REPORT

2025 Annual Groundwater Monitoring and Corrective Action Report

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

January 31, 2026

Project Number: 23007-25

Submitted to:

Ameren Missouri
1901 Chouteau Avenue
St. Louis, Missouri 63103

Submitted by:

Rocksmith Geoengineering, LLC
2320 Creve Coeur Mill Rd
Maryland Heights, MO 63043

EXECUTIVE SUMMARY AND STATUS OF THE LCPB 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 LCPB Coal Combustion Residuals (CCR) Surface Impoundment at the Labadie Energy Center (LEC) is subject to the requirements of the CCR Rule. This Annual Report for the LCPB describes CCR Rule groundwater monitoring activities from January 1, 2025, through December 31, 2025, including verification results related to late 2024 sampling.

Throughout 2025, the LCPB CCR unit has been operating under the Detection Monitoring Program (§257.94), which began October 17, 2017. As a part of Detection Monitoring, statistical evaluations are completed after each sampling event to determine if there are any values that represent a Statistically Significant Increase (SSI) over background concentrations. SSIs have been determined during each sampling event and a summary of the SSIs for the past year is provided in **Table 1**.

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

Event Name	Type of Event and Sampling Dates	Laboratory Analytical Data Receipt	Parameters Collected	Verified SSIs	SSI Determination Date	ASD Completion Date
October-November 2024 Sampling Event	Detection Monitoring, October 28 – November 1, 2024	December 23, 2024	Appendix III, Major Cations and Anions	**pH:** LMW-2S **Boron:** LMW-1S, LMW-2S, LMW-3S, LMW-4S, LMW-6S, LMW-7S, LMW-8S **Chloride:** LMW-2S, LMW-3S, LMW-4S, LMW-7S **Fluoride**: LMW-3S **Sulfate:** LMW-2S, LMW-3S, LMW-4S, LMW-7S	March 23, 2025	June 20, 2025
	There were no new initial exceedances identified during the October-November 2024 sampling event; therefore, no verification sampling was conducted.					
April 2025 Sampling Event	Detection Monitoring, April 24-30, 2025	June 14, 2025	Appendix III, Major Cations and Anions	**pH:** LMW-2S **Boron:** LMW-2S, LMW-3S, LMW-4S, LMW-6S, LMW-7S, LMW-8S **Chloride:** LMW-2S, LMW-3S, LMW-4S **Fluoride**: LMW-8S **Sulfate:** LMW-2S, LMW-3S, LMW-4S, LMW-7S	September 12, 2025	December 9, 2025
	Verification Sampling July 8-9, 2025	July 23, 2025	Detected Appendix III parameters (See Note 1)			
October 2025 Sampling Event	Detection Monitoring, October 17-22, 2025	November 22, 2025	Appendix III, Appendix IV, & Major Cations and Anions	**pH:** LMW-2S **Boron:** LMW-1S, LMW-2S, LMW-3S, LMW-4S, LMW-6S, LMW-7S, LMW-8S **Chloride:** LMW-2S, LMW-3S, LMW-4S **Fluoride**: LMW-8S **Sulfate:** LMW-2S, LMW-3S, LMW-4S, LMW-7S	January 31, 2026	To be evaluated in 2026
	Verification Sampling November 8, 2025	December 23, 2025	Detected Appendix III parameters (See Note 1)			

Notes:
1) Only analytes/wells that were detected above the prediction limit and that were not previously verified as SSIs were tested during Verification Sampling.
2) SSI – Statistically Significant Increase.
3) ASD – Alternative Source Demonstration.

As outlined in section 257.94(e)(2) of the CCR Rule, the owner or operator may demonstrate that a source other than the CCR unit has caused an SSI and that the apparent SSI was the result of an alternative source or resulted from errors in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. Alternative Source Demonstrations (ASDs) were prepared for the October-November 2024 and May 2025 sampling events and are discussed further in this Annual Report. An ASD will be evaluated for the October 2025 sampling event in 2026.

There were no changes made to the monitoring system in 2025 with no new wells being installed or decommissioned. Substantial closure of the LCPB was completed in 2020, with the geomembrane liner cover system completed on December 15, 2020. Additional aspects of closure were completed in spring 2021, and the CCR unit is now closed. The LCPB has now transitioned 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 the completion of closure.

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APPENDICES

1.0 INSTALLATION OR DECOMISSIONING OF MONITORING WELLS

In accordance with the CCR Rule, a groundwater monitoring system has been installed to monitor the LCPB. The groundwater monitoring system consists of ten groundwater monitoring wells screened in the uppermost aquifer and is displayed in **Figure 1**. No new monitoring wells were installed or decommissioned in 2025 as a part of the CCR Rule monitoring program for the LCPB. For more information on the groundwater monitoring well network, details are provided in the previous Annual Groundwater Monitoring Reports for the LCPB.

2.0 GROUNDWATER SAMPLING RESULTS AND DISCUSSION

The following sections discuss the sampling events completed for the LCPB CCR Unit in 2025. **Table 2** below provides a summary of the groundwater samples collected in 2025 including the number of samples, the date of sample collection, and the monitoring program.

Table 2 – Summary of Groundwater Sampling Dates

Sampling Event	Groundwater Monitoring Wells										Monitoring Program
	BMW-1S	BMW-2S	LMW-1S	LMW-2S	LMW-3S	LMW-4S	LMW-5S	LMW-6S	LMW-7S	LMW-8S	
	Date of Sample Collection										
April 2025 Detection Monitoring	4/24/2025	4/24/2025	4/29/2025	4/25/2025	4/25/2025	4/28/2025	4/28/2025	4/30/2025	4/30/2025	4/30/2025	Detection
July 2025 Verification Sampling	-	-	7/9/2025	-	7/8/2025	-	-	7/8/2025	-	7/8/2025	Detection
October-November 2025 Detection Monitoring	10/21/2025	10/21/2025	10/17/2025	10/20/2025	10/21/2025	10/22/2025	10/17/2025	10/17/2025	10/17/2025	10/17/2025	Detection
December 2025 Verification Sampling	-	-	12/8/2025	-	12/8/2025	-	-	-	-	-	Detection
Total Number of Samples	2	2	4	2	4	2	2	3	2	3	NA

Notes:

1) No verification sampling associated with the October-November 2024 sampling event was required.
2) Detection Monitoring events tested for Appendix III Parameters.
3) Only analytes/wells that were detected above the prediction limit were tested during verification sampling.
4) "-" No sample collected.
5) NA – Not applicable.

2.1 Detection Monitoring Program

A Detection Monitoring groundwater sampling event was completed from October 28 to November 1, 2024. The statistical analysis to evaluate for SSIs for this event was completed in 2025 and is included in this report. There were no new initial exceedances; therefore, no verification sampling associated with this event was necessary. **Table 3** summarizes the results and the statistical analysis of the October-November 2024 Detection Monitoring event. Laboratory analytical data from this sampling event are provided in the 2024 Groundwater Monitoring and

Corrective Action Annual Report for the LCPB. Laboratory analytical data for all sampling events conducted in 2025 are provided in **Appendix A**.

As outlined in section 257.94(e)(2) of the CCR Rule, the owner or operator may demonstrate that a source other than the CCR Unit has caused an SSI and that the apparent SSI was the result of an alternative source or resulted from errors in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. An Alternative Source Demonstration (ASD) was completed for SSIs identified in October-November 2024 and is provided in **Appendix B**. This ASD demonstrates that SSIs at the monitoring wells around LCPB are not caused by the LCPB CCR unit and the LCPB CCR unit remains in Detection Monitoring.

Detection Monitoring groundwater samples were collected April 24-30, 2025, and testing was completed for all Appendix III analytes, as well as major cations and anions. As outlined in the Statistical Analysis plan for the site, updates to the statistical limits should be completed once four to eight new sample results are available. During the statistical analysis of the April 2025 sampling event, the statistical limits used to determine an SSI were updated according to the Statistical Analysis Plan. New initial exceedances of Appendix III analytes triggered verification sampling, which was completed July 8-9, 2025. One of the new initial exceedances was confirmed as an SSI. **Table 4** summarizes the results and the statistical analysis of the April 2025 Detection Monitoring event. Similar to previous results, it was determined that the SSIs identified for this event are not caused by the LCPB CCR Unit, and an ASD for this sampling event is provided in **Appendix C**.

A Detection Monitoring sampling event was completed October 17-22, 2025 and testing was completed for all Appendix III analytes, as well as major cations and anions. New initial exceedances of Appendix III analytes triggered a verification sampling event, which was completed on December 8, 2025. Verification sampling confirmed one new SSI. **Table 5** summarizes the results and statistical analysis of the October 2025 Detection Monitoring event. An ASD for SSIs associated with the October 2025 sampling event will be evaluated in 2026.

2.2 Groundwater Elevation, Flow Rate and Direction

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

Groundwater elevations were used to generate potentiometric surface maps included in **Appendix D**. As shown on the potentiometric surface maps, groundwater flow direction within the uppermost aquifer is dynamic and influenced by seasonal changes in the water level in the nearby 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, as was observed in April 2025. During these times of high river stage and temporary flow direction changes, horizontal groundwater gradients generally decrease, and little net movement of groundwater occurs. Based on quarterly water level measurements, groundwater across the LEC exhibited typical flow towards the Missouri River throughout much of 2025, except in April, when groundwater in the alluvial aquifer was temporarily flowing away from the river to the southeast.

Groundwater flow direction and hydraulic gradient were estimated for the alluvial aquifer wells at the Labadie Energy Center (LEC) using commercially available software to evaluate data since 2016. 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 0.0009 feet/foot with an estimated net annual groundwater movement of approximately 18 feet per year in the prevailing downgradient direction.

2.3 Sampling Issues

No notable sampling issues were encountered at the LCPB in 2025.

3.0 ACTIVITIES PLANNED FOR 2026

Detection Monitoring is scheduled to continue on a semi-annual basis in the second and fourth quarters of 2026. An ASD for the SSI associated with the October 2025 sampling event will be evaluated in 2026.

Tables

Table 3
October-November 2024 Detection Monitoring Results
LCPB Surface Impoundment
Labadie Energy Center, Franklin County, MO

			BACKGROUND		GROUNDWATER MONITORING WELLS							
ANALYTE	UNITS	PREDICTION LIMITS	BMW-1S	BMW-2S	LMW-1S	LMW-2S	LMW-3S	LMW-4S	LMW-5S	LMW-6S	LMW-7S	LMW-8S
October-November 2024 Detection Monitoring Event												
DATE	NA	NA	10/28/2024	10/28/2024	10/30/2024	11/1/2024	10/28/2024	10/30/2024	10/31/2024	10/29/2024	10/29/2024	10/29/2024
pH	SU	6.416-7.307	6.47	6.92	6.93	9.56	6.88	6.77	6.75	6.66	6.79	6.97
BORON, TOTAL	µg/L	141.2	84.8 J	45.4 J	772	3,490	4,120	2,950	88.8 J	761	4,870	721
CALCIUM, TOTAL	µg/L	221,000	202,000	121,000	99,700	73,800	99,000	168,000	152,000 J	174,000	162,000	82,300
CHLORIDE, TOTAL	mg/L	7.564	4.5	1.8	2.1	20.0	23.3	86.4	3.5 J	3.5	9.2	1.2
FLUORIDE, TOTAL	mg/L	0.2154	ND	ND	ND	ND	0.29	ND	ND	ND	ND	0.21
SULFATE, TOTAL	mg/L	75.18	95.1	13.7	22.5	326 J	198.0	106	7.4	40.3	149	24.7
TOTAL DISSOLVED SOLIDS	mg/L	828	744	436	364	506	667	777	453	645	697	349

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. There were no new initial exceedances for the October-November 2024 event; therefore, no Verification Sampling was necessary.

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

Table 4
April 2025 Detection Monitoring Results
LCPB Surface Impoundment
Labadie Energy Center, Franklin County, MO

			BACKGROUND		GROUNDWATER MONITORING WELLS							
ANALYTE	UNITS	PREDICTION LIMITS	BMW-1S	BMW-2S	LMW-1S	LMW-2S	LMW-3S	LMW-4S	LMW-5S	LMW-6S	LMW-7S	LMW-8S
April 2025 Detection Monitoring Event												
DATE	NA	NA	4/24/2025	4/24/2025	4/29/2025	4/25/2025	4/25/2025	4/28/2025	4/28/2025	4/30/2025	4/30/2025	4/30/2025
pH	SU	6.423-7.308	6.98	7.26	6.95	9.31	7.61	6.96	6.67	6.85	6.85	7.24
BORON, TOTAL	µg/L	138	103	56.7 J	16.4 J*	3,660	3,830	7,390	55.2 J	299	5,200	647
CALCIUM, TOTAL	µg/L	221,000	204,000	143,000	ND*	66,600	72,600	117,000	165,000	95,200	81,100	64,300
CHLORIDE, TOTAL	mg/L	9.745	7.2	3.5	1.4	17.7	29.5	35.1	2.7 J	1.5	9.3	1.5
FLUORIDE, TOTAL	mg/L	0.23	ND	ND	0.26	ND	0.15 J	ND	ND	0.25	0.17 J	0.39
SULFATE, TOTAL	mg/L	83.55	77.8	71.6	14.1	256	233	214	9.3	15.4	125	15.6
TOTAL DISSOLVED SOLIDS	mg/L	831	831	531	295	490	589	740	520	370	498	294
July 2025 Verification Sampling Event												
DATE	NA	NA			7/9/2025		7/8/2025			7/8/2025		7/8/2025
pH	SU	6.423-7.308					7.27					
BORON, TOTAL	µg/L	138										
CALCIUM, TOTAL	µg/L	221,000										
CHLORIDE, TOTAL	mg/L	9.745										
FLUORIDE, TOTAL	mg/L	0.23			0.19 J					0.13 J		0.32
SULFATE, TOTAL	mg/L	83.55										
TOTAL DISSOLVED SOLIDS	mg/L	831										

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. * - Metals results at LMW-1S were unusually low compared to historical results at this well. These results are considered outliers due to laboratory error.

Prepared By: JTR
Checked By: JDQ
Reviewed By: JSI

Table 5
October 2025 Detection Monitoring Results
LCPB Surface Impoundment
Labadie Energy Center, Franklin County, MO

			BACKGROUND		GROUNDWATER MONITORING WELLS							
ANALYTE	UNITS	PREDICTION LIMITS	BMW-1S	BMW-2S	LMW-1S	LMW-2S	LMW-3S	LMW-4S	LMW-5S	LMW-6S	LMW-7S	LMW-8S
October 2025 Detection Monitoring Event												
DATE	NA	NA	10/21/2025	10/21/2025	10/17/2025	10/20/2025	10/21/2025	10/22/2025	10/17/2025	10/17/2025	10/17/2025	10/17/2025
pH	SU	6.423-7.308	6.68	6.96	7.19	9.71	6.92	6.72	6.70	6.74	6.68	7.19
BORON, TOTAL	µg/L	138	83.9 J	51.5 J	485	3,980	4,530	3,750	48.7 J	322	2,910	287
CALCIUM, TOTAL	µg/L	221,000	191,000	130,000	82,000	77,000	103,000	162,000	138,000	143,000	175,000	75,000
CHLORIDE, TOTAL	mg/L	9.745	5.3	1.4	2.2	14.5	21.2	67.0	1.1	2.4	6.6	0.78 J
FLUORIDE, TOTAL	mg/L	0.23	0.075 J	0.14	0.25	0.10	0.40	0.15	0.11	0.13	0.15	0.38
SULFATE, TOTAL	mg/L	83.55	57.7	13.4	23.8	302	225	114	7.9	26.2	86.5	19.9
TOTAL DISSOLVED SOLIDS	mg/L	831	660	466	306	553	639	735	434	514	687	310
December 2025 Verification Sampling Event												
DATE	NA	NA			12/8/2025		12/8/2025					
pH	SU	6.423-7.308										
BORON, TOTAL	µg/L	138			398							
CALCIUM, TOTAL	µg/L	221,000										
CHLORIDE, TOTAL	mg/L	9.745										
FLUORIDE, TOTAL	mg/L	0.23			ND		0.23					
SULFATE, TOTAL	mg/L	83.55										
TOTAL DISSOLVED SOLIDS	mg/L	831										

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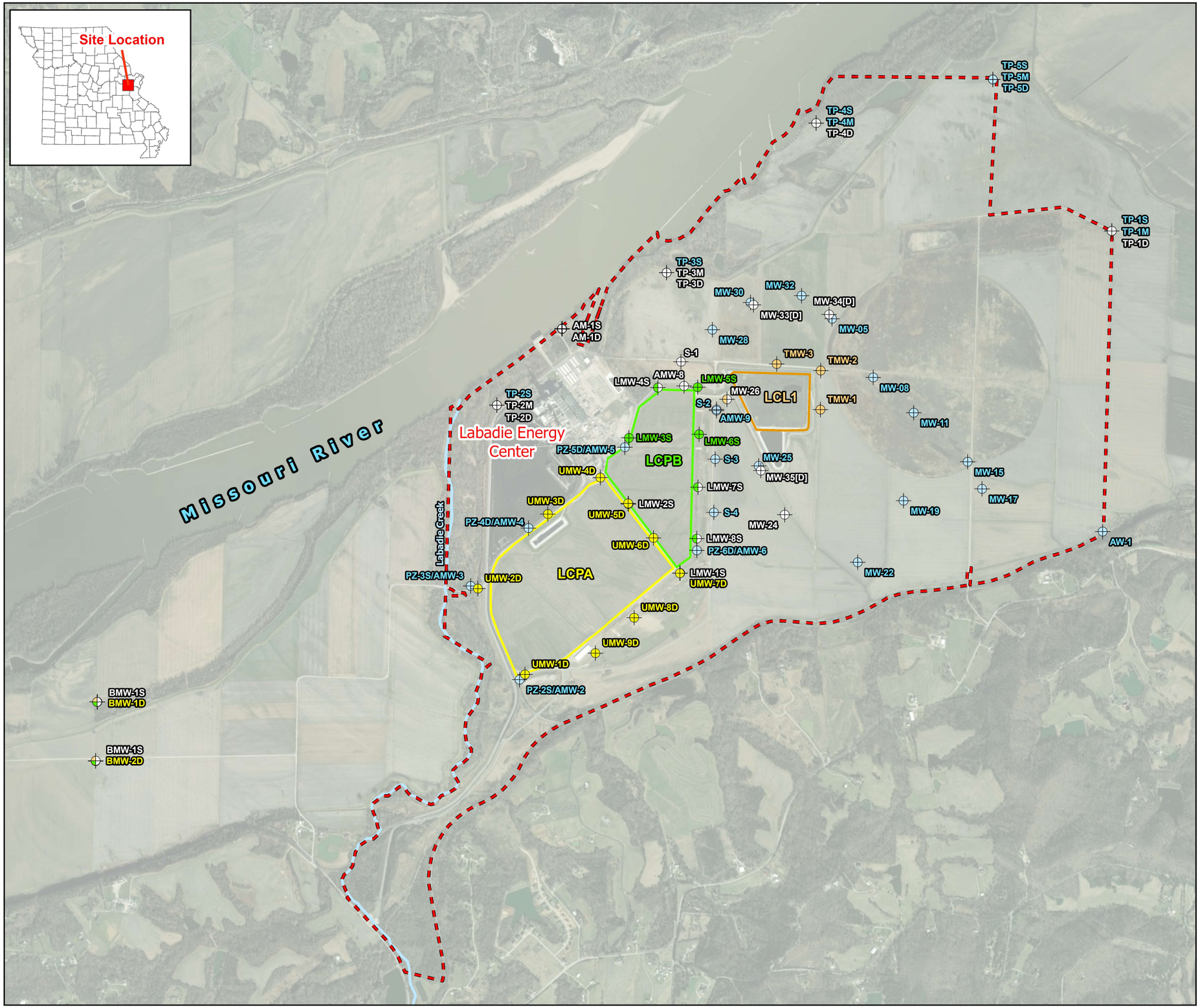
3. NA - Not applicable.
4. ND - Constituent was analyzed but was not detected above the Method Detection Limit (MDL) or the adjusted Practical Quantitation Limit (PQL) based on data validation and is considered a non-detect. Values displayed as ND.
5. Prediction Limits calculated using Sanitas Software.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

Prepared By: JTR
Checked By: JDQ
Reviewed By: JSI

Figures



TITLE

LABADIE ENERGY CENTER GROUNDWATER MONITORING PROGRAMS AND MONITORING WELL LOCATION MAP

Legend

Approximate Property Boundary

Labadie Energy Center CCR Units

- LCPA - Closed Bottom Ash Surface Impoundment
- LCPB - Closed 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

NOTES

1. All locations and boundaries are approximate.

REFERENCES

1. Zahner and Associates, Inc. 2016. Lot Consolidation Plat of "Labadie Energy Center" - Prepared for Ameren Missouri. Revised June 15, 2016.
2. USGS (United States Geological Survey), National Water Information System, USGS Gauge 06935550 Missouri River near Labadie, MO.

0 700 1,400 2,800 4,200 5,600 Feet

PROJECT
CCR RULE GROUNDWATER MONITORING PROGRAM

CLIENT
AMEREN MISSOURI
LABADIE ENERGY CENTER

ROCKSMITH GEOENGINEERING

DESIGN	JSI	YYYY-MM-DD	2026-01-12
PREPARED	JSI	PROJECT No.	23007-25
REVIEW	GTM		
APPROVED	MNH		

FIGURE 1

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

Path: C:\Users\JackRasmussen\Rocksmith Geoengineering LLC\23007 - Ameren GW - Documents\400 - Drawings, Figures\4.1 LEC\4.1.2 - Production\Other Maps\Annual Report Figure 1.aprx

Appendix A
Laboratory Analytical Data

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

October 30, 2025

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

RE: Project: AMEREN LCPB
Pace Project No.: 60473870

Dear Mark Haddock:

Enclosed are the analytical results for sample(s) received by the laboratory between April 26, 2025 and May 02, 2025. 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

Report revised to remove parameters not required under the CCR Rule

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

Sincerely,

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

Enclosures

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

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

CERTIFICATIONS

Project: AMEREN LCPB
Pace Project No.: 60473870

Pace Analytical Services Kansas

9608 Loiret Boulevard, Lenexa, KS 66219
EPA Lab Code: KS00021
Arkansas Certification #: 88-00679
Illinois Certification #: 200030
Colorado Division of Oil and Public Safety
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Oklahoma Certification #: 9205
Texas Certification #: T104704407
Utah Certification #: KS0002125-15
UDSA_CA : #KS-SC-DOM-25-01

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

SAMPLE SUMMARY

Project: AMEREN LCPB
Pace Project No.: 60473870

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60473870001	**L-LMW-3S**	Water	04/25/25 13:52	04/26/25 06:47
60473870002	**L-LMW-FB-1**	Water	04/25/25 13:47	04/26/25 06:47
60473870003	**L-LMW-5S**	Water	04/28/25 15:15	04/30/25 07:30
60473870004	**L-LMW-DUP-1**	Water	04/28/25 00:00	04/30/25 07:30
60473870005	**L-LMW-6S**	Water	04/30/25 14:30	05/02/25 07:00
60473870006	**L-LMW-MS-1**	Water	04/30/25 14:30	05/02/25 07:00
60473870007	**L-LMW-MSD-2**	Water	04/30/25 14:30	05/02/25 07:00
60473874001	**L-BMW-1S**	Water	04/24/25 11:50	04/26/25 06:47
60473874002	**L-BMW-2S**	Water	04/24/25 14:15	04/26/25 06:47
60473874003	**L-LMW-2S**	Water	04/25/25 12:05	04/26/25 06:47
60473874013	**L-LMW-1S**	Water	04/29/25 13:47	04/30/25 07:30
60473874014	**L-LMW-4S**	Water	04/28/25 13:30	04/30/25 07:30
60473874026	**L-LMW-7S**	Water	04/30/25 16:19	05/02/25 07:00
60473874027	**L-LMW-8S**	Water	04/30/25 14:20	05/02/25 07:00

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

SAMPLE ANALYTE COUNT

Project: AMEREN LCPB
Pace Project No.: 60473870

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60473870001	**L-LMW-3S**	EPA 200.7	ARMN	7	PASI-K
		SM 2320B	EFM	1	PASI-K
		SM 2540C	CAR	1	PASI-K
		EPA 300.0	AAA	3	PASI-K
60473870002	**L-LMW-FB-1**	EPA 200.7	ARMN	7	PASI-K
		SM 2320B	EFM	1	PASI-K
		SM 2540C	CAR	1	PASI-K
		EPA 300.0	AAA	3	PASI-K
60473870003	**L-LMW-5S**	EPA 200.7	ARMN	7	PASI-K
		SM 2320B	EFM	1	PASI-K
		SM 2540C	CAR	1	PASI-K
		EPA 300.0	AAA	3	PASI-K
60473870004	**L-LMW-DUP-1**	EPA 200.7	ARMN	7	PASI-K
		SM 2320B	EFM	1	PASI-K
		SM 2540C	CAR	1	PASI-K
		EPA 300.0	AAA	3	PASI-K
60473870005	**L-LMW-6S**	EPA 200.7	ARMN	7	PASI-K
		SM 2320B	EFM	1	PASI-K
		SM 2540C	CAR	1	PASI-K
		EPA 300.0	AAA	3	PASI-K
60473874001	**L-BMW-1S**	EPA 200.7	ARMN	7	PASI-K
		SM 2320B	EFM	1	PASI-K
		SM 2540C	CAR	1	PASI-K
		EPA 300.0	AAA	3	PASI-K
60473874002	**L-BMW-2S**	EPA 200.7	ARMN	7	PASI-K
		SM 2320B	EFM	1	PASI-K
		SM 2540C	CAR	1	PASI-K
		EPA 300.0	AAA	3	PASI-K
60473874003	**L-LMW-2S**	EPA 200.7	ARMN	7	PASI-K
		SM 2320B	EFM	1	PASI-K
		SM 2540C	CAR	1	PASI-K
		EPA 300.0	AAA	3	PASI-K
60473874013	**L-LMW-1S**	EPA 200.7	ARMN	7	PASI-K
		SM 2320B	EFM	1	PASI-K
		SM 2540C	CAR	1	PASI-K
		EPA 300.0	MLD	3	PASI-K
60473874014	**L-LMW-4S**	EPA 200.7	ARMN	7	PASI-K

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SAMPLE ANALYTE COUNT

Project: AMEREN LCPB
Pace Project No.: 60473870

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		SM 2320B	EFM	1	PASI-K
		SM 2540C	CAR	1	PASI-K
		EPA 300.0	AAA	3	PASI-K
60473874026	**L-LMW-7S**	EPA 200.7	ARMN	7	PASI-K
		SM 2320B	EFM	1	PASI-K
		SM 2540C	CAR	1	PASI-K
		EPA 300.0	MLD	3	PASI-K
60473874027	**L-LMW-8S**	EPA 200.7	ARMN	7	PASI-K
		SM 2320B	EFM	1	PASI-K
		SM 2540C	CAR	1	PASI-K
		EPA 300.0	MLD	3	PASI-K

PASI-K = Pace Analytical Services - Kansas City

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ANALYTICAL RESULTS

Project: AMEREN LCPB
Pace Project No.: 60473870

Sample: L-LMW-3S **Lab ID: 60473870001** Collected: 04/25/25 13:52 Received: 04/26/25 06:47 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								
Boron	**3830**	ug/L	100	6.4	1	04/30/25 07:50	05/23/25 13:15	7440-42-8	
Calcium	**72600**	ug/L	200	26.9	1	04/30/25 07:50	05/23/25 13:15	7440-70-2	
Iron	**4860**	ug/L	50.0	9.1	1	04/30/25 07:50	05/23/25 13:15	7439-89-6	
Magnesium	**6900**	ug/L	50.0	20.1	1	04/30/25 07:50	05/23/25 13:15	7439-95-4	
Manganese	**453**	ug/L	5.0	0.39	1	04/30/25 07:50	05/23/25 13:15	7439-96-5	
Potassium	**7250**	ug/L	500	69.7	1	04/30/25 07:50	05/23/25 13:15	7440-09-7	
Sodium	**87500**	ug/L	500	115	1	04/30/25 07:50	05/23/25 13:15	7440-23-5	
2320B Alkalinity	Analytical Method: SM 2320B								
	Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**154**	mg/L	20.0	10.5	1		05/09/25 12:48		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
	Pace Analytical Services - Kansas City								
Total Dissolved Solids	**589**	mg/L	10.0	10.0	1		05/01/25 13:36		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
	Pace Analytical Services - Kansas City								
Chloride	**29.5**	mg/L	20.0	10.5	20		05/15/25 16:53	16887-00-6	
Fluoride	**0.15J**	mg/L	0.20	0.12	1		05/15/25 16:39	16984-48-8	
Sulfate	**233**	mg/L	20.0	11.0	20		05/15/25 16:53	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LCPB
Pace Project No.: 60473870

Sample: L-LMW-FB-1 **Lab ID: 60473870002** Collected: 04/25/25 13:47 Received: 04/26/25 06:47 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								
Boron	**8.7J**	ug/L	100	6.4	1	04/30/25 07:50	05/23/25 13:17	7440-42-8	
Calcium	**<26.9**	ug/L	200	26.9	1	04/30/25 07:50	05/23/25 13:17	7440-70-2	
Iron	**<9.1**	ug/L	50.0	9.1	1	04/30/25 07:50	05/23/25 13:17	7439-89-6	
Magnesium	**<20.1**	ug/L	50.0	20.1	1	04/30/25 07:50	05/23/25 13:17	7439-95-4	
Manganese	**<0.39**	ug/L	5.0	0.39	1	04/30/25 07:50	05/23/25 13:17	7439-96-5	
Potassium	**<69.7**	ug/L	500	69.7	1	04/30/25 07:50	05/23/25 13:17	7440-09-7	
Sodium	**<115**	ug/L	500	115	1	04/30/25 07:50	05/23/25 13:17	7440-23-5	
2320B Alkalinity	Analytical Method: SM 2320B								
	Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**<10.5**	mg/L	20.0	10.5	1		05/09/25 13:03		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
	Pace Analytical Services - Kansas City								
Total Dissolved Solids	**12.0**	mg/L	5.0	5.0	1		05/01/25 13:36		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
	Pace Analytical Services - Kansas City								
Chloride	**0.60J**	mg/L	1.0	0.53	1		05/15/25 17:07	16887-00-6	
Fluoride	**<0.12**	mg/L	0.20	0.12	1		05/15/25 17:07	16984-48-8	
Sulfate	**<0.55**	mg/L	1.0	0.55	1		05/15/25 17:07	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LCPB
Pace Project No.: 60473870

Sample: L-LMW-5S **Lab ID: 60473870003** Collected: 04/28/25 15:15 Received: 04/30/25 07:30 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								
Boron	**55.2J**	ug/L	100	6.4	1	05/01/25 13:06	05/23/25 11:27	7440-42-8	
Calcium	**165000**	ug/L	200	26.9	1	05/01/25 13:06	05/23/25 11:27	7440-70-2	
Iron	**30.8J**	ug/L	50.0	9.1	1	05/01/25 13:06	05/23/25 11:27	7439-89-6	
Magnesium	**14800**	ug/L	50.0	20.1	1	05/01/25 13:06	05/23/25 11:27	7439-95-4	
Manganese	**4.1J**	ug/L	5.0	0.39	1	05/01/25 13:06	05/23/25 11:27	7439-96-5	
Potassium	**3320**	ug/L	500	69.7	1	05/01/25 13:06	05/23/25 11:27	7440-09-7	
Sodium	**5030**	ug/L	500	115	1	05/01/25 13:06	05/23/25 11:27	7440-23-5	
2320B Alkalinity	Analytical Method: SM 2320B								
	Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**471**	mg/L	20.0	10.5	1		05/12/25 13:49		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
	Pace Analytical Services - Kansas City								
Total Dissolved Solids	**520**	mg/L	10.0	10.0	1		05/05/25 14:47		MW
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
	Pace Analytical Services - Kansas City								
Chloride	**2.7**	mg/L	1.0	0.53	1		05/22/25 20:53	16887-00-6	B
Fluoride	**<0.12**	mg/L	0.20	0.12	1		05/22/25 20:53	16984-48-8	
Sulfate	**9.3**	mg/L	1.0	0.55	1		05/22/25 20:53	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LCPB
Pace Project No.: 60473870

Sample: L-LMW-DUP-1 **Lab ID: 60473870004** Collected: 04/28/25 00:00 Received: 04/30/25 07:30 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								
Boron	**54.9J**	ug/L	100	6.4	1	05/01/25 13:06	05/23/25 11:28	7440-42-8	
Calcium	**163000**	ug/L	200	26.9	1	05/01/25 13:06	05/23/25 11:28	7440-70-2	
Iron	**137**	ug/L	50.0	9.1	1	05/01/25 13:06	05/23/25 11:28	7439-89-6	
Magnesium	**14600**	ug/L	50.0	20.1	1	05/01/25 13:06	05/23/25 11:28	7439-95-4	
Manganese	**4.8J**	ug/L	5.0	0.39	1	05/01/25 13:06	05/23/25 11:28	7439-96-5	
Potassium	**3240**	ug/L	500	69.7	1	05/01/25 13:06	05/23/25 11:28	7440-09-7	
Sodium	**4960**	ug/L	500	115	1	05/01/25 13:06	05/23/25 11:28	7440-23-5	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**459**	mg/L	20.0	10.5	1		05/12/25 13:56		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**525**	mg/L	10.0	10.0	1		05/05/25 14:47		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**2.8**	mg/L	1.0	0.53	1		05/22/25 21:07	16887-00-6	B
Fluoride	**<0.12**	mg/L	0.20	0.12	1		05/22/25 21:07	16984-48-8	
Sulfate	**9.1**	mg/L	1.0	0.55	1		05/22/25 21:07	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LCPB
Pace Project No.: 60473870

Sample: L-LMW-6S **Lab ID: 60473870005** Collected: 04/30/25 14:30 Received: 05/02/25 07:00 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7								
	Pace Analytical Services - Kansas City								
Boron	**299**	ug/L	100	6.4	1	05/06/25 08:42	05/22/25 20:34	7440-42-8	
Calcium	**95200**	ug/L	200	26.9	1	05/06/25 08:42	05/22/25 20:34	7440-70-2	
Iron	**13900**	ug/L	50.0	9.1	1	05/06/25 08:42	05/22/25 20:34	7439-89-6	
Magnesium	**17600**	ug/L	50.0	20.1	1	05/06/25 08:42	05/22/25 20:34	7439-95-4	
Manganese	**1070**	ug/L	5.0	0.39	1	05/06/25 08:42	05/22/25 20:34	7439-96-5	
Potassium	**4170**	ug/L	500	69.7	1	05/06/25 08:42	05/22/25 20:34	7440-09-7	
Sodium	**5790**	ug/L	500	115	1	05/06/25 08:42	05/22/25 20:34	7440-23-5	
2320B Alkalinity	Analytical Method: SM 2320B								
	Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**319**	mg/L	20.0	10.5	1		05/14/25 20:07		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
	Pace Analytical Services - Kansas City								
Total Dissolved Solids	**370**	mg/L	10.0	10.0	1		05/07/25 15:13		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
	Pace Analytical Services - Kansas City								
Chloride	**1.5**	mg/L	1.0	0.53	1		05/27/25 22:36	16887-00-6	
Fluoride	**0.25**	mg/L	0.20	0.12	1		05/27/25 22:36	16984-48-8	
Sulfate	**15.4**	mg/L	1.0	0.55	1		05/27/25 22:36	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LCPB
Pace Project No.: 60473870

Sample: L-BMW-1S **Lab ID: 60473874001** Collected: 04/24/25 11:50 Received: 04/26/25 06:47 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								
Boron	**103**	ug/L	100	6.4	1	04/30/25 07:50	05/23/25 13:18	7440-42-8	
Calcium	**204000**	ug/L	200	26.9	1	04/30/25 07:50	05/23/25 13:18	7440-70-2	
Iron	**25700**	ug/L	50.0	9.1	1	04/30/25 07:50	05/23/25 13:18	7439-89-6	
Magnesium	**51800**	ug/L	50.0	20.1	1	04/30/25 07:50	05/23/25 13:18	7439-95-4	
Manganese	**2500**	ug/L	5.0	0.39	1	04/30/25 07:50	05/23/25 13:18	7439-96-5	
Potassium	**5780**	ug/L	500	69.7	1	04/30/25 07:50	05/23/25 13:18	7440-09-7	
Sodium	**20200**	ug/L	500	115	1	04/30/25 07:50	05/23/25 13:18	7440-23-5	
2320B Alkalinity	Analytical Method: SM 2320B								
	Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**668**	mg/L	20.0	10.5	1		05/08/25 14:11		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
	Pace Analytical Services - Kansas City								
Total Dissolved Solids	**831**	mg/L	13.3	13.3	1		05/01/25 13:34		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
	Pace Analytical Services - Kansas City								
Chloride	**7.2**	mg/L	1.0	0.53	1		05/15/25 17:20	16887-00-6	
Fluoride	**<0.12**	mg/L	0.20	0.12	1		05/15/25 17:20	16984-48-8	
Sulfate	**77.8**	mg/L	10.0	5.5	10		05/15/25 17:34	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LCPB
Pace Project No.: 60473870

Sample: L-BMW-2S **Lab ID: 60473874002** Collected: 04/24/25 14:15 Received: 04/26/25 06:47 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								
Boron	**56.7J**	ug/L	100	6.4	1	04/30/25 07:50	05/23/25 13:20	7440-42-8	
Calcium	**143000**	ug/L	200	26.9	1	04/30/25 07:50	05/23/25 13:20	7440-70-2	
Iron	**<9.1**	ug/L	50.0	9.1	1	04/30/25 07:50	05/23/25 13:20	7439-89-6	
Magnesium	**23000**	ug/L	50.0	20.1	1	04/30/25 07:50	05/23/25 13:20	7439-95-4	
Manganese	**2.6J**	ug/L	5.0	0.39	1	04/30/25 07:50	05/23/25 13:20	7439-96-5	
Potassium	**6070**	ug/L	500	69.7	1	04/30/25 07:50	05/23/25 13:20	7440-09-7	
Sodium	**4550**	ug/L	500	115	1	04/30/25 07:50	05/23/25 13:20	7440-23-5	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**372**	mg/L	20.0	10.5	1		05/08/25 14:17		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**531**	mg/L	10.0	10.0	1		05/01/25 13:34		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**3.5**	mg/L	1.0	0.53	1		05/15/25 17:48	16887-00-6	
Fluoride	**<0.12**	mg/L	0.20	0.12	1		05/15/25 17:48	16984-48-8	
Sulfate	**71.6**	mg/L	10.0	5.5	10		05/15/25 18:02	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LCPB
Pace Project No.: 60473870

Sample: L-LMW-2S **Lab ID: 60473874003** Collected: 04/25/25 12:05 Received: 04/26/25 06:47 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								
Boron	**3660**	ug/L	100	6.4	1	04/29/25 12:40	05/23/25 12:32	7440-42-8	
Calcium	**66600**	ug/L	200	26.9	1	04/29/25 12:40	05/23/25 12:32	7440-70-2	
Iron	**14.9J**	ug/L	50.0	9.1	1	04/29/25 12:40	05/23/25 12:32	7439-89-6	B
Magnesium	**90.8**	ug/L	50.0	20.1	1	04/29/25 12:40	05/23/25 12:32	7439-95-4	
Manganese	**1.7J**	ug/L	5.0	0.39	1	04/29/25 12:40	05/23/25 12:32	7439-96-5	
Potassium	**9190**	ug/L	500	69.7	1	04/29/25 12:40	05/23/25 12:32	7440-09-7	
Sodium	**64200**	ug/L	500	115	1	04/29/25 12:40	05/23/25 12:32	7440-23-5	
2320B Alkalinity	Analytical Method: SM 2320B								
	Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**36.0**	mg/L	20.0	10.5	1		05/09/25 13:07		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
	Pace Analytical Services - Kansas City								
Total Dissolved Solids	**490**	mg/L	10.0	10.0	1		05/01/25 13:36		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
	Pace Analytical Services - Kansas City								
Chloride	**17.7**	mg/L	1.0	0.53	1		05/15/25 18:15	16887-00-6	
Fluoride	**<0.12**	mg/L	0.20	0.12	1		05/15/25 18:15	16984-48-8	
Sulfate	**256**	mg/L	20.0	11.0	20		05/15/25 18:29	14808-79-8	

