032	L-LMW-4S	EPA 200.7	719400	EPA 200.7	719546
60366962033	L-LMW-2S	EPA 200.7	719402	EPA 200.7	719547
60366962001	L-MW-24	EPA 200.8	717299	EPA 200.8	717438
60366962002	L-MW-33(D)	EPA 200.8	717299	EPA 200.8	717438
60366962003	L-MW-34(D)	EPA 200.8	717299	EPA 200.8	717438
60366962004	L-MW-35(D)	EPA 200.8	717299	EPA 200.8	717438
60366962005	L-S-1	EPA 200.8	717299	EPA 200.8	717438
60366962006	L-TP-3M	EPA 200.8	717299	EPA 200.8	717438
60366962007	L-TP-3D	EPA 200.8	717299	EPA 200.8	717438
60366962008	L-TP-4D	EPA 200.8	717299	EPA 200.8	717438
60366962009	L-CA-DUP-1	EPA 200.8	717299	EPA 200.8	717438
60366962010	L-CA-FB-1	EPA 200.8	717299	EPA 200.8	717438
60366962011	L-CA-FB-2	EPA 200.8	717299	EPA 200.8	717438
60366962012	L-CA-FB-3	EPA 200.8	717299	EPA 200.8	717438
60366962013	L-MW-26	EPA 200.8	717299	EPA 200.8	717438
60366962014	L-LMW-1S	EPA 200.8	717299	EPA 200.8	717438
60366962015	L-LMW-7S	EPA 200.8	717299	EPA 200.8	717438
60366962016	L-LMW-8S	EPA 200.8	717299	EPA 200.8	717438
60366962020	L-AMW-8	EPA 200.8	718923	EPA 200.8	719003
60366962021	L-TP-1D	EPA 200.8	718923	EPA 200.8	719003
60366962022	L-TP-2M	EPA 200.8	718923	EPA 200.8	719003

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60366962023	L-TP-2D	EPA 200.8	718923	EPA 200.8	719003
60366962024	L-AM-1S	EPA 200.8	718923	EPA 200.8	719003
60366962025	L-AM-1D	EPA 200.8	718923	EPA 200.8	719003
60366962026	L-CA-DUP-2	EPA 200.8	718923	EPA 200.8	719003
60366962027	L-CA-DUP-3	EPA 200.8	718923	EPA 200.8	719003
60366962032	L-LMW-4S	EPA 200.8	718923	EPA 200.8	719003
60366962033	L-LMW-2S	EPA 200.8	719408	EPA 200.8	719549
60366962001	L-MW-24	EPA 7470	719265	EPA 7470	719615
60366962002	L-MW-33(D)	EPA 7470	719265	EPA 7470	719615
60366962003	L-MW-34(D)	EPA 7470	719265	EPA 7470	719615
60366962004	L-MW-35(D)	EPA 7470	719265	EPA 7470	719615
60366962005	L-S-1	EPA 7470	719265	EPA 7470	719615
60366962006	L-TP-3M	EPA 7470	719265	EPA 7470	719615
60366962007	L-TP-3D	EPA 7470	719265	EPA 7470	719615
60366962008	L-TP-4D	EPA 7470	719265	EPA 7470	719615
60366962009	L-CA-DUP-1	EPA 7470	719265	EPA 7470	719615
60366962010	L-CA-FB-1	EPA 7470	719265	EPA 7470	719615
60366962011	L-CA-FB-2	EPA 7470	719265	EPA 7470	719615
60366962012	L-CA-FB-3	EPA 7470	719265	EPA 7470	719615
60366962013	L-MW-26	EPA 7470	719265	EPA 7470	719615
60366962014	L-LMW-1S	EPA 7470	719265	EPA 7470	719615
60366962015	L-LMW-7S	EPA 7470	719265	EPA 7470	719615
60366962016	L-LMW-8S	EPA 7470	719265	EPA 7470	719615
60366962020	L-AMW-8	EPA 7470	719266	EPA 7470	719616
60366962021	L-TP-1D	EPA 7470	719266	EPA 7470	719616
60366962022	L-TP-2M	EPA 7470	719266	EPA 7470	719616
60366962023	L-TP-2D	EPA 7470	719266	EPA 7470	719616
60366962024	L-AM-1S	EPA 7470	719266	EPA 7470	719616
60366962025	L-AM-1D	EPA 7470	719266	EPA 7470	719616
60366962026	L-CA-DUP-2	EPA 7470	719266	EPA 7470	719616
60366962027	L-CA-DUP-3	EPA 7470	719266	EPA 7470	719616
60366962032	L-LMW-4S	EPA 7470	719266	EPA 7470	719616
60366962033	L-LMW-2S	EPA 7470	719627	EPA 7470	720576
60366962001	L-MW-24	EPA 903.1	446783		
60366962002	L-MW-33(D)	EPA 903.1	446783		
60366962003	L-MW-34(D)	EPA 903.1	446783		
60366962004	L-MW-35(D)	EPA 903.1	446783		
60366962005	L-S-1	EPA 903.1	446783		
60366962006	L-TP-3M	EPA 903.1	446783		
60366962007	L-TP-3D	EPA 903.1	446783		
60366962008	L-TP-4D	EPA 903.1	446783		
60366962009	L-CA-DUP-1	EPA 903.1	446783		
60366962010	L-CA-FB-1	EPA 903.1	446783		
60366962011	L-CA-FB-2	EPA 903.1	446783		
60366962012	L-CA-FB-3	EPA 903.1	446783		
60366962013	L-MW-26	EPA 903.1	446783		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60366962014	L-LMW-1S	EPA 903.1	446783		
60366962015	L-LMW-7S	EPA 903.1	446783		
60366962016	L-LMW-8S	EPA 903.1	446783		
60366962020	L-AMW-8	EPA 903.1	446783		
60366962021	L-TP-1D	EPA 903.1	446783		
60366962022	L-TP-2M	EPA 903.1	446797		
60366962023	L-TP-2D	EPA 903.1	446797		
60366962024	L-AM-1S	EPA 903.1	446797		
60366962025	L-AM-1D	EPA 903.1	446797		
60366962026	L-CA-DUP-2	EPA 903.1	446797		
60366962027	L-CA-DUP-3	EPA 903.1	446797		
60366962028	L-CA-MS-1	EPA 903.1	446783		
60366962029	L-CA-MSD-1	EPA 903.1	446783		
60366962030	L-CA-MS-2	EPA 903.1	446797		
60366962031	L-CA-MSD-2	EPA 903.1	446797		
60366962032	L-LMW-4S	EPA 903.1	446797		
60366962033	L-LMW-2S	EPA 903.1	446797		
60366962001	L-MW-24	EPA 904.0	446782		
60366962002	L-MW-33(D)	EPA 904.0	446782		
60366962003	L-MW-34(D)	EPA 904.0	446782		
60366962004	L-MW-35(D)	EPA 904.0	446782		
60366962005	L-S-1	EPA 904.0	446782		
60366962006	L-TP-3M	EPA 904.0	446782		
60366962007	L-TP-3D	EPA 904.0	446782		
60366962008	L-TP-4D	EPA 904.0	446782		
60366962009	L-CA-DUP-1	EPA 904.0	446782		
60366962010	L-CA-FB-1	EPA 904.0	446782		
60366962011	L-CA-FB-2	EPA 904.0	446782		
60366962012	L-CA-FB-3	EPA 904.0	446782		
60366962013	L-MW-26	EPA 904.0	446782		
60366962014	L-LMW-1S	EPA 904.0	446782		
60366962015	L-LMW-7S	EPA 904.0	446782		
60366962016	L-LMW-8S	EPA 904.0	446782		
60366962020	L-AMW-8	EPA 904.0	446782		
60366962021	L-TP-1D	EPA 904.0	446782		
60366962022	L-TP-2M	EPA 904.0	446796		
60366962023	L-TP-2D	EPA 904.0	446796		
60366962024	L-AM-1S	EPA 904.0	446796		
60366962025	L-AM-1D	EPA 904.0	446796		
60366962026	L-CA-DUP-2	EPA 904.0	446796		
60366962027	L-CA-DUP-3	EPA 904.0	446796		
60366962028	L-CA-MS-1	EPA 904.0	446782		
60366962029	L-CA-MSD-1	EPA 904.0	446782		
60366962030	L-CA-MS-2	EPA 904.0	446796		
60366962031	L-CA-MSD-2	EPA 904.0	446796		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60366962032	L-LMW-4S	EPA 904.0	446796		
60366962033	L-LMW-2S	EPA 904.0	446796		
60366962001	L-MW-24	SM 2320B	717133		
60366962002	L-MW-33(D)	SM 2320B	717133		
60366962003	L-MW-34(D)	SM 2320B	717133		
60366962004	L-MW-35(D)	SM 2320B	717133		
60366962005	L-S-1	SM 2320B	717133		
60366962006	L-TP-3M	SM 2320B	717133		
60366962007	L-TP-3D	SM 2320B	717133		
60366962008	L-TP-4D	SM 2320B	717133		
60366962009	L-CA-DUP-1	SM 2320B	717133		
60366962010	L-CA-FB-1	SM 2320B	716898		
60366962011	L-CA-FB-2	SM 2320B	717133		
60366962012	L-CA-FB-3	SM 2320B	717133		
60366962013	L-MW-26	SM 2320B	717133		
60366962014	L-LMW-1S	SM 2320B	716898		
60366962015	L-LMW-7S	SM 2320B	716898		
60366962016	L-LMW-8S	SM 2320B	716898		
60366962020	L-AMW-8	SM 2320B	718221		
60366962021	L-TP-1D	SM 2320B	717897		
60366962022	L-TP-2M	SM 2320B	718221		
60366962023	L-TP-2D	SM 2320B	718221		
60366962024	L-AM-1S	SM 2320B	718221		
60366962025	L-AM-1D	SM 2320B	718221		
60366962026	L-CA-DUP-2	SM 2320B	718221		
60366962027	L-CA-DUP-3	SM 2320B	718221		
60366962032	L-LMW-4S	SM 2320B	718221		
60366962033	L-LMW-2S	SM 2320B	718267		
60366962001	L-MW-24	SM 2540C	716210		
60366962002	L-MW-33(D)	SM 2540C	716210		
60366962003	L-MW-34(D)	SM 2540C	716210		
60366962004	L-MW-35(D)	SM 2540C	716210		
60366962005	L-S-1	SM 2540C	716543		
60366962006	L-TP-3M	SM 2540C	716543		
60366962007	L-TP-3D	SM 2540C	716543		
60366962008	L-TP-4D	SM 2540C	716543		
60366962009	L-CA-DUP-1	SM 2540C	716543		
60366962010	L-CA-FB-1	SM 2540C	716210		
60366962011	L-CA-FB-2	SM 2540C	716543		
60366962012	L-CA-FB-3	SM 2540C	716543		
60366962013	L-MW-26	SM 2540C	716543		
60366962014	L-LMW-1S	SM 2540C	716210		

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Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60366962015	L-LMW-7S	SM 2540C	716210		
60366962016	L-LMW-8S	SM 2540C	716210		
60366962020	L-AMW-8	SM 2540C	716658		
60366962021	L-TP-1D	SM 2540C	716657		
60366962022	L-TP-2M	SM 2540C	716658		
60366962023	L-TP-2D	SM 2540C	716658		
60366962024	L-AM-1S	SM 2540C	716658		
60366962025	L-AM-1D	SM 2540C	716658		
60366962026	L-CA-DUP-2	SM 2540C	716658		
60366962027	L-CA-DUP-3	SM 2540C	716658		
60366962032	L-LMW-4S	SM 2540C	716658		
60366962033	L-LMW-2S	SM 2540C	717180		
60366962001	L-MW-24	SM 3500-Fe B#4	720613		
60366962002	L-MW-33(D)	SM 3500-Fe B#4	720613		
60366962003	L-MW-34(D)	SM 3500-Fe B#4	720769		
60366962004	L-MW-35(D)	SM 3500-Fe B#4	720769		
60366962005	L-S-1	SM 3500-Fe B#4	720769		
60366962006	L-TP-3M	SM 3500-Fe B#4	720769		
60366962007	L-TP-3D	SM 3500-Fe B#4	720769		
60366962008	L-TP-4D	SM 3500-Fe B#4	720769		
60366962009	L-CA-DUP-1	SM 3500-Fe B#4	720769		
60366962010	L-CA-FB-1	SM 3500-Fe B#4	720769		
60366962011	L-CA-FB-2	SM 3500-Fe B#4	720769		
60366962012	L-CA-FB-3	SM 3500-Fe B#4	720769		
60366962013	L-MW-26	SM 3500-Fe B#4	720769		
60366962014	L-LMW-1S	SM 3500-Fe B#4	720769		
60366962015	L-LMW-7S	SM 3500-Fe B#4	720769		
60366962016	L-LMW-8S	SM 3500-Fe B#4	720769		
60366962020	L-AMW-8	SM 3500-Fe B#4	723195		
60366962021	L-TP-1D	SM 3500-Fe B#4	723195		
60366962022	L-TP-2M	SM 3500-Fe B#4	723195		
60366962023	L-TP-2D	SM 3500-Fe B#4	723195		
60366962024	L-AM-1S	SM 3500-Fe B#4	723195		
60366962025	L-AM-1D	SM 3500-Fe B#4	723195		
60366962026	L-CA-DUP-2	SM 3500-Fe B#4	723195		
60366962027	L-CA-DUP-3	SM 3500-Fe B#4	723195		
60366962032	L-LMW-4S	SM 3500-Fe B#4	723195		
60366962033	L-LMW-2S	SM 3500-Fe B#4	723195		
60366962001	L-MW-24	SM 3500-Fe B#4	716373		
60366962002	L-MW-33(D)	SM 3500-Fe B#4	716373		
60366962003	L-MW-34(D)	SM 3500-Fe B#4	716373		
60366962004	L-MW-35(D)	SM 3500-Fe B#4	716373		
60366962005	L-S-1	SM 3500-Fe B#4	716373		
60366962006	L-TP-3M	SM 3500-Fe B#4	716373		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60366962007	L-TP-3D	SM 3500-Fe B#4	716370		
60366962008	L-TP-4D	SM 3500-Fe B#4	716370		
60366962009	L-CA-DUP-1	SM 3500-Fe B#4	716370		
60366962010	L-CA-FB-1	SM 3500-Fe B#4	716370		
60366962011	L-CA-FB-2	SM 3500-Fe B#4	716370		
60366962012	L-CA-FB-3	SM 3500-Fe B#4	716373		
60366962013	L-MW-26	SM 3500-Fe B#4	716370		
60366962014	L-LMW-1S	SM 3500-Fe B#4	716370		
60366962015	L-LMW-7S	SM 3500-Fe B#4	716370		
60366962016	L-LMW-8S	SM 3500-Fe B#4	716370		
60366962020	L-AMW-8	SM 3500-Fe B#4	716375		
60366962021	L-TP-1D	SM 3500-Fe B#4	716373		
60366962022	L-TP-2M	SM 3500-Fe B#4	716375		
60366962023	L-TP-2D	SM 3500-Fe B#4	716375		
60366962024	L-AM-1S	SM 3500-Fe B#4	716373		
60366962025	L-AM-1D	SM 3500-Fe B#4	716375		
60366962026	L-CA-DUP-2	SM 3500-Fe B#4	716373		
60366962027	L-CA-DUP-3	SM 3500-Fe B#4	716373		
60366962032	L-LMW-4S	SM 3500-Fe B#4	716375		
60366962033	L-LMW-2S	SM 3500-Fe B#4	718252		
60366962001	L-MW-24	SM 4500-S-2 D	716128		
60366962002	L-MW-33(D)	SM 4500-S-2 D	716128		
60366962003	L-MW-34(D)	SM 4500-S-2 D	716128		
60366962004	L-MW-35(D)	SM 4500-S-2 D	716128		
60366962005	L-S-1	SM 4500-S-2 D	716128		
60366962006	L-TP-3M	SM 4500-S-2 D	716128		
60366962007	L-TP-3D	SM 4500-S-2 D	716128		
60366962008	L-TP-4D	SM 4500-S-2 D	716128		
60366962009	L-CA-DUP-1	SM 4500-S-2 D	716128		
60366962010	L-CA-FB-1	SM 4500-S-2 D	716124		
60366962011	L-CA-FB-2	SM 4500-S-2 D	716128		
60366962012	L-CA-FB-3	SM 4500-S-2 D	716128		
60366962013	L-MW-26	SM 4500-S-2 D	716368		
60366962014	L-LMW-1S	SM 4500-S-2 D	716124		
60366962015	L-LMW-7S	SM 4500-S-2 D	716124		
60366962016	L-LMW-8S	SM 4500-S-2 D	716124		
60366962020	L-AMW-8	SM 4500-S-2 D	716615		
60366962021	L-TP-1D	SM 4500-S-2 D	716615		
60366962022	L-TP-2M	SM 4500-S-2 D	716615		
60366962023	L-TP-2D	SM 4500-S-2 D	716615		
60366962024	L-AM-1S	SM 4500-S-2 D	716615		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN LEC LCPA-CA

Pace Project No.: 60366962

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60366962025	L-AM-1D	SM 4500-S-2 D	716615		
60366962026	L-CA-DUP-2	SM 4500-S-2 D	716615		
60366962027	L-CA-DUP-3	SM 4500-S-2 D	716875		
60366962032	L-LMW-4S	SM 4500-S-2 D	716875		
60366962033	L-LMW-2S	SM 4500-S-2 D	716875		
60366962001	L-MW-24	EPA 300.0	716874		
60366962002	L-MW-33(D)	EPA 300.0	716874		
60366962003	L-MW-34(D)	EPA 300.0	716874		
60366962004	L-MW-35(D)	EPA 300.0	716874		
60366962005	L-S-1	EPA 300.0	716874		
60366962006	L-TP-3M	EPA 300.0	716877		
60366962007	L-TP-3D	EPA 300.0	716877		
60366962008	L-TP-4D	EPA 300.0	716877		
60366962009	L-CA-DUP-1	EPA 300.0	716877		
60366962010	L-CA-FB-1	EPA 300.0	716877		
60366962011	L-CA-FB-2	EPA 300.0	716877		
60366962012	L-CA-FB-3	EPA 300.0	716877		
60366962013	L-MW-26	EPA 300.0	716877		
60366962014	L-LMW-1S	EPA 300.0	716877		
60366962015	L-LMW-7S	EPA 300.0	716877		
60366962016	L-LMW-8S	EPA 300.0	716877		
60366962020	L-AMW-8	EPA 300.0	716978		
60366962021	L-TP-1D	EPA 300.0	716978		
60366962022	L-TP-2M	EPA 300.0	716978		
60366962023	L-TP-2D	EPA 300.0	717700		
60366962024	L-AM-1S	EPA 300.0	716978		
60366962025	L-AM-1D	EPA 300.0	716978		
60366962026	L-CA-DUP-2	EPA 300.0	716978		
60366962027	L-CA-DUP-3	EPA 300.0	716978		
60366962032	L-LMW-4S	EPA 300.0	716978		
60366962033	L-LMW-2S	EPA 300.0	718360		

REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

WO#: 60366962



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 2PLC

Thermometer Used: T-298 ^{1.4} _{17.2} Type of Ice: Lot Blue None ^{1.4} _{17.2} °C

Cooler Temperature (°C): As-read 18.5 ^{1.1} _{1.7} Corr. Factor 0.0 Corrected 18.5 ^{1.1} _{1.7}

Date and initials of person examining contents: 4-17-21/ko

Chain of Custody present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Chain of Custody relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Samples arrived within holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Short Hold Time analyses (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<u>Fe+2</u>
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	<u>Received containers not on COC.</u>
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<u>1BPIU, 2BPINs, 1BP3U, 1BP3N, 1BP4Z</u>
Correct containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<u>for the following:</u>
Pace containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<u>L-UMW-7D 4-15-21 10:18</u>
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<u>L-UMW-MS-1 4-15-21 10:18</u>
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	<u>L-UMW-MSD-1 4-15-21 10:18</u>
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Sample labels match COC: Date / time / ID / analyses	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Samples contain multiple phases? Matrix: <u>WT</u>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Containers requiring pH preservation in compliance? (HNO ₃ , H ₂ SO ₄ , HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO) LOT# <u>603173, 603222</u>	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	List sample IDs, volumes, lot #'s of preservative and the date/time added. <u>L-LMW-1S BP4Z pH 9.5</u>
Cyanide water sample checks:		
Lead acetate strip turns dark? (Record only)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Potassium iodide test strip turns blue/purple? (Preserve)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Trip Blank present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Samples from USDA Regulated Area: State:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: **REVIEWED** Extra sample received should be logged under separate workorder number.

REVIEWED
By jchurc at 9:28 am, 4/19/21

Project Manager Review: _____ Date: _____

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: Golder Associates	Report To: Jeffrey Ingram	Attention:
Address: 13515 Barrett Parkway Dr., Ste 260 Ballwin, MO 63021	Copy To: Eric Schnieder, Ryan Feldman	Company Name: Golder Associates Inc
Email To: jeffrey_ingram@golder.com	Purchase Order No.: COC #2	Address:
Phone: 636-724-9191	Project Name: Ameren Labadie Energy Center LCPA-CA	Pace Quote Reference:
Requested Due Date/TAT: Standard	Project Number: 153140602.0001A	Pace Project Manager: Jamie Church
		Pace Profile #: 9285, line 1

ITEM #	Valid Matrix Codes MATRIX CODE DRINKING WATER DW WASTE WATER WW WASTE WATER PRODUCT P SOLIDSOLID SL OIL OL AR OT TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	Requested Analysis Filtered (Y/N)											Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.								
				COMPOSITE START	COMPOSITE END/GRAB		Analysis Test ↓	Y/N	Chloride/Fluoride/Sulfate	App III and Cat/An Metals	Alkalinity	TDS	Appendix IV Metals *	Mercury	Radium 226	Radium 226	Ferrous/Ferric Iron			SM4500-S2D Sulfide							
1	L-AMW-8	WT	G	DATE	TIME		Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol	Other	N	N	N	N	N	N	N	N	N	N	N		
2	L-MW-24	WT	G	4/16/21	1326		6Z	3			1				X	X	X	X	X	X	X	X	X	X	X		
3	L-MW-33(D)	WT	G	4/16/21	1333		L	L							X	X	X	X	X	X	X	X	X	X	X		
4	L-MW-34(D)	WT	G	4/16/21	1443		WZ	3			1				X	X	X	X	X	X	X	X	X	X	X		
5	L-MW-35(D)	WT	G	4/16/21	1232		6Z	3			1				X	X	X	X	X	X	X	X	X	X	X		
6	L-S-1	WT	G	4/16/21	1515		6Z	3			1				X	X	X	X	X	X	X	X	X	X	X		
7	L-TP-1D	WT	G																								
8	L-TP-2M	WT	G																								
9	L-TP-2D	WT	G																								
10	L-TP-3M	WT	G	4/16/21	1213		6Z	3							X	X	X	X	X	X	X	X	X	X	X		
11	L-TP-3D	WT	G	4/16/21	1122		L	L							X	X	X	X	X	X	X	X	X	X	X		
12	L-TP-4D	WT	G	4/16/21	0940		L	L							X	X	X	X	X	X	X	X	X	X	X		

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	<i>Eric Schnieder</i>	04/16/21	1720	<i>Angela Manno</i>	4/16	1730	Received on Ice (Y/N) <input checked="" type="checkbox"/> Y
	<i>Angela Manno</i>	04/16	1730	<i>Whu Zou Pace</i>	4/17/21	0335	Temp In <input checked="" type="checkbox"/> Y
							Custody Sealed <input checked="" type="checkbox"/> Y
							Printer (Y/N) <input checked="" type="checkbox"/> Y
							Analyst (Y/N) <input checked="" type="checkbox"/> Y
							Cooler (Y/N) <input checked="" type="checkbox"/> Y
							Samples Intact (Y/N) <input checked="" type="checkbox"/> 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.



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: Golder Associates	Report To: Jeffrey Ingram	Company Name: Golder Associates Inc	Attention:		
Address: 13515 Barrett Parkway Dr., Ste 260	Copy To: Eric Schnieder, Ryan Feldman	Address:			
Email To: jeffrey_ingram@golder.com	Purchase Order No.: COC #2	Reference:			
Phone: 636-724-9191	Fax: 636-724-9323	Project Name: Ameren Labadie Energy Center LCPA-CA			
Requested Due Date/TAT: Standard	Project Number: 153140602.0001A	Pace Profile #: 9285, line 1			

ITEM #	Valid Matrix Codes MATRIX CODE DRINKING WATER DW WATER WT WASTE WATER WW PRODUCT P SOLID SL OIL OL AR WP OT TS	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives HNO ₃ H ₂ SO ₄ Unpreserved Other	Analysis Test Chloride/Fluoride/Sulfate App III and Cat/An Metals Alkalinity TDS Appendix IV Metals * Mercury Radium 226 Radium 226 Ferrous/Ferric Iron SM4500-S2D Sulfide	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
		COMPOSITE START	COMPOSITE END/GRAB							
1	L-AM-1S									
2	L-AM-1D									
3	L-CA-DUP-1		4/16/21		6	2	3	1		
4	L-CA-DUP-2									
5	L-CA-DUP-3									
6	L-CA-FB-1		4/16/21 1550		6	2	3	1		
7	L-CA-FB-2		4/16/21 1140		2	2	1			
8	L-CA-FB-3		4/16/21 1530		6	2	3	1		
9	L-CA-MS-1									
10	L-CA-MSD-1									
11	L-CA-MS-2									
12	L-CA-MSD-2									

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
<i>Eric Schnieder</i>	4/16/21	1720	<i>George Mc</i>	4/16/21	1730	
<i>George Mc</i>	4/16/21	1730	<i>Eric Schnieder</i>	4/17/21	0335	Temp 1.4 Received on 17.2 Ice (Y/N) N Cooler (Y/N) Y Custody Sealed (Y/N) Y Samples Intact (Y/N) 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.



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 **Report To:** Jeffrey Ingram **Section B Required Project Information:** **Company Name:** Golder Associates Inc **Invoice Information:** **Page:** 3 **of** 3

Address: 13515 Barrett Parkway Dr., Ste 260 **Copy To:** Eric Schnieder, Ryan Feldman **Address:** **Regulatory Agency:** NPDES GROUND WATER DRINKING WATER
 Ballwin, MO 63021 **Email To:** jeffrey_ingram@golder.com **Purchase Order No.:** COC #2 **Reference:** UST OTHER
Phone: 636-724-9191 **Fax:** 636-724-9323 **Project Name:** Ameren Labadie Energy Center LCPA-CA **Site Location:** MO
Requested Due Date/TAT: Standard **Project Number:** 153140602.0001A **Manager:** Jamie Church **State:** MO
Pace Profile #: 9285, line 1

Section D Required Client Information				Valid Matrix Codes				Section B Matrix Codes				Requested Analysis Filtered (Y/N)				Requested Analysis Filtered (Y/N)								
ITEM #	SAMPLE ID (A-Z, 0-9 / -)	Matrix Code	SAMPLE TYPE (G=GRAB C=COMP)	COMPOSITE START DATE TIME	COMPOSITE END DATE TIME	DATE	TIME	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	DATE	TIME	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	
1	L-MW-26	WT	G	4/16/21 1110	4/16/21 1319	4/16/21	1730	WT	G	04/16/21	1730	Eric Schnieder	4/16	1730	Eric Schnieder	4/16	1730	Eric Schnieder	4/16	1730	Eric Schnieder	4/16	1730	
2	L-LMW-1S	WT	G	4/15/21 1513	4/15/21 1532	4/15/21	1730	WT	G	4/15/21	1532	Amanda Mc	4/15	1532	Amanda Mc	4/15	1532	Amanda Mc	4/15	1532	Amanda Mc	4/15	1532	
3	L-LMW-2S	WT	G					WT	G															
4	L-LMW-4S	WT	G					WT	G															
5	L-LMW-7S	WT	G					WT	G															
6	L-LMW-8S	WT	G					WT	G															
7	L-BMW-1S	WT	G					WT	G															
8	L-BMW-2S	WT	G					WT	G															
9		WT	G					WT	G															
10		WT	G					WT	G															
11		WT	G					WT	G															
12		WT	G					WT	G															

Residual Chlorine (Y/N) 60366962

Pace Project No./ Lab I.D.



Sample Condition Upon Receipt

WO#: 60366962



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 [] epic

Thermometer Used: T298 Type of Ice: Wet Blue None

Cooler Temperature (°C): As-read 14.9, 1.2 Corr. Factor 0.0 Corrected 14.9, 1.2

Date and initials of person examining contents: 4-21 ML

Temperature should be above freezing to 6°C

Chain of Custody present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	• only radium in out of temp coolers 175
Chain of Custody relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Samples arrived within holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Short Hold Time analyses (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Correct containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Lcmw-8 4/20/21 at 1040
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Sample labels match COC: Date / time / ID / analyses	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Samples contain multiple phases? Matrix: <u>WT</u>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Containers requiring pH preservation in compliance? (HNO ₃ , H ₂ SO ₄ , HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO) LOT# <u>603173</u>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> 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) <input type="checkbox"/> Yes <input type="checkbox"/> No Potassium iodide test strip turns blue/purple? (Preserve) <input type="checkbox"/> Yes <input type="checkbox"/> No		
Trip Blank present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Samples from USDA Regulated Area: State: _____	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> 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 4:18 pm, 4/21/21

Project Manager Review: _____ Date: _____



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: 13515 Barrett Parkway Dr., Ste 260 Ballwin, MO 63021	Section B Required Project Information: Report To: Jeffrey Ingram Copy To: Eric Schneider, Ryan Feldman Purchase Order No.: COC #2 Project Name: Ameren Labadie Energy Center LCPA-CA Project Number: 153140602.0001A	Section C Invoice Information: Attention: Company Name: Golder Associates Inc Address: Pace Quote Reference: Pace Project Manager: Pace Profile #: 9285, line 1
REGULATORY AGENCY <input type="checkbox"/> NPDES <input checked="" type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER _____		
Site Location STATE: MO		

ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)
				DATE	TIME					
1	L-AMW-8	WT G	G	4-20-21	1040		2		N	
2	L-MW-24	WT G	G						N	
3	L-MW-33(D)	WT G	G						N	
4	L-MW-34(D)	WT G	G						N	
5	L-MW-35(D)	WT G	G						N	
6	L-S-1	WT G	G						N	
7	L-TP-1D	WT G	G	4-19-21	6945		2		N	
8	L-TP-2M	WT G	G	4-20-21	1255		2		N	
9	L-TP-2D	WT G	G	4-20-21	1400		2		N	
10	L-TP-3M	WT G	G						N	
11	L-TP-3D	WT G	G						N	
12	L-TP-4D	WT G	G						N	

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 200.8 Metals - Sb, As, Cd, Cr, Se, Ti Relinquished by: Brendan Talbert/Golder DATE: 4/20/21 TIME: 1730	ACCEPTED BY / AFFILIATION Signature: [Signature] DATE: 04/20/21 TIME:
--	---

SAMPLER NAME AND SIGNATURE	
PRINT Name of SAMPLER: Brendan Talbert	DATE Signed (MM/DD/YY): 04/20/21
SIGNATURE of SAMPLER: [Signature]	

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.

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: **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**
 Purchase Order No.: **COC #2**
 Project Name: **Ameren Labadie Energy Center LCPA-CA**
 Project Number: **153140602.0001A**

Section C
 Invoice Information:
 Attention:
 Company Name: **Golder Associates Inc**
 Address:
 Pace Quote Reference:
 Pace Project Manager: **Jamie Church**
 Pace Profile #: **9285, line 1**
 MO

REGULATORY AGENCY
 NPDES GROUND WATER DRINKING WATER
 UST RCRA OTHER

Page: **1** of **3**

Section D Required Client Information		Valid Matrix Codes MATRIX CODE DW DRINKING WATER WT WATER WW WASTE WATER P PRODUCT S/S SOLID OIL A-Z (A-Z) O-I (O-I) V-T (V-T) TS	COLLECTED		SAMPLE TYPE (G=GRAB C=COMP) MATRIX CODE (see valid codes to left)	PRESERVED		# OF CONTAINERS	Requested Analysis Filtered (Y/N)													Residual Chlorine (Y/N) <i>60366962</i>	Pace Project No./ Lab I.D.														
			COMPOSITE START	COMPOSITE END/GRAB		DATE	TIME		DATE	TIME	SAMPLE TEMP AT COLLECTION	Y	N	↑ Analysis Test ↓	Chloride/Fluoride/Sulfate	N	App III and Cat/An Metals	N	Alkalinity	N	TDS			N	Appendix IV Metals **	N	Mercury	N	Radium 226	N	Radium 226	N	Ferrous/Ferric Iron	N	SM4500-S2D Sulfide	N	
1	L-MW-8																																				
2	L-MW-24																																				
3	L-MW-33(D)																																				
4	L-MW-34(D)																																				
5	L-MW-35(D)																																				
6	L-S-1																																				
7	L-TP-1D																																				
8	L-TP-2M																																				
9	L-TP-2D																																				
10	L-TP-3M																																				
11	L-TP-3D																																				
12	L-TP-4D																																				
ADDITIONAL COMMENTS			RELINQUISHED BY / AFFILIATION		DATE		TIME		ACCEPTED BY / AFFILIATION		DATE		TIME		SAMPLE CONDITIONS												Temp In		Received		Cooler (Y/N)		Custody Sealed		Samples Intact (Y/N)		
			Brandon Talbert/Golder		4/20/12		1730		Mingy/PACE		4-21-12		0849		N												17.0		N		N		Y		Y		
SAMPLER NAME AND SIGNATURE			PRINT Name of SAMPLER:		SIGNATURE of SAMPLER:		DATE Signed (MM/DD/YYYY):				DATE Signed (MM/DD/YYYY):																										
			Brandon Talbert		<i>[Signature]</i>				<i>[Signature]</i>		04/20/12																										

*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.

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, Purchase Order No.: COC #2, Project Name: Ameren Labadie Energy Center LCPA-CA, Project Number: 153140602.0001A

Section C

Invoice Information: Company Name: Golder Associates Inc, Address: NPDES / GROUND WATER, UST / RCRA, OTHER, REGULATORY AGENCY, Site Location MO, STATE: MO

Main data table with columns for ITEM #, Valid Matrix Codes, Section D Required Client Information, SAMPLE ID (A-Z, 0-9 / -), MATRIX CODE, SAMPLE TYPE, COLLECTED (COMPOSITE START, DATE, TIME, COMPOSITE END/GRAB, DATE, TIME), RELINQUISHED BY / AFFILIATION, DATE, TIME, ACCEPTED BY / AFFILIATION, DATE, TIME, ANALYSIS TEST, PRESERVATIVES, REQUESTED ANALYSIS FILTERED (Y/N), Residual Chlorine (Y/N), Pace Project No. / Lab I.D. (60366962)

Additional Comments and Signatures: ADDITIONAL COMMENTS, Relinquished by/affiliation, Date, Time, Accepted by/affiliation, Date, Time, Sample Name and Signature, Print Name of Sampler (Brandon Talbert), Signature of Sampler (Brandon Talbert), Date Signed (MM/DD/YY) (04/20/21)



Sample Condition Upon Receipt

WO#: 60366962



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 2 plc

Thermometer Used: T298 Type of Ice: Wet Blue None Radiums

Cooler Temperature (°C): As-read 0.9 Corr. Factor 0.0 Corrected 0.9
Temperature should be above freezing to 6° 14.9

Date and initials of person examining contents: 4/24/2018

Chain of Custody present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Chain of Custody relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Samples arrived within holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Short Hold Time analyses (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<u>Fe + 2 4/24/2018</u>
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Correct containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Sample labels match COC: Date / time / ID / analyses	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Samples contain multiple phases? Matrix: <u>wt</u>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Containers requiring pH preservation in compliance? (HNO ₃ , H ₂ SO ₄ , HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO) LOT# <u>W0303</u>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> 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)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Potassium iodide test strip turns blue/purple? (Preserve)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Trip Blank present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Samples from USDA Regulated Area: State: _____	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

REVIEWED

Project Manager Reviewed By jchurch at 9:13 am, 4/26/21 Date: _____

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: **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**

Purchase Order No.: **COC #2**

Project Name: **Ameren Labadie Energy Center LCPA-CA**

Project Number: **153140602.0001A**

Section C

Invoice Information:

Attention:

Company Name: **Golder Associates Inc**

Address:

Pace Quote Reference:

Pace Project Manager: **Jamie Church**

Pace Profile #: **9285, line 1**

Page: **81** of **81**

REGULATORY AGENCY

NPDES GROUND WATER DRINKING WATER

UST RCRA OTHER

Site Location: **MO**

STATE: **MO**

ITEM #	Section D Required Client Information	Valid Matrix Codes	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test ↑	Requested Analysis Filtered (Y/N)												Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.					
					COMPOSITE START	DATE					TIME	DATE	TIME	Y	N	Y	N	Y	N	Y	N	Y			N	Y	N	Y	N
1		L-MW-26	WT G	G																									
2		L-LMW-1S	WT G	G																									
3		L-LMW-2S	WT G	G		4-21-26	1102		6	2	3	1																	
4		L-LMW-4S	WT G	G																									
5		L-LMW-7S	WT G	G																									
6		L-LMW-8S	WT G	G																									
7		L-BMW-1S	WT G	G																									
8		L-BMW-2S	WT G	G																									
9			WT G	G																									
10			WT G	G																									
11			WT G	G																									
12			WT G	G																									

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
<i>Eric Schnieder</i>	4/23/26	1725	<i>Eric Schnieder</i>	4/24/26	0310	Y	Y	N	Y
<i>Jeffrey Ingram</i>	4/23/26					N	N	N	Y

Section D Required Client Information

SAMPLER NAME AND SIGNATURE
 PRINT Name of SAMPLER: *Eric Schnieder*
 SIGNATURE of SAMPLER: *[Signature]*

DATE Signed (MM/DD/YYYY): **04/23/26**

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

MEMORANDUM**DATE** July 14, 2021**Project No.** 15314060303**TO** Project File
Golder Associates**CC** Amanda Derhake, Jeff Ingram**FROM** Annie Muehlfarth**EMAIL** AMuehlfarth@golder.com**DATA VALIDATION SUMMARY, LABADIE ENERGY CENTER – LCPA-CA – CORRECTIVE ACTION
SAMPLING APRIL 2021 - DATA PACKAGE 60366962**

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 a compound was analyzed outside of hold time, sample results were qualified as estimates (J for detects, UJ for non-detects).
- 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 Associates
 Project Name: Ameren - LEC - LCPA-CA
 Reviewer: A. Muehlfarth

Project Manager: J In gam
 Project Number: 153140603
 Validation Date: 7/14/2021

Laboratory: Pace Analytical

SDG #: 60366962

Analytical Method (type and no.): EPA 200.7/200.8 (Total Metals); EPA 7470 (Mercury); SM2320B (Alkalinity); SM2540C (TDS); EPA 300.0 (Anions);

Matrix: Air Soil/Sed. Water Waste SM 3500-FE B#4 (Ferric/Ferrous Iron); SM 4500-S-2 D (Sulfide); EPA 903.1/904.0 (Radium 226/228)

Sample Names L-MW-24, L-MW-33(D), L-MW-34(D), L-MW-35(D), L-S-1, L-TP-3M, L-TP-3D, L-TP-4D, L-CA-DUP-1, L-CA-FB-1, L-CA-FB-2, L-CA-FB-3, L-MW-26, L-LMW-1S, L-LMW-7S, L-LMW-8S, L-AMW-8, L-TP-1D, L-TP-2M, L-TP-2D, L-AM-1S, L-AM-1D, L-CA-DUP-2, L-CA-DUP-3, L-CA-MS-1, L-CA-MSD-1, L-CA-MS-2, L-CA-MSD-2, L-LMW-4S, L-LMW-2S

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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>4/15/2021 - 4/21/2021</u>
b) Sampling team indicated?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>AMM/BTT/EMS</u>
c) Sample location noted?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u></u>
d) Sample depth indicated (Soils)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u></u>
e) Sample type indicated (grab/composite)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>Grab</u>
f) Field QC noted?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>See Notes</u>
g) Field parameters collected (note types)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u></u>
h) Field Calibration within control limits?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u></u>
i) Notations of unacceptable field conditions/performances from field logs or field notes?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u></u>
j) Does the laboratory narrative indicate deficiencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u></u>

Note Deficiencies: _____

Chain-of-Custody (COC)	YES	NO	NA	COMMENTS
a) Was the COC properly completed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>See Notes</u>
b) Was the COC signed by both field and laboratory personnel?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u></u>
c) Were samples received in good condition?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>See Notes</u>

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

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

Blanks	YES	NO	NA	COMMENTS
a) Were analytes detected in the method blank(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Notes
b) Were analytes detected in the field blank(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Notes
c) Were analytes detected in the equipment blank(s)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
d) Were analytes detected in the trip blank(s)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Laboratory Control Sample (LCS)	YES	NO	NA	COMMENTS
a) Was a LCS analyzed once per SDG?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
b) Were the proper analytes included in the LCS?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
c) Was the LCS accuracy criteria met?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Duplicates	YES	NO	NA	COMMENTS
a) Were field duplicates collected (note original and duplicate sample names)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Notes
b) Were field dup. precision criteria met (note RPD)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Notes
c) Were lab duplicates analyzed (note original and duplicate samples)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
d) Were lab dup. precision criteria met (note RPD)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Notes

Blind Standards	YES	NO	NA	COMMENTS
a) Was a blind standard used (indicate name, analytes included and concentrations)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
b) Was the %D within control limits?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Matrix Spike/Matrix Spike Duplicate (MS/MSD)	YES	NO	NA	COMMENTS
a) Was MS accuracy criteria met?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Recovery could not be calculated since sample contained high concentration of analyte?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
b) Was MSD accuracy criteria met?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Recovery could not be calculated since sample contained high concentration of analyte?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
c) Were MS/MSD precision criteria met?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Comments/Notes:

A Sample Condition Upon Receipt form completed 4-17-2021 indicates that containers were received that were not listed on the COC (L-UMW-7D, L-UMW-MS-1, L-UMW-MSD-1); L-LWM-1S BP42 container received with pH of 9.5. According to the lab this is the sulfide bottle preserved with NaOH/Zinc acetate. EPA guidance states these bottles should be preserved at pH >9. No qualification necessary.

Ferrous Iron analyzed outside of hold time in all samples. All results were qualified as estimated.

Sulfate and Chloride analyzed at a dilution in several samples, no qualification necessary.

QA LEVEL IV - INORGANIC DATA EVALUATION CHECKLIST

Comments/Notes:

Barium, Beryllium, Boron, Calcium, Iron, Lithium, Magnesium, Manganese, Potassium, and Sodium analyzed at a dilution in L-LMW-8S, no qualification necessary.

MB:

2887521: Potassium (189J). Associated with samples -020 through -025. Sample results >RL and 10x blank detection, no qualification necessary.

2893278: Boron (11.4J). Associated with sample -033. Sample results >RL, no qualification necessary.

2885326: Chromium (0.47J). Associated with samples -001 through -016. All sample results <RL, qualified as non-detect.

2893284: Chromium (0.44J). Associated with sample -033, sample results <RL, qualified as non-detect.

2883996: Chloride (0.49J). Associated with samples -001 through -005. Sample results >RL but <10x blank were qualified as estimated.

2887096: Chloride (4.9J). Associated with samples -020 through -022, -024 through -027, -032. Sample results >RL but <10x blank were qualified as estimates.

L-CA-FB-1 @ L-LMW-8S: Boron (21.9J), Chromium (0.25J), TDS (21.5), Ferric Iron (0.0000000010J). Sample results <RL qualified.

L-CA-FB-2 @ L-MW-26: Boron (11.6J), Chromium (0.37J), TDS (27.0). Sample results <RL qualified.

L-CA-FB-3 @ L-S-1: Boron (10.4J), Chromium (0.32J), TDS (46.5), Ferric Iron (0.00022J), Radium-228 (0.613 ± 0.331)

DUP:

L-CA-DUP-1 @ L-MW-34D: Dup RPD exceeds limit (20%) for Chromium (26.1%), Ferrous Iron (47.6%), Radium-226 (153.9%), Radium-228 (24.5%); Lead non-detect in sample, detected in dup. These compounds qualified as estimated in both samples.

L-CA-DUP-2 @ AM-1S: Dup RPD exceeds limit (20%) for Lithium (21.7%), Molybdenum (27.2%), Chromium (21.5%), Ferrous Iron (97.3%); Lead, Selenium, Fluoride detected in sample, non-detect in dup; Radium-226 detected in dup, non-detect in sample. These compounds qualified as estimated in both samples.

L-CA-DUP-3 @ TP-2M: Dup RPD exceeds limit (20%) for Chromium (60.9%), Radium-228 (35.8%); Lead detected in sample, non-detect in dup; Sulfide detected in dup, non-detect in sample. These compounds qualified as estimated in both samples.

Lab Sample Duplicate 2881081: Dup RPD exceeds limit (10%) for TDS (23%). Associated with unrelated sample, no qualification necessary.

MS/MSD:

2885313: MS % recovery low for Boron. Associated with sample -003. Only 1 QC indicator outside control limits, no qualification necessary.

2885314/2885315: MS % recovery low for Boron; MSD % recovery low for Cobalt. MS/MSD performed on an unrelated sample, no qualification is necessary.

2889301/2889302: MS % recovery high and RPD exceeds limit for Fluoride. MS/MSD performed on an unrelated sample, no qualification necessary.

2887523: MS % recovery high for Calcium, Sodium. MS/MSD performed on an unrelated sample, no qualification necessary.

2887524/2887525: MSD % recovery high for Calcium, associated with sample -021. Only 1 QC indicator outside control limits, no qualification necessary.

2893275/2893276: MS % recovery low for Boron, Calcium, Sodium, associated with sample -032. Only 1 QC indicator outside control limits, no qualification necessary.

2893280/2893281: MS/MSD % recovery low for sodium. MS/MSD performed on an unrelated sample, no qualification necessary.

2886616: MS % recovery high for Chloride and Fluoride. MS/MSD performed on an unrelated sample, no qualification necessary.

QA LEVEL II - iNORGANIC DATA EVALUATION CHECKLIST

Data Qualification:

Sample Name	Constituent(s)	Result	Qualifier	Reason
L-MW-24	Ferrous Iron	0.048	UJ	Analyzed outside of hold time; non-detect
L-S-1	"	0.048	UJ	"
L-CA-FB-1	"	0.048	UJ	"
L-CA-FB-2	"	0.048	UJ	"
L-CA-FB-3	"	0.048	UJ	"
L-MW-26	"	0.048	UJ	"
L-LMW-2S	"	0.048	UJ	"
L-MW-33(D)	"	0.24	J	Analyzed outside of hold time
L-MW-35(D)	"	0.24	J	"
L-TP-3M	"	0.33	J	"
L-TP-3D	"	0.29	J	"
L-TP-4D	"	0.20	J	"
L-LMW-1S	"	0.096	J	"
L-LMW-7S	"	0.22	J	"
L-LMW-8S	"	0.19	J	"
L-AMW-8	"	0.13	J	"
L-TP-1D	"	0.32	J	"
L-TP-2M	"	0.11	J	"
L-TP-2D	"	0.13	J	"
L-AM-1D	"	0.19	J	"
L-CA-DUP-3	"	0.13	J	"
L-LMW-4S	"	0.35	J	"
L-MW-24	Chromium	1.0	U	Detected in MB, detected in sample <RL
L-MW-33(D)	"	1.0	U	"
L-MW-35(D)	"	1.0	U	"
L-S-1	"	1.0	U	"
L-TP-3M	"	1.0	U	"
L-TP-3D	"	1.0	U	"
L-TP-4D	"	1.0	U	"
L-CA-FB-1	"	1.0	U	"
L-CA-FB-2	"	1.0	U	"
L-CA-FB-3	"	1.0	U	"
L-LMW-1S	"	1.0	U	"
L-LMW-7S	"	1.0	U	"

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

Data Qualification:

Sample Name	Constituent(s)	Result	Qualifier	Reason
L-LMW-2S	Chromium	1.0	U	Detected in MB, detected in sample <RL
L-S-1	Chloride	1.8	U	Detected in MB and FB, detected in sample <RL
L-MW-26	Chromium	1.0	U	"
L-LMW-8S	"	1.0	U	"
L-AMW-8	Chloride	20.4	J	Detected in MB, sample result <10x blank
L-TP-1D	"	4.6	J	"
L-TP-2M	"	20.8	J	"
L-AM-1D	"	39.8	J	"
L-CA-DUP-3	"	21.5	J	"
L-LMW-4S	"	25.4	J	"
L-MW-34(D)	Chromium	1.0	UJ	Detected in MB, detected in sample <RL; Dup RPD exceeds limit
"	Ferrous Iron	0.26	J	Dup RPD exceeds limit; analyzed outside hold time
"	Radium-226	0.207 ± 0.443	J	Dup RPD exceeds limit
"	Radium-228	1.33 ± 0.524	J	"
"	Lead	3.8	UJ	Non-detect in sample, detected in dup
L-CA-DUP-1	Chromium	1.0	UJ	Detected in MB, detected in sample <RL; Dup RPD exceeds limit
"	Ferrous Iron	0.16	J	Dup RPD exceeds limit; analyzed outside hold time
"	Radium-226	1.59 ± 0.730	J	Dup RPD exceeds limit
"	Radium-228	1.04 ± 0.467	J	"
"	Lead	5.8	J	Non-detect in sample, detected in dup
L-AM-1S	Lithium	30.8	J	Dup RPD exceeds limit
"	Molybdenum	4.6	J	"
"	Chromium	0.36	J	"
"	Ferrous Iron	0.22	J	Dup RPD exceeds limit; analyzed outside hold time
"	Lead	6.0	J	Detected in sample, non-detect in dup
"	Selenium	0.20	J	"
"	Fluoride	0.32	J	"
"	Radium-226	0.841 ± 0.642	UJ	Detected in dup, non-detect in sample
L-CA-DUP-2	Lithium	38.3	J	Dup RPD exceeds limit
"	Molybdenum	3.5	J	"
"	Chromium	0.29	J	"
"	Ferrous Iron	0.076	J	Dup RPD exceeds limit; analyzed outside hold time
"	Lead	3.8	UJ	Detected in sample, non-detect in dup
L-CA-DUP-2	Selenium	0.18	UJ	"

QA LEVEL IV - INORGANIC DATA EVALUATION CHECKLIST

Data Qualification:

Sample Name	Constituent(s)	Result	Qualifier	Reason
L-CA-DUP-2	Fluoride	0.086	UJ	Detected in sample, non-detect in dup
"	Radium-226	0.739 ± 0.460	J	Detected in dup, non-detect in sample
TP-2M	Chromium	0.24	J	Dup RPD exceeds limit
"	Radium-228	1.45 ± 0.583	J	"
"	Lead	4.2	J	Detected in sample, non-detect in dup
"	Sulfide	0.026	UJ	Non-detect in sample, detect in dup
L-CA-DUP-3	Chromium	0.45	J	Dup RPD exceeds limit
"	Radium-228	1.01 ± 0.507	J	"
"	Lead	3.8	UJ	Detected in sample, non-detect in dup
"	Sulfide	0.032	J	Non-detect in sample, detect in dup

Signature:



Date:

7/14/2021

June 21, 2021

Jeffrey Ingram
Golder Associates
13515 Barrett Parkway Drive
Suite 260
Ballwin, MO 63021

RE: Project: AMEREN-Verification-LCPA
Pace Project No.: 60371614

Dear Jeffrey Ingram:

Enclosed are the analytical results for sample(s) received by the laboratory on June 09, 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 - 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



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: AMEREN-Verification-LCPA

Pace Project No.: 60371614

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 #: 200030

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

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SAMPLE SUMMARY

Project: AMEREN-Verification-LCPA

Pace Project No.: 60371614

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60371614001	L-UMW-3D	Water	06/07/21 14:52	06/09/21 04:00
60371614002	L-UMW-7D	Water	06/08/21 14:00	06/09/21 04:00
60371614003	L-LCPA-FB-1	Water	06/08/21 14:20	06/09/21 04:00
60371614004	L-LCPA-DUP-1	Water	06/08/21 08:00	06/09/21 04:00

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SAMPLE ANALYTE COUNT

Project: AMEREN-Verification-LCPA

Pace Project No.: 60371614

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60371614001	L-UMW-3D	EPA 300.0	CRN2	2	PASI-K
60371614002	L-UMW-7D	EPA 300.0	CRN2	2	PASI-K
60371614003	L-LCPA-FB-1	EPA 300.0	CRN2	2	PASI-K
60371614004	L-LCPA-DUP-1	EPA 300.0	CRN2	2	PASI-K

PASI-K = Pace Analytical Services - Kansas City

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN-Verification-LCPA

Pace Project No.: 60371614

Sample: L-UMW-3D **Lab ID: 60371614001** Collected: 06/07/21 14:52 Received: 06/09/21 04:00 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									
Chloride	21.3	mg/L	2.0	0.78	2		06/18/21 18:43	16887-00-6	
Fluoride	<0.086	mg/L	0.20	0.086	1		06/18/21 17:30	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN-Verification-LCPA

Pace Project No.: 60371614

Sample: L-UMW-7D **Lab ID: 60371614002** Collected: 06/08/21 14:00 Received: 06/09/21 04:00 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							
Chloride	6.0	mg/L	1.0	0.39	1		06/17/21 14:11	16887-00-6	B
Fluoride	0.25	mg/L	0.20	0.086	1		06/17/21 14:11	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN-Verification-LCPA

Pace Project No.: 60371614

Sample: L-LCPA-FB-1 **Lab ID: 60371614003** Collected: 06/08/21 14:20 Received: 06/09/21 04:00 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									
Chloride	0.65J	mg/L	1.0	0.39	1		06/17/21 14:59	16887-00-6	B
Fluoride	<0.086	mg/L	0.20	0.086	1		06/17/21 14:59	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN-Verification-LCPA

Pace Project No.: 60371614

Sample: L-LCPA-DUP-1 **Lab ID: 60371614004** Collected: 06/08/21 08:00 Received: 06/09/21 04:00 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							
Chloride	6.3	mg/L	1.0	0.39	1		06/17/21 15:11	16887-00-6	B
Fluoride	0.14J	mg/L	0.20	0.086	1		06/17/21 15:11	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN-Verification-LCPA

Pace Project No.: 60371614

QC Batch: 726791

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: 60371614002, 60371614003, 60371614004

METHOD BLANK: 2920009

Matrix: Water

Associated Lab Samples: 60371614002, 60371614003, 60371614004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.65J	1.0	0.39	06/17/21 08:37	
Fluoride	mg/L	<0.086	0.20	0.086	06/17/21 08:37	

METHOD BLANK: 2923076

Matrix: Water

Associated Lab Samples: 60371614002, 60371614003, 60371614004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.39	1.0	0.39	06/18/21 09:15	
Fluoride	mg/L	<0.086	0.20	0.086	06/18/21 09:15	

LABORATORY CONTROL SAMPLE: 2920010

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	2.5	100	90-110	

LABORATORY CONTROL SAMPLE: 2923077

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	5.2	104	90-110	
Fluoride	mg/L	2.5	2.7	109	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2920012 2920013

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		60371788001 Result	Spike Conc.	Spike Conc.	MS Result						
Chloride	mg/L	144	100	100	205	230	60	85	80-120	12	15 M1
Fluoride	mg/L	ND	50	50	52.4	63.6	105	127	80-120	19	15 M1,R1

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-LCPA

Pace Project No.: 60371614

MATRIX SPIKE SAMPLE: 2920014

Parameter	Units	60371523003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	226	100	337	111	80-120	
Fluoride	mg/L	ND	50	56.2	112	80-120	

SAMPLE DUPLICATE: 2920011

Parameter	Units	60371788001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chloride	mg/L	144	111	26	15	D6
Fluoride	mg/L	ND	<1.7		15	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN-Verification-LCPA

Pace Project No.: 60371614

QC Batch: 727236

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: 60371614001

METHOD BLANK: 2921782

Matrix: Water

Associated Lab Samples: 60371614001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.67J	1.0	0.39	06/18/21 15:42	
Fluoride	mg/L	<0.086	0.20	0.086	06/18/21 15:42	

METHOD BLANK: 2923401

Matrix: Water

Associated Lab Samples: 60371614001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.59J	1.0	0.39	06/21/21 08:40	
Fluoride	mg/L	<0.086	0.20	0.086	06/21/21 08:40	

LABORATORY CONTROL SAMPLE: 2921783

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	2.5	100	90-110	

LABORATORY CONTROL SAMPLE: 2923402

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	2.3	91	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2921784 2921785

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		60371614001 Result	Spike Conc.	Spike Conc.	Result						
Chloride	mg/L	21.3	10	10	31.3	31.5	100	102	80-120	1	15
Fluoride	mg/L	<0.086	2.5	2.5	2.7	2.8	104	108	80-120	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-LCPA

Pace Project No.: 60371614

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2921787												2921788	
Parameter	Units	60371615002 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
			Spike Conc.	Spike Conc.									
Chloride	mg/L	16.2	5	5	21.6	21.8	108	112	80-120	1	15	E	
Fluoride	mg/L	<0.086	2.5	2.5	2.9	3.0	115	118	80-120	3	15		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2921790												2921791	
Parameter	Units	60371616004 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
			Spike Conc.	Spike Conc.									
Chloride	mg/L	6.3	5	5	11.3	11.3	99	100	80-120	0	15		
Fluoride	mg/L	0.15J	2.5	2.5	2.7	2.8	102	104	80-120	2	15		

SAMPLE DUPLICATE: 2921786						
Parameter	Units	60371614001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chloride	mg/L	21.3	21.3	0	15	
Fluoride	mg/L	<0.086	0.097J		15	

SAMPLE DUPLICATE: 2921789						
Parameter	Units	60371615002 Result	Dup Result	RPD	Max RPD	Qualifiers
Chloride	mg/L	16.2	16.2	0	15	
Fluoride	mg/L	<0.086	0.29		15	

SAMPLE DUPLICATE: 2921792						
Parameter	Units	60371616004 Result	Dup Result	RPD	Max RPD	Qualifiers
Chloride	mg/L	6.3	6.3	0	15	
Fluoride	mg/L	0.15J	0.14J		15	

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

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: AMEREN-Verification-LCPA

Pace Project No.: 60371614

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.

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.

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

R1 RPD value was outside control limits.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN-Verification-LCPA
Pace Project No.: 60371614

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60371614001	L-UMW-3D	EPA 300.0	727236		
60371614002	L-UMW-7D	EPA 300.0	726791		
60371614003	L-LCPA-FB-1	EPA 300.0	726791		
60371614004	L-LCPA-DUP-1	EPA 300.0	726791		

REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

WO#: 60371614



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 Ziploc

Thermometer Used: T298 Type of Ice: Ice Blue None

Cooler Temperature (°C): As-read 1.0 Corr. Factor 0.0 Corrected 1.0
Temperature should be above freezing to 6°C 1.3 2.0 1.3 2.0

Date and initials of person examining contents: 6/9/21

Chain of Custody present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<u>2.0</u>
Chain of Custody relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Samples arrived within holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Short Hold Time analyses (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Correct containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Sample labels match COC: Date / time / ID / analyses	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Samples contain multiple phases? Matrix: <u>wt</u>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Containers requiring pH preservation in compliance? (HNO ₃ , H ₂ SO ₄ , HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> 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)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Potassium iodide test strip turns blue/purple? (Preserve)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Trip Blank present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Samples from USDA Regulated Area: State:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> 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 9:56 pm, 6/9/21

Project Manager Review: _____ Date: _____

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: 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 - Verification Sampling - LCA Project Number: 153140603.0001A	Section C Invoice Information: Attention: Company Name: Address: Pace Quote Reference: Pace Project Manager: Jamie Church Pace Profile #: 9285	REGULATORY AGENCY <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER Site Location STATE: MO
--	---	--	--

ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX CODE DW DRINKING WATER WT WASTE WATER P PRODUCT SS SOLID OIL	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	Requested Analysis Filtered (Y/N)										Residual Chlorine (Y/N)							
					COMPOSITE START	COMPOSITE END/GRAB		DATE	TIME	DATE	TIME	200.7 Boron	200.7 Calcium	Chloride	Fluoride	Sulfate	TDS								
1	L-Umw-3D		WT G	G	6-7-21	1452		1	1	1	1	1	1	1	1	1	1	1	1	1	1			60571614 Pace Project No./ Lab I.D.	
2	L-Umw-7D		WT G	G	6-8-21	1400		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
3	L-LCPA-FB-1		WT G	G	6-8-21	1420		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
4	L-LCPA-DUG-1		WT G	G	6-8-21	---		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
5	L-LCPA-MS-1		WT G	G	6-7-21	1452		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
6	L-LCPA-MSD-1		WT G	G	6-7-21	1452		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
7			WT G	G																					
8			WT G	G																					
9			WT G	G																					
10			WT G	G																					
11			WT G	G																					
12			WT G	G																					

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	<i>Brandon Talbert/Golder</i>	6-8-21	1750	<i>Brandon Talbert</i>	6-8-21	1400	Temp in °C: 1.0 Ice (Y/N): Y Cooler (Y/N): Y Custody Sealed (Y/N): Y Samples Intact (Y/N): Y

SAMPLER NAME AND SIGNATURE	DATE Signed (MM/DD/YY): 06/08/21
PRINT Name of SAMPLER: <i>Brandon Talbert</i>	
SIGNATURE of SAMPLER: <i>Br-Talbert</i>	

MEMORANDUM**DATE** August 31, 2021**Project No.** 153140603**TO** Project File
Golder Associates**CC** Amanda Derhake, Jeff Ingram**FROM** Annie Muehlfarth**EMAIL** AMuehlfarth@golder.com**DATA VALIDATION SUMMARY, LABADIE ENERGY CENTER – LCPA – VERIFICATION SAMPLING - DATA PACKAGE 60371614**

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).

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

Company Name: Golder Associates
 Project Name: Ameren - LEC - LCPA
 Reviewer: A. Muehlfarth

Project Manager: J. Ingram
 Project Number: 153140603
 Validation Date: 8/31/2021

Laboratory: Pace Analytical - Kansas City

SDG #: 60371614

Analytical Method (type and no.): EPA 300.0 (Anions)

Matrix: Air Soil/Sed. Water Waste

Sample Names L-UMW-3D, L-UMW-7D, L-LCPA-FB-1, L-LCPA-DUP-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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>6/7/2021 - 6/8/2021</u>
b) Sampling team indicated?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>BTT/SSS</u>
c) Sample location noted?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u></u>
d) Sample depth indicated (Soils)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u></u>
e) Sample type indicated (grab/composite)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>Grab</u>
f) Field QC noted?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>See Notes</u>
g) Field parameters collected (note types)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>pH, Sp. Conductivity, ORP, Temp, DO, Turbidity</u>
h) Field Calibration within control limits?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u></u>
i) Notations of unacceptable field conditions/performances from field logs or field notes?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u></u>
j) Does the laboratory narrative indicate deficiencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u></u>

Note Deficiencies: _____

Chain-of-Custody (COC)	YES	NO	NA	COMMENTS
a) Was the COC properly completed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u></u>
b) Was the COC signed by both field and laboratory personnel?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u></u>
c) Were samples received in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u></u>

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

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

Blanks	YES	NO	NA	COMMENTS
a) Were analytes detected in the method blank(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Notes
b) Were analytes detected in the field blank(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Notes
c) Were analytes detected in the equipment blank(s)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
d) Were analytes detected in the trip blank(s)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Laboratory Control Sample (LCS)	YES	NO	NA	COMMENTS
a) Was a LCS analyzed once per SDG?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
b) Were the proper analytes included in the LCS?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
c) Was the LCS accuracy criteria met?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Duplicates	YES	NO	NA	COMMENTS
a) Were field duplicates collected (note original and duplicate sample names)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	L-LCPA-DUP-1 @ L-UMW-7D
b) Were field dup. precision criteria met (note RPD)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Notes
c) Were lab duplicates analyzed (note original and duplicate samples)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
d) Were lab dup. precision criteria met (note RPD)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Notes

Blind Standards	YES	NO	NA	COMMENTS
a) Was a blind standard used (indicate name, analytes included and concentrations)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
b) Was the %D within control limits?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Matrix Spike/Matrix Spike Duplicate (MS/MSD)	YES	NO	NA	COMMENTS
a) Was MS accuracy criteria met?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Notes
Recovery could not be calculated since sample contained high concentration of analyte?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
b) Was MSD accuracy criteria met?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Notes
Recovery could not be calculated since sample contained high concentration of analyte?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
c) Were MS/MSD precision criteria met?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Notes

Comments/Notes:

Dilutions: Chloride was diluted in L-UMW-3D, no qualification necessary.

Method Blanks:

2920009: Chloride (0.65J), associated with samples -002 through -004. Sample results >RL but <10x the blank were qualified as estimates, sample results <RL were qualified as non-detect.

QA LEVEL IV - INORGANIC DATA EVALUATION CHECKLIST

Comments/Notes:

2923401/2921782: Chloride (0.59J/0.67J), associated with sample -001. Sample result >RL and 10x blank, no qualification necessary.

Field Blanks:

L-LCPA-FB-1 @ L-UMW-7D: Chloride (0.65J). Field blank detection qualified non-detect based on method blank detection.

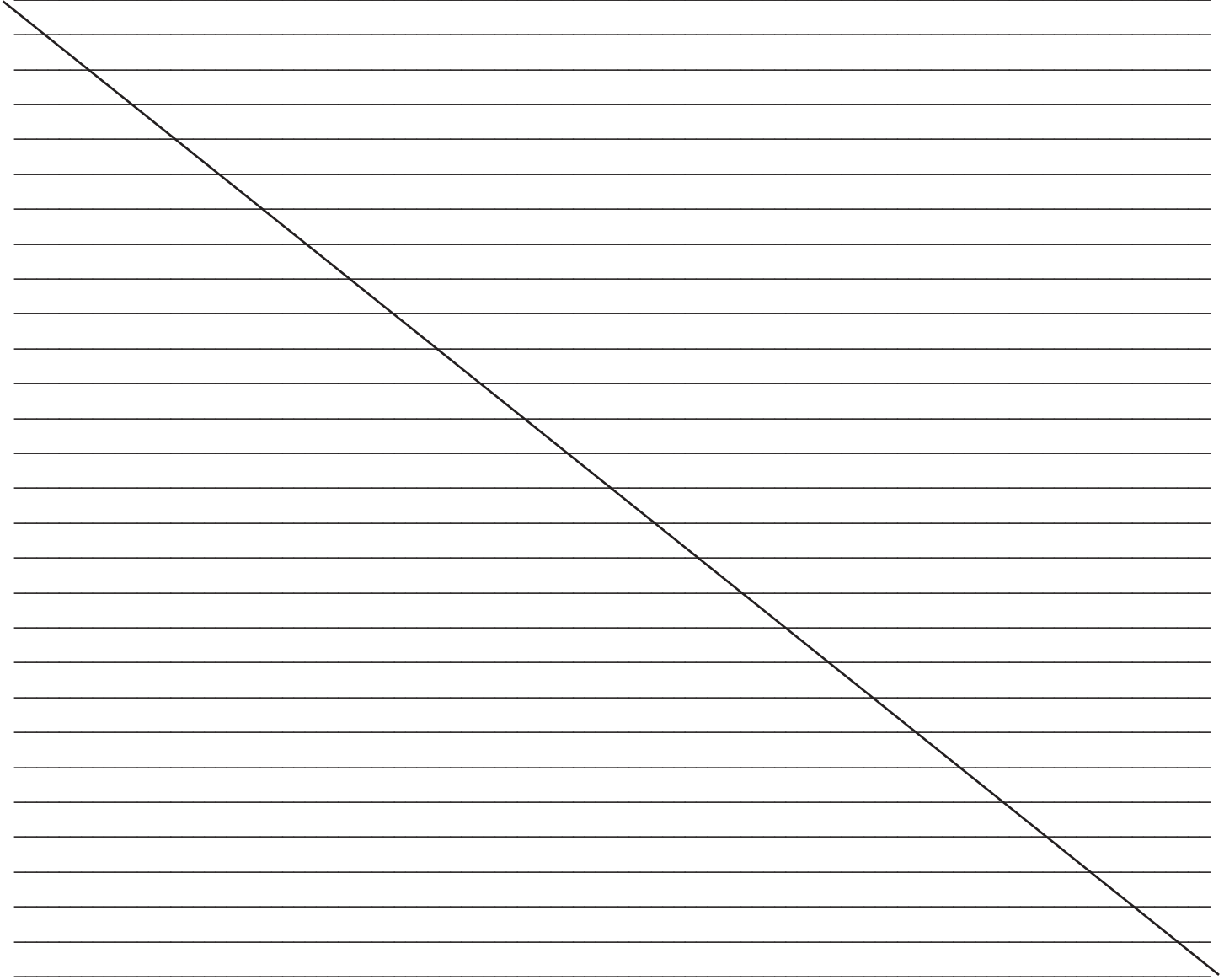
Duplicates:

L-LCPA-DUP-1 @ L-UMW-7D: DUP RPD exceeds limit (20%) for Fluoride (56.4%).

Lab Duplicate 2920011: DUP RPD exceeds limit (15%) for Chloride (26%). Duplicate performed on unrelated sample, no qualification necessary.

MS/MSD:

2920012/2920013: MS % recovery low for Chloride; MSD % recovery high and RPD exceeds limit 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
L-UMW-7D	Chloride	6.0	J	Detected in MB, 10x blank > result >RL
L-LCPA-DUP-1	"	6.3	J	"
L-LCPA-FB-1	"	1.0	U	Detected in MB, result <RL
L-UMW-7D	Fluoride	0.25	J	DUP RPD exceeds limit
L-LCPA-DUP-1	"	0.14	J	"

Signature: Ann Mulharty

Date: 8/31/2021

December 27, 2021

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

RE: Project: AMEREN LCPA
Pace Project No.: 60385384

Dear Jeffrey Ingram:

Enclosed are the analytical results for sample(s) received by the laboratory between November 03, 2021 and November 06, 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

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

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CERTIFICATIONS

Project: AMEREN LCPA

Pace Project No.: 60385384

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 #: 9526

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

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SAMPLE SUMMARY

Project: AMEREN LCPA

Pace Project No.: 60385384

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60385384001	L-UMW-1D	Water	11/02/21 10:02	11/03/21 03:48
60385384002	L-UMW-2D	Water	11/02/21 14:35	11/03/21 03:48
60385384003	L-UMW-5D	Water	11/02/21 14:00	11/03/21 03:48
60385384004	L-UMW-6D	Water	11/02/21 11:16	11/03/21 03:48
60385384005	L-UMW-FB-1	Water	11/02/21 11:30	11/03/21 03:48
60385384006	L-BMW-1D	Water	11/01/21 10:35	11/03/21 03:48
60385384007	L-BMW-2D	Water	11/01/21 14:40	11/03/21 03:48
60385384008	L-UMW-DUP-1	Water	11/01/21 00:00	11/03/21 03:48
60385384009	L-UMW-MS-1	Water	11/01/21 10:02	11/03/21 03:48
60385384010	L-UMW-MSD-1	Water	11/01/21 10:02	11/03/21 03:48
60385384011	L-UMW-3D	Water	11/03/21 16:05	11/06/21 05:30
60385384012	L-UMW-4D	Water	11/03/21 13:37	11/06/21 05:30
60385384013	L-UMW-7D	Water	11/04/21 09:27	11/06/21 05:30
60385384014	L-UMW-8D	Water	11/05/21 10:00	11/06/21 05:30
60385384015	L-UMW-9D	Water	11/05/21 11:03	11/06/21 05:30
60385384016	L-UMW-DUP-2	Water	11/04/21 00:00	11/06/21 05:30
60385384017	L-UMW-FB-2	Water	11/03/21 14:00	11/06/21 05:30

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: AMEREN LCPA

Pace Project No.: 60385384

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60385384001	L-UMW-1D	EPA 200.7	MA1	10	PASI-K
		EPA 200.8	MRV	3	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
60385384002	L-UMW-2D	EPA 200.7	MA1	10	PASI-K
		EPA 200.8	MRV	3	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	ALH	3	PASI-K
60385384003	L-UMW-5D	EPA 200.7	MA1	10	PASI-K
		EPA 200.8	MRV	3	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	ALH	3	PASI-K
60385384004	L-UMW-6D	EPA 200.7	MA1	10	PASI-K
		EPA 200.8	MRV	3	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
60385384005	L-UMW-FB-1	EPA 200.7	MA1	10	PASI-K
		EPA 200.8	MRV	3	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
60385384006	L-BMW-1D	EPA 200.7	MA1	10	PASI-K
		EPA 200.8	MRV	3	PASI-K

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SAMPLE ANALYTE COUNT

Project: AMEREN LCPA

Pace Project No.: 60385384

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60385384007	L-BMW-2D	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
		EPA 200.7	MA1	10	PASI-K
		EPA 200.8	MRV	3	PASI-K
		EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
		SM 2320B	SWJ	1	PASI-I
60385384008	L-UMW-DUP-1	SM 2540C	BLA	1	PASI-K
		EPA 300.0	MAW	3	PASI-K
		EPA 200.7	MA1	10	PASI-K
		EPA 200.8	MRV	3	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
		EPA 903.1	SLC	1	PASI-PA
60385384009	L-UMW-MS-1	EPA 904.0	JC2	1	PASI-PA
		EPA 903.1	SLC	1	PASI-PA
60385384010	L-UMW-MSD-1	EPA 904.0	JC2	1	PASI-PA
		EPA 200.7	MA1	10	PASI-K
60385384011	L-UMW-3D	EPA 200.8	MRV	3	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
		EPA 200.7	MA1	10	PASI-K
		EPA 200.8	MRV	3	PASI-K
		EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
60385384012	L-UMW-4D	SM 2320B	SWJ	1	PASI-I
		SM 2540C	BLA	1	PASI-K
		EPA 300.0	LDB	3	PASI-K

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SAMPLE ANALYTE COUNT

Project: AMEREN LCPA

Pace Project No.: 60385384

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60385384013	L-UMW-7D	EPA 200.7	MA1	10	PASI-K
		EPA 200.8	MRV	3	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
60385384014	L-UMW-8D	EPA 200.7	MA1	10	PASI-K
		EPA 200.8	MRV	3	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
60385384015	L-UMW-9D	EPA 200.7	MA1	10	PASI-K
		EPA 200.8	MRV	3	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
60385384016	L-UMW-DUP-2	EPA 200.7	MA1	10	PASI-K
		EPA 200.8	MRV	3	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
60385384017	L-UMW-FB-2	EPA 200.7	MA1	10	PASI-K
		EPA 200.8	MRV	3	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

PASI-I = Pace Analytical Services - Indianapolis

PASI-K = Pace Analytical Services - Kansas City

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SAMPLE ANALYTE COUNT

Project: AMEREN LCPA

Pace Project No.: 60385384

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
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PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LCPA

Pace Project No.: 60385384

Sample: L-UMW-1D **Lab ID: 60385384001** Collected: 11/02/21 10:02 Received: 11/03/21 03:48 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	539	ug/L	5.0	1.8	1	11/22/21 16:33	11/30/21 16:18	7440-39-3	
Boron	611	ug/L	100	8.6	1	11/22/21 16:33	11/30/21 16:18	7440-42-8	
Calcium	156000	ug/L	2000	754	10	11/22/21 16:33	12/01/21 13:32	7440-70-2	
Iron	18900	ug/L	50.0	21.4	1	11/22/21 16:33	11/30/21 16:18	7439-89-6	
Lithium	<76.7	ug/L	100	76.7	10	11/22/21 16:33	12/01/21 13:32	7439-93-2	
Magnesium	37700	ug/L	50.0	31.4	1	11/22/21 16:33	11/30/21 16:18	7439-95-4	
Manganese	429	ug/L	5.0	0.74	1	11/22/21 16:33	11/30/21 16:18	7439-96-5	
Molybdenum	3.5J	ug/L	20.0	2.2	1	11/22/21 16:33	11/30/21 16:18	7439-98-7	
Potassium	6640	ug/L	500	146	1	11/22/21 16:33	11/30/21 16:18	7440-09-7	
Sodium	25900	ug/L	500	254	1	11/22/21 16:33	11/30/21 16:18	7440-23-5	
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8									
Pace Analytical Services - Kansas City									
Arsenic	46.6	ug/L	1.0	0.11	1	11/24/21 08:36	11/30/21 11:58	7440-38-2	
Chromium	0.28J	ug/L	1.0	0.23	1	11/24/21 08:36	11/30/21 11:58	7440-47-3	
Selenium	<0.18	ug/L	1.0	0.18	1	11/24/21 08:36	11/30/21 11:58	7782-49-2	
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Indianapolis									
Alkalinity, Total as CaCO3	498	mg/L	2.0	2.0	1		11/10/21 12:29		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Kansas City									
Total Dissolved Solids	617	mg/L	10.0	10.0	1		11/09/21 09:44		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0									
Pace Analytical Services - Kansas City									
Chloride	11.1	mg/L	1.0	0.39	1		11/19/21 12:33	16887-00-6	
Fluoride	0.21	mg/L	0.20	0.086	1		11/19/21 12:33	16984-48-8	
Sulfate	39.2	mg/L	5.0	2.1	5		11/19/21 13:13	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LCPA

Pace Project No.: 60385384

Sample: L-UMW-2D **Lab ID: 60385384002** Collected: 11/02/21 14:35 Received: 11/03/21 03:48 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	138	ug/L	5.0	1.8	1	11/22/21 16:33	11/30/21 16:25	7440-39-3	
Boron	1040	ug/L	100	8.6	1	11/22/21 16:33	11/30/21 16:25	7440-42-8	
Calcium	124000	ug/L	2000	754	10	11/22/21 16:33	12/01/21 13:38	7440-70-2	
Iron	3580	ug/L	50.0	21.4	1	11/22/21 16:33	11/30/21 16:25	7439-89-6	
Lithium	<76.7	ug/L	100	76.7	10	11/22/21 16:33	12/01/21 13:38	7439-93-2	
Magnesium	25300	ug/L	50.0	31.4	1	11/22/21 16:33	11/30/21 16:25	7439-95-4	
Manganese	396	ug/L	5.0	0.74	1	11/22/21 16:33	11/30/21 16:25	7439-96-5	
Molybdenum	36.5	ug/L	20.0	2.2	1	11/22/21 16:33	11/30/21 16:25	7439-98-7	
Potassium	7680	ug/L	500	146	1	11/22/21 16:33	11/30/21 16:25	7440-09-7	
Sodium	67800	ug/L	500	254	1	11/22/21 16:33	11/30/21 16:25	7440-23-5	
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8									
Pace Analytical Services - Kansas City									
Arsenic	1.2	ug/L	1.0	0.11	1	11/24/21 08:36	11/30/21 12:06	7440-38-2	
Chromium	0.33J	ug/L	1.0	0.23	1	11/24/21 08:36	11/30/21 12:06	7440-47-3	
Selenium	<0.18	ug/L	1.0	0.18	1	11/24/21 08:36	11/30/21 12:06	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		11/10/21 10:58		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Kansas City									
Total Dissolved Solids	616	mg/L	10.0	10.0	1		11/09/21 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		11/17/21 12:30	16887-00-6	M1,R1
Fluoride	0.35	mg/L	0.20	0.086	1		11/17/21 03:44	16984-48-8	L2
Sulfate	115	mg/L	10.0	4.2	10		11/16/21 23:51	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LCPA

Pace Project No.: 60385384

Sample: L-UMW-5D **Lab ID: 60385384003** Collected: 11/02/21 14:00 Received: 11/03/21 03:48 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	76.9	ug/L	5.0	1.8	1	11/22/21 16:33	11/30/21 16:27	7440-39-3	
Boron	7940	ug/L	100	8.6	1	11/22/21 16:33	11/30/21 16:27	7440-42-8	
Calcium	78400	ug/L	200	75.4	1	11/22/21 16:33	11/30/21 16:27	7440-70-2	
Iron	32.0J	ug/L	50.0	21.4	1	11/22/21 16:33	11/30/21 16:27	7439-89-6	
Lithium	19.6	ug/L	10.0	7.7	1	11/22/21 16:33	11/30/21 16:27	7439-93-2	
Magnesium	79.9	ug/L	50.0	31.4	1	11/22/21 16:33	11/30/21 16:27	7439-95-4	
Manganese	9.4	ug/L	5.0	0.74	1	11/22/21 16:33	11/30/21 16:27	7439-96-5	
Molybdenum	584	ug/L	20.0	2.2	1	11/22/21 16:33	11/30/21 16:27	7439-98-7	
Potassium	13500	ug/L	500	146	1	11/22/21 16:33	11/30/21 16:27	7440-09-7	
Sodium	79800	ug/L	500	254	1	11/22/21 16:33	11/30/21 16:27	7440-23-5	
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8									
Pace Analytical Services - Kansas City									
Arsenic	19.1	ug/L	1.0	0.11	1	11/24/21 08:36	11/30/21 12:08	7440-38-2	
Chromium	0.29J	ug/L	1.0	0.23	1	11/24/21 08:36	11/30/21 12:08	7440-47-3	
Selenium	0.18J	ug/L	1.0	0.18	1	11/24/21 08:36	11/30/21 12:08	7782-49-2	
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Indianapolis									
Alkalinity, Total as CaCO3	64.7	mg/L	2.0	2.0	1		11/10/21 10:58		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Kansas City									
Total Dissolved Solids	544	mg/L	10.0	10.0	1		11/09/21 09:45		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0									
Pace Analytical Services - Kansas City									
Chloride	18.8	mg/L	2.0	0.78	2		11/17/21 01:04	16887-00-6	
Fluoride	0.19J	mg/L	0.20	0.086	1		11/17/21 00:46	16984-48-8	L2
Sulfate	271	mg/L	20.0	8.4	20		11/17/21 01:23	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LCPA

Pace Project No.: 60385384

Sample: L-UMW-6D **Lab ID: 60385384004** Collected: 11/02/21 11:16 Received: 11/03/21 03:48 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	112	ug/L	5.0	1.8	1	11/22/21 16:33	11/30/21 16:29	7440-39-3	
Boron	13200	ug/L	100	8.6	1	11/22/21 16:33	11/30/21 16:29	7440-42-8	
Calcium	126000	ug/L	2000	754	10	11/22/21 16:33	12/01/21 13:40	7440-70-2	
Iron	568	ug/L	50.0	21.4	1	11/22/21 16:33	11/30/21 16:29	7439-89-6	
Lithium	<76.7	ug/L	100	76.7	10	11/22/21 16:33	12/01/21 13:40	7439-93-2	
Magnesium	5500	ug/L	50.0	31.4	1	11/22/21 16:33	11/30/21 16:29	7439-95-4	
Manganese	432	ug/L	5.0	0.74	1	11/22/21 16:33	11/30/21 16:29	7439-96-5	
Molybdenum	518	ug/L	20.0	2.2	1	11/22/21 16:33	11/30/21 16:29	7439-98-7	
Potassium	24100	ug/L	500	146	1	11/22/21 16:33	11/30/21 16:29	7440-09-7	
Sodium	108000	ug/L	500	254	1	11/22/21 16:33	11/30/21 16:29	7440-23-5	
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8									
Pace Analytical Services - Kansas City									
Arsenic	14.6	ug/L	1.0	0.11	1	11/24/21 08:36	11/30/21 12:10	7440-38-2	
Chromium	<0.23	ug/L	1.0	0.23	1	11/24/21 08:36	11/30/21 12:10	7440-47-3	
Selenium	0.18J	ug/L	1.0	0.18	1	11/24/21 08:36	11/30/21 12:10	7782-49-2	
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Indianapolis									
Alkalinity, Total as CaCO3	49.1	mg/L	2.0	2.0	1		11/10/21 10:58		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Kansas City									
Total Dissolved Solids	901	mg/L	10.0	10.0	1		11/09/21 09:45		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0									
Pace Analytical Services - Kansas City									
Chloride	19.9	mg/L	1.0	0.39	1		11/19/21 13:53	16887-00-6	
Fluoride	<0.086	mg/L	0.20	0.086	1		11/19/21 13:53	16984-48-8	
Sulfate	514	mg/L	50.0	21.0	50		11/19/21 14:47	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LCPA

Pace Project No.: 60385384

Sample: L-UMW-FB-1 **Lab ID: 60385384005** Collected: 11/02/21 11:30 Received: 11/03/21 03:48 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	<1.8	ug/L	5.0	1.8	1	11/22/21 16:33	11/30/21 16:31	7440-39-3	
Boron	9.9J	ug/L	100	8.6	1	11/22/21 16:33	11/30/21 16:31	7440-42-8	
Calcium	<75.4	ug/L	200	75.4	1	11/22/21 16:33	11/30/21 16:31	7440-70-2	
Iron	<21.4	ug/L	50.0	21.4	1	11/22/21 16:33	11/30/21 16:31	7439-89-6	
Lithium	<7.7	ug/L	10.0	7.7	1	11/22/21 16:33	11/30/21 16:31	7439-93-2	
Magnesium	<31.4	ug/L	50.0	31.4	1	11/22/21 16:33	11/30/21 16:31	7439-95-4	
Manganese	<0.74	ug/L	5.0	0.74	1	11/22/21 16:33	11/30/21 16:31	7439-96-5	
Molybdenum	<2.2	ug/L	20.0	2.2	1	11/22/21 16:33	11/30/21 16:31	7439-98-7	
Potassium	<146	ug/L	500	146	1	11/22/21 16:33	11/30/21 16:31	7440-09-7	
Sodium	<254	ug/L	500	254	1	11/22/21 16:33	11/30/21 16:31	7440-23-5	
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8									
Pace Analytical Services - Kansas City									
Arsenic	<0.11	ug/L	1.0	0.11	1	11/24/21 08:36	11/30/21 12:11	7440-38-2	
Chromium	0.41J	ug/L	1.0	0.23	1	11/24/21 08:36	11/30/21 12:11	7440-47-3	
Selenium	<0.18	ug/L	1.0	0.18	1	11/24/21 08:36	11/30/21 12:11	7782-49-2	
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Indianapolis									
Alkalinity, Total as CaCO3	2.9	mg/L	2.0	2.0	1		11/10/21 10:58		
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		11/09/21 09:45		
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		11/19/21 15:00	16887-00-6	
Fluoride	<0.086	mg/L	0.20	0.086	1		11/19/21 15:00	16984-48-8	
Sulfate	<0.42	mg/L	1.0	0.42	1		11/19/21 15:00	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LCPA

Pace Project No.: 60385384

Sample: L-BMW-1D **Lab ID: 60385384006** Collected: 11/01/21 10:35 Received: 11/03/21 03:48 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	1090	ug/L	5.0	1.8	1	11/22/21 16:33	11/30/21 16:33	7440-39-3	
Boron	72.6J	ug/L	100	8.6	1	11/22/21 16:33	11/30/21 16:33	7440-42-8	
Calcium	133000	ug/L	2000	754	10	11/22/21 16:33	12/01/21 13:42	7440-70-2	
Iron	10700	ug/L	50.0	21.4	1	11/22/21 16:33	11/30/21 16:33	7439-89-6	
Lithium	<76.7	ug/L	100	76.7	10	11/22/21 16:33	12/01/21 13:42	7439-93-2	
Magnesium	29000	ug/L	50.0	31.4	1	11/22/21 16:33	11/30/21 16:33	7439-95-4	
Manganese	650	ug/L	5.0	0.74	1	11/22/21 16:33	11/30/21 16:33	7439-96-5	
Molybdenum	<2.2	ug/L	20.0	2.2	1	11/22/21 16:33	11/30/21 16:33	7439-98-7	
Potassium	4320	ug/L	500	146	1	11/22/21 16:33	11/30/21 16:33	7440-09-7	
Sodium	9720	ug/L	500	254	1	11/22/21 16:33	11/30/21 16:33	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	11/24/21 08:36	11/30/21 12:13	7440-38-2	
Chromium	0.35J	ug/L	1.0	0.23	1	11/24/21 08:36	11/30/21 12:13	7440-47-3	
Selenium	<0.18	ug/L	1.0	0.18	1	11/24/21 08:36	11/30/21 12:13	7782-49-2	
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Indianapolis									
Alkalinity, Total as CaCO3	424	mg/L	2.0	2.0	1		11/10/21 10:58		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Kansas City									
Total Dissolved Solids	502	mg/L	10.0	10.0	1		11/09/21 09:38		H1
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		11/19/21 15:13	16887-00-6	
Fluoride	0.20J	mg/L	0.20	0.086	1		11/19/21 15:13	16984-48-8	
Sulfate	23.5	mg/L	5.0	2.1	5		11/19/21 15:27	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LCPA

Pace Project No.: 60385384

Sample: L-BMW-2D **Lab ID: 60385384007** Collected: 11/01/21 14:40 Received: 11/03/21 03:48 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	343	ug/L	5.0	1.8	1	11/22/21 16:33	11/30/21 16:40	7440-39-3	
Boron	63.0J	ug/L	100	8.6	1	11/22/21 16:33	11/30/21 16:40	7440-42-8	
Calcium	149000	ug/L	2000	754	10	11/22/21 16:33	12/01/21 13:44	7440-70-2	
Iron	7170	ug/L	50.0	21.4	1	11/22/21 16:33	11/30/21 16:40	7439-89-6	
Lithium	<76.7	ug/L	100	76.7	10	11/22/21 16:33	12/01/21 13:44	7439-93-2	
Magnesium	27300	ug/L	50.0	31.4	1	11/22/21 16:33	11/30/21 16:40	7439-95-4	
Manganese	282	ug/L	5.0	0.74	1	11/22/21 16:33	11/30/21 16:40	7439-96-5	
Molybdenum	2.7J	ug/L	20.0	2.2	1	11/22/21 16:33	11/30/21 16:40	7439-98-7	
Potassium	3740	ug/L	500	146	1	11/22/21 16:33	11/30/21 16:40	7440-09-7	
Sodium	5660	ug/L	500	254	1	11/22/21 16:33	11/30/21 16:40	7440-23-5	
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8									
Pace Analytical Services - Kansas City									
Arsenic	31.8	ug/L	1.0	0.11	1	11/24/21 08:36	11/30/21 12:15	7440-38-2	
Chromium	0.37J	ug/L	1.0	0.23	1	11/24/21 08:36	11/30/21 12:15	7440-47-3	
Selenium	<0.18	ug/L	1.0	0.18	1	11/24/21 08:36	11/30/21 12:15	7782-49-2	
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Indianapolis									
Alkalinity, Total as CaCO3	410	mg/L	2.0	2.0	1		11/10/21 10:58		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Kansas City									
Total Dissolved Solids	524	mg/L	10.0	10.0	1		11/09/21 09:38		H1
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0									
Pace Analytical Services - Kansas City									
Chloride	3.0	mg/L	1.0	0.39	1		11/19/21 15:40	16887-00-6	B
Fluoride	0.21	mg/L	0.20	0.086	1		11/19/21 15:40	16984-48-8	
Sulfate	39.2	mg/L	5.0	2.1	5		11/19/21 15:53	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LCPA

Pace Project No.: 60385384

Sample: L-UMW-DUP-1 **Lab ID: 60385384008** Collected: 11/01/21 00:00 Received: 11/03/21 03:48 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	140	ug/L	5.0	1.8	1	11/22/21 16:33	11/30/21 16:42	7440-39-3	
Boron	1050	ug/L	100	8.6	1	11/22/21 16:33	11/30/21 16:42	7440-42-8	
Calcium	125000	ug/L	2000	754	10	11/22/21 16:33	12/01/21 13:46	7440-70-2	
Iron	3630	ug/L	50.0	21.4	1	11/22/21 16:33	11/30/21 16:42	7439-89-6	
Lithium	<76.7	ug/L	100	76.7	10	11/22/21 16:33	12/01/21 13:46	7439-93-2	
Magnesium	25300	ug/L	50.0	31.4	1	11/22/21 16:33	11/30/21 16:42	7439-95-4	
Manganese	401	ug/L	5.0	0.74	1	11/22/21 16:33	11/30/21 16:42	7439-96-5	
Molybdenum	34.2	ug/L	20.0	2.2	1	11/22/21 16:33	11/30/21 16:42	7439-98-7	
Potassium	7840	ug/L	500	146	1	11/22/21 16:33	11/30/21 16:42	7440-09-7	
Sodium	68700	ug/L	500	254	1	11/22/21 16:33	11/30/21 16:42	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	0.11	1	11/24/21 08:36	11/30/21 12:17	7440-38-2	
Chromium	0.31J	ug/L	1.0	0.23	1	11/24/21 08:36	11/30/21 12:17	7440-47-3	
Selenium	<0.18	ug/L	1.0	0.18	1	11/24/21 08:36	11/30/21 12:17	7782-49-2	
2320B Alkalinity									
Analytical Method: SM 2320B Pace Analytical Services - Indianapolis									
Alkalinity, Total as CaCO3	378	mg/L	2.0	2.0	1		11/10/21 10:58		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C Pace Analytical Services - Kansas City									
Total Dissolved Solids	610	mg/L	10.0	10.0	1		11/09/21 09:38		H1
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City									
Chloride	28.7	mg/L	20.0	7.8	20		11/19/21 16:20	16887-00-6	B
Fluoride	0.29	mg/L	0.20	0.086	1		11/19/21 16:07	16984-48-8	
Sulfate	116	mg/L	20.0	8.4	20		11/19/21 16:20	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LCPA

Pace Project No.: 60385384

Sample: L-UMW-3D **Lab ID: 60385384011** Collected: 11/03/21 16:05 Received: 11/06/21 05:30 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	110	ug/L	5.0	1.8	1	11/28/21 09:06	11/30/21 15:30	7440-39-3	
Boron	10300	ug/L	100	8.6	1	11/28/21 09:06	11/30/21 15:30	7440-42-8	
Calcium	140000	ug/L	2000	754	10	11/28/21 09:06	12/01/21 11:43	7440-70-2	
Iron	656	ug/L	50.0	21.4	1	11/28/21 09:06	11/30/21 15:30	7439-89-6	
Lithium	<76.7	ug/L	100	76.7	10	11/28/21 09:06	12/01/21 11:43	7439-93-2	
Magnesium	12500	ug/L	50.0	31.4	1	11/28/21 09:06	11/30/21 15:30	7439-95-4	
Manganese	314	ug/L	5.0	0.74	1	11/28/21 09:06	11/30/21 15:30	7439-96-5	
Molybdenum	166	ug/L	20.0	2.2	1	11/28/21 09:06	11/30/21 15:30	7439-98-7	
Potassium	10500	ug/L	500	146	1	11/28/21 09:06	11/30/21 15:30	7440-09-7	
Sodium	60500	ug/L	500	254	1	11/28/21 09:06	11/30/21 15:30	7440-23-5	
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8									
Pace Analytical Services - Kansas City									
Arsenic	1.8	ug/L	1.0	0.11	1	11/27/21 16:56	11/30/21 13:57	7440-38-2	
Chromium	0.25J	ug/L	1.0	0.23	1	11/27/21 16:56	11/30/21 13:57	7440-47-3	
Selenium	<0.18	ug/L	1.0	0.18	1	11/27/21 16:56	11/30/21 13:57	7782-49-2	
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Indianapolis									
Alkalinity, Total as CaCO3	123	mg/L	2.0	2.0	1		11/12/21 11:45		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Kansas City									
Total Dissolved Solids	743	mg/L	10.0	10.0	1		11/10/21 14:32		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0									
Pace Analytical Services - Kansas City									
Chloride	19.1	mg/L	1.0	0.39	1		11/20/21 19:51	16887-00-6	
Fluoride	0.28	mg/L	0.20	0.086	1		11/20/21 19:51	16984-48-8	
Sulfate	396	mg/L	50.0	21.0	50		11/20/21 20:03	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LCPA

Pace Project No.: 60385384

Sample: L-UMW-4D **Lab ID: 60385384012** Collected: 11/03/21 13:37 Received: 11/06/21 05:30 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	84.0	ug/L	5.0	1.8	1	11/28/21 09:06	11/30/21 15:32	7440-39-3	
Boron	3460	ug/L	100	8.6	1	11/28/21 09:06	11/30/21 15:32	7440-42-8	
Calcium	65500	ug/L	200	75.4	1	11/28/21 09:06	11/30/21 15:32	7440-70-2	
Iron	215	ug/L	50.0	21.4	1	11/28/21 09:06	11/30/21 15:32	7439-89-6	B
Lithium	30.0	ug/L	10.0	7.7	1	11/28/21 09:06	11/30/21 15:32	7439-93-2	
Magnesium	7680	ug/L	50.0	31.4	1	11/28/21 09:06	11/30/21 15:32	7439-95-4	
Manganese	264	ug/L	5.0	0.74	1	11/28/21 09:06	11/30/21 15:32	7439-96-5	
Molybdenum	124	ug/L	20.0	2.2	1	11/28/21 09:06	11/30/21 15:32	7439-98-7	
Potassium	8930	ug/L	500	146	1	11/28/21 09:06	11/30/21 15:32	7440-09-7	
Sodium	107000	ug/L	500	254	1	11/28/21 09:06	11/30/21 15:32	7440-23-5	
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City									
Arsenic	0.11J	ug/L	1.0	0.11	1	11/27/21 16:56	11/30/21 13:59	7440-38-2	
Chromium	0.30J	ug/L	1.0	0.23	1	11/27/21 16:56	11/30/21 13:59	7440-47-3	
Selenium	<0.18	ug/L	1.0	0.18	1	11/27/21 16:56	11/30/21 13:59	7782-49-2	
2320B Alkalinity									
Analytical Method: SM 2320B Pace Analytical Services - Indianapolis									
Alkalinity, Total as CaCO3	52.2	mg/L	2.0	2.0	1		11/12/21 11:45		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C Pace Analytical Services - Kansas City									
Total Dissolved Solids	631	mg/L	10.0	10.0	1		11/10/21 14:32		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City									
Chloride	21.7	mg/L	5.0	1.9	5		11/23/21 22:43	16887-00-6	B
Fluoride	0.42	mg/L	0.20	0.086	1		11/20/21 20:37	16984-48-8	
Sulfate	377	mg/L	50.0	21.0	50		11/20/21 20:48	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LCPA

Pace Project No.: 60385384

Sample: L-UMW-7D **Lab ID: 60385384013** Collected: 11/04/21 09:27 Received: 11/06/21 05:30 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	81.5	ug/L	5.0	1.8	1	11/28/21 09:06	11/30/21 15:34	7440-39-3	
Boron	2220	ug/L	100	8.6	1	11/28/21 09:06	11/30/21 15:34	7440-42-8	
Calcium	165000	ug/L	2000	754	10	11/28/21 09:06	12/01/21 11:45	7440-70-2	
Iron	9750	ug/L	50.0	21.4	1	11/28/21 09:06	11/30/21 15:34	7439-89-6	
Lithium	<76.7	ug/L	100	76.7	10	11/28/21 09:06	12/01/21 11:45	7439-93-2	
Magnesium	19800	ug/L	50.0	31.4	1	11/28/21 09:06	11/30/21 15:34	7439-95-4	
Manganese	1420	ug/L	5.0	0.74	1	11/28/21 09:06	11/30/21 15:34	7439-96-5	
Molybdenum	131	ug/L	20.0	2.2	1	11/28/21 09:06	11/30/21 15:34	7439-98-7	
Potassium	5090	ug/L	500	146	1	11/28/21 09:06	11/30/21 15:34	7440-09-7	
Sodium	25000	ug/L	500	254	1	11/28/21 09:06	11/30/21 15:34	7440-23-5	
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8									
Pace Analytical Services - Kansas City									
Arsenic	25.1	ug/L	1.0	0.11	1	11/27/21 16:56	11/30/21 14:00	7440-38-2	
Chromium	0.30J	ug/L	1.0	0.23	1	11/27/21 16:56	11/30/21 14:00	7440-47-3	
Selenium	<0.18	ug/L	1.0	0.18	1	11/27/21 16:56	11/30/21 14:00	7782-49-2	
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Indianapolis									
Alkalinity, Total as CaCO3	446	mg/L	2.0	2.0	1		11/12/21 11:45		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Kansas City									
Total Dissolved Solids	555	mg/L	10.0	10.0	1		11/11/21 08:05		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0									
Pace Analytical Services - Kansas City									
Chloride	5.7	mg/L	1.0	0.39	1		11/20/21 20:59	16887-00-6	
Fluoride	0.33	mg/L	0.20	0.086	1		11/20/21 20:59	16984-48-8	
Sulfate	58.3	mg/L	10.0	4.2	10		11/23/21 23:23	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LCPA

Pace Project No.: 60385384

Sample: L-UMW-8D **Lab ID: 60385384014** Collected: 11/05/21 10:00 Received: 11/06/21 05:30 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	111	ug/L	5.0	1.8	1	11/28/21 09:06	11/30/21 15:36	7440-39-3	
Boron	6170	ug/L	100	8.6	1	11/28/21 09:06	11/30/21 15:36	7440-42-8	
Calcium	143000	ug/L	2000	754	10	11/28/21 09:06	12/01/21 11:47	7440-70-2	
Iron	22500	ug/L	50.0	21.4	1	11/28/21 09:06	11/30/21 15:36	7439-89-6	
Lithium	<76.7	ug/L	100	76.7	10	11/28/21 09:06	12/01/21 11:47	7439-93-2	
Magnesium	30700	ug/L	50.0	31.4	1	11/28/21 09:06	11/30/21 15:36	7439-95-4	
Manganese	872	ug/L	5.0	0.74	1	11/28/21 09:06	11/30/21 15:36	7439-96-5	
Molybdenum	77.6	ug/L	20.0	2.2	1	11/28/21 09:06	11/30/21 15:36	7439-98-7	
Potassium	5600	ug/L	500	146	1	11/28/21 09:06	11/30/21 15:36	7440-09-7	
Sodium	80100	ug/L	500	254	1	11/28/21 09:06	11/30/21 15:36	7440-23-5	
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8									
Pace Analytical Services - Kansas City									
Arsenic	27.0	ug/L	1.0	0.11	1	11/27/21 16:56	11/30/21 14:02	7440-38-2	
Chromium	<0.23	ug/L	1.0	0.23	1	11/27/21 16:56	11/30/21 14:02	7440-47-3	
Selenium	<0.18	ug/L	1.0	0.18	1	11/27/21 16:56	11/30/21 14:02	7782-49-2	
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Indianapolis									
Alkalinity, Total as CaCO3	331	mg/L	2.0	2.0	1		11/12/21 11:45		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Kansas City									
Total Dissolved Solids	829	mg/L	10.0	10.0	1		11/11/21 08:08		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0									
Pace Analytical Services - Kansas City									
Chloride	8.4	mg/L	1.0	0.39	1		11/20/21 21:22	16887-00-6	
Fluoride	0.23	mg/L	0.20	0.086	1		11/20/21 21:22	16984-48-8	
Sulfate	336	mg/L	50.0	21.0	50		11/23/21 23:37	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LCPA

Pace Project No.: 60385384

Sample: L-UMW-9D **Lab ID: 60385384015** Collected: 11/05/21 11:03 Received: 11/06/21 05:30 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	491	ug/L	5.0	1.8	1	11/28/21 09:06	11/30/21 15:38	7440-39-3	
Boron	95.7J	ug/L	100	8.6	1	11/28/21 09:06	11/30/21 15:38	7440-42-8	
Calcium	117000	ug/L	2000	754	10	11/28/21 09:06	12/01/21 11:49	7440-70-2	
Iron	21800	ug/L	50.0	21.4	1	11/28/21 09:06	11/30/21 15:38	7439-89-6	
Lithium	<76.7	ug/L	100	76.7	10	11/28/21 09:06	12/01/21 11:49	7439-93-2	
Magnesium	28000	ug/L	50.0	31.4	1	11/28/21 09:06	11/30/21 15:38	7439-95-4	
Manganese	365	ug/L	5.0	0.74	1	11/28/21 09:06	11/30/21 15:38	7439-96-5	
Molybdenum	<2.2	ug/L	20.0	2.2	1	11/28/21 09:06	11/30/21 15:38	7439-98-7	
Potassium	3980	ug/L	500	146	1	11/28/21 09:06	11/30/21 15:38	7440-09-7	
Sodium	13500	ug/L	500	254	1	11/28/21 09:06	11/30/21 15:38	7440-23-5	
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8									
Pace Analytical Services - Kansas City									
Arsenic	29.4	ug/L	1.0	0.11	1	11/27/21 16:56	11/30/21 14:04	7440-38-2	
Chromium	0.29J	ug/L	1.0	0.23	1	11/27/21 16:56	11/30/21 14:04	7440-47-3	
Selenium	<0.18	ug/L	1.0	0.18	1	11/27/21 16:56	11/30/21 14:04	7782-49-2	
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Indianapolis									
Alkalinity, Total as CaCO3	400	mg/L	2.0	2.0	1		11/12/21 11:45		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Kansas City									
Total Dissolved Solids	439	mg/L	10.0	10.0	1		11/11/21 08:09		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0									
Pace Analytical Services - Kansas City									
Chloride	24.8	mg/L	2.0	0.78	2		11/20/21 21:56	16887-00-6	
Fluoride	0.24	mg/L	0.20	0.086	1		11/20/21 21:45	16984-48-8	
Sulfate	<0.42	mg/L	1.0	0.42	1		11/20/21 21:45	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LCPA

Pace Project No.: 60385384

Sample: L-UMW-DUP-2 **Lab ID: 60385384016** Collected: 11/04/21 00:00 Received: 11/06/21 05:30 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	81.4	ug/L	5.0	1.8	1	11/28/21 09:06	11/30/21 15:40	7440-39-3	
Boron	2200	ug/L	100	8.6	1	11/28/21 09:06	11/30/21 15:40	7440-42-8	
Calcium	163000	ug/L	2000	754	10	11/28/21 09:06	12/01/21 11:51	7440-70-2	
Iron	9520	ug/L	50.0	21.4	1	11/28/21 09:06	11/30/21 15:40	7439-89-6	
Lithium	<76.7	ug/L	100	76.7	10	11/28/21 09:06	12/01/21 11:51	7439-93-2	
Magnesium	19500	ug/L	50.0	31.4	1	11/28/21 09:06	11/30/21 15:40	7439-95-4	
Manganese	1400	ug/L	5.0	0.74	1	11/28/21 09:06	11/30/21 15:40	7439-96-5	
Molybdenum	130	ug/L	20.0	2.2	1	11/28/21 09:06	11/30/21 15:40	7439-98-7	
Potassium	5080	ug/L	500	146	1	11/28/21 09:06	11/30/21 15:40	7440-09-7	
Sodium	24800	ug/L	500	254	1	11/28/21 09:06	11/30/21 15:40	7440-23-5	
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8									
Pace Analytical Services - Kansas City									
Arsenic	24.6	ug/L	1.0	0.11	1	11/27/21 16:56	11/30/21 14:05	7440-38-2	
Chromium	0.26J	ug/L	1.0	0.23	1	11/27/21 16:56	11/30/21 14:05	7440-47-3	
Selenium	<0.18	ug/L	1.0	0.18	1	11/27/21 16:56	11/30/21 14:05	7782-49-2	
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Indianapolis									
Alkalinity, Total as CaCO3	445	mg/L	2.0	2.0	1		11/12/21 11:45		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Kansas City									
Total Dissolved Solids	575	mg/L	10.0	10.0	1		11/11/21 08:06		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0									
Pace Analytical Services - Kansas City									
Chloride	5.7	mg/L	1.0	0.39	1		11/20/21 22:07	16887-00-6	
Fluoride	0.33	mg/L	0.20	0.086	1		11/20/21 22:07	16984-48-8	
Sulfate	59.4	mg/L	20.0	8.4	20		11/20/21 22:53	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LCPA

Pace Project No.: 60385384

Sample: L-UMW-FB-2 **Lab ID: 60385384017** Collected: 11/03/21 14:00 Received: 11/06/21 05:30 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	<1.8	ug/L	5.0	1.8	1	11/28/21 09:06	11/30/21 15:42	7440-39-3	
Boron	<8.6	ug/L	100	8.6	1	11/28/21 09:06	11/30/21 15:42	7440-42-8	
Calcium	<75.4	ug/L	200	75.4	1	11/28/21 09:06	11/30/21 15:42	7440-70-2	
Iron	<21.4	ug/L	50.0	21.4	1	11/28/21 09:06	11/30/21 15:42	7439-89-6	
Lithium	<7.7	ug/L	10.0	7.7	1	11/28/21 09:06	11/30/21 15:42	7439-93-2	
Magnesium	<31.4	ug/L	50.0	31.4	1	11/28/21 09:06	11/30/21 15:42	7439-95-4	
Manganese	<0.74	ug/L	5.0	0.74	1	11/28/21 09:06	11/30/21 15:42	7439-96-5	
Molybdenum	<2.2	ug/L	20.0	2.2	1	11/28/21 09:06	11/30/21 15:42	7439-98-7	
Potassium	<146	ug/L	500	146	1	11/28/21 09:06	11/30/21 15:42	7440-09-7	
Sodium	<254	ug/L	500	254	1	11/28/21 09:06	11/30/21 15:42	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 13:52	7440-38-2	
Chromium	0.33J	ug/L	1.0	0.23	1	11/27/21 16:56	11/30/21 13:52	7440-47-3	
Selenium	<0.18	ug/L	1.0	0.18	1	11/27/21 16:56	11/30/21 13:52	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		11/12/21 11:45		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Kansas City									
Total Dissolved Solids	684	mg/L	10.0	10.0	1		11/10/21 14:32		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0									
Pace Analytical Services - Kansas City									
Chloride	0.84J	mg/L	1.0	0.39	1		11/20/21 23:16	16887-00-6	B
Fluoride	<0.086	mg/L	0.20	0.086	1		11/20/21 23:16	16984-48-8	
Sulfate	<0.42	mg/L	1.0	0.42	1		11/20/21 23:16	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN LCPA

