



REPORT

2017 ANNUAL GROUNDWATER MONITORING REPORT

LCPB, Labadie Energy Center

Franklin County, Missouri, USA



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Table of Contents

| | | |
|-----|---|---|
| 1.0 | INTRODUCTION..... | 2 |
| 2.0 | INSTALLATION OR DECOMMISSIONING OF MONITORING WELLS | 3 |
| 2.1 | Background Monitoring Well Locations..... | 3 |
| 2.2 | Downgradient Monitoring Well Locations..... | 3 |
| 3.0 | GROUNDWATER SAMPLING RESULTS AND DISCUSSION..... | 4 |
| 3.1 | Baseline Sampling Events (Background Events)..... | 4 |
| 3.2 | Detection Monitoring | 4 |
| 3.3 | Groundwater Elevation, Flow Rate and Direction | 4 |
| 4.0 | STATUS OF THE GROUNDWATER MONITORING PROGRAM | 5 |
| 4.1 | Sampling Issues and Monitoring Well Decommissioning | 5 |
| 5.0 | ACTIVITIES PLANNED FOR 2018..... | 7 |
| 6.0 | CLOSING | 8 |

List of Tables

| | |
|----------|--|
| Table 1 | Monitoring Well Construction Details |
| Table 2 | Baseline Sampling Event 1 Results |
| Table 3 | Baseline Sampling Event 2 Results |
| Table 4 | Baseline Sampling Event 3 Results |
| Table 5 | Baseline Sampling Event 4 Results |
| Table 6 | Baseline Sampling Event 5 Results |
| Table 7 | Baseline Sampling Event 6 Results |
| Table 8 | Baseline Sampling Event 7 Results |
| Table 9 | Baseline Sampling Event 8 Results |
| Table 10 | November 2017 Detection Monitoring Results |
| Table 11 | Summary of Groundwater Sampling Dates |

List of Figures

| | |
|----------|--|
| Figure 1 | Site Location Aerial Map and Monitoring Well Locations |
|----------|--|

List of Appendices

| | |
|------------|---|
| Appendix A | CCR Monitoring Well Construction Diagrams |
| Appendix B | Laboratory Analytical Data |
| Appendix C | Potentiometric Surface Maps |



1.0 INTRODUCTION

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 Surface Impoundment at the Labadie Energy Center (LEC) is subject to the requirements of the CCR Rule. This is the first Annual Report for the LCPB and describes CCR Rule groundwater monitoring activities through December 31, 2017.

A groundwater monitoring well network was designed and installed for the LCPB to meet the requirements of the CCR Rule. The well network consists of two background monitoring wells and eight downgradient monitoring wells that were installed in November 2015 and February 2016. Eight independent baseline sampling events were completed using this well network to sample and test for all Appendix III and Appendix IV parameters, as required by the CCR Rule. The first Detection Monitoring sampling event for the LEC was completed November 7-8, 2017. Statistical analysis of the Detection Monitoring data will be performed in 2018. The LCPB will continue Detection Monitoring on a semi-annual basis and, in accordance with the CCR Rule, statistical analysis of sample results will determine the need for Assessment Monitoring or any efforts related to Assessment of Corrective Measures or potential Corrective Action in the future. As of December 31, 2017, the LCPB groundwater monitoring program status remains in Detection Monitoring.



2.0 INSTALLATION OR DECOMMISSIONING 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 monitoring wells screened in the uppermost aquifer (alluvial aquifer). Monitoring wells were installed by Cascade Drilling LP using rotosonic drilling techniques under the direct supervision of a Golder Geologist or Engineer and were installed in accordance with Missouri Department of Natural Resources (MDNR) well construction rules (10 CSR 23-4.060 Construction Standards for Monitoring Wells). A summary of groundwater monitoring well construction details is provided in **Table 1** and **Appendix A**.

2.1 Background Monitoring Well Locations

Background Monitoring wells for the LCPB consist of BMW-1S and BMW-2S. The Rule (§257.91(a)(1)) requires that background groundwater monitoring wells “*Accurately represent the quality of background groundwater that has not been affected by leakage from a CCR unit.*” The Rule allows background monitoring wells that are not hydraulically upgradient where hydrogeological conditions preclude it, and/or where sampling at other monitoring wells will provide an indication of background groundwater quality that is as representative as, or more representative than, that provided by upgradient monitoring well locations. The groundwater flow direction observed in the alluvial aquifer is generally from the bluffs area located south of the site toward the Missouri River to the north, however, alluvial aquifer flow is locally influenced by water levels in the Bottom Ash Surface Impoundment (LCPA) and the Missouri River level.

As shown in **Figure 1**, the background monitoring wells BMW-1S and BMW-2S are west of the LCPB. These wells provide background groundwater quality representative of background conditions in the alluvial aquifer.

2.2 Downgradient Monitoring Well Locations

Downgradient monitoring wells are located ringing the LCPB to monitor downgradient water quality. **Figure 1** shows that the downgradient well network consists of eight groundwater monitoring wells (LMW-1S, LMW-2S, LMW-3S, LMW-4S, LMW-5S, LMW-6S, LMW-7S, and LMW-8S) around the LCPB at locations that accurately represent the quality of groundwater passing the waste boundary of the CCR Unit.



3.0 GROUNDWATER SAMPLING RESULTS AND DISCUSSION

3.1 Baseline Sampling Events (Background Events)

As required by the CCR Rule, eight baseline sampling events were completed prior to October 17, 2017. Groundwater sampling was completed by Golder in accordance with the LCPB Groundwater Monitoring Plan (GMP). As required by the CCR Rule, baseline sampling was completed for all Appendix III and Appendix IV parameters. Groundwater sampling and field parameter results from the initial baseline sampling are provided in **Appendix B** and **Tables 2-9**.

3.2 Detection Monitoring

Detection Monitoring samples for the LEC were collected from the groundwater monitoring wells on November 7-8, 2017. As required by the CCR Rule, testing was completed for all Appendix III analytes. Groundwater sampling and field parameter results from the November 2017 Detection Monitoring event are provided in **Appendix B** and **Table 10**. Statistical analyses to evaluate Statistically Significant Increases (SSI) over background in the November 2017 Detection Monitoring data were not completed in 2017. Results of the statistical evaluation will be included in the 2018 Annual Report.

3.3 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 C**. As shown on the potentiometric surface maps, groundwater flow direction within the uppermost aquifer is dynamic and influenced by seasonal changes in the water level in the adjacent Missouri River. Water flows into and out of the alluvial aquifer as a result of fluctuating river water levels that produce “bank recharge” and “bank discharge” conditions. Overall, based on potentiometric surface maps, a general flow direction from the south/southwest (bluffs area) to the north/northeast (Missouri River) under normal river conditions is expected. However, during periods of high river levels, groundwater flow can temporarily reverse and flow southward. During these times of high river stage and temporary flow direction changes, horizontal groundwater gradients generally decrease and little net movement of groundwater occurs.

Groundwater flow direction and gradient were estimated for the downgradient CCR monitoring wells using the USEPA’s On-line Tool for Site Assessment Calculation for Hydraulic Gradient (Magnitude and Direction) (USEPA, 2016). Results from this assessment indicate that while groundwater flow direction is variable, the overall net groundwater flow at the LCPB is generally towards the northwest, flowing from the bluffs towards the river. Horizontal gradients calculated by the program range from 0.0003 to 0.0009 feet/foot with an estimated net annual groundwater velocity of approximately 19 feet per year.



4.0 STATUS OF THE GROUNDWATER MONITORING PROGRAM

As required by the CCR Rule prior to the October 17, 2017 deadline, the following was completed; (1) a Groundwater Monitoring Well System was installed and certified by a Professional Engineer, (2) a Statistical Method Certification was prepared and certified by a Professional Engineer, and (3) a GMP was prepared recording the design, installation, development, sampling procedures, as well as statistical methods and placed in the owner's operating record. The first Detection Monitoring sampling event for the LEC was completed on November 7-8, 2017. As required by the CCR Rule, **Table 11** provides a summary including the number of groundwater samples that were collected, the date of sample collection, and whether the sample was collected as required by the baseline, detection or assessment monitoring program. According to the CCR Rule, statistical evaluation for these samples must be completed within 90 days of completing sampling and analysis. Verification sampling, if needed, and statistical analysis will be completed by January 15, 2018 and included in future reports and notifications as required by the CCR Rule. Semi-annual Detection Monitoring will continue as required by the CCR Rule. Section 5.0 provides discussion of activities planned for 2018.

Table 11 – Summary of Groundwater Sampling Dates

| Sampling Event | Date of Sample Collection | | | | | | | | | | Baseline, Detection or Assessment Monitoring |
|--|---------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|--|
| | BMW-1S | BMW-2S | LMW-1S | LMW-2S | LMW-3S | LMW-4S | LMW-5S | LMW-6S | LMW-7S | LMW-8S | |
| | Date of Sample Collection | | | | | | | | | | |
| Baseline Event 1 | 3/22/2016 | 3/22/2016 | 3/23/2016 | 3/23/2016 | 3/24/2016 | 3/24/2016 | 3/24/2016 | 3/23/2016 | 3/23/2016 | 3/23/2016 | Baseline |
| Baseline Event 2 | 5/3/2016 | 5/4/2016 | 5/4/2016 | 5/5/2016 | 5/4/2016 | 5/5/2016 | 5/6/2016 | 5/5/2016 | 5/5/2016 | 5/5/2016 | Baseline |
| Baseline Event 3 | 7/11/2016 | 7/11/2016 | 7/11/2016 | 7/13/2016 | 7/12/2016 | 7/13/2016 | 7/13/2016 | 7/12/2016 | 7/12/2016 | 7/12/2016 | Baseline |
| Baseline Event 4 | 9/13/2016 | 9/9/2016 | 9/12/2016 | 9/9/2016 | 9/13/2016 | 9/13/2016 | 9/13/2016 | 9/12/2016 | 9/12/2016 | 9/12/2016 | Baseline |
| Baseline Event 5 | 11/11/2016 | 11/11/2016 | 11/14/2016 | 11/14/2016 | 11/14/2016 | 11/14/2016 | 11/15/2016 | 11/14/2016 | 11/14/2016 | 11/14/2016 | Baseline |
| Baseline Event 6 | 1/16/2017 | 1/16/2017 | 1/18/2017 | 1/17/2017 | 1/16/2017 | 1/18/2017 | 1/18/2017 | 1/18/2017 | 1/17/2017 | 1/17/2017 | Baseline |
| Baseline Event 7 | 3/1/2017 | 3/1/2017 | 3/2/2017 | 3/2/2017 | 3/3/2017 | 3/3/2017 | 3/2/2017 | 3/2/2017 | 3/2/2017 | 3/2/2017 | Baseline |
| Baseline Event 8 | 5/31/2017 | 5/31/2017 | 6/1/2017 | 6/1/2017 | 6/1/2017 | 6/1/2017 | 6/2/2017 | 6/2/2017 | 6/2/2017 | 6/1/2017 | Baseline |
| November 2017 Detection Monitoring Event | 11/7/2017 | 11/7/2017 | 11/8/2017 | 11/7/2017 | 11/8/2017 | 11/8/2017 | 11/8/2017 | 11/8/2017 | 11/8/2017 | 11/8/2017 | Detection |
| Total Number of Samples Collected | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | NA |

Notes:

- 1) Baseline Events sampled for all Appendix III and Appendix IV parameters.
- 2) The November 2017 Detection Monitoring Event sampled for Appendix III parameters.
- 3) NA – Not Applicable.

4.1 Sampling Issues and Monitoring Well Decommissioning

LMW-3S was originally installed on November 17, 2015, however, during development this monitoring well was determined to be un-usable for this monitoring program because it did not recharge water at a sufficient rate for sampling. LMW-3S was successfully re-installed with a replacement well on February 2, 2016. This monitoring well was installed at a deeper depth and yielded enough recharge to serve as a CCR groundwater monitoring well.

From approximately April 30, 2017 to May 8, 2017, some of the monitoring wells at the LEC were under water due to the flooding of the Missouri River. At the LCPB, the following wells were submerged by flood



water: LMW-1S, LMW-4S, LMW-5S, LMW-6S, LMW-7S, LMW-8S, BMW-1S, and BMW-2S. On May 10, 2017 Golder performed a post-flood monitoring well inspection at the LEC. Only LMW-6S was found to have flood water penetrate the well casing and needed to be re-developed. The other wells on site that were under water did not have flood damage. Due to access problems resulting from the flood, the wells were not able to be sampled until May 31, 2017. No other notable sampling issues were encountered.



5.0 ACTIVITIES PLANNED FOR 2018

Detection Monitoring sampling is currently scheduled to be completed semi-annually in the second and fourth quarters of 2018, but may be changed due to site conditions (e.g., flooding, access, etc.). Statistical analysis of the November 2017 Detection Monitoring data will be completed by January 15, 2018. If it is determined that there is an SSI over background, Ameren will collect verification samples for all SSIs. Additionally, within 90 days of determining an SSI, Ameren would either establish an Assessment Monitoring program or demonstrate that the SSI was the result of error, or caused by an alternate source.



6.0 CLOSING

GOLDER ASSOCIATES INC.

A handwritten signature in black ink, appearing to read "Mark Haddock".

Mark Haddock, P.E., R.G.
Principal, Practice Leader

JSI/RJF/MNH

A handwritten signature in black ink, appearing to read "Jeffrey S. Ingram".

Jeffrey Ingram, R.G.
Project Geologist

TABLES

Table 1
Monitoring Well Construction Details
LCPB Surface Impoundment
Labadie Energy Center, Franklin County, MO

| Well ID | Date Installed | Location ⁴ | | Top of Casing Elevation | Ground Surface Elevation | Top of Screen | Bottom of Screen | Base of Well | Total Depth |
|---------|----------------|-----------------------|----------|-------------------------|--------------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| | | Northing | Easting | (FT MSL) ⁵ | (FT MSL) ⁵ | (FT MSL) ⁵ | (FT MSL) ⁵ | (FT MSL) ⁵ | (FT BGS) ⁵ |
| LMW-1S | 11/20/2015 | 990727.7 | 726039.1 | 470.06 | 468.1 | 454.5 | 444.7 | 444.3 | 23.8 |
| LMW-2S | 11/23/2015 | 992017.5 | 725074.2 | 496.64 | 494.9 | 445.8 | 441.0 | 440.6 | 54.3 |
| LMW-3S | 2/2/2016 | 993254.3 | 725081.6 | 492.56 | 490.5 | 431.0 | 421.2 | 420.8 | 69.7 |
| LMW-4S | 11/18/2015 | 994194.9 | 725624.1 | 472.88 | 470.7 | 448.3 | 438.5 | 438.1 | 32.7 |
| LMW-5S | 11/18/2015 | 994201.6 | 726366.8 | 468.75 | 466.9 | 455.0 | 445.2 | 444.8 | 22.1 |
| LMW-6S | 11/20/2015 | 993320.2 | 726391.4 | 469.56 | 467.2 | 454.7 | 444.9 | 444.5 | 22.8 |
| LMW-7S | 11/20/2015 | 992330.1 | 726371.1 | 468.43 | 466.7 | 453.4 | 443.6 | 443.2 | 23.5 |
| LMW-8S | 11/20/2015 | 991371.2 | 726351.3 | 467.24 | 465.2 | 452.2 | 442.4 | 442.0 | 23.2 |
| BMW-1S | 2/1/2016 | 988310.0 | 715131.6 | 473.49 | 471.2 | 450.7 | 440.9 | 440.5 | 30.7 |
| BMW-2S | 2/2/2016 | 987210.1 | 715104.3 | 474.56 | 472.5 | 454.6 | 444.8 | 444.4 | 28.1 |

Notes:

- 1.) All elevations and coordinates were surveyed on January 13, 2016 and February 11, 2016 by Zahner and Associates, Inc.
- 2.) FT MSL = Feet Above Mean Sea Level.
- 3.) FT BGS = Feet Below Ground Surface.
- 4.) Horizontal Datum: State Plane Coordinates NAD83 (2000) Missouri East Zone Feet.
- 5.) Vertical Datum: NAVD88 Feet.

Prepared By: JS
Checked By: JSI/MSG
Reviewed By: MNH

Table 2
Baseline Sampling Event 1 Results
LCPB Surface Impoundment
Labadie Energy Center, Franklin County, MO

| ANALYTE | UNITS | BACKGROUND | | GROUNDWATER MONITORING WELLS | | | | | | | |
|-------------------------|-------|------------|-----------|------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | | BMW-1S | BMW-2S | LMW-1S | LMW-2S | LMW-3S | LMW-4S | LMW-5S | LMW-6S | LMW-7S | LMW-8S |
| FIELD PARAMETERS | | | | | | | | | | | |
| DATE | NA | 3/22/2016 | 3/22/2016 | 3/23/2016 | 3/23/2016 | 3/24/2016 | 3/24/2016 | 3/24/2016 | 3/23/2016 | 3/23/2016 | 3/23/2016 |
| DISSOLVED OXYGEN | mg/L | 0.87 | 4.87 | 0.29 | 1.15 | 0.91 | 1.16 | 3.59 | 0.79 | 0.81 | 0.92 |
| pH | SU | 6.63 | 6.66 | 7.08 | 9.06 | 7.44 | 6.93 | 7.10 | 6.81 | 7.25 | 7.06 |
| REDOX POTENTIAL | mV | -161.7 | 138.9 | -151.9 | 8.5 | -106.8 | 70.0 | 24.7 | -201.3 | -158.2 | -174.2 |
| SPECIFIC CONDUCTIVITY | mS/cm | 1.268 | 1.363 | 0.845 | 1.059 | 1.001 | 1.218 | 0.668 | 1.015 | 0.815 | 1.125 |
| TURBIDITY | NTU | 4.25 | 1.09 | 3.89 | 1.69 | 4.86 | 3.45 | 1.56 | 3.90 | 1.49 | 4.82 |
| APPENDIX III | | | | | | | | | | | |
| BORON, TOTAL | µg/L | 96.5 J | 52.2 J | 3,530 | 6,970 | 4,760 | 7,320 | 65.4 J | 2,290 | 4,060 | 5,530 |
| CALCIUM, TOTAL | µg/L | 191,000 | 133,000 | 133,000 | 68,700 | 61,100 | 150,000 | 113,000 | 163,000 | 110,000 | 161,000 |
| CHLORIDE, TOTAL | mg/L | 3.1 | 2.0 | 2.7 | 18.9 | 20.9 | 25.4 | 1.6 | 6.4 | 14.6 | 19.3 |
| FLUORIDE, TOTAL | mg/L | 0.19 J | 0.23 | 0.24 | 0.22 | 0.58 | 0.25 | 0.22 | 0.19 J | 0.22 | 0.29 |
| SULFATE, TOTAL | mg/L | 50.1 | 20.5 | 76.7 | 295 | 254 | 231 | 8.6 | 81.3 | 142 | 287 |
| TOTAL DISSOLVED SOLIDS | mg/L | 712 | 499 | 529 | 496 | 595 | 793 | 374 | 642 | 551 | 791 |
| APPENDIX IV | | | | | | | | | | | |
| ANTIMONY, TOTAL | µg/L | ND | 0.082 J | ND | ND | ND | ND | 0.060 J | ND | ND | ND |
| ARSENIC, TOTAL | µg/L | 21.8 | 0.22 J | 5.3 | 25.2 | 11.9 | 9.0 | 0.52 J | 1.3 | 8.5 | 3.1 |
| BARIIUM, TOTAL | µg/L | 340 | 247 | 126 | 58.9 | 86.5 | 159 | 282 | 308 | 257 | 191 |
| BERYLLIUM, TOTAL | µg/L | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| CADMIUM, TOTAL | µg/L | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| CHROMIUM, TOTAL | µg/L | 0.44 J | 0.52 J | 0.78 J | ND | 0.36 J | 0.56 J | ND | 0.37 J | 0.56 J | 0.38 J |
| COBALT, TOTAL | µg/L | 1.4 J | ND | 2.3 J | ND | ND | 2.1 J | ND | 4.2 J | 1.2 J | 3.7 J |
| LEAD, TOTAL | µg/L | ND | ND | ND | 4.1 J | ND | ND | 3.0 J | ND | ND | ND |
| LITHIUM, TOTAL | µg/L | 21.1 | 17.3 | 22.0 | 16.2 | 22.7 | 42.0 | 14.6 | 38.8 | 25.6 | 27.5 |
| MERCURY, TOTAL | µg/L | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| MOLYBDENUM, TOTAL | µg/L | ND | ND | ND | 141 | 202 | 33.2 | ND | ND | 56.2 | 51.4 |
| RADIUM [226 + 228] | pCi/L | ND | ND | ND | ND | ND | 1.120 | ND | ND | 2.305 | ND |
| SELENIUM, TOTAL | µg/L | ND | 1.4 | ND | ND | ND | ND | 0.89 J | 3.3 | ND | ND |
| THALLIUM, TOTAL | µg/L | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |

NOTES

- Unit Abbreviations: µg/L - micrograms per liter, mg/L - milligrams per liter, SU - standard units, and pCi/L - picocuries per liter, mV - millivolts, mS/cm - millisiemens per centimeters, and NTU - nephelometric turbidity unit.
- J - Result is an estimated value.
- ND - Constituent was analyzed for, but was not detected above the Method Detection Limit (MDL) and is considered a non-detect.
- Radium (226 + 228) is reported as the sum of the Radium 226 and the Radium 228 activity concentrations unless the sum of the Radium 226 and Radium 228 Minimum Detectable Concentrations (MDC) is higher in which case it is displayed as ND.

Table 3
Baseline Sampling Event 2 Results
LCPB Surface Impoundment
Labadie Energy Center, Franklin County, MO

| ANALYTE | UNITS | BACKGROUND | | GROUNDWATER MONITORING WELLS | | | | | | | |
|-------------------------|-------|------------|----------|------------------------------|----------|----------|----------|----------|----------|----------|----------|
| | | BMW-1S | BMW-2S | LMW-1S | LMW-2S | LMW-3S | LMW-4S | LMW-5S | LMW-6S | LMW-7S | LMW-8S |
| FIELD PARAMETERS | | | | | | | | | | | |
| DATE | NA | 5/3/2016 | 5/4/2016 | 5/4/2016 | 5/5/2016 | 5/4/2016 | 5/5/2016 | 5/6/2016 | 5/5/2016 | 5/5/2016 | 5/5/2016 |
| DISSOLVED OXYGEN | mg/L | 0.91 | 1.83 | 1.01 | 0.63 | 0.43 | 1.15 | 1.47 | 1.04 | 1.20 | 0.76 |
| pH | SU | 6.40 | 6.12 | 6.20 | 9.29 | 7.35 | 7.53 | 6.76 | 6.47 | 6.40 | 6.71 |
| REDOX POTENTIAL | mV | -73.5 | 207.1 | -32.2 | -42.6 | -141.4 | -99.8 | 230.6 | 84.0 | 21.1 | -28.8 |
| SPECIFIC CONDUCTIVITY | mS/cm | 1.890 | 1.155 | 1.311 | 0.857 | 0.933 | 1.151 | 0.729 | 1.438 | 1.678 | 1.742 |
| TURBIDITY | NTU | 4.52 | 1.76 | 7.25 | 2.40 | 1.89 | 4.08 | 3.14 | 9.07 | 4.49 | 9.77 |
| APPENDIX III | | | | | | | | | | | |
| BORON, TOTAL | µg/L | 112 | 54.5 J | 2,620 | 6,920 | 4,040 | 9,460 | 65.0 J | 4,780 | 4,150 | 7,160 |
| CALCIUM, TOTAL | µg/L | 196,000 | 123,000 | 130,000 | 66,500 | 54,000 | 77,500 | 109,000 | 145,000 | 157,000 | 147,000 |
| CHLORIDE, TOTAL | mg/L | 6.5 | 1.5 | 4.3 | 17.8 | 21.3 | 26.0 | 1.7 | 11.5 | 11.6 | 19.5 |
| FLUORIDE, TOTAL | mg/L | 0.12 J | 0.16 J | 0.15 J | 0.16 J | 0.36 | 0.27 | 0.14 J | 0.12 J | 0.11 J | 0.27 |
| SULFATE, TOTAL | mg/L | 65.3 J | 23.5 | 71.6 | 312 | 286 | 266 | 12.2 | 124 | 144 | 522 |
| TOTAL DISSOLVED SOLIDS | mg/L | 772 | 446 | 525 | 505 | 508 | 648 | 383 | 633 | 732 | 899 |
| APPENDIX IV | | | | | | | | | | | |
| ANTIMONY, TOTAL | µg/L | ND | 0.32 J | ND | 0.064 J | ND | ND | 0.21 J | 0.065 J | ND | ND |
| ARSENIC, TOTAL | µg/L | 36.1 | 0.42 J | 9.1 | 25.8 | 0.79 J | 24.2 | 0.30 J | 3.2 | 10.0 | 14.7 |
| BARIUM, TOTAL | µg/L | 366 | 276 | 142 | 56.5 | 77.3 | 119 | 294 | 278 | 395 | 238 |
| BERYLLIUM, TOTAL | µg/L | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| CADMIUM, TOTAL | µg/L | ND | 0.047 J | 0.031 J | ND | ND | ND | 0.029 J | 0.14 J | 0.063 J | 0.071 J |
| CHROMIUM, TOTAL | µg/L | 1.1 | 0.50 J | 0.53 J | ND | 0.91 J | 1.4 | 0.79 J | 0.67 J | 0.50 J | 1.0 |
| COBALT, TOTAL | µg/L | 0.84 J | 0.84 J | 0.80 J | ND | ND | 0.73 J | ND | 3.6 J | 3.7 J | 2.8 J |
| LEAD, TOTAL | µg/L | ND | ND | 3.2 J | ND | ND | 2.5 J | ND | ND | ND | ND |
| LITHIUM, TOTAL | µg/L | 28.4 | 25.7 | 20.9 | 16.6 | 28.2 | 39.6 | 14.4 | 44.4 | 48.6 | 28.1 |
| MERCURY, TOTAL | µg/L | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| MOLYBDENUM, TOTAL | µg/L | 0.68 J | 2.7 J | 4.0 J | 137 | 172 | 218 | 1.7 J | 16.8 J | 27.2 | 206 |
| RADIUM [226 + 228] | pCi/L | 1.725 | 1.189 | ND | ND | ND | 1.561 | 1.406 | 1.670 | 1.323 | ND |
| SELENIUM, TOTAL | µg/L | ND | 0.56 J | ND | 0.19 J | ND | ND | 0.30 J | 0.44 J | 0.27 J | ND |
| THALLIUM, TOTAL | µg/L | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |

NOTES

- Unit Abbreviations: µg/L - micrograms per liter, mg/L - milligrams per liter, SU - standard units, and pCi/L - picocuries per liter, mV - millivolts, mS/cm - millisiemens per centimeters, and NTU - nephelometric turbidity unit.
- J - Result is an estimated value.
- ND - Constituent was analyzed for, but was not detected above the Method Detection Limit (MDL) and is considered a non-detect.
- Radium (226 + 228) is reported as the sum of the Radium 226 and the Radium 228 activity concentrations unless the sum of the Radium 226 and Radium 228 Minimum Detectable Concentrations (MDC) is higher in which case it is displayed as ND.