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ANALYTICAL RESULTS

Project: AMEREN LCPB
Pace Project No.: 60473870

Sample: L-LMW-1S **Lab ID: 60473874013** Collected: 04/29/25 13:47 Received: 04/30/25 07:30 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								
Boron	**16.4J**	ug/L	100	6.4	1	05/01/25 13:06	05/23/25 12:12	7440-42-8	
Calcium	**<26.9**	ug/L	200	26.9	1	05/01/25 13:06	05/23/25 12:12	7440-70-2	
Iron	**<9.1**	ug/L	50.0	9.1	1	05/01/25 13:06	05/23/25 12:12	7439-89-6	
Magnesium	**<20.1**	ug/L	50.0	20.1	1	05/01/25 13:06	05/23/25 12:12	7439-95-4	
Manganese	**<0.39**	ug/L	5.0	0.39	1	05/01/25 13:06	05/23/25 12:12	7439-96-5	
Potassium	**<69.7**	ug/L	500	69.7	1	05/01/25 13:06	05/23/25 12:12	7440-09-7	
Sodium	**<115**	ug/L	500	115	1	05/01/25 13:06	05/23/25 12:12	7440-23-5	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**259**	mg/L	20.0	10.5	1		05/13/25 22:10		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**295**	mg/L	10.0	10.0	1		05/06/25 13:15		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**1.4**	mg/L	1.0	0.53	1		05/23/25 12:14	16887-00-6	
Fluoride	**0.26**	mg/L	0.20	0.12	1		05/23/25 12:14	16984-48-8	
Sulfate	**14.1**	mg/L	1.0	0.55	1		05/23/25 12:14	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: AMEREN LCPB
Pace Project No.: 60473870

Sample: L-LMW-4S **Lab ID: 60473874014** Collected: 04/28/25 13:30 Received: 04/30/25 07:30 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								
Boron	**7390**	ug/L	100	6.4	1	05/01/25 13:06	05/23/25 12:14	7440-42-8	
Calcium	**117000**	ug/L	200	26.9	1	05/01/25 13:06	05/23/25 12:14	7440-70-2	
Iron	**8610**	ug/L	50.0	9.1	1	05/01/25 13:06	05/23/25 12:14	7439-89-6	
Magnesium	**22200**	ug/L	50.0	20.1	1	05/01/25 13:06	05/23/25 12:14	7439-95-4	
Manganese	**1740**	ug/L	5.0	0.39	1	05/01/25 13:06	05/23/25 12:14	7439-96-5	
Potassium	**6900**	ug/L	500	69.7	1	05/01/25 13:06	05/23/25 12:14	7440-09-7	
Sodium	**86000**	ug/L	500	115	1	05/01/25 13:06	05/23/25 12:14	7440-23-5	
2320B Alkalinity	Analytical Method: SM 2320B								
	Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**337**	mg/L	20.0	10.5	1		05/12/25 16:33		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
	Pace Analytical Services - Kansas City								
Total Dissolved Solids	**740**	mg/L	13.3	13.3	1		05/05/25 14:48		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
	Pace Analytical Services - Kansas City								
Chloride	**35.1**	mg/L	20.0	10.5	20		05/23/25 01:31	16887-00-6	B
Fluoride	**<0.12**	mg/L	0.20	0.12	1		05/23/25 01:17	16984-48-8	
Sulfate	**214**	mg/L	20.0	11.0	20		05/23/25 01:31	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LCPB
Pace Project No.: 60473870

Sample: L-LMW-7S **Lab ID: 60473874026** Collected: 04/30/25 16:19 Received: 05/02/25 07:00 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7								
	Pace Analytical Services - Kansas City								
Boron	**5200**	ug/L	100	6.4	1	05/06/25 08:42	05/22/25 20:13	7440-42-8	
Calcium	**81100**	ug/L	200	26.9	1	05/06/25 08:42	05/22/25 20:13	7440-70-2	
Iron	**3890**	ug/L	50.0	9.1	1	05/06/25 08:42	05/22/25 20:13	7439-89-6	
Magnesium	**16800**	ug/L	50.0	20.1	1	05/06/25 08:42	05/22/25 20:13	7439-95-4	
Manganese	**641**	ug/L	5.0	0.39	1	05/06/25 08:42	05/22/25 20:13	7439-96-5	
Potassium	**5340**	ug/L	500	69.7	1	05/06/25 08:42	05/22/25 20:13	7440-09-7	
Sodium	**52200**	ug/L	500	115	1	05/06/25 08:42	05/22/25 20:13	7440-23-5	
2320B Alkalinity	Analytical Method: SM 2320B								
	Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**255**	mg/L	20.0	10.5	1		05/14/25 19:25		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
	Pace Analytical Services - Kansas City								
Total Dissolved Solids	**498**	mg/L	10.0	10.0	1		05/07/25 15:12		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
	Pace Analytical Services - Kansas City								
Chloride	**9.3**	mg/L	1.0	0.53	1		05/23/25 17:18	16887-00-6	
Fluoride	**0.17J**	mg/L	0.20	0.12	1		05/23/25 17:18	16984-48-8	
Sulfate	**125**	mg/L	20.0	11.0	20		05/23/25 17:32	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LCPB
Pace Project No.: 60473870

Sample: L-LMW-8S **Lab ID: 60473874027** Collected: 04/30/25 14:20 Received: 05/02/25 07:00 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City								
Boron	**647**	ug/L	100	6.4	1	05/06/25 08:42	05/22/25 20:15	7440-42-8	
Calcium	**64300**	ug/L	200	26.9	1	05/06/25 08:42	05/22/25 20:15	7440-70-2	
Iron	**2500**	ug/L	50.0	9.1	1	05/06/25 08:42	05/22/25 20:15	7439-89-6	
Magnesium	**10700**	ug/L	50.0	20.1	1	05/06/25 08:42	05/22/25 20:15	7439-95-4	
Manganese	**343**	ug/L	5.0	0.39	1	05/06/25 08:42	05/22/25 20:15	7439-96-5	
Potassium	**3380**	ug/L	500	69.7	1	05/06/25 08:42	05/22/25 20:15	7440-09-7	
Sodium	**18400**	ug/L	500	115	1	05/06/25 08:42	05/22/25 20:15	7440-23-5	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**236**	mg/L	20.0	10.5	1		05/14/25 19:31		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**294**	mg/L	10.0	10.0	1		05/07/25 15:12		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Chloride	**1.5**	mg/L	1.0	0.53	1		05/23/25 17:46	16887-00-6	
Fluoride	**0.39**	mg/L	0.20	0.12	1		05/23/25 17:46	16984-48-8	
Sulfate	**15.6**	mg/L	1.0	0.55	1		05/23/25 17:46	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN LCPB
Pace Project No.: 60473870

QC Batch: 933297
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Total
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60473870001, 60473870002, 60473874001, 60473874002

METHOD BLANK: 3697620 Matrix: Water
Associated Lab Samples: 60473870001, 60473870002, 60473874001, 60473874002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	ug/L	<6.4	100	6.4	05/23/25 12:51	
Calcium	ug/L	<26.9	200	26.9	05/23/25 12:51	
Iron	ug/L	<9.1	50.0	9.1	05/23/25 12:51	
Magnesium	ug/L	<20.1	50.0	20.1	05/23/25 12:51	
Manganese	ug/L	<0.39	5.0	0.39	05/23/25 12:51	
Potassium	ug/L	<69.7	500	69.7	05/23/25 12:51	
Sodium	ug/L	<115	500	115	05/23/25 12:51	

LABORATORY CONTROL SAMPLE: 3697621

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	ug/L	1000	914	91	85-115	
Calcium	ug/L	10000	10000	100	85-115	
Iron	ug/L	10000	9960	100	85-115	
Magnesium	ug/L	10000	9700	97	85-115	
Manganese	ug/L	1000	984	98	85-115	
Potassium	ug/L	10000	9760	98	85-115	
Sodium	ug/L	10000	9640	96	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3697622 3697623

Parameter	Units	60473868003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	11800	1000	1000	12600	12600	78	78	70-130	0	20	
Calcium	ug/L	104000	10000	10000	112000	112000	81	80	70-130	0	20	
Iron	ug/L	17.2J	10000	10000	9880	9950	99	99	70-130	1	20	
Magnesium	ug/L	36.2J	10000	10000	9420	9440	94	94	70-130	0	20	
Manganese	ug/L	12.2	1000	1000	982	999	97	99	70-130	2	20	
Potassium	ug/L	17200	10000	10000	26700	27000	95	97	70-130	1	20	
Sodium	ug/L	96600	10000	10000	104000	104000	79	78	70-130	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN LCPB
Pace Project No.: 60473870

QC Batch: 933298
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Total
Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60473874003

METHOD BLANK: 3697624 Matrix: Water
Associated Lab Samples: 60473874003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	ug/L	<6.4	100	6.4	05/23/25 12:29	
Calcium	ug/L	<26.9	200	26.9	05/23/25 12:29	
Iron	ug/L	28.7J	50.0	9.1	05/23/25 12:29	
Magnesium	ug/L	<20.1	50.0	20.1	05/23/25 12:29	
Manganese	ug/L	<0.39	5.0	0.39	05/23/25 12:29	
Potassium	ug/L	<69.7	500	69.7	05/23/25 12:29	
Sodium	ug/L	<115	500	115	05/23/25 12:29	

LABORATORY CONTROL SAMPLE: 3697625

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	ug/L	1000	929	93	85-115	
Calcium	ug/L	10000	10100	101	85-115	
Iron	ug/L	10000	10000	100	85-115	
Magnesium	ug/L	10000	9880	99	85-115	
Manganese	ug/L	1000	1000	100	85-115	
Potassium	ug/L	10000	9910	99	85-115	
Sodium	ug/L	10000	9780	98	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3697626 3697627

Parameter	Units	60473874005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	64.2J	1000	1000	982	964	92	90	70-130	2	20	
Calcium	ug/L	136000	10000	10000	141000	140000	54	40	70-130	1	20	M1
Iron	ug/L	8510	10000	10000	18100	17900	96	94	70-130	1	20	
Magnesium	ug/L	33600	10000	10000	42000	41300	84	77	70-130	2	20	
Manganese	ug/L	264	1000	1000	1230	1220	96	95	70-130	1	20	
Potassium	ug/L	4390	10000	10000	14200	14100	98	97	70-130	0	20	
Sodium	ug/L	10400	10000	10000	19600	19400	93	90	70-130	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN LCPB
Pace Project No.: 60473870

QC Batch: 933650
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Total
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60473870003, 60473870004, 60473874013, 60473874014

METHOD BLANK: 3698971 Matrix: Water
Associated Lab Samples: 60473870003, 60473870004, 60473874013, 60473874014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	ug/L	<6.4	100	6.4	05/23/25 11:23	
Calcium	ug/L	<26.9	200	26.9	05/23/25 11:23	
Iron	ug/L	<9.1	50.0	9.1	05/23/25 11:23	
Magnesium	ug/L	<20.1	50.0	20.1	05/23/25 11:23	
Manganese	ug/L	<0.39	5.0	0.39	05/23/25 11:23	
Potassium	ug/L	<69.7	500	69.7	05/23/25 11:23	
Sodium	ug/L	<115	500	115	05/23/25 11:23	

LABORATORY CONTROL SAMPLE: 3698972

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	ug/L	1000	920	92	85-115	
Calcium	ug/L	10000	10000	100	85-115	
Iron	ug/L	10000	9990	100	85-115	
Magnesium	ug/L	10000	9760	98	85-115	
Manganese	ug/L	1000	994	99	85-115	
Potassium	ug/L	10000	9770	98	85-115	
Sodium	ug/L	10000	9730	97	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3698973 3698974

Parameter	Units	60474050002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	104	1000	1000	1040	1040	94	93	70-130	0	20	
Calcium	ug/L	193000	10000	10000	202000	196000	89	28	70-130	3	20	M1
Iron	ug/L	1580	10000	10000	12100	11900	105	103	70-130	1	20	
Magnesium	ug/L	43600	10000	10000	53300	51900	97	83	70-130	3	20	
Manganese	ug/L	3130	1000	1000	4070	4010	95	89	70-130	1	20	
Potassium	ug/L	6720	10000	10000	16800	16700	101	99	70-130	1	20	
Sodium	ug/L	10500	10000	10000	20300	20000	98	95	70-130	2	20	

MATRIX SPIKE SAMPLE: 3698975

Parameter	Units	60474050003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Boron	ug/L	83.1J	1000	1030	95	70-130	
Calcium	ug/L	121000	10000	130000	91	70-130	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN LCPB
Pace Project No.: 60473870

MATRIX SPIKE SAMPLE: 3698975

Parameter	Units	60474050003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Iron	ug/L	85.2	10000	10200	101	70-130	
Magnesium	ug/L	21900	10000	31700	97	70-130	
Manganese	ug/L	70.3	1000	1080	101	70-130	
Potassium	ug/L	5230	10000	15500	103	70-130	
Sodium	ug/L	5240	10000	15200	100	70-130	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN LCPB
Pace Project No.: 60473870

QC Batch: 934063
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Total
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60473870005, 60473874026, 60473874027

METHOD BLANK: 3700770 Matrix: Water
Associated Lab Samples: 60473870005, 60473874026, 60473874027

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	ug/L	<6.4	100	6.4	05/22/25 19:50	
Calcium	ug/L	34.5J	200	26.9	05/22/25 19:50	
Iron	ug/L	20.1J	50.0	9.1	05/22/25 19:50	
Magnesium	ug/L	<20.1	50.0	20.1	05/22/25 19:50	
Manganese	ug/L	1.0J	5.0	0.39	05/22/25 19:50	
Potassium	ug/L	<69.7	500	69.7	05/22/25 19:50	
Sodium	ug/L	<115	500	115	05/22/25 19:50	

LABORATORY CONTROL SAMPLE: 3700771

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	ug/L	1000	883	88	85-115	
Calcium	ug/L	10000	9850	98	85-115	
Iron	ug/L	10000	9810	98	85-115	
Magnesium	ug/L	10000	9580	96	85-115	
Manganese	ug/L	1000	994	99	85-115	
Potassium	ug/L	10000	9470	95	85-115	
Sodium	ug/L	10000	9630	96	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3700773 3700774

Parameter	Units	60473870005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	299	1000	1000	1200	1200	90	90	70-130	0	20	
Calcium	ug/L	95200	10000	10000	105000	103000	99	83	70-130	2	20	
Iron	ug/L	13900	10000	10000	23900	24000	100	101	70-130	0	20	
Magnesium	ug/L	17600	10000	10000	27100	26700	96	92	70-130	1	20	
Manganese	ug/L	1070	1000	1000	2010	2040	94	97	70-130	2	20	
Potassium	ug/L	4170	10000	10000	13700	14000	96	98	70-130	2	20	
Sodium	ug/L	5790	10000	10000	15500	15500	97	97	70-130	0	20	

MATRIX SPIKE SAMPLE: 3700775

Parameter	Units	60473874028 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Boron	ug/L	76.6J	1000	964	89	70-130	
Calcium	ug/L	136000	10000	143000	62	70-130	M1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN LCPB
Pace Project No.: 60473870

MATRIX SPIKE SAMPLE: 3700775

Parameter	Units	60473874028 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Iron	ug/L	34.3J	10000	9780	97	70-130	
Magnesium	ug/L	24900	10000	33700	89	70-130	
Manganese	ug/L	151	1000	1130	98	70-130	
Potassium	ug/L	4740	10000	14400	97	70-130	
Sodium	ug/L	10900	10000	20200	93	70-130	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN LCPB
Pace Project No.: 60473870

QC Batch: 934386
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60473874001, 60473874002

METHOD BLANK: 3702446 Matrix: Water
Associated Lab Samples: 60473874001, 60473874002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<10.5	20.0	10.5	05/08/25 13:29	

LABORATORY CONTROL SAMPLE: 3702447

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

SAMPLE DUPLICATE: 3702448

Parameter	Units	60473866001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	661	657	0	10	

SAMPLE DUPLICATE: 3702449

Parameter	Units	60474532001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	253	253	0	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN LCPB
Pace Project No.: 60473870

QC Batch: 934523
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60473870001, 60473870002, 60473874003

METHOD BLANK: 3703239 Matrix: Water
Associated Lab Samples: 60473870001, 60473870002, 60473874003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<10.5	20.0	10.5	05/09/25 11:51	

LABORATORY CONTROL SAMPLE: 3703240

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

SAMPLE DUPLICATE: 3703241

Parameter	Units	60473939004 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	208	207	1	10	

SAMPLE DUPLICATE: 3703242

Parameter	Units	60473868003 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	90.1	89.0	1	10	

SAMPLE DUPLICATE: 3703243

Parameter	Units	60473874005 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	467	471	1	10	

SAMPLE DUPLICATE: 3703244

Parameter	Units	60473953003 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	98.9	97.9	1	10	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(913)599-5665

QUALITY CONTROL DATA

Project: AMEREN LCPB
Pace Project No.: 60473870

QC Batch: 934756
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60473870003, 60473870004

METHOD BLANK: 3704361 Matrix: Water
Associated Lab Samples: 60473870003, 60473870004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<10.5	20.0	10.5	05/12/25 11:58	

LABORATORY CONTROL SAMPLE: 3704362

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

SAMPLE DUPLICATE: 3704363

Parameter	Units	60473941001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	231	229	1	10	

SAMPLE DUPLICATE: 3704364

Parameter	Units	60473953001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	33.8	33.0	2	10	

SAMPLE DUPLICATE: 3704365

Parameter	Units	60474050002 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	603	616	2	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN LCPB
Pace Project No.: 60473870

QC Batch: 934821
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60473874014

METHOD BLANK: 3704708 Matrix: Water
Associated Lab Samples: 60473874014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<10.5	20.0	10.5	05/12/25 16:18	

LABORATORY CONTROL SAMPLE: 3704709

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

SAMPLE DUPLICATE: 3704710

Parameter	Units	60473874014 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	337	337	0	10	

SAMPLE DUPLICATE: 3704711

Parameter	Units	60473874017 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	424	426	0	10	

SAMPLE DUPLICATE: 3704712

Parameter	Units	60474657012 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	820	791	4	10	

SAMPLE DUPLICATE: 3704713

Parameter	Units	60474657014 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	577	575	0	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN LCPB
Pace Project No.: 60473870

QC Batch: 934892
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60473874013

METHOD BLANK: 3705033 Matrix: Water
Associated Lab Samples: 60473874013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<10.5	20.0	10.5	05/13/25 19:36	

LABORATORY CONTROL SAMPLE: 3705034

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	500	516	103	90-110	

SAMPLE DUPLICATE: 3705035

Parameter	Units	60474053004 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	359	349	3	10	

SAMPLE DUPLICATE: 3705036

Parameter	Units	60474053004 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	359	351	2	10	

SAMPLE DUPLICATE: 3705037

Parameter	Units	60473868010 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	488	489	0	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN LCPB
Pace Project No.: 60473870

QC Batch: 935136
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60473870005, 60473874026, 60473874027

METHOD BLANK: 3706237 Matrix: Water
Associated Lab Samples: 60473870005, 60473874026, 60473874027

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<10.5	20.0	10.5	05/14/25 19:11	

LABORATORY CONTROL SAMPLE: 3706238

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	500	512	102	90-110	

SAMPLE DUPLICATE: 3706239

Parameter	Units	60473870005 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	319	319	0	10	

SAMPLE DUPLICATE: 3706240

Parameter	Units	60474215001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	126	130	3	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN LCPB
Pace Project No.: 60473870

QC Batch: 933633
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60473870001, 60473870002, 60473874001, 60473874002, 60473874003

METHOD BLANK: 3698856 Matrix: Water
Associated Lab Samples: 60473870001, 60473870002, 60473874001, 60473874002, 60473874003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	05/01/25 13:33	

LABORATORY CONTROL SAMPLE: 3698857

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

SAMPLE DUPLICATE: 3698858

Parameter	Units	60473868003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	795	805	1	10	

SAMPLE DUPLICATE: 3698859

Parameter	Units	60473874005 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	529	530	0	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN LCPB
Pace Project No.: 60473870

QC Batch: 933971
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60473870003, 60473870004

METHOD BLANK: 3700463 Matrix: Water
Associated Lab Samples: 60473870003, 60473870004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	05/05/25 14:45	

LABORATORY CONTROL SAMPLE: 3700464

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

SAMPLE DUPLICATE: 3700465

Parameter	Units	60473736001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	12800	12800	1	10	H1

SAMPLE DUPLICATE: 3700466

Parameter	Units	60474050002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	767	724	6	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN LCPB
Pace Project No.: 60473870

QC Batch: 933972
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60473874014

METHOD BLANK: 3700467 Matrix: Water
Associated Lab Samples: 60473874014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	05/05/25 14:48	

LABORATORY CONTROL SAMPLE: 3700468

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

SAMPLE DUPLICATE: 3700469

Parameter	Units	60473874017 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	651	645	1	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN LCPB
Pace Project No.: 60473870

QC Batch: 934108
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60473874013

METHOD BLANK: 3700872 Matrix: Water
Associated Lab Samples: 60473874013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	05/06/25 13:14	

LABORATORY CONTROL SAMPLE: 3700873

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

SAMPLE DUPLICATE: 3700874

Parameter	Units	60474043001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	160	154	3	10	

SAMPLE DUPLICATE: 3700875

Parameter	Units	60474053004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	629	620	1	10	

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QUALITY CONTROL DATA

Project: AMEREN LCPB
Pace Project No.: 60473870

QC Batch: 934269
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60473870005, 60473874026, 60473874027

METHOD BLANK: 3701859 Matrix: Water
Associated Lab Samples: 60473870005, 60473874026, 60473874027

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	05/07/25 15:10	

LABORATORY CONTROL SAMPLE: 3701860

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	1030	103	80-120	

SAMPLE DUPLICATE: 3701861

Parameter	Units	60474170001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	3270	3230	1	10	

SAMPLE DUPLICATE: 3701862

Parameter	Units	60473870005 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	370	377	2	10	

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REPORT OF LABORATORY ANALYSIS

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(913)599-5665

QUALITY CONTROL DATA

Project: AMEREN LCPB
Pace Project No.: 60473870

QC Batch: 935142
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60473870001, 60473870002, 60473874001, 60473874002, 60473874003

METHOD BLANK: 3706253 Matrix: Water
Associated Lab Samples: 60473870001, 60473870002, 60473874001, 60473874002, 60473874003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.53	1.0	0.53	05/15/25 05:11	
Fluoride	mg/L	<0.12	0.20	0.12	05/15/25 05:11	
Sulfate	mg/L	<0.55	1.0	0.55	05/15/25 05:11	

LABORATORY CONTROL SAMPLE: 3706254

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	5.1	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3706255 3706256

Parameter	Units	60473868003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	27.6	100	100	113	114	85	86	80-120	1	15	
Fluoride	mg/L	<0.12	2.5	2.5	2.2	2.5	87	99	80-120	13	15	
Sulfate	mg/L	407	250	250	669	657	105	100	80-120	2	15	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3706257 3706258

Parameter	Units	60473874005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	3.8	5	5	8.5	8.0	93	85	80-120	5	15	
Fluoride	mg/L	<0.12	2.5	2.5	2.7	2.4	106	94	80-120	11	15	
Sulfate	mg/L	20.7	10	10	30.7	30.5	100	98	80-120	1	15	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN LCPB
Pace Project No.: 60473870

QC Batch: 936168
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60473870003, 60473870004, 60473874014

METHOD BLANK: 3711067 Matrix: Water
Associated Lab Samples: 60473870003, 60473870004, 60473874014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.59J	1.0	0.53	05/22/25 16:59	
Fluoride	mg/L	<0.12	0.20	0.12	05/22/25 16:59	
Sulfate	mg/L	<0.55	1.0	0.55	05/22/25 16:59	

LABORATORY CONTROL SAMPLE: 3711068

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	4.9	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3711069 3711070

Parameter	Units	60474050002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	4.4	5	5	9.5	8.8	101	88	80-120	7	15	
Fluoride	mg/L	<0.12	2.5	2.5	2.7	2.4	107	93	80-120	14	15	
Sulfate	mg/L	73.8	100	100	176	179	102	105	80-120	2	15	

MATRIX SPIKE SAMPLE: 3711071

Parameter	Units	60474050005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	0.59J	5	4.9	85	80-120	
Fluoride	mg/L	<0.12	2.5	2.5	101	80-120	
Sulfate	mg/L	<0.55	5	4.9	93	80-120	

SAMPLE DUPLICATE: 3711201

Parameter	Units	60474050002 Result	Dup Result	RPD	Max RPD	Qualifiers
Chloride	mg/L	4.4	4.3	2	15	
Fluoride	mg/L	<0.12	<0.12		15	
Sulfate	mg/L	73.8	72.6	2	15	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN LCPB
Pace Project No.: 60473870

QC Batch: 936176
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60473874013, 60473874026, 60473874027

METHOD BLANK: 3711108 Matrix: Water
Associated Lab Samples: 60473874013, 60473874026, 60473874027

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.53	1.0	0.53	05/23/25 06:08	
Fluoride	mg/L	<0.12	0.20	0.12	05/23/25 06:08	
Sulfate	mg/L	<0.55	1.0	0.55	05/23/25 06:08	

LABORATORY CONTROL SAMPLE: 3711109

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	2.6	102	90-110	
Sulfate	mg/L	5	5.0	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3711236 3711237

Parameter	Units	60473874017 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	9.9	5	5	14.5	15.4	92	109	80-120	6	15	
Fluoride	mg/L	<0.12	2.5	2.5	2.4	2.8	95	109	80-120	13	15	
Sulfate	mg/L	112	100	100	208	208	96	96	80-120	0	15	

MATRIX SPIKE SAMPLE: 3711239

Parameter	Units	60473874022 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	<0.53	5	4.8	97	80-120	
Fluoride	mg/L	<0.12	2.5	2.6	103	80-120	
Sulfate	mg/L	<0.55	5	5.0	95	80-120	

SAMPLE DUPLICATE: 3711238

Parameter	Units	60473874017 Result	Dup Result	RPD	Max RPD	Qualifiers
Chloride	mg/L	9.9	9.9	0	15	
Fluoride	mg/L	<0.12	<0.12		15	
Sulfate	mg/L	112	109	3	15	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN LCPB
Pace Project No.: 60473870

QC Batch: 936490
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60473870005

METHOD BLANK: 3712529 Matrix: Water
Associated Lab Samples: 60473870005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.53	1.0	0.53	05/27/25 22:13	
Fluoride	mg/L	<0.12	0.20	0.12	05/27/25 22:13	
Sulfate	mg/L	<0.55	1.0	0.55	05/27/25 22:13	

LABORATORY CONTROL SAMPLE: 3712530

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	99	90-110	
Sulfate	mg/L	5	5.2	105	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3712531 3712532

Parameter	Units	60473870005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	1.5	5	5	6.6	6.4	102	99	80-120	3	15	
Fluoride	mg/L	0.25	2.5	2.5	2.9	2.8	105	100	80-120	4	15	
Sulfate	mg/L	15.4	5	5	21.4	21.1	119	114	80-120	1	15	E

SAMPLE DUPLICATE: 3712533

Parameter	Units	60473870005 Result	Dup Result	RPD	Max RPD	Qualifiers
Chloride	mg/L	1.5	1.5	0	15	
Fluoride	mg/L	0.25	0.25	3	15	
Sulfate	mg/L	15.4	15.4	0	15	

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REPORT OF LABORATORY ANALYSIS

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

QUALIFIERS

Project: AMEREN LCPB
Pace Project No.: 60473870

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

B	Analyte was detected in the associated method blank.
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.
MW	Due to matrix interference, achieving a constant weight is not possible.

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN LCPB
Pace Project No.: 60473870

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60473870001	**L-LMW-3S**	EPA 200.7	933297	EPA 200.7	933530
60473870002	**L-LMW-FB-1**	EPA 200.7	933297	EPA 200.7	933530
60473874001	**L-BMW-1S**	EPA 200.7	933297	EPA 200.7	933530
60473874002	**L-BMW-2S**	EPA 200.7	933297	EPA 200.7	933530
60473874003	**L-LMW-2S**	EPA 200.7	933298	EPA 200.7	933376
60473870003	**L-LMW-5S**	EPA 200.7	933650	EPA 200.7	933723
60473870004	**L-LMW-DUP-1**	EPA 200.7	933650	EPA 200.7	933723
60473874013	**L-LMW-1S**	EPA 200.7	933650	EPA 200.7	933723
60473874014	**L-LMW-4S**	EPA 200.7	933650	EPA 200.7	933723
60473874026	**L-LMW-7S**	EPA 200.7	934063	EPA 200.7	934134
60473874027	**L-LMW-8S**	EPA 200.7	934063	EPA 200.7	934134
60473870005	**L-LMW-6S**	EPA 200.7	934063	EPA 200.7	934134
60473870001	**L-LMW-3S**	SM 2320B	934523		
60473870002	**L-LMW-FB-1**	SM 2320B	934523		
60473874001	**L-BMW-1S**	SM 2320B	934386		
60473874002	**L-BMW-2S**	SM 2320B	934386		
60473874003	**L-LMW-2S**	SM 2320B	934523		
60473870003	**L-LMW-5S**	SM 2320B	934756		
60473870004	**L-LMW-DUP-1**	SM 2320B	934756		
60473874013	**L-LMW-1S**	SM 2320B	934892		
60473874014	**L-LMW-4S**	SM 2320B	934821		
60473874026	**L-LMW-7S**	SM 2320B	935136		
60473874027	**L-LMW-8S**	SM 2320B	935136		
60473870005	**L-LMW-6S**	SM 2320B	935136		
60473870001	**L-LMW-3S**	SM 2540C	933633		
60473870002	**L-LMW-FB-1**	SM 2540C	933633		
60473874001	**L-BMW-1S**	SM 2540C	933633		
60473874002	**L-BMW-2S**	SM 2540C	933633		
60473874003	**L-LMW-2S**	SM 2540C	933633		
60473870003	**L-LMW-5S**	SM 2540C	933971		
60473870004	**L-LMW-DUP-1**	SM 2540C	933971		
60473874013	**L-LMW-1S**	SM 2540C	934108		
60473874014	**L-LMW-4S**	SM 2540C	933972		
60473874026	**L-LMW-7S**	SM 2540C	934269		
60473874027	**L-LMW-8S**	SM 2540C	934269		
60473870005	**L-LMW-6S**	SM 2540C	934269		
60473870001	**L-LMW-3S**	EPA 300.0	935142		
60473870002	**L-LMW-FB-1**	EPA 300.0	935142		
60473874001	**L-BMW-1S**	EPA 300.0	935142		
60473874002	**L-BMW-2S**	EPA 300.0	935142		
60473874003	**L-LMW-2S**	EPA 300.0	935142		

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN LCPB
Pace Project No.: 60473870

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60473870003	**L-LMW-5S**	EPA 300.0	936168		
60473870004	**L-LMW-DUP-1**	EPA 300.0	936168		
60473874013	**L-LMW-1S**	EPA 300.0	936176		
60473874014	**L-LMW-4S**	EPA 300.0	936168		
60473874026	**L-LMW-7S**	EPA 300.0	936176		
60473874027	**L-LMW-8S**	EPA 300.0	936176		
60473870005	**L-LMW-6S**	EPA 300.0	936490		

WO# : 60473870

60473870

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

Client Name: Rocksmith Geoeng

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

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

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

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

Thermometer Used: T-301 **Type of Ice:** (Wet) Blue None

Cooler Temperature (°C): As-read 1.6/1.0 Corr. Factor +0.1 Corrected 1.7/1.1/19.9

Date and initials of person examining contents: PV 4/28/25

Temperature should be above freezing to 6°C 19.7

Chain of Custody present:	☑Yes ☐No ☐N/A	
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	
Samples arrived within holding time:	☑Yes ☐No ☐N/A	
Short Hold Time analyses (<72hr):	☐Yes ☑No ☐N/A	
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	
Sufficient volume:	☑Yes ☐No ☐N/A	
Correct containers used:	☑Yes ☐No ☐N/A	
Pace containers used:	☑Yes ☐No ☐N/A	
Containers intact:	☑Yes ☐No ☐N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	☐Yes ☐No ☑N/A	
Filtered volume received for dissolved tests?	☐Yes ☐No ☑N/A	
Sample labels match COC: Date / time / ID / analyses	☑Yes ☐No ☐N/A	
Samples contain multiple phases? Matrix: WT	☐Yes ☑No ☐N/A	
Containers requiring pH preservation in compliance? (HNO3, H2SO4, HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO) LOT#: 96888 4/28 ~~180728~~	☑Yes ☐No ☐N/A	List sample IDs, volumes, lot #'s of preservative and the date/time added.
Cyanide water sample checks: Lead acetate strip turns dark? (Record only)	☐Yes ☐No	
Potassium iodide test strip turns blue/purple? (Preserve)	☐Yes ☐No	
Trip Blank present:	☐Yes ☐No ☑N/A	
Headspace in VOA vials (>6mm):	☐Yes ☐No ☑N/A	
Samples from USDA Regulated Area: State:	☐Yes ☐No ☑N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	☐Yes ☐No ☑N/A	

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

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

CHAIN-OF-CUSTODY Analytical Request Document

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

LAB USE ONLY- Affix Workorder/Login Label Here

60473870

Scan QR Code for instructions

Company Name:	Rocksmith Geoengineering, LLC.	Contact/Report To:	Mark Haddock
Street Address:	2320 Creve Coeur Mill Road, Maryland Heights, MO 63043	Phone #:	314-974-6578
		E-Mail:	mark.haddock@rocksmithgeo.com
		Cc E-Mail:	
Customer Project #:	COC# 3		
Project Name:	AMEREN LCPB	Invoice To:	Mark Haddock
		Invoice E-Mail:	mark.haddock@rocksmithgeo.com
Site Collection Info/Facility ID (as applicable):		Purchase Order # (if applicable):	
		Quote #:	

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

County / State origin of sample(s): Missouri

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

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

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

DW PWSID # or WW Permit # as applicable:

Date Results Requested:

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

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

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

Identify Container Preservative Type***: 1 1 3 2 2 2 3 2

Customer Sample ID	Matrix *	Comp / Grab	Composite Start Date	Composite Start Time	Collected or Composite End Date	Collected or Composite End Time	# Cont.	Res. Chlorine Results	Res. Chlorine Units	Chloride/Fluoride/Sulfate	TDS / Alkalinity	COD / TOC	App III and Cat/An Metals (200.7)*	Appendix IV Metals (200.7/200.8/7470)*	UWL Metals (200.7)***	TOX	Radium 226 & Radium 228	Sample Comment
L-LMW-3S	WT	G			4-25-25	1352	6			✓	✓	✓	✓	✓	✓	✓	✓	
L-LMW-5S	WT																	
L-LMW-6S	WT																	
L-LMW-DUP-1	WT																	
L-LMW-FB-1	WT				4-25-25	1347	6			✓	✓	✓	✓	✓	✓	✓	✓	
L-LMW-MS-1	WT																	
L-LMW-MSD-2	WT																	
L-BMW-1S	WT	G			4-24-25	1150	6			✓	✓	✓	✓	✓	✓	✓	✓	
L-BMW-2S	WT	G			1	1415	6			✓	✓	✓	✓	✓	✓	✓	✓	
L-LMW-2S	WT	G			4-25-25	1205	6											

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

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

Lab Use Only
Proj. Mgr: Jamie Church
AcctNum / Client ID:
Table #:
Profile / Template: 15857
Prelog / Bottle Ord. ID: EZ 3244556

Preservation non-conformance identified for sample.

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

Collected By: (Printed Name) Grant Morey
Signature:

Customer Remarks / Special Conditions / Possible Hazards:

# Coolers:	Thermometer ID:	Correction Factor (°C):	Obs. Temp. (°C)	Corrected Temp. (°C)	On Ice:
3	T-361	+0.1		1.7/1.1/19.8	

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Tracking Number:
Rocksmith	4-25-25/1600		4/26 0647	
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Delivered by: [ ] In- Person [ ] Courier
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	[ ] FedEX [ ] UPS [ ] Other
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Page: 1 of 1

DC#_Title: ENV-FRM-LENE-0001 v07_Sample Container Count
Effective Date: 7/12/2024

Client: Rocksmith Geoeng

Profile/EZ # (C) 3244556

Site:

Notes

COC Line Item	Matrix	VG9H	DG9H	DG9Q	VG9U	DG9U	DG9M	DG9B	BG1U	AG1H	AG1U	AG2U	AG3S	AG4U	AG5U	JGFU	WGKU	WGDU	BP1U	BP2U	BP3U	BP1N	BP3N	BP3F	BP3S	BP3B	BP3Z	WPDU	ZPLC	Other		
1	WT												2						1			2	1									
2																																
3																																
4																																
5	WT												2						1			2	1									
6																																
7																																
8																																
9																																
10																																
11																																
12																																

DO not Log

Container Codes

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

Plastic	
BP1B	1L NAOH plastic
BP1N	1L HNO3 plastic
BP1S	1L H2SO4 plastic
BP1U	1L unpreserved plastic
BP1Z	1L NaOH, Zn Acetate
BP2B	500mL NAOH plastic
BP2N	500mL HNO3 plastic
BP2S	500mL H2SO4 plastic
BP2U	500mL unpreserved plastic
BP2Z	500mL NaOH, Zn Acetate
BP3B	250mL NaOH plastic
BP3F	250mL HNO3 plastic - field filtered
BP3N	250mL HNO3 plastic
BP3U	250mL unpreserved plastic
BP3S	250mL H2SO4 plastic
BP3Z	250mL NaOH, Zn Acetate
BP4U	125mL unpreserved plastic
BP4N	125mL HNO3 plastic
BP4S	125mL H2SO4 plastic
WPDU	16oz unpresserved plstic

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

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

Work Order Number: 6047387O

WO# : 60473870

60473870

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

Client Name: Rocksmith Gevens

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: T1361 **Type of Ice:** (Wet) Blue None

Cooler Temperature (°C): **As-read** 4.4/1.3 **Corr. Factor** +0.1 **Corrected** 4.5/1.4/15.3

15.2

Date and initials of person examining contents: PM 4/30/25

Temperature should be above freezing to 6°C

Chain of Custody present:	☑Yes ☐No ☐N/A	
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	
Samples arrived within holding time:	☑Yes ☐No ☐N/A	
Short Hold Time analyses (<72hr):	☐Yes ☑No ☐N/A	
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	
Sufficient volume:	☑Yes ☐No ☐N/A	
Correct containers used:	☑Yes ☐No ☐N/A	
Pace containers used:	☑Yes ☐No ☐N/A	
Containers intact:	☑Yes ☐No ☐N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	☐Yes ☐No ☑N/A	
Filtered volume received for dissolved tests?	☐Yes ☐No ☑N/A	
Sample labels match COC: Date / time / ID / analyses	☑Yes ☐No ☐N/A	
Samples contain multiple phases? Matrix: WT	☐Yes ☑No ☐N/A	
Containers requiring pH preservation in compliance? ☑Yes ☐No ☐N/A (HNO_3, H_2SO_4, HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO) **LOT#:** 96888 Cyanide water sample checks: Lead acetate strip turns dark? (Record only) ☐Yes ☐No Potassium iodide test strip turns blue/purple? (Preserve) ☐Yes ☐No		List sample IDs, volumes, lot #'s of preservative and the date/time added.
Trip Blank present:	☐Yes ☐No ☑N/A	
Headspace in VOA vials (>6mm):	☐Yes ☐No ☑N/A	
Samples from USDA Regulated Area: State:	☐Yes ☐No ☑N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	☐Yes ☐No ☑N/A	

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

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

CHAIN-OF-CUSTODY Analytical Request Document

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

LAB USE ONLY- Affix Workorder/Login Label Here

60473870

Scan QR Code for instructions

Company Name:	Rocksmith Geoengineering, LLC.	Contact/Report To:	Mark Haddock
Street Address:	2320 Creve Coeur Mill Road, Maryland Heights, MO 63043	Phone #:	314-974-6578
		E-Mail:	mark.haddock@rocksmithgeo.com
		Cc E-Mail:	
Customer Project #:	COC# 3		
Project Name:	AMEREN LCPB	Invoice To:	Mark Haddock
		Invoice E-Mail:	mark.haddock@rocksmithgeo.com
Site Collection Info/Facility ID (as applicable):		Purchase Order # (if applicable):	
		Quote #:	

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

County / State origin of sample(s): Missouri

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

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

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

DW PWSID # or WW Permit # as applicable:

Date Results Requested:

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

Analysis:

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

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

Identify Container Preservative Type***: 1 1 3 2 2 3 3 2

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

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

Lab Use Only: Proj. Mgr: Jamie Church; AcctNum / Client ID:; Table #:; Profile / Template: 15857; Prelog / Bottle Ord. ID: EZ 3244556

Customer Sample ID	Matrix *	Comp / Grab	Composite Start Date	Composite Start Time	Collected or Composite End Date	Collected or Composite End Time	# Cont.	Res. Chlorine Results	Res. Chlorine Units	Chloride/Fluoride/Sulfate	TDS / Alkalinity	COD / TOC	App III and Cat/An Metals (200.7)*	Appendix IV Metals (200.7/200.8/7470)**	UWL Metals (200.7)***	TOX	Radium 226 & Radium 228	Sample Comment	Preservation non-conformance identified for sample.
L-LMW-3S	WT																		
L-LMW-5S	WT	G			4-28-25	1515	6			✓	✓	✓	✓	✓	✓	✓	✓		
L-LMW-6S	WT	G																	
L-LMW-DUP-1	WT				4-28-25	—	6			✓	✓	✓	✓	✓	✓	✓	✓		
L-LMW-FB-1	WT																		
L-LMW-MS-1	WT																		
L-LMW-MSD-2	WT																		
L-LMW-4S	WT	G			4-28-25	1330	6			✓	✓	✓	✓	✓	✓	✓	✓		
L-LMW-1S	WT	G			4-29-25	1347	6			✓	✓	✓	✓	✓	✓	✓	✓		

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

Collected By: (Printed Name) Grayt Morey

Signature:

Customer Remarks / Special Conditions / Possible Hazards:

# Coolers:	Thermometer ID:	Correction Factor (°C):	Obs. Temp. (°C)	Corrected Temp. (°C)	On Ice:
3	T-301	+0.1		4.5/1.4/15.3	

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Rocksmith	4-29-25/1600		4/30/25 07:30
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:

Tracking Number:

Delivered by: [ ] In- Person [ ] Courier [ ] FedEx [ ] UPS [ ] Other

Page: 1 of 1

DC#_Title: ENV-FRM-LENE-0001 v07_Sample Container Count
Effective Date: 7/12/2024

Client: Rocksmith Glooeng

Profile/EZ # Only Print What you log.