Pace Project No.: 60385384

QC Batch:	757955	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: 60385384001, 60385384002, 60385384003, 60385384004, 60385384005, 60385384006, 60385384007, 60385384008

METHOD BLANK:	3033331	Matrix:	Water
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Associated Lab Samples: 60385384001, 60385384002, 60385384003, 60385384004, 60385384005, 60385384006, 60385384007, 60385384008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Barium	ug/L	<1.8	5.0	1.8	11/30/21 16:14	
Boron	ug/L	<8.6	100	8.6	11/30/21 16:14	
Calcium	ug/L	<75.4	200	75.4	11/30/21 16:14	
Iron	ug/L	<21.4	50.0	21.4	11/30/21 16:14	
Lithium	ug/L	<7.7	10.0	7.7	11/30/21 16:14	
Magnesium	ug/L	<31.4	50.0	31.4	11/30/21 16:14	
Manganese	ug/L	<0.74	5.0	0.74	11/30/21 16:14	
Molybdenum	ug/L	<2.2	20.0	2.2	11/30/21 16:14	
Potassium	ug/L	<146	500	146	11/30/21 16:14	
Sodium	ug/L	<254	500	254	11/30/21 16:14	

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	1000	1010	101	85-115	
Boron	ug/L	1000	963	96	85-115	
Calcium	ug/L	10000	9950	100	85-115	
Iron	ug/L	10000	9930	99	85-115	
Lithium	ug/L	1000	970	97	85-115	
Magnesium	ug/L	10000	10300	103	85-115	
Manganese	ug/L	1000	998	100	85-115	
Molybdenum	ug/L	1000	1020	102	85-115	
Potassium	ug/L	10000	9820	98	85-115	
Sodium	ug/L	10000	10200	102	85-115	

Parameter	Units	3033333		3033334		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.						
Barium	ug/L	539	1000	1540	1550	100	101	70-130	0	20	
Boron	ug/L	611	1000	1580	1590	97	98	70-130	1	20	
Calcium	ug/L	156000	10000	164000	167000	84	111	70-130	2	20	
Iron	ug/L	18900	10000	28400	28600	94	97	70-130	1	20	
Lithium	ug/L	<76.7	1000	864	879	84	86	70-130	2	20	
Magnesium	ug/L	37700	10000	45700	46500	81	89	70-130	2	20	
Manganese	ug/L	429	1000	1400	1410	97	98	70-130	1	20	

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QUALITY CONTROL DATA

Project: AMEREN LCPA

Pace Project No.: 60385384

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3033333 3033334											
Parameter	Units	60385384001		MS	MSD	3033334		% Rec	% Rec	% Rec	Max
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec				
Molybdenum	ug/L	3.5J	1000	1000	1020	1030	102	103	70-130	1	20
Potassium	ug/L	6640	10000	10000	16400	16600	98	100	70-130	1	20
Sodium	ug/L	25900	10000	10000	35400	35600	95	97	70-130	1	20

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QUALITY CONTROL DATA

Project: AMEREN LCPA

Pace Project No.: 60385384

QC Batch:	758442	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: 60385384011, 60385384012, 60385384013, 60385384014, 60385384015, 60385384016, 60385384017

METHOD BLANK: 3035306 Matrix: Water
Associated Lab Samples: 60385384011, 60385384012, 60385384013, 60385384014, 60385384015, 60385384016, 60385384017

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Barium	ug/L	<1.8	5.0	1.8	12/01/21 11:39	
Boron	ug/L	<8.6	100	8.6	12/01/21 11:39	
Calcium	ug/L	<75.4	200	75.4	12/01/21 11:39	
Iron	ug/L	40.8J	50.0	21.4	12/01/21 11:39	
Lithium	ug/L	<7.7	10.0	7.7	12/01/21 11:39	
Magnesium	ug/L	<31.4	50.0	31.4	12/01/21 11:39	
Manganese	ug/L	<0.74	5.0	0.74	12/01/21 11:39	
Molybdenum	ug/L	<2.2	20.0	2.2	12/01/21 11:39	
Potassium	ug/L	<146	500	146	12/01/21 11:39	
Sodium	ug/L	<254	500	254	12/01/21 11:39	

LABORATORY CONTROL SAMPLE: 3035307

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	1000	994	99	85-115	
Boron	ug/L	1000	965	97	85-115	
Calcium	ug/L	10000	9880	99	85-115	
Iron	ug/L	10000	9850	98	85-115	
Lithium	ug/L	1000	1020	102	85-115	
Magnesium	ug/L	10000	10700	107	85-115	
Manganese	ug/L	1000	997	100	85-115	
Molybdenum	ug/L	1000	1040	104	85-115	
Potassium	ug/L	10000	9720	97	85-115	
Sodium	ug/L	10000	10100	101	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3035308 3035309

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		60385866001 Result	Spike Conc.	Spike Conc.	MS Result						
Barium	ug/L	264	1000	1000	1260	1280	100	101	70-130	1	20
Boron	ug/L	93.1J	1000	1000	1050	1060	95	96	70-130	1	20
Calcium	ug/L	96900	10000	10000	114000	115000	172	184	70-130	1	20 M1
Iron	ug/L	<21.4	10000	10000	9590	9590	96	96	70-130	0	20
Lithium	ug/L	17.3	1000	1000	742	737	72	72	70-130	1	20
Magnesium	ug/L	21200	10000	10000	29000	29200	78	80	70-130	1	20
Manganese	ug/L	155	1000	1000	1100	1100	94	95	70-130	0	20
Molybdenum	ug/L	2.8J	1000	1000	1030	1040	103	104	70-130	1	20

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QUALITY CONTROL DATA

Project: AMEREN LCPA

Pace Project No.: 60385384

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3035308												3035309	
Parameter	Units	60385866001 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
			Spike Conc.	Spike Conc.									
Potassium	ug/L	4490	10000	10000	14400	14600	99	101	70-130	2	20		
Sodium	ug/L	41400	10000	10000	50900	51800	95	104	70-130	2	20		

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QUALITY CONTROL DATA

Project: AMEREN LCPA

Pace Project No.: 60385384

QC Batch:	758163	Analysis Method:	EPA 200.8
QC Batch Method:	EPA 200.8	Analysis Description:	200.8 MET
		Laboratory:	Pace Analytical Services - Kansas City
Associated Lab Samples:	60385384001, 60385384002, 60385384003, 60385384004, 60385384005, 60385384006, 60385384007, 60385384008		

METHOD BLANK:	3034230	Matrix:	Water
Associated Lab Samples:	60385384001, 60385384002, 60385384003, 60385384004, 60385384005, 60385384006, 60385384007, 60385384008		

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	ug/L	<0.11	1.0	0.11	11/30/21 11:53	
Chromium	ug/L	<0.23	1.0	0.23	11/30/21 11:53	
Selenium	ug/L	<0.18	1.0	0.18	11/30/21 11:53	

LABORATORY CONTROL SAMPLE: 3034231						
Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	40	40.5	101	85-115	
Chromium	ug/L	40	39.4	99	85-115	
Selenium	ug/L	40	41.0	102	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3034232												3034233	
Parameter	Units	60385384001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
Arsenic	ug/L	46.6	40	40	85.6	87.0	97	101	70-130	2	20		
Chromium	ug/L	0.28J	40	40	39.2	39.9	97	99	70-130	2	20		
Selenium	ug/L	<0.18	40	40	38.4	39.1	96	98	70-130	2	20		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3034234												3034235	
Parameter	Units	60385386004 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	44.6	43.8	104	102	70-130	2	20		
Chromium	ug/L	0.34J	40	40	39.8	39.1	99	97	70-130	2	20		
Selenium	ug/L	<0.18	40	40	39.2	37.5	98	94	70-130	4	20		

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QUALITY CONTROL DATA

Project: AMEREN LCPA

Pace Project No.: 60385384

QC Batch:	758166	Analysis Method:	EPA 200.8
QC Batch Method:	EPA 200.8	Analysis Description:	200.8 MET
		Laboratory:	Pace Analytical Services - Kansas City

Associated Lab Samples: 60385384011, 60385384012, 60385384013, 60385384014, 60385384015, 60385384016, 60385384017

METHOD BLANK: 3034249

Matrix: Water

Associated Lab Samples: 60385384011, 60385384012, 60385384013, 60385384014, 60385384015, 60385384016, 60385384017

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	ug/L	<0.11	1.0	0.11	11/30/21 13:38	
Chromium	ug/L	<0.23	1.0	0.23	11/30/21 13:38	
Selenium	ug/L	<0.18	1.0	0.18	11/30/21 13:38	

LABORATORY CONTROL SAMPLE: 3034250

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	40	41.0	102	85-115	
Chromium	ug/L	40	40.1	100	85-115	
Selenium	ug/L	40	41.2	103	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3034251 3034252

Parameter	Units	60385386028		MS		MSD		% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result						
Arsenic	ug/L	<0.11	40	40	40	39.8	39.2	100	98	70-130	2	20	
Chromium	ug/L	0.44J	40	40	40	39.9	39.2	99	97	70-130	2	20	
Selenium	ug/L	<0.18	40	40	40	39.7	39.4	99	98	70-130	1	20	

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QUALITY CONTROL DATA

Project: AMEREN LCPA

Pace Project No.: 60385384

QC Batch: 649356

Analysis Method: SM 2320B

QC Batch Method: SM 2320B

Analysis Description: 2320B Alkalinity

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 60385384001

METHOD BLANK: 2992117

Matrix: Water

Associated Lab Samples: 60385384001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	<2.0	2.0	2.0	11/10/21 12:29	

LABORATORY CONTROL SAMPLE: 2992118

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	50	48.8	98	90-110	

SAMPLE DUPLICATE: 2992119

Parameter	Units	50302070016 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	375	420	11	20	

SAMPLE DUPLICATE: 2992120

Parameter	Units	60385384001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	498	465	7	20	

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QUALITY CONTROL DATA

Project: AMEREN LCPA

Pace Project No.: 60385384

QC Batch: 649386 Analysis Method: SM 2320B
 QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity
 Laboratory: Pace Analytical Services - Indianapolis
 Associated Lab Samples: 60385384002, 60385384003, 60385384004, 60385384005, 60385384006, 60385384007, 60385384008

METHOD BLANK: 2992253 Matrix: Water
 Associated Lab Samples: 60385384002, 60385384003, 60385384004, 60385384005, 60385384006, 60385384007, 60385384008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<2.0	2.0	2.0	11/10/21 10:58	

LABORATORY CONTROL SAMPLE: 2992254

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: 2992255

Parameter	Units	60385386004 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	152	154	1	20	

SAMPLE DUPLICATE: 2992256

Parameter	Units	50301936001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	687	690	0	20	

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QUALITY CONTROL DATA

Project: AMEREN LCPA

Pace Project No.: 60385384

QC Batch: 650017

Analysis Method: SM 2320B

QC Batch Method: SM 2320B

Analysis Description: 2320B Alkalinity

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 60385384011, 60385384012, 60385384013, 60385384014, 60385384015, 60385384016, 60385384017

METHOD BLANK: 2995888

Matrix: Water

Associated Lab Samples: 60385384011, 60385384012, 60385384013, 60385384014, 60385384015, 60385384016, 60385384017

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	<2.0	2.0	2.0	11/12/21 11:45	

LABORATORY CONTROL SAMPLE: 2995889

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	50	51.5	103	90-110	

SAMPLE DUPLICATE: 2995890

Parameter	Units	60385390001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	378	385	2	20	

SAMPLE DUPLICATE: 2995891

Parameter	Units	50302276001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	283	290	2	20	

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QUALITY CONTROL DATA

Project: AMEREN LCPA

Pace Project No.: 60385384

QC Batch: 754996	Analysis Method: SM 2540C
QC Batch Method: SM 2540C	Analysis Description: 2540C Total Dissolved Solids
	Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60385384006, 60385384007, 60385384008

METHOD BLANK: 3021542 Matrix: Water

Associated Lab Samples: 60385384006, 60385384007, 60385384008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	11/09/21 09:38	

LABORATORY CONTROL SAMPLE: 3021543

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	962	96	80-120	

SAMPLE DUPLICATE: 3021544

Parameter	Units	60384977004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	823	854	4	10	

SAMPLE DUPLICATE: 3021545

Parameter	Units	60385364001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	456	472	3	10	

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QUALITY CONTROL DATA

Project: AMEREN LCPA

Pace Project No.: 60385384

QC Batch: 755000

Analysis Method: SM 2540C

QC Batch Method: SM 2540C

Analysis Description: 2540C Total Dissolved Solids

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60385384001, 60385384002, 60385384003, 60385384004, 60385384005

METHOD BLANK: 3021558

Matrix: Water

Associated Lab Samples: 60385384001, 60385384002, 60385384003, 60385384004, 60385384005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	11/09/21 09:43	

LABORATORY CONTROL SAMPLE: 3021559

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	960	96	80-120	

SAMPLE DUPLICATE: 3021560

Parameter	Units	60385384001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	617	609	1	10	

SAMPLE DUPLICATE: 3021561

Parameter	Units	60385386004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	790	838	6	10	

SAMPLE DUPLICATE: 3021562

Parameter	Units	60385390001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	423	431	2	10	

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QUALITY CONTROL DATA

Project: AMEREN LCPA

Pace Project No.: 60385384

QC Batch:	755409	Analysis Method:	SM 2540C
QC Batch Method:	SM 2540C	Analysis Description:	2540C Total Dissolved Solids
		Laboratory:	Pace Analytical Services - Kansas City

Associated Lab Samples: 60385384011, 60385384012, 60385384017

METHOD BLANK: 3023062 Matrix: Water

Associated Lab Samples: 60385384011, 60385384012, 60385384017

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	11/10/21 14:30	

LABORATORY CONTROL SAMPLE: 3023063

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	949	95	80-120	

SAMPLE DUPLICATE: 3023064

Parameter	Units	60385386023 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	561	612	9	10	

SAMPLE DUPLICATE: 3023065

Parameter	Units	60385384012 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	631	655	4	10	

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QUALITY CONTROL DATA

Project: AMEREN LCPA

Pace Project No.: 60385384

QC Batch: 755548

Analysis Method: SM 2540C

QC Batch Method: SM 2540C

Analysis Description: 2540C Total Dissolved Solids

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60385384013, 60385384016

METHOD BLANK: 3023486

Matrix: Water

Associated Lab Samples: 60385384013, 60385384016

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	11/11/21 08:03	

LABORATORY CONTROL SAMPLE: 3023487

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	973	97	80-120	

SAMPLE DUPLICATE: 3023488

Parameter	Units	60385385001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	4870	4660	4	10	

SAMPLE DUPLICATE: 3023489

Parameter	Units	60385386016 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	490	497	1	10	

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QUALITY CONTROL DATA

Project: AMEREN LCPA

Pace Project No.: 60385384

QC Batch: 755549

Analysis Method: SM 2540C

QC Batch Method: SM 2540C

Analysis Description: 2540C Total Dissolved Solids

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60385384014, 60385384015

METHOD BLANK: 3023490

Matrix: Water

Associated Lab Samples: 60385384014, 60385384015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	11/11/21 08:06	

LABORATORY CONTROL SAMPLE: 3023491

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

SAMPLE DUPLICATE: 3023492

Parameter	Units	60385386013 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	799	812	2	10	

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QUALITY CONTROL DATA

Project: AMEREN LCPA

Pace Project No.: 60385384

QC Batch: 756243

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: 60385384002, 60385384003

METHOD BLANK: 3026411

Matrix: Water

Associated Lab Samples: 60385384002, 60385384003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.44J	1.0	0.39	11/15/21 08:37	
Fluoride	mg/L	<0.086	0.20	0.086	11/15/21 08:37	
Sulfate	mg/L	<0.42	1.0	0.42	11/15/21 08:37	

METHOD BLANK: 3029175

Matrix: Water

Associated Lab Samples: 60385384002, 60385384003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.45J	1.0	0.39	11/16/21 08:04	
Fluoride	mg/L	<0.086	0.20	0.086	11/16/21 08:04	
Sulfate	mg/L	<0.42	1.0	0.42	11/16/21 08:04	

METHOD BLANK: 3029202

Matrix: Water

Associated Lab Samples: 60385384002, 60385384003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.43J	1.0	0.39	11/16/21 12:15	
Fluoride	mg/L	<0.086	0.20	0.086	11/16/21 12:15	
Sulfate	mg/L	<0.42	1.0	0.42	11/16/21 12:15	

METHOD BLANK: 3029249

Matrix: Water

Associated Lab Samples: 60385384002, 60385384003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.53J	1.0	0.39	11/16/21 08:24	
Fluoride	mg/L	<0.086	0.20	0.086	11/16/21 08:24	
Sulfate	mg/L	<0.42	1.0	0.42	11/16/21 08:24	

METHOD BLANK: 3029445

Matrix: Water

Associated Lab Samples: 60385384002, 60385384003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.46J	1.0	0.39	11/17/21 08:09	

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QUALITY CONTROL DATA

Project: AMEREN LCPA

Pace Project No.: 60385384

METHOD BLANK: 3029445

Matrix: Water

Associated Lab Samples: 60385384002, 60385384003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Fluoride	mg/L	<0.086	0.20	0.086	11/17/21 08:09	
Sulfate	mg/L	<0.42	1.0	0.42	11/17/21 08:09	

LABORATORY CONTROL SAMPLE: 3026412

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.5	90	90-110	
Sulfate	mg/L	5	4.7	93	90-110	

LABORATORY CONTROL SAMPLE: 3029176

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.9	99	90-110	
Fluoride	mg/L	2.5	2.7	108	90-110	
Sulfate	mg/L	5	5.3	105	90-110	

LABORATORY CONTROL SAMPLE: 3029203

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	2.4	96	90-110	
Sulfate	mg/L	5	5.1	101	90-110	

LABORATORY CONTROL SAMPLE: 3029250

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.9	99	90-110	
Fluoride	mg/L	2.5	2.6	104	90-110	
Sulfate	mg/L	5	4.9	98	90-110	

LABORATORY CONTROL SAMPLE: 3029446

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	5.1	101	90-110	
Fluoride	mg/L	2.5	2.8	110	90-110	
Sulfate	mg/L	5	5.4	108	90-110	

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QUALITY CONTROL DATA

Project: AMEREN LCPA

Pace Project No.: 60385384

MATRIX SPIKE SAMPLE:		3026415					
Parameter	Units	60385866005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	2.7	5	7.1	89	80-120	
Fluoride	mg/L	0.43	2.5	2.7	89	80-120	
Sulfate	mg/L	46.8	25	70.4	94	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:		3026423			3026424							
Parameter	Units	60385384002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	26.6	25	25	68.5	51.4	168	99	80-120	29	15	M1,R1
Fluoride	mg/L	0.35	2.5	2.5	2.6	2.6	89	89	80-120	1	15	
Sulfate	mg/L	115	50	50	164	168	99	106	80-120	2	15	

SAMPLE DUPLICATE:		3026422					
Parameter	Units	60385758001 Result	Dup Result	RPD	Max RPD	Qualifiers	
Chloride	mg/L	2280	2000	13	15		
Fluoride	mg/L	3.7	3.9	5	15		
Sulfate	mg/L	2520	1240	68	15 D6		

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QUALITY CONTROL DATA

Project: AMEREN LCPA

Pace Project No.: 60385384

QC Batch:	757096	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: 60385384011, 60385384012, 60385384013, 60385384014, 60385384015, 60385384016, 60385384017

METHOD BLANK: 3029718 Matrix: Water
Associated Lab Samples: 60385384011, 60385384012, 60385384013, 60385384014, 60385384015, 60385384016, 60385384017

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.52J	1.0	0.39	11/18/21 08:36	
Fluoride	mg/L	<0.086	0.20	0.086	11/18/21 08:36	
Sulfate	mg/L	<0.42	1.0	0.42	11/18/21 08:36	

METHOD BLANK: 3032292 Matrix: Water
Associated Lab Samples: 60385384011, 60385384012, 60385384013, 60385384014, 60385384015, 60385384016, 60385384017

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.39	1.0	0.39	11/20/21 18:20	
Fluoride	mg/L	<0.086	0.20	0.086	11/20/21 18:20	
Sulfate	mg/L	<0.42	1.0	0.42	11/20/21 18:20	

METHOD BLANK: 3036563 Matrix: Water
Associated Lab Samples: 60385384011, 60385384012, 60385384013, 60385384014, 60385384015, 60385384016, 60385384017

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

LABORATORY CONTROL SAMPLE: 3029719

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	109	90-110	
Sulfate	mg/L	5	5.5	109	90-110	

LABORATORY CONTROL SAMPLE: 3032293

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	2.6	105	90-110	
Sulfate	mg/L	5	5.5	109	90-110	

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QUALITY CONTROL DATA

Project: AMEREN LCPA

Pace Project No.: 60385384

LABORATORY CONTROL SAMPLE: 3036564

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	4.9	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3029720 3029721

Parameter	Units	60385386027		MS	MSD	MS	MSD	MS	MSD	% Rec	Limits	RPD	Max RPD	Qual
		Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec						
Chloride	mg/L	25.8	25	25	49.4	49.3	94	94	80-120	0	15			
Fluoride	mg/L	0.33	2.5	2.5	3.1	3.1	111	112	80-120	1	15			
Sulfate	mg/L	547	250	250	739	778	77	92	80-120	5	15	M1		

MATRIX SPIKE SAMPLE: 3029722

Parameter	Units	60385384016	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5.7	5	11.3	112	80-120	
Fluoride	mg/L	0.33	2.5	3.2	113	80-120	
Sulfate	mg/L	59.4	100	171	112	80-120	

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QUALITY CONTROL DATA

Project: AMEREN LCPA

Pace Project No.: 60385384

QC Batch: 757277 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: 60385384001, 60385384004, 60385384005, 60385384006, 60385384007, 60385384008

METHOD BLANK: 3030419 Matrix: Water
 Associated Lab Samples: 60385384001, 60385384004, 60385384005, 60385384006, 60385384007, 60385384008

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: 3032423 Matrix: Water
 Associated Lab Samples: 60385384001, 60385384004, 60385384005, 60385384006, 60385384007, 60385384008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.39	1.0	0.39	11/21/21 17:33	
Fluoride	mg/L	<0.086	0.20	0.086	11/21/21 17:33	
Sulfate	mg/L	<0.42	1.0	0.42	11/21/21 17:33	

METHOD BLANK: 3034763 Matrix: Water
 Associated Lab Samples: 60385384001, 60385384004, 60385384005, 60385384006, 60385384007, 60385384008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.45J	1.0	0.39	11/22/21 21:29	
Fluoride	mg/L	<0.086	0.20	0.086	11/22/21 21:29	
Sulfate	mg/L	<0.42	1.0	0.42	11/22/21 21:29	

LABORATORY CONTROL SAMPLE: 3030420

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: 3032424

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	2.7	110	90-110	
Sulfate	mg/L	5	4.9	97	90-110	

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QUALITY CONTROL DATA

Project: AMEREN LCPA

Pace Project No.: 60385384

LABORATORY CONTROL SAMPLE: 3034764

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	99	90-110	
Sulfate	mg/L	5	5.0	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3030421 3030422

Parameter	Units	60385384001		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Conc.	Result	Result	% Rec	% Rec	RPD	RPD			
Chloride	mg/L	11.1	5	5	15.9	16.2	96	101	80-120	2	15		
Fluoride	mg/L	0.21	2.5	2.5	2.5	2.6	92	97	80-120	5	15		
Sulfate	mg/L	39.2	25	25	62.9	63.1	95	96	80-120	0	15		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3030424 3030423

Parameter	Units	60385386004		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Conc.	Result	Result	% Rec	% Rec	RPD	RPD			
Chloride	mg/L	44.8	25	25	71.5	71.6	107	107	80-120	0	15		
Fluoride	mg/L	0.32	2.5	2.5	2.6	2.7	93	94	80-120	1	15		
Sulfate	mg/L	377	250	250	640	636	105	104	80-120	1	15		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3030425 3030426

Parameter	Units	60386286007		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Conc.	Result	Result	% Rec	% Rec	RPD	RPD			
Chloride	mg/L	19.4	10	10	30.2	30.1	108	108	80-120	0	15		
Fluoride	mg/L	ND	2.5	2.5	2.8	2.8	110	111	80-120	1	15		
Sulfate	mg/L	53.9	5	5	59.8	59.9	118	119	80-120	0	15 E		

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LCPA

Pace Project No.: 60385384

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: L-UMW-1D Lab ID: 60385384001 Collected: 11/02/21 10:02 Received: 11/03/21 03:48 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.353 ± 0.337 (0.514) C:NA T:96%	pCi/L	12/08/21 14:11	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	1.63 ± 0.681 (1.13) C:67% T:102%	pCi/L	12/08/21 14:56	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LCPA

Pace Project No.: 60385384

Sample: L-UMW-2D **Lab ID: 60385384002** Collected: 11/02/21 14:35 Received: 11/03/21 03:48 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	0.717 ± 0.588 (0.875) C:NA T:90%	pCi/L	12/08/21 14:11	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	2.70 ± 0.899 (1.25) C:62% T:93%	pCi/L	12/08/21 14:56	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LCPA

Pace Project No.: 60385384

Sample: L-UMW-5D **Lab ID: 60385384003** Collected: 11/02/21 14:00 Received: 11/03/21 03:48 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	0.481 ± 0.475 (0.722) C:NA T:85%	pCi/L	12/08/21 14:11	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	4.38 ± 1.24 (1.44) C:62% T:76%	pCi/L	12/08/21 14:56	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LCPA

Pace Project No.: 60385384

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: L-UMW-6D Lab ID: 60385384004 Collected: 11/02/21 11:16 Received: 11/03/21 03:48 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.483 ± 0.353 (0.395) C:NA T:82%	pCi/L	12/08/21 14:11	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.489 ± 0.656 (1.40) C:65% T:81%	pCi/L	12/08/21 18:52	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LCPA

Pace Project No.: 60385384

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: L-UMW-FB-1 Lab ID: 60385384005 Collected: 11/02/21 11:30 Received: 11/03/21 03:48 Matrix: Water PWS: Site ID: Sample Type:						
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	-0.0949 ± 0.395 (0.826) C:NA T:99%	pCi/L	12/08/21 14:11	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	0.404 ± 0.555 (1.19) C:70% T:92%	pCi/L	12/08/21 18:52	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LCPA

Pace Project No.: 60385384

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: L-BMW-1D Lab ID: 60385384006 Collected: 11/01/21 10:35 Received: 11/03/21 03:48 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	1.02 ± 0.599 (0.758) C:NA T:103%	pCi/L	12/08/21 14:32	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	1.03 ± 0.664 (1.28) C:66% T:92%	pCi/L	12/08/21 18:11	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LCPA

Pace Project No.: 60385384

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: L-BMW-2D Lab ID: 60385384007 Collected: 11/01/21 14:40 Received: 11/03/21 03:48 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.277 ± 0.385 (0.650) C:NA T:99%	pCi/L	12/08/21 14:32	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	1.80 ± 0.764 (1.24) C:66% T:87%	pCi/L	12/08/21 18:13	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LCPA

Pace Project No.: 60385384

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: L-UMW-DUP-1 Lab ID: 60385384008 Collected: 11/01/21 00:00 Received: 11/03/21 03:48 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.687 ± 0.664 (1.04) C:NA T:86%	pCi/L	12/08/21 14:32	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.936 ± 0.859 (1.77) C:64% T:81%	pCi/L	12/08/21 18:13	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LCPA

Pace Project No.: 60385384

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: L-UMW-MS-1 Lab ID: 60385384009 Collected: 11/01/21 10:02 Received: 11/03/21 03:48 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	111.85 %REC ± NA (NA) C:NA T:NA	pCi/L	12/08/21 14:32	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	92.40 %REC ± NA (NA) C:NA T:NA	pCi/L	12/08/21 18:17	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LCPA

Pace Project No.: 60385384

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	102.15 %REC 9.07 RPD ± NA (NA) C:NA T:NA	pCi/L	12/08/21 14:32	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	129.18 %REC 33.20 RPD ± NA (NA) C:NA T:NA	pCi/L	12/08/21 18:17	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LCPA

Pace Project No.: 60385384

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: L-UMW-3D Lab ID: 60385384011 Collected: 11/03/21 16:05 Received: 11/06/21 05:30 Matrix: Water PWS: Site ID: Sample Type:						
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	0.117 ± 0.457 (0.875) C:NA T:84%	pCi/L	12/08/21 14:32	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	1.23 ± 0.735 (1.37) C:66% T:83%	pCi/L	12/08/21 18:18	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LCPA

Pace Project No.: 60385384

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: L-UMW-4D Lab ID: 60385384012 Collected: 11/03/21 13:37 Received: 11/06/21 05:30 Matrix: Water PWS: Site ID: Sample Type:						
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	0.383 ± 0.356 (0.470) C:NA T:87%	pCi/L	12/08/21 14:32	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	1.51 ± 0.749 (1.31) C:68% T:83%	pCi/L	12/08/21 18:18	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LCPA

Pace Project No.: 60385384

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: L-UMW-7D Lab ID: 60385384013 Collected: 11/04/21 09:27 Received: 11/06/21 05:30 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.0984 ± 0.452 (0.856) C:NA T:102%	pCi/L	12/08/21 14:32	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	2.00 ± 0.707 (0.937) C:68% T:91%	pCi/L	12/08/21 18:36	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LCPA

Pace Project No.: 60385384

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: L-UMW-8D Lab ID: 60385384014 Collected: 11/05/21 10:00 Received: 11/06/21 05:30 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.0494 ± 0.291 (0.594) C:NA T:96%	pCi/L	12/08/21 14:47	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.530 ± 0.983 (2.15) C:68% T:91%	pCi/L	12/08/21 19:04	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LCPA

Pace Project No.: 60385384

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: L-UMW-9D Lab ID: 60385384015 Collected: 11/05/21 11:03 Received: 11/06/21 05:30 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.390 ± 0.408 (0.639) C:NA T:99%	pCi/L	12/08/21 14:47	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.885 ± 0.817 (1.69) C:67% T:89%	pCi/L	12/08/21 19:04	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LCPA

Pace Project No.: 60385384

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: L-UMW-DUP-2 Lab ID: 60385384016 Collected: 11/04/21 00:00 Received: 11/06/21 05:30 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.360 ± 0.417 (0.674) C:NA T:91%	pCi/L	12/08/21 14:47	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.551 ± 0.792 (1.71) C:68% T:90%	pCi/L	12/08/21 19:04	15262-20-1	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LCPA

Pace Project No.: 60385384

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: L-UMW-FB-2 Lab ID: 60385384017 Collected: 11/03/21 14:00 Received: 11/06/21 05:30 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	-0.146 ± 0.223 (0.585) C:NA T:102%	pCi/L	12/08/21 14:47	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.873 ± 0.932 (1.96) C:66% T:90%	pCi/L	12/08/21 19:04	15262-20-1	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN LCPA

Pace Project No.: 60385384

QC Batch: 473483

Analysis Method: EPA 904.0

QC Batch Method: EPA 904.0

Analysis Description: 904.0 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 60385384001, 60385384002, 60385384003, 60385384004, 60385384005, 60385384006, 60385384007, 60385384008, 60385384009, 60385384010, 60385384011, 60385384012, 60385384013, 60385384014, 60385384015, 60385384016, 60385384017

METHOD BLANK: 2286789

Matrix: Water

Associated Lab Samples: 60385384001, 60385384002, 60385384003, 60385384004, 60385384005, 60385384006, 60385384007, 60385384008, 60385384009, 60385384010, 60385384011, 60385384012, 60385384013, 60385384014, 60385384015, 60385384016, 60385384017

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.281 ± 0.368 (0.785) C:68% T:87%	pCi/L	12/08/21 11:38	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN LCPA

Pace Project No.: 60385384

QC Batch: 473482

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: 60385384001, 60385384002, 60385384003, 60385384004, 60385384005, 60385384006, 60385384007, 60385384008, 60385384009, 60385384010, 60385384011, 60385384012, 60385384013, 60385384014, 60385384015, 60385384016, 60385384017

METHOD BLANK: 2286788

Matrix: Water

Associated Lab Samples: 60385384001, 60385384002, 60385384003, 60385384004, 60385384005, 60385384006, 60385384007, 60385384008, 60385384009, 60385384010, 60385384011, 60385384012, 60385384013, 60385384014, 60385384015, 60385384016, 60385384017

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	-0.0778 ± 0.241 (0.548) C:NA T:96%	pCi/L	12/08/21 14:11	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: AMEREN LCPA

Pace Project No.: 60385384

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.

L2 Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.

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

R1 RPD value was outside control limits.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN LCPA

Pace Project No.: 60385384

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60385384001	L-UMW-1D	EPA 200.7	757955	EPA 200.7	758019
60385384002	L-UMW-2D	EPA 200.7	757955	EPA 200.7	758019
60385384003	L-UMW-5D	EPA 200.7	757955	EPA 200.7	758019
60385384004	L-UMW-6D	EPA 200.7	757955	EPA 200.7	758019
60385384005	L-UMW-FB-1	EPA 200.7	757955	EPA 200.7	758019
60385384006	L-BMW-1D	EPA 200.7	757955	EPA 200.7	758019
60385384007	L-BMW-2D	EPA 200.7	757955	EPA 200.7	758019
60385384008	L-UMW-DUP-1	EPA 200.7	757955	EPA 200.7	758019
60385384011	L-UMW-3D	EPA 200.7	758442	EPA 200.7	758579
60385384012	L-UMW-4D	EPA 200.7	758442	EPA 200.7	758579
60385384013	L-UMW-7D	EPA 200.7	758442	EPA 200.7	758579
60385384014	L-UMW-8D	EPA 200.7	758442	EPA 200.7	758579
60385384015	L-UMW-9D	EPA 200.7	758442	EPA 200.7	758579
60385384016	L-UMW-DUP-2	EPA 200.7	758442	EPA 200.7	758579
60385384017	L-UMW-FB-2	EPA 200.7	758442	EPA 200.7	758579
60385384001	L-UMW-1D	EPA 200.8	758163	EPA 200.8	758394
60385384002	L-UMW-2D	EPA 200.8	758163	EPA 200.8	758394
60385384003	L-UMW-5D	EPA 200.8	758163	EPA 200.8	758394
60385384004	L-UMW-6D	EPA 200.8	758163	EPA 200.8	758394
60385384005	L-UMW-FB-1	EPA 200.8	758163	EPA 200.8	758394
60385384006	L-BMW-1D	EPA 200.8	758163	EPA 200.8	758394
60385384007	L-BMW-2D	EPA 200.8	758163	EPA 200.8	758394
60385384008	L-UMW-DUP-1	EPA 200.8	758163	EPA 200.8	758394
60385384011	L-UMW-3D	EPA 200.8	758166	EPA 200.8	758547
60385384012	L-UMW-4D	EPA 200.8	758166	EPA 200.8	758547
60385384013	L-UMW-7D	EPA 200.8	758166	EPA 200.8	758547
60385384014	L-UMW-8D	EPA 200.8	758166	EPA 200.8	758547
60385384015	L-UMW-9D	EPA 200.8	758166	EPA 200.8	758547
60385384016	L-UMW-DUP-2	EPA 200.8	758166	EPA 200.8	758547
60385384017	L-UMW-FB-2	EPA 200.8	758166	EPA 200.8	758547
60385384001	L-UMW-1D	EPA 903.1	473482		
60385384002	L-UMW-2D	EPA 903.1	473482		
60385384003	L-UMW-5D	EPA 903.1	473482		
60385384004	L-UMW-6D	EPA 903.1	473482		
60385384005	L-UMW-FB-1	EPA 903.1	473482		
60385384006	L-BMW-1D	EPA 903.1	473482		
60385384007	L-BMW-2D	EPA 903.1	473482		
60385384008	L-UMW-DUP-1	EPA 903.1	473482		
60385384009	L-UMW-MS-1	EPA 903.1	473482		
60385384010	L-UMW-MSD-1	EPA 903.1	473482		
60385384011	L-UMW-3D	EPA 903.1	473482		
60385384012	L-UMW-4D	EPA 903.1	473482		
60385384013	L-UMW-7D	EPA 903.1	473482		
60385384014	L-UMW-8D	EPA 903.1	473482		
60385384015	L-UMW-9D	EPA 903.1	473482		
60385384016	L-UMW-DUP-2	EPA 903.1	473482		
60385384017	L-UMW-FB-2	EPA 903.1	473482		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN LCPA

Pace Project No.: 60385384

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60385384001	L-UMW-1D	EPA 904.0	473483		
60385384002	L-UMW-2D	EPA 904.0	473483		
60385384003	L-UMW-5D	EPA 904.0	473483		
60385384004	L-UMW-6D	EPA 904.0	473483		
60385384005	L-UMW-FB-1	EPA 904.0	473483		
60385384006	L-BMW-1D	EPA 904.0	473483		
60385384007	L-BMW-2D	EPA 904.0	473483		
60385384008	L-UMW-DUP-1	EPA 904.0	473483		
60385384009	L-UMW-MS-1	EPA 904.0	473483		
60385384010	L-UMW-MSD-1	EPA 904.0	473483		
60385384011	L-UMW-3D	EPA 904.0	473483		
60385384012	L-UMW-4D	EPA 904.0	473483		
60385384013	L-UMW-7D	EPA 904.0	473483		
60385384014	L-UMW-8D	EPA 904.0	473483		
60385384015	L-UMW-9D	EPA 904.0	473483		
60385384016	L-UMW-DUP-2	EPA 904.0	473483		
60385384017	L-UMW-FB-2	EPA 904.0	473483		
60385384001	L-UMW-1D	SM 2320B	649356		
60385384002	L-UMW-2D	SM 2320B	649386		
60385384003	L-UMW-5D	SM 2320B	649386		
60385384004	L-UMW-6D	SM 2320B	649386		
60385384005	L-UMW-FB-1	SM 2320B	649386		
60385384006	L-BMW-1D	SM 2320B	649386		
60385384007	L-BMW-2D	SM 2320B	649386		
60385384008	L-UMW-DUP-1	SM 2320B	649386		
60385384011	L-UMW-3D	SM 2320B	650017		
60385384012	L-UMW-4D	SM 2320B	650017		
60385384013	L-UMW-7D	SM 2320B	650017		
60385384014	L-UMW-8D	SM 2320B	650017		
60385384015	L-UMW-9D	SM 2320B	650017		
60385384016	L-UMW-DUP-2	SM 2320B	650017		
60385384017	L-UMW-FB-2	SM 2320B	650017		
60385384001	L-UMW-1D	SM 2540C	755000		
60385384002	L-UMW-2D	SM 2540C	755000		
60385384003	L-UMW-5D	SM 2540C	755000		
60385384004	L-UMW-6D	SM 2540C	755000		
60385384005	L-UMW-FB-1	SM 2540C	755000		
60385384006	L-BMW-1D	SM 2540C	754996		
60385384007	L-BMW-2D	SM 2540C	754996		
60385384008	L-UMW-DUP-1	SM 2540C	754996		
60385384011	L-UMW-3D	SM 2540C	755409		
60385384012	L-UMW-4D	SM 2540C	755409		
60385384013	L-UMW-7D	SM 2540C	755548		
60385384014	L-UMW-8D	SM 2540C	755549		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN LCPA

Pace Project No.: 60385384

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60385384015	L-UMW-9D	SM 2540C	755549		
60385384016	L-UMW-DUP-2	SM 2540C	755548		
60385384017	L-UMW-FB-2	SM 2540C	755409		
60385384001	L-UMW-1D	EPA 300.0	757277		
60385384002	L-UMW-2D	EPA 300.0	756243		
60385384003	L-UMW-5D	EPA 300.0	756243		
60385384004	L-UMW-6D	EPA 300.0	757277		
60385384005	L-UMW-FB-1	EPA 300.0	757277		
60385384006	L-BMW-1D	EPA 300.0	757277		
60385384007	L-BMW-2D	EPA 300.0	757277		
60385384008	L-UMW-DUP-1	EPA 300.0	757277		
60385384011	L-UMW-3D	EPA 300.0	757096		
60385384012	L-UMW-4D	EPA 300.0	757096		
60385384013	L-UMW-7D	EPA 300.0	757096		
60385384014	L-UMW-8D	EPA 300.0	757096		
60385384015	L-UMW-9D	EPA 300.0	757096		
60385384016	L-UMW-DUP-2	EPA 300.0	757096		
60385384017	L-UMW-FB-2	EPA 300.0	757096		

REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

WO#: 60385384



Client Name: Golden 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 2.5/2.2/1.6 Corr. Factor -0.2 Corrected 23/2.0/1.4

Date and initials of person examining contents:

Temperature should be above freezing to 6°C 11.9/13.1

11.2/12.9

pv 11/8/21

Chain of Custody present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Chain of Custody relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Samples arrived within holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Short Hold Time analyses (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Correct containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Sample labels match COC: Date / time / ID / analyses	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Samples contain multiple phases? Matrix: <u>WT</u>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Containers requiring pH preservation in compliance? (HNO ₃ , H ₂ SO ₄ , HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO) LOT# <u>603173</u>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> 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)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Potassium iodide test strip turns blue/purple? (Preserve)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Trip Blank present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Samples from USDA Regulated Area: State:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> 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 12:59 pm, 11/8/21

Project Manager Review: _____ Date: _____



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** Report To: **Jeffrey Ingram** Section B Required Project Information: Invoice Information: Attention: **Jeffrey Ingram** Project Name: **Ameren LCPA** Project Number: **153-140603.0001A (COC #1)** Project Address: **13515 Barrett Parkway Drive, Ste 260 Ballwin, MO 63021** Project Phone: **636-724-9191** Project Fax: **636-724-9323** Project Manager: **Jamie Church** Project Pace Profile #: **9285**

Section C Regulatory Agency: **GROUND WATER** (circled) **DRINKING WATER** (circled) **OTHER** (circled) Site Location: **MO** State: **MO**

ITEM #	Valid Matrix Codes MATRIX CODE DRINKING WATER DW WASTE WATER WW WATER W SLURRY/SOLID SL OIL OL WP AR OT TS	Section D Required Client Information	COLLECTED		SAMPLE TYPE (G=GRAB C=COMP)	MATRIX CODE (see valid codes to left)	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives H ₂ O ₂ HNO ₃ HCl NaOH Na ₂ S ₂ O ₈ Methanol Other	Requested Analysis Filtered (Y/N)	Requested Analysis (Y/N)												Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.		
			DATE	TIME							DATE	TIME	Analysis Test	Chloride/Fluoride/Sulfate	App III and Cat/An Metals	Alkalinity	TDS	Appendix IV Metals **	Radium 226	Radium 228						
1	L-UMW-1D		11/21/21	1007	G	WT G		4			Y	X	X	X	X	X	X	X	X	X	X	X	X	X		
2	L-UMW-2D		11/21/21	1455	G	WT G		4			Y	X	X	X	X	X	X	X	X	X	X	X	X	X		60385384
3	L-UMW-3D				G	WT G					Y	X	X	X	X	X	X	X	X	X	X	X	X	X		
4	L-UMW-4D				G	WT G					Y	X	X	X	X	X	X	X	X	X	X	X	X	X		
5	L-UMW-5D				G	WT G					Y	X	X	X	X	X	X	X	X	X	X	X	X	X		
6	L-UMW-6D		11/21/21	1400	G	WT G		4			Y	X	X	X	X	X	X	X	X	X	X	X	X	X		
7	L-UMW-7D		11/21/21	1116	G	WT G		4			Y	X	X	X	X	X	X	X	X	X	X	X	X	X		
8	L-UMW-8D		11/21/21	1130	G	WT G		4			Y	X	X	X	X	X	X	X	X	X	X	X	X	X		
9	L-UMW-9D		11/21/21	1007	G	WT G		4			Y	X	X	X	X	X	X	X	X	X	X	X	X	X		
10	L-BMW-1D		11/11/21	1035	G	WT G		4			Y	X	X	X	X	X	X	X	X	X	X	X	X	X		
11	L-BMW-2D		11/11/21	1440	G	WT G		4			Y	X	X	X	X	X	X	X	X	X	X	X	X	X		
12	L-UMW-DUP-1		11/21/21		G	WT G		4			Y	X	X	X	X	X	X	X	X	X	X	X	X	X		

RELINQUISHED BY / AFFILIATION: **Angela McW** DATE: **11/21/21** TIME: **1715**

ACCEPTED BY / AFFILIATION: **Angela McW** DATE: **11/3/21** TIME: **08:40**

DATE SIGNED (MM/DD/YYYY): **11/21/21**

PRINT Name of SAMPLER: **Eric Schneider**

SIGNATURE of SAMPLER: *[Signature]*

DATE SIGNED (MM/DD/YYYY): **11/21/21**

SIGNATURE of SAMPLER: *[Signature]*

Temp In: **16.2**

Received on Ice (Y/N): **Y**

Custody Sealed Cooler (Y/N): **Y**

Samples Intact (Y/N): **Y**



Sample Condition Upon Receipt

WO#: 60385384



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 SPLC

Thermometer Used: T299 Type of Ice: Wet Blue None

Cooler Temperature (°C): As-read 1.1, 1.8, 15.7 Corr. Factor 0.2 Corrected 0.9, 1.6, 15.5, 0.4 Date and initials of person examining contents: SP 11/10/21

Chain of Custody present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Chain of Custody relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Samples arrived within holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Short Hold Time analyses (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<u>TOS 11/10</u>
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<u>All coolers out of temp had only Rad. in</u>
Correct containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Sample labels match COC: Date / time / ID / analyses	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Samples contain multiple phases? Matrix: <u>WT</u>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Containers requiring pH preservation in compliance? (HNO ₃ , H ₂ SO ₄ , HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO) LOT# <u>003173</u>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> 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)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Potassium iodide test strip turns blue/purple? (Preserve)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Trip Blank present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Samples from USDA Regulated Area: State:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> 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 11:43 am, 11/10/21

Project Manager Review: _____ Date: _____



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** Invoice Information: Report To: **Jeffrey Ingram** Page: **1** of **2**

Section B Required Project Information: Copy To: **Ryan Feldmann/Eric Schneider** Company Name: **REGULATORY AGENCY**

Address: **13515 Barrett Parkway Drive, Ste 260** Ballwin, MO 63021

Project Name: **Ameren LCPA** Project Reference: **Jamie Church**

Phone: **636-724-9191** Fax: **636-724-9323** Project Number: **153-140803.0001A (COC #1)**

Requested Due Date/TAT: **Standard**

Site Location: **MO**

NPDES / GROUND WATER / DRINKING WATER
UST / RCRA / OTHER

ITEM #	Valid Matrix Codes MATRIX CODE DW WT WW P OL WP AR OT TS	COLLECTED		SAMPLE TYPE (G=GRAB C=COMP)	MATRIX CODE (see valid codes to left)	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
		COMPOSITE START	COMPOSITE END/GRAB									
1	L-UMW-1D			G	WT							
2	L-UMW-2D			G	WT							
3	L-UMW-3D	11-3-21	11-05	G	WT	Sierra Shields/Golder	11/5/21	1520	Angela M W	11/5/21	1530	1530 09
4	L-UMW-4D	11-3-21	1337	G	WT		11/5	1530		11-6-21	0520	1.6
5	L-UMW-5D			G	WT							15.3
6	L-UMW-6D			G	WT							14.2
7	L-UMW-7D			G	WT							
8	L-UMW-8D			G	WT							
9	L-UMW-9D			G	WT							
10	L-BMW-1D			G	WT							
11	L-BMW-2D			G	WT							
12	L-UMW-DUP-1			G	WT							
ADDITIONAL COMMENTS Residual Chlorine (Y/N) Pace Project No./ Lab I.D.												

Requested Analysis Filtered (Y/N)

Requested Analysis Test

Preservatives: HCl, HNO₃, H₂SO₄, Unpreserved, NaOH, Na₂S₂O₃, Methanol, Other

OF CONTAINERS

SAMPLE TEMP AT COLLECTION

DATE SIGNED (MM/DD/YYYY): **11/5/21**

SIGNATURE OF SAMPLER: **Sierra Shields**

DATE SIGNED (MM/DD/YYYY): **11/5/21**

SIGNATURE OF SAMPLER: **Sean Shea**

Temp In °C: **15.0**

Received on Ice (Y/N): **2.9**

Custody Sealed Cooler (Y/N)

Samples Intact (Y/N)



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: 13515 Barrett Parkway Drive, Site 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 LCPA
 Project Number: 153-140803.0001A (COC #1)

Section C
 Invoice Information:
 Attention:
 Company Name:
 Address:
 Place Quote Reference:
 Salesperson:
 Manager: Jamie Church
 Place Profile #: 9285

REGULATORY AGENCY
 NPDES GROUND WATER DRINKING WATER
 UST RCRA OTHER

Site Location
 STATE: MO

Page: 2 of 2

ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX CODE DW WT WW P SL WP AR OT TS	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Requested Analysis Filtered (Y/N)	DATE	TIME	DATE	TIME	SAMPLE CONDITIONS
			COMPOSITE START	COMPOSITE END/GRAB									
1	L-UMW-DUP-2		DATE	TIME	11-4-21	1	H ₂ SO ₄	Y	11/5	1520	11/5	1520	
2	L-UMW-FB-1		DATE	TIME		4	HCl	N					
3	L-UMW-FB-2		DATE	TIME	11-3-21	4	HNO ₃	N					
4	L-UMW-MS-1		DATE	TIME			NaOH	N					
5	L-UMW-MSD-1		DATE	TIME			Na ₂ S ₂ O ₃	N					
6			DATE	TIME			Methanol	N					
7			DATE	TIME			Other	N					
8			DATE	TIME				N					
9			DATE	TIME				N					
10			DATE	TIME				N					
11			DATE	TIME				N					
12			DATE	TIME				N					
	<p>ADDITIONAL COMMENTS Sierra Shields / Golder 11/5/21 1520 Analytical Analytical 11/5 1530 ramp in</p>												
	<p>ADDITIONAL COMMENTS Residual Chlorine (Y/N) Pace Project No./ Lab I.D. Radium 226 Radium 228</p>												

SAMPLER NAME AND SIGNATURE
 PRINT Name of SAMPLER: Sierra Shields
 SIGNATURE of SAMPLER: [Signature]
 DATE Signed (MM/DD/YYYY): 11/5/21

Temp in °C
 Received on
 Sealed Cooler
 Custody
 Samples Intact

MEMORANDUM**DATE** January 6, 2022**Project No.** 153140603**TO** Project File
Golder Associates**CC** Amanda Derhake, Jeff Ingram**FROM** Annie Muehlfarth**EMAIL** AMuehlfarth@golder.com**DATA VALIDATION SUMMARY, LABADIE ENERGY CENTER – LCPA – DETECTION MONITORING AND ASSESSMENT MONITORING - DATA PACKAGE 60385384**

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

- When a compound was detected in a sample result between the 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, 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 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, the associated sample result was qualified as an estimate (J for detects).

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

Company Name: Golder Associates
 Project Name: Ameren - LEC - LCPA
 Reviewer: A. Muehlfarth

Project Manager: J. Ingram
 Project Number: 153140603
 Validation Date: 1/6/2022

Laboratory: Pace Analytical

SDG #: 60385384

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 L-UMW-1D, L-UMW-2D, L-UMW-5D, L-UMW-6D, L-UMW-FB-1, L-BMW-1D, L-BMW-2D, L-UMW-DUP-1, L-UMW-MS-1, L-UMW-MSD-1, L-UMW-3D, L-UMW-4D, L-UMW-7D, L-UMW-8D, L-UMW-9D, L-UMW-DUP-2, L-UMW-FB-2

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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>11/1/2021 - 11/4/2021</u>
b) Sampling team indicated?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>ETF/EMS/SSS/BTT</u>
c) Sample location noted?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>_____</u>
d) Sample depth indicated (Soils)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>_____</u>
e) Sample type indicated (grab/composite)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>Grab</u>
f) Field QC noted?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>See Notes</u>
g) Field parameters collected (note types)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>pH, Sp.Cond, ORP, Temp, DO, Turb</u>
h) Field Calibration within control limits?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>_____</u>
i) Notations of unacceptable field conditions/performances from field logs or field notes?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>_____</u>
j) Does the laboratory narrative indicate deficiencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>_____</u>

Note Deficiencies: _____

Chain-of-Custody (COC)	YES	NO	NA	COMMENTS
a) Was the COC properly completed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>_____</u>
b) Was the COC signed by both field and laboratory personnel?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>_____</u>
c) Were samples received in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>See Notes</u>

General (reference QAPP or Method)	YES	NO	NA	COMMENTS
a) Were hold times met for sample pretreatment?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>_____</u>
b) Were hold times met for sample analysis?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>See Notes</u>
c) Were the correct preservatives used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>_____</u>
d) Was the correct method used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>_____</u>
e) Were appropriate reporting limits achieved?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>_____</u>
f) Were any sample dilutions noted?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>See Notes</u>
g) Were any matrix problems noted?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>See Notes</u>

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

Blanks	YES	NO	NA	COMMENTS
a) Were analytes detected in the method blank(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Notes
b) Were analytes detected in the field blank(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Notes
c) Were analytes detected in the equipment blank(s)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
d) Were analytes detected in the trip blank(s)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Laboratory Control Sample (LCS)	YES	NO	NA	COMMENTS
a) Was a LCS analyzed once per SDG?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
b) Were the proper analytes included in the LCS?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
c) Was the LCS accuracy criteria met?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Duplicates	YES	NO	NA	COMMENTS
a) Were field duplicates collected (note original and duplicate sample names)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Notes
b) Were field dup. precision criteria met (note RPD)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Notes
c) Were lab duplicates analyzed (note original and duplicate samples)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Notes
d) Were lab dup. precision criteria met (note RPD)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Notes

Blind Standards	YES	NO	NA	COMMENTS
a) Was a blind standard used (indicate name, analytes included and concentrations)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
b) Was the %D within control limits?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Matrix Spike/Matrix Spike Duplicate (MS/MSD)	YES	NO	NA	COMMENTS
a) Was MS accuracy criteria met?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Recovery could not be calculated since sample contained high concentration of analyte?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
b) Was MSD accuracy criteria met?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Recovery could not be calculated since sample contained high concentration of analyte?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
c) Were MS/MSD precision criteria met?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Comments/Notes:

The Sample Condition Upon Receipt forms indicate that coolers recieved outside of temperature range only contained radium samples. No qualification necessary.

TDS in samples L-BMW-1D, L-BMW-2D, L-UMW-DUP-1 were analyzed outside of hold time. Qualified as estimates.

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

QA LEVEL IV - INORGANIC DATA EVALUATION CHECKLIST

Comments/Notes:

Blanks:

3035306: Iron (40.8J). Associated with samples -011 through -017. Results >RL and 10x blank or ND not qualified. Results >RL but <10x blank qualified as estimates.

3026411/3029175/3029202/3029249/3029445: Chloride (0.44J/0.45J/0.43J/0.53J/0.46J). Associated with samples -002 and -003. Results >RL and 10x blank, no qualification necessary.

3029718: Chloride (0.52J). Associated with samples -011 through -017. Results >RL and 10x blank not qualified. Results <RL were reported at RL and qualified as ND.

3034763: Chloride (0.45J). Associated with samples -001, -004 through -008. Results >RL and 10x blank or ND not qualified. Results >RL but <10x blank qualified as estimates.

L-UMW-FB-1 @ L-UMW-6D: Boron (9.9J), chromium (0.41J), alkalinity (2.9). Sample results >RL and 10x blank or ND, no qualification necessary.

L-UMW-FB-2 @ L-UMW-4D: Chromium (0.33J), alkalinity (2.0), TDS (684), chloride (0.84J). Results >RL and 10x blank were not qualified. Results <RL were reported at the RL and qualified as ND.

Duplicates

L-UMW-DUP-1 @ L-UMW-2D: Radium-228 detected in sample, ND in duplicate.

L-UMW-DUP-2 @ L-UMW-7D: Radium-228 detected in sample, ND in duplicate

Laboratory analyzed sample duplicates for alkalinity, TDS, anions.

3026422: RPD exceeds limit (15%) for sulfate (68%). Sample duplicate performed on unrelated sample, no qualification necessary.

MS/MSD:

3035308/3035309: MS/MSD % recovery high for calcium. MS/MSD performed on unrelated sample, no qualification necessary.

3026423/3026424: MS % recovery high and RPD exceeds limit for chloride. Associated with sample 60385384002. Only 1 QC indicator out, no qualification necessary.

3029720/3029721: MS % recovery low for sulfate. MS/MSD performed on unrelated sample, no qualification necessary.

December 21, 2021

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

RE: Project: AMEREN LCPA-CA
Pace Project No.: 60385386

Dear Jeffrey Ingram:

Enclosed are the analytical results for sample(s) received by the laboratory between November 03, 2021 and November 06, 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

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

This report shall not be reproduced, except in full,
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CERTIFICATIONS

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

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 #: 9526

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

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SAMPLE SUMMARY

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60385386001	L-AM-1S	Water	11/02/21 10:51	11/03/21 03:48
60385386002	L-BMW-1S	Water	11/01/21 12:10	11/03/21 03:48
60385386003	L-BMW-2S	Water	11/01/21 13:40	11/03/21 03:48
60385386004	L-AM-1D	Water	11/02/21 12:07	11/03/21 03:48
60385386005	L-LMW-2S	Water	11/02/21 12:20	11/03/21 03:48
60385386006	L-CA-DUP-1	Water	11/02/21 00:00	11/03/21 03:48
60385386007	L-S-1	Water	11/02/21 14:00	11/03/21 03:48
60385386008	L-CA-MS-1	Water	11/02/21 12:07	11/03/21 03:48
60385386009	L-CA-MSD-1	Water	11/02/21 12:07	11/03/21 03:48
60385386010	L-AMW-8	Water	11/03/21 10:06	11/06/21 05:30
60385386011	L-LMW-1S	Water	11/04/21 10:55	11/06/21 05:30
60385386012	L-LMW-4S	Water	11/03/21 12:00	11/06/21 05:30
60385386013	L-LMW-7S	Water	11/05/21 11:47	11/06/21 05:30
60385386014	L-LMW-8S	Water	11/05/21 12:48	11/06/21 05:30
60385386015	L-MW-24	Water	11/04/21 10:24	11/06/21 05:30
60385386016	L-MW-26	Water	11/04/21 12:55	11/06/21 05:30
60385386017	L-MW-33(D)	Water	11/03/21 14:44	11/06/21 05:30
60385386018	L-MW-34(D)	Water	11/03/21 15:50	11/06/21 05:30
60385386019	L-MW-35(D)	Water	11/04/21 11:33	11/06/21 05:30
60385386020	L-TP-1D	Water	11/04/21 15:41	11/06/21 05:30
60385386021	L-TP-2M	Water	11/04/21 13:23	11/06/21 05:30
60385386022	L-TP-2D	Water	11/04/21 15:18	11/06/21 05:30
60385386023	L-TP-3M	Water	11/03/21 12:02	11/06/21 05:30
60385386024	L-TP-3D	Water	11/03/21 13:27	11/06/21 05:30
60385386025	L-TP-4D	Water	11/03/21 10:31	11/06/21 05:30
60385386026	L-CA-DUP-2	Water	11/03/21 00:00	11/06/21 05:30
60385386027	L-CA-DUP-3	Water	11/03/21 00:00	11/06/21 05:30
60385386028	L-CA-FB-1	Water	11/03/21 10:30	11/06/21 05:30
60385386029	L-CA-FB-2	Water	11/04/21 12:00	11/06/21 05:30
60385386030	L-CA-FB-3	Water	11/03/21 15:10	11/06/21 05:30
60385386031	L-MS-2	Water	11/03/21 12:02	11/06/21 05:30
60385386032	L-MSD-2	Water	11/03/21 12:02	11/06/21 05:30

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60385386001	L-AM-1S	EPA 200.7	MA1	10	PASI-K
		EPA 200.8	MRV	3	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
60385386002	L-BMW-1S	EPA 200.7	MA1	10	PASI-K
		EPA 200.8	MRV	3	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
60385386003	L-BMW-2S	EPA 200.7	MA1	10	PASI-K
		EPA 200.8	MRV	3	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
60385386004	L-AM-1D	EPA 200.7	MA1	10	PASI-K
		EPA 200.8	MRV	3	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
60385386005	L-LMW-2S	EPA 200.7	MA1	10	PASI-K
		EPA 200.8	MRV	3	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
60385386006	L-CA-DUP-1	EPA 200.7	MA1	10	PASI-K
		EPA 200.8	MRV	3	PASI-K

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: AMEREN LCPA-CA
Pace Project No.: 60385386

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60385386007	L-S-1	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, MAW	3	PASI-K
		EPA 200.7	MA1	10	PASI-K
		EPA 200.8	MRV	3	PASI-K
		EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
		SM 2320B	SWJ	1	PASI-I
60385386008	L-CA-MS-1	SM 2540C	BLA	1	PASI-K
		EPA 300.0	LDB, MAW	3	PASI-K
		EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
60385386009	L-CA-MSD-1	EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
60385386010	L-AMW-8	EPA 200.7	MA1	10	PASI-K
		EPA 200.8	MRV	3	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
		EPA 200.7	MA1	10	PASI-K
		EPA 200.8	MRV	3	PASI-K
		EPA 903.1	SLC	1	PASI-PA
60385386011	L-LMW-1S	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
		EPA 200.7	MA1	10	PASI-K
		EPA 200.8	MRV	3	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
60385386012	L-LMW-4S	EPA 300.0	LDB	3	PASI-K
		EPA 200.7	MA1	10	PASI-K
		EPA 200.8	MRV	3	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

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60385386013	L-LMW-7S	EPA 200.7	MA1	10	PASI-K
		EPA 200.8	MRV	3	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
60385386014	L-LMW-8S	EPA 200.7	MA1	10	PASI-K
		EPA 200.8	MRV	3	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, MAW	3	PASI-K
60385386015	L-MW-24	EPA 200.7	MA1	10	PASI-K
		EPA 200.8	MRV	3	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
60385386016	L-MW-26	EPA 200.7	MA1	10	PASI-K
		EPA 200.8	MRV	3	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	ALH	3	PASI-K
60385386017	L-MW-33(D)	EPA 200.7	MA1	10	PASI-K
		EPA 200.8	MRV	3	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
60385386018	L-MW-34(D)	EPA 200.7	MA1	10	PASI-K
		EPA 200.8	MRV	3	PASI-K

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SAMPLE ANALYTE COUNT

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60385386019	L-MW-35(D)	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
		EPA 200.7	MA1	10	PASI-K
		EPA 200.8	MRV	3	PASI-K
		EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
		SM 2320B	SWJ	1	PASI-I
60385386020	L-TP-1D	SM 2540C	BLA	1	PASI-K
		EPA 300.0	MAW	3	PASI-K
		EPA 200.7	MA1	10	PASI-K
		EPA 200.8	MRV	3	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
		EPA 200.7	MA1	10	PASI-K
60385386021	L-TP-2M	EPA 200.8	MRV	3	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
		EPA 200.7	MA1	10	PASI-K
		EPA 200.8	MRV	3	PASI-K
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
60385386022	L-TP-2D	SM 2320B	SWJ	1	PASI-I
		SM 2540C	BLA	1	PASI-K
		EPA 300.0	MAW	3	PASI-K
		EPA 200.7	MA1	10	PASI-K
		EPA 200.8	MRV	3	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
60385386023	L-TP-3M	EPA 200.7	MA1	10	PASI-K
		EPA 200.8	MRV	3	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 LCPA-CA

Pace Project No.: 60385386

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60385386024	L-TP-3D	SM 2320B	SWJ	1	PASI-I
		SM 2540C	BLA	1	PASI-K
		EPA 300.0	ALH, LDB	3	PASI-K
		EPA 200.7	MA1	10	PASI-K
		EPA 200.8	MRV	3	PASI-K
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		SM 2320B	SWJ	1	PASI-I
60385386025	L-TP-4D	SM 2540C	BLA	1	PASI-K
		EPA 300.0	LDB, MAW	3	PASI-K
		EPA 200.7	MA1	10	PASI-K
		EPA 200.8	MRV	3	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
60385386026	L-CA-DUP-2	EPA 300.0	MAW	3	PASI-K
		EPA 200.7	MA1	10	PASI-K
		EPA 200.8	MRV	3	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	LDB, MAW	3	PASI-K
60385386027	L-CA-DUP-3	EPA 200.7	MA1	10	PASI-K
		EPA 200.8	MRV	3	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	LDB	3	PASI-K
		EPA 200.7	MA1	10	PASI-K
60385386028	L-CA-FB-1	EPA 200.8	MRV	3	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

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SAMPLE ANALYTE COUNT

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60385386029	L-CA-FB-2	EPA 300.0	LDB	3	PASI-K
		EPA 200.7	MA1	10	PASI-K
		EPA 200.8	MRV	3	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
60385386030	L-CA-FB-3	EPA 300.0	LDB	3	PASI-K
		EPA 200.7	MA1	10	PASI-K
		EPA 200.8	MRV	3	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
60385386031	L-MS-2	EPA 300.0	LDB	3	PASI-K
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
60385386032	L-MSD-2	EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA

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 LCPA-CA

Pace Project No.: 60385386

Sample: L-AM-1S **Lab ID: 60385386001** Collected: 11/02/21 10:51 Received: 11/03/21 03:48 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	655	ug/L	5.0	1.8	1	11/22/21 16:33	11/30/21 16:48	7440-39-3	
Boron	262	ug/L	100	8.6	1	11/22/21 16:33	11/30/21 16:48	7440-42-8	
Calcium	201000	ug/L	2000	754	10	11/22/21 16:33	12/01/21 13:49	7440-70-2	
Iron	12800	ug/L	50.0	21.4	1	11/22/21 16:33	11/30/21 16:48	7439-89-6	
Lithium	<76.7	ug/L	100	76.7	10	11/22/21 16:33	12/01/21 13:49	7439-93-2	
Magnesium	37700	ug/L	50.0	31.4	1	11/22/21 16:33	11/30/21 16:48	7439-95-4	
Manganese	2500	ug/L	5.0	0.74	1	11/22/21 16:33	11/30/21 16:48	7439-96-5	
Molybdenum	6.5J	ug/L	20.0	2.2	1	11/22/21 16:33	11/30/21 16:48	7439-98-7	
Potassium	7290	ug/L	500	146	1	11/22/21 16:33	11/30/21 16:48	7440-09-7	
Sodium	81600	ug/L	500	254	1	11/22/21 16:33	11/30/21 16:48	7440-23-5	
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City									
Arsenic	7.8	ug/L	1.0	0.11	1	11/24/21 08:36	11/30/21 12:18	7440-38-2	
Chromium	0.24J	ug/L	1.0	0.23	1	11/24/21 08:36	11/30/21 12:18	7440-47-3	
Selenium	<0.18	ug/L	1.0	0.18	1	11/24/21 08:36	11/30/21 12:18	7782-49-2	
2320B Alkalinity									
Analytical Method: SM 2320B Pace Analytical Services - Indianapolis									
Alkalinity, Total as CaCO3	537	mg/L	2.0	2.0	1		11/10/21 10:58		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C Pace Analytical Services - Kansas City									
Total Dissolved Solids	851	mg/L	13.3	13.3	1		11/09/21 09:45		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City									
Chloride	164	mg/L	10.0	3.9	10		11/19/21 17:27	16887-00-6	
Fluoride	<0.086	mg/L	0.20	0.086	1		11/19/21 16:34	16984-48-8	
Sulfate	24.9	mg/L	5.0	2.1	5		11/19/21 16:47	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

Sample: L-BMW-1S **Lab ID: 60385386002** Collected: 11/01/21 12:10 Received: 11/03/21 03:48 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	412	ug/L	5.0	1.8	1	11/22/21 16:33	11/30/21 16:50	7440-39-3	
Boron	77.0J	ug/L	100	8.6	1	11/22/21 16:33	11/30/21 16:50	7440-42-8	
Calcium	260000	ug/L	2000	754	10	11/22/21 16:33	12/01/21 13:51	7440-70-2	
Iron	29800	ug/L	50.0	21.4	1	11/22/21 16:33	11/30/21 16:50	7439-89-6	
Lithium	<76.7	ug/L	100	76.7	10	11/22/21 16:33	12/01/21 13:51	7439-93-2	
Magnesium	57800	ug/L	500	314	10	11/22/21 16:33	12/01/21 13:51	7439-95-4	
Manganese	2940	ug/L	5.0	0.74	1	11/22/21 16:33	11/30/21 16:50	7439-96-5	
Molybdenum	2.3J	ug/L	20.0	2.2	1	11/22/21 16:33	11/30/21 16:50	7439-98-7	
Potassium	5850	ug/L	500	146	1	11/22/21 16:33	11/30/21 16:50	7440-09-7	
Sodium	24900	ug/L	500	254	1	11/22/21 16:33	11/30/21 16:50	7440-23-5	
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8									
Pace Analytical Services - Kansas City									
Arsenic	38.4	ug/L	1.0	0.11	1	11/24/21 08:36	11/30/21 12:20	7440-38-2	
Chromium	0.33J	ug/L	1.0	0.23	1	11/24/21 08:36	11/30/21 12:20	7440-47-3	
Selenium	<0.18	ug/L	1.0	0.18	1	11/24/21 08:36	11/30/21 12:20	7782-49-2	
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Indianapolis									
Alkalinity, Total as CaCO3	696	mg/L	2.0	2.0	1		11/10/21 10:58		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Kansas City									
Total Dissolved Solids	953	mg/L	13.3	13.3	1		11/09/21 09:45		H1
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0									
Pace Analytical Services - Kansas City									
Chloride	13.7	mg/L	1.0	0.39	1		11/19/21 17:41	16887-00-6	
Fluoride	<0.086	mg/L	0.20	0.086	1		11/19/21 17:41	16984-48-8	
Sulfate	146	mg/L	20.0	8.4	20		11/22/21 21:56	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

Sample: L-BMW-2S **Lab ID: 60385386003** Collected: 11/01/21 13:40 Received: 11/03/21 03:48 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	245	ug/L	5.0	1.8	1	11/22/21 16:33	11/30/21 16:52	7440-39-3	
Boron	40.7J	ug/L	100	8.6	1	11/22/21 16:33	11/30/21 16:52	7440-42-8	
Calcium	140000	ug/L	2000	754	10	11/22/21 16:33	12/01/21 13:57	7440-70-2	
Iron	<21.4	ug/L	50.0	21.4	1	11/22/21 16:33	11/30/21 16:52	7439-89-6	
Lithium	<76.7	ug/L	100	76.7	10	11/22/21 16:33	12/01/21 13:57	7439-93-2	
Magnesium	20400	ug/L	50.0	31.4	1	11/22/21 16:33	11/30/21 16:52	7439-95-4	
Manganese	4.3J	ug/L	5.0	0.74	1	11/22/21 16:33	11/30/21 16:52	7439-96-5	
Molybdenum	2.6J	ug/L	20.0	2.2	1	11/22/21 16:33	11/30/21 16:52	7439-98-7	
Potassium	5460	ug/L	500	146	1	11/22/21 16:33	11/30/21 16:52	7440-09-7	
Sodium	3990	ug/L	500	254	1	11/22/21 16:33	11/30/21 16:52	7440-23-5	
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8									
Pace Analytical Services - Kansas City									
Arsenic	0.52J	ug/L	1.0	0.11	1	11/24/21 08:36	11/30/21 12:22	7440-38-2	
Chromium	0.25J	ug/L	1.0	0.23	1	11/24/21 08:36	11/30/21 12:22	7440-47-3	
Selenium	2.9	ug/L	1.0	0.18	1	11/24/21 08:36	11/30/21 12:22	7782-49-2	
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Indianapolis									
Alkalinity, Total as CaCO3	357	mg/L	2.0	2.0	1		11/10/21 10:58		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Kansas City									
Total Dissolved Solids	475	mg/L	10.0	10.0	1		11/09/21 09:46		H1
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0									
Pace Analytical Services - Kansas City									
Chloride	1.7	mg/L	1.0	0.39	1		11/19/21 18:07	16887-00-6	B
Fluoride	0.14J	mg/L	0.20	0.086	1		11/19/21 18:07	16984-48-8	
Sulfate	46.2	mg/L	5.0	2.1	5		11/19/21 18:21	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

Sample: L-AM-1D **Lab ID: 60385386004** Collected: 11/02/21 12:07 Received: 11/03/21 03:48 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	75.6	ug/L	5.0	1.8	1	11/22/21 16:33	11/30/21 16:54	7440-39-3	
Boron	7500	ug/L	100	8.6	1	11/22/21 16:33	11/30/21 16:54	7440-42-8	
Calcium	120000	ug/L	2000	754	10	11/22/21 16:33	12/01/21 13:59	7440-70-2	
Iron	5620	ug/L	50.0	21.4	1	11/22/21 16:33	11/30/21 16:54	7439-89-6	
Lithium	<76.7	ug/L	100	76.7	10	11/22/21 16:33	12/01/21 13:59	7439-93-2	
Magnesium	15500	ug/L	50.0	31.4	1	11/22/21 16:33	11/30/21 16:54	7439-95-4	
Manganese	305	ug/L	5.0	0.74	1	11/22/21 16:33	11/30/21 16:54	7439-96-5	
Molybdenum	311	ug/L	20.0	2.2	1	11/22/21 16:33	11/30/21 16:54	7439-98-7	
Potassium	8650	ug/L	500	146	1	11/22/21 16:33	11/30/21 16:54	7440-09-7	
Sodium	121000	ug/L	500	254	1	11/22/21 16:33	11/30/21 16:54	7440-23-5	M1
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	11/24/21 08:36	11/30/21 12:27	7440-38-2	
Chromium	0.34J	ug/L	1.0	0.23	1	11/24/21 08:36	11/30/21 12:27	7440-47-3	
Selenium	<0.18	ug/L	1.0	0.18	1	11/24/21 08:36	11/30/21 12:27	7782-49-2	
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Indianapolis									
Alkalinity, Total as CaCO3	152	mg/L	2.0	2.0	1		11/10/21 10:58		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Kansas City									
Total Dissolved Solids	790	mg/L	10.0	10.0	1		11/09/21 09:46		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0									
Pace Analytical Services - Kansas City									
Chloride	44.8	mg/L	5.0	1.9	5		11/19/21 19:14	16887-00-6	
Fluoride	0.32	mg/L	0.20	0.086	1		11/19/21 18:34	16984-48-8	
Sulfate	377	mg/L	50.0	21.0	50		11/19/21 20:21	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

Sample: L-LMW-2S **Lab ID: 60385386005** Collected: 11/02/21 12:20 Received: 11/03/21 03:48 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	44.3	ug/L	5.0	1.8	1	11/22/21 16:33	11/30/21 17:05	7440-39-3	
Boron	3180	ug/L	100	8.6	1	11/22/21 16:33	11/30/21 17:05	7440-42-8	
Calcium	68700	ug/L	200	75.4	1	11/22/21 16:33	11/30/21 17:05	7440-70-2	
Iron	<21.4	ug/L	50.0	21.4	1	11/22/21 16:33	11/30/21 17:05	7439-89-6	
Lithium	11.5	ug/L	10.0	7.7	1	11/22/21 16:33	11/30/21 17:05	7439-93-2	
Magnesium	87.0	ug/L	50.0	31.4	1	11/22/21 16:33	11/30/21 17:05	7439-95-4	
Manganese	1.0J	ug/L	5.0	0.74	1	11/22/21 16:33	11/30/21 17:05	7439-96-5	
Molybdenum	164	ug/L	20.0	2.2	1	11/22/21 16:33	11/30/21 17:05	7439-98-7	
Potassium	9350	ug/L	500	146	1	11/22/21 16:33	11/30/21 17:05	7440-09-7	
Sodium	66300	ug/L	500	254	1	11/22/21 16:33	11/30/21 17:05	7440-23-5	
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8									
Pace Analytical Services - Kansas City									
Arsenic	45.5	ug/L	1.0	0.11	1	11/24/21 08:36	11/30/21 12:34	7440-38-2	
Chromium	0.25J	ug/L	1.0	0.23	1	11/24/21 08:36	11/30/21 12:34	7440-47-3	
Selenium	0.21J	ug/L	1.0	0.18	1	11/24/21 08:36	11/30/21 12:34	7782-49-2	
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Indianapolis									
Alkalinity, Total as CaCO3	30.9	mg/L	2.0	2.0	1		11/10/21 10:58		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Kansas City									
Total Dissolved Solids	473	mg/L	10.0	10.0	1		11/09/21 09:46		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0									
Pace Analytical Services - Kansas City									
Chloride	17.8	mg/L	1.0	0.39	1		11/19/21 21:01	16887-00-6	
Fluoride	0.15J	mg/L	0.20	0.086	1		11/19/21 21:01	16984-48-8	
Sulfate	255	mg/L	20.0	8.4	20		11/19/21 21:15	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

Sample: L-CA-DUP-1 **Lab ID:** 60385386006 Collected: 11/02/21 00:00 Received: 11/03/21 03:48 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	662	ug/L	5.0	1.8	1	11/22/21 16:33	11/30/21 17:07	7440-39-3	
Boron	262	ug/L	100	8.6	1	11/22/21 16:33	11/30/21 17:07	7440-42-8	
Calcium	200000	ug/L	2000	754	10	11/22/21 16:33	12/01/21 14:05	7440-70-2	
Iron	12500	ug/L	50.0	21.4	1	11/22/21 16:33	11/30/21 17:07	7439-89-6	
Lithium	<76.7	ug/L	100	76.7	10	11/22/21 16:33	12/01/21 14:05	7439-93-2	
Magnesium	37600	ug/L	50.0	31.4	1	11/22/21 16:33	11/30/21 17:07	7439-95-4	
Manganese	2470	ug/L	5.0	0.74	1	11/22/21 16:33	11/30/21 17:07	7439-96-5	
Molybdenum	6.6J	ug/L	20.0	2.2	1	11/22/21 16:33	11/30/21 17:07	7439-98-7	
Potassium	7110	ug/L	500	146	1	11/22/21 16:33	11/30/21 17:07	7440-09-7	
Sodium	80800	ug/L	500	254	1	11/22/21 16:33	11/30/21 17:07	7440-23-5	
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8									
Pace Analytical Services - Kansas City									
Arsenic	7.5	ug/L	1.0	0.11	1	11/24/21 08:36	11/30/21 12:35	7440-38-2	
Chromium	<0.23	ug/L	1.0	0.23	1	11/24/21 08:36	11/30/21 12:35	7440-47-3	
Selenium	<0.18	ug/L	1.0	0.18	1	11/24/21 08:36	11/30/21 12:35	7782-49-2	
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Indianapolis									
Alkalinity, Total as CaCO3	528	mg/L	2.0	2.0	1		11/10/21 10:58		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Kansas City									
Total Dissolved Solids	873	mg/L	13.3	13.3	1		11/09/21 09:46		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0									
Pace Analytical Services - Kansas City									
Chloride	158	mg/L	20.0	7.8	20		11/19/21 21:41	16887-00-6	
Fluoride	<0.086	mg/L	0.20	0.086	1		11/19/21 21:28	16984-48-8	
Sulfate	26.0	mg/L	2.0	0.84	2		11/21/21 17:57	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

Sample: L-S-1 **Lab ID: 60385386007** Collected: 11/02/21 14:00 Received: 11/03/21 03:48 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	352	ug/L	5.0	1.8	1	11/22/21 16:33	11/30/21 17:09	7440-39-3	
Boron	74.0J	ug/L	100	8.6	1	11/22/21 16:33	11/30/21 17:09	7440-42-8	
Calcium	146000	ug/L	2000	754	10	11/22/21 16:33	12/01/21 14:07	7440-70-2	
Iron	132	ug/L	50.0	21.4	1	11/22/21 16:33	11/30/21 17:09	7439-89-6	
Lithium	<76.7	ug/L	100	76.7	10	11/22/21 16:33	12/01/21 14:07	7439-93-2	
Magnesium	20100	ug/L	50.0	31.4	1	11/22/21 16:33	11/30/21 17:09	7439-95-4	
Manganese	664	ug/L	5.0	0.74	1	11/22/21 16:33	11/30/21 17:09	7439-96-5	
Molybdenum	<2.2	ug/L	20.0	2.2	1	11/22/21 16:33	11/30/21 17:09	7439-98-7	
Potassium	25400	ug/L	500	146	1	11/22/21 16:33	11/30/21 17:09	7440-09-7	
Sodium	3330	ug/L	500	254	1	11/22/21 16:33	11/30/21 17:09	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	11/24/21 08:36	11/30/21 12:37	7440-38-2	
Chromium	0.34J	ug/L	1.0	0.23	1	11/24/21 08:36	11/30/21 12:37	7440-47-3	
Selenium	0.27J	ug/L	1.0	0.18	1	11/24/21 08:36	11/30/21 12:37	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		11/10/21 10:58		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Kansas City									
Total Dissolved Solids	505	mg/L	10.0	10.0	1		11/09/21 09:46		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0									
Pace Analytical Services - Kansas City									
Chloride	1.1	mg/L	1.0	0.39	1		11/19/21 21:55	16887-00-6	B
Fluoride	0.15J	mg/L	0.20	0.086	1		11/19/21 21:55	16984-48-8	
Sulfate	21.7	mg/L	2.0	0.84	2		11/21/21 18:08	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

Sample: L-AMW-8 **Lab ID: 60385386010** Collected: 11/03/21 10:06 Received: 11/06/21 05:30 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	192	ug/L	5.0	1.8	1	11/22/21 16:33	11/30/21 17:12	7440-39-3	
Boron	6150	ug/L	100	8.6	1	11/22/21 16:33	11/30/21 17:12	7440-42-8	
Calcium	64700	ug/L	200	75.4	1	11/22/21 16:33	11/30/21 17:12	7440-70-2	
Iron	8930	ug/L	50.0	21.4	1	11/22/21 16:33	11/30/21 17:12	7439-89-6	
Lithium	16.2	ug/L	10.0	7.7	1	11/22/21 16:33	11/30/21 17:12	7439-93-2	
Magnesium	10100	ug/L	50.0	31.4	1	11/22/21 16:33	11/30/21 17:12	7439-95-4	
Manganese	313	ug/L	5.0	0.74	1	11/22/21 16:33	11/30/21 17:12	7439-96-5	
Molybdenum	291	ug/L	20.0	2.2	1	11/22/21 16:33	11/30/21 17:12	7439-98-7	
Potassium	5880	ug/L	500	146	1	11/22/21 16:33	11/30/21 17:12	7440-09-7	
Sodium	79000	ug/L	500	254	1	11/22/21 16:33	11/30/21 17:12	7440-23-5	
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8									
Pace Analytical Services - Kansas City									
Arsenic	0.56J	ug/L	1.0	0.11	1	11/24/21 08:36	11/30/21 12:47	7440-38-2	
Chromium	0.40J	ug/L	1.0	0.23	1	11/24/21 08:36	11/30/21 12:47	7440-47-3	
Selenium	<0.18	ug/L	1.0	0.18	1	11/24/21 08:36	11/30/21 12:47	7782-49-2	
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Indianapolis									
Alkalinity, Total as CaCO3	64.6	mg/L	2.0	2.0	1		11/12/21 11:19		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Kansas City									
Total Dissolved Solids	536	mg/L	10.0	10.0	1		11/10/21 14:30		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0									
Pace Analytical Services - Kansas City									
Chloride	19.7	mg/L	2.0	0.78	2		11/18/21 18:17	16887-00-6	
Fluoride	0.33	mg/L	0.20	0.086	1		11/18/21 17:36	16984-48-8	
Sulfate	271	mg/L	20.0	8.4	20		11/18/21 18:30	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

Sample: L-LMW-1S **Lab ID: 60385386011** Collected: 11/04/21 10:55 Received: 11/06/21 05:30 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	118	ug/L	5.0	1.8	1	11/22/21 16:33	11/30/21 17:14	7440-39-3	
Boron	3970	ug/L	100	8.6	1	11/22/21 16:33	11/30/21 17:14	7440-42-8	
Calcium	147000	ug/L	2000	754	10	11/22/21 16:33	12/01/21 14:09	7440-70-2	
Iron	2270	ug/L	50.0	21.4	1	11/22/21 16:33	11/30/21 17:14	7439-89-6	
Lithium	<76.7	ug/L	100	76.7	10	11/22/21 16:33	12/01/21 14:09	7439-93-2	
Magnesium	24900	ug/L	50.0	31.4	1	11/22/21 16:33	11/30/21 17:14	7439-95-4	
Manganese	979	ug/L	5.0	0.74	1	11/22/21 16:33	11/30/21 17:14	7439-96-5	
Molybdenum	4.3J	ug/L	20.0	2.2	1	11/22/21 16:33	11/30/21 17:14	7439-98-7	
Potassium	4220	ug/L	500	146	1	11/22/21 16:33	11/30/21 17:14	7440-09-7	
Sodium	9430	ug/L	500	254	1	11/22/21 16:33	11/30/21 17:14	7440-23-5	
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8									
Pace Analytical Services - Kansas City									
Arsenic	6.1	ug/L	1.0	0.11	1	11/24/21 08:36	11/30/21 12:49	7440-38-2	
Chromium	0.29J	ug/L	1.0	0.23	1	11/24/21 08:36	11/30/21 12:49	7440-47-3	
Selenium	<0.18	ug/L	1.0	0.18	1	11/24/21 08:36	11/30/21 12:49	7782-49-2	
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Indianapolis									
Alkalinity, Total as CaCO3	332	mg/L	2.0	2.0	1		11/12/21 11:19		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Kansas City									
Total Dissolved Solids	547	mg/L	10.0	10.0	1		11/11/21 08:04		
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		11/18/21 18:43	16887-00-6	B
Fluoride	0.18J	mg/L	0.20	0.086	1		11/18/21 18:43	16984-48-8	
Sulfate	114	mg/L	20.0	8.4	20		11/18/21 18:57	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

Sample: L-LMW-4S **Lab ID: 60385386012** Collected: 11/03/21 12:00 Received: 11/06/21 05:30 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	151	ug/L	5.0	1.8	1	11/22/21 16:33	11/30/21 17:16	7440-39-3	
Boron	8060	ug/L	100	8.6	1	11/22/21 16:33	11/30/21 17:16	7440-42-8	
Calcium	131000	ug/L	2000	754	10	11/22/21 16:33	12/01/21 14:11	7440-70-2	
Iron	8510	ug/L	50.0	21.4	1	11/22/21 16:33	11/30/21 17:16	7439-89-6	
Lithium	<76.7	ug/L	100	76.7	10	11/22/21 16:33	12/01/21 14:11	7439-93-2	
Magnesium	25500	ug/L	50.0	31.4	1	11/22/21 16:33	11/30/21 17:16	7439-95-4	
Manganese	1690	ug/L	5.0	0.74	1	11/22/21 16:33	11/30/21 17:16	7439-96-5	
Molybdenum	142	ug/L	20.0	2.2	1	11/22/21 16:33	11/30/21 17:16	7439-98-7	
Potassium	6880	ug/L	500	146	1	11/22/21 16:33	11/30/21 17:16	7440-09-7	
Sodium	91300	ug/L	500	254	1	11/22/21 16:33	11/30/21 17:16	7440-23-5	
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8									
Pace Analytical Services - Kansas City									
Arsenic	23.8	ug/L	1.0	0.11	1	11/24/21 08:36	11/30/21 12:51	7440-38-2	
Chromium	0.45J	ug/L	1.0	0.23	1	11/24/21 08:36	11/30/21 12:51	7440-47-3	
Selenium	<0.18	ug/L	1.0	0.18	1	11/24/21 08:36	11/30/21 12:51	7782-49-2	
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Indianapolis									
Alkalinity, Total as CaCO3	344	mg/L	2.0	2.0	1		11/12/21 11:19		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Kansas City									
Total Dissolved Solids	722	mg/L	10.0	10.0	1		11/10/21 14:30		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0									
Pace Analytical Services - Kansas City									
Chloride	22.8	mg/L	5.0	1.9	5		11/18/21 19:23	16887-00-6	B
Fluoride	0.25	mg/L	0.20	0.086	1		11/18/21 19:10	16984-48-8	
Sulfate	208	mg/L	20.0	8.4	20		11/18/21 19:37	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

Sample: L-LMW-7S **Lab ID: 60385386013** Collected: 11/05/21 11:47 Received: 11/06/21 05:30 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	271	ug/L	5.0	1.8	1	11/22/21 16:33	11/30/21 17:18	7440-39-3	
Boron	7540	ug/L	100	8.6	1	11/22/21 16:33	11/30/21 17:18	7440-42-8	
Calcium	181000	ug/L	2000	754	10	11/22/21 16:33	12/01/21 14:14	7440-70-2	
Iron	2820	ug/L	50.0	21.4	1	11/22/21 16:33	11/30/21 17:18	7439-89-6	
Lithium	<76.7	ug/L	100	76.7	10	11/22/21 16:33	12/01/21 14:14	7439-93-2	
Magnesium	37100	ug/L	50.0	31.4	1	11/22/21 16:33	11/30/21 17:18	7439-95-4	
Manganese	1570	ug/L	5.0	0.74	1	11/22/21 16:33	11/30/21 17:18	7439-96-5	
Molybdenum	76.1	ug/L	20.0	2.2	1	11/22/21 16:33	11/30/21 17:18	7439-98-7	
Potassium	7320	ug/L	500	146	1	11/22/21 16:33	11/30/21 17:18	7440-09-7	
Sodium	48700	ug/L	500	254	1	11/22/21 16:33	11/30/21 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	6.8	ug/L	1.0	0.11	1	11/24/21 08:36	11/30/21 12:52	7440-38-2	
Chromium	0.40J	ug/L	1.0	0.23	1	11/24/21 08:36	11/30/21 12:52	7440-47-3	
Selenium	<0.18	ug/L	1.0	0.18	1	11/24/21 08:36	11/30/21 12:52	7782-49-2	
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Indianapolis									
Alkalinity, Total as CaCO3	416	mg/L	2.0	2.0	1		11/12/21 11:19		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Kansas City									
Total Dissolved Solids	799	mg/L	10.0	10.0	1		11/11/21 08:07		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0									
Pace Analytical Services - Kansas City									
Chloride	18.6	mg/L	1.0	0.39	1		11/18/21 19:50	16887-00-6	
Fluoride	0.19J	mg/L	0.20	0.086	1		11/18/21 19:50	16984-48-8	
Sulfate	215	mg/L	20.0	8.4	20		11/18/21 20:04	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

Sample: L-LMW-8S **Lab ID: 60385386014** Collected: 11/05/21 12:48 Received: 11/06/21 05:30 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	126	ug/L	5.0	1.8	1	11/22/21 16:33	11/30/21 17:20	7440-39-3	
Boron	4990	ug/L	100	8.6	1	11/22/21 16:33	11/30/21 17:20	7440-42-8	
Calcium	169000	ug/L	2000	754	10	11/22/21 16:33	12/01/21 14:16	7440-70-2	
Iron	4230	ug/L	50.0	21.4	1	11/22/21 16:33	11/30/21 17:20	7439-89-6	
Lithium	<76.7	ug/L	100	76.7	10	11/22/21 16:33	12/01/21 14:16	7439-93-2	
Magnesium	29000	ug/L	50.0	31.4	1	11/22/21 16:33	11/30/21 17:20	7439-95-4	
Manganese	2030	ug/L	5.0	0.74	1	11/22/21 16:33	11/30/21 17:20	7439-96-5	
Molybdenum	190	ug/L	20.0	2.2	1	11/22/21 16:33	11/30/21 17:20	7439-98-7	
Potassium	6360	ug/L	500	146	1	11/22/21 16:33	11/30/21 17:20	7440-09-7	
Sodium	63700	ug/L	500	254	1	11/22/21 16:33	11/30/21 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	7.9	ug/L	1.0	0.11	1	11/24/21 08:36	11/30/21 12:54	7440-38-2	
Chromium	0.24J	ug/L	1.0	0.23	1	11/24/21 08:36	11/30/21 12:54	7440-47-3	
Selenium	<0.18	ug/L	1.0	0.18	1	11/24/21 08:36	11/30/21 12:54	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		11/12/21 11:19		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Kansas City									
Total Dissolved Solids	850	mg/L	10.0	10.0	1		11/11/21 08:08		
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		11/18/21 20:17	16887-00-6	
Fluoride	0.43	mg/L	0.20	0.086	1		11/18/21 20:17	16984-48-8	
Sulfate	383	mg/L	50.0	21.0	50		11/19/21 12:20	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

Sample: L-MW-24 **Lab ID: 60385386015** Collected: 11/04/21 10:24 Received: 11/06/21 05:30 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	199	ug/L	5.0	1.8	1	11/22/21 16:33	11/30/21 17:22	7440-39-3	
Boron	96.8J	ug/L	100	8.6	1	11/22/21 16:33	11/30/21 17:22	7440-42-8	
Calcium	141000	ug/L	2000	754	10	11/22/21 16:33	12/01/21 14:22	7440-70-2	
Iron	81.9	ug/L	50.0	21.4	1	11/22/21 16:33	11/30/21 17:22	7439-89-6	
Lithium	<76.7	ug/L	100	76.7	10	11/22/21 16:33	12/01/21 14:22	7439-93-2	
Magnesium	28000	ug/L	50.0	31.4	1	11/22/21 16:33	11/30/21 17:22	7439-95-4	
Manganese	60.2	ug/L	5.0	0.74	1	11/22/21 16:33	11/30/21 17:22	7439-96-5	
Molybdenum	2.9J	ug/L	20.0	2.2	1	11/22/21 16:33	11/30/21 17:22	7439-98-7	
Potassium	5800	ug/L	500	146	1	11/22/21 16:33	11/30/21 17:22	7440-09-7	
Sodium	8420	ug/L	500	254	1	11/22/21 16:33	11/30/21 17:22	7440-23-5	
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8									
Pace Analytical Services - Kansas City									
Arsenic	0.58J	ug/L	1.0	0.11	1	11/24/21 08:36	11/30/21 12:56	7440-38-2	
Chromium	0.34J	ug/L	1.0	0.23	1	11/24/21 08:36	11/30/21 12:56	7440-47-3	
Selenium	3.6	ug/L	1.0	0.18	1	11/24/21 08:36	11/30/21 12:56	7782-49-2	
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Indianapolis									
Alkalinity, Total as CaCO3	415	mg/L	2.0	2.0	1		11/12/21 11:19		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Kansas City									
Total Dissolved Solids	513	mg/L	10.0	10.0	1		11/11/21 08:04		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0									
Pace Analytical Services - Kansas City									
Chloride	5.0	mg/L	1.0	0.39	1		11/19/21 07:12	16887-00-6	B
Fluoride	0.14J	mg/L	0.20	0.086	1		11/19/21 07:12	16984-48-8	
Sulfate	29.8	mg/L	5.0	2.1	5		11/19/21 07:26	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

Sample: L-MW-26 **Lab ID: 60385386016** Collected: 11/04/21 12:55 Received: 11/06/21 05:30 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	216	ug/L	5.0	1.8	1	11/22/21 16:33	11/30/21 17:24	7440-39-3	
Boron	68.7J	ug/L	100	8.6	1	11/22/21 16:33	11/30/21 17:24	7440-42-8	
Calcium	146000	ug/L	2000	754	10	11/22/21 16:33	12/01/21 14:24	7440-70-2	
Iron	43.7J	ug/L	50.0	21.4	1	11/22/21 16:33	11/30/21 17:24	7439-89-6	
Lithium	<76.7	ug/L	100	76.7	10	11/22/21 16:33	12/01/21 14:24	7439-93-2	
Magnesium	26300	ug/L	50.0	31.4	1	11/22/21 16:33	11/30/21 17:24	7439-95-4	
Manganese	464	ug/L	5.0	0.74	1	11/22/21 16:33	11/30/21 17:24	7439-96-5	
Molybdenum	<2.2	ug/L	20.0	2.2	1	11/22/21 16:33	11/30/21 17:24	7439-98-7	
Potassium	4310	ug/L	500	146	1	11/22/21 16:33	11/30/21 17:24	7440-09-7	
Sodium	6070	ug/L	500	254	1	11/22/21 16:33	11/30/21 17:24	7440-23-5	
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8									
Pace Analytical Services - Kansas City									
Arsenic	0.50J	ug/L	1.0	0.11	1	11/24/21 08:36	11/30/21 13:01	7440-38-2	M1
Chromium	0.33J	ug/L	1.0	0.23	1	11/24/21 08:36	11/30/21 13:01	7440-47-3	M1
Selenium	2.9	ug/L	1.0	0.18	1	11/24/21 08:36	11/30/21 13:01	7782-49-2	M1,R1
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Indianapolis									
Alkalinity, Total as CaCO3	390	mg/L	2.0	2.0	1		11/12/21 11:19		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Kansas City									
Total Dissolved Solids	490	mg/L	10.0	10.0	1		11/11/21 08:04		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0									
Pace Analytical Services - Kansas City									
Chloride	6.2	mg/L	1.0	0.39	1		11/18/21 14:06	16887-00-6	B
Fluoride	0.24	mg/L	0.20	0.086	1		11/18/21 14:06	16984-48-8	
Sulfate	29.3	mg/L	5.0	2.1	5		11/18/21 15:02	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

Sample: L-MW-33(D) **Lab ID: 60385386017** Collected: 11/03/21 14:44 Received: 11/06/21 05:30 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	105	ug/L	5.0	1.8	1	11/22/21 16:33	11/30/21 17:35	7440-39-3	
Boron	9640	ug/L	100	8.6	1	11/22/21 16:33	11/30/21 17:35	7440-42-8	
Calcium	84100	ug/L	200	75.4	1	11/22/21 16:33	11/30/21 17:35	7440-70-2	
Iron	4300	ug/L	50.0	21.4	1	11/22/21 16:33	11/30/21 17:35	7439-89-6	
Lithium	32.6	ug/L	10.0	7.7	1	11/22/21 16:33	11/30/21 17:35	7439-93-2	
Magnesium	18200	ug/L	50.0	31.4	1	11/22/21 16:33	11/30/21 17:35	7439-95-4	
Manganese	219	ug/L	5.0	0.74	1	11/22/21 16:33	11/30/21 17:35	7439-96-5	
Molybdenum	917	ug/L	20.0	2.2	1	11/22/21 16:33	11/30/21 17:35	7439-98-7	
Potassium	6660	ug/L	500	146	1	11/22/21 16:33	11/30/21 17:35	7440-09-7	
Sodium	91800	ug/L	500	254	1	11/22/21 16:33	11/30/21 17:35	7440-23-5	
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8									
Pace Analytical Services - Kansas City									
Arsenic	2.5	ug/L	1.0	0.11	1	11/24/21 08:36	11/30/21 13:08	7440-38-2	
Chromium	0.42J	ug/L	1.0	0.23	1	11/24/21 08:36	11/30/21 13:08	7440-47-3	
Selenium	<0.18	ug/L	1.0	0.18	1	11/24/21 08:36	11/30/21 13:08	7782-49-2	
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Indianapolis									
Alkalinity, Total as CaCO3	110	mg/L	2.0	2.0	1		11/12/21 11:19		
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		11/10/21 14:31		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0									
Pace Analytical Services - Kansas City									
Chloride	25.3	mg/L	20.0	7.8	20		11/19/21 07:52	16887-00-6	B
Fluoride	0.31	mg/L	0.20	0.086	1		11/19/21 07:39	16984-48-8	
Sulfate	328	mg/L	20.0	8.4	20		11/19/21 07:52	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

Sample: L-MW-34(D) **Lab ID: 60385386018** Collected: 11/03/21 15:50 Received: 11/06/21 05:30 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	88.4	ug/L	5.0	1.8	1	11/22/21 16:33	11/30/21 17:37	7440-39-3	
Boron	10100	ug/L	100	8.6	1	11/22/21 16:33	11/30/21 17:37	7440-42-8	
Calcium	87500	ug/L	200	75.4	1	11/22/21 16:33	11/30/21 17:37	7440-70-2	
Iron	4840	ug/L	50.0	21.4	1	11/22/21 16:33	11/30/21 17:37	7439-89-6	
Lithium	34.0	ug/L	10.0	7.7	1	11/22/21 16:33	11/30/21 17:37	7439-93-2	
Magnesium	21200	ug/L	50.0	31.4	1	11/22/21 16:33	11/30/21 17:37	7439-95-4	
Manganese	219	ug/L	5.0	0.74	1	11/22/21 16:33	11/30/21 17:37	7439-96-5	
Molybdenum	960	ug/L	20.0	2.2	1	11/22/21 16:33	11/30/21 17:37	7439-98-7	
Potassium	6460	ug/L	500	146	1	11/22/21 16:33	11/30/21 17:37	7440-09-7	
Sodium	78200	ug/L	500	254	1	11/22/21 16:33	11/30/21 17:37	7440-23-5	
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8									
Pace Analytical Services - Kansas City									
Arsenic	3.6	ug/L	1.0	0.11	1	11/24/21 08:36	11/30/21 13:09	7440-38-2	
Chromium	0.31J	ug/L	1.0	0.23	1	11/24/21 08:36	11/30/21 13:09	7440-47-3	
Selenium	<0.18	ug/L	1.0	0.18	1	11/24/21 08:36	11/30/21 13:09	7782-49-2	
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Indianapolis									
Alkalinity, Total as CaCO3	159	mg/L	2.0	2.0	1		11/12/21 11:19		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Kansas City									
Total Dissolved Solids	661	mg/L	10.0	10.0	1		11/10/21 14:31		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0									
Pace Analytical Services - Kansas City									
Chloride	23.5	mg/L	20.0	7.8	20		11/19/21 08:19	16887-00-6	B
Fluoride	0.27	mg/L	0.20	0.086	1		11/19/21 08:06	16984-48-8	
Sulfate	270	mg/L	20.0	8.4	20		11/19/21 08:19	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

Sample: L-MW-35(D) **Lab ID: 60385386019** Collected: 11/04/21 11:33 Received: 11/06/21 05:30 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	43.6	ug/L	5.0	1.8	1	11/22/21 16:33	11/30/21 17:39	7440-39-3	
Boron	8700	ug/L	100	8.6	1	11/22/21 16:33	11/30/21 17:39	7440-42-8	
Calcium	130000	ug/L	2000	754	10	11/22/21 16:33	12/01/21 14:30	7440-70-2	
Iron	5300	ug/L	50.0	21.4	1	11/22/21 16:33	11/30/21 17:39	7439-89-6	
Lithium	<76.7	ug/L	100	76.7	10	11/22/21 16:33	12/01/21 14:30	7439-93-2	
Magnesium	27600	ug/L	50.0	31.4	1	11/22/21 16:33	11/30/21 17:39	7439-95-4	
Manganese	383	ug/L	5.0	0.74	1	11/22/21 16:33	11/30/21 17:39	7439-96-5	
Molybdenum	584	ug/L	20.0	2.2	1	11/22/21 16:33	11/30/21 17:39	7439-98-7	
Potassium	5540	ug/L	500	146	1	11/22/21 16:33	11/30/21 17:39	7440-09-7	
Sodium	97500	ug/L	500	254	1	11/22/21 16:33	11/30/21 17:39	7440-23-5	
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8									
Pace Analytical Services - Kansas City									
Arsenic	0.16J	ug/L	1.0	0.11	1	11/24/21 08:36	11/30/21 13:11	7440-38-2	
Chromium	0.40J	ug/L	1.0	0.23	1	11/24/21 08:36	11/30/21 13:11	7440-47-3	
Selenium	<0.18	ug/L	1.0	0.18	1	11/24/21 08:36	11/30/21 13:11	7782-49-2	
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Indianapolis									
Alkalinity, Total as CaCO3	159	mg/L	2.0	2.0	1		11/12/21 11:19		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Kansas City									
Total Dissolved Solids	855	mg/L	10.0	10.0	1		11/11/21 08:05		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0									
Pace Analytical Services - Kansas City									
Chloride	18.2	mg/L	1.0	0.39	1		11/19/21 08:32	16887-00-6	
Fluoride	0.25	mg/L	0.20	0.086	1		11/19/21 08:32	16984-48-8	
Sulfate	410	mg/L	100	42.1	100		11/19/21 08:46	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

Sample: L-TP-1D **Lab ID: 60385386020** Collected: 11/04/21 15:41 Received: 11/06/21 05:30 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	1430	ug/L	5.0	1.8	1	11/22/21 16:33	11/30/21 17:41	7440-39-3	
Boron	79.6J	ug/L	100	8.6	1	11/22/21 16:33	11/30/21 17:41	7440-42-8	
Calcium	143000	ug/L	2000	754	10	11/22/21 16:33	12/01/21 14:32	7440-70-2	
Iron	7890	ug/L	50.0	21.4	1	11/22/21 16:33	11/30/21 17:41	7439-89-6	
Lithium	<76.7	ug/L	100	76.7	10	11/22/21 16:33	12/01/21 14:32	7439-93-2	
Magnesium	35100	ug/L	50.0	31.4	1	11/22/21 16:33	11/30/21 17:41	7439-95-4	
Manganese	220	ug/L	5.0	0.74	1	11/22/21 16:33	11/30/21 17:41	7439-96-5	
Molybdenum	5.1J	ug/L	20.0	2.2	1	11/22/21 16:33	11/30/21 17:41	7439-98-7	
Potassium	4170	ug/L	500	146	1	11/22/21 16:33	11/30/21 17:41	7440-09-7	
Sodium	13200	ug/L	500	254	1	11/22/21 16:33	11/30/21 17:41	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	11/24/21 08:36	11/30/21 13:13	7440-38-2	
Chromium	0.32J	ug/L	1.0	0.23	1	11/24/21 08:36	11/30/21 13:13	7440-47-3	
Selenium	<0.18	ug/L	1.0	0.18	1	11/24/21 08:36	11/30/21 13:13	7782-49-2	
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Indianapolis									
Alkalinity, Total as CaCO3	472	mg/L	2.0	2.0	1		11/12/21 11:19		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Kansas City									
Total Dissolved Solids	521	mg/L	10.0	10.0	1		11/11/21 08:05		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0									
Pace Analytical Services - Kansas City									
Chloride	4.5	mg/L	1.0	0.39	1		11/19/21 12:06	16887-00-6	B
Fluoride	0.17J	mg/L	0.20	0.086	1		11/19/21 12:06	16984-48-8	
Sulfate	12.9	mg/L	1.0	0.42	1		11/19/21 12:06	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

Sample: L-TP-2M **Lab ID: 60385386021** Collected: 11/04/21 13:23 Received: 11/06/21 05:30 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	123	ug/L	5.0	1.8	1	11/22/21 16:33	11/30/21 17:48	7440-39-3	
Boron	2580	ug/L	100	8.6	1	11/22/21 16:33	11/30/21 17:48	7440-42-8	
Calcium	94300	ug/L	200	75.4	1	11/22/21 16:33	11/30/21 17:48	7440-70-2	
Iron	2830	ug/L	50.0	21.4	1	11/22/21 16:33	11/30/21 17:48	7439-89-6	
Lithium	32.8	ug/L	10.0	7.7	1	11/22/21 16:33	11/30/21 17:48	7439-93-2	
Magnesium	14400	ug/L	50.0	31.4	1	11/22/21 16:33	11/30/21 17:48	7439-95-4	
Manganese	398	ug/L	5.0	0.74	1	11/22/21 16:33	11/30/21 17:48	7439-96-5	
Molybdenum	92.3	ug/L	20.0	2.2	1	11/22/21 16:33	11/30/21 17:48	7439-98-7	
Potassium	6520	ug/L	500	146	1	11/22/21 16:33	11/30/21 17:48	7440-09-7	
Sodium	65500	ug/L	500	254	1	11/22/21 16:33	11/30/21 17:48	7440-23-5	
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8									
Pace Analytical Services - Kansas City									
Arsenic	0.61J	ug/L	1.0	0.11	1	11/24/21 08:36	11/30/21 13:14	7440-38-2	
Chromium	0.27J	ug/L	1.0	0.23	1	11/24/21 08:36	11/30/21 13:14	7440-47-3	
Selenium	<0.18	ug/L	1.0	0.18	1	11/24/21 08:36	11/30/21 13:14	7782-49-2	
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Indianapolis									
Alkalinity, Total as CaCO3	222	mg/L	2.0	2.0	1		11/12/21 11:19		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Kansas City									
Total Dissolved Solids	525	mg/L	10.0	10.0	1		11/11/21 08:05		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0									
Pace Analytical Services - Kansas City									
Chloride	22.4	mg/L	10.0	3.9	10		11/19/21 09:39	16887-00-6	B
Fluoride	0.42	mg/L	0.20	0.086	1		11/19/21 09:26	16984-48-8	
Sulfate	158	mg/L	10.0	4.2	10		11/19/21 09:39	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

Sample: L-TP-2D **Lab ID: 60385386022** Collected: 11/04/21 15:18 Received: 11/06/21 05:30 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	117	ug/L	5.0	1.8	1	11/22/21 16:33	11/30/21 17:50	7440-39-3	
Boron	1930	ug/L	100	8.6	1	11/22/21 16:33	11/30/21 17:50	7440-42-8	
Calcium	94000	ug/L	200	75.4	1	11/22/21 16:33	11/30/21 17:50	7440-70-2	
Iron	3440	ug/L	50.0	21.4	1	11/22/21 16:33	11/30/21 17:50	7439-89-6	
Lithium	42.0	ug/L	10.0	7.7	1	11/22/21 16:33	11/30/21 17:50	7439-93-2	
Magnesium	17100	ug/L	50.0	31.4	1	11/22/21 16:33	11/30/21 17:50	7439-95-4	
Manganese	309	ug/L	5.0	0.74	1	11/22/21 16:33	11/30/21 17:50	7439-96-5	
Molybdenum	129	ug/L	20.0	2.2	1	11/22/21 16:33	11/30/21 17:50	7439-98-7	
Potassium	5620	ug/L	500	146	1	11/22/21 16:33	11/30/21 17:50	7440-09-7	
Sodium	59800	ug/L	500	254	1	11/22/21 16:33	11/30/21 17:50	7440-23-5	
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8									
Pace Analytical Services - Kansas City									
Arsenic	11.1	ug/L	1.0	0.11	1	11/24/21 08:36	11/30/21 13:16	7440-38-2	
Chromium	0.25J	ug/L	1.0	0.23	1	11/24/21 08:36	11/30/21 13:16	7440-47-3	
Selenium	<0.18	ug/L	1.0	0.18	1	11/24/21 08:36	11/30/21 13:16	7782-49-2	
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Indianapolis									
Alkalinity, Total as CaCO3	232	mg/L	2.0	2.0	1		11/12/21 11:19		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Kansas City									
Total Dissolved Solids	520	mg/L	10.0	10.0	1		11/11/21 08:05		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0									
Pace Analytical Services - Kansas City									
Chloride	22.9	mg/L	10.0	3.9	10		11/19/21 10:06	16887-00-6	B
Fluoride	0.39	mg/L	0.20	0.086	1		11/19/21 09:53	16984-48-8	
Sulfate	152	mg/L	10.0	4.2	10		11/19/21 10:06	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