Table 4
Baseline Sampling Event 3 Results
LCPB Surface Impoundment
Labadie Energy Center, Franklin County, MO

| ANALYTE | UNITS | BACKGROUND | | GROUNDWATER MONITORING WELLS | | | | | | | |
|-------------------------|-------|------------|-----------|------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | | BMW-1S | BMW-2S | LMW-1S | LMW-2S | LMW-3S | LMW-4S | LMW-5S | LMW-6S | LMW-7S | LMW-8S |
| FIELD PARAMETERS | | | | | | | | | | | |
| DATE | NA | 7/11/2016 | 7/11/2016 | 7/11/2016 | 7/13/2016 | 7/12/2016 | 7/13/2016 | 7/13/2016 | 7/12/2016 | 7/12/2016 | 7/12/2016 |
| DISSOLVED OXYGEN | mg/L | 1.02 | 1.77 | 1.28 | 1.33 | 0.65 | 0.68 | 2.08 | 1.19 | 1.83 | 1.90 |
| pH | SU | 6.52 | 7.14 | 6.89 | 9.47 | 7.64 | 7.09 | 7.02 | 6.74 | 7.13 | 7.30 |
| REDOX POTENTIAL | mV | -68.7 | 33.0 | -53.3 | -12.1 | -171.5 | -111.7 | 7.9 | -3.2 | -41.5 | -39.6 |
| SPECIFIC CONDUCTIVITY | mS/cm | 1.242 | 0.758 | 0.759 | 0.736 | 0.739 | 0.864 | 0.606 | 0.980 | 1.000 | 1.146 |
| TURBIDITY | NTU | 4.56 | 2.35 | 4.86 | 1.86 | 4.51 | 3.71 | 1.84 | 3.41 | 3.46 | 5.03 |
| APPENDIX III | | | | | | | | | | | |
| BORON, TOTAL | µg/L | 120 | 58.2 J | 2,320 | 6,720 | 4,300 | 9,480 | 59.4 J | 5,150 | 6,400 | 6,220 |
| CALCIUM, TOTAL | µg/L | 219,000 | 136,000 | 133,000 | 74,700 | 67,100 | 109,000 | 111,000 | 164,000 | 136,000 | 183,000 |
| CHLORIDE, TOTAL | mg/L | 6.0 | 8.2 | 4.0 | 19.2 | 20.8 | 23.9 | 2.0 | 11.3 | 19.0 | 18.4 |
| FLUORIDE, TOTAL | mg/L | 0.12 J | 0.15 J | 0.14 J | 0.15 J | 0.36 | 0.24 | 0.15 J | 0.12 J | 0.12 J | 0.23 |
| SULFATE, TOTAL | mg/L | 51.9 | 24.8 | 52.7 | 365 | 256 | 247 | 13.4 | 107 | 191 | 338 |
| TOTAL DISSOLVED SOLIDS | mg/L | 780 | 494 | 552 | 519 | 576 | 712 | 363 | 656 | 687 | 865 |
| APPENDIX IV | | | | | | | | | | | |
| ANTIMONY, TOTAL | µg/L | ND | 0.24 J | ND | ND | ND | ND | 0.14 J | 0.060 J | ND | 0.062 J |
| ARSENIC, TOTAL | µg/L | 34.0 | 0.41 J | 8.8 | 25.8 | 5.4 | 18.4 | 0.46 J | 2.3 | 9.2 | 5.9 |
| BARIUM, TOTAL | µg/L | 334 | 245 | 127 | 53.8 | 77.7 | 120 | 253 | 283 | 295 | 170 |
| BERYLLIUM, TOTAL | µg/L | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| CADMIUM, TOTAL | µg/L | ND | 0.045 J | ND | ND | ND | ND | ND | 0.059 J | 0.035 J | 0.049 J |
| CHROMIUM, TOTAL | µg/L | ND | ND | ND | ND | 1.3 | ND | 0.57 J | ND | ND | ND |
| COBALT, TOTAL | µg/L | ND | ND | 1.2 J | ND | ND | 0.95 J | ND | 9.5 | 3.2 J | 2.4 J |
| LEAD, TOTAL | µg/L | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| LITHIUM, TOTAL | µg/L | 20.0 | 19.2 | 19.0 | 16.1 | 25.8 | 36.5 | 9.8 J | 37.6 | 36.3 | 28.4 |
| MERCURY, TOTAL | µg/L | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| MOLYBDENUM, TOTAL | µg/L | 1.4 J | 2.9 J | 4.5 J | 123 | 173 | 142 | 2.3 J | 16.5 J | 54.1 | 80.7 |
| RADIUM [226 + 228] | pCi/L | 2.492 | ND | ND | ND | 1.531 | 1.622 | ND | ND | 2.155 | ND |
| SELENIUM, TOTAL | µg/L | ND | 0.75 J | ND | ND | ND | ND | 0.49 J | ND | ND | ND |
| THALLIUM, TOTAL | µg/L | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |

NOTES

- Unit Abbreviations: µg/L - micrograms per liter, mg/L - milligrams per liter, SU - standard units, and pCi/L - picocuries per liter, mV - millivolts, mS/cm - millisiemens per centimeters, and NTU - nephelometric turbidity unit.
- J - Result is an estimated value.
- ND - Constituent was analyzed for, but was not detected above the Method Detection Limit (MDL) and is considered a non-detect.
- Radium (226 + 228) is reported as the sum of the Radium 226 and the Radium 228 activity concentrations unless the sum of the Radium 226 and Radium 228 Minimum Detectable Concentrations (MDC) is higher in which case it is displayed as ND.

Table 5
Baseline Sampling Event 4 Results
LCPB Surface Impoundment
Labadie Energy Center, Franklin County, MO

| ANALYTE | UNITS | BACKGROUND | | GROUNDWATER MONITORING WELLS | | | | | | | |
|-------------------------|-------|------------|----------|------------------------------|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | | BMW-1S | BMW-2S | LMW-1S | LMW-2S | LMW-3S | LMW-4S | LMW-5S | LMW-6S | LMW-7S | LMW-8S |
| FIELD PARAMETERS | | | | | | | | | | | |
| DATE | NA | 9/13/2016 | 9/9/2016 | 9/12/2016 | 9/9/2016 | 9/13/2016 | 9/13/2016 | 9/13/2016 | 9/12/2016 | 9/12/2016 | 9/12/2016 |
| DISSOLVED OXYGEN | mg/L | 0.61 | 1.37 | 1.27 | 1.07 | 1.12 | 1.24 | 0.44 | 0.83 | 1.63 | 0.49 |
| pH | SU | 6.80 | 6.99 | 7.22 | 9.46 | 7.58 | 7.18 | 7.29 | 7.02 | 7.18 | 6.89 |
| REDOX POTENTIAL | mV | -90.9 | 163.0 | -31.0 | 46.8 | -146.5 | -113.8 | -35.2 | 40.5 | -43.4 | -36.2 |
| SPECIFIC CONDUCTIVITY | mS/cm | 1.401 | 0.832 | 0.959 | 0.679 | 0.795 | 0.995 | 0.645 | 1.080 | 1.146 | 1.221 |
| TURBIDITY | NTU | 4.26 | 3.15 | 4.70 | 1.75 | 3.60 | 3.72 | 2.16 | 1.75 | 2.25 | 3.32 |
| APPENDIX III | | | | | | | | | | | |
| BORON, TOTAL | µg/L | 103 | 61.0 J | 4,340 | 6,900 | 3,950 | 9,560 | 63.8 J | 2,260 | 4,280 | 5,220 |
| CALCIUM, TOTAL | µg/L | 188,000 | 137,000 | 139,000 | 76,400 | 53,600 | 79,800 | 95,100 | 158,000 | 144,000 | 160,000 |
| CHLORIDE, TOTAL | mg/L | 5.0 | 1.9 | 3.2 | 19.1 | 20.8 | 25.2 | 2.6 | 5.9 | 13.8 | 18.2 |
| FLUORIDE, TOTAL | mg/L | 0.069 J | 0.14 J | 0.092 J | 0.13 J | 0.34 | 0.27 | 0.11 J | 0.076 J | 0.059 J | 0.19 J |
| SULFATE, TOTAL | mg/L | 50.0 | 15.4 | 118 | 311 | 256 | 243 | 21.6 | 78.4 | 156 | 309 |
| TOTAL DISSOLVED SOLIDS | mg/L | 752 | 480 | 615 | 526 | 501 | 677 | 358 | 659 | 722 | 845 |
| APPENDIX IV | | | | | | | | | | | |
| ANTIMONY, TOTAL | µg/L | ND | 0.20 J | 0.13 J | 0.066 J | ND | ND | 0.20 J | ND | ND | ND |
| ARSENIC, TOTAL | µg/L | 29.4 | 0.49 J | 5.2 | 27.3 | 1.5 | 25.2 | 0.61 J | 1.7 | 9.4 | 6.3 |
| BARIUM, TOTAL | µg/L | 338 | 249 | 141 | 55.4 | 67.2 | 109 | 259 | 279 | 339 | 147 |
| BERYLLIUM, TOTAL | µg/L | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| CADMIUM, TOTAL | µg/L | ND | 0.040 J | 0.061 J | ND | ND | ND | ND | 0.093 J | ND | ND |
| CHROMIUM, TOTAL | µg/L | 0.39 J | ND | 0.42 J | ND | 0.98 J | 0.83 J | 0.43 J | 0.53 J | 0.53 J | ND |
| COBALT, TOTAL | µg/L | 0.78 J | ND | 1.5 J | ND | ND | ND | ND | 2.3 J | 3.1 J | 2.4 J |
| LEAD, TOTAL | µg/L | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| LITHIUM, TOTAL | µg/L | 16.1 | 17.6 | 13.4 | 14.3 | 23.5 | 35.0 | 9.4 J | 34.5 | 35.5 | 22.5 |
| MERCURY, TOTAL | µg/L | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| MOLYBDENUM, TOTAL | µg/L | ND | ND | 3.0 J | 119 | 171 | 214 | 2.7 J | 9.4 J | 46.2 | 110 |
| RADIUM [226 + 228] | pCi/L | 3.620 | 2.126 | ND | 1.793 | ND | ND | ND | ND | 2.171 | ND |
| SELENIUM, TOTAL | µg/L | ND | 0.75 J | 0.72 J | ND | 0.19 J | ND | 0.67 J | 0.41 J | 0.25 J | ND |
| THALLIUM, TOTAL | µg/L | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |

NOTES

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

Table 6
Baseline Sampling Event 5 Results
LCPB Surface Impoundment
Labadie Energy Center, Franklin County, MO

| ANALYTE | UNITS | BACKGROUND | | GROUNDWATER MONITORING WELLS | | | | | | | |
|-------------------------|-------|------------|------------|------------------------------|------------|------------|------------|------------|------------|------------|------------|
| | | BMW-1S | BMW-2S | LMW-1S | LMW-2S | LMW-3S | LMW-4S | LMW-5S | LMW-6S | LMW-7S | LMW-8S |
| FIELD PARAMETERS | | | | | | | | | | | |
| DATE | NA | 11/11/2016 | 11/11/2016 | 11/14/2016 | 11/14/2016 | 11/14/2016 | 11/14/2016 | 11/15/2016 | 11/14/2016 | 11/14/2016 | 11/14/2016 |
| DISSOLVED OXYGEN | mg/L | 0.47 | 3.26 | 0.59 | 0.41 | 0.35 | 0.49 | 3.34 | 0.86 | 0.35 | 0.59 |
| pH | SU | 6.59 | 6.86 | 7.04 | 9.34 | 7.24 | 6.66 | 6.92 | 6.41 | 6.59 | 6.89 |
| REDOX POTENTIAL | mV | -105.3 | 171.6 | -90.8 | -85.0 | -191.0 | -112.5 | -3.4 | -30.7 | -73.4 | -127.5 |
| SPECIFIC CONDUCTIVITY | mS/cm | 1.219 | 0.628 | 1.034 | 0.672 | 0.940 | 1.095 | 0.577 | 0.986 | 0.984 | 0.988 |
| TURBIDITY | NTU | 2.45 | 2.78 | 4.36 | 0.99 | 0.96 | 3.66 | 0.96 | 2.56 | 2.32 | 4.14 |
| APPENDIX III | | | | | | | | | | | |
| BORON, TOTAL | µg/L | 88.1 J | ND | 6,230 | 7,190 | 5,310 | 7,600 | 62.9 J | 576 | 679 | 2,800 |
| CALCIUM, TOTAL | µg/L | 200,000 | 119,000 | 169,000 | 67,000 | 76,900 | 145,000 | 107,000 | 179,000 | 160,000 | 169,000 |
| CHLORIDE, TOTAL | mg/L | 5.3 | 2.0 | 3.8 | 18.3 | 20.7 | 23.3 | 1.6 | 2.6 | 4.7 | 11.4 |
| FLUORIDE, TOTAL | mg/L | 0.11 J | 0.16 J | 0.17 J | 0.17 J | 0.43 | 0.18 J | 0.20 | 0.14 J | 0.12 J | 0.18 J |
| SULFATE, TOTAL | mg/L | 43.1 | 12.3 | 224 | 275 | 260 | 208 | 13.2 | 53.5 | 46.1 | 127 |
| TOTAL DISSOLVED SOLIDS | mg/L | 692 | 405 | 688 | 466 | 641 | 748 | 320 | 608 | 578 | 649 |
| APPENDIX IV | | | | | | | | | | | |
| ANTIMONY, TOTAL | µg/L | ND | 0.22 J | ND | ND | ND | ND | ND | ND | ND | ND |
| ARSENIC, TOTAL | µg/L | 22.9 | 0.41 J | 3.4 | 29.7 | 15.3 | 11.8 | ND | ND | 3.3 | ND |
| BARIUM, TOTAL | µg/L | 338 | 218 | 156 | 51.3 | 97.0 | 143 | 263 | 290 | 304 | 134 |
| BERYLLIUM, TOTAL | µg/L | ND | ND | 0.34 J | 0.49 J | ND | ND | ND | ND | ND | ND |
| CADMIUM, TOTAL | µg/L | ND | 0.036 J | ND | ND | ND | ND | ND | ND | ND | ND |
| CHROMIUM, TOTAL | µg/L | 0.48 J | 0.64 J | ND | 0.35 J | ND | ND | 0.38 J | ND | ND | ND |
| COBALT, TOTAL | µg/L | 1.8 J | ND | 2.7 J | ND | ND | 1.9 J | ND | 1.9 J | 2.4 J | 1.4 J |
| LEAD, TOTAL | µg/L | ND | ND | 5.5 | 3.2 J | 2.6 J | 3.3 J | 2.5 J | ND | 3.1 J | ND |
| LITHIUM, TOTAL | µg/L | 20.0 | 19.2 | 17.0 | 12.8 | 21.8 | 38.2 | 8.6 J | 36.6 | 31.9 | 24.3 |
| MERCURY, TOTAL | µg/L | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| MOLYBDENUM, TOTAL | µg/L | ND | ND | ND | 111 | 207 | 37.9 | ND | 5.6 J | 11.8 J | 17.4 J |
| RADIUM [226 + 228] | pCi/L | 2.091 | ND | 2.343 | ND | ND | ND | 2.371 | ND | 1.920 | 2.275 |
| SELENIUM, TOTAL | µg/L | ND | 1.3 | 0.60 J | ND | ND | ND | 0.78 J | 0.70 J | 0.91 J | ND |
| THALLIUM, TOTAL | µg/L | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |

NOTES

- Unit Abbreviations: µg/L - micrograms per liter, mg/L - milligrams per liter, SU - standard units, and pCi/L - picocuries per liter, mV - millivolts, mS/cm - millisiemens per centimeters, and NTU - nephelometric turbidity unit.
- J - Result is an estimated value.
- ND - Constituent was analyzed for, but was not detected above the Method Detection Limit (MDL) and is considered a non-detect.
- Radium (226 + 228) is reported as the sum of the Radium 226 and the Radium 228 activity concentrations unless the sum of the Radium 226 and Radium 228 Minimum Detectable Concentrations (MDC) is higher in which case it is displayed as ND.

Table 7
Baseline Sampling Event 6 Results
LCPB Surface Impoundment
Labadie Energy Center, Franklin County, MO

| ANALYTE | UNITS | BACKGROUND | | GROUNDWATER MONITORING WELLS | | | | | | | |
|-------------------------|-------|------------|-----------|------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | | BMW-1S | BMW-2S | LMW-1S | LMW-2S | LMW-3S | LMW-4S | LMW-5S | LMW-6S | LMW-7S | LMW-8S |
| FIELD PARAMETERS | | | | | | | | | | | |
| DATE | NA | 1/16/2017 | 1/16/2017 | 1/18/2017 | 1/17/2017 | 1/16/2017 | 1/18/2017 | 1/18/2017 | 1/18/2017 | 1/17/2017 | 1/17/2017 |
| DISSOLVED OXYGEN | mg/L | 0.52 | 1.83 | 0.35 | 0.40 | 0.32 | 0.48 | 2.60 | 1.70 | 0.67 | 1.27 |
| pH | SU | 6.93 | 7.36 | 7.27 | 9.57 | 7.43 | 7.24 | 7.40 | 6.51 | 7.06 | 7.18 |
| REDOX POTENTIAL | mV | -44.1 | -18.2 | -79.4 | -117.5 | -122.4 | -84.6 | -10.1 | -18.1 | 12.7 | 13.0 |
| SPECIFIC CONDUCTIVITY | mS/cm | 1.253 | 0.681 | 0.900 | 0.724 | 1.587 | 1.111 | 0.846 | 1.025 | 1.065 | 0.948 |
| TURBIDITY | NTU | 1.62 | 0.50 | 4.06 | 2.01 | 2.70 | 3.00 | 1.17 | 8.96 | 2.14 | 9.93 |
| APPENDIX III | | | | | | | | | | | |
| BORON, TOTAL | µg/L | 105 | ND | 3,450 | 6,860 | 5,550 | 8,120 | 84.0 J | 364 | 289 | 1,950 |
| CALCIUM, TOTAL | µg/L | 204,000 | 116,000 | 138,000 | 68,900 | 76,600 | 126,000 | 140,000 | 164,000 | 176,000 | 162,000 |
| CHLORIDE, TOTAL | mg/L | 7.4 | 2.5 | 3.7 | 19.4 | 21.6 | 23.1 | 5.3 | 2.1 | 7.4 | 2.5 |
| FLUORIDE, TOTAL | mg/L | 0.13 J | 0.18 J | 0.18 J | 0.19 J | 0.46 | 0.22 | 0.17 J | 0.13 J | 0.13 J | 0.18 J |
| SULFATE, TOTAL | mg/L | 42.9 | 12.8 | 90.8 | 285 | 257 | 231 | 14.7 | 49.4 | 34.0 | 12.8 |
| TOTAL DISSOLVED SOLIDS | mg/L | 704 | 366 | 519 | 484 | 666 | 724 | 471 | 602 | 607 | 596 |
| APPENDIX IV | | | | | | | | | | | |
| ANTIMONY, TOTAL | µg/L | ND | 0.18 J | 0.065 J | ND | ND | ND | 0.15 J | 0.089 J | ND | 0.073 J |
| ARSENIC, TOTAL | µg/L | 22.4 | 0.26 J | 3.4 | 32.1 | 17.0 | 9.5 | 0.56 J | 0.92 J | 1.2 | 3.2 |
| BARIUM, TOTAL | µg/L | 359 | 232 | 121 | 52.0 | 90.8 | 122 | 333 | 270 | 300 | 136 |
| BERYLLIUM, TOTAL | µg/L | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| CADMIUM, TOTAL | µg/L | ND | 0.054 J | 0.093 J | ND | 0.029 J | ND | 0.029 J | 0.071 J | 0.077 J | 0.17 J |
| CHROMIUM, TOTAL | µg/L | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| COBALT, TOTAL | µg/L | 0.81 J | ND | 3.2 J | ND | ND | 2.3 J | ND | 3.5 J | 2.1 J | 1.4 J |
| LEAD, TOTAL | µg/L | 2.7 J | 3.1 J | ND | ND | ND | ND | ND | ND | ND | ND |
| LITHIUM, TOTAL | µg/L | 17.6 | 16.6 | 15.6 | 15.2 | 24.6 | 37.5 | 9.4 J | 34.7 | 36.9 | 23.3 |
| MERCURY, TOTAL | µg/L | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| MOLYBDENUM, TOTAL | µg/L | 1.4 J | 1.9 J | ND | 115 | 197 | 33.6 | ND | ND | 4.1 J | 11.0 J |
| RADIUM [226 + 228] | pCi/L | 1.410 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| SELENIUM, TOTAL | µg/L | ND | 1.7 | 0.59 J | ND | ND | ND | 0.54 J | 0.40 J | 0.54 J | 0.23 J |
| THALLIUM, TOTAL | µg/L | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |

NOTES

- Unit Abbreviations: µg/L - micrograms per liter, mg/L - milligrams per liter, SU - standard units, and pCi/L - picocuries per liter, mV - millivolts, mS/cm - millisiemens per centimeters, and NTU - nephelometric turbidity unit.
- J - Result is an estimated value.
- ND - Constituent was analyzed for, but was not detected above the Method Detection Limit (MDL) and is considered a non-detect.
- Radium (226 + 228) is reported as the sum of the Radium 226 and the Radium 228 activity concentrations unless the sum of the Radium 226 and Radium 228 Minimum Detectable Concentrations (MDC) is higher in which case it is displayed as ND.

Table 8
Baseline Sampling Event 7 Results
LCPB Surface Impoundment
Labadie Energy Center, Franklin County, MO

| ANALYTE | UNITS | BACKGROUND | | GROUNDWATER MONITORING WELLS | | | | | | | |
|-------------------------|-------|------------|----------|------------------------------|----------|----------|----------|----------|----------|----------|----------|
| | | BMW-1S | BMW-2S | LMW-1S | LMW-2S | LMW-3S | LMW-4S | LMW-5S | LMW-6S | LMW-7S | LMW-8S |
| FIELD PARAMETERS | | | | | | | | | | | |
| DATE | NA | 3/1/2017 | 3/1/2017 | 3/2/2017 | 3/2/2017 | 3/3/2017 | 3/3/2017 | 3/2/2017 | 3/2/2017 | 3/2/2017 | 3/2/2017 |
| DISSOLVED OXYGEN | mg/L | 0.30 | 1.95 | 0.29 | 0.45 | 0.47 | 0.61 | 2.62 | 0.61 | 0.66 | 0.33 |
| pH | SU | 6.71 | 7.12 | 7.02 | 9.80 | 7.29 | 6.89 | 7.07 | 6.72 | 6.82 | 6.99 |
| REDOX POTENTIAL | mV | -96.4 | 14.4 | -27.7 | -179.2 | -63.3 | -31.5 | 5.9 | 11.5 | 9.0 | -13.5 |
| SPECIFIC CONDUCTIVITY | mS/cm | 1.257 | 0.709 | 0.857 | 0.766 | 0.737 | 1.032 | 0.850 | 1.006 | 1.094 | 0.948 |
| TURBIDITY | NTU | 0.60 | 0.90 | 2.98 | 0.46 | 0.98 | 3.52 | 2.53 | 4.97 | 3.63 | 4.43 |
| APPENDIX III | | | | | | | | | | | |
| BORON, TOTAL | µg/L | 102 | 49.1 J | 2,560 | 6,680 | 4,530 | 9,500 | 86.9 J | 269 | 237 | 1,870 |
| CALCIUM, TOTAL | µg/L | 209,000 | 131,000 | 153,000 | 77,600 | 63,200 | 136,000 | 154,000 | 182,000 | 190,000 | 163,000 |
| CHLORIDE, TOTAL | mg/L | 6.3 | 2.2 | 4.8 | 18.1 | 20.2 | 23.2 | 5.7 | 1.7 | 3.3 | 6.9 |
| FLUORIDE, TOTAL | mg/L | 0.14 J | 0.17 J | 0.16 J | 0.15 J | 0.34 | 0.20 | 0.17 J | 0.13 J | ND | 0.18 J |
| SULFATE, TOTAL | mg/L | 53.3 | 14.3 | 57.6 | 293 | 239 | 233 | 14.4 | 43.7 | 31.0 | 81.8 |
| TOTAL DISSOLVED SOLIDS | mg/L | 748 | 413 | 521 | 519 | 516 | 740 | 494 | 599 | 636 | 585 |
| APPENDIX IV | | | | | | | | | | | |
| ANTIMONY, TOTAL | µg/L | 0.027 J | 0.21 J | 0.058 J | 0.066 J | ND | 0.030 J | 0.13 J | 0.097 J | 0.052 J | 0.095 J |
| ARSENIC, TOTAL | µg/L | 27.1 | 0.46 J | 5.6 | 30.2 | 2.2 | 13.5 | 0.58 J | 1.3 | 1.4 | 0.73 J |
| BARIIUM, TOTAL | µg/L | 351 | 250 | 138 | 53.2 | 65.8 | 132 | 374 | 298 | 290 | 120 |
| BERYLLIUM, TOTAL | µg/L | ND | 0.25 J | 0.24 J | 0.33 J | ND | ND | 0.17 J | 0.21 J | 0.21 J | 0.21 J |
| CADMIUM, TOTAL | µg/L | ND | 0.033 J | 0.072 J | ND | ND | ND | 0.034 J | 0.11 J | 0.10 J | 0.13 J |
| CHROMIUM, TOTAL | µg/L | 2.2 | ND | ND | ND | ND | ND | 1.4 J | ND | 3.5 | ND |
| COBALT, TOTAL | µg/L | 0.88 J | ND | 2.6 J | ND | ND | 2.0 J | ND | 4.9 J | 2.0 J | 1.5 J |
| LEAD, TOTAL | µg/L | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| LITHIUM, TOTAL | µg/L | 18.9 | 17.9 | 21.7 | 16.4 | 29.0 | 44.6 | 11.9 | 41.3 | 40.2 | 24.5 |
| MERCURY, TOTAL | µg/L | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| MOLYBDENUM, TOTAL | µg/L | 1.4 J | 2.3 J | 3.3 J | 151 | 172 | 69.3 | ND | 3.2 J | 3.4 J | 9.3 J |
| RADIUM [226 + 228] | pCi/L | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| SELENIUM, TOTAL | µg/L | ND | 1.6 | 0.34 J | 0.12 J | ND | ND | 0.66 J | 0.73 J | 0.34 J | 0.11 J |
| THALLIUM, TOTAL | µg/L | ND | ND | 0.055 J | 0.056 J | ND | ND | 0.041 J | ND | ND | ND |

NOTES

- Unit Abbreviations: µg/L - micrograms per liter, mg/L - milligrams per liter, SU - standard units, and pCi/L - picocuries per liter, mV - millivolts, mS/cm - millisiemens per centimeters, and NTU - nephelometric turbidity unit.
- J - Result is an estimated value.
- ND - Constituent was analyzed for, but was not detected above the Method Detection Limit (MDL) and is considered a non-detect.
- Radium (226 + 228) is reported as the sum of the Radium 226 and the Radium 228 activity concentrations unless the sum of the Radium 226 and Radium 228 Minimum Detectable Concentrations (MDC) is higher in which case it is displayed as ND.