Site:

Notes Append to 60473870

COC Line Item	Matrix	VG9H	DG9H	DG9Q	VG9U	DG9U	DG9M	DG9B	BG1U	AG1H	AG1U	AG2U	AG3S	AG4U	AG5U	JGFU	WGKU	WGDU	BP1U	BP2U	BP3U	BP1N	BP3N	BP3F	BP3S	BP3B	BP3Z	WPDU	ZPLC	Other		
1																																
2	WT												2						1			2	1									
3																																
4	WT												2						1			2	1									
5																																
6																																
7																																
8	DO NOT LOG																															
9																																
10																																
11																																
12																																

Container Codes

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

Plastic	
BP1B	1L NAOH plastic
BP1N	1L HNO3 plastic
BP1S	1L H2SO4 plastic
BP1U	1L unpreserved plastic
BP1Z	1L NaOH, Zn Acetate
BP2B	500mL NAOH plastic
BP2N	500mL HNO3 plastic
BP2S	500mL H2SO4 plastic
BP2U	500mL unpreserved plastic
BP2Z	500mL NaOH, Zn Acetate
BP3B	250mL NaOH plastic
BP3F	250mL HNO3 plastic - field filtered
BP3N	250mL HNO3 plastic
BP3U	250mL unpreserved plastic
BP3S	250mL H2SO4 plastic
BP3Z	250mL NaOH, Zn Acetate
BP4U	125mL unpreserved plastic
BP4N	125mL HNO3 plastic
BP4S	125mL H2SO4 plastic
WPDU	16oz unpresserved plstic

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

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

Work Order Number: 60473870

WO# : 60473870

60473870

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

Client Name: Rocksmith Greens

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-301 **Type of Ice:** (Wet) Blue None

Cooler Temperature (°C): As-read 2.3/1.9/2.7 Corr. Factor +0.1 Corrected 2.4/2.0/2.8

Date and initials of person examining contents: AV 5/2/25

Temperature should be above freezing to 6°C

Chain of Custody present:	☑Yes ☐No ☐N/A	
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	
Samples arrived within holding time:	☑Yes ☐No ☐N/A	
Short Hold Time analyses (<72hr):	☐Yes ☑No ☐N/A	
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	
Sufficient volume:	☑Yes ☐No ☐N/A	
Correct containers used:	☑Yes ☐No ☐N/A	
Pace containers used:	☑Yes ☐No ☐N/A	
Containers intact:	☑Yes ☐No ☐N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	☐Yes ☐No ☑N/A	
Filtered volume received for dissolved tests?	☐Yes ☑No ☐N/A	
Sample labels match COC: Date / time / ID / analyses	☑Yes ☐No ☐N/A	
Samples contain multiple phases? Matrix: WT	☐Yes (☑)No ☐N/A AV 5/2	
Containers requiring pH preservation in compliance? (HNO_3, H_2SO_4, HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO) **LOT#:** 96888	☑Yes ☐No ☐N/A	List sample IDs, volumes, lot #'s of preservative and the date/time added.
Cyanide water sample checks: Lead acetate strip turns dark? (Record only)	☐Yes ☐No	
Potassium iodide test strip turns blue/purple? (Preserve)	☐Yes ☐No	
Trip Blank present:	☐Yes ☐No ☑N/A	
Headspace in VOA vials (>6mm):	☐Yes ☐No ☑N/A	
Samples from USDA Regulated Area: State:	☐Yes ☐No ☑N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	☐Yes ☐No ☑N/A	

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

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

CHAIN-OF-CUSTODY Analytical Request Document

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

LAB USE ONLY- Affix Workorder/Login Label Here

60473870

Scan QR Code for instructions

Company Name:	Rocksmith Geoengineering, LLC.	Contact/Report To:	Mark Haddock
Street Address:	2320 Creve Coeur Mill Road, Maryland Heights, MO 63043	Phone #:	314-974-6578
		E-Mail:	mark.haddock@rocksmithgeo.com
		Cc E-Mail:	
Customer Project #:	COC# 3		
Project Name:	AMEREN LCPB	Invoice To:	Mark Haddock
		Invoice E-Mail:	mark.haddock@rocksmithgeo.com
Site Collection Info/Facility ID (as applicable):		Purchase Order # (if applicable):	
		Quote #:	
Time Zone Collected: [ ] AK [ ] PT [ ] MT [ ] CT [ ] ET		County / State origin of sample(s):	Missouri
Data Deliverables: [ ] Level II [ ] Level III [ ] Level IV [ ] EQUIS [ ] Other		Regulatory Program (DW, RCRA, etc.) as applicable:	Reportable [ ] Yes [ ] No
		Rush (Pre-approval required): [ ] Same Day [ ] 1 Day [ ] 2 Day [ ] 3 Day [ ] Other _____	DW PWSID # or WW Permit # as applicable:
		Date Results Requested:	Field Filtered (if applicable): [ ] Yes [ ] No Analysis:

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

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

Identify Container Preservative Type***: 1 1 3 2 2 2 3 2

Analysis Requested: Chloride/Fluoride/Sulfate; TDS / Alkalinity; COD / TOC; App III and Cat/An Metals (200.7)*; Appendix IV Metals (200.7/200.8/7470)*; UWL Metals (200.7)***; TOX; Radium 226 & Radium 228

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

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

Lab Use Only: Proj. Mgr: Jamie Church; AcctNum / Client ID:; Table #:; Profile / Template: 15857; Prelog / Bottle Ord. ID: EZ 3244556

Preservation non-conformance identified for sample.

Customer Sample ID	Matrix *	Comp / Grab	Composite Start Date	Composite Start Time	Collected or Composite End Date	Collected or Composite End Time	# Cont.	Res. Chlorine Results	Res. Chlorine Units	Sample Comment
L-LMW-3S	WT									
L-LMW-5S	WT									
L-LMW-6S	WT	G			4-30-25	1430	6			
L-LMW-DUP-1	WT									
L-LMW-FB-1	WT									
L-LMW-MS-1	WT	G			4-30-25	1430	6			Collected @ L-LMW-6S
L-LMW-MSD-2	WT	G			4-30-25	1430	6			
L-LMW-7S	WT	G			4-30-25	1619				
L-LMW-8S	WT	G			4-30-25	1420	6			

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

Collected By: (Printed Name) Grant Morey
Signature:

Customer Remarks / Special Conditions / Possible Hazards:

# Coolers:	Thermometer ID:	Correction Factor (°C):	Obs. Temp. (°C)	Corrected Temp. (°C)	On Ice:
3	T-301	+0.1		2.4/2.0/12.8	

Relinquished by/Company: (Signature) Rocksmith	Date/Time: 5-1-25/0800	Received by/Company: (Signature)	Date/Time: 5/2/25 0700	Tracking Number:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Delivered by: [ ] In- Person [ ] Courier
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	[ ] FedEx [ ] UPS [ ] Other
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Page: 1 of 1

Client: Rocksmith Geoeng

Profile/EZ # Only print what you log.

Site:

Notes Append to 60473870

COC Line Item	Matrix	VG9H	DG9H	DG9Q	VG9U	DG9U	DG9M	DG9B	BG1U	AG1H	AG1U	AG2U	AG3S	AG4U	AG5U	JGFU	WGKU	WGDU	BP1U	BP2U	BP3U	BP1N	BP3N	BP3F	BP3S	BP3B	BP3Z	WPDU	ZPLC	Other		
1																																
2																																
3	WT												6						3			2	3									
4																																
5																																
6	WT																					2										
7	WT																					2										
8																																
9																																
10																																
11																																
12																																

(Only Log RAD)

DO not Log

Container Codes

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

Plastic	
BP1B	1L NAOH plastic
BP1N	1L HNO3 plastic
BP1S	1L H2SO4 plastic
BP1U	1L unpreserved plastic
BP1Z	1L NaOH, Zn Acetate
BP2B	500mL NAOH plastic
BP2N	500mL HNO3 plastic
BP2S	500mL H2SO4 plastic
BP2U	500mL unpreserved plastic
BP2Z	500mL NaOH, Zn Acetate
BP3B	250mL NaOH plastic
BP3F	250mL HNO3 plastic - field filtered
BP3N	250mL HNO3 plastic
BP3U	250mL unpreserved plastic
BP3S	250mL H2SO4 plastic
BP3Z	250mL NaOH, Zn Acetate
BP4U	125mL unpreserved plastic
BP4N	125mL HNO3 plastic
BP4S	125mL H2SO4 plastic
WPDU	16oz unpresserved plstic

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

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

Work Order Number: 60473870

Internal Transfer Chain of Custody

K192

☐ Rush Multiplier_____X
☐ Samples Pre-Logged into eCOC

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

Workorder: 60473870 **Workorder Name:** AMEREN LCPB **Owner Received Date:** 4/26/2025 **Results Requested By:** 5/15/2025

Report To	Subcontract To
Jamie Church Pace Analytical Kansas 9608 Loiret Blvd. Lenexa, KS 66219 Phone 314-838-7223	Pace National 12065 Lebanon Rd Mt. Juliet, TN 37122 Phone (615) 758-5858

L1853747

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: N H2SO4						Requested Analysis: Total Organic Halogens												LAB USE ONLY
1	L-LMW-3S	PS	4/25/2025 13:52	60473870001	Water	1						X												-01
2	L-LMW-FB-1	PS	4/25/2025 13:47	60473870002	Water	1						X												-02
3	L-LMW-5S	PS	4/28/2025 15:15	60473870003	Water	1						X												-03
4	L-LMW-DUP-1	PS	4/28/2025 00:00	60473870004	Water	1						X												-04
5																								

Transfers	Released By	Date/Time	Received By	Date/Time
1	JAPace	4/30/25 1700	Easton Orgn	5/1/25 0900
2				
3				

Comments

OK

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

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

2.7+0.4=3.1 FLA

Sample Receipt Checklist

4753 8931 0145

COC Seal Present/Intact:	Y N NP	If Applicable	
COC Signed/Accurate:	Y N	VOA Zero Headspace:	Y N
Bottles arrive intact:	Y N	Pres. Correct/Check:	Y N
Correct bottles used:	Y N		
Sufficient volume sent:	Y N		
RA Screen <0.5 mR/hr:	Y N	Condition: NCF OK	

Internal Transfer Chain of Custody

1067

Pace

Rush Multiplier_____X

Samples Pre-Logged into eCOC

State Of Origin: MO

Cert. Needed: ☐ Yes ☒ No

Workorder: 60473870 **Workorder Name:** AMEREN LCPB

Owner Received Date: 4/26/2025 **Results Requested By:** 5/21/2025

Report To	Subcontract To
Jamie Church Pace Analytical Kansas 9608 Loiret Blvd. Lenexa, KS 66219 Phone 314-838-7223	Pace National 12065 Lebanon Rd Mt. Juliet, TN 37122 Phone (615) 758-5858

L1856617

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: H2SO4	Requested Analysis: Total Organic Halogens	LAB USE ONLY
1	L-LMW-6S	RQS	4/30/2025 14:30	60473870005	Water	3	X	-01
2								
3								
4								
5								

Transfers	Released By	Date/Time	Received By	Date/Time
1			[illegible] 5-8-25	0900
2				
3				

Comments

Cooler Temperature on Receipt ____ °C | **Custody Seal** Y or N | **Received on Ice** Y or N | **Samples Intact** Y or N

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

Sample Receipt Checklist

COC Seal Present/Intact:	Y N NP	If Applicable	
COC Signed/Accurate:	Y N	VOA Zero Headspace:	Y N
Bottles arrive intact:	Y N	Pres. Correct/Check:	Y N
Correct bottles used:	Y N		
Sufficient volume sent:	Y N	Condition: NCF OK	
RA Screen <0.5 mR/hr:	Y N		

RK COMPLETED THI

No

DISPOSITION of FORM

receiving lab - Copy kept at the sending lab.

When work completed: Original sent to the ABM at the receiving laboratory. Copies are made to corporate as needed.

LOCATION: 60-R28-S1

Multiple Parcel Form L#_____

Parcel Tracking Number	Infrared Thermometer ID	Temperature Reading (°C)	Correction Factor (°C)	Corrected Temperature (°C)	Custody Seal Intact
4453 8931 2825	TEA9	4.6	0.4	5.0	Yes / No / Not Present
4453 8931 2917	TEA9	0.4	0.4	0.8	Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present

DL
Name

5-8-25
Date

Memorandum

October 30, 2025

To:	Project File Rocksmith Geoengineering, LLC	**Project Number:**	23007-25
CC:	Mark Haddock, Jeffrey Ingram		
From:	Valerie Hurt	**Email:**	Valer .Hurt@Rocksmithgeo.com
RE:	**Data Validation Summary, Labadie Energy Center – LCPB – Data Package 60473870**		

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

- When a compound was detected in a sample result between the Method Detection Limit (MDL) and Practical Quantification Limit (PQL), the results were recorded at the detection value and qualified as estimates (J).
- When a duplicate criterion was not met, the associated sample result was qualified as an estimate (J for detects, UJ for non-detects).

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

Company Name: Rocksmith Geoengineering
Project Manager: J. Ingram
Project Name: Ameren LCPB
Project Number: 23007-25
Reviewer: V. Hurt
Validation Date: 10/30/2025

Laboratory: Pace Analytical
SDG #: 60473870
Analytical Method (type and no.): EPA 200.7(Total Metals); SM 2320B (Alkalinity); SM 2540C (TDS), EPA 300.0 (Anions)
Matrix: ☐ Air ☐ Soil/Sed. ■ Water ☐ Waste ☐
Sample Names L-LMW-5S, L-LMW-6S, L-LMW-FB-1, L-LMW-3S, L-LMW-DUP-1, L-LMW-MS-1, L-MW-MSD-2, L-LMW-1S, L-LMW-2S, L-LMW-4S, L-LMW-7S L-LMW-8S, L-BW-1S, L-BMW-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?	x			4/24/2025-4/30/2025
b) Sampling team indicated?	x			VAH/GTM
c) Sample location noted?	x			
d) Sample depth indicated (Soils)?			x	
e) Sample type indicated (grab/composite)?	x			Grab
f) Field QC noted?	x			See Notes
g) Field parameters collected (note types)?	x			pH, Spec Cond, Turb, Temp, DO, ORP
h) Field Calibration within control limits?	x			
i) Notations of unacceptable field conditions/performances from field logs or field notes?		x		
j) Does the laboratory narrative indicate deficiencies?			x	No lab narrative.

Note Deficiencies:

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

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

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

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

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

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

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

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

Comments/Notes:

General:

Chloride and sulfate diluted in some samples, no qualification necessary.

QA LEVEL IV - INORGANIC DATA EVALUATION CHECKLIST

Comments/Notes:

Method Blank:

3697624: Iron (28.7J ug/L) detected. Associated with sample -002, result is < RL, result qualified as estimate.

3700770: Calcium (34.5J ug/L), iron (20.1J ug/L), and manganese (1.0J ug/L) detected. Associated with samples -005, -026, and -027

All results > RL and 10x the method blank, therefore no qualification necessary.

3711067: Chloride (0.59J mg/L) detected. Associated with samples -003 and -004.

Results > Reporting limit & Result < 10x method blank. Results qualified as estimates.

Field blank:

L-LMW-FB-1: Boron (8.7J ug/L), TDS (12.0 mg/L) and chloride (0.60J mg/L) detected. Associated with sample -003.

Sample result > reporting limit and 10x field blank. therefore no qualification necessary.

Field Duplicate:

L-LMW-DUP-1 associated with L-LMW-5S:

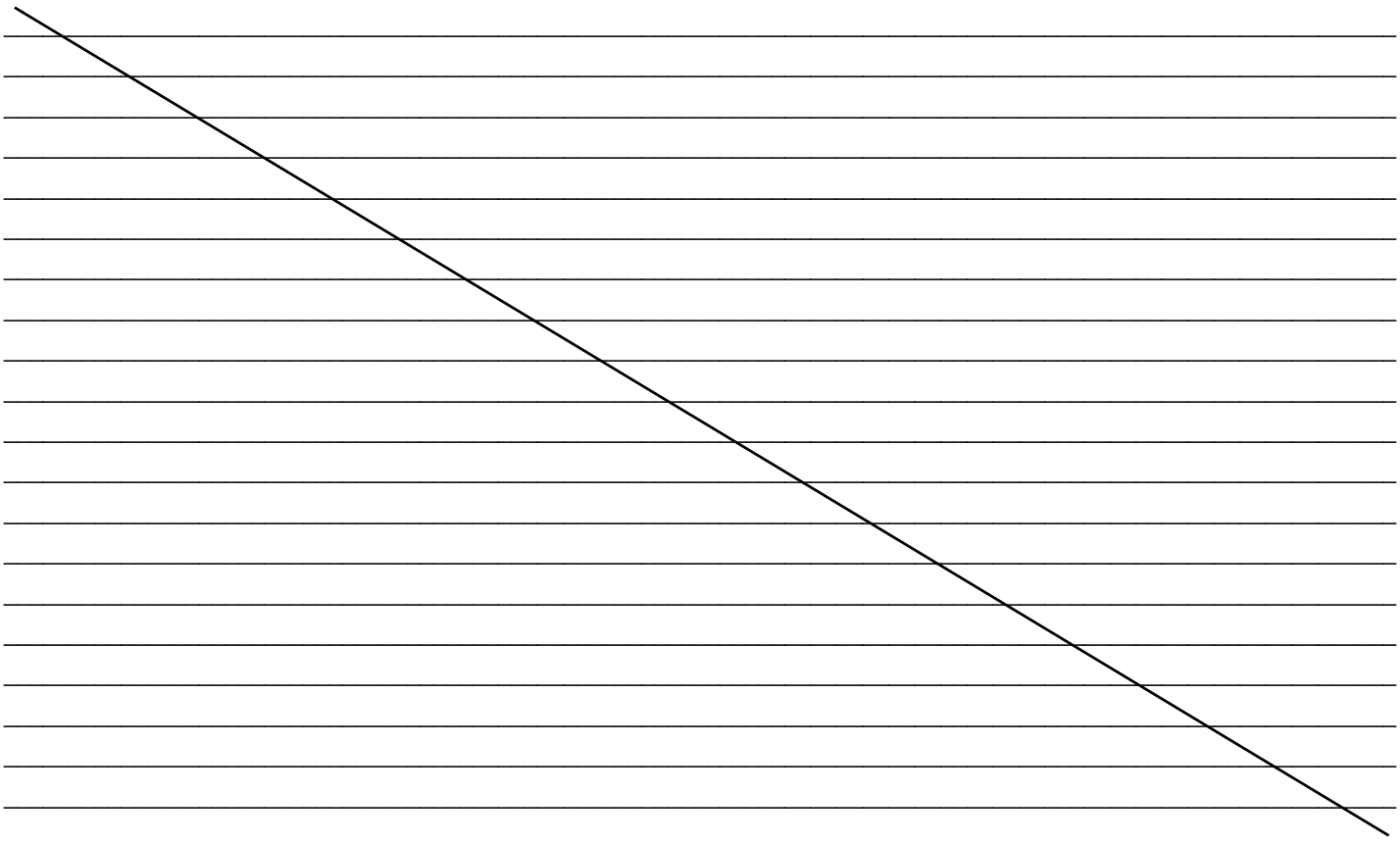
RPD exceeds control limit (20%) for Iron (127%), result qualified as estimate.

Matrix Spike/Matrix Spike Duplicate

3697929/3697627: MS/MSD recovery low for calcium. RPD OK. Associated with unrelated sample, therefore no qualification necessart.

3698973/3698974: MS/MSD recovery low for calcium. RPD OK. Associated with unrelated sample, therefore no qualification necessary.

3700775: MS recovery low for calcium. RPD OK. Associated with unrelated sample, therefore no qualification necessary.



QA LEVEL IV - INORGANIC DATA EVALUATION CHECKLIST

Data Qualification:

Sample Name	Constituent(s)	Result	Qualifier	Reason
L-LMW-2S	Iron	50.0	U	Detected in method blank, result < RL
L-LMW-5S	Chloride	2.7	J	Result > Reporting limit & Result < 10x method blank.
L-LMW-DUP-1	"	2.8	J	"

Signature: _____ Date: 10/30/2025

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

July 23, 2025

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

RE: Project: AMEREN LCPB-VERIFICATION
Pace Project No.: 60478698

Dear Mark Haddock:

Enclosed are the analytical results for sample(s) received by the laboratory on July 10, 2025. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Kansas City

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

Sincerely,

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

Enclosures

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

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CERTIFICATIONS

Project: AMEREN LCPB-VERIFICATION
Pace Project No.: 60478698

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

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SAMPLE SUMMARY

Project: AMEREN LCPB-VERIFICATION
Pace Project No.: 60478698

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60478698001	**L-LMW-1S**	Water	07/09/25 09:07	07/10/25 06:40
60478698002	**L-LMW-6S**	Water	07/08/25 14:55	07/10/25 06:40
60478698003	**L-LMW-8S**	Water	07/08/25 13:40	07/10/25 06:40
60478698004	**L-LMW-DUP-1**	Water	07/08/25 00:00	07/10/25 06:40
60478698005	**L-LMW-FB-1**	Water	07/08/25 14:33	07/10/25 06:40

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SAMPLE ANALYTE COUNT

Project: AMEREN LCPB-VERIFICATION
Pace Project No.: 60478698

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60478698001	**L-LMW-1S**	EPA 300.0	MLD	1	PASI-K
60478698002	**L-LMW-6S**	EPA 300.0	MLD	1	PASI-K
60478698003	**L-LMW-8S**	EPA 300.0	MLD	1	PASI-K
60478698004	**L-LMW-DUP-1**	EPA 300.0	MLD	1	PASI-K
60478698005	**L-LMW-FB-1**	EPA 300.0	MLD	1	PASI-K

PASI-K = Pace Analytical Services - Kansas City

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ANALYTICAL RESULTS

Project: AMEREN LCPB-VERIFICATION
Pace Project No.: 60478698

Sample: L-LMW-1S **Lab ID: 60478698001** Collected: 07/09/25 09:07 Received: 07/10/25 06:40 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	**0.19J**	mg/L	0.20	0.12	1		07/19/25 21:27	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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(913)599-5665

ANALYTICAL RESULTS

Project: AMEREN LCPB-VERIFICATION
Pace Project No.: 60478698

Sample: L-LMW-6S **Lab ID: 60478698002** Collected: 07/08/25 14:55 Received: 07/10/25 06:40 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	**0.13J**	mg/L	0.20	0.12	1		07/19/25 22:12	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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(913)599-5665

ANALYTICAL RESULTS

Project: AMEREN LCPB-VERIFICATION
Pace Project No.: 60478698

Sample: L-LMW-8S **Lab ID: 60478698003** Collected: 07/08/25 13:40 Received: 07/10/25 06:40 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	0.12	1		07/19/25 22:23	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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(913)599-5665

ANALYTICAL RESULTS

Project: AMEREN LCPB-VERIFICATION
Pace Project No.: 60478698

Sample: L-LMW-DUP-1 **Lab ID: 60478698004** Collected: 07/08/25 00:00 Received: 07/10/25 06:40 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	0.12	1		07/19/25 22:34	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: AMEREN LCPB-VERIFICATION
Pace Project No.: 60478698

Sample: L-LMW-FB-1 **Lab ID: 60478698005** Collected: 07/08/25 14:33 Received: 07/10/25 06:40 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	**<0.12**	mg/L	0.20	0.12	1		07/19/25 22:45	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: AMEREN LCPB-VERIFICATION
Pace Project No.: 60478698

QC Batch: 942249
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60478698001, 60478698002, 60478698003, 60478698004, 60478698005

METHOD BLANK: 3735306 Matrix: Water
Associated Lab Samples: 60478698001, 60478698002, 60478698003, 60478698004, 60478698005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Fluoride	mg/L	<0.12	0.20	0.12	07/19/25 19:05	

LABORATORY CONTROL SAMPLE: 3735307

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	2.5	2.5	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3735308 3735309

Parameter	Units	60478698001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Fluoride	mg/L	0.19J	2.5	2.5	2.6	2.6	95	97	80-120	1	15	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3735311 3735312

Parameter	Units	60478803001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Fluoride	mg/L	1.0	2.5	2.5	3.5	3.5	98	99	80-120	1	15	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3735314 3735315

Parameter	Units	60478805001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Fluoride	mg/L	0.25	2.5	2.5	2.6	2.7	93	99	80-120	5	15	

SAMPLE DUPLICATE: 3735310

Parameter	Units	60478698001 Result	Dup Result	RPD	Max RPD	Qualifiers
Fluoride	mg/L	0.19J	0.18J		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 LCPB-VERIFICATION
Pace Project No.: 60478698

SAMPLE DUPLICATE: 3735313

Parameter	Units	60478803001 Result	Dup Result	RPD	Max RPD	Qualifiers
Fluoride	mg/L	1.0	1.0	3	15	

SAMPLE DUPLICATE: 3735316

Parameter	Units	60478805001 Result	Dup Result	RPD	Max RPD	Qualifiers
Fluoride	mg/L	0.25	0.28	12	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 LCPB-VERIFICATION
Pace Project No.: 60478698

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

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

TNI - The NELAC Institute.

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(913)599-5665

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN LCPB-VERIFICATION
Pace Project No.: 60478698

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60478698001	**L-LMW-1S**	EPA 300.0	942249		
60478698002	**L-LMW-6S**	EPA 300.0	942249		
60478698003	**L-LMW-8S**	EPA 300.0	942249		
60478698004	**L-LMW-DUP-1**	EPA 300.0	942249		
60478698005	**L-LMW-FB-1**	EPA 300.0	942249		

WO# : 60478698

60478698

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

Client Name: Rocksmith Geoeng

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

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

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

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

Thermometer Used: T-301 **Type of Ice:** (Wet) Blue None

Cooler Temperature (°C): **As-read** 2.3 **Corr. Factor** 0.0 **Corrected** 2.3

Date and initials of person examining contents: AV 7/10/25

Temperature should be above freezing to 6°C

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

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

Pace Analytical
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A — **Required** Client Information:

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

Section B — **Required** Project Information:

Report To:	Mark Haddock
Copy To:	Jeffery Ingram, Grant Morey
Purchase Order No.:	COC #8
Project Name:	Ameren LCPB - Verification Sampling
Project Number:	COC#8

Section C — Invoice Information:

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

REGULATORY AGENCY

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

Site Location STATE: MO

Section D — **Required** Client Information

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

Valid Matrix Codes

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

Requested Analysis Filtered (Y/N)

ITEM #	Section D: SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED: COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N: Fluoride	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	L-LMW-1S	WT	G			7-9-25	907		1	X								X		60478698
2	L-LMW-6S	WT	G			7-9-25	1455		1	X								X		
3	L-LMW-8S	WT	G			7-8-25	1340		1	X								X		
4	L-LMW-DUP-1	WT	G			7-9-25	—		1	X								X		
5	L-LMW-FB-1	WT	G			7-9-25	1453		1	X								X		
6	L-LMW-MS-1	WT	G			7-9-25	907		1	X								X		
7	L-LMW-MSD-1	WT	G			7-9-25	907		1	X								X		
8		WT	G																	
9		WT	G																	
10		WT	G																	
11		WT	G																	
12		WT	G																	

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	David Quick / Rocksmith	7-9-25	1240	[signature]	7/10	0640	2-3 X X X

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: David Quick

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 07/09/25

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

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

Client: Rocksmith Geoeng Profile/EZ # 15856-1

Site: Notes

COC Line Item	Matrix	VG9H	DG9H	DG9Q	VG9U	DG9U	DG9M	DG9B	BG1U	AG1H	AG1U	AG2U	AG3S	AG4U	AG5U	JGFU	WGKU	WGDU	BP1U	BP2U	BP3U	BP1N	BP3N	BP3F	BP3S	BP3B	BP3Z	WPDU	ZPLC	Other
1	WT																			3			(MS/MSD)							
2	↓																			-										
3	↓																			1										
4	↓																			1										
5	↓																			1										
6	~																													
7	~																													
8																														
9																														
10																														
11																														
12																														

Container Codes

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

Plastic	
BP1B	1L NAOH plastic
BP1N	1L HNO3 plastic
BP1S	1L H2SO4 plastic
BP1U	1L unpreserved plastic
BP1Z	1L NaOH, Zn Acetate
BP2B	500mL NAOH plastic
BP2N	500mL HNO3 plastic
BP2S	500mL H2SO4 plastic
BP2U	500mL unpreserved plastic
BP2Z	500mL NaOH, Zn Acetate
BP3B	250mL NaOH plastic
BP3F	250mL HNO3 plastic - field filtered
BP3N	250mL HNO3 plastic
BP3U	250mL unpreserved plastic
BP3S	250mL H2SO4 plastic
BP3Z	250mL NaOH, Zn Acetate
BP4U	125mL unpreserved plastic
BP4N	125mL HNO3 plastic
BP4S	125mL H2SO4 plastic
WPDU	16oz unpresserved plstic

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

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

Work Order Number: 60478698

Memorandum

August 15, 2025

To:	Project File Rocksmith Geoengineering, LLC	**Project Number:**	23007-25
CC:	Mark Haddock, Jeffrey Ingram		
From:	Jack Rasmussen	**Email:**	jack.rasmussen@rocksmithgeo.com
RE:	**Data Validation Summary, Labadie Energy Center – LCPB Verification – Data Package 660478698**		

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

- None

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

Company Name: Rocksmith Geoengineering
Project Manager: J. Ingram
Project Name: Ameren LEC - LCPB Verification
Project Number: 23007-25
Reviewer: J. Rasmussen
Validation Date: 8/15/2025

Laboratory: Pace Analytical Services
SDG #: 60478698
Analytical Method (type and no.): EPA 300.0 (Fluoride)
Matrix: ☐ Air ☐ Soil/Sed. ■ Water ☐ Waste ☐ _____
Sample Names L-LMW-1S, L-LMW-6S, L-LMW-8S, L-LMW-DUP-1, L-LMW-FB-1

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

Field Information	YES	NO	NA	COMMENTS
a) Sampling dates noted?	x			07/08/2025 - 07/09/2025
b) Sampling team indicated?	x			JDQ/JTR
c) Sample location noted?	x			
d) Sample depth indicated (Soils)?			x	
e) Sample type indicated (grab/composite)?	x			Grab
f) Field QC noted?	x			See notes.
g) Field parameters collected (note types)?	x			pH, Sp.Cond, ORP, Temp, DO, Turb
h) Field Calibration within control limits?		x		See notes.
i) Notations of unacceptable field conditions/performances from field logs or field notes?		x		
j) Does the laboratory narrative indicate deficiencies?		x		No lab narrative.

Note Deficiencies: _____

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

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

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

Blanks	**YES**	**NO**	**NA**	**COMMENTS**
a) Were analytes detected in the method blank(s)?	☐	☒	☐	
b) Were analytes detected in the field blank(s)?	☐	☒	☐	L-LMW-FB-1 @ L-LMW-6S
c) Were analytes detected in the equipment blank(s)?	☐	☐	☒	
d) Were analytes detected in the trip blank(s)?	☐	☐	☒	

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

Duplicates	**YES**	**NO**	**NA**	**COMMENTS**
a) Were field duplicates collected (note original and duplicate sample names)?				L-LMW-DUP-1 @ L-LMW-8S
	☒	☐	☐	
b) Were field dup. precision criteria met (note RPD)?	☒	☐	☐	
c) Were lab duplicates analyzed (note original and duplicate samples)?				
	☒	☐	☐	
d) Were lab dup. precision criteria met (note RPD)?	☒	☐	☐	

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

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

Comments/Notes:

QA LEVEL II- INORGANIC DATA EVALUATION CHECKLIST

Data Qualification:

Sample Name	Constituent(s)	Result	Qualifier	Reason

Signature: _____ Date: 08/15/2025

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

December 16, 2025

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

RE: Project: AMEREN LCPB
Pace Project No.: 60484433

Dear Mark Haddock:

Enclosed are the analytical results for sample(s) received by the laboratory between October 18, 2025 and October 23, 2025. 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 - Salina

REV-1: Report revised to remove parameters not required under the CCR Rule.