Sample: L-TP-3M **Lab ID: 60385386023** Collected: 11/03/21 12:02 Received: 11/06/21 05:30 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	219	ug/L	5.0	1.8	1	11/22/21 16:33	11/30/21 17:56	7440-39-3	
Boron	6550	ug/L	100	8.6	1	11/22/21 16:33	11/30/21 17:56	7440-42-8	
Calcium	93100	ug/L	200	75.4	1	11/22/21 16:33	11/30/21 17:56	7440-70-2	M1
Iron	6750	ug/L	50.0	21.4	1	11/22/21 16:33	11/30/21 17:56	7439-89-6	
Lithium	30.9	ug/L	10.0	7.7	1	11/22/21 16:33	11/30/21 17:56	7439-93-2	
Magnesium	20500	ug/L	50.0	31.4	1	11/22/21 16:33	11/30/21 17:56	7439-95-4	
Manganese	1020	ug/L	5.0	0.74	1	11/22/21 16:33	11/30/21 17:56	7439-96-5	
Molybdenum	424	ug/L	20.0	2.2	1	11/22/21 16:33	11/30/21 17:56	7439-98-7	
Potassium	5040	ug/L	500	146	1	11/22/21 16:33	11/30/21 17:56	7440-09-7	
Sodium	73700	ug/L	500	254	1	11/22/21 16:33	11/30/21 17:56	7440-23-5	
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8									
Pace Analytical Services - Kansas City									
Arsenic	0.34J	ug/L	1.0	0.11	1	11/24/21 08:36	11/30/21 13:21	7440-38-2	
Chromium	0.33J	ug/L	1.0	0.23	1	11/24/21 08:36	11/30/21 13:21	7440-47-3	
Selenium	<0.18	ug/L	1.0	0.18	1	11/24/21 08:36	11/30/21 13:21	7782-49-2	
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Indianapolis									
Alkalinity, Total as CaCO3	188	mg/L	2.0	2.0	1		11/12/21 11:19		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Kansas City									
Total Dissolved Solids	561	mg/L	10.0	10.0	1		11/10/21 14:31		
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		11/20/21 14:12	16887-00-6	
Fluoride	0.36	mg/L	0.20	0.086	1		11/18/21 15:37	16984-48-8	
Sulfate	246	mg/L	20.0	8.4	20		11/18/21 16:11	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

Sample: L-TP-3D **Lab ID: 60385386024** Collected: 11/03/21 13:27 Received: 11/06/21 05:30 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	72.7	ug/L	5.0	1.8	1	11/22/21 16:33	11/30/21 18:03	7440-39-3	
Boron	10400	ug/L	100	8.6	1	11/22/21 16:33	11/30/21 18:03	7440-42-8	
Calcium	108000	ug/L	2000	754	10	11/22/21 16:33	12/01/21 14:39	7440-70-2	
Iron	4790	ug/L	50.0	21.4	1	11/22/21 16:33	11/30/21 18:03	7439-89-6	
Lithium	<76.7	ug/L	100	76.7	10	11/22/21 16:33	12/01/21 14:39	7439-93-2	
Magnesium	23700	ug/L	50.0	31.4	1	11/22/21 16:33	11/30/21 18:03	7439-95-4	
Manganese	180	ug/L	5.0	0.74	1	11/22/21 16:33	11/30/21 18:03	7439-96-5	
Molybdenum	531	ug/L	20.0	2.2	1	11/22/21 16:33	11/30/21 18:03	7439-98-7	
Potassium	6910	ug/L	500	146	1	11/22/21 16:33	11/30/21 18:03	7440-09-7	
Sodium	126000	ug/L	500	254	1	11/22/21 16:33	11/30/21 18:03	7440-23-5	
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City									
Arsenic	7.7	ug/L	1.0	0.11	1	11/24/21 08:36	11/30/21 13:28	7440-38-2	
Chromium	0.33J	ug/L	1.0	0.23	1	11/24/21 08:36	11/30/21 13:28	7440-47-3	
Selenium	<0.18	ug/L	1.0	0.18	1	11/24/21 08:36	11/30/21 13:28	7782-49-2	
2320B Alkalinity									
Analytical Method: SM 2320B Pace Analytical Services - Indianapolis									
Alkalinity, Total as CaCO3	110	mg/L	2.0	2.0	1		11/12/21 11:19		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C Pace Analytical Services - Kansas City									
Total Dissolved Solids	860	mg/L	10.0	10.0	1		11/10/21 14:31		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City									
Chloride	25.2	mg/L	5.0	1.9	5		11/23/21 11:58	16887-00-6	B
Fluoride	<0.086	mg/L	0.20	0.086	1		11/23/21 11:23	16984-48-8	
Sulfate	469	mg/L	50.0	21.0	50		11/25/21 12:05	14808-79-8	M1

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ANALYTICAL RESULTS

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

Sample: L-TP-4D **Lab ID: 60385386025** Collected: 11/03/21 10:31 Received: 11/06/21 05:30 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	431	ug/L	5.0	1.8	1	11/22/21 16:33	11/30/21 18:05	7440-39-3	
Boron	6680	ug/L	100	8.6	1	11/22/21 16:33	11/30/21 18:05	7440-42-8	
Calcium	128000	ug/L	2000	754	10	11/22/21 16:33	12/01/21 14:41	7440-70-2	
Iron	5580	ug/L	50.0	21.4	1	11/22/21 16:33	11/30/21 18:05	7439-89-6	
Lithium	<76.7	ug/L	100	76.7	10	11/22/21 16:33	12/01/21 14:41	7439-93-2	
Magnesium	33100	ug/L	50.0	31.4	1	11/22/21 16:33	11/30/21 18:05	7439-95-4	
Manganese	336	ug/L	5.0	0.74	1	11/22/21 16:33	11/30/21 18:05	7439-96-5	
Molybdenum	4.0J	ug/L	20.0	2.2	1	11/22/21 16:33	11/30/21 18:05	7439-98-7	
Potassium	4800	ug/L	500	146	1	11/22/21 16:33	11/30/21 18:05	7440-09-7	
Sodium	28500	ug/L	500	254	1	11/22/21 16:33	11/30/21 18:05	7440-23-5	
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8									
Pace Analytical Services - Kansas City									
Arsenic	7.7	ug/L	1.0	0.11	1	11/24/21 08:36	11/30/21 13:30	7440-38-2	
Chromium	<0.23	ug/L	1.0	0.23	1	11/24/21 08:36	11/30/21 13:30	7440-47-3	
Selenium	<0.18	ug/L	1.0	0.18	1	11/24/21 08:36	11/30/21 13:30	7782-49-2	
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Indianapolis									
Alkalinity, Total as CaCO3	291	mg/L	2.0	2.0	1		11/12/21 11:19		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Kansas City									
Total Dissolved Solids	637	mg/L	10.0	10.0	1		11/10/21 14:31		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0									
Pace Analytical Services - Kansas City									
Chloride	14.3	mg/L	1.0	0.39	1		11/19/21 10:46	16887-00-6	
Fluoride	0.19J	mg/L	0.20	0.086	1		11/19/21 10:46	16984-48-8	
Sulfate	166	mg/L	20.0	8.4	20		11/19/21 11:00	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

Sample: L-CA-DUP-2 **Lab ID: 60385386026** Collected: 11/03/21 00:00 Received: 11/06/21 05:30 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	151	ug/L	5.0	1.8	1	11/22/21 16:33	11/30/21 18:07	7440-39-3	
Boron	8030	ug/L	100	8.6	1	11/22/21 16:33	11/30/21 18:07	7440-42-8	
Calcium	132000	ug/L	2000	754	10	11/22/21 16:33	12/01/21 14:47	7440-70-2	
Iron	8390	ug/L	50.0	21.4	1	11/22/21 16:33	11/30/21 18:07	7439-89-6	
Lithium	<76.7	ug/L	100	76.7	10	11/22/21 16:33	12/01/21 14:47	7439-93-2	
Magnesium	25200	ug/L	50.0	31.4	1	11/22/21 16:33	11/30/21 18:07	7439-95-4	
Manganese	1680	ug/L	5.0	0.74	1	11/22/21 16:33	11/30/21 18:07	7439-96-5	
Molybdenum	138	ug/L	20.0	2.2	1	11/22/21 16:33	11/30/21 18:07	7439-98-7	
Potassium	6860	ug/L	500	146	1	11/22/21 16:33	11/30/21 18:07	7440-09-7	
Sodium	91100	ug/L	500	254	1	11/22/21 16:33	11/30/21 18:07	7440-23-5	
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City									
Arsenic	23.3	ug/L	1.0	0.11	1	11/24/21 08:36	11/30/21 13:31	7440-38-2	
Chromium	0.27J	ug/L	1.0	0.23	1	11/24/21 08:36	11/30/21 13:31	7440-47-3	
Selenium	<0.18	ug/L	1.0	0.18	1	11/24/21 08:36	11/30/21 13:31	7782-49-2	
2320B Alkalinity									
Analytical Method: SM 2320B Pace Analytical Services - Indianapolis									
Alkalinity, Total as CaCO3	346	mg/L	2.0	2.0	1		11/12/21 11:19		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C Pace Analytical Services - Kansas City									
Total Dissolved Solids	791	mg/L	10.0	10.0	1		11/10/21 14:31		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City									
Chloride	24.2	mg/L	5.0	1.9	5		11/23/21 13:45	16887-00-6	B
Fluoride	<0.086	mg/L	0.20	0.086	1		11/23/21 13:33	16984-48-8	
Sulfate	221	mg/L	50.0	21.0	50		11/25/21 12:40	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

Sample: L-CA-DUP-3 **Lab ID: 60385386027** Collected: 11/03/21 00:00 Received: 11/06/21 05:30 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	69.5	ug/L	5.0	1.8	1	11/27/21 16:56	11/30/21 18:13	7440-39-3	
Boron	10300	ug/L	100	8.6	1	11/27/21 16:56	11/30/21 18:13	7440-42-8	
Calcium	105000	ug/L	2000	754	10	11/27/21 16:56	12/01/21 14:49	7440-70-2	
Iron	4680	ug/L	50.0	21.4	1	11/27/21 16:56	11/30/21 18:13	7439-89-6	
Lithium	<76.7	ug/L	100	76.7	10	11/27/21 16:56	12/01/21 14:49	7439-93-2	
Magnesium	23200	ug/L	50.0	31.4	1	11/27/21 16:56	11/30/21 18:13	7439-95-4	
Manganese	175	ug/L	5.0	0.74	1	11/27/21 16:56	11/30/21 18:13	7439-96-5	
Molybdenum	522	ug/L	20.0	2.2	1	11/27/21 16:56	11/30/21 18:13	7439-98-7	
Potassium	6850	ug/L	500	146	1	11/27/21 16:56	11/30/21 18:13	7440-09-7	
Sodium	125000	ug/L	500	254	1	11/27/21 16:56	11/30/21 18:13	7440-23-5	M1
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8									
Pace Analytical Services - Kansas City									
Arsenic	7.6	ug/L	1.0	0.11	1	11/24/21 08:36	11/30/21 13:33	7440-38-2	
Chromium	0.26J	ug/L	1.0	0.23	1	11/24/21 08:36	11/30/21 13:33	7440-47-3	
Selenium	<0.18	ug/L	1.0	0.18	1	11/24/21 08:36	11/30/21 13:33	7782-49-2	
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Indianapolis									
Alkalinity, Total as CaCO3	109	mg/L	2.0	2.0	1		11/12/21 11:19		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Kansas City									
Total Dissolved Solids	900	mg/L	10.0	10.0	1		11/10/21 14:32		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0									
Pace Analytical Services - Kansas City									
Chloride	25.8	mg/L	5.0	1.9	5		11/23/21 21:23	16887-00-6	B
Fluoride	0.33	mg/L	0.20	0.086	1		11/20/21 18:43	16984-48-8	
Sulfate	547	mg/L	50.0	21.0	50		11/23/21 22:03	14808-79-8	M1

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ANALYTICAL RESULTS

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

Sample: L-CA-FB-1 **Lab ID: 60385386028** Collected: 11/03/21 10:30 Received: 11/06/21 05:30 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	2.5J	ug/L	5.0	1.8	1	11/27/21 16:56	11/30/21 18:24	7440-39-3	
Boron	19.6J	ug/L	100	8.6	1	11/27/21 16:56	11/30/21 18:24	7440-42-8	B
Calcium	<75.4	ug/L	200	75.4	1	11/27/21 16:56	11/30/21 18:24	7440-70-2	
Iron	<21.4	ug/L	50.0	21.4	1	11/27/21 16:56	11/30/21 18:24	7439-89-6	
Lithium	<7.7	ug/L	10.0	7.7	1	11/27/21 16:56	11/30/21 18:24	7439-93-2	
Magnesium	<31.4	ug/L	50.0	31.4	1	11/27/21 16:56	11/30/21 18:24	7439-95-4	
Manganese	<0.74	ug/L	5.0	0.74	1	11/27/21 16:56	11/30/21 18:24	7439-96-5	
Molybdenum	3.8J	ug/L	20.0	2.2	1	11/27/21 16:56	11/30/21 18:24	7439-98-7	
Potassium	<146	ug/L	500	146	1	11/27/21 16:56	11/30/21 18:24	7440-09-7	
Sodium	<254	ug/L	500	254	1	11/27/21 16:56	11/30/21 18:24	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 13:43	7440-38-2	
Chromium	0.44J	ug/L	1.0	0.23	1	11/27/21 16:56	11/30/21 13:43	7440-47-3	
Selenium	<0.18	ug/L	1.0	0.18	1	11/27/21 16:56	11/30/21 13:43	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		11/12/21 11:19		
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		11/10/21 14:32		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City									
Chloride	0.55J	mg/L	1.0	0.39	1		11/18/21 12:10	16887-00-6	B
Fluoride	<0.086	mg/L	0.20	0.086	1		11/18/21 12:10	16984-48-8	
Sulfate	<0.42	mg/L	1.0	0.42	1		11/18/21 12:10	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

Sample: L-CA-FB-2 **Lab ID: 60385386029** Collected: 11/04/21 12:00 Received: 11/06/21 05:30 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	<1.8	ug/L	5.0	1.8	1	11/27/21 16:56	11/30/21 18:26	7440-39-3	
Boron	<8.6	ug/L	100	8.6	1	11/27/21 16:56	11/30/21 18:26	7440-42-8	
Calcium	<75.4	ug/L	200	75.4	1	11/27/21 16:56	11/30/21 18:26	7440-70-2	
Iron	<21.4	ug/L	50.0	21.4	1	11/27/21 16:56	11/30/21 18:26	7439-89-6	
Lithium	<7.7	ug/L	10.0	7.7	1	11/27/21 16:56	11/30/21 18:26	7439-93-2	
Magnesium	<31.4	ug/L	50.0	31.4	1	11/27/21 16:56	11/30/21 18:26	7439-95-4	
Manganese	<0.74	ug/L	5.0	0.74	1	11/27/21 16:56	11/30/21 18:26	7439-96-5	
Molybdenum	<2.2	ug/L	20.0	2.2	1	11/27/21 16:56	11/30/21 18:26	7439-98-7	
Potassium	<146	ug/L	500	146	1	11/27/21 16:56	11/30/21 18:26	7440-09-7	
Sodium	<254	ug/L	500	254	1	11/27/21 16:56	11/30/21 18:26	7440-23-5	
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8									
Pace Analytical Services - Kansas City									
Arsenic	<0.11	ug/L	1.0	0.11	1	11/27/21 16:56	11/30/21 13:54	7440-38-2	
Chromium	0.32J	ug/L	1.0	0.23	1	11/27/21 16:56	11/30/21 13:54	7440-47-3	
Selenium	<0.18	ug/L	1.0	0.18	1	11/27/21 16:56	11/30/21 13:54	7782-49-2	
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Indianapolis									
Alkalinity, Total as CaCO3	2.4	mg/L	2.0	2.0	1		11/12/21 11:19		
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		11/11/21 08:05		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0									
Pace Analytical Services - Kansas City									
Chloride	0.53J	mg/L	1.0	0.39	1		11/18/21 12:29	16887-00-6	B
Fluoride	<0.086	mg/L	0.20	0.086	1		11/18/21 12:29	16984-48-8	
Sulfate	<0.42	mg/L	1.0	0.42	1		11/18/21 12:29	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

Sample: L-CA-FB-3 **Lab ID: 60385386030** Collected: 11/03/21 15:10 Received: 11/06/21 05:30 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	<1.8	ug/L	5.0	1.8	1	11/27/21 16:56	11/30/21 18:28	7440-39-3	
Boron	<8.6	ug/L	100	8.6	1	11/27/21 16:56	11/30/21 18:28	7440-42-8	
Calcium	<75.4	ug/L	200	75.4	1	11/27/21 16:56	11/30/21 18:28	7440-70-2	
Iron	<21.4	ug/L	50.0	21.4	1	11/27/21 16:56	11/30/21 18:28	7439-89-6	
Lithium	<7.7	ug/L	10.0	7.7	1	11/27/21 16:56	11/30/21 18:28	7439-93-2	
Magnesium	<31.4	ug/L	50.0	31.4	1	11/27/21 16:56	11/30/21 18:28	7439-95-4	
Manganese	<0.74	ug/L	5.0	0.74	1	11/27/21 16:56	11/30/21 18:28	7439-96-5	
Molybdenum	<2.2	ug/L	20.0	2.2	1	11/27/21 16:56	11/30/21 18:28	7439-98-7	
Potassium	<146	ug/L	500	146	1	11/27/21 16:56	11/30/21 18:28	7440-09-7	
Sodium	<254	ug/L	500	254	1	11/27/21 16:56	11/30/21 18:28	7440-23-5	
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8									
Pace Analytical Services - Kansas City									
Arsenic	<0.11	ug/L	1.0	0.11	1	11/27/21 16:56	11/30/21 13:55	7440-38-2	
Chromium	0.56J	ug/L	1.0	0.23	1	11/27/21 16:56	11/30/21 13:55	7440-47-3	
Selenium	<0.18	ug/L	1.0	0.18	1	11/27/21 16:56	11/30/21 13:55	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		11/12/21 16:29		
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		11/10/21 14:32		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0									
Pace Analytical Services - Kansas City									
Chloride	0.53J	mg/L	1.0	0.39	1		11/18/21 13:24	16887-00-6	B
Fluoride	<0.086	mg/L	0.20	0.086	1		11/18/21 13:24	16984-48-8	
Sulfate	<0.42	mg/L	1.0	0.42	1		11/18/21 13:24	14808-79-8	

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QUALITY CONTROL DATA

Project: AMEREN LCPA-CA
Pace Project No.: 60385386

QC Batch: 757956 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: 60385386001, 60385386002, 60385386003, 60385386004, 60385386005, 60385386006, 60385386007, 60385386010, 60385386011, 60385386012, 60385386013, 60385386014, 60385386015, 60385386016, 60385386017, 60385386018, 60385386019, 60385386020

METHOD BLANK: 3033339 Matrix: Water
Associated Lab Samples: 60385386001, 60385386002, 60385386003, 60385386004, 60385386005, 60385386006, 60385386007, 60385386010, 60385386011, 60385386012, 60385386013, 60385386014, 60385386015, 60385386016, 60385386017, 60385386018, 60385386019, 60385386020

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Barium	ug/L	<1.8	5.0	1.8	11/30/21 16:44	
Boron	ug/L	<8.6	100	8.6	11/30/21 16:44	
Calcium	ug/L	<75.4	200	75.4	11/30/21 16:44	
Iron	ug/L	<21.4	50.0	21.4	11/30/21 16:44	
Lithium	ug/L	<7.7	10.0	7.7	11/30/21 16:44	
Magnesium	ug/L	<31.4	50.0	31.4	11/30/21 16:44	
Manganese	ug/L	<0.74	5.0	0.74	11/30/21 16:44	
Molybdenum	ug/L	<2.2	20.0	2.2	11/30/21 16:44	
Potassium	ug/L	<146	500	146	11/30/21 16:44	
Sodium	ug/L	<254	500	254	11/30/21 16:44	

LABORATORY CONTROL SAMPLE: 3033340

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	1000	992	99	85-115	
Boron	ug/L	1000	957	96	85-115	
Calcium	ug/L	10000	9800	98	85-115	
Iron	ug/L	10000	9780	98	85-115	
Lithium	ug/L	1000	947	95	85-115	
Magnesium	ug/L	10000	10100	101	85-115	
Manganese	ug/L	1000	979	98	85-115	
Molybdenum	ug/L	1000	1010	101	85-115	
Potassium	ug/L	10000	9720	97	85-115	
Sodium	ug/L	10000	9980	100	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3033341 3033342

Parameter	Units	3033341		3033342		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.						
Barium	ug/L	75.6	1000	1090	1080	102	101	70-130	1	20	
Boron	ug/L	7500	1000	8410	8280	91	77	70-130	2	20	
Calcium	ug/L	120000	10000	128000	127000	87	74	70-130	1	20	
Iron	ug/L	5620	10000	15700	15400	100	98	70-130	2	20	
Lithium	ug/L	<76.7	1000	899	903	87	87	70-130	1	20	

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QUALITY CONTROL DATA

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3033341												3033342	
Parameter	Units	60385386004 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
Magnesium	ug/L	15500	10000	10000	25200	24800	96	93	70-130	1	20		
Manganese	ug/L	305	1000	1000	1300	1290	99	98	70-130	1	20		
Molybdenum	ug/L	311	1000	1000	1360	1340	105	103	70-130	1	20		
Potassium	ug/L	8650	10000	10000	18800	18300	102	96	70-130	3	20		
Sodium	ug/L	121000	10000	10000	129000	127000	86	61	70-130	2	20	M1	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3033343												3033344	
Parameter	Units	60385386016 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
Barium	ug/L	216	1000	1000	1240	1250	103	103	70-130	1	20		
Boron	ug/L	68.7J	1000	1000	1060	1060	99	99	70-130	0	20		
Calcium	ug/L	146000	10000	10000	158000	155000	123	95	70-130	2	20		
Iron	ug/L	43.7J	10000	10000	10200	10200	101	101	70-130	0	20		
Lithium	ug/L	<76.7	1000	1000	857	863	84	84	70-130	1	20		
Magnesium	ug/L	26300	10000	10000	36000	35900	97	96	70-130	0	20		
Manganese	ug/L	464	1000	1000	1490	1490	102	103	70-130	0	20		
Molybdenum	ug/L	<2.2	1000	1000	1050	1050	105	105	70-130	0	20		
Potassium	ug/L	4310	10000	10000	14500	14500	102	101	70-130	0	20		
Sodium	ug/L	6070	10000	10000	16400	16400	103	104	70-130	0	20		

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QUALITY CONTROL DATA

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

QC Batch: 757957 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: 60385386021, 60385386022, 60385386023, 60385386024, 60385386025, 60385386026

METHOD BLANK: 3033347 Matrix: Water
 Associated Lab Samples: 60385386021, 60385386022, 60385386023, 60385386024, 60385386025, 60385386026

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Barium	ug/L	<1.8	5.0	1.8	11/30/21 17:43	
Boron	ug/L	<8.6	100	8.6	11/30/21 17:43	
Calcium	ug/L	<75.4	200	75.4	11/30/21 17:43	
Iron	ug/L	<21.4	50.0	21.4	11/30/21 17:43	
Lithium	ug/L	<7.7	10.0	7.7	11/30/21 17:43	
Magnesium	ug/L	<31.4	50.0	31.4	11/30/21 17:43	
Manganese	ug/L	<0.74	5.0	0.74	11/30/21 17:43	
Molybdenum	ug/L	<2.2	20.0	2.2	11/30/21 17:43	
Potassium	ug/L	<146	500	146	11/30/21 17:43	
Sodium	ug/L	<254	500	254	11/30/21 17:43	

LABORATORY CONTROL SAMPLE: 3033348

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	1000	1030	103	85-115	
Boron	ug/L	1000	985	99	85-115	
Calcium	ug/L	10000	10200	102	85-115	
Iron	ug/L	10000	10100	101	85-115	
Lithium	ug/L	1000	969	97	85-115	
Magnesium	ug/L	10000	10400	104	85-115	
Manganese	ug/L	1000	1010	101	85-115	
Molybdenum	ug/L	1000	1030	103	85-115	
Potassium	ug/L	10000	10100	101	85-115	
Sodium	ug/L	10000	10300	103	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3033349 3033350

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		60385386023 Result	Spike Conc.	Spike Conc.	MS Result							MSD Result
Barium	ug/L	219	1000	1000	1250	1220	103	100	70-130	3	20	
Boron	ug/L	6550	1000	1000	7510	7380	96	83	70-130	2	20	
Calcium	ug/L	93100	10000	10000	107000	103000	136	97	70-130	4	20	M1
Iron	ug/L	6750	10000	10000	16900	16500	102	98	70-130	2	20	
Lithium	ug/L	30.9	1000	1000	885	868	85	84	70-130	2	20	
Magnesium	ug/L	20500	10000	10000	30300	29300	98	88	70-130	3	20	
Manganese	ug/L	1020	1000	1000	2040	1980	102	95	70-130	3	20	
Molybdenum	ug/L	424	1000	1000	1470	1440	105	102	70-130	2	20	

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QUALITY CONTROL DATA

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3033349 3033350												
Parameter	Units	60385386023 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.								
Potassium	ug/L	5040	10000	10000	15100	15100	100	100	70-130	0	20	
Sodium	ug/L	73700	10000	10000	83600	82400	99	86	70-130	2	20	

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QUALITY CONTROL DATA

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

QC Batch: 758172 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: 60385386027, 60385386028, 60385386029, 60385386030

METHOD BLANK: 3034277 Matrix: Water

Associated Lab Samples: 60385386027, 60385386028, 60385386029, 60385386030

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Barium	ug/L	<1.8	5.0	1.8	11/30/21 18:09	
Boron	ug/L	15.5J	100	8.6	11/30/21 18:09	
Calcium	ug/L	95.6J	200	75.4	11/30/21 18:09	
Iron	ug/L	<21.4	50.0	21.4	11/30/21 18:09	
Lithium	ug/L	<7.7	10.0	7.7	11/30/21 18:09	
Magnesium	ug/L	<31.4	50.0	31.4	11/30/21 18:09	
Manganese	ug/L	<0.74	5.0	0.74	11/30/21 18:09	
Molybdenum	ug/L	<2.2	20.0	2.2	11/30/21 18:09	
Potassium	ug/L	<146	500	146	11/30/21 18:09	
Sodium	ug/L	<254	500	254	11/30/21 18:09	

LABORATORY CONTROL SAMPLE: 3034278

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	1000	981	98	85-115	
Boron	ug/L	1000	962	96	85-115	
Calcium	ug/L	10000	9750	97	85-115	
Iron	ug/L	10000	9750	97	85-115	
Lithium	ug/L	1000	943	94	85-115	
Magnesium	ug/L	10000	10000	100	85-115	
Manganese	ug/L	1000	973	97	85-115	
Molybdenum	ug/L	1000	992	99	85-115	
Potassium	ug/L	10000	9630	96	85-115	
Sodium	ug/L	10000	10000	100	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3034279 3034280

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		60385386027 Result	Spike Conc.	Spike Conc.	MS Result						
Barium	ug/L	69.5	1000	1000	1060	1060	99	99	70-130	0	20
Boron	ug/L	10300	1000	1000	11100	11400	80	106	70-130	2	20
Calcium	ug/L	105000	10000	10000	113000	115000	73	96	70-130	2	20
Iron	ug/L	4680	10000	10000	14400	14500	97	98	70-130	1	20
Lithium	ug/L	<76.7	1000	1000	873	913	85	89	70-130	4	20
Magnesium	ug/L	23200	10000	10000	32000	32700	88	95	70-130	2	20
Manganese	ug/L	175	1000	1000	1140	1160	97	98	70-130	1	20
Molybdenum	ug/L	522	1000	1000	1530	1540	101	101	70-130	0	20

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QUALITY CONTROL DATA

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3034279 3034280													
Parameter	Units	60385386027 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
Potassium	ug/L	6850	10000	10000	16400	16700	95	99	70-130	2	20		
Sodium	ug/L	125000	10000	10000	132000	134000	67	94	70-130	2	20	M1	

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QUALITY CONTROL DATA

Project: AMEREN LCPA-CA
Pace Project No.: 60385386

QC Batch: 758163 Analysis Method: EPA 200.8
QC Batch Method: EPA 200.8 Analysis Description: 200.8 MET
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60385386001, 60385386002, 60385386003, 60385386004, 60385386005, 60385386006, 60385386007

METHOD BLANK: 3034230 Matrix: Water
Associated Lab Samples: 60385386001, 60385386002, 60385386003, 60385386004, 60385386005, 60385386006, 60385386007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	ug/L	<0.11	1.0	0.11	11/30/21 11:53	
Chromium	ug/L	<0.23	1.0	0.23	11/30/21 11:53	
Selenium	ug/L	<0.18	1.0	0.18	11/30/21 11:53	

LABORATORY CONTROL SAMPLE: 3034231

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	40	40.5	101	85-115	
Chromium	ug/L	40	39.4	99	85-115	
Selenium	ug/L	40	41.0	102	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3034232 3034233

Parameter	Units	60385384001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	Result	MSD Result	% Rec	MSD % Rec					
Arsenic	ug/L	46.6	40	40	85.6	87.0	97	101	70-130	2	20		
Chromium	ug/L	0.28J	40	40	39.2	39.9	97	99	70-130	2	20		
Selenium	ug/L	<0.18	40	40	38.4	39.1	96	98	70-130	2	20		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3034234 3034235

Parameter	Units	60385386004		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	Result	MSD Result	% Rec	MSD % Rec					
Arsenic	ug/L	2.9	40	40	44.6	43.8	104	102	70-130	2	20		
Chromium	ug/L	0.34J	40	40	39.8	39.1	99	97	70-130	2	20		
Selenium	ug/L	<0.18	40	40	39.2	37.5	98	94	70-130	4	20		

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

QC Batch:	758165	Analysis Method:	EPA 200.8
QC Batch Method:	EPA 200.8	Analysis Description:	200.8 MET
		Laboratory:	Pace Analytical Services - Kansas City
Associated Lab Samples:	60385386010, 60385386011, 60385386012, 60385386013, 60385386014, 60385386015, 60385386016, 60385386017, 60385386018, 60385386019, 60385386020, 60385386021, 60385386022, 60385386023, 60385386024, 60385386025, 60385386026, 60385386027		

METHOD BLANK:	3034243	Matrix:	Water
Associated Lab Samples:	60385386010, 60385386011, 60385386012, 60385386013, 60385386014, 60385386015, 60385386016, 60385386017, 60385386018, 60385386019, 60385386020, 60385386021, 60385386022, 60385386023, 60385386024, 60385386025, 60385386026, 60385386027		

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	ug/L	<0.11	1.0	0.11	11/30/21 12:42	
Chromium	ug/L	<0.23	1.0	0.23	11/30/21 12:42	
Selenium	ug/L	<0.18	1.0	0.18	11/30/21 12:42	

LABORATORY CONTROL SAMPLE:	3034244					
Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	40	40.9	102	85-115	
Chromium	ug/L	40	39.8	100	85-115	
Selenium	ug/L	40	41.0	102	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:	3034245			3034246								
Parameter	Units	60385386016 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chromium	ug/L	0.33J	40	40	0.34J	40.6	0	101	70-130		20	M1
Selenium	ug/L	2.9	40	40	2.9	42.1	0	98	70-130		20	M1, R1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:	3034247			3034248								
Parameter	Units	60385386023 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chromium	ug/L	0.33J	40	40	39.2	39.6	97	98	70-130	1	20	
Selenium	ug/L	<0.18	40	40	38.5	38.7	96	97	70-130	0	20	

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QUALITY CONTROL DATA

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

QC Batch:	758166	Analysis Method:	EPA 200.8
QC Batch Method:	EPA 200.8	Analysis Description:	200.8 MET
		Laboratory:	Pace Analytical Services - Kansas City

Associated Lab Samples: 60385386028, 60385386029, 60385386030

METHOD BLANK: 3034249 Matrix: Water

Associated Lab Samples: 60385386028, 60385386029, 60385386030

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	ug/L	<0.11	1.0	0.11	11/30/21 13:38	
Chromium	ug/L	<0.23	1.0	0.23	11/30/21 13:38	
Selenium	ug/L	<0.18	1.0	0.18	11/30/21 13:38	

LABORATORY CONTROL SAMPLE: 3034250

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	40	41.0	102	85-115	
Chromium	ug/L	40	40.1	100	85-115	
Selenium	ug/L	40	41.2	103	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3034251 3034252

Parameter	Units	60385386028		60385386029		60385386030		% Rec	% Rec	Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.						
Arsenic	ug/L	<0.11	40	<0.11	40	39.8	39.2	100	98	70-130	2	20	
Chromium	ug/L	0.44J	40	0.44J	40	39.9	39.2	99	97	70-130	2	20	
Selenium	ug/L	<0.18	40	<0.18	40	39.7	39.4	99	98	70-130	1	20	

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QUALITY CONTROL DATA

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

QC Batch: 649386

Analysis Method: SM 2320B

QC Batch Method: SM 2320B

Analysis Description: 2320B Alkalinity

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 60385386001, 60385386002, 60385386003, 60385386004, 60385386005, 60385386006, 60385386007

METHOD BLANK: 2992253

Matrix: Water

Associated Lab Samples: 60385386001, 60385386002, 60385386003, 60385386004, 60385386005, 60385386006, 60385386007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<2.0	2.0	2.0	11/10/21 10:58	

LABORATORY CONTROL SAMPLE: 2992254

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: 2992255

Parameter	Units	60385386004 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	152	154	1	20	

SAMPLE DUPLICATE: 2992256

Parameter	Units	50301936001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	687	690	0	20	

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QUALITY CONTROL DATA

Project: AMEREN LCPA-CA
Pace Project No.: 60385386

QC Batch:	650018	Analysis Method:	SM 2320B
QC Batch Method:	SM 2320B	Analysis Description:	2320B Alkalinity
		Laboratory:	Pace Analytical Services - Indianapolis

Associated Lab Samples: 60385386010, 60385386011, 60385386012, 60385386013, 60385386014, 60385386015, 60385386016, 60385386017, 60385386018, 60385386019, 60385386020, 60385386021, 60385386022, 60385386023, 60385386024, 60385386025, 60385386026, 60385386027, 60385386028, 60385386029

METHOD BLANK: 2995900 Matrix: Water

Associated Lab Samples: 60385386010, 60385386011, 60385386012, 60385386013, 60385386014, 60385386015, 60385386016, 60385386017, 60385386018, 60385386019, 60385386020, 60385386021, 60385386022, 60385386023, 60385386024, 60385386025, 60385386026, 60385386027, 60385386028, 60385386029

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	<2.0	2.0	2.0	11/12/21 11:19	

LABORATORY CONTROL SAMPLE: 2995901

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	50	48.5	97	90-110	

SAMPLE DUPLICATE: 2995902

Parameter	Units	60385386016 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	390	400	2	20	

SAMPLE DUPLICATE: 2995903

Parameter	Units	60385386023 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	188	190	1	20	

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QUALITY CONTROL DATA

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

QC Batch: 650093

Analysis Method: SM 2320B

QC Batch Method: SM 2320B

Analysis Description: 2320B Alkalinity

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 60385386030

METHOD BLANK: 2996225

Matrix: Water

Associated Lab Samples: 60385386030

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<2.0	2.0	2.0	11/12/21 16:29	

LABORATORY CONTROL SAMPLE: 2996226

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: 2996227

Parameter	Units	50302278003 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	377	382	1	20	

SAMPLE DUPLICATE: 2996228

Parameter	Units	50302319001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	100	103	2	20	

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QUALITY CONTROL DATA

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

QC Batch:	755000	Analysis Method:	SM 2540C
QC Batch Method:	SM 2540C	Analysis Description:	2540C Total Dissolved Solids
		Laboratory:	Pace Analytical Services - Kansas City

Associated Lab Samples: 60385386001, 60385386002, 60385386003, 60385386004, 60385386005, 60385386006, 60385386007

METHOD BLANK: 3021558 Matrix: Water
Associated Lab Samples: 60385386001, 60385386002, 60385386003, 60385386004, 60385386005, 60385386006, 60385386007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	11/09/21 09:43	

LABORATORY CONTROL SAMPLE: 3021559

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	960	96	80-120	

SAMPLE DUPLICATE: 3021560

Parameter	Units	60385384001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	617	609	1	10	

SAMPLE DUPLICATE: 3021561

Parameter	Units	60385386004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	790	838	6	10	

SAMPLE DUPLICATE: 3021562

Parameter	Units	60385390001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	423	431	2	10	

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QUALITY CONTROL DATA

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

QC Batch:	755409	Analysis Method:	SM 2540C
QC Batch Method:	SM 2540C	Analysis Description:	2540C Total Dissolved Solids
		Laboratory:	Pace Analytical Services - Kansas City

Associated Lab Samples: 60385386010, 60385386012, 60385386017, 60385386018, 60385386023, 60385386024, 60385386025, 60385386026, 60385386027, 60385386028, 60385386030

METHOD BLANK: 3023062 Matrix: Water

Associated Lab Samples: 60385386010, 60385386012, 60385386017, 60385386018, 60385386023, 60385386024, 60385386025, 60385386026, 60385386027, 60385386028, 60385386030

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	11/10/21 14:30	

LABORATORY CONTROL SAMPLE: 3023063

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	949	95	80-120	

SAMPLE DUPLICATE: 3023064

Parameter	Units	60385386023 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	561	612	9	10	

SAMPLE DUPLICATE: 3023065

Parameter	Units	60385384012 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	631	655	4	10	

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QUALITY CONTROL DATA

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

QC Batch: 755548

Analysis Method: SM 2540C

QC Batch Method: SM 2540C

Analysis Description: 2540C Total Dissolved Solids

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60385386011, 60385386015, 60385386016, 60385386019, 60385386020, 60385386021, 60385386022, 60385386029

METHOD BLANK: 3023486

Matrix: Water

Associated Lab Samples: 60385386011, 60385386015, 60385386016, 60385386019, 60385386020, 60385386021, 60385386022, 60385386029

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	11/11/21 08:03	

LABORATORY CONTROL SAMPLE: 3023487

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	973	97	80-120	

SAMPLE DUPLICATE: 3023488

Parameter	Units	60385385001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	4870	4660	4	10	

SAMPLE DUPLICATE: 3023489

Parameter	Units	60385386016 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	490	497	1	10	

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QUALITY CONTROL DATA

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

QC Batch: 755549

Analysis Method: SM 2540C

QC Batch Method: SM 2540C

Analysis Description: 2540C Total Dissolved Solids

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60385386013, 60385386014

METHOD BLANK: 3023490

Matrix: Water

Associated Lab Samples: 60385386013, 60385386014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	11/11/21 08:06	

LABORATORY CONTROL SAMPLE: 3023491

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

SAMPLE DUPLICATE: 3023492

Parameter	Units	60385386013 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	799	812	2	10	

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QUALITY CONTROL DATA

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

QC Batch: 757095 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: 60385386010, 60385386011, 60385386012, 60385386013, 60385386014, 60385386015, 60385386016, 60385386017, 60385386018, 60385386019, 60385386020, 60385386021, 60385386022, 60385386023, 60385386025

METHOD BLANK: 3029711 Matrix: Water

Associated Lab Samples: 60385386010, 60385386011, 60385386012, 60385386013, 60385386014, 60385386015, 60385386016, 60385386017, 60385386018, 60385386019, 60385386020, 60385386021, 60385386022, 60385386023, 60385386025

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: 60385386010, 60385386011, 60385386012, 60385386013, 60385386014, 60385386015, 60385386016, 60385386017, 60385386018, 60385386019, 60385386020, 60385386021, 60385386022, 60385386023, 60385386025

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: 60385386010, 60385386011, 60385386012, 60385386013, 60385386014, 60385386015, 60385386016, 60385386017, 60385386018, 60385386019, 60385386020, 60385386021, 60385386022, 60385386023, 60385386025

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: 60385386010, 60385386011, 60385386012, 60385386013, 60385386014, 60385386015, 60385386016, 60385386017, 60385386018, 60385386019, 60385386020, 60385386021, 60385386022, 60385386023, 60385386025

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	

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QUALITY CONTROL DATA

Project: AMEREN LCPA-CA
Pace Project No.: 60385386

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	
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		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
Chloride	mg/L	6.2	5	5	11.1	11.2	96	99	98-120	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		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
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		

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QUALITY CONTROL DATA

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3029715 3029716												
Parameter	Units	60385386023 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max	Qual
			Spike Conc.	Spike Conc.							RPD	
Sulfate	mg/L	246	100	100	354	344	107	98	80-120	3	15	

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QUALITY CONTROL DATA

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

QC Batch:	757096	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: 60385386027, 60385386028, 60385386029, 60385386030

METHOD BLANK: 3029718 Matrix: Water
Associated Lab Samples: 60385386027, 60385386028, 60385386029, 60385386030

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.52J	1.0	0.39	11/18/21 08:36	
Fluoride	mg/L	<0.086	0.20	0.086	11/18/21 08:36	
Sulfate	mg/L	<0.42	1.0	0.42	11/18/21 08:36	

METHOD BLANK: 3032292 Matrix: Water
Associated Lab Samples: 60385386027, 60385386028, 60385386029, 60385386030

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.39	1.0	0.39	11/20/21 18:20	
Fluoride	mg/L	<0.086	0.20	0.086	11/20/21 18:20	
Sulfate	mg/L	<0.42	1.0	0.42	11/20/21 18:20	

METHOD BLANK: 3036563 Matrix: Water
Associated Lab Samples: 60385386027, 60385386028, 60385386029, 60385386030

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

LABORATORY CONTROL SAMPLE: 3029719

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	109	90-110	
Sulfate	mg/L	5	5.5	109	90-110	

LABORATORY CONTROL SAMPLE: 3032293

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	2.6	105	90-110	
Sulfate	mg/L	5	5.5	109	90-110	

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QUALITY CONTROL DATA

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

LABORATORY CONTROL SAMPLE: 3036564

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	4.9	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3029720 3029721

Parameter	Units	60385386027		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual	
Chloride	mg/L	25.8	25	25	49.4	49.3	94	94	80-120	0	15		
Fluoride	mg/L	0.33	2.5	2.5	3.1	3.1	111	112	80-120	1	15		
Sulfate	mg/L	547	250	250	739	778	77	92	80-120	5	15	M1	

MATRIX SPIKE SAMPLE: 3029722

Parameter	Units	60385384016 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5.7	5	11.3	112	80-120	
Fluoride	mg/L	0.33	2.5	3.2	113	80-120	
Sulfate	mg/L	59.4	100	171	112	80-120	

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QUALITY CONTROL DATA

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

QC Batch: 757277 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: 60385386001, 60385386002, 60385386003, 60385386004, 60385386005, 60385386006, 60385386007

METHOD BLANK: 3030419 Matrix: Water
 Associated Lab Samples: 60385386001, 60385386002, 60385386003, 60385386004, 60385386005, 60385386006, 60385386007

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: 3032423 Matrix: Water
 Associated Lab Samples: 60385386001, 60385386002, 60385386003, 60385386004, 60385386005, 60385386006, 60385386007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.39	1.0	0.39	11/21/21 17:33	
Fluoride	mg/L	<0.086	0.20	0.086	11/21/21 17:33	
Sulfate	mg/L	<0.42	1.0	0.42	11/21/21 17:33	

METHOD BLANK: 3034763 Matrix: Water
 Associated Lab Samples: 60385386001, 60385386002, 60385386003, 60385386004, 60385386005, 60385386006, 60385386007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.45J	1.0	0.39	11/22/21 21:29	
Fluoride	mg/L	<0.086	0.20	0.086	11/22/21 21:29	
Sulfate	mg/L	<0.42	1.0	0.42	11/22/21 21:29	

LABORATORY CONTROL SAMPLE: 3030420

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: 3032424

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	2.7	110	90-110	
Sulfate	mg/L	5	4.9	97	90-110	

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QUALITY CONTROL DATA

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

LABORATORY CONTROL SAMPLE: 3034764

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	99	90-110	
Sulfate	mg/L	5	5.0	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3030421 3030422

Parameter	Units	60385384001		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Conc.	Result	Result	% Rec	% Rec					
Chloride	mg/L	11.1	5	5	15.9	16.2	96	101	80-120	2	15		
Fluoride	mg/L	0.21	2.5	2.5	2.5	2.6	92	97	80-120	5	15		
Sulfate	mg/L	39.2	25	25	62.9	63.1	95	96	80-120	0	15		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3030424 3030423

Parameter	Units	60385386004		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Conc.	Result	Result	% Rec	% Rec					
Chloride	mg/L	44.8	25	25	71.5	71.6	107	107	80-120	0	15		
Fluoride	mg/L	0.32	2.5	2.5	2.6	2.7	93	94	80-120	1	15		
Sulfate	mg/L	377	250	250	640	636	105	104	80-120	1	15		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3030425 3030426

Parameter	Units	60386286007		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Conc.	Result	Result	% Rec	% Rec					
Chloride	mg/L	19.4	10	10	30.2	30.1	108	108	80-120	0	15		
Fluoride	mg/L	ND	2.5	2.5	2.8	2.8	110	111	80-120	1	15		
Sulfate	mg/L	53.9	5	5	59.8	59.9	118	119	80-120	0	15 E		

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QUALITY CONTROL DATA

Project: AMEREN LCPA-CA
Pace Project No.: 60385386

QC Batch: 757936 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: 60385386024, 60385386026

METHOD BLANK: 3033262 Matrix: Water

Associated Lab Samples: 60385386024, 60385386026

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.55J	1.0	0.39	11/23/21 10:58	
Fluoride	mg/L	<0.086	0.20	0.086	11/23/21 10:58	
Sulfate	mg/L	<0.42	1.0	0.42	11/23/21 10:58	

METHOD BLANK: 3036552 Matrix: Water

Associated Lab Samples: 60385386024, 60385386026

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

METHOD BLANK: 3037296 Matrix: Water

Associated Lab Samples: 60385386024, 60385386026

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.65J	1.0	0.39	11/29/21 17:45	
Fluoride	mg/L	<0.086	0.20	0.086	11/29/21 17:45	
Sulfate	mg/L	<0.42	1.0	0.42	11/29/21 17:45	

LABORATORY CONTROL SAMPLE: 3033263

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	4.9	97	90-110	

LABORATORY CONTROL SAMPLE: 3036553

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	4.9	98	90-110	

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QUALITY CONTROL DATA

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

LABORATORY CONTROL SAMPLE: 3037297

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.9	97	90-110	
Fluoride	mg/L	2.5	2.6	104	90-110	
Sulfate	mg/L	5	5.1	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3033264 3033265

Parameter	Units	60385386024		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Conc.	Result	Result	% Rec	% Rec					
Chloride	mg/L	25.2	25	25	53.6	53.4	113	113	80-120	0	15		
Fluoride	mg/L	<0.086	2.5	2.5	3.0	2.9	117	117	80-120	1	15		
Sulfate	mg/L	469	250	250	845	846	150	151	80-120	0	15	M1	

MATRIX SPIKE SAMPLE: 3033266

Parameter	Units	60386713006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	185	100	288	103	80-120	
Fluoride	mg/L	ND	25	30.5	122	80-120	M1
Sulfate	mg/L	105	50	161	112	80-120	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

Sample: L-AM-1S **Lab ID: 60385386001** Collected: 11/02/21 10:51 Received: 11/03/21 03:48 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	0.0682 ± 0.312 (0.502) C:NA T:94%	pCi/L	12/18/21 11:14		
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.374 ± 0.359 (0.731) C:56% T:96%	pCi/L	12/16/21 11:21		

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: L-BMW-1S Lab ID: 60385386002 Collected: 11/01/21 12:10 Received: 11/03/21 03:48 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.406 ± 0.422 (0.628) C:NA T:97%	pCi/L	12/18/21 11:14		
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	2.09 ± 0.638 (0.771) C:57% T:96%	pCi/L	12/16/21 11:21		

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: L-BMW-2S Lab ID: 60385386003 Collected: 11/01/21 13:40 Received: 11/03/21 03:48 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.000 ± 0.550 (1.14) C:NA T:87%	pCi/L	12/18/21 11:14		
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.866 ± 0.517 (0.967) C:57% T:90%	pCi/L	12/16/21 11:22		

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

Sample: L-AM-1D **Lab ID: 60385386004** Collected: 11/02/21 12:07 Received: 11/03/21 03:48 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 ± 0.259 (0.581) C:NA T:96%	pCi/L	12/18/21 11:14		
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	1.30 ± 0.564 (0.911) C:53% T:91%	pCi/L	12/16/21 11:20		

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: L-LMW-2S Lab ID: 60385386005 Collected: 11/02/21 12:20 Received: 11/03/21 03:48 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.713 ± 0.565 (0.767) C:NA T:95%	pCi/L	12/18/21 11:14		
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.421 ± 0.386 (0.777) C:57% T:86%	pCi/L	12/16/21 11:20		

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: L-CA-DUP-1 Lab ID: 60385386006 Collected: 11/02/21 00:00 Received: 11/03/21 03:48 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.524 ± 0.449 (0.609) C:NA T:97%	pCi/L	12/18/21 11:14		
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	-0.145 ± 0.341 (0.836) C:59% T:89%	pCi/L	12/16/21 11:20		

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

Sample: L-S-1 **Lab ID: 60385386007** Collected: 11/02/21 14:00 Received: 11/03/21 03:48 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	0.469 ± 0.575 (0.945) C:NA T:93%	pCi/L	12/18/21 11:14		
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	1.25 ± 0.575 (0.989) C:59% T:89%	pCi/L	12/16/21 11:22		

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: L-CA-MS-1 Lab ID: 60385386008 Collected: 11/02/21 12:07 Received: 11/03/21 03:48 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	75.61 %REC ± NA (NA) C:NA T:NA%	pCi/L	12/18/21 11:38		
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	98.81 %REC ± NA (NA) C:NA T:NA	pCi/L	12/16/21 11:22		

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: L-CA-MSD-1 Lab ID: 60385386009 Collected: 11/02/21 12:07 Received: 11/03/21 03:48 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	105.13 %REC 32.67 RPD ± NA (NA) C:NA T:NA%	pCi/L	12/18/21 11:27		
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	102.30 %REC 3.47 RPD ± NA (NA) C:NA T:NA	pCi/L	12/16/21 11:22		

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

Sample: L-AMW-8 **Lab ID: 60385386010** Collected: 11/03/21 10:06 Received: 11/06/21 05:30 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	-0.261 ± 0.444 (1.04) C:NA T:96%	pCi/L	12/18/21 11:27		
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	1.25 ± 0.556 (0.944) C:59% T:95%	pCi/L	12/16/21 11:23		

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: L-LMW-1S Lab ID: 60385386011 Collected: 11/04/21 10:55 Received: 11/06/21 05:30 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	-0.0637 ± 0.414 (0.899) C:NA T:96%	pCi/L	12/18/21 11:27		
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.402 ± 0.446 (0.936) C:63% T:90%	pCi/L	12/16/21 11:23		

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: L-LMW-4S Lab ID: 60385386012 Collected: 11/03/21 12:00 Received: 11/06/21 05:30 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	-0.131 ± 0.365 (0.862) C:NA T:95%	pCi/L	12/18/21 11:27		
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.853 ± 0.487 (0.896) C:65% T:83%	pCi/L	12/16/21 11:23		

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: L-LMW-7S Lab ID: 60385386013 Collected: 11/05/21 11:47 Received: 11/06/21 05:30 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	2.11 ± 0.869 (0.698) C:NA T:92%	pCi/L	12/18/21 11:27		
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.679 ± 0.431 (0.818) C:64% T:93%	pCi/L	12/16/21 11:23		

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: L-LMW-8S Lab ID: 60385386014 Collected: 11/05/21 12:48 Received: 11/06/21 05:30 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.000 ± 0.313 (0.636) C:NA T:93%	pCi/L	12/18/21 11:27		
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.699 ± 0.454 (0.865) C:60% T:94%	pCi/L	12/16/21 11:23		

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

Sample: L-MW-24 **Lab ID: 60385386015** Collected: 11/04/21 10:24 Received: 11/06/21 05:30 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	0.414 ± 0.471 (0.743) C:NA T:93%	pCi/L	12/18/21 11:27		
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	-0.0646 ± 0.382 (0.897) C:63% T:93%	pCi/L	12/16/21 11:23		

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

Sample: L-MW-26 **Lab ID: 60385386016** Collected: 11/04/21 12:55 Received: 11/06/21 05:30 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	0.408 ± 0.501 (0.817) C:NA T:92%	pCi/L	12/18/21 11:49		
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.460 ± 0.389 (0.782) C:67% T:90%	pCi/L	12/16/21 11:23		

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: L-MW-33(D) Lab ID: 60385386017 Collected: 11/03/21 14:44 Received: 11/06/21 05:30 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.570 ± 0.562 (0.855) C:NA T:96%	pCi/L	12/18/21 11:49		
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	1.32 ± 0.518 (0.802) C:65% T:88%	pCi/L	12/16/21 11:23		

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: L-MW-34(D) Lab ID: 60385386018 Collected: 11/03/21 15:50 Received: 11/06/21 05:30 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.266 ± 0.555 (1.000) C:NA T:97%	pCi/L	12/18/21 11:49		
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.785 ± 0.490 (0.938) C:65% T:93%	pCi/L	12/16/21 11:23		

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

Sample: L-MW-35(D) **Lab ID: 60385386019** Collected: 11/04/21 11:33 Received: 11/06/21 05:30 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	0.138 ± 0.468 (0.902) C:NA T:96%	pCi/L	12/18/21 11:49		
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.619 ± 0.429 (0.832) C:65% T:92%	pCi/L	12/16/21 11:23		

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

Sample: L-TP-1D **Lab ID: 60385386020** Collected: 11/04/21 15:41 Received: 11/06/21 05:30 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	1.63 ± 0.893 (1.09) C:NA T:88%	pCi/L	12/18/21 11:49		
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	2.68 ± 0.712 (0.763) C:68% T:94%	pCi/L	12/16/21 11:23		

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

Sample: L-TP-2M **Lab ID: 60385386021** Collected: 11/04/21 13:23 Received: 11/06/21 05:30 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	0.180 ± 0.312 (0.558) C:NA T:100%	pCi/L	12/19/21 12:27		
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.942 ± 0.429 (0.722) C:71% T:95%	pCi/L	12/16/21 11:21		

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

Sample: L-TP-2D **Lab ID: 60385386022** Collected: 11/04/21 15:18 Received: 11/06/21 05:30 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	0.0610 ± 0.493 (0.968) C:NA T:91%	pCi/L	12/19/21 12:27		
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.623 ± 0.389 (0.735) C:74% T:93%	pCi/L	12/16/21 11:21		

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

Sample: L-TP-3M **Lab ID: 60385386023** Collected: 11/03/21 12:02 Received: 11/06/21 05:30 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	0.270 ± 0.307 (0.485) C:NA T:99%	pCi/L	12/19/21 12:27		
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.865 ± 0.417 (0.693) C:69% T:92%	pCi/L	12/16/21 14:29		

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

Sample: L-TP-3D **Lab ID: 60385386024** Collected: 11/03/21 13:27 Received: 11/06/21 05:30 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	0.332 ± 0.471 (0.798) C:NA T:93%	pCi/L	12/19/21 12:27		
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	0.739 ± 0.427 (0.786) C:75% T:91%	pCi/L	12/16/21 14:28		

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: L-TP-4D Lab ID: 60385386025 Collected: 11/03/21 10:31 Received: 11/06/21 05:30 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	1.62 ± 0.755 (0.780) C:NA T:93%	pCi/L	12/19/21 12:27		
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.462 ± 0.424 (0.864) C:71% T:88%	pCi/L	12/16/21 14:29		

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: L-CA-DUP-2 Lab ID: 60385386026 Collected: 11/03/21 00:00 Received: 11/06/21 05:30 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.323 ± 0.381 (0.600) C:NA T:92%	pCi/L	12/19/21 12:27		
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.890 ± 0.442 (0.753) C:67% T:92%	pCi/L	12/16/21 14:29		

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: L-CA-DUP-3 Lab ID: 60385386027 Collected: 11/03/21 00:00 Received: 11/06/21 05:30 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.000 ± 0.457 (0.936) C:NA T:92%	pCi/L	12/19/21 12:27		
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	1.15 ± 0.546 (0.942) C:68% T:88%	pCi/L	12/16/21 14:29		

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

Sample: L-CA-FB-1 **Lab ID: 60385386028** Collected: 11/03/21 10:30 Received: 11/06/21 05:30 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	0.0639 ± 0.292 (0.593) C:NA T:92%	pCi/L	12/19/21 12:44		
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.503 ± 0.386 (0.756) C:71% T:90%	pCi/L	12/16/21 14:29		

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

Sample: L-CA-FB-2 **Lab ID: 60385386029** Collected: 11/04/21 12:00 Received: 11/06/21 05:30 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	-0.0612 ± 0.279 (0.568) C:NA T:91%	pCi/L	12/19/21 12:44		
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	0.468 ± 0.369 (0.724) C:74% T:86%	pCi/L	12/16/21 14:29		

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

Sample: L-CA-FB-3 **Lab ID: 60385386030** Collected: 11/03/21 15:10 Received: 11/06/21 05:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	0.000 ± 0.294 (0.658) C:NA T:93%	pCi/L	12/19/21 12:44		
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	-0.415 ± 0.363 (0.927) C:66% T:88%	pCi/L	12/16/21 14:29		

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

Sample: L-MS-2 **Lab ID: 60385386031** Collected: 11/03/21 12:02 Received: 11/06/21 05:30 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	91.77 %REC ± NA (NA) C:NA T:NA	pCi/L	12/19/21 12:44		
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	86.82 %REC ± NA (NA) C:NA T:NA	pCi/L	12/16/21 14:29		

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

Sample: L-MSD-2 **Lab ID: 60385386032** Collected: 11/03/21 12:02 Received: 11/06/21 05:30 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	81.12 %REC 12.32 RPD ± NA (NA) C:NA T:NA	pCi/L	12/19/21 12:44		
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	107.43 %REC 21.23 RPD ± NA (NA) C:NA T:NA	pCi/L	12/16/21 14:30		

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

QC Batch:	475156	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: 60385386021, 60385386022, 60385386023, 60385386024, 60385386025, 60385386026, 60385386027, 60385386028, 60385386029, 60385386030, 60385386031, 60385386032

METHOD BLANK: 2295340 Matrix: Water

Associated Lab Samples: 60385386021, 60385386022, 60385386023, 60385386024, 60385386025, 60385386026, 60385386027, 60385386028, 60385386029, 60385386030, 60385386031, 60385386032

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	-0.201 ± 0.243 (0.659) C:NA T:95%	pCi/L	12/19/21 12:27	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

QC Batch: 475158

Analysis Method: EPA 904.0

QC Batch Method: EPA 904.0

Analysis Description: 904.0 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 60385386021, 60385386022, 60385386023, 60385386024, 60385386025, 60385386026, 60385386027, 60385386028, 60385386029, 60385386030, 60385386031, 60385386032

METHOD BLANK: 2295345

Matrix: Water

Associated Lab Samples: 60385386021, 60385386022, 60385386023, 60385386024, 60385386025, 60385386026, 60385386027, 60385386028, 60385386029, 60385386030, 60385386031, 60385386032

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.572 ± 0.352 (0.643) C:71% T:87%	pCi/L	12/16/21 11:21	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

QC Batch: 475154

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: 60385386001, 60385386002, 60385386003, 60385386004, 60385386005, 60385386006, 60385386007, 60385386008, 60385386009, 60385386010, 60385386011, 60385386012, 60385386013, 60385386014, 60385386015, 60385386016, 60385386017, 60385386018, 60385386019, 60385386020

METHOD BLANK: 2295338

Matrix: Water

Associated Lab Samples: 60385386001, 60385386002, 60385386003, 60385386004, 60385386005, 60385386006, 60385386007, 60385386008, 60385386009, 60385386010, 60385386011, 60385386012, 60385386013, 60385386014, 60385386015, 60385386016, 60385386017, 60385386018, 60385386019, 60385386020

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.217 ± 0.337 (0.584) C:NA T:96%	pCi/L	12/18/21 11:14	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

QC Batch: 475155

Analysis Method: EPA 904.0

QC Batch Method: EPA 904.0

Analysis Description: 904.0 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 60385386001, 60385386002, 60385386003, 60385386004, 60385386005, 60385386006, 60385386007, 60385386008, 60385386009, 60385386010, 60385386011, 60385386012, 60385386013, 60385386014, 60385386015, 60385386016, 60385386017, 60385386018, 60385386019, 60385386020

METHOD BLANK: 2295339

Matrix: Water

Associated Lab Samples: 60385386001, 60385386002, 60385386003, 60385386004, 60385386005, 60385386006, 60385386007, 60385386008, 60385386009, 60385386010, 60385386011, 60385386012, 60385386013, 60385386014, 60385386015, 60385386016, 60385386017, 60385386018, 60385386019, 60385386020

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.604 ± 0.371 (0.694) C:74% T:89%	pCi/L	12/16/21 11:14	

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QUALIFIERS

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

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.

BATCH QUALIFIERS

Batch: 475155

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

B Analyte was detected in the associated method blank.

E Analyte concentration exceeded the calibration range. The reported result is estimated.

H1 Analysis conducted outside the EPA 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 LCPA-CA

Pace Project No.: 60385386

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60385386001	L-AM-1S	EPA 200.7	757956	EPA 200.7	758020
60385386002	L-BMW-1S	EPA 200.7	757956	EPA 200.7	758020
60385386003	L-BMW-2S	EPA 200.7	757956	EPA 200.7	758020
60385386004	L-AM-1D	EPA 200.7	757956	EPA 200.7	758020
60385386005	L-LMW-2S	EPA 200.7	757956	EPA 200.7	758020
60385386006	L-CA-DUP-1	EPA 200.7	757956	EPA 200.7	758020
60385386007	L-S-1	EPA 200.7	757956	EPA 200.7	758020
60385386010	L-AMW-8	EPA 200.7	757956	EPA 200.7	758020
60385386011	L-LMW-1S	EPA 200.7	757956	EPA 200.7	758020
60385386012	L-LMW-4S	EPA 200.7	757956	EPA 200.7	758020
60385386013	L-LMW-7S	EPA 200.7	757956	EPA 200.7	758020
60385386014	L-LMW-8S	EPA 200.7	757956	EPA 200.7	758020
60385386015	L-MW-24	EPA 200.7	757956	EPA 200.7	758020
60385386016	L-MW-26	EPA 200.7	757956	EPA 200.7	758020
60385386017	L-MW-33(D)	EPA 200.7	757956	EPA 200.7	758020
60385386018	L-MW-34(D)	EPA 200.7	757956	EPA 200.7	758020
60385386019	L-MW-35(D)	EPA 200.7	757956	EPA 200.7	758020
60385386020	L-TP-1D	EPA 200.7	757956	EPA 200.7	758020
60385386021	L-TP-2M	EPA 200.7	757957	EPA 200.7	758022
60385386022	L-TP-2D	EPA 200.7	757957	EPA 200.7	758022
60385386023	L-TP-3M	EPA 200.7	757957	EPA 200.7	758022
60385386024	L-TP-3D	EPA 200.7	757957	EPA 200.7	758022
60385386025	L-TP-4D	EPA 200.7	757957	EPA 200.7	758022
60385386026	L-CA-DUP-2	EPA 200.7	757957	EPA 200.7	758022
60385386027	L-CA-DUP-3	EPA 200.7	758172	EPA 200.7	758546
60385386028	L-CA-FB-1	EPA 200.7	758172	EPA 200.7	758546
60385386029	L-CA-FB-2	EPA 200.7	758172	EPA 200.7	758546
60385386030	L-CA-FB-3	EPA 200.7	758172	EPA 200.7	758546
60385386001	L-AM-1S	EPA 200.8	758163	EPA 200.8	758394
60385386002	L-BMW-1S	EPA 200.8	758163	EPA 200.8	758394
60385386003	L-BMW-2S	EPA 200.8	758163	EPA 200.8	758394
60385386004	L-AM-1D	EPA 200.8	758163	EPA 200.8	758394
60385386005	L-LMW-2S	EPA 200.8	758163	EPA 200.8	758394
60385386006	L-CA-DUP-1	EPA 200.8	758163	EPA 200.8	758394
60385386007	L-S-1	EPA 200.8	758163	EPA 200.8	758394
60385386010	L-AMW-8	EPA 200.8	758165	EPA 200.8	758393
60385386011	L-LMW-1S	EPA 200.8	758165	EPA 200.8	758393
60385386012	L-LMW-4S	EPA 200.8	758165	EPA 200.8	758393
60385386013	L-LMW-7S	EPA 200.8	758165	EPA 200.8	758393
60385386014	L-LMW-8S	EPA 200.8	758165	EPA 200.8	758393
60385386015	L-MW-24	EPA 200.8	758165	EPA 200.8	758393
60385386016	L-MW-26	EPA 200.8	758165	EPA 200.8	758393
60385386017	L-MW-33(D)	EPA 200.8	758165	EPA 200.8	758393
60385386018	L-MW-34(D)	EPA 200.8	758165	EPA 200.8	758393
60385386019	L-MW-35(D)	EPA 200.8	758165	EPA 200.8	758393
60385386020	L-TP-1D	EPA 200.8	758165	EPA 200.8	758393
60385386021	L-TP-2M	EPA 200.8	758165	EPA 200.8	758393

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60385386022	L-TP-2D	EPA 200.8	758165	EPA 200.8	758393
60385386023	L-TP-3M	EPA 200.8	758165	EPA 200.8	758393
60385386024	L-TP-3D	EPA 200.8	758165	EPA 200.8	758393
60385386025	L-TP-4D	EPA 200.8	758165	EPA 200.8	758393
60385386026	L-CA-DUP-2	EPA 200.8	758165	EPA 200.8	758393
60385386027	L-CA-DUP-3	EPA 200.8	758165	EPA 200.8	758393
60385386028	L-CA-FB-1	EPA 200.8	758166	EPA 200.8	758547
60385386029	L-CA-FB-2	EPA 200.8	758166	EPA 200.8	758547
60385386030	L-CA-FB-3	EPA 200.8	758166	EPA 200.8	758547
60385386001	L-AM-1S	EPA 903.1	475154		
60385386002	L-BMW-1S	EPA 903.1	475154		
60385386003	L-BMW-2S	EPA 903.1	475154		
60385386004	L-AM-1D	EPA 903.1	475154		
60385386005	L-LMW-2S	EPA 903.1	475154		
60385386006	L-CA-DUP-1	EPA 903.1	475154		
60385386007	L-S-1	EPA 903.1	475154		
60385386008	L-CA-MS-1	EPA 903.1	475154		
60385386009	L-CA-MSD-1	EPA 903.1	475154		
60385386010	L-AMW-8	EPA 903.1	475154		
60385386011	L-LMW-1S	EPA 903.1	475154		
60385386012	L-LMW-4S	EPA 903.1	475154		
60385386013	L-LMW-7S	EPA 903.1	475154		
60385386014	L-LMW-8S	EPA 903.1	475154		
60385386015	L-MW-24	EPA 903.1	475154		
60385386016	L-MW-26	EPA 903.1	475154		
60385386017	L-MW-33(D)	EPA 903.1	475154		
60385386018	L-MW-34(D)	EPA 903.1	475154		
60385386019	L-MW-35(D)	EPA 903.1	475154		
60385386020	L-TP-1D	EPA 903.1	475154		
60385386021	L-TP-2M	EPA 903.1	475156		
60385386022	L-TP-2D	EPA 903.1	475156		
60385386023	L-TP-3M	EPA 903.1	475156		
60385386024	L-TP-3D	EPA 903.1	475156		
60385386025	L-TP-4D	EPA 903.1	475156		
60385386026	L-CA-DUP-2	EPA 903.1	475156		
60385386027	L-CA-DUP-3	EPA 903.1	475156		
60385386028	L-CA-FB-1	EPA 903.1	475156		
60385386029	L-CA-FB-2	EPA 903.1	475156		
60385386030	L-CA-FB-3	EPA 903.1	475156		
60385386031	L-MS-2	EPA 903.1	475156		
60385386032	L-MSD-2	EPA 903.1	475156		
60385386001	L-AM-1S	EPA 904.0	475155		
60385386002	L-BMW-1S	EPA 904.0	475155		
60385386003	L-BMW-2S	EPA 904.0	475155		
60385386004	L-AM-1D	EPA 904.0	475155		
60385386005	L-LMW-2S	EPA 904.0	475155		
60385386006	L-CA-DUP-1	EPA 904.0	475155		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60385386007	L-S-1	EPA 904.0	475155		
60385386008	L-CA-MS-1	EPA 904.0	475155		
60385386009	L-CA-MSD-1	EPA 904.0	475155		
60385386010	L-AMW-8	EPA 904.0	475155		
60385386011	L-LMW-1S	EPA 904.0	475155		
60385386012	L-LMW-4S	EPA 904.0	475155		
60385386013	L-LMW-7S	EPA 904.0	475155		
60385386014	L-LMW-8S	EPA 904.0	475155		
60385386015	L-MW-24	EPA 904.0	475155		
60385386016	L-MW-26	EPA 904.0	475155		
60385386017	L-MW-33(D)	EPA 904.0	475155		
60385386018	L-MW-34(D)	EPA 904.0	475155		
60385386019	L-MW-35(D)	EPA 904.0	475155		
60385386020	L-TP-1D	EPA 904.0	475155		
60385386021	L-TP-2M	EPA 904.0	475158		
60385386022	L-TP-2D	EPA 904.0	475158		
60385386023	L-TP-3M	EPA 904.0	475158		
60385386024	L-TP-3D	EPA 904.0	475158		
60385386025	L-TP-4D	EPA 904.0	475158		
60385386026	L-CA-DUP-2	EPA 904.0	475158		
60385386027	L-CA-DUP-3	EPA 904.0	475158		
60385386028	L-CA-FB-1	EPA 904.0	475158		
60385386029	L-CA-FB-2	EPA 904.0	475158		
60385386030	L-CA-FB-3	EPA 904.0	475158		
60385386031	L-MS-2	EPA 904.0	475158		
60385386032	L-MSD-2	EPA 904.0	475158		
60385386001	L-AM-1S	SM 2320B	649386		
60385386002	L-BMW-1S	SM 2320B	649386		
60385386003	L-BMW-2S	SM 2320B	649386		
60385386004	L-AM-1D	SM 2320B	649386		
60385386005	L-LMW-2S	SM 2320B	649386		
60385386006	L-CA-DUP-1	SM 2320B	649386		
60385386007	L-S-1	SM 2320B	649386		
60385386010	L-AMW-8	SM 2320B	650018		
60385386011	L-LMW-1S	SM 2320B	650018		
60385386012	L-LMW-4S	SM 2320B	650018		
60385386013	L-LMW-7S	SM 2320B	650018		
60385386014	L-LMW-8S	SM 2320B	650018		
60385386015	L-MW-24	SM 2320B	650018		
60385386016	L-MW-26	SM 2320B	650018		
60385386017	L-MW-33(D)	SM 2320B	650018		
60385386018	L-MW-34(D)	SM 2320B	650018		
60385386019	L-MW-35(D)	SM 2320B	650018		
60385386020	L-TP-1D	SM 2320B	650018		
60385386021	L-TP-2M	SM 2320B	650018		
60385386022	L-TP-2D	SM 2320B	650018		
60385386023	L-TP-3M	SM 2320B	650018		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60385386024	L-TP-3D	SM 2320B	650018		
60385386025	L-TP-4D	SM 2320B	650018		
60385386026	L-CA-DUP-2	SM 2320B	650018		
60385386027	L-CA-DUP-3	SM 2320B	650018		
60385386028	L-CA-FB-1	SM 2320B	650018		
60385386029	L-CA-FB-2	SM 2320B	650018		
60385386030	L-CA-FB-3	SM 2320B	650093		
60385386001	L-AM-1S	SM 2540C	755000		
60385386002	L-BMW-1S	SM 2540C	755000		
60385386003	L-BMW-2S	SM 2540C	755000		
60385386004	L-AM-1D	SM 2540C	755000		
60385386005	L-LMW-2S	SM 2540C	755000		
60385386006	L-CA-DUP-1	SM 2540C	755000		
60385386007	L-S-1	SM 2540C	755000		
60385386010	L-AMW-8	SM 2540C	755409		
60385386011	L-LMW-1S	SM 2540C	755548		
60385386012	L-LMW-4S	SM 2540C	755409		
60385386013	L-LMW-7S	SM 2540C	755549		
60385386014	L-LMW-8S	SM 2540C	755549		
60385386015	L-MW-24	SM 2540C	755548		
60385386016	L-MW-26	SM 2540C	755548		
60385386017	L-MW-33(D)	SM 2540C	755409		
60385386018	L-MW-34(D)	SM 2540C	755409		
60385386019	L-MW-35(D)	SM 2540C	755548		
60385386020	L-TP-1D	SM 2540C	755548		
60385386021	L-TP-2M	SM 2540C	755548		
60385386022	L-TP-2D	SM 2540C	755548		
60385386023	L-TP-3M	SM 2540C	755409		
60385386024	L-TP-3D	SM 2540C	755409		
60385386025	L-TP-4D	SM 2540C	755409		
60385386026	L-CA-DUP-2	SM 2540C	755409		
60385386027	L-CA-DUP-3	SM 2540C	755409		
60385386028	L-CA-FB-1	SM 2540C	755409		
60385386029	L-CA-FB-2	SM 2540C	755548		
60385386030	L-CA-FB-3	SM 2540C	755409		
60385386001	L-AM-1S	EPA 300.0	757277		
60385386002	L-BMW-1S	EPA 300.0	757277		
60385386003	L-BMW-2S	EPA 300.0	757277		
60385386004	L-AM-1D	EPA 300.0	757277		
60385386005	L-LMW-2S	EPA 300.0	757277		
60385386006	L-CA-DUP-1	EPA 300.0	757277		
60385386007	L-S-1	EPA 300.0	757277		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN LCPA-CA

Pace Project No.: 60385386

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60385386010	L-AMW-8	EPA 300.0	757095		
60385386011	L-LMW-1S	EPA 300.0	757095		
60385386012	L-LMW-4S	EPA 300.0	757095		
60385386013	L-LMW-7S	EPA 300.0	757095		
60385386014	L-LMW-8S	EPA 300.0	757095		
60385386015	L-MW-24	EPA 300.0	757095		
60385386016	L-MW-26	EPA 300.0	757095		
60385386017	L-MW-33(D)	EPA 300.0	757095		
60385386018	L-MW-34(D)	EPA 300.0	757095		
60385386019	L-MW-35(D)	EPA 300.0	757095		
60385386020	L-TP-1D	EPA 300.0	757095		
60385386021	L-TP-2M	EPA 300.0	757095		
60385386022	L-TP-2D	EPA 300.0	757095		
60385386023	L-TP-3M	EPA 300.0	757095		
60385386024	L-TP-3D	EPA 300.0	757936		
60385386025	L-TP-4D	EPA 300.0	757095		
60385386026	L-CA-DUP-2	EPA 300.0	757936		
60385386027	L-CA-DUP-3	EPA 300.0	757096		
60385386028	L-CA-FB-1	EPA 300.0	757096		
60385386029	L-CA-FB-2	EPA 300.0	757096		
60385386030	L-CA-FB-3	EPA 300.0	757096		

REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

WO# : 60385386



Client Name: Golden 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: WT Blue None

Cooler Temperature (°C): As-read 2.5/2.3/1.6 Corr. Factor -0.2 Corrected 2.3/2.0/1.4

Date and initials of person examining contents:

Temperature should be above freezing to 6°C 11.9/13.1

11.2/12.9

pv 11/8/21

Chain of Custody present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Chain of Custody relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Samples arrived within holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Short Hold Time analyses (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Correct containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Sample labels match COC: Date / time / ID / analyses	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Samples contain multiple phases? Matrix: <u>WT</u>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Containers requiring pH preservation in compliance? (HNO ₃ , H ₂ SO ₄ , HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO) LOT# <u>603173</u>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> 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)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Potassium iodide test strip turns blue/purple? (Preserve)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Trip Blank present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Samples from USDA Regulated Area: State:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> 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 1:18 pm, 11/8/21

Project Manager Review: _____

Date: _____



Sample Condition Upon Receipt

WO#: 60385386



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 SPLC

Thermometer Used: 219 Type of Ice: Wet Blue None

Cooler Temperature (°C): As-read 1, 1.8, 15.9 Corr. Factor -0.2 Corrected 0.9, 1.6, 15.5, 0.4 Date and initials of person examining contents: SP illio

Temperature should be above freezing to 6°C 6, 14.2, 15.2, 13.1 14.2, 15.0, 7.9

Table with 2 columns: Question/Field and Answer/Status. Rows include Chain of Custody, Samples arrived, Short Hold Time, Rush Turn Around Time, Sufficient volume, Correct containers used, Pace containers used, Containers intact, Unpreserved soils, Filtered volume, Sample labels match, Samples contain multiple phases, Containers requiring pH preservation, Cyanide water sample checks, Trip Blank present, Headspace in VOA vials, Samples from USDA Regulated Area, Additional labels attached.

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

Person Contacted: Date/Time:

Comments/ Resolution

REVIEWED By jchurch at 11:19 am, 11/10/21

Project Manager Review Date:



CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: **2** of **3**

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 Drive, Ste 260 Ballwin, MO 63021	Copy To:	Ryan Feldmann/Eric Schneider	Company Name:	
Email To:	jeffrey_ingram@golder.com	Purchase Order No.:		Address:	
Phone:	636-724-9191	Project Name:	Ameren LCFA-CA	Pace Quote Reference:	
Requested Due Date/AT:	Standard	Project Number:	153-140603.0001A (COC #2)	Pace Project Manager:	Jamie Church
				Pace Profile #:	9285

REGULATORY AGENCY	
NPDES	7 GROUND WATER
UST	RCRA
	DRINKING WATER
	OTHER
Site Location	MO
STATE:	

ITEM #	Valid Matrix Codes MATRIX CODE DW DRINKING WATER WT WASTE WATER P PRODUCT SL SOLIDS OIL	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Requested Analysis Filtered (Y/N)										Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.										
		COMPOSITE START	COMPOSITE END/GRAB			Y	N	Chloride/Fluoride/Sulfate	App III and Cat/An Metals	Alkalinity	TDS	Appendix IV Metals *	Radium 226	Radium 228													
1	L-MW-35 (D)			11-4-21 1133	4	Unpreserved	H ₂ O ₂	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol	Other	Y	N	N	N	N	N	N	N	N	N	N			
2	L-S-1																										
3	L-TP-1D			11-4-21 1541	4																						
4	L-TP-2M			↓ 1323	↓																						
5	L-TP-2D			↓ 1518	↓																						
6	L-TP-3M			T 1202	T																						
7	L-TP-3D			T 1327	T																						
8	L-TP-4D			11/3/21 1051	4																						
9	L-AM-1S																										
10	L-AM-1D																										
11	L-CA-DUP-1																										
12	L-CA-DUP-2			11-3-21																							

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Sierra Shields / Golder A	11/5	1530	Angela MW	11/5	1530	
Angela MW	11/5	1530	Angela MW	11/5	1530	
			Angela MW	11/5	1530	

ADDITIONAL COMMENTS		Temp In °C	Received on	Custody Sealed Cooler	Samples Intact
*EPA 200.7: Fe, Mg, Mn, K, Na, Ca, B					
**EPA 200.7: Ba, Li, Mo					
**EPA 200.8: As, Cr, Se					
SAMPLER NAME AND SIGNATURE		DATE SIGNED (MM/DD/YYYY):			
PRINT Name of SAMPLER: Sierra Shields		11/5/21			
SIGNATURE of SAMPLER: <i>Sierra Shields</i>					

MEMORANDUM**DATE** January 5, 2022**Project No.** 153140603**TO** Project File
Golder Associates**CC** Amanda Derhake, Jeff Ingram**FROM** Annie Muehlfarth**EMAIL** AMuehlfarth@golder.com**DATA VALIDATION SUMMARY, LABADIE ENERGY CENTER – LCPA-CA – CORRECTIVE ACTION
SAMPLING NOVEMBER 2021 - DATA PACKAGE 60385386**

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

- When a compound was detected in a sample result between the 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, 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 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).

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

Company Name: Golder Associates
 Project Name: Ameren - LEC - LCPA-CA
 Reviewer: A. Muehlfarth

Project Manager: J. Ingram
 Project Number: 153140603
 Validation Date: 1/5/2022

Laboratory: Pace Analytical

SDG #: 60385386

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 L-AM-1S, L-BMW-1S, L-BMW-2S, L-AM-1D, L-LMW-2S, L-CA-DUP-1, L-S-1, L-CA-MS-1, L-CA-MSD-1, L-AMW-8, L-LMW-1S, L-LMW-4S, L-LMW-7S, L-LMW-8S, L-MW-24, L-MW-26, L-MW-33(D), L-MW-34(D), L-MW-35(D), L-TP-1D, L-TP-2M, L-TP-2D, L-TP-3M, L-TP-3D, L-TP-4D, L-CA-DUP-2, L-CA-DUP-3, L-CA-FB-1, L-CA-FB-2, L-CA-FB-3, L-MS-2, L-MSD-2

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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>11/01/2021 - 11/05/2021</u>
b) Sampling team indicated?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>ETF/SSS/EMS/BTT</u>
c) Sample location noted?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u></u>
d) Sample depth indicated (Soils)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u></u>
e) Sample type indicated (grab/composite)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>Grab</u>
f) Field QC noted?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>See Notes</u>
g) Field parameters collected (note types)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>pH, Sp.Cond, ORP, Temp, DO, Turb</u>
h) Field Calibration within control limits?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u></u>
i) Notations of unacceptable field conditions/performances from field logs or field notes?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u></u>
j) Does the laboratory narrative indicate deficiencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u></u>

Note Deficiencies: _____

Chain-of-Custody (COC)	YES	NO	NA	COMMENTS
a) Was the COC properly completed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u></u>
b) Was the COC signed by both field and laboratory personnel?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u></u>
c) Were samples received in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>See Notes</u>

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

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

Blanks	YES	NO	NA	COMMENTS
a) Were analytes detected in the method blank(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b) Were analytes detected in the field blank(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c) Were analytes detected in the equipment blank(s)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____
d) Were analytes detected in the trip blank(s)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____

Laboratory Control Sample (LCS)	YES	NO	NA	COMMENTS
a) Was a LCS analyzed once per SDG?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b) Were the proper analytes included in the LCS?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c) Was the LCS accuracy criteria met?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

Duplicates	YES	NO	NA	COMMENTS
a) Were field duplicates collected (note original and duplicate sample names)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
				See Notes
b) Were field dup. precision criteria met (note RPD)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
				See Notes
c) Were lab duplicates analyzed (note original and duplicate samples)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
d) Were lab dup. precision criteria met (note RPD)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
				Max RPD: 9% [<10%]

Blind Standards	YES	NO	NA	COMMENTS
a) Was a blind standard used (indicate name, analytes included and concentrations)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____
b) Was the %D within control limits?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____

Matrix Spike/Matrix Spike Duplicate (MS/MSD)	YES	NO	NA	COMMENTS
a) Was MS accuracy criteria met?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Recovery could not be calculated since sample contained high concentration of analyte?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____
b) Was MSD accuracy criteria met?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Recovery could not be calculated since sample contained high concentration of analyte?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____
c) Were MS/MSD precision criteria met?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
				See Note

Comments/Notes:

The Sample Condition Upon Receipt forms from the laboratory indicate that the only coolers out of temperature range contained radiums, no qualification necessary.

TDS analyzed outside of hold time for samples L-BMW-1S and L-BMW-2S. Qualified as estimates.

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

QA LEVEL IV - INORGANIC DATA EVALUATION CHECKLIST

Comments/Notes:

Blanks:

3034277: Boron (15.5J), Calcium (95.6J). Associated with samples -027 through -030. Sample results >RL, > 10x blank, or ND were not qualified. Results <RL were qualified as ND.

3032286: Chloride (0.79J). Associated with samples -010 through -023, -025. Sample results >RL, > 10x blank, or ND were not qualified. Results <10x blank were qualified as estimates.

3029718: Chloride (0.52J). Associated with samples -027 through -030. Sample results >RL, > 10x blank, or ND were not qualified. Results <RL were qualified as ND.

3034763: Chloride (0.45J). Associated with samples -001 through -007. Sample results >RL, > 10x blank, or ND were not qualified. Results <10x blank were qualified as estimates.

3033262: Chloride (0.55J). Associated with samples -024, -026. Sample results >RL and 10x blank, no qualification necessary.

3037296: Chloride (0.65J). Associated with samples -024, -026. Sample results >RL and 10x blank, no qualification necessary.

L-CA-FB-1 @ L-AMW-8: Barium (2.5J), boron (19.6J), molybdenum (3.8J), chromium (0.44J), alkalinity (2.2), chloride (0.55J)
Sample results >RL and 10x blank not qualified. Results <RL qualified as ND.

L-CA-FB-2 @ L-MW-35(D): Chromium (0.32J), alkalinity (2.4), chloride (0.53J). Results >RL and 10x blank not qualified.
Results <RL qualified as ND.

L-CA-FB-3 @ L-MW-33(D): Chromium (0.56J), Chloride (0.53J). Results >RL and 10x blank not qualified. Results <RL qualified as ND.

Duplicates:

L-CA-DUP-1 @ AM-1S: Chromium detected in sample, ND in duplicate.

L-CA-DUP-2 @ L-LMW-4S: RPD for chromium (50%) exceeds limit (20%); Fluoride detected in sample, ND in duplicate;
Radium-228 detected in duplicate, ND in sample.

L-CA-DUP-3 @ L-TP-3D: RPD for chromium (23.7%) exceeds limit (20%); Fluoride detected in sample, ND in duplicate;
Radium-228 detected in duplicate, ND in sample.

Laboratory analyzed sample duplicates for alkalinity, TDS

MS/MSD:

3033341/3033342: MSD % recovery low for sodium, associated with sample -004. Only 1 QC indicator out, no qualification necessary.

3033349/3033350: MS % recovery high for calcium, associated with sample -023. Only 1 QC indicator out, no qualification necessary.

3034279/3034280: MS % recovery low for sodium, associated with sample -027. Only 1 QC indicator out, no qualification necessary.

3029720/3029721: MS % recovery low for sulfate, associated with sample -027. Only 1 QC indicator out, no qualification necessary.

3033266: MS % recovery high for fluoride. MS performed on unrelated sample, no qualification necessary.

3034245/3034246: MS % recovery low (0%), RPD not calculated for arsenic and chromium; MS % recovery low (0%),
RPD exceeds limit for Selenium. Associated with sample -016.

3033264/3033265: MS/MSD % recovery high for sulfate. Associated with sample -024.

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

Data Qualification:

Sample Name	Constituent(s)	Result	Qualifier	Reason
L-BMW-1S	TDS	953	J	Analyzed outside of hold time
L-BMW-2S	"	475	J	"
L-LMW-1S	Chloride	2.5	J	Detected in MB 10x blank > result > RL
L-MW-24	"	5.0	J	"
L-MW-26	"	6.2	J	"
L-TP-1D	"	4.5	J	"
L-CA-FB-1	Chloride	1.0	U	Detected in MB, RL > result > MDL
"	Boron	100	U	"
L-CA-FB-2	Chloride	1.0	U	"
L-CA-FB-3	"	1.0	U	"
L-BMW-2S	"	1.7	J	Detected in MB 10x blank > result > RL
L-S-1	"	1.1	J	"
L-AMW-8	Chloride	1.0	U	Detected in FB, RL > result > MDL
L-MW-35(D)	Chromium	1.0	U	"
L-MW-33(D)	"	1.0	U	"
AM-1S	"	0.24	J	Detected in sample, ND in duplicate
L-CA-DUP-1	"	0.23	UJ	"
L-LMW-4S	Chromium	0.45	J	RPD exceeds limit
"	Fluoride	0.25	J	Detected in sample, ND in duplicate
"	Radium-228	0.853 ± 0.487	UJ	Detected in duplicate, ND in sample
L-CA-DUP-2	Chromium	0.27	J	RPD exceeds limit
"	Fluoride	0.086	UJ	Detected in sample, ND in duplicate
"	Radium-228	0.890 ± 0.442	J	Detected in duplicate, ND in sample
L-TP-3D	Chromium	0.33	J	RPD exceeds limit
"	Fluoride	0.086	UJ	Detected in sample, ND in duplicate
"	Radium-228	0.739 ± 0.427	UJ	Detected in duplicate, ND in sample
L-CA-DUP-3	Chromium	0.26	J	RPD exceeds limit
"	Fluoride	0.33	J	Detected in sample, ND in duplicate
"	Radium-228	1.15 ± 0.546	J	Detected in duplicate, ND in sample
L-MW-26	Arsenic	0.50	J	MS % recovery low, RPD not calculated
"	Chromium	0.33	J	"
"	Selenium	2.9	J	"
L-TP-3D	Sulfate	469	J+	MS/MSD % recovery high

APPENDIX B

**November 2020 Assessment
Monitoring Statistical Evaluation**

TECHNICAL MEMORANDUM

DATE March 4, 2021 **Project No.** 153-140602

TO Bill Kutosky
Ameren Missouri

CC Susan Knowles, Craig Giesmann, Charlie Henderson

FROM Jeffrey Ingram, Sean Paulsen, Mark Haddock **EMAIL** Jingram@Golder.com

ASSESSMENT MONITORING STATISTICAL EVALUATION LCPA SURFACE IMPOUNDMENT LABADIE ENERGY CENTER, FRANKLIN COUNTY, MISSOURI

This Technical Memorandum provides the results of the Assessment Monitoring Statistical Evaluation for the November 2020 sampling event at the LCPA Surface Impoundment at the Labadie Energy Center located in Franklin County, Missouri. Included in this memorandum is a brief 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 Groundwater Monitoring Plan's (GMP) Statistical Analysis Plan (SAP). No additional outliers were removed prior to the calculation of confidence limits, however, some previously identified outliers were added back to the data set, as described below.

An analysis of the outliers removed to date was completed and one statistical outlier that was previously removed was added back into the dataset, as it is no longer an outlier. The following statistical outlier was added back into the dataset prior to the calculation of confidence limits:

- Lithium
 - UMW-1D at 32.6 micrograms per liter (µg/L) on 11/7/2018 was originally removed as an outlier for the November 2019 event statistical analysis because the value was statistically higher than the other results at the same well. Additional sampling results have displayed a larger spatial variability in this well and it is no longer a statistical outlier.

No new SSLs were identified in the November 2020 sampling event. The SSLs reported for the November 2020 monitoring event are as follows:

- Molybdenum at UMW-3D, UMW-4D, UMW-5D, UMW-6D, and UMW-7D

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.

Sincerely,



Jeffrey Ingram, R.G.
Senior Project Geologist

JSI/SCP/MNH



Sean Paulsen
Associate, Senior Consultant

Enclosures:

Table 1 – LCPA Groundwater Protection Standards

Appendix A – Sanitas Confidence Interval Statistical Output

Appendix B – Sanitas Trending Confidence Bands Statistical Output

**Table 1 - LCPA Groundwater Protection Standards
LCPA Surface Impoundment
Labadie Energy Center**

Parameter	Units	MCL or Health Based GWPS	Site GWPS	Value to Return to Detection Monitoring ⁷
Antimony	µg/L	6	6	DQR
Arsenic	µg/L	10	44.2	44.2
Barium	µg/L	2000	2000	1290
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	0.3163
Lead	µg/L	15	15	DQR
Lithium	µg/L	40	47.4	47.4
Mercury	µg/L	2	2	DQR
Molybdenum	µg/L	100	100	DQR
Radium 226 + 228	pCi/L	5	5	4.14
Selenium	µg/L	50	50	DQR
Thallium	µg/L	2	2	DQR

Notes:

1. µg/L - micrograms per liter.
2. mg/L - milligrams per liter.
3. pCi/L - picocuries per liter.

4. MCL - Maximum Contaminant Level. MCLs from United States Environmental Protection Agency (USEPA) 2012 Edition of the Drinking Water Standards and Health Advisories. Spring 2012. <http://water.epa.gov/drink/contaminants/index.cfm>.

5. Health Based Groundwater Protection Standards (GWPS) were adopted 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 collected through February 2021 from monitoring wells BMW-1D and BMW-2D.

Prepared by: JSI

Checked by: EMS

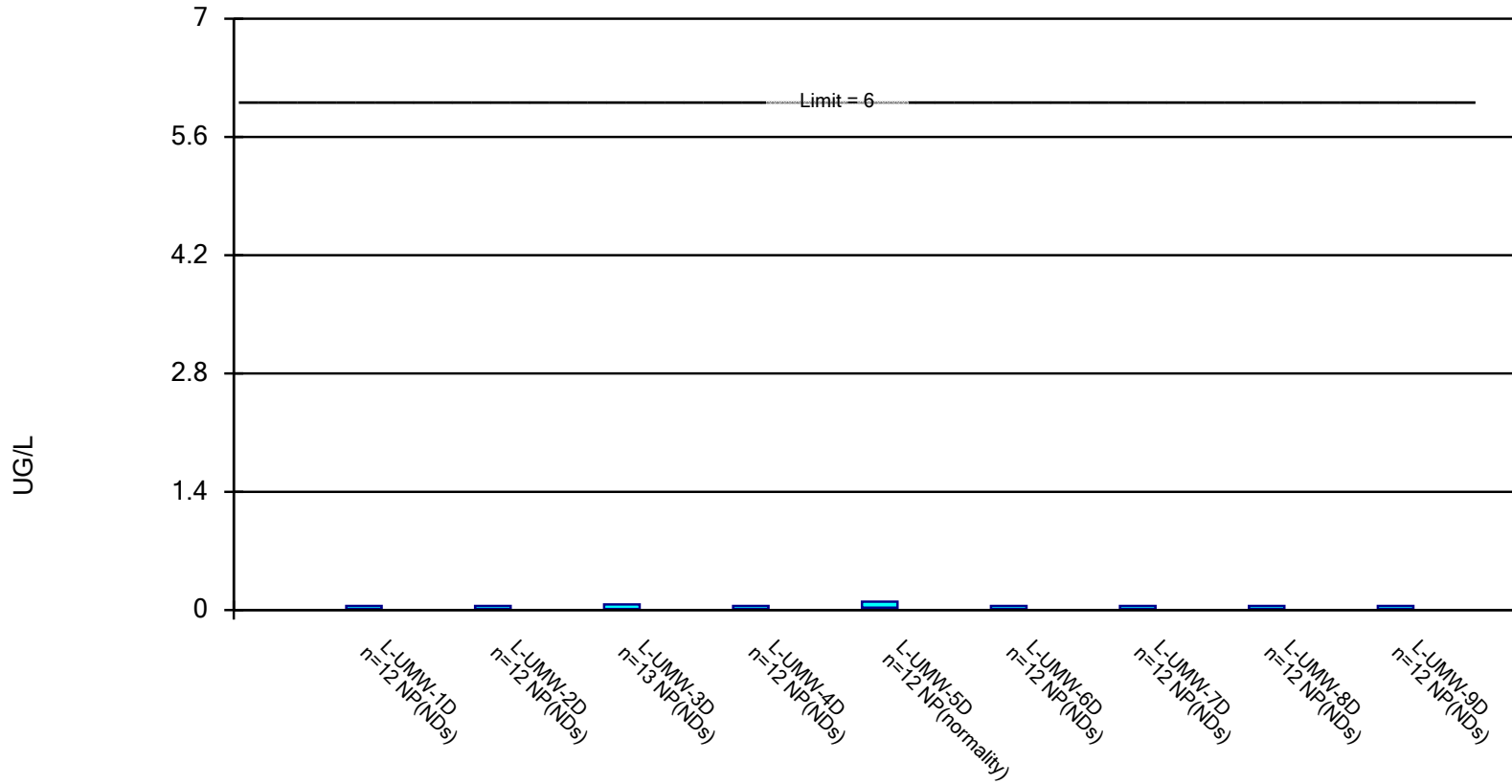
Reviewed by: SCP

APPENDIX A

**Sanitas Confidence Interval
Statistical Output**

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.

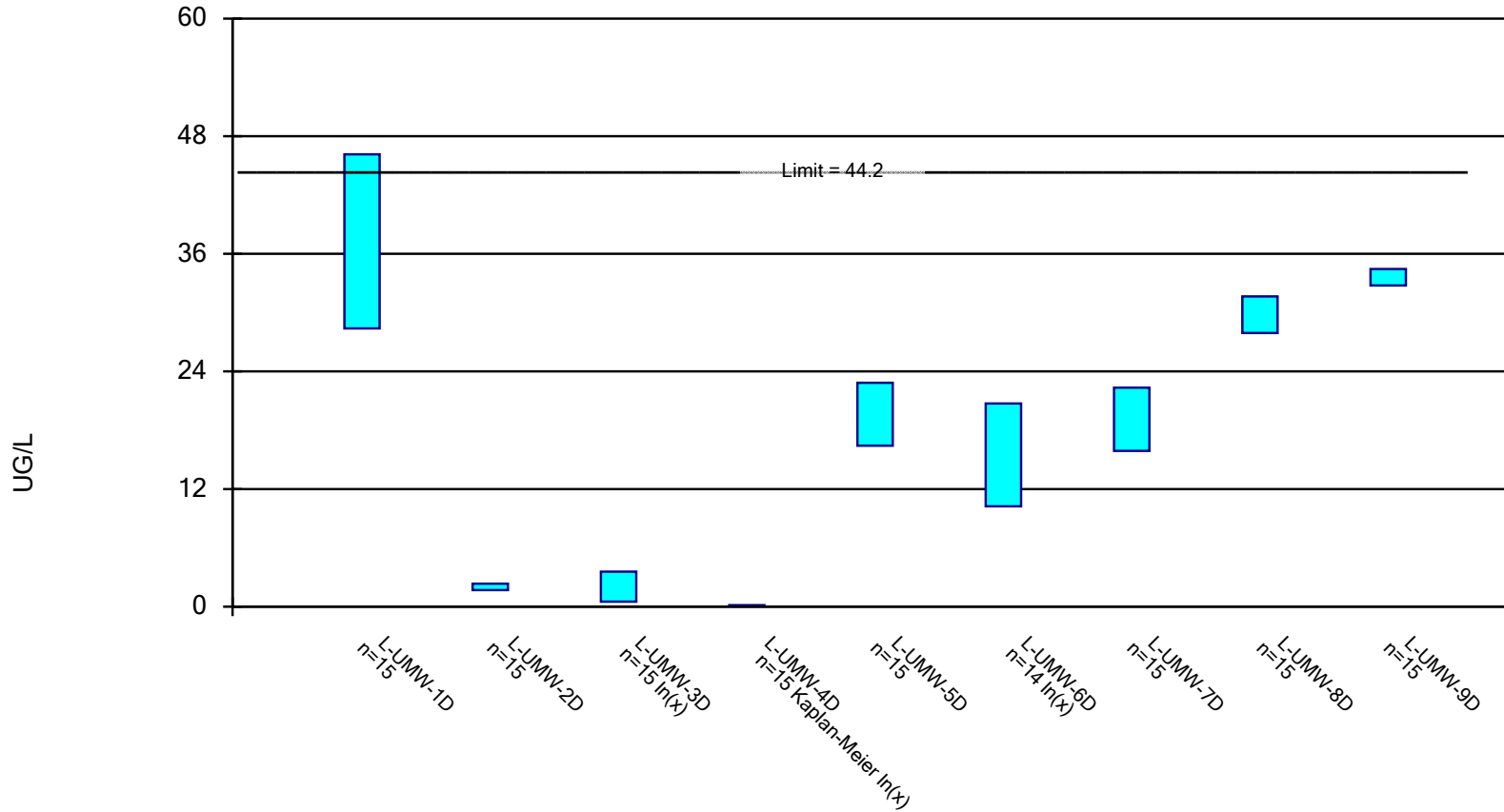


Constituent: ANTIMONY, TOTAL Analysis Run 3/2/2021 12:53 PM

Labadie E.C. Client: Ameren Data: LEC DATA (STATS)

Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

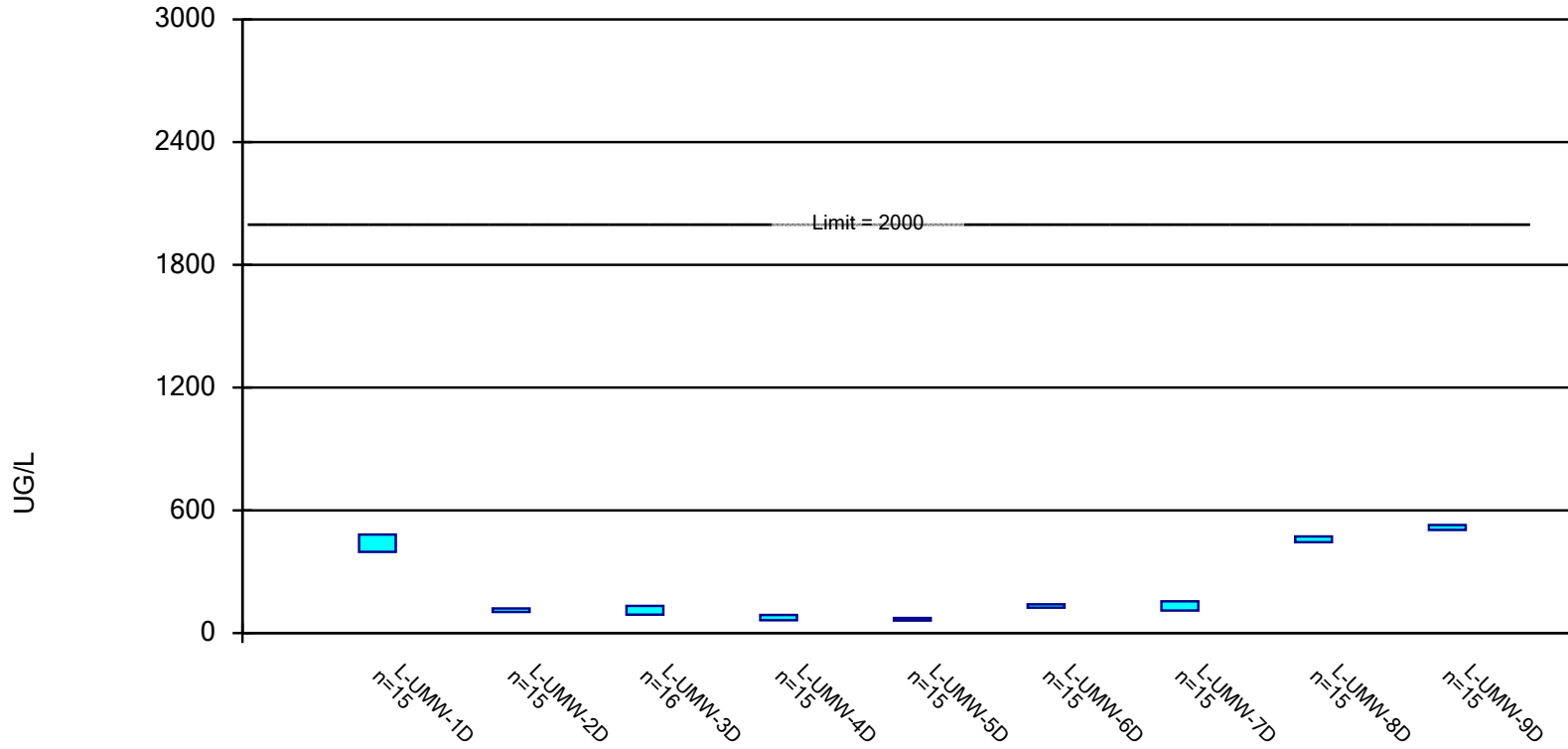


Constituent: ARSENIC, TOTAL Analysis Run 3/2/2021 12:53 PM

Labadie E.C. Client: Ameren Data: LEC DATA (STATS)

Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

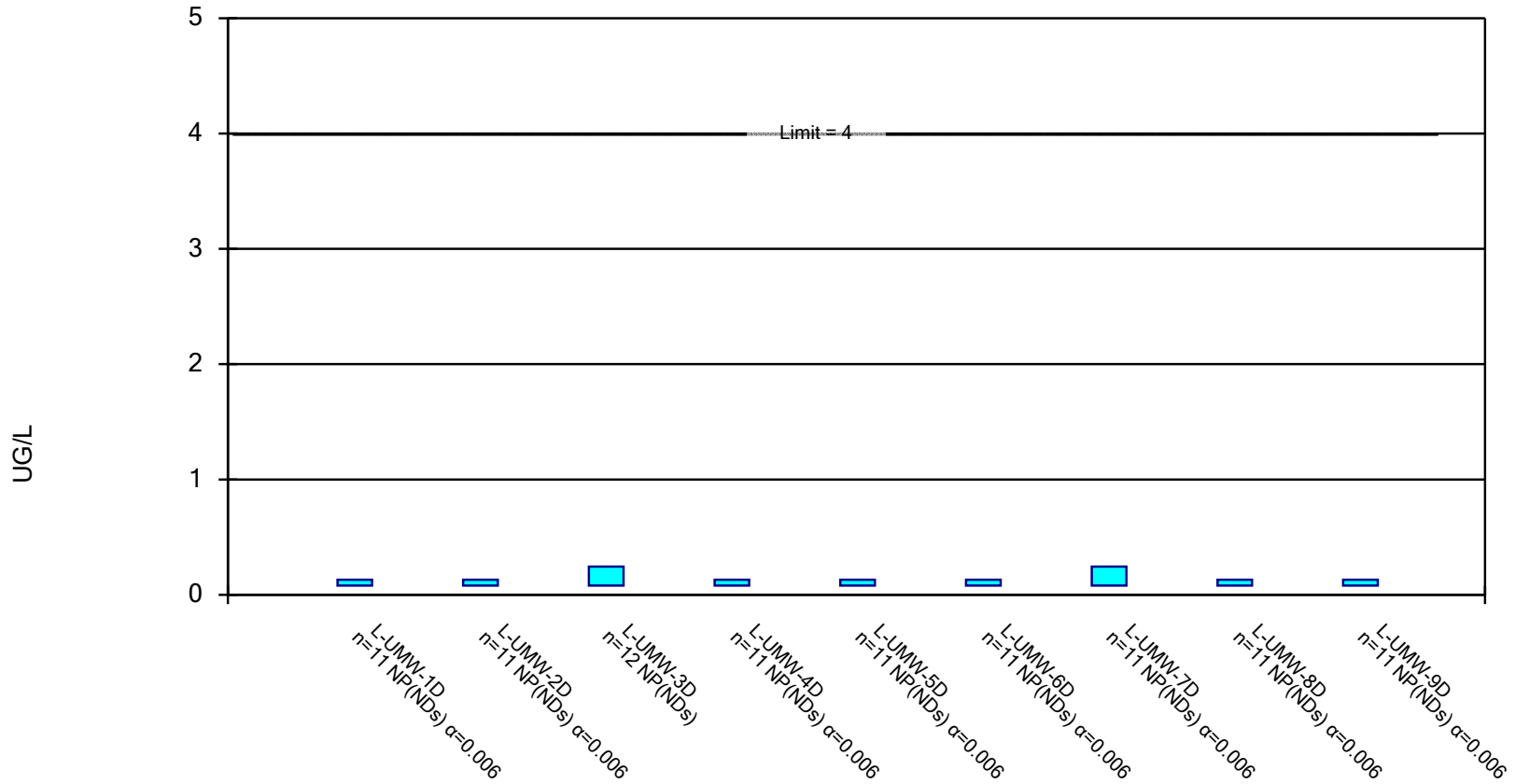


Constituent: BARIUM, TOTAL Analysis Run 3/2/2021 12:53 PM

Labadie E.C. Client: Ameren Data: LEC DATA (STATS)

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.