Table 9
Baseline Sampling Event 8 Results
LCPB Surface Impoundment
Labadie Energy Center, Franklin County, MO

| ANALYTE | UNITS | BACKGROUND | | GROUNDWATER MONITORING WELLS | | | | | | | |
|-------------------------|-------|------------|-----------|------------------------------|----------|----------|----------|----------|----------|----------|----------|
| | | BMW-1S | BMW-2S | LMW-1S | LMW-2S | LMW-3S | LMW-4S | LMW-5S | LMW-6S | LMW-7S | LMW-8S |
| FIELD PARAMETERS | | | | | | | | | | | |
| DATE | NA | 5/31/2017 | 5/31/2017 | 6/1/2017 | 6/1/2017 | 6/1/2017 | 6/1/2017 | 6/2/2017 | 6/2/2017 | 6/2/2017 | 6/1/2017 |
| DISSOLVED OXYGEN | mg/L | 0.12 | 0.14 | 0.10 | 0.57 | 0.73 | 0.45 | 0.93 | 0.35 | 0.49 | 0.14 |
| pH | SU | 6.66 | 6.95 | 6.88 | 9.27 | 7.02 | 7.06 | 6.98 | 6.76 | 6.78 | 7.06 |
| REDOX POTENTIAL | mV | -89.8 | 16.4 | -83.7 | -37.2 | -109.4 | -91.9 | 17.9 | -44.5 | -30.1 | -84.6 |
| SPECIFIC CONDUCTIVITY | mS/cm | 1.124 | 0.689 | 0.957 | 0.775 | 0.974 | 0.946 | 0.673 | 0.966 | 1.082 | 1.116 |
| TURBIDITY | NTU | 4.68 | 2.07 | 4.98 | 0.50 | 2.24 | 8.28 | 4.84 | 4.63 | 4.77 | 4.79 |
| APPENDIX III | | | | | | | | | | | |
| BORON, TOTAL | µg/L | 122 | 37.3 J | 3,260 | 7,300 | 5,390 | 10,600 | 56.4 J | 5,770 | 5,660 | 8,730 |
| CALCIUM, TOTAL | µg/L | 217,000 | 139,000 | 190,000 | 79,600 | 74,900 | 108,000 | 136,000 | 160,000 | 181,000 | 169,000 |
| CHLORIDE, TOTAL | mg/L | 5.6 | 2.3 | 5.1 | 18.8 | 21.4 | 24.4 | 3.0 | 12.6 | 16.6 | 19.8 |
| FLUORIDE, TOTAL | mg/L | 0.17 J | 0.23 | 0.26 | 0.15 J | 0.50 | 0.27 | 0.18 J | 0.23 | 0.19 J | 0.46 |
| SULFATE, TOTAL | mg/L | 51.6 | 23.6 | 154 | 317 | 271 | 264 | 13.0 | 108 | 174 | 448 |
| TOTAL DISSOLVED SOLIDS | mg/L | 749 | 472 | 685 | 523 | 627 | 695 | 401 | 627 | 752 | 913 |
| APPENDIX IV | | | | | | | | | | | |
| ANTIMONY, TOTAL | µg/L | ND | 0.24 J | 0.033 J | 0.073 J | ND | ND | 0.13 J | 0.070 J | 0.029 J | 0.029 J |
| ARSENIC, TOTAL | µg/L | 30.4 | 0.46 J | 10.6 | 28.5 | 6.0 | 19.4 | 0.52 J | 9.0 | 6.2 | 11.7 |
| BARIUM, TOTAL | µg/L | 352 | 306 | 230 | 54.7 | 84.1 | 142 | 314 | 318 | 372 | 238 |
| BERYLLIUM, TOTAL | µg/L | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| CADMIUM, TOTAL | µg/L | ND | 0.031 J | 0.025 J | ND | ND | ND | 0.049 J | 0.055 J | 0.031 J | 0.11 J |
| CHROMIUM, TOTAL | µg/L | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| COBALT, TOTAL | µg/L | 1.3 J | ND | 1.5 J | ND | ND | 0.95 J | ND | 6.1 | 5.1 | 3.2 J |
| LEAD, TOTAL | µg/L | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| LITHIUM, TOTAL | µg/L | 13.0 | 17.8 | 18.6 | 13.4 | 21.7 | 37.9 | 8.3 J | 40.8 | 44.2 | 18.7 |
| MERCURY, TOTAL | µg/L | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| MOLYBDENUM, TOTAL | µg/L | 1.5 J | 2.0 J | 4.7 J | 148 | 187 | 130 | 1.6 J | 27.8 | 46.0 | 258 |
| RADIUM [226 + 228] | pCi/L | 2.389 | ND | ND | ND | ND | ND | 1.530 | ND | ND | ND |
| SELENIUM, TOTAL | µg/L | ND | 0.57 J | 0.13 J | 0.12 J | 0.099 J | 0.12 J | 0.41 J | 0.12 J | ND | ND |
| THALLIUM, TOTAL | µg/L | ND | 0.044 J | 0.090 J | 0.093 J | 0.038 J | ND | ND | ND | 0.073 J | 0.039 J |

NOTES

- Unit Abbreviations: µg/L - micrograms per liter, mg/L - milligrams per liter, SU - standard units, and pCi/L - picocuries per liter, mV - millivolts, mS/cm - millisiemens per centimeters, and NTU - nephelometric turbidity unit.
- J - Result is an estimated value.
- ND - Constituent was analyzed for, but was not detected above the Method Detection Limit (MDL) and is considered a non-detect.
- Radium (226 + 228) is reported as the sum of the Radium 226 and the Radium 228 activity concentrations unless the sum of the Radium 226 and Radium 228 Minimum Detectable Concentrations (MDC) is higher in which case it is displayed as ND.

Table 10
November 2017 Detection Monitoring Results
LCPB Surface Impoundment
Labadie Energy Center, Franklin County, MO

| ANALYTE | UNITS | BACKGROUND | | GROUNDWATER MONITORING WELLS | | | | | | | |
|-------------------------|-------|------------|-----------|------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | | BMW-1S | BMW-2S | LMW-1S | LMW-2S | LMW-3S | LMW-4S | LMW-5S | LMW-6S | LMW-7S | LMW-8S |
| FIELD PARAMETERS | | | | | | | | | | | |
| DATE | NA | 11/7/2017 | 11/7/2017 | 11/8/2017 | 11/7/2017 | 11/8/2017 | 11/8/2017 | 11/8/2017 | 11/8/2017 | 11/8/2017 | 11/8/2017 |
| DISSOLVED OXYGEN | mg/L | 0.90 | 2.31 | 0.76 | 1.24 | 1.12 | 0.57 | 1.11 | 0.75 | 0.95 | 0.91 |
| pH | SU | 6.77 | 7.11 | 6.85 | 9.51 | 7.54 | 7.19 | 7.22 | 6.69 | 6.73 | 6.95 |
| REDOX POTENTIAL | mV | -57.8 | 10.0 | 16.3 | -108.8 | -97.4 | -57.4 | -10.1 | 56.9 | 40.9 | 18.0 |
| SPECIFIC CONDUCTIVITY | mS/cm | 1.262 | 0.698 | 1.052 | 0.640 | 0.964 | 1.137 | 0.703 | 0.994 | 1.121 | 1.088 |
| TURBIDITY | NTU | 3.16 | 0.81 | 2.81 | 0.46 | 4.67 | 2.23 | 2.13 | 1.08 | 4.09 | 3.55 |
| APPENDIX III | | | | | | | | | | | |
| BORON, TOTAL | µg/L | 100 | 46.3 J | 4,570 | 6,350 | 5,350 | 9,160 | 108 | 843 | 3,690 | 4,430 |
| CALCIUM, TOTAL | µg/L | 197,000 | 120,000 | 178,000 | 62,200 | 74,100 | 139,000 | 131,000 | 167,000 | 179,000 | 173,000 |
| CHLORIDE, TOTAL | mg/L | 4.6 | 21.2 | 5.4 | 21.0 | 20.3 | 22.6 | 3.6 | 3.0 | 11.5 | 15.0 |
| FLUORIDE, TOTAL | mg/L | 0.18 J | 0.18 J | 0.16 J | 0.18 J | 0.42 | 0.22 | 0.19 J | 0.17 J | 0.14 J | 0.22 |
| SULFATE, TOTAL | mg/L | 157 | 246 | 49.1 J | 232 | 255 | 250 | 13.3 | 51.2 | 139 | 191 |
| TOTAL DISSOLVED SOLIDS | mg/L | 653 | 414 | 703 | 428 | 632 | 780 | 427 | 605 | 734 | 731 |

- NOTES
1. Unit Abbreviations: µg/L - micrograms per liter, mg/L - milligrams per liter, SU - standard units, mV - millivolts, mS/cm - millisiemens per centimeter, and NTU - nephelometric turbidity unit.
 2. J - Result is an estimated value.
 3. ND - Constituent was analyzed for, but was not detected above the MDL and is considered a non-detect. Values displayed as ND.
 4. NA - Not applicable.

FIGURES

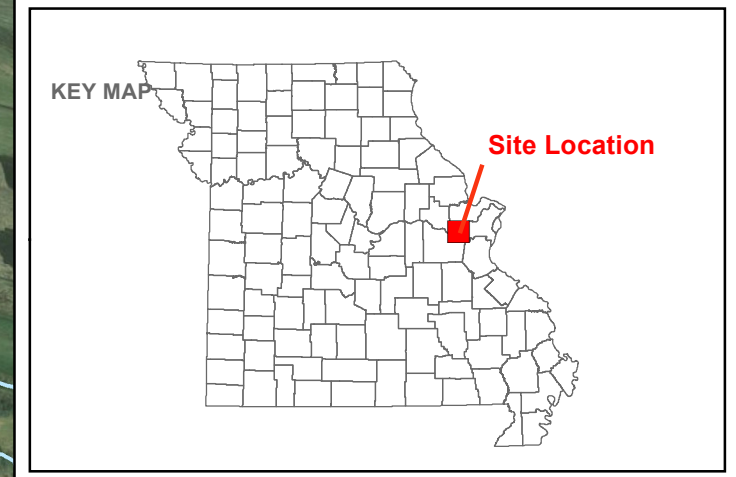


LEGEND

- Labadie Energy Center Property Boundary
- LCPB - Fly Ash Surface Impoundment

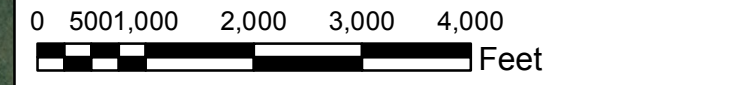
Ground/Surface Water Measurement Locations

- LCPB - Fly Ash Surface Impoundment Monitoring Well
- Background Monitoring Well



- NOTES**
1. ALL LOCATIONS AND BOUNDARIES ARE APPROXIMATE.
 2. GROUNDWATER MONITORING WELLS SURVEYED BY ZAHNER AND ASSOCIATES, INC. ON JANUARY 13 AND

- REFERENCES**
1. ZAHNER AND ASSOCIATES, INC. 2016. LOT CONSOLIDATION PLAT OF "LABADIE ENERGY CENTER" - PREPARED FOR AMEREN MISSOURI. REVISED JUNE 15, 2016.
 2. COORDINATE SYSTEM: NAD 1983 STATEPLANE MISSOURI EAST FIPS 2,401 FEET.



CLIENT
 AMEREN MISSOURI
 LABADIE ENERGY CENTER



PROJECT
 GROUNDWATER MONITORING PROGRAM

TITLE
SITE LOCATION AERIAL MAP AND MONITORING WELL LOCATIONS

| | | |
|------------|------------|------------|
| CONSULTANT | YYYY-MM-DD | 2017-08-07 |
| | PREPARED | JSI |
| | DESIGN | JSI |
| | REVIEW | JS |
| | APPROVED | MNH |

| | | | |
|-------------------------|----------------|-------------|--------------------|
| PROJECT No. 153-1406 | PHASE 0001B | Rev. 0.0 | FIGURE 1 |
|-------------------------|----------------|-------------|--------------------|

Path: G:\Projects\153-1406 - Ameren GW Monitoring Program - MOCPhase 0001 - Labadie Energy\800 - FIGURES\DRAWINGS\PRODUCTION\CMP\Figure 2 - Site Aerial map and monitoring well locations.mxd



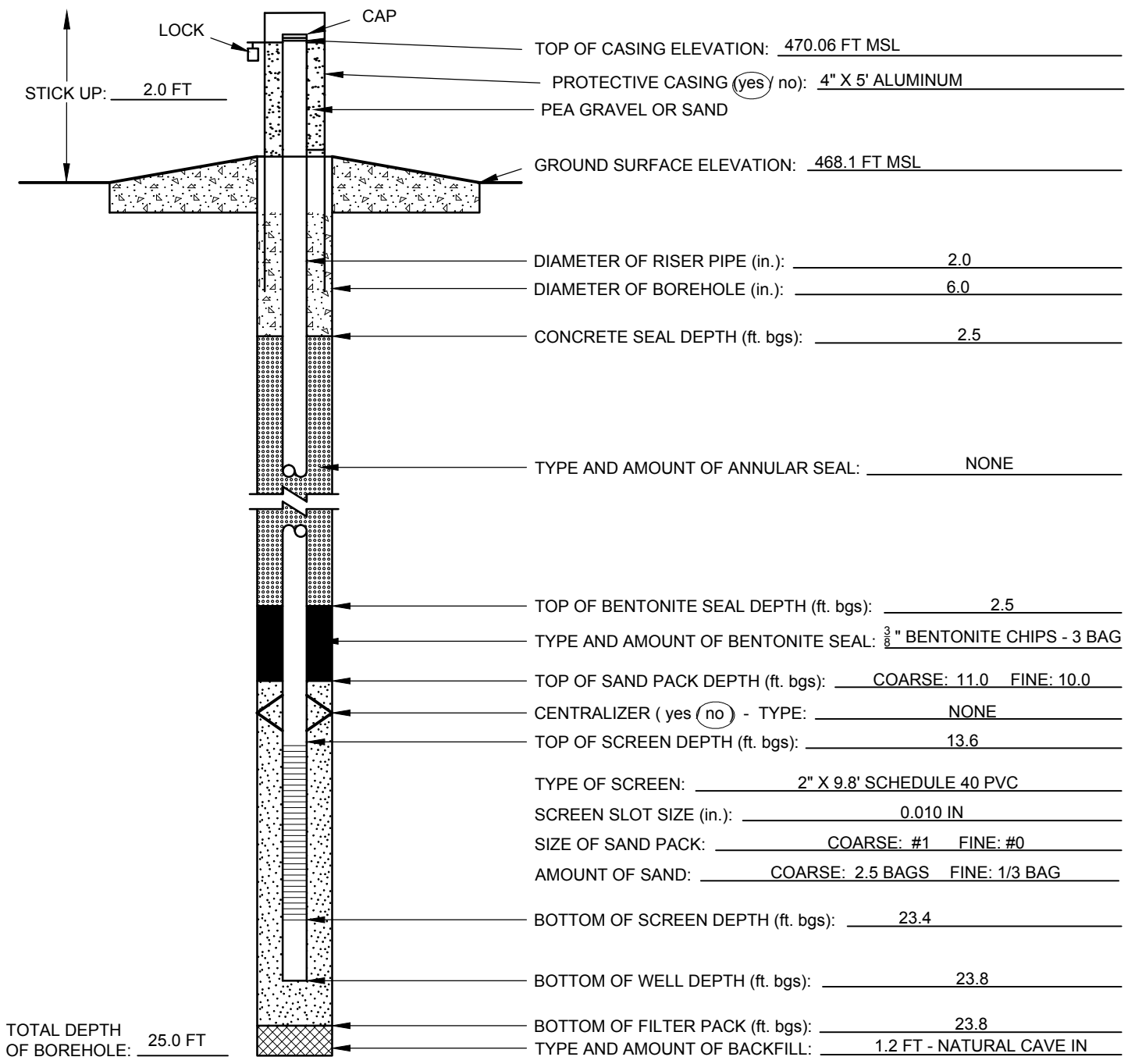
1in IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM:

APPENDIX A – CCR MONITORING WELL CONSTRUCTION DIAGRAMS



ABOVE GROUND MONITORING WELL CONSTRUCTION LOG LMW-1S

| | | | |
|--|----------------------------------|---------------------------------|--|
| PROJECT NAME: AMEREN CCR GW MONITORING | | PROJECT NUMBER: 153-1406.0001B | |
| SITE NAME: LABADIE ENERGY CENTER | | LOCATION: LMW-1S | |
| CLIENT: AMEREN MISSOURI | | SURFACE ELEVATION: 468.1 FT MSL | |
| GEOLOGIST: J. SUOZZI | NORTHING: 990727.7 | EASTING: 726039.1 | |
| DRILLER: J. DRABEK | STATIC WATER LEVEL: 9.50 FT BTOC | COMPLETION DATE: 11/20/2015 | |
| DRILLING COMPANY: CASCADE | | DRILLING METHODS: SONIC | |



TOP OF CASING ELEVATION: 470.06 FT MSL

PROTECTIVE CASING (yes) no: 4" X 5' ALUMINUM

PEA GRAVEL OR SAND

GROUND SURFACE ELEVATION: 468.1 FT MSL

DIAMETER OF RISER PIPE (in.): 2.0

DIAMETER OF BOREHOLE (in.): 6.0

CONCRETE SEAL DEPTH (ft. bgs): 2.5

TYPE AND AMOUNT OF ANNULAR SEAL: NONE

TOP OF BENTONITE SEAL DEPTH (ft. bgs): 2.5

TYPE AND AMOUNT OF BENTONITE SEAL: 3/8" BENTONITE CHIPS - 3 BAG

TOP OF SAND PACK DEPTH (ft. bgs): COARSE: 11.0 FINE: 10.0

CENTRALIZER (yes (no) - TYPE: NONE

TOP OF SCREEN DEPTH (ft. bgs): 13.6

TYPE OF SCREEN: 2" X 9.8' SCHEDULE 40 PVC

SCREEN SLOT SIZE (in.): 0.010 IN

SIZE OF SAND PACK: COARSE: #1 FINE: #0

AMOUNT OF SAND: COARSE: 2.5 BAGS FINE: 1/3 BAG

BOTTOM OF SCREEN DEPTH (ft. bgs): 23.4

BOTTOM OF WELL DEPTH (ft. bgs): 23.8

BOTTOM OF FILTER PACK (ft. bgs): 23.8

TYPE AND AMOUNT OF BACKFILL: 1.2 FT - NATURAL CAVE IN

TOTAL DEPTH OF BOREHOLE: 25.0 FT

ADDITIONAL NOTES: FT BGS = FEET BELOW GROUND SURFACE. FT MSL = FEET ABOVE MEAN SEA LEVEL.

30 GALLONS OF H2O USED DURING DRILLING. HORIZONTAL DATUM: STATE PLANE COORDINATES NAD83 US SURVEY FEET (2000) MISSOURI EAST ZONE. VERTICAL DATUM: NAVD88. WELL SURVEYED BY ZAHNER AND ASSOCIATES, INC ON JANUARY 16, 2016.

FT BTOC = FEET BELOW TOP OF CASING. SAND AND BENTONITE BAGS WEIGH 50 LBS EACH.

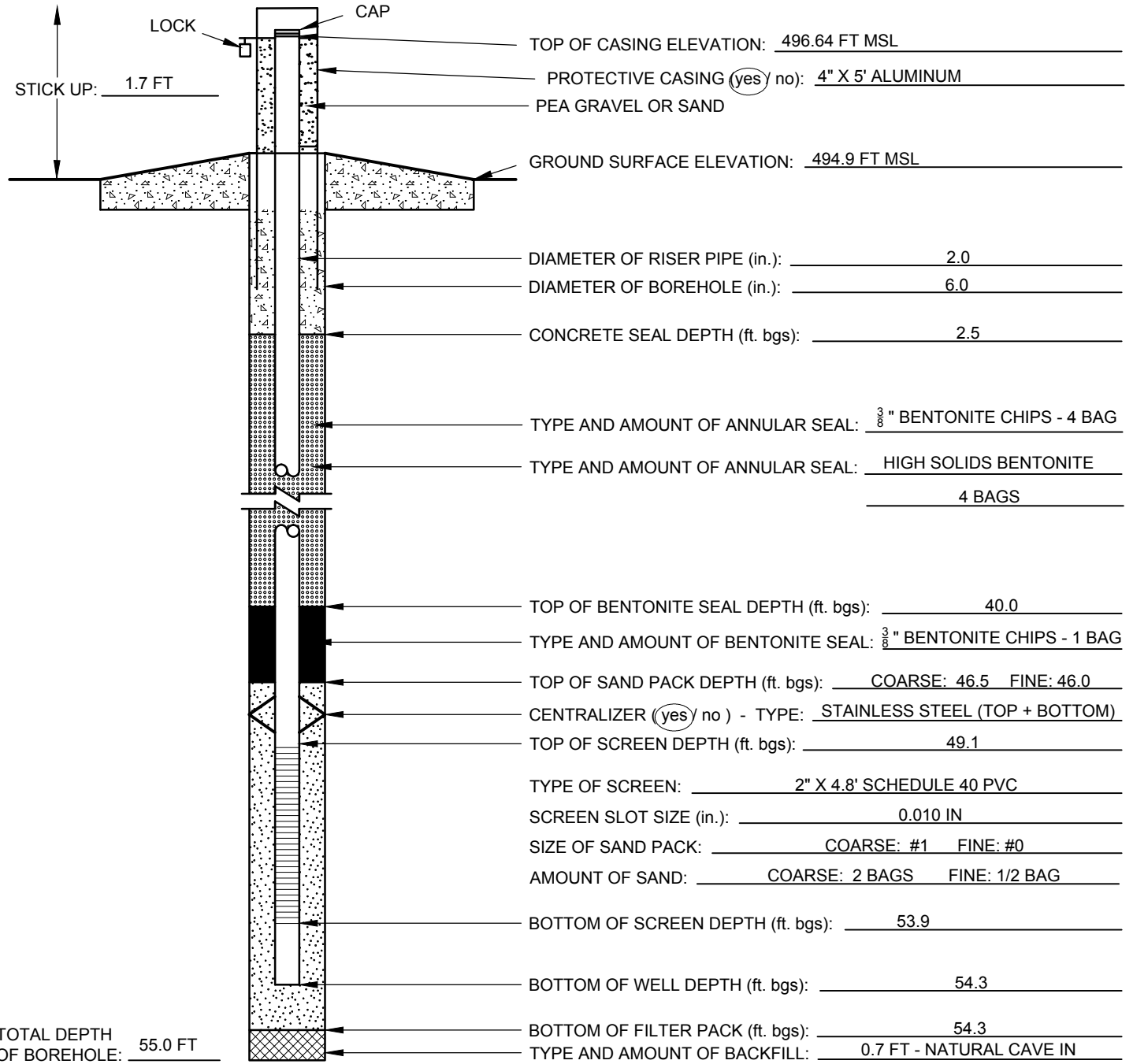
CHECKED BY: J. INGRAM
 DATE CHECKED: 4/19/2016

PREPARED BY: J. SUOZZI



ABOVE GROUND MONITORING WELL CONSTRUCTION LOG LMW-2S

| | | | |
|--|-----------------------------------|---------------------------------|--|
| PROJECT NAME: AMEREN CCR GW MONITORING | | PROJECT NUMBER: 153-1406.0001B | |
| SITE NAME: LABADIE ENERGY CENTER | | LOCATION: LMW-2S | |
| CLIENT: AMEREN MISSOURI | | SURFACE ELEVATION: 494.9 FT MSL | |
| GEOLOGIST: J. SUOZZI | NORTHING: 992017.5 | EASTING: 725074.2 | |
| DRILLER: J. DRABEK | STATIC WATER LEVEL: 35.68 FT BTOC | COMPLETION DATE: 11/23/2015 | |
| DRILLING COMPANY: CASCADE | | DRILLING METHODS: SONIC | |



ADDITIONAL NOTES: FT BGS = FEET BELOW GROUND SURFACE. FT MSL = FEET ABOVE MEAN SEA LEVEL.
 200 GALLONS OF H2O USED DURING DRILLING. HORIZONTAL DATUM: STATE PLANE COORDINATES NAD83 US SURVEY FEET (2000) MISSOURI EAST ZONE. VERTICAL DATUM: NAVD88. WELL SURVEYED BY ZAHNER AND ASSOCIATES, INC ON JANUARY 16, 2016.
 FT BTOC = FEET BELOW TOP OF CASING. SAND AND BENTONITE BAGS WEIGH 50 LBS EACH.