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

Sincerely,

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

Enclosures

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

Pace Analytical Services, LLC
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CERTIFICATIONS

Project: AMEREN LCPB
Pace Project No.: 60484433

Pace Analytical Services Kansas
9608 Loiret Boulevard, Lenexa, KS 66219
EPA Lab Code: KS00021
Arkansas Certification #: 88-00679
Colorado Division of Oil and Public Safety
Illinois Certification #: 200030
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Oklahoma Certification #: 9205
Texas Certification #: T104704407
Utah Certification #: KS0002125-15
UDSA_CA : #KS-SC-DOM-25-01

Pace Analytical Services Salina
528 N 9th Street, Salina, KS 67401
EPA Lab Code: KS00013
Kansas/NELAP Certification: # E-10146
Oklahoma Certification: #2405
Texas Certification: T104704246-23-15

REPORT OF LABORATORY ANALYSIS

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

SAMPLE SUMMARY

Project: AMEREN LCPB
Pace Project No.: 60484433

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60484433001	**L-LMW-5S**	Water	10/17/25 13:38	10/18/25 08:50
60484433002	**L-LMW-6S**	Water	10/17/25 10:57	10/18/25 08:50
60484433003	**L-LMW-FB-1**	Water	10/17/25 11:10	10/18/25 08:50
60484433004	**L-LMW-3S**	Water	10/21/25 13:06	10/22/25 08:50
60484433005	**L-LMW-DUP-1**	Water	10/21/25 00:00	10/22/25 08:50
60484433006	**L-LMW-MS-1**	Water	10/21/25 13:06	10/22/25 08:50
60484433007	**L-LMW-MSD-2**	Water	10/21/25 13:06	10/22/25 08:50
60484431001	**L-LMW-1S**	Water	10/17/25 11:45	10/18/25 08:50
60484431015	**L-LMW-2S**	Water	10/20/25 15:10	10/22/25 08:50
60484431032	**L-LMW-4S**	Water	10/22/25 09:48	10/23/25 08:00
60484431002	**L-LMW-7S**	Water	10/17/25 12:20	10/18/25 08:50
60484431003	**L-LMW-8S**	Water	10/17/25 12:41	10/18/25 08:50
60484431013	**L-BMW-1S**	Water	10/21/25 11:06	10/22/25 08:50
60484431014	**L-BMW-2S**	Water	10/21/25 09:05	10/22/25 08:50

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SAMPLE ANALYTE COUNT

Project: AMEREN LCPB
Pace Project No.: 60484433

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60484433001	**L-LMW-5S**	EPA 200.7	ARMN	7	PASI-K
		EPA 300.0	MLL	3	PASI-SA
		SM 2320B	AJWM	1	PASI-K
		SM 2540C	DLJ	1	PASI-K
60484433002	**L-LMW-6S**	EPA 200.7	ARMN	7	PASI-K
		EPA 300.0	MLL	3	PASI-SA
		SM 2320B	AJWM	1	PASI-K
		SM 2540C	DLJ	1	PASI-K
60484433003	**L-LMW-FB-1**	EPA 200.7	ARMN	7	PASI-K
		EPA 300.0	MLL	3	PASI-SA
		SM 2320B	AJWM	1	PASI-K
		SM 2540C	DLJ	1	PASI-K
60484433004	**L-LMW-3S**	EPA 200.7	CJM	7	PASI-K
		EPA 300.0	MLL	3	PASI-SA
		SM 2320B	EMB	1	PASI-K
		SM 2540C	DLJ	1	PASI-K
60484433005	**L-LMW-DUP-1**	EPA 200.7	CJM	7	PASI-K
		EPA 300.0	MLL	3	PASI-SA
		SM 2320B	EMB	1	PASI-K
		SM 2540C	DLJ	1	PASI-K
60484431001	**L-LMW-1S**	EPA 200.7	ARMN	7	PASI-K
		EPA 300.0	MLL	3	PASI-SA
		SM 2320B	AJWM	1	PASI-K
		SM 2540C	DLJ	1	PASI-K
60484431015	**L-LMW-2S**	EPA 200.7	ARMN	7	PASI-K
		EPA 300.0	MLL	3	PASI-SA
		SM 2320B	EMB	1	PASI-K
		SM 2540C	DLJ	1	PASI-K
60484431032	**L-LMW-4S**	EPA 200.7	ARMN, CJM	7	PASI-K
		EPA 300.0	MLL	3	PASI-SA
		SM 2320B	EMB	1	PASI-K
		SM 2540C	DLJ	1	PASI-K
60484431002	**L-LMW-7S**	EPA 200.7	ARMN	7	PASI-K
		EPA 300.0	MLL	3	PASI-SA
		SM 2320B	AJWM	1	PASI-K
		SM 2540C	DLJ	1	PASI-K
60484431003	**L-LMW-8S**	EPA 200.7	ARMN	7	PASI-K

REPORT OF LABORATORY ANALYSIS

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

SAMPLE ANALYTE COUNT

Project: AMEREN LCPB
Pace Project No.: 60484433

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 300.0	MLL	3	PASI-SA
		SM 2320B	AJWM	1	PASI-K
		SM 2540C	DLJ	1	PASI-K
60484431013	**L-BMW-1S**	EPA 200.7	ARMN	7	PASI-K
		EPA 300.0	MLL	3	PASI-SA
		SM 2320B	EMB	1	PASI-K
		SM 2540C	DLJ	1	PASI-K
60484431014	**L-BMW-2S**	EPA 200.7	ARMN	7	PASI-K
		EPA 300.0	MLL	3	PASI-SA
		SM 2320B	EMB	1	PASI-K
		SM 2540C	DLJ	1	PASI-K

PASI-K = Pace Analytical Services - Kansas City
PASI-SA = Pace Analytical Services - Salina

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: AMEREN LCPB
Pace Project No.: 60484433

Sample: L-LMW-5S **Lab ID: 60484433001** Collected: 10/17/25 13:38 Received: 10/18/25 08:50 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								
Boron	**48.7J**	ug/L	100	33.2	1	10/21/25 08:28	10/28/25 13:03	7440-42-8	
Calcium	**138000**	ug/L	200	45.3	1	10/21/25 08:28	10/28/25 13:03	7440-70-2	
Iron	**74.7**	ug/L	50.0	15.4	1	10/21/25 08:28	10/28/25 13:03	7439-89-6	
Magnesium	**12200**	ug/L	50.0	21.1	1	10/21/25 08:28	10/28/25 13:03	7439-95-4	
Manganese	**11.4**	ug/L	5.0	0.42	1	10/21/25 08:28	10/28/25 13:03	7439-96-5	
Potassium	**3420**	ug/L	500	45.2	1	10/21/25 08:28	10/28/25 13:03	7440-09-7	
Sodium	**6000**	ug/L	500	31.8	1	10/21/25 08:28	10/28/25 13:03	7440-23-5	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Salina								
Chloride	**1.1**	mg/L	1.0	0.18	1		10/29/25 14:39	16887-00-6	
Fluoride	**0.11**	mg/L	0.10	0.040	1		10/29/25 14:39	16984-48-8	
Sulfate	**7.9**	mg/L	1.0	0.096	1		10/29/25 14:39	14808-79-8	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**404**	mg/L	20.0	10.5	1		10/30/25 16:53		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**434**	mg/L	10.0	10.0	1		10/23/25 11:01		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LCPB
Pace Project No.: 60484433

Sample: L-LMW-6S **Lab ID: 60484433002** Collected: 10/17/25 10:57 Received: 10/18/25 08:50 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								
Boron	**322**	ug/L	100	33.2	1	10/21/25 08:28	10/28/25 13:36	7440-42-8	
Calcium	**143000**	ug/L	200	45.3	1	10/21/25 08:28	10/28/25 13:36	7440-70-2	
Iron	**2460**	ug/L	50.0	15.4	1	10/21/25 08:28	10/28/25 13:36	7439-89-6	
Magnesium	**24000**	ug/L	50.0	21.1	1	10/21/25 08:28	10/28/25 13:36	7439-95-4	
Manganese	**524**	ug/L	5.0	0.42	1	10/21/25 08:28	10/28/25 13:36	7439-96-5	
Potassium	**5610**	ug/L	500	45.2	1	10/21/25 08:28	10/28/25 13:36	7440-09-7	
Sodium	**10300**	ug/L	500	31.8	1	10/21/25 08:28	10/28/25 13:36	7440-23-5	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Salina								
Chloride	**2.4**	mg/L	1.0	0.18	1		10/29/25 14:52	16887-00-6	
Fluoride	**0.13**	mg/L	0.10	0.040	1		10/29/25 14:52	16984-48-8	
Sulfate	**26.2**	mg/L	2.0	0.19	2		10/29/25 20:12	14808-79-8	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**460**	mg/L	20.0	10.5	1		10/30/25 16:54		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**514**	mg/L	10.0	10.0	1		10/23/25 11:01		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LCPB
Pace Project No.: 60484433

Sample: L-LMW-FB-1 **Lab ID: 60484433003** Collected: 10/17/25 11:10 Received: 10/18/25 08:50 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								
Boron	**<33.2**	ug/L	100	33.2	1	10/21/25 08:28	10/28/25 13:38	7440-42-8	
Calcium	**54.5J**	ug/L	200	45.3	1	10/21/25 08:28	10/28/25 13:38	7440-70-2	
Iron	**<15.4**	ug/L	50.0	15.4	1	10/21/25 08:28	10/28/25 13:38	7439-89-6	
Magnesium	**<21.1**	ug/L	50.0	21.1	1	10/21/25 08:28	10/28/25 13:38	7439-95-4	
Manganese	**<0.42**	ug/L	5.0	0.42	1	10/21/25 08:28	10/28/25 13:38	7439-96-5	
Potassium	**<45.2**	ug/L	500	45.2	1	10/21/25 08:28	10/28/25 13:38	7440-09-7	
Sodium	**38.3J**	ug/L	500	31.8	1	10/21/25 08:28	10/28/25 13:38	7440-23-5	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Salina								
Chloride	**<0.18**	mg/L	1.0	0.18	1		10/29/25 15:04	16887-00-6	
Fluoride	**<0.040**	mg/L	0.10	0.040	1		10/29/25 15:04	16984-48-8	
Sulfate	**<0.096**	mg/L	1.0	0.096	1		10/29/25 15:04	14808-79-8	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**<10.5**	mg/L	20.0	10.5	1		10/30/25 16:54		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**<5.0**	mg/L	5.0	5.0	1		10/23/25 11:02		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(913)599-5665

ANALYTICAL RESULTS

Project: AMEREN LCPB
Pace Project No.: 60484433

Sample: L-LMW-3S **Lab ID: 60484433004** Collected: 10/21/25 13:06 Received: 10/22/25 08:50 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								
Boron	**4530**	ug/L	100	7.3	1	10/23/25 10:10	11/10/25 15:36	7440-42-8	
Calcium	**103000**	ug/L	200	12.1	1	10/23/25 10:10	11/10/25 15:36	7440-70-2	
Iron	**10400**	ug/L	50.0	8.7	1	10/23/25 10:10	11/10/25 15:36	7439-89-6	
Magnesium	**14200**	ug/L	50.0	16.0	1	10/23/25 10:10	11/10/25 15:36	7439-95-4	
Manganese	**1040**	ug/L	5.0	0.52	1	10/23/25 10:10	11/10/25 15:36	7439-96-5	
Potassium	**6820**	ug/L	500	66.6	1	10/23/25 10:10	11/10/25 15:36	7440-09-7	
Sodium	**86800**	ug/L	500	46.9	1	10/23/25 10:10	11/10/25 15:36	7440-23-5	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Salina								
Chloride	**21.2**	mg/L	2.0	0.36	2		10/29/25 20:24	16887-00-6	
Fluoride	**0.40**	mg/L	0.10	0.040	1		10/29/25 15:16	16984-48-8	
Sulfate	**225**	mg/L	20.0	1.9	20		10/29/25 21:26	14808-79-8	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**144**	mg/L	20.0	10.5	1		11/04/25 22:33		D6
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**639**	mg/L	10.0	10.0	1		10/28/25 10:57		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LCPB
Pace Project No.: 60484433

Sample: L-LMW-DUP-1 **Lab ID: 60484433005** Collected: 10/21/25 00:00 Received: 10/22/25 08:50 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								
Boron	**4580**	ug/L	100	7.3	1	10/23/25 10:10	11/10/25 15:41	7440-42-8	
Calcium	**103000**	ug/L	200	12.1	1	10/23/25 10:10	11/10/25 15:41	7440-70-2	
Iron	**10700**	ug/L	50.0	8.7	1	10/23/25 10:10	11/10/25 15:41	7439-89-6	
Magnesium	**14300**	ug/L	50.0	16.0	1	10/23/25 10:10	11/10/25 15:41	7439-95-4	
Manganese	**1040**	ug/L	5.0	0.52	1	10/23/25 10:10	11/10/25 15:41	7439-96-5	
Potassium	**6740**	ug/L	500	66.6	1	10/23/25 10:10	11/10/25 15:41	7440-09-7	
Sodium	**86900**	ug/L	500	46.9	1	10/23/25 10:10	11/10/25 15:41	7440-23-5	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Salina								
Chloride	**21.0**	mg/L	2.0	0.36	2		10/29/25 22:03	16887-00-6	
Fluoride	**0.40**	mg/L	0.10	0.040	1		10/29/25 15:53	16984-48-8	
Sulfate	**213**	mg/L	20.0	1.9	20		10/29/25 22:15	14808-79-8	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**271**	mg/L	20.0	10.5	1		11/04/25 22:58		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**646**	mg/L	10.0	10.0	1		10/28/25 10:57		

REPORT OF LABORATORY ANALYSIS

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(913)599-5665

ANALYTICAL RESULTS

Project: AMEREN LCPB
Pace Project No.: 60484433

Sample: L-LMW-1S **Lab ID: 60484431001** Collected: 10/17/25 11:45 Received: 10/18/25 08:50 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								
Boron	**485**	ug/L	100	33.2	1	10/20/25 13:33	10/29/25 15:58	7440-42-8	
Calcium	**82000**	ug/L	200	45.3	1	10/20/25 13:33	10/29/25 15:58	7440-70-2	
Iron	**219**	ug/L	50.0	15.4	1	10/20/25 13:33	10/29/25 15:58	7439-89-6	
Magnesium	**13100**	ug/L	50.0	21.1	1	10/20/25 13:33	10/29/25 15:58	7439-95-4	
Manganese	**324**	ug/L	5.0	0.42	1	10/20/25 13:33	10/29/25 15:58	7439-96-5	
Potassium	**3030**	ug/L	500	45.2	1	10/20/25 13:33	10/29/25 15:58	7440-09-7	
Sodium	**5980**	ug/L	500	31.8	1	10/20/25 13:33	10/29/25 15:58	7440-23-5	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Salina								
Chloride	**2.2**	mg/L	1.0	0.18	1		11/01/25 11:05	16887-00-6	
Fluoride	**0.25**	mg/L	0.10	0.040	1		11/01/25 11:05	16984-48-8	
Sulfate	**23.8**	mg/L	2.0	0.19	2		11/01/25 17:38	14808-79-8	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**246**	mg/L	20.0	10.5	1		10/30/25 16:53		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**306**	mg/L	10.0	10.0	1		10/23/25 11:00		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LCPB
Pace Project No.: 60484433

Sample: L-LMW-2S **Lab ID: 60484431015** Collected: 10/20/25 15:10 Received: 10/22/25 08:50 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								
Boron	**3980**	ug/L	100	33.2	1	10/23/25 09:34	11/11/25 10:36	7440-42-8	
Calcium	**77000**	ug/L	200	45.3	1	10/23/25 09:34	11/11/25 10:36	7440-70-2	
Iron	**<15.4**	ug/L	50.0	15.4	1	10/23/25 09:34	11/11/25 10:36	7439-89-6	
Magnesium	**106**	ug/L	50.0	21.1	1	10/23/25 09:34	11/11/25 10:36	7439-95-4	
Manganese	**1.5J**	ug/L	5.0	0.42	1	10/23/25 09:34	11/11/25 10:36	7439-96-5	
Potassium	**9650**	ug/L	500	45.2	1	10/23/25 09:34	11/11/25 10:36	7440-09-7	
Sodium	**68900**	ug/L	500	31.8	1	10/23/25 09:34	11/11/25 10:36	7440-23-5	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
	Pace Analytical Services - Salina								
Chloride	**14.5**	mg/L	1.0	0.18	1		11/01/25 14:10	16887-00-6	
Fluoride	**0.10**	mg/L	0.10	0.040	1		11/01/25 14:10	16984-48-8	
Sulfate	**302**	mg/L	50.0	4.8	50		11/01/25 21:07	14808-79-8	
2320B Alkalinity	Analytical Method: SM 2320B								
	Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**44.0**	mg/L	20.0	10.5	1		11/03/25 14:41		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
	Pace Analytical Services - Kansas City								
Total Dissolved Solids	**553**	mg/L	10.0	10.0	1		10/27/25 10:51		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LCPB
Pace Project No.: 60484433

Sample: L-LMW-4S **Lab ID: 60484431032** Collected: 10/22/25 09:48 Received: 10/23/25 08:00 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7								
	Pace Analytical Services - Kansas City								
Boron	**3750**	ug/L	100	7.3	1	10/24/25 09:33	11/03/25 17:53	7440-42-8	
Calcium	**162000**	ug/L	200	45.3	1	10/24/25 09:33	11/04/25 11:34	7440-70-2	
Iron	**7850**	ug/L	50.0	8.7	1	10/24/25 09:33	11/03/25 17:53	7439-89-6	
Magnesium	**26100**	ug/L	50.0	21.1	1	10/24/25 09:33	11/04/25 11:34	7439-95-4	
Manganese	**1660**	ug/L	5.0	0.52	1	10/24/25 09:33	11/03/25 17:53	7439-96-5	
Potassium	**6960**	ug/L	500	66.6	1	10/24/25 09:33	11/03/25 17:53	7440-09-7	
Sodium	**65000**	ug/L	500	31.8	1	10/24/25 09:33	11/04/25 11:34	7440-23-5	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
	Pace Analytical Services - Salina								
Chloride	**67.0**	mg/L	10.0	1.8	10		11/02/25 17:02	16887-00-6	
Fluoride	**0.15**	mg/L	0.10	0.040	1		11/02/25 13:20	16984-48-8	
Sulfate	**114**	mg/L	10.0	0.96	10		11/02/25 17:02	14808-79-8	
2320B Alkalinity	Analytical Method: SM 2320B								
	Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**464**	mg/L	20.0	10.5	1		11/05/25 22:49		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
	Pace Analytical Services - Kansas City								
Total Dissolved Solids	**735**	mg/L	13.3	13.3	1		10/29/25 09:12		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LCPB
Pace Project No.: 60484433

Sample: L-LMW-7S **Lab ID: 60484431002** Collected: 10/17/25 12:20 Received: 10/18/25 08:50 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								
Boron	**2910**	ug/L	100	33.2	1	10/20/25 13:33	10/29/25 16:00	7440-42-8	
Calcium	**175000**	ug/L	200	45.3	1	10/20/25 13:33	10/29/25 16:00	7440-70-2	
Iron	**1830**	ug/L	50.0	15.4	1	10/20/25 13:33	10/29/25 16:00	7439-89-6	
Magnesium	**33100**	ug/L	50.0	21.1	1	10/20/25 13:33	10/29/25 16:00	7439-95-4	
Manganese	**1070**	ug/L	5.0	0.42	1	10/20/25 13:33	10/29/25 16:00	7439-96-5	
Potassium	**6980**	ug/L	500	45.2	1	10/20/25 13:33	10/29/25 16:00	7440-09-7	
Sodium	**30500**	ug/L	500	31.8	1	10/20/25 13:33	10/29/25 16:00	7440-23-5	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Salina								
Chloride	**6.6**	mg/L	1.0	0.18	1		11/01/25 11:18	16887-00-6	
Fluoride	**0.15**	mg/L	0.10	0.040	1		11/01/25 11:18	16984-48-8	
Sulfate	**86.5**	mg/L	10.0	0.96	10		11/01/25 17:50	14808-79-8	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**556**	mg/L	20.0	10.5	1		10/30/25 16:53		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**687**	mg/L	13.3	13.3	1		10/23/25 11:00		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LCPB
Pace Project No.: 60484433

Sample: L-LMW-8S **Lab ID: 60484431003** Collected: 10/17/25 12:41 Received: 10/18/25 08:50 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								
Boron	**287**	ug/L	100	33.2	1	10/20/25 13:33	10/29/25 16:01	7440-42-8	
Calcium	**75000**	ug/L	200	45.3	1	10/20/25 13:33	10/29/25 16:01	7440-70-2	
Iron	**142**	ug/L	50.0	15.4	1	10/20/25 13:33	10/29/25 16:01	7439-89-6	
Magnesium	**11800**	ug/L	50.0	21.1	1	10/20/25 13:33	10/29/25 16:01	7439-95-4	
Manganese	**12.8**	ug/L	5.0	0.42	1	10/20/25 13:33	10/29/25 16:01	7439-96-5	
Potassium	**3530**	ug/L	500	45.2	1	10/20/25 13:33	10/29/25 16:01	7440-09-7	
Sodium	**14100**	ug/L	500	31.8	1	10/20/25 13:33	10/29/25 16:01	7440-23-5	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Salina								
Chloride	**0.78J**	mg/L	1.0	0.18	1		11/01/25 11:30	16887-00-6	
Fluoride	**0.38**	mg/L	0.10	0.040	1		11/01/25 11:30	16984-48-8	
Sulfate	**19.9**	mg/L	1.0	0.096	1		11/01/25 11:30	14808-79-8	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**254**	mg/L	20.0	10.5	1		10/30/25 16:53		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**310**	mg/L	10.0	10.0	1		10/23/25 11:00		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LCPB
Pace Project No.: 60484433

Sample: L-BMW-1S **Lab ID: 60484431013** Collected: 10/21/25 11:06 Received: 10/22/25 08:50 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								
Boron	**83.9J**	ug/L	100	33.2	1	10/23/25 09:34	11/11/25 10:32	7440-42-8	
Calcium	**191000**	ug/L	200	45.3	1	10/23/25 09:34	11/11/25 10:32	7440-70-2	
Iron	**24100**	ug/L	50.0	15.4	1	10/23/25 09:34	11/11/25 10:32	7439-89-6	
Magnesium	**34500**	ug/L	50.0	21.1	1	10/23/25 09:34	11/11/25 10:32	7439-95-4	
Manganese	**2540**	ug/L	5.0	0.42	1	10/23/25 09:34	11/11/25 10:32	7439-96-5	
Potassium	**5230**	ug/L	500	45.2	1	10/23/25 09:34	11/11/25 10:32	7440-09-7	
Sodium	**8740**	ug/L	500	31.8	1	10/23/25 09:34	11/11/25 10:32	7440-23-5	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Salina								
Chloride	**5.3**	mg/L	1.0	0.18	1		11/01/25 13:46	16887-00-6	
Fluoride	**0.075J**	mg/L	0.10	0.040	1		11/01/25 13:46	16984-48-8	
Sulfate	**57.7**	mg/L	5.0	0.48	5		11/01/25 20:54	14808-79-8	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**575**	mg/L	20.0	10.5	1		11/04/25 21:32		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**660**	mg/L	13.3	13.3	1		10/28/25 10:56		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LCPB
Pace Project No.: 60484433

Sample: L-BMW-2S **Lab ID: 60484431014** Collected: 10/21/25 09:05 Received: 10/22/25 08:50 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								
Boron	**51.5J**	ug/L	100	33.2	1	10/23/25 09:34	11/11/25 10:34	7440-42-8	
Calcium	**130000**	ug/L	200	45.3	1	10/23/25 09:34	11/11/25 10:34	7440-70-2	
Iron	**36.3J**	ug/L	50.0	15.4	1	10/23/25 09:34	11/11/25 10:34	7439-89-6	
Magnesium	**19300**	ug/L	50.0	21.1	1	10/23/25 09:34	11/11/25 10:34	7439-95-4	
Manganese	**4.0J**	ug/L	5.0	0.42	1	10/23/25 09:34	11/11/25 10:34	7439-96-5	
Potassium	**5390**	ug/L	500	45.2	1	10/23/25 09:34	11/11/25 10:34	7440-09-7	
Sodium	**4280**	ug/L	500	31.8	1	10/23/25 09:34	11/11/25 10:34	7440-23-5	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Salina								
Chloride	**1.4**	mg/L	1.0	0.18	1		11/01/25 13:58	16887-00-6	
Fluoride	**0.14**	mg/L	0.10	0.040	1		11/01/25 13:58	16984-48-8	
Sulfate	**13.4**	mg/L	1.0	0.096	1		11/01/25 13:58	14808-79-8	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Kansas City								
Alkalinity, Total as CaCO3	**378**	mg/L	20.0	10.5	1		11/04/25 21:39		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City								
Total Dissolved Solids	**466**	mg/L	10.0	10.0	1		10/28/25 10:56		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN LCPB
Pace Project No.: 60484433

QC Batch: 952222
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Total
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60484431001, 60484431002, 60484431003

METHOD BLANK: 3774086 Matrix: Water
Associated Lab Samples: 60484431001, 60484431002, 60484431003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	ug/L	<33.2	100	33.2	10/29/25 15:49	
Calcium	ug/L	<45.3	200	45.3	10/29/25 15:49	
Iron	ug/L	<15.4	50.0	15.4	10/29/25 15:49	
Magnesium	ug/L	<21.1	50.0	21.1	10/29/25 15:49	
Manganese	ug/L	<0.42	5.0	0.42	10/29/25 15:49	
Potassium	ug/L	<45.2	500	45.2	10/29/25 15:49	
Sodium	ug/L	<31.8	500	31.8	10/29/25 15:49	

LABORATORY CONTROL SAMPLE: 3774087

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	ug/L	1000	955	96	85-115	
Calcium	ug/L	10000	9990	100	85-115	
Iron	ug/L	10000	10300	103	85-115	
Magnesium	ug/L	10000	9690	97	85-115	
Manganese	ug/L	1000	1010	101	85-115	
Potassium	ug/L	10000	9960	100	85-115	
Sodium	ug/L	10000	10000	100	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3774088 3774089

Parameter	Units	60484431006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	5060	1000	1000	6140	6030	108	97	70-130	2	20	
Calcium	ug/L	101000	10000	10000	113000	111000	116	96	70-130	2	20	
Iron	ug/L	7470	10000	10000	17800	17800	103	103	70-130	0	20	
Magnesium	ug/L	21300	10000	10000	31300	31000	100	97	70-130	1	20	
Manganese	ug/L	1130	1000	1000	2140	2110	101	98	70-130	2	20	
Potassium	ug/L	5360	10000	10000	15600	15400	102	100	70-130	1	20	
Sodium	ug/L	62700	10000	10000	73900	72800	112	101	70-130	1	20	

MATRIX SPIKE SAMPLE: 3774090

Parameter	Units	60484431005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Boron	ug/L	8870	1000	9710	84	70-130	
Calcium	ug/L	115000	10000	122000	66	70-130	M1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN LCPB
Pace Project No.: 60484433

MATRIX SPIKE SAMPLE: 3774090

Parameter	Units	60484431005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Iron	ug/L	7170	10000	17300	101	70-130	
Magnesium	ug/L	27500	10000	36700	92	70-130	
Manganese	ug/L	306	1000	1310	101	70-130	
Potassium	ug/L	6900	10000	17000	101	70-130	
Sodium	ug/L	64600	10000	73400	88	70-130	

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QUALITY CONTROL DATA

Project: AMEREN LCPB
Pace Project No.: 60484433

QC Batch: 952284
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Total
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60484433001, 60484433002, 60484433003

METHOD BLANK: 3774255 Matrix: Water
Associated Lab Samples: 60484433001, 60484433002, 60484433003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	ug/L	<33.2	100	33.2	10/28/25 12:49	
Calcium	ug/L	<45.3	200	45.3	10/28/25 12:49	
Iron	ug/L	<15.4	50.0	15.4	10/28/25 12:49	
Magnesium	ug/L	<21.1	50.0	21.1	10/28/25 12:49	
Manganese	ug/L	<0.42	5.0	0.42	10/28/25 12:49	
Potassium	ug/L	<45.2	500	45.2	10/28/25 12:49	
Sodium	ug/L	<31.8	500	31.8	10/28/25 12:49	

LABORATORY CONTROL SAMPLE: 3774256

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	ug/L	1000	957	96	85-115	
Calcium	ug/L	10000	10100	101	85-115	
Iron	ug/L	10000	10100	101	85-115	
Magnesium	ug/L	10000	9890	99	85-115	
Manganese	ug/L	1000	981	98	85-115	
Potassium	ug/L	10000	9760	98	85-115	
Sodium	ug/L	10000	9940	99	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3774257 3774258

Parameter	Units	60484246021 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	2270	1000	1000	3320	3340	105	107	70-130	0	20	
Calcium	ug/L	107000	10000	10000	119000	119000	121	120	70-130	0	20	
Iron	ug/L	1500	10000	10000	11900	11800	104	103	70-130	1	20	
Magnesium	ug/L	14600	10000	10000	25000	24900	104	103	70-130	0	20	
Manganese	ug/L	1350	1000	1000	2350	2370	100	102	70-130	1	20	
Potassium	ug/L	4880	10000	10000	15000	15200	102	103	70-130	1	20	
Sodium	ug/L	87400	10000	10000	98500	98300	111	109	70-130	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN LCPB
Pace Project No.: 60484433

QC Batch: 952613
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Total
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60484431013, 60484431014, 60484431015

METHOD BLANK: 3775499 Matrix: Water
Associated Lab Samples: 60484431013, 60484431014, 60484431015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	ug/L	<33.2	100	33.2	11/11/25 10:21	
Calcium	ug/L	<45.3	200	45.3	11/11/25 10:21	
Iron	ug/L	<15.4	50.0	15.4	11/11/25 10:21	
Magnesium	ug/L	<21.1	50.0	21.1	11/11/25 10:21	
Manganese	ug/L	<0.42	5.0	0.42	11/11/25 10:21	
Potassium	ug/L	<45.2	500	45.2	11/11/25 10:21	
Sodium	ug/L	<31.8	500	31.8	11/11/25 10:21	

LABORATORY CONTROL SAMPLE: 3775500

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	ug/L	1000	952	95	85-115	
Calcium	ug/L	10000	10000	100	85-115	
Iron	ug/L	10000	10100	101	85-115	
Magnesium	ug/L	10000	9750	97	85-115	
Manganese	ug/L	1000	999	100	85-115	
Potassium	ug/L	10000	9860	99	85-115	
Sodium	ug/L	10000	9810	98	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3775501 3775502

Parameter	Units	60484431021 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	1020	1000	1000	1950	2010	94	100	70-130	3	20	
Calcium	ug/L	119000	10000	10000	126000	129000	72	96	70-130	2	20	
Iron	ug/L	3800	10000	10000	13700	14200	99	104	70-130	4	20	
Magnesium	ug/L	18400	10000	10000	27700	28200	92	97	70-130	2	20	
Manganese	ug/L	503	1000	1000	1470	1510	97	101	70-130	3	20	
Potassium	ug/L	7250	10000	10000	16800	17500	95	103	70-130	4	20	
Sodium	ug/L	74300	10000	10000	82300	83700	80	94	70-130	2	20	

SAMPLE DUPLICATE: 3785256

Parameter	Units	60484431020 Result	Dup Result	RPD	Max RPD	Qualifiers
Boron	ug/L	51.2J	50.9J		20	
Calcium	ug/L	137000	137000	0	20	

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REPORT OF LABORATORY ANALYSIS

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(913)599-5665

QUALITY CONTROL DATA

Project: AMEREN LCPB
Pace Project No.: 60484433

SAMPLE DUPLICATE: 3785256

Parameter	Units	60484431020 Result	Dup Result	RPD	Max RPD	Qualifiers
Iron	ug/L	8570	8710	2	19	
Magnesium	ug/L	34000	34000	0	20	
Manganese	ug/L	269	270	1	12	
Potassium	ug/L	4250	4200	1	20	
Sodium	ug/L	10600	10600	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN LCPB
Pace Project No.: 60484433

QC Batch: 952626
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Total
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60484433004, 60484433005

METHOD BLANK: 3775545 Matrix: Water
Associated Lab Samples: 60484433004, 60484433005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	ug/L	<7.3	100	7.3	11/10/25 15:33	
Calcium	ug/L	<12.1	200	12.1	11/10/25 15:33	
Iron	ug/L	<8.7	50.0	8.7	11/10/25 15:33	
Magnesium	ug/L	<16.0	50.0	16.0	11/10/25 15:33	
Manganese	ug/L	<0.52	5.0	0.52	11/10/25 15:33	
Potassium	ug/L	<66.6	500	66.6	11/10/25 15:33	
Sodium	ug/L	<46.9	500	46.9	11/10/25 15:33	

LABORATORY CONTROL SAMPLE: 3775546

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	ug/L	1000	967	97	85-115	
Calcium	ug/L	10000	10400	104	85-115	
Iron	ug/L	10000	10500	105	85-115	
Magnesium	ug/L	10000	10400	104	85-115	
Manganese	ug/L	1000	1030	103	85-115	
Potassium	ug/L	10000	9910	99	85-115	
Sodium	ug/L	10000	10100	101	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3775547 3775548

Parameter	Units	60484433004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	4530	1000	1000	5520	5690	99	116	70-130	3	20	
Calcium	ug/L	103000	10000	10000	111000	115000	86	120	70-130	3	20	
Iron	ug/L	10400	10000	10000	20900	21200	105	108	70-130	1	20	
Magnesium	ug/L	14200	10000	10000	24400	24800	101	106	70-130	2	20	
Manganese	ug/L	1040	1000	1000	2030	2070	99	102	70-130	2	20	
Potassium	ug/L	6820	10000	10000	17200	17500	104	107	70-130	2	20	
Sodium	ug/L	86800	10000	10000	95800	98900	90	121	70-130	3	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN LCPB
Pace Project No.: 60484433

QC Batch: 952811
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Total
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60484431032

METHOD BLANK: 3776415 Matrix: Water
Associated Lab Samples: 60484431032

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	ug/L	<7.3	100	7.3	11/03/25 17:08	
Calcium	ug/L	<45.3	200	45.3	11/03/25 17:08	
Iron	ug/L	<8.7	50.0	8.7	11/03/25 17:08	
Magnesium	ug/L	<21.1	50.0	21.1	11/03/25 17:08	
Manganese	ug/L	<0.52	5.0	0.52	11/03/25 17:08	
Potassium	ug/L	<66.6	500	66.6	11/03/25 17:08	
Sodium	ug/L	<31.8	500	31.8	11/03/25 17:08	

LABORATORY CONTROL SAMPLE: 3776416

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	ug/L	1000	977	98	85-115	
Calcium	ug/L	10000	10400	104	85-115	
Iron	ug/L	10000	10500	105	85-115	
Magnesium	ug/L	10000	10300	103	85-115	
Manganese	ug/L	1000	1030	103	85-115	
Potassium	ug/L	10000	10000	100	85-115	
Sodium	ug/L	10000	10100	101	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3776417 3776418

Parameter	Units	60484550001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	547	1000	1000	1560	1600	102	105	70-130	2	20	
Calcium	ug/L	68000	10000	10000	80100	80500	121	125	70-130	0	20	
Iron	ug/L	ND	10000	10000	10600	10900	106	109	70-130	3	20	
Magnesium	ug/L	15500	10000	10000	26100	26200	106	107	70-130	0	20	
Manganese	ug/L	6.6	1000	1000	1030	1050	102	104	70-130	2	20	
Potassium	ug/L	58400	10000	10000	71900	71600	135	132	70-130	0	20	M1
Sodium	ug/L	769000	10000	10000	790000	791000	217	226	70-130	0	20	M1

MATRIX SPIKE SAMPLE: 3776419

Parameter	Units	60484621001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Boron	ug/L	ND	1000	1010	97	70-130	
Calcium	ug/L	80000	10000	86900	69	70-130	M1

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QUALITY CONTROL DATA

Project: AMEREN LCPB
Pace Project No.: 60484433

MATRIX SPIKE SAMPLE: 3776419

Parameter	Units	60484621001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Iron	ug/L	2850	10000	13300	105	70-130	
Magnesium	ug/L	13100	10000	22200	91	70-130	
Manganese	ug/L	79.9	1000	1100	102	70-130	
Potassium	ug/L	63600	10000	73000	94	70-130	
Sodium	ug/L	112000	10000	117000	44	70-130	M1

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QUALITY CONTROL DATA

Project: AMEREN LCPB
Pace Project No.: 60484433

QC Batch: 953416
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Salina
Associated Lab Samples: 60484433001, 60484433002, 60484433003, 60484433004, 60484433005

METHOD BLANK: 3778827 Matrix: Water
Associated Lab Samples: 60484433001, 60484433002, 60484433003, 60484433004, 60484433005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.18	1.0	0.18	10/29/25 14:15	
Fluoride	mg/L	<0.040	0.10	0.040	10/29/25 14:15	
Sulfate	mg/L	<0.096	1.0	0.096	10/29/25 14:15	

LABORATORY CONTROL SAMPLE: 3778828

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.7	95	90-110	
Fluoride	mg/L	2.5	2.6	104	90-110	
Sulfate	mg/L	5	4.9	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3778829 3778830

Parameter	Units	60484433004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	21.2	10	10	30.4	30.9	93	98	80-120	2	15	
Fluoride	mg/L	0.40	2.5	2.5	2.9	3.0	99	103	80-120	3	15	
Sulfate	mg/L	225	100	100	327	334	102	109	80-120	2	15	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN LCPB
Pace Project No.: 60484433

QC Batch: 953722
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Salina
Associated Lab Samples: 60484431001, 60484431002, 60484431003, 60484431013, 60484431014, 60484431015

METHOD BLANK: 3779885 Matrix: Water
Associated Lab Samples: 60484431001, 60484431002, 60484431003, 60484431013, 60484431014, 60484431015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.18	1.0	0.18	11/01/25 10:41	
Fluoride	mg/L	<0.040	0.10	0.040	11/01/25 10:41	
Sulfate	mg/L	<0.096	1.0	0.096	11/01/25 10:41	

LABORATORY CONTROL SAMPLE: 3779886

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.7	95	90-110	
Fluoride	mg/L	2.5	2.6	103	90-110	
Sulfate	mg/L	5	4.9	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3779887 3779888

Parameter	Units	60484431006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	21.0	10	10	29.8	29.2	89	83	80-120	2	15	
Fluoride	mg/L	0.23	2.5	2.5	2.7	2.7	101	100	80-120	1	15	
Sulfate	mg/L	178	100	100	274	278	97	100	80-120	1	15	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3779889 3779890

Parameter	Units	60484431020 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	4.9	5	5	9.4	9.3	90	88	80-120	1	15	
Fluoride	mg/L	0.16	2.5	2.5	2.7	2.7	100	100	80-120	1	15	
Sulfate	mg/L	17.6	10	10	27.1	26.8	94	92	80-120	1	15	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN LCPB
Pace Project No.: 60484433

QC Batch: 953723
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Salina

Associated Lab Samples: 60484431032

METHOD BLANK: 3779891 Matrix: Water
Associated Lab Samples: 60484431032

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	<0.18	1.0	0.18	11/02/25 10:15	
Fluoride	mg/L	<0.040	0.10	0.040	11/02/25 10:15	
Sulfate	mg/L	<0.096	1.0	0.096	11/02/25 10:15	

LABORATORY CONTROL SAMPLE: 3779892

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	106	90-110	
Sulfate	mg/L	5	5.0	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3779893 3779894

Parameter	Units	60484431021 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	26.3	10	10	36.3	35.8	99	94	80-120	1	15	
Fluoride	mg/L	0.40	2.5	2.5	2.9	2.9	101	101	80-120	0	15	
Sulfate	mg/L	239	100	100	327	331	88	92	80-120	1	15	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN LCPB
Pace Project No.: 60484433

QC Batch: 953528
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60484431001, 60484431002, 60484431003, 60484433001, 60484433002, 60484433003

METHOD BLANK: 3779185 Matrix: Water
Associated Lab Samples: 60484431001, 60484431002, 60484431003, 60484433001, 60484433002, 60484433003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<10.5	20.0	10.5	10/30/25 16:52	

LABORATORY CONTROL SAMPLE: 3779186

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	500	502	100	90-110	

SAMPLE DUPLICATE: 3779187

Parameter	Units	60484246021 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	460	444	4	10	

SAMPLE DUPLICATE: 3779188

Parameter	Units	60484431006 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	276	570	70	10	D6

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QUALITY CONTROL DATA

Project: AMEREN LCPB
Pace Project No.: 60484433

QC Batch: 953892
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60484431015

METHOD BLANK: 3780864 Matrix: Water
Associated Lab Samples: 60484431015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<10.5	20.0	10.5	11/03/25 14:28	

LABORATORY CONTROL SAMPLE: 3780865

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	500	475	95	90-110	

SAMPLE DUPLICATE: 3780866

Parameter	Units	60484431021 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	285	283	0	10	

SAMPLE DUPLICATE: 3780867

Parameter	Units	60484581008 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	222	222	0	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN LCPB
Pace Project No.: 60484433

QC Batch: 954127 | Analysis Method: SM 2320B
QC Batch Method: SM 2320B | Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60484431013, 60484431014, 60484433004, 60484433005

METHOD BLANK: 3781518 Matrix: Water
Associated Lab Samples: 60484431013, 60484431014, 60484433004, 60484433005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<10.5	20.0	10.5	11/04/25 21:17	

LABORATORY CONTROL SAMPLE: 3781519

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	500	484	97	90-110	

SAMPLE DUPLICATE: 3781520

Parameter	Units	60484433004 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	144	262	58	10	D6

SAMPLE DUPLICATE: 3781521

Parameter	Units	60484432009 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	64.4	57.9	11	10	D6

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QUALITY CONTROL DATA

Project: AMEREN LCPB
Pace Project No.: 60484433

QC Batch: 954208
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60484431032

METHOD BLANK: 3781815 Matrix: Water
Associated Lab Samples: 60484431032

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<10.5	20.0	10.5	11/05/25 20:08	

LABORATORY CONTROL SAMPLE: 3781816

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	500	488	98	90-110	

SAMPLE DUPLICATE: 3781817

Parameter	Units	60484432017 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	64.6	65.5	1	10	

SAMPLE DUPLICATE: 3781818

Parameter	Units	60484431032 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	464	465	0	10	

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QUALITY CONTROL DATA

Project: AMEREN LCPB
Pace Project No.: 60484433

QC Batch: 952616
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60484431001, 60484431002, 60484431003, 60484433001, 60484433002, 60484433003

METHOD BLANK: 3775512 Matrix: Water
Associated Lab Samples: 60484431001, 60484431002, 60484431003, 60484433001, 60484433002, 60484433003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	10/23/25 10:59	

LABORATORY CONTROL SAMPLE: 3775513

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

SAMPLE DUPLICATE: 3775514

Parameter	Units	60484431001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	306	298	3	10	

SAMPLE DUPLICATE: 3775515

Parameter	Units	60484431006 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	607	611	1	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN LCPB
Pace Project No.: 60484433

QC Batch: 953035
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60484431015

METHOD BLANK: 3777327 Matrix: Water
Associated Lab Samples: 60484431015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	10/27/25 10:49	

LABORATORY CONTROL SAMPLE: 3777328

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

SAMPLE DUPLICATE: 3777329

Parameter	Units	60484491002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	492	496	1	10	

SAMPLE DUPLICATE: 3777330

Parameter	Units	60484431021 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	682	680	0	10	

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QUALITY CONTROL DATA

Project: AMEREN LCPB
Pace Project No.: 60484433

QC Batch: 953151 | Analysis Method: SM 2540C
QC Batch Method: SM 2540C | Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60484431013, 60484431014, 60484433004, 60484433005

METHOD BLANK: 3777820 Matrix: Water
Associated Lab Samples: 60484431013, 60484431014, 60484433004, 60484433005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	10/28/25 10:56	

LABORATORY CONTROL SAMPLE: 3777821

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

SAMPLE DUPLICATE: 3777822

Parameter	Units	60484433004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	639	645	1	10	

SAMPLE DUPLICATE: 3777823

Parameter	Units	60484432009 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1060	1060	0	10	

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QUALITY CONTROL DATA

Project: AMEREN LCPB
Pace Project No.: 60484433

QC Batch: 953276
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60484431032

METHOD BLANK: 3778215 Matrix: Water
Associated Lab Samples: 60484431032

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	5.0	10/29/25 09:11	

LABORATORY CONTROL SAMPLE: 3778216

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

SAMPLE DUPLICATE: 3778217

Parameter	Units	60484604001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	5600	5580	0	10	

SAMPLE DUPLICATE: 3778218

Parameter	Units	60484431032 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	735	741	1	10	