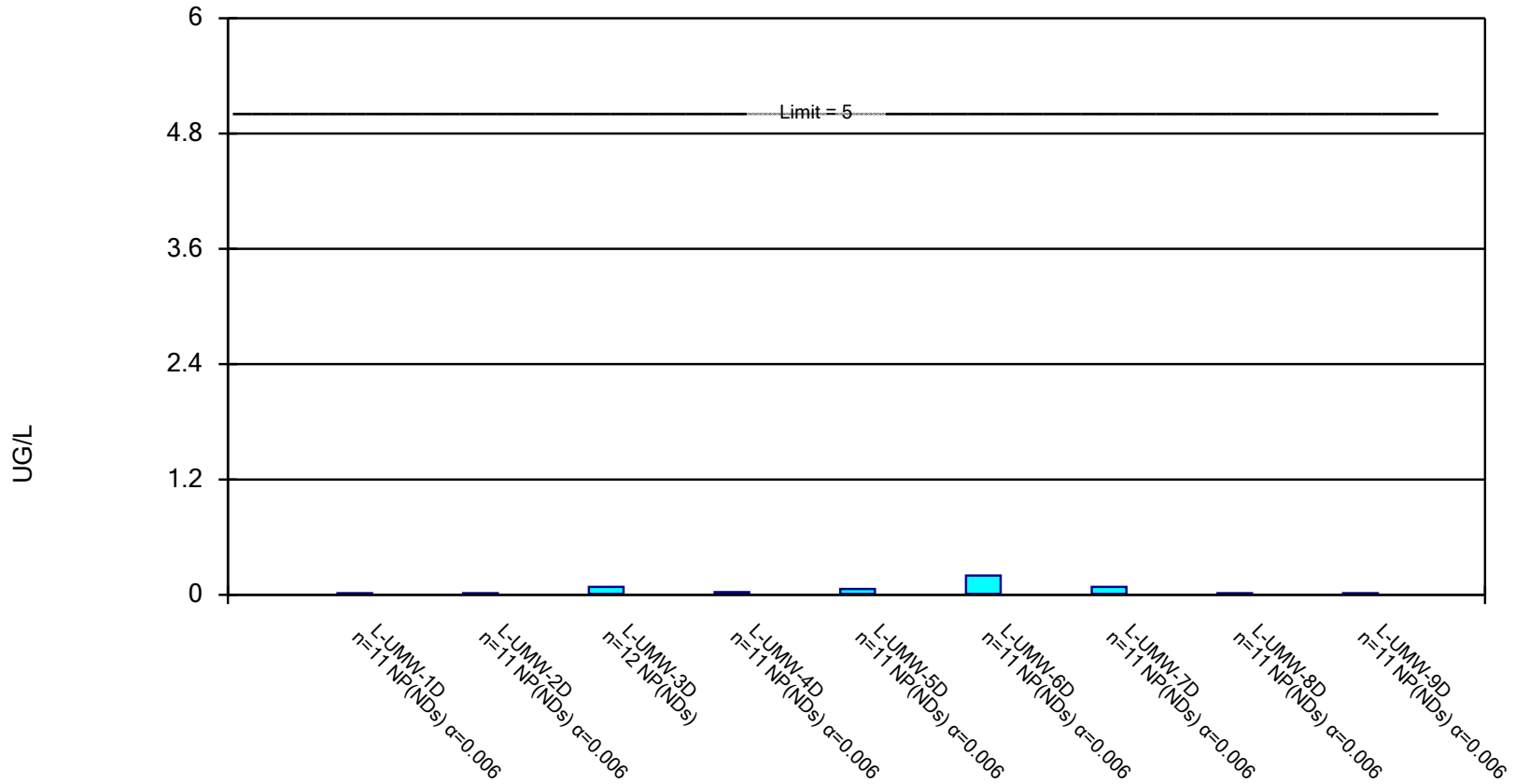


Constituent: BERYLLIUM, TOTAL Analysis Run 3/2/2021 12:53 PM

Labadie E.C. Client: Ameren Data: LEC DATA (STATS)

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.

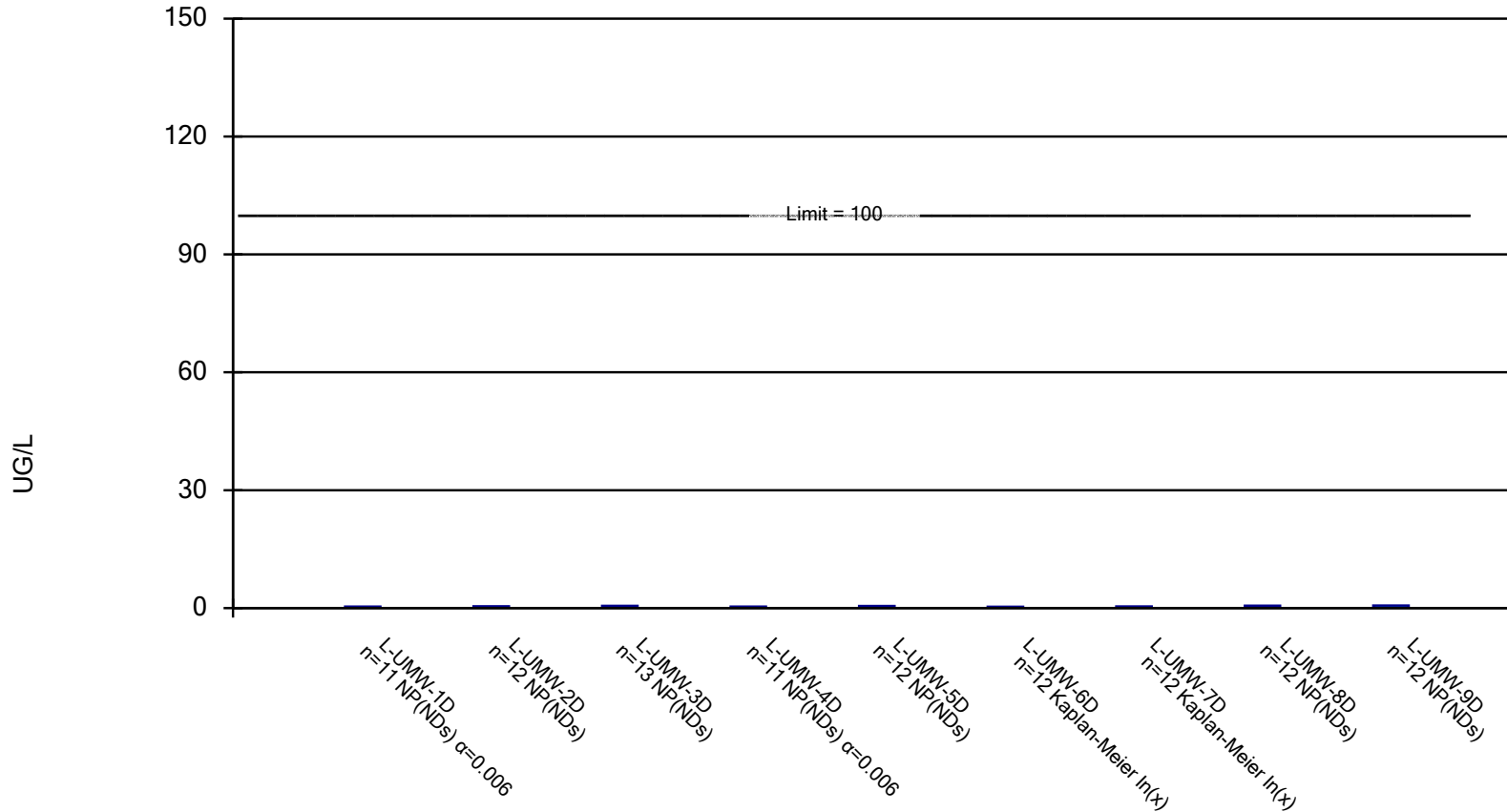


Constituent: CADMIUM, TOTAL Analysis Run 3/2/2021 12:53 PM

Labadie E.C. Client: Ameren Data: LEC DATA (STATS)

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

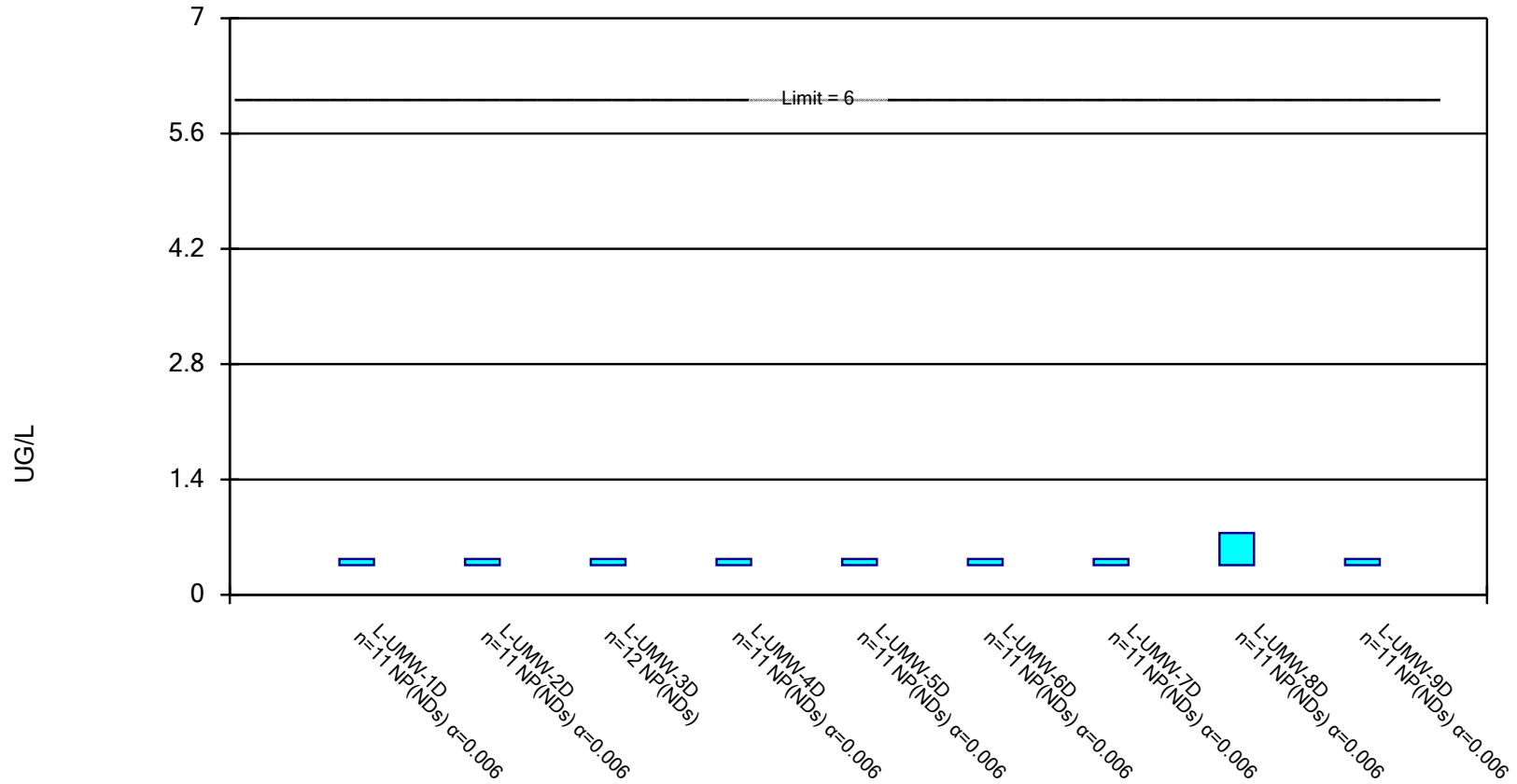


Constituent: CHROMIUM, TOTAL Analysis Run 3/2/2021 12:53 PM

Labadie E.C. Client: Ameren Data: LEC DATA (STATS)

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.

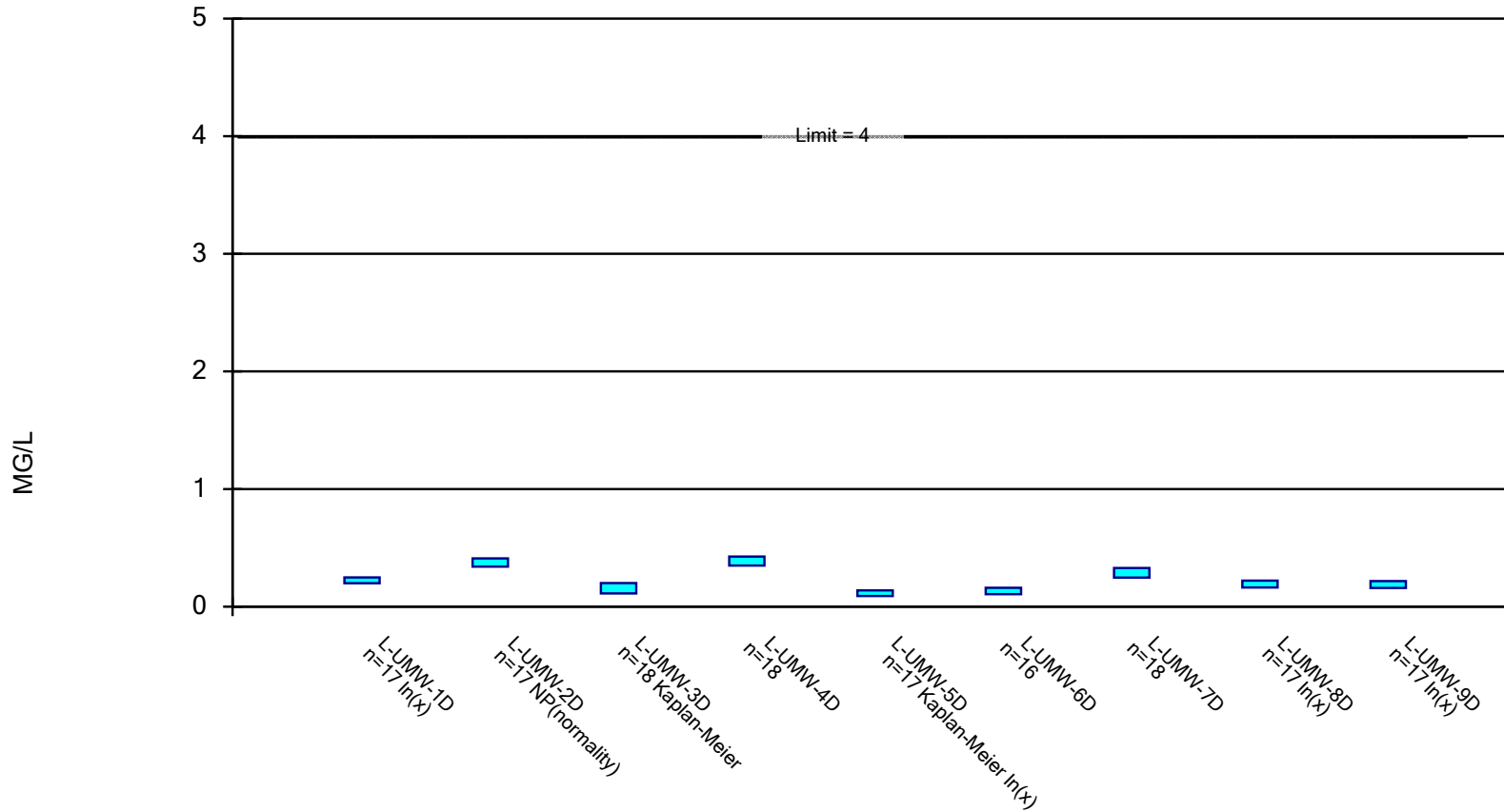


Constituent: COBALT, TOTAL Analysis Run 3/2/2021 12:54 PM

Labadie E.C. Client: Ameren Data: LEC DATA (STATS)

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.

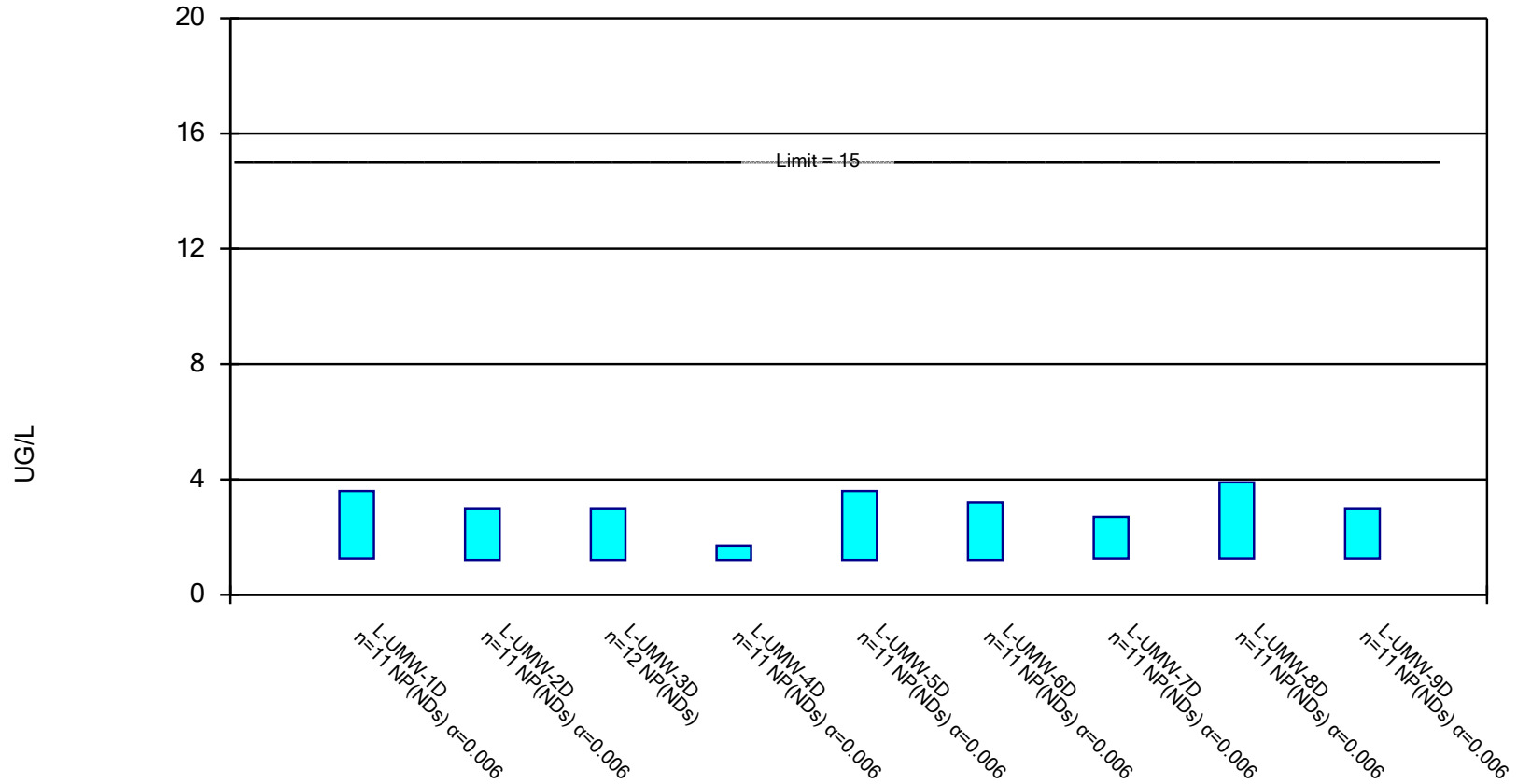


Constituent: FLUORIDE, TOTAL Analysis Run 3/2/2021 12:54 PM

Labadie E.C. Client: Ameren Data: LEC DATA (STATS)

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.

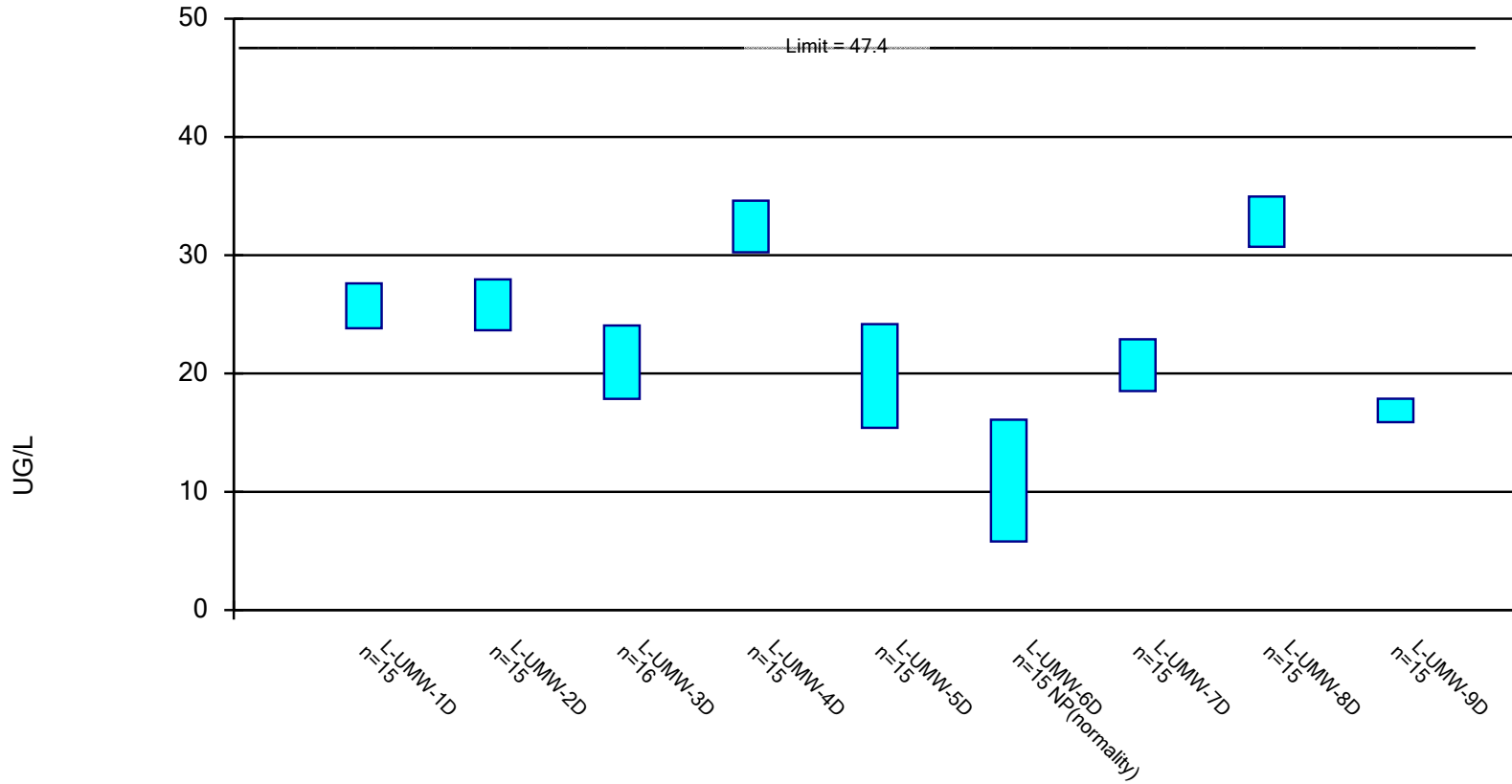


Constituent: LEAD, TOTAL Analysis Run 3/2/2021 12:54 PM

Labadie E.C. Client: Ameren Data: LEC DATA (STATS)

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

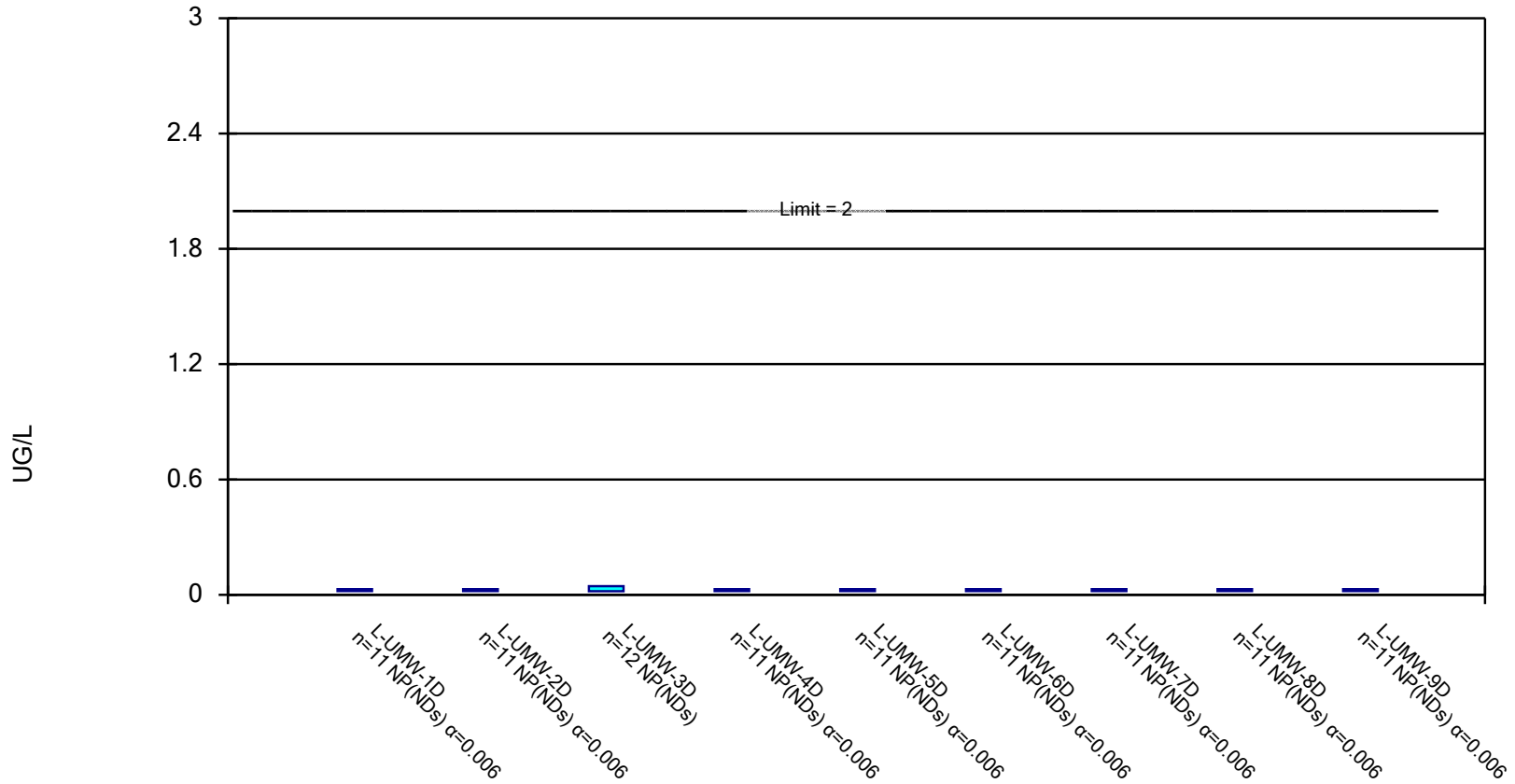


Constituent: LITHIUM, TOTAL Analysis Run 3/2/2021 12:54 PM

Labadie E.C. Client: Ameren Data: LEC DATA (STATS)

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.

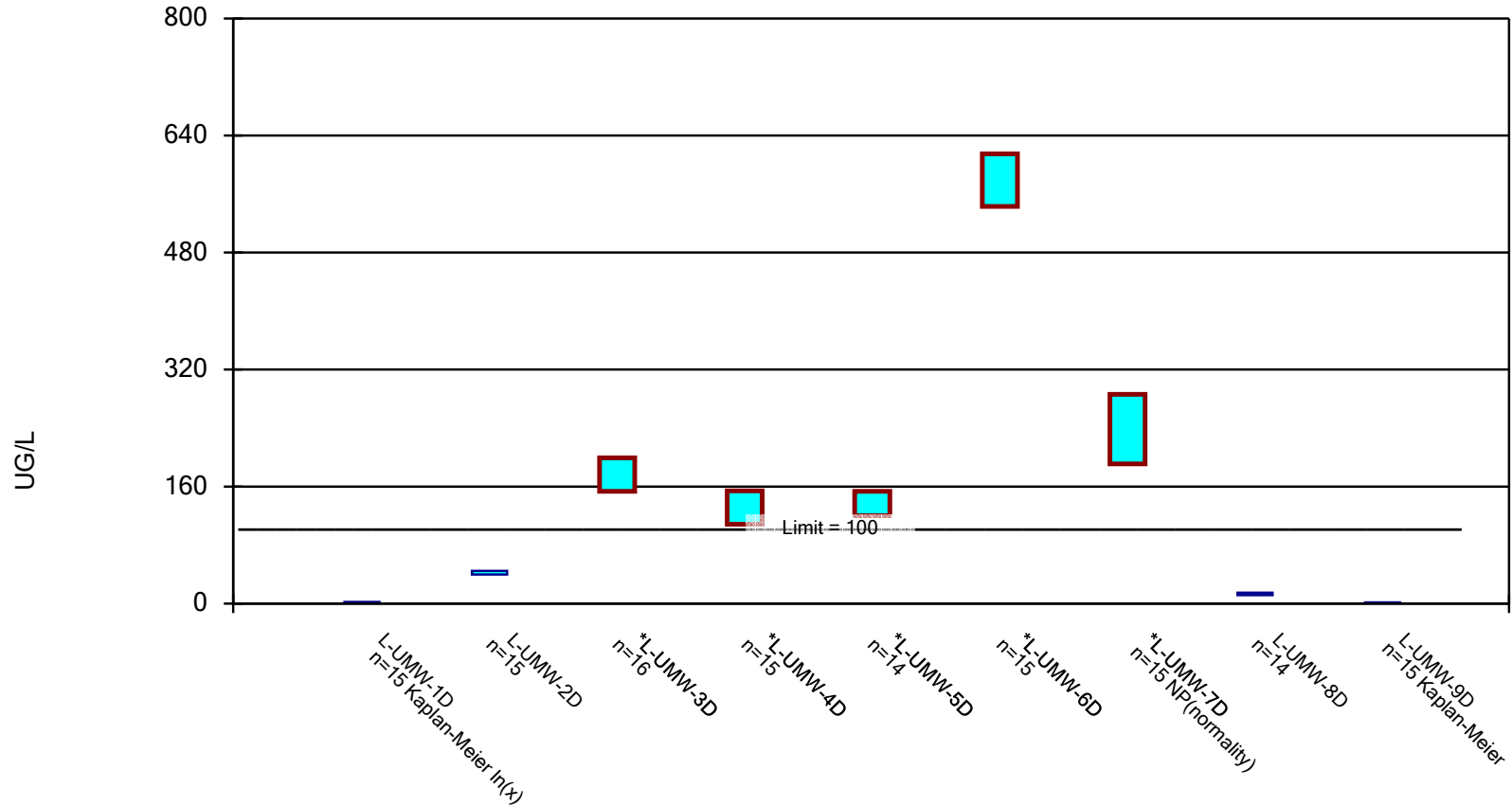


Constituent: MERCURY, TOTAL Analysis Run 3/2/2021 12:54 PM

Labadie E.C. Client: Ameren Data: LEC DATA (STATS)

Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

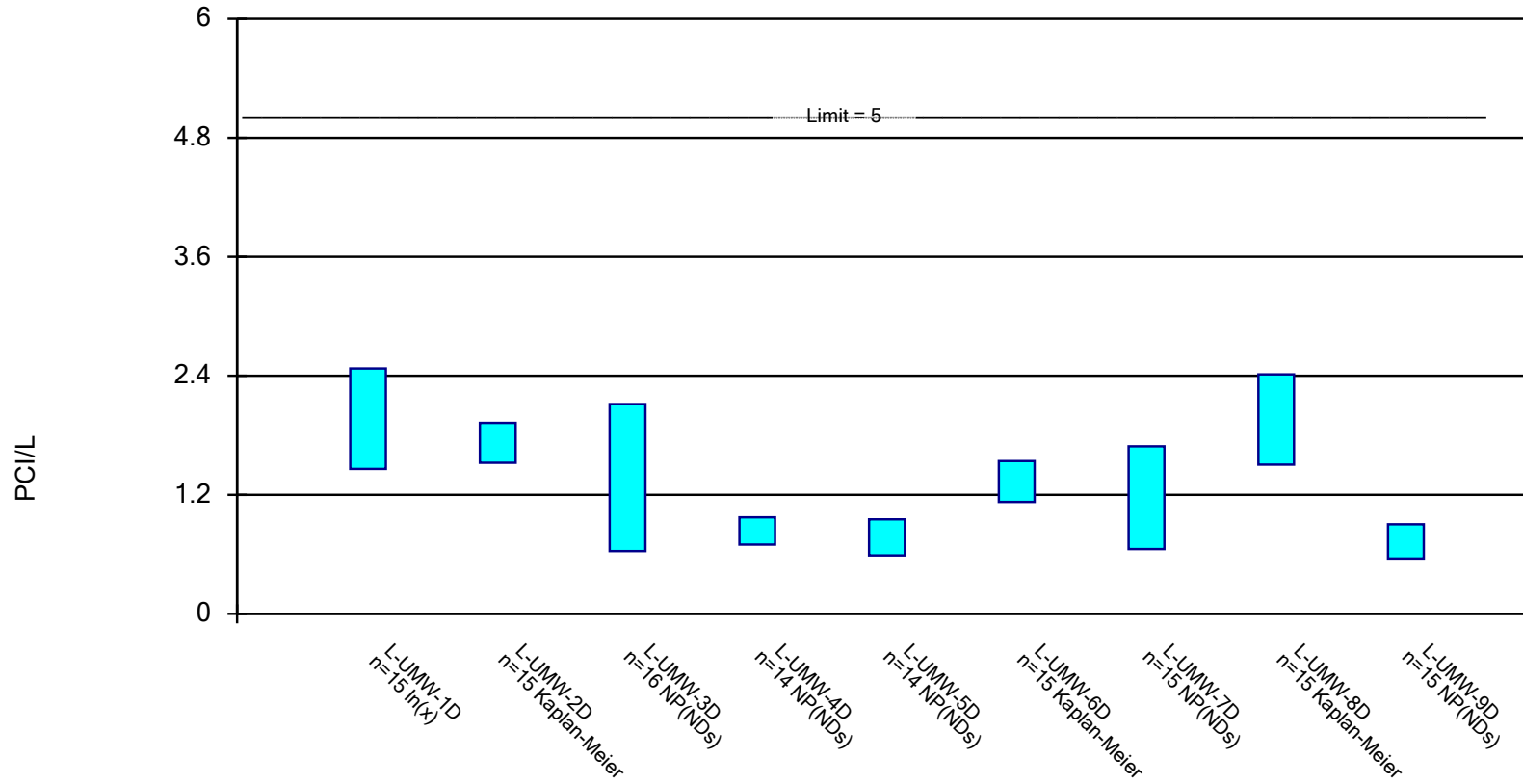


Constituent: MOLYBDENUM, TOTAL Analysis Run 3/2/2021 12:54 PM

Labadie E.C. Client: Ameren Data: LEC DATA (STATS)

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.

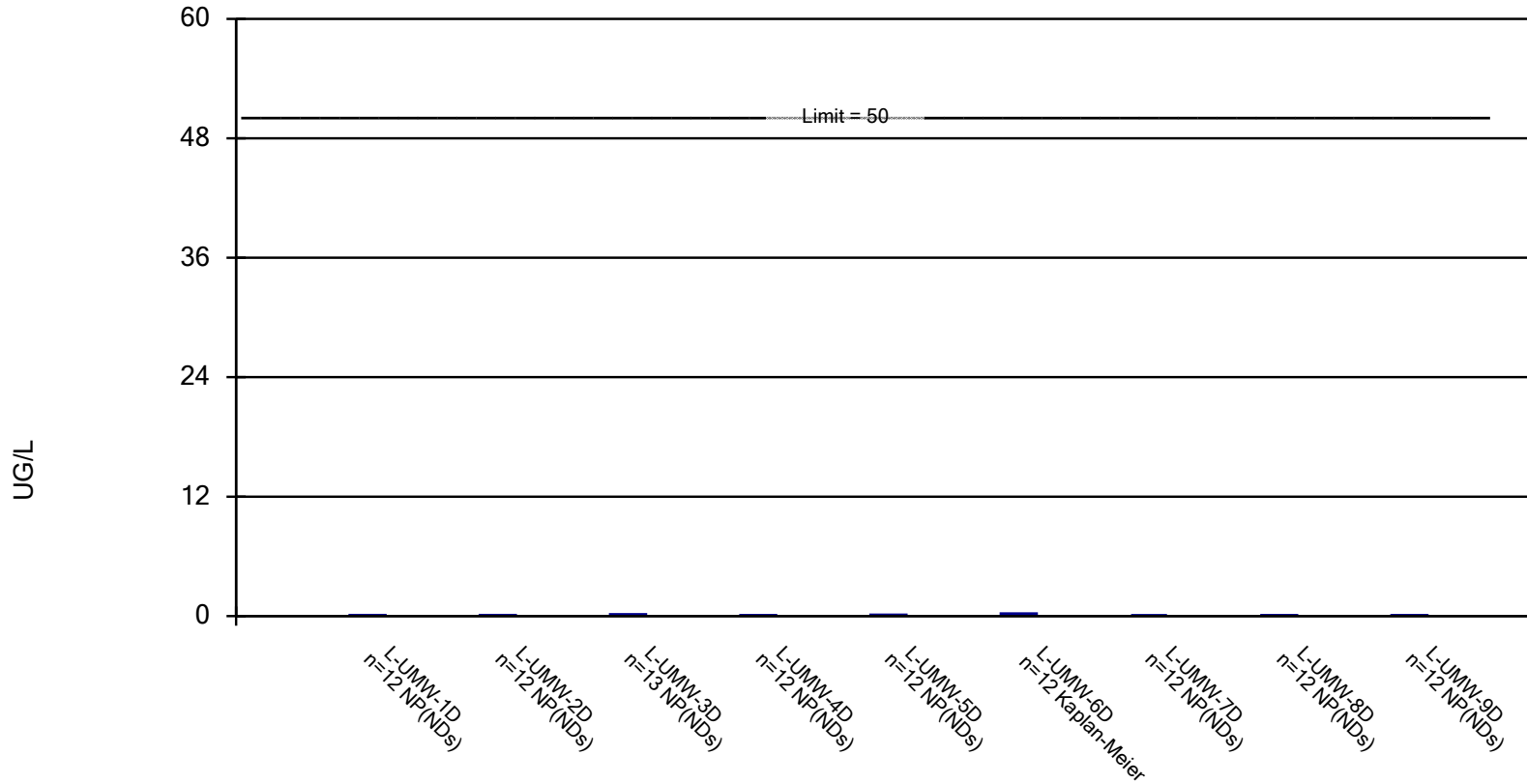


Constituent: Radium [226 + 228] Analysis Run 3/2/2021 12:54 PM

Labadie E.C. Client: Ameren Data: LEC DATA (STATS)

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.

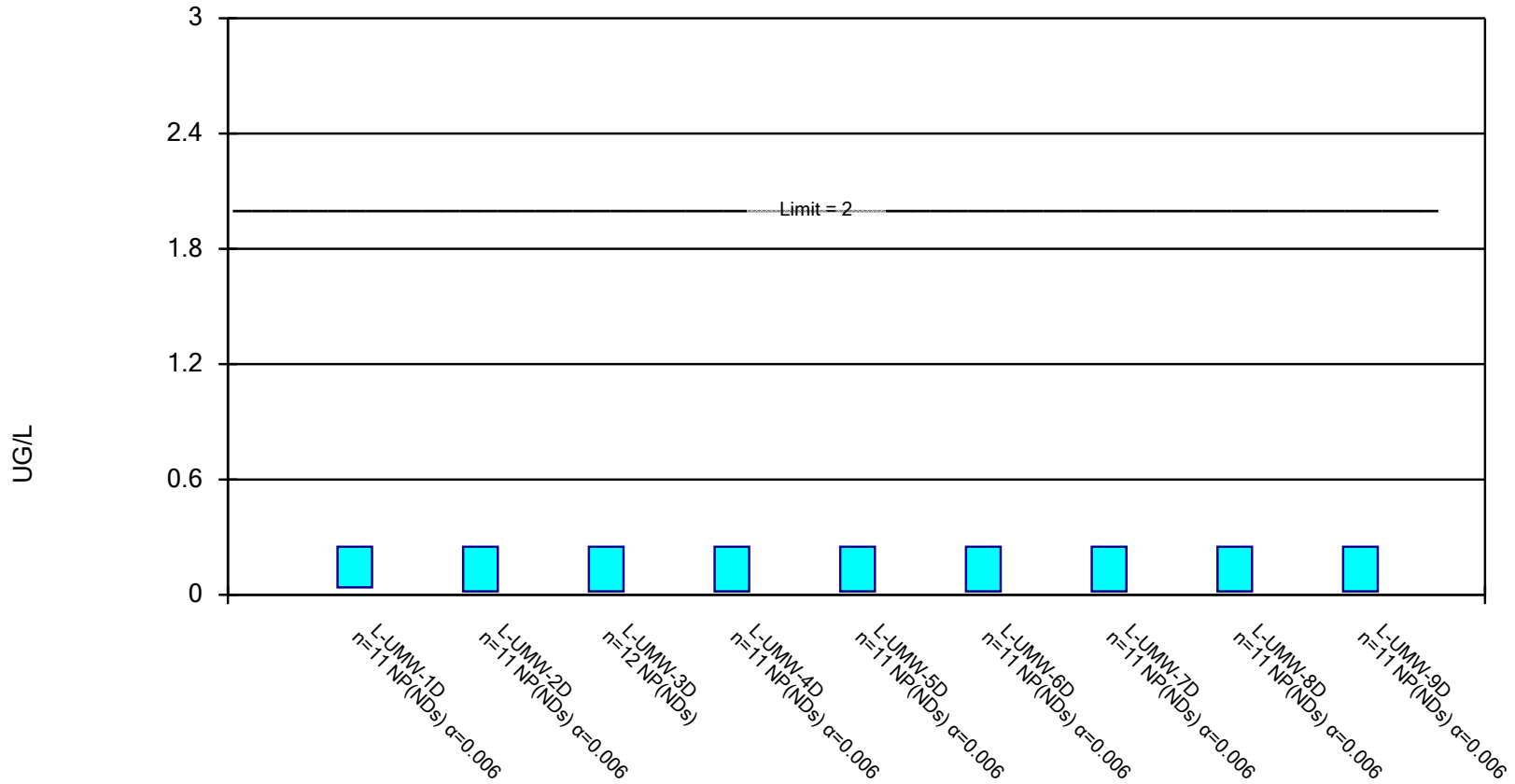


Constituent: SELENIUM, TOTAL Analysis Run 3/2/2021 12:54 PM

Labadie E.C. Client: Ameren Data: LEC DATA (STATS)

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: THALLIUM, TOTAL Analysis Run 3/2/2021 12:54 PM

Labadie E.C. Client: Ameren Data: LEC DATA (STATS)

Confidence Interval

Labadie E.C. Client: Ameren Data: LEC DATA (STATS) Printed 3/2/2021, 12:55 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Compliance</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
ANTIMONY, TOTAL (UG/L)	L-UMW-1D	0.0485	0.013	6	No	12	83.33	No	0.01	NP (NDs)
ANTIMONY, TOTAL (UG/L)	L-UMW-2D	0.0485	0.013	6	No	12	100	No	0.01	NP (NDs)
ANTIMONY, TOTAL (UG/L)	L-UMW-3D	0.066	0.013	6	No	13	84.62	No	0.01	NP (NDs)
ANTIMONY, TOTAL (UG/L)	L-UMW-4D	0.0485	0.013	6	No	12	91.67	No	0.01	NP (NDs)
ANTIMONY, TOTAL (UG/L)	L-UMW-5D	0.1	0.029	6	No	12	50	No	0.01	NP (normality)
ANTIMONY, TOTAL (UG/L)	L-UMW-6D	0.0485	0.013	6	No	12	91.67	No	0.01	NP (NDs)
ANTIMONY, TOTAL (UG/L)	L-UMW-7D	0.0485	0.013	6	No	12	100	No	0.01	NP (NDs)
ANTIMONY, TOTAL (UG/L)	L-UMW-8D	0.0485	0.013	6	No	12	100	No	0.01	NP (NDs)
ANTIMONY, TOTAL (UG/L)	L-UMW-9D	0.0485	0.013	6	No	12	91.67	No	0.01	NP (NDs)
ARSENIC, TOTAL (UG/L)	L-UMW-1D	46.16	28.39	44.2	No	15	0	No	0.01	Param.
ARSENIC, TOTAL (UG/L)	L-UMW-2D	2.342	1.698	44.2	No	15	0	No	0.01	Param.
ARSENIC, TOTAL (UG/L)	L-UMW-3D	3.568	0.5042	44.2	No	15	6.667	ln(x)	0.01	Param.
ARSENIC, TOTAL (UG/L)	L-UMW-4D	0.1546	0.09642	44.2	No	15	26.67	ln(x)	0.01	Param.
ARSENIC, TOTAL (UG/L)	L-UMW-5D	22.84	16.42	44.2	No	15	0	No	0.01	Param.
ARSENIC, TOTAL (UG/L)	L-UMW-6D	20.72	10.24	44.2	No	14	0	ln(x)	0.01	Param.
ARSENIC, TOTAL (UG/L)	L-UMW-7D	22.34	15.9	44.2	No	15	0	No	0.01	Param.
ARSENIC, TOTAL (UG/L)	L-UMW-8D	31.65	27.93	44.2	No	15	0	No	0.01	Param.
ARSENIC, TOTAL (UG/L)	L-UMW-9D	34.45	32.76	44.2	No	15	0	No	0.01	Param.
BARIUM, TOTAL (UG/L)	L-UMW-1D	481.7	397	2000	No	15	0	No	0.01	Param.
BARIUM, TOTAL (UG/L)	L-UMW-2D	120.6	103.2	2000	No	15	0	No	0.01	Param.
BARIUM, TOTAL (UG/L)	L-UMW-3D	132.5	89.94	2000	No	16	0	No	0.01	Param.
BARIUM, TOTAL (UG/L)	L-UMW-4D	88.06	63.06	2000	No	15	0	No	0.01	Param.
BARIUM, TOTAL (UG/L)	L-UMW-5D	73.29	61.45	2000	No	15	0	No	0.01	Param.
BARIUM, TOTAL (UG/L)	L-UMW-6D	140.7	124	2000	No	15	0	No	0.01	Param.
BARIUM, TOTAL (UG/L)	L-UMW-7D	155.2	110.5	2000	No	15	0	No	0.01	Param.
BARIUM, TOTAL (UG/L)	L-UMW-8D	472.6	444.3	2000	No	15	0	No	0.01	Param.
BARIUM, TOTAL (UG/L)	L-UMW-9D	528	504.4	2000	No	15	0	No	0.01	Param.
BERYLLIUM, TOTAL (UG/L)	L-UMW-1D	0.13	0.08	4	No	11	100	No	0.006	NP (NDs)
BERYLLIUM, TOTAL (UG/L)	L-UMW-2D	0.13	0.08	4	No	11	100	No	0.006	NP (NDs)
BERYLLIUM, TOTAL (UG/L)	L-UMW-3D	0.245	0.08	4	No	12	100	No	0.01	NP (NDs)
BERYLLIUM, TOTAL (UG/L)	L-UMW-4D	0.13	0.08	4	No	11	100	No	0.006	NP (NDs)
BERYLLIUM, TOTAL (UG/L)	L-UMW-5D	0.13	0.08	4	No	11	100	No	0.006	NP (NDs)
BERYLLIUM, TOTAL (UG/L)	L-UMW-6D	0.13	0.08	4	No	11	100	No	0.006	NP (NDs)
BERYLLIUM, TOTAL (UG/L)	L-UMW-7D	0.245	0.08	4	No	11	90.91	No	0.006	NP (NDs)
BERYLLIUM, TOTAL (UG/L)	L-UMW-8D	0.13	0.08	4	No	11	100	No	0.006	NP (NDs)
BERYLLIUM, TOTAL (UG/L)	L-UMW-9D	0.13	0.08	4	No	11	100	No	0.006	NP (NDs)
CADMIUM, TOTAL (UG/L)	L-UMW-1D	0.0165	0.009	5	No	11	100	No	0.006	NP (NDs)
CADMIUM, TOTAL (UG/L)	L-UMW-2D	0.0165	0.009	5	No	11	100	No	0.006	NP (NDs)
CADMIUM, TOTAL (UG/L)	L-UMW-3D	0.082	0.009	5	No	12	66.67	No	0.01	NP (NDs)
CADMIUM, TOTAL (UG/L)	L-UMW-4D	0.028	0.009	5	No	11	90.91	No	0.006	NP (NDs)
CADMIUM, TOTAL (UG/L)	L-UMW-5D	0.06	0.009	5	No	11	81.82	No	0.006	NP (NDs)
CADMIUM, TOTAL (UG/L)	L-UMW-6D	0.2	0.009	5	No	11	63.64	No	0.006	NP (NDs)
CADMIUM, TOTAL (UG/L)	L-UMW-7D	0.082	0.009	5	No	11	81.82	No	0.006	NP (NDs)
CADMIUM, TOTAL (UG/L)	L-UMW-8D	0.0165	0.009	5	No	11	100	No	0.006	NP (NDs)
CADMIUM, TOTAL (UG/L)	L-UMW-9D	0.0165	0.009	5	No	11	100	No	0.006	NP (NDs)
CHROMIUM, TOTAL (UG/L)	L-UMW-1D	0.36	0.027	100	No	11	63.64	No	0.006	NP (NDs)
CHROMIUM, TOTAL (UG/L)	L-UMW-2D	0.47	0.027	100	No	12	75	No	0.01	NP (NDs)
CHROMIUM, TOTAL (UG/L)	L-UMW-3D	0.57	0.039	100	No	13	84.62	No	0.01	NP (NDs)
CHROMIUM, TOTAL (UG/L)	L-UMW-4D	0.36	0.039	100	No	11	72.73	No	0.006	NP (NDs)
CHROMIUM, TOTAL (UG/L)	L-UMW-5D	0.54	0.027	100	No	12	75	No	0.01	NP (NDs)

Confidence Interval

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Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
CHROMIUM, TOTAL (UG/L)	L-UMW-6D	0.3523	0.0704	100	No	12	50	ln(x)	0.01	Param.
CHROMIUM, TOTAL (UG/L)	L-UMW-7D	0.3988	0.07084	100	No	12	50	ln(x)	0.01	Param.
CHROMIUM, TOTAL (UG/L)	L-UMW-8D	0.62	0.027	100	No	12	66.67	No	0.01	NP (NDs)
CHROMIUM, TOTAL (UG/L)	L-UMW-9D	0.65	0.027	100	No	12	75	No	0.01	NP (NDs)
COBALT, TOTAL (UG/L)	L-UMW-1D	0.435	0.36	6	No	11	100	No	0.006	NP (NDs)
COBALT, TOTAL (UG/L)	L-UMW-2D	0.435	0.36	6	No	11	100	No	0.006	NP (NDs)
COBALT, TOTAL (UG/L)	L-UMW-3D	0.435	0.36	6	No	12	100	No	0.01	NP (NDs)
COBALT, TOTAL (UG/L)	L-UMW-4D	0.435	0.36	6	No	11	100	No	0.006	NP (NDs)
COBALT, TOTAL (UG/L)	L-UMW-5D	0.435	0.36	6	No	11	100	No	0.006	NP (NDs)
COBALT, TOTAL (UG/L)	L-UMW-6D	0.435	0.36	6	No	11	100	No	0.006	NP (NDs)
COBALT, TOTAL (UG/L)	L-UMW-7D	0.435	0.36	6	No	11	100	No	0.006	NP (NDs)
COBALT, TOTAL (UG/L)	L-UMW-8D	0.75	0.36	6	No	11	90.91	No	0.006	NP (NDs)
COBALT, TOTAL (UG/L)	L-UMW-9D	0.435	0.36	6	No	11	100	No	0.006	NP (NDs)
FLUORIDE, TOTAL (MG/L)	L-UMW-1D	0.2477	0.1987	4	No	17	0	ln(x)	0.01	Param.
FLUORIDE, TOTAL (MG/L)	L-UMW-2D	0.41	0.34	4	No	17	0	No	0.01	NP (normality)
FLUORIDE, TOTAL (MG/L)	L-UMW-3D	0.2002	0.1121	4	No	18	22.22	No	0.01	Param.
FLUORIDE, TOTAL (MG/L)	L-UMW-4D	0.4253	0.3492	4	No	18	0	No	0.01	Param.
FLUORIDE, TOTAL (MG/L)	L-UMW-5D	0.1377	0.09032	4	No	17	17.65	ln(x)	0.01	Param.
FLUORIDE, TOTAL (MG/L)	L-UMW-6D	0.16	0.1061	4	No	16	12.5	No	0.01	Param.
FLUORIDE, TOTAL (MG/L)	L-UMW-7D	0.3281	0.2475	4	No	18	0	No	0.01	Param.
FLUORIDE, TOTAL (MG/L)	L-UMW-8D	0.2209	0.1627	4	No	17	0	ln(x)	0.01	Param.
FLUORIDE, TOTAL (MG/L)	L-UMW-9D	0.2167	0.1595	4	No	17	0	ln(x)	0.01	Param.
LEAD, TOTAL (UG/L)	L-UMW-1D	3.6	1.25	15	No	11	63.64	No	0.006	NP (NDs)
LEAD, TOTAL (UG/L)	L-UMW-2D	3	1.2	15	No	11	81.82	No	0.006	NP (NDs)
LEAD, TOTAL (UG/L)	L-UMW-3D	3	1.2	15	No	12	83.33	No	0.01	NP (NDs)
LEAD, TOTAL (UG/L)	L-UMW-4D	1.7	1.2	15	No	11	100	No	0.006	NP (NDs)
LEAD, TOTAL (UG/L)	L-UMW-5D	3.6	1.2	15	No	11	81.82	No	0.006	NP (NDs)
LEAD, TOTAL (UG/L)	L-UMW-6D	3.2	1.2	15	No	11	81.82	No	0.006	NP (NDs)
LEAD, TOTAL (UG/L)	L-UMW-7D	2.7	1.25	15	No	11	81.82	No	0.006	NP (NDs)
LEAD, TOTAL (UG/L)	L-UMW-8D	3.9	1.25	15	No	11	81.82	No	0.006	NP (NDs)
LEAD, TOTAL (UG/L)	L-UMW-9D	3	1.25	15	No	11	54.55	No	0.006	NP (NDs)
LITHIUM, TOTAL (UG/L)	L-UMW-1D	27.61	23.83	47.4	No	15	0	No	0.01	Param.
LITHIUM, TOTAL (UG/L)	L-UMW-2D	27.95	23.66	47.4	No	15	0	No	0.01	Param.
LITHIUM, TOTAL (UG/L)	L-UMW-3D	24.06	17.86	47.4	No	16	0	No	0.01	Param.
LITHIUM, TOTAL (UG/L)	L-UMW-4D	34.61	30.25	47.4	No	15	0	No	0.01	Param.
LITHIUM, TOTAL (UG/L)	L-UMW-5D	24.18	15.41	47.4	No	15	0	No	0.01	Param.
LITHIUM, TOTAL (UG/L)	L-UMW-6D	16.1	5.8	47.4	No	15	0	No	0.01	NP (normality)
LITHIUM, TOTAL (UG/L)	L-UMW-7D	22.89	18.51	47.4	No	15	0	No	0.01	Param.
LITHIUM, TOTAL (UG/L)	L-UMW-8D	34.97	30.71	47.4	No	15	0	No	0.01	Param.
LITHIUM, TOTAL (UG/L)	L-UMW-9D	17.87	15.89	47.4	No	15	0	No	0.01	Param.
MERCURY, TOTAL (UG/L)	L-UMW-1D	0.029	0.0195	2	No	11	100	No	0.006	NP (NDs)
MERCURY, TOTAL (UG/L)	L-UMW-2D	0.029	0.0195	2	No	11	100	No	0.006	NP (NDs)
MERCURY, TOTAL (UG/L)	L-UMW-3D	0.045	0.0185	2	No	12	100	No	0.01	NP (NDs)
MERCURY, TOTAL (UG/L)	L-UMW-4D	0.029	0.0195	2	No	11	100	No	0.006	NP (NDs)
MERCURY, TOTAL (UG/L)	L-UMW-5D	0.029	0.0195	2	No	11	100	No	0.006	NP (NDs)
MERCURY, TOTAL (UG/L)	L-UMW-6D	0.029	0.0195	2	No	11	100	No	0.006	NP (NDs)
MERCURY, TOTAL (UG/L)	L-UMW-7D	0.029	0.0195	2	No	11	100	No	0.006	NP (NDs)
MERCURY, TOTAL (UG/L)	L-UMW-8D	0.029	0.0195	2	No	11	100	No	0.006	NP (NDs)
MERCURY, TOTAL (UG/L)	L-UMW-9D	0.029	0.0195	2	No	11	100	No	0.006	NP (NDs)
MOLYBDENUM, TOTAL (UG/L)	L-UMW-1D	2.175	0.727	100	No	15	26.67	ln(x)	0.01	Param.

Confidence Interval

Labadie E.C. Client: Ameren Data: LEC DATA (STATS) Printed 3/2/2021, 12:55 PM

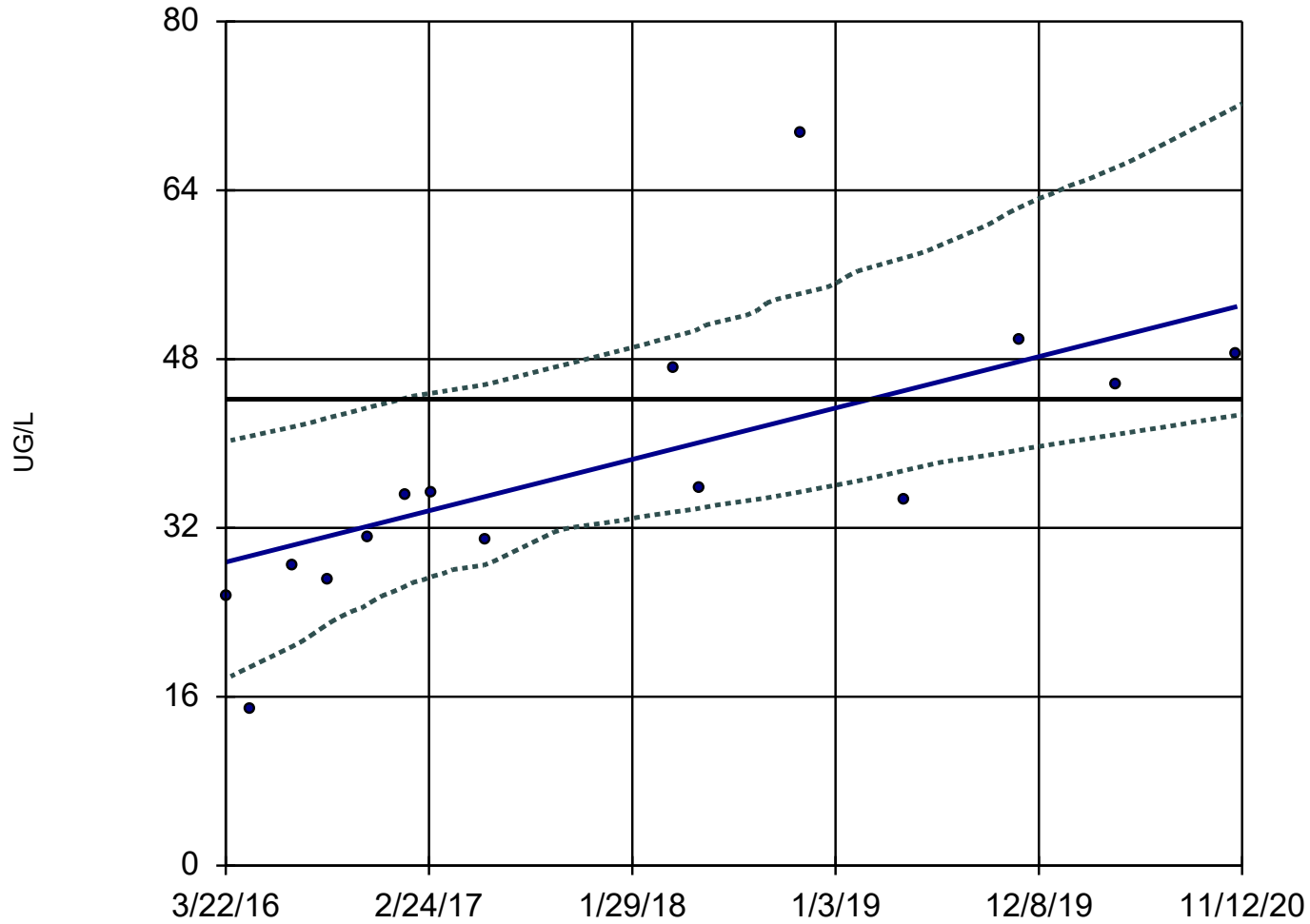
<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Compliance</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
MOLYBDENUM, TOTAL (UG/L)	L-UMW-2D	44.77	39.67	100	No	15	0	No	0.01	Param.
MOLYBDENUM, TOTAL (UG/L)	L-UMW-3D	199.2	153.5	100	Yes	16	0	No	0.01	Param.
MOLYBDENUM, TOTAL (UG/L)	L-UMW-4D	154	108.5	100	Yes	15	0	No	0.01	Param.
MOLYBDENUM, TOTAL (UG/L)	L-UMW-5D	153.6	120.2	100	Yes	14	0	No	0.01	Param.
MOLYBDENUM, TOTAL (UG/L)	L-UMW-6D	615	543	100	Yes	15	0	No	0.01	Param.
MOLYBDENUM, TOTAL (UG/L)	L-UMW-7D	286	191	100	Yes	15	0	No	0.01	NP (normality)
MOLYBDENUM, TOTAL (UG/L)	L-UMW-8D	14.93	11.64	100	No	14	0	No	0.01	Param.
MOLYBDENUM, TOTAL (UG/L)	L-UMW-9D	1.655	0.7429	100	No	15	40	No	0.01	Param.
Radium [226 + 228] (PCI/L)	L-UMW-1D	2.474	1.461	5	No	15	13.33	ln(x)	0.01	Param.
Radium [226 + 228] (PCI/L)	L-UMW-2D	1.925	1.523	5	No	15	33.33	No	0.01	Param.
Radium [226 + 228] (PCI/L)	L-UMW-3D	2.114	0.632	5	No	16	68.75	No	0.01	NP (NDs)
Radium [226 + 228] (PCI/L)	L-UMW-4D	0.973	0.697	5	No	14	85.71	No	0.01	NP (NDs)
Radium [226 + 228] (PCI/L)	L-UMW-5D	0.952	0.588	5	No	14	100	No	0.01	NP (NDs)
Radium [226 + 228] (PCI/L)	L-UMW-6D	1.539	1.127	5	No	15	46.67	No	0.01	Param.
Radium [226 + 228] (PCI/L)	L-UMW-7D	1.689	0.6525	5	No	15	80	No	0.01	NP (NDs)
Radium [226 + 228] (PCI/L)	L-UMW-8D	2.415	1.504	5	No	15	33.33	No	0.01	Param.
Radium [226 + 228] (PCI/L)	L-UMW-9D	0.9025	0.5575	5	No	15	86.67	No	0.01	NP (NDs)
SELENIUM, TOTAL (UG/L)	L-UMW-1D	0.11	0.043	50	No	12	91.67	No	0.01	NP (NDs)
SELENIUM, TOTAL (UG/L)	L-UMW-2D	0.11	0.043	50	No	12	91.67	No	0.01	NP (NDs)
SELENIUM, TOTAL (UG/L)	L-UMW-3D	0.19	0.043	50	No	13	53.85	No	0.01	NP (NDs)
SELENIUM, TOTAL (UG/L)	L-UMW-4D	0.09	0.0425	50	No	12	100	No	0.01	NP (NDs)
SELENIUM, TOTAL (UG/L)	L-UMW-5D	0.14	0.09	50	No	12	66.67	No	0.01	NP (NDs)
SELENIUM, TOTAL (UG/L)	L-UMW-6D	0.2595	0.1904	50	No	12	16.67	No	0.01	Param.
SELENIUM, TOTAL (UG/L)	L-UMW-7D	0.091	0.089	50	No	12	75	No	0.01	NP (NDs)
SELENIUM, TOTAL (UG/L)	L-UMW-8D	0.09	0.043	50	No	12	91.67	No	0.01	NP (NDs)
SELENIUM, TOTAL (UG/L)	L-UMW-9D	0.09	0.0425	50	No	12	100	No	0.01	NP (NDs)
THALLIUM, TOTAL (UG/L)	L-UMW-1D	0.25	0.039	2	No	11	81.82	No	0.006	NP (NDs)
THALLIUM, TOTAL (UG/L)	L-UMW-2D	0.25	0.018	2	No	11	100	No	0.006	NP (NDs)
THALLIUM, TOTAL (UG/L)	L-UMW-3D	0.25	0.018	2	No	12	100	No	0.01	NP (NDs)
THALLIUM, TOTAL (UG/L)	L-UMW-4D	0.25	0.018	2	No	11	100	No	0.006	NP (NDs)
THALLIUM, TOTAL (UG/L)	L-UMW-5D	0.25	0.018	2	No	11	100	No	0.006	NP (NDs)
THALLIUM, TOTAL (UG/L)	L-UMW-6D	0.25	0.018	2	No	11	90.91	No	0.006	NP (NDs)
THALLIUM, TOTAL (UG/L)	L-UMW-7D	0.25	0.018	2	No	11	100	No	0.006	NP (NDs)
THALLIUM, TOTAL (UG/L)	L-UMW-8D	0.25	0.018	2	No	11	100	No	0.006	NP (NDs)
THALLIUM, TOTAL (UG/L)	L-UMW-9D	0.25	0.018	2	No	11	100	No	0.006	NP (NDs)

APPENDIX B

**Sanitas Trending Confidence
Bands Statistical Output**

Sen's Slope and 95% Confidence Band

L-UMW-1D

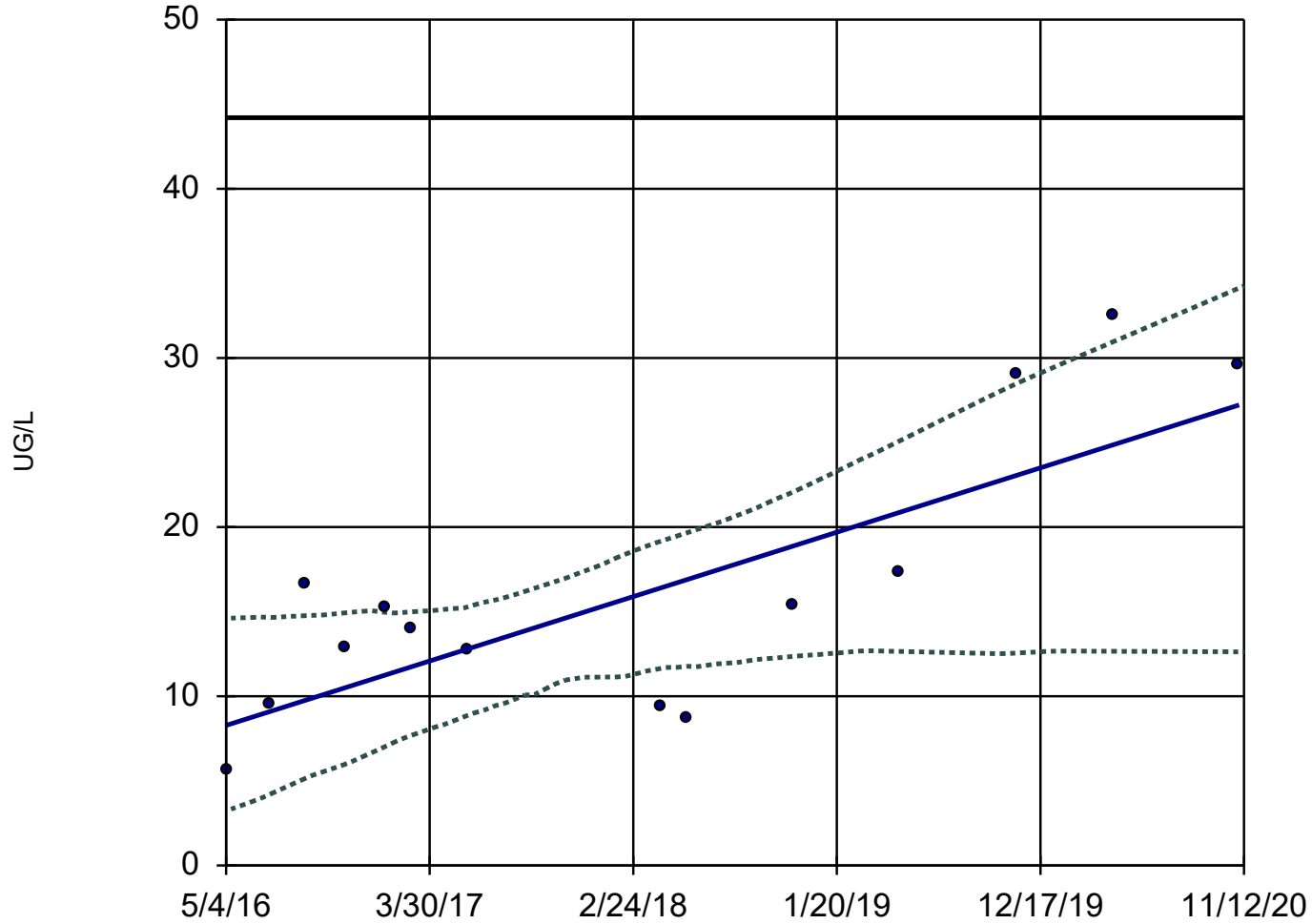


n = 15
Slope = 5.24 units per year.
Mann-Kendall statistic = 71
critical = 48
Increasing trend significant at 98% confidence level ($\alpha = 0.01$ per tail).
GWPS = 44.2.

Constituent: ARSENIC, TOTAL Analysis Run 3/2/2021 12:39 PM
Labadie E.C. Client: Ameren Data: LEC DATA (STATS)

Sen's Slope and 95% Confidence Band

L-UMW-6D



n = 14

Slope = 4.201
units per year.

Mann-Kendall
statistic = 45
critical = 44

Increasing trend
significant at 98%
confidence level
($\alpha = 0.01$ per
tail).

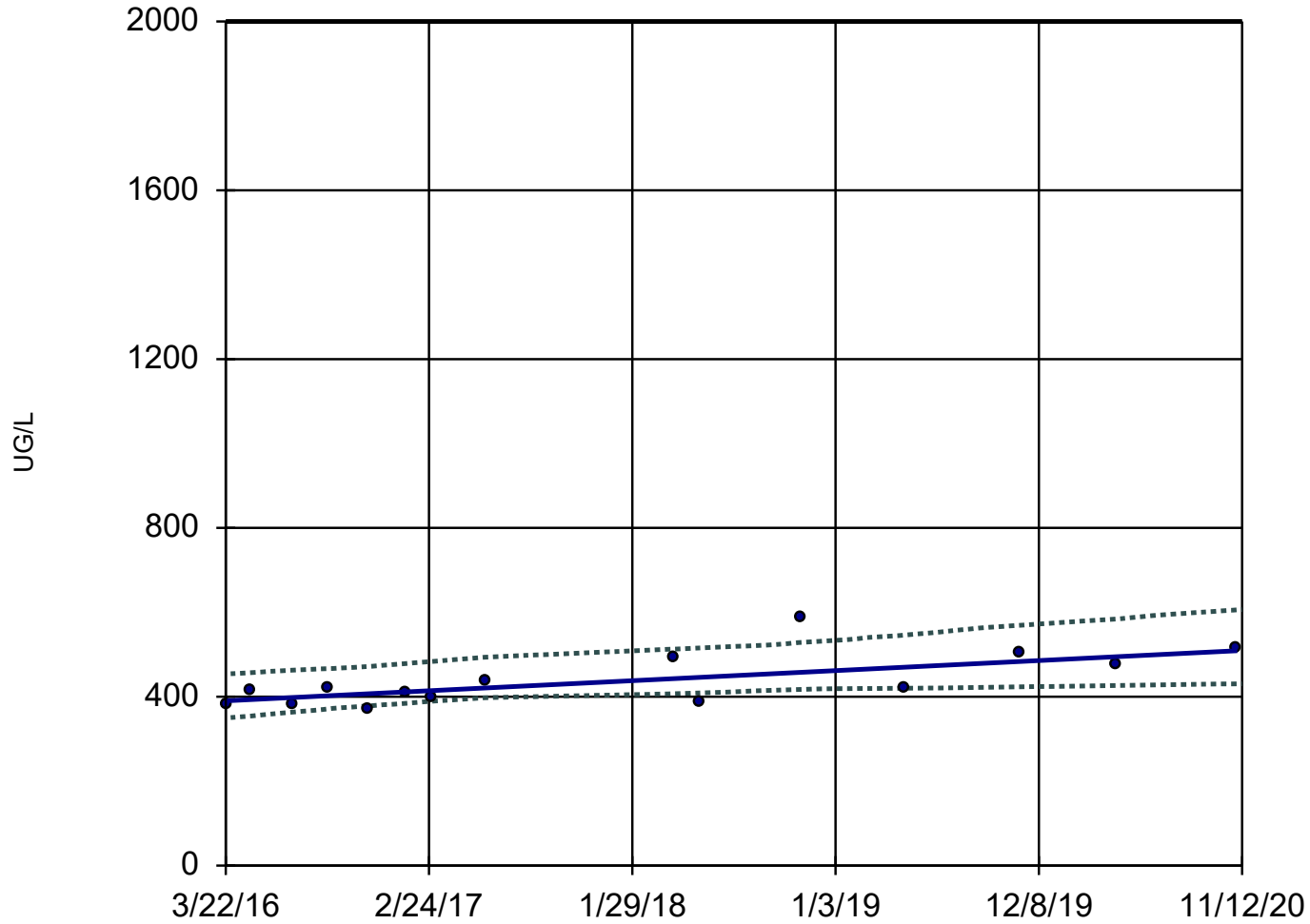
GWPS = 44.2.

Constituent: ARSENIC, TOTAL Analysis Run 3/2/2021 12:39 PM

Labadie E.C. Client: Ameren Data: LEC DATA (STATS)

Sen's Slope and 95% Confidence Band

L-UMW-1D



n = 15

Slope = 25.64
units per year.

Mann-Kendall
statistic = 55
critical = 48

Increasing trend
significant at 98%
confidence level
($\alpha = 0.01$ per
tail).

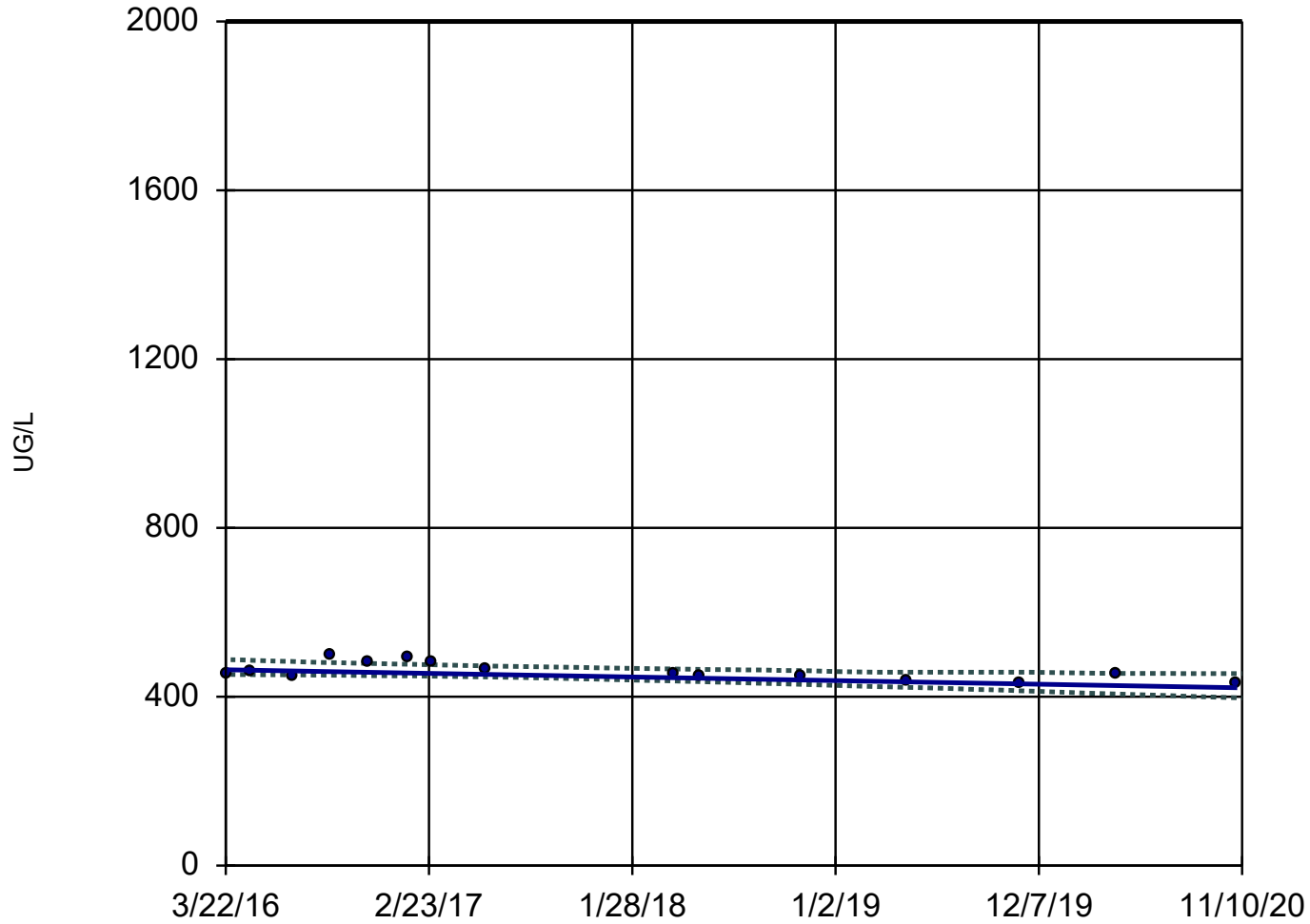
GWPS = 2000.

Constituent: BARIUM, TOTAL Analysis Run 3/2/2021 12:39 PM

Labadie E.C. Client: Ameren Data: LEC DATA (STATS)

Sen's Slope and 95% Confidence Band

L-UMW-8D



n = 15

Slope = -9.277
units per year.

Mann-Kendall
statistic = -52
critical = -48

Decreasing trend
significant at 98%
confidence level
($\alpha = 0.01$ per
tail).

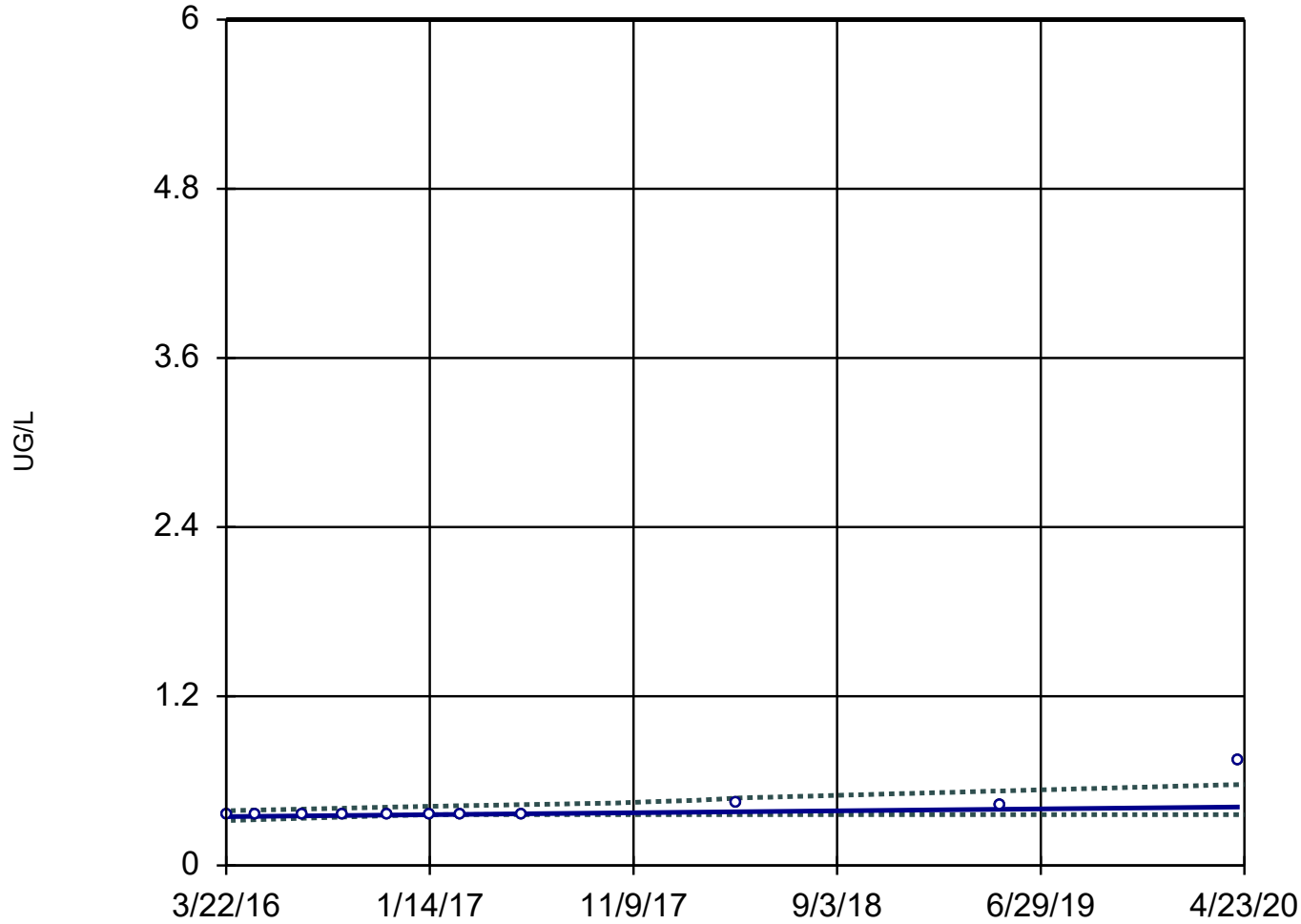
GWPS = 2000.

Constituent: BARIUM, TOTAL Analysis Run 3/2/2021 12:39 PM

Labadie E.C. Client: Ameren Data: LEC DATA (STATS)

Sen's Slope and 95% Confidence Band

L-UMW-1D



n = 11

Slope = 0.0169
units per year.

Mann-Kendall
statistic = 37
critical = 31

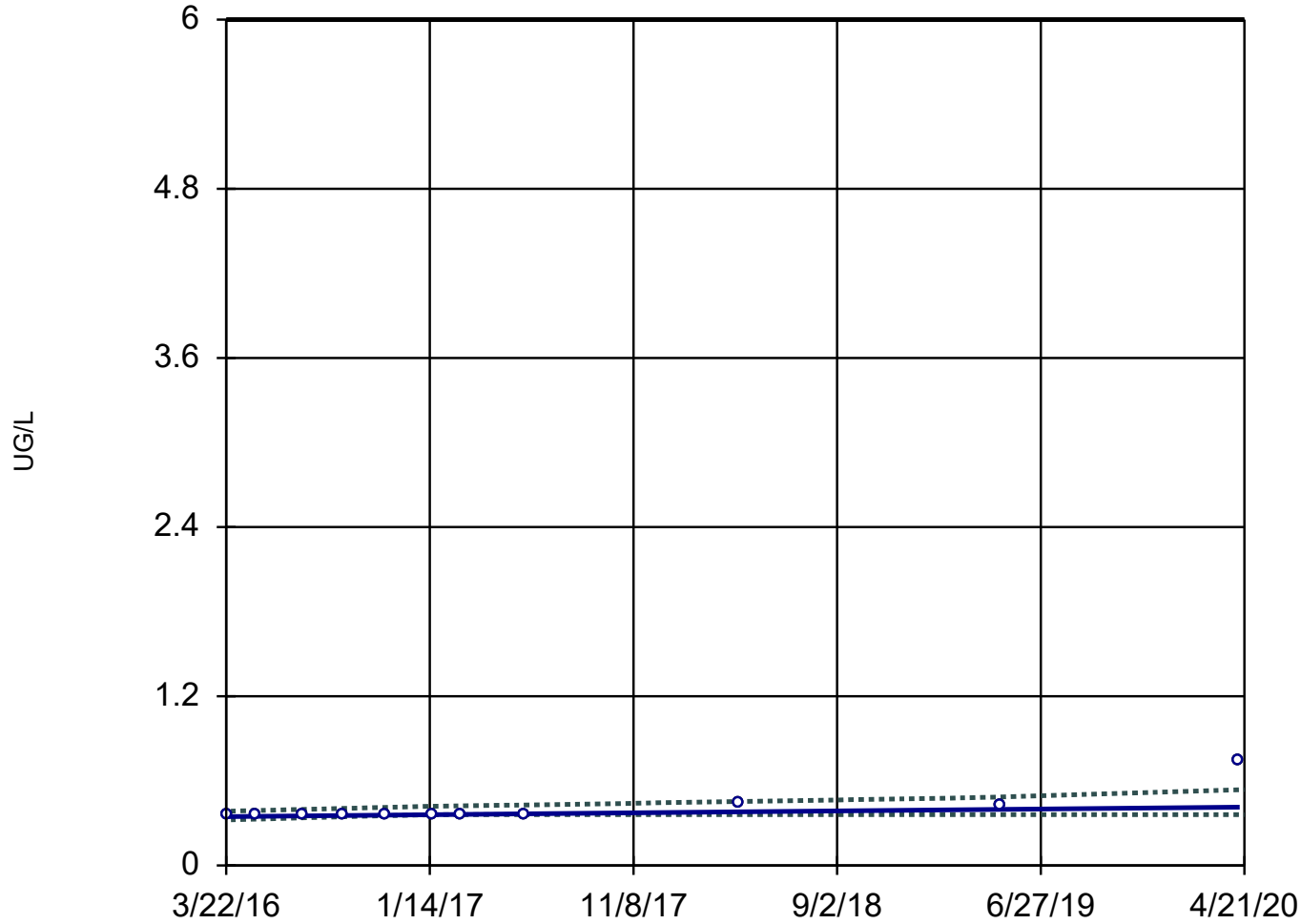
Increasing trend
significant at 98%
confidence level
($\alpha = 0.01$ per
tail).

GWPS = 6.

Constituent: COBALT, TOTAL Analysis Run 3/2/2021 12:40 PM
Labadie E.C. Client: Ameren Data: LEC DATA (STATS)

Sen's Slope and 95% Confidence Band

L-UMW-2D



n = 11

Slope = 0.01644
units per year.

Mann-Kendall
statistic = 37
critical = 31

Increasing trend
significant at 98%
confidence level
($\alpha = 0.01$ per
tail).

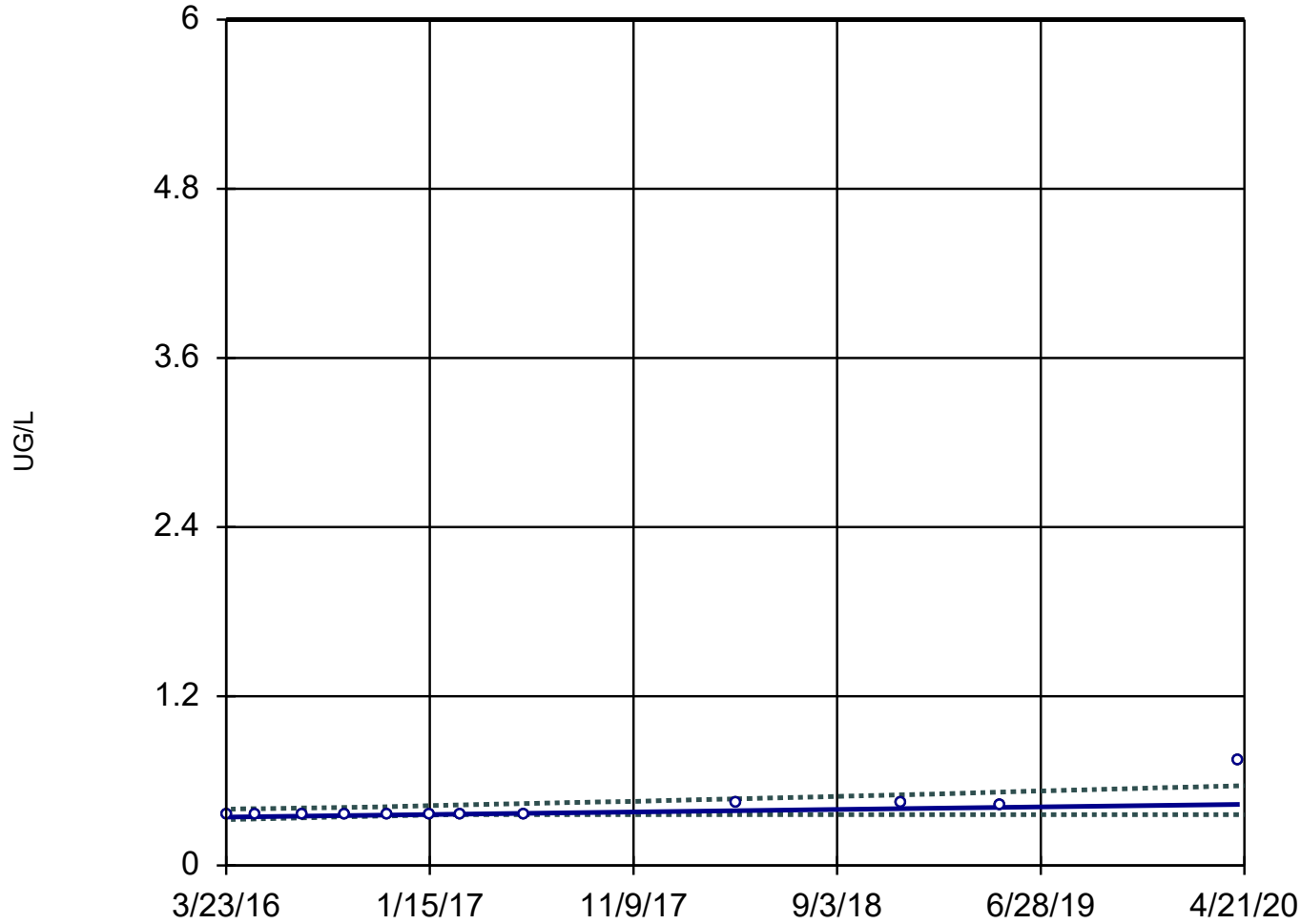
GWPS = 6.

Constituent: COBALT, TOTAL Analysis Run 3/2/2021 12:40 PM

Labadie E.C. Client: Ameren Data: LEC DATA (STATS)

Sen's Slope and 95% Confidence Band

L-UMW-3D



n = 12

Slope = 0.02213
units per year.

Mann-Kendall
statistic = 45
critical = 35

Increasing trend
significant at 98%
confidence level
($\alpha = 0.01$ per
tail).

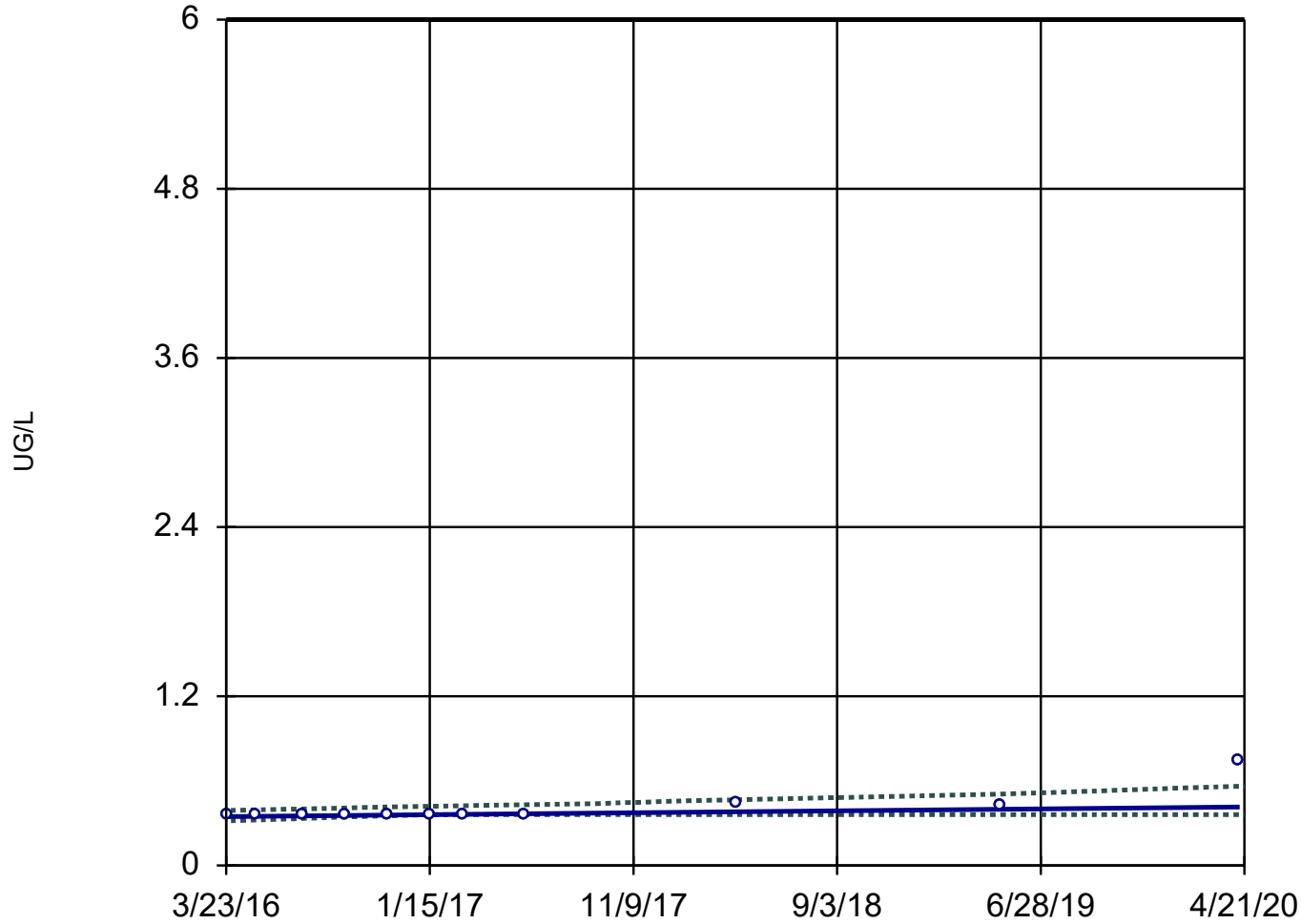
GWPS = 6.

Constituent: COBALT, TOTAL Analysis Run 3/2/2021 12:40 PM

Labadie E.C. Client: Ameren Data: LEC DATA (STATS)

Sen's Slope and 95% Confidence Band

L-UMW-4D



n = 11

Slope = 0.01674
units per year.

Mann-Kendall
statistic = 37
critical = 31

Increasing trend
significant at 98%
confidence level
($\alpha = 0.01$ per
tail).

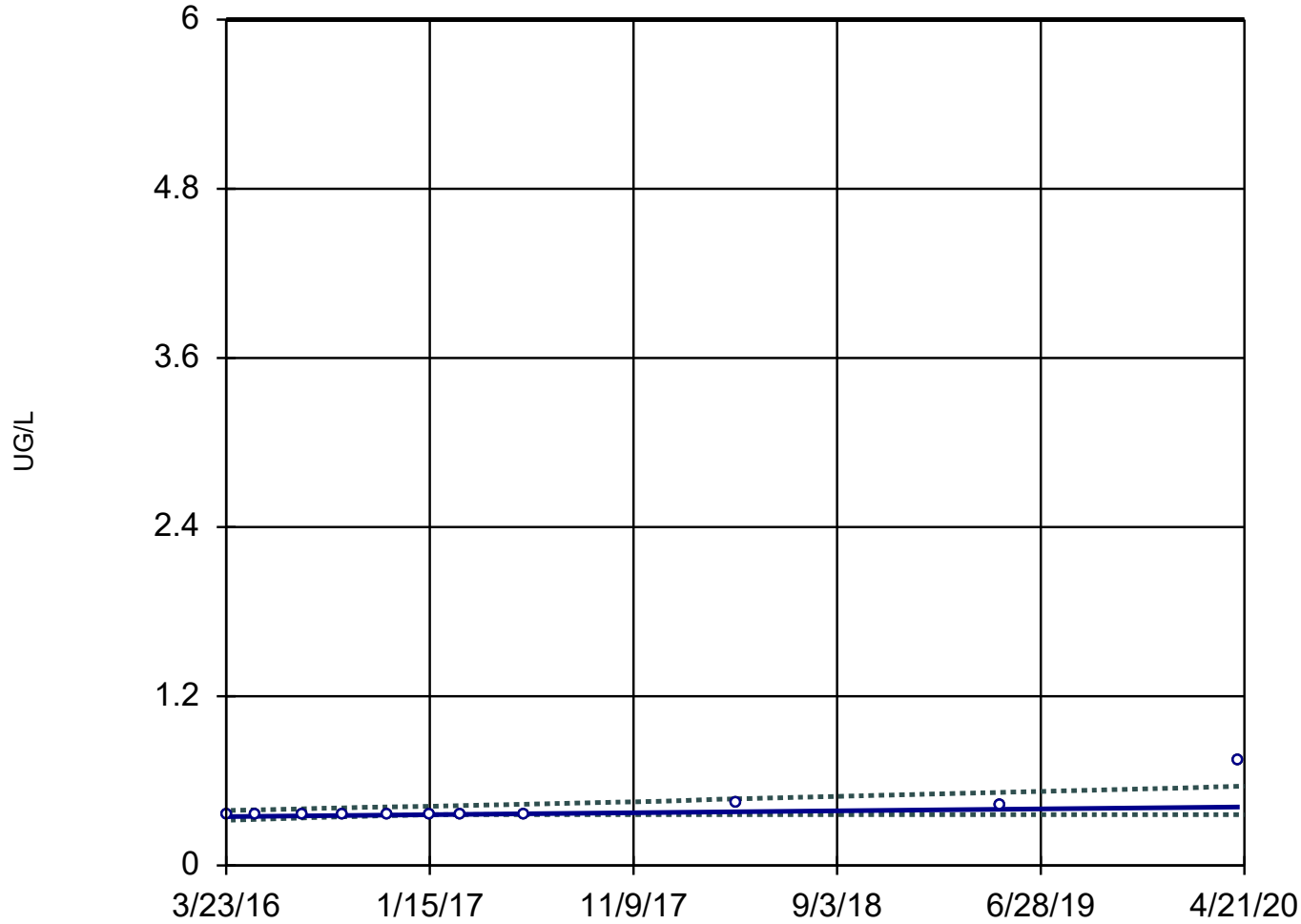
GWPS = 6.

Constituent: COBALT, TOTAL Analysis Run 3/2/2021 12:40 PM

Labadie E.C. Client: Ameren Data: LEC DATA (STATS)

Sen's Slope and 95% Confidence Band

L-UMW-5D



n = 11

Slope = 0.0169
units per year.

Mann-Kendall
statistic = 37
critical = 31

Increasing trend
significant at 98%
confidence level
($\alpha = 0.01$ per
tail).

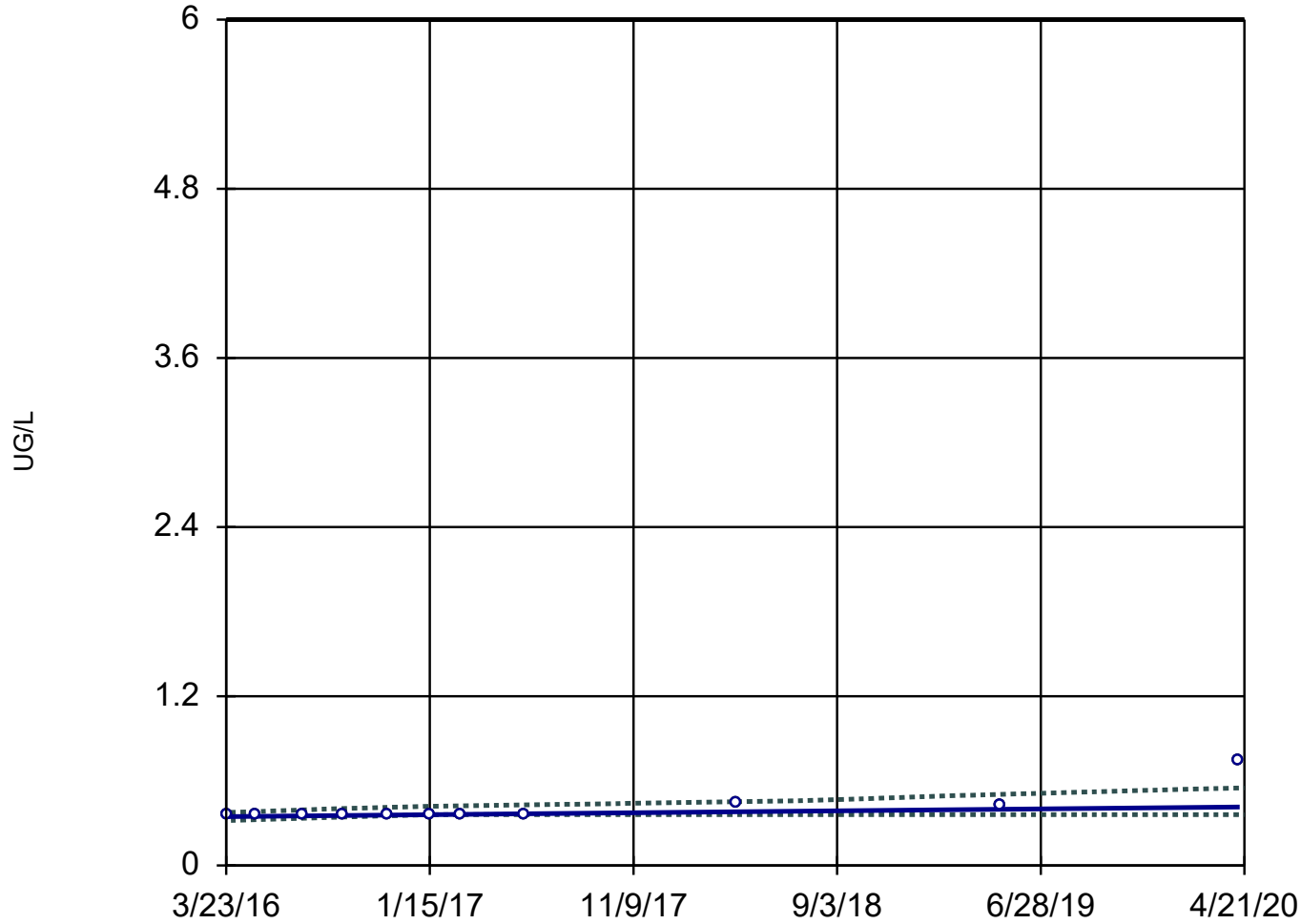
GWPS = 6.

Constituent: COBALT, TOTAL Analysis Run 3/2/2021 12:40 PM

Labadie E.C. Client: Ameren Data: LEC DATA (STATS)

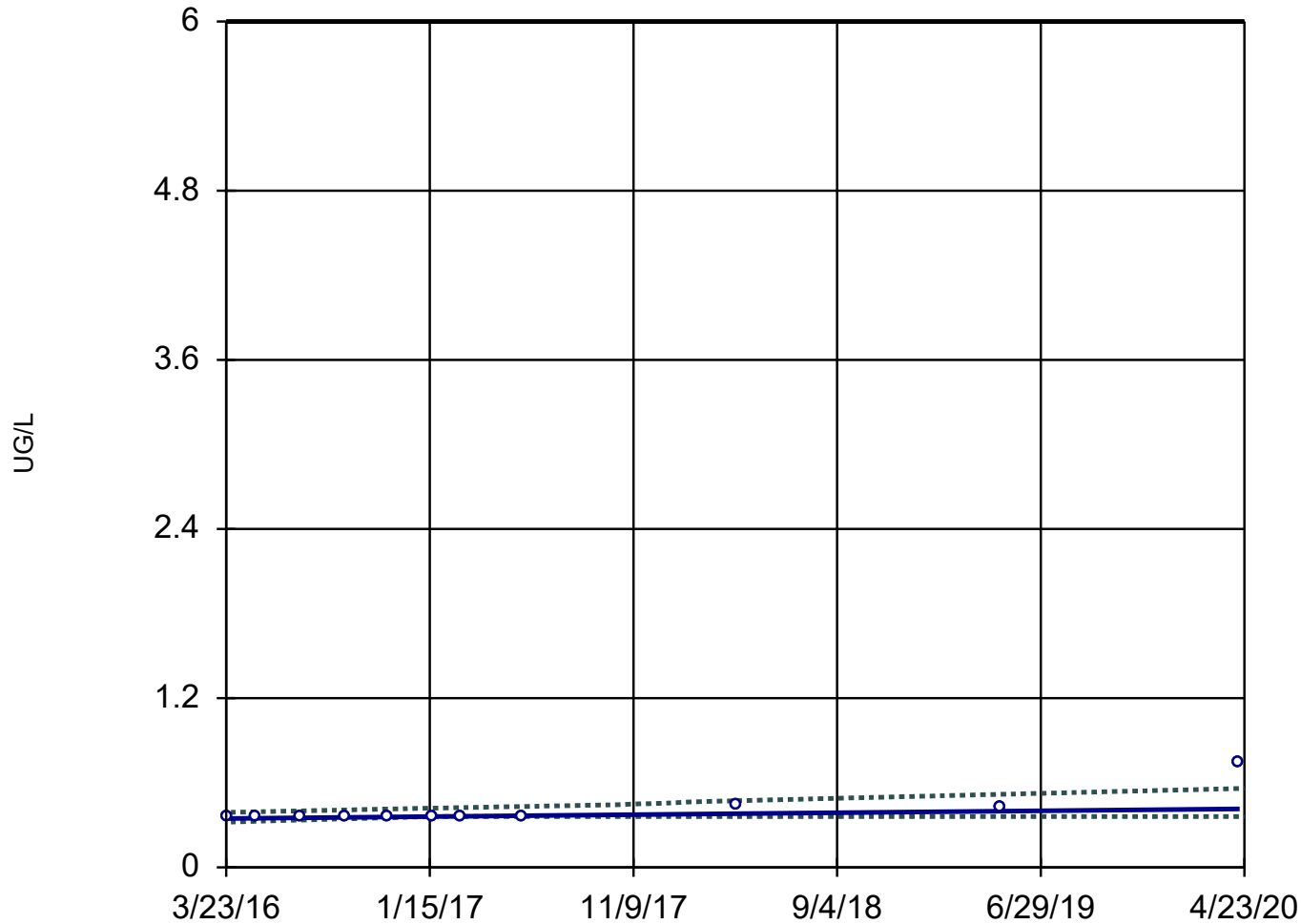
Sen's Slope and 95% Confidence Band

L-UMW-6D



Sen's Slope and 95% Confidence Band

L-UMW-7D



n = 11

Slope = 0.0169
units per year.

Mann-Kendall
statistic = 37
critical = 31

Increasing trend
significant at 98%
confidence level
($\alpha = 0.01$ per
tail).

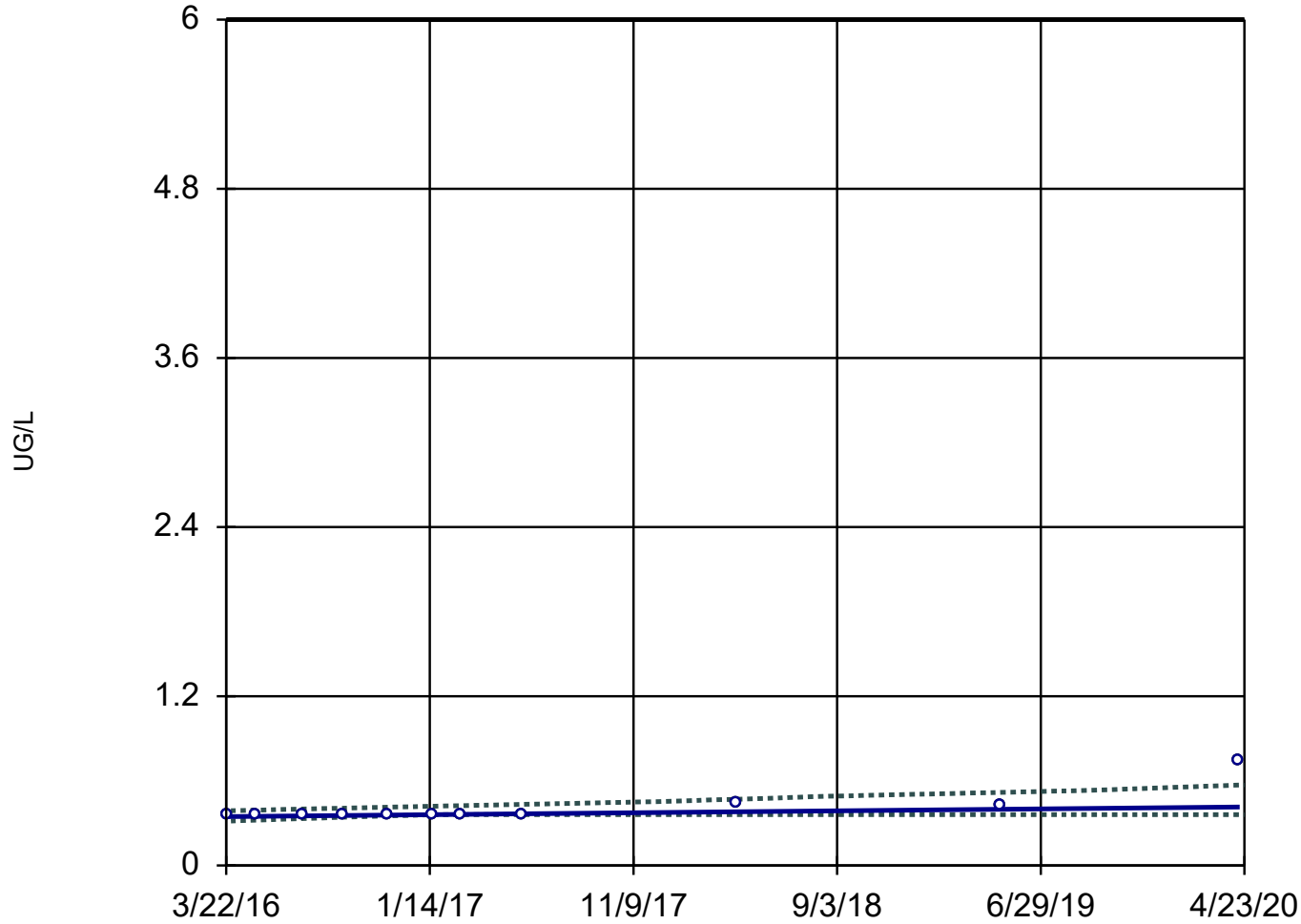
GWPS = 6.