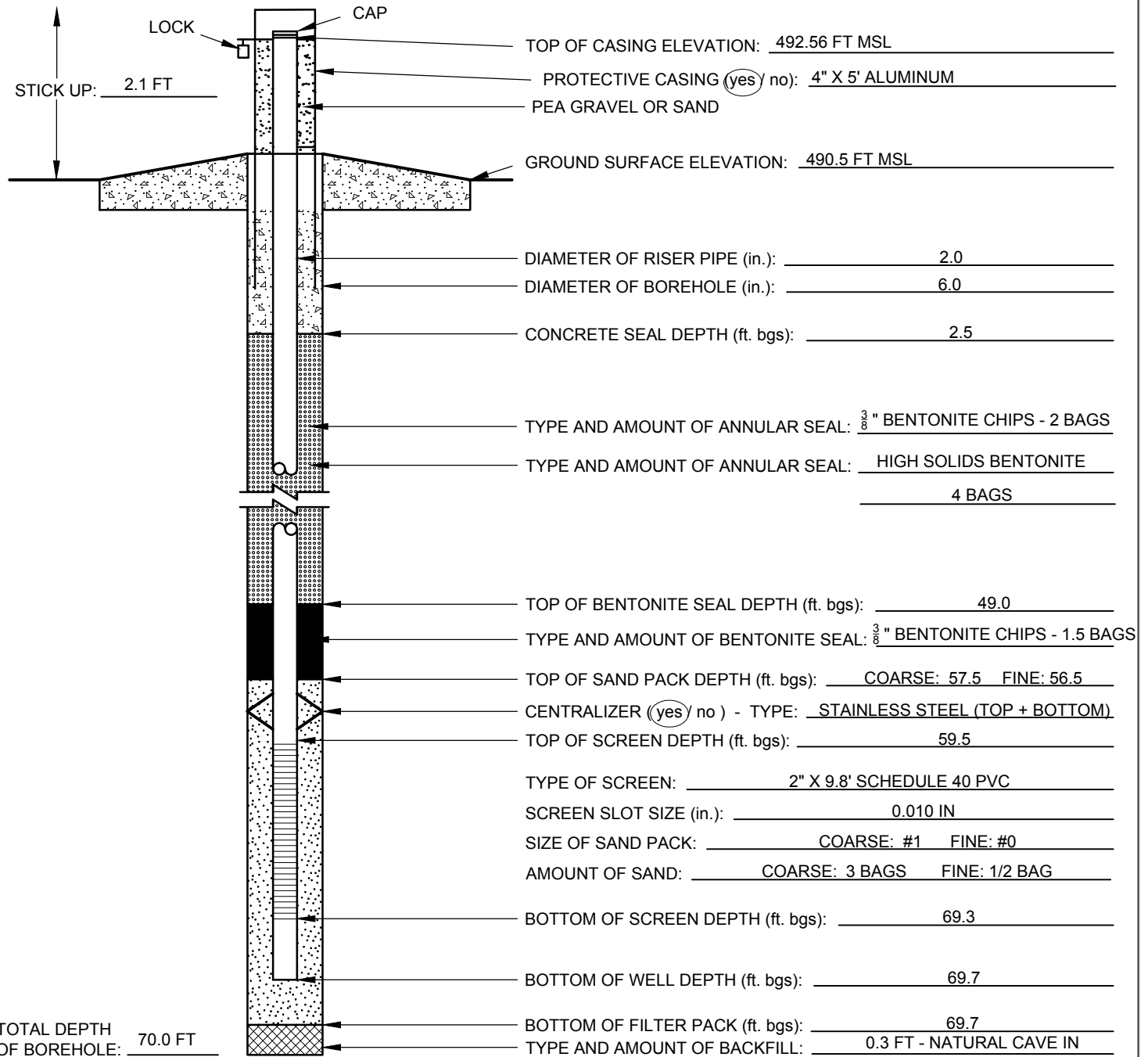
CHECKED BY: J. INGRAM
 DATE CHECKED: 4/19/2016

PREPARED BY: J. SUOZZI



ABOVE GROUND MONITORING WELL CONSTRUCTION LOG LMW-3S

| | | | |
|--|----------------------------------|---------------------------------|--|
| PROJECT NAME: AMEREN CCR GW MONITORING | | PROJECT NUMBER: 153-1406.0001B | |
| SITE NAME: LABADIE ENERGY CENTER | | LOCATION: LMW-3S | |
| CLIENT: AMEREN MISSOURI | | SURFACE ELEVATION: 490.5 FT MSL | |
| GEOLOGIST: J. INGRAM | NORTHING: 993254.3 | EASTING: 725081.6 | |
| DRILLER: J. DRABEK | STATIC WATER LEVEL: 32.6 FT BTOC | COMPLETION DATE: 2/2/2016 | |
| DRILLING COMPANY: CASCADE | | DRILLING METHODS: SONIC | |



ADDITIONAL NOTES: FT BGS = FEET BELOW GROUND SURFACE. FT MSL = FEET ABOVE MEAN SEA LEVEL.
250 GALLONS OF H2O USED DURING DRILLING. HORIZONTAL DATUM: STATE PLANE COORDINATES NAD83 (2000) MISSOURI EAST ZONE.
VERTICAL DATUM: NAVD88. WELL SURVEYED BY ZAHNER AND ASSOCIATES, INC ON FEBRUARY 11, 2016.
 FT BTOC = FEET BELOW TOP OF CASING. SAND AND BENTONITE BAGS WEIGH 50 LBS EACH.

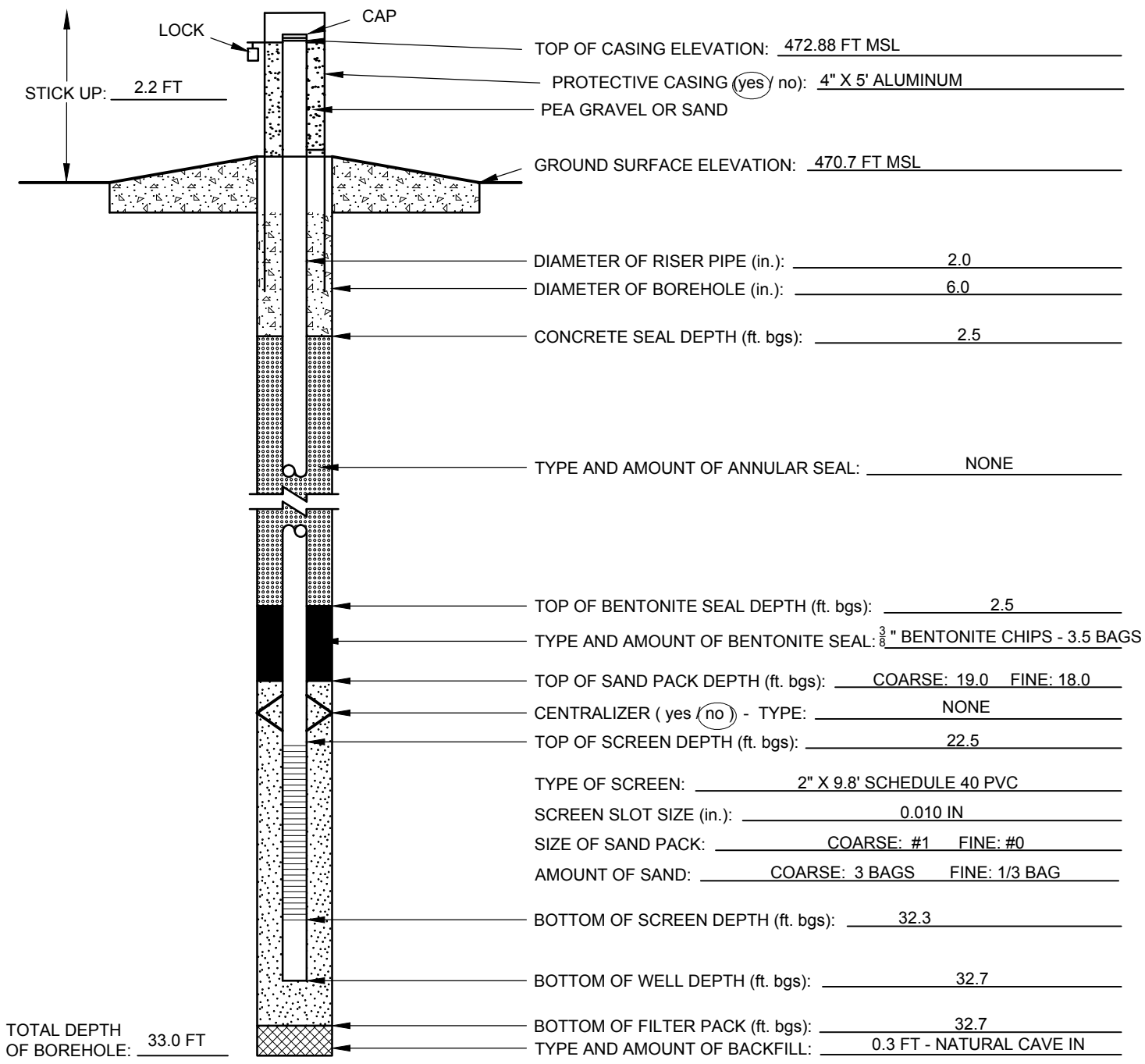
CHECKED BY: J. INGRAM
 DATE CHECKED: 4/19/2016

PREPARED BY: J. SUOZZI



ABOVE GROUND MONITORING WELL CONSTRUCTION LOG LMW-4S

| | | | |
|--|-----------------------------------|---------------------------------|--|
| PROJECT NAME: AMEREN CCR GW MONITORING | | PROJECT NUMBER: 153-1406.0001B | |
| SITE NAME: LABADIE ENERGY CENTER | | LOCATION: LMW-4S | |
| CLIENT: AMEREN MISSOURI | | SURFACE ELEVATION: 470.7 FT MSL | |
| GEOLOGIST: J. INGRAM | NORTHING: 994194.9 | EASTING: 725624.1 | |
| DRILLER: J. DRABEK | STATIC WATER LEVEL: 14.89 FT BTOC | COMPLETION DATE: 11/18/2015 | |
| DRILLING COMPANY: CASCADE | | DRILLING METHODS: SONIC | |



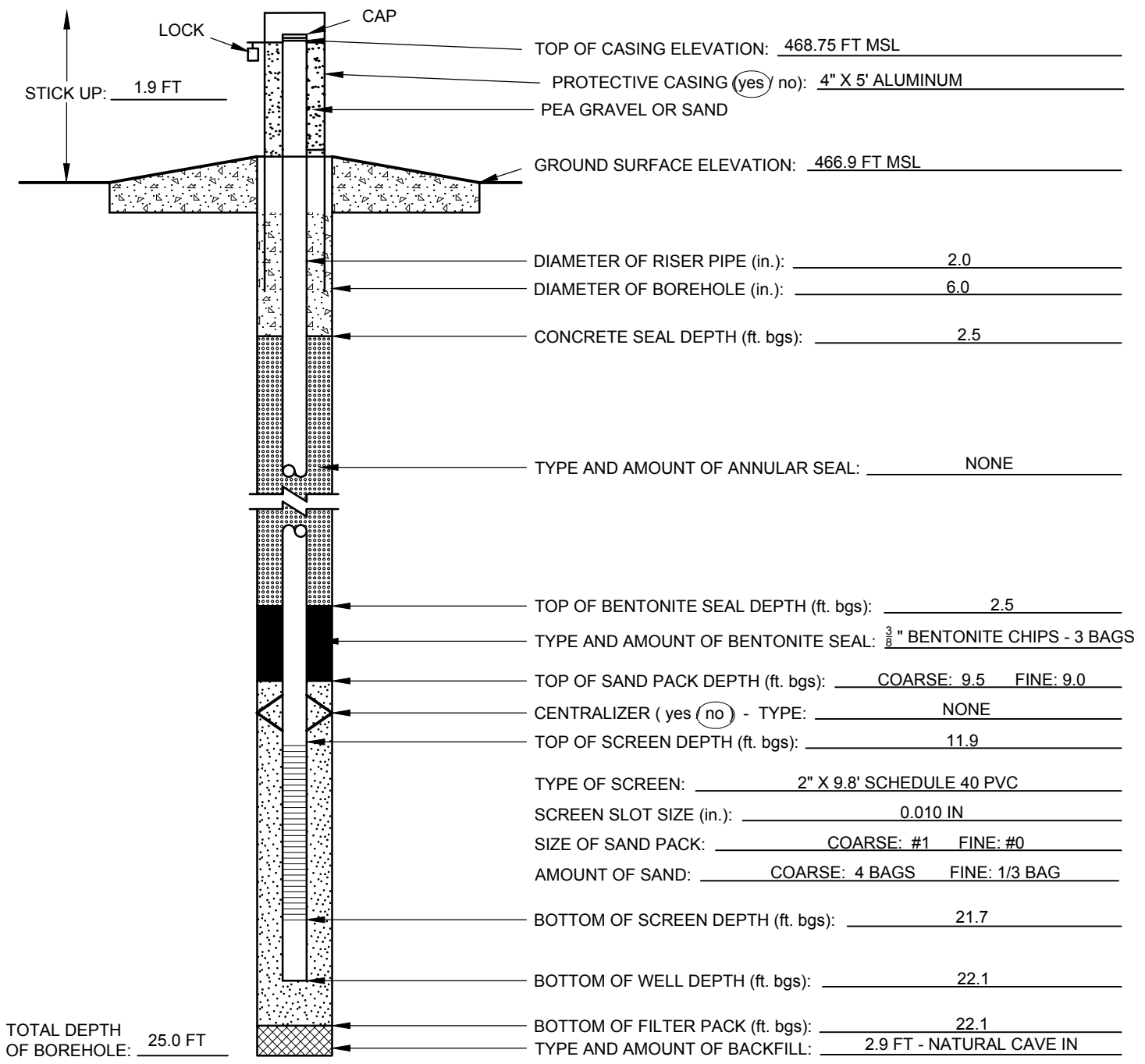
ADDITIONAL NOTES: FT BGS = FEET BELOW GROUND SURFACE. FT MSL = FEET ABOVE MEAN SEA LEVEL.
 150 GALLONS OF H2O USED DURING DRILLING. HORIZONTAL DATUM: STATE PLANE COORDINATES NAD83 (2000) MISSOURI EAST ZONE.
 VERTICAL DATUM: NAVD88. WELL SURVEYED BY ZAHNER AND ASSOCIATES, INC ON JANUARY 16, 2016.
 FT BTOC = FEET BELOW TOP OF CASING. SAND AND BENTONITE BAGS WEIGH 50 LBS EACH.

CHECKED BY: J. INGRAM
 DATE CHECKED: 4/19/2016
 PREPARED BY: J. SUOZZI



ABOVE GROUND MONITORING WELL CONSTRUCTION LOG LMW-5S

| | | | |
|--|-----------------------------------|---------------------------------|--|
| PROJECT NAME: AMEREN CCR GW MONITORING | | PROJECT NUMBER: 153-1406.0001B | |
| SITE NAME: LABADIE ENERGY CENTER | | LOCATION: LMW-5S | |
| CLIENT: AMEREN MISSOURI | | SURFACE ELEVATION: 466.9 FT MSL | |
| GEOLOGIST: J. INGRAM | NORTHING: 994201.6 | EASTING: 726366.8 | |
| DRILLER: J. DRABEK | STATIC WATER LEVEL: 10.38 FT BTOC | COMPLETION DATE: 11/18/2015 | |
| DRILLING COMPANY: CASCADE | | DRILLING METHODS: SONIC | |



ADDITIONAL NOTES: FT BGS = FEET BELOW GROUND SURFACE. FT MSL = FEET ABOVE MEAN SEA LEVEL.
75 GALLONS OF H2O USED DURING DRILLING. HORIZONTAL DATUM: STATE PLANE COORDINATES NAD83 (2000) MISSOURI EAST ZONE.
VERTICAL DATUM: NAVD88. WELL SURVEYED BY ZAHNER AND ASSOCIATES, INC ON JANUARY 16, 2016.
 FT BTOC = FEET BELOW TOP OF CASING. SAND AND BENTONITE BAGS WEIGH 50 LBS EACH.

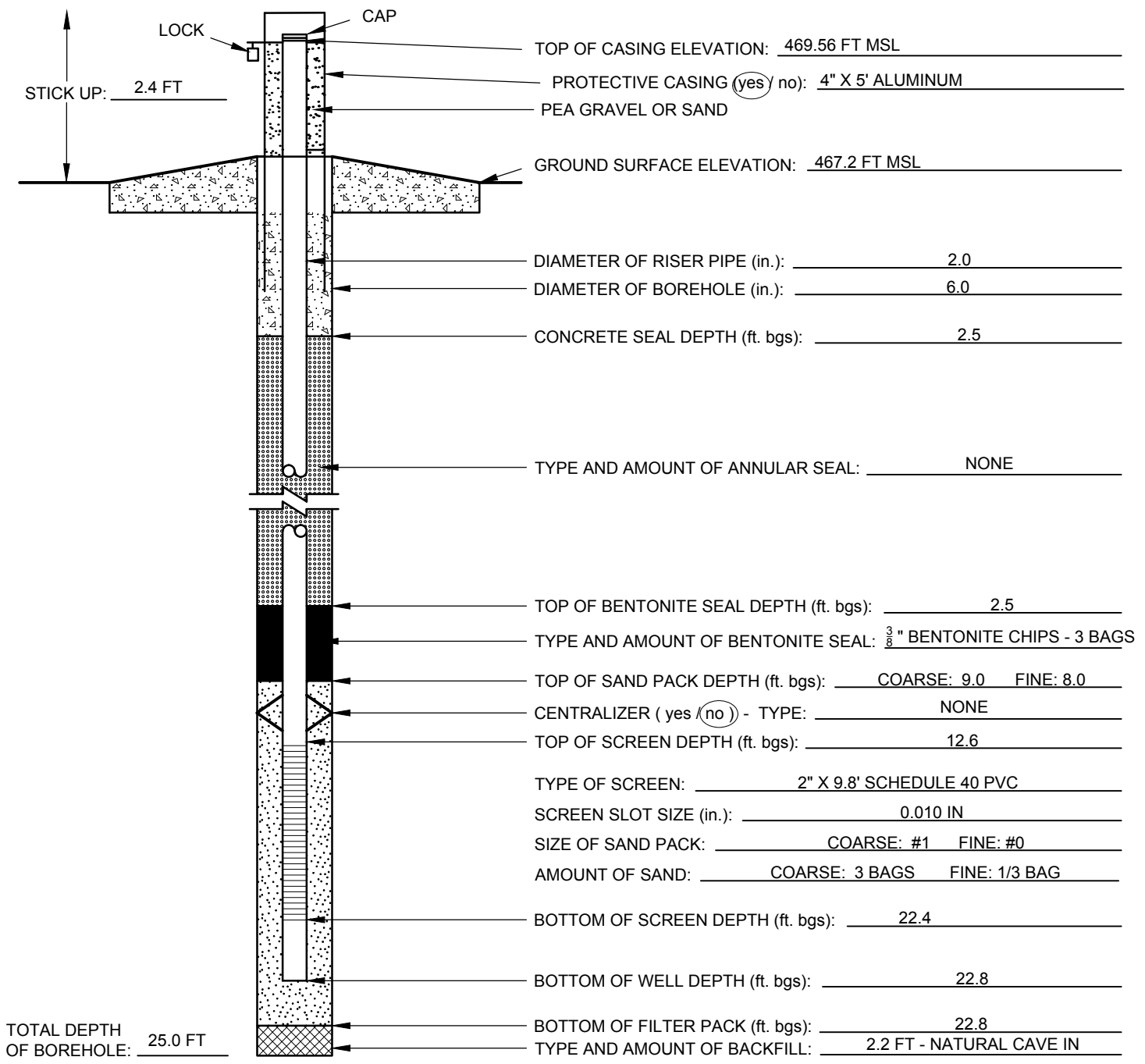
CHECKED BY: J. INGRAM
 DATE CHECKED: 4/19/2016

PREPARED BY: J. SUOZZI



ABOVE GROUND MONITORING WELL CONSTRUCTION LOG LMW-6S

| | | | |
|--|-----------------------------------|---------------------------------|--|
| PROJECT NAME: AMEREN CCR GW MONITORING | | PROJECT NUMBER: 153-1406.0001B | |
| SITE NAME: LABADIE ENERGY CENTER | | LOCATION: LMW-6S | |
| CLIENT: AMEREN MISSOURI | | SURFACE ELEVATION: 467.2 FT MSL | |
| GEOLOGIST: J. SUOZZI | NORTHING: 993320.2 | EASTING: 726391.4 | |
| DRILLER: J. DRABEK | STATIC WATER LEVEL: 10.49 FT BTOR | COMPLETION DATE: 11/20/2015 | |
| DRILLING COMPANY: CASCADE | | DRILLING METHODS: SONIC | |



ADDITIONAL NOTES: FT BGS = FEET BELOW GROUND SURFACE. FT MSL = FEET ABOVE MEAN SEA LEVEL.
30 GALLONS OF H2O USED DURING DRILLING. HORIZONTAL DATUM: STATE PLANE COORDINATES NAD83 (2000) MISSOURI EAST ZONE.
VERTICAL DATUM: NAVD88. WELL SURVEYED BY ZAHNER AND ASSOCIATES, INC ON JANUARY 16, 2016.
FT BTOR = FEET BELOW TOP OF CASING. SAND AND BENTONITE BAGS WEIGH 50 LBS EACH.

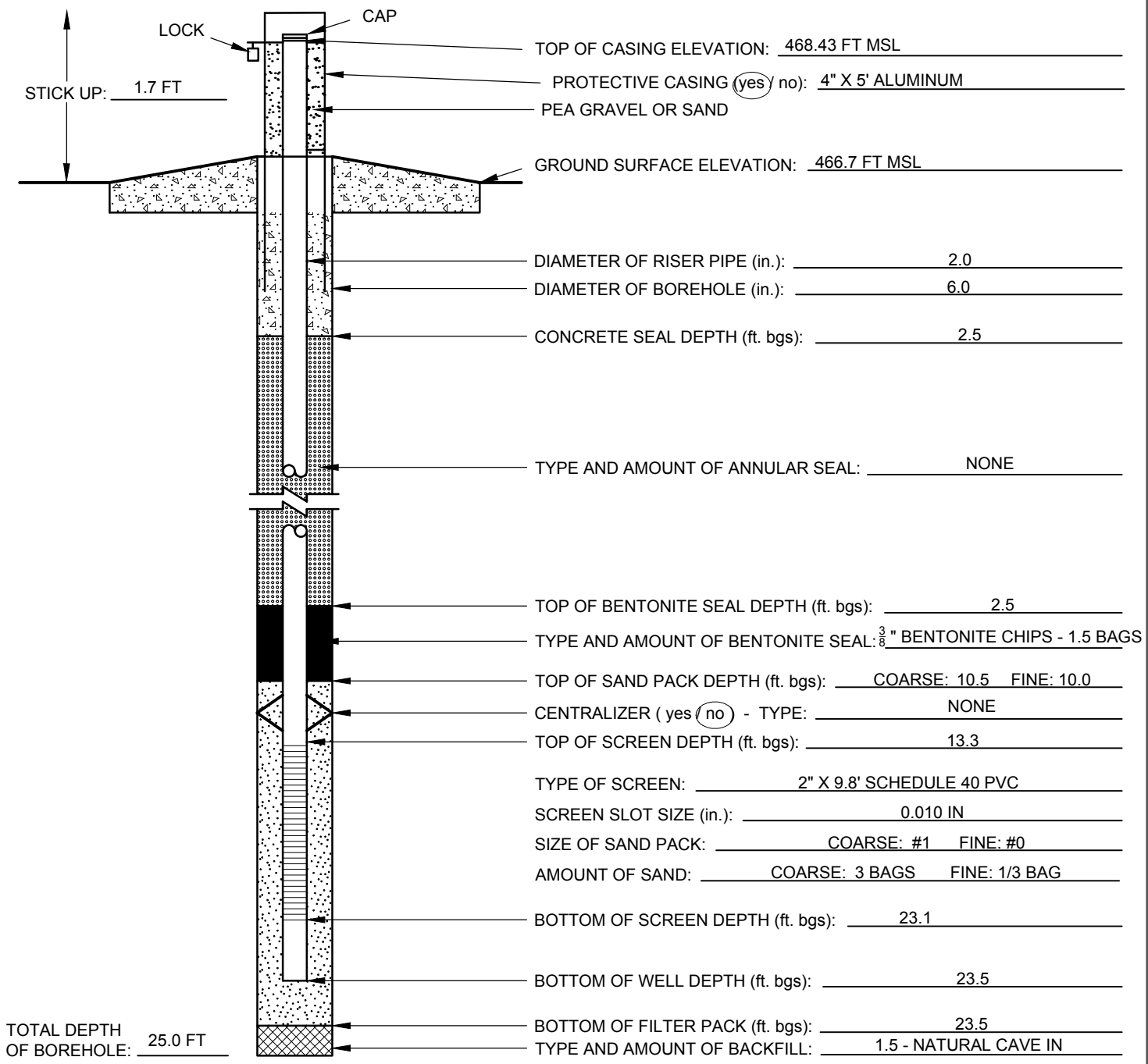
CHECKED BY: J. INGRAM
DATE CHECKED: 4/19/2016

PREPARED BY: J. SUOZZI



ABOVE GROUND MONITORING WELL CONSTRUCTION LOG LMW-7S

| | | | |
|--|----------------------------------|---------------------------------|--|
| PROJECT NAME: AMEREN CCR GW MONITORING | | PROJECT NUMBER: 153-1406.0001B | |
| SITE NAME: LABADIE ENERGY CENTER | | LOCATION: LMW-7S | |
| CLIENT: AMEREN MISSOURI | | SURFACE ELEVATION: 466.7 FT MSL | |
| GEOLOGIST: J. SUOZZI | NORTHING: 992330.1 | EASTING: 726371.1 | |
| DRILLER: J. DRABEK | STATIC WATER LEVEL: 8.57 FT BTOC | COMPLETION DATE: 11/20/2015 | |
| DRILLING COMPANY: CASCADE | | DRILLING METHODS: SONIC | |



ADDITIONAL NOTES: FT BGS = FEET BELOW GROUND SURFACE. FT MSL = FEET ABOVE MEAN SEA LEVEL.
 30 GALLONS OF H2O USED DURING DRILLING. HORIZONTAL DATUM: STATE PLANE COORDINATES NAD83 (2000) MISSOURI EAST ZONE.
 VERTICAL DATUM: NAVD88. WELL SURVEYED BY ZAHNER AND ASSOCIATES, INC ON JANUARY 16, 2016.
 FT BTOC = FEET BELOW TOP OF CASING. SAND AND BENTONITE BAGS WEIGH 50 LBS EACH.