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

REPORT OF LABORATORY ANALYSIS

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

QUALIFIERS

Project: AMEREN LCPB
Pace Project No.: 60484433

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

D6	The precision between the sample and sample duplicate exceeded laboratory control limits.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN LCPB
Pace Project No.: 60484433

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60484431001	**L-LMW-1S**	EPA 200.7	952222	EPA 200.7	952243
60484431002	**L-LMW-7S**	EPA 200.7	952222	EPA 200.7	952243
60484431003	**L-LMW-8S**	EPA 200.7	952222	EPA 200.7	952243
60484433001	**L-LMW-5S**	EPA 200.7	952284	EPA 200.7	952323
60484433002	**L-LMW-6S**	EPA 200.7	952284	EPA 200.7	952323
60484433003	**L-LMW-FB-1**	EPA 200.7	952284	EPA 200.7	952323
60484431013	**L-BMW-1S**	EPA 200.7	952613	EPA 200.7	952704
60484431014	**L-BMW-2S**	EPA 200.7	952613	EPA 200.7	952704
60484431015	**L-LMW-2S**	EPA 200.7	952613	EPA 200.7	952704
60484433004	**L-LMW-3S**	EPA 200.7	952626	EPA 200.7	952715
60484433005	**L-LMW-DUP-1**	EPA 200.7	952626	EPA 200.7	952715
60484431032	**L-LMW-4S**	EPA 200.7	952811	EPA 200.7	952836
60484431001	**L-LMW-1S**	EPA 300.0	953722		
60484431002	**L-LMW-7S**	EPA 300.0	953722		
60484431003	**L-LMW-8S**	EPA 300.0	953722		
60484433001	**L-LMW-5S**	EPA 300.0	953416		
60484433002	**L-LMW-6S**	EPA 300.0	953416		
60484433003	**L-LMW-FB-1**	EPA 300.0	953416		
60484431013	**L-BMW-1S**	EPA 300.0	953722		
60484431014	**L-BMW-2S**	EPA 300.0	953722		
60484431015	**L-LMW-2S**	EPA 300.0	953722		
60484433004	**L-LMW-3S**	EPA 300.0	953416		
60484433005	**L-LMW-DUP-1**	EPA 300.0	953416		
60484431032	**L-LMW-4S**	EPA 300.0	953723		
60484431001	**L-LMW-1S**	SM 2320B	953528		
60484431002	**L-LMW-7S**	SM 2320B	953528		
60484431003	**L-LMW-8S**	SM 2320B	953528		
60484433001	**L-LMW-5S**	SM 2320B	953528		
60484433002	**L-LMW-6S**	SM 2320B	953528		
60484433003	**L-LMW-FB-1**	SM 2320B	953528		
60484431013	**L-BMW-1S**	SM 2320B	954127		
60484431014	**L-BMW-2S**	SM 2320B	954127		
60484431015	**L-LMW-2S**	SM 2320B	953892		
60484433004	**L-LMW-3S**	SM 2320B	954127		
60484433005	**L-LMW-DUP-1**	SM 2320B	954127		
60484431032	**L-LMW-4S**	SM 2320B	954208		
60484431001	**L-LMW-1S**	SM 2540C	952616		
60484431002	**L-LMW-7S**	SM 2540C	952616		
60484431003	**L-LMW-8S**	SM 2540C	952616		
60484433001	**L-LMW-5S**	SM 2540C	952616		
60484433002	**L-LMW-6S**	SM 2540C	952616		

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN LCPB
Pace Project No.: 60484433

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60484433003	**L-LMW-FB-1**	SM 2540C	952616		
60484431013	**L-BMW-1S**	SM 2540C	953151		
60484431014	**L-BMW-2S**	SM 2540C	953151		
60484431015	**L-LMW-2S**	SM 2540C	953035		
60484433004	**L-LMW-3S**	SM 2540C	953151		
60484433005	**L-LMW-DUP-1**	SM 2540C	953151		
60484431032	**L-LMW-4S**	SM 2540C	953276		

WO# : 60484433

60484433

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-LENE-0009_Sample Co	
	Revision: 3	Effective Date: 09/22/2025

Client Name: Rocksmith Geoeng

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

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

Custody Seal on Cooler/Box Present: Yes ☑ No ☐ Seals intact: Yes ☑ No ☐ Cooling process has begun ☐

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

Thermometer Used: T-301 **Type of Ice:** (Wet) Blue None

Cooler Temperature (°C): **As-read** 20.4/19.9 **Corr. Factor** 0.0 **Corrected** 20.4/19.9 2.3/2.0

Temperature should be above freezing to 6°C 2.3/2.0

Date and initials of person examining contents: AV 10/20/25

Chain of Custody present:	☑Yes ☐No ☐N/A	
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	
Samples arrived within holding time:	☑Yes ☐No ☐N/A	
Short Hold Time analyses (<72hr):	☐Yes ☑No ☐N/A	
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	
Sufficient volume:	☑Yes ☐No ☐N/A	
Correct containers used:	☑Yes ☐No ☐N/A	
Pace containers used:	☑Yes ☐No ☐N/A	
Containers intact:	☑Yes ☐No ☐N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	☐Yes ☐No ☑N/A	
Filtered volume received for dissolved tests?	☐Yes ☐No ☑N/A	
Sample labels match COC: Date / time / ID / analyses	☑Yes ☐No ☐N/A	
Samples contain multiple phases? Matrix: WT	☐Yes ☑No ☐N/A	
Containers requiring pH preservation in compliance? (HNO_3, H_2SO_4, HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, Radium) **LOT#:** 96888	☑Yes ☐No ☐N/A	List sample IDs, volumes, lot #'s of preservative and the date/time added.
Cyanide water sample checks: Lead acetate strip turns dark? (Record only)	☐Yes ☐No	
Potassium iodide test strip turns blue/purple? (Preserve)	☐Yes ☐No	
Trip Blank present:	☐Yes ☐No ☑N/A	
Headspace in VOA vials (>6mm):	☐Yes ☐No ☑N/A	
Samples from USDA Regulated Area: State:	☐Yes ☐No ☑N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	☐Yes ☐No ☑N/A	

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

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

CHAIN-OF-CUSTODY Analytical Request Document

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

LAB USE ONLY- Affix Workorder/Login Label Here

60484473

Scan QR Code for instructions

Company Name:	Rocksmith Geoengineering, LLC.	Contact/Report To:	Mark Haddock
Street Address:	2320 Creve Coeur Mill Road Maryland Heights, MO 63043	Phone #:	314-974-6578
		E-Mail:	mark.haddock@rocksmithgeo.com
		Cc E-Mail:	
Customer Project #:			
Project Name:	AMEREN LCPB	Invoice To:	Mark Haddock
		Invoice E-Mail:	mark.haddock@rocksmithgeo.com
Site Collection Info/Facility ID (as applicable):		Purchase Order # (if applicable):	
		Quote #:	
Time Zone Collected: [ ] AK [ ] PT [ ] MT [ ] CT [ ] ET		County / State origin of sample(s):	Missouri
Data Deliverables: [ ] Level II [ ] Level III [ ] Level IV [ ] EQUIS [ ] Other		Regulatory Program (DW, RCRA, etc.) as applicable:	Reportable [ ] Yes [ ] No
		Rush (Pre-approval required): [ ] Same Day [ ] 1 Day [ ] 2 Day [ ] 3 Day [ ] Other	DW PWSID # or WW Permit # as applicable:
		Date Results Requested:	Field Filtered (if applicable): [ ] Yes [ ] No
			Analysis:

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

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

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

Customer Sample ID	Matrix *	Comp / Grab	Composite Start Date	Composite Start Time	Collected or Composite End Date	Collected or Composite End Time	# Cont.	Res. Chlorine Results	Res. Chlorine Units	App III and Cat/An Metals*	App IV Metals**	UWL Metals***	COD & TOC	Cl/F/SO4/TDS/Alkalinity	Radium 226/228	Total Organic Halogens	Sample Comment
L-LMW-3S	WT																
L-LMW-5S	WT	G			10/17/25	1338	6			✓	✓	✓	✓	✓	✓	✓	
L-LMW-6S	WT	G			10/17/25	1057	6			✓	✓	✓	✓	✓	✓	✓	
L-LMW-DUP-1	WT																
L-LMW-FB-1	WT	G			10/17/25	1110	6			✓	✓	✓	✓	✓	✓	✓	
L-LMW-MS-1	WT																
L-LMW-MSD-2	WT																
L-LMW-1S	WT	G			10/17/25	1145	6			✓	✓	✓	✓	✓	✓	✓	
L-LMW-8S	WT	G			10/17/25	1241	6			✓	✓	✓	✓	✓	✓	✓	
L-LMW-7S	WT	G			10/17/25	1224	6			✓	✓	✓	✓	✓	✓	✓	

Lab Use Only
Proj. Mgr: Jamie Church
AcctNum / Client ID:
Table #:
Profile / Template: 15857
Prelog / Bottle Ord. ID: EZ 3303688

Preservation non-conformance identified for sample.

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

Collected By: (Printed Name) John Rasmussen
Signature:

Customer Remarks / Special Conditions / Possible Hazards:

# Coolers:	Thermometer ID:	Correction Factor (°C):	Obs. Temp. (°C)	Corrected Temp. (°C)	On Ice:
	T30	0.0	20.4	20.4	

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Tracking Number:
Rocksmith	10/17/25 1515	JA Pace	10/18/25 0850	
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Delivered by: [ ] In- Person [ ] Courier
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	[ ] FedEx [ ] UPS [ ] Other
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Page: of

Client: Rocksmith Geoeng Profile/EZ #: 3303688

Site: Notes

COC Line Item	Matrix	VG9H	DG9H	DG9Q	VG9U	DG9U	DG9M	DG9B	BG1U	AG1H	AG1U	AG2U	AG3S	AG4U	AG5U	JGFU	WGKU	WGDU	BP1U	BP2U	BP3U	BP1N	BP3N	BP3F	BP3S	BP3B	BP3Z	WPDU	ZPLC	Other		
1																																
2	WT												2						1			2	1									
3	↓												↓						↓			↓	↓									
4																																
5	WT												↓						↓			↓	↓									
6																																
7																																
8																																
9																																
10																																
11																																
12																																

Container Codes

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

Plastic	
BP1B	1L NAOH plastic
BP1N	1L HNO3 plastic
BP1S	1L H2SO4 plastic
BP1U	1L unpreserved plastic
BP1Z	1L NaOH, Zn Acetate
BP2B	500mL NAOH plastic
BP2N	500mL HNO3 plastic
BP2S	500mL H2SO4 plastic
BP2U	500mL unpreserved plastic
BP2Z	500mL NaOH, Zn Acetate
BP3B	250mL NaOH plastic
BP3F	250mL HNO3 plastic - field filtered
BP3N	250mL HNO3 plastic
BP3U	250mL unpreserved plastic
BP3S	250mL H2SO4 plastic
BP3Z	250mL NaOH, Zn Acetate
BP4U	125mL unpreserved plastic
BP4N	125mL HNO3 plastic
BP4S	125mL H2SO4 plastic
WPDU	16oz unpresserved plstic

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

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

Work Order Number: 60484433

WO# : 60484433

60484433

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-LENE-0009_Sample Conc		
	Revision: 3	Effective Date: 09/22/2025	Issued By: Lenexa

Client Name: Rocksmith Geoeng

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

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

Custody Seal on Cooler/Box Present: Yes ☑ No ☐ Seals intact: Yes ☑ No ☐ Cooling process has begun ☐

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

Thermometer Used: T-361 **Type of Ice:** (Wet) Blue None

Cooler Temperature (°C): As-read 0.6/0.5 Corr. Factor 0.0 Corrected 0.6/0.5/14.0

Temperature should be above freezing to 6°C 14.0

Date and initials of person examining contents: PV 10/22/25

Chain of Custody present:	☑Yes ☐No ☐N/A	
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	
Samples arrived within holding time:	☑Yes ☐No ☐N/A	
Short Hold Time analyses (<72hr):	☐Yes ☑No ☐N/A	
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	
Sufficient volume:	☑Yes ☐No ☐N/A	
Correct containers used:	☑Yes ☐No ☐N/A	
Pace containers used:	☑Yes ☐No ☐N/A	
Containers intact:	☑Yes ☐No ☐N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	☐Yes ☐No ☑N/A	
Filtered volume received for dissolved tests?	☐Yes ☐No ☑N/A	
Sample labels match COC: Date / time / ID / analyses	☑Yes ☐No ☐N/A	
Samples contain multiple phases? Matrix: WT	☐Yes ☑No ☐N/A	
Containers requiring pH preservation in compliance? (HNO_3, H_2SO_4, HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, Radium) LOT#: 96888	☑Yes ☐No ☐N/A	List sample IDs, volumes, lot #'s of preservative and the date/time added.
Cyanide water sample checks: Lead acetate strip turns dark? (Record only)	☐Yes ☐No	
Potassium iodide test strip turns blue/purple? (Preserve)	☐Yes ☐No	
Trip Blank present:	☐Yes ☐No ☑N/A	
Headspace in VOA vials (>6mm):	☐Yes ☐No ☑N/A	
Samples from USDA Regulated Area: State:	☐Yes ☐No ☑N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	☐Yes ☐No ☑N/A	

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

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

CHAIN-OF-CUSTODY Analytical Request Document

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

LAB USE ONLY- Affix Workorder/Login Label Here

Loc 84433

Scan QR Code for instructions

Company Name:	Rocksmith Geoengineering, LLC.	Contact/Report To:	Mark Haddock
Street Address:	2320 Creve Coeur Mill Road Maryland Heights, MO 63043	Phone #:	314-974-6578
		E-Mail:	mark.haddock@rocksmithgeo.com
		Cc E-Mail:	
Customer Project #:			
Project Name:	AMEREN LCPB	Invoice To:	Mark Haddock
		Invoice E-Mail:	mark.haddock@rocksmithgeo.com
Site Collection Info/Facility ID (as applicable):		Purchase Order # (if applicable):	
		Quote #:	
Time Zone Collected: [ ] AK [ ] PT [ ] MT [ ] CT [ ] ET		County / State origin of sample(s):	Missouri
Data Deliverables: [ ] Level II [ ] Level III [ ] Level IV [ ] EQUIS [ ] Other	Regulatory Program (DW, RCRA, etc.) as applicable: Reportable [ ] Yes [ ] No		
	Rush (Pre-approval required): [ ] Same Day [ ] 1 Day [ ] 2 Day [ ] 3 Day [ ] Other	DW PWSID # or WW Permit # as applicable:	
	Date Results Requested:	Field Filtered (if applicable): [ ] Yes [ ] No	Analysis:

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

Customer Sample ID	Matrix *	Comp / Grab	Composite Start Date	Composite Start Time	Collected or Composite End Date	Collected or Composite End Time	# Cont.	Res. Chlorine Results	Res. Chlorine Units	200.7 / 200.8 Metals + Hg	COD & TOC	Cl/F/SO4/TDS/Alkalinity	Radium 226/228	Total Organic Halogens						Sample Comment
L-LMW-3S	WT	G			10/21/25	1306	6			✓	✓	✓	✓	✓						
L-LMW-5S	WT																			
L-LMW-6S	WT																			
L-LMW-DUP-1	WT	G			10/21/25	—	6			✓	✓	✓	✓	✓						
L-LMW-FB-1	WT																			
L-LMW-MS-1	WT	G			10/21/25	1306	6			✓	✓	✓	✓	✓						Taken @ LMW-3S
L-LMW-MSD-2	WT	G			"	1306	6			✓	✓	✓	✓	✓						"
L-LMW-2S	WT	G			10/20/25	1510	6			✓	✓	✓	✓	✓	~~✓~~					
L-BMW-1S	WT	G			10/21/25	1106	6			✓	✓	✓	✓	✓						
L-BMW-2S	WT	G			10/21/25	0905	6			✓	✓	✓	✓	✓						

Specify Container Size **

Identify Container Preservative Type***

Analysis Requested

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

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

Lab Use Only

Proj. Mgr: Jamie Church

AcctNum / Client ID:

Table #:

Profile / Template: 15857

Prelog / Bottle Ord. ID: EZ 3303688

Preservation non-conformance identified for sample.

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

Collected By: (Printed Name) John Rasmussen

Signature:

Customer Remarks / Special Conditions / Possible Hazards:

# Coolers:	Thermometer ID:	Correction Factor (°C):	Obs. Temp. (°C)	Corrected Temp. (°C)	On Ice:
3	T-301	0-0	0.6/0.5/4.0	0.6/0.5/14.0	

Relinquished by/Company: (Signature) Rocksmith / Jm	Date/Time: 10/21/25 / 1600	Received by/Company: (Signature) MSL	Date/Time: 10/22	0850
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	

Tracking Number:

Delivered by: [ ] In- Person [ ] Courier [ ] FedEx [ ] UPS [ ] Other

Page: 1 of 1

Client: Rocksmith Geoeng

Profile/EZ # only print what you log.

Site:

Notes Append to 60484433

COC Line Item	Matrix	VG9H	DG9H	DG9Q	VG9U	DG9U	DG9M	DG9B	BG1U	AG1H	AG1U	AG2U	AG3S	AG4U	AG5U	JGFU	WGKU	WGDU	BP1U	BP2U	BP3U	BP1N	BP3N	BP3F	BP3S	BP3B	BP3Z	WPDU	ZPLC	Other		
1	WT												6						3			2	3									
2																																
3																																
4	WT												2						1			2	1									
5																																
6	WT																					2										
7	WT																					2										
8																																
9																																
10																																
11																																
12																																

(Only Log RAD)

(Do not Log)

Container Codes

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

Plastic	
BP1B	1L NAOH plastic
BP1N	1L HNO3 plastic
BP1S	1L H2SO4 plastic
BP1U	1L unpreserved plastic
BP1Z	1L NaOH, Zn Acetate
BP2B	500mL NAOH plastic
BP2N	500mL HNO3 plastic
BP2S	500mL H2SO4 plastic
BP2U	500mL unpreserved plastic
BP2Z	500mL NaOH, Zn Acetate
BP3B	250mL NaOH plastic
BP3F	250mL HNO3 plastic - field filtered
BP3N	250mL HNO3 plastic
BP3U	250mL unpreserved plastic
BP3S	250mL H2SO4 plastic
BP3Z	250mL NaOH, Zn Acetate
BP4U	125mL unpreserved plastic
BP4N	125mL HNO3 plastic
BP4S	125mL H2SO4 plastic
WPDU	16oz unpresserved plstic

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

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

Work Order Number: 60484433

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

CHAIN-OF-CUSTODY Analytical Request Document

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

WO# : 60484433

60484433

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

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

County / State origin of sample(s): Missouri

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

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

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

DW PWSID # or WW Permit # as applicable:

Date Results Requested:

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

Analysis:

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

Specify Container Size **: 3 3 1 1 3

Identify Container Preservative Type***: 2 3 1 2 3

Analysis Requested

Customer Sample ID	Matrix *	Comp / Grab	Composite Start Date	Composite Start Time	Collected or Composite End Date	Collected or Composite End Time	# Cont.	Res. Chlorine Results	Res. Chlorine Units	200.7 / 200.8 Metals + Hg	COD & TOC	Cl/F/SO4/TDS/Alkalinity	Radium 226/228	Total Organic Halogens	Sample Comment
L-LMW-3S	WT														
L-LMW-5S	WT														
L-LMW-6S	WT														
L-LMW-DUP-1	WT														
L-LMW-FB-1	WT														
L-LMW-MS-1	WT														
L-LMW-MSD-2	WT														
L-LMW-4S	WT	G			10-22-25	0948	6			✓	✓	✓	✓	✓	

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

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

Lab Use Only

Proj. Mgr: Jamie Church
AcctNum / Client ID:
Table #:
Profile / Template: 15857
Prelog / Bottle Ord. ID: EZ 3303688

Preservation non-conformance identified for sample:

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

Collected By: (Printed Name) Daniel Quick
Signature:

Customer Remarks / Special Conditions / Possible Hazards:

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

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Tracking Number:
Rocksmith	1308 10-22-25			
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Delivered by: [ ] In- Person [ ] Courier
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	[ ] FedEx [ ] UPS [ ] Other
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Page: 1 of 1

Memorandum

December 16, 2025

To:	Project File Rocksmith Geoengineering, LLC	**Project Number:**	23007-25
CC:	Mark Haddock, Jeffrey Ingram		
From:	Valerie Hurt	**Email:**	Valerie.Hurt@Rocksmithgeo.com
RE:	**Data Validation Summary, Labadie Energy Center – LCPB – Data Package 60484433**		

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 duplicate criterion was not met, the associated sample result was qualified as an estimate (J for detects, UJ for non-detects).
- When a compound was detected in a blank (i.e. method, field), and the blank comparison criterion was not met, associated sample results were qualified as estimates (J) or non-detects (U).

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

Company Name: Rocksmith Geoengineering
Project Manager: J. Ingram
Project Name: Ameren LCPB
Project Number: 23007-25
Reviewer: V. Hurt
Validation Date: 12/16/2025

Laboratory: Pace Analytical
SDG #: 60484433
Analytical Method (type and no.): EPA 200.7 (Total Metals); SM 2320B (Alkalinity); SM 2540C (TDS); EPA 300.0 (Anions)
Matrix: ☐ Air ☐ Soil/Sed. ■ Water ☐ Waste ☐ _____
Sample Names L-LMW-5S, L-LMW-6S, L-LMW-FB-1, L-LMW-3S, L-LMW-DUP-1, L-LMW-MS-1, L-MW-MSD-2, L-LMW-1S, L-LMW-2S, L-LMW-4S, L-LMW-7S L-LMW-8S, L-BW-1S, L-BMW-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?	x			10/17/2025-10/21/2025
b) Sampling team indicated?	x			JTR/JDQ/VAH
c) Sample location noted?	x			
d) Sample depth indicated (Soils)?			x	
e) Sample type indicated (grab/composite)?	x			Grab
f) Field QC noted?	x			See Notes
g) Field parameters collected (note types)?	x			pH, Spec Cond, Turb, Temp, DO, ORP
h) Field Calibration within control limits?	x			
i) Notations of unacceptable field conditions/performances from field logs or field notes?		x		
j) Does the laboratory narrative indicate deficiencies?			x	No lab narrative.

Note Deficiencies: _____

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

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

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

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

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

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

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

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

Comments/Notes:

General:

Chloride, sulfate, and total organic carbon diluted in some samples, no qualification necessary.

QA LEVEL IV - INORGANIC DATA EVALUATION CHECKLIST

Comments/Notes:

Field Duplicates:

L-LMW-DUP-1 @ L-LMW-3S: RPD control limit (20%) exceeded for Alkalinity (61%). Result qualified as estimate.

MS/MSD:

3774090: MS recovery low for calcium. Associated with an unrelated sample, no qualification necessary.

3776417/3776418: MS/MSD recovery high for potassium and sodium, RPD okay. Associated with unrelated sample, no qualification necessary.

3776419: MS recovery low for calcium and sodium. Associated with unrelated sample, no qualification necessary.

Field Blanks:

L-LMW-FB-1 @ L-LMW-6S: Calcium (54.5J), sodium (38.3J). Results > RL and 10x blank, no qualification necessary.

Sample Duplicates:

3779188: RPD exceeds lab precision criteria for alkalinity, associated with unrelated sample. No qualification necessary.

3781520: RPD exceeds lab precision criteria for alkalinity, associated with sample -004. Result qualified as an estimate.

3781521: RPD exceeds lab precision criteria for alkalinity, associated with unrelated sample. No qualification necessary.

QA LEVEL IV - INORGANIC DATA EVALUATION CHECKLIST

Data Qualification:

Sample Name	Constituent(s)	Result	Qualifier	Reason
L-LMW-3S	Alkalinity	144	J	RPD control limit exceeded
L-LMW-DUP-1	"	271	J	"
L-LMW-3S	Alkalinity	144	J	Lab DUP RPD limit exceeded

Signature: _____ Date: 12/16/2025

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

December 23, 2025

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

RE: Project: AMEREN LCPB-VERIFICATION
Pace Project No.: 60487238

Dear Mark Haddock:

Enclosed are the analytical results for sample(s) received by the laboratory on December 09, 2025. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Kansas City

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

Sincerely,

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

Enclosures

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

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

CERTIFICATIONS

Project: AMEREN LCPB-VERIFICATION
Pace Project No.: 60487238

Pace Analytical Services Kansas

9608 Loiret Boulevard, Lenexa, KS 66219
EPA Lab Code: KS00021
Arkansas Certification #: 88-00679
Illinois Certification #: 200030
Colorado Division of Oil and Public Safety
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Oklahoma Certification #: 9205
Texas Certification #: T104704407
Utah Certification #: KS0002125-15
UDSA_CA : #KS-SC-DOM-25-01

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

SAMPLE SUMMARY

Project: AMEREN LCPB-VERIFICATION
Pace Project No.: 60487238

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60487238001	**L-LMW-1S**	Water	12/08/25 10:09	12/09/25 07:44
60487238002	**L-LMW-3S**	Water	12/08/25 11:56	12/09/25 07:44
60487238003	**L-LMW-DUP-1**	Water	12/08/25 00:00	12/09/25 07:44
60487238004	**L-LMW-FB-1**	Water	12/08/25 12:00	12/09/25 07:44

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SAMPLE ANALYTE COUNT

Project: AMEREN LCPB-VERIFICATION
Pace Project No.: 60487238

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60487238001	**L-LMW-1S**	EPA 200.7	ARMN	1	PASI-K
		EPA 300.0	GTS	1	PASI-K
60487238002	**L-LMW-3S**	EPA 200.7	ARMN	1	PASI-K
		EPA 300.0	GTS	1	PASI-K
60487238003	**L-LMW-DUP-1**	EPA 200.7	ARMN	1	PASI-K
		EPA 300.0	GTS	1	PASI-K
60487238004	**L-LMW-FB-1**	EPA 200.7	ARMN	1	PASI-K
		EPA 300.0	GTS	1	PASI-K

PASI-K = Pace Analytical Services - Kansas City

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

ANALYTICAL RESULTS

Project: AMEREN LCPB-VERIFICATION
Pace Project No.: 60487238

Sample: L-LMW-1S **Lab ID: 60487238001** Collected: 12/08/25 10:09 Received: 12/09/25 07:44 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								
Boron	**398**	ug/L	100	33.2	1	12/10/25 13:17	12/16/25 11:38	7440-42-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Fluoride	**<0.16**	mg/L	0.20	0.16	1		12/20/25 16:37	16984-48-8	M1

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: AMEREN LCPB-VERIFICATION
Pace Project No.: 60487238

Sample: L-LMW-3S **Lab ID: 60487238002** Collected: 12/08/25 11:56 Received: 12/09/25 07:44 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								
Boron	**5040**	ug/L	100	33.2	1	12/10/25 13:17	12/16/25 11:43	7440-42-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Fluoride	**0.23**	mg/L	0.20	0.16	1		12/20/25 17:13	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: AMEREN LCPB-VERIFICATION
Pace Project No.: 60487238

Sample: L-LMW-DUP-1 **Lab ID: 60487238003** Collected: 12/08/25 00:00 Received: 12/09/25 07:44 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								
Boron	**5080**	ug/L	100	33.2	1	12/10/25 13:17	12/16/25 11:45	7440-42-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Fluoride	**0.23**	mg/L	0.20	0.16	1		12/20/25 17:25	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: AMEREN LCPB-VERIFICATION
Pace Project No.: 60487238

Sample: L-LMW-FB-1 **Lab ID: 60487238004** Collected: 12/08/25 12:00 Received: 12/09/25 07:44 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								
Boron	**<33.2**	ug/L	100	33.2	1	12/10/25 13:17	12/16/25 11:47	7440-42-8	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City								
Fluoride	**<0.16**	mg/L	0.20	0.16	1		12/20/25 17:37	16984-48-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(913)599-5665

QUALITY CONTROL DATA

Project: AMEREN LCPB-VERIFICATION
Pace Project No.: 60487238

QC Batch: 958106
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Total
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60487238001, 60487238002, 60487238003, 60487238004

METHOD BLANK: 3797151 Matrix: Water
Associated Lab Samples: 60487238001, 60487238002, 60487238003, 60487238004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	ug/L	<33.2	100	33.2	12/16/25 11:34	

LABORATORY CONTROL SAMPLE: 3797152

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	ug/L	1000	979	98	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3797153 3797154

Parameter	Units	60487238001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	398	1000	1000	1400	1390	100	99	70-130	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3797160 3797161

Parameter	Units	60487252002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	1260	1000	1000	2310	2320	105	105	70-130	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3797162 3797163

Parameter	Units	60487252003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	9860	1000	1000	10900	10800	101	93	70-130	1	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

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

QUALITY CONTROL DATA

Project: AMEREN LCPB-VERIFICATION
Pace Project No.: 60487238

QC Batch: 959320
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60487238001, 60487238002, 60487238003, 60487238004

METHOD BLANK: 3801996 Matrix: Water
Associated Lab Samples: 60487238001, 60487238002, 60487238003, 60487238004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Fluoride	mg/L	<0.16	0.20	0.16	12/20/25 14:11	

LABORATORY CONTROL SAMPLE: 3801997

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	2.5	2.5	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3801998 3801999

Parameter	Units	60487238001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Fluoride	mg/L	<0.16	2.5	2.5	3.5	3.4	133	130	80-120	2	15	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3802000 3802001

Parameter	Units	60487252002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Fluoride	mg/L	<0.16	2.5	2.5	3.4	3.4	132	130	80-120	1	15	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3802002 3802003

Parameter	Units	60487252003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Fluoride	mg/L	0.30	2.5	2.5	3.5	3.5	127	127	80-120	0	15	M1

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

REPORT OF LABORATORY ANALYSIS

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

QUALIFIERS

Project: AMEREN LCPB-VERIFICATION
Pace Project No.: 60487238

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

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

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN LCPB-VERIFICATION
Pace Project No.: 60487238

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60487238001	**L-LMW-1S**	EPA 200.7	958106	EPA 200.7	958142
60487238002	**L-LMW-3S**	EPA 200.7	958106	EPA 200.7	958142
60487238003	**L-LMW-DUP-1**	EPA 200.7	958106	EPA 200.7	958142
60487238004	**L-LMW-FB-1**	EPA 200.7	958106	EPA 200.7	958142
60487238001	**L-LMW-1S**	EPA 300.0	959320		
60487238002	**L-LMW-3S**	EPA 300.0	959320		
60487238003	**L-LMW-DUP-1**	EPA 300.0	959320		
60487238004	**L-LMW-FB-1**	EPA 300.0	959320		

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-LENE-0009_Samp	WO#: 60487238
	Revision: 3	Effective Date: 09/22/20

Client Name: RockSmith Geoengineering, LLC

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 ☐ Cooling process has begun ☐

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

Thermometer Used: T301 **Type of Ice:** (Wet) Blue None

Cooler Temperature (°C): **As-read** 1.1 **Corr. Factor** 0.0 **Corrected** 1.1 / 0.9

Date and initials of person examining contents: JA 12/9/25

Temperature should be above freezing to 6°C 0.9

Chain of Custody present:	☑Yes ☐No ☐N/A	
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	
Samples arrived within holding time:	☑Yes ☐No ☐N/A	
Short Hold Time analyses (<72hr):	☐Yes ☑No ☐N/A	
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	
Sufficient volume:	☑Yes ☐No ☐N/A	
Correct containers used:	☑Yes ☐No ☐N/A	
Pace containers used:	☑Yes ☐No ☐N/A	
Containers intact:	☑Yes ☐No ☐N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	☐Yes ☐No ☑N/A	
Filtered volume received for dissolved tests?	☐Yes ☐No ☑N/A	
Sample labels match COC: Date / time / ID / analyses	☑Yes ☐No ☐N/A	
Samples contain multiple phases? Matrix: WT	☐Yes ☑No ☐N/A	
Containers requiring pH preservation in compliance? (HNO_3, H_2SO_4, HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, Radium) LOT#: 88727	☑Yes ☐No ☐N/A	List sample IDs, volumes, lot #'s of preservative and the date/time added.
Cyanide water sample checks: Lead acetate strip turns dark? (Record only)	☐Yes ☐No	
Potassium iodide test strip turns blue/purple? (Preserve)	☐Yes ☐No	
Trip Blank present:	☐Yes ☐No ☑N/A	
Headspace in VOA vials (>6mm):	☐Yes ☐No ☑N/A	
Samples from USDA Regulated Area: State:	☐Yes ☐No ☑N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	☐Yes ☐No ☑N/A	

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

Pace Analytical
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 1 of 1

Section A — **Required** Client Information:

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

Section B — **Required** Project Information:

Report To:	Mark Haddock
Copy To:	Jeffery Ingram, Grant Morey
Purchase Order No.:	COC #2
Project Name:	Ameren LCPB - Verification Sampling
Project Number:	

Section C — Invoice Information:

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

REGULATORY AGENCY

NPDES GROUND WATER DRINKING WATER

UST RCRA O _____

Site Location STATE: MO

Section D — **Required** Client Information

Valid Matrix Codes

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

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

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRA DATE	COLLECTED COMPOSITE END/GRA TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	Boron	Fluoride	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	L-LMW-1S	WT	G			12/8/25		1009	2	X		X						N	X	X		60487238
2	L-LMW-3S	WT	G					1156										N	X	X		
3	L-LMW-MS-1	WT	G					1009	2	X		X						N	X	X		Collected @ L-LMW-1S
4	L-LMW-MSD-1	WT	G					1009	2	X		X						N	X	X		
5	L-LMW-DUP-1	WT	G						2	X		X						N	X	X		
6	L-LMW-FB-1	WT	G					1200	2	X		X						N	X	X		
7		WT	G															N				
8		WT	G															N				
9		WT	G															N				
10		WT	G															N				
11		WT	G															N				
12		WT	G															N				

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Daniel Quick RSG	12-9-25	1340	JAPace	12/9/25	0744	1-1 Y Y Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Daniel Quick

SIGNATURE of SAMPLER: [signature]

DATE Signed (MM/DD/YY): 12-9-25

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

Client: Rocksmith Geoengineering, LLC

Profile/EZ # 15856, line 1

samples 1, 3, 4 should be logged as 1 sample

Site: Ameren LCPB - verification Sampling

Notes

COC Line Item	Matrix	VG9H	DG9H	DG9Q	VG9U	DG9U	DG9M	DG9B	BG1U	AG1H	AG1U	AG2U	AG3S	AG4U	AG5U	JGFU	WGKU	WGDU	BP1U	BP2U	BP3U	BP1N	BP3N	BP3F	BP3S	BP3B	BP3Z	WPDU	ZPLC	Other		
1	WT																				3		3									
2	WT																				1		1									
3																																
4																																
5	WT																			1			1									
6	WT																			1			1									
7																																
8																																
9																																
10																																
11																																
12																																

Container Codes

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

Plastic	
BP1B	1L NAOH plastic
BP1N	1L HNO3 plastic
BP1S	1L H2SO4 plastic
BP1U	1L unpreserved plastic
BP1Z	1L NaOH, Zn Acetate
BP2B	500mL NAOH plastic
BP2N	500mL HNO3 plastic
BP2S	500mL H2SO4 plastic
BP2U	500mL unpreserved plastic
BP2Z	500mL NaOH, Zn Acetate
BP3B	250mL NaOH plastic
BP3F	250mL HNO3 plastic - field filtered
BP3N	250mL HNO3 plastic
BP3U	250mL unpreserved plastic
BP3S	250mL H2SO4 plastic
BP3Z	250mL NaOH, Zn Acetate
BP4U	125mL unpreserved plastic
BP4N	125mL HNO3 plastic
BP4S	125mL H2SO4 plastic
WPDU	16oz unpresserved plstic

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

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

Work Order Number: 60487238

Memorandum

December 29, 2025

To:	Project File Rocksmith Geoengineering, LLC	**Project Number:**	23007-25
CC:	Mark Haddock, Jeffrey Ingram		
From:	Valerie Hurt	**Email:**	Valerie.Hurt@Rocksmithgeo.com
RE:	**Data Validation Summary, Labadie Energy Center – LCPA – Data Package 60487238**		

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

- None

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

Company Name: Rocksmith Geoengineering
Project Manager: J. Ingram
Project Name: Ameren LCPB - Verification Sampling
Project Number: 23007-25
Reviewer: V. Hurt
Validation Date: 12/29/2025

Laboratory: Pace Analytical
SDG #: 60487238
Analytical Method (type and no.): EPA 300.0 (Anions), EPA 200.7 (Metals)
Matrix: ☐ Air ☐ Soil/Sed. ■ Water ☐ Waste ☐ _____
Sample Names L-LMW-1S, L-LMW-3S, L-LMW-DUP-1, and L-LMW-FB-1

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

Field Information	YES	NO	NA	COMMENTS
a) Sampling dates noted?	x			12/08/25
b) Sampling team indicated?	x			JTR/JDQ
c) Sample location noted?	x			
d) Sample depth indicated (Soils)?			x	
e) Sample type indicated (grab/composite)?	x			Grab
f) Field QC noted?	x			See Notes
g) Field parameters collected (note types)?	x			pH, Spec Cond, Turb, Temp, DO, ORP
h) Field Calibration within control limits?	x			
i) Notations of unacceptable field conditions/performances from field logs or field notes?		x		
j) Does the laboratory narrative indicate deficiencies?			x	No lab narrative.

Note Deficiencies: _____

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

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

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

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

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

Duplicates	YES	NO	NA	COMMENTS
a) Were field duplicates collected (note original and duplicate sample names)?	☒	☐	☐	L-LMW-DUP-1 @ L-LMW-3S
b) Were field dup. precision criteria met (note RPD)?	☒	☐	☐	
c) Were lab duplicates analyzed (note original and duplicate samples)?	☒	☐	☐	
d) Were lab dup. precision criteria met (note RPD)?	☒	☐	☐	

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

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

Comments/Notes:

QA LEVEL IV - INORGANIC DATA EVALUATION CHECKLIST

Comments/Notes:

Field blank:

L-LMW-FB-1 @ L-LMW-3S: No detections

MS/MSD:

3801998/3801999: MS/MSD % Recovery high for fluoride, RPD OK. Associated with sample -001, result is non-detect, no qualification necessary.

3802000/3802001: MS/MSD % Recovery high for fluoride, RPD OK. Associated with unrelated sample, therefore no qualification necessary.

3802002/3802003: MS/MSD % Recovery high for fluoride, RPD OK. Associated with unrelated sample, therefore no qualification necessary.

QA LEVEL IV - INORGANIC DATA EVALUATION CHECKLIST

Data Qualification:

Sample Name	Constituent(s)	Result	Qualifier	Reason

Signature: _____ Date: 12/29/2025

Appendix B

Alternative Source Demonstration – October-November 2024 Sampling Event

Technical Memoranum

June 20, 2025

To:	Ameren Missouri 1901 Chouteau Ave, St. Louis, MO 63103	**Project Number:**	23007-25
From:	Mark Haddock, P.E., R.G., Jeff Ingram, R.G.	**Email:**	jeff.ingram@rocksmithgeo.com
RE :	**LCPB – Alternative Source Demonstration – October-November 2024 Sampling Event**		

1.0 INTRODUCTION

In accordance with the United States Environmental Protection Agency (EPA) coal combustion residual (CCR) rule (CCR Rule or The Rule), Rocksmith Geoengineering, LLC (Rocksmith) has prepared this Technical Memorandum to show that Statistically Significant Increases (SSIs) identified at Ameren Missouri's (Ameren) Labadie Energy Center (LEC) fly ash surface impoundment (LCPB) are the result from an alternative source and are not related to impacts from LCPB. This LCPB Alternative Source Demonstration (ASD) satisfies the requirements of §257.94(e)(2), which allows the owner or operator to demonstrate that a source other than the CCR Unit has caused an SSI and that the apparent SSI was the result of an alternative source or resulted from errors in sampling, analysis, statistical evaluation, or natural variation in groundwater quality.