Constituent: COBALT, TOTAL Analysis Run 3/2/2021 12:40 PM

Labadie E.C. Client: Ameren Data: LEC DATA (STATS)

Sen's Slope and 95% Confidence Band

L-UMW-9D



n = 11

Slope = 0.0169
units per year.

Mann-Kendall
statistic = 37
critical = 31

Increasing trend
significant at 98%
confidence level
($\alpha = 0.01$ per
tail).

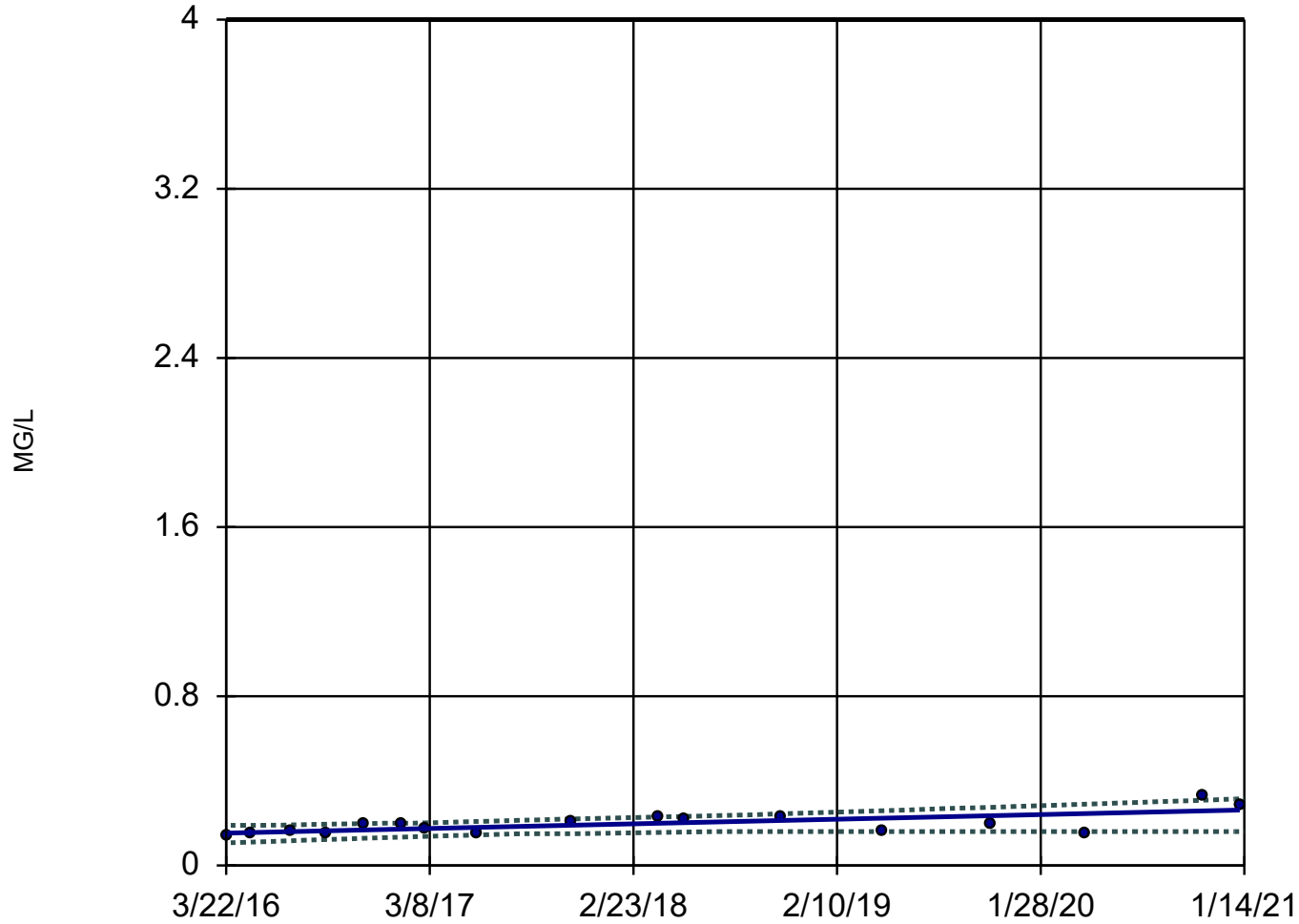
GWPS = 6.

Constituent: COBALT, TOTAL Analysis Run 3/2/2021 12:40 PM

Labadie E.C. Client: Ameren Data: LEC DATA (STATS)

Sen's Slope and 95% Confidence Band

L-UMW-8D



n = 17

Slope = 0.02274
units per year.

Mann-Kendall
statistic = 65
critical = 58

Increasing trend
significant at 98%
confidence level
($\alpha = 0.01$ per
tail).

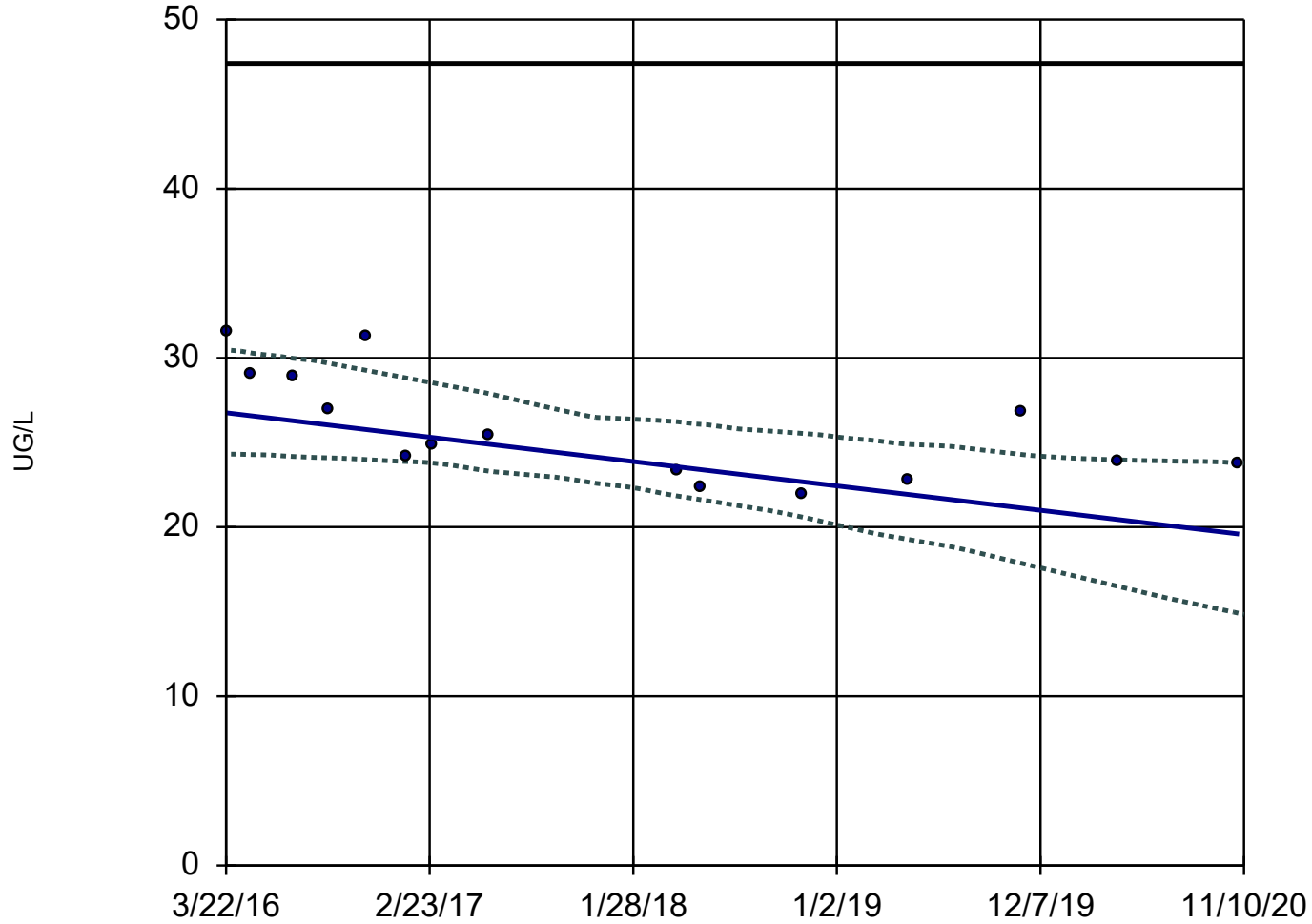
GWPS = 4.

Constituent: FLUORIDE, TOTAL Analysis Run 3/2/2021 12:40 PM

Labadie E.C. Client: Ameren Data: LEC DATA (STATS)

Sen's Slope and 95% Confidence Band

L-UMW-2D

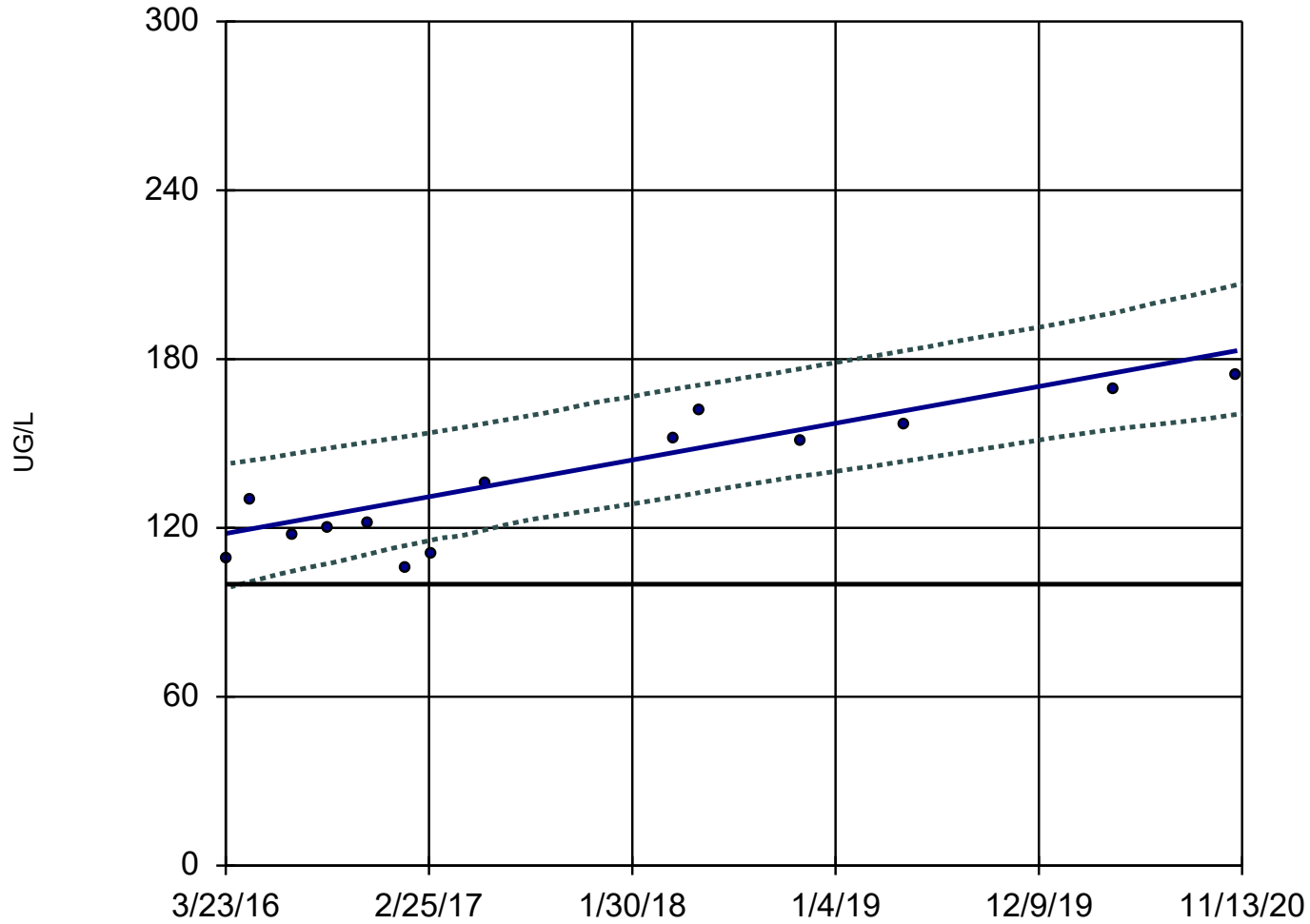


n = 15
Slope = -1.552 units per year.
Mann-Kendall statistic = -59
critical = -48
Decreasing trend significant at 98% confidence level ($\alpha = 0.01$ per tail).
GWPS = 47.4.

Constituent: LITHIUM, TOTAL Analysis Run 3/2/2021 12:41 PM
Labadie E.C. Client: Ameren Data: LEC DATA (STATS)

Sen's Slope and 95% Confidence Band

L-UMW-5D



n = 14

Slope = 14.06
units per year.

Mann-Kendall
statistic = 61
critical = 44

Increasing trend
significant at 98%
confidence level
($\alpha = 0.01$ per
tail).

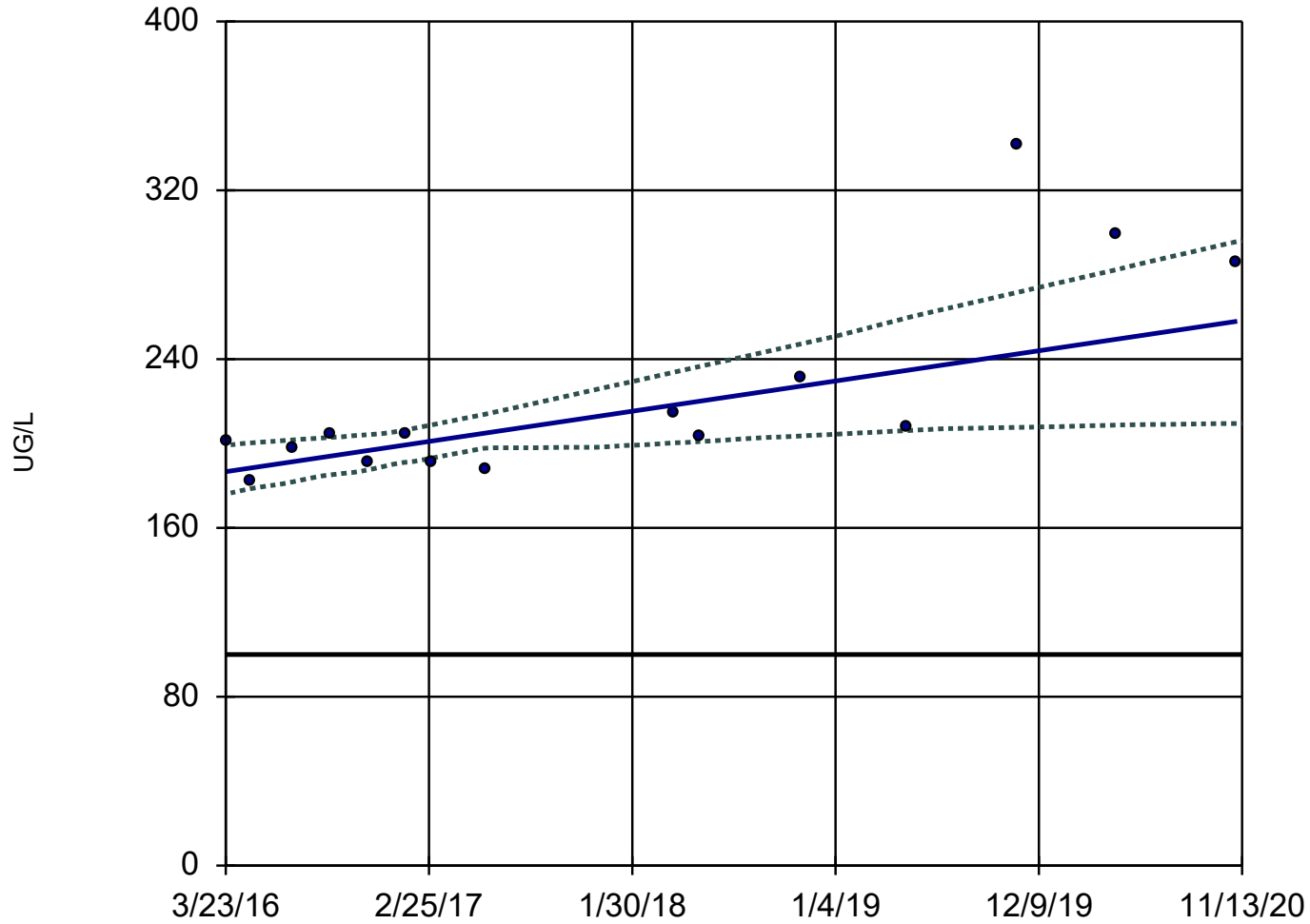
GWPS = 100.

Constituent: MOLYBDENUM, TOTAL Analysis Run 3/2/2021 12:41 PM

Labadie E.C. Client: Ameren Data: LEC DATA (STATS)

Sen's Slope and 95% Confidence Band

L-UMW-7D



n = 15

Slope = 15.42
units per year.

Mann-Kendall
statistic = 57
critical = 48

Increasing trend
significant at 98%
confidence level
($\alpha = 0.01$ per
tail).

GWPS = 100.

Constituent: MOLYBDENUM, TOTAL Analysis Run 3/2/2021 12:41 PM

Labadie E.C. Client: Ameren Data: LEC DATA (STATS)

Trend Test

Labadie E.C. Client: Ameren Data: LEC DATA (STATS) Printed 3/2/2021, 12:42 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
ANTIMONY, TOTAL (UG/L)	L-UMW-1D	7.4e-10	13	35	No	12	83.33	n/a	n/a	0.02	NP
ANTIMONY, TOTAL (UG/L)	L-UMW-2D	0	11	35	No	12	100	n/a	n/a	0.02	NP
ANTIMONY, TOTAL (UG/L)	L-UMW-3D	0	8	39	No	13	84.62	n/a	n/a	0.02	NP
ANTIMONY, TOTAL (UG/L)	L-UMW-4D	0	6	35	No	12	91.67	n/a	n/a	0.02	NP
ANTIMONY, TOTAL (UG/L)	L-UMW-5D	0.001555	7	35	No	12	50	n/a	n/a	0.02	NP
ANTIMONY, TOTAL (UG/L)	L-UMW-6D	0	0	35	No	12	91.67	n/a	n/a	0.02	NP
ANTIMONY, TOTAL (UG/L)	L-UMW-7D	0	11	35	No	12	100	n/a	n/a	0.02	NP
ANTIMONY, TOTAL (UG/L)	L-UMW-8D	0	11	35	No	12	100	n/a	n/a	0.02	NP
ANTIMONY, TOTAL (UG/L)	L-UMW-9D	0.003394	25	35	No	12	91.67	n/a	n/a	0.02	NP
ARSENIC, TOTAL (UG/L)	L-UMW-1D	5.24	71	48	Yes	15	0	n/a	n/a	0.02	NP
ARSENIC, TOTAL (UG/L)	L-UMW-2D	-0.08608	-23	-48	No	15	0	n/a	n/a	0.02	NP
ARSENIC, TOTAL (UG/L)	L-UMW-3D	0.8888	41	48	No	15	6.667	n/a	n/a	0.02	NP
ARSENIC, TOTAL (UG/L)	L-UMW-4D	0	3	48	No	15	26.67	n/a	n/a	0.02	NP
ARSENIC, TOTAL (UG/L)	L-UMW-5D	-1.222	-29	-48	No	15	0	n/a	n/a	0.02	NP
ARSENIC, TOTAL (UG/L)	L-UMW-6D	4.201	45	44	Yes	14	0	n/a	n/a	0.02	NP
ARSENIC, TOTAL (UG/L)	L-UMW-7D	2.6	46	48	No	15	0	n/a	n/a	0.02	NP
ARSENIC, TOTAL (UG/L)	L-UMW-8D	-0.1673	-8	-48	No	15	0	n/a	n/a	0.02	NP
ARSENIC, TOTAL (UG/L)	L-UMW-9D	0	3	48	No	15	0	n/a	n/a	0.02	NP
BARIUM, TOTAL (UG/L)	L-UMW-1D	25.64	55	48	Yes	15	0	n/a	n/a	0.02	NP
BARIUM, TOTAL (UG/L)	L-UMW-2D	-4	-38	-48	No	15	0	n/a	n/a	0.02	NP
BARIUM, TOTAL (UG/L)	L-UMW-3D	-3.736	-14	-53	No	16	0	n/a	n/a	0.02	NP
BARIUM, TOTAL (UG/L)	L-UMW-4D	6.041	48	48	No	15	0	n/a	n/a	0.02	NP
BARIUM, TOTAL (UG/L)	L-UMW-5D	-1.575	-19	-48	No	15	0	n/a	n/a	0.02	NP
BARIUM, TOTAL (UG/L)	L-UMW-6D	-0.9256	-5	-48	No	15	0	n/a	n/a	0.02	NP
BARIUM, TOTAL (UG/L)	L-UMW-7D	-13.56	-37	-48	No	15	0	n/a	n/a	0.02	NP
BARIUM, TOTAL (UG/L)	L-UMW-8D	-9.277	-52	-48	Yes	15	0	n/a	n/a	0.02	NP
BARIUM, TOTAL (UG/L)	L-UMW-9D	-3.029	-23	-48	No	15	0	n/a	n/a	0.02	NP
BERYLLIUM, TOTAL (UG/L)	L-UMW-1D	0	-11	-31	No	11	100	n/a	n/a	0.02	NP
BERYLLIUM, TOTAL (UG/L)	L-UMW-2D	0	-11	-31	No	11	100	n/a	n/a	0.02	NP
BERYLLIUM, TOTAL (UG/L)	L-UMW-3D	0	-15	-35	No	12	100	n/a	n/a	0.02	NP
BERYLLIUM, TOTAL (UG/L)	L-UMW-4D	0	-11	-31	No	11	100	n/a	n/a	0.02	NP
BERYLLIUM, TOTAL (UG/L)	L-UMW-5D	0	-11	-31	No	11	100	n/a	n/a	0.02	NP
BERYLLIUM, TOTAL (UG/L)	L-UMW-6D	0	-11	-31	No	11	100	n/a	n/a	0.02	NP
BERYLLIUM, TOTAL (UG/L)	L-UMW-7D	0	-1	-31	No	11	90.91	n/a	n/a	0.02	NP
BERYLLIUM, TOTAL (UG/L)	L-UMW-8D	0	-11	-31	No	11	100	n/a	n/a	0.02	NP
BERYLLIUM, TOTAL (UG/L)	L-UMW-9D	0	-11	-31	No	11	100	n/a	n/a	0.02	NP
CADMIUM, TOTAL (UG/L)	L-UMW-1D	0	1	31	No	11	100	n/a	n/a	0.02	NP
CADMIUM, TOTAL (UG/L)	L-UMW-2D	0	1	31	No	11	100	n/a	n/a	0.02	NP
CADMIUM, TOTAL (UG/L)	L-UMW-3D	0.01299	22	35	No	12	66.67	n/a	n/a	0.02	NP
CADMIUM, TOTAL (UG/L)	L-UMW-4D	0	-1	-31	No	11	90.91	n/a	n/a	0.02	NP
CADMIUM, TOTAL (UG/L)	L-UMW-5D	0	-1	-31	No	11	81.82	n/a	n/a	0.02	NP
CADMIUM, TOTAL (UG/L)	L-UMW-6D	0.01121	16	31	No	11	63.64	n/a	n/a	0.02	NP
CADMIUM, TOTAL (UG/L)	L-UMW-7D	0	1	31	No	11	81.82	n/a	n/a	0.02	NP
CADMIUM, TOTAL (UG/L)	L-UMW-8D	0	1	31	No	11	100	n/a	n/a	0.02	NP
CADMIUM, TOTAL (UG/L)	L-UMW-9D	0	1	31	No	11	100	n/a	n/a	0.02	NP
CHROMIUM, TOTAL (UG/L)	L-UMW-1D	0	-1	-31	No	11	63.64	n/a	n/a	0.02	NP
CHROMIUM, TOTAL (UG/L)	L-UMW-2D	-0.07171	-29	-35	No	12	75	n/a	n/a	0.02	NP
CHROMIUM, TOTAL (UG/L)	L-UMW-3D	-0.01315	-19	-39	No	13	84.62	n/a	n/a	0.02	NP
CHROMIUM, TOTAL (UG/L)	L-UMW-4D	-0.04683	-32	-31	Yes	11	72.73	n/a	n/a	0.02	NP
CHROMIUM, TOTAL (UG/L)	L-UMW-5D	-0.05535	-32	-35	No	12	75	n/a	n/a	0.02	NP

Trend Test

Labadie E.C. Client: Ameren Data: LEC DATA (STATS) Printed 3/2/2021, 12:42 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
CHROMIUM, TOTAL (UG/L)	L-UMW-6D	-0.06498	-18	-35	No	12	50	n/a	n/a	0.02	NP
CHROMIUM, TOTAL (UG/L)	L-UMW-7D	-0.06664	-18	-35	No	12	50	n/a	n/a	0.02	NP
CHROMIUM, TOTAL (UG/L)	L-UMW-8D	-0.07791	-29	-35	No	12	66.67	n/a	n/a	0.02	NP
CHROMIUM, TOTAL (UG/L)	L-UMW-9D	-0.05539	-32	-35	No	12	75	n/a	n/a	0.02	NP
COBALT, TOTAL (UG/L)	L-UMW-1D	0.0169	37	31	Yes	11	100	n/a	n/a	0.02	NP
COBALT, TOTAL (UG/L)	L-UMW-2D	0.01644	37	31	Yes	11	100	n/a	n/a	0.02	NP
COBALT, TOTAL (UG/L)	L-UMW-3D	0.02213	45	35	Yes	12	100	n/a	n/a	0.02	NP
COBALT, TOTAL (UG/L)	L-UMW-4D	0.01674	37	31	Yes	11	100	n/a	n/a	0.02	NP
COBALT, TOTAL (UG/L)	L-UMW-5D	0.0169	37	31	Yes	11	100	n/a	n/a	0.02	NP
COBALT, TOTAL (UG/L)	L-UMW-6D	0.0169	37	31	Yes	11	100	n/a	n/a	0.02	NP
COBALT, TOTAL (UG/L)	L-UMW-7D	0.0169	37	31	Yes	11	100	n/a	n/a	0.02	NP
COBALT, TOTAL (UG/L)	L-UMW-8D	0.01067	24	31	No	11	90.91	n/a	n/a	0.02	NP
COBALT, TOTAL (UG/L)	L-UMW-9D	0.0169	37	31	Yes	11	100	n/a	n/a	0.02	NP
FLUORIDE, TOTAL (MG/L)	L-UMW-1D	0.01661	51	58	No	17	0	n/a	n/a	0.02	NP
FLUORIDE, TOTAL (MG/L)	L-UMW-2D	0.004081	26	58	No	17	0	n/a	n/a	0.02	NP
FLUORIDE, TOTAL (MG/L)	L-UMW-3D	0.0133	28	63	No	18	22.22	n/a	n/a	0.02	NP
FLUORIDE, TOTAL (MG/L)	L-UMW-4D	0.01761	36	63	No	18	0	n/a	n/a	0.02	NP
FLUORIDE, TOTAL (MG/L)	L-UMW-5D	0.01821	54	58	No	17	17.65	n/a	n/a	0.02	NP
FLUORIDE, TOTAL (MG/L)	L-UMW-6D	0.003903	9	53	No	16	12.5	n/a	n/a	0.02	NP
FLUORIDE, TOTAL (MG/L)	L-UMW-7D	0	-7	-63	No	18	0	n/a	n/a	0.02	NP
FLUORIDE, TOTAL (MG/L)	L-UMW-8D	0.02274	65	58	Yes	17	0	n/a	n/a	0.02	NP
FLUORIDE, TOTAL (MG/L)	L-UMW-9D	0.02322	75	58	Yes	17	0	n/a	n/a	0.02	NP
LEAD, TOTAL (UG/L)	L-UMW-1D	0	3	31	No	11	63.64	n/a	n/a	0.02	NP
LEAD, TOTAL (UG/L)	L-UMW-2D	0.1447	12	31	No	11	81.82	n/a	n/a	0.02	NP
LEAD, TOTAL (UG/L)	L-UMW-3D	0.1081	17	35	No	12	83.33	n/a	n/a	0.02	NP
LEAD, TOTAL (UG/L)	L-UMW-4D	0	15	31	No	11	100	n/a	n/a	0.02	NP
LEAD, TOTAL (UG/L)	L-UMW-5D	0	4	31	No	11	81.82	n/a	n/a	0.02	NP
LEAD, TOTAL (UG/L)	L-UMW-6D	0	4	31	No	11	81.82	n/a	n/a	0.02	NP
LEAD, TOTAL (UG/L)	L-UMW-7D	0.1432	16	31	No	11	81.82	n/a	n/a	0.02	NP
LEAD, TOTAL (UG/L)	L-UMW-8D	0.1448	17	31	No	11	81.82	n/a	n/a	0.02	NP
LEAD, TOTAL (UG/L)	L-UMW-9D	0	-3	-31	No	11	54.55	n/a	n/a	0.02	NP
LITHIUM, TOTAL (UG/L)	L-UMW-1D	0.1628	12	48	No	15	0	n/a	n/a	0.02	NP
LITHIUM, TOTAL (UG/L)	L-UMW-2D	-1.552	-59	-48	Yes	15	0	n/a	n/a	0.02	NP
LITHIUM, TOTAL (UG/L)	L-UMW-3D	-0.702	-27	-53	No	16	0	n/a	n/a	0.02	NP
LITHIUM, TOTAL (UG/L)	L-UMW-4D	-0.827	-32	-48	No	15	0	n/a	n/a	0.02	NP
LITHIUM, TOTAL (UG/L)	L-UMW-5D	-0.4171	-5	-48	No	15	0	n/a	n/a	0.02	NP
LITHIUM, TOTAL (UG/L)	L-UMW-6D	0.8327	13	48	No	15	0	n/a	n/a	0.02	NP
LITHIUM, TOTAL (UG/L)	L-UMW-7D	1.064	29	48	No	15	0	n/a	n/a	0.02	NP
LITHIUM, TOTAL (UG/L)	L-UMW-8D	0.6266	19	48	No	15	0	n/a	n/a	0.02	NP
LITHIUM, TOTAL (UG/L)	L-UMW-9D	-0.2967	-25	-48	No	15	0	n/a	n/a	0.02	NP
MERCURY, TOTAL (UG/L)	L-UMW-1D	0	12	31	No	11	100	n/a	n/a	0.02	NP
MERCURY, TOTAL (UG/L)	L-UMW-2D	0	12	31	No	11	100	n/a	n/a	0.02	NP
MERCURY, TOTAL (UG/L)	L-UMW-3D	0.002006	18	35	No	12	100	n/a	n/a	0.02	NP
MERCURY, TOTAL (UG/L)	L-UMW-4D	0	12	31	No	11	100	n/a	n/a	0.02	NP
MERCURY, TOTAL (UG/L)	L-UMW-5D	0	12	31	No	11	100	n/a	n/a	0.02	NP
MERCURY, TOTAL (UG/L)	L-UMW-6D	0	12	31	No	11	100	n/a	n/a	0.02	NP
MERCURY, TOTAL (UG/L)	L-UMW-7D	0	12	31	No	11	100	n/a	n/a	0.02	NP
MERCURY, TOTAL (UG/L)	L-UMW-8D	0	12	31	No	11	100	n/a	n/a	0.02	NP
MERCURY, TOTAL (UG/L)	L-UMW-9D	0	12	31	No	11	100	n/a	n/a	0.02	NP
MOLYBDENUM, TOTAL (UG/L)	L-UMW-1D	0.2162	26	48	No	15	26.67	n/a	n/a	0.02	NP

Trend Test

Labadie E.C. Client: Ameren Data: LEC DATA (STATS) Printed 3/2/2021, 12:42 PM

<u>Constituent</u>	<u>Well</u>	<u>Slope</u>	<u>Calc.</u>	<u>Critical</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Normality</u>	<u>Xform</u>	<u>Alpha</u>	<u>Method</u>
MOLYBDENUM, TOTAL (UG/L)	L-UMW-2D	-1.24	-45	-48	No	15	0	n/a	n/a	0.02	NP
MOLYBDENUM, TOTAL (UG/L)	L-UMW-3D	2.613	11	53	No	16	0	n/a	n/a	0.02	NP
MOLYBDENUM, TOTAL (UG/L)	L-UMW-4D	-13.11	-44	-48	No	15	0	n/a	n/a	0.02	NP
MOLYBDENUM, TOTAL (UG/L)	L-UMW-5D	14.06	61	44	Yes	14	0	n/a	n/a	0.02	NP
MOLYBDENUM, TOTAL (UG/L)	L-UMW-6D	-9.372	-12	-48	No	15	0	n/a	n/a	0.02	NP
MOLYBDENUM, TOTAL (UG/L)	L-UMW-7D	15.42	57	48	Yes	15	0	n/a	n/a	0.02	NP
MOLYBDENUM, TOTAL (UG/L)	L-UMW-8D	0.4644	12	44	No	14	0	n/a	n/a	0.02	NP
MOLYBDENUM, TOTAL (UG/L)	L-UMW-9D	-1.4e-8	-1	-48	No	15	40	n/a	n/a	0.02	NP
Radium [226 + 228] (PCI/L)	L-UMW-1D	0.08804	18	48	No	15	13.33	n/a	n/a	0.02	NP
Radium [226 + 228] (PCI/L)	L-UMW-2D	0.03891	1	48	No	15	33.33	n/a	n/a	0.02	NP
Radium [226 + 228] (PCI/L)	L-UMW-3D	0.01054	2	53	No	16	68.75	n/a	n/a	0.02	NP
Radium [226 + 228] (PCI/L)	L-UMW-4D	0.0364	19	44	No	14	85.71	n/a	n/a	0.02	NP
Radium [226 + 228] (PCI/L)	L-UMW-5D	0.002344	3	44	No	14	100	n/a	n/a	0.02	NP
Radium [226 + 228] (PCI/L)	L-UMW-6D	0.04407	11	48	No	15	46.67	n/a	n/a	0.02	NP
Radium [226 + 228] (PCI/L)	L-UMW-7D	-0.03539	-13	-48	No	15	80	n/a	n/a	0.02	NP
Radium [226 + 228] (PCI/L)	L-UMW-8D	-0.02878	-7	-48	No	15	33.33	n/a	n/a	0.02	NP
Radium [226 + 228] (PCI/L)	L-UMW-9D	-0.04863	-27	-48	No	15	86.67	n/a	n/a	0.02	NP
SELENIUM, TOTAL (UG/L)	L-UMW-1D	0	-5	-35	No	12	91.67	n/a	n/a	0.02	NP
SELENIUM, TOTAL (UG/L)	L-UMW-2D	0	-5	-35	No	12	91.67	n/a	n/a	0.02	NP
SELENIUM, TOTAL (UG/L)	L-UMW-3D	0	-6	-39	No	13	53.85	n/a	n/a	0.02	NP
SELENIUM, TOTAL (UG/L)	L-UMW-4D	0	-19	-35	No	12	100	n/a	n/a	0.02	NP
SELENIUM, TOTAL (UG/L)	L-UMW-5D	0	14	35	No	12	66.67	n/a	n/a	0.02	NP
SELENIUM, TOTAL (UG/L)	L-UMW-6D	0.009081	15	35	No	12	16.67	n/a	n/a	0.02	NP
SELENIUM, TOTAL (UG/L)	L-UMW-7D	0	-7	-35	No	12	75	n/a	n/a	0.02	NP
SELENIUM, TOTAL (UG/L)	L-UMW-8D	0	-17	-35	No	12	91.67	n/a	n/a	0.02	NP
SELENIUM, TOTAL (UG/L)	L-UMW-9D	0	-19	-35	No	12	100	n/a	n/a	0.02	NP
THALLIUM, TOTAL (UG/L)	L-UMW-1D	-0.05648	-30	-31	No	11	81.82	n/a	n/a	0.02	NP
THALLIUM, TOTAL (UG/L)	L-UMW-2D	-0.05414	-25	-31	No	11	100	n/a	n/a	0.02	NP
THALLIUM, TOTAL (UG/L)	L-UMW-3D	-0.05544	-29	-35	No	12	100	n/a	n/a	0.02	NP
THALLIUM, TOTAL (UG/L)	L-UMW-4D	-0.05418	-25	-31	No	11	100	n/a	n/a	0.02	NP
THALLIUM, TOTAL (UG/L)	L-UMW-5D	-0.05418	-25	-31	No	11	100	n/a	n/a	0.02	NP
THALLIUM, TOTAL (UG/L)	L-UMW-6D	-0.05657	-29	-31	No	11	90.91	n/a	n/a	0.02	NP
THALLIUM, TOTAL (UG/L)	L-UMW-7D	-0.05402	-25	-31	No	11	100	n/a	n/a	0.02	NP
THALLIUM, TOTAL (UG/L)	L-UMW-8D	-0.05406	-25	-31	No	11	100	n/a	n/a	0.02	NP
THALLIUM, TOTAL (UG/L)	L-UMW-9D	-0.05406	-25	-31	No	11	100	n/a	n/a	0.02	NP

APPENDIX C

**February/April 2021 Assessment
Monitoring Statistical Evaluation**

TECHNICAL MEMORANDUM

DATE August 31, 2021

Project No. 153-140603

TO Bill Kutosky
Ameren Missouri

CC Susan Knowles, Craig Giesmann, Charlie Henderson

FROM Jeffrey Ingram, Sean Paulsen, Mark Haddock

EMAIL Jingram@Golder.com

ASSESSMENT MONITORING STATISTICAL EVALUATION LCPA SURFACE IMPOUNDMENT LABADIE ENERGY CENTER, FRANKLIN COUNTY, MISSOURI

This Technical Memorandum provides the results of the Assessment Monitoring Statistical Evaluation for the April 2021 sampling event at the LCPA Surface Impoundment at the Labadie Energy Center located in Franklin County, Missouri. Included in this memorandum is a brief 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 Groundwater Monitoring Plan's (GMP) Statistical Analysis Plan (SAP). The following outliers were removed prior to the calculation of confidence limits.

■ Fluoride

- UMW-7D at 0.13 J and 0.16 J milligrams per liter (mg/L) on 5/2/2019 and 11/6/2019. The results are statistically lower than other results at the same well. The low results have not been confirmed during subsequent sampling events.
- UMW-9D at 0.36 mg/L on 11/2/2020. The result is statistically higher than other results at the same well. The high result has not been confirmed during subsequent sampling events.

An analysis of the outliers removed to-date was completed and no statistical outliers that were previously removed were added back into the dataset prior to the calculation of confidence limits.

No new SSLs were identified in the April 2021 sampling event. The SSLs reported for the April 2021 monitoring event are as follows:

- Molybdenum at UMW-3D, UMW-4D, UMW-5D, UMW-6D, and UMW-7D

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.

Sincerely,



Jeffrey Ingram, R.G.
Senior Project Geologist



Sean Paulsen
Associate, Senior Consultant

JSI/SCP/MNH

Enclosures:

Table 1 – LCPA Groundwater Protection Standards

Appendix A – Sanitas Confidence Interval Statistical Output

Appendix B – Sanitas Trending Confidence Bands Statistical Output

**Table 1 - LCPA Groundwater Protection Standards
LCPA Surface Impoundment
Labadie Energy Center**

Parameter	Units	MCL or Health Based GWPS	Site GWPS	Value to Return to Detection Monitoring ⁷
Antimony	µg/L	6	6	DQR
Arsenic	µg/L	10	44.2	44.2
Barium	µg/L	2000	2000	1290
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	0.3163
Lead	µg/L	15	15	DQR
Lithium	µg/L	40	47.4	47.4
Mercury	µg/L	2	2	DQR
Molybdenum	µg/L	100	100	DQR
Radium 226 + 228	pCi/L	5	5	4.14
Selenium	µg/L	50	50	DQR
Thallium	µg/L	2	2	DQR

Notes:

1. µg/L - micrograms per liter.
2. mg/L - milligrams per liter.
3. pCi/L - picocuries per liter.

4. MCL - Maximum Contaminant Level. MCLs from United States Environmental Protection Agency (USEPA) 2012 Edition of the Drinking Water Standards and Health Advisories. Spring 2012.
<http://water.epa.gov/drink/contaminants/index.cfm>.

5. Health Based Groundwater Protection Standards (GWPS) were adopted 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 collected through February 2021 from monitoring wells BMW-1D and BMW-2D.

Prepared by: JSI

Checked by: EMS

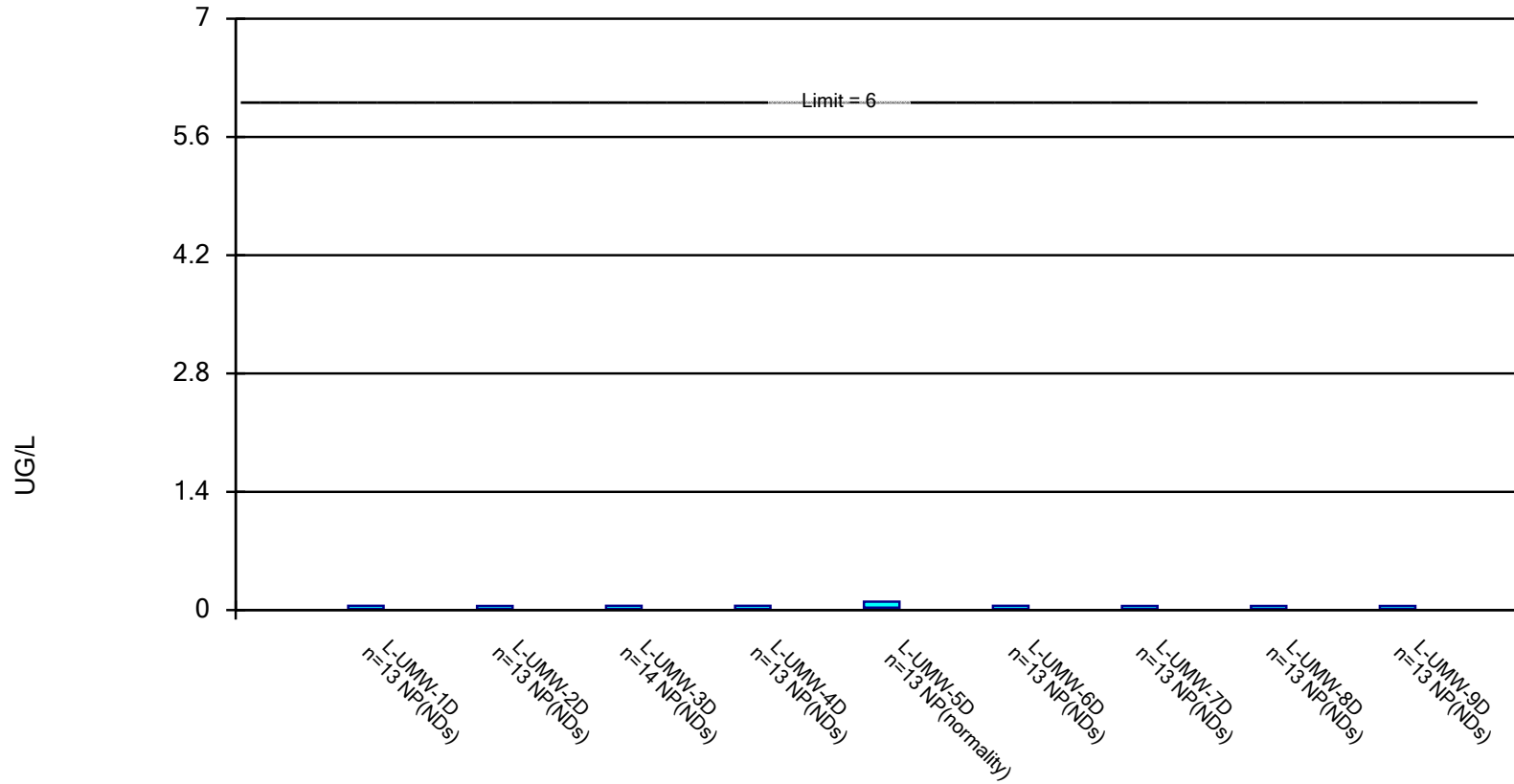
Reviewed by: SCP

APPENDIX A

**Sanitas Confidence Interval
Statistical Output**

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.

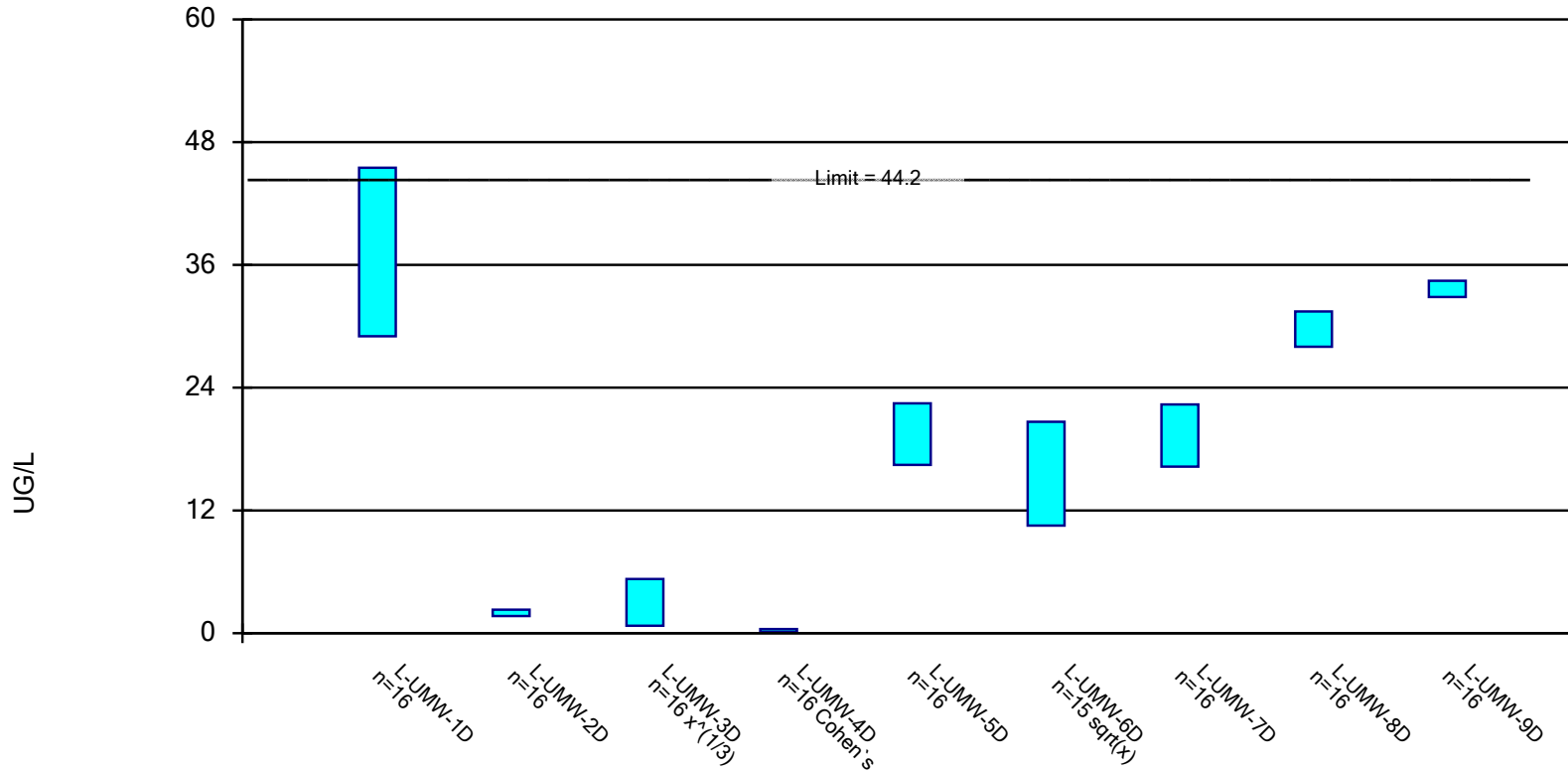


Constituent: ANTIMONY, TOTAL Analysis Run 8/30/2021 1:51 PM

Labadie E.C. Client: Ameren Data: 2021-08-02_April 2021 SSL

Parametric Confidence Interval

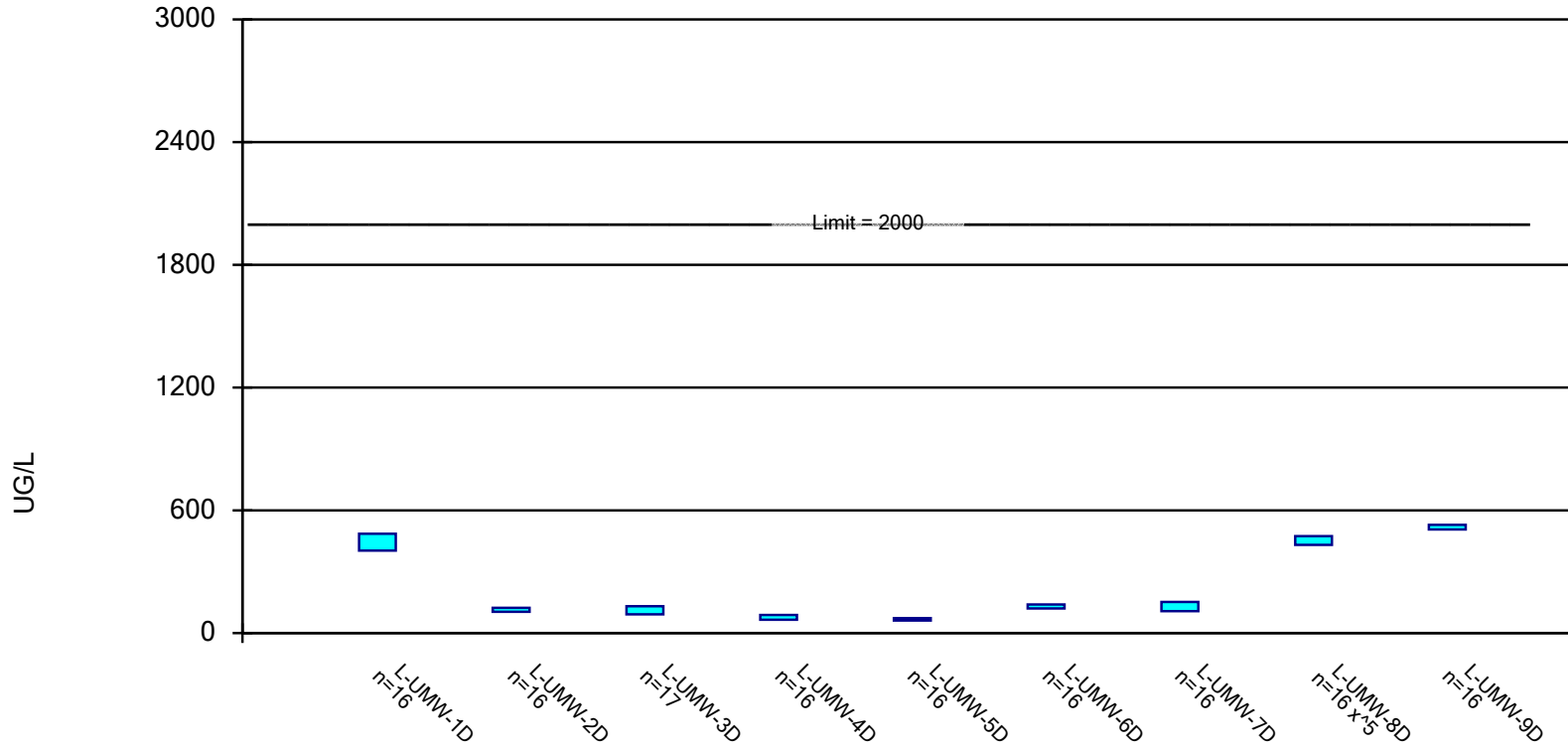
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: ARSENIC, TOTAL Analysis Run 8/30/2021 1:51 PM
Labadie E.C. Client: Ameren Data: 2021-08-02_April 2021 SSL

Parametric Confidence Interval

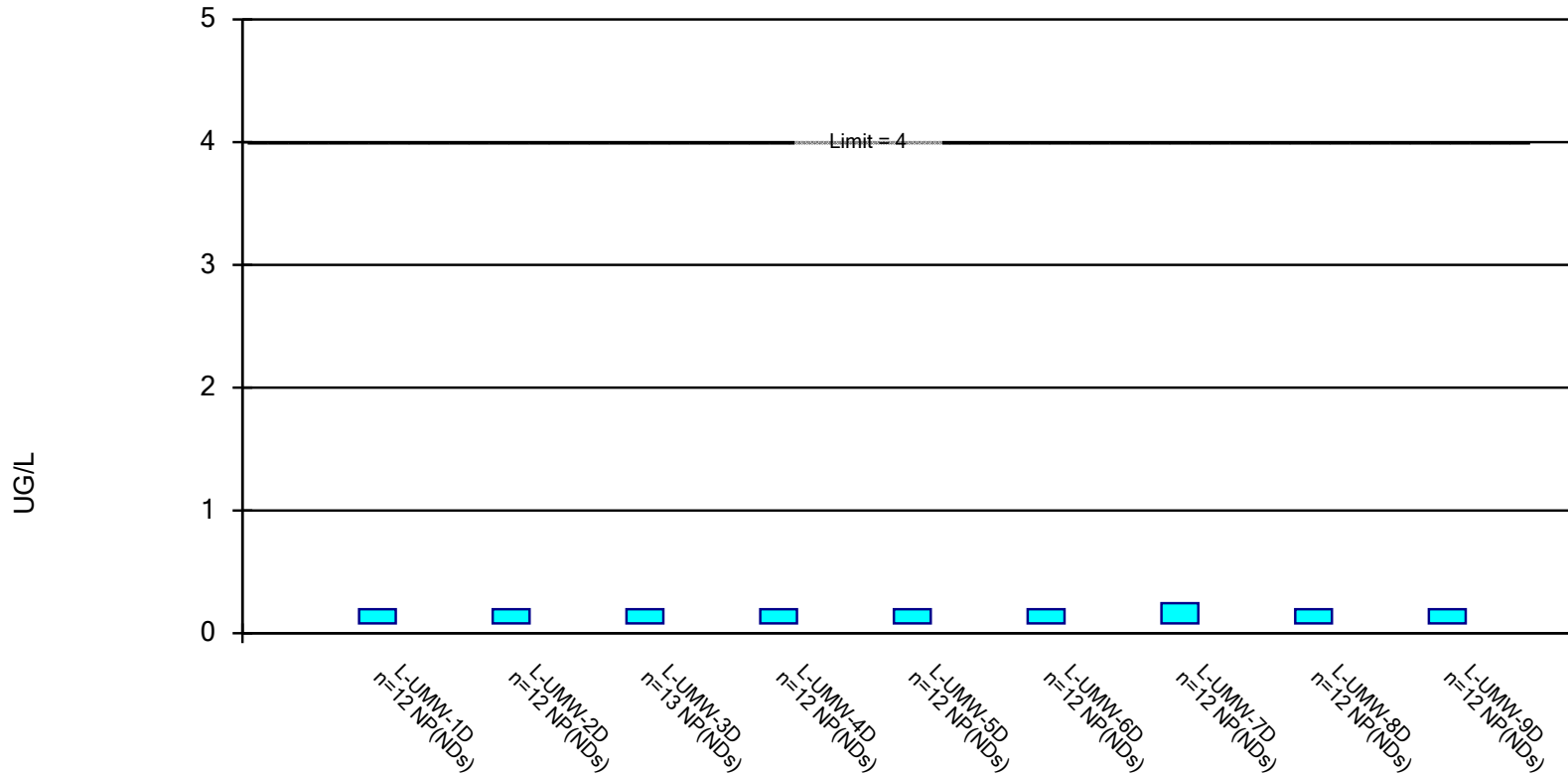
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: BARIUM, TOTAL Analysis Run 8/30/2021 1:51 PM
Labadie E.C. Client: Ameren Data: 2021-08-02_April 2021 SSL

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.

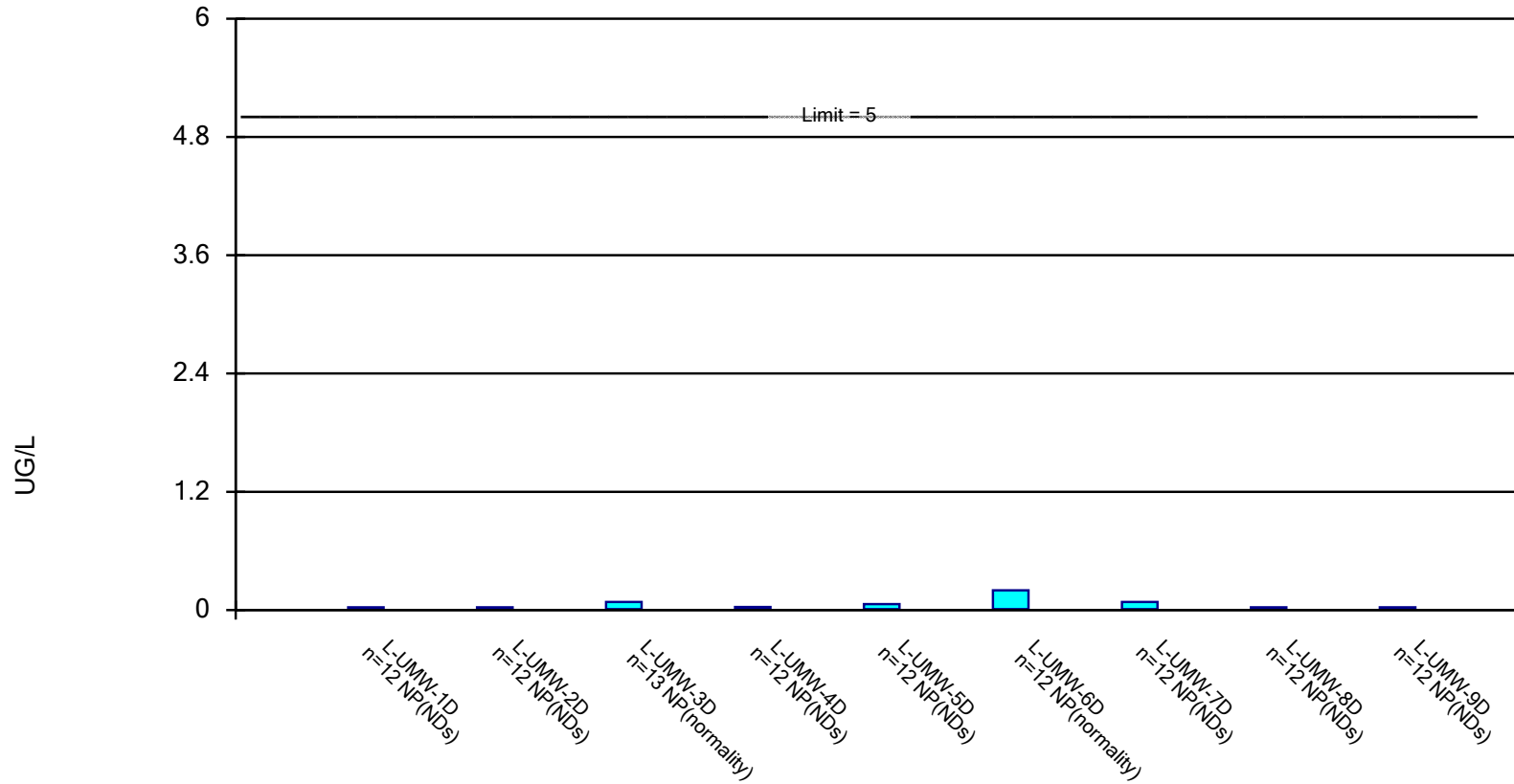


Constituent: BERYLLIUM, TOTAL Analysis Run 8/30/2021 1:51 PM

Labadie E.C. Client: Ameren Data: 2021-08-02_April 2021 SSL

Non-Parametric Confidence Interval

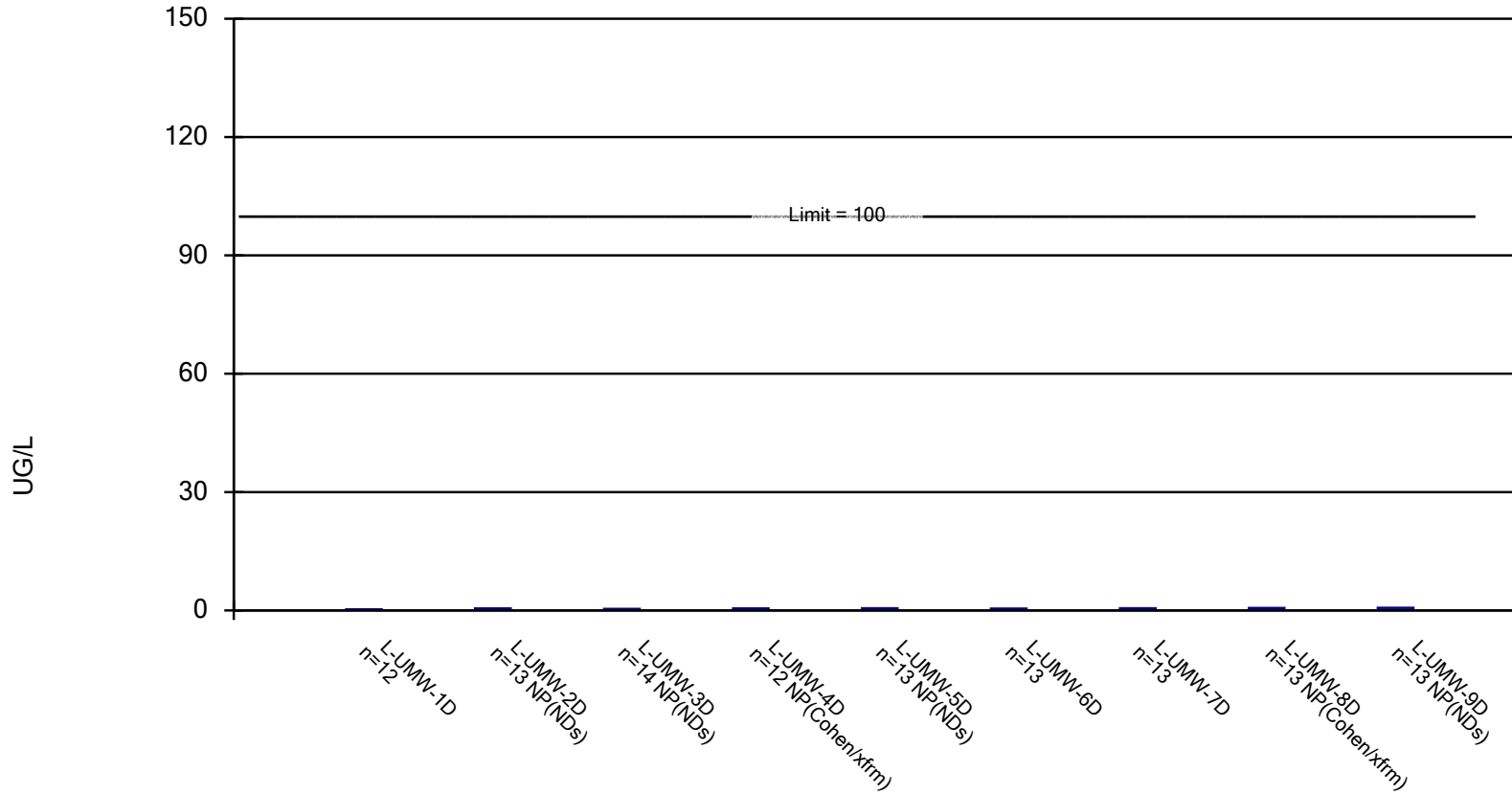
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: CADMIUM, TOTAL Analysis Run 8/30/2021 1:51 PM
Labadie E.C. Client: Ameren Data: 2021-08-02_April 2021 SSL

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.

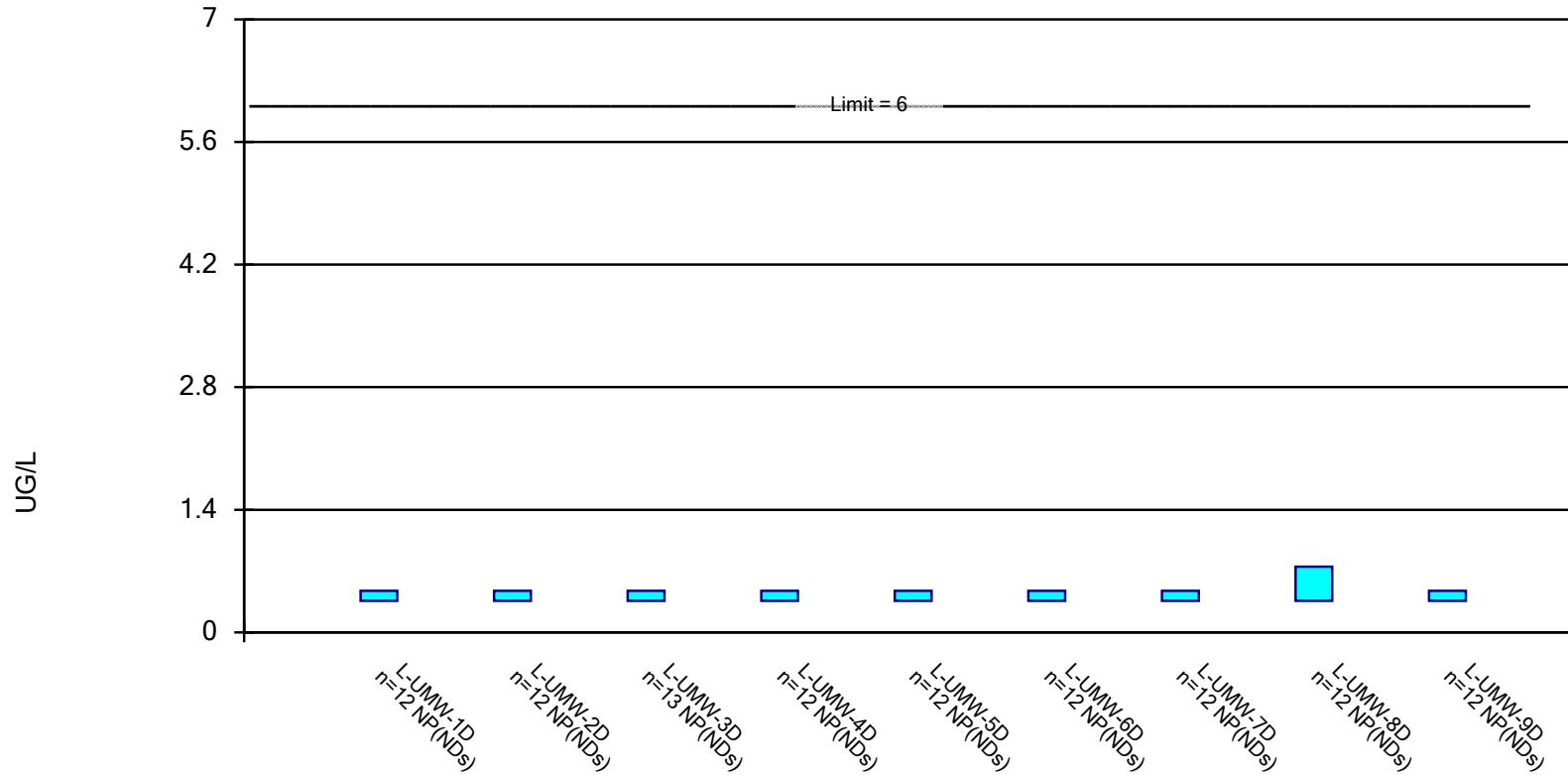


Constituent: CHROMIUM, TOTAL Analysis Run 8/30/2021 1:51 PM

Labadie E.C. Client: Ameren Data: 2021-08-02_April 2021 SSL

Non-Parametric Confidence Interval

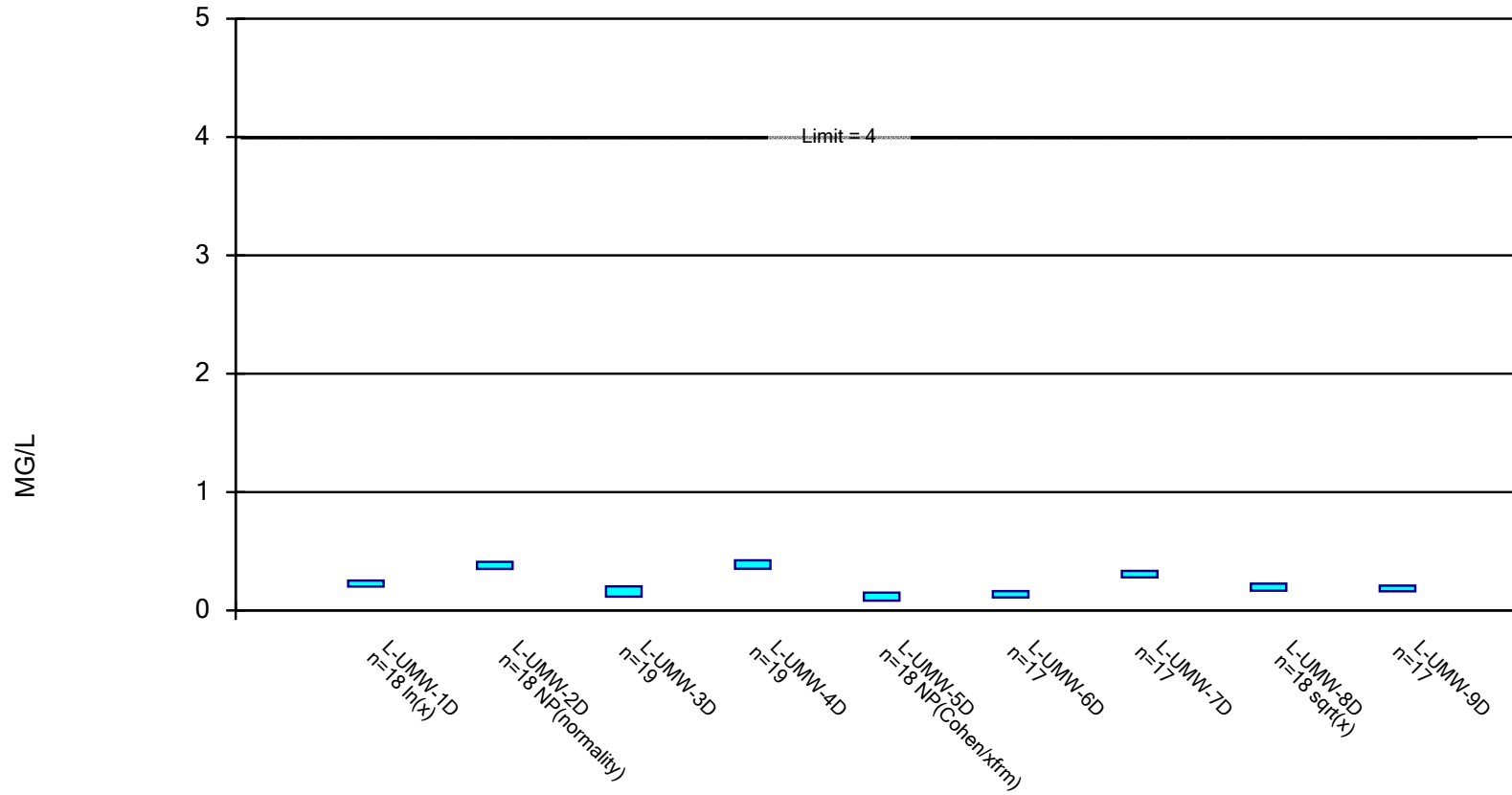
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: COBALT, TOTAL Analysis Run 8/30/2021 1:51 PM
Labadie E.C. Client: Ameren Data: 2021-08-02_April 2021 SSL

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.

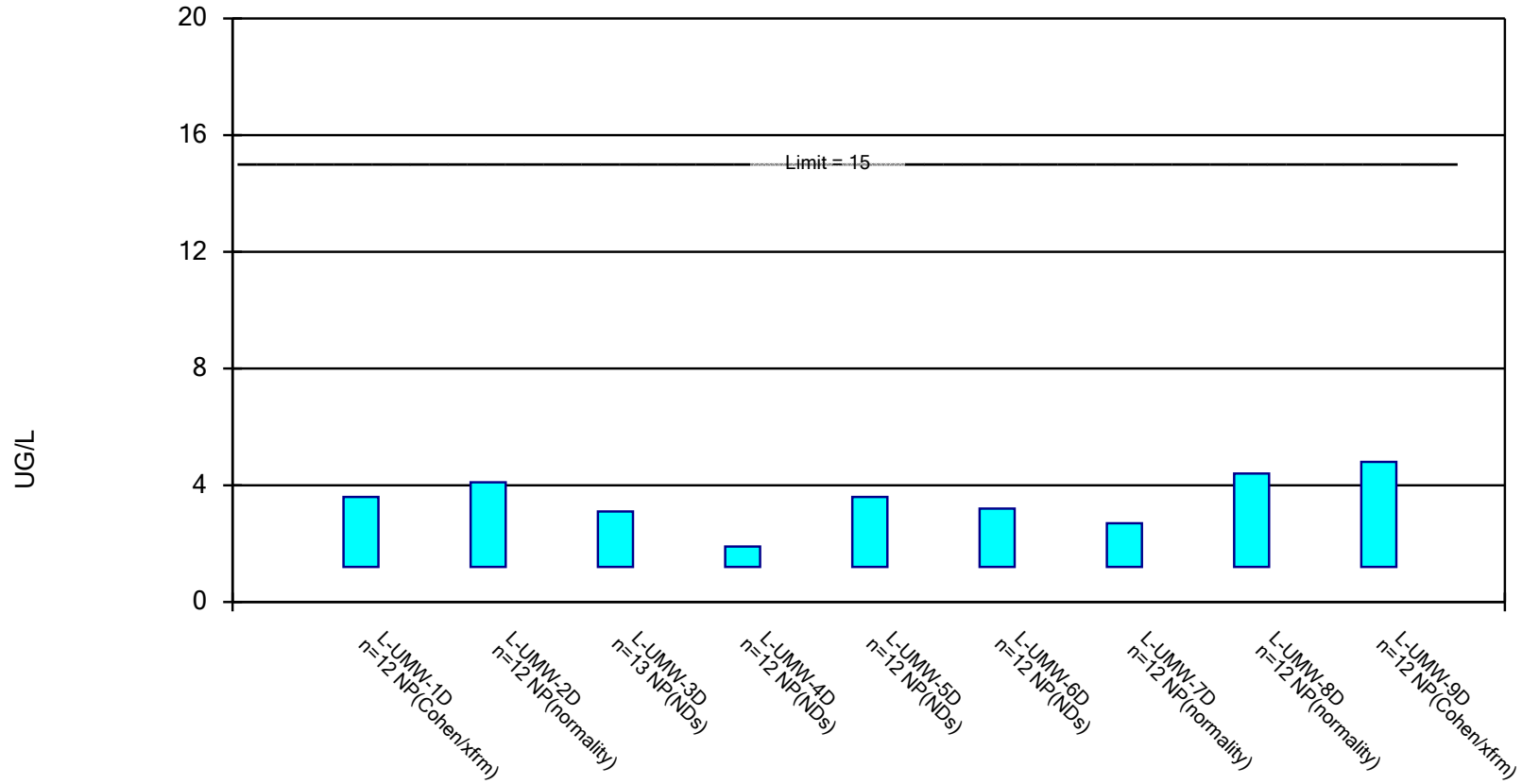


Constituent: FLUORIDE, TOTAL Analysis Run 8/30/2021 1:52 PM

Labadie E.C. Client: Ameren Data: 2021-08-02_April 2021 SSL

Non-Parametric Confidence Interval

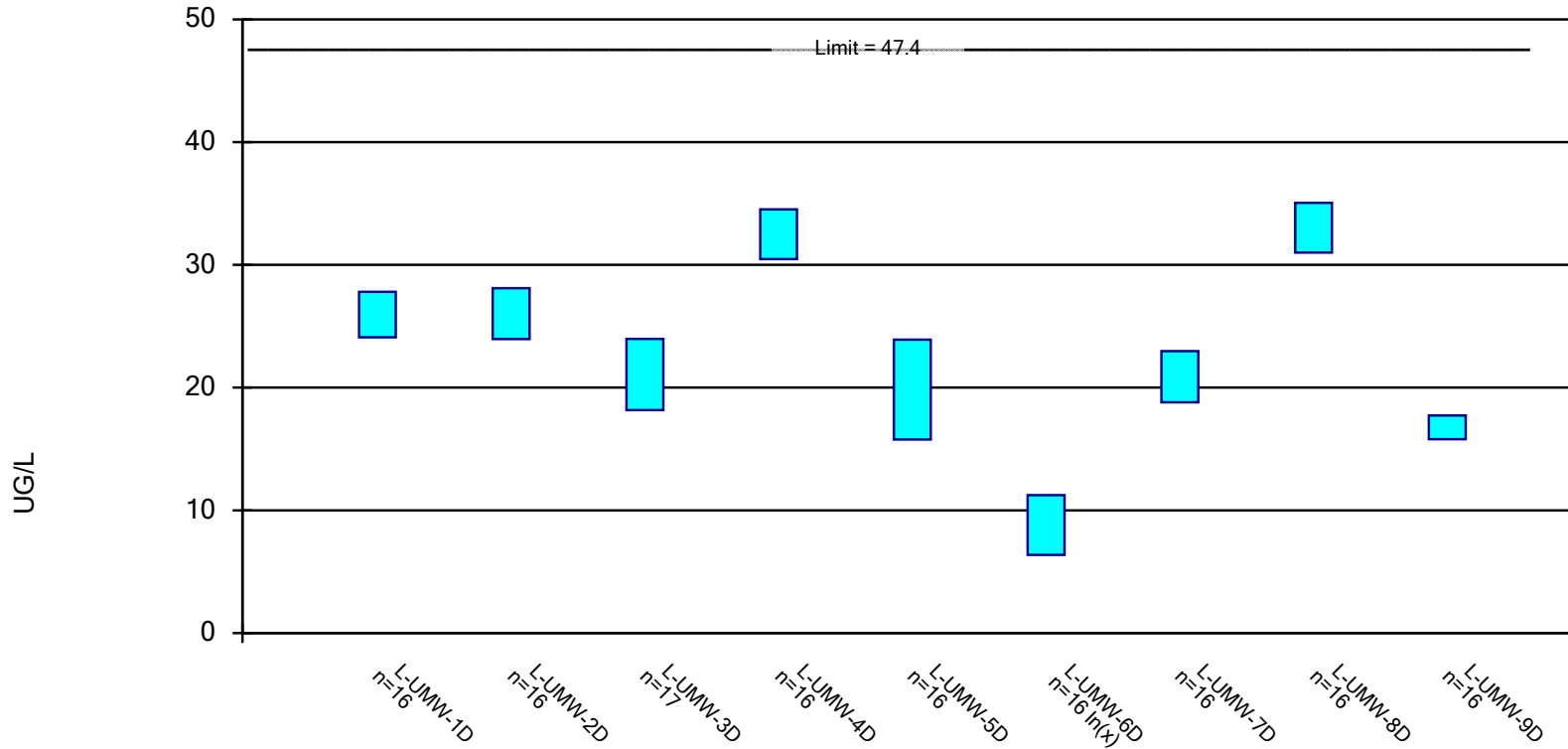
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: LEAD, TOTAL Analysis Run 8/30/2021 1:52 PM
Labadie E.C. Client: Ameren Data: 2021-08-02_April 2021 SSL

Parametric Confidence Interval

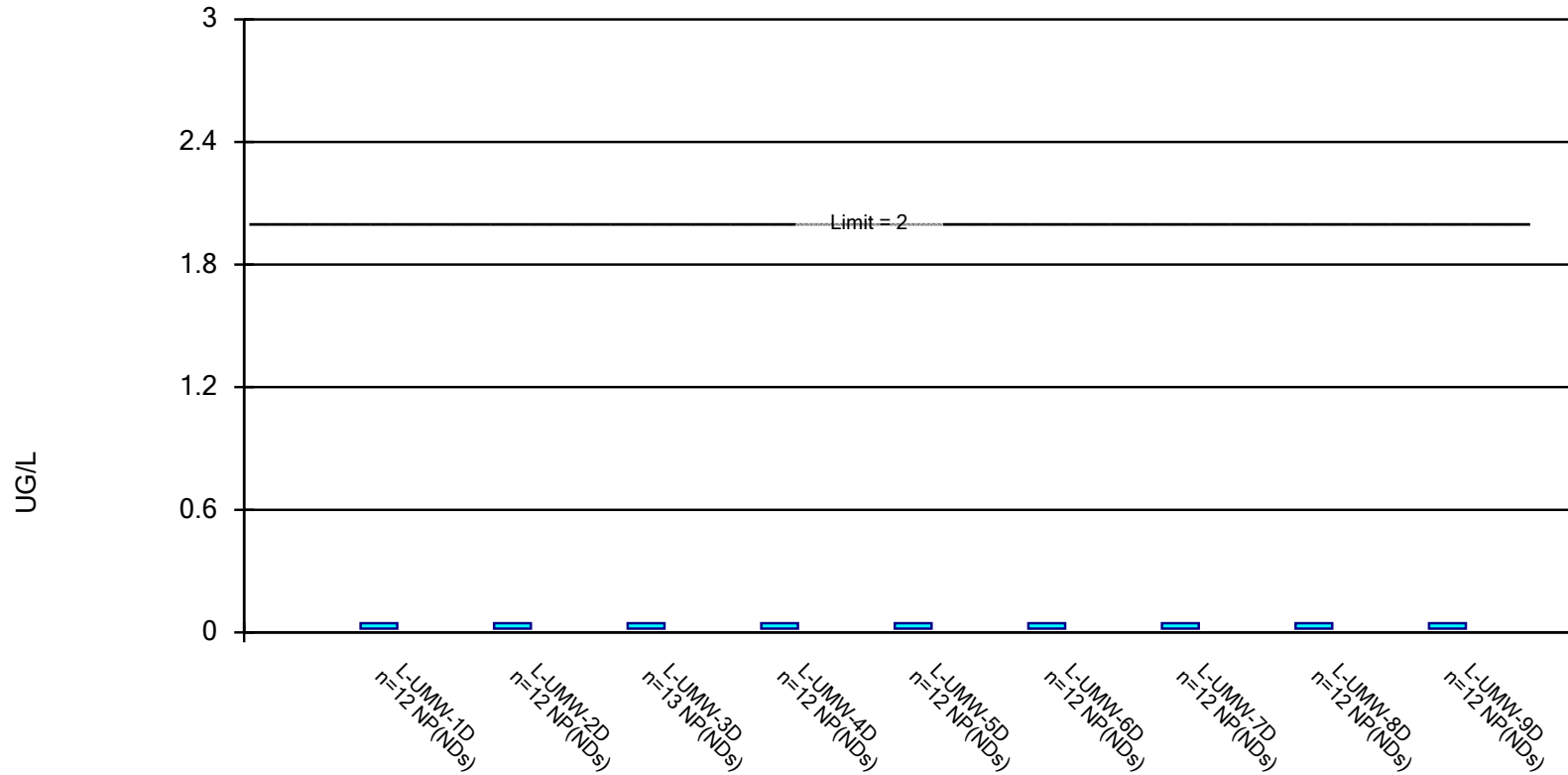
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: LITHIUM, TOTAL Analysis Run 8/30/2021 1:52 PM
Labadie E.C. Client: Ameren Data: 2021-08-02_April 2021 SSL

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.

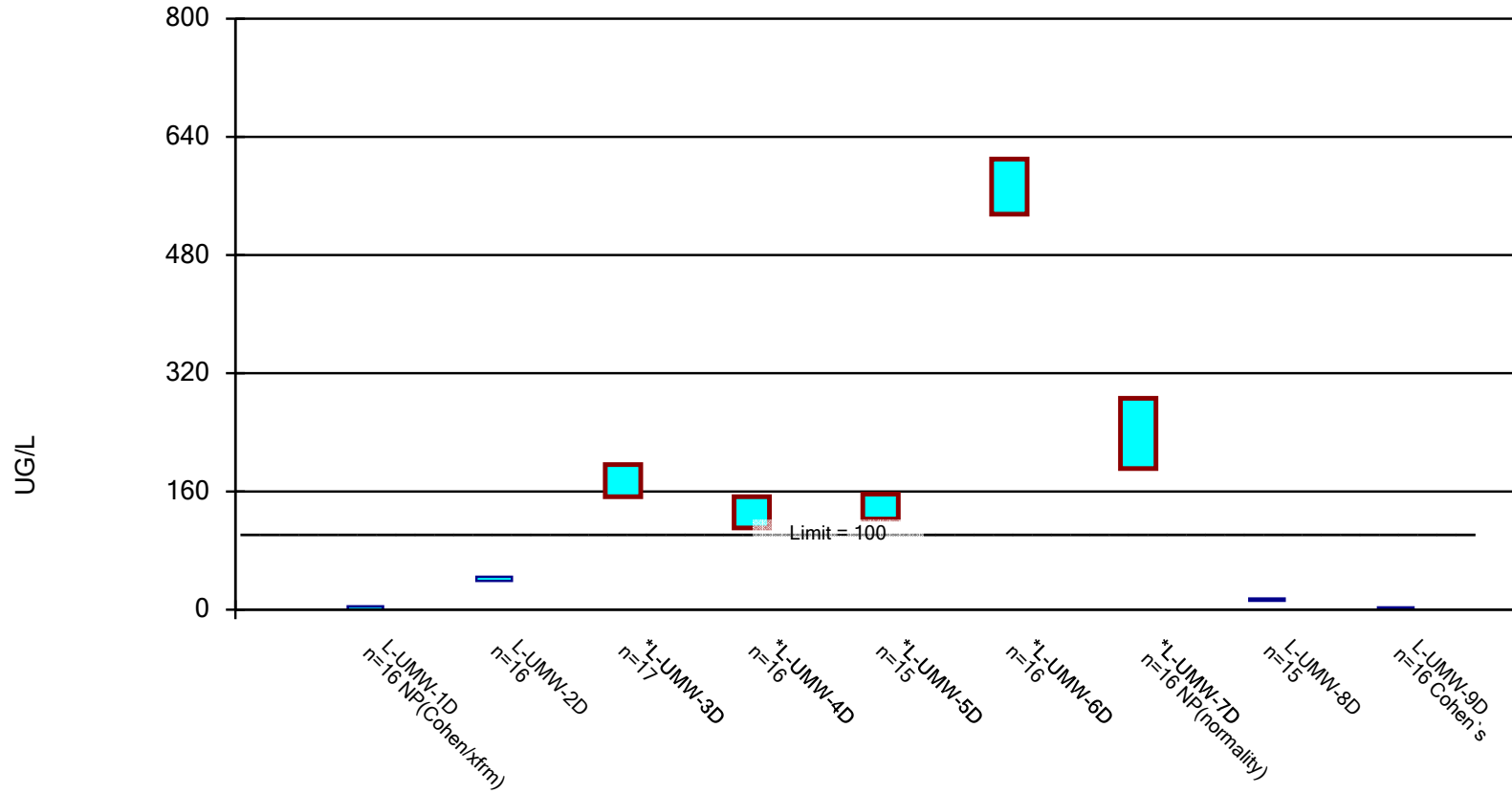


Constituent: MERCURY, TOTAL Analysis Run 8/30/2021 1:52 PM

Labadie E.C. Client: Ameren Data: 2021-08-02_April 2021 SSL

Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

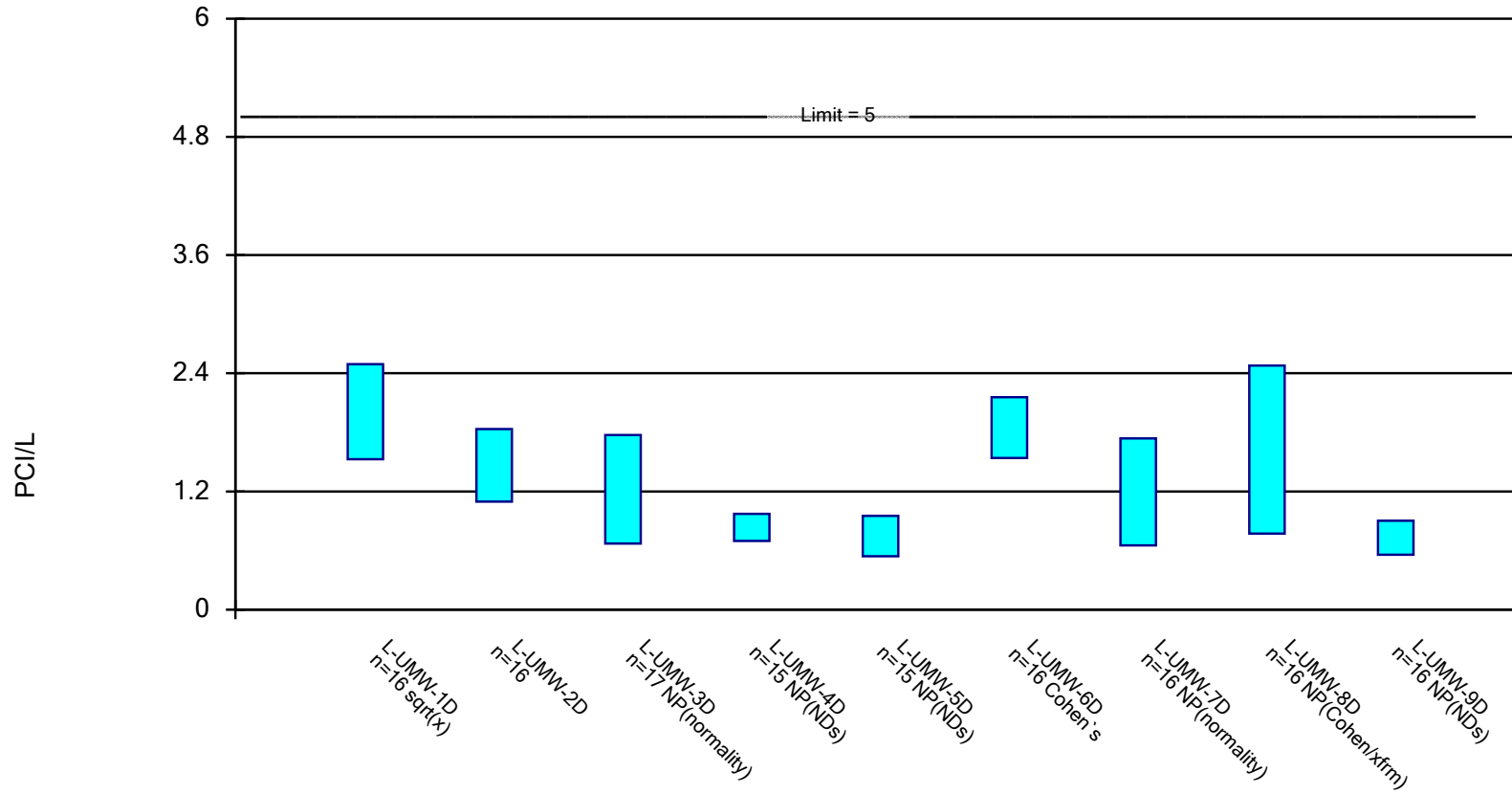


Constituent: MOLYBDENUM, TOTAL Analysis Run 8/30/2021 1:52 PM

Labadie E.C. Client: Ameren Data: 2021-08-02_April 2021 SSL

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.

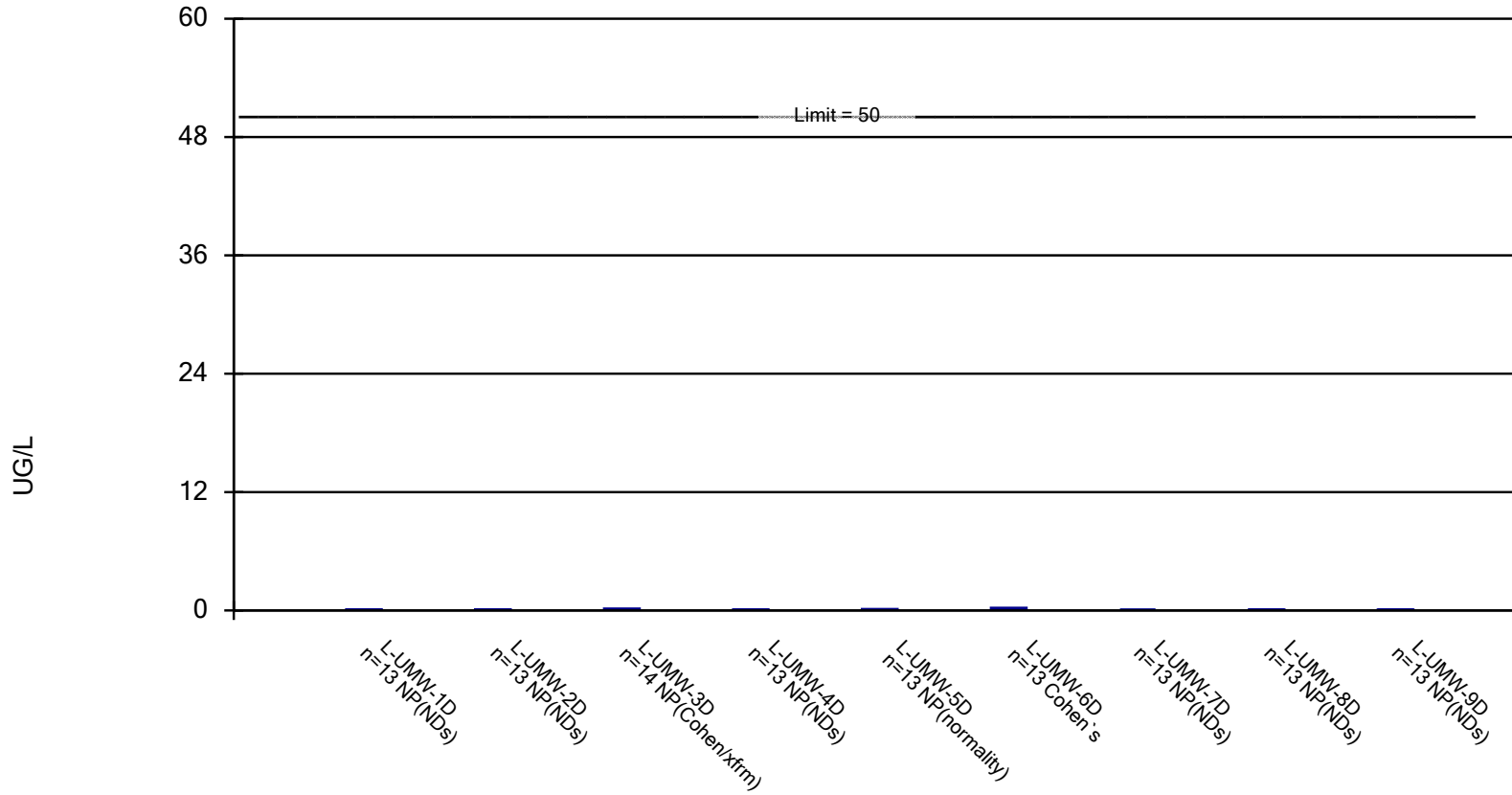


Constituent: Radium [226 + 228] Analysis Run 8/30/2021 1:52 PM

Labadie E.C. Client: Ameren Data: 2021-08-02_April 2021 SSL

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.