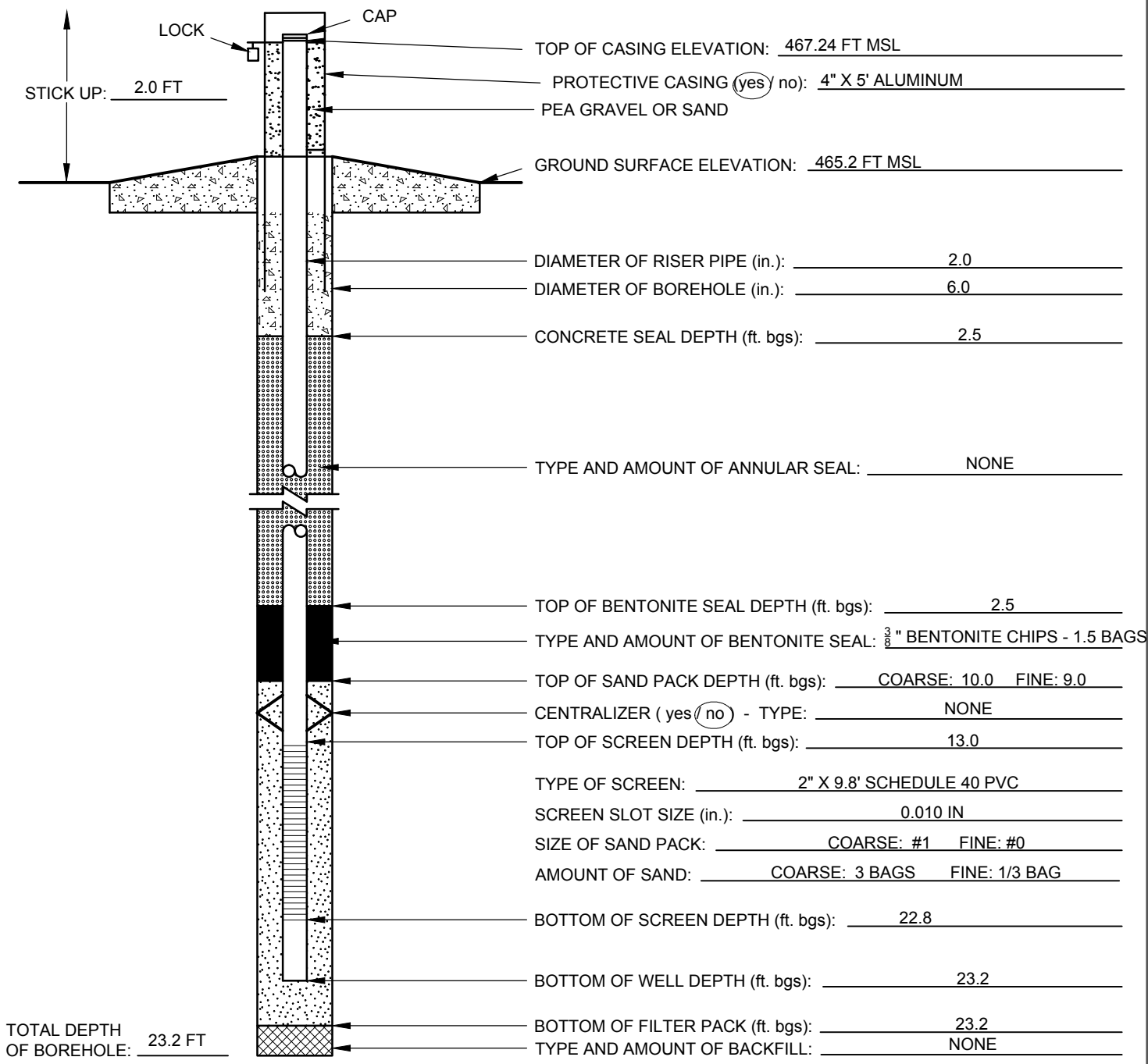
CHECKED BY: J. INGRAM
 DATE CHECKED: 4/19/2016

PREPARED BY: J. SUOZZI



ABOVE GROUND MONITORING WELL CONSTRUCTION LOG LMW-8S

| | | | |
|--|----------------------------------|---------------------------------|--|
| PROJECT NAME: AMEREN CCR GW MONITORING | | PROJECT NUMBER: 153-1406.0001B | |
| SITE NAME: LABADIE ENERGY CENTER | | LOCATION: LMW-8S | |
| CLIENT: AMEREN MISSOURI | | SURFACE ELEVATION: 465.2 FT MSL | |
| GEOLOGIST: J. INGRAM | NORTHING: 991371.2 | EASTING: 726351.3 | |
| DRILLER: J. DRABEK | STATIC WATER LEVEL: 7.10 FT BTOC | COMPLETION DATE: 11/20/2015 | |
| DRILLING COMPANY: CASCADE | | DRILLING METHODS: SONIC | |



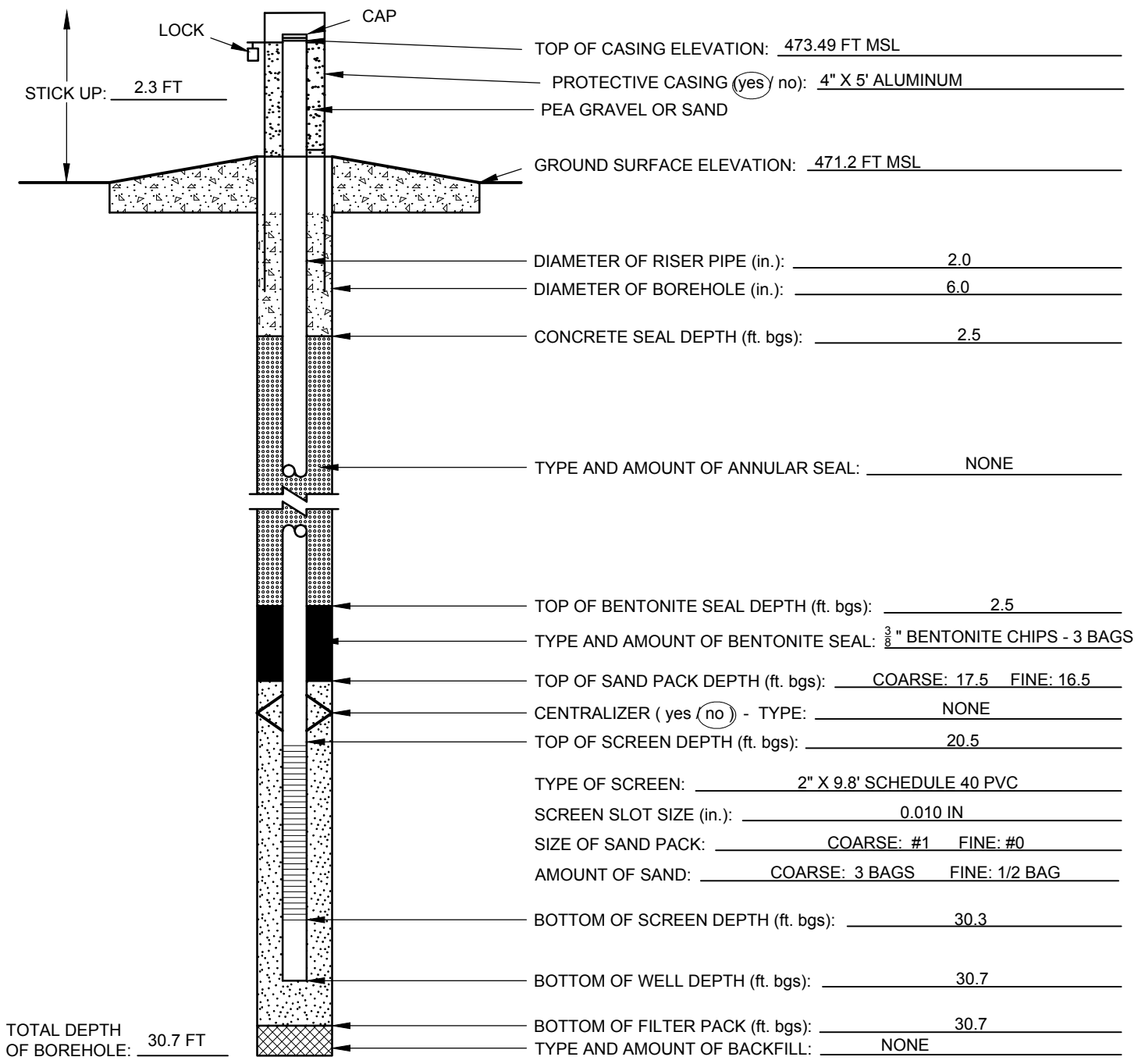
ADDITIONAL NOTES: FT BGS = FEET BELOW GROUND SURFACE. FT MSL = FEET ABOVE MEAN SEA LEVEL.
25 GALLONS OF H2O USED DURING DRILLING. HORIZONTAL DATUM: STATE PLANE COORDINATES NAD83 (2000) MISSOURI EAST ZONE.
VERTICAL DATUM: NAVD88. WELL SURVEYED BY ZAHNER AND ASSOCIATES, INC ON JANUARY 16, 2016.
FT BTOC = FEET BELOW TOP OF CASING. SAND AND BENTONITE BAGS WEIGH 50 LBS EACH.

CHECKED BY: J. INGRAM
DATE CHECKED: 4/19/2016
PREPARED BY: J. SUOZZI



ABOVE GROUND MONITORING WELL CONSTRUCTION LOG BMW-1S

| | | | |
|--|-----------------------------------|---------------------------------|--|
| PROJECT NAME: AMEREN CCR GW MONITORING | | PROJECT NUMBER: 153-1406.0001B | |
| SITE NAME: LABADIE ENERGY CENTER | | LOCATION: BMW-1S | |
| CLIENT: AMEREN MISSOURI | | SURFACE ELEVATION: 471.2 FT MSL | |
| GEOLOGIST: J. INGRAM | NORTHING: 988310.0 | EASTING: 715131.6 | |
| DRILLER: J. DRABEK | STATIC WATER LEVEL: 13.60 FT BTOC | COMPLETION DATE: 2/01/2016 | |
| DRILLING COMPANY: CASCADE | | DRILLING METHODS: SONIC | |



ADDITIONAL NOTES: FT BGS = FEET BELOW GROUND SURFACE. FT MSL = FEET ABOVE MEAN SEA LEVEL.
 100 GALLONS OF H2O USED DURING DRILLING. HORIZONTAL DATUM: STATE PLANE COORDINATES NAD83 US SURVEY FEET (2000)
 MISSOURI EAST ZONE. VERTICAL DATUM: NAVD88. WELL SURVEYED BY ZAHNER AND ASSOCIATES, INC ON FEBRUARY 11, 2016.
 FT BTOC = FEET BELOW TOP OF CASING. SAND AND BENTONITE BAGS WEIGH 50 LBS EACH.

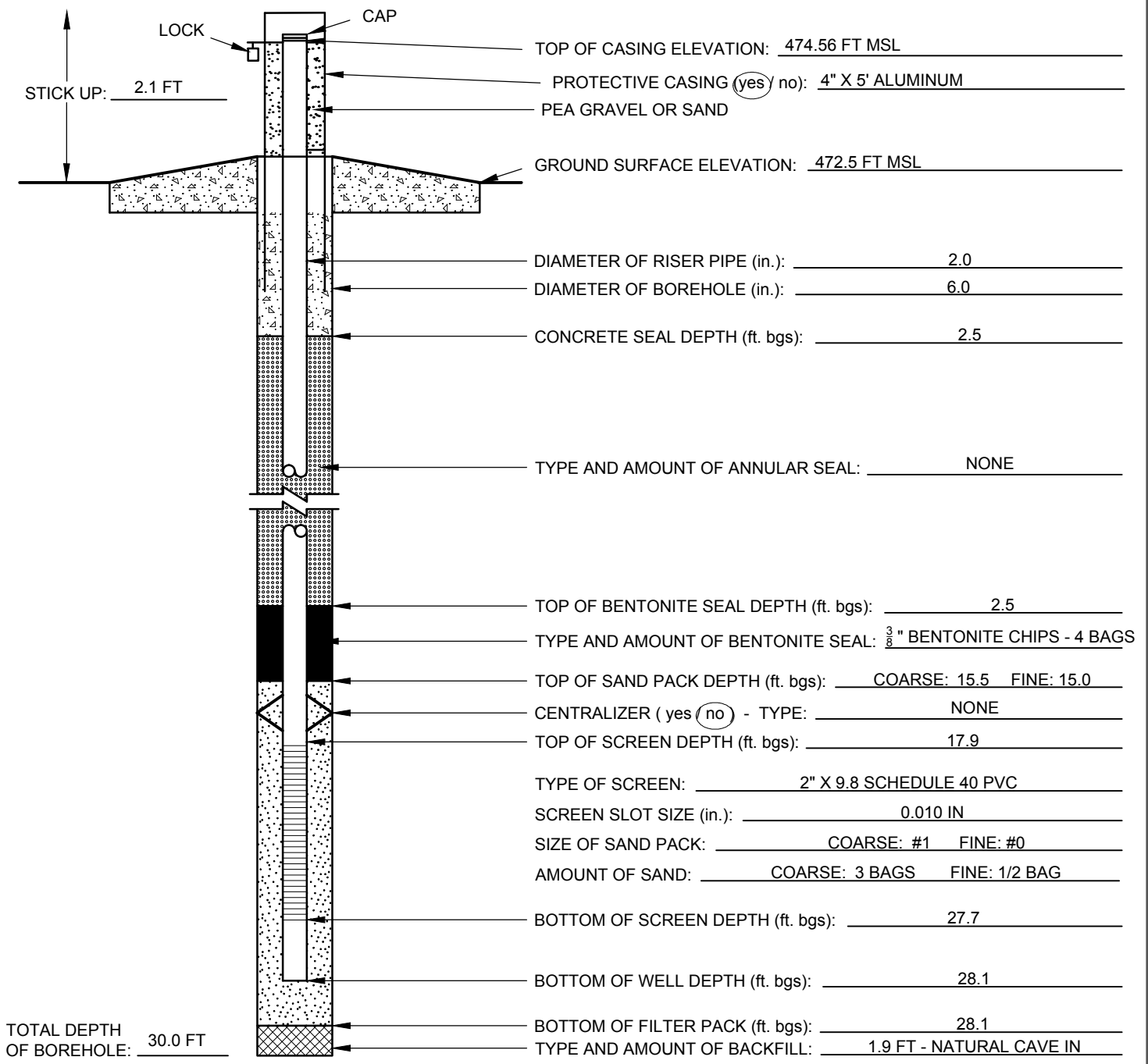
CHECKED BY: J. INGRAM
 DATE CHECKED: 4/19/2016

PREPARED BY: J. SUOZZI



ABOVE GROUND MONITORING WELL CONSTRUCTION LOG BMW-2S

| | | | |
|--|-----------------------------------|---------------------------------|--|
| PROJECT NAME: AMEREN CCR GW MONITORING | | PROJECT NUMBER: 153-1406.0001B | |
| SITE NAME: LABADIE ENERGY CENTER | | LOCATION: BMW-2S | |
| CLIENT: AMEREN MISSOURI | | SURFACE ELEVATION: 472.5 FT MSL | |
| GEOLOGIST: J. INGRAM | NORTHING: 987210.1 | EASTING: 715104.3 | |
| DRILLER: J. DRABEK | STATIC WATER LEVEL: 14.30 FT BTOC | COMPLETION DATE: 2/02/2016 | |
| DRILLING COMPANY: CASCADE | | DRILLING METHODS: SONIC | |



ADDITIONAL NOTES: FT BGS = FEET BELOW GROUND SURFACE. FT MSL = FEET ABOVE MEAN SEA LEVEL.
 100 GALLONS OF H2O USED DURING DRILLING. HORIZONTAL DATUM: STATE PLANE COORDINATES NAD83 US SURVEY FEET (2000) MISSOURI EAST ZONE. VERTICAL DATUM: NAVD88. WELL SURVEYED BY ZAHNER AND ASSOCIATES, INC ON FEBRUARY 11, 2016.
 FT BTOC = FEET BELOW TOP OF CASING. SAND AND BENTONITE BAGS WEIGH 50 LBS EACH.

CHECKED BY: J. INGRAM
 DATE CHECKED: 4/19/2016
 PREPARED BY: J. SUOZZI

APPENDIX B – LABORATORY ANALYTICAL DATA

April 08, 2016

Mark Haddock
Golder Associates
820 S. Main St
Suite 100
Saint Charles, MO 63301

RE: Project: AMEREN LABADIE ENERGY CTR-FLY
Pace Project No.: 60215629

Dear Mark Haddock:

Enclosed are the analytical results for sample(s) received by the laboratory on March 25, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Jamie Church
jamie.church@pacelabs.com
Project Manager

Enclosures

cc: Jeffrey Ingram, Golder Associates
John Suozzi, Golder Associates



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60215629

Pennsylvania Certification IDs

Georgia Certification #: C040
1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
L-A-B DOD-ELAP Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification
Connecticut Certification #: PH-0694
Delaware Certification
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: 90133
Louisiana DHH/TNI Certification #: LA140008
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: PA00091
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification
Missouri Certification #: 235

Montana Certification #: Cert 0082
Nebraska Certification #: NE-05-29-14
Nevada Certification #: PA014572015-1
New Hampshire/TNI Certification #: 2976
New Jersey/TNI Certification #: PA 051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Oregon/TNI Certification #: PA200002
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN2867
Texas/TNI Certification #: T104704188-14-8
Utah/TNI Certification #: PA014572015-5
USDA Soil Permit #: P330-14-00213
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Certification
Wyoming Certification #: 8TMS-L

Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219
WY STR Certification #: 2456.01
Arkansas Certification #: 15-016-0
Illinois Certification #: 003097
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055
Nevada Certification #: KS000212008A
Oklahoma Certification #: 9205/9935
Texas Certification #: T104704407
Utah Certification #: KS00021
Kansas Field Laboratory Accreditation: # E-92587

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SAMPLE SUMMARY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60215629

| Lab ID | Sample ID | Matrix | Date Collected | Date Received |
|-------------|--------------|--------|----------------|----------------|
| 60215629001 | L-LMW-1S | Water | 03/23/16 10:19 | 03/25/16 03:20 |
| 60215629002 | L-LMW-2S | Water | 03/23/16 14:02 | 03/25/16 03:20 |
| 60215629003 | L-LMW-3S | Water | 03/24/16 10:41 | 03/25/16 03:20 |
| 60215629004 | L-LMW-4S | Water | 03/24/16 09:52 | 03/25/16 03:20 |
| 60215629005 | L-LMW-5S | Water | 03/24/16 10:43 | 03/25/16 03:20 |
| 60215629006 | L-LMW-6S | Water | 03/23/16 14:50 | 03/25/16 03:20 |
| 60215629007 | L-LMW-7S | Water | 03/23/16 14:20 | 03/25/16 03:20 |
| 60215629008 | L-LMW-8S | Water | 03/23/16 12:45 | 03/25/16 03:20 |
| 60215629009 | L-BMW-1S | Water | 03/23/16 10:20 | 03/25/16 03:20 |
| 60215629010 | L-BMW-2S | Water | 03/22/16 11:39 | 03/25/16 03:20 |
| 60215629011 | L-LMW-DUP-1 | Water | 03/24/16 00:00 | 03/25/16 03:20 |
| 60215629012 | L-LMW-FB-1 | Water | 03/24/16 11:15 | 03/25/16 03:20 |
| 60215629013 | L-LMW-1S MS | Water | 03/23/16 10:19 | 03/25/16 03:20 |
| 60215629014 | L-LMW-1S MSD | Water | 03/23/16 10:19 | 03/25/16 03:20 |

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60215629

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|-------------|-----------|-------------|----------|-------------------|------------|
| 60215629001 | L-LMW-1S | EPA 200.7 | NDJ | 8 | PASI-K |
| | | EPA 200.8 | SMW | 6 | PASI-K |
| | | EPA 7470 | ZBM | 1 | PASI-K |
| | | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| | | SM 2540C | AGO | 1 | PASI-K |
| | | SM 4500-H+B | LJS | 1 | PASI-K |
| 60215629002 | L-LMW-2S | EPA 300.0 | OL | 3 | PASI-K |
| | | EPA 200.7 | NDJ | 8 | PASI-K |
| | | EPA 200.8 | SMW | 6 | PASI-K |
| | | EPA 7470 | ZBM | 1 | PASI-K |
| | | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| | | SM 2540C | AGO | 1 | PASI-K |
| 60215629003 | L-LMW-3S | SM 4500-H+B | LJS | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| | | EPA 200.7 | NDJ | 8 | PASI-K |
| | | EPA 200.8 | SMW | 6 | PASI-K |
| | | EPA 7470 | ZBM | 1 | PASI-K |
| | | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| 60215629004 | L-LMW-4S | SM 2540C | AGO | 1 | PASI-K |
| | | SM 4500-H+B | LJS | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| | | EPA 200.7 | NDJ | 8 | PASI-K |
| | | EPA 200.8 | SMW | 6 | PASI-K |
| | | EPA 7470 | ZBM | 1 | PASI-K |
| | | EPA 903.1 | WRR | 1 | PASI-PA |
| 60215629005 | L-LMW-5S | EPA 904.0 | JLW | 1 | PASI-PA |
| | | SM 2540C | AGO | 1 | PASI-K |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| | | EPA 200.7 | NDJ | 8 | PASI-K |
| | | EPA 200.8 | SMW | 6 | PASI-K |
| | | EPA 7470 | ZBM | 1 | PASI-K |
| | | EPA 903.1 | WRR | 1 | PASI-PA |

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SAMPLE ANALYTE COUNT

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60215629

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|-------------|-----------|-------------|----------|-------------------|------------|
| 60215629006 | L-LMW-6S | SM 2540C | AGO | 1 | PASI-K |
| | | SM 4500-H+B | LJS | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| | | EPA 200.7 | NDJ | 8 | PASI-K |
| | | EPA 200.8 | SMW | 6 | PASI-K |
| | | EPA 7470 | ZBM | 1 | PASI-K |
| | | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| 60215629007 | L-LMW-7S | SM 2540C | AGO | 1 | PASI-K |
| | | SM 4500-H+B | LJS | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| | | EPA 200.7 | NDJ | 8 | PASI-K |
| | | EPA 200.8 | SMW | 6 | PASI-K |
| | | EPA 7470 | ZBM | 1 | PASI-K |
| | | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| 60215629008 | L-LMW-8S | SM 2540C | AGO | 1 | PASI-K |
| | | SM 4500-H+B | LJS | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| | | EPA 200.7 | NDJ | 8 | PASI-K |
| | | EPA 200.8 | SMW | 6 | PASI-K |
| | | EPA 7470 | ZBM | 1 | PASI-K |
| | | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| 60215629009 | L-BMW-1S | SM 2540C | AGO | 1 | PASI-K |
| | | SM 4500-H+B | LJS | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| | | EPA 200.7 | NDJ | 8 | PASI-K |
| | | EPA 200.8 | SMW | 6 | PASI-K |
| | | EPA 7470 | ZBM | 1 | PASI-K |
| | | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| 60215629010 | L-BMW-2S | SM 2540C | AGO | 1 | PASI-K |
| | | SM 4500-H+B | LJS | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| | | EPA 200.7 | NDJ | 8 | PASI-K |
| | | EPA 200.8 | SMW | 6 | PASI-K |

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SAMPLE ANALYTE COUNT

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60215629

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|--------------------|---------------------|-------------|----------|-------------------|------------|
| | | EPA 7470 | ZBM | 1 | PASI-K |
| | | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| | | SM 2540C | AGO | 1 | PASI-K |
| | | SM 4500-H+B | LJS | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| 60215629011 | L-LMW-DUP-1 | EPA 200.7 | NDJ | 8 | PASI-K |
| | | EPA 200.8 | SMW | 6 | PASI-K |
| | | EPA 7470 | ZBM | 1 | PASI-K |
| | | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| | | SM 2540C | AGO | 1 | PASI-K |
| | | SM 4500-H+B | LJS | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| 60215629012 | L-LMW-FB-1 | EPA 200.7 | NDJ | 8 | PASI-K |
| | | EPA 200.8 | SMW | 6 | PASI-K |
| | | EPA 7470 | ZBM | 1 | PASI-K |
| | | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| | | SM 2540C | AGO | 1 | PASI-K |
| | | SM 4500-H+B | LJS | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| 60215629013 | L-LMW-1S MS | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| 60215629014 | L-LMW-1S MSD | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60215629

Sample: L-LMW-1S **Lab ID: 60215629001** Collected: 03/23/16 10:19 Received: 03/25/16 03:20 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 126 | ug/L | 10.0 | 0.58 | 1 | 03/28/16 14:15 | 04/04/16 17:01 | 7440-39-3 | |
| Beryllium | <0.26 | ug/L | 1.0 | 0.26 | 1 | 03/28/16 14:15 | 04/04/16 17:01 | 7440-41-7 | |
| Boron | 3530 | ug/L | 100 | 50.0 | 1 | 03/28/16 14:15 | 04/04/16 17:01 | 7440-42-8 | |
| Calcium | 133000 | ug/L | 100 | 8.1 | 1 | 03/28/16 14:15 | 04/04/16 17:01 | 7440-70-2 | M1 |
| Cobalt | 2.3J | ug/L | 5.0 | 0.72 | 1 | 03/28/16 14:15 | 04/04/16 17:01 | 7440-48-4 | |
| Lead | <2.5 | ug/L | 5.0 | 2.5 | 1 | 03/28/16 14:15 | 04/04/16 17:01 | 7439-92-1 | |
| Lithium | 22.0 | ug/L | 10.0 | 4.9 | 1 | 03/28/16 14:15 | 04/04/16 17:01 | 7439-93-2 | |
| Molybdenum | 4.1J | ug/L | 20.0 | 0.52 | 1 | 03/28/16 14:15 | 04/04/16 17:01 | 7439-98-7 | B |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | <0.058 | ug/L | 1.0 | 0.058 | 1 | 03/28/16 14:15 | 03/29/16 12:58 | 7440-36-0 | |
| Arsenic | 5.3 | ug/L | 1.0 | 0.10 | 1 | 03/28/16 14:15 | 03/29/16 12:58 | 7440-38-2 | |
| Cadmium | 0.082J | ug/L | 0.50 | 0.029 | 1 | 03/28/16 14:15 | 03/29/16 12:58 | 7440-43-9 | B |
| Chromium | 0.78J | ug/L | 1.0 | 0.34 | 1 | 03/28/16 14:15 | 03/29/16 12:58 | 7440-47-3 | |
| Selenium | <0.18 | ug/L | 1.0 | 0.18 | 1 | 03/28/16 14:15 | 03/29/16 12:58 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 03/28/16 14:15 | 03/29/16 12:58 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | 0.070J | ug/L | 0.20 | 0.046 | 1 | 04/06/16 09:20 | 04/06/16 14:49 | 7439-97-6 | B |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 529 | mg/L | 5.0 | 5.0 | 1 | | 03/30/16 10:17 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 8.0 | Std. Units | 0.10 | 0.10 | 1 | | 04/04/16 12:30 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 2.7 | mg/L | 1.0 | 0.50 | 1 | | 03/29/16 16:16 | 16887-00-6 | |
| Fluoride | 0.24 | mg/L | 0.20 | 0.073 | 1 | | 03/29/16 16:16 | 16984-48-8 | |
| Sulfate | 76.7 | mg/L | 10.0 | 2.5 | 10 | | 03/30/16 23:09 | 14808-79-8 | |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60215629