2.0 BACKGROUND

The first Detection Monitoring sampling event at the LEC LCPB CCR Unit in Franklin County, Missouri was completed in November 2017. This sampling was completed in accordance with the CCR Rule and SSIs were identified and verified. In February/March 2018, additional drilling and a detailed analysis of results were completed, and it was determined that the SSIs in the CCR Rule groundwater monitoring wells at the LCPB were not caused by impacts from the LCPB. The ASD report for the November 2017 monitoring results and subsequent ASDs indicated that the SSIs observed in the LCPB wells were caused by the adjacent LCPA surface impoundment. This conclusion was supported by lines of evidence (LOEs) as follows.

- Geochemical Signatures
- USEPA FALCON Analysis
- Groundwater Flow Directions
- Construction of the SCPB

Previous ASD reports may be found in the LCPB Annual Groundwater Monitoring and Corrective Action Reports available on Ameren's Publicly available website (https://www.ameren.com/company/environment-and-sustainability/managing-coal-combustion/ccr-compliance-reports).

ASD reports are included in LCPB Annual Groundwater Monitoring and Corrective Action Reports.

3.0 OCTOBER-NOVEMBER 2024 SAMPLING EVENT

A summary of the October-November 2024 sampling results is provided in **Table 1**. As discussed in **Section 2.0**, there are several LOEs presented in the previous ASDs that demonstrate that impacts around the LCPB are caused by the LCPA and not the LCPB. Although both CCR units are now capped and closed with an engineered geomembrane cover system, the same LOEs are still present at the site, and the LCPA is the source of impacts around the LCPB in the October-November 2024 sampling event. The following summarizes the LOEs using current monitoring data through the October-November 2024 sampling event.

- **Geochemical Signatures** - As reflected on the piper diagram provided in **Figure 1**, LCPA porewater has a distinctly different signature than the porewater from the LCPB. Groundwater samples in monitoring wells with SSIs plot on the piper diagrams in a location between the LCPA porewater zone and the background groundwater zone, indicating that well water chemistry is a mixture of unaffected groundwater and groundwater impacted by the LCPA.
- **USEPA FALCON Analysis** – The United States Environmental Protection Agency (USEPA) Fingerprint Analysis of Leachate Contaminants (FALCON) method was used to compare constituent fingerprints from the downgradient monitoring wells with those of background groundwater, LCPB porewater, and LCPA porewater. A Technical Memorandum summarizing the calculations and results is provided in **Appendix A**. An updated calculation using data from the October-November 2024 sampling event was completed and a summary of the results is provided in Table 5 of **Appendix A**. The results indicate that there is strong correlation between the downgradient monitoring wells and both LCPA porewater and background groundwater, while there is low correlation between downgradient monitoring well data and LCPB porewater. These same correlations were found at depth within the alluvial aquifer.
- **Groundwater Flow Direction** - Potentiometric surface mapping from 2018 through 2024 continues to show that, while groundwater flow conditions are variable, net groundwater flow is toward the north and sometimes east and northeast, flowing from the bluffs toward the Missouri River. This supports the conclusion that the unlined LCPA is the source of impacts at the LCPB downgradient monitoring wells because the impacted monitoring wells around the LCPB are located downgradient of the LCPA under some flow conditions.
- **LCPB Construction** - The LCPB was constructed with an engineered liner system consisting of a 60-mil High Density Polyethylene (HDPE) geomembrane liner with a minimum bottom elevation of approximately 460 feet above mean sea level (FT MSL). The low permeability HDPE liner system in the LCPB is a barrier to the migration of CCR-influenced water and provides containment for CCR. The LCPA was built in the early 1970s and is unlined, with a bottom elevation estimated at approximately 410 FT MSL, which is much deeper than the LCPB. In addition to the distinct porewater fingerprint for LCPA relative to LCPB, there are elevated concentrations of CCR indicators in the intermediate and deep zones of groundwater in the alluvial aquifer surrounding the LCPA, as shown in the LCPA Annual Reports. Around the LCPA, impacts are present in the shallow, intermediate (middle), and deep alluvial zones, and are not isolated to the shallow zone, where LCPB impacts would most readily occur. The impacts to the intermediate and deep alluvial zones are most likely from the LCPA, where the base elevation extends into deeper groundwater zones in the aquifer.

In summary, groundwater chemistry, porewater chemistry fingerprints, cell construction, and hydrogeological evidence all demonstrate that SSIs reported for the October-November 2024 Sampling Event for the LCPB CCR

Unit were not caused by impacts from the LCPB surface impoundment. The LCPA surface impoundment, located immediately adjacent to the LCPB, is the source of the SSIs in the LCPB groundwater monitoring well network.

4.0 CERTIFICATION STATEMENT

This *LCPB – Alternative Source Demonstration – October-November 2024 Sampling Event 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 Rocksmith Geoengineering, LLC.

I hereby certify that this *LCPB – Alternative Source Demonstration – October-November 2024 Sampling Event* located at 226 Labadie Power Plant Road, Labadie, Missouri 63055 has been prepared to meet the requirements of 40 CFR §257.94(e)(2).

Rocksmith Geoengineering, LLC

_____

Mark Haddock, P.E., R.G.
Principal Engineer, Senior Partner

Attachments: Table 1 – October-November 2024 Detection Monitoring Results
Figure 1 – LCPB Piper Diagram for October-November 2024
Appendix A – FALCON Analysis Calculation Package

Tables

Table 1
October-November 2024 Detection Monitoring Results
LCPB Surface Impoundment
Labadie Energy Center, Franklin County, MO

			BACKGROUND		GROUNDWATER MONITORING WELLS							
ANALYTE	UNITS	PREDICTION LIMITS	BMW-1S	BMW-2S	LMW-1S	LMW-2S	LMW-3S	LMW-4S	LMW-5S	LMW-6S	LMW-7S	LMW-8S
October-November 2024 Detection Monitoring Event												
DATE	NA	NA	10/28/2024	10/28/2024	10/30/2024	11/1/2024	10/28/2024	10/30/2024	10/31/2024	10/29/2024	10/29/2024	10/29/2024
pH	SU	6.416-7.307	6.47	6.92	6.93	9.56	6.88	6.77	6.75	6.66	6.79	6.97
BORON, TOTAL	µg/L	141.2	84.8 J	45.4 J	772	3,490	4,120	2,950	88.8 J	761	4,870	721
CALCIUM, TOTAL	µg/L	221,000	202,000	121,000	99,700	73,800	99,000	168,000	152,000 J	174,000	162,000	82,300
CHLORIDE, TOTAL	mg/L	7.564	4.5	1.8	2.1	20.0	23.3	86.4	3.5 J	3.5	9.2	1.2
FLUORIDE, TOTAL	mg/L	0.2154	ND	ND	ND	ND	0.29	ND	ND	ND	ND	0.21
SULFATE, TOTAL	mg/L	75.18	95.1	13.7	22.5	326 J	198.0	106	7.4	40.3	149	24.7
TOTAL DISSOLVED SOLIDS	mg/L	828	744	436	364	506	667	777	453	645	697	349

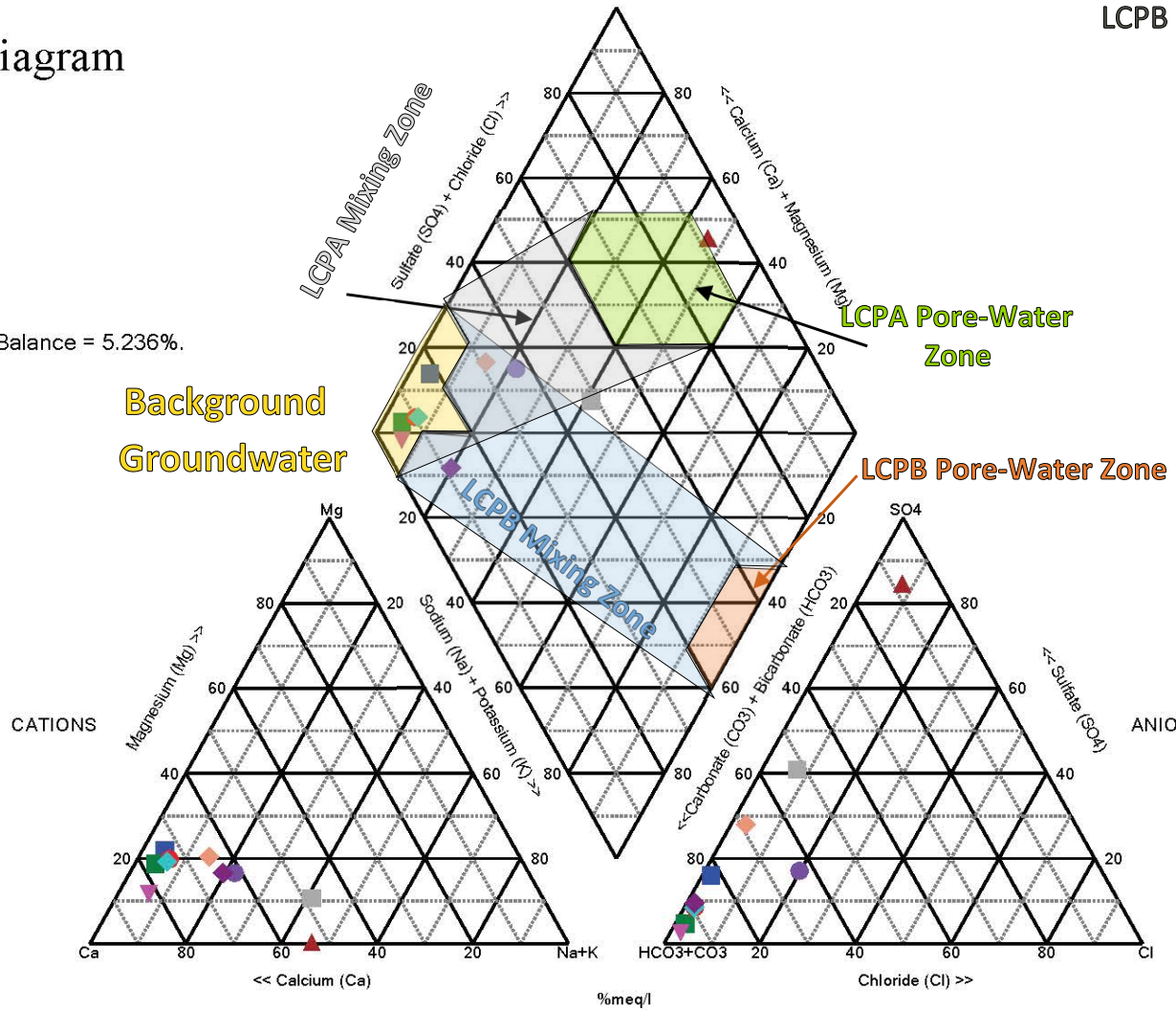
NOTES:
1. Unit Abbreviations: µg/L - micrograms per liter, mg/L - milligrams per liter, SU - standard units.
2. J - Result is an estimated value.
3. NA - Not applicable.
4. ND - Constituent was analyzed but was not detected above the Method Detection Limit (MDL) or the adjusted Practical Quantitation 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. There were no new initial exceedances for the October-November 2024 event; therefore, no Verification Sampling was necessary.

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

Figures

Piper Diagram

Cation-Anion Balance = 5.236%.



LCPB CCR Rule Monitoring Wells

- L-BMW-1S* 2024-10-28
- L-BMW-2S* 2024-10-28
- L-LMW-1S 2024-10-30
- L-LMW-2S 2024-11-01
- L-LMW-3S 2024-10-28
- L-LMW-4S 2024-10-30
- L-LMW-5S 2024-10-31
- L-LMW-6S 2024-10-29
- L-LMW-7S 2024-10-29
- L-LMW-8S 2024-10-29

Notes
1) Piper diagram generated using Sanitas Software.
2) %mEq/l – milliequivalents per liter

CLIENT/PROJECT				TITLE		
AMEREN MISSOURI LABADIE ENERGY CENTER				LCPB Piper Diagram for October-November 2024		
DRAWN	CHECKED	REVIEWED	DATE	Rev No.	JOB NO.	FIGURE
JTR	GTM	MNH	2025-05-21	NA	23007-25	1

ROCKSMITH GEOENGINEERING

Appendix A
FALCON Analysis Calculation Package

Technical Memorandum

June 20, 2025

To:	Ameren Missouri 1901 Chouteau Ave, St. Louis, MO 63103	**Project Number:**	23007-25
From:	Mark Haddock, P.E., R.G., Jeff Ingram, R.G.	**Email:**	jeff.ingram@rocksmithgeo.com
RE:	**Appendix A – LCPB FALCON Analysis Calculation Package**		

1.0 OBJECTIVE

The objective of this analysis is to determine if there is a correlation between the ion ratio fingerprints in the LCPA pore-water, LCPB pore-water or background groundwater with the compliance monitoring well samples in the alluvial aquifer at the Labadie Energy Center (LEC).

2.0 FINGERPRINT ANALYSIS OF LEACHATE CONTAMINANTS (FALCON) METHOD

The Fingerprint Analysis of Leachate Contaminants (FALCON) method was developed in 2004 by the United States Environmental Protection Agency (USEPA) as a tool to identify the source of impacts within groundwater. The FALCON method compiles ion ratios for multiple constituents in order to develop a distinctive chemical fingerprint for each possible contaminant source and un-impacted background groundwater. These fingerprints were correlated to well sample data downgradient of the sources and are used to characterize the source of the contaminant plume. For this calculation, background groundwater quality is derived from samples collected in background wells located approximately 2 to 2.5 miles west of the LCPB. Source data are from pore-water collected from piezometers within the LCPA and LCPB. Fingerprints from these three sources (background groundwater, LCPA pore-water and LCPB pore-water) were compared to data from alluvial aquifer monitoring well sampling locations at the LEC. Data from the LCPA and LCPB pore-water are from the November 2017 Alternative Source Demonstration (ASD) for the LCPB, which is available in the 2019 Annual Report for the LCPB. Data from the background and compliance monitoring wells are from the November 2024 sampling event.

3.0 SELECTION OF CONSTITUENTS TO USE

The first step in completing the FALCON analysis was to select a subset of constituents that are representative of the potential source areas. When selecting these constituents, it is important to include constituents that are mobile in the hydrogeological environment and that can uniquely characterize each water type. Constituents selected included major cation and anion constituents that represent groundwater chemistry and key indicators of CCR impacts. Values of the three different sources were compared to see which constituents fit the criteria. A summary table of the values used for the three sources is provided in **Table 1**. The following constituents were selected to complete the FALCON analysis:

- Alkalinity
- Total Boron
- Total Calcium

- Total Chloride
- Total Fluoride
- Total Iron
- Total Magnesium
- Total Manganese
- Total Potassium
- Total Sodium
- Total Sulfate

4.0 DATA TABULATION AND NORMALIZATION

Once the constituents were selected, the data were tabulated, normalized, and a graphical presentation of the fingerprints was produced. The data used, along with the normalization percentages, are provided in **Table 1** for the three different sources (background groundwater, LCPA pore-water, and LCPB pore-water) as well as for each monitoring well evaluated. Correlations were then completed between the different sources to determine each source's reproducibility. Tables displaying the FALCON correlations are provided below in **Tables 2-4**.

Table 2 – Background Groundwater Correlations

Background Groundwater Correlations				
Well ID	*L-BMW-1D*	*L-BMW-1S*	*L-BMW-2D*	*L-BMW-2S*
L-BMW-1D				
L-BMW-1S	99.4%			
L-BMW-2D	99.7%	99.9%		
L-BMW-2S	99.8%	99.3%	99.7%	
Average Fingerprint Reproducibility				99.6%

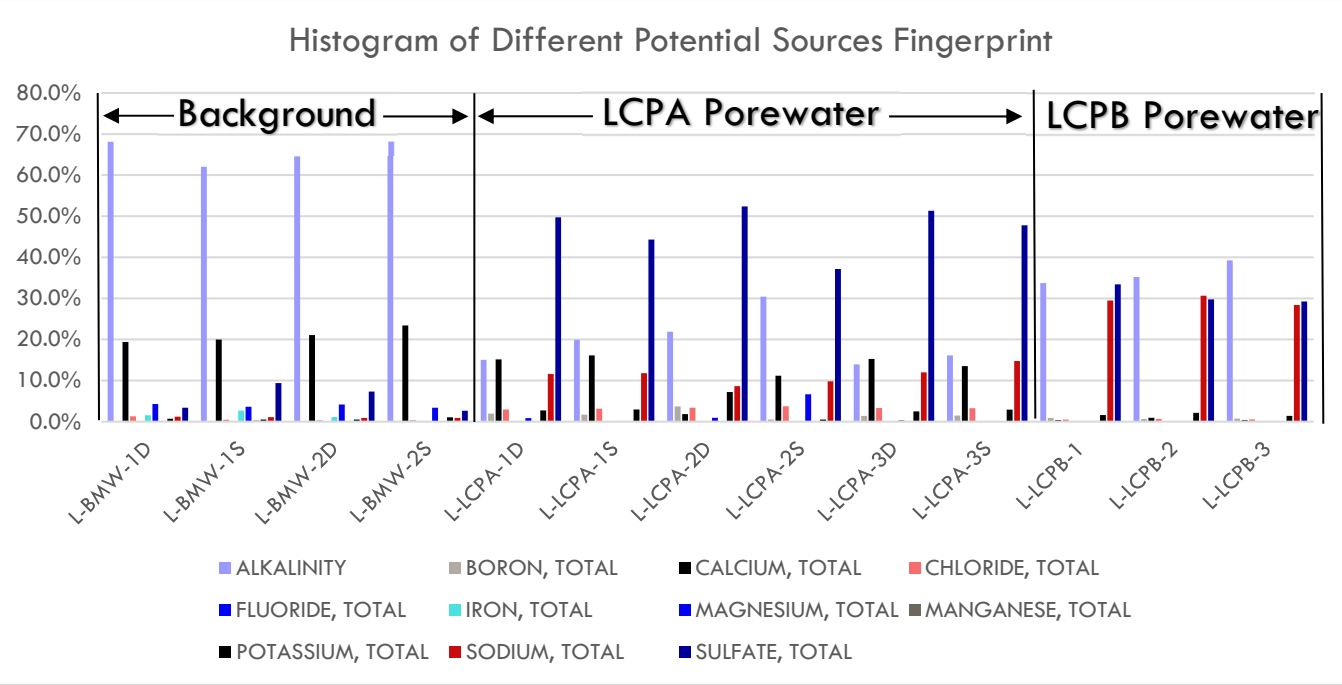
Table 3- LCPB Pore-water Correlations

LCPB Pore-water Correlations			
Well ID	*L-LCPB-1*	*L-LCPB-2*	*L-LCPB-3*
L-LCPB-1			
L-LCPB-2	99.6%		
L-LCPB-3	98.9%	99.5%	
Average Fingerprint Reproducibility			99.4%

Table 4 – LCPA Pore-water Correlations

LCPA Pore-Water Correlations						
Well ID	*L-LCPA-1D*	*L-LCPA-1S*	*L-LCPA-2D*	*L-LCPA-2S*	*L-LCPA-3D*	*L-LCPA-3S*
L-LCPA-1D						
L-LCPA-1S	98.9%					
L-LCPA-2D	94.5%	93.8%				
L-LCPA-2S	88.9%	93.3%	90.0%			
L-LCPA-3D	99.9%	98.5%	94.1%	87.6%		
L-LCPA-3S	99.6%	99.0%	94.8%	89.8%	99.5%	
Average Fingerprint Reproducibility						94.8%
Average Fingerprint Reproducibility with LCPA-1S, LCPA-1D, LCPA-2D, LCPA-3S and LCPA-3D						97.2%

Additionally, **Figure 1** below displays a histogram of the different source water normalizations.



As described in previous ASDs for the LCPB, samples collected within the LCPA unit displayed less correlation due to the spatial variation of sample locations and differing CCR materials present in sample intervals. The LCPA has been in operation since the 1970s and there have been many changes to CCR received by the LCPA during this time. These include changes in types of coal used onsite, types of CCR placed in the facility (pre-LCPB construction vs. post-LCPB construction), and types of CCR placed within the unit. While not as evident using the constituents available for this evaluation, no Appendix IV constituents were tested because LCPB is under detection monitoring. When compared with the 2018 evaluation, LCPA-2S still appears to have a slightly weaker correlation (<90% in this case) and was evaluated separately. Separating the LCPA into two potential sources (one for LCPA-1S, -1D, -2D, -3S, -3D and one for LCPA-2S) more accurately reflects the conditions within the LCPA due to its spatial variation of CCR management and constituent concentrations.

5.0 CORRELATING DOWNGRADIENT GROUNDWATER SAMPLES WITH SOURCES

A correlation between the average groundwater concentration and the different source waters was completed to demonstrate which source better correlates with each alluvial aquifer groundwater sample. Results from this correlation are provided in **Table 5** and the values used for this correlation are provided in **Table 1**. The results demonstrate that groundwater in the alluvial aquifer correlates better with the LCPA pore-water or background groundwater than it does with the LCPB pore-water. In no case did downgradient groundwater correlate better with the LCPB pore-water than with the LCPA pore-water or background groundwater.

Table 5 – Summary of October-November 2024 USEPA FALCON Evaluation

Piezometer or Well ID	Percent Correlation				Highest (Best) Correlation
	Background Groundwater	LCPB Average	LCPA Average (LCPA-1S/D, LCPA-2D & LCPA-3S/D)	LCPA-2S	
L-BMW-1D	100%	56%	30%	59%	Background
L-BMW-1S	100%	60%	39%	66%	Background
L-BMW-2D	100%	58%	36%	64%	Background
L-BMW-2S	100%	54%	29%	58%	Background
L-AM-1D	39%	79%	99%	95%	LCPA-Average
L-AM-1S	98%	55%	27%	55%	Background
L-AMW-8	27%	75%	99%	91%	LCPA-Average
L-LMW-1S	100%	57%	32%	61%	Background
L-LMW-2S	7%	61%	95%	81%	LCPA-Average
L-LMW-3S	85%	87%	75%	92%	LCPA-2S
L-LMW-4S	98%	66%	45%	70%	Background
L-LMW-5S	100%	53%	28%	56%	Background
L-LMW-6S	100%	57%	33%	61%	Background
L-LMW-7S	97%	70%	54%	78%	Background
L-LMW-8S	100%	62%	34%	62%	Background
L-MW-24	100%	57%	33%	61%	Background
L-MW-26	100%	55%	31%	60%	Background
L-MW-33(D)	9%	60%	95%	82%	LCPA-Average
L-MW-34(D)	43%	78%	98%	97%	LCPA-Average
L-MW-35(D)	94%	79%	63%	85%	Background
L-S-1	100%	55%	30%	58%	Background
L-TMW-1	100%	59%	35%	63%	Background
L-TMW-2	100%	60%	39%	66%	Background
L-TMW-3	100%	56%	32%	61%	Background
L-TP-1D	100%	56%	29%	59%	Background
L-TP-2D	82%	84%	80%	95%	LCPA-2S
L-TP-2M	80%	85%	82%	95%	LCPA-2S
L-TP-3D	15%	68%	97%	86%	LCPA-Average
L-TP-3M	92%	79%	67%	87%	Background
L-TP-4D	85%	77%	77%	93%	LCPA-2S
L-UMW-1D	100%	57%	30%	59%	Background
L-UMW-2D	96%	72%	56%	80%	Background
L-UMW-3D	21%	67%	98%	88%	LCPA-Average
L-UMW-4D	15%	71%	97%	86%	LCPA-Average
L-UMW-5D	15%	66%	97%	85%	LCPA-Average
L-UMW-6D	21%	75%	98%	88%	LCPA-Average
L-UMW-7D	100%	57%	29%	58%	Background
L-UMW-8D	99%	55%	25%	55%	Background
L-UMW-9D	99%	54%	24%	54%	Background

Notes
1) Values display percent correlation between data collected in October-November 2024 for each monitoring well and the LPCA, LCPB or background fingerprints.
2) The higher values are shaded darker and indicate better correlation.
3) More information on the calculation of these numbers is provided in Table 1.

Tables

Table 1
Summary of Concentrations Used for FALCON Correlation
LCPB Anternative Source Demonstration
Labadie Energy Center, Franklin County, MO

Analyte	Units	L-BMW-1D	L-BMW-1S	L-BMW-2D	L-BMW-2S	L-AM-1D	L-AM-1S	L-AMW-8
ALKALINITY	mg/L	397	628	457	353	175	599	98.1
BORON, TOTAL	mg/L	0.0712	0.0848	0.0641	0.0454	7.54	0.316	6.89
CALCIUM, TOTAL	mg/L	113	202	149	121	110	187	67.2
CHLORIDE, TOTAL	mg/L	7.40	4.50	2.20	1.80	55.2	115	30
FLUORIDE, TOTAL	mg/L	0.06	0.06	0.06	0.06	0.06	0.06	0.21
IRON, TOTAL	mg/L	9.06	27	7.95	0.0046	5.73	7.16	2.39
MAGNESIUM, TOTAL	mg/L	24.9	36.7	29.5	17.6	13.1	37.8	11.9
MANGANESE, TOTAL	mg/L	0.56	2.57	0.31	0.00340	0.285	1.13	0.327
POTASSIUM, TOTAL	mg/L	3.95	5.04	3.69	5.32	8.56	7.07	5.88
SODIUM, TOTAL	mg/L	7.07	10.9	6.24	4.6	106	49.8	78.1
SULFATE, TOTAL	mg/L	19.7	95.1	51.9	13.7	358	14.90	274
Sum		582.8	1012.0	707.9	517.1	839.5	1019.2	575.0

Analyte	L-BMW-1D	L-BMW-1S	L-BMW-2D	L-BMW-2S	L-AM-1D	L-AM-1S	L-AMW-8
ALKALINITY	68%	62%	65%	68%	21%	59%	17%
BORON, TOTAL	0.012%	0.0084%	0.0091%	0.0088%	0.9%	0.031%	1.2%
CALCIUM, TOTAL	19%	20%	21%	23%	13%	18%	12%
CHLORIDE, TOTAL	1.3%	0.44%	0.31%	0.35%	6.6%	11%	5.2%
FLUORIDE, TOTAL	0.01%	0.0059%	0.0085%	0.012%	0.0071%	0.0059%	0.037%
IRON, TOTAL	1.6%	2.7%	1.1%	0.00088%	0.68%	0.7%	0.42%
MAGNESIUM, TOTAL	4.3%	3.6%	4.2%	3.4%	1.6%	3.7%	2.1%
MANGANESE, TOTAL	0.095%	0.25%	0.044%	0.00066%	0.034%	0.11%	0.057%
POTASSIUM, TOTAL	0.68%	0.5%	0.52%	1%	1%	0.69%	1%
SODIUM, TOTAL	1.2%	1.1%	0.88%	0.89%	13%	4.9%	14%
SULFATE, TOTAL	3.4%	9.4%	7.3%	2.6%	43%	1.5%	48%
Sum	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Notes

1) Values for CCR Rule monitoring wells from November 2024 samples collected for the CCR Rule.
2) mg/L - milligrams per liter.
3) One-half the value of the Method Detection Limit (MDL) is used for non-detect values.

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

Table 1
Summary of Concentrations Used for FALCON Correlation
LCPB Anternative Source Demonstration
Labadie Energy Center, Franklin County, MO

Analyte	Units	L-LMW-1S	L-LMW-2S	L-LMW-3S	L-LMW-4S	L-LMW-5S	L-LMW-6S	L-LMW-7S
ALKALINITY	mg/L	314	41	321	506	415	552	473
BORON, TOTAL	mg/L	0.772	3.49	4.12	2.95	0.0888	0.761	4.87
CALCIUM, TOTAL	mg/L	99.7	73.8	99	168	152	174	162
CHLORIDE, TOTAL	mg/L	2.10	20	23.3	86.4	3.50	3.50	9.2
FLUORIDE, TOTAL	mg/L	0.06	0.06	0.29	0.06	0.06	0.06	0.06
IRON, TOTAL	mg/L	0.663	0.032	10	5.85	0.0341	3.99	2.84
MAGNESIUM, TOTAL	mg/L	16	0.0978	12.8	26.9	12.9	27.2	30.4
MANGANESE, TOTAL	mg/L	0.454	0.0019	1.05	1.54	0.0063	0.566	0.966
POTASSIUM, TOTAL	mg/L	4.33	9.33	6.46	6.83	5.06	6.31	6.82
SODIUM, TOTAL	mg/L	7.7	68.1	92.3	64.8	11	14.3	38.2
SULFATE, TOTAL	mg/L	22.5	326	198	106	7.4	40.3	149
Sum		468.3	541.9	768.3	975.3	607.0	823.0	877.4

Analyte	L-LMW-1S	L-LMW-2S	L-LMW-3S	L-LMW-4S	L-LMW-5S	L-LMW-6S	L-LMW-7S
ALKALINITY	67%	7.6%	42%	52%	68%	67%	54%
BORON, TOTAL	0.16%	0.64%	0.54%	0.3%	0.015%	0.092%	0.56%
CALCIUM, TOTAL	21%	14%	13%	17%	25%	21%	18%
CHLORIDE, TOTAL	0.45%	3.7%	3%	8.9%	0.58%	0.43%	1%
FLUORIDE, TOTAL	0.013%	0.011%	0.038%	0.0062%	0.0099%	0.0073%	0.0068%
IRON, TOTAL	0.14%	0.0059%	1.3%	0.6%	0.0056%	0.48%	0.32%
MAGNESIUM, TOTAL	3.4%	0.018%	1.7%	2.8%	2.1%	3.3%	3.5%
MANGANESE, TOTAL	0.097%	0.00035%	0.14%	0.16%	0.001%	0.069%	0.11%
POTASSIUM, TOTAL	0.92%	1.7%	0.84%	0.7%	0.83%	0.77%	0.78%
SODIUM, TOTAL	1.6%	13%	12%	6.6%	1.8%	1.7%	4.4%
SULFATE, TOTAL	4.8%	60%	26%	11%	1.2%	4.9%	17%
Sum	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Notes

1) Values for CCR Rule monitoring wells from November 2024 samples collected for the CCR Rule.
2) mg/L - milligrams per liter.
3) One-half the value of the Method Detection Limit (MDL) is used for non-detect values.

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

Table 1
Summary of Concentrations Used for FALCON Correlation
LCPB Anternative Source Demonstration
Labadie Energy Center, Franklin County, MO

Analyte	Units	L-LMW-8S	L-MW-24	L-MW-26	L-MW-33(D)	L-MW-34(D)	L-MW-35(D)	L-S-1
ALKALINITY	mg/L	294	377	469	98.1	197	387	495
BORON, TOTAL	mg/L	0.721	0.11	0.0614	8.01	9.19	6.76	0.0937
CALCIUM, TOTAL	mg/L	82.3	124	157	148	110	121	152
CHLORIDE, TOTAL	mg/L	1.20	5.30	17.7	27.2	24	13.3	2.40
FLUORIDE, TOTAL	mg/L	0.21	0.06	0.06	0.06	0.06	0.06	0.06
IRON, TOTAL	mg/L	0.426	0.0371	0.04620	7.09	6.28	5.75	0.0374
MAGNESIUM, TOTAL	mg/L	12.9	24.1	27.6	29.2	25.4	27.5	21.1
MANGANESE, TOTAL	mg/L	0.0712	0.02420	0.0792	0.392	0.291	0.415	0.196
POTASSIUM, TOTAL	mg/L	4.36	5.78	4.9	8.35	7.19	5.47	27.2
SODIUM, TOTAL	mg/L	26.7	7.59	7.53	108	81.9	64.6	5.50
SULFATE, TOTAL	mg/L	24.7	29	28.5	671	376	167	21.5
Sum		447.6	573.0	712.5	1105.4	837.3	798.9	725.1

Analyte	L-LMW-8S	L-MW-24	L-MW-26	L-MW-33(D)	L-MW-34(D)	L-MW-35(D)	L-S-1
ALKALINITY	66%	66%	66%	8.9%	24%	48%	68%
BORON, TOTAL	0.16%	0.019%	0.0086%	0.72%	1.1%	0.85%	0.013%
CALCIUM, TOTAL	18%	22%	22%	13%	13%	15%	21%
CHLORIDE, TOTAL	0.27%	0.92%	2.5%	2.5%	2.9%	1.7%	0.33%
FLUORIDE, TOTAL	0.047%	0.01%	0.0084%	0.0054%	0.0072%	0.0075%	0.0083%
IRON, TOTAL	0.095%	0.0065%	0.0065%	0.64%	0.75%	0.72%	0.0052%
MAGNESIUM, TOTAL	2.9%	4.2%	3.9%	2.6%	3%	3.4%	2.9%
MANGANESE, TOTAL	0.016%	0.0042%	0.011%	0.035%	0.035%	0.052%	0.027%
POTASSIUM, TOTAL	0.97%	1%	0.69%	0.76%	0.86%	0.68%	3.8%
SODIUM, TOTAL	6%	1.3%	1.1%	9.8%	9.8%	8.1%	0.76%
SULFATE, TOTAL	5.5%	5.1%	4%	61%	45%	21%	3%
Sum	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Notes

1) Values for CCR Rule monitoring wells from November 2024 samples collected for the CCR Rule.
2) mg/L - milligrams per liter.
3) One-half the value of the Method Detection Limit (MDL) is used for non-detect values.

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

Table 1
Summary of Concentrations Used for FALCON Correlation
LCPB Anternative Source Demonstration
Labadie Energy Center, Franklin County, MO

Analyte	Units	L-TMW-1	L-TMW-2	L-TMW-3	L-TP-1D	L-TP-2D	L-TP-2M	L-TP-3D
ALKALINITY	mg/L	519	648	384	506	264	275	119
BORON, TOTAL	mg/L	0.121	0.126	0.0894	0.0591	2.44	1.43	9.31
CALCIUM, TOTAL	mg/L	159	216	124	139	102	106	98.8
CHLORIDE, TOTAL	mg/L	3.70	10.30	2.40	3.10	35.7	29.8	31.8
FLUORIDE, TOTAL	mg/L	0.06	0.06	0.06	0.06	0.22	0.06	0.06
IRON, TOTAL	mg/L	0.173	0.334	0.291	8.29	3.98	3.77	4.54
MAGNESIUM, TOTAL	mg/L	41.7	49.4	23.8	34.1	18	16.2	21.1
MANGANESE, TOTAL	mg/L	3.74	3.18	0.693	0.241	0.36	0.467	0.178
POTASSIUM, TOTAL	mg/L	5.9	7.27	5.82	4.14	5.77	6.74	6.98
SODIUM, TOTAL	mg/L	11	13.0	6.08	10.9	64.2	71.8	119
SULFATE, TOTAL	mg/L	55	95.7	27.3	21.5	194	211	532
Sum		799.4	1043.4	574.5	727.4	690.7	722.3	942.8

Analyte	L-TMW-1	L-TMW-2	L-TMW-3	L-TP-1D	L-TP-2D	L-TP-2M	L-TP-3D
ALKALINITY	65%	62%	67%	70%	38%	38%	13%
BORON, TOTAL	0.015%	0.012%	0.016%	0.0081%	0.35%	0.2%	0.99%
CALCIUM, TOTAL	20%	21%	22%	19%	15%	15%	10%
CHLORIDE, TOTAL	0.46%	0.99%	0.42%	0.43%	5.2%	4.1%	3.4%
FLUORIDE, TOTAL	0.0075%	0.0058%	0.01%	0.0082%	0.032%	0.0083%	0.0064%
IRON, TOTAL	0.022%	0.032%	0.051%	1.1%	0.58%	0.52%	0.48%
MAGNESIUM, TOTAL	5.2%	4.7%	4.1%	4.7%	2.6%	2.2%	2.2%
MANGANESE, TOTAL	0.47%	0.3%	0.12%	0.033%	0.052%	0.065%	0.019%
POTASSIUM, TOTAL	0.74%	0.7%	1%	0.57%	0.84%	0.93%	0.74%
SODIUM, TOTAL	1.4%	1.2%	1.1%	1.5%	9.3%	9.9%	13%
SULFATE, TOTAL	6.9%	9.2%	4.8%	3%	28%	29%	56%
Sum	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Notes

1) Values for CCR Rule monitoring wells from November 2024 samples collected for the CCR Rule.
2) mg/L - milligrams per liter.
3) One-half the value of the Method Detection Limit (MDL) is used for non-detect values.

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

Table 1
Summary of Concentrations Used for FALCON Correlation
LCPB Anternative Source Demonstration
Labadie Energy Center, Franklin County, MO

Analyte	Units	L-TP-3M	L-TP-4D	L-UMW-1D	L-UMW-2D	L-UMW-3D	L-UMW-4D	L-UMW-5D
ALKALINITY	mg/L	332	312	556	429	77.1	70.7	83
BORON, TOTAL	mg/L	4.44	6.84	0.427	0.976	9.55	9.93	10.7
CALCIUM, TOTAL	mg/L	118	127	149	148	77.8	66.1	91.2
CHLORIDE, TOTAL	mg/L	25.5	16.1	9.40	42.6	29	26.7	28.8
FLUORIDE, TOTAL	mg/L	0.06	0.06	0.06	0.06	0.06	0.27	0.06
IRON, TOTAL	mg/L	8.84	5.73	20	5.36	0.381	0.231	0.0267
MAGNESIUM, TOTAL	mg/L	24.4	32.5	35.8	28.1	6.38	6.66	0.0924
MANGANESE, TOTAL	mg/L	1.39	0.352	0.449	0.619	0.168	0.279	0.0114
POTASSIUM, TOTAL	mg/L	5.68	4.99	6.17	7.57	8.2	9.14	13.9
SODIUM, TOTAL	mg/L	55.8	28.6	19.5	49.5	58.4	91.5	84.4
SULFATE, TOTAL	mg/L	164	221	27.4	150	281	296	380
Sum		740.1	755.2	824.2	861.8	548.0	577.5	692.2

Analyte	L-TP-3M	L-TP-4D	L-UMW-1D	L-UMW-2D	L-UMW-3D	L-UMW-4D	L-UMW-5D
ALKALINITY	45%	41%	67%	50%	14%	12%	12%
BORON, TOTAL	0.6%	0.91%	0.052%	0.11%	1.7%	1.7%	1.5%
CALCIUM, TOTAL	16%	17%	18%	17%	14%	11%	13%
CHLORIDE, TOTAL	3.4%	2.1%	1.1%	4.9%	5.3%	4.6%	4.2%
FLUORIDE, TOTAL	0.0081%	0.0079%	0.0073%	0.007%	0.011%	0.047%	0.0087%
IRON, TOTAL	1.2%	0.76%	2.4%	0.62%	0.07%	0.04%	0.0039%
MAGNESIUM, TOTAL	3.3%	4.3%	4.3%	3.3%	1.2%	1.2%	0.013%
MANGANESE, TOTAL	0.19%	0.047%	0.054%	0.072%	0.031%	0.048%	0.0016%
POTASSIUM, TOTAL	0.77%	0.66%	0.75%	0.88%	1.5%	1.6%	2%
SODIUM, TOTAL	7.5%	3.8%	2.4%	5.7%	11%	16%	12%
SULFATE, TOTAL	22%	29%	3.3%	17%	51%	51%	55%
Sum	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Notes

1) Values for CCR Rule monitoring wells from November 2024 samples collected for the CCR Rule.
2) mg/L - milligrams per liter.
3) One-half the value of the Method Detection Limit (MDL) is used for non-detect values.