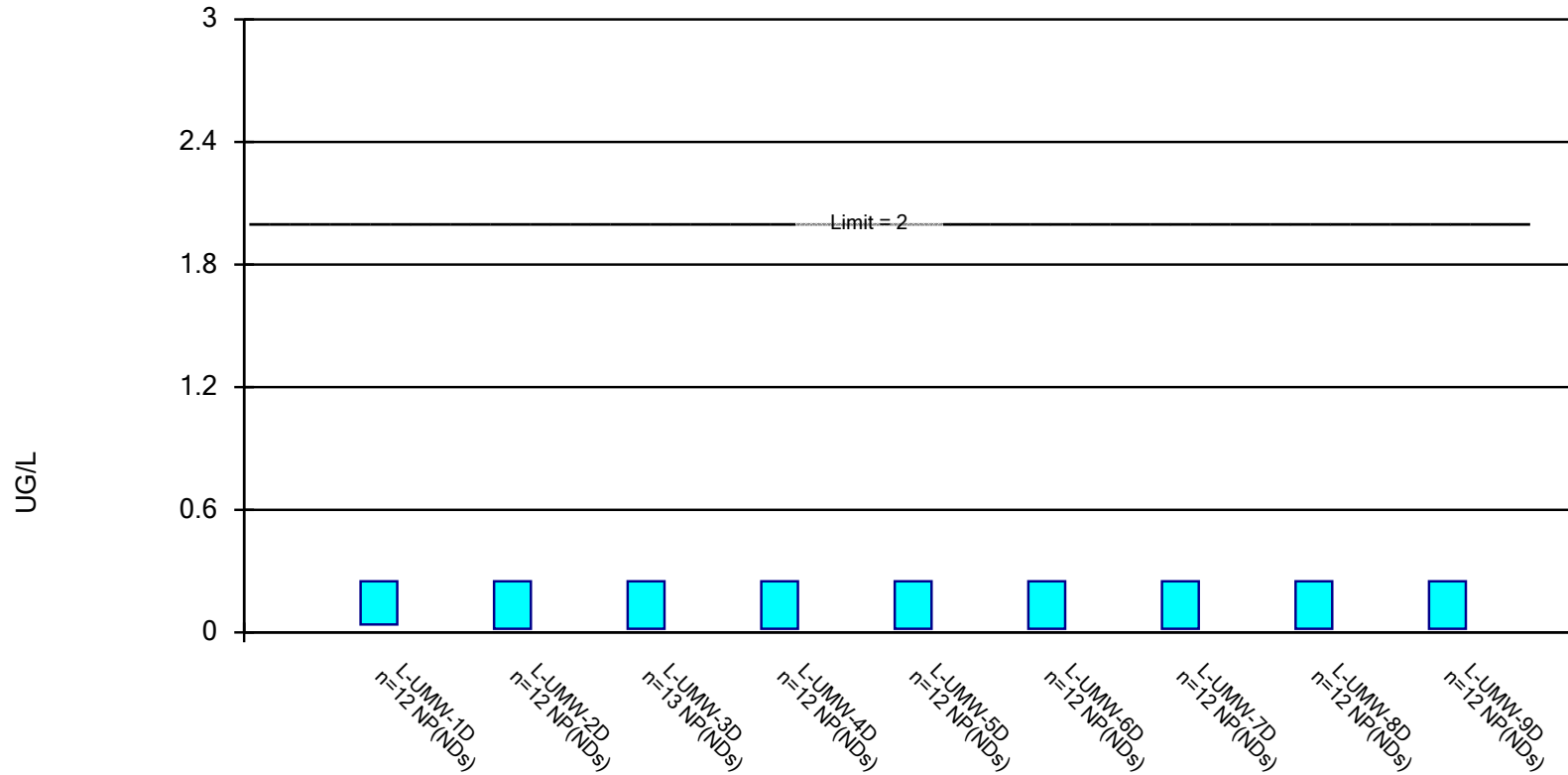


Constituent: SELENIUM, TOTAL Analysis Run 8/30/2021 1:52 PM

Labadie E.C. Client: Ameren Data: 2021-08-02_April 2021 SSL

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: THALLIUM, TOTAL Analysis Run 8/30/2021 1:52 PM

Labadie E.C. Client: Ameren Data: 2021-08-02_April 2021 SSL

Confidence Interval

Labadie E.C. Client: Ameren Data: 2021-08-02_April 2021 SSL Printed 8/30/2021, 1:53 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Compliance</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
ANTIMONY, TOTAL (UG/L)	L-UMW-1D	0.05	0.013	6	No	13	84.62	No	0.01	NP (NDs)
ANTIMONY, TOTAL (UG/L)	L-UMW-2D	0.0485	0.013	6	No	13	100	No	0.01	NP (NDs)
ANTIMONY, TOTAL (UG/L)	L-UMW-3D	0.05	0.013	6	No	14	85.71	No	0.01	NP (NDs)
ANTIMONY, TOTAL (UG/L)	L-UMW-4D	0.05	0.013	6	No	13	92.31	No	0.01	NP (NDs)
ANTIMONY, TOTAL (UG/L)	L-UMW-5D	0.1	0.029	6	No	13	53.85	No	0.01	NP (normality)
ANTIMONY, TOTAL (UG/L)	L-UMW-6D	0.05	0.013	6	No	13	92.31	No	0.01	NP (NDs)
ANTIMONY, TOTAL (UG/L)	L-UMW-7D	0.0485	0.013	6	No	13	100	No	0.01	NP (NDs)
ANTIMONY, TOTAL (UG/L)	L-UMW-8D	0.0485	0.013	6	No	13	100	No	0.01	NP (NDs)
ANTIMONY, TOTAL (UG/L)	L-UMW-9D	0.0485	0.013	6	No	13	92.31	No	0.01	NP (NDs)
ARSENIC, TOTAL (UG/L)	L-UMW-1D	45.5	29.02	44.2	No	16	0	No	0.01	Param.
ARSENIC, TOTAL (UG/L)	L-UMW-2D	2.298	1.677	44.2	No	16	0	No	0.01	Param.
ARSENIC, TOTAL (UG/L)	L-UMW-3D	5.299	0.7235	44.2	No	16	6.25	x^(1/3)	0.01	Param.
ARSENIC, TOTAL (UG/L)	L-UMW-4D	0.397	0.1252	44.2	No	16	25	No	0.01	Param.
ARSENIC, TOTAL (UG/L)	L-UMW-5D	22.47	16.45	44.2	No	16	0	No	0.01	Param.
ARSENIC, TOTAL (UG/L)	L-UMW-6D	20.66	10.52	44.2	No	15	0	sqrt(x)	0.01	Param.
ARSENIC, TOTAL (UG/L)	L-UMW-7D	22.35	16.28	44.2	No	16	0	No	0.01	Param.
ARSENIC, TOTAL (UG/L)	L-UMW-8D	31.46	27.99	44.2	No	16	0	No	0.01	Param.
ARSENIC, TOTAL (UG/L)	L-UMW-9D	34.45	32.86	44.2	No	16	0	No	0.01	Param.
BARIUM, TOTAL (UG/L)	L-UMW-1D	485.1	402.9	2000	No	16	0	No	0.01	Param.
BARIUM, TOTAL (UG/L)	L-UMW-2D	123.5	104.3	2000	No	16	0	No	0.01	Param.
BARIUM, TOTAL (UG/L)	L-UMW-3D	131.1	91.43	2000	No	17	0	No	0.01	Param.
BARIUM, TOTAL (UG/L)	L-UMW-4D	88.7	64.74	2000	No	16	0	No	0.01	Param.
BARIUM, TOTAL (UG/L)	L-UMW-5D	72.54	61.31	2000	No	16	0	No	0.01	Param.
BARIUM, TOTAL (UG/L)	L-UMW-6D	139.9	119.9	2000	No	16	0	No	0.01	Param.
BARIUM, TOTAL (UG/L)	L-UMW-7D	152	107.3	2000	No	16	0	No	0.01	Param.
BARIUM, TOTAL (UG/L)	L-UMW-8D	473.9	430.9	2000	No	16	0	x^5	0.01	Param.
BARIUM, TOTAL (UG/L)	L-UMW-9D	529.3	506.1	2000	No	16	0	No	0.01	Param.
BERYLLIUM, TOTAL (UG/L)	L-UMW-1D	0.195	0.08	4	No	12	100	No	0.01	NP (NDs)
BERYLLIUM, TOTAL (UG/L)	L-UMW-2D	0.195	0.08	4	No	12	100	No	0.01	NP (NDs)
BERYLLIUM, TOTAL (UG/L)	L-UMW-3D	0.195	0.08	4	No	13	100	No	0.01	NP (NDs)
BERYLLIUM, TOTAL (UG/L)	L-UMW-4D	0.195	0.08	4	No	12	100	No	0.01	NP (NDs)
BERYLLIUM, TOTAL (UG/L)	L-UMW-5D	0.195	0.08	4	No	12	100	No	0.01	NP (NDs)
BERYLLIUM, TOTAL (UG/L)	L-UMW-6D	0.195	0.08	4	No	12	100	No	0.01	NP (NDs)
BERYLLIUM, TOTAL (UG/L)	L-UMW-7D	0.245	0.08	4	No	12	91.67	No	0.01	NP (NDs)
BERYLLIUM, TOTAL (UG/L)	L-UMW-8D	0.195	0.08	4	No	12	100	No	0.01	NP (NDs)
BERYLLIUM, TOTAL (UG/L)	L-UMW-9D	0.195	0.08	4	No	12	100	No	0.01	NP (NDs)
CADMIUM, TOTAL (UG/L)	L-UMW-1D	0.028	0.009	5	No	12	100	No	0.01	NP (NDs)
CADMIUM, TOTAL (UG/L)	L-UMW-2D	0.028	0.009	5	No	12	100	No	0.01	NP (NDs)
CADMIUM, TOTAL (UG/L)	L-UMW-3D	0.082	0.009	5	No	13	69.23	No	0.01	NP (normality)
CADMIUM, TOTAL (UG/L)	L-UMW-4D	0.031	0.009	5	No	12	91.67	No	0.01	NP (NDs)
CADMIUM, TOTAL (UG/L)	L-UMW-5D	0.06	0.009	5	No	12	83.33	No	0.01	NP (NDs)
CADMIUM, TOTAL (UG/L)	L-UMW-6D	0.2	0.009	5	No	12	66.67	No	0.01	NP (normality)
CADMIUM, TOTAL (UG/L)	L-UMW-7D	0.082	0.009	5	No	12	83.33	No	0.01	NP (NDs)
CADMIUM, TOTAL (UG/L)	L-UMW-8D	0.028	0.009	5	No	12	100	No	0.01	NP (NDs)
CADMIUM, TOTAL (UG/L)	L-UMW-9D	0.028	0.009	5	No	12	100	No	0.01	NP (NDs)
CHROMIUM, TOTAL (UG/L)	L-UMW-1D	0.2793	0.07803	100	No	12	58.33	No	0.01	Param.
CHROMIUM, TOTAL (UG/L)	L-UMW-2D	0.5	0.027	100	No	13	76.92	No	0.01	NP (NDs)
CHROMIUM, TOTAL (UG/L)	L-UMW-3D	0.37	0.039	100	No	14	78.57	No	0.01	NP (NDs)
CHROMIUM, TOTAL (UG/L)	L-UMW-4D	0.49	0.039	100	No	12	66.67	No	0.01	NP (Cohens/xfrm)
CHROMIUM, TOTAL (UG/L)	L-UMW-5D	0.54	0.039	100	No	13	76.92	No	0.01	NP (NDs)

Confidence Interval

Labadie E.C. Client: Ameren Data: 2021-08-02_April 2021 SSL Printed 8/30/2021, 1:53 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
CHROMIUM, TOTAL (UG/L)	L-UMW-6D	0.4633	0.09703	100	No	13	53.85	No	0.01	Param.
CHROMIUM, TOTAL (UG/L)	L-UMW-7D	0.5318	0.1188	100	No	13	53.85	No	0.01	Param.
CHROMIUM, TOTAL (UG/L)	L-UMW-8D	0.62	0.039	100	No	13	61.54	No	0.01	NP (Cohens/xfrm)
CHROMIUM, TOTAL (UG/L)	L-UMW-9D	0.65	0.039	100	No	13	76.92	No	0.01	NP (NDs)
COBALT, TOTAL (UG/L)	L-UMW-1D	0.475	0.36	6	No	12	100	No	0.01	NP (NDs)
COBALT, TOTAL (UG/L)	L-UMW-2D	0.475	0.36	6	No	12	100	No	0.01	NP (NDs)
COBALT, TOTAL (UG/L)	L-UMW-3D	0.475	0.36	6	No	13	100	No	0.01	NP (NDs)
COBALT, TOTAL (UG/L)	L-UMW-4D	0.475	0.36	6	No	12	100	No	0.01	NP (NDs)
COBALT, TOTAL (UG/L)	L-UMW-5D	0.475	0.36	6	No	12	100	No	0.01	NP (NDs)
COBALT, TOTAL (UG/L)	L-UMW-6D	0.475	0.36	6	No	12	100	No	0.01	NP (NDs)
COBALT, TOTAL (UG/L)	L-UMW-7D	0.475	0.36	6	No	12	100	No	0.01	NP (NDs)
COBALT, TOTAL (UG/L)	L-UMW-8D	0.75	0.36	6	No	12	91.67	No	0.01	NP (NDs)
COBALT, TOTAL (UG/L)	L-UMW-9D	0.475	0.36	6	No	12	100	No	0.01	NP (NDs)
FLUORIDE, TOTAL (MG/L)	L-UMW-1D	0.2523	0.2018	4	No	18	0	ln(x)	0.01	Param.
FLUORIDE, TOTAL (MG/L)	L-UMW-2D	0.41	0.35	4	No	18	0	No	0.01	NP (normality)
FLUORIDE, TOTAL (MG/L)	L-UMW-3D	0.2034	0.1158	4	No	19	21.05	No	0.01	Param.
FLUORIDE, TOTAL (MG/L)	L-UMW-4D	0.4231	0.3516	4	No	19	0	No	0.01	Param.
FLUORIDE, TOTAL (MG/L)	L-UMW-5D	0.15	0.082	4	No	18	16.67	No	0.01	NP (Cohens/xfrm)
FLUORIDE, TOTAL (MG/L)	L-UMW-6D	0.163	0.1098	4	No	17	11.76	No	0.01	Param.
FLUORIDE, TOTAL (MG/L)	L-UMW-7D	0.3341	0.28	4	No	17	0	No	0.01	Param.
FLUORIDE, TOTAL (MG/L)	L-UMW-8D	0.2265	0.1665	4	No	18	0	sqrt(x)	0.01	Param.
FLUORIDE, TOTAL (MG/L)	L-UMW-9D	0.2096	0.1621	4	No	17	0	No	0.01	Param.
LEAD, TOTAL (UG/L)	L-UMW-1D	3.6	1.2	15	No	12	66.67	No	0.01	NP (Cohens/xfrm)
LEAD, TOTAL (UG/L)	L-UMW-2D	4.1	1.2	15	No	12	75	No	0.01	NP (normality)
LEAD, TOTAL (UG/L)	L-UMW-3D	3.1	1.2	15	No	13	76.92	No	0.01	NP (NDs)
LEAD, TOTAL (UG/L)	L-UMW-4D	1.9	1.2	15	No	12	100	No	0.01	NP (NDs)
LEAD, TOTAL (UG/L)	L-UMW-5D	3.6	1.2	15	No	12	83.33	No	0.01	NP (NDs)
LEAD, TOTAL (UG/L)	L-UMW-6D	3.2	1.2	15	No	12	83.33	No	0.01	NP (NDs)
LEAD, TOTAL (UG/L)	L-UMW-7D	2.7	1.2	15	No	12	75	No	0.01	NP (normality)
LEAD, TOTAL (UG/L)	L-UMW-8D	4.4	1.2	15	No	12	75	No	0.01	NP (normality)
LEAD, TOTAL (UG/L)	L-UMW-9D	4.8	1.2	15	No	12	50	No	0.01	NP (Cohens/xfrm)
LITHIUM, TOTAL (UG/L)	L-UMW-1D	27.81	24.09	47.4	No	16	0	No	0.01	Param.
LITHIUM, TOTAL (UG/L)	L-UMW-2D	28.09	23.96	47.4	No	16	0	No	0.01	Param.
LITHIUM, TOTAL (UG/L)	L-UMW-3D	23.97	18.16	47.4	No	17	0	No	0.01	Param.
LITHIUM, TOTAL (UG/L)	L-UMW-4D	34.52	30.46	47.4	No	16	0	No	0.01	Param.
LITHIUM, TOTAL (UG/L)	L-UMW-5D	23.9	15.76	47.4	No	16	0	No	0.01	Param.
LITHIUM, TOTAL (UG/L)	L-UMW-6D	11.23	6.368	47.4	No	16	0	ln(x)	0.01	Param.
LITHIUM, TOTAL (UG/L)	L-UMW-7D	22.97	18.8	47.4	No	16	0	No	0.01	Param.
LITHIUM, TOTAL (UG/L)	L-UMW-8D	35.05	31	47.4	No	16	0	No	0.01	Param.
LITHIUM, TOTAL (UG/L)	L-UMW-9D	17.73	15.79	47.4	No	16	0	No	0.01	Param.
MERCURY, TOTAL (UG/L)	L-UMW-1D	0.045	0.0185	2	No	12	100	No	0.01	NP (NDs)
MERCURY, TOTAL (UG/L)	L-UMW-2D	0.045	0.0185	2	No	12	100	No	0.01	NP (NDs)
MERCURY, TOTAL (UG/L)	L-UMW-3D	0.045	0.0185	2	No	13	100	No	0.01	NP (NDs)
MERCURY, TOTAL (UG/L)	L-UMW-4D	0.045	0.0185	2	No	12	100	No	0.01	NP (NDs)
MERCURY, TOTAL (UG/L)	L-UMW-5D	0.045	0.0185	2	No	12	100	No	0.01	NP (NDs)
MERCURY, TOTAL (UG/L)	L-UMW-6D	0.045	0.0185	2	No	12	100	No	0.01	NP (NDs)
MERCURY, TOTAL (UG/L)	L-UMW-7D	0.045	0.0185	2	No	12	100	No	0.01	NP (NDs)
MERCURY, TOTAL (UG/L)	L-UMW-8D	0.045	0.0185	2	No	12	100	No	0.01	NP (NDs)
MERCURY, TOTAL (UG/L)	L-UMW-9D	0.045	0.0185	2	No	12	100	No	0.01	NP (NDs)
MOLYBDENUM, TOTAL (UG/L)	L-UMW-1D	4.5	0.45	100	No	16	25	No	0.01	NP (Cohens/xfrm)

Confidence Interval

Labadie E.C. Client: Ameren Data: 2021-08-02_April 2021 SSL Printed 8/30/2021, 1:53 PM

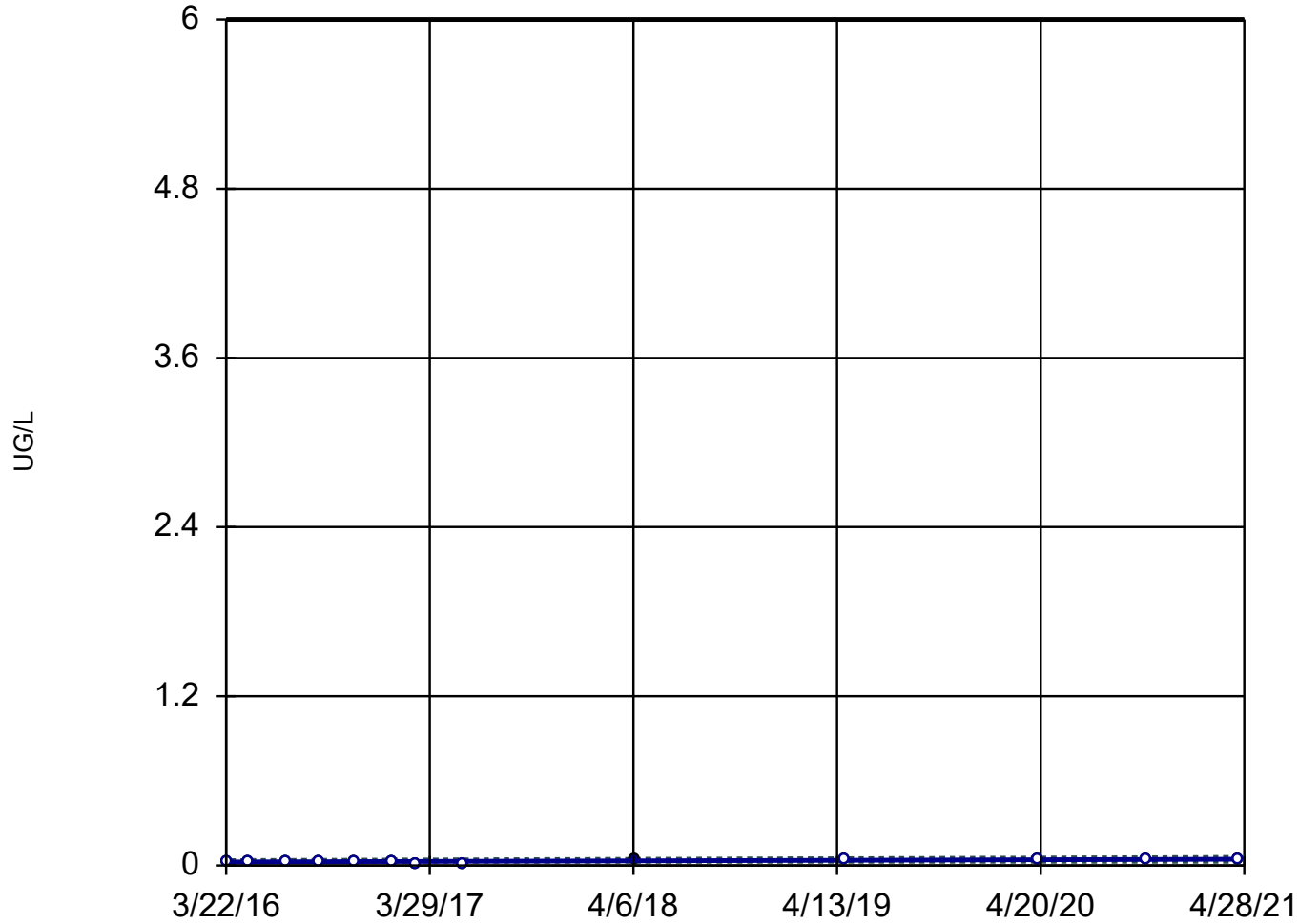
<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Compliance</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
MOLYBDENUM, TOTAL (UG/L)	L-UMW-2D	44.43	38.92	100	No	16	0	No	0.01	Param.
MOLYBDENUM, TOTAL (UG/L)	L-UMW-3D	196.5	153	100	Yes	17	0	No	0.01	Param.
MOLYBDENUM, TOTAL (UG/L)	L-UMW-4D	152.8	110.6	100	Yes	16	0	No	0.01	Param.
MOLYBDENUM, TOTAL (UG/L)	L-UMW-5D	156.3	122.6	100	Yes	15	0	No	0.01	Param.
MOLYBDENUM, TOTAL (UG/L)	L-UMW-6D	609.9	535.3	100	Yes	16	0	No	0.01	Param.
MOLYBDENUM, TOTAL (UG/L)	L-UMW-7D	286	191	100	Yes	16	0	No	0.01	NP (normality)
MOLYBDENUM, TOTAL (UG/L)	L-UMW-8D	15.14	11.89	100	No	15	0	No	0.01	Param.
MOLYBDENUM, TOTAL (UG/L)	L-UMW-9D	3.076	1.741	100	No	16	43.75	No	0.01	Param.
Radium [226 + 228] (PCI/L)	L-UMW-1D	2.492	1.527	5	No	16	12.5	sqrt(x)	0.01	Param.
Radium [226 + 228] (PCI/L)	L-UMW-2D	1.833	1.097	5	No	16	37.5	No	0.01	Param.
Radium [226 + 228] (PCI/L)	L-UMW-3D	1.772	0.6715	5	No	17	70.59	No	0.01	NP (normality)
Radium [226 + 228] (PCI/L)	L-UMW-4D	0.973	0.697	5	No	15	86.67	No	0.01	NP (NDs)
Radium [226 + 228] (PCI/L)	L-UMW-5D	0.952	0.542	5	No	15	100	No	0.01	NP (NDs)
Radium [226 + 228] (PCI/L)	L-UMW-6D	2.157	1.54	5	No	16	50	No	0.01	Param.
Radium [226 + 228] (PCI/L)	L-UMW-7D	1.738	0.6525	5	No	16	75	No	0.01	NP (normality)
Radium [226 + 228] (PCI/L)	L-UMW-8D	2.478	0.7715	5	No	16	37.5	No	0.01	NP (Cohens/xfrm)
Radium [226 + 228] (PCI/L)	L-UMW-9D	0.9025	0.5575	5	No	16	87.5	No	0.01	NP (NDs)
SELENIUM, TOTAL (UG/L)	L-UMW-1D	0.11	0.043	50	No	13	92.31	No	0.01	NP (NDs)
SELENIUM, TOTAL (UG/L)	L-UMW-2D	0.11	0.043	50	No	13	92.31	No	0.01	NP (NDs)
SELENIUM, TOTAL (UG/L)	L-UMW-3D	0.19	0.043	50	No	14	57.14	No	0.01	NP (Cohens/xfrm)
SELENIUM, TOTAL (UG/L)	L-UMW-4D	0.09	0.043	50	No	13	100	No	0.01	NP (NDs)
SELENIUM, TOTAL (UG/L)	L-UMW-5D	0.14	0.09	50	No	13	69.23	No	0.01	NP (normality)
SELENIUM, TOTAL (UG/L)	L-UMW-6D	0.2657	0.1847	50	No	13	23.08	No	0.01	Param.
SELENIUM, TOTAL (UG/L)	L-UMW-7D	0.091	0.089	50	No	13	76.92	No	0.01	NP (NDs)
SELENIUM, TOTAL (UG/L)	L-UMW-8D	0.09	0.043	50	No	13	92.31	No	0.01	NP (NDs)
SELENIUM, TOTAL (UG/L)	L-UMW-9D	0.09	0.043	50	No	13	100	No	0.01	NP (NDs)
THALLIUM, TOTAL (UG/L)	L-UMW-1D	0.25	0.039	2	No	12	83.33	No	0.01	NP (NDs)
THALLIUM, TOTAL (UG/L)	L-UMW-2D	0.25	0.018	2	No	12	100	No	0.01	NP (NDs)
THALLIUM, TOTAL (UG/L)	L-UMW-3D	0.25	0.018	2	No	13	100	No	0.01	NP (NDs)
THALLIUM, TOTAL (UG/L)	L-UMW-4D	0.25	0.018	2	No	12	100	No	0.01	NP (NDs)
THALLIUM, TOTAL (UG/L)	L-UMW-5D	0.25	0.018	2	No	12	100	No	0.01	NP (NDs)
THALLIUM, TOTAL (UG/L)	L-UMW-6D	0.25	0.018	2	No	12	91.67	No	0.01	NP (NDs)
THALLIUM, TOTAL (UG/L)	L-UMW-7D	0.25	0.018	2	No	12	100	No	0.01	NP (NDs)
THALLIUM, TOTAL (UG/L)	L-UMW-8D	0.25	0.018	2	No	12	100	No	0.01	NP (NDs)
THALLIUM, TOTAL (UG/L)	L-UMW-9D	0.25	0.018	2	No	12	100	No	0.01	NP (NDs)

APPENDIX B

**Sanitas Trending Confidence
Bands Statistical Output**

Sen's Slope and 95% Confidence Band

L-UMW-9D



n = 13

Slope = 0.003793
units per year.

Mann-Kendall
statistic = 37
critical = 34

Increasing trend
significant at 95%
confidence level
($\alpha = 0.025$ per
tail).

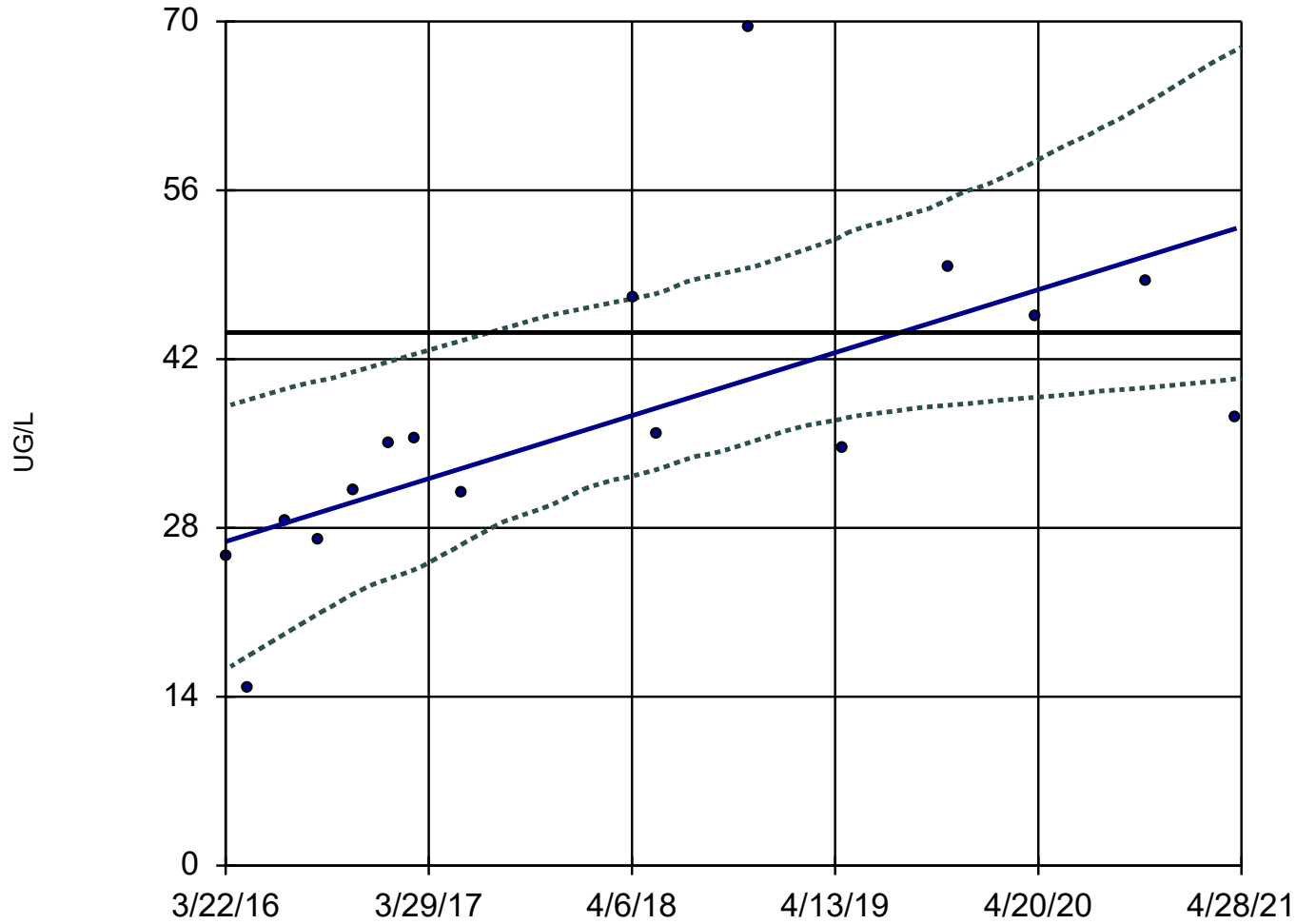
GWPS = 6.

Constituent: ANTIMONY, TOTAL Analysis Run 8/30/2021 1:45 PM

Labadie E.C. Client: Ameren Data: 2021-08-02_April 2021 SSL

Sen's Slope and 95% Confidence Band

L-UMW-1D



n = 16

Slope = 5.116
units per year.

Mann-Kendall
statistic = 76
critical = 45

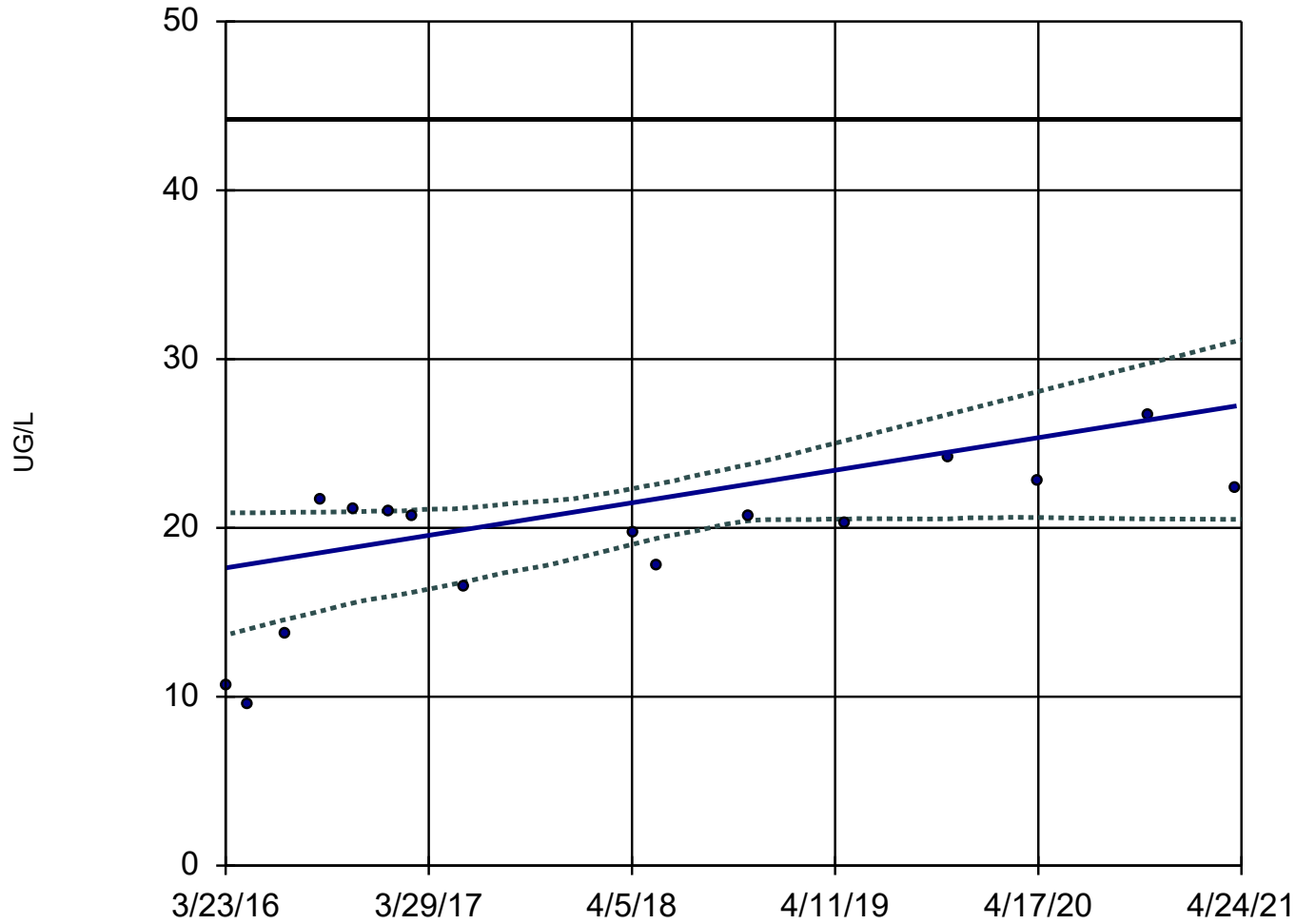
Increasing trend
significant at 95%
confidence level
($\alpha = 0.025$ per
tail).

GWPS = 44.2.

Constituent: ARSENIC, TOTAL Analysis Run 8/30/2021 1:45 PM
Labadie E.C. Client: Ameren Data: 2021-08-02_April 2021 SSL

Sen's Slope and 95% Confidence Band

L-UMW-7D



n = 16

Slope = 1.893
units per year.

Mann-Kendall
statistic = 55
critical = 45

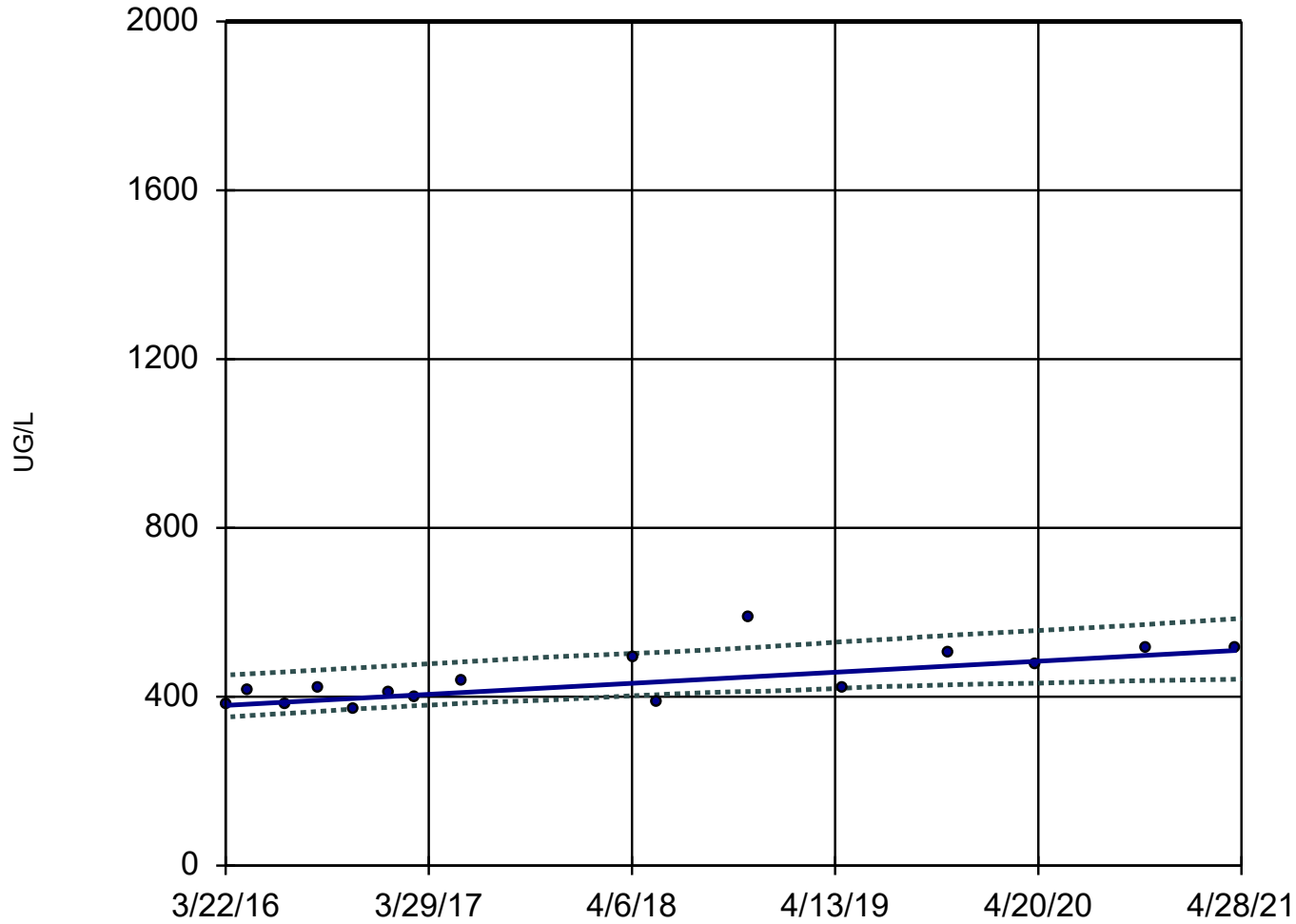
Increasing trend
significant at 95%
confidence level
($\alpha = 0.025$ per
tail).

GWPS = 44.2.

Constituent: ARSENIC, TOTAL Analysis Run 8/30/2021 1:45 PM
Labadie E.C. Client: Ameren Data: 2021-08-02_April 2021 SSL

Sen's Slope and 95% Confidence Band

L-UMW-1D



n = 16

Slope = 25.62
units per year.

Mann-Kendall
statistic = 68
critical = 45

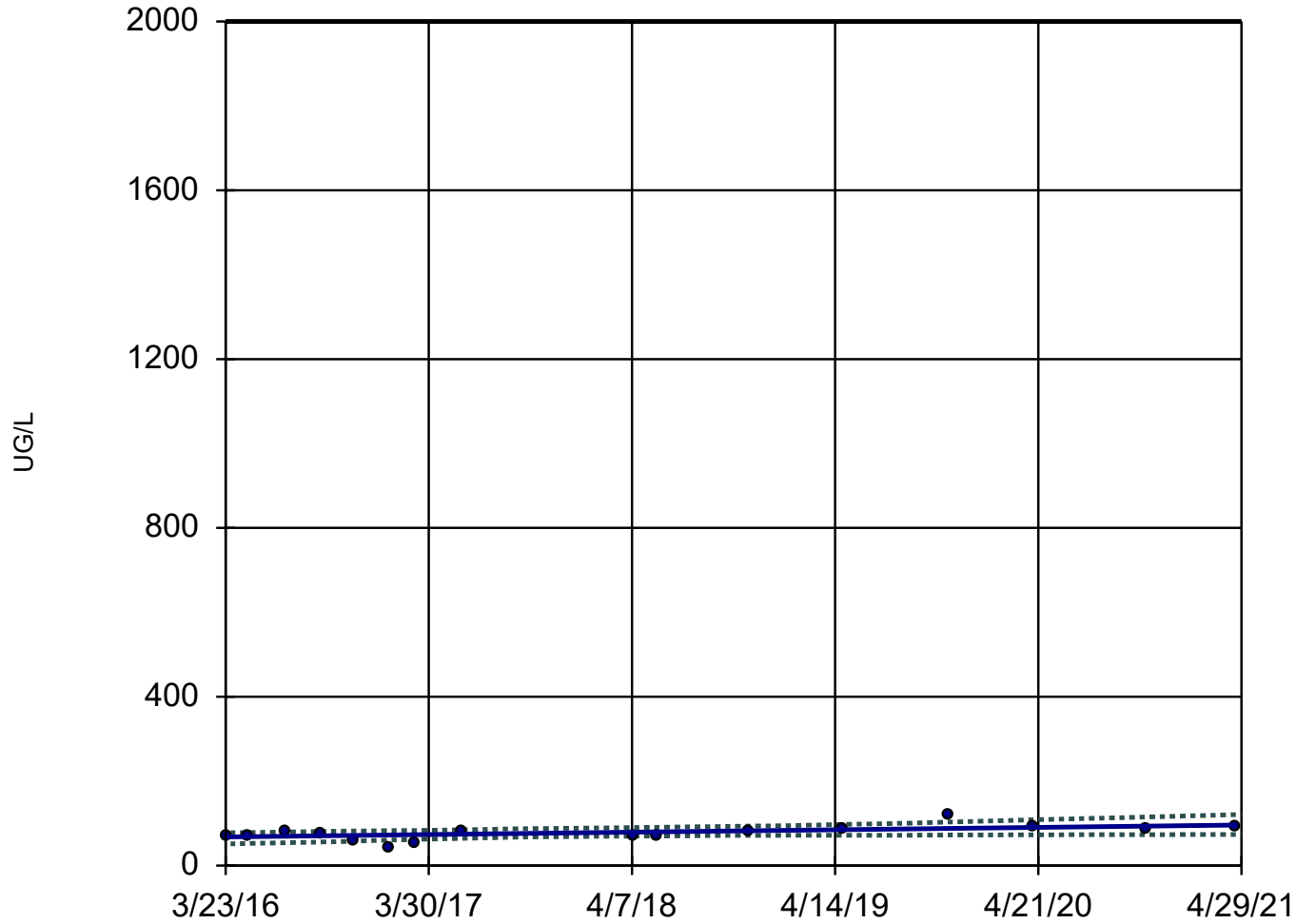
Increasing trend
significant at 95%
confidence level
($\alpha = 0.025$ per
tail).

GWPS = 2000.

Constituent: BARIUM, TOTAL Analysis Run 8/30/2021 1:46 PM
Labadie E.C. Client: Ameren Data: 2021-08-02_April 2021 SSL

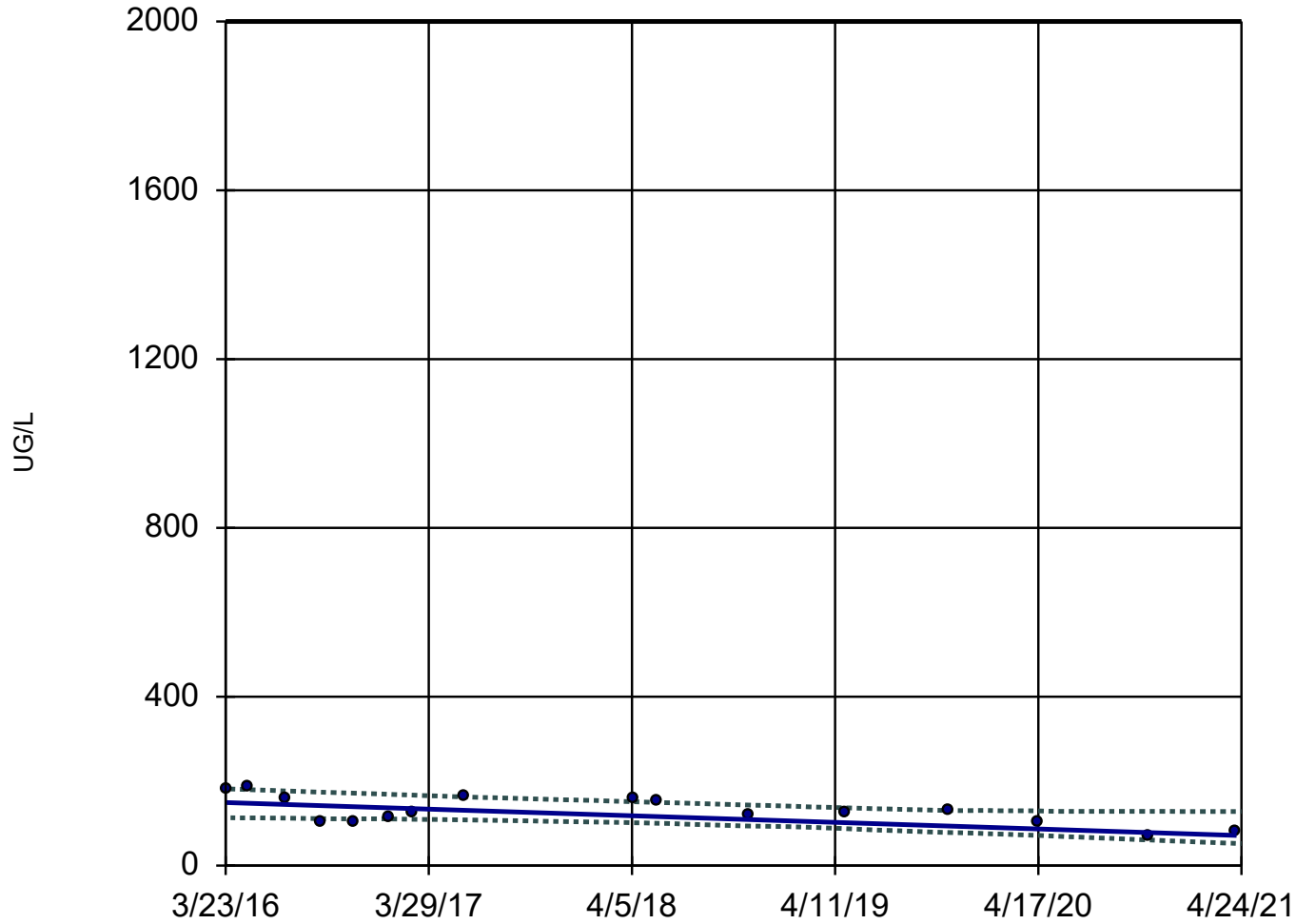
Sen's Slope and 95% Confidence Band

L-UMW-4D



Sen's Slope and 95% Confidence Band

L-UMW-7D



n = 16

Slope = -15.33
units per year.

Mann-Kendall
statistic = -50
critical = -45

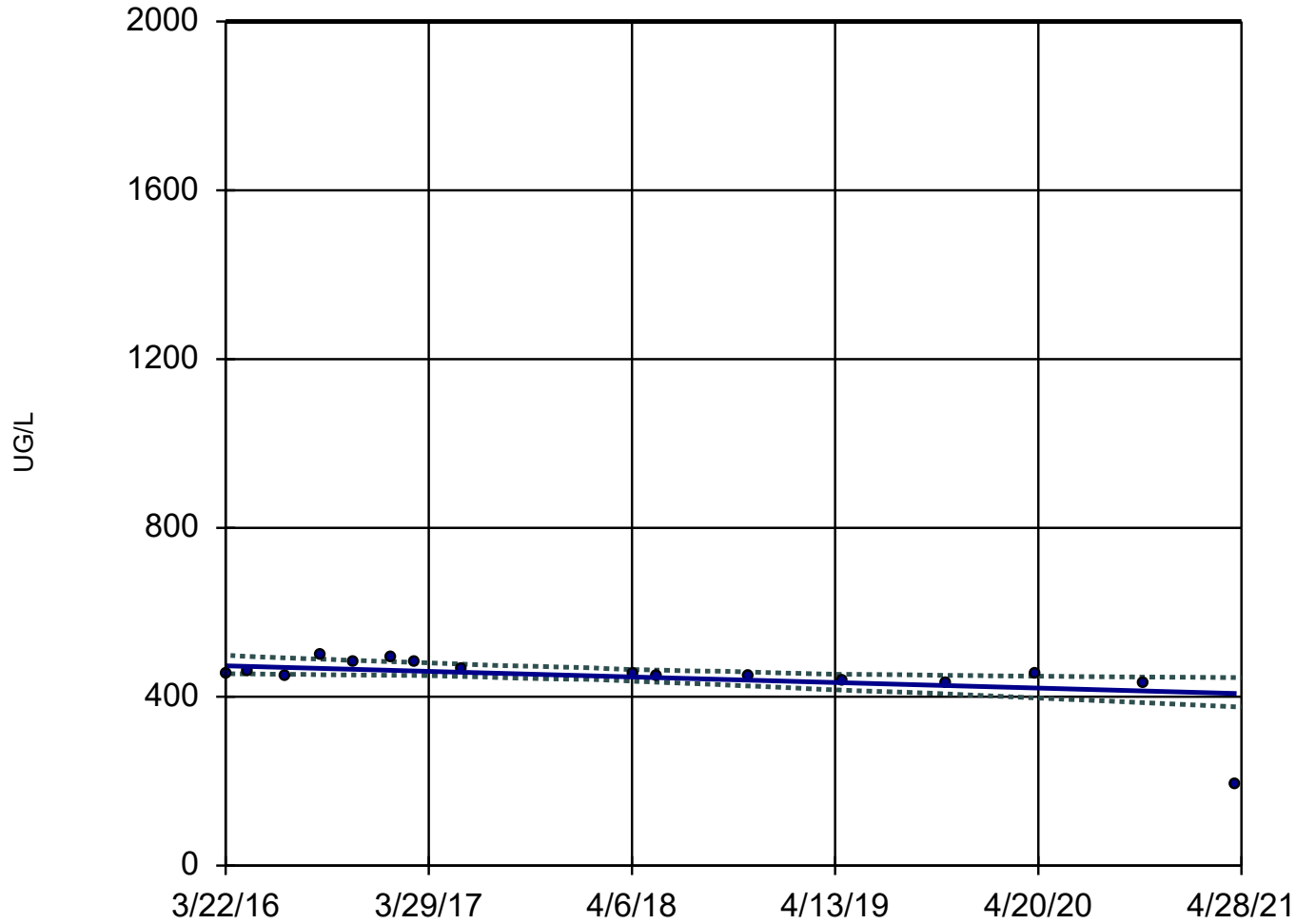
Decreasing trend
significant at 95%
confidence level
($\alpha = 0.025$ per
tail).

GWPS = 2000.

Constituent: BARIUM, TOTAL Analysis Run 8/30/2021 1:46 PM
Labadie E.C. Client: Ameren Data: 2021-08-02_April 2021 SSL

Sen's Slope and 95% Confidence Band

L-UMW-8D



n = 16

Slope = -12.9
units per year.

Mann-Kendall
statistic = -67
critical = -45

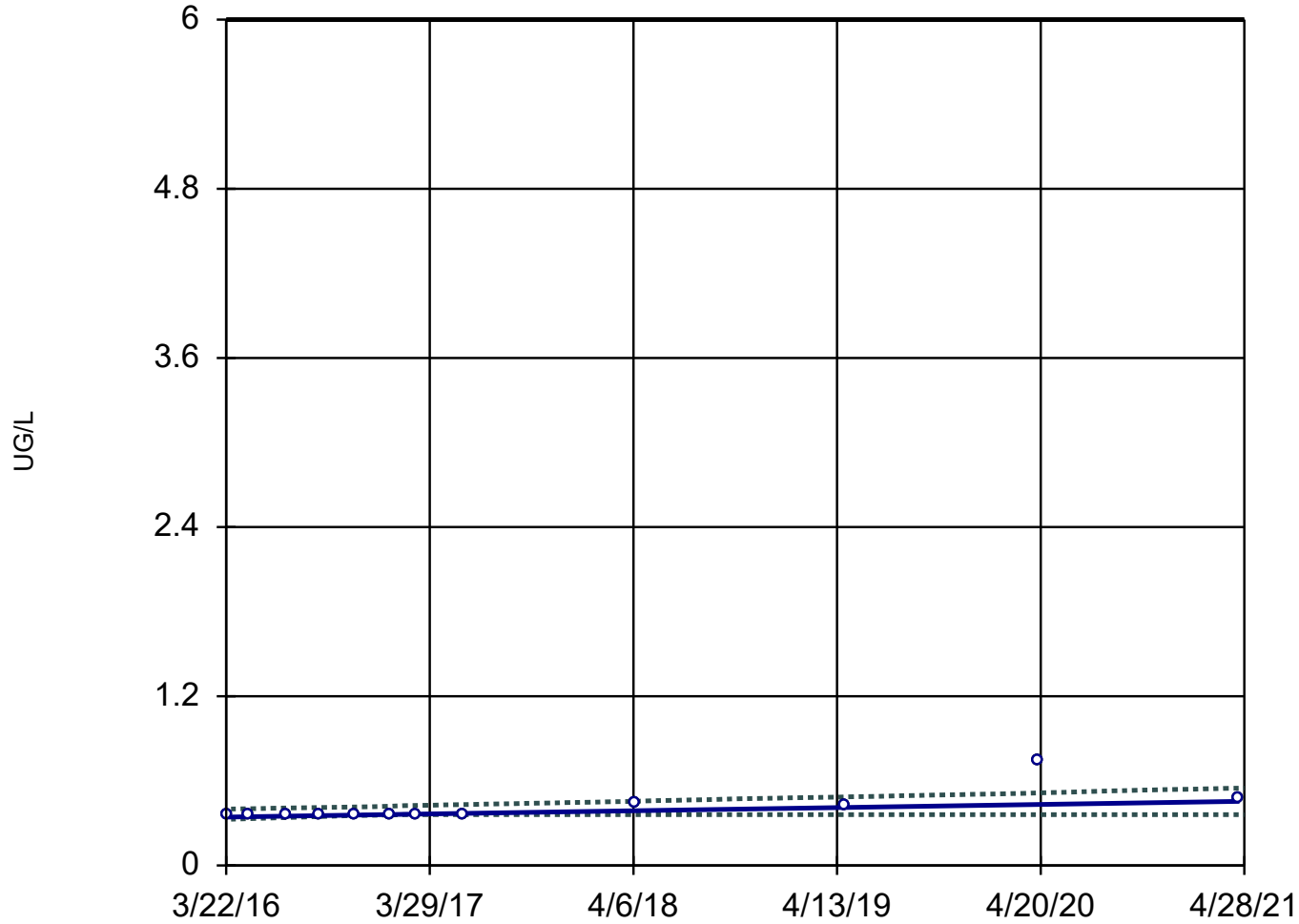
Decreasing trend
significant at 95%
confidence level
($\alpha = 0.025$ per
tail).

GWPS = 2000.

Constituent: BARIUM, TOTAL Analysis Run 8/30/2021 1:46 PM
Labadie E.C. Client: Ameren Data: 2021-08-02_April 2021 SSL

Sen's Slope and 95% Confidence Band

L-UMW-1D



n = 12

Slope = 0.02203
units per year.

Mann-Kendall
statistic = 46
critical = 30

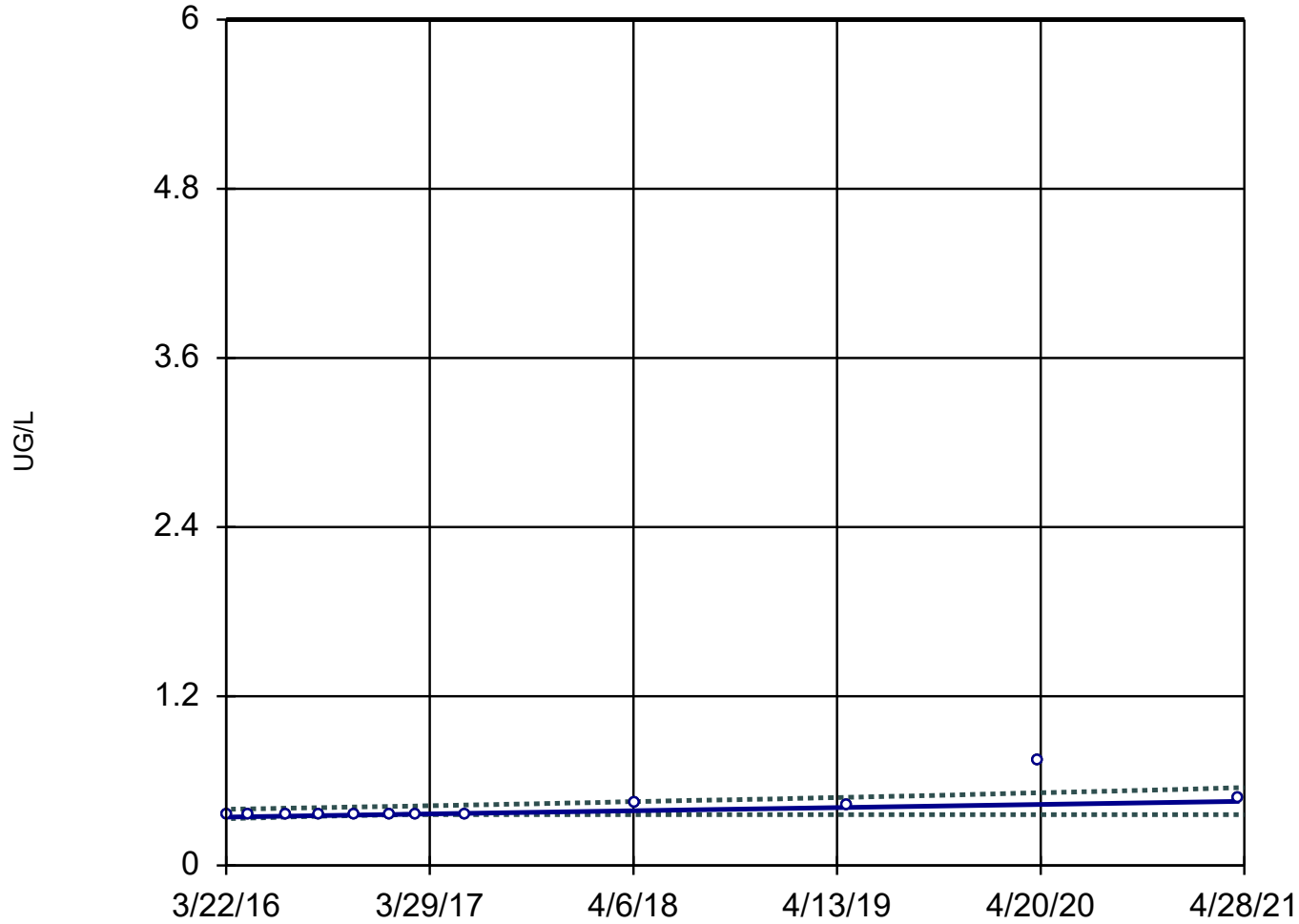
Increasing trend
significant at 95%
confidence level
($\alpha = 0.025$ per
tail).

GWPS = 6.

Constituent: COBALT, TOTAL Analysis Run 8/30/2021 1:46 PM
Labadie E.C. Client: Ameren Data: 2021-08-02_April 2021 SSL

Sen's Slope and 95% Confidence Band

L-UMW-2D



n = 12

Slope = 0.02202
units per year.

Mann-Kendall
statistic = 46
critical = 30

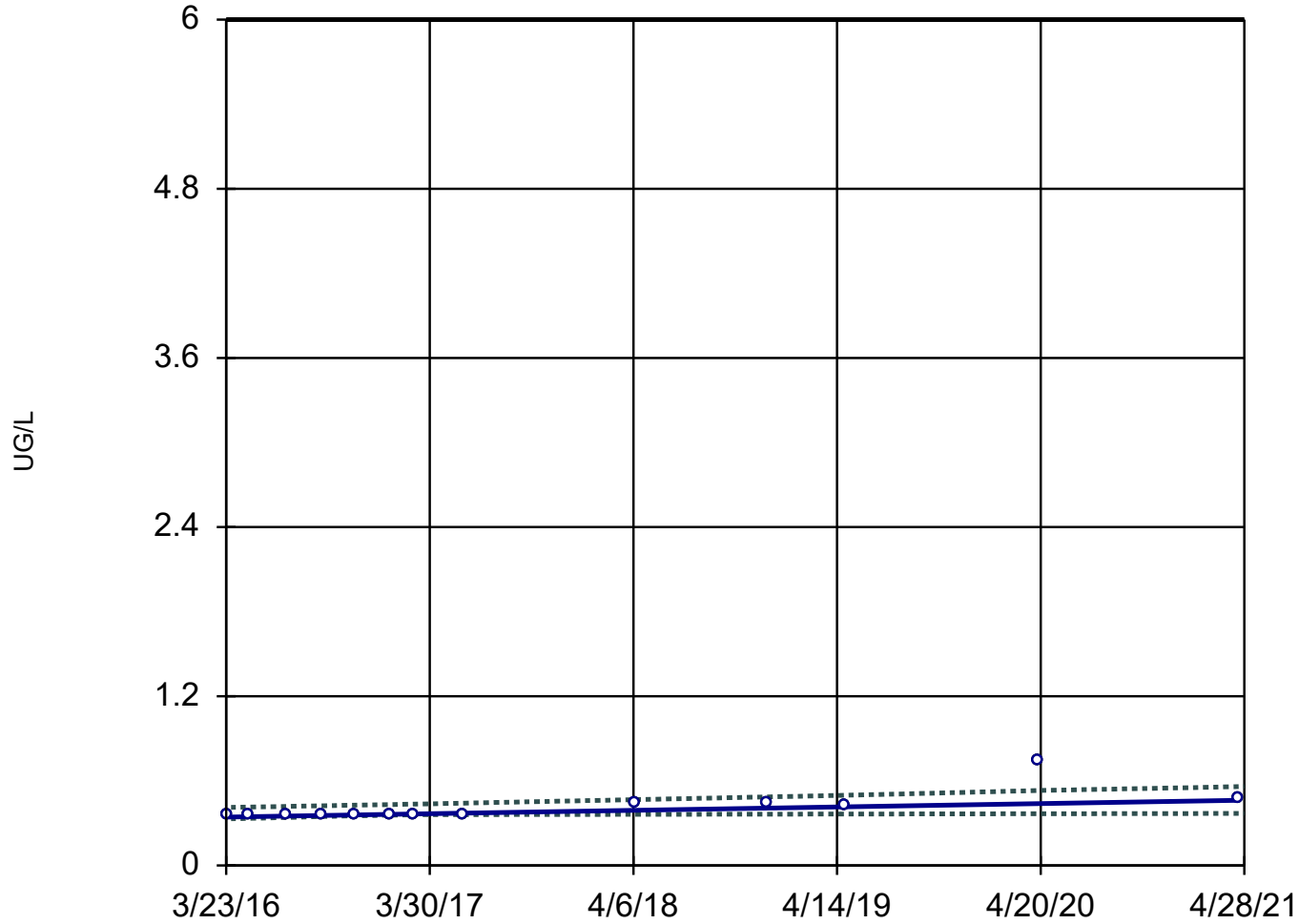
Increasing trend
significant at 95%
confidence level
($\alpha = 0.025$ per
tail).

GWPS = 6.

Constituent: COBALT, TOTAL Analysis Run 8/30/2021 1:46 PM
Labadie E.C. Client: Ameren Data: 2021-08-02_April 2021 SSL

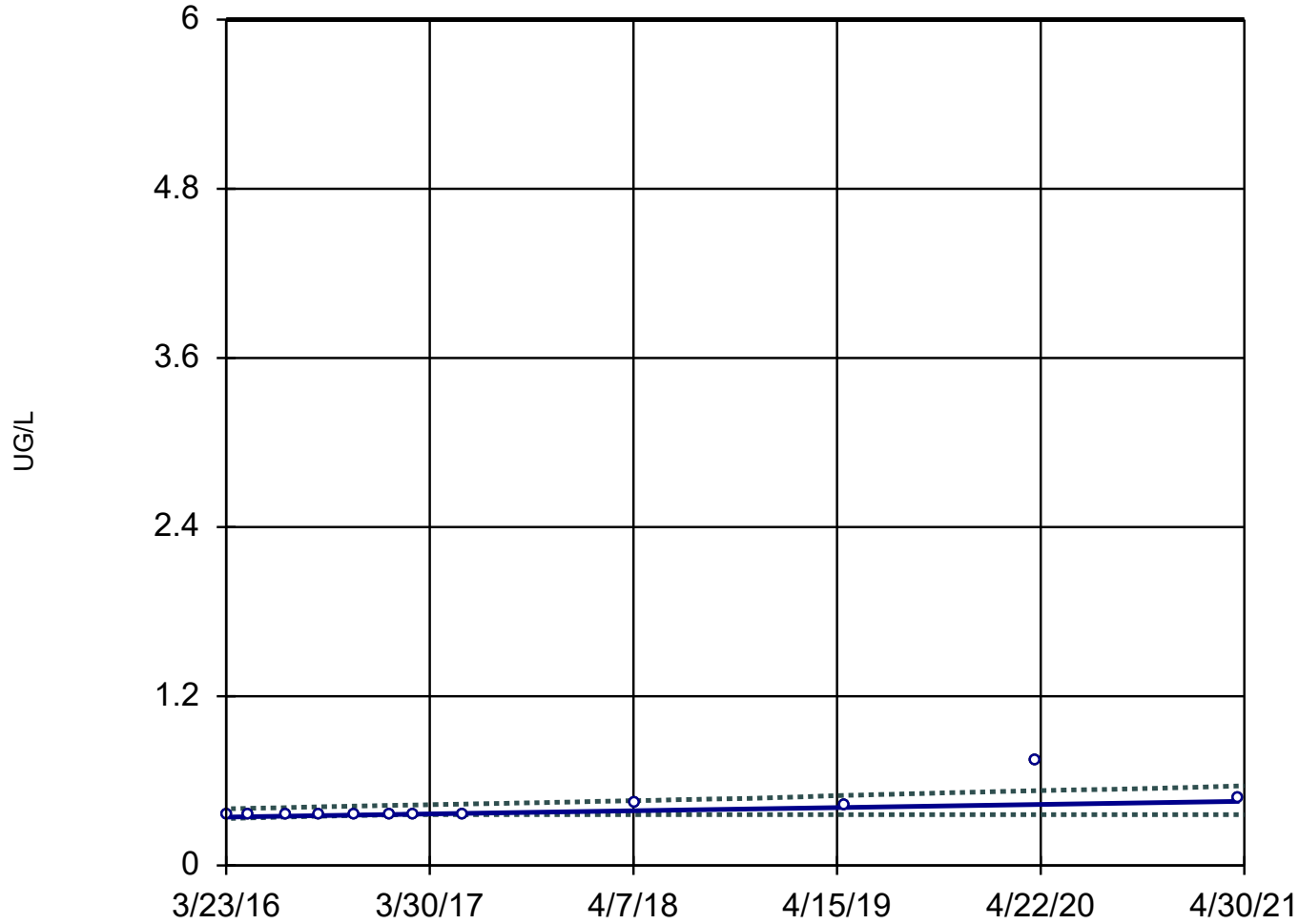
Sen's Slope and 95% Confidence Band

L-UMW-3D



Sen's Slope and 95% Confidence Band

L-UMW-5D



n = 12

Slope = 0.02204
units per year.

Mann-Kendall
statistic = 46
critical = 30

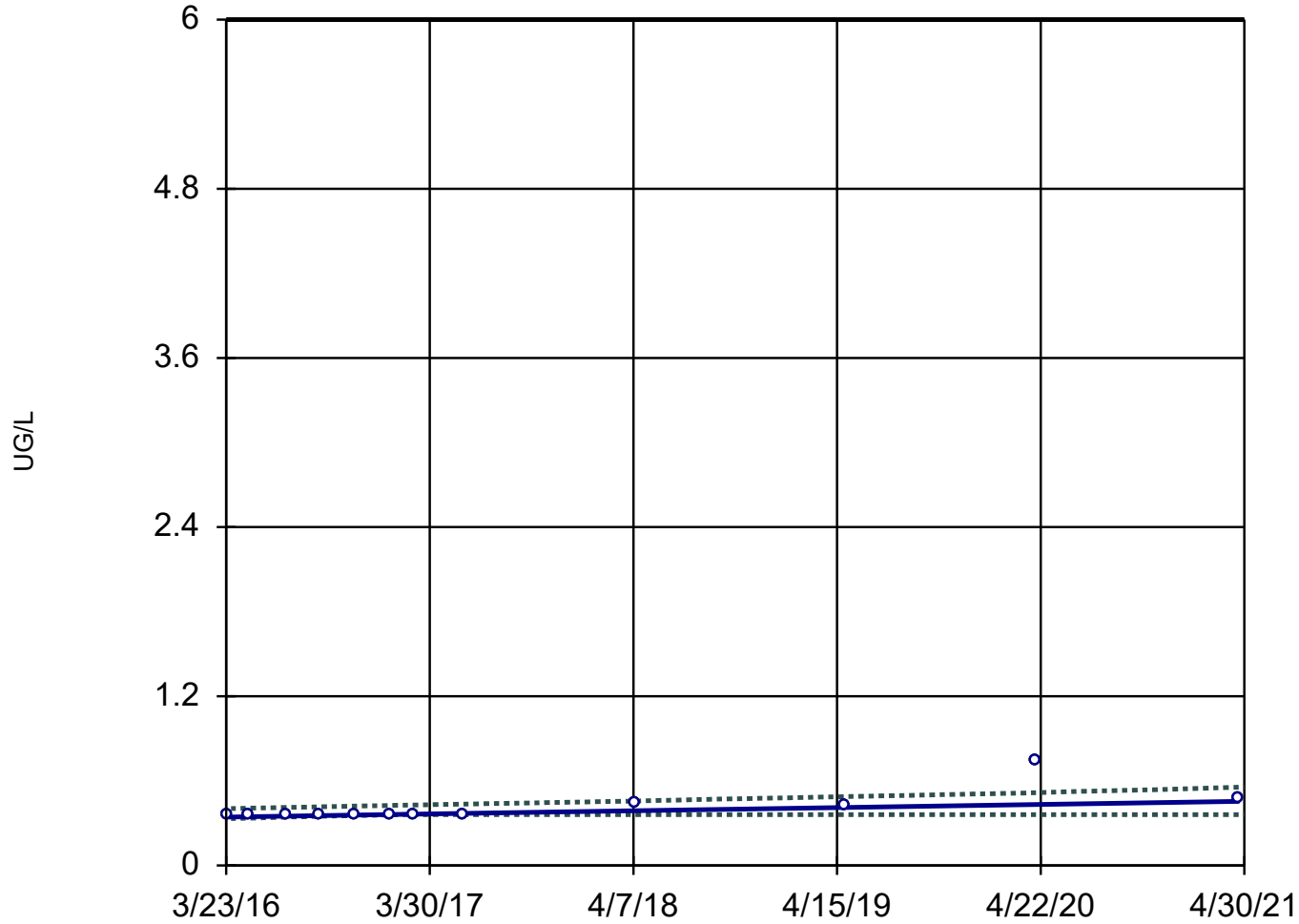
Increasing trend
significant at 95%
confidence level
($\alpha = 0.025$ per
tail).

GWPS = 6.

Constituent: COBALT, TOTAL Analysis Run 8/30/2021 1:46 PM
Labadie E.C. Client: Ameren Data: 2021-08-02_April 2021 SSL

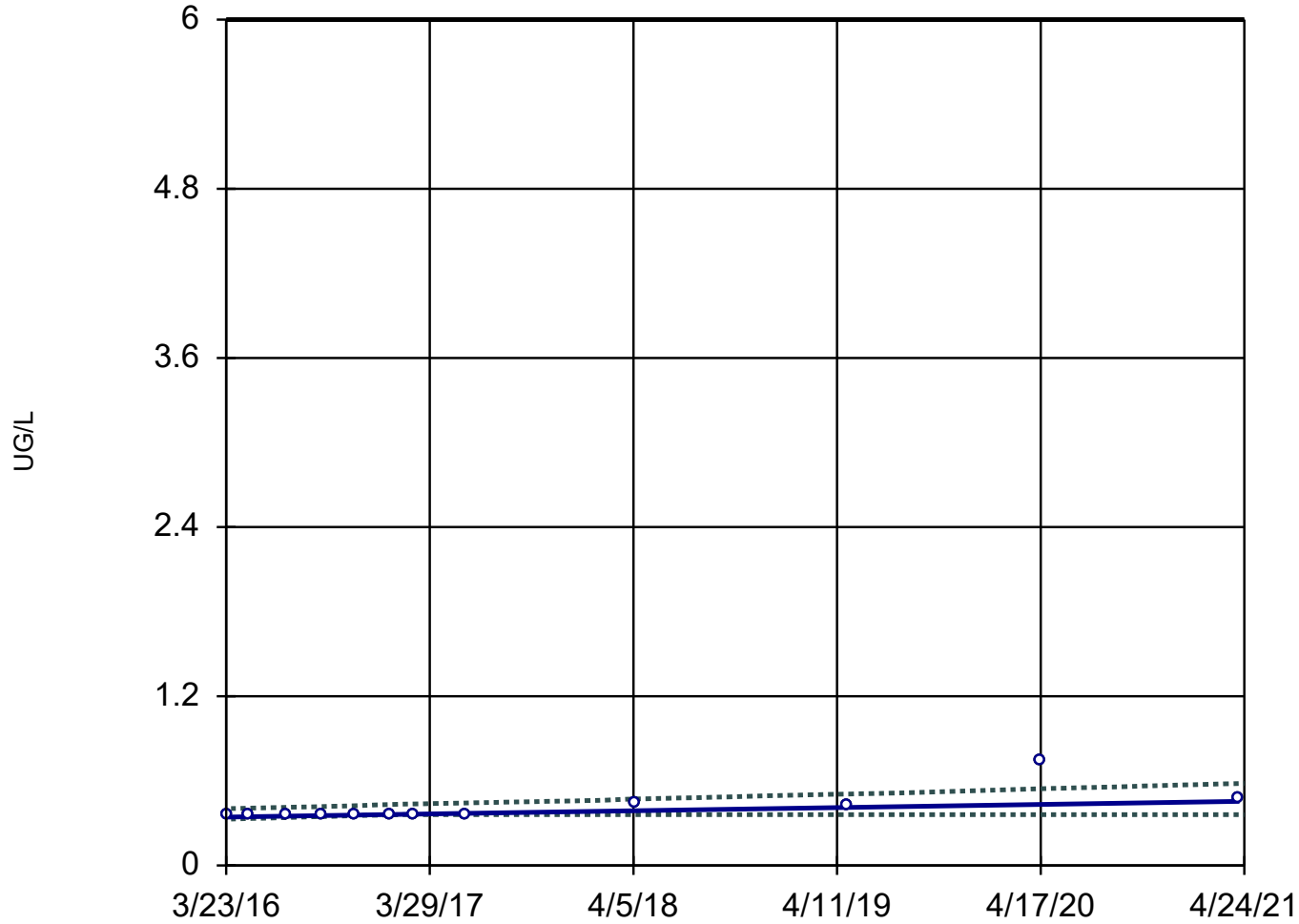
Sen's Slope and 95% Confidence Band

L-UMW-6D



Sen's Slope and 95% Confidence Band

L-UMW-7D



n = 12

Slope = 0.02203
units per year.

Mann-Kendall
statistic = 46
critical = 30

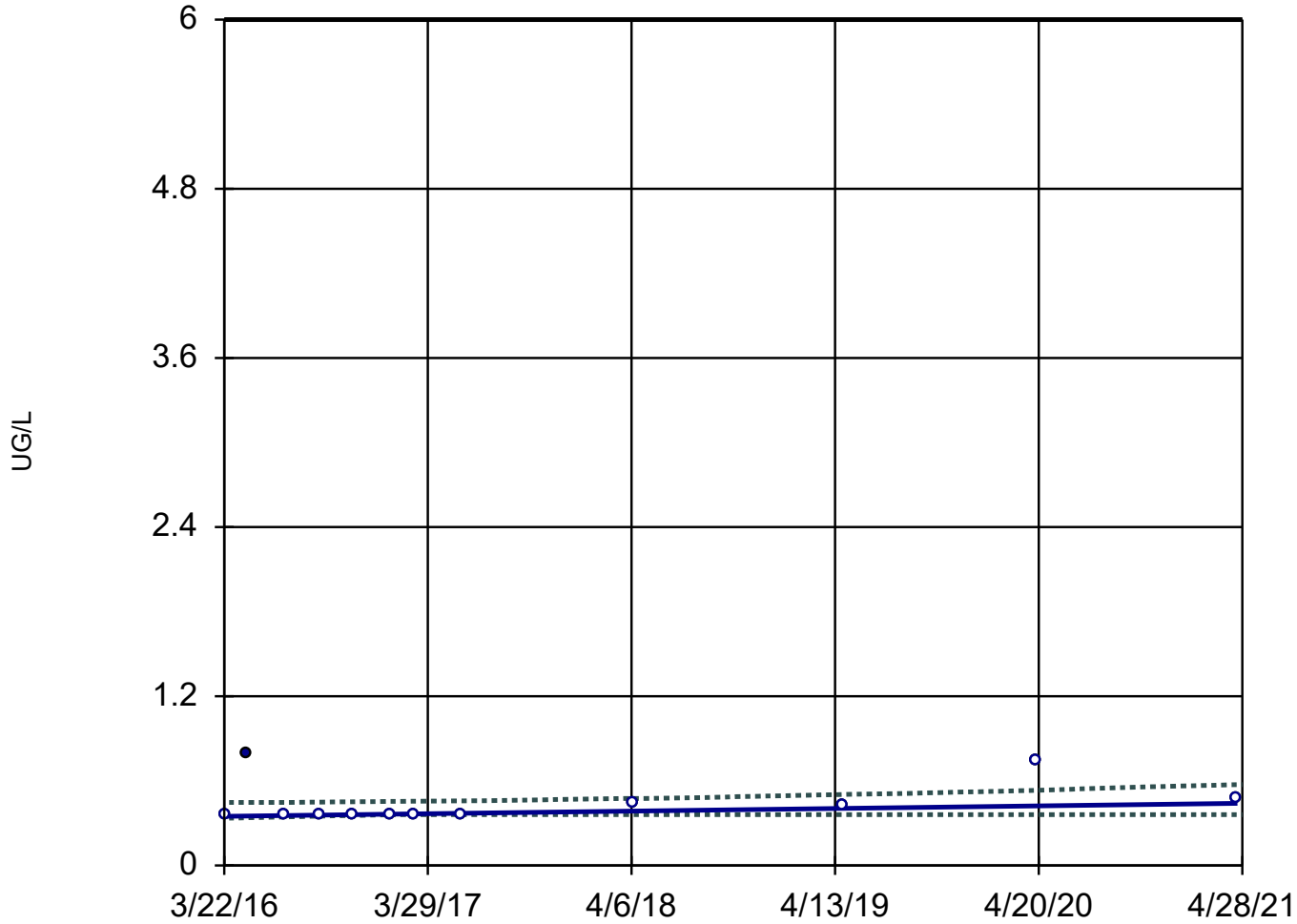
Increasing trend
significant at 95%
confidence level
($\alpha = 0.025$ per
tail).

GWPS = 6.

Constituent: COBALT, TOTAL Analysis Run 8/30/2021 1:46 PM
Labadie E.C. Client: Ameren Data: 2021-08-02_April 2021 SSL

Sen's Slope and 95% Confidence Band

L-UMW-8D



n = 12

Slope = 0.01811
units per year.

Mann-Kendall
statistic = 31
critical = 30

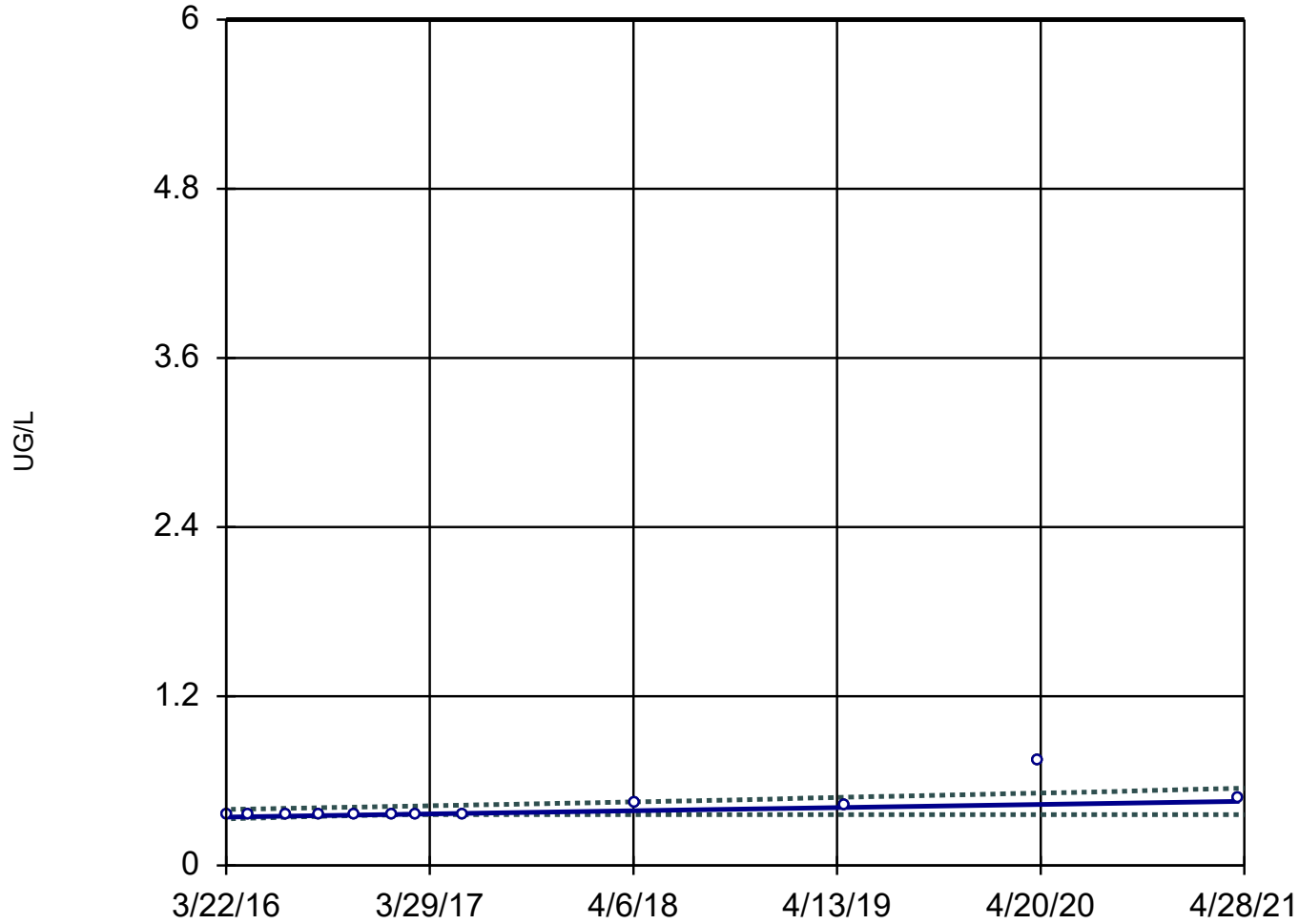
Increasing trend
significant at 95%
confidence level
($\alpha = 0.025$ per
tail).

GWPS = 6.

Constituent: COBALT, TOTAL Analysis Run 8/30/2021 1:46 PM
Labadie E.C. Client: Ameren Data: 2021-08-02_April 2021 SSL

Sen's Slope and 95% Confidence Band

L-UMW-9D



n = 12

Slope = 0.02203
units per year.

Mann-Kendall
statistic = 46
critical = 30

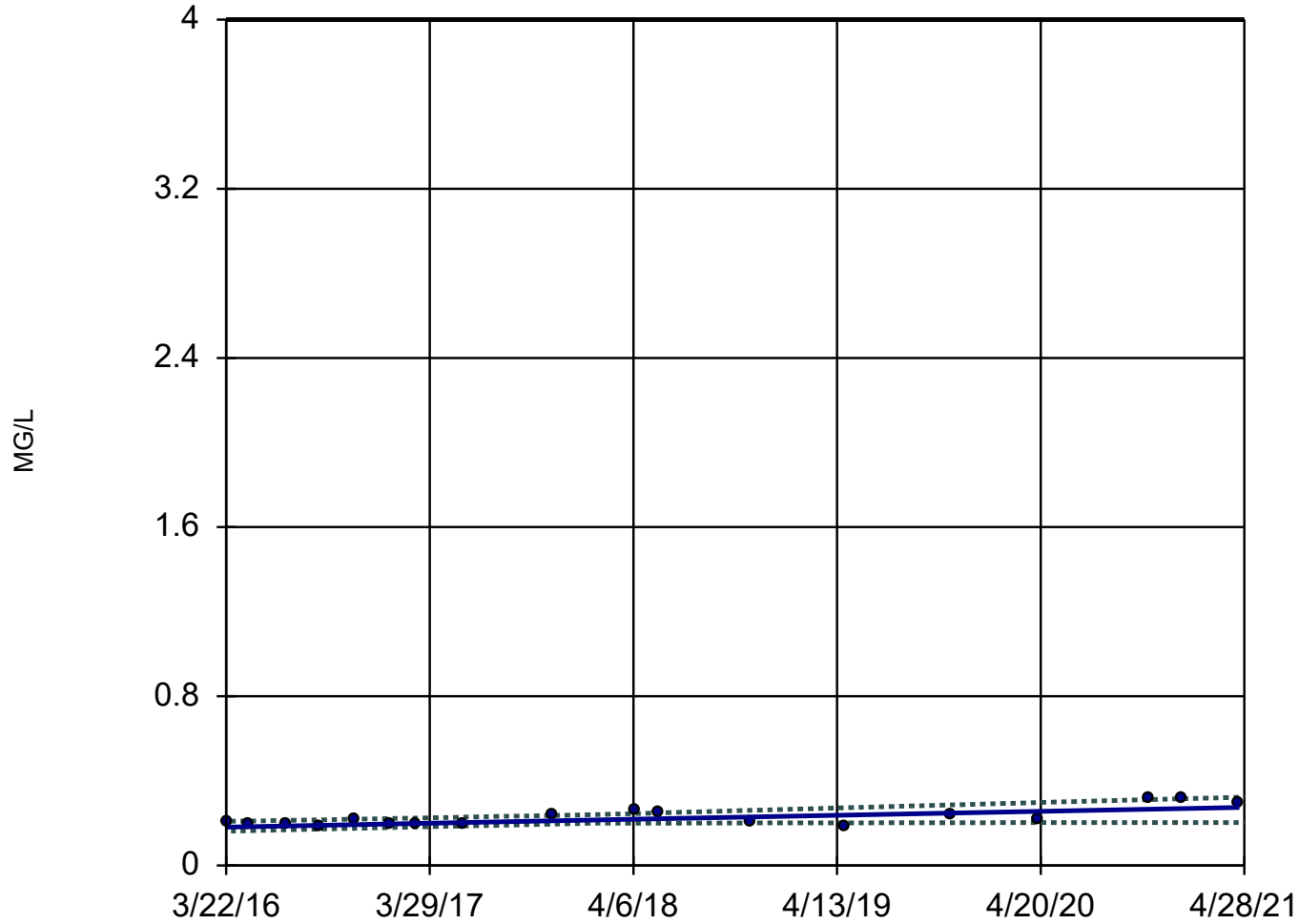
Increasing trend
significant at 95%
confidence level
($\alpha = 0.025$ per
tail).

GWPS = 6.

Constituent: COBALT, TOTAL Analysis Run 8/30/2021 1:46 PM
Labadie E.C. Client: Ameren Data: 2021-08-02_April 2021 SSL

Sen's Slope and 95% Confidence Band

L-UMW-1D



n = 18

Slope = 0.01837
units per year.

Mann-Kendall
statistic = 64
critical = 53

Increasing trend
significant at 95%
confidence level
($\alpha = 0.025$ per
tail).

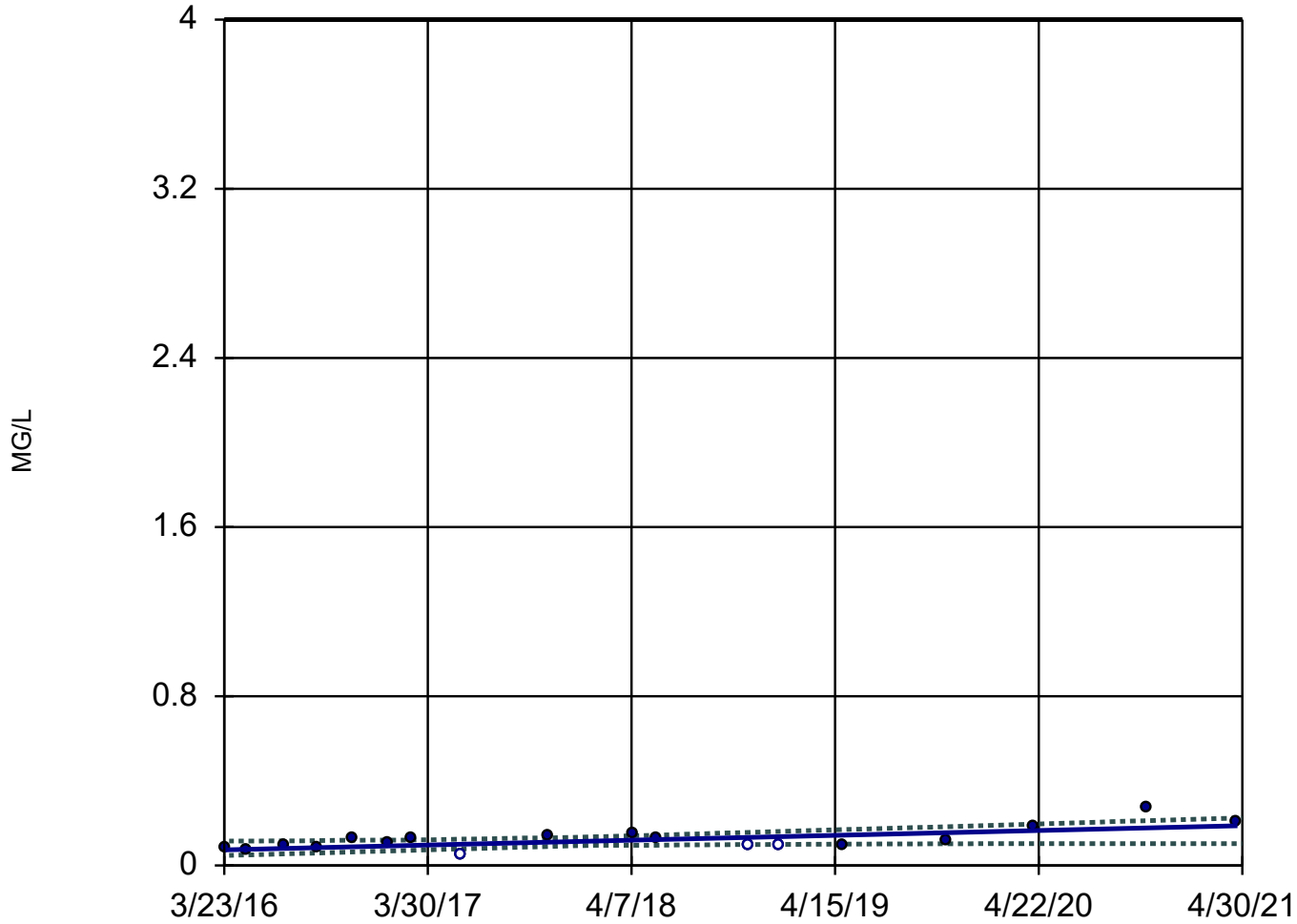
GWPS = 4.

Constituent: FLUORIDE, TOTAL Analysis Run 8/30/2021 1:46 PM

Labadie E.C. Client: Ameren Data: 2021-08-02_April 2021 SSL

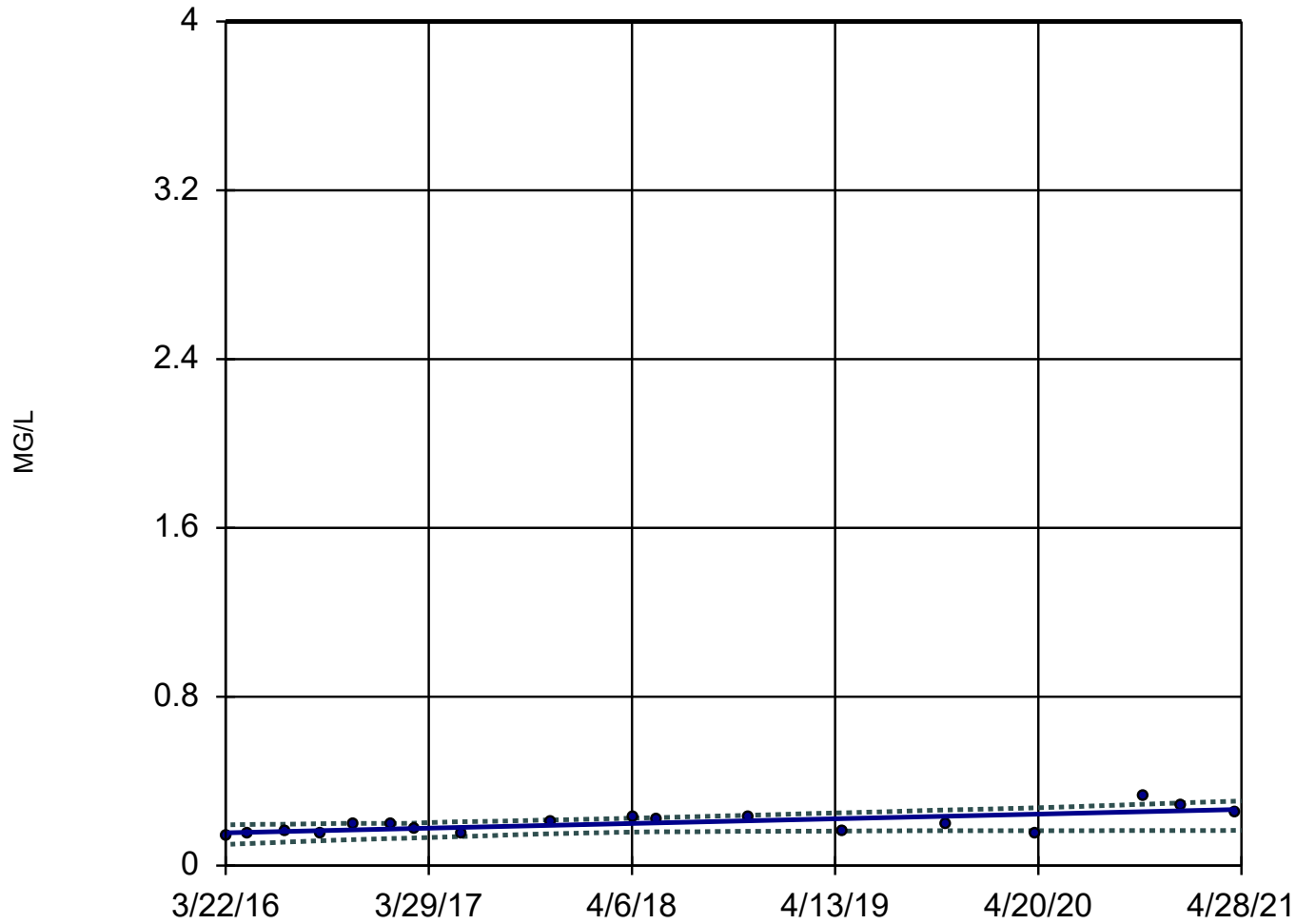
Sen's Slope and 95% Confidence Band

L-UMW-5D



Sen's Slope and 95% Confidence Band

L-UMW-8D



n = 18

Slope = 0.02173
units per year.

Mann-Kendall
statistic = 78
critical = 53

Increasing trend
significant at 95%
confidence level
($\alpha = 0.025$ per
tail).

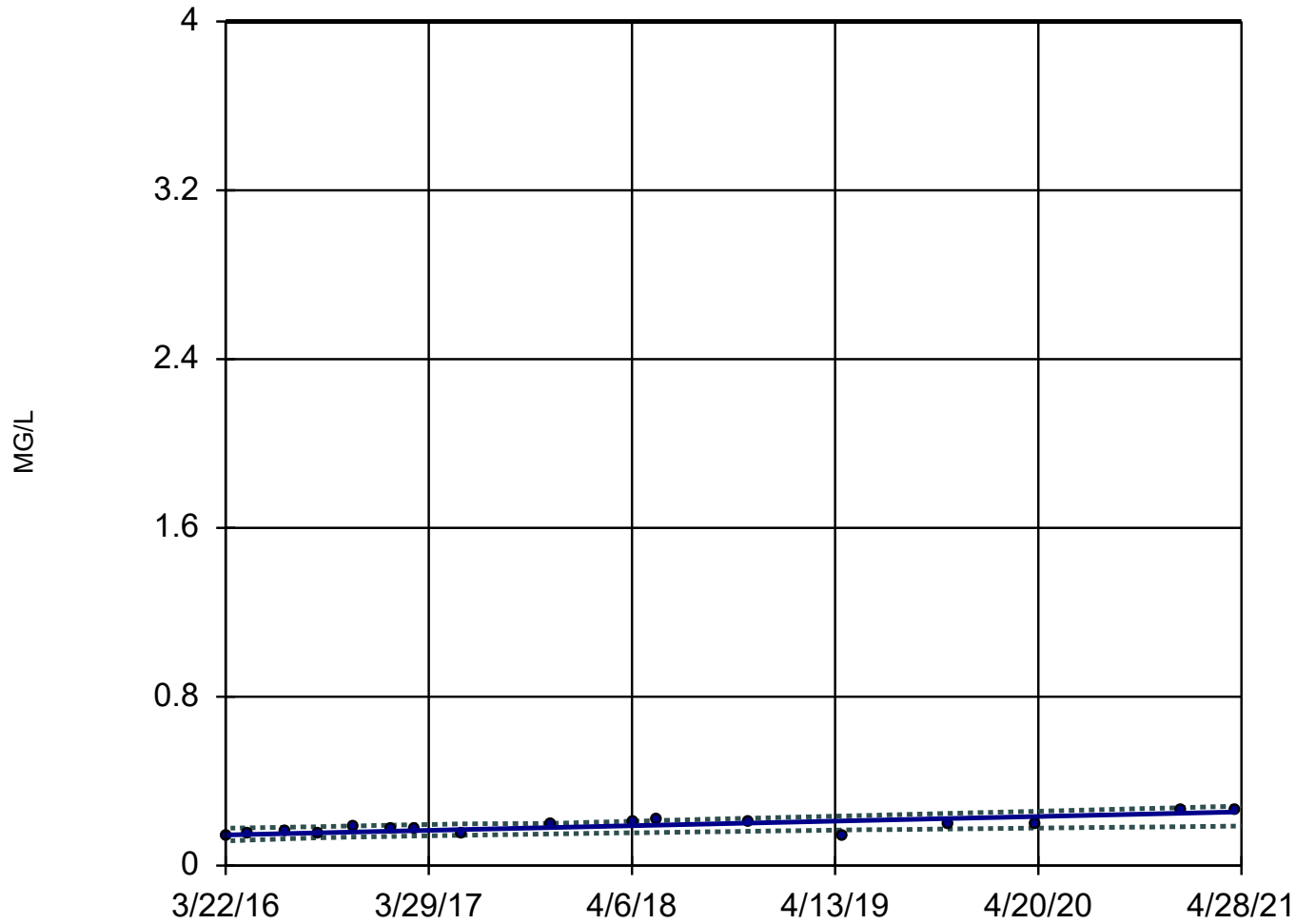
GWPS = 4.

Constituent: FLUORIDE, TOTAL Analysis Run 8/30/2021 1:47 PM

Labadie E.C. Client: Ameren Data: 2021-08-02_April 2021 SSL

Sen's Slope and 95% Confidence Band

L-UMW-9D



n = 17

Slope = 0.02139
units per year.

Mann-Kendall
statistic = 76
critical = 49

Increasing trend
significant at 95%
confidence level
($\alpha = 0.025$ per
tail).

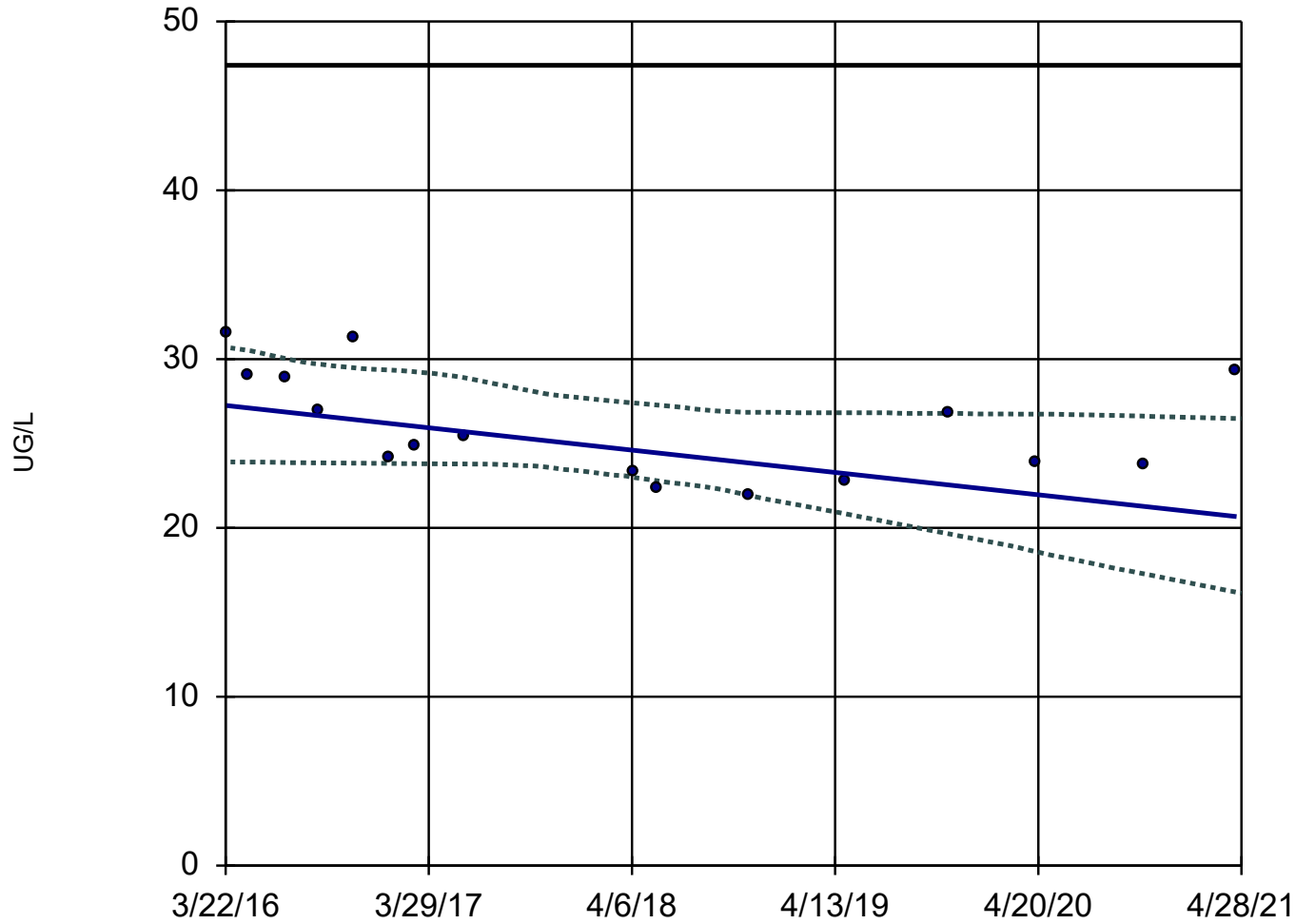
GWPS = 4.

Constituent: FLUORIDE, TOTAL Analysis Run 8/30/2021 1:47 PM

Labadie E.C. Client: Ameren Data: 2021-08-02_April 2021 SSL

Sen's Slope and 95% Confidence Band

L-UMW-2D



n = 16

Slope = -1.296
units per year.

Mann-Kendall
statistic = -48
critical = -45

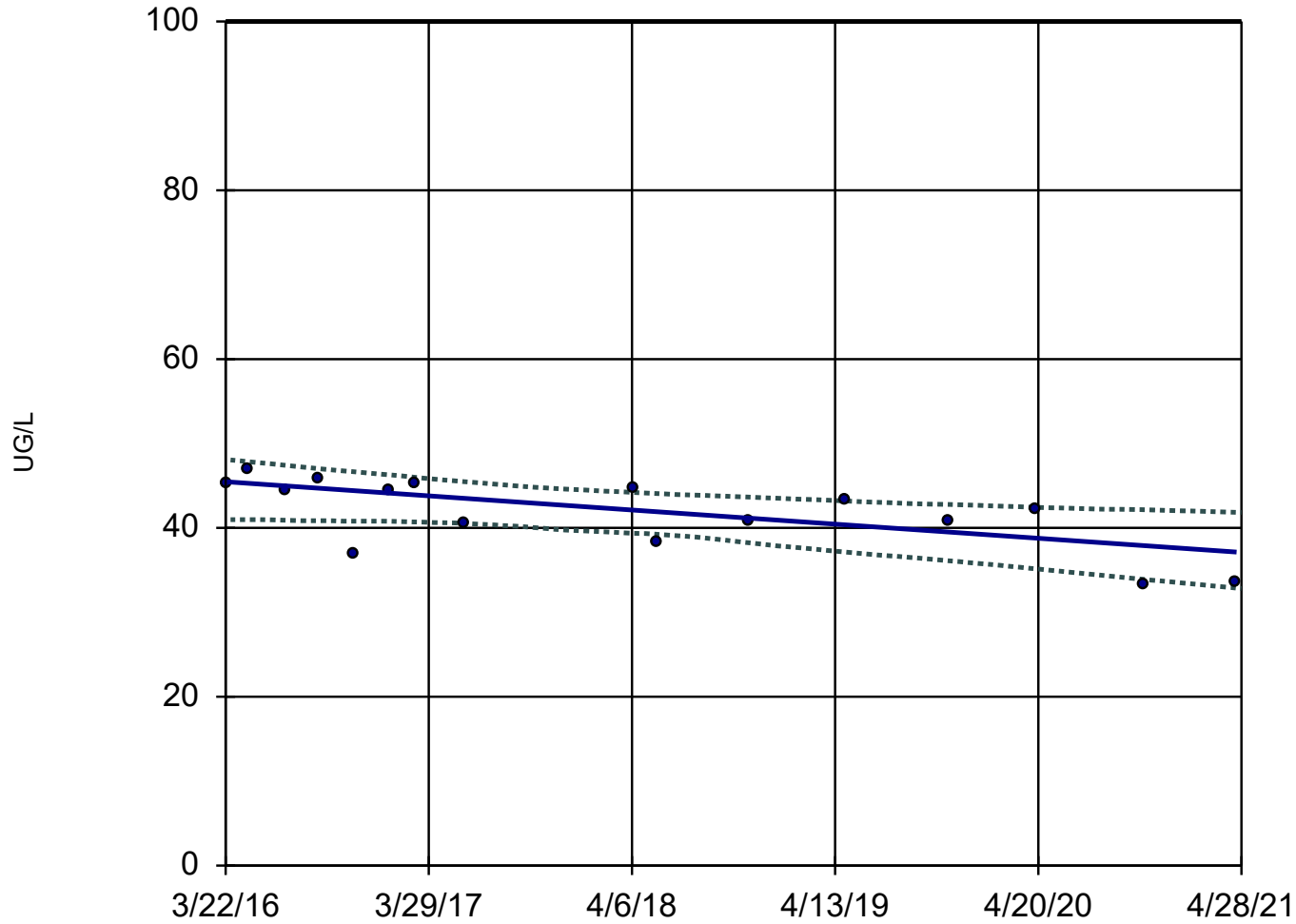
Decreasing trend
significant at 95%
confidence level
($\alpha = 0.025$ per
tail).

GWPS = 47.4.

Constituent: LITHIUM, TOTAL Analysis Run 8/30/2021 1:47 PM
Labadie E.C. Client: Ameren Data: 2021-08-02_April 2021 SSL

Sen's Slope and 95% Confidence Band

L-UMW-2D



n = 16

Slope = -1.64
units per year.

Mann-Kendall
statistic = -58
critical = -45

Decreasing trend
significant at 95%
confidence level
($\alpha = 0.025$ per
tail).

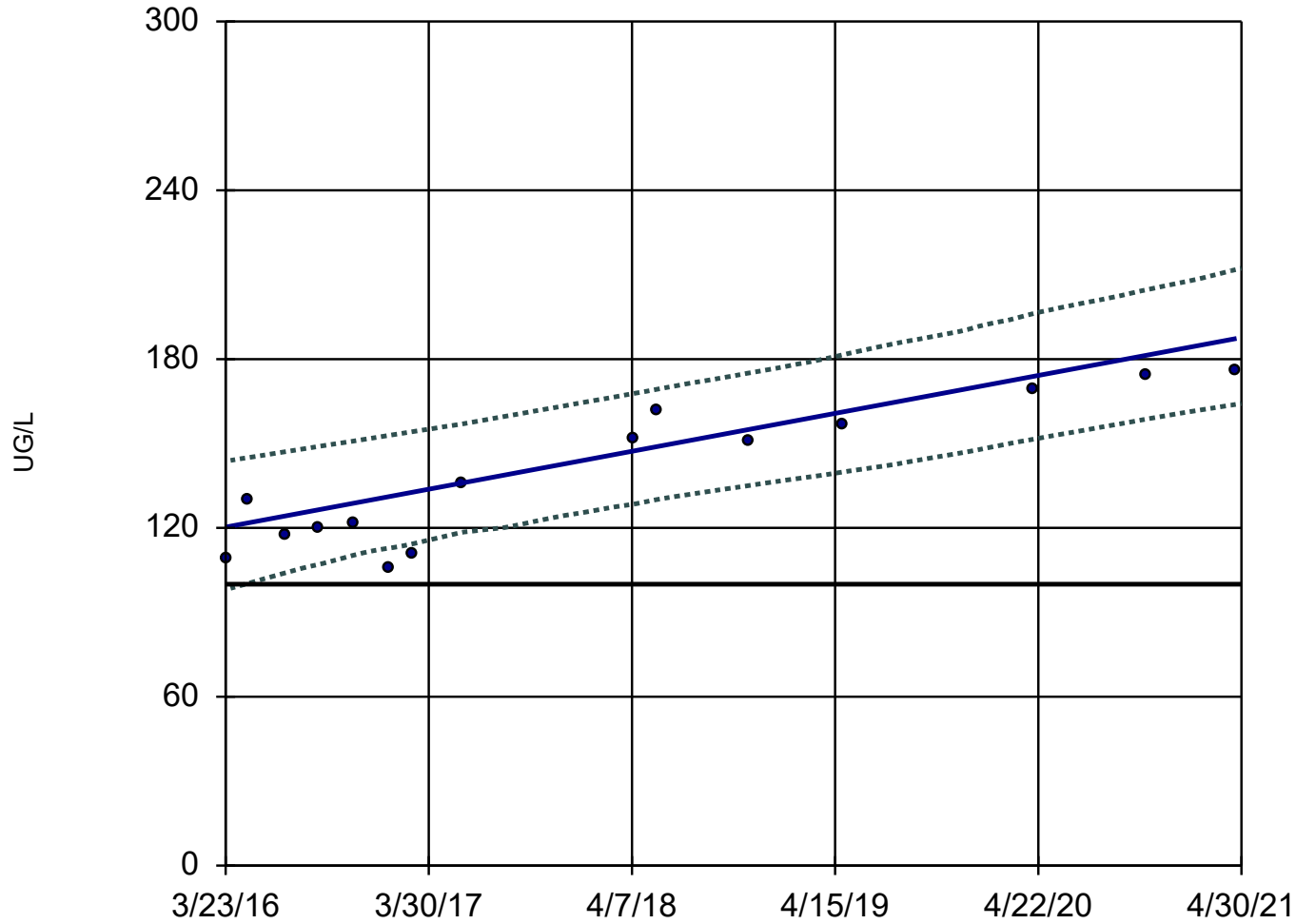
GWPS = 100.

Constituent: MOLYBDENUM, TOTAL Analysis Run 8/30/2021 1:47 PM

Labadie E.C. Client: Ameren Data: 2021-08-02_April 2021 SSL

Sen's Slope and 95% Confidence Band

L-UMW-5D



n = 15

Slope = 13.2
units per year.

Mann-Kendall
statistic = 75
critical = 41

Increasing trend
significant at 95%
confidence level
($\alpha = 0.025$ per
tail).

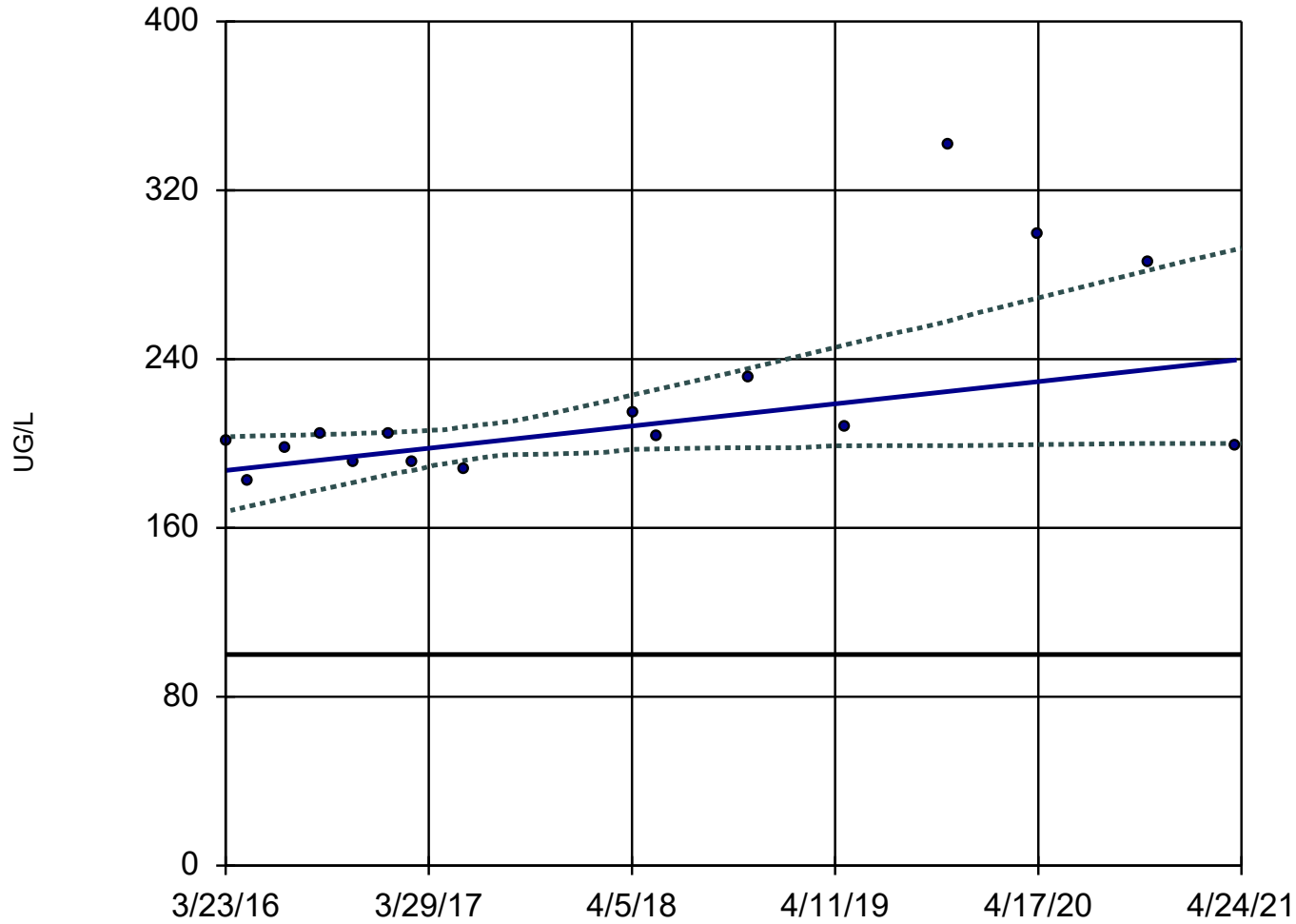
GWPS = 100.

Constituent: MOLYBDENUM, TOTAL Analysis Run 8/30/2021 1:47 PM

Labadie E.C. Client: Ameren Data: 2021-08-02_April 2021 SSL

Sen's Slope and 95% Confidence Band

L-UMW-7D



n = 16

Slope = 10.34
units per year.

Mann-Kendall
statistic = 52
critical = 45

Increasing trend
significant at 95%
confidence level
($\alpha = 0.025$ per
tail).

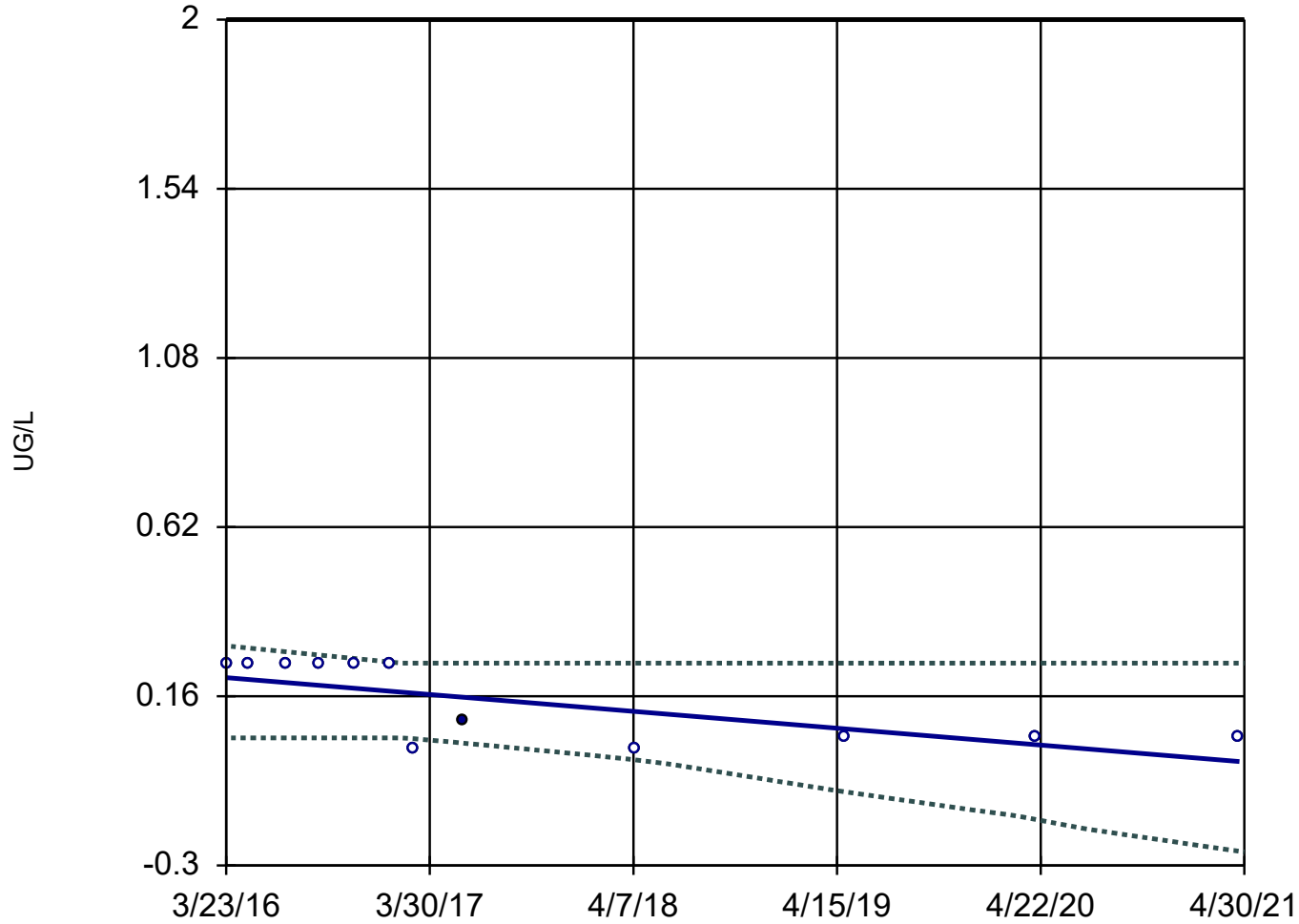
GWPS = 100.

Constituent: MOLYBDENUM, TOTAL Analysis Run 8/30/2021 1:47 PM

Labadie E.C. Client: Ameren Data: 2021-08-02_April 2021 SSL

Sen's Slope and 95% Confidence Band

L-UMW-6D



n = 12

Slope = -0.04487
units per year.

Mann-Kendall
statistic = -34
critical = -30

Decreasing trend
significant at 95%
confidence level
($\alpha = 0.025$ per
tail).

GWPS = 2.