Sample: L-LMW-2S **Lab ID: 60215629002** Collected: 03/23/16 14:02 Received: 03/25/16 03:20 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|--|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 58.9 | ug/L | 10.0 | 0.58 | 1 | 03/28/16 14:15 | 04/04/16 17:14 | 7440-39-3 | |
| Beryllium | <0.26 | ug/L | 1.0 | 0.26 | 1 | 03/28/16 14:15 | 04/04/16 17:14 | 7440-41-7 | |
| Boron | 6970 | ug/L | 100 | 50.0 | 1 | 03/28/16 14:15 | 04/04/16 17:14 | 7440-42-8 | |
| Calcium | 68700 | ug/L | 100 | 8.1 | 1 | 03/28/16 14:15 | 04/04/16 17:14 | 7440-70-2 | |
| Cobalt | <0.72 | ug/L | 5.0 | 0.72 | 1 | 03/28/16 14:15 | 04/04/16 17:14 | 7440-48-4 | |
| Lead | 4.1J | ug/L | 5.0 | 2.5 | 1 | 03/28/16 14:15 | 04/04/16 17:14 | 7439-92-1 | |
| Lithium | 16.2 | ug/L | 10.0 | 4.9 | 1 | 03/28/16 14:15 | 04/04/16 17:14 | 7439-93-2 | |
| Molybdenum | 141 | ug/L | 20.0 | 0.52 | 1 | 03/28/16 14:15 | 04/04/16 17:14 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | <0.058 | ug/L | 1.0 | 0.058 | 1 | 03/28/16 14:15 | 03/29/16 13:12 | 7440-36-0 | |
| Arsenic | 25.2 | ug/L | 1.0 | 0.10 | 1 | 03/28/16 14:15 | 03/29/16 13:12 | 7440-38-2 | |
| Cadmium | <0.029 | ug/L | 0.50 | 0.029 | 1 | 03/28/16 14:15 | 03/29/16 13:12 | 7440-43-9 | |
| Chromium | <0.34 | ug/L | 1.0 | 0.34 | 1 | 03/28/16 14:15 | 03/29/16 13:12 | 7440-47-3 | |
| Selenium | <0.18 | ug/L | 1.0 | 0.18 | 1 | 03/28/16 14:15 | 03/29/16 13:12 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 03/28/16 14:15 | 03/29/16 13:12 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | 0.064J | ug/L | 0.20 | 0.046 | 1 | 04/06/16 09:20 | 04/06/16 14:56 | 7439-97-6 | B |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 496 | mg/L | 5.0 | 5.0 | 1 | | 03/30/16 10:18 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 9.2 | Std. Units | 0.10 | 0.10 | 1 | | 04/04/16 12:30 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 18.9 | mg/L | 1.0 | 0.50 | 1 | | 03/29/16 17:02 | 16887-00-6 | |
| Fluoride | 0.22 | mg/L | 0.20 | 0.073 | 1 | | 03/29/16 17:02 | 16984-48-8 | |
| Sulfate | 295 | mg/L | 50.0 | 12.4 | 50 | | 03/31/16 00:13 | 14808-79-8 | |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60215629

Sample: L-LMW-3S **Lab ID: 60215629003** Collected: 03/24/16 10:41 Received: 03/25/16 03:20 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 86.5 | ug/L | 10.0 | 0.58 | 1 | 03/28/16 14:15 | 04/04/16 17:19 | 7440-39-3 | |
| Beryllium | <0.26 | ug/L | 1.0 | 0.26 | 1 | 03/28/16 14:15 | 04/04/16 17:19 | 7440-41-7 | |
| Boron | 4760 | ug/L | 100 | 50.0 | 1 | 03/28/16 14:15 | 04/04/16 17:19 | 7440-42-8 | |
| Calcium | 61100 | ug/L | 100 | 8.1 | 1 | 03/28/16 14:15 | 04/04/16 17:19 | 7440-70-2 | |
| Cobalt | <0.72 | ug/L | 5.0 | 0.72 | 1 | 03/28/16 14:15 | 04/04/16 17:19 | 7440-48-4 | |
| Lead | <2.5 | ug/L | 5.0 | 2.5 | 1 | 03/28/16 14:15 | 04/04/16 17:19 | 7439-92-1 | |
| Lithium | 22.7 | ug/L | 10.0 | 4.9 | 1 | 03/28/16 14:15 | 04/04/16 17:19 | 7439-93-2 | |
| Molybdenum | 202 | ug/L | 20.0 | 0.52 | 1 | 03/28/16 14:15 | 04/04/16 17:19 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | <0.058 | ug/L | 1.0 | 0.058 | 1 | 03/28/16 14:15 | 03/29/16 13:16 | 7440-36-0 | |
| Arsenic | 11.9 | ug/L | 1.0 | 0.10 | 1 | 03/28/16 14:15 | 03/29/16 13:16 | 7440-38-2 | |
| Cadmium | <0.029 | ug/L | 0.50 | 0.029 | 1 | 03/28/16 14:15 | 03/29/16 13:16 | 7440-43-9 | |
| Chromium | 0.36J | ug/L | 1.0 | 0.34 | 1 | 03/28/16 14:15 | 03/29/16 13:16 | 7440-47-3 | |
| Selenium | <0.18 | ug/L | 1.0 | 0.18 | 1 | 03/28/16 14:15 | 03/29/16 13:16 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 03/28/16 14:15 | 03/29/16 13:16 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | 0.088J | ug/L | 0.20 | 0.046 | 1 | 04/06/16 09:20 | 04/06/16 14:58 | 7439-97-6 | B |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 595 | mg/L | 5.0 | 5.0 | 1 | | 03/31/16 11:48 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.7 | Std. Units | 0.10 | 0.10 | 1 | | 04/05/16 10:00 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 20.9 | mg/L | 2.0 | 1.0 | 2 | | 03/31/16 00:39 | 16887-00-6 | |
| Fluoride | 0.58 | mg/L | 0.20 | 0.073 | 1 | | 03/29/16 18:03 | 16984-48-8 | |
| Sulfate | 254 | mg/L | 20.0 | 5.0 | 20 | | 03/31/16 00:52 | 14808-79-8 | |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60215629

Sample: L-LMW-4S **Lab ID: 60215629004** Collected: 03/24/16 09:52 Received: 03/25/16 03:20 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 159 | ug/L | 10.0 | 0.58 | 1 | 03/28/16 14:15 | 04/04/16 17:21 | 7440-39-3 | |
| Beryllium | <0.26 | ug/L | 1.0 | 0.26 | 1 | 03/28/16 14:15 | 04/04/16 17:21 | 7440-41-7 | |
| Boron | 7320 | ug/L | 100 | 50.0 | 1 | 03/28/16 14:15 | 04/04/16 17:21 | 7440-42-8 | |
| Calcium | 150000 | ug/L | 100 | 8.1 | 1 | 03/28/16 14:15 | 04/04/16 17:21 | 7440-70-2 | |
| Cobalt | 2.1J | ug/L | 5.0 | 0.72 | 1 | 03/28/16 14:15 | 04/04/16 17:21 | 7440-48-4 | |
| Lead | <2.5 | ug/L | 5.0 | 2.5 | 1 | 03/28/16 14:15 | 04/04/16 17:21 | 7439-92-1 | |
| Lithium | 42.0 | ug/L | 10.0 | 4.9 | 1 | 03/28/16 14:15 | 04/04/16 17:21 | 7439-93-2 | |
| Molybdenum | 33.2 | ug/L | 20.0 | 0.52 | 1 | 03/28/16 14:15 | 04/04/16 17:21 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | <0.058 | ug/L | 1.0 | 0.058 | 1 | 03/28/16 14:15 | 03/29/16 13:25 | 7440-36-0 | |
| Arsenic | 9.0 | ug/L | 1.0 | 0.10 | 1 | 03/28/16 14:15 | 03/29/16 13:25 | 7440-38-2 | |
| Cadmium | 0.048J | ug/L | 0.50 | 0.029 | 1 | 03/28/16 14:15 | 03/29/16 13:25 | 7440-43-9 | B |
| Chromium | 0.56J | ug/L | 1.0 | 0.34 | 1 | 03/28/16 14:15 | 03/29/16 13:25 | 7440-47-3 | |
| Selenium | <0.18 | ug/L | 1.0 | 0.18 | 1 | 03/28/16 14:15 | 03/29/16 13:25 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 03/28/16 14:15 | 03/29/16 13:25 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | 0.065J | ug/L | 0.20 | 0.046 | 1 | 04/06/16 09:20 | 04/06/16 15:00 | 7439-97-6 | B |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 793 | mg/L | 5.0 | 5.0 | 1 | | 03/31/16 11:48 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.7 | Std. Units | 0.10 | 0.10 | 1 | | 04/05/16 10:00 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 25.4 | mg/L | 2.0 | 1.0 | 2 | | 03/31/16 01:05 | 16887-00-6 | |
| Fluoride | 0.25 | mg/L | 0.20 | 0.073 | 1 | | 03/29/16 18:18 | 16984-48-8 | |
| Sulfate | 231 | mg/L | 20.0 | 5.0 | 20 | | 03/31/16 01:18 | 14808-79-8 | |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60215629

Sample: L-LMW-5S **Lab ID: 60215629005** Collected: 03/24/16 10:43 Received: 03/25/16 03:20 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|-----------------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 282 | ug/L | 10.0 | 0.58 | 1 | 03/28/16 14:15 | 04/04/16 17:23 | 7440-39-3 | |
| Beryllium | <0.26 | ug/L | 1.0 | 0.26 | 1 | 03/28/16 14:15 | 04/04/16 17:23 | 7440-41-7 | |
| Boron | 65.4J | ug/L | 100 | 50.0 | 1 | 03/28/16 14:15 | 04/04/16 17:23 | 7440-42-8 | |
| Calcium | 113000 | ug/L | 100 | 8.1 | 1 | 03/28/16 14:15 | 04/04/16 17:23 | 7440-70-2 | |
| Cobalt | <0.72 | ug/L | 5.0 | 0.72 | 1 | 03/28/16 14:15 | 04/04/16 17:23 | 7440-48-4 | |
| Lead | 3.0J | ug/L | 5.0 | 2.5 | 1 | 03/28/16 14:15 | 04/04/16 17:23 | 7439-92-1 | |
| Lithium | 14.6 | ug/L | 10.0 | 4.9 | 1 | 03/28/16 14:15 | 04/04/16 17:23 | 7439-93-2 | |
| Molybdenum | 1.6J | ug/L | 20.0 | 0.52 | 1 | 03/28/16 14:15 | 04/04/16 17:23 | 7439-98-7 | B |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | 0.060J | ug/L | 1.0 | 0.058 | 1 | 03/28/16 14:15 | 03/29/16 13:29 | 7440-36-0 | |
| Arsenic | 0.52J | ug/L | 1.0 | 0.10 | 1 | 03/28/16 14:15 | 03/29/16 13:29 | 7440-38-2 | |
| Cadmium | 0.051J | ug/L | 0.50 | 0.029 | 1 | 03/28/16 14:15 | 03/29/16 13:29 | 7440-43-9 | B |
| Chromium | 0.48J | ug/L | 1.0 | 0.34 | 1 | 03/28/16 14:15 | 03/29/16 13:29 | 7440-47-3 | |
| Selenium | 0.89J | ug/L | 1.0 | 0.18 | 1 | 03/28/16 14:15 | 03/29/16 13:29 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 03/28/16 14:15 | 03/29/16 13:29 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | 0.060J | ug/L | 0.20 | 0.046 | 1 | 04/06/16 09:20 | 04/06/16 15:07 | 7439-97-6 | B |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 374 | mg/L | 5.0 | 5.0 | 1 | | 03/31/16 11:49 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.8 | Std. Units | 0.10 | 0.10 | 1 | | 04/05/16 10:00 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 1.6 | mg/L | 1.0 | 0.50 | 1 | | 03/29/16 18:33 | 16887-00-6 | |
| Fluoride | 0.22 | mg/L | 0.20 | 0.073 | 1 | | 03/29/16 18:33 | 16984-48-8 | |
| Sulfate | 8.6 | mg/L | 1.0 | 0.25 | 1 | | 03/29/16 18:33 | 14808-79-8 | |

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60215629

Sample: L-LMW-6S **Lab ID: 60215629006** Collected: 03/23/16 14:50 Received: 03/25/16 03:20 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 308 | ug/L | 10.0 | 0.58 | 1 | 03/28/16 14:15 | 04/04/16 17:25 | 7440-39-3 | |
| Beryllium | <0.26 | ug/L | 1.0 | 0.26 | 1 | 03/28/16 14:15 | 04/04/16 17:25 | 7440-41-7 | |
| Boron | 2290 | ug/L | 100 | 50.0 | 1 | 03/28/16 14:15 | 04/04/16 17:25 | 7440-42-8 | |
| Calcium | 163000 | ug/L | 100 | 8.1 | 1 | 03/28/16 14:15 | 04/04/16 17:25 | 7440-70-2 | |
| Cobalt | 4.2J | ug/L | 5.0 | 0.72 | 1 | 03/28/16 14:15 | 04/04/16 17:25 | 7440-48-4 | |
| Lead | <2.5 | ug/L | 5.0 | 2.5 | 1 | 03/28/16 14:15 | 04/04/16 17:25 | 7439-92-1 | |
| Lithium | 38.8 | ug/L | 10.0 | 4.9 | 1 | 03/28/16 14:15 | 04/04/16 17:25 | 7439-93-2 | |
| Molybdenum | 5.1J | ug/L | 20.0 | 0.52 | 1 | 03/28/16 14:15 | 04/04/16 17:25 | 7439-98-7 | B |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | <0.058 | ug/L | 1.0 | 0.058 | 1 | 03/28/16 14:15 | 03/29/16 13:42 | 7440-36-0 | |
| Arsenic | 1.3 | ug/L | 1.0 | 0.10 | 1 | 03/28/16 14:15 | 03/29/16 13:42 | 7440-38-2 | |
| Cadmium | 0.10J | ug/L | 0.50 | 0.029 | 1 | 03/28/16 14:15 | 03/29/16 13:42 | 7440-43-9 | B |
| Chromium | 0.37J | ug/L | 1.0 | 0.34 | 1 | 03/28/16 14:15 | 03/29/16 13:42 | 7440-47-3 | |
| Selenium | 3.3 | ug/L | 1.0 | 0.18 | 1 | 03/28/16 14:15 | 03/29/16 13:42 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 03/28/16 14:15 | 03/29/16 13:42 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | 0.062J | ug/L | 0.20 | 0.046 | 1 | 04/06/16 09:20 | 04/06/16 15:09 | 7439-97-6 | B |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 642 | mg/L | 5.0 | 5.0 | 1 | | 03/30/16 10:18 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.6 | Std. Units | 0.10 | 0.10 | 1 | | 04/04/16 12:30 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 6.4 | mg/L | 1.0 | 0.50 | 1 | | 03/29/16 18:48 | 16887-00-6 | |
| Fluoride | 0.19J | mg/L | 0.20 | 0.073 | 1 | | 03/29/16 18:48 | 16984-48-8 | |
| Sulfate | 81.3 | mg/L | 10.0 | 2.5 | 10 | | 03/31/16 01:31 | 14808-79-8 | |

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60215629

Sample: L-LMW-7S **Lab ID: 60215629007** Collected: 03/23/16 14:20 Received: 03/25/16 03:20 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|--|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 257 | ug/L | 10.0 | 0.58 | 1 | 03/28/16 14:15 | 04/04/16 17:28 | 7440-39-3 | |
| Beryllium | <0.26 | ug/L | 1.0 | 0.26 | 1 | 03/28/16 14:15 | 04/04/16 17:28 | 7440-41-7 | |
| Boron | 4060 | ug/L | 100 | 50.0 | 1 | 03/28/16 14:15 | 04/04/16 17:28 | 7440-42-8 | |
| Calcium | 110000 | ug/L | 100 | 8.1 | 1 | 03/28/16 14:15 | 04/04/16 17:28 | 7440-70-2 | |
| Cobalt | 1.2J | ug/L | 5.0 | 0.72 | 1 | 03/28/16 14:15 | 04/04/16 17:28 | 7440-48-4 | |
| Lead | <2.5 | ug/L | 5.0 | 2.5 | 1 | 03/28/16 14:15 | 04/04/16 17:28 | 7439-92-1 | |
| Lithium | 25.6 | ug/L | 10.0 | 4.9 | 1 | 03/28/16 14:15 | 04/04/16 17:28 | 7439-93-2 | |
| Molybdenum | 56.2 | ug/L | 20.0 | 0.52 | 1 | 03/28/16 14:15 | 04/04/16 17:28 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | <0.058 | ug/L | 1.0 | 0.058 | 1 | 03/28/16 14:15 | 03/29/16 13:47 | 7440-36-0 | |
| Arsenic | 8.5 | ug/L | 1.0 | 0.10 | 1 | 03/28/16 14:15 | 03/29/16 13:47 | 7440-38-2 | |
| Cadmium | 0.052J | ug/L | 0.50 | 0.029 | 1 | 03/28/16 14:15 | 03/29/16 13:47 | 7440-43-9 | B |
| Chromium | 0.56J | ug/L | 1.0 | 0.34 | 1 | 03/28/16 14:15 | 03/29/16 13:47 | 7440-47-3 | |
| Selenium | <0.18 | ug/L | 1.0 | 0.18 | 1 | 03/28/16 14:15 | 03/29/16 13:47 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 03/28/16 14:15 | 03/29/16 13:47 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | 0.059J | ug/L | 0.20 | 0.046 | 1 | 04/06/16 09:20 | 04/06/16 15:11 | 7439-97-6 | B |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 551 | mg/L | 5.0 | 5.0 | 1 | | 03/30/16 10:19 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.8 | Std. Units | 0.10 | 0.10 | 1 | | 04/04/16 12:30 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 14.6 | mg/L | 1.0 | 0.50 | 1 | | 03/29/16 19:03 | 16887-00-6 | |
| Fluoride | 0.22 | mg/L | 0.20 | 0.073 | 1 | | 03/29/16 19:03 | 16984-48-8 | |
| Sulfate | 142 | mg/L | 20.0 | 5.0 | 20 | | 03/31/16 01:44 | 14808-79-8 | |

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60215629

Sample: L-LMW-8S **Lab ID: 60215629008** Collected: 03/23/16 12:45 Received: 03/25/16 03:20 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 191 | ug/L | 10.0 | 0.58 | 1 | 03/28/16 14:15 | 04/04/16 17:34 | 7440-39-3 | |
| Beryllium | <0.26 | ug/L | 1.0 | 0.26 | 1 | 03/28/16 14:15 | 04/04/16 17:34 | 7440-41-7 | |
| Boron | 5530 | ug/L | 100 | 50.0 | 1 | 03/28/16 14:15 | 04/04/16 17:34 | 7440-42-8 | |
| Calcium | 161000 | ug/L | 100 | 8.1 | 1 | 03/28/16 14:15 | 04/04/16 17:34 | 7440-70-2 | |
| Cobalt | 3.7J | ug/L | 5.0 | 0.72 | 1 | 03/28/16 14:15 | 04/04/16 17:34 | 7440-48-4 | |
| Lead | <2.5 | ug/L | 5.0 | 2.5 | 1 | 03/28/16 14:15 | 04/04/16 17:34 | 7439-92-1 | |
| Lithium | 27.5 | ug/L | 10.0 | 4.9 | 1 | 03/28/16 14:15 | 04/04/16 17:34 | 7439-93-2 | |
| Molybdenum | 51.4 | ug/L | 20.0 | 0.52 | 1 | 03/28/16 14:15 | 04/04/16 17:34 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | <0.058 | ug/L | 1.0 | 0.058 | 1 | 03/28/16 14:15 | 03/29/16 13:51 | 7440-36-0 | |
| Arsenic | 3.1 | ug/L | 1.0 | 0.10 | 1 | 03/28/16 14:15 | 03/29/16 13:51 | 7440-38-2 | |
| Cadmium | 0.12J | ug/L | 0.50 | 0.029 | 1 | 03/28/16 14:15 | 03/29/16 13:51 | 7440-43-9 | B |
| Chromium | 0.38J | ug/L | 1.0 | 0.34 | 1 | 03/28/16 14:15 | 03/29/16 13:51 | 7440-47-3 | |
| Selenium | <0.18 | ug/L | 1.0 | 0.18 | 1 | 03/28/16 14:15 | 03/29/16 13:51 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 03/28/16 14:15 | 03/29/16 13:51 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | 0.061J | ug/L | 0.20 | 0.046 | 1 | 04/06/16 09:20 | 04/06/16 15:14 | 7439-97-6 | B |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 791 | mg/L | 5.0 | 5.0 | 1 | | 03/30/16 10:19 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.7 | Std. Units | 0.10 | 0.10 | 1 | | 04/04/16 12:30 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 19.3 | mg/L | 1.0 | 0.50 | 1 | | 03/29/16 19:19 | 16887-00-6 | |
| Fluoride | 0.29 | mg/L | 0.20 | 0.073 | 1 | | 03/29/16 19:19 | 16984-48-8 | |
| Sulfate | 287 | mg/L | 50.0 | 12.4 | 50 | | 03/31/16 02:22 | 14808-79-8 | |

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60215629

Sample: L-BMW-1S **Lab ID: 60215629009** Collected: 03/23/16 10:20 Received: 03/25/16 03:20 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 340 | ug/L | 10.0 | 0.58 | 1 | 03/28/16 14:15 | 04/04/16 17:37 | 7440-39-3 | |
| Beryllium | <0.26 | ug/L | 1.0 | 0.26 | 1 | 03/28/16 14:15 | 04/04/16 17:37 | 7440-41-7 | |
| Boron | 96.5J | ug/L | 100 | 50.0 | 1 | 03/28/16 14:15 | 04/04/16 17:37 | 7440-42-8 | |
| Calcium | 191000 | ug/L | 100 | 8.1 | 1 | 03/28/16 14:15 | 04/04/16 17:37 | 7440-70-2 | |
| Cobalt | 1.4J | ug/L | 5.0 | 0.72 | 1 | 03/28/16 14:15 | 04/04/16 17:37 | 7440-48-4 | |
| Lead | <2.5 | ug/L | 5.0 | 2.5 | 1 | 03/28/16 14:15 | 04/04/16 17:37 | 7439-92-1 | |
| Lithium | 21.1 | ug/L | 10.0 | 4.9 | 1 | 03/28/16 14:15 | 04/04/16 17:37 | 7439-93-2 | |
| Molybdenum | 1.3J | ug/L | 20.0 | 0.52 | 1 | 03/28/16 14:15 | 04/04/16 17:37 | 7439-98-7 | B |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | <0.058 | ug/L | 1.0 | 0.058 | 1 | 03/28/16 14:15 | 03/29/16 13:56 | 7440-36-0 | |
| Arsenic | 21.8 | ug/L | 1.0 | 0.10 | 1 | 03/28/16 14:15 | 03/29/16 13:56 | 7440-38-2 | |
| Cadmium | 0.041J | ug/L | 0.50 | 0.029 | 1 | 03/28/16 14:15 | 03/29/16 13:56 | 7440-43-9 | B |
| Chromium | 0.44J | ug/L | 1.0 | 0.34 | 1 | 03/28/16 14:15 | 03/29/16 13:56 | 7440-47-3 | |
| Selenium | <0.18 | ug/L | 1.0 | 0.18 | 1 | 03/28/16 14:15 | 03/29/16 13:56 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 03/28/16 14:15 | 03/29/16 13:56 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | 0.063J | ug/L | 0.20 | 0.046 | 1 | 04/06/16 09:20 | 04/06/16 15:16 | 7439-97-6 | B |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 712 | mg/L | 5.0 | 5.0 | 1 | | 03/30/16 10:20 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.3 | Std. Units | 0.10 | 0.10 | 1 | | 04/04/16 12:30 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 3.1 | mg/L | 1.0 | 0.50 | 1 | | 03/29/16 19:34 | 16887-00-6 | |
| Fluoride | 0.19J | mg/L | 0.20 | 0.073 | 1 | | 03/29/16 19:34 | 16984-48-8 | |
| Sulfate | 50.1 | mg/L | 5.0 | 1.2 | 5 | | 03/31/16 02:35 | 14808-79-8 | |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60215629

Sample: L-BMW-2S **Lab ID: 60215629010** Collected: 03/22/16 11:39 Received: 03/25/16 03:20 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|-----------------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 247 | ug/L | 10.0 | 0.58 | 1 | 03/28/16 14:15 | 04/04/16 17:39 | 7440-39-3 | |
| Beryllium | <0.26 | ug/L | 1.0 | 0.26 | 1 | 03/28/16 14:15 | 04/04/16 17:39 | 7440-41-7 | |
| Boron | 52.2J | ug/L | 100 | 50.0 | 1 | 03/28/16 14:15 | 04/04/16 17:39 | 7440-42-8 | |
| Calcium | 133000 | ug/L | 100 | 8.1 | 1 | 03/28/16 14:15 | 04/04/16 17:39 | 7440-70-2 | |
| Cobalt | <0.72 | ug/L | 5.0 | 0.72 | 1 | 03/28/16 14:15 | 04/04/16 17:39 | 7440-48-4 | |
| Lead | <2.5 | ug/L | 5.0 | 2.5 | 1 | 03/28/16 14:15 | 04/04/16 17:39 | 7439-92-1 | |
| Lithium | 17.3 | ug/L | 10.0 | 4.9 | 1 | 03/28/16 14:15 | 04/04/16 17:39 | 7439-93-2 | |
| Molybdenum | 2.9J | ug/L | 20.0 | 0.52 | 1 | 03/28/16 14:15 | 04/04/16 17:39 | 7439-98-7 | B |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | 0.082J | ug/L | 1.0 | 0.058 | 1 | 03/28/16 14:15 | 03/29/16 14:00 | 7440-36-0 | |
| Arsenic | 0.22J | ug/L | 1.0 | 0.10 | 1 | 03/28/16 14:15 | 03/29/16 14:00 | 7440-38-2 | |
| Cadmium | 0.085J | ug/L | 0.50 | 0.029 | 1 | 03/28/16 14:15 | 03/29/16 14:00 | 7440-43-9 | B |
| Chromium | 0.52J | ug/L | 1.0 | 0.34 | 1 | 03/28/16 14:15 | 03/29/16 14:00 | 7440-47-3 | |
| Selenium | 1.4 | ug/L | 1.0 | 0.18 | 1 | 03/28/16 14:15 | 03/29/16 14:00 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 03/28/16 14:15 | 03/29/16 14:00 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | 0.060J | ug/L | 0.20 | 0.046 | 1 | 04/06/16 09:20 | 04/06/16 15:18 | 7439-97-6 | B |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 499 | mg/L | 5.0 | 5.0 | 1 | | 03/28/16 10:28 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 8.0 | Std. Units | 0.10 | 0.10 | 1 | | 04/04/16 13:16 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 2.0 | mg/L | 1.0 | 0.50 | 1 | | 03/29/16 19:49 | 16887-00-6 | |
| Fluoride | 0.23 | mg/L | 0.20 | 0.073 | 1 | | 03/29/16 19:49 | 16984-48-8 | |
| Sulfate | 20.5 | mg/L | 2.0 | 0.50 | 2 | | 03/31/16 02:48 | 14808-79-8 | |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60215629