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

Table 1
Summary of Concentrations Used for FALCON Correlation
LCPB Anternative Source Demonstration
Labadie Energy Center, Franklin County, MO

Analyte	Units	L-UMW-6D	L-UMW-7D	L-UMW-8D	L-UMW-9D	L-LCPA-1D	L-LCPA-1S	L-LCPA-2D
ALKALINITY	mg/L	144	380	123	439	77.6	120	128
BORON, TOTAL	mg/L	9.34	0.808	0.325	0.0769	10.0	10.3	21.7
CALCIUM, TOTAL	mg/L	117	101	31.7	116	78.2	97.1	10.6
CHLORIDE, TOTAL	mg/L	21.9	7.60	1.10	27.6	15.2	18.9	19.8
FLUORIDE, TOTAL	mg/L	0.06	0.06	0.17	0.06	0.20	0.088	0.14
IRON, TOTAL	mg/L	0.566	10.2	4.47	24.2	0.178	0.138	0.0869
MAGNESIUM, TOTAL	mg/L	2.99	17.8	7.53	30.4	4.47	0.184	5.43
MANGANESE, TOTAL	mg/L	0.326	1.11	0.198	0.394	0.00410	0.00320	0.00250
POTASSIUM, TOTAL	mg/L	14.8	3.86	3.13	4.11	14.0	17.8	42.1
SODIUM, TOTAL	mg/L	156	13.7	4.4	14.1	60.0	71.1	50.5
SULFATE, TOTAL	mg/L	487	12.6	0.275	0.61	257	267	306
Sum		954.0	548.7	176.3	656.6	516.9	602.6	584.4

Analyte	L-UMW-6D	L-UMW-7D	L-UMW-8D	L-UMW-9D	L-LCPA-1D	L-LCPA-1S	L-LCPA-2D
ALKALINITY	15%	69%	70%	67%	15%	20%	22%
BORON, TOTAL	0.98%	0.15%	0.18%	0.012%	1.9%	1.7%	3.7%
CALCIUM, TOTAL	12%	18%	18%	18%	15%	16%	1.8%
CHLORIDE, TOTAL	2.3%	1.4%	0.62%	4.2%	2.9%	3.1%	3.4%
FLUORIDE, TOTAL	0.0063%	0.011%	0.096%	0.0091%	0.039%	0.015%	0.024%
IRON, TOTAL	0.059%	1.9%	2.5%	3.7%	0.034%	0.023%	0.015%
MAGNESIUM, TOTAL	0.31%	3.2%	4.3%	4.6%	0.86%	0.031%	0.93%
MANGANESE, TOTAL	0.034%	0.2%	0.11%	0.06%	0.00079%	0.00053%	0.00043%
POTASSIUM, TOTAL	1.6%	0.7%	1.8%	0.63%	2.7%	3%	7.2%
SODIUM, TOTAL	16%	2.5%	2.5%	2.1%	12%	12%	8.6%
SULFATE, TOTAL	51%	2.3%	0.16%	0.093%	50%	44%	52%
Sum	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Notes

1) Values for CCR Rule monitoring wells from November 2024; Values for pore-water samples from LCPB ASD Investigation collected in February-March 2018.

2) mg/L - milligrams per liter.

3) One-half the value of the Method Detection Limit (MDL) is used for non-detect values.

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

Table 1
Summary of Concentrations Used for FALCON Correlation
LCPB Anternative Source Demonstration
Labadie Energy Center, Franklin County, MO

Analyte	Units	L-LCPA-2S	L-LCPA-3D	L-LCPA-3S	L-LCPB-1	L-LCPB-2	L-LCPB-3
ALKALINITY	mg/L	208	80.2	91.8	1070	861	1340
BORON, TOTAL	mg/L	3.36	8.10	8.44	28.2	14.8	25.7
CALCIUM, TOTAL	mg/L	76.5	87.7	76.9	11.4	22.6	11.4
CHLORIDE, TOTAL	mg/L	25.5	18.9	18.6	15.6	16.2	18.4
FLUORIDE, TOTAL	mg/L	0.170	0.160	0.160	2.40	1.00	1.90
IRON, TOTAL	mg/L	0.0279	0.122	0.112	0.0273	0.129	0.384
MAGNESIUM, TOTAL	mg/L	45.5	1.54	0.445	0.0844	0.0874	0.386
MANGANESE, TOTAL	mg/L	0.0392	0.00230	0.00250	0.00250	0.00250	0.00230
POTASSIUM, TOTAL	mg/L	3.54	14.2	16.6	51.0	52.6	48.2
SODIUM, TOTAL	mg/L	67.2	69.0	84.0	935	750	969
SULFATE, TOTAL	mg/L	254	295	272	1060	728	999
Sum		683.8	574.9	569.1	3173.7	2446.4	3414.4

Analyte	L-LCPA-2S	L-LCPA-3D	L-LCPA-3S	L-LCPB-1	L-LCPB-2	L-LCPB-3
ALKALINITY	30%	14%	16%	34%	35%	39%
BORON, TOTAL	0.49%	1.4%	1.5%	0.89%	0.6%	0.75%
CALCIUM, TOTAL	11%	15%	14%	0.36%	0.92%	0.33%
CHLORIDE, TOTAL	3.7%	3.3%	3.3%	0.49%	0.66%	0.54%
FLUORIDE, TOTAL	0.025%	0.028%	0.028%	0.076%	0.041%	0.056%
IRON, TOTAL	0.0041%	0.021%	0.02%	0.00086%	0.0053%	0.011%
MAGNESIUM, TOTAL	6.7%	0.27%	0.078%	0.0027%	0.0036%	0.011%
MANGANESE, TOTAL	0.0057%	0.0004%	0.00044%	0.000079%	0.0001%	0.000067%
POTASSIUM, TOTAL	0.52%	2.5%	2.9%	1.6%	2.2%	1.4%
SODIUM, TOTAL	9.8%	12%	15%	29%	31%	28%
SULFATE, TOTAL	37%	51%	48%	33%	30%	29%
Sum	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Notes

1) Values for CCR Rule monitoring wells from November 2024; Values for pore-water samples from LCPB ASD Investigation collected in February-March 2018.

2) mg/L - milligrams per liter.

3) One-half the value of the Method Detection Limit (MDL) is used for non-detect values.

Appendix C

Alternative Source Demonstration – April 2025 Sampling Event

Technical Memoranum

December 9, 2025

To:	Ameren Missouri 1901 Chouteau Ave, St. Louis, MO 63103	**Project Number:**	23007-25
From:	Mark Haddock, P.E., R.G., Jeff Ingram, R.G., Grant Morey, R.G.	**Email:**	jeff.ingram@rocksmithgeo.com
RE :	**LCPB – Alternative Source Demonstration – April 2025 Sampling Event**		

1.0 INTRODUCTION

In accordance with the United States Environmental Protection Agency (USEPA) coal combustion residual (CCR) rule (CCR Rule or The Rule), Rocksmith Geoengineering, LLC (Rocksmith) has prepared this Technical Memorandum to show that Statistically Significant Increases (SSIs) identified at Ameren Missouri's (Ameren) Labadie Energy Center (LEC) fly ash surface impoundment (LCPB) are the result from an alternative source and are not related to impacts from LCPB. This LCPB Alternative Source Demonstration (ASD) satisfies the requirements of §257.94(e)(2), which allows the owner or operator to demonstrate that a source other than the CCR Unit has caused an SSI and that the apparent SSI was the result of an alternative source or resulted from errors in sampling, analysis, statistical evaluation, or natural variation in groundwater quality.

2.0 BACKGROUND

The first Detection Monitoring sampling event at the LEC LCPB CCR Unit in Franklin County, Missouri was completed in November 2017. This sampling was completed in accordance with the CCR Rule and SSIs were identified and verified. In February/March 2018, additional drilling and a detailed analysis of results were completed, and it was determined that the SSIs in the CCR Rule groundwater monitoring wells at the LCPB were not caused by impacts from the LCPB. The ASD report for the November 2017 monitoring results and subsequent ASDs indicated that the SSIs observed in the LCPB wells were caused by the adjacent LCPA surface impoundment. This conclusion was supported by lines of evidence (LOEs) as follows.

- Geochemical Signatures
- USEPA FALCON Analysis
- Groundwater Flow Directions
- Construction of the SCPB

Previous ASD reports may be found in the LCPB Annual Groundwater Monitoring and Corrective Action Reports available on Ameren's Publicly available website (https://www.ameren.com/company/environment-and-sustainability/managing-coal-combustion/ccr-compliance-reports).

3.0 APRIL 2025 SAMPLING EVENT

A summary of the April 2025 detection monitoring and July 2025 verification sampling results is provided in **Table 1**. As discussed in **Section 2.0**, there are several LOEs presented in the previous ASDs that demonstrate that impacts around the LCPB are caused by the LCPA and not the LCPB. Although both CCR units are now capped and closed with an engineered geomembrane cover system, the same LOEs are still present at the site, and the LCPA is the source of impacts around the LCPB observed in the April 2025 sampling event. The following summarizes the LOEs using current monitoring data through the April 2025 sampling event.

- **Geochemical Signatures** - As reflected on the piper diagram provided in **Figure 1**, LCPA porewater has a distinctly different signature than the porewater from the LCPB. Groundwater samples in monitoring wells with SSIs plot on the piper diagrams generally in a location between the LCPA porewater zone and the background groundwater zone, indicating that well water chemistry is largely a mixture of unaffected groundwater and groundwater impacted by the LCPA.

- **USEPA FALCON Analysis** – The USEPA Fingerprint Analysis of Leachate Contaminants (FALCON) method was used to compare constituent fingerprints from the downgradient monitoring wells with those of background groundwater, LCPB porewater, and LCPA porewater. A Technical Memorandum summarizing the calculations and results is provided in **Appendix A**. An updated calculation using data from the April 2025 sampling event was completed and a summary of the results is provided in Table 5 of **Appendix A**. The results indicate that there is strong correlation between the downgradient monitoring wells and both LCPA porewater and background groundwater, while there is low correlation between downgradient monitoring well data and LCPB porewater. These same correlations were found at depth within the alluvial aquifer. Of note on **Table 5**, L-UMW- D is not included in the LCPB monitoring network and is screened in the deep alluvial aquifer, below the shallow wells monitoring the LCPB. This well exhibits low correlations between background groundwater and each porewater source.

- **Groundwater Flow Direction** - Potentiometric surface mapping from 2018 through 2025 continues to show that, while groundwater flow conditions are variable, net groundwater flow is toward the north and occasionally east-northeast, flowing from the bluffs toward the Missouri River. The LCPB is located directly adjacent to and northeast of the unlined LCPA and is downgradient to the LCPA under some flow conditions. Groundwater flow patterns at the LEC support the conclusion that the unlined LCPA is the source of SSIs at the LCPB downgradient monitoring wells.

- **LCPB Construction** - The LCPB was constructed with an engineered liner system consisting of a 60-mil High Density Polyethylene (HDPE) geomembrane liner with a minimum bottom elevation of approximately 460 feet above mean sea level (FT MSL). The low permeability HDPE liner system in the LCPB is a barrier to the migration of CCR-influenced water and provides containment for CCR. The LCPA was built in the early 1970s and is unlined, with a bottom elevation estimated at approximately 410 FT MSL, which is much deeper than the LCPB. In addition to the distinct porewater fingerprint for LCPA relative to LCPB, there are elevated concentrations of CCR indicators in the intermediate and deep zones of groundwater in the alluvial aquifer surrounding the LCPA, as shown in the LCPA Annual Reports. Around the LCPA, impacts are present in the shallow, intermediate (middle), and deep alluvial zones, and are not isolated to the shallow zone, where LCPB impacts would most readily occur. The impacts to the intermediate and deep alluvial zones are most likely from the LCPA, where the base elevation extends into deeper groundwater zones in the aquifer.

In summary, groundwater chemistry, porewater chemistry fingerprints, cell construction, and hydrogeological evidence all demonstrate that SSIs reported for the April 2025 Sampling Event for the LCPB CCR Unit were not

caused by impacts from the LCPB surface impoundment. The LCPA surface impoundment, located immediately adjacent to the LCPB, is the source of the SSIs in the LCPB groundwater monitoring well network.

4.0 CERTIFICATION STATEMENT

This *LCPB – Alternative Source Demonstration – April 2025 Sampling Event 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 Rocksmith Geoengineering, LLC.

I hereby certify that this *LCPB – Alternative Source Demonstration – April 2025 Sampling Event* located at 226 Labadie Power Plant Road, Labadie, Missouri 63055 has been prepared to meet the requirements of 40 CFR §257.94(e)(2).

Rocksmith Geoengineering, LLC

_____

Mark Haddock, P.E., R.G.
Principal Engineer, Senior Partner

Attachments: Table 1 – April 2025 Detection Monitoring Results
Figure 1 – LCPB Piper Diagram for April 2025
Appendix A – FALCON Analysis Calculation Package

Tables

Table 1
April 2025 Detection Monitoring Results
LCPB Surface Impoundment
Labadie Energy Center, Franklin County, MO

			BACKGROUND		GROUNDWATER MONITORING WELLS							
ANALYTE	UNITS	PREDICTION LIMITS	BMW-1S	BMW-2S	LMW-1S	LMW-2S	LMW-3S	LMW-4S	LMW-5S	LMW-6S	LMW-7S	LMW-8S
April 2025 Detection Monitoring Event												
DATE	NA	NA	4/24/2025	4/24/2025	4/29/2025	4/25/2025	4/25/2025	4/28/2025	4/28/2025	4/30/2025	4/30/2025	4/30/2025
pH	SU	6.423-7.308	6.98	7.26	6.95	9.31	7.61	6.96	6.67	6.85	6.85	7.24
BORON, TOTAL	µg/L	138	103	56.7 J	16.4 J*	3,660	3,830	7,390	55.2 J	299	5,200	647
CALCIUM, TOTAL	µg/L	221,000	204,000	143,000	ND*	66,600	72,600	117,000	165,000	95,200	81,100	64,300
CHLORIDE, TOTAL	mg/L	9.745	7.2	3.5	1.4	17.7	29.5	35.1	2.7 J	1.5	9.3	1.5
FLUORIDE, TOTAL	mg/L	0.23	ND	ND	0.26	ND	0.15 J	ND	ND	0.25	0.17 J	0.39
SULFATE, TOTAL	mg/L	83.55	77.8	71.6	14.1	256	233	214	9.3	15.4	125	15.6
TOTAL DISSOLVED SOLIDS	mg/L	831	831	531	295	490	589	740	520	370	498	294
July 2025 Verification Sampling Event												
DATE	NA	NA			7/9/2025		7/8/2025			7/8/2025		7/8/2025
pH	SU	6.423-7.308					7.27					
BORON, TOTAL	µg/L	138										
CALCIUM, TOTAL	µg/L	221,000										
CHLORIDE, TOTAL	mg/L	9.745										
FLUORIDE, TOTAL	mg/L	0.23			0.19 J					0.13 J		0.32
SULFATE, TOTAL	mg/L	83.55										
TOTAL DISSOLVED SOLIDS	mg/L	831										

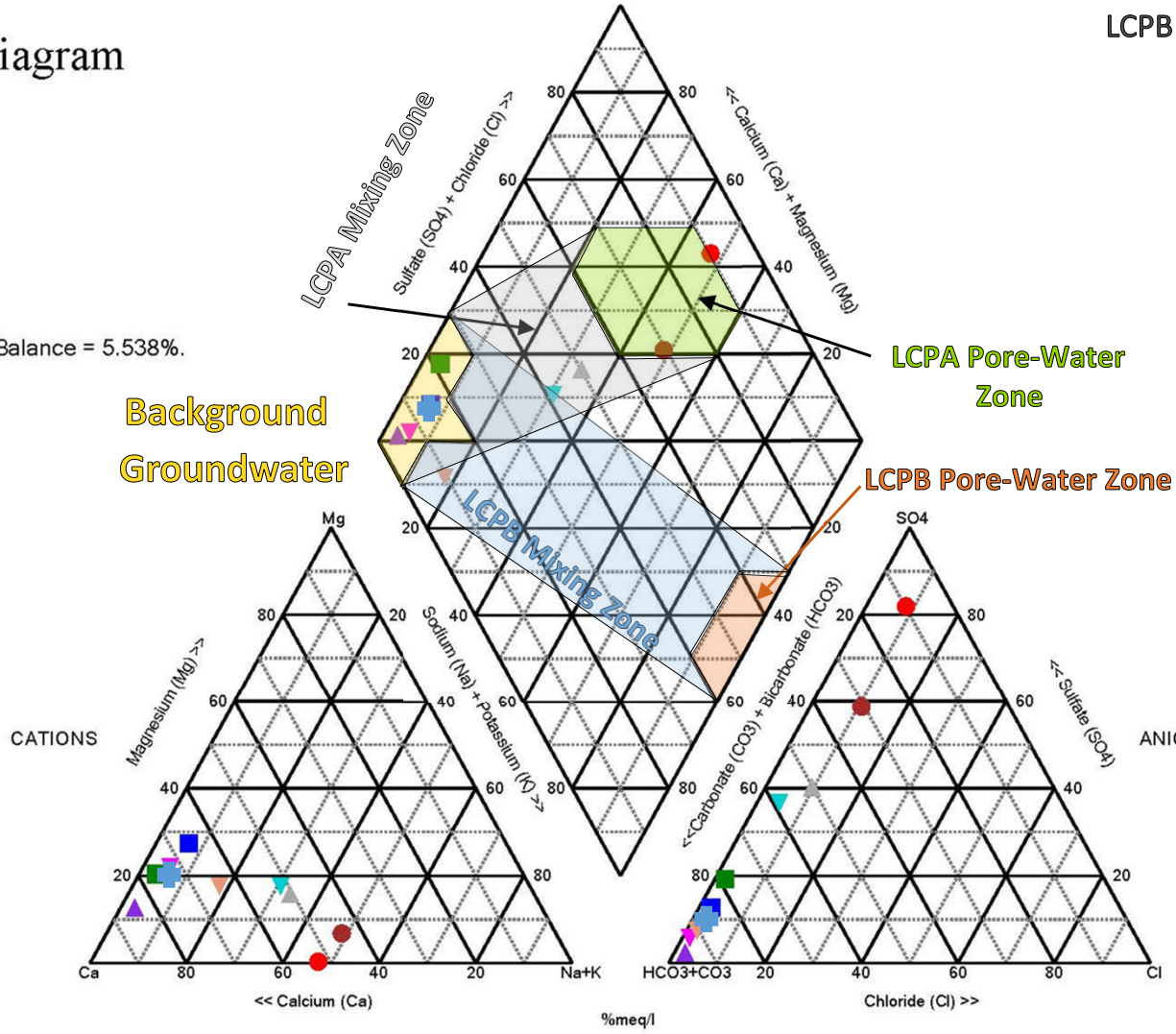
NOTES:
1. Unit Abbreviations: µg/L - micrograms per liter, mg/L - milligrams per liter, SU - standard units.
2. J - Result is an estimated value.
3. NA - Not applicable.
4. ND - Constituent was analyzed but was not detected above the Method Detection Limit (MDL) or the adjusted Practical Quantitation 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. * - Metals results at LMW-1S were unusually low compared to historical results at this well. These results are considered outliers due to laboratory error.

Prepared By: JTR
Checked By: JDQ
Reviewed By: JSI

Figures

Piper Diagram

Cation-Anion Balance = 5.538%.



LCPB CCR Rule Monitoring Wells

- L-BMW-1S* 2025-04-24
- L-BMW-2S* 2025-04-24
- L-LMW-2S 2025-04-25
- L-LMW-3S 2025-04-25
- L-LMW-4S 2025-04-28
- L-LMW-5S 2025-04-28
- L-LMW-6S 2025-04-30
- L-LMW-7S 2025-04-30
- L-LMW-8S 2025-04-30
- L-LMW-1S 2025-10-17*

Notes
1) Piper diagram generated using Sanitas Software.
2) %mEq/l – milliequivalents per liter
3) * - October 2025 data for L-LMW-1S is plotted due to several outliers in April 2025 metal results at the well.

CLIENT/PROJECT				TITLE		
AMEREN MISSOURI **LABADIE ENERGY CENTER**				**LCPB Piper Diagram for April 2025**		
DRAWN	CHECKED	REVIEWED	DATE	Rev No.	JOB NO.	FIGURE
JDQ	GTM	JSI	2025-09-17	NA	23007-25	1

Appendix A
FALCON Analysis Calculation Package

Technical Memorandum

December 9, 2025

To:	Ameren Missouri 1901 Chouteau Ave, St. Louis, MO 63103	**Project Number:**	23007-25
From:	Mark Haddock, P.E., R.G., Jeff Ingram, R.G., Grant Morey, R.G.	**Email:**	jeff.ingram@rocksmithgeo.com
RE:	**Appendix A – LCPB FALCON Analysis Calculation Package**		

1.0 OBJECTIVE

The objective of this analysis is to determine if there is a correlation between the ion ratio fingerprints in the LCPA pore-water, LCPB pore-water or background groundwater with the compliance monitoring well samples in the alluvial aquifer at the Labadie Energy Center (LEC).

2.0 FINGERPRINT ANALYSIS OF LEACHATE CONTAMINANTS (FALCON) METHOD

The Fingerprint Analysis of Leachate Contaminants (FALCON) method was developed in 2004 by the United States Environmental Protection Agency (USEPA) as a tool to identify the source of impacts within groundwater. The FALCON method compiles ion ratios for multiple constituents in order to develop a distinctive chemical fingerprint for each possible contaminant source and un-impacted background groundwater. These fingerprints were correlated to well sample data downgradient of the sources and are used to characterize the source of the contaminant plume. For this calculation, background groundwater quality is derived from samples collected in background wells located approximately 2 to 2.5 miles west of the LCPB. Source data are from pore-water collected from piezometers within the LCPA and LCPB. Fingerprints from these three sources (background groundwater, LCPA pore-water, and LCPB pore-water) were compared to data from alluvial aquifer monitoring well sampling locations at the LEC. Data from the LCPA and LCPB pore-water are from the November 2017 Alternative Source Demonstration (ASD) for the LCPB, which is available in the 2019 Annual Report for the LCPB. Data from the background and compliance monitoring wells are from the April 2025 sampling event.

3.0 SELECTION OF CONSTITUENTS TO USE

The first step in completing the FALCON analysis was to select a subset of constituents that are representative of the potential source areas. When selecting these constituents, it is important to include constituents that are mobile in the hydrogeological environment and that can uniquely characterize each water type. Constituents selected included major cation and anion constituents that represent groundwater chemistry and key indicators of CCR impacts. Values of the three different sources were compared to see which constituents fit the criteria. A summary table of the values used for the three sources is provided in **Table 1**. The following constituents were selected to complete the FALCON analysis:

- Alkalinity
- Total Boron
- Total Calcium
- Total Chloride
- Total Fluoride
- Total Iron
- Total Magnesium
- Total Manganese
- Total Potassium
- Total Sodium
- Total Sulfate

4.0 DATA TABULATION AND NORMALIZATION

The selected constituent data were tabulated, normalized, and a graphical presentation of the fingerprints was produced. The data used, along with the normalization percentages, are provided in **Table 1** for the three different sources (background groundwater, LCPA pore-water, and LCPB pore-water) as well as for each monitoring well evaluated. Correlations were completed between the different sources to determine each source's reproducibility. Tables displaying the FALCON correlations are provided below in **Tables 2-4**.

Table 2 – Background Groundwater Correlations

Background Groundwater Correlations				
Well ID	*L-BMW-1D*	*L-BMW-1S*	*L-BMW-2D*	*L-BMW-2S*
L-BMW-1D				
L-BMW-1S	99.4%			
L-BMW-2D	99.7%	99.9%		
L-BMW-2S	99.8%	99.3%	99.7%	
Average Fingerprint Reproducibility			99.6%	

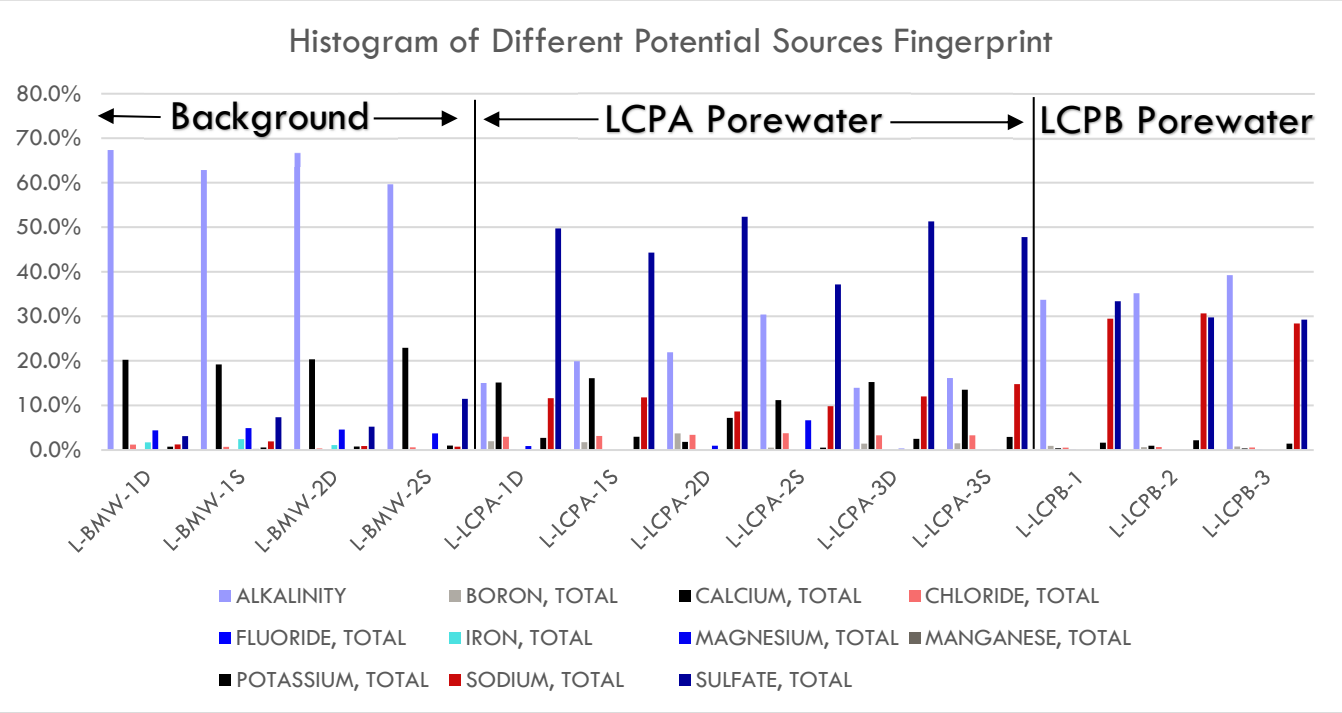
Table 3- LCPB Pore-water Correlations

LCPB Pore-water Correlations			
Well ID	*L-LCPB-1*	*L-LCPB-2*	*L-LCPB-3*
L-LCPB-1			
L-LCPB-2	99.6%		
L-LCPB-3	98.9%	99.5%	
Average Fingerprint Reproducibility			99.4%

Table 4 – LCPA Pore-water Correlations

LCPA Pore-Water Correlations						
Well ID	*L-LCPA-1D*	*L-LCPA-1S*	*L-LCPA-2D*	*L-LCPA-2S*	*L-LCPA-3D*	*L-LCPA-3S*
L-LCPA-1D						
L-LCPA-1S	98.9%					
L-LCPA-2D	94.5%	93.8%				
L-LCPA-2S	88.9%	93.3%	90.0%			
L-LCPA-3D	99.9%	98.5%	94.1%	87.6%		
L-LCPA-3S	99.6%	99.0%	94.8%	89.8%	99.5%	
Average Fingerprint Reproducibility						94.8%
Average Fingerprint Reproducibility with LCPA-1S, LCPA-1D, LCPA-2D, LCPA-3S and LCPA-3D						97.2%

Additionally, **Figure 1** below displays a histogram of the different source water normalizations.



As described in previous ASDs for the LCPB, samples collected within the LCPA unit displayed less correlation due to the spatial variation of sample locations and differing CCR materials present in sample intervals. The LCPA has been in operation since the 1970s and there were many changes to CCR received by the LCPA during this time. These include changes in types of coal used, types of CCR placed in the facility (pre-LCPB construction vs. post-LCPB construction), and types of CCR placed within the unit. While not as evident using the constituents available for this evaluation, no Appendix IV constituents were tested because LCPB is under detection monitoring. When compared with the 2018 evaluation, LCPA-2S still appears to have a slightly weaker correlation (<90% in this case) and was evaluated separately. Separating the LCPA into two potential sources (one for LCPA-1S, -1D, -2D, -3S, -3D and one for LCPA-2S) more accurately reflects the conditions within the LCPA due to its spatial variation of CCR management and constituent concentrations.

5.0 CORRELATING DOWNGRADIENT GROUNDWATER SAMPLES WITH SOURCES

A correlation between the average groundwater concentration and the different source waters was completed to demonstrate which source better correlates with each alluvial aquifer groundwater sample. Results from this correlation are provided in **Table 5** and the values used for this correlation are provided in **Table 1**. The results demonstrate that groundwater in the alluvial aquifer correlates better with the background groundwater or LCPA porewater than it does with the LCPB porewater. In no case did any wells within the LCPB monitoring network correlate better with the LCPB porewater than with the LCPA porewater or background groundwater.

Table 5 – Summary of April 2025 USEPA FALCON Evaluation

Piezometer or Well ID	Percent Correlation				Highest (Best) Correlation
	Background Groundwater	LCPB Average	LCPA Average (LCPA-1S/D, LCPA-2D & LCPA-3S/D)	LCPA-2S	
L-BMW-1D	100%	55%	29%	58%	Background
L-BMW-1S	100%	59%	35%	64%	Background
L-BMW-2D	100%	57%	32%	61%	Background
L-BMW-2S	99%	60%	43%	69%	Background
L-AM-1D	54%	84%	96%	98%	LCPA-2S
L-AM-1S	94%	51%	25%	53%	Background
L-AMW-8	32%	76%	99%	93%	LCPA-Average
L-LMW-1S	100%	56%	31%	59%	Background
L-LMW-2S	10%	62%	95%	81%	LCPA-Average
L-LMW-3S	52%	87%	97%	98%	LCPA-2S
L-LMW-4S	86%	85%	76%	92%	LCPA-2S
L-LMW-5S	100%	53%	28%	57%	Background
L-LMW-6S	100%	56%	29%	58%	Background
L-LMW-7S	92%	82%	67%	87%	Background
L-LMW-8S	100%	61%	32%	61%	Background
L-MW-24	100%	56%	31%	59%	Background
L-MW-26	100%	57%	32%	61%	Background
L-MW-33(D)	17%	64%	97%	86%	LCPA-Average
L-MW-34(D)	89%	82%	74%	92%	LCPA-2S
L-MW-35(D)	99%	69%	49%	75%	Background
L-S-1	100%	55%	29%	57%	Background
L-TMW-1	100%	59%	35%	63%	Background
L-TMW-2	100%	59%	37%	64%	Background
L-TMW-3	100%	56%	32%	60%	Background
L-TP-1D	100%	56%	29%	59%	Background
L-TP-2D	61%	81%	95%	99%	LCPA-2S
L-TP-2M	79%	85%	84%	96%	LCPA-2S
L-TP-3D	16%	68%	97%	86%	LCPA-Average
L-TP-3M	65%	83%	93%	99%	LCPA-2S
L-TP-4D	85%	77%	78%	93%	LCPA-2S
L-UMW-1D	100%	57%	29%	59%	Background
L-UMW-2D	83%	82%	80%	95%	LCPA-2S
L-UMW-3D	13%	64%	96%	83%	LCPA-Average
L-UMW-4D	17%	72%	97%	86%	LCPA-Average
L-UMW-5D	17%	67%	97%	85%	LCPA-Average
L-UMW-6D	30%	46%	14%	22%	LCPB
L-UMW-7D	100%	54%	27%	56%	Background
L-UMW-8D	99%	56%	28%	58%	Background
L-UMW-9D	99%	54%	24%	55%	Background

Notes

1) Values display percent correlation between data collected in April 2025 for each monitoring well and the LPCA, LCPB or background fingerprints.
2) The higher values are shaded darker and indicate better correlation.
3) More information on the calculation of these numbers is provided in Table 1.

Tables

Table 1
Summary of Concentrations Used for FALCON Correlation
LCPB Anternative Source Demonstration
Labadie Energy Center, Franklin County, MO

Analyte	Units	L-BMW-1D	L-BMW-1S	L-BMW-2D	L-BMW-2S	L-AM-1D	L-AM-1S	L-AMW-8
ALKALINITY	mg/L	393	668	378	372	194	485	111
BORON, TOTAL	mg/L	0.0903	0.103	0.0666	0.0567	6.40	0.341	7.00
CALCIUM, TOTAL	mg/L	118	204	115	143	104	177	75.9
CHLORIDE, TOTAL	mg/L	7.0	7.2	1.9	3.5	48.8	163	28.9
FLUORIDE, TOTAL	mg/L	0.06	0.06	0.06	0.06	0.24	0.06	0.25
IRON, TOTAL	mg/L	9.87	25.7	6.08	0.0046	4.87	2.9	1.91
MAGNESIUM, TOTAL	mg/L	25.7	51.8	25.8	23.0	12.2	36.4	11.7
MANGANESE, TOTAL	mg/L	0.64	2.5	0.244	0.00260	0.278	0.627	0.356
POTASSIUM, TOTAL	mg/L	4.16	5.78	4.38	6.07	8.91	7.47	6.63
SODIUM, TOTAL	mg/L	7.23	20.2	4.89	4.55	97.7	60.4	76.6
SULFATE, TOTAL	mg/L	18.0	77.8	29.5	71.6	283	12.5	286
Sum		583.8	1063.1	565.9	623.8	760.4	945.7	606.2

Analyte	L-BMW-1D	L-BMW-1S	L-BMW-2D	L-BMW-2S	L-AM-1D	L-AM-1S	L-AMW-8
ALKALINITY	67%	63%	67%	60%	26%	51%	18%
BORON, TOTAL	0.015%	0.0097%	0.012%	0.0091%	0.84%	0.036%	1.2%
CALCIUM, TOTAL	20%	19%	20%	23%	14%	19%	13%
CHLORIDE, TOTAL	1.2%	0.68%	0.34%	0.56%	6.4%	17%	4.8%
FLUORIDE, TOTAL	0.01%	0.0056%	0.011%	0.0096%	0.032%	0.0063%	0.041%
IRON, TOTAL	1.7%	2.4%	1.1%	0.00073%	0.64%	0.31%	0.32%
MAGNESIUM, TOTAL	4.4%	4.9%	4.6%	3.7%	1.6%	3.8%	1.9%
MANGANESE, TOTAL	0.11%	0.24%	0.043%	0.00042%	0.037%	0.066%	0.059%
POTASSIUM, TOTAL	0.71%	0.54%	0.77%	0.97%	1.2%	0.79%	1.1%
SODIUM, TOTAL	1.2%	1.9%	0.86%	0.73%	13%	6.4%	13%
SULFATE, TOTAL	3.1%	7.3%	5.2%	11%	37%	1.3%	47%
Sum	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Notes

1) Values for CCR Rule monitoring wells from April 2025 samples collected for the CCR Rule.
2) mg/L - milligrams per liter.
3) One-half the value of the Method Detection Limit (MDL) is used for non -detect values.

Prepared By: GTM
Checked By: JDQ
Reviewed By: MNH

Table 1
Summary of Concentrations Used for FALCON Correlation
LCPB Anternative Source Demonstration
Labadie Energy Center, Franklin County, MO

Analyte	Units	L-LMW-1S*	L-LMW-2S	L-LMW-3S	L-LMW-4S	L-LMW-5S	L-LMW-6S	L-LMW-7S
ALKALINITY	mg/L	259	36	154	337	471	319	255
BORON, TOTAL	mg/L	0.485	3.66	3.83	7.39	0.0552	0.299	5.20
CALCIUM, TOTAL	mg/L	0.82	66.6	72.6	117	165	95.2	81.1
CHLORIDE, TOTAL	mg/L	1.4	17.7	29.5	35.1	2.7	1.5	9.3
FLUORIDE, TOTAL	mg/L	0.26	0.06	0.15	0.06	0.06	0.25	0.17
IRON, TOTAL	mg/L	0.219	0.0149	4.86	8.61	0.0308	13.9	3.89
MAGNESIUM, TOTAL	mg/L	13.1	0.0908	6.9	22.2	14.8	17.6	16.8
MANGANESE, TOTAL	mg/L	0.324	0.0017	0.453	1.74	0.0041	1.07	0.641
POTASSIUM, TOTAL	mg/L	3.03	9.19	7.25	6.90	3.32	4.17	5.34
SODIUM, TOTAL	mg/L	5.98	64.2	87.5	86.0	5.03	5.79	52.2
SULFATE, TOTAL	mg/L	14.1	256	233	214	9.3	15.4	125
Sum		298.7	453.5	600.0	836.0	671.3	474.2	554.6

Analyte	L-LMW-1S*	L-LMW-2S	L-LMW-3S	L-LMW-4S	L-LMW-5S	L-LMW-6S	L-LMW-7S
ALKALINITY	87%	7.9%	26%	40%	70%	67%	46%
BORON, TOTAL	0.16%	0.81%	0.64%	0.88%	0.0082%	0.063%	0.94%
CALCIUM, TOTAL	0.27%	15%	12%	14%	25%	20%	15%
CHLORIDE, TOTAL	0.47%	3.9%	4.9%	4.2%	0.4%	0.32%	1.7%
FLUORIDE, TOTAL	0.087%	0.013%	0.025%	0.0072%	0.0089%	0.053%	0.031%
IRON, TOTAL	0.073%	0.0033%	0.81%	1%	0.0046%	2.9%	0.7%
MAGNESIUM, TOTAL	4.4%	0.02%	1.1%	2.7%	2.2%	3.7%	3%
MANGANESE, TOTAL	0.11%	0.00037%	0.075%	0.21%	0.00061%	0.23%	0.12%
POTASSIUM, TOTAL	1%	2%	1.2%	0.83%	0.49%	0.88%	0.96%
SODIUM, TOTAL	2%	14%	15%	10%	0.75%	1.2%	9.4%
SULFATE, TOTAL	4.7%	56%	39%	26%	1.4%	3.2%	23%
Sum	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Notes

1) Values for CCR Rule monitoring wells from April 2025 samples collected for the CCR Rule.
2) mg/L - milligrams per liter.
3) One-half the value of the Method Detection Limit (MDL) is used for non-detect values.
4) * - Metals results at L-LMW-1S from October 2025 are displayed due to low outliers reported in the April 2025 laboratory data.

Prepared By: GTM
Checked By: JDQ
Reviewed By: MNH

Table 1
Summary of Concentrations Used for FALCON Correlation
LCPB Anternative Source Demonstration
Labadie Energy Center, Franklin County, MO

Analyte	Units	L-LMW-8S	L-MW-24	L-MW-26	L-MW-33(D)	L-MW-34(D)	L-MW-35(D)	L-S-1
ALKALINITY	mg/L	236	306	432	103	335	424	440
BORON, TOTAL	mg/L	0.647	0.0784	0.0766	8.50	7.61	5.44	0.103
CALCIUM, TOTAL	mg/L	64.3	97.1	136	115	117	132	127
CHLORIDE, TOTAL	mg/L	1.5	3.1	7.3	28.3	14.3	9.9	2.1
FLUORIDE, TOTAL	mg/L	0.39	0.22	0.06	0.06	0.06	0.06	0.06
IRON, TOTAL	mg/L	2.50	0.0621	0.03430	5.72	7.06	6.68	0.0381
MAGNESIUM, TOTAL	mg/L	10.7	18.7	24.9	23.6	28.1	30.1	19.5
MANGANESE, TOTAL	mg/L	0.343	0.00200	0.151	0.325	0.313	0.448	0.504
POTASSIUM, TOTAL	mg/L	3.38	3.84	4.74	7.07	6.92	5.28	22.9
SODIUM, TOTAL	mg/L	18.4	5.45	10.9	91.1	59.6	39.1	3.60
SULFATE, TOTAL	mg/L	15.6	16.8	29.3	489	204	112	14.4
Sum		353.8	451.4	645.5	871.7	780.0	765.0	630.2

Analyte	L-LMW-8S	L-MW-24	L-MW-26	L-MW-33(D)	L-MW-34(D)	L-MW-35(D)	L-S-1
ALKALINITY	67%	68%	67%	12%	43%	55%	70%
BORON, TOTAL	0.18%	0.017%	0.012%	0.98%	0.98%	0.71%	0.016%
CALCIUM, TOTAL	18%	22%	21%	13%	15%	17%	20%
CHLORIDE, TOTAL	0.42%	0.69%	1.1%	3.2%	1.8%	1.3%	0.33%
FLUORIDE, TOTAL	0.11%	0.049%	0.0093%	0.0069%	0.0077%	0.0078%	0.0095%
IRON, TOTAL	0.71%	0.014%	0.0053%	0.66%	0.91%	0.87%	0.006%
MAGNESIUM, TOTAL	3%	4.1%	3.9%	2.7%	3.6%	3.9%	3.1%
MANGANESE, TOTAL	0.097%	0.00044%	0.023%	0.037%	0.04%	0.059%	0.08%
POTASSIUM, TOTAL	0.96%	0.85%	0.73%	0.81%	0.89%	0.69%	3.6%
SODIUM, TOTAL	5.2%	1.2%	1.7%	10%	7.6%	5.1%	0.57%
SULFATE, TOTAL	4.4%	3.7%	4.5%	56%	26%	15%	2.3%
Sum	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Notes

1) Values for CCR Rule monitoring wells from April 2025 samples collected for the CCR Rule.
2) mg/L - milligrams per liter.
3) One-half the value of the Method Detection Limit (MDL) is used for non -detect values.