Constituent: THALLIUM, TOTAL Analysis Run 8/30/2021 1:48 PM
Labadie E.C. Client: Ameren Data: 2021-08-02_April 2021 SSL

Trend Test

Labadie E.C. Client: Ameren Data: 2021-08-02_April 2021 SSL Printed 8/30/2021, 1:49 PM

<u>Constituent</u>	<u>Well</u>	<u>Slope</u>	<u>Calc.</u>	<u>Critical</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Normality</u>	<u>Xform</u>	<u>Alpha</u>	<u>Method</u>
ANTIMONY, TOTAL (UG/L)	L-UMW-1D	0.000...	23	34	No	13	84.62	n/a	n/a	0.05	NP
ANTIMONY, TOTAL (UG/L)	L-UMW-2D	0.003237	23	34	No	13	100	n/a	n/a	0.05	NP
ANTIMONY, TOTAL (UG/L)	L-UMW-3D	0.003222	17	37	No	14	85.71	n/a	n/a	0.05	NP
ANTIMONY, TOTAL (UG/L)	L-UMW-4D	0.002349	16	34	No	13	92.31	n/a	n/a	0.05	NP
ANTIMONY, TOTAL (UG/L)	L-UMW-5D	0.000...	7	34	No	13	53.85	n/a	n/a	0.05	NP
ANTIMONY, TOTAL (UG/L)	L-UMW-6D	0	10	34	No	13	92.31	n/a	n/a	0.05	NP
ANTIMONY, TOTAL (UG/L)	L-UMW-7D	0.003278	23	34	No	13	100	n/a	n/a	0.05	NP
ANTIMONY, TOTAL (UG/L)	L-UMW-8D	0.003239	23	34	No	13	100	n/a	n/a	0.05	NP
ANTIMONY, TOTAL (UG/L)	L-UMW-9D	0.003793	37	34	Yes	13	92.31	n/a	n/a	0.05	NP
ARSENIC, TOTAL (UG/L)	L-UMW-1D	5.116	76	45	Yes	16	0	n/a	n/a	0.05	NP
ARSENIC, TOTAL (UG/L)	L-UMW-2D	-0.1047	-33	-45	No	16	0	n/a	n/a	0.05	NP
ARSENIC, TOTAL (UG/L)	L-UMW-3D	1.164	56	45	Yes	16	6.25	n/a	n/a	0.05	NP
ARSENIC, TOTAL (UG/L)	L-UMW-4D	0.00436	12	45	No	16	25	n/a	n/a	0.05	NP
ARSENIC, TOTAL (UG/L)	L-UMW-5D	-1.073	-34	-45	No	16	0	n/a	n/a	0.05	NP
ARSENIC, TOTAL (UG/L)	L-UMW-6D	3.616	39	41	No	15	0	n/a	n/a	0.05	NP
ARSENIC, TOTAL (UG/L)	L-UMW-7D	1.893	55	45	Yes	16	0	n/a	n/a	0.05	NP
ARSENIC, TOTAL (UG/L)	L-UMW-8D	-0.225	-11	-45	No	16	0	n/a	n/a	0.05	NP
ARSENIC, TOTAL (UG/L)	L-UMW-9D	0.05738	10	45	No	16	0	n/a	n/a	0.05	NP
BARIUM, TOTAL (UG/L)	L-UMW-1D	25.62	68	45	Yes	16	0	n/a	n/a	0.05	NP
BARIUM, TOTAL (UG/L)	L-UMW-2D	-1.995	-23	-45	No	16	0	n/a	n/a	0.05	NP
BARIUM, TOTAL (UG/L)	L-UMW-3D	-2.847	-12	-49	No	17	0	n/a	n/a	0.05	NP
BARIUM, TOTAL (UG/L)	L-UMW-4D	5.527	61	45	Yes	16	0	n/a	n/a	0.05	NP
BARIUM, TOTAL (UG/L)	L-UMW-5D	-1.579	-28	-45	No	16	0	n/a	n/a	0.05	NP
BARIUM, TOTAL (UG/L)	L-UMW-6D	-3.004	-20	-45	No	16	0	n/a	n/a	0.05	NP
BARIUM, TOTAL (UG/L)	L-UMW-7D	-15.33	-50	-45	Yes	16	0	n/a	n/a	0.05	NP
BARIUM, TOTAL (UG/L)	L-UMW-8D	-12.9	-67	-45	Yes	16	0	n/a	n/a	0.05	NP
BARIUM, TOTAL (UG/L)	L-UMW-9D	-0.9422	-10	-45	No	16	0	n/a	n/a	0.05	NP
BERYLLIUM, TOTAL (UG/L)	L-UMW-1D	0	-2	-30	No	12	100	n/a	n/a	0.05	NP
BERYLLIUM, TOTAL (UG/L)	L-UMW-2D	0	-2	-30	No	12	100	n/a	n/a	0.05	NP
BERYLLIUM, TOTAL (UG/L)	L-UMW-3D	0	-5	-34	No	13	100	n/a	n/a	0.05	NP
BERYLLIUM, TOTAL (UG/L)	L-UMW-4D	0	-2	-30	No	12	100	n/a	n/a	0.05	NP
BERYLLIUM, TOTAL (UG/L)	L-UMW-5D	0	-2	-30	No	12	100	n/a	n/a	0.05	NP
BERYLLIUM, TOTAL (UG/L)	L-UMW-6D	0	-2	-30	No	12	100	n/a	n/a	0.05	NP
BERYLLIUM, TOTAL (UG/L)	L-UMW-7D	0	6	30	No	12	91.67	n/a	n/a	0.05	NP
BERYLLIUM, TOTAL (UG/L)	L-UMW-8D	0	-2	-30	No	12	100	n/a	n/a	0.05	NP
BERYLLIUM, TOTAL (UG/L)	L-UMW-9D	0	-2	-30	No	12	100	n/a	n/a	0.05	NP
CADMIUM, TOTAL (UG/L)	L-UMW-1D	0	12	30	No	12	100	n/a	n/a	0.05	NP
CADMIUM, TOTAL (UG/L)	L-UMW-2D	0	12	30	No	12	100	n/a	n/a	0.05	NP
CADMIUM, TOTAL (UG/L)	L-UMW-3D	0.003801	26	34	No	13	69.23	n/a	n/a	0.05	NP
CADMIUM, TOTAL (UG/L)	L-UMW-4D	0	8	30	No	12	91.67	n/a	n/a	0.05	NP
CADMIUM, TOTAL (UG/L)	L-UMW-5D	0	6	30	No	12	83.33	n/a	n/a	0.05	NP
CADMIUM, TOTAL (UG/L)	L-UMW-6D	0.003647	19	30	No	12	66.67	n/a	n/a	0.05	NP
CADMIUM, TOTAL (UG/L)	L-UMW-7D	0	8	30	No	12	83.33	n/a	n/a	0.05	NP
CADMIUM, TOTAL (UG/L)	L-UMW-8D	0	12	30	No	12	100	n/a	n/a	0.05	NP
CADMIUM, TOTAL (UG/L)	L-UMW-9D	0	12	30	No	12	100	n/a	n/a	0.05	NP
CHROMIUM, TOTAL (UG/L)	L-UMW-1D	0	8	30	No	12	58.33	n/a	n/a	0.05	NP
CHROMIUM, TOTAL (UG/L)	L-UMW-2D	-0.0176	-19	-34	No	13	76.92	n/a	n/a	0.05	NP
CHROMIUM, TOTAL (UG/L)	L-UMW-3D	0	-8	-37	No	14	78.57	n/a	n/a	0.05	NP
CHROMIUM, TOTAL (UG/L)	L-UMW-4D	-0.01715	-23	-30	No	12	66.67	n/a	n/a	0.05	NP
CHROMIUM, TOTAL (UG/L)	L-UMW-5D	-0.01712	-24	-34	No	13	76.92	n/a	n/a	0.05	NP

Trend Test

Labadie E.C. Client: Ameren Data: 2021-08-02_April 2021 SSL Printed 8/30/2021, 1:49 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
CHROMIUM, TOTAL (UG/L)	L-UMW-6D	-0.04957	-12	-34	No	13	53.85	n/a	n/a	0.05	NP
CHROMIUM, TOTAL (UG/L)	L-UMW-7D	-0.05232	-14	-34	No	13	53.85	n/a	n/a	0.05	NP
CHROMIUM, TOTAL (UG/L)	L-UMW-8D	-0.05005	-23	-34	No	13	61.54	n/a	n/a	0.05	NP
CHROMIUM, TOTAL (UG/L)	L-UMW-9D	-0.02107	-24	-34	No	13	76.92	n/a	n/a	0.05	NP
COBALT, TOTAL (UG/L)	L-UMW-1D	0.02203	46	30	Yes	12	100	n/a	n/a	0.05	NP
COBALT, TOTAL (UG/L)	L-UMW-2D	0.02202	46	30	Yes	12	100	n/a	n/a	0.05	NP
COBALT, TOTAL (UG/L)	L-UMW-3D	0.02364	55	34	Yes	13	100	n/a	n/a	0.05	NP
COBALT, TOTAL (UG/L)	L-UMW-4D	0.02204	46	30	Yes	12	100	n/a	n/a	0.05	NP
COBALT, TOTAL (UG/L)	L-UMW-5D	0.02204	46	30	Yes	12	100	n/a	n/a	0.05	NP
COBALT, TOTAL (UG/L)	L-UMW-6D	0.02204	46	30	Yes	12	100	n/a	n/a	0.05	NP
COBALT, TOTAL (UG/L)	L-UMW-7D	0.02203	46	30	Yes	12	100	n/a	n/a	0.05	NP
COBALT, TOTAL (UG/L)	L-UMW-8D	0.01811	31	30	Yes	12	91.67	n/a	n/a	0.05	NP
COBALT, TOTAL (UG/L)	L-UMW-9D	0.02203	46	30	Yes	12	100	n/a	n/a	0.05	NP
FLUORIDE, TOTAL (MG/L)	L-UMW-1D	0.01837	64	53	Yes	18	0	n/a	n/a	0.05	NP
FLUORIDE, TOTAL (MG/L)	L-UMW-2D	0.003786	27	53	No	18	0	n/a	n/a	0.05	NP
FLUORIDE, TOTAL (MG/L)	L-UMW-3D	0.01014	32	58	No	19	21.05	n/a	n/a	0.05	NP
FLUORIDE, TOTAL (MG/L)	L-UMW-4D	0.01185	37	58	No	19	0	n/a	n/a	0.05	NP
FLUORIDE, TOTAL (MG/L)	L-UMW-5D	0.02236	69	53	Yes	18	16.67	n/a	n/a	0.05	NP
FLUORIDE, TOTAL (MG/L)	L-UMW-6D	0.007386	23	49	No	17	11.76	n/a	n/a	0.05	NP
FLUORIDE, TOTAL (MG/L)	L-UMW-7D	0.005165	19	49	No	17	0	n/a	n/a	0.05	NP
FLUORIDE, TOTAL (MG/L)	L-UMW-8D	0.02173	78	53	Yes	18	0	n/a	n/a	0.05	NP
FLUORIDE, TOTAL (MG/L)	L-UMW-9D	0.02139	76	49	Yes	17	0	n/a	n/a	0.05	NP
LEAD, TOTAL (UG/L)	L-UMW-1D	0	4	30	No	12	66.67	n/a	n/a	0.05	NP
LEAD, TOTAL (UG/L)	L-UMW-2D	0.2446	23	30	No	12	75	n/a	n/a	0.05	NP
LEAD, TOTAL (UG/L)	L-UMW-3D	0.1707	29	34	No	13	76.92	n/a	n/a	0.05	NP
LEAD, TOTAL (UG/L)	L-UMW-4D	0.1302	24	30	No	12	100	n/a	n/a	0.05	NP
LEAD, TOTAL (UG/L)	L-UMW-5D	0.1116	9	30	No	12	83.33	n/a	n/a	0.05	NP
LEAD, TOTAL (UG/L)	L-UMW-6D	0.1116	9	30	No	12	83.33	n/a	n/a	0.05	NP
LEAD, TOTAL (UG/L)	L-UMW-7D	0.1794	27	30	No	12	75	n/a	n/a	0.05	NP
LEAD, TOTAL (UG/L)	L-UMW-8D	0.1933	28	30	No	12	75	n/a	n/a	0.05	NP
LEAD, TOTAL (UG/L)	L-UMW-9D	0.1791	8	30	No	12	50	n/a	n/a	0.05	NP
LITHIUM, TOTAL (UG/L)	L-UMW-1D	0.4926	23	45	No	16	0	n/a	n/a	0.05	NP
LITHIUM, TOTAL (UG/L)	L-UMW-2D	-1.296	-48	-45	Yes	16	0	n/a	n/a	0.05	NP
LITHIUM, TOTAL (UG/L)	L-UMW-3D	-0.4726	-21	-49	No	17	0	n/a	n/a	0.05	NP
LITHIUM, TOTAL (UG/L)	L-UMW-4D	-0.5677	-25	-45	No	16	0	n/a	n/a	0.05	NP
LITHIUM, TOTAL (UG/L)	L-UMW-5D	-0.3401	-4	-45	No	16	0	n/a	n/a	0.05	NP
LITHIUM, TOTAL (UG/L)	L-UMW-6D	0.996	22	45	No	16	0	n/a	n/a	0.05	NP
LITHIUM, TOTAL (UG/L)	L-UMW-7D	1.033	38	45	No	16	0	n/a	n/a	0.05	NP
LITHIUM, TOTAL (UG/L)	L-UMW-8D	0.7673	30	45	No	16	0	n/a	n/a	0.05	NP
LITHIUM, TOTAL (UG/L)	L-UMW-9D	-0.4376	-38	-45	No	16	0	n/a	n/a	0.05	NP
MERCURY, TOTAL (UG/L)	L-UMW-1D	0.002463	23	30	No	12	100	n/a	n/a	0.05	NP
MERCURY, TOTAL (UG/L)	L-UMW-2D	0.002467	23	30	No	12	100	n/a	n/a	0.05	NP
MERCURY, TOTAL (UG/L)	L-UMW-3D	0.002715	30	34	No	13	100	n/a	n/a	0.05	NP
MERCURY, TOTAL (UG/L)	L-UMW-4D	0.002468	23	30	No	12	100	n/a	n/a	0.05	NP
MERCURY, TOTAL (UG/L)	L-UMW-5D	0.002469	23	30	No	12	100	n/a	n/a	0.05	NP
MERCURY, TOTAL (UG/L)	L-UMW-6D	0.002468	23	30	No	12	100	n/a	n/a	0.05	NP
MERCURY, TOTAL (UG/L)	L-UMW-7D	0.002462	23	30	No	12	100	n/a	n/a	0.05	NP
MERCURY, TOTAL (UG/L)	L-UMW-8D	0.002463	23	30	No	12	100	n/a	n/a	0.05	NP
MERCURY, TOTAL (UG/L)	L-UMW-9D	0.002463	23	30	No	12	100	n/a	n/a	0.05	NP
MOLYBDENUM, TOTAL (UG/L)	L-UMW-1D	0.4504	37	45	No	16	25	n/a	n/a	0.05	NP

Trend Test

Labadie E.C. Client: Ameren Data: 2021-08-02_April 2021 SSL Printed 8/30/2021, 1:49 PM

<u>Constituent</u>	<u>Well</u>	<u>Slope</u>	<u>Calc.</u>	<u>Critical</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Normality</u>	<u>Xform</u>	<u>Alpha</u>	<u>Method</u>
MOLYBDENUM, TOTAL (UG/L)	L-UMW-2D	-1.64	-58	-45	Yes	16	0	n/a	n/a	0.05	NP
MOLYBDENUM, TOTAL (UG/L)	L-UMW-3D	0.5577	1	49	No	17	0	n/a	n/a	0.05	NP
MOLYBDENUM, TOTAL (UG/L)	L-UMW-4D	-9.359	-41	-45	No	16	0	n/a	n/a	0.05	NP
MOLYBDENUM, TOTAL (UG/L)	L-UMW-5D	13.2	75	41	Yes	15	0	n/a	n/a	0.05	NP
MOLYBDENUM, TOTAL (UG/L)	L-UMW-6D	-16.22	-27	-45	No	16	0	n/a	n/a	0.05	NP
MOLYBDENUM, TOTAL (UG/L)	L-UMW-7D	10.34	52	45	Yes	16	0	n/a	n/a	0.05	NP
MOLYBDENUM, TOTAL (UG/L)	L-UMW-8D	0.5547	23	41	No	15	0	n/a	n/a	0.05	NP
MOLYBDENUM, TOTAL (UG/L)	L-UMW-9D	-2.4e-8	-5	-45	No	16	43.75	n/a	n/a	0.05	NP
Radium [226 + 228] (PCI/L)	L-UMW-1D	0.07143	23	45	No	16	12.5	n/a	n/a	0.05	NP
Radium [226 + 228] (PCI/L)	L-UMW-2D	-0.02895	-10	-45	No	16	37.5	n/a	n/a	0.05	NP
Radium [226 + 228] (PCI/L)	L-UMW-3D	-0.00...	-2	-49	No	17	70.59	n/a	n/a	0.05	NP
Radium [226 + 228] (PCI/L)	L-UMW-4D	0.02845	21	41	No	15	86.67	n/a	n/a	0.05	NP
Radium [226 + 228] (PCI/L)	L-UMW-5D	-0.02411	-11	-41	No	15	100	n/a	n/a	0.05	NP
Radium [226 + 228] (PCI/L)	L-UMW-6D	0.000...	0	45	No	16	50	n/a	n/a	0.05	NP
Radium [226 + 228] (PCI/L)	L-UMW-7D	0.000...	0	45	No	16	75	n/a	n/a	0.05	NP
Radium [226 + 228] (PCI/L)	L-UMW-8D	-0.06806	-22	-45	No	16	37.5	n/a	n/a	0.05	NP
Radium [226 + 228] (PCI/L)	L-UMW-9D	-0.03263	-24	-45	No	16	87.5	n/a	n/a	0.05	NP
SELENIUM, TOTAL (UG/L)	L-UMW-1D	0	-3	-34	No	13	92.31	n/a	n/a	0.05	NP
SELENIUM, TOTAL (UG/L)	L-UMW-2D	0	-3	-34	No	13	92.31	n/a	n/a	0.05	NP
SELENIUM, TOTAL (UG/L)	L-UMW-3D	0	-11	-37	No	14	57.14	n/a	n/a	0.05	NP
SELENIUM, TOTAL (UG/L)	L-UMW-4D	0	-15	-34	No	13	100	n/a	n/a	0.05	NP
SELENIUM, TOTAL (UG/L)	L-UMW-5D	0	10	34	No	13	69.23	n/a	n/a	0.05	NP
SELENIUM, TOTAL (UG/L)	L-UMW-6D	0	5	34	No	13	23.08	n/a	n/a	0.05	NP
SELENIUM, TOTAL (UG/L)	L-UMW-7D	0	-5	-34	No	13	76.92	n/a	n/a	0.05	NP
SELENIUM, TOTAL (UG/L)	L-UMW-8D	0	-13	-34	No	13	92.31	n/a	n/a	0.05	NP
SELENIUM, TOTAL (UG/L)	L-UMW-9D	0	-15	-34	No	13	100	n/a	n/a	0.05	NP
THALLIUM, TOTAL (UG/L)	L-UMW-1D	-0.04492	-35	-30	Yes	12	83.33	n/a	n/a	0.05	NP
THALLIUM, TOTAL (UG/L)	L-UMW-2D	-0.04328	-28	-30	No	12	100	n/a	n/a	0.05	NP
THALLIUM, TOTAL (UG/L)	L-UMW-3D	-0.04333	-33	-34	No	13	100	n/a	n/a	0.05	NP
THALLIUM, TOTAL (UG/L)	L-UMW-4D	-0.04332	-28	-30	No	12	100	n/a	n/a	0.05	NP
THALLIUM, TOTAL (UG/L)	L-UMW-5D	-0.04324	-28	-30	No	12	100	n/a	n/a	0.05	NP
THALLIUM, TOTAL (UG/L)	L-UMW-6D	-0.04487	-34	-30	Yes	12	91.67	n/a	n/a	0.05	NP
THALLIUM, TOTAL (UG/L)	L-UMW-7D	-0.04341	-28	-30	No	12	100	n/a	n/a	0.05	NP
THALLIUM, TOTAL (UG/L)	L-UMW-8D	-0.04332	-28	-30	No	12	100	n/a	n/a	0.05	NP
THALLIUM, TOTAL (UG/L)	L-UMW-9D	-0.04328	-28	-30	No	12	100	n/a	n/a	0.05	NP

APPENDIX D

**February/April 2021 Corrective
Action Statistical Evaluation**

TECHNICAL MEMORANDUM

DATE February 15, 2022 **Project No.** 153-140603

TO Bill Kutosky
Ameren Missouri

CC Susan Knowles, Craig Giesmann, Charlie Henderson

FROM Jeffrey Ingram, Sean Paulsen, Mark Haddock **EMAIL** Jingram@Golder.com

REVISED CORRECTIVE ACTION STATISTICAL EVALUATION LCPA SURFACE IMPOUNDMENT LABADIE ENERGY CENTER, FRANKLIN COUNTY, MISSOURI

This Technical Memorandum provides the results of the Corrective Action Monitoring statistical analyses from the April 2021 sampling event for the LCPA Surface Impoundment at the Labadie Energy Center located in Franklin County, Missouri. As outlined in the remedy selection report for the LCPA, Corrective Action at the LCPA consists of two phases as follows:

- 1) Source control, stabilization, and containment of CCR by installation of a low-permeability geomembrane cap.
- 2) Once source control is achieved, monitor the natural attenuation (MNA) of groundwater concentrations to address limited and localized CCR-related impacts. Ongoing monitoring and modeling evaluations will document that concentrations are decreasing as modeled.

Phase 1 of Corrective Action was commenced on September 28, 2019, and substantially completed on December 30, 2020, with the installation of the low permeability cover system. Included in this memorandum is a brief summary of constituents that are currently in exceedance of the groundwater protection standard (GWPS), a list of site-specific Groundwater Protection Standards (**Table 1**), and the Sanitas Technologies™ (Sanitas) statistical software output for each of the Appendix IV parameters (**Appendix A**).

The initial Corrective Action sampling event was completed in April 2020, and four (4) sampling events have been completed in total as a part of the Corrective Action Program at the LEC. Corrective Action statistical analyses cannot be completed until a minimum of four (4) sampling events have been completed during the Corrective Action monitoring period. Thus, the statistical evaluation described herein is the first Corrective Action statistical evaluation and is the first event completed following the completion of Phase 1. This analysis uses results collected since the beginning of Corrective Action monitoring (April 2020), as data collected prior to this time was collected during active conditions at the LCPA, prior to cessation of CCR materials being added to the LCPA and is thus not representative of groundwater conditions since the initiation of closure. Several constituents were reported at concentrations below the practical quantitation limit (PQL) during the April 2020 sampling event including beryllium, cadmium, cobalt, lead, mercury, and thallium. Because these constituents were not detected during the initial Corrective Action sampling event, they were not re-sampled during the subsequent 2020 semi-annual sampling events in May and November 2020. Only two results are available for each of the constituents, and therefore, confidence intervals could not be calculated, and these constituents were not evaluated in this statistical evaluation.

The Appendix IV constituents were evaluated for exceedances above the GWPS using the methods and procedures outlined in the Corrective Action Groundwater Monitoring Plans (CAGMP) Statistical Analysis Plan (SAP). An outlier analysis was completed as the first step of the statistical evaluation. The following outliers were removed prior to the calculation of confidence limits.

- Beryllium
 - LMW-8S at ND on 4/15/2021. The detection limits for this event are statistically higher than other results at the same well. The high result is not consistent with previous sampling event results and will be further evaluated during subsequent sampling events.
- Fluoride
 - MW-26 at 0.29 mg/L on 4/16/2021. The result is statistically higher than other results at the same well. The high result is not consistent with previous sampling event results and will be further evaluated during subsequent sampling events.
- Lead
 - MW-26 at 5.8J µg/L on 4/16/2021. The high result is not consistent with previous sampling event results and will be further evaluated during subsequent sampling events.
- Lithium
 - LMW-8S at ND on 4/15/2021. The result is statistically higher than other results at the same well. The high result is not consistent with previous sampling event results and will be further evaluated during subsequent sampling events.

Following the removal of the outliers, statistical analyses were completed using the methods and procedures outlined in the CAGMPs SAP. The second step in the statistical analysis was to calculate confidence intervals and compare those to the GWPS¹. The confidence intervals shown in Appendix A are calculated based on results from the four sampling events that have occurred since the initiation of Corrective Action. A summary of constituents exceeding the GWPS at corresponding well(s) is as follows:

- Arsenic at LMW-2S
- Lithium at LMW-4S and LMW-7S
- Molybdenum at LMW-2S, LMW-4S, LMW-7S, LMW-8S, AM-1D, TP-2D, TP-3D, TP-3M, AMW-8, MW-33[D], MW-34[D], and MW-35[D]
- Radium 226 & 228 at TP-1D

Typically, following the calculation of confidence intervals, trend tests would be completed using the Sen's Slope / Mann Kendall analysis as outlined in the statistical analysis plan. However, Sen's Slope / Mann Kendall analysis require 8 independent sampling results to complete as outlined in the USEPA Unified Guidance. Since only 4 sampling events have occurred after the cessation of CCR disposal into the LCPA, the Sen's Slope / Mann

¹ The GWPS is the same limit that was used during Assessment Monitoring period, which was the groundwater monitoring phase immediately prior to Corrective Action.

Kendall test cannot be completed. Therefore, no constituent well pairs were determined to have a significant trend and no trend charts are included with this Technical Memorandum.

While there are exceedances of the GWPS using corrective action statistical methods for Arsenic, Lithium, Molybdenum and Radium 226 + 228, variability in the initial groundwater sampling results during and directly after closure of the LCPA is expected, especially at wells nearest the CCR unit where closure grading and disturbance activities were greatest. The concentrations reported in these preliminary results are expected to decrease over time after closure, as stabilization occurs and supplemental corrective measures are put into service.

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.

Sincerely,



Jeffrey Ingram, R.G.
Senior Project Geologist



Sean Paulsen
Associate, Senior Consultant

EMS/JSI/SCP/MNH

Enclosures:

Table 1 – LCPA Groundwater Protection Standards

Appendix A – Sanitas Confidence Interval Statistical Output

**Table 1 - LCPA Groundwater Protection Standards
LCPA Surface Impoundment
Labadie Energy Center**

Parameter	Units	MCL or Health Based GWPS	Site GWPS	Value to Return to Detection Monitoring ⁷
Antimony	µg/L	6	6	DQR
Arsenic	µg/L	10	44.2	44.2
Barium	µg/L	2000	2000	1290
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	0.3163
Lead	µg/L	15	15	DQR
Lithium	µg/L	40	47.4	47.4
Mercury	µg/L	2	2	DQR
Molybdenum	µg/L	100	100	DQR
Radium 226 + 228	pCi/L	5	5	4.14
Selenium	µg/L	50	50	DQR
Thallium	µg/L	2	2	DQR

Notes:

1. µg/L - micrograms per liter.
2. mg/L - milligrams per liter.
3. pCi/L - picocuries per liter.

4. MCL - Maximum Contaminant Level. MCLs from United States Environmental Protection Agency (USEPA) 2012 Edition of the Drinking Water Standards and Health Advisories. Spring 2012. <http://water.epa.gov/drink/contaminants/index.cfm>.

5. Health Based Groundwater Protection Standards (GWPS) were adopted 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 collected through February 2021 from monitoring wells BMW-1D and BMW-2D.

Prepared by: JSI

Checked by: EMS

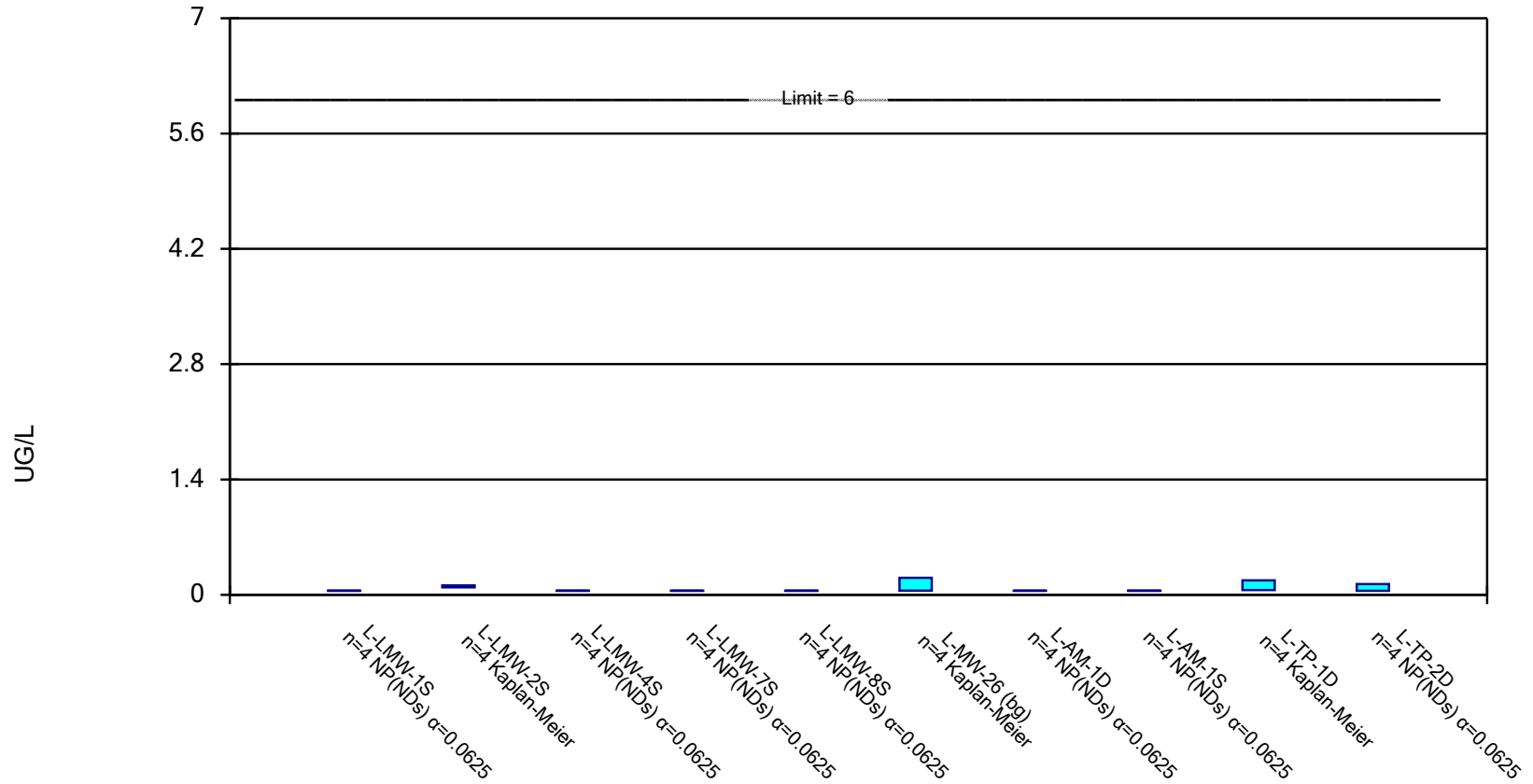
Reviewed by: SCP

APPENDIX A

**Sanitas Confidence Interval
Statistical Output**

Parametric and Non-Parametric (NP) Confidence Interval, Corrective Action Mode

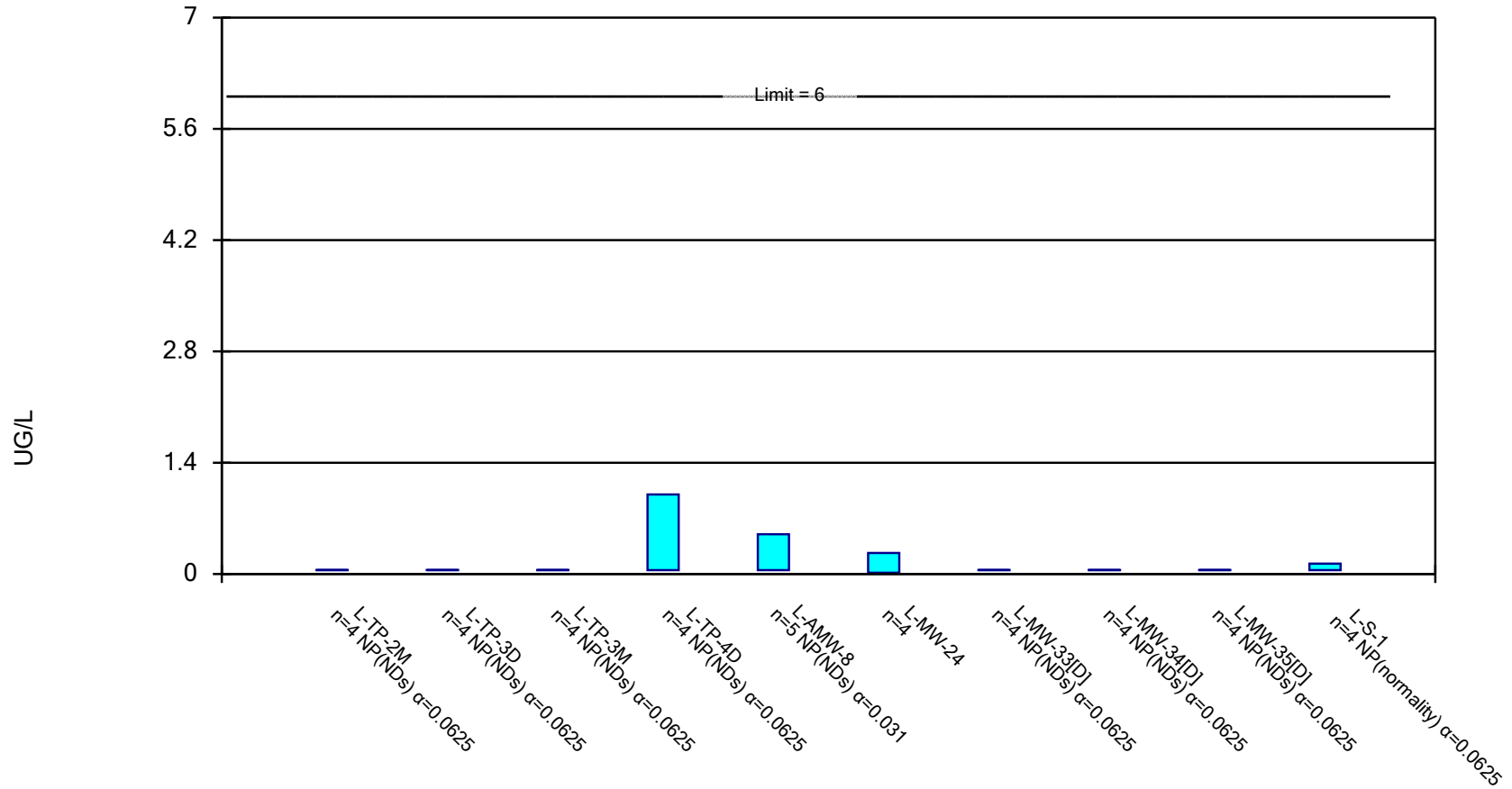
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Constituent: ANTIMONY, TOTAL Analysis Run 2/8/2022 2:54 PM View: Corrective Action
Labadie E.C. Client: Ameren Data: LEC DATA (STATS)

Parametric and Non-Parametric (NP) Confidence Interval, Corrective Action Mode

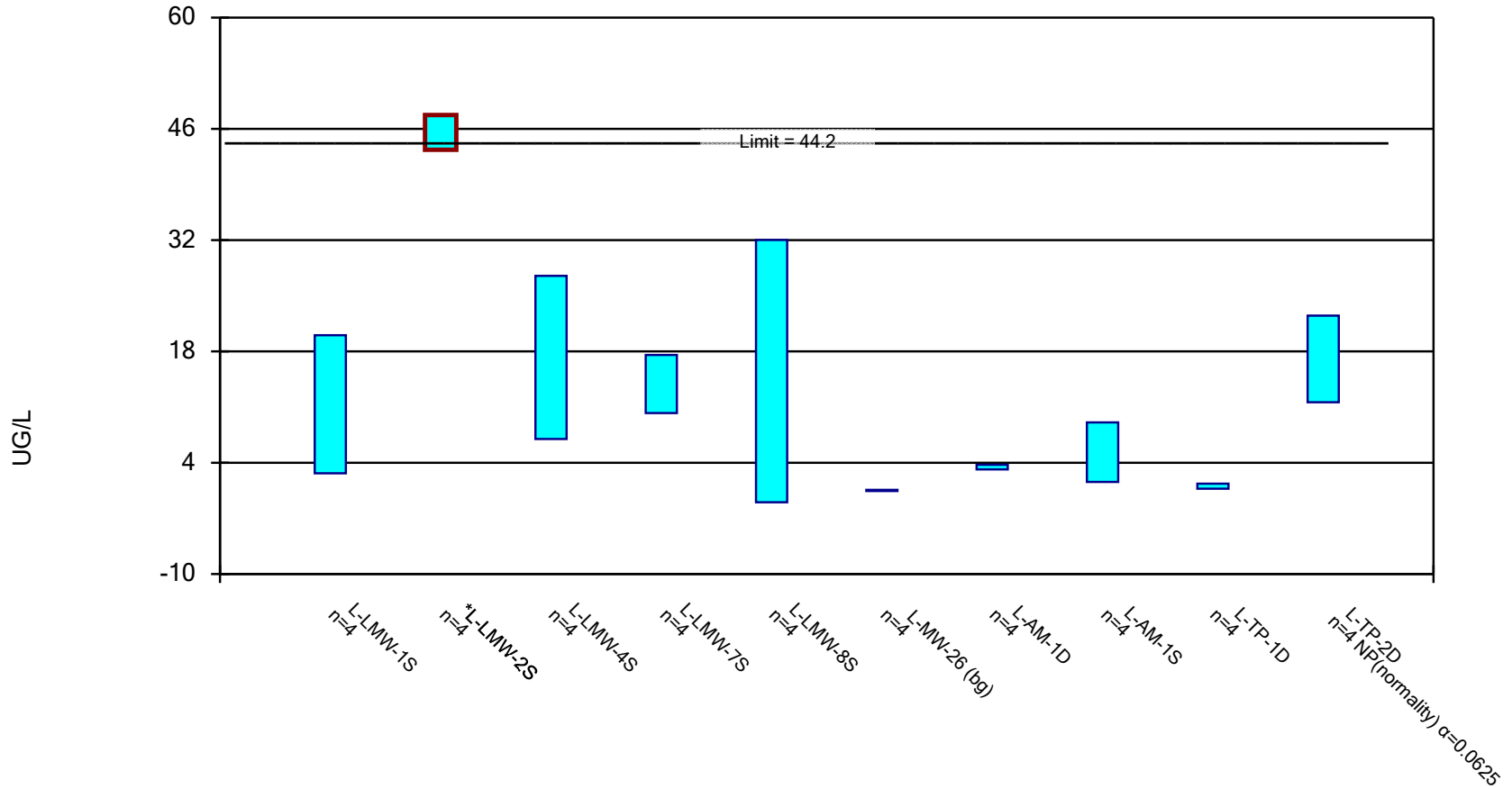
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Constituent: ANTIMONY, TOTAL Analysis Run 2/8/2022 2:54 PM View: Corrective Action
Labadie E.C. Client: Ameren Data: LEC DATA (STATS)

Parametric and Non-Parametric (NP) Confidence Interval, Corrective Action Mode

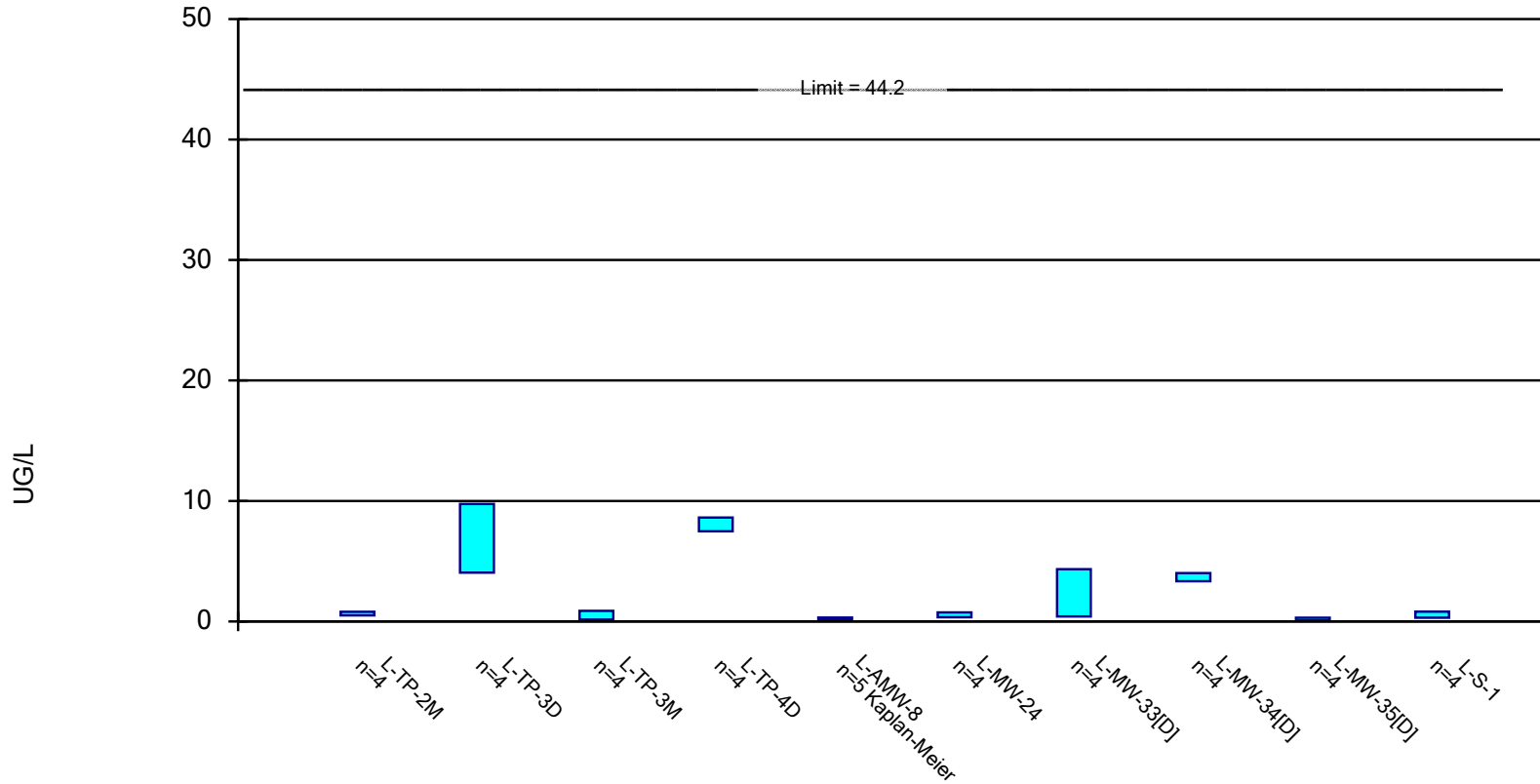
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Constituent: ARSENIC, TOTAL Analysis Run 2/8/2022 2:54 PM View: Corrective Action
 Labadie E.C. Client: Ameren Data: LEC DATA (STATS)

Parametric Confidence Interval, Corrective Action Mode

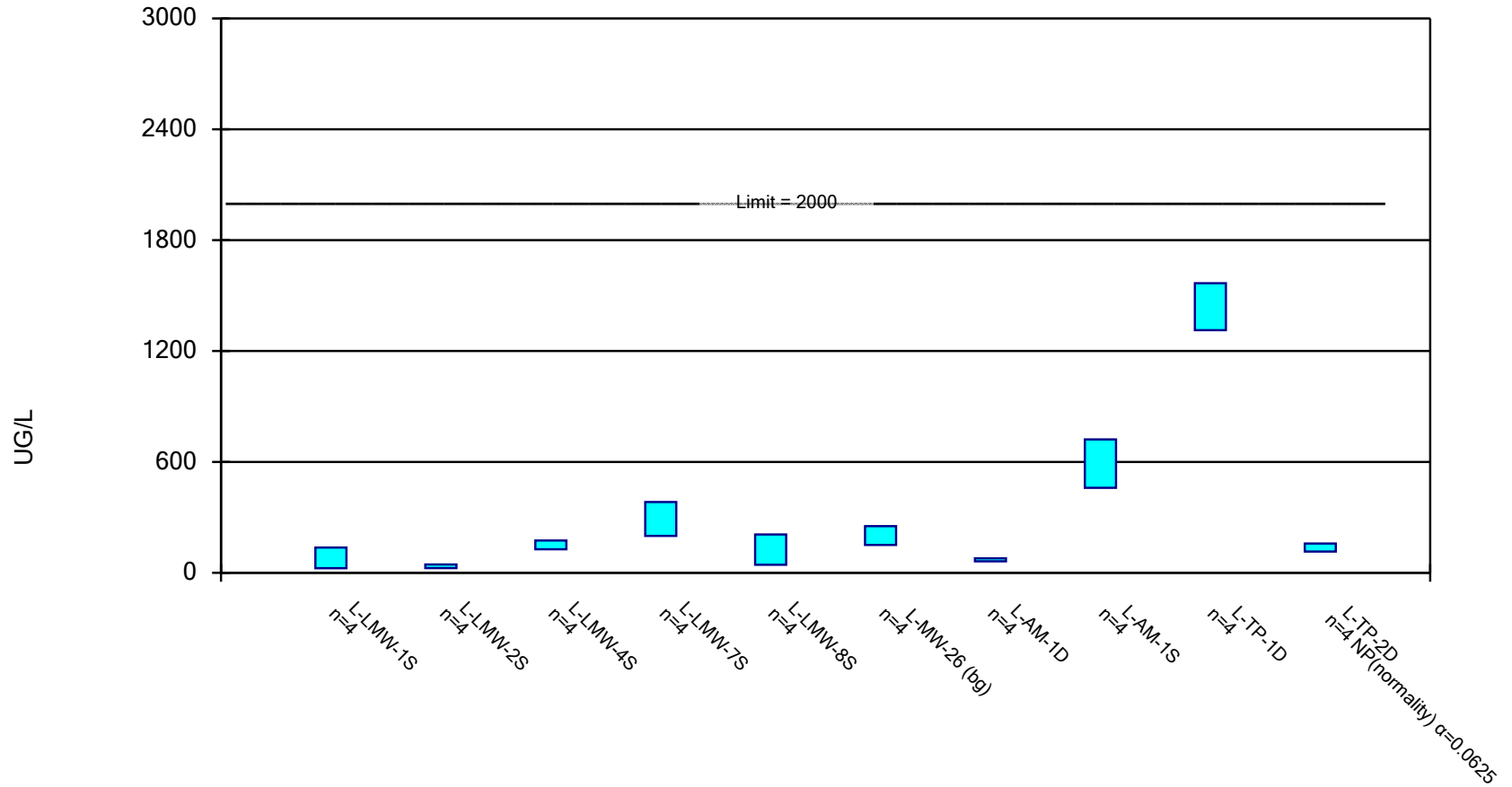
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Constituent: ARSENIC, TOTAL Analysis Run 2/8/2022 2:54 PM View: Corrective Action
Labadie E.C. Client: Ameren Data: LEC DATA (STATS)

Parametric and Non-Parametric (NP) Confidence Interval, Corrective Action Mode

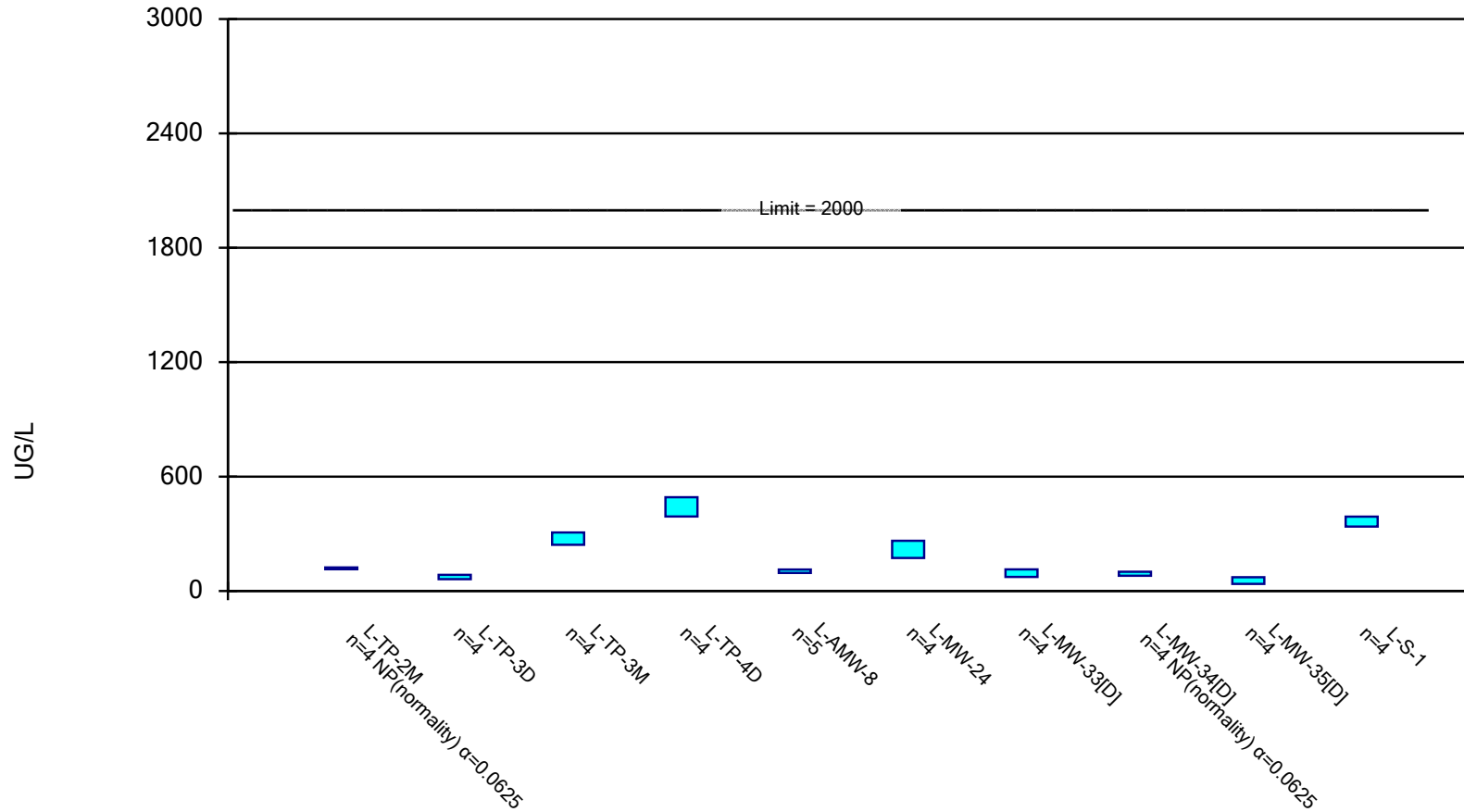
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: BARIUM, TOTAL Analysis Run 2/8/2022 2:54 PM View: Corrective Action
Labadie E.C. Client: Ameren Data: LEC DATA (STATS)

Parametric and Non-Parametric (NP) Confidence Interval, Corrective Action Mode

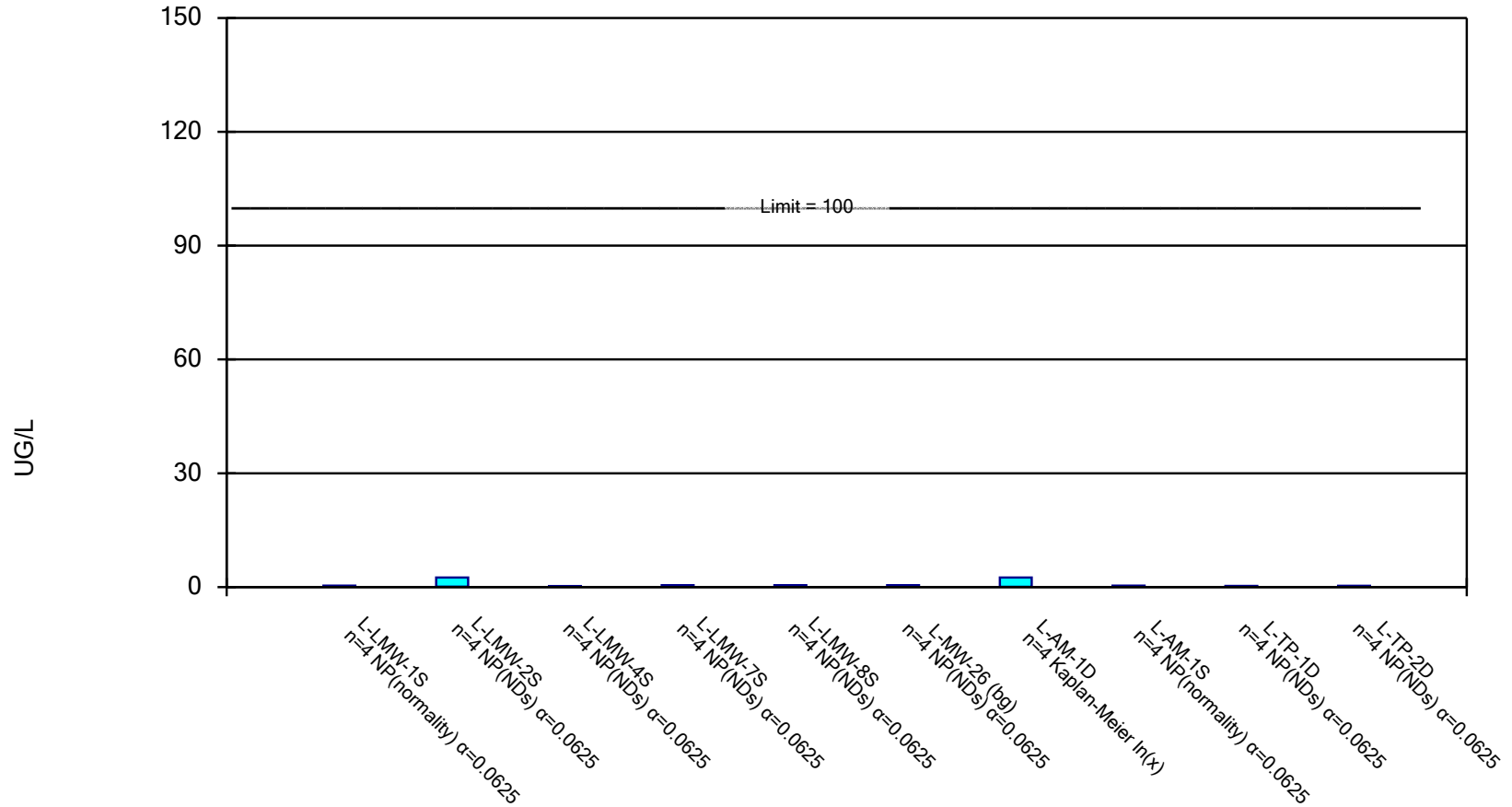
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: BARIUM, TOTAL Analysis Run 2/8/2022 2:54 PM View: Corrective Action
Labadie E.C. Client: Ameren Data: LEC DATA (STATS)

Parametric and Non-Parametric (NP) Confidence Interval, Corrective Action Mode

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

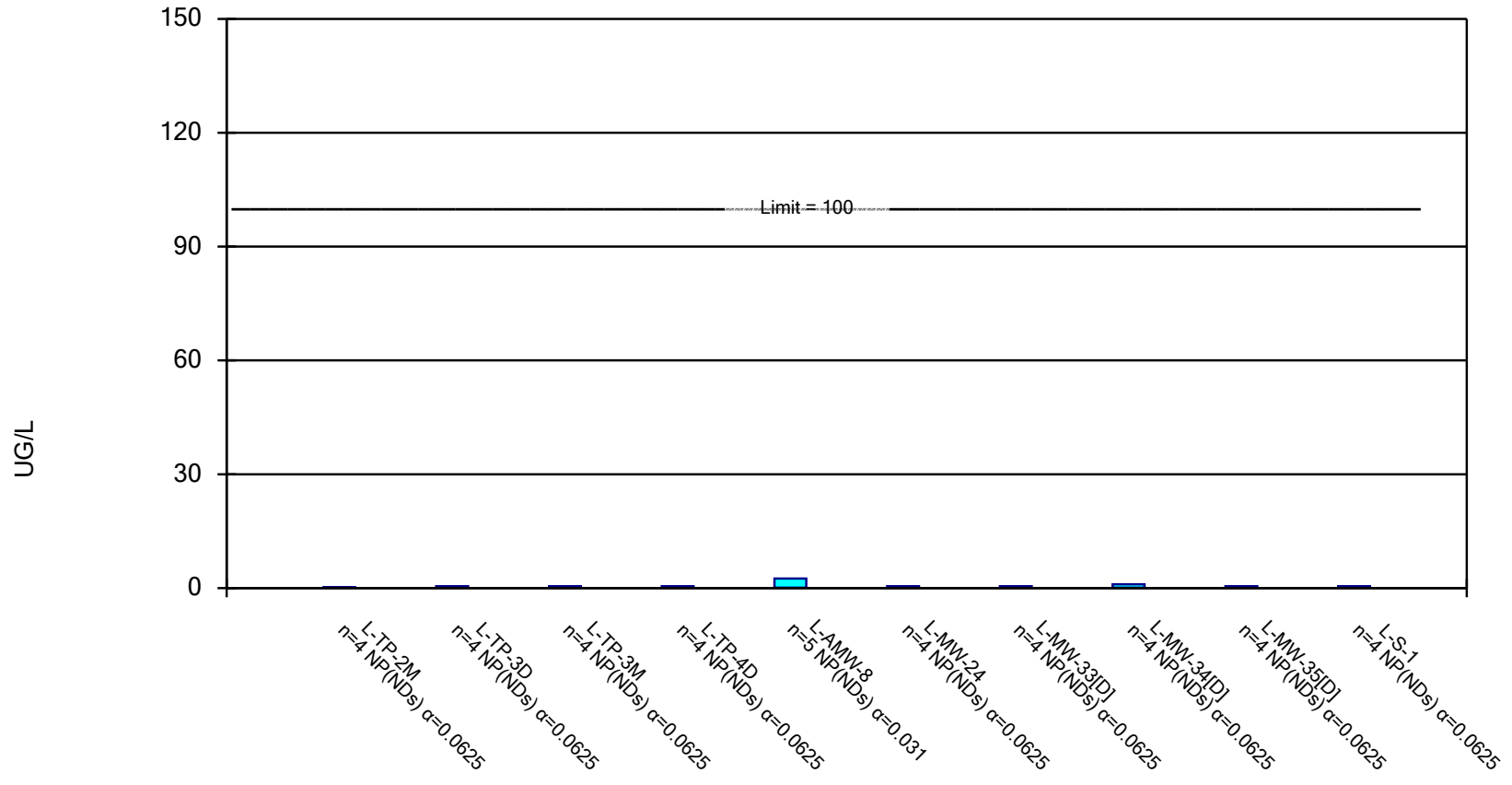


Constituent: CHROMIUM, TOTAL Analysis Run 2/8/2022 2:54 PM View: Corrective Action

Labadie E.C. Client: Ameren Data: LEC DATA (STATS)

Non-Parametric Confidence Interval, Corrective Action Mode

Compliance Limit is not exceeded.

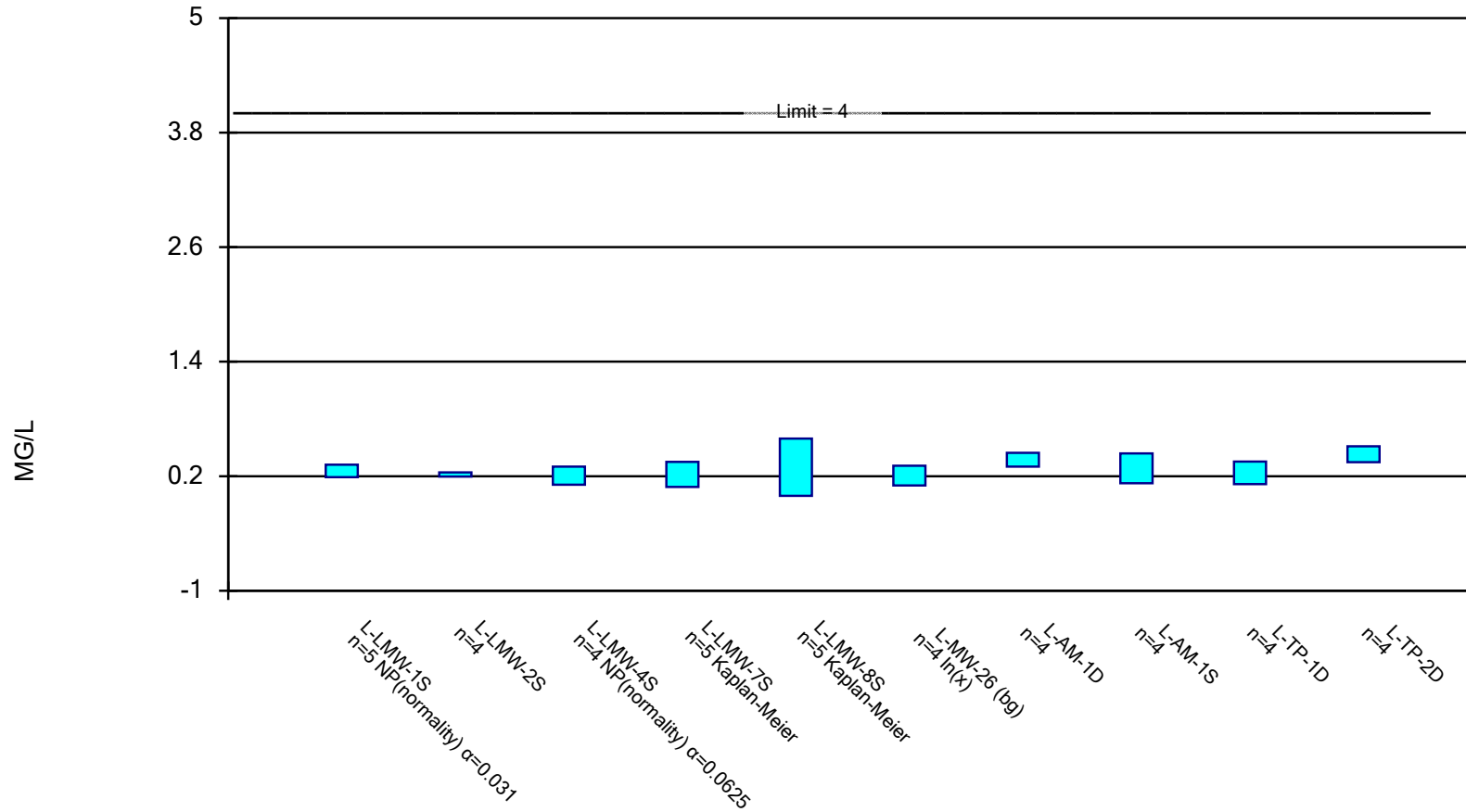


Constituent: CHROMIUM, TOTAL Analysis Run 2/8/2022 2:54 PM View: Corrective Action

Labadie E.C. Client: Ameren Data: LEC DATA (STATS)

Parametric and Non-Parametric (NP) Confidence Interval, Corrective Action Mode

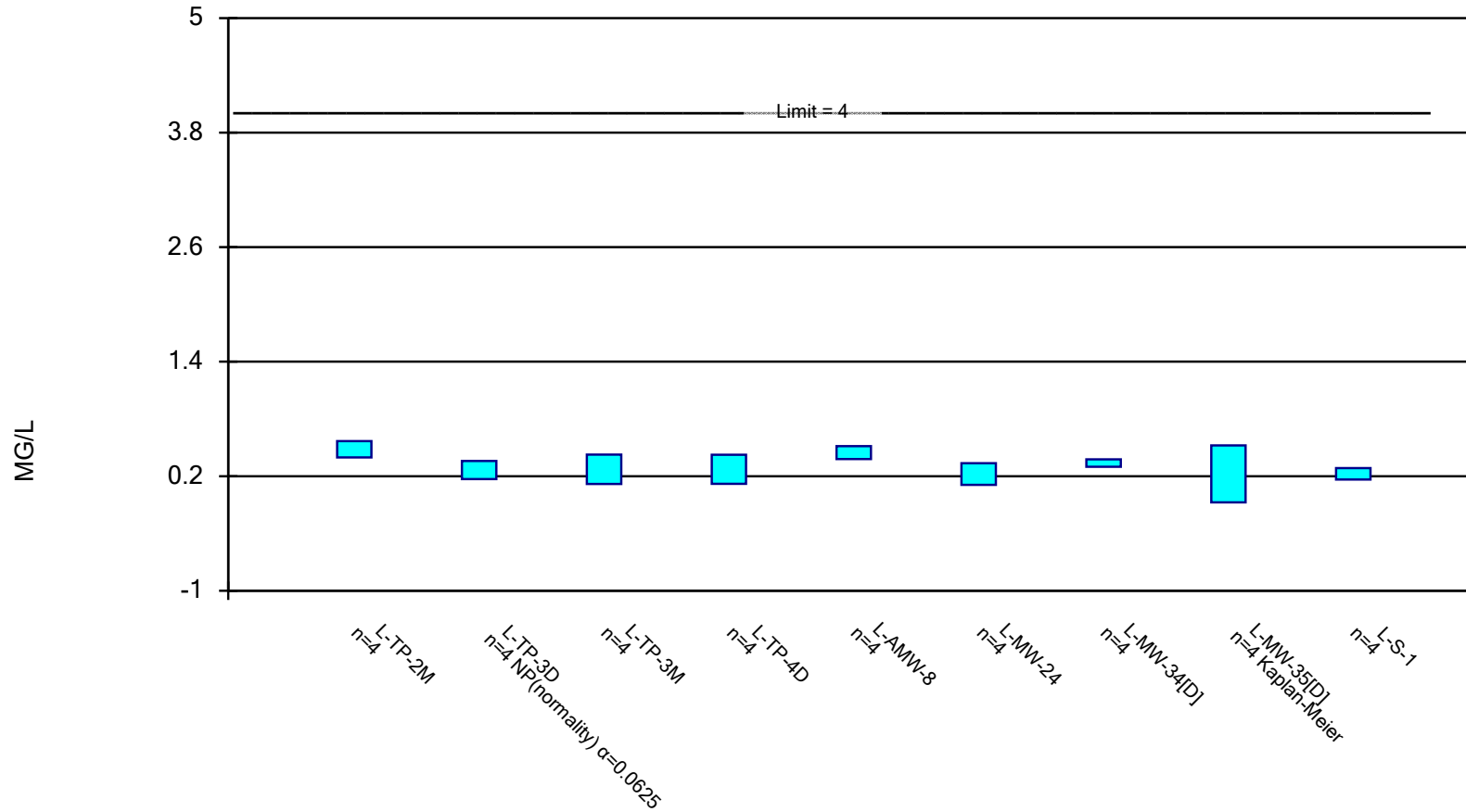
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: FLUORIDE, TOTAL Analysis Run 2/8/2022 2:54 PM View: Corrective Action
 Labadie E.C. Client: Ameren Data: LEC DATA (STATS)

Parametric and Non-Parametric (NP) Confidence Interval, Corrective Action Mode

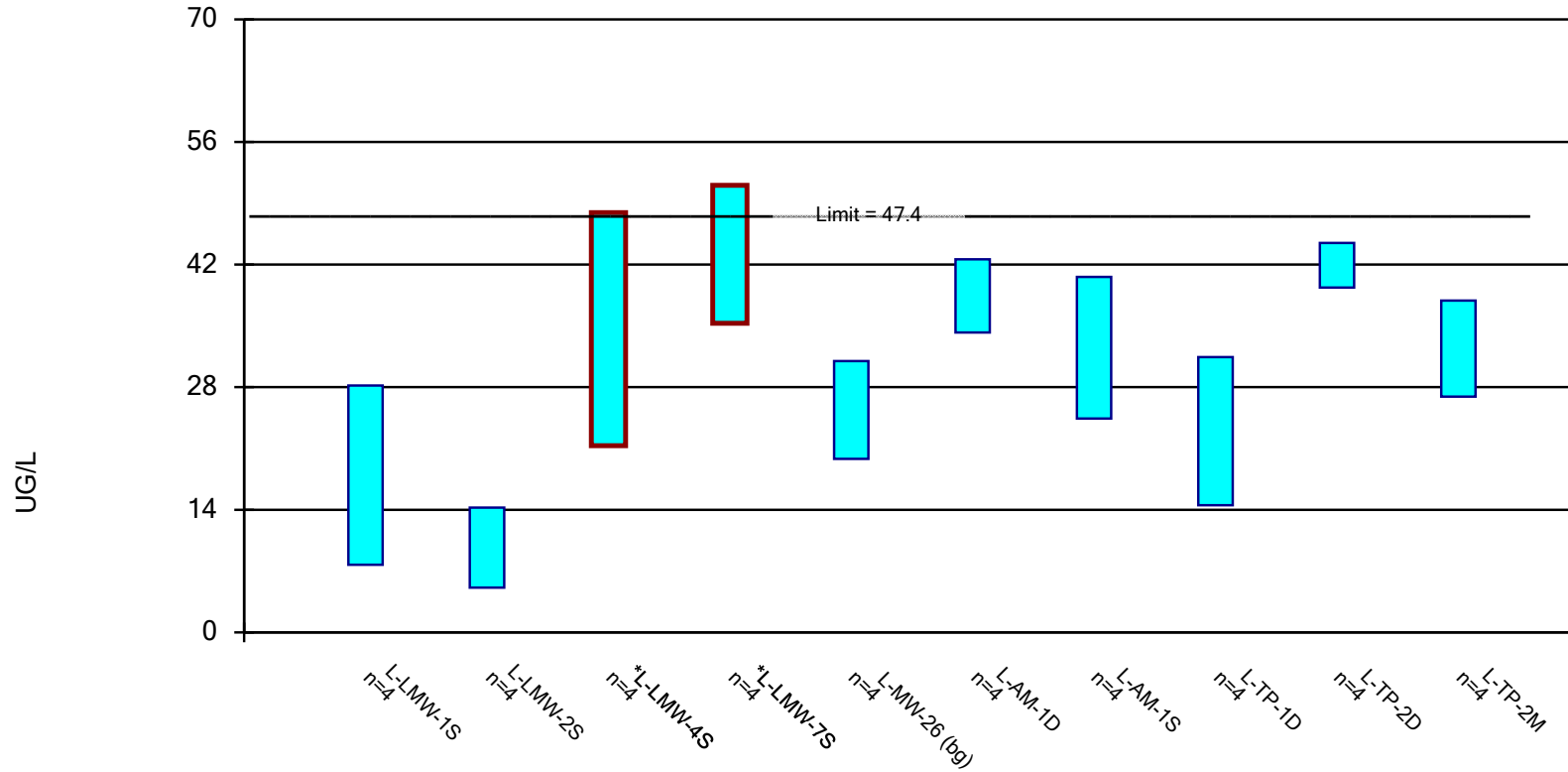
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Constituent: FLUORIDE, TOTAL Analysis Run 2/8/2022 2:54 PM View: Corrective Action
Labadie E.C. Client: Ameren Data: LEC DATA (STATS)

Parametric Confidence Interval, Corrective Action Mode

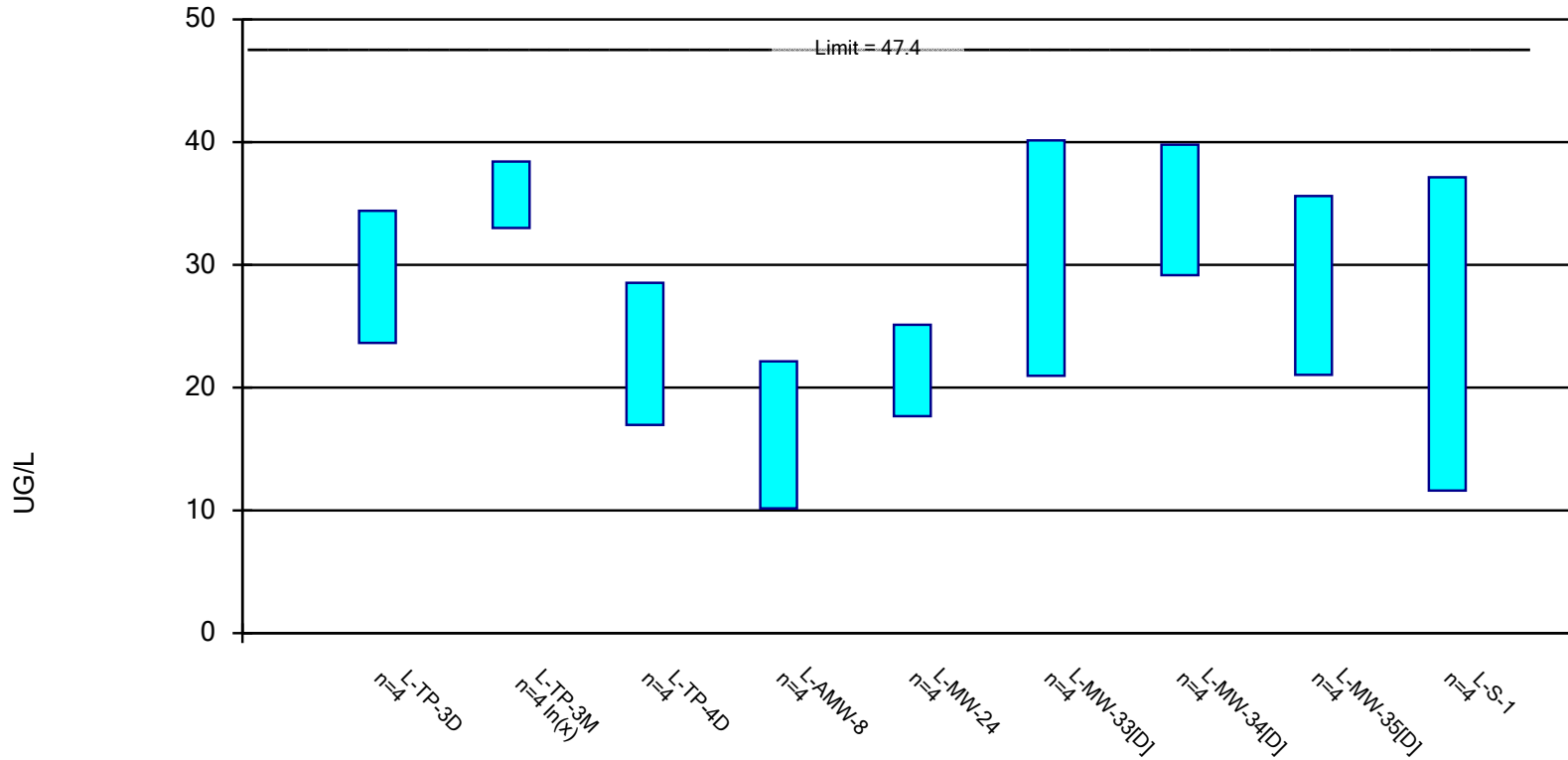
Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: LITHIUM, TOTAL Analysis Run 2/8/2022 2:54 PM View: Corrective Action
Labadie E.C. Client: Ameren Data: LEC DATA (STATS)

Parametric Confidence Interval, Corrective Action Mode

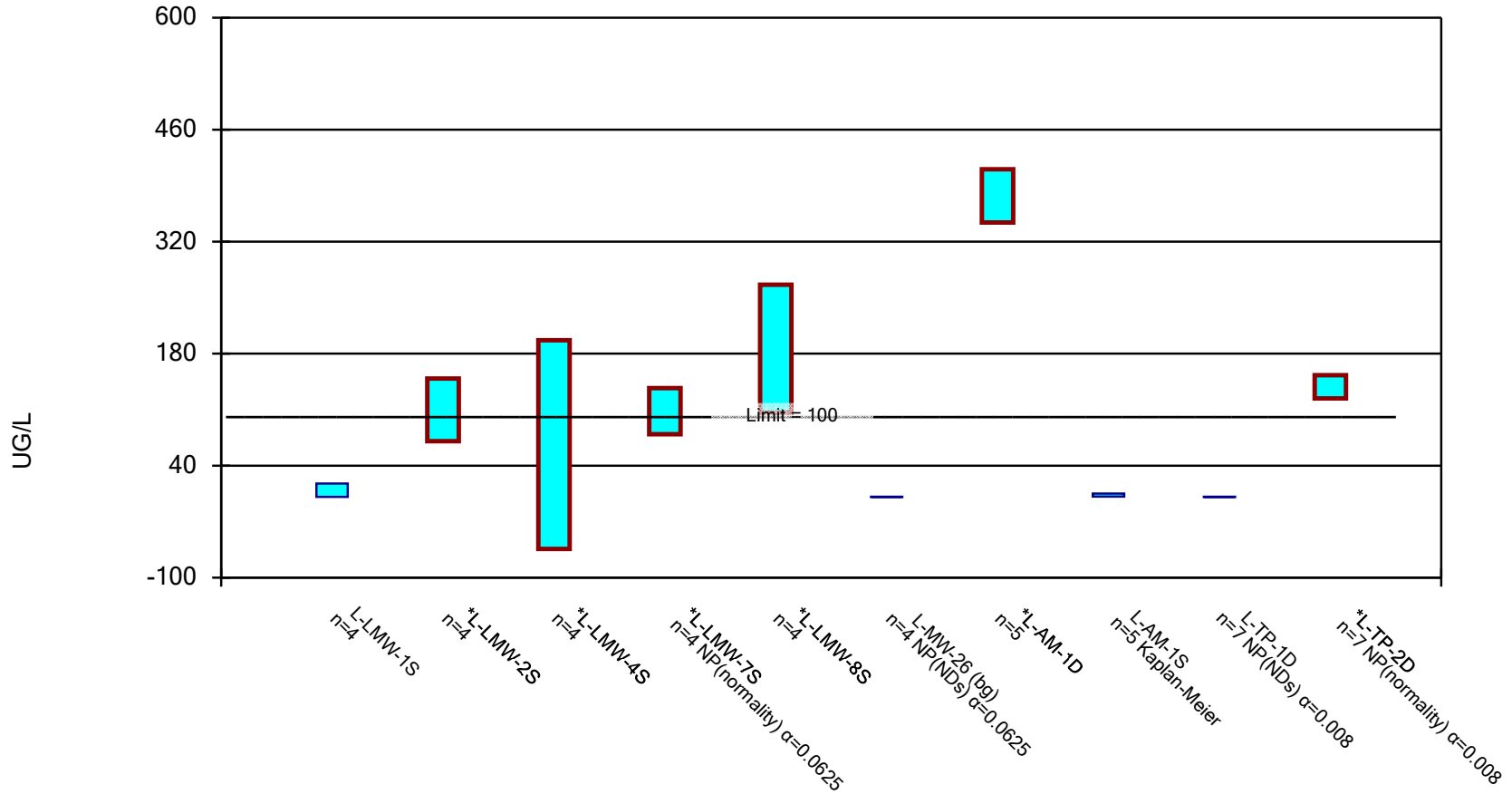
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: LITHIUM, TOTAL Analysis Run 2/8/2022 2:54 PM View: Corrective Action
Labadie E.C. Client: Ameren Data: LEC DATA (STATS)

Parametric and Non-Parametric (NP) Confidence Interval, Corrective Action Mode

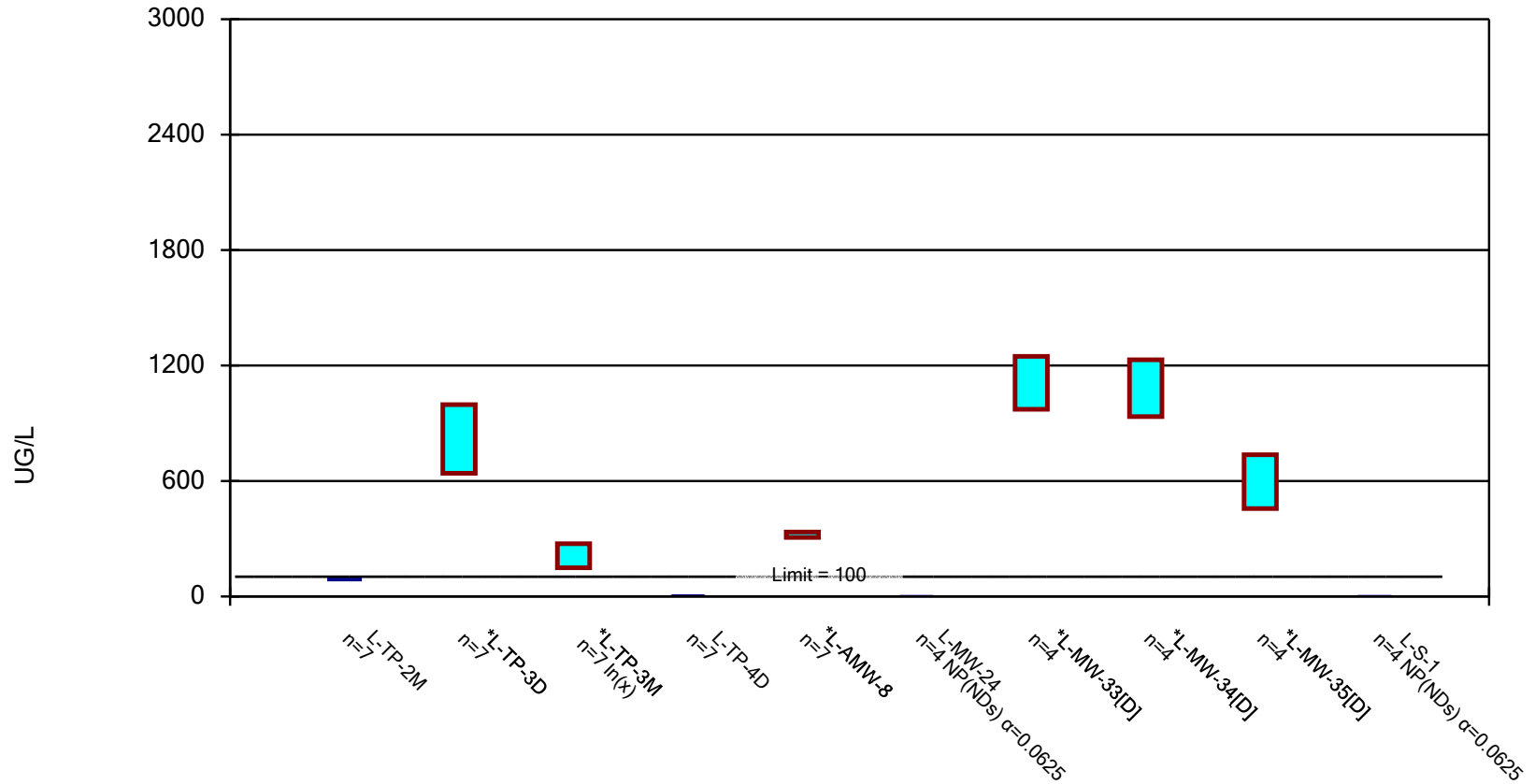
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Constituent: MOLYBDENUM, TOTAL Analysis Run 2/8/2022 2:54 PM View: Corrective Action
 Labadie E.C. Client: Ameren Data: LEC DATA (STATS)

Parametric and Non-Parametric (NP) Confidence Interval, Corrective Action Mode

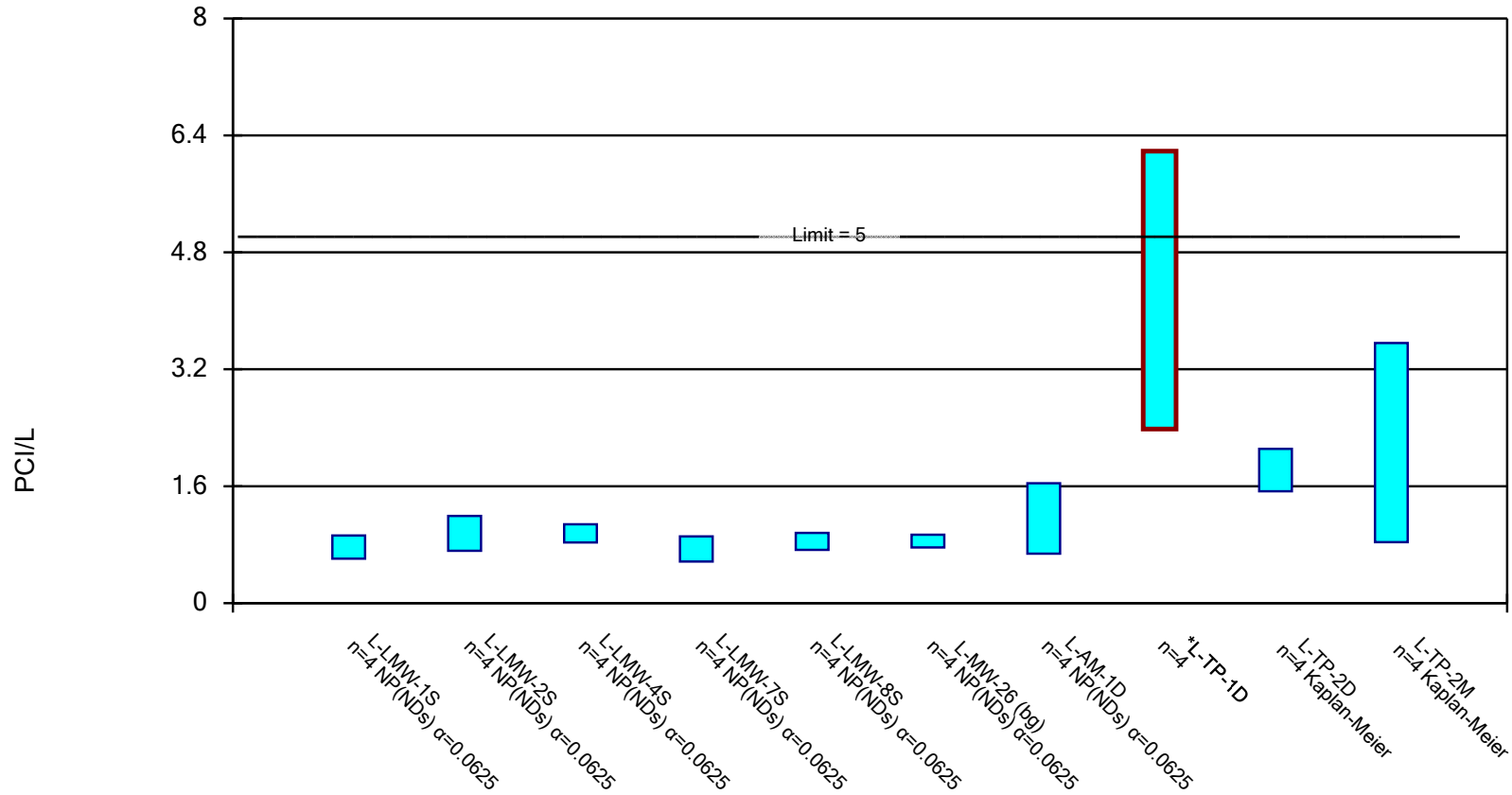
Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: MOLYBDENUM, TOTAL Analysis Run 2/8/2022 2:54 PM View: Corrective Action
 Labadie E.C. Client: Ameren Data: LEC DATA (STATS)

Parametric and Non-Parametric (NP) Confidence Interval, Corrective Action Mode

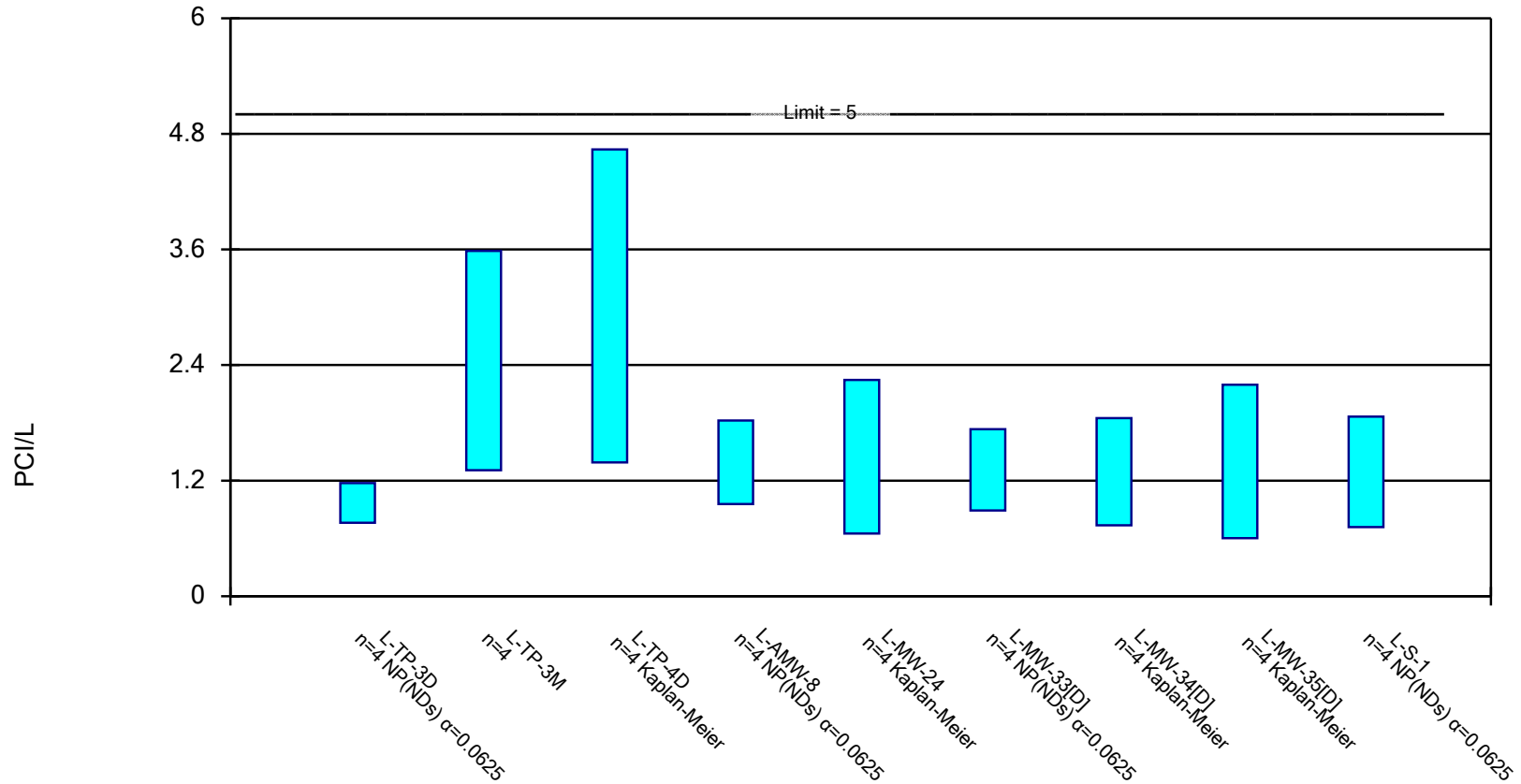
Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Radium [226 + 228] Analysis Run 2/8/2022 2:54 PM View: Corrective Action
 Labadie E.C. Client: Ameren Data: LEC DATA (STATS)

Parametric and Non-Parametric (NP) Confidence Interval, Corrective Action Mode

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.

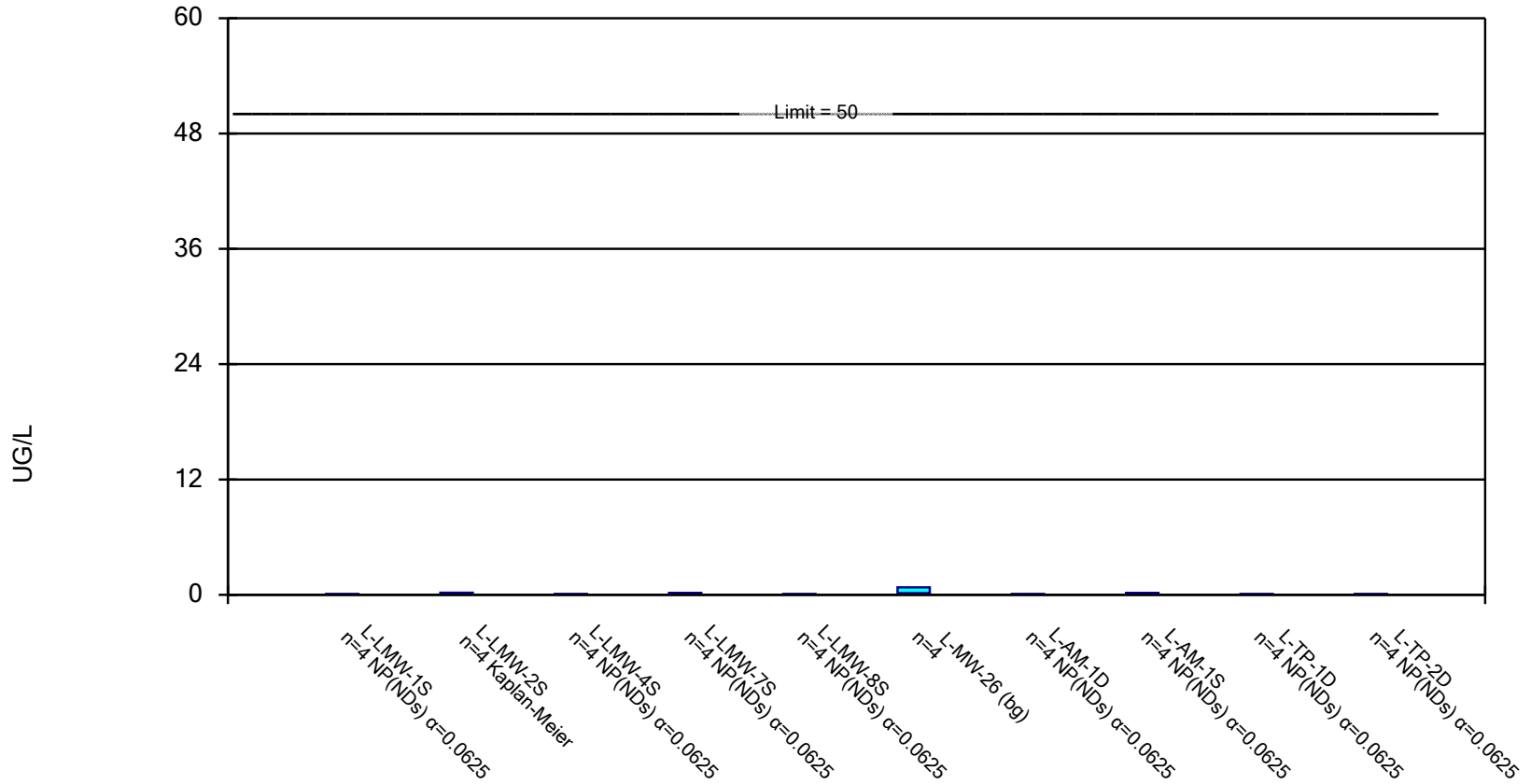


Constituent: Radium [226 + 228] Analysis Run 2/8/2022 2:54 PM View: Corrective Action

Labadie E.C. Client: Ameren Data: LEC DATA (STATS)

Parametric and Non-Parametric (NP) Confidence Interval, Corrective Action Mode

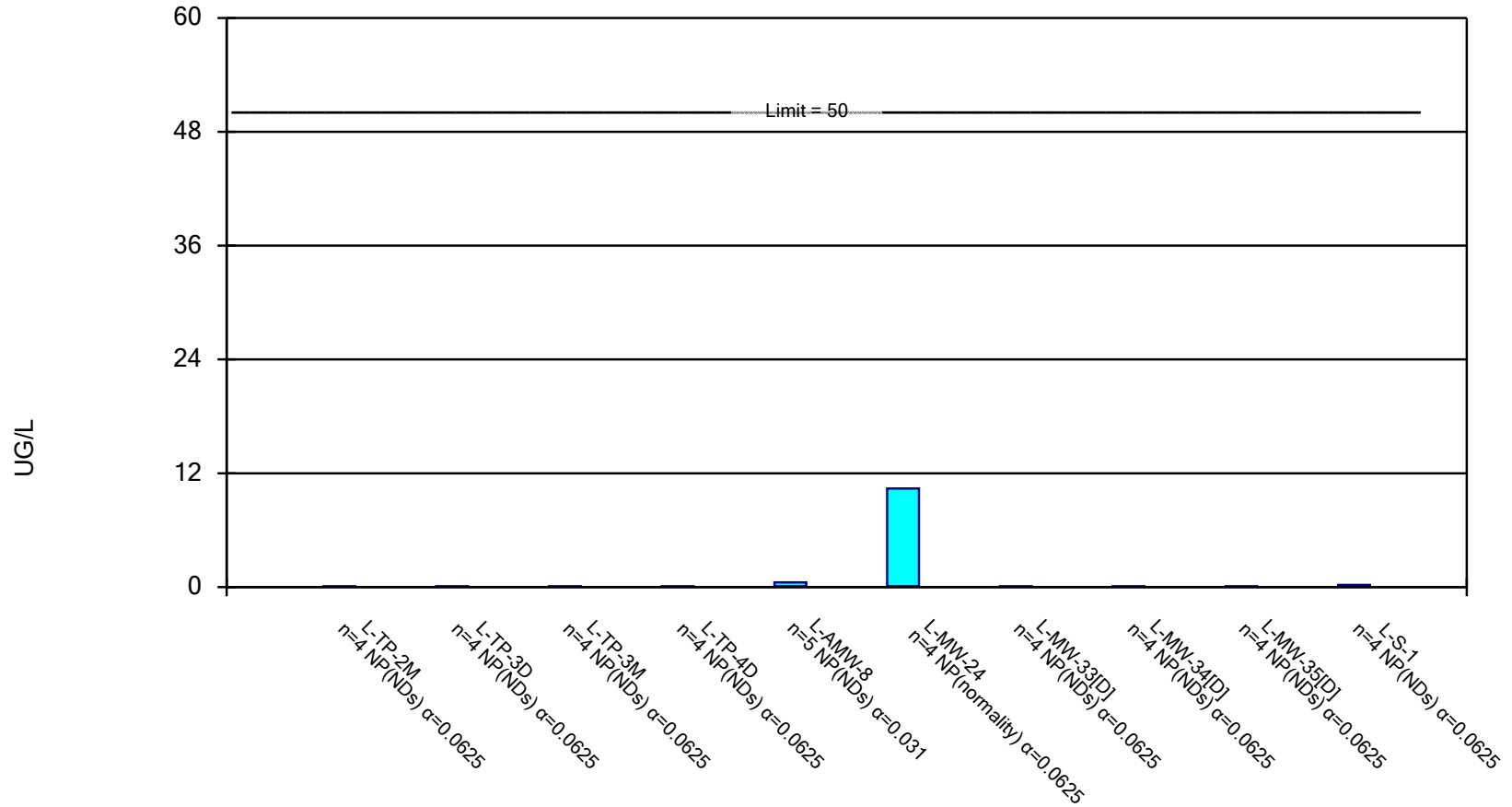
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: SELENIUM, TOTAL Analysis Run 2/8/2022 2:54 PM View: Corrective Action
Labadie E.C. Client: Ameren Data: LEC DATA (STATS)

Non-Parametric Confidence Interval, Corrective Action Mode

Compliance Limit is not exceeded.



Constituent: SELENIUM, TOTAL Analysis Run 2/8/2022 2:54 PM View: Corrective Action

Labadie E.C. Client: Ameren Data: LEC DATA (STATS)

Confidence Interval

Labadie E.C. Client: Ameren Data: LEC DATA (STATS) Printed 2/8/2022, 2:56 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Compliance</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
ANTIMONY, TOTAL (UG/L)	L-LMW-1S	0.05	0.0485	6	No	4	100	No	0.0625	NP (NDs)
ANTIMONY, TOTAL (UG/L)	L-LMW-2S	0.1131	0.08969	6	No	4	50	No	0.01	Param.
ANTIMONY, TOTAL (UG/L)	L-LMW-4S	0.05	0.0485	6	No	4	100	No	0.0625	NP (NDs)
ANTIMONY, TOTAL (UG/L)	L-LMW-7S	0.05	0.0485	6	No	4	100	No	0.0625	NP (NDs)
ANTIMONY, TOTAL (UG/L)	L-LMW-8S	0.05	0.0485	6	No	4	100	No	0.0625	NP (NDs)
ANTIMONY, TOTAL (UG/L)	L-MW-26 (bg)	0.2069	0.05011	6	No	4	50	No	0.01	Param.
ANTIMONY, TOTAL (UG/L)	L-AM-1D	0.05	0.0485	6	No	4	100	No	0.0625	NP (NDs)
ANTIMONY, TOTAL (UG/L)	L-AM-1S	0.05	0.0485	6	No	4	100	No	0.0625	NP (NDs)
ANTIMONY, TOTAL (UG/L)	L-TP-1D	0.1749	0.05708	6	No	4	50	No	0.01	Param.
ANTIMONY, TOTAL (UG/L)	L-TP-2D	0.13	0.0485	6	No	4	75	No	0.0625	NP (NDs)
ANTIMONY, TOTAL (UG/L)	L-TP-2M	0.05	0.0485	6	No	4	100	No	0.0625	NP (NDs)
ANTIMONY, TOTAL (UG/L)	L-TP-3D	0.05	0.0485	6	No	4	100	No	0.0625	NP (NDs)
ANTIMONY, TOTAL (UG/L)	L-TP-3M	0.05	0.0485	6	No	4	100	No	0.0625	NP (NDs)
ANTIMONY, TOTAL (UG/L)	L-TP-4D	1	0.0485	6	No	4	75	No	0.0625	NP (NDs)
ANTIMONY, TOTAL (UG/L)	L-AMW-8	0.5	0.0485	6	No	5	80	No	0.031	NP (NDs)
ANTIMONY, TOTAL (UG/L)	L-MW-24	0.2644	0.01565	6	No	4	0	No	0.01	Param.
ANTIMONY, TOTAL (UG/L)	L-MW-33[D]	0.05	0.0485	6	No	4	100	No	0.0625	NP (NDs)
ANTIMONY, TOTAL (UG/L)	L-MW-34[D]	0.05	0.0485	6	No	4	100	No	0.0625	NP (NDs)
ANTIMONY, TOTAL (UG/L)	L-MW-35[D]	0.05	0.0485	6	No	4	100	No	0.0625	NP (NDs)
ANTIMONY, TOTAL (UG/L)	L-S-1	0.13	0.0485	6	No	4	50	No	0.0625	NP (normality)
ARSENIC, TOTAL (UG/L)	L-LMW-1S	20.04	2.66	44.2	No	4	0	No	0.01	Param.
ARSENIC, TOTAL (UG/L)	L-LMW-2S	47.73	43.37	44.2	Yes	4	0	No	0.01	Param.
ARSENIC, TOTAL (UG/L)	L-LMW-4S	27.51	6.988	44.2	No	4	0	No	0.01	Param.
ARSENIC, TOTAL (UG/L)	L-LMW-7S	17.56	10.24	44.2	No	4	0	No	0.01	Param.
ARSENIC, TOTAL (UG/L)	L-LMW-8S	32.02	-0.9674	44.2	No	4	0	No	0.01	Param.
ARSENIC, TOTAL (UG/L)	L-MW-26 (bg)	0.5848	0.4302	44.2	No	4	0	No	0.01	Param.
ARSENIC, TOTAL (UG/L)	L-AM-1D	3.743	3.157	44.2	No	4	0	No	0.01	Param.
ARSENIC, TOTAL (UG/L)	L-AM-1S	9.071	1.579	44.2	No	4	0	No	0.01	Param.
ARSENIC, TOTAL (UG/L)	L-TP-1D	1.356	0.7288	44.2	No	4	0	No	0.01	Param.
ARSENIC, TOTAL (UG/L)	L-TP-2D	22.5	11.6	44.2	No	4	0	No	0.0625	NP (normality)
ARSENIC, TOTAL (UG/L)	L-TP-2M	0.804	0.496	44.2	No	4	0	No	0.01	Param.
ARSENIC, TOTAL (UG/L)	L-TP-3D	9.754	4.046	44.2	No	4	0	No	0.01	Param.
ARSENIC, TOTAL (UG/L)	L-TP-3M	0.874	0.151	44.2	No	4	0	No	0.01	Param.
ARSENIC, TOTAL (UG/L)	L-TP-4D	8.621	7.479	44.2	No	4	0	No	0.01	Param.
ARSENIC, TOTAL (UG/L)	L-AMW-8	0.3158	0.1492	44.2	No	5	20	No	0.01	Param.
ARSENIC, TOTAL (UG/L)	L-MW-24	0.7485	0.3415	44.2	No	4	0	No	0.01	Param.
ARSENIC, TOTAL (UG/L)	L-MW-33[D]	4.34	0.4099	44.2	No	4	0	No	0.01	Param.
ARSENIC, TOTAL (UG/L)	L-MW-34[D]	4.016	3.334	44.2	No	4	0	No	0.01	Param.
ARSENIC, TOTAL (UG/L)	L-MW-35[D]	0.307	0.08301	44.2	No	4	0	No	0.01	Param.
ARSENIC, TOTAL (UG/L)	L-S-1	0.8122	0.3128	44.2	No	4	0	No	0.01	Param.
BARIUM, TOTAL (UG/L)	L-LMW-1S	136.9	24.37	2000	No	4	0	No	0.01	Param.
BARIUM, TOTAL (UG/L)	L-LMW-2S	44.66	25.44	2000	No	4	0	No	0.01	Param.
BARIUM, TOTAL (UG/L)	L-LMW-4S	174.4	127.1	2000	No	4	0	No	0.01	Param.
BARIUM, TOTAL (UG/L)	L-LMW-7S	383.2	199.3	2000	No	4	0	No	0.01	Param.
BARIUM, TOTAL (UG/L)	L-LMW-8S	207.1	43.01	2000	No	4	0	No	0.01	Param.
BARIUM, TOTAL (UG/L)	L-MW-26 (bg)	252	150.5	2000	No	4	0	No	0.01	Param.
BARIUM, TOTAL (UG/L)	L-AM-1D	78.37	62.03	2000	No	4	0	No	0.01	Param.
BARIUM, TOTAL (UG/L)	L-AM-1S	721.8	459.7	2000	No	4	0	No	0.01	Param.
BARIUM, TOTAL (UG/L)	L-TP-1D	1567	1313	2000	No	4	0	No	0.01	Param.
BARIUM, TOTAL (UG/L)	L-TP-2D	158	115	2000	No	4	0	No	0.0625	NP (normality)

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Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
BARIUM, TOTAL (UG/L)	L-TP-2M	123	114	2000	No	4	0	No	0.0625	NP (normality)
BARIUM, TOTAL (UG/L)	L-TP-3D	84.5	62	2000	No	4	0	No	0.01	Param.
BARIUM, TOTAL (UG/L)	L-TP-3M	307.1	242.4	2000	No	4	0	No	0.01	Param.
BARIUM, TOTAL (UG/L)	L-TP-4D	491.6	390.4	2000	No	4	0	No	0.01	Param.
BARIUM, TOTAL (UG/L)	L-AMW-8	112.6	94.27	2000	No	5	0	No	0.01	Param.
BARIUM, TOTAL (UG/L)	L-MW-24	263.2	172.8	2000	No	4	0	No	0.01	Param.
BARIUM, TOTAL (UG/L)	L-MW-33[D]	113.5	73.56	2000	No	4	0	No	0.01	Param.
BARIUM, TOTAL (UG/L)	L-MW-34[D]	101	80	2000	No	4	0	No	0.0625	NP (normality)
BARIUM, TOTAL (UG/L)	L-MW-35[D]	72.37	36.78	2000	No	4	0	No	0.01	Param.
BARIUM, TOTAL (UG/L)	L-S-1	389.6	337.9	2000	No	4	0	No	0.01	Param.
CHROMIUM, TOTAL (UG/L)	L-LMW-1S	0.39	0.11	100	No	4	50	No	0.0625	NP (normality)
CHROMIUM, TOTAL (UG/L)	L-LMW-2S	2.5	0.11	100	No	4	75	No	0.0625	NP (NDs)
CHROMIUM, TOTAL (UG/L)	L-LMW-4S	0.28	0.11	100	No	4	75	No	0.0625	NP (NDs)
CHROMIUM, TOTAL (UG/L)	L-LMW-7S	0.5	0.11	100	No	4	100	No	0.0625	NP (NDs)
CHROMIUM, TOTAL (UG/L)	L-LMW-8S	0.5	0.11	100	No	4	100	No	0.0625	NP (NDs)
CHROMIUM, TOTAL (UG/L)	L-MW-26 (bg)	0.5	0.11	100	No	4	100	No	0.0625	NP (NDs)
CHROMIUM, TOTAL (UG/L)	L-AM-1D	2.525	0.05727	100	No	4	25	ln(x)	0.01	Param.
CHROMIUM, TOTAL (UG/L)	L-AM-1S	0.38	0.11	100	No	4	50	No	0.0625	NP (normality)
CHROMIUM, TOTAL (UG/L)	L-TP-1D	0.32	0.11	100	No	4	75	No	0.0625	NP (NDs)
CHROMIUM, TOTAL (UG/L)	L-TP-2D	0.34	0.11	100	No	4	75	No	0.0625	NP (NDs)
CHROMIUM, TOTAL (UG/L)	L-TP-2M	0.24	0.11	100	No	4	75	No	0.0625	NP (NDs)
CHROMIUM, TOTAL (UG/L)	L-TP-3D	0.5	0.11	100	No	4	75	No	0.0625	NP (NDs)
CHROMIUM, TOTAL (UG/L)	L-TP-3M	0.5	0.11	100	No	4	100	No	0.0625	NP (NDs)
CHROMIUM, TOTAL (UG/L)	L-TP-4D	0.5	0.11	100	No	4	75	No	0.0625	NP (NDs)
CHROMIUM, TOTAL (UG/L)	L-AMW-8	2.5	0.11	100	No	5	60	No	0.031	NP (NDs)
CHROMIUM, TOTAL (UG/L)	L-MW-24	0.5	0.11	100	No	4	100	No	0.0625	NP (NDs)
CHROMIUM, TOTAL (UG/L)	L-MW-33[D]	0.5	0.11	100	No	4	100	No	0.0625	NP (NDs)
CHROMIUM, TOTAL (UG/L)	L-MW-34[D]	0.99	0.11	100	No	4	75	No	0.0625	NP (NDs)
CHROMIUM, TOTAL (UG/L)	L-MW-35[D]	0.5	0.11	100	No	4	100	No	0.0625	NP (NDs)
CHROMIUM, TOTAL (UG/L)	L-S-1	0.5	0.11	100	No	4	75	No	0.0625	NP (NDs)
FLUORIDE, TOTAL (MG/L)	L-LMW-1S	0.32	0.19	4	No	5	0	No	0.031	NP (normality)
FLUORIDE, TOTAL (MG/L)	L-LMW-2S	0.2392	0.1958	4	No	4	0	No	0.01	Param.
FLUORIDE, TOTAL (MG/L)	L-LMW-4S	0.3	0.11	4	No	4	0	No	0.0625	NP (normality)
FLUORIDE, TOTAL (MG/L)	L-LMW-7S	0.3504	0.088	4	No	5	20	No	0.01	Param.
FLUORIDE, TOTAL (MG/L)	L-LMW-8S	0.5942	-0.005389	4	No	5	40	No	0.01	Param.
FLUORIDE, TOTAL (MG/L)	L-MW-26 (bg)	0.3098	0.1029	4	No	4	0	ln(x)	0.01	Param.
FLUORIDE, TOTAL (MG/L)	L-AM-1D	0.4452	0.2998	4	No	4	0	No	0.01	Param.
FLUORIDE, TOTAL (MG/L)	L-AM-1S	0.438	0.127	4	No	4	0	No	0.01	Param.
FLUORIDE, TOTAL (MG/L)	L-TP-1D	0.353	0.117	4	No	4	0	No	0.01	Param.
FLUORIDE, TOTAL (MG/L)	L-TP-2D	0.5129	0.3471	4	No	4	0	No	0.01	Param.
FLUORIDE, TOTAL (MG/L)	L-TP-2M	0.5682	0.3968	4	No	4	0	No	0.01	Param.
FLUORIDE, TOTAL (MG/L)	L-TP-3D	0.36	0.17	4	No	4	0	No	0.0625	NP (normality)
FLUORIDE, TOTAL (MG/L)	L-TP-3M	0.4258	0.1192	4	No	4	0	No	0.01	Param.
FLUORIDE, TOTAL (MG/L)	L-TP-4D	0.4247	0.1203	4	No	4	0	No	0.01	Param.
FLUORIDE, TOTAL (MG/L)	L-AMW-8	0.5153	0.3797	4	No	4	0	No	0.01	Param.
FLUORIDE, TOTAL (MG/L)	L-MW-24	0.3358	0.1092	4	No	4	0	No	0.01	Param.
FLUORIDE, TOTAL (MG/L)	L-MW-34[D]	0.3763	0.2987	4	No	4	0	No	0.01	Param.
FLUORIDE, TOTAL (MG/L)	L-MW-35[D]	0.5226	-0.0746	4	No	4	25	No	0.01	Param.
FLUORIDE, TOTAL (MG/L)	L-S-1	0.2851	0.1649	4	No	4	0	No	0.01	Param.
LITHIUM, TOTAL (UG/L)	L-LMW-1S	28.19	7.712	47.4	No	4	0	No	0.01	Param.