Sample: L-LMW-DUP-1 **Lab ID:** 60215629011 Collected: 03/24/16 00:00 Received: 03/25/16 03:20 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|---------|--|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 85.9 | ug/L | 10.0 | 0.58 | 1 | 03/28/16 14:15 | 04/04/16 17:41 | 7440-39-3 | |
| Beryllium | <0.26 | ug/L | 1.0 | 0.26 | 1 | 03/28/16 14:15 | 04/04/16 17:41 | 7440-41-7 | |
| Boron | 4720 | ug/L | 100 | 50.0 | 1 | 03/28/16 14:15 | 04/04/16 17:41 | 7440-42-8 | |
| Calcium | 60000 | ug/L | 100 | 8.1 | 1 | 03/28/16 14:15 | 04/04/16 17:41 | 7440-70-2 | |
| Cobalt | <0.72 | ug/L | 5.0 | 0.72 | 1 | 03/28/16 14:15 | 04/04/16 17:41 | 7440-48-4 | |
| Lead | <2.5 | ug/L | 5.0 | 2.5 | 1 | 03/28/16 14:15 | 04/04/16 17:41 | 7439-92-1 | |
| Lithium | 22.7 | ug/L | 10.0 | 4.9 | 1 | 03/28/16 14:15 | 04/04/16 17:41 | 7439-93-2 | |
| Molybdenum | 201 | ug/L | 20.0 | 0.52 | 1 | 03/28/16 14:15 | 04/04/16 17:41 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | <0.058 | ug/L | 1.0 | 0.058 | 1 | 03/28/16 14:15 | 03/29/16 14:04 | 7440-36-0 | |
| Arsenic | 11.9 | ug/L | 1.0 | 0.10 | 1 | 03/28/16 14:15 | 03/29/16 14:04 | 7440-38-2 | |
| Cadmium | 0.035J | ug/L | 0.50 | 0.029 | 1 | 03/28/16 14:15 | 03/29/16 14:04 | 7440-43-9 | B |
| Chromium | 0.40J | ug/L | 1.0 | 0.34 | 1 | 03/28/16 14:15 | 03/29/16 14:04 | 7440-47-3 | |
| Selenium | <0.18 | ug/L | 1.0 | 0.18 | 1 | 03/28/16 14:15 | 03/29/16 14:04 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 03/28/16 14:15 | 03/29/16 14:04 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | 0.059J | ug/L | 0.20 | 0.046 | 1 | 04/06/16 09:20 | 04/06/16 15:20 | 7439-97-6 | B |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 600 | mg/L | 5.0 | 5.0 | 1 | | 03/31/16 11:49 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.8 | Std. Units | 0.10 | 0.10 | 1 | | 04/04/16 12:30 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 20.9 | mg/L | 2.0 | 1.0 | 2 | | 03/31/16 03:01 | 16887-00-6 | |
| Fluoride | 0.59 | mg/L | 0.20 | 0.073 | 1 | | 03/30/16 01:39 | 16984-48-8 | |
| Sulfate | 259 | mg/L | 50.0 | 12.4 | 50 | | 03/31/16 03:14 | 14808-79-8 | |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60215629

Sample: L-LMW-FB-1 **Lab ID: 60215629012** Collected: 03/24/16 11:15 Received: 03/25/16 03:20 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|---------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | <0.58 | ug/L | 10.0 | 0.58 | 1 | 03/28/16 14:15 | 04/04/16 17:44 | 7440-39-3 | |
| Beryllium | <0.26 | ug/L | 1.0 | 0.26 | 1 | 03/28/16 14:15 | 04/04/16 17:44 | 7440-41-7 | |
| Boron | <50.0 | ug/L | 100 | 50.0 | 1 | 03/28/16 14:15 | 04/04/16 17:44 | 7440-42-8 | |
| Calcium | 50.1J | ug/L | 100 | 8.1 | 1 | 03/28/16 14:15 | 04/04/16 17:44 | 7440-70-2 | B |
| Cobalt | <0.72 | ug/L | 5.0 | 0.72 | 1 | 03/28/16 14:15 | 04/04/16 17:44 | 7440-48-4 | |
| Lead | <2.5 | ug/L | 5.0 | 2.5 | 1 | 03/28/16 14:15 | 04/04/16 17:44 | 7439-92-1 | |
| Lithium | <4.9 | ug/L | 10.0 | 4.9 | 1 | 03/28/16 14:15 | 04/04/16 17:44 | 7439-93-2 | |
| Molybdenum | <0.52 | ug/L | 20.0 | 0.52 | 1 | 03/28/16 14:15 | 04/04/16 17:44 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | <0.058 | ug/L | 1.0 | 0.058 | 1 | 03/28/16 14:15 | 03/29/16 14:09 | 7440-36-0 | |
| Arsenic | <0.10 | ug/L | 1.0 | 0.10 | 1 | 03/28/16 14:15 | 03/29/16 14:09 | 7440-38-2 | |
| Cadmium | 0.044J | ug/L | 0.50 | 0.029 | 1 | 03/28/16 14:15 | 03/29/16 14:09 | 7440-43-9 | B |
| Chromium | 0.45J | ug/L | 1.0 | 0.34 | 1 | 03/28/16 14:15 | 03/29/16 14:09 | 7440-47-3 | |
| Selenium | <0.18 | ug/L | 1.0 | 0.18 | 1 | 03/28/16 14:15 | 03/29/16 14:09 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 03/28/16 14:15 | 03/29/16 14:09 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | 0.060J | ug/L | 0.20 | 0.046 | 1 | 04/06/16 09:20 | 04/06/16 15:22 | 7439-97-6 | B |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | <5.0 | mg/L | 5.0 | 5.0 | 1 | | 03/31/16 11:49 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 6.4 | Std. Units | 0.10 | 0.10 | 1 | | 04/05/16 10:00 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | <0.50 | mg/L | 1.0 | 0.50 | 1 | | 03/30/16 01:54 | 16887-00-6 | |
| Fluoride | <0.073 | mg/L | 0.20 | 0.073 | 1 | | 03/30/16 01:54 | 16984-48-8 | |
| Sulfate | <0.25 | mg/L | 1.0 | 0.25 | 1 | | 03/30/16 01:54 | 14808-79-8 | |

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60215629

QC Batch: MERP/10474 Analysis Method: EPA 7470
 QC Batch Method: EPA 7470 Analysis Description: 7470 Mercury
 Associated Lab Samples: 60215629001, 60215629002, 60215629003, 60215629004, 60215629005, 60215629006, 60215629007, 60215629008, 60215629009, 60215629010, 60215629011, 60215629012

METHOD BLANK: 1735849 Matrix: Water
 Associated Lab Samples: 60215629001, 60215629002, 60215629003, 60215629004, 60215629005, 60215629006, 60215629007, 60215629008, 60215629009, 60215629010, 60215629011, 60215629012

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Mercury | ug/L | 0.061J | 0.20 | 0.046 | 04/06/16 14:45 | |

LABORATORY CONTROL SAMPLE: 1735850

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Mercury | ug/L | 5 | 5.0 | 101 | 80-120 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1735851 1735852

| Parameter | Units | 60215629001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
| Mercury | ug/L | 0.070J | 5 | 5 | 5.1 | 4.5 | 100 | 88 | 75-125 | 13 | 20 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60215629

| | | | |
|-------------------------|--|-----------------------|---------------------|
| QC Batch: | MPRP/35341 | Analysis Method: | EPA 200.7 |
| QC Batch Method: | EPA 200.7 | Analysis Description: | 200.7 Metals, Total |
| Associated Lab Samples: | 60215629001, 60215629002, 60215629003, 60215629004, 60215629005, 60215629006, 60215629007, 60215629008, 60215629009, 60215629010, 60215629011, 60215629012 | | |

| | | | |
|-------------------------|--|---------|-------|
| METHOD BLANK: | 1731908 | Matrix: | Water |
| Associated Lab Samples: | 60215629001, 60215629002, 60215629003, 60215629004, 60215629005, 60215629006, 60215629007, 60215629008, 60215629009, 60215629010, 60215629011, 60215629012 | | |

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|------------|-------|--------------|-----------------|------|----------------|------------|
| Barium | ug/L | 0.58J | 10.0 | 0.58 | 04/04/16 16:58 | |
| Beryllium | ug/L | <0.26 | 1.0 | 0.26 | 04/04/16 16:58 | |
| Boron | ug/L | <50.0 | 100 | 50.0 | 04/04/16 16:58 | |
| Calcium | ug/L | 14.2J | 100 | 8.1 | 04/04/16 16:58 | |
| Cobalt | ug/L | <0.72 | 5.0 | 0.72 | 04/04/16 16:58 | |
| Lead | ug/L | <2.5 | 5.0 | 2.5 | 04/04/16 16:58 | |
| Lithium | ug/L | <4.9 | 10.0 | 4.9 | 04/04/16 16:58 | |
| Molybdenum | ug/L | 0.69J | 20.0 | 0.52 | 04/04/16 16:58 | |

LABORATORY CONTROL SAMPLE: 1731909

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------|-------|-------------|------------|-----------|--------------|------------|
| Barium | ug/L | 1000 | 989 | 99 | 85-115 | |
| Beryllium | ug/L | 1000 | 972 | 97 | 85-115 | |
| Boron | ug/L | 1000 | 988 | 99 | 85-115 | |
| Calcium | ug/L | 10000 | 9490 | 95 | 85-115 | |
| Cobalt | ug/L | 1000 | 1030 | 103 | 85-115 | |
| Lead | ug/L | 1000 | 1020 | 102 | 85-115 | |
| Lithium | ug/L | 1000 | 975 | 97 | 85-115 | |
| Molybdenum | ug/L | 1000 | 1090 | 109 | 85-115 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1731910 1731911

| Parameter | Units | MS | | MSD | | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|------------|-------|--------------------|-------------|-------------|-----------|----------|-----------|--------------|--------|---------|-------|
| | | 60215629001 Result | Spike Conc. | Spike Conc. | MS Result | | | | | | |
| Barium | ug/L | 126 | 1000 | 1000 | 1080 | 1110 | 96 | 98 | 70-130 | 2 | 20 |
| Beryllium | ug/L | <0.26 | 1000 | 1000 | 954 | 971 | 95 | 97 | 70-130 | 2 | 20 |
| Boron | ug/L | 3530 | 1000 | 1000 | 4420 | 4570 | 90 | 104 | 70-130 | 3 | 20 |
| Calcium | ug/L | 133000 | 10000 | 10000 | 140000 | 145000 | 68 | 116 | 70-130 | 3 | 20 M1 |
| Cobalt | ug/L | 2.3J | 1000 | 1000 | 998 | 1020 | 100 | 101 | 70-130 | 2 | 20 |
| Lead | ug/L | <2.5 | 1000 | 1000 | 1000 | 1010 | 100 | 101 | 70-130 | 1 | 20 |
| Lithium | ug/L | 22.0 | 1000 | 1000 | 1000 | 1020 | 98 | 100 | 70-130 | 2 | 20 |
| Molybdenum | ug/L | 4.1J | 1000 | 1000 | 1080 | 1100 | 108 | 110 | 70-130 | 2 | 20 |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60215629

| MATRIX SPIKE SAMPLE: 1731912 | | 60215629002 | Spike | MS | MS | % Rec | |
|------------------------------|-------|-------------|-------|--------|-------|--------|------------|
| Parameter | Units | Result | Conc. | Result | % Rec | Limits | Qualifiers |
| Barium | ug/L | 58.9 | 1000 | 1010 | 95 | 70-130 | |
| Beryllium | ug/L | <0.26 | 1000 | 942 | 94 | 70-130 | |
| Boron | ug/L | 6970 | 1000 | 8080 | 112 | 70-130 | |
| Calcium | ug/L | 68700 | 10000 | 78900 | 102 | 70-130 | |
| Cobalt | ug/L | <0.72 | 1000 | 992 | 99 | 70-130 | |
| Lead | ug/L | 4.1J | 1000 | 978 | 97 | 70-130 | |
| Lithium | ug/L | 16.2 | 1000 | 994 | 98 | 70-130 | |
| Molybdenum | ug/L | 141 | 1000 | 1200 | 106 | 70-130 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60215629

QC Batch: MPRP/35343 Analysis Method: EPA 200.8
 QC Batch Method: EPA 200.8 Analysis Description: 200.8 MET
 Associated Lab Samples: 60215629001, 60215629002, 60215629003, 60215629004, 60215629005, 60215629006, 60215629007, 60215629008, 60215629009, 60215629010, 60215629011, 60215629012

METHOD BLANK: 1731918 Matrix: Water
 Associated Lab Samples: 60215629001, 60215629002, 60215629003, 60215629004, 60215629005, 60215629006, 60215629007, 60215629008, 60215629009, 60215629010, 60215629011, 60215629012

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Antimony | ug/L | <0.058 | 1.0 | 0.058 | 03/29/16 12:50 | |
| Arsenic | ug/L | <0.10 | 1.0 | 0.10 | 03/29/16 12:50 | |
| Cadmium | ug/L | 0.039J | 0.50 | 0.029 | 03/29/16 12:50 | |
| Chromium | ug/L | <0.34 | 1.0 | 0.34 | 03/29/16 12:50 | |
| Selenium | ug/L | <0.18 | 1.0 | 0.18 | 03/29/16 12:50 | |
| Thallium | ug/L | <0.50 | 1.0 | 0.50 | 03/29/16 12:50 | |

LABORATORY CONTROL SAMPLE: 1731919

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Antimony | ug/L | 40 | 41.8 | 105 | 85-115 | |
| Arsenic | ug/L | 40 | 42.0 | 105 | 85-115 | |
| Cadmium | ug/L | 40 | 41.7 | 104 | 85-115 | |
| Chromium | ug/L | 40 | 41.0 | 103 | 85-115 | |
| Selenium | ug/L | 40 | 42.9 | 107 | 85-115 | |
| Thallium | ug/L | 40 | 37.9 | 95 | 85-115 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1731920 1731921

| Parameter | Units | 60215629001 | | 60215629003 | | MSD | | % Rec | | Max | | Qual |
|-----------|-------|-------------|----------------|-----------------|-----------|------------|----------|-----------|--------|-----|-----|------|
| | | Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | Limits | RPD | RPD | |
| Antimony | ug/L | <0.058 | 40 | 40 | 40.2 | 41.1 | 100 | 103 | 70-130 | 2 | 20 | |
| Arsenic | ug/L | 5.3 | 40 | 40 | 46.0 | 47.6 | 102 | 106 | 70-130 | 3 | 20 | |
| Cadmium | ug/L | 0.082J | 40 | 40 | 38.8 | 38.9 | 97 | 97 | 70-130 | 0 | 20 | |
| Chromium | ug/L | 0.78J | 40 | 40 | 40.7 | 40.6 | 100 | 100 | 70-130 | 0 | 20 | |
| Selenium | ug/L | <0.18 | 40 | 40 | 39.3 | 39.7 | 98 | 99 | 70-130 | 1 | 20 | |
| Thallium | ug/L | <0.50 | 40 | 40 | 40.6 | 40.6 | 101 | 101 | 70-130 | 0 | 20 | |

MATRIX SPIKE SAMPLE: 1731922

| Parameter | Units | 60215629003 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|--------------------|-------------|-----------|----------|--------------|------------|
| Antimony | ug/L | <0.058 | 40 | 42.4 | 106 | 70-130 | |
| Arsenic | ug/L | 11.9 | 40 | 55.5 | 109 | 70-130 | |
| Cadmium | ug/L | <0.029 | 40 | 40.1 | 100 | 70-130 | |
| Chromium | ug/L | 0.36J | 40 | 41.2 | 102 | 70-130 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60215629

| MATRIX SPIKE SAMPLE: | | 1731922 | | | | | |
|----------------------|-------|-----------------------|----------------|--------------|-------------|-----------------|------------|
| Parameter | Units | 60215629003 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
| Selenium | ug/L | <0.18 | 40 | 41.0 | 102 | 70-130 | |
| Thallium | ug/L | <0.50 | 40 | 40.6 | 101 | 70-130 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60215629

QC Batch: WET/60837

Analysis Method: SM 2540C

QC Batch Method: SM 2540C

Analysis Description: 2540C Total Dissolved Solids

Associated Lab Samples: 60215629010

METHOD BLANK: 1731234

Matrix: Water

Associated Lab Samples: 60215629010

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|------------------------|-------|--------------|-----------------|-----|----------------|------------|
| Total Dissolved Solids | mg/L | <5.0 | 5.0 | 5.0 | 03/28/16 10:22 | |

LABORATORY CONTROL SAMPLE: 1731235

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|-------------|------------|-----------|--------------|------------|
| Total Dissolved Solids | mg/L | 1000 | 990 | 99 | 80-120 | |

SAMPLE DUPLICATE: 1731236

| Parameter | Units | 60215561009 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L | 5580 | 5380 | 4 | 10 | |

SAMPLE DUPLICATE: 1731237

| Parameter | Units | 60215561005 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L | 1670 | 1730 | 3 | 10 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60215629

QC Batch: WET/60871

Analysis Method: SM 2540C

QC Batch Method: SM 2540C

Analysis Description: 2540C Total Dissolved Solids

Associated Lab Samples: 60215629001, 60215629002, 60215629006, 60215629007, 60215629008, 60215629009

METHOD BLANK: 1732230

Matrix: Water

Associated Lab Samples: 60215629001, 60215629002, 60215629006, 60215629007, 60215629008, 60215629009

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|------------------------|-------|--------------|-----------------|-----|----------------|------------|
| Total Dissolved Solids | mg/L | <5.0 | 5.0 | 5.0 | 03/30/16 10:11 | |

LABORATORY CONTROL SAMPLE: 1732231

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|-------------|------------|-----------|--------------|------------|
| Total Dissolved Solids | mg/L | 1000 | 989 | 99 | 80-120 | |

SAMPLE DUPLICATE: 1732232

| Parameter | Units | 60215628007 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L | 725 | 727 | 0 | 10 | |

SAMPLE DUPLICATE: 1732233

| Parameter | Units | 60215629001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L | 529 | 526 | 1 | 10 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60215629

QC Batch: WET/60908

Analysis Method: SM 2540C

QC Batch Method: SM 2540C

Analysis Description: 2540C Total Dissolved Solids

Associated Lab Samples: 60215629003, 60215629004, 60215629005, 60215629011, 60215629012

METHOD BLANK: 1733446

Matrix: Water

Associated Lab Samples: 60215629003, 60215629004, 60215629005, 60215629011, 60215629012

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|------------------------|-------|--------------|-----------------|-----|----------------|------------|
| Total Dissolved Solids | mg/L | <5.0 | 5.0 | 5.0 | 03/31/16 11:47 | |

LABORATORY CONTROL SAMPLE: 1733447

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

SAMPLE DUPLICATE: 1733448

| Parameter | Units | 60215657005 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L | 516 | 516 | 0 | 10 | |

SAMPLE DUPLICATE: 1733449

| Parameter | Units | 60215727001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L | 940 | 940 | 0 | 10 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60215629

QC Batch: WET/60970 Analysis Method: SM 4500-H+B

QC Batch Method: SM 4500-H+B Analysis Description: 4500H+B pH

Associated Lab Samples: 60215629010

SAMPLE DUPLICATE: 1735408

| Parameter | Units | 60215628007 Result | Dup Result | RPD | Max RPD | Qualifiers |
|--------------------|------------|-----------------------|---------------|-----|------------|------------|
| pH at 25 Degrees C | Std. Units | 7.8 | 7.8 | 0 | 5 | H6 |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60215629

QC Batch: WET/60988 Analysis Method: SM 4500-H+B

QC Batch Method: SM 4500-H+B Analysis Description: 4500H+B pH

Associated Lab Samples: 60215629003, 60215629004, 60215629005, 60215629012

SAMPLE DUPLICATE: 1735731

| Parameter | Units | 60215635002 Result | Dup Result | RPD | Max RPD | Qualifiers |
|--------------------|------------|-----------------------|---------------|-----|------------|------------|
| pH at 25 Degrees C | Std. Units | 6.3 | 6.3 | 0 | 5 | H6 |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60215629

QC Batch: WETA/38754

Analysis Method: EPA 300.0

QC Batch Method: EPA 300.0

Analysis Description: 300.0 IC Anions

Associated Lab Samples: 60215629001, 60215629002, 60215629003, 60215629004, 60215629005, 60215629006, 60215629007, 60215629008, 60215629009, 60215629010, 60215629011, 60215629012

METHOD BLANK: 1732199

Matrix: Water

Associated Lab Samples: 60215629001, 60215629002, 60215629003, 60215629004, 60215629005, 60215629006, 60215629007, 60215629008, 60215629009, 60215629010, 60215629011, 60215629012

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Chloride | mg/L | <0.50 | 1.0 | 0.50 | 03/29/16 15:46 | |
| Fluoride | mg/L | <0.073 | 0.20 | 0.073 | 03/29/16 15:46 | |
| Sulfate | mg/L | <0.25 | 1.0 | 0.25 | 03/29/16 15:46 | |

METHOD BLANK: 1732965

Matrix: Water

Associated Lab Samples: 60215629001, 60215629002, 60215629003, 60215629004, 60215629006, 60215629007, 60215629008, 60215629009, 60215629010, 60215629011

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|------|----------------|------------|
| Chloride | mg/L | <0.50 | 1.0 | 0.50 | 03/30/16 22:43 | |
| Sulfate | mg/L | <0.25 | 1.0 | 0.25 | 03/30/16 22:43 | |

LABORATORY CONTROL SAMPLE: 1732200

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Chloride | mg/L | 5 | 4.7 | 93 | 90-110 | |
| Fluoride | mg/L | 2.5 | 2.5 | 99 | 90-110 | |
| Sulfate | mg/L | 5 | 4.8 | 96 | 90-110 | |

LABORATORY CONTROL SAMPLE: 1732966

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Chloride | mg/L | 5 | 4.8 | 96 | 90-110 | |
| Sulfate | mg/L | 5 | 5.0 | 99 | 90-110 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1732201 1732202

| Parameter | Units | MS | | MSD | | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|-------------|--------|-------------|--------|-----------|------------|----------|-----------|--------------|-----|---------|------|
| | | Spike Conc. | Result | Spike Conc. | Result | | | | | | | | |
| Chloride | mg/L | 2.7 | 5 | 5 | 7.2 | 7.2 | 90 | 90 | 80-120 | 0 | 15 | | |
| Fluoride | mg/L | 0.24 | 2.5 | 2.5 | 2.8 | 2.8 | 102 | 103 | 80-120 | 0 | 15 | | |
| Sulfate | mg/L | 76.7 | 50 | 50 | 128 | 129 | 103 | 105 | 80-120 | 1 | 15 | | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60215629

| MATRIX SPIKE SAMPLE: | | 1732203 | | | | | |
|----------------------|-------|-----------------------|----------------|--------------|-------------|-----------------|------------|
| Parameter | Units | 60215629002 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
| Chloride | mg/L | 18.9 | 5 | 23.6 | 93 | 80-120 | |
| Fluoride | mg/L | 0.22 | 2.5 | 2.6 | 97 | 80-120 | |
| Sulfate | mg/L | 295 | 250 | 536 | 97 | 80-120 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60215629

Sample: L-LMW-1S **Lab ID: 60215629001** Collected: 03/23/16 10:19 Received: 03/25/16 03:20 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|--|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | -0.104 ± 0.477 (0.970) C:NA T:89% | pCi/L | 04/08/16 10:04 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 0.707 ± 0.405 (0.740) C:83% T:79% | pCi/L | 04/06/16 17:08 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60215629

Sample: L-LMW-2S **Lab ID: 60215629002** Collected: 03/23/16 14:02 Received: 03/25/16 03:20 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|--|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.295 ± 0.450 (0.266) C:NA T:81% | pCi/L | 04/05/16 22:01 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 0.132 ± 0.342 (0.763) C:83% T:82% | pCi/L | 04/06/16 17:13 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60215629

Sample: L-LMW-3S **Lab ID: 60215629003** Collected: 03/24/16 10:41 Received: 03/25/16 03:20 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|--|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.171 ± 0.391 (0.631) C:NA T:92% | pCi/L | 04/05/16 22:26 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 0.519 ± 0.388 (0.763) C:84% T:80% | pCi/L | 04/06/16 17:13 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60215629

Sample: L-LMW-4S **Lab ID: 60215629004** Collected: 03/24/16 09:52 Received: 03/25/16 03:20 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|---|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.547 ± 0.442 (0.247) C:NA T:90% | pCi/L | 04/05/16 21:49 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 0.573 ± 0.350 (0.643) C:84% T:83% | pCi/L | 04/06/16 17:13 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60215629

Sample: L-LMW-5S **Lab ID: 60215629005** Collected: 03/24/16 10:43 Received: 03/25/16 03:20 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|---|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.721 ± 0.617 (0.836) C:NA T:92% | pCi/L | 04/08/16 10:04 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 0.182 ± 0.316 (0.690) C:85% T:85% | pCi/L | 04/06/16 17:08 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60215629

Sample: L-LMW-6S **Lab ID: 60215629006** Collected: 03/23/16 14:50 Received: 03/25/16 03:20 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|--|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.279 ± 0.484 (0.865) C:NA T:94% | pCi/L | 04/08/16 10:22 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 1.28 ± 0.498 (0.755) C:85% T:80% | pCi/L | 04/06/16 17:08 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60215629

Sample: L-LMW-7S **Lab ID: 60215629007** Collected: 03/23/16 14:20 Received: 03/25/16 03:20 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|---|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 1.48 ± 0.831 (0.862) C:NA T:88% | pCi/L | 04/08/16 10:26 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 0.825 ± 0.521 (1.01) C:84% T:77% | pCi/L | 04/06/16 17:09 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60215629