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Table 1
Summary of Concentrations Used for FALCON Correlation
LCPB Anternative Source Demonstration
Labadie Energy Center, Franklin County, MO

Analyte	Units	L-TMW-1	L-TMW-2	L-TMW-3	L-TP-1D	L-TP-2D	L-TP-2M	L-TP-3D
ALKALINITY	mg/L	515	603	365	467	255	275	108
BORON, TOTAL	mg/L	0.107	0.104	0.0831	0.0642	1.81	1.04	8.72
CALCIUM, TOTAL	mg/L	158	193	121	136	97.2	111	97.4
CHLORIDE, TOTAL	mg/L	3.6	4.4	1.8	3.8	52.9	34.5	30.9
FLUORIDE, TOTAL	mg/L	0.06	0.06	0.06	0.06	0.44	0.41	0.06
IRON, TOTAL	mg/L	0.0489	1.58	0.0852	8.51	3.72	4.03	4.33
MAGNESIUM, TOTAL	mg/L	42.0	43.6	21.9	33.6	17.2	16.9	21.1
MANGANESE, TOTAL	mg/L	1.74	3.13	0.0703	0.264	0.347	0.479	0.178
POTASSIUM, TOTAL	mg/L	5.08	6.72	5.23	4.39	5.65	6.68	6.76
SODIUM, TOTAL	mg/L	10.0	10.5	5.24	10.4	59.1	73.2	114
SULFATE, TOTAL	mg/L	55.1	73.8	25.6	20.7	331	228	490
Sum		790.7	939.9	546.1	684.8	824.4	751.2	881.4

Analyte	L-TMW-1	L-TMW-2	L-TMW-3	L-TP-1D	L-TP-2D	L-TP-2M	L-TP-3D
ALKALINITY	65%	64%	67%	68%	31%	37%	12%
BORON, TOTAL	0.014%	0.011%	0.015%	0.0094%	0.22%	0.14%	0.99%
CALCIUM, TOTAL	20%	21%	22%	20%	12%	15%	11%
CHLORIDE, TOTAL	0.46%	0.47%	0.33%	0.55%	6.4%	4.6%	3.5%
FLUORIDE, TOTAL	0.0076%	0.0064%	0.011%	0.0088%	0.053%	0.055%	0.0068%
IRON, TOTAL	0.0062%	0.17%	0.016%	1.2%	0.45%	0.54%	0.49%
MAGNESIUM, TOTAL	5.3%	4.6%	4%	4.9%	2.1%	2.2%	2.4%
MANGANESE, TOTAL	0.22%	0.33%	0.013%	0.039%	0.042%	0.064%	0.02%
POTASSIUM, TOTAL	0.64%	0.71%	0.96%	0.64%	0.69%	0.89%	0.77%
SODIUM, TOTAL	1.3%	1.1%	0.96%	1.5%	7.2%	9.7%	13%
SULFATE, TOTAL	7%	7.9%	4.7%	3%	40%	30%	56%
Sum	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Notes

1) Values for CCR Rule monitoring wells from April 2025 samples collected for the CCR Rule.
2) mg/L - milligrams per liter.
3) One-half the value of the Method Detection Limit (MDL) is used for non -detect values.

Prepared By: GTM
Checked By: JDQ
Reviewed By: MNH

Table 1
Summary of Concentrations Used for FALCON Correlation
LCPB Anternative Source Demonstration
Labadie Energy Center, Franklin County, MO

Analyte	Units	L-TP-3M	L-TP-4D	L-UMW-1D	L-UMW-2D	L-UMW-3D	L-UMW-4D	L-UMW-5D
ALKALINITY	mg/L	204	281	549	286	47.6	69.6	90.1
BORON, TOTAL	mg/L	5.73	8.02	0.353	1.07	11.6	6.19	11.8
CALCIUM, TOTAL	mg/L	94.6	126	150	112	64.5	58.0	104
CHLORIDE, TOTAL	mg/L	29.7	15.9	7.1	29.4	31.3	23.3	27.6
FLUORIDE, TOTAL	mg/L	0.06	0.06	0.06	0.15	0.06	0.25	0.06
IRON, TOTAL	mg/L	6.74	6.13	18.5	3.93	0.113	0.201	0.0172
MAGNESIUM, TOTAL	mg/L	19.6	31.1	37.3	23.2	4.22	6.32	0.0362
MANGANESE, TOTAL	mg/L	1.05	0.342	0.424	0.434	0.0968	0.237	0.0122
POTASSIUM, TOTAL	mg/L	5.08	4.86	6.23	6.88	8.35	7.57	17.2
SODIUM, TOTAL	mg/L	63.0	32.1	16.5	57.4	63.2	87.8	96.6
SULFATE, TOTAL	mg/L	243	202	26.1	212	257	286	407
Sum		672.6	707.5	811.6	732.5	488.0	545.5	754.4

Analyte	L-TP-3M	L-TP-4D	L-UMW-1D	L-UMW-2D	L-UMW-3D	L-UMW-4D	L-UMW-5D
ALKALINITY	30%	40%	68%	39%	9.8%	13%	12%
BORON, TOTAL	0.85%	1.1%	0.043%	0.15%	2.4%	1.1%	1.6%
CALCIUM, TOTAL	14%	18%	18%	15%	13%	11%	14%
CHLORIDE, TOTAL	4.4%	2.2%	0.87%	4%	6.4%	4.3%	3.7%
FLUORIDE, TOTAL	0.0089%	0.0085%	0.0074%	0.02%	0.012%	0.046%	0.008%
IRON, TOTAL	1%	0.87%	2.3%	0.54%	0.023%	0.037%	0.0023%
MAGNESIUM, TOTAL	2.9%	4.4%	4.6%	3.2%	0.86%	1.2%	0.0048%
MANGANESE, TOTAL	0.16%	0.048%	0.052%	0.059%	0.02%	0.043%	0.0016%
POTASSIUM, TOTAL	0.76%	0.69%	0.77%	0.94%	1.7%	1.4%	2.3%
SODIUM, TOTAL	9.4%	4.5%	2%	7.8%	13%	16%	13%
SULFATE, TOTAL	36%	29%	3.2%	29%	53%	52%	54%
Sum	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Notes

1) Values for CCR Rule monitoring wells from April 2025 samples collected for the CCR Rule.
2) mg/L - milligrams per liter.
3) One-half the value of the Method Detection Limit (MDL) is used for non -detect values.

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Table 1
Summary of Concentrations Used for FALCON Correlation
LCPB Anternative Source Demonstration
Labadie Energy Center, Franklin County, MO

Analyte	Units	L-UMW-6D	L-UMW-7D	L-UMW-8D	L-UMW-9D	L-LCPA-1D	L-LCPA-1S	L-LCPA-2D
ALKALINITY	mg/L	66.7	488	101	406	77.6	120	128
BORON, TOTAL	mg/L	8.80	0.336	0.0331	0.0838	10.0	10.3	21.7
CALCIUM, TOTAL	mg/L	126	146	24.0	117	78.2	97.1	10.6
CHLORIDE, TOTAL	mg/L	0.84	7.5	3.2	0.59	15.2	18.9	19.8
FLUORIDE, TOTAL	mg/L	0.06	0.06	0.06	0.06	0.20	0.088	0.14
IRON, TOTAL	mg/L	0.864	18.2	3.44	24.1	0.178	0.138	0.0869
MAGNESIUM, TOTAL	mg/L	3.67	30.6	5.66	30.5	4.47	0.184	5.43
MANGANESE, TOTAL	mg/L	0.535	1.7	0.158	0.404	0.00410	0.00320	0.00250
POTASSIUM, TOTAL	mg/L	13.0	5.28	1.90	4.48	14.0	17.8	42.1
SODIUM, TOTAL	mg/L	173	10.8	2.00	14.0	60.0	71.1	50.5
SULFATE, TOTAL	mg/L	4.0	10.6	3.6	0.275	257	267	306
Sum		397.5	719.1	145.1	597.5	516.9	602.6	584.4

Analyte	L-UMW-6D	L-UMW-7D	L-UMW-8D	L-UMW-9D	L-LCPA-1D	L-LCPA-1S	L-LCPA-2D
ALKALINITY	17%	68%	70%	68%	15%	20%	22%
BORON, TOTAL	2.2%	0.047%	0.023%	0.014%	1.9%	1.7%	3.7%
CALCIUM, TOTAL	32%	20%	17%	20%	15%	16%	1.8%
CHLORIDE, TOTAL	0.21%	1%	2.2%	0.099%	2.9%	3.1%	3.4%
FLUORIDE, TOTAL	0.015%	0.0083%	0.041%	0.01%	0.039%	0.015%	0.024%
IRON, TOTAL	0.22%	2.5%	2.4%	4%	0.034%	0.023%	0.015%
MAGNESIUM, TOTAL	0.92%	4.3%	3.9%	5.1%	0.86%	0.031%	0.93%
MANGANESE, TOTAL	0.13%	0.24%	0.11%	0.068%	0.00079%	0.00053%	0.00043%
POTASSIUM, TOTAL	3.3%	0.73%	1.3%	0.75%	2.7%	3%	7.2%
SODIUM, TOTAL	44%	1.5%	1.4%	2.3%	12%	12%	8.6%
SULFATE, TOTAL	1%	1.5%	2.5%	0.046%	50%	44%	52%
Sum	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Notes

1) Values for CCR Rule monitoring wells from April 2025; Values for pore-water samples from LCPB ASD Investigation collected in February-March 2018.

2) mg/L - milligrams per liter.

3) One-half the value of the Method Detection Limit (MDL) is used for non-detect values.

Prepared By: GTM
Checked By: JDQ
Reviewed By: MNH

Table 1
Summary of Concentrations Used for FALCON Correlation
LCPB Anternative Source Demonstration
Labadie Energy Center, Franklin County, MO

Analyte	Units	L-LCPA-2S	L-LCPA-3D	L-LCPA-3S	L-LCPB-1	L-LCPB-2	L-LCPB-3
ALKALINITY	mg/L	208	80.2	91.8	1070	861	1340
BORON, TOTAL	mg/L	3.36	8.10	8.44	28.2	14.8	25.7
CALCIUM, TOTAL	mg/L	76.5	87.7	76.9	11.4	22.6	11.4
CHLORIDE, TOTAL	mg/L	25.5	18.9	18.6	15.6	16.2	18.4
FLUORIDE, TOTAL	mg/L	0.170	0.160	0.160	2.40	1.00	1.90
IRON, TOTAL	mg/L	0.0279	0.122	0.112	0.0273	0.129	0.384
MAGNESIUM, TOTAL	mg/L	45.5	1.54	0.445	0.0844	0.0874	0.386
MANGANESE, TOTAL	mg/L	0.0392	0.00230	0.00250	0.00250	0.00250	0.00230
POTASSIUM, TOTAL	mg/L	3.54	14.2	16.6	51.0	52.6	48.2
SODIUM, TOTAL	mg/L	67.2	69.0	84.0	935	750	969
SULFATE, TOTAL	mg/L	254	295	272	1060	728	999
Sum		683.8	574.9	569.1	3173.7	2446.4	3414.4

Analyte	L-LCPA-2S	L-LCPA-3D	L-LCPA-3S	L-LCPB-1	L-LCPB-2	L-LCPB-3
ALKALINITY	30%	14%	16%	34%	35%	39%
BORON, TOTAL	0.49%	1.4%	1.5%	0.89%	0.6%	0.75%
CALCIUM, TOTAL	11%	15%	14%	0.36%	0.92%	0.33%
CHLORIDE, TOTAL	3.7%	3.3%	3.3%	0.49%	0.66%	0.54%
FLUORIDE, TOTAL	0.025%	0.028%	0.028%	0.076%	0.041%	0.056%
IRON, TOTAL	0.0041%	0.021%	0.02%	0.00086%	0.0053%	0.011%
MAGNESIUM, TOTAL	6.7%	0.27%	0.078%	0.0027%	0.0036%	0.011%
MANGANESE, TOTAL	0.0057%	0.0004%	0.00044%	0.000079%	0.0001%	0.000067%
POTASSIUM, TOTAL	0.52%	2.5%	2.9%	1.6%	2.2%	1.4%
SODIUM, TOTAL	9.8%	12%	15%	29%	31%	28%
SULFATE, TOTAL	37%	51%	48%	33%	30%	29%
Sum	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Notes

1) Values for CCR Rule monitoring wells from April 2025; Values for pore-water samples from LCPB ASD Investigation collected in February-March 2018.

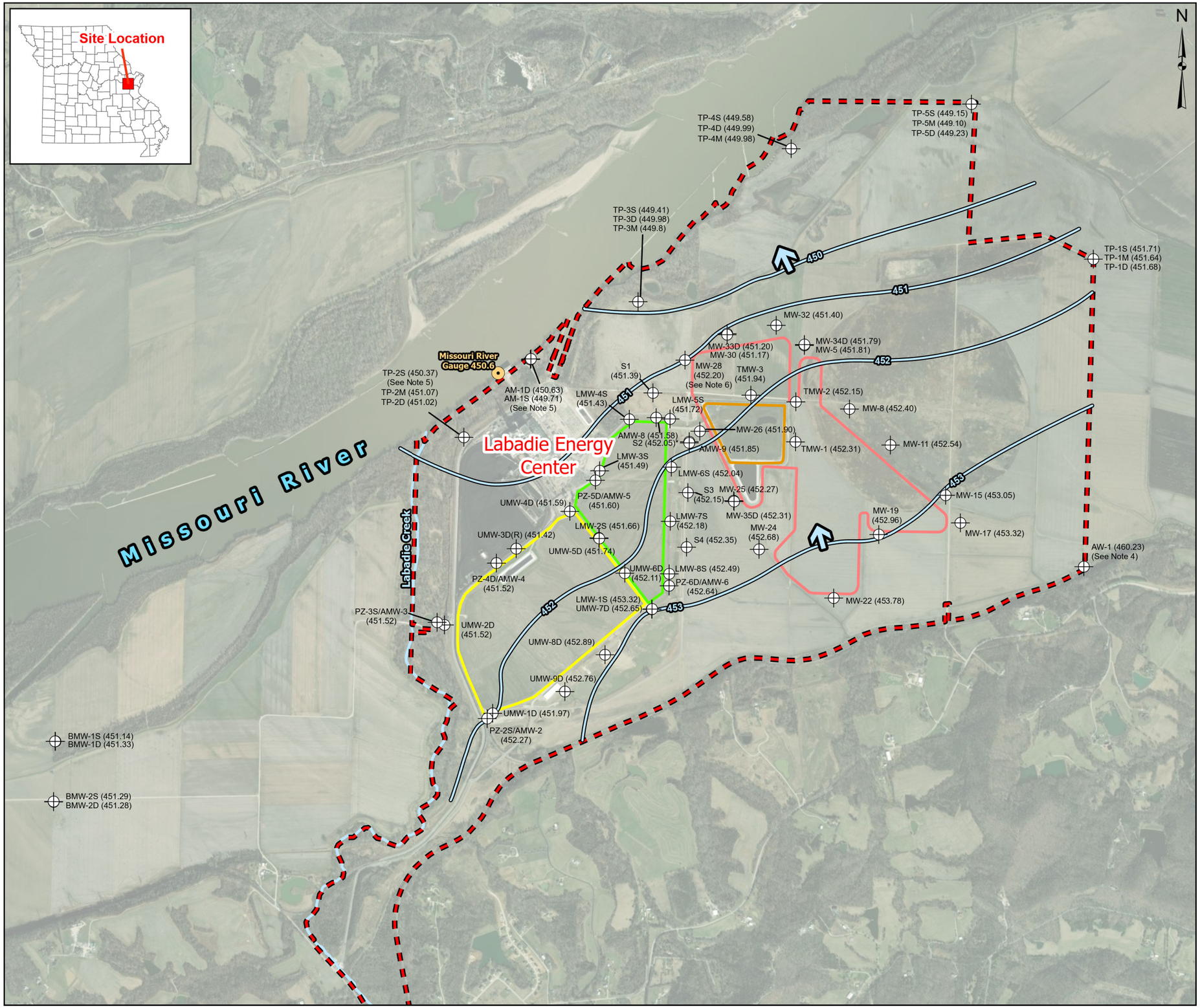
2) mg/L - milligrams per liter.

3) One-half the value of the Method Detection Limit (MDL) is used for non-detect values.

Prepared By: GTM
Checked By: JDQ
Reviewed By: MNH

Appendix D

2025 Potentiometric Surface Maps



TITLE

FEBRUARY 4, 2025 POTENTIOMETRIC SURFACE MAP

Legend

- Labadie Energy Center Property Boundary

CCR Units

- LCPA - Closed Bottom Ash Surface Impoundment
- LCPB - Closed Fly Ash Surface Impoundment
- LCL1 - Utility Waste Landfill Cell 1
- Proposed Final UWL Fence Perimeter

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 elevations displayed in FT MSL (Feet above Mean Sea Level).
3. Missouri River Level obtained from USGS Labadie gauge 06935550.
4. AW-1 was not used used in potentiometric surface contouring due to localized conditions causing an artificially high potentiometric elevation.
5. Wells TP-2S and AM-1S not used for potentiometric surface contouring due to localized vertical gradients.
6. MW-28 not used for potentiometric surface contouring due to localized vertical gradients.

REFERENCES

1. Zahner and Associates, Inc. 2016. Lot Consolidation Plat of "Labadie Energy Center" - Prepared for Ameren Missouri. Revised June 15, 2016.
2. USGS (United States Geological Survey), National Water Information System, USGS Gauge 06935550 Missouri River near Labadie, MO.

0 500 1,000 2,000 3,000 4,000 Feet

PROJECT
CCR RULE GROUNDWATER MONITORING PROGRAM

CLIENT
AMEREN MISSOURI
LABADIE ENERGY CENTER

ROCKSMITH GEOENGINEERING

DESIGN	JSI	YYYY-MM-DD	2025-07-18
PREPARED	JDQ	PROJECT No.	23007-25
REVIEW	JTR		
APPROVED	MNH		

FIGURE D1

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

1 in

0

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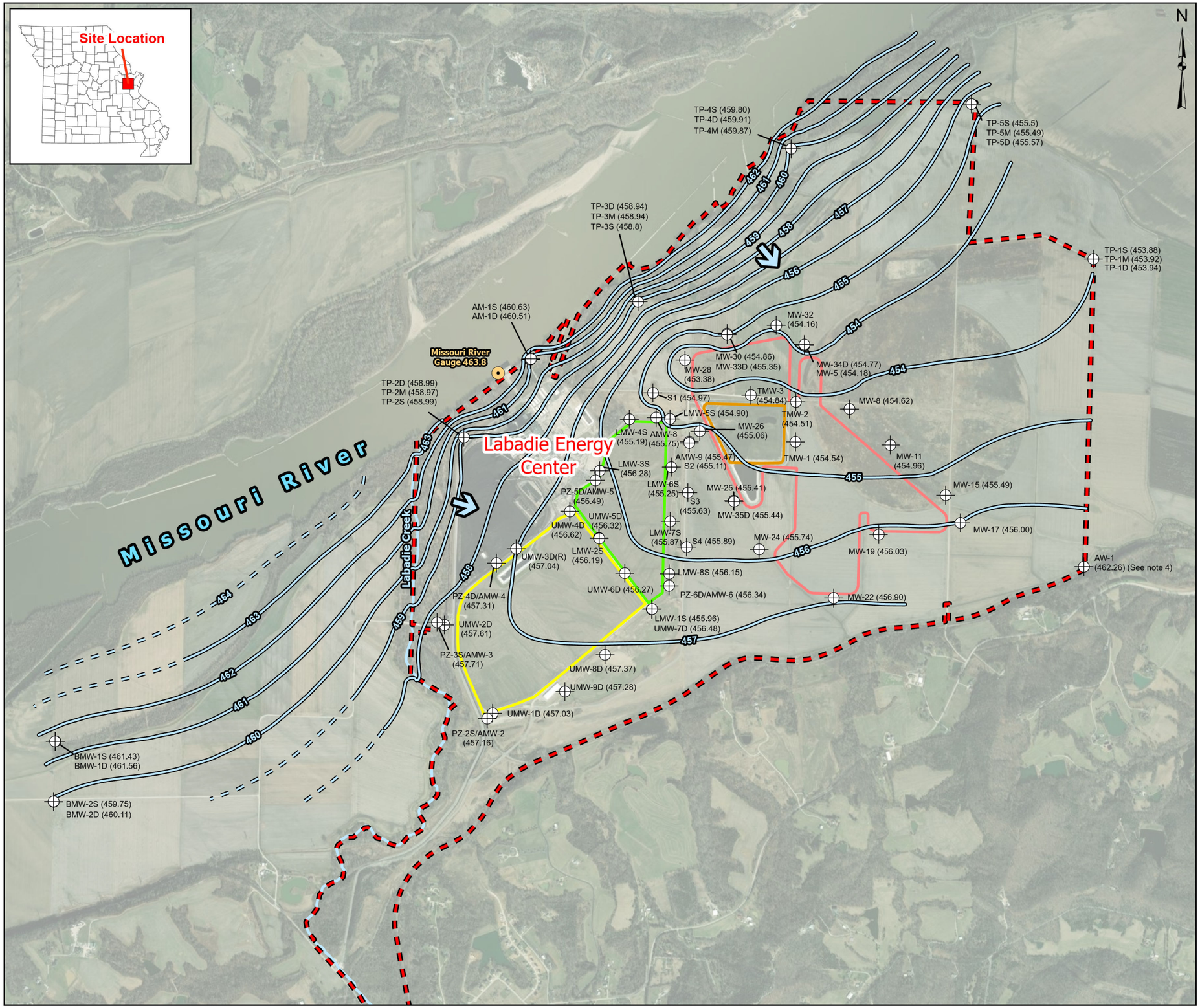
TITLE

APRIL 23, 2025 POTENTIOMETRIC SURFACE MAP



Legend

Labadie Energy Center Property Boundary

CCR Units

- LCPA - Closed Bottom Ash Surface Impoundment
- LCPB - Closed Fly Ash Surface Impoundment
- LCL1 - Utility Waste Landfill Cell 1
- Proposed Final UWL Fence Perimeter

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 elevations displayed in FT MSL (Feet above Mean Sea Level).
3. Missouri River Level obtained from USGS Labadie gauge 06935550.
4. AW-1 was not used used in potentiometric surface contouring due to localized conditions causing an artificially high potentiometric elevation.

REFERENCES

1. Zahner and Associates, Inc. 2016. Lot Consolidation Plat of "Labadie Energy Center" - Prepared for Ameren Missouri. Revised June 15, 2016.
2. USGS (United States Geological Survey), National Water Information System, USGS Gauge 06935550 Missouri River near Labadie, MO.

0 5001,000 2,000 3,000 4,000 Feet

PROJECT
CCR RULE GROUNDWATER MONITORING PROGRAM

CLIENT
AMEREN MISSOURI
LABADIE ENERGY CENTER

ROCKSMITH GEOENGINEERING

DESIGN	JSI	YYYY-MM-DD	2025-12-22
PREPARED	JDQ/JTR	PROJECT No.	23007-25
REVIEW	JTR		
APPROVED	MNH		

FIGURE D2

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

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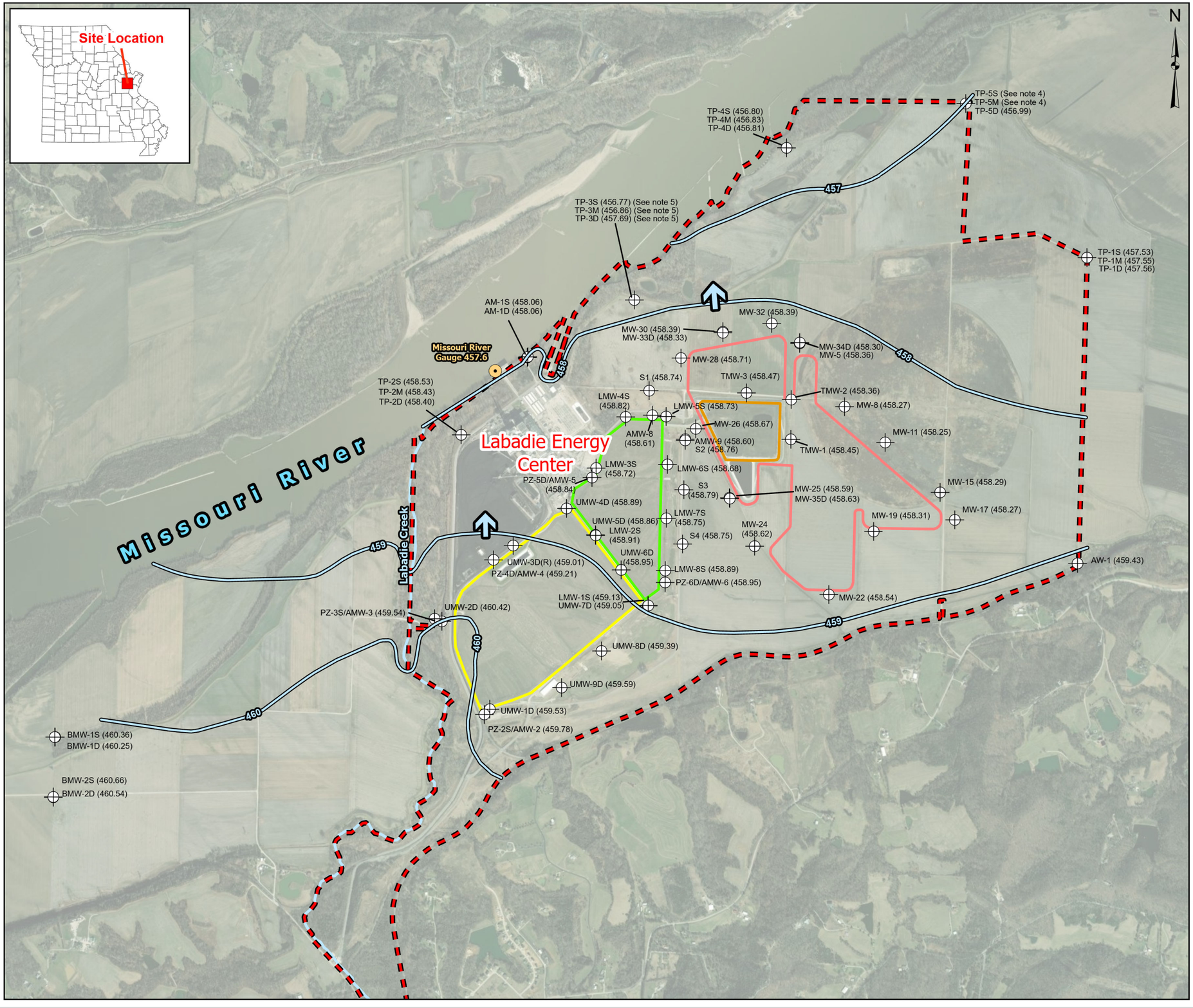

TITLE

JULY 8, 2025 POTENTIOMETRIC SURFACE MAP

Legend

- Labadie Energy Center Property Boundary

CCR Units

- LCPA - Closed Bottom Ash Surface Impoundment
- LCPB - Closed Fly Ash Surface Impoundment
- LCL1 - Utility Waste Landfill Cell 1
- Proposed Final UWL Fence Perimeter

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 elevations displayed in FT MSL (Feet above Mean Sea Level).
3. Missouri River Level obtained from USGS Labadie gauge 06935550.
4. TP-5S and TP-5M were not used in potentiometric surface contouring due to measurement error.
5. TP-3S, TP-3M, and TP-3D were not used in potentiometric surface contouring due to localized vertical gradient.

REFERENCES

1. Zahner and Associates, Inc. 2016. Lot Consolidation Plat of "Labadie Energy Center" - Prepared for Ameren Missouri. Revised June 15, 2016.
2. USGS (United States Geological Survey), National Water Information System, USGS Gauge 06935550 Missouri River near Labadie, MO.

0 500 1,000 2,000 3,000 4,000 Feet

PROJECT
CCR RULE GROUNDWATER MONITORING PROGRAM

CLIENT
AMEREN MISSOURI
LABADIE ENERGY CENTER

ROCKSMITH GEOENGINEERING

DESIGN	JSI	YYYY-MM-DD	2025-12-18
PREPARED	JDQ	PROJECT No.	23007-25
REVIEW	JTR		
APPROVED	MNH		**FIGURE D3**

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

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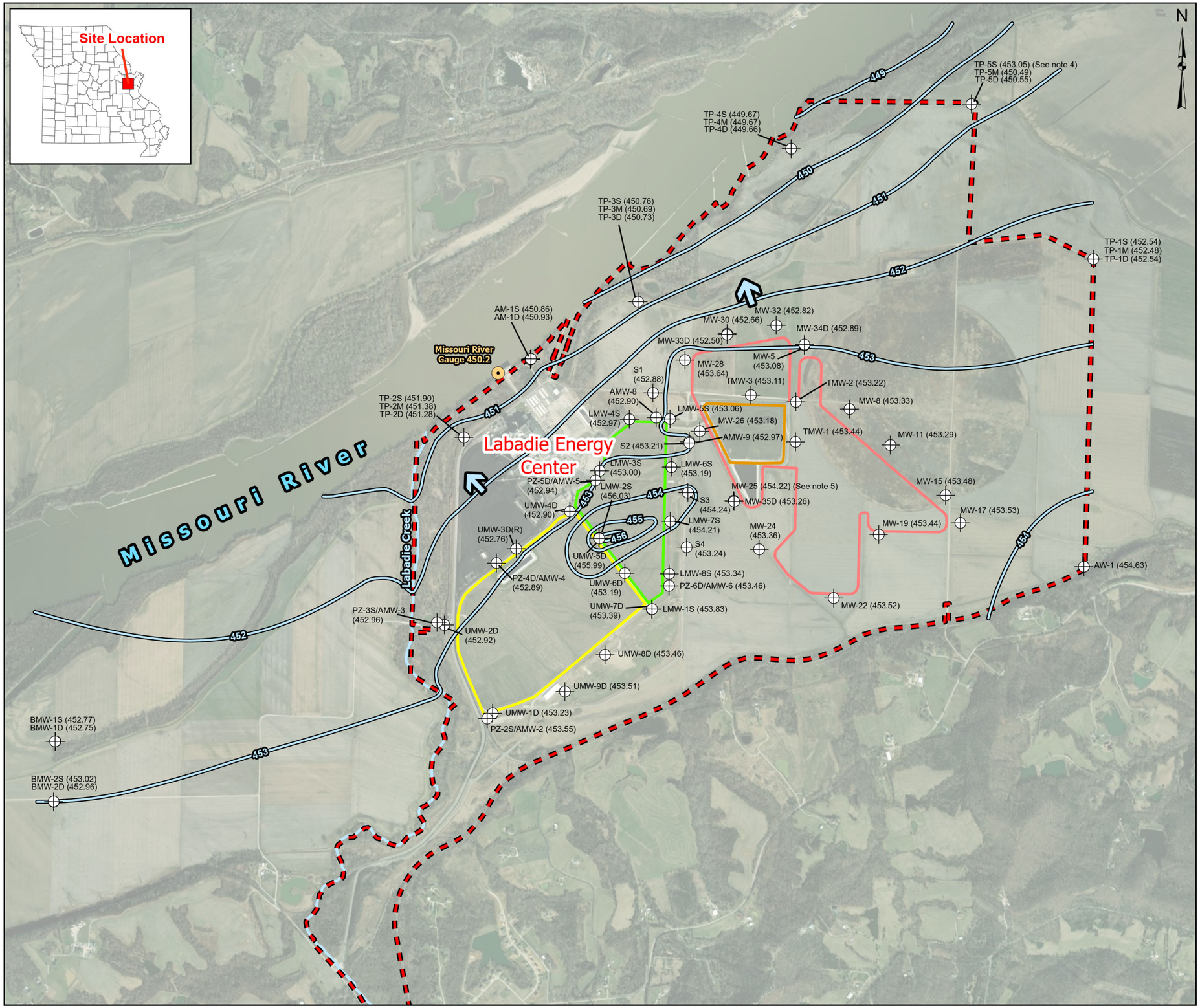

TITLE

OCTOBER 16, 2025 POTENTIOMETRIC SURFACE MAP

Legend

- Labadie Energy Center Property Boundary

CCR Units

- LCPA - Closed Bottom Ash Surface Impoundment
- LCPB - Closed Fly Ash Surface Impoundment
- LCL1 - Utility Waste Landfill Cell 1
- Proposed Final UWL Fence Perimeter

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 elevations displayed in FT MSL (Feet above Mean Sea Level).
3. Missouri River Level obtained from USGS Labadie gauge 06935550.
4. TP-5S not used in potentiometric surface contouring due to localized vertical gradient.
5. MW-25 not used in potentiometric surface contouring due to localized vertical gradient.

REFERENCES

1. Zahner and Associates, Inc. 2016. Lot Consolidation Plat of "Labadie Energy Center" - Prepared for Ameren Missouri. Revised June 15, 2016.
2. USGS (United States Geological Survey), National Water Information System, USGS Gauge 06935550 Missouri River near Labadie, MO.

0 500 1,000 2,000 3,000 4,000 Feet

PROJECT
CCR RULE GROUNDWATER MONITORING PROGRAM

CLIENT
AMEREN MISSOURI
LABADIE ENERGY CENTER

ROCKSMITH GEOENGINEERING

DESIGN	JSI	YYYY-MM-DD	2025-12-15
PREPARED	JDQ	PROJECT No.	23007-25
REVIEW	JTR		
APPROVED	MNH		

FIGURE D4

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

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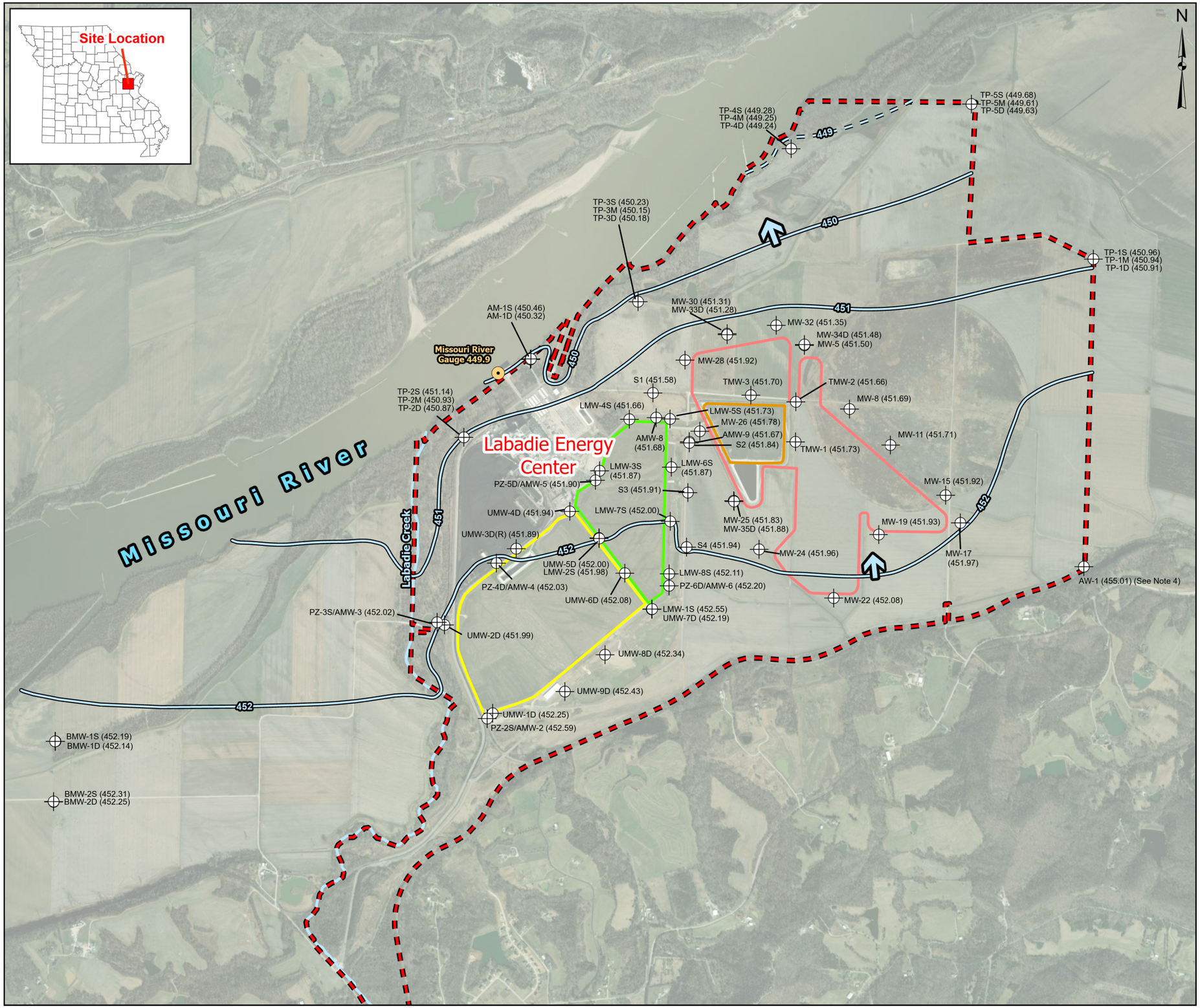

TITLE

DECEMBER 5, 2025 POTENTIOMETRIC SURFACE MAP

Legend

- Labadie Energy Center Property Boundary

CCR Units

- LCPA - Closed Bottom Ash Surface Impoundment
- LCPB - Closed Fly Ash Surface Impoundment
- LCL1 - Utility Waste Landfill Cell 1
- Proposed Final UWL Fence Perimeter

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 elevations displayed in FT MSL (Feet above Mean Sea Level).
3. Missouri River Level obtained from USGS Labadie gauge 06935550.
4. AW-1 was not used in potentiometric surface contouring due to localized conditions causing an artificially high potentiometric elevation.

REFERENCES

1. Zahner and Associates, Inc. 2016. Lot Consolidation Plat of "Labadie Energy Center" - Prepared for Ameren Missouri. Revised June 15, 2016.
2. USGS (United States Geological Survey), National Water Information System, USGS Gauge 06935550 Missouri River near Labadie, MO.

0 500 1,000 2,000 3,000 4,000 Feet

PROJECT
CCR RULE GROUNDWATER MONITORING PROGRAM

CLIENT
AMEREN MISSOURI
LABADIE ENERGY CENTER

ROCKSMITH GEOENGINEERING

DESIGN	JSI	YYYY-MM-DD	2025-12-11
PREPARED	JDQ	PROJECT No.	23007-25
REVIEW	GTM		
APPROVED	MNH		

FIGURE D5

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

1 in

0

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