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Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
LITHIUM, TOTAL (UG/L)	L-LMW-2S	14.24	5.11	47.4	No	4	0	No	0.01	Param.
LITHIUM, TOTAL (UG/L)	L-LMW-4S	47.93	21.32	47.4	Yes	4	0	No	0.01	Param.
LITHIUM, TOTAL (UG/L)	L-LMW-7S	51.05	35.3	47.4	Yes	4	0	No	0.01	Param.
LITHIUM, TOTAL (UG/L)	L-MW-26 (bg)	30.98	19.82	47.4	No	4	0	No	0.01	Param.
LITHIUM, TOTAL (UG/L)	L-AM-1D	42.6	34.25	47.4	No	4	0	No	0.01	Param.
LITHIUM, TOTAL (UG/L)	L-AM-1S	40.59	24.41	47.4	No	4	0	No	0.01	Param.
LITHIUM, TOTAL (UG/L)	L-TP-1D	31.44	14.51	47.4	No	4	0	No	0.01	Param.
LITHIUM, TOTAL (UG/L)	L-TP-2D	44.47	39.38	47.4	No	4	0	No	0.01	Param.
LITHIUM, TOTAL (UG/L)	L-TP-2M	37.89	26.91	47.4	No	4	0	No	0.01	Param.
LITHIUM, TOTAL (UG/L)	L-TP-3D	34.4	23.65	47.4	No	4	0	No	0.01	Param.
LITHIUM, TOTAL (UG/L)	L-TP-3M	38.41	33.01	47.4	No	4	0	ln(x)	0.01	Param.
LITHIUM, TOTAL (UG/L)	L-TP-4D	28.54	16.96	47.4	No	4	0	No	0.01	Param.
LITHIUM, TOTAL (UG/L)	L-AMW-8	22.14	10.16	47.4	No	4	0	No	0.01	Param.
LITHIUM, TOTAL (UG/L)	L-MW-24	25.13	17.67	47.4	No	4	0	No	0.01	Param.
LITHIUM, TOTAL (UG/L)	L-MW-33[D]	40.14	20.96	47.4	No	4	0	No	0.01	Param.
LITHIUM, TOTAL (UG/L)	L-MW-34[D]	39.79	29.16	47.4	No	4	0	No	0.01	Param.
LITHIUM, TOTAL (UG/L)	L-MW-35[D]	35.61	21.04	47.4	No	4	0	No	0.01	Param.
LITHIUM, TOTAL (UG/L)	L-S-1	37.13	11.62	47.4	No	4	0	No	0.01	Param.
MOLYBDENUM, TOTAL (UG/L)	L-LMW-1S	17.53	1.019	100	No	4	0	No	0.01	Param.
MOLYBDENUM, TOTAL (UG/L)	L-LMW-2S	148.9	70.63	100	Yes	4	0	No	0.01	Param.
MOLYBDENUM, TOTAL (UG/L)	L-LMW-4S	196.8	-64.16	100	Yes	4	0	No	0.01	Param.
MOLYBDENUM, TOTAL (UG/L)	L-LMW-7S	137	79.2	100	Yes	4	0	No	0.0625	NP (normality)
MOLYBDENUM, TOTAL (UG/L)	L-LMW-8S	266.2	106.3	100	Yes	4	0	No	0.01	Param.
MOLYBDENUM, TOTAL (UG/L)	L-MW-26 (bg)	1.1	0.85	100	No	4	100	No	0.0625	NP (NDs)
MOLYBDENUM, TOTAL (UG/L)	L-AM-1D	410.4	344	100	Yes	5	0	No	0.01	Param.
MOLYBDENUM, TOTAL (UG/L)	L-AM-1S	5.149	1.371	100	No	5	20	No	0.01	Param.
MOLYBDENUM, TOTAL (UG/L)	L-TP-1D	1.1	0.85	100	No	7	100	No	0.008	NP (NDs)
MOLYBDENUM, TOTAL (UG/L)	L-TP-2D	153	124	100	Yes	7	0	No	0.008	NP (normality)
MOLYBDENUM, TOTAL (UG/L)	L-TP-2M	96.79	84.24	100	No	7	0	No	0.01	Param.
MOLYBDENUM, TOTAL (UG/L)	L-TP-3D	996.4	639.9	100	Yes	7	0	No	0.01	Param.
MOLYBDENUM, TOTAL (UG/L)	L-TP-3M	274	148.8	100	Yes	7	0	ln(x)	0.01	Param.
MOLYBDENUM, TOTAL (UG/L)	L-TP-4D	2.883	2.174	100	No	7	0	No	0.01	Param.
MOLYBDENUM, TOTAL (UG/L)	L-AMW-8	334.6	307.1	100	Yes	7	0	No	0.01	Param.
MOLYBDENUM, TOTAL (UG/L)	L-MW-24	1.1	0.85	100	No	4	100	No	0.0625	NP (NDs)
MOLYBDENUM, TOTAL (UG/L)	L-MW-33[D]	1247	972.5	100	Yes	4	0	No	0.01	Param.
MOLYBDENUM, TOTAL (UG/L)	L-MW-34[D]	1230	934.9	100	Yes	4	0	No	0.01	Param.
MOLYBDENUM, TOTAL (UG/L)	L-MW-35[D]	736.5	457	100	Yes	4	0	No	0.01	Param.
MOLYBDENUM, TOTAL (UG/L)	L-S-1	1.7	0.85	100	No	4	75	No	0.0625	NP (NDs)
Radium [226 + 228] (PCI/L)	L-LMW-1S	0.925	0.608	5	No	4	100	No	0.0625	NP (NDs)
Radium [226 + 228] (PCI/L)	L-LMW-2S	1.193	0.7165	5	No	4	100	No	0.0625	NP (NDs)
Radium [226 + 228] (PCI/L)	L-LMW-4S	1.08	0.83	5	No	4	100	No	0.0625	NP (NDs)
Radium [226 + 228] (PCI/L)	L-LMW-7S	0.9135	0.57	5	No	4	100	No	0.0625	NP (NDs)
Radium [226 + 228] (PCI/L)	L-LMW-8S	0.9615	0.728	5	No	4	100	No	0.0625	NP (NDs)
Radium [226 + 228] (PCI/L)	L-MW-26 (bg)	0.9355	0.7625	5	No	4	100	No	0.0625	NP (NDs)
Radium [226 + 228] (PCI/L)	L-AM-1D	1.641	0.677	5	No	4	75	No	0.0625	NP (NDs)
Radium [226 + 228] (PCI/L)	L-TP-1D	6.183	2.382	5	Yes	4	0	No	0.01	Param.
Radium [226 + 228] (PCI/L)	L-TP-2D	2.111	1.531	5	No	4	50	No	0.01	Param.
Radium [226 + 228] (PCI/L)	L-TP-2M	3.559	0.8337	5	No	4	25	No	0.01	Param.
Radium [226 + 228] (PCI/L)	L-TP-3D	1.175	0.762	5	No	4	100	No	0.0625	NP (NDs)
Radium [226 + 228] (PCI/L)	L-TP-3M	3.585	1.308	5	No	4	0	No	0.01	Param.

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<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Compliance</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Radium [226 + 228] (PCI/L)	L-TP-4D	4.638	1.389	5	No	4	25	No	0.01	Param.
Radium [226 + 228] (PCI/L)	L-AMW-8	1.824	0.9565	5	No	4	75	No	0.0625	NP (NDs)
Radium [226 + 228] (PCI/L)	L-MW-24	2.245	0.6505	5	No	4	50	No	0.01	Param.
Radium [226 + 228] (PCI/L)	L-MW-33[D]	1.734	0.89	5	No	4	75	No	0.0625	NP (NDs)
Radium [226 + 228] (PCI/L)	L-MW-34[D]	1.848	0.7358	5	No	4	50	No	0.01	Param.
Radium [226 + 228] (PCI/L)	L-MW-35[D]	2.196	0.6032	5	No	4	50	No	0.01	Param.
Radium [226 + 228] (PCI/L)	L-S-1	1.865	0.7175	5	No	4	75	No	0.0625	NP (NDs)
SELENIUM, TOTAL (UG/L)	L-LMW-1S	0.09	0.09	50	No	4	100	No	0.0625	NP (NDs)
SELENIUM, TOTAL (UG/L)	L-LMW-2S	0.217	0.158	50	No	4	50	No	0.01	Param.
SELENIUM, TOTAL (UG/L)	L-LMW-4S	0.09	0.09	50	No	4	100	No	0.0625	NP (NDs)
SELENIUM, TOTAL (UG/L)	L-LMW-7S	0.2	0.09	50	No	4	75	No	0.0625	NP (NDs)
SELENIUM, TOTAL (UG/L)	L-LMW-8S	0.09	0.09	50	No	4	100	No	0.0625	NP (NDs)
SELENIUM, TOTAL (UG/L)	L-MW-26 (bg)	0.7796	0.1604	50	No	4	0	No	0.01	Param.
SELENIUM, TOTAL (UG/L)	L-AM-1D	0.09	0.09	50	No	4	100	No	0.0625	NP (NDs)
SELENIUM, TOTAL (UG/L)	L-AM-1S	0.2	0.09	50	No	4	75	No	0.0625	NP (NDs)
SELENIUM, TOTAL (UG/L)	L-TP-1D	0.09	0.09	50	No	4	100	No	0.0625	NP (NDs)
SELENIUM, TOTAL (UG/L)	L-TP-2D	0.09	0.09	50	No	4	100	No	0.0625	NP (NDs)
SELENIUM, TOTAL (UG/L)	L-TP-2M	0.09	0.09	50	No	4	100	No	0.0625	NP (NDs)
SELENIUM, TOTAL (UG/L)	L-TP-3D	0.09	0.09	50	No	4	100	No	0.0625	NP (NDs)
SELENIUM, TOTAL (UG/L)	L-TP-3M	0.09	0.09	50	No	4	100	No	0.0625	NP (NDs)
SELENIUM, TOTAL (UG/L)	L-TP-4D	0.09	0.09	50	No	4	100	No	0.0625	NP (NDs)
SELENIUM, TOTAL (UG/L)	L-AMW-8	0.5	0.09	50	No	5	100	No	0.031	NP (NDs)
SELENIUM, TOTAL (UG/L)	L-MW-24	10.4	0.09	50	No	4	50	No	0.0625	NP (normality)
SELENIUM, TOTAL (UG/L)	L-MW-33[D]	0.09	0.09	50	No	4	100	No	0.0625	NP (NDs)
SELENIUM, TOTAL (UG/L)	L-MW-34[D]	0.09	0.09	50	No	4	100	No	0.0625	NP (NDs)
SELENIUM, TOTAL (UG/L)	L-MW-35[D]	0.09	0.09	50	No	4	100	No	0.0625	NP (NDs)
SELENIUM, TOTAL (UG/L)	L-S-1	0.23	0.09	50	No	4	75	No	0.0625	NP (NDs)

APPENDIX E

**Alternative Source Demonstration -
February/April 2021 Corrective Action
Sampling Event**



REPORT

LCPA Corrective Action - Alternative Source Demonstration

Labadie Energy Center, Franklin County, Missouri, USA

Submitted to:

Ameren Missouri

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Submitted by:

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153140603

November 29, 2021

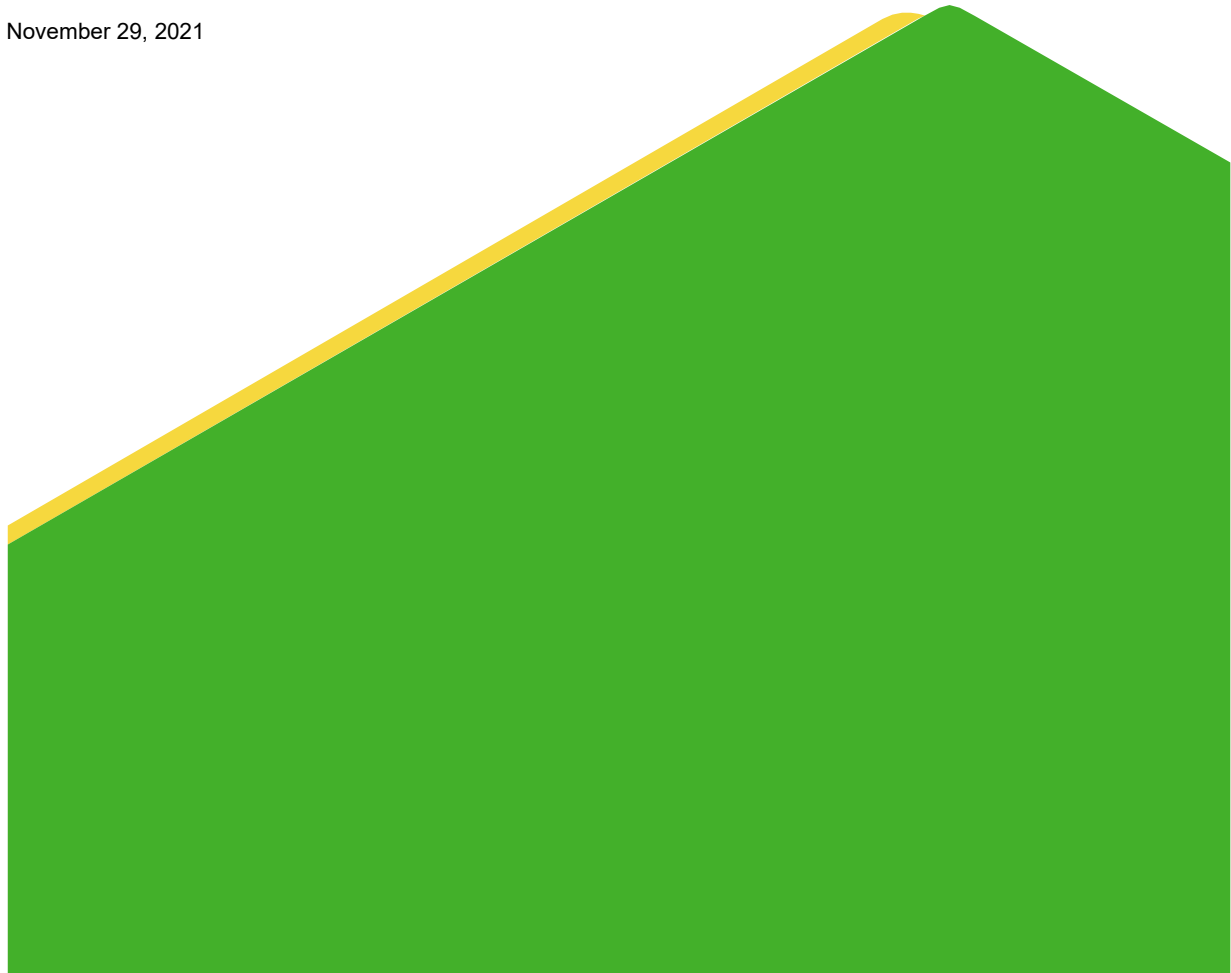


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TABLES

Table 1: Types of CCR and Typical Indicator Parameters

FIGURES

Figure 1 - Labadie Energy Center Groundwater Monitoring Programs and Monitoring Well Location Map

Figure 2 – Time Series Plot of Radium 226 + 228 Concentrations at TP-1D

Figure 3 – Time Series Plot of Boron Concentrations at TP-1D

Figure 4 – Box and Whiskers Plot of Boron at TP-1D & LCPA Monitoring Wells

Figure 5 – Time Series Plot of Sulfate Concentrations at TP-1D

Figure 6 – Box and Whiskers Plot of Sulfate at TP-1D & LCPA Monitoring Wells

Figure 7 – Time Series of Molybdenum Concentrations at TP-1D

Figure 8 – Box and Whiskers Plot of Molybdenum Concentrations at TP-1D & LCPA Monitoring Wells

Figure 9 – TP-1D & Background Monitoring Wells Stiff Diagrams

Figure 10 – TP-1D Piper Diagram

Figure 11 – Box and Whiskers Plot of Radium 226 + 228 at TP-1D & LCPA Monitoring Wells

CERTIFICATION STATEMENT

This *LCPA Corrective Action – Alternative Source Demonstration, Labadie Energy Center, Franklin County, Missouri, USA* has been prepared to comply with the United States Environmental Protection Agency (EPA coal combustion residual (CCR) rule under the direction of a licensed professional engineer with Golder Associates Inc.

I hereby certify that this *LCPA Corrective Action – Alternative Source Demonstration, Labadie Energy Center, Franklin County, Missouri, USA* located at 226 Labadie Power Plant Road, Labadie Missouri 63055 has been prepared to meet the requirements of 40 CFR §257.98(a)(1)(i) and 257.95(g)(3)(ii).

GOLDER ASSOCIATES USA INC.



Mark Haddock, P.E., R.G.
Principal, Practice Leader

1.0 INTRODUCTION

In accordance with the United States Environmental Protection Agency (EPA) coal combustion residual (CCR) rule (CCR Rule or The Rule), this *LCPA Corrective Action – Alternative Source Demonstration* has been prepared to document an Alternative Source Demonstration (ASD) for a statistical exceedance of the Groundwater Protection Standard (GWPS) calculated for Ameren Missouri's (Ameren) Labadie Energy Center (LEC) Bottom Ash Surface Impoundment (referred to as the LCPA) Corrective Action Monitoring Well Network. This document satisfies the requirements of §257.98(a)(1)(i) and 257.95(g)(3)(ii) which state that at a minimum, the Corrective Action program must meet that of the Assessment Monitoring Program under 257.95 which allows the owner or operator to demonstrate that a source other than the CCR Unit has caused a constituent to be at a statistical level that exceeds the GWPS was the result of an alternative source or resulted from errors in sampling, analysis, statistical evaluation, or natural variation in groundwater quality.

2.0 SITE DESCRIPTION AND BACKGROUND

The LEC is located approximately 35 miles west of downtown St. Louis in Franklin County, Missouri, just south of the Missouri River. **Figure 1** depicts the site location and layout, including the location of LCPA, LCPB and the LCL1 CCR Units. The LEC encompasses approximately 2,400 acres and is located within the Missouri River Valley. The facility is bounded to the north by the Missouri River, to the west by Labadie Creek, to the northeast and east by agricultural land, and to the south by a railroad line and bedrock bluffs.

2.1 Geological and Hydrogeological Setting

The site lies between the Missouri River (to the north) and bedrock bluffs (to the south). Flow and deposition from the Missouri River have resulted in thick alluvial deposits which lie on top of bedrock. These alluvial deposits, which can range from approximately 90 to 120 feet thick, comprise the uppermost aquifer. Overall, this alluvial aquifer is described as a fining-upwards sequence of stratified sands and gravels with varying amounts of silts and clays. Based on drilling records, the alluvial aquifer is divided into sub-units, including floodplain deposits, natural levee deposits, and channel deposits along with volumetrically less important loess deposits. Grain sizes of these alluvial deposits are variable.

Beneath the alluvial aquifer lies the bedrock aquifer. Bedrock in this region consists of Ordovician-aged rock. Formations include primarily limestone, dolomite, sandstone, and shale and are comprised of the Plattin Group, Joachim Dolomite, St. Peter Sandstone, Powell Dolomite, and the Cotter/Jefferson City Dolomites.

2.2 Coal Combustion Residuals (CCR) LCPA Surface Impoundment

The LCPA is in the floodplain of the Missouri River to the south of the LEC generating plant and is constructed with perimeter berms at an elevation of approximately 494 feet above mean sea level (feet MSL), which is above the 100-year flood elevation of 484 feet MSL. Both fly ash and bottom ash have been historically managed and stored in this surface impoundment. Construction drawings indicate that in the deepest portions of the CCR Unit the base depth of CCR extends down approximately ninety (90) feet to an elevation of approximately 400 feet MSL. Directly to the east of the LCPA are two additional CCR Units, the fly ash surface impoundment (LCPB) and the Utility Waste Landfill (UWL) Cell 1 (LCL1), which both have berm elevations above 488 feet MSL. To the south of the LCPA are lower elevation agricultural fields ranging from approximately 465 to 475 feet MSL. South of the railroad, bedrock bluffs rise to an elevation of over 600 feet MSL. The western side of the surface impoundment is bounded by a forested area and Labadie Creek, which flows north to the Missouri River.

2.3 CCR Rule Groundwater Monitoring

As required by the CCR Rule, the following was completed prior to the October 17, 2017 deadline; (1) a groundwater monitoring well system was installed and certified by a Professional Engineer, (2) a Statistical Method Certification was prepared and certified by a Professional Engineer, (3) a Groundwater Monitoring Plan (GMP) was prepared recording the design, installation, development, sampling procedures, as well as statistical methods, and placed in the owner's operating record, and eight (8) baseline groundwater sampling events were completed for all Appendix III and Appendix IV parameters of CCR Rule.

The groundwater monitoring system for the LCPA consists of eleven (11) monitoring wells screened in the uppermost aquifer (alluvial aquifer) as shown on **Figure 1**. These wells were installed by Golder in 2015 and 2016 for CCR Rule groundwater monitoring purposes. More information regarding the design and installation of the monitoring wells is provided in the LCPA GMP (Golder, 2017) and the LCPA 2017 Annual Report (Golder, 2018).

Between May 2016 and June 2017, eight (8) baseline sampling events were completed for the LCPA. After baseline sampling, Detection Monitoring events have been completed twice a year generally in the second and fourth quarters. In January 2018, background results from the eight (8) baseline sampling events were used to calculate statistical upper prediction limits (UPL). These UPLs were then compared to the Detection Monitoring results. The results of the analysis indicated that there were Statistically Significant Increases (SSIs) and Assessment Monitoring was initiated.

The Assessment Monitoring program was established at the LCPA 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 at several wells (UMW-3D, UMW-4D, UMW-5D, UMW-6D, and UMW-7D). The SSLs have remained the same since that time, and no new SSL have been determined.

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 29, 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 and use of Monitored Natural Attenuation (MNA) 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 1×10^{-7} centimeters per second (cm/sec) versus 1×10^{-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 those concentrations are decreasing as modelled. MNA occurs due to naturally occurring processes within the aquifer¹.

¹ Ameren is installing a groundwater treatment system at its Rush Island Energy Center (RIEC) that is designed to accelerate the timeframe for attaining compliance with applicable groundwater standards as required by an underground injection permit issued by the Missouri Department of Natural Resources (MDNR). Pilot studies for this system have proven to be successful, and a pilot study for the LEC is currently underway. Assuming the pilot study has similar success at the LEC as was observed at the RIEC, Ameren intends to employ a system at the LEC.

As required by the CCR Rule, the following was completed within 90 days of selecting the remedy (November 27, 2019): (1) a groundwater monitoring well system was selected and certified by a Professional Engineer, (2) a Statistical Method Certification was prepared and certified by a Professional Engineer, and (3) a Groundwater Monitoring Plan (GMP) was prepared recording the design, installation, development, sampling procedures, as well as statistical methods, and placed in the owner's operating record. The Corrective Action Monitoring Well Network consists of 22 monitoring wells, installed within the shallow, intermediate, and deep zones of the alluvial aquifer as shown on **Figure 1**. TP-1D was installed in June 2018 as a part of the nature and extent evaluation completed under Assessment Monitoring and is used as a Corrective Action Monitoring Well.

On September 28, 2019, Ameren commenced Phase 1 by initiating closure at the LCPA. Closure of the LCPA has been completed and the first Corrective Action sampling event associated with Phase 2 of the Corrective Measures Remedial Plan was completed in April 2021. On August 31, 2021 corrective action statistical methods² were used to determine that molybdenum was present at concentrations exceeding the GWPS in 11 monitoring wells (LMW-4S, LMW-8S, AM-1D, TP-2D, TP-2M, TP-3D, TP-3M, AMW-8, MW-33D, MW-34D, and MW-35D) within the Corrective Action Monitoring Well Network, and the Radium 226 + 228 was at a concentration exceeding the GWPS at 1 monitoring well (TP-1D).

3.0 REVIEW OF THE VALUE PRESENT AT STATISTICALLY SIGNIFICANT LEVEL OVER THE GWPS

The statistical exceedance over the GWPS for radium 226 + 228 occurred at monitoring well TP-1D. A time series plot displaying historical radium 226 + 228 concentrations in TP-1D, as well as the calculated Upper Confidence Limit (UCL) and Lower Confidence Limit (LCL) is provided in **Figure 2**. TP-1D is screened in the deep zone of the alluvial aquifer, with a screened interval at 375.4 to 380.1 feet above mean sea level (FT MSL, 85.7 to 90.4 feet below ground surface). As show on **Figure 1**, TP-1D is located near the north-eastern extent of the Ameren property, within the agricultural fields east of the generating plant, the LCPA, LCPB, and LCL1 CCR units, and in the Missouri River floodplain.

As displayed in **Figure 2**, during five (5) discrete monitoring events, Radium 226+228 concentrations have ranged from 2.726 to 5.34 pCi/L since sampling started in May 2019. As outlined in the LCPA Corrective Action Statistical Evaluation (Golder, 2021b), a UCL of 5.655 picocuries per liter (pCi/L) and a LCL of 2.287 were calculated based on these five (5) results. Because the UCL exceeds the site-specific GWPS of 5 pCi/L, the results from TP-1D are considered a statistical exceedance over the GWPS using corrective action statistical methods.

4.0 EVIDENCE THAT STATISTICAL EXCEEDANCE OVER GWPS ORIGINATES FROM DIFFERENT SOURCE

Several different lines of evidence indicate that the statistical exceedance over the GWPS at TP-1D is not the result of a release from the LCPA, but is rather from an alternative source. The following detail the different lines of evidence that support this ASD:

- Preparation of geochemical models displaying current and historical groundwater chemistries, as well as comparisons between the different sources at the site.

² The statistical testing method used to evaluate the Corrective Action monitoring data will be the confidence interval method, which is the same method used during Assessment Monitoring, except the null hypothesis for the confidence intervals is reversed. For Corrective Action, the Unified Guidance states that the appropriate null hypothesis is that the groundwater population (mean) exceeds the GWPS for those constituents that exceed the GWPS under Assessment Monitoring program. Therefore, in Corrective Action the Upper Confidence Limit (UCL) is compared to the Groundwater Protection Standard (GWPS) instead of the Lower Confidence Limit (LCL) [as was used during Assessment Monitoring].

- Absence of elevated concentrations for key CCR indicators at TP-1D.
- Comparison of TP-1D and background datasets.

4.1 CCR Indicators

Several types of CCR by-products are generated by coal-fired power plants. The different types of CCR typically display distinct geochemical signatures and indicator parameters. **Table 1** describes the different types of CCRs and their typical indicator parameters (USEPA 2018, EPRI 2011, EPRI 2012, and EPRI 2017).

Table 1: Types of CCR and Typical Indicator Parameters

Type of CCR	Description of CCR (USEPA 2018)	Key Indicators (EPRI 2011, 2012, 2017)
Fly Ash	Fine grained, powdery material composed mostly of silica made from the burning of finely ground coal in the boiler.	<ul style="list-style-type: none"> ■ Boron ■ Molybdenum ■ Lithium ■ Sulfate
Boiler Slag / Bottom Ash	Molten bottom ash from the slag tap and cyclone type furnaces that turns into pellets that have a smooth glassy appearance after quenching with water.	<ul style="list-style-type: none"> ■ Bromide ■ Potassium ■ Sodium ■ Fluoride
Flue Gas Desulfurization Material (FGD)	A material leftover from the process of reducing sulfur dioxide emissions from a coal-fired boiler that can be a wet sludge consisting of calcium sulfite or calcium sulfate or a dry powdered material that is a mixture of sulfites and sulfates.	<ul style="list-style-type: none"> ■ Sulfate ■ Fluoride ■ Calcium ■ Boron ■ Bromide ■ Chloride

Notes:

- 1) Fly ash and boiler slag/bottom ash typically have the same indicator parameters.
- 2) Definitions from USEPA website, available at <https://www.epa.gov/coalash/coal-ash-basics>.
- 3) Key indicators from EPRI 2011, 2012, and 2017 as well as Gredell and Reitz & Jens, 2014.

Radium is not a typical CCR Indicator as it is generally not found at levels within fly ash, bottom ash or FGD materials at a significant level over background (EPRI 2012).

4.2 Analysis of Key CCR Indicators at TP-1D

4.2.1 Boron Concentrations

As indicated in **Table 1**, boron is a key indicator for fly ash and boiler slag/bottom ash impacts, because it is typically present at relatively high concentrations in the leachate from these types of waste. In addition, boron is not a common anthropogenic contaminant, and it is non-reactive and mobile in most hydrogeological environments (EPRI 2012). This non-reactive and mobile nature makes boron an early and key indicator of impacts from a CCR Unit. This has previously been demonstrated for the LCPA, with elevated concentrations within the LCPA compared to background groundwater (Golder 2019b). Therefore, it would be expected that if the elevated concentrations of radium 226 + 228 in TP-1D were the result of CCR impacts, the elevated radium concentrations would be accompanied by increases in boron and other common CCR indicators (such as molybdenum or sulfate).

Concentrations of boron at TP-1D and background wells BMW-1D and BMW-2D are represented in **Figure 3**. As displayed on **Figure 3**, boron concentrations in TP-1D have ranged from 56.6 J to 78.3 J micrograms per liter ($\mu\text{g/L}$), which is well below the background Upper Prediction Limit (UPL) of 100 $\mu\text{g/L}$. As shown on Figure 3, the boron concentrations in TP-1D are within the same range of concentrations reported for background wells BMW-1D and BMW-2D, and thus are not statistically elevated compared to background. This provides evidence that CCR related impacts are not the cause for elevated radium concentrations at TP-1D.

Additionally, **Figure 4** displays a box and whisker plot of boron concentrations in the background wells, TP-1D, and other the Detection/Assessment Monitoring wells for the LCPA. As shown in **Figure 4**, boron concentrations at TP-1D are similar to background concentrations, and do not display elevated boron concentrations like those in the downgradient Detection Monitoring wells which are immediately adjacent the LCPA. Monitoring well TP-1D is located approximately 10,000 feet downgradient of LCPA. The lack of evidence of elevated key CCR indicators in monitoring well TP-1D and concentrations at or below background levels indicate that the elevated concentrations for radium 226 + 228 were not related to CCR impacts and are likely from an alternative source.

4.2.2 Sulfate Concentrations

Like boron, sulfate is listed in **Table 1** as a key indicator for Fly Ash, Boiler Slag/Bottom Ash, and FGD type waste and can be a key indicator of CCR impacts. Sulfate is mobile in most hydrogeological environments, except where conditions are strongly reducing. The groundwater at TP-1D does not demonstrate strongly reducing conditions (sulfide odors, etc.). In fact, sulfide has been collected as part of the Corrective Action sampling events and results from have been below the Practical Quantitation Limit (PQL) each time. Elevated sulfate has also been documented in the Detection/Assessment Monitoring Wells for the LCPA relative to background (Golder 2019b). Like the previous section for boron, if the elevated radium 226 + 228 results for TP-1D were the result of CCR impacts, then key CCR indicators for CCR, such as sulfate, would be expected to be at elevated levels relative to background concentrations.

As displayed in **Figure 5**, sulfate concentrations at TP-1D have ranged from 9.8 to 25.7 milligrams per liter (mg/L) throughout the monitoring period for the well. This range is well below the UPL of 54.83 mg/L for upgradient and unimpacted background monitoring wells BMW-1D and BMW-2D. The data for these background wells are also displayed on **Figure 5** and the concentrations observed at these wells range from 25.2 to 64.6 mg/L since CCR monitoring began in 2016. These results indicate that concentrations for sulfate at TP-1D have been below typical concentrations in the upgradient and unimpacted background wells and are not statistically elevated compared to background, which provides further evidence that elevated radium concentrations at TP-1D are not a result of CCR related influence on the groundwater.

Additionally, **Figure 6** displays a box whisker plot of sulfate concentrations for the background wells, TP-1D, and the Detection/Assessment Monitoring well network. As shown in **Figure 6** and as was described for boron, sulfate concentrations at TP-1D are similar to background concentrations, and do not display elevated sulfate like those downgradient wells used for Detection Monitoring adjacent the CCR Unit. The lack of evidence of elevated key CCR indicators in monitoring well TP-1D and concentrations at or below background levels indicate that the elevated concentrations for radium 226 + 228 are not related to CCR impacts, but are from an alternative source.

4.2.3 Molybdenum Concentrations

Table 1 lists molybdenum as a key indicator for Fly Ash and Boiler Slag/Bottom Ash impacts, because it is typically present at relatively high concentrations in the leachate from these types of waste and is not a common anthropogenic contaminant (EPRI 2012). Additionally, the upgradient LCPA is currently in corrective action due to molybdenum SSLs in several wells adjacent to the CCR Unit. This demonstrates that if there

were impacts from CCR wastes at the LEC, that elevated molybdenum concentrations with respect to background would be expected.

Figure 7 is a time series plot of molybdenum results for TP-1D, BMW-1D, and BMW-2D. As displayed, all sampling results for TP-1D are less than the PQL, which is consistent with the background data. In fact, molybdenum concentrations in TP-1D are also generally below the MDL. The general absence of molybdenum concentrations reveals that elevated concentrations for radium 226 + 228 are likely related to an alternative source, rather than the LCPA.

Additionally, **Figure 8** displays a box whisker plot of molybdenum concentrations for the background wells, TP-1D, and the Detection/Assessment Monitoring well network. As shown in **Figure 8**, like boron and sulfate, molybdenum concentrations at TP-1D are similar to background concentrations, and do not display elevated molybdenum like those downgradient Assessment Monitoring wells adjacent the CCR Unit. The lack of evidence of elevated key CCR indicators in monitoring well TP-1D and concentrations at or below background levels indicate that the elevated concentrations for radium 226 + 228 were not related to CCR impacts, but are from an alternative source.

4.3 Geochemical Modelling Analysis

Since monitoring began at TP-1D in November 2018, major cation and anions concentrations have been collected. These data are used to compare major ion chemistry both over time at TP-1D and to compare the chemistry spatially to results from both the pore-water at the LCPA and background groundwater. In 2018, as a part of the LCPB ASD (Golder 2019b), major ion chemistry was collected in the pore-water of the LCPA. Additionally, since November 2017, during detection monitoring events, major ion chemistry concentrations have been collected in background monitoring wells.

The following sections use these geochemical results to display that TP-1D has not been impacted by the LCPA, and therefore, elevated Radium 226 + 228 values are the result of an alternative source.

4.3.1 Stiff Diagrams

Stiff diagrams visually display the major cation and anion data. **Figure 9** displays an annual time sequence of Stiff diagrams since monitoring began at TP-1D. As shown in **Figure 9**, the shape of the Stiff diagram is very consistent over time as well as between TP-1D and the background wells BMW-1D and BMW-2D, indicating that the general groundwater chemistry of TP-1D is very similar to background well chemistry. If impacts from the LCPA were causing the elevated radium 226 + 228 concentrations, differences would be noted in the shapes of the Stiff diagrams or changes in the Stiff diagrams over time would be apparent. These results further support the absence of CCR impacts at TP-1D.

4.3.2 Piper Diagrams

A Piper diagram is a graphical technique used to classify and compare the chemistry of various groundwater sources. The same data used to generate the Stiff diagram were plotted on a ternary Piper diagram based on major cation and anion concentrations. In addition to showing instantaneous concentrations, Piper diagrams can be used to determine if groundwater chemistry is changing, either spatially or temporally. **Figure 10** displays a Piper diagram for TP-1D over time. If CCR impacts from the LCPA were causing the increased radium 226 + 228 concentrations at TP-1D, then groundwater from TP-1D would be expected to plot between background concentrations and those from LCPA pore-water. **Figure 10** demonstrates that TP-1D data plot in the area of background groundwater and thus the recent statistical exceedance over the GWPS for radium 226 + 228 is not a result of influence from the LCPA.

4.4 Evaluation of Statistical Exceedances at TP-1D

Radium 226 + 228 is not listed in **Table 1** as a typical indicator of fly ash, boiler slag/bottom ash, or FGD, because it typically has low concentrations in CCR leachate relative to typical background, and it also shows low mobility and/or potential for reactivity (EPRI 2017). As displayed in **Figure 2**, concentrations at TP-1D have ranged from 2.726 to 5.34 J pCi/L since May 2019, with an average concentration of 3.971 from 5 (five) total results. As calculated in the LCPA Corrective Action Statistical Evaluation (Golder, 2021b), the UCL is 5.655 pCi/L based on these five (5) results.

The GWPS for Radium in the LCPA Corrective Action Network is 5.0 pCi/L and is based on the USEPA Maximum Contaminant Level (MCL) for radium 226 + 228. As displayed on **Figure 2**, background values for radium 226 + 228 have ranged from non-detect (<0.796) to 4.14 pCi/L with BMW-1D (the northern well, which is closer to the Missouri River showing the higher radium 226 + 228 concentrations. In fact, the radium 226 + 228 concentrations in background well BMW-1D are similar to radium concentrations in TP-1D.

Radium 226 + 228 has been monitored in the monitoring well network adjacent to the LCPA used for Detection and Assessment Monitoring since 2016. **Figure 11** displays a box whisker plot of radium concentrations since the start of CCR monitoring at TP-1D (November 2018) for the background wells, TP-1D, and the Detection/Assessment Monitoring well network. As shown in **Figure 11**, radium 226 + 228 concentrations at TP-1D are most similar to radium concentrations in background well BMW-1D, and are higher than the concentrations reported for the Assessment Monitoring wells located immediately adjacent to the LCPA. Therefore, elevated radium 226 + 228 does not appear to be a result for impacts from the LCPA because there is an apparent lack of key CCR indicators in TP-1D, and radium 226 + 228 value are highest in those that are not impacted from the CCR Unit (TP-1D, BMW-1D).

Additionally, it should be noted that radium 226 + 228 has not be identified as an SSL in the Assessment Monitoring well network. If elevated impacts for radium 226 + 228 were caused by the LCPA, it would be expected that the wells immediately adjacent to the LCPA would show elevated concentrations, like those reported for boron, sulfate, and molybdenum.

Due to radium's lack of mobility, the relatively low concentrations of key CCR indicator constituents in TP-1D relative to background concentrations, and absence of elevated radium 226 + 228 in wells immediately adjacent to the LCPA, there is clear evidence that elevated radium 226 +228 at TP-1D is not caused by the LCPA, but from an alternative source.

4.5 Potential Alternative Sources for Radium at TP-1D

Radium is a natural breakdown product of the radioactive decay of uranium, and both radium and uranium are known to commonly occur within the Missouri River Alluvial Aquifer from the igneous source rocks that comprise the sediments from upgradient locations along the Missouri River and from discharges from the Ozark Aquifer into the alluvial deposits.

The Ozark Aquifer is a regional aquifer that is present south of the Missouri River and West of the Mississippi River in the southern parts of Missouri, eastern Kansas, and northern Arkansas. The aquifer is made up of mostly of carbonate rocks that are Cambrian through Mississippian in age. The discharges for the Ozark Aquifer in Missouri are the Missouri River to the north and the Mississippi River to the east. In 2012, the United States Geological Survey completed a nationwide study on radium within groundwater aquifers and found that the Mid-Continent and the Ozark Aquifers had the highest average radium concentrations, with more than 20% of the samples included in the study had radium concentrations above the MCL of 5 pCi/L. TP-1D is in the deep zone of the alluvial aquifer, and is situated such that discharges from the Ozark Aquifer may be contributing to the increased radium 226 + 228 at this location.

Additionally, the Missouri River Alluvial Aquifer is comprised of alluvial deposits from the Missouri River basin, which encompasses a vast area of the United States including parts of Missouri, Iowa, Kansas, Nebraska, South Dakota, North Dakota, Montana, Wyoming, and Colorado. The sediments in the Missouri River Alluvial Aquifer at the site are made up of a mixture of sediments from all reaches of the Missouri River Basin. Uranium deposits and many igneous rocks containing uranium occur at numerous locations within the Missouri River Basin. Therefore, the alluvial aquifer sediments in the vicinity of TP-1D (as well as background well BMW-1D) likely include naturally occurring uranium-containing deposits which are likely resulting in the elevated radium concentrations measured at these locations.

5.0 DEMONSTRATION THAT STATISTICAL EXCEEDANCE WAS NOT CAUSED BY LCPA IMPACT

Based on the information presented in Section 4.0 above, the statistical exceedance for radium in TP-1D is not a result of impacts from the LCPA, but appears to be the result of natural geochemical variability within the alluvial aquifer. The natural geochemical source of the radium exceedance is supported by several factors including: (1) a lack of key CCR indicators (boron, sulfate, and molybdenum) in monitoring well TP-1D, (2) a stable geochemical fingerprint in TP-1D, which closely resembles that of the background wells BMW-1D and BMW-2D approximately 1.5 miles upgradient of the LCPA, (3) apparent lack of radium 226 + 228 in monitoring wells immediately adjacent to the LCPA, (4) similarities in radium 226 + 228 concentrations between TP-1D and background monitoring well BMW-1D, (5) radium is a naturally occurring element in soils and alluvial aquifer sediments that are derived from igneous rocks within the Missouri River watershed and (6) the Ozark Aquifer, which discharges into the Missouri River Alluvium, is known for having higher concentrations of radium.

6.0 REFERENCES

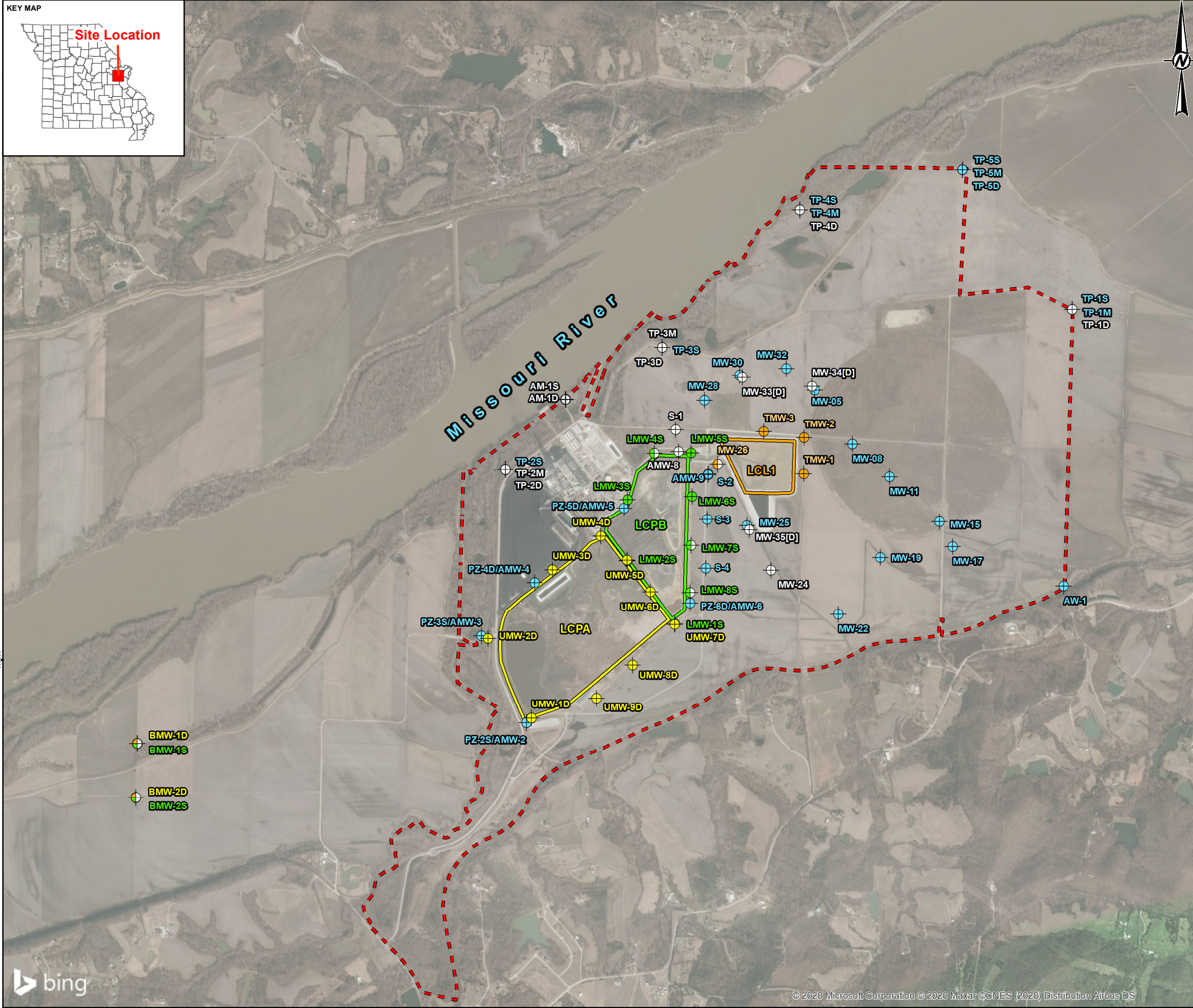
- Electric Power Research Institute (EPRI). 2011, Composition and Leaching of FGD Gypsum and Mined Gypsum, Report 1022146. November 2011.
- Electric Power Research Institute (EPRI). 2012, Groundwater Quality Signatures for Assessing Potential Impacts from Coal Combustion Product Leachate, Report 1017923. October 2012.
- Electric Power Research Institute (EPRI). 2017, Guidelines for Development of Alternative Source Demonstrations at Coal Combustion Residual Sites, Report 3002010920, October 2017.
- GREDELL Engineering Resources and Reitz & Jens, Inc. 2011. Detailed Site Investigation. Ameren Missouri Labadie Power Plant Proposed Utility Waste Disposal Area. Franklin County, Missouri. February 4, 2011.
- Golder Associates Inc., 2017, 40 CFR Part 257 Groundwater Monitoring Plan, LCPA Surface Impoundment–Labadie Energy Center – Franklin County, Missouri, USA.
- Golder Associates Inc., 2018, 2017 Annual Groundwater Monitoring Report, LCPA Surface Impoundment, Labadie Energy Center – Franklin County, Missouri, USA.
- Golder Associates Inc., 2019a, 2018 Annual Groundwater Monitoring and Corrective Action Report, LCPA Surface Impoundment, Labadie Energy Center – Franklin County, Missouri, USA.
- Golder Associates Inc., 2019b, 2018 Annual Groundwater Monitoring Report, LCPB – Fly Ash Surface Impoundment, Labadie Energy Center – Franklin County, Missouri, USA.
- Golder Associates Inc., 2020a, 2019 Annual Groundwater Monitoring and Corrective Action Report, LCPA Surface Impoundment, Labadie Energy Center – Franklin County, Missouri, USA.

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- Golder Associates Inc., 2020b, Corrective Action Groundwater Monitoring Plan, LCPA Surface Impoundment, Labadie Energy Center – Franklin County, Missouri, USA
- Golder Associates Inc., 2021a, 2020 Annual Groundwater Monitoring and Corrective Action Report, LCPA Surface Impoundment, Labadie Energy Center – Franklin County, Missouri, USA.
- Golder Associates Inc., 2021b, Corrective Action Statistical Evaluation, LCPA Surface Impoundment, Labadie Energy Center – Franklin County, Missouri, USA.
- MDNR. 2011. Missouri Well Construction Rules. Missouri Department of Natural Resources Division of Geology and Land Survey. Rolla, MO. August 2011.
- Reitz & Jens, Inc., and GREDELL Engineering Resources, Inc., 2013. Groundwater Detection Monitoring System for a Proposed Utility Waste Landfill – Franklin County, Missouri. January 3, 2013.
- Reitz & Jens, Inc. 2013. Ground Water Detection Monitoring Wells Installation Report. Ameren Missouri Labadie Energy Center Utility Waste Landfill (UWL) Solid Waste Disposal Area. Franklin County, Missouri. May 9, 2013.
- Reitz & Jens, Inc., and GREDELL Engineering Resources, Inc., 2014. Ameren Missouri Labadie Energy Center Construction Permit Application for a Proposed Utility Waste Landfill Franklin County Missouri. Revised January 2014.
- Reitz & Jens, Inc. 2-14. Additional Ground Water Detection Monitoring Wells Installation Report. Ameren Missouri Labadie Energy Center Utility Waste Landfill (UWL) Solid Waste Disposal.
- USEPA. 2009. Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance. Office of Resource Conservation and Recovery – Program Implementation and Information Division. March.
- USEPA. 2015. Federal Register. Volume 80. No. 74. Friday April 17, 2015. Part II. Environmental Protection Agency. 40 CRF Parts 257 and 261. Hazardous and Solid Waste Management System; Disposal of Coal
- USGS 2021. Principal Aquifers can Contribute Radium to Sources of Drinking Water Under Certain Geochemical Conditions. Fact Sheet 2010-3113.

Figures

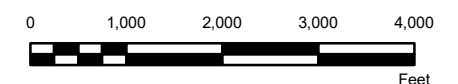


P:\14\153140603\153140601.D - Ameren CCR GW Monitoring Program 2020 - 15314106 - All Project Files (1)MS Technical\Work\0001-LECS-F-Figure-Drawings\PRODUCTION\Other Maps\Figure 1 - 2020-LEC-AI Wells Map.mxd PRINTED ON: 2021-10-10 08:11:07:03 AM



LEGEND

- Approximate Property Boundary
- Labadie Energy Center CCR Units**
- LCPA - Bottom Ash Surface Impoundment
- LCPB - Fly Ash Surface Impoundment
- LCL1 - Utility Waste Landfill Cell 1
- Monitoring Well Network**
- ⊕ Corrective Action Monitoring Well
- ⊕ LCPA Monitoring Well
- ⊕ LCPB Monitoring Well
- ⊕ LCPB and Corrective Action Monitoring Well
- ⊕ LCL1 Monitoring Well
- ⊕ LCL1 and Corrective Action Monitoring Well
- ⊕ Background Well Used for LCPA, Corrective Action, LCPB, and LCL1 Monitoring
- ⊕ Monitoring Well Used for Water Level Elevation Measurements Only



NOTE(S)
 1.) ALL LOCATIONS AND BOUNDARIES ARE APPROXIMATE.

REFERENCE(S)
 1.) ZAHNER AND ASSOCIATES, INC. 2016. LOT CONSOLIDATION PLAT OF "LABADIE ENERGY CENTER" - PREPARED FOR AMEREN MISSOURI. REVISED JUNE 15, 2016.
 2.) COORDINATE SYSTEM: NAD 1983 STATEPLANE MISSOURI EAST FIPS 2,401 FEET.

CLIENT
AMEREN MISSOURI
LABADIE ENERGY CENTER

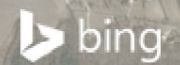
PROJECT
GROUNDWATER MONITORING PROGRAM



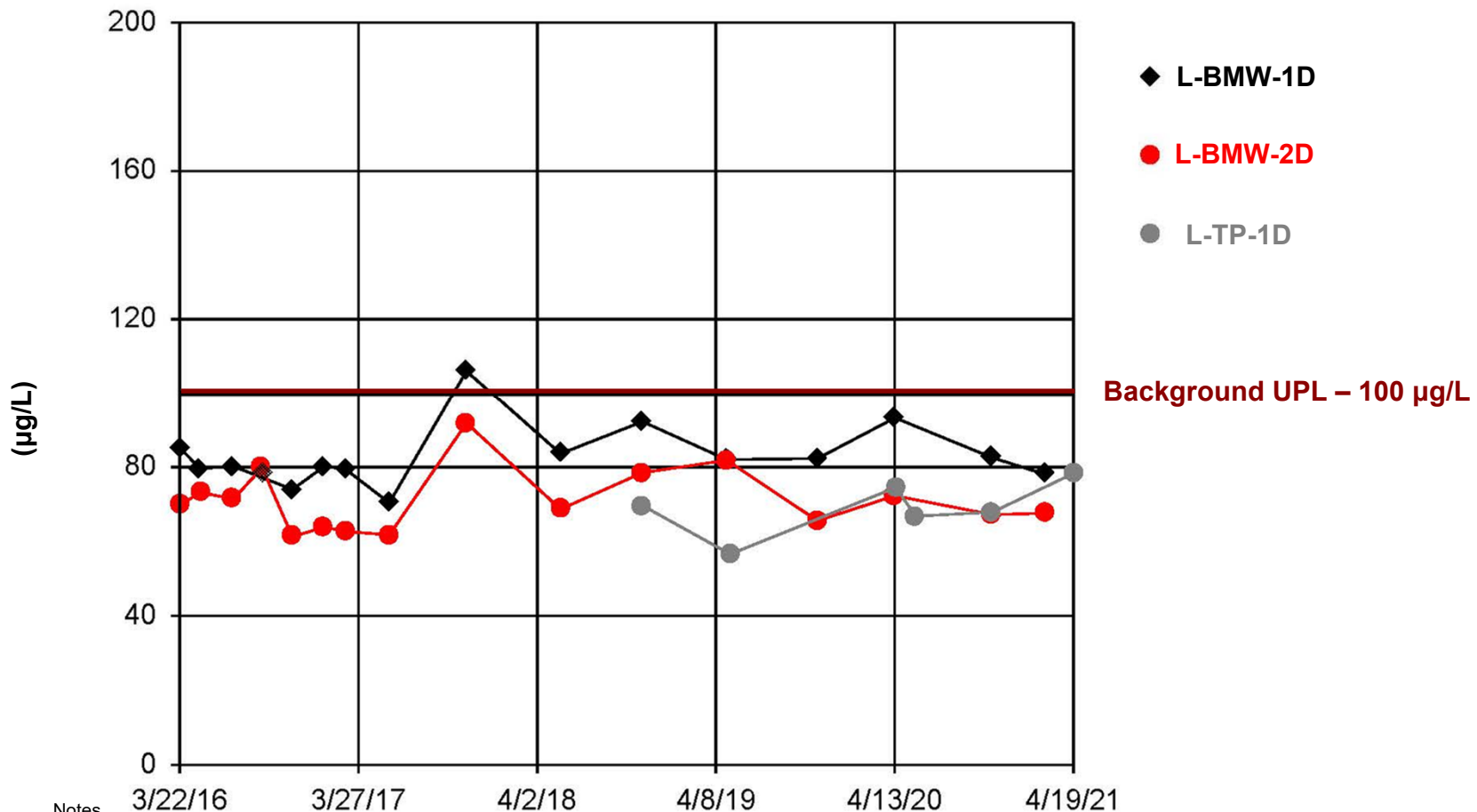
TITLE
LABADIE ENERGY CENTER GROUNDWATER MONITORING PROGRAMS AND MONITORING WELL LOCATION MAP

CONSULTANT	YYYY-MM-DD	2021-10-12
DESIGNED	JSI	
PREPARED	BTT	
REVIEWED	JSI	
APPROVED	SCP	

PROJECT NO. 153140603 CONTROL 1240 REV. 0.0 FIGURE 1



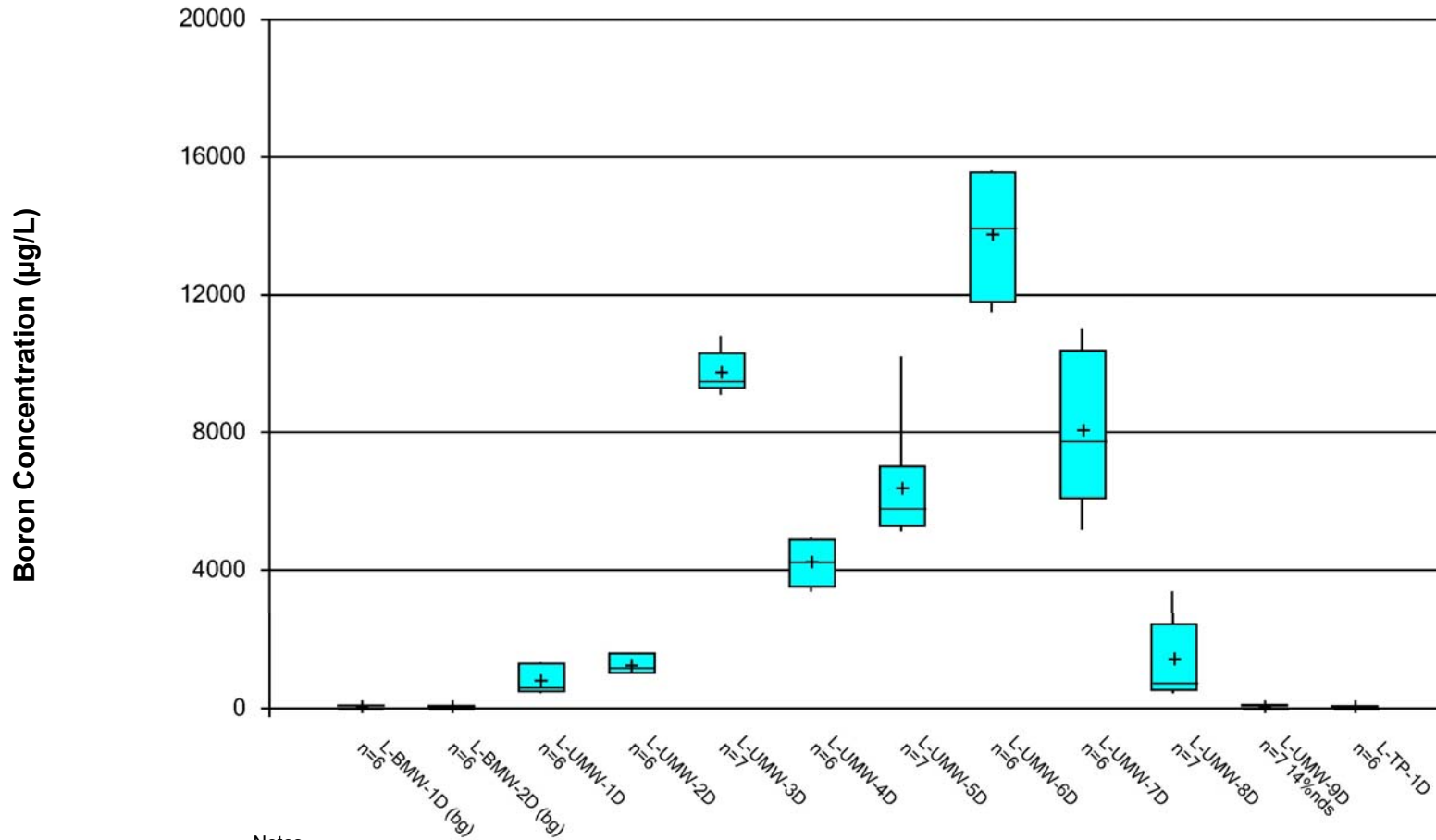
IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI B



- Notes
- 1) µg/L – Micrograms per liter.
 - 2) UPL – Upper Prediction Limit.
 - 3) The UPL for background monitoring wells BMW-1D and BMW-2D is set at the Double Quantification Rule (DQR) because the entire background dataset is reported as ND or estimated (J-flag). In this case the DQR can be numerically represented as the practical quantitation limit (PQL).
 - 4) PQL – Practical Quantitation Limit is the minimum concentration of an analyte (substance) that can be measured with a high degree of confidence that the analyte is present at or above that concentration (typically 5-10x higher than the MDL). In this case, 100 µg/L is the general PQL for boron.

CLIENT/PROJECT AMEREN MISSOURI LABADIE ENERGY CENTER									TITLE Timeseries Plot of Boron Concentrations at TP-1D		
DRAWN EMS	CHECKED BTT	REVIEWED SCP	DATE 2021-11-16	SCALE N/A	FILE NO. N/A	JOB NO. 153140603.0001	DWG NO. N/A	SUBTITLE N/A	REV. NO. N/A	FIGURE 3	

Box & Whiskers Plot



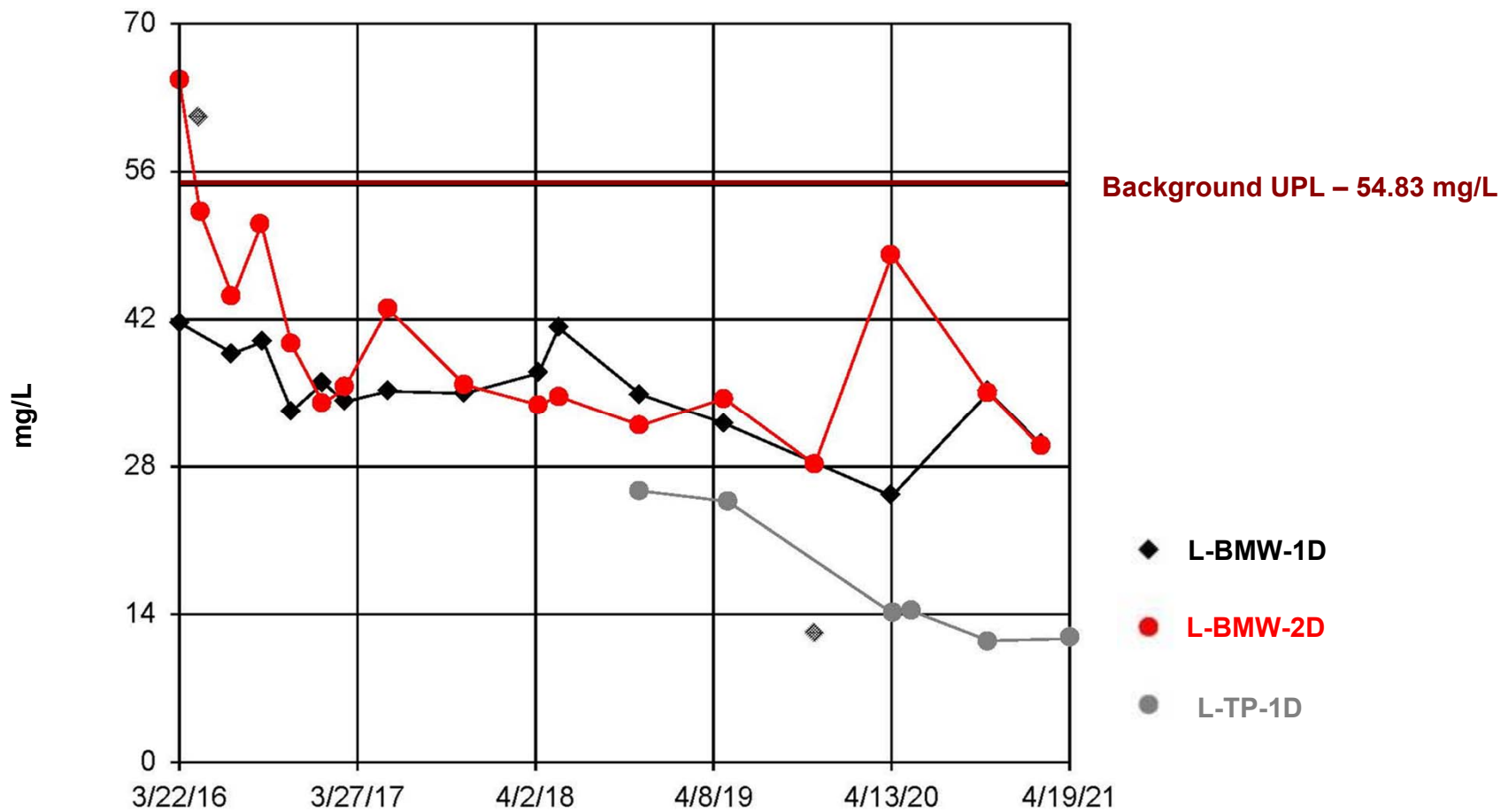
Notes
1) µg/L – Micrograms per liter.

CLIENT/PROJECT
AMEREN MISSOURI
LABADIE ENERGY CENTER



TITLE
**Box and Whiskers Plot of Boron at TP-1D
& LCPA Monitoring Wells**

DRAWN EMS	CHECKED BTT	REVIEWED SCP	DATE 2021-11-16	SCALE N/A	FILE NO. N/A	JOB NO. 153140603.0001	DWG NO. N/A	SUBTITLE N/A	REV. NO. N/A	FIGURE 4
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Notes
 1) mg/L – Milligrams per liter.
 2) UPL – Upper Prediction Limit.
 3) Data points not connected to lines are considered outliers.

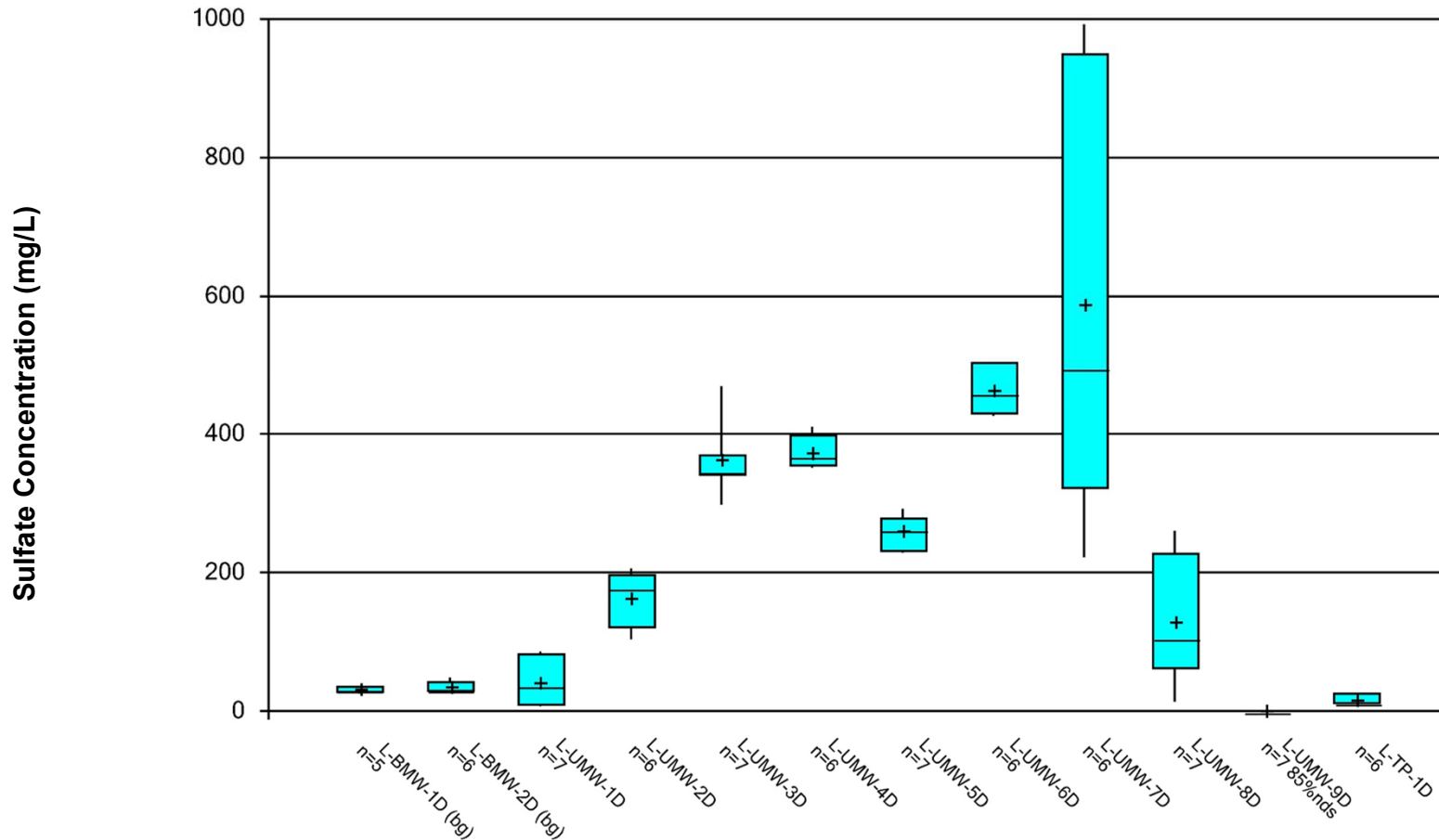
CLIENT/PROJECT
**AMEREN MISSOURI
 LABADIE ENERGY CENTER**



TITLE
**Timeseries Plot of Sulfate Concentrations
 at TP-1D**

DRAWN EMS	CHECKED BTT	REVIEWED SCP	DATE 2021-11-16	SCALE N/A	FILE NO. N/A	JOB NO. 153140603.0001	DWG NO. N/A	SUBTITLE N/A	REV. NO. N/A	FIGURE 5
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Box & Whiskers Plot



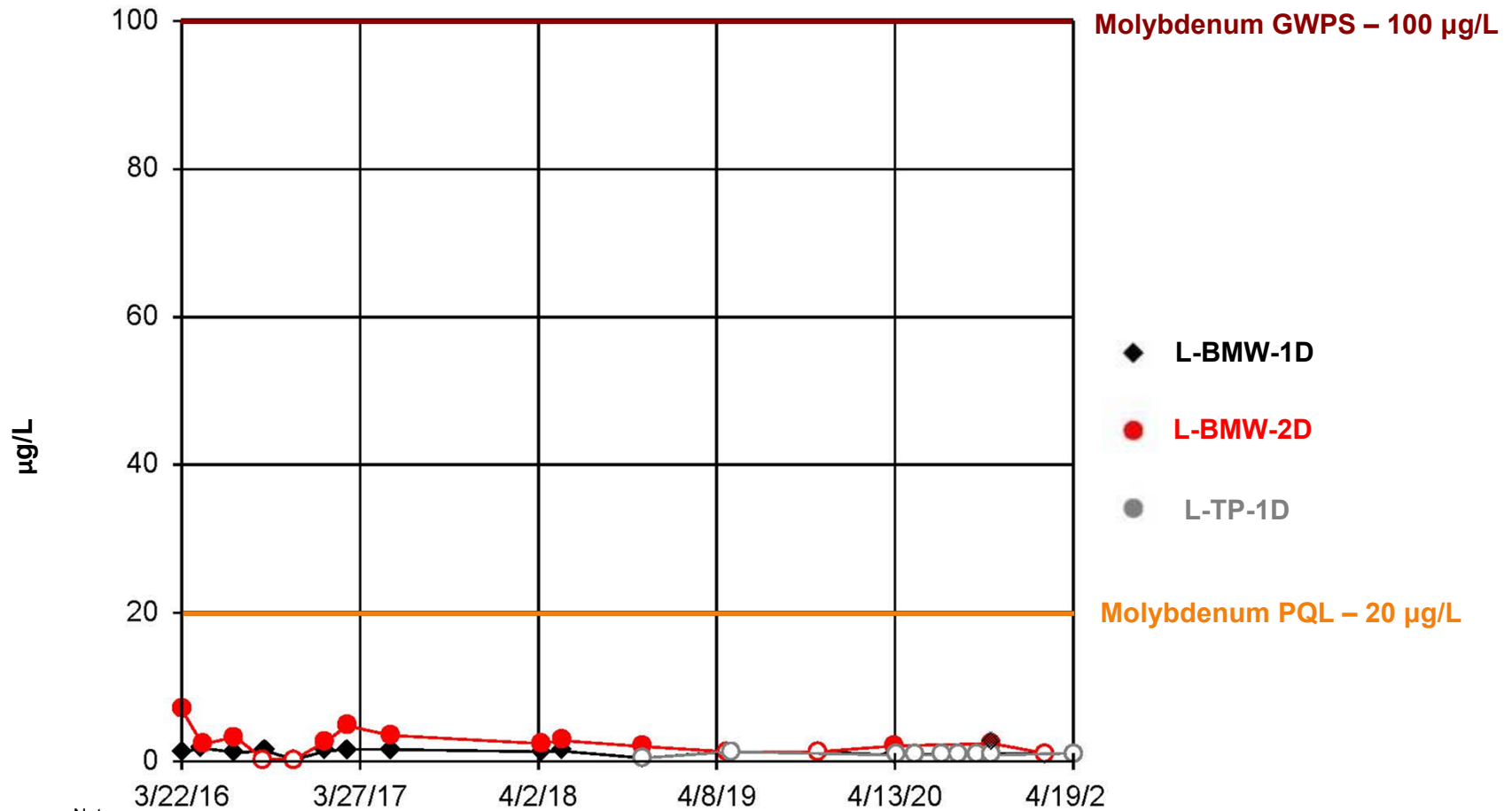
Notes
1) mg/L – Milligrams per liter.

CLIENT/PROJECT
AMEREN MISSOURI
LABADIE ENERGY CENTER



TITLE
**Box and Whiskers Plot of Sulfate at TP-1D
& LCPA Monitoring Wells**

DRAWN EMS	CHECKED BTT	REVIEWED SCP	DATE 2021-11-16	SCALE N/A	FILE NO. N/A	JOB NO. 153140603.0001	DWG NO. N/A	SUBTITLE N/A	REV. NO. N/A	FIGURE 6
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Notes

- 1) µg/L – Micrograms per liter.
- 2) GWPS – Groundwater Protection Standard.
- 3) PQL – Practical Quantitation Limit, the minimum concentration of an analyte (substance) that can be measured with a high degree of confidence that the analyte is present at or above that concentration (typically 5-10x higher than the MDL). Generally, the PQL for molybdenum is 20 µg/L.
- 4) Data points not filled in indicate a Non-Detect result.

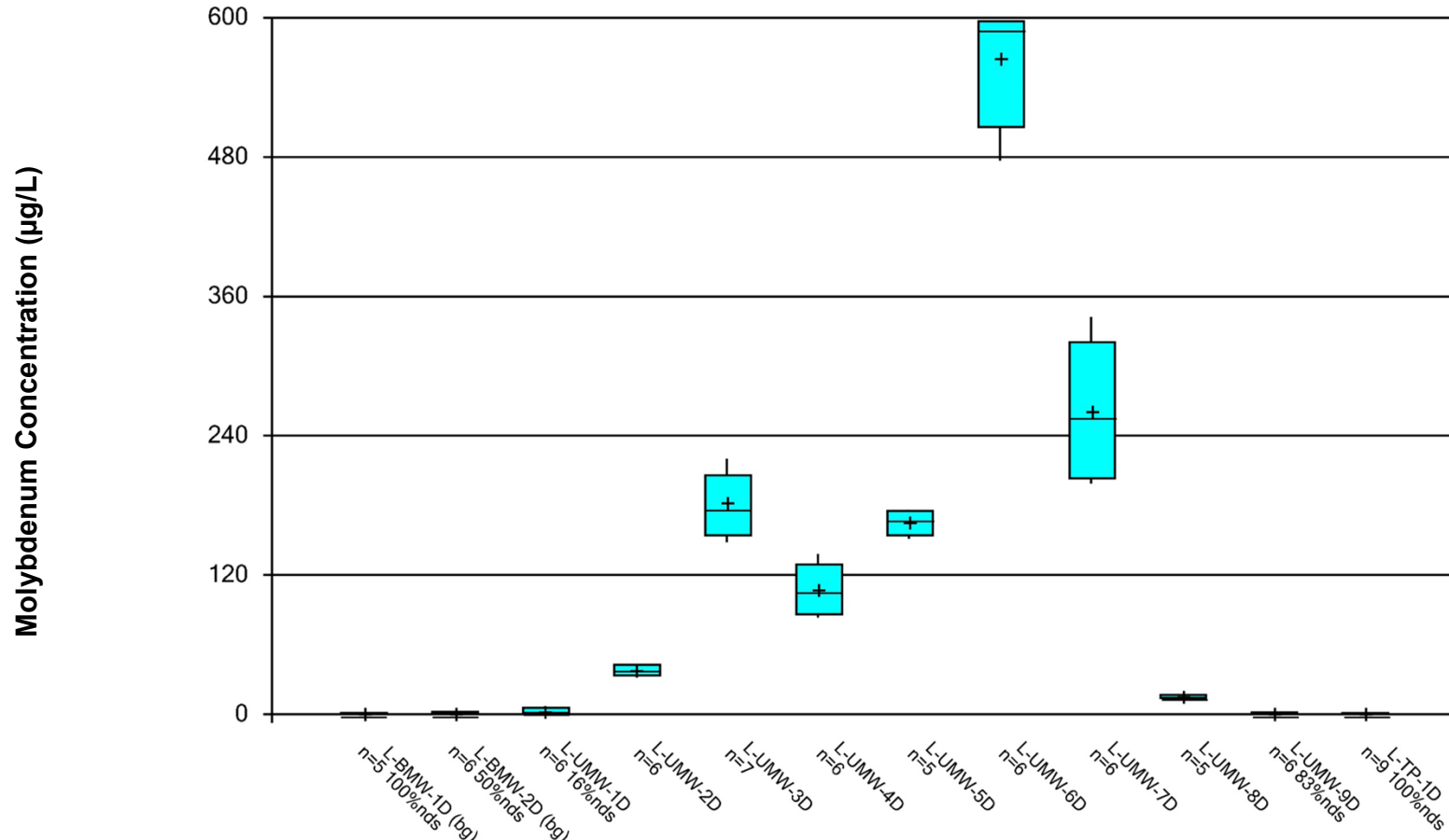
CLIENT/PROJECT
**AMEREN MISSOURI
 LABADIE ENERGY CENTER**



TITLE
**Timeseries Plot of Molybdenum
 Concentrations at TP-1D**

DRAWN EMS	CHECKED BTT	REVIEWED SCP	DATE 2021-11-16	SCALE N/A	FILE NO. N/A	JOB NO. 153140603.0001	DWG NO. N/A	SUBTITLE N/A	REV. NO. N/A	FIGURE 7
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Box & Whiskers Plot



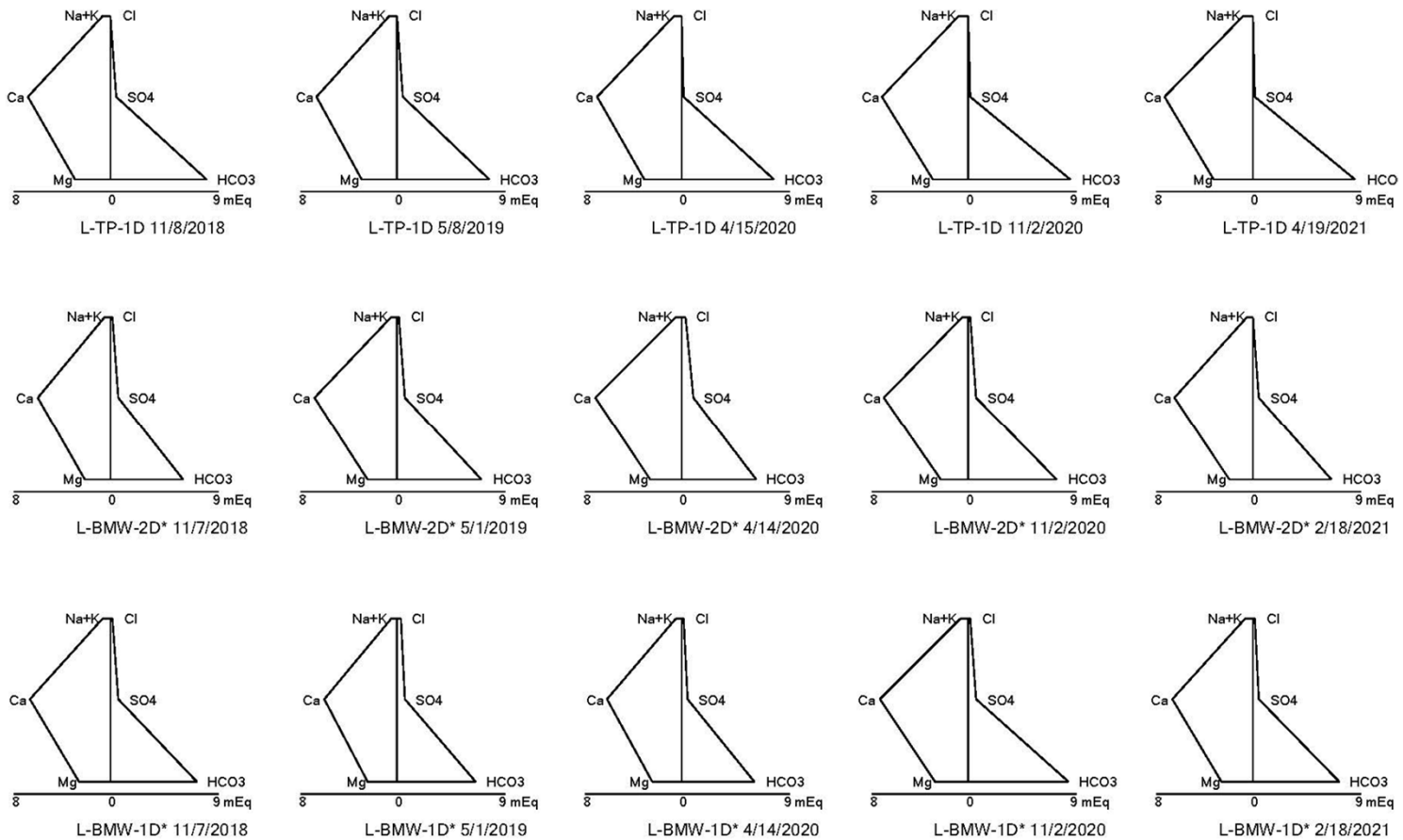
Notes
1) µg/L – Micrograms per liter.

CLIENT/PROJECT
AMEREN MISSOURI
LABADIE ENERGY CENTER



TITLE
**Box and Whiskers Plot of Molybdenum at
TP-1D & LCPA Monitoring Wells**

DRAWN EMS	CHECKED BTT	REVIEWED SCP	DATE 2021-11-16	SCALE N/A	FILE NO. N/A	JOB NO. 153140603.0001	DWG NO. N/A	SUBTITLE N/A	REV. NO. N/A	FIGURE 8
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Notes

- 1) Stiff diagrams calculated using Sanitas Software.
- 2) Data used to calculate diagrams provided in previous Annual Reports for the LCPA.
- 3) Na + K – Sodium plus Potassium.
- 4) SO4 – Sulfate.
- 5) HCO3 – Alkalinity.
- 6) Mg – Magnesium.
- 7) Ca – Calcium.
- 8) Cl – Chloride.
- 9) mEq – milliequivalents.

CLIENT/PROJECT
**AMEREN MISSOURI
 LABADIE ENERGY CENTER**



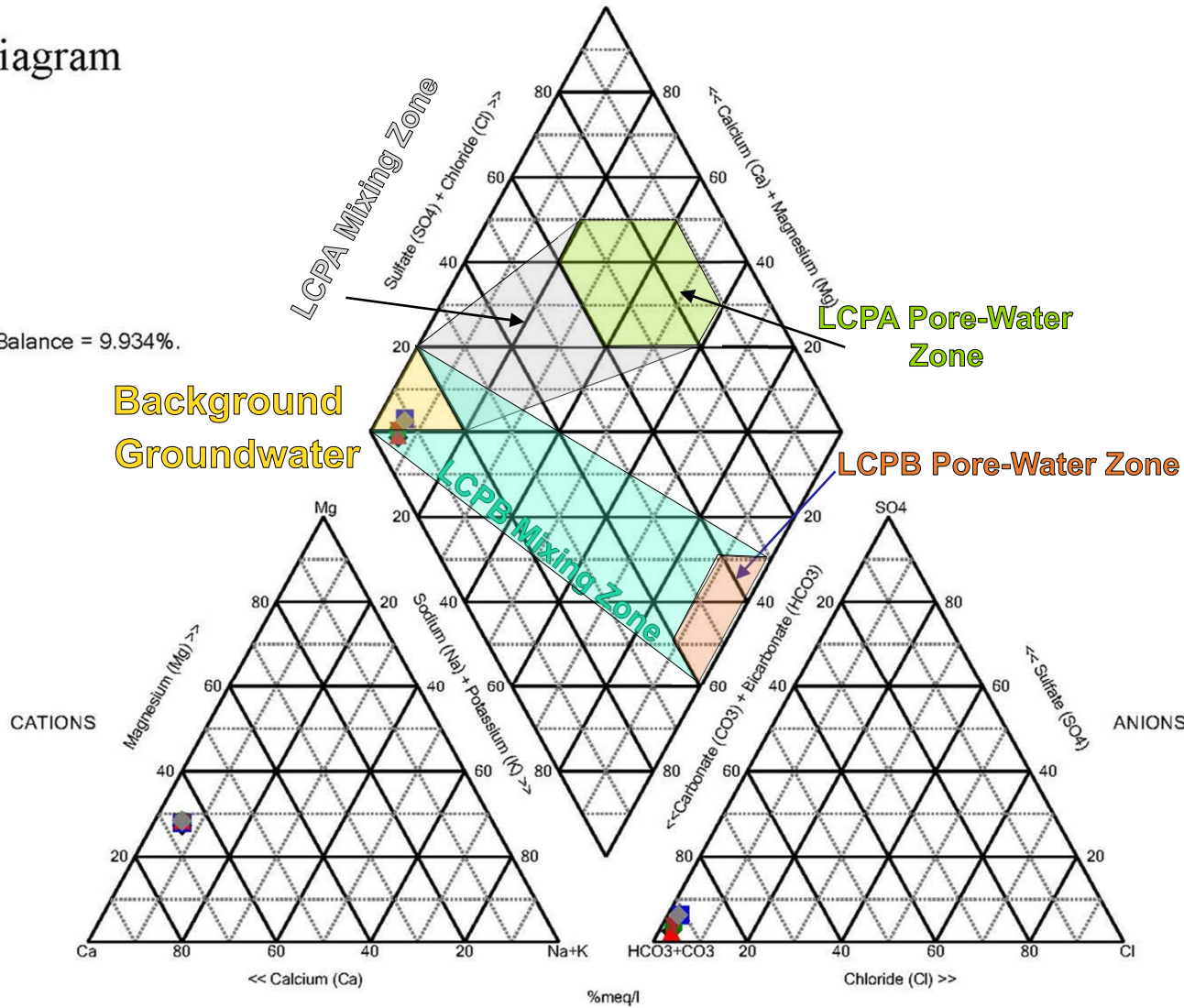
TITLE
**TP-1D & Background Monitoring Wells Stiff
 Diagrams**

DRAWN EMS	CHECKED BTT	REVIEWED SCP	DATE 2021-11-16	SCALE N/A	FILE NO. N/A	JOB NO. 153140603.0001	DWG NO. N/A	SUBTITLE N/A	REV. NO. N/A	FIGURE 9
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Piper Diagram

L-TP-1D

Cation-Anion Balance = 9.934%.



- ◆ 11/2/2020
- 11/8/2018
- 4/15/2020
- ▲ 4/19/2021
- ▼ 5/27/2020
- ◆ 5/8/2019

Notes

- 1) Piper diagram generated using Sanitas Software.
- 2) Data used to calculate diagrams provided in previous Annual Reports for the LCPCB.
- 3) %meq/l – milliequivalents per liter

CLIENT/PROJECT
AMEREN MISSOURI
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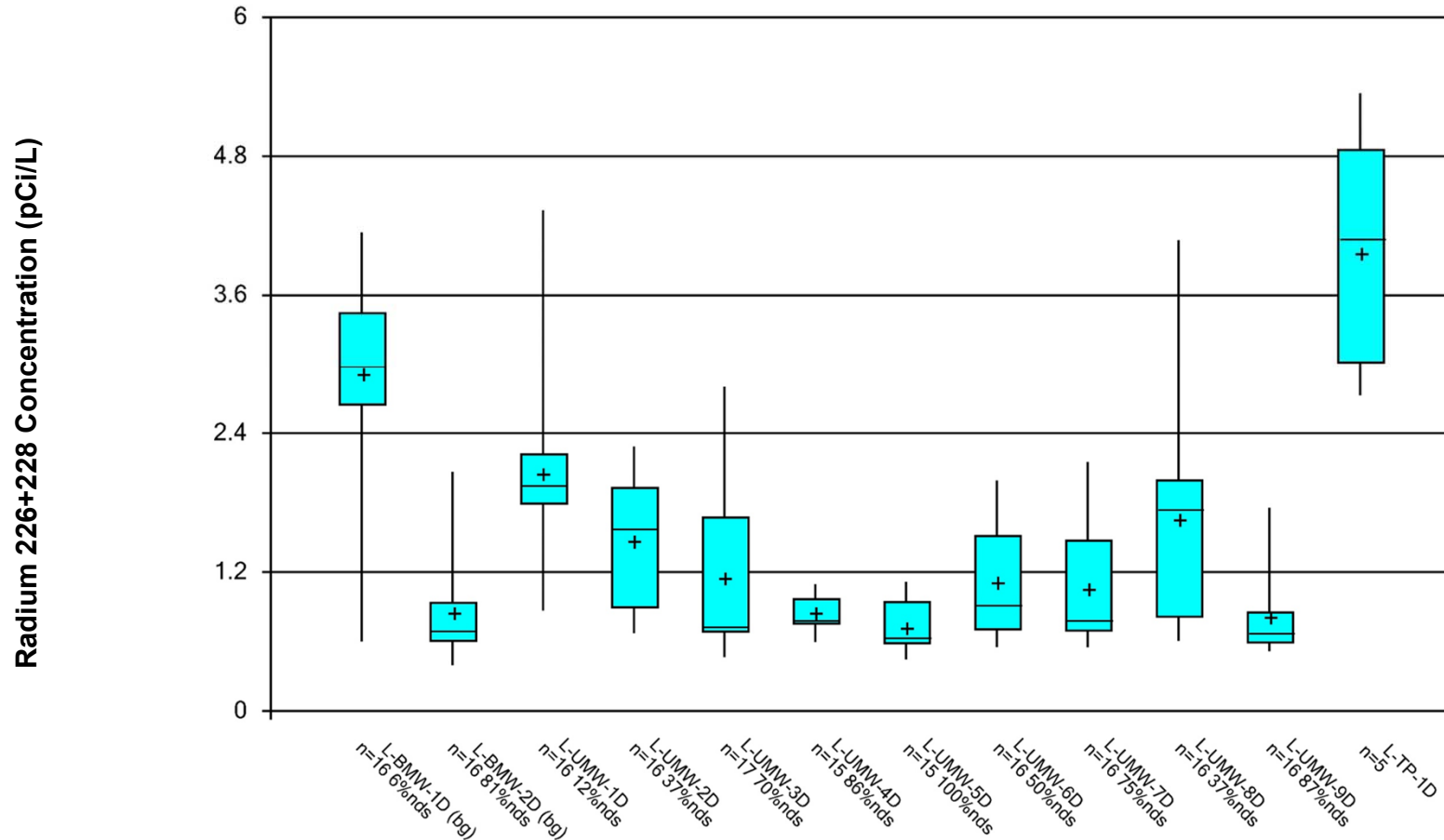


TITLE

TP-1D Piper Diagram

DRAWN EMS	CHECKED BTT	REVIEWED SCP	DATE 2021-11-16	SCALE N/A	FILE NO. N/A	JOB NO. 153140603.0001	DWG NO. N/A	SUBTITLE N/A	REV. NO. N/A	FIGURE 10
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Box & Whiskers Plot



Notes
1) pCi/L – Picocuries per liter.

CLIENT/PROJECT
AMEREN MISSOURI
LABADIE ENERGY CENTER



TITLE
**Box and Whiskers Plot of Radium 226+228
at TP-1D & LCPA Monitoring Wells**

DRAWN EMS	CHECKED BTT	REVIEWED SCP	DATE 2021-11-16	SCALE N/A	FILE NO. N/A	JOB NO. 153140603.0001	DWG NO. N/A	SUBTITLE N/A	REV. NO. N/A	FIGURE 11
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APPENDIX F

2021 Potentiometric Surface Maps



LEGEND

- Labadie Energy Center Property Boundary
- Utility Waste Landfill (UWL)**
 - Proposed Final UWL Fence Perimeter
 - LCL1 - Utility Waste Landfill Cell 1
- Surface Impoundments**
 - LCPA - Bottom Ash Surface Impoundment
 - LCPB - Fly Ash Surface Impoundment
- Monitoring Well or Piezometer**
 - Monitoring Well or Piezometer
- Surface Water Elevation Measurement Location**
 - Missouri River Gauge
- Groundwater Elevation Contours**
 - Groundwater Elevation Contour (FT MSL)
 - Inferred Groundwater Elevation Contour (FT MSL)
 - Groundwater Flow Direction

NOTES

- ALL LOCATIONS AND BOUNDARIES ARE APPROXIMATE.
- GROUNDWATER ELEVATION MEASUREMENTS OBTAINED BY GOLDER.
- GROUNDWATER ELEVATIONS DISPLAYED IN FT MSL (FEET ABOVE MEAN SEA LEVEL).
- MISSOURI RIVER LEVEL OBTAINED FROM USGS LABADIE GAUGE 06935550.
- THE UWL BOUNDARIES AND DESIGNATIONS ARE BASED ON AMEREN LABADIE CONSTRUCTION PERMIT APPLICATION DRAWINGS.
- AW-1 WAS NOT USED IN POTENTIOMETRIC SURFACE CONTOURING.
- MW-28 WAS NOT USED IN POTENTIOMETRIC SURFACE CONTOURING DUE TO MEASUREMENT ERROR.

REFERENCES

- ZAHNER AND ASSOCIATES, INC. 2016. LOT CONSOLIDATION PLAT OF "LABADIE ENERGY CENTER" - PREPARED FOR AMEREN MISSOURI. REVISED JUNE 15, 2016.
- COORDINATE SYSTEM: NAD 1983 STATEPLANE MISSOURI EAST FIPS 2,401 FEET.
- USGS (UNITED STATES GEOLOGICAL SURVEY), NATIONAL WATER INFORMATION SYSTEM, USGS GAUGE 06935550 MISSOURI RIVER NEAR LABADIE, MO.


0 1,000 2,000 3,000 4,000 5,000 6,000 Feet

CLIENT
AMEREN MISSOURI
 LABADIE ENERGY CENTER



PROJECT
 CCR GROUNDWATER MONITORING PROGRAM

TITLE
JANUARY 4, 2021 POTENTIOMETRIC SURFACE MAP

CONSULTANT	YYYY-MM-DD	2021-01-27
 GOLDER MEMBER OF WSP	PREPARED	BTT
	DESIGN	JSI
	REVIEW	EMS
	APPROVED	MNH

PROJECT No. 153140603 PHASE 0001 FIGURE **F1**

Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics,

Path: C:\Users\jgolder\OneDrive\Documents\153140603_02 - Ameren CCR GW Monitoring Program 2020 - AEPIS Technical Work\0001 - LCL1 - Figures-Drawings\PRODUCTION\DOT MAPS\2021-01-27 - Event Pot Map.mxd

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: 11in



LEGEND

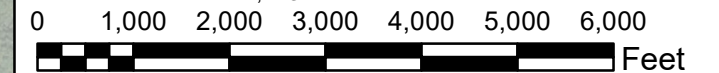
- Labadie Energy Center Property Boundary
- Utility Waste Landfill (UWL)**
- Proposed Final UWL Fence Perimeter
- LCL1 - Utility Waste Landfill Cell 1
- Surface Impoundments**
- LCPA - Bottom Ash Surface Impoundment
- LCPB - Fly Ash Surface Impoundment
- Monitoring Well or Piezometer**
- Monitoring Well or Piezometer
- Surface Water Elevation Measurement Location**
- Missouri River Gauge
- Groundwater Elevation Contours**
- Groundwater Elevation Contour (FT MSL)
- Inferred Groundwater Elevation Contour (FT MSL)
- Groundwater Flow Direction

NOTES

1. ALL LOCATIONS AND BOUNDARIES ARE APPROXIMATE.
2. GROUNDWATER ELEVATION MEASUREMENTS OBTAINED BY GOLDER.
3. GROUNDWATER ELEVATIONS DISPLAYED IN FT MSL (FEET ABOVE MEAN SEA LEVEL).
4. MISSOURI RIVER LEVEL OBTAINED FROM USGS LABADIE GAUGE 06935550.
5. THE UWL BOUNDARIES AND DESIGNATIONS ARE BASED ON AMEREN LABADIE CONSTRUCTION PERMIT APPLICATION DRAWINGS.

REFERENCES

1. ZAHNER AND ASSOCIATES, INC. 2016. LOT CONSOLIDATION PLAT OF "LABADIE ENERGY CENTER" - PREPARED FOR AMEREN MISSOURI. REVISED JUNE 15, 2016.
2. COORDINATE SYSTEM: NAD 1983 STATEPLANE MISSOURI EAST FIPS 2,401 FEET.
3. USGS (UNITED STATES GEOLOGICAL SURVEY), NATIONAL WATER INFORMATION SYSTEM, USGS GAUGE 06935550 MISSOURI RIVER NEAR LABADIE, MO.



CLIENT
AMEREN MISSOURI
LABADIE ENERGY CENTER



PROJECT
CCR GROUNDWATER MONITORING PROGRAM

TITLE
APRIL 15, 2021 POTENTIOMETRIC SURFACE MAP

CONSULTANT	DATE	PREPARED BY
GOLDER MEMBER OF WSP	YYYY-MM-DD	2021-05-14
	PREPARED	BTT
	DESIGN	JSI
	REVIEW	EMS
	APPROVED	MNH

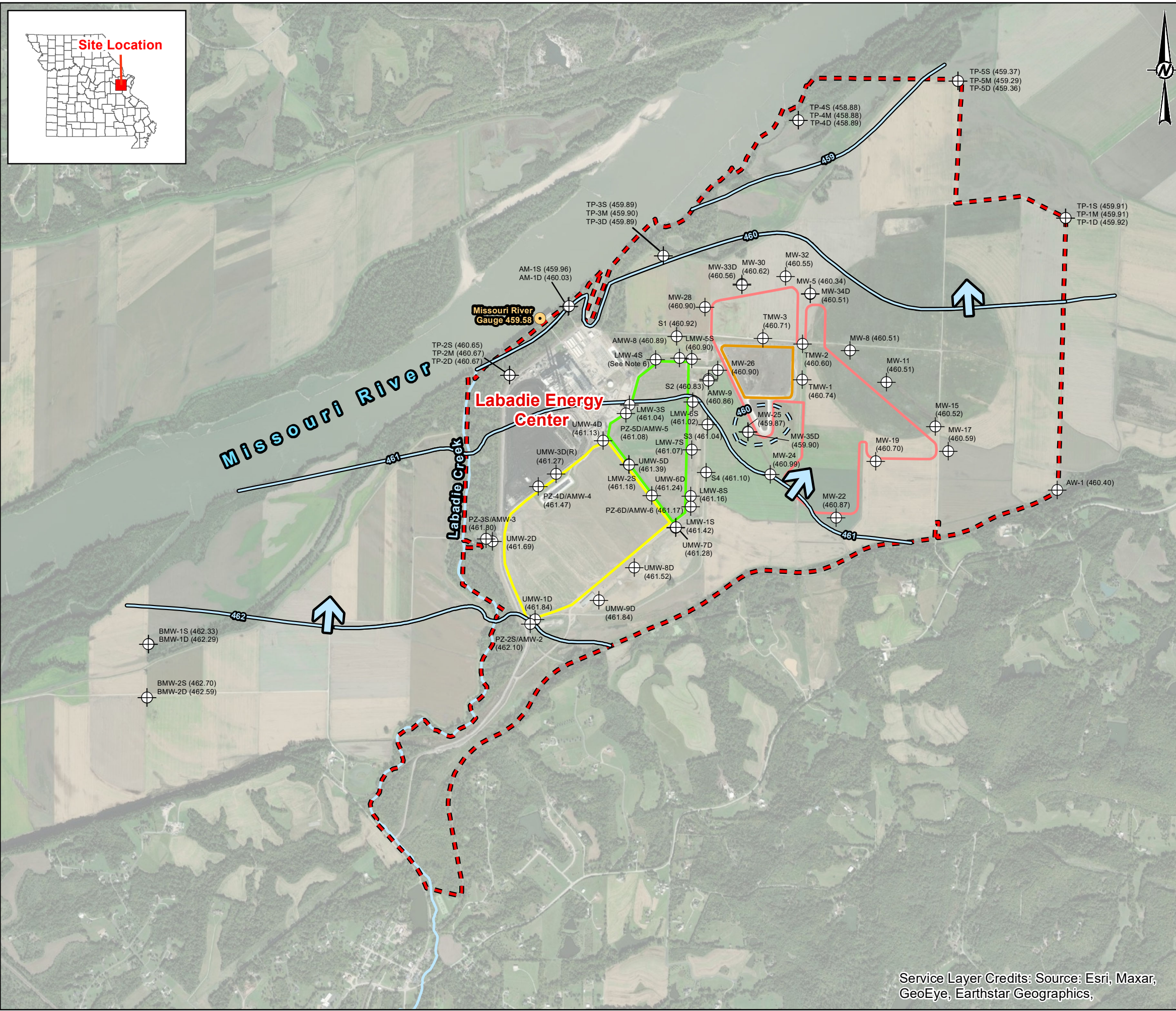
PROJECT No.
153140603

PHASE
0001

FIGURE
F2

Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics,

Path: C:\Users\jgolder\OneDrive\Documents\Projects\Labadie\Labadie\Production\Map\Map001.mxd
 02 - Ameren CCR GW Monitoring Program 2020 - APTIS Technical Worksheet 1.ECIS 14.Figure-Drawing\PRODUCTION\Map\Map001.mxd
 13 - Event Plot Map.mxd
 1in



LEGEND

- Labadie Energy Center Property Boundary
- Utility Waste Landfill (UWL)**
- Proposed Final UWL Fence Perimeter
- LCL1 - Utility Waste Landfill Cell 1
- Surface Impoundments**
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- LCPB - Fly Ash Surface Impoundment
- Monitoring Well or Piezometer**
- Monitoring Well or Piezometer
- Surface Water Elevation Measurement Location**
- Missouri River Gauge
- Groundwater Elevation Contours**
- Groundwater Elevation Contour (FT MSL)
- Inferred Groundwater Elevation Contour (FT MSL)
- Groundwater Flow Direction

NOTES

1. ALL LOCATIONS AND BOUNDARIES ARE APPROXIMATE.
2. GROUNDWATER ELEVATION MEASUREMENTS OBTAINED BY GOLDR.
3. GROUNDWATER ELEVATIONS DISPLAYED IN FT MSL (FEET ABOVE MEAN SEA LEVEL).
4. MISSOURI RIVER LEVEL OBTAINED FROM USGS LABADIE GAUGE 06935550.
5. THE UWL BOUNDARIES AND DESIGNATIONS ARE BASED ON AMEREN LABADIE CONSTRUCTION PERMIT APPLICATION DRAWINGS.
6. LMW-4S WAS NOT USED IN POTENTIOMETRIC SURFACE CONTOURING DUE TO MEASUREMENT ERROR.

REFERENCES

1. ZAHNER AND ASSOCIATES, INC. 2016. LOT CONSOLIDATION PLAT OF "LABADIE ENERGY CENTER" - PREPARED FOR AMEREN MISSOURI. REVISED JUNE 15, 2016.
2. COORDINATE SYSTEM: NAD 1983 STATEPLANE MISSOURI EAST FIPS 2,401 FEET.
3. USGS (UNITED STATES GEOLOGICAL SURVEY), NATIONAL WATER INFORMATION SYSTEM, USGS GAUGE 06935550 MISSOURI RIVER NEAR LABADIE, MO.

0 1,000 2,000 3,000 4,000 5,000 6,000 Feet

CLIENT
AMEREN MISSOURI
LABADIE ENERGY CENTER

PROJECT
CCR GROUNDWATER MONITORING PROGRAM

TITLE
JUNE 4, 2021 POTENTIOMETRIC SURFACE MAP

CONSULTANT	YYYY-MM-DD	2021-09-03
	PREPARED	ETF/BTT
	DESIGN	JSI
	REVIEW	EMS
	APPROVED	MNH

PROJECT No. 153140603 PHASE 0001 FIGURE **F3**

Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics,

Path: C:\Users\jgolder\OneDrive\Documents\153140603_02 - Ameren CCR GW Monitoring Program 2020 - 2021\2021-09-03\PRODUCTION\PT MAPS\2021-09-03-Event Pot Map.mxd

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: 11in



LEGEND

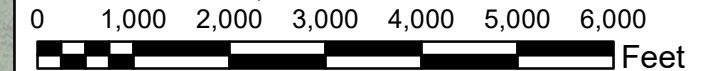
- Labadie Energy Center Property Boundary
- Utility Waste Landfill (UWL)**
- Proposed Final UWL Fence Perimeter
- LCL1 - Utility Waste Landfill Cell 1
- Surface Impoundments**
- LCPA - Bottom Ash Surface Impoundment
- LCPB - Fly Ash Surface Impoundment
- Monitoring Well or Piezometer**
- Monitoring Well or Piezometer
- Surface Water Elevation Measurement Location**
- Missouri River Gauge
- Groundwater Elevation Contours**
- Groundwater Elevation Contour (FT MSL)
- Inferred Groundwater Elevation Contour (FT MSL)
- Groundwater Flow Direction

NOTES

1. ALL LOCATIONS AND BOUNDARIES ARE APPROXIMATE.
2. GROUNDWATER ELEVATION MEASUREMENTS OBTAINED BY GOLDER.
3. GROUNDWATER ELEVATIONS DISPLAYED IN FT MSL (FEET ABOVE MEAN SEA LEVEL).
4. MISSOURI RIVER LEVEL OBTAINED FROM USGS LABADIE GAUGE 06935550.
5. THE UWL BOUNDARIES AND DESIGNATIONS ARE BASED ON AMEREN LABADIE CONSTRUCTION PERMIT APPLICATION DRAWINGS.
6. AW-1 WAS NOT USED IN POTENTIOMETRIC SURFACE CONTOURING.

REFERENCES

1. ZAHNER AND ASSOCIATES, INC. 2016. LOT CONSOLIDATION PLAT OF "LABADIE ENERGY CENTER" - PREPARED FOR AMEREN MISSOURI. REVISED JUNE 15, 2016.
2. COORDINATE SYSTEM: NAD 1983 STATEPLANE MISSOURI EAST FIPS 2,401 FEET.
3. USGS (UNITED STATES GEOLOGICAL SURVEY), NATIONAL WATER INFORMATION SYSTEM, USGS GAUGE 06935550 MISSOURI RIVER NEAR LABADIE, MO.



CLIENT
AMEREN MISSOURI
LABADIE ENERGY CENTER



PROJECT
CCR GROUNDWATER MONITORING PROGRAM

TITLE
NOVEMBER 1, 2021 POTENTIOMETRIC SURFACE MAP

CONSULTANT	DATE	BY
GOLDER MEMBER OF WSP	YYYY-MM-DD	2021-12-01
	PREPARED	ETF
	DESIGN	JSI
	REVIEW	BTT
	APPROVED	MNH

PROJECT No.
153140603

PHASE
0001

FIGURE
F4

Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics,

Path: C:\Users\jgolder\OneDrive\Documents\153140603_02 - Ameren CCR GW Monitoring Program 2020 - APTIS Technical Work\0001_1.EC\GIS\Figures-Drawings\PRODUCTION\PT MAPS\2021-11-16 Event Pot Map.mxd

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: 11in



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