Sample: L-LMW-8S **Lab ID: 60215629008** Collected: 03/23/16 12:45 Received: 03/25/16 03:20 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|--|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.000 ± 0.427 (0.958) C:NA T:88% | pCi/L | 04/08/16 10:33 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 0.590 ± 0.420 (0.814) C:92% T:71% | pCi/L | 04/06/16 17:09 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60215629

Sample: L-BMW-1S **Lab ID: 60215629009** Collected: 03/23/16 10:20 Received: 03/25/16 03:20 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|---|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.0858 ± 0.391 (0.796) C:NA T:93% | pCi/L | 04/08/16 10:39 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 1.30 ± 0.498 (0.770) C:81% T:85% | pCi/L | 04/06/16 17:09 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60215629

Sample: L-BMW-2S **Lab ID: 60215629010** Collected: 03/22/16 11:39 Received: 03/25/16 03:20 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|---|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.348 ± 0.541 (0.937) C:NA T:91% | pCi/L | 04/08/16 10:33 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 0.495 ± 0.378 (0.745) C:78% T:88% | pCi/L | 04/06/16 17:09 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60215629

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|--|-----------|---|-------|----------------|------------|------|
| Sample: L-LMW-DUP-1 Lab ID: 60215629011 Collected: 03/24/16 00:00 Received: 03/25/16 03:20 Matrix: Water PWS: Site ID: Sample Type: | | | | | | |
| Radium-226 | EPA 903.1 | 0.000 ± 0.390 (0.629) C:NA T:91% | pCi/L | 04/08/16 10:44 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 0.822 ± 0.442 (0.796) C:83% T:79% | pCi/L | 04/06/16 17:09 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60215629

Sample: L-LMW-FB-1 **Lab ID: 60215629012** Collected: 03/24/16 11:15 Received: 03/25/16 03:20 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|--|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | -0.088 ± 0.403 (0.819) C:NA T:93% | pCi/L | 04/08/16 10:44 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 0.234 ± 0.296 (0.627) C:82% T:85% | pCi/L | 04/06/16 17:09 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60215629

Sample: L-LMW-1S MS **Lab ID: 60215629013** Collected: 03/23/16 10:19 Received: 03/25/16 03:20 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|---|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 92.3 %REC ± NA (NA) C:NA T:NA | pCi/L | 04/08/16 11:07 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 104 %REC +/- NA (NA) C:NA T:NA | pCi/L | 04/06/16 17:09 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60215629

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|--------------------------------|-----------------|----------|----------------|------------|
| Radium-226 | EPA 903.1 | 83.3 %REC (NA) C:NA T:NA | 13.3 RPD ± NA | pCi/L | 04/08/16 10:54 | 13982-63-3 |
| Radium-228 | EPA 904.0 | 124 %REC (NA) C:NA T:NA | 17.4 RPD +/- NA | pCi/L | 04/06/16 17:10 | 15262-20-1 |

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60215629

| | | | |
|-------------------------|---------------------------------------|-----------------------|------------------|
| QC Batch: | RADC/28721 | Analysis Method: | EPA 904.0 |
| QC Batch Method: | EPA 904.0 | Analysis Description: | 904.0 Radium 228 |
| Associated Lab Samples: | 60215629002, 60215629003, 60215629004 | | |

METHOD BLANK: 1050671 Matrix: Water

Associated Lab Samples:

| Parameter | Act ± Unc (MDC) Carr Trac | Units | Analyzed | Qualifiers |
|------------|-----------------------------------|-------|----------------|------------|
| Radium-228 | 0.779 ± 0.434 (0.786) C:79% T:83% | pCi/L | 04/06/16 13:09 | |

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60215629

| | | | |
|-------------------------|---|-----------------------|------------------|
| QC Batch: | RADC/28722 | Analysis Method: | EPA 904.0 |
| QC Batch Method: | EPA 904.0 | Analysis Description: | 904.0 Radium 228 |
| Associated Lab Samples: | 60215629001, 60215629005, 60215629006, 60215629007, 60215629008, 60215629009, 60215629010, 60215629011, 60215629012, 60215629013, 60215629014 | | |

METHOD BLANK: 1050672 Matrix: Water

Associated Lab Samples:

| Parameter | Act ± Unc (MDC) Carr Trac | Units | Analyzed | Qualifiers |
|------------|-----------------------------------|-------|----------------|------------|
| Radium-228 | 0.460 ± 0.355 (0.699) C:83% T:84% | pCi/L | 04/06/16 17:08 | |

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60215629

QC Batch: RADC/28708

Analysis Method: EPA 903.1

QC Batch Method: EPA 903.1

Analysis Description: 903.1 Radium-226

Associated Lab Samples: 60215629002, 60215629003, 60215629004

METHOD BLANK: 1050642

Matrix: Water

Associated Lab Samples:

| Parameter | Act ± Unc (MDC) Carr Trac | Units | Analyzed | Qualifiers |
|------------|-----------------------------------|-------|----------------|------------|
| Radium-226 | -0.085 ± 0.386 (0.786) C:NA T:93% | pCi/L | 04/05/16 20:28 | |

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60215629

| | | | |
|-------------------------|---|-----------------------|------------------|
| QC Batch: | RADC/28710 | Analysis Method: | EPA 903.1 |
| QC Batch Method: | EPA 903.1 | Analysis Description: | 903.1 Radium-226 |
| Associated Lab Samples: | 60215629001, 60215629005, 60215629006, 60215629007, 60215629008, 60215629009, 60215629010, 60215629011, 60215629012, 60215629013, 60215629014 | | |

METHOD BLANK: 1050644 Matrix: Water

Associated Lab Samples:

| Parameter | Act ± Unc (MDC) Carr Trac | Units | Analyzed | Qualifiers |
|------------|----------------------------------|-------|----------------|------------|
| Radium-226 | 0.000 ± 0.436 (0.944) C:NA T:98% | pCi/L | 04/08/16 10:20 | |

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

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60215629

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.

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.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

Act - Activity

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

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

LABORATORIES

PASI-K Pace Analytical Services - Kansas City

PASI-PA Pace Analytical Services - Greensburg

ANALYTE QUALIFIERS

B Analyte was detected in the associated method blank.

H6 Analysis initiated outside of the 15 minute EPA required holding time.

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60215629

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|-------------|-------------|-----------------|------------|-------------------|------------------|
| 60215629001 | L-LMW-1S | EPA 200.7 | MPRP/35341 | EPA 200.7 | ICP/25863 |
| 60215629002 | L-LMW-2S | EPA 200.7 | MPRP/35341 | EPA 200.7 | ICP/25863 |
| 60215629003 | L-LMW-3S | EPA 200.7 | MPRP/35341 | EPA 200.7 | ICP/25863 |
| 60215629004 | L-LMW-4S | EPA 200.7 | MPRP/35341 | EPA 200.7 | ICP/25863 |
| 60215629005 | L-LMW-5S | EPA 200.7 | MPRP/35341 | EPA 200.7 | ICP/25863 |
| 60215629006 | L-LMW-6S | EPA 200.7 | MPRP/35341 | EPA 200.7 | ICP/25863 |
| 60215629007 | L-LMW-7S | EPA 200.7 | MPRP/35341 | EPA 200.7 | ICP/25863 |
| 60215629008 | L-LMW-8S | EPA 200.7 | MPRP/35341 | EPA 200.7 | ICP/25863 |
| 60215629009 | L-BMW-1S | EPA 200.7 | MPRP/35341 | EPA 200.7 | ICP/25863 |
| 60215629010 | L-BMW-2S | EPA 200.7 | MPRP/35341 | EPA 200.7 | ICP/25863 |
| 60215629011 | L-LMW-DUP-1 | EPA 200.7 | MPRP/35341 | EPA 200.7 | ICP/25863 |
| 60215629012 | L-LMW-FB-1 | EPA 200.7 | MPRP/35341 | EPA 200.7 | ICP/25863 |
| 60215629001 | L-LMW-1S | EPA 200.8 | MPRP/35343 | EPA 200.8 | ICPM/4164 |
| 60215629002 | L-LMW-2S | EPA 200.8 | MPRP/35343 | EPA 200.8 | ICPM/4164 |
| 60215629003 | L-LMW-3S | EPA 200.8 | MPRP/35343 | EPA 200.8 | ICPM/4164 |
| 60215629004 | L-LMW-4S | EPA 200.8 | MPRP/35343 | EPA 200.8 | ICPM/4164 |
| 60215629005 | L-LMW-5S | EPA 200.8 | MPRP/35343 | EPA 200.8 | ICPM/4164 |
| 60215629006 | L-LMW-6S | EPA 200.8 | MPRP/35343 | EPA 200.8 | ICPM/4164 |
| 60215629007 | L-LMW-7S | EPA 200.8 | MPRP/35343 | EPA 200.8 | ICPM/4164 |
| 60215629008 | L-LMW-8S | EPA 200.8 | MPRP/35343 | EPA 200.8 | ICPM/4164 |
| 60215629009 | L-BMW-1S | EPA 200.8 | MPRP/35343 | EPA 200.8 | ICPM/4164 |
| 60215629010 | L-BMW-2S | EPA 200.8 | MPRP/35343 | EPA 200.8 | ICPM/4164 |
| 60215629011 | L-LMW-DUP-1 | EPA 200.8 | MPRP/35343 | EPA 200.8 | ICPM/4164 |
| 60215629012 | L-LMW-FB-1 | EPA 200.8 | MPRP/35343 | EPA 200.8 | ICPM/4164 |
| 60215629001 | L-LMW-1S | EPA 7470 | MERP/10474 | EPA 7470 | MERC/10426 |
| 60215629002 | L-LMW-2S | EPA 7470 | MERP/10474 | EPA 7470 | MERC/10426 |
| 60215629003 | L-LMW-3S | EPA 7470 | MERP/10474 | EPA 7470 | MERC/10426 |
| 60215629004 | L-LMW-4S | EPA 7470 | MERP/10474 | EPA 7470 | MERC/10426 |
| 60215629005 | L-LMW-5S | EPA 7470 | MERP/10474 | EPA 7470 | MERC/10426 |
| 60215629006 | L-LMW-6S | EPA 7470 | MERP/10474 | EPA 7470 | MERC/10426 |
| 60215629007 | L-LMW-7S | EPA 7470 | MERP/10474 | EPA 7470 | MERC/10426 |
| 60215629008 | L-LMW-8S | EPA 7470 | MERP/10474 | EPA 7470 | MERC/10426 |
| 60215629009 | L-BMW-1S | EPA 7470 | MERP/10474 | EPA 7470 | MERC/10426 |
| 60215629010 | L-BMW-2S | EPA 7470 | MERP/10474 | EPA 7470 | MERC/10426 |
| 60215629011 | L-LMW-DUP-1 | EPA 7470 | MERP/10474 | EPA 7470 | MERC/10426 |
| 60215629012 | L-LMW-FB-1 | EPA 7470 | MERP/10474 | EPA 7470 | MERC/10426 |
| 60215629001 | L-LMW-1S | EPA 903.1 | RADC/28710 | | |
| 60215629002 | L-LMW-2S | EPA 903.1 | RADC/28708 | | |
| 60215629003 | L-LMW-3S | EPA 903.1 | RADC/28708 | | |
| 60215629004 | L-LMW-4S | EPA 903.1 | RADC/28708 | | |
| 60215629005 | L-LMW-5S | EPA 903.1 | RADC/28710 | | |
| 60215629006 | L-LMW-6S | EPA 903.1 | RADC/28710 | | |
| 60215629007 | L-LMW-7S | EPA 903.1 | RADC/28710 | | |
| 60215629008 | L-LMW-8S | EPA 903.1 | RADC/28710 | | |
| 60215629009 | L-BMW-1S | EPA 903.1 | RADC/28710 | | |
| 60215629010 | L-BMW-2S | EPA 903.1 | RADC/28710 | | |

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60215629

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|-------------|--------------|-----------------|------------|-------------------|------------------|
| 60215629011 | L-LMW-DUP-1 | EPA 903.1 | RADC/28710 | | |
| 60215629012 | L-LMW-FB-1 | EPA 903.1 | RADC/28710 | | |
| 60215629013 | L-LMW-1S MS | EPA 903.1 | RADC/28710 | | |
| 60215629014 | L-LMW-1S MSD | EPA 903.1 | RADC/28710 | | |
| 60215629001 | L-LMW-1S | EPA 904.0 | RADC/28722 | | |
| 60215629002 | L-LMW-2S | EPA 904.0 | RADC/28721 | | |
| 60215629003 | L-LMW-3S | EPA 904.0 | RADC/28721 | | |
| 60215629004 | L-LMW-4S | EPA 904.0 | RADC/28721 | | |
| 60215629005 | L-LMW-5S | EPA 904.0 | RADC/28722 | | |
| 60215629006 | L-LMW-6S | EPA 904.0 | RADC/28722 | | |
| 60215629007 | L-LMW-7S | EPA 904.0 | RADC/28722 | | |
| 60215629008 | L-LMW-8S | EPA 904.0 | RADC/28722 | | |
| 60215629009 | L-BMW-1S | EPA 904.0 | RADC/28722 | | |
| 60215629010 | L-BMW-2S | EPA 904.0 | RADC/28722 | | |
| 60215629011 | L-LMW-DUP-1 | EPA 904.0 | RADC/28722 | | |
| 60215629012 | L-LMW-FB-1 | EPA 904.0 | RADC/28722 | | |
| 60215629013 | L-LMW-1S MS | EPA 904.0 | RADC/28722 | | |
| 60215629014 | L-LMW-1S MSD | EPA 904.0 | RADC/28722 | | |
| 60215629001 | L-LMW-1S | SM 2540C | WET/60871 | | |
| 60215629002 | L-LMW-2S | SM 2540C | WET/60871 | | |
| 60215629003 | L-LMW-3S | SM 2540C | WET/60908 | | |
| 60215629004 | L-LMW-4S | SM 2540C | WET/60908 | | |
| 60215629005 | L-LMW-5S | SM 2540C | WET/60908 | | |
| 60215629006 | L-LMW-6S | SM 2540C | WET/60871 | | |
| 60215629007 | L-LMW-7S | SM 2540C | WET/60871 | | |
| 60215629008 | L-LMW-8S | SM 2540C | WET/60871 | | |
| 60215629009 | L-BMW-1S | SM 2540C | WET/60871 | | |
| 60215629010 | L-BMW-2S | SM 2540C | WET/60837 | | |
| 60215629011 | L-LMW-DUP-1 | SM 2540C | WET/60908 | | |
| 60215629012 | L-LMW-FB-1 | SM 2540C | WET/60908 | | |
| 60215629001 | L-LMW-1S | SM 4500-H+B | WET/60976 | | |
| 60215629002 | L-LMW-2S | SM 4500-H+B | WET/60976 | | |
| 60215629003 | L-LMW-3S | SM 4500-H+B | WET/60988 | | |
| 60215629004 | L-LMW-4S | SM 4500-H+B | WET/60988 | | |
| 60215629005 | L-LMW-5S | SM 4500-H+B | WET/60988 | | |
| 60215629006 | L-LMW-6S | SM 4500-H+B | WET/60976 | | |
| 60215629007 | L-LMW-7S | SM 4500-H+B | WET/60976 | | |
| 60215629008 | L-LMW-8S | SM 4500-H+B | WET/60976 | | |
| 60215629009 | L-BMW-1S | SM 4500-H+B | WET/60976 | | |
| 60215629010 | L-BMW-2S | SM 4500-H+B | WET/60970 | | |
| 60215629011 | L-LMW-DUP-1 | SM 4500-H+B | WET/60976 | | |
| 60215629012 | L-LMW-FB-1 | SM 4500-H+B | WET/60988 | | |

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60215629

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|-------------|-------------|-----------------|------------|-------------------|------------------|
| 60215629001 | L-LMW-1S | EPA 300.0 | WETA/38754 | | |
| 60215629002 | L-LMW-2S | EPA 300.0 | WETA/38754 | | |
| 60215629003 | L-LMW-3S | EPA 300.0 | WETA/38754 | | |
| 60215629004 | L-LMW-4S | EPA 300.0 | WETA/38754 | | |
| 60215629005 | L-LMW-5S | EPA 300.0 | WETA/38754 | | |
| 60215629006 | L-LMW-6S | EPA 300.0 | WETA/38754 | | |
| 60215629007 | L-LMW-7S | EPA 300.0 | WETA/38754 | | |
| 60215629008 | L-LMW-8S | EPA 300.0 | WETA/38754 | | |
| 60215629009 | L-BMW-1S | EPA 300.0 | WETA/38754 | | |
| 60215629010 | L-BMW-2S | EPA 300.0 | WETA/38754 | | |
| 60215629011 | L-LMW-DUP-1 | EPA 300.0 | WETA/38754 | | |
| 60215629012 | L-LMW-FB-1 | EPA 300.0 | WETA/38754 | | |

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Sample Condition Upon Receipt

WO#: 60215629



60215629

Client Name: Golder

Courier: FedEx UPS VIA Clay PEX ECI Pace xroad Other Client

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: CF +1.0 T-239 / CF 0.6 T-262 Type of Ice: Wet Blue None Samples received on ice, cooling process has begun.

Cooler Temperature: 2-3/15.1/16.3

Date and initials of person examining contents: pvc/25/16

Temperature should be above freezing to 6°C

| | | |
|--|--|------------------------------------|
| Chain of Custody present: | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 1. Radium receive in the high temp |
| Chain of Custody filled out: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 2. Coolers. |
| Chain of Custody relinquished: | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 3. |
| Sampler name & signature on COC: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 4. |
| Samples arrived within holding time: | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | 5. |
| Short Hold Time analyses (<72hr): | <u>pvc/25/16</u> <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | 6. pH |
| Rush Turn Around Time requested: | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | 7. |
| Sufficient volume: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 8. |
| Correct containers used: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Pace containers used: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 9. |
| Containers intact: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 10. |
| Unpreserved 5035A soils frozen w/in 48hrs? | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | 11. |
| Filtered volume received for dissolved tests? | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | 12. |
| Sample labels match COC: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Includes date/time/ID/analyses Matrix: <u>WT</u> | | 13. |
| All containers needing preservation have been checked. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| All containers needing preservation are found to be in compliance with EPA recommendation. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 14. |
| Exceptions: VOA, Coliform, O&G, WI-DRO (water) | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Initial when completed |
| Trip Blank present: | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | Lot # of added preservative |
| Pace Trip Blank lot # (if purchased): | | 15. |
| Headspace in VOA vials (>6mm): | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | |
| | | 16. |
| Project sampled in USDA Regulated Area: | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | 17. List State: |
| Additional labels attached to 5035A vials in the field? | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | 18. |

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: Jami Church 3/25/16

Project Manager Review: _____ Date: _____

June 02, 2016

Mark Haddock
Golder Associates
820 S. Main St
Suite 100
Saint Charles, MO 63301

RE: Project: AMEREN LABADIE ENERGY CTR-FLY
Pace Project No.: 60218627

Dear Mark Haddock:

Enclosed are the analytical results for sample(s) received by the laboratory on May 07, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Jamie Church
jamie.church@pacelabs.com
Project Manager

Enclosures

cc: Jeffrey Ingram, Golder Associates
John Suozzi, Golder Associates



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60218627

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601

L-A-B DOD-ELAP Accreditation #: L2417

Alabama Certification #: 41590

Arizona Certification #: AZ0734

Arkansas Certification

California Certification #: 04222CA

Colorado Certification

Connecticut Certification #: PH-0694

Delaware Certification

Florida/TNI Certification #: E87683

Georgia Certification #: C040

Guam Certification

Hawaii Certification

Idaho Certification

Illinois Certification

Indiana Certification

Iowa Certification #: 391

Kansas/TNI Certification #: E-10358

Kentucky Certification #: 90133

Louisiana DHH/TNI Certification #: LA140008

Louisiana DEQ/TNI Certification #: 4086

Maine Certification #: PA00091

Maryland Certification #: 308

Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification

Missouri Certification #: 235

Montana Certification #: Cert 0082

Nebraska Certification #: NE-05-29-14

Nevada Certification #: PA014572015-1

New Hampshire/TNI Certification #: 2976

New Jersey/TNI Certification #: PA 051

New Mexico Certification #: PA01457

New York/TNI Certification #: 10888

North Carolina Certification #: 42706

North Dakota Certification #: R-190

Oregon/TNI Certification #: PA200002

Pennsylvania/TNI Certification #: 65-00282

Puerto Rico Certification #: PA01457

Rhode Island Certification #: 65-00282

South Dakota Certification

Tennessee Certification #: TN2867

Texas/TNI Certification #: T104704188-14-8

Utah/TNI Certification #: PA014572015-5

USDA Soil Permit #: P330-14-00213

Vermont Dept. of Health: ID# VT-0282

Virgin Island/PADEP Certification

Virginia/VELAP Certification #: 460198

Washington Certification #: C868

West Virginia DEP Certification #: 143

West Virginia DHHR Certification #: 9964C

Wisconsin Certification

Wyoming Certification #: 8TMS-L

Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 15-016-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407

Utah Certification #: KS00021

Kansas Field Laboratory Accreditation: # E-92587

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60218627

| Lab ID | Sample ID | Matrix | Date Collected | Date Received |
|-------------|--------------|--------|----------------|----------------|
| 60218627001 | L-LMW-1S | Water | 05/04/16 15:25 | 05/07/16 04:15 |
| 60218627002 | L-LMW-2S | Water | 05/05/16 11:30 | 05/07/16 04:15 |
| 60218627003 | L-LMW-3S | Water | 05/04/16 15:35 | 05/07/16 04:15 |
| 60218627004 | L-LMW-4S | Water | 05/05/16 12:35 | 05/07/16 04:15 |
| 60218627005 | L-LMW-5S | Water | 05/06/16 08:55 | 05/07/16 04:15 |
| 60218627006 | L-LMW-6S | Water | 05/05/16 14:08 | 05/07/16 04:15 |
| 60218627007 | L-LMW-7S | Water | 05/05/16 11:10 | 05/07/16 04:15 |
| 60218627008 | L-LMW-8S | Water | 05/05/16 09:55 | 05/07/16 04:15 |
| 60218627009 | L-BMW-1S | Water | 05/03/16 15:33 | 05/07/16 04:15 |
| 60218627010 | L-BMW-2S | Water | 05/04/16 08:55 | 05/07/16 04:15 |
| 60218627011 | L-LMW-DUP-1 | Water | 05/05/16 08:00 | 05/07/16 04:15 |
| 60218627012 | L-LMW-FB-1 | Water | 05/05/16 11:15 | 05/07/16 04:15 |
| 60218627013 | L-LMW-1S MS | Water | 05/04/16 15:25 | 05/07/16 04:15 |
| 60218627014 | L-LMW-1S MSD | Water | 05/04/16 15:25 | 05/07/16 04:15 |

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60218627

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|-------------|-----------|-------------|----------|-------------------|------------|
| 60218627001 | L-LMW-1S | EPA 200.7 | ZBM | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |
| | | EPA 7470 | NDJ | 1 | PASI-K |
| | | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| | | SM 2540C | AGO | 1 | PASI-K |
| | | SM 4500-H+B | AGO | 1 | PASI-K |
| 60218627002 | L-LMW-2S | EPA 300.0 | OL | 3 | PASI-K |
| | | EPA 200.7 | ZBM | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |
| | | EPA 7470 | NDJ | 1 | PASI-K |
| | | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| | | SM 2540C | HAC | 1 | PASI-K |
| 60218627003 | L-LMW-3S | SM 4500-H+B | AGO | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| | | EPA 200.7 | ZBM | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |
| | | EPA 7470 | NDJ | 1 | PASI-K |
| | | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| 60218627004 | L-LMW-4S | SM 2540C | AGO | 1 | PASI-K |
| | | SM 4500-H+B | AGO | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| | | EPA 200.7 | ZBM | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |
| | | EPA 7470 | NDJ | 1 | PASI-K |
| | | EPA 903.1 | WRR | 1 | PASI-PA |
| 60218627005 | L-LMW-5S | EPA 904.0 | JLW | 1 | PASI-PA |
| | | SM 2540C | HAC | 1 | PASI-K |
| | | SM 4500-H+B | AGO | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| | | EPA 200.7 | ZBM | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |
| | | EPA 7470 | NDJ | 1 | PASI-K |
| 60218627005 | L-LMW-5S | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |

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SAMPLE ANALYTE COUNT

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60218627

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|-------------|-----------|-------------|----------|-------------------|------------|
| 60218627006 | L-LMW-6S | SM 2540C | HAC | 1 | PASI-K |
| | | SM 4500-H+B | JMC1 | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| | | EPA 200.7 | ZBM | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |
| | | EPA 7470 | NDJ | 1 | PASI-K |
| | | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| 60218627007 | L-LMW-7S | SM 2540C | HAC | 1 | PASI-K |
| | | SM 4500-H+B | AGO | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| | | EPA 200.7 | ZBM | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |
| | | EPA 7470 | NDJ | 1 | PASI-K |
| | | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| 60218627008 | L-LMW-8S | SM 2540C | HAC | 1 | PASI-K |
| | | SM 4500-H+B | AGO | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| | | EPA 200.7 | ZBM | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |
| | | EPA 7470 | NDJ | 1 | PASI-K |
| | | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| 60218627009 | L-BMW-1S | SM 2540C | HAC | 1 | PASI-K |
| | | SM 4500-H+B | AGO | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| | | EPA 200.7 | ZBM | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |
| | | EPA 7470 | NDJ | 1 | PASI-K |
| | | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| 60218627010 | L-BMW-2S | SM 2540C | AGO | 1 | PASI-K |
| | | SM 4500-H+B | AGO | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| | | EPA 200.7 | ZBM | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |

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SAMPLE ANALYTE COUNT

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60218627

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|--------------------|---------------------|-------------|----------|-------------------|------------|
| | | EPA 7470 | NDJ | 1 | PASI-K |
| | | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| | | SM 2540C | AGO | 1 | PASI-K |
| | | SM 4500-H+B | AGO | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| 60218627011 | L-LMW-DUP-1 | EPA 200.7 | ZBM | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |
| | | EPA 7470 | NDJ | 1 | PASI-K |
| | | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| | | SM 2540C | HAC | 1 | PASI-K |
| | | SM 4500-H+B | AGO | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| 60218627012 | L-LMW-FB-1 | EPA 200.7 | ZBM | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |
| | | EPA 7470 | NDJ | 1 | PASI-K |
| | | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| | | SM 2540C | HAC | 1 | PASI-K |
| | | SM 4500-H+B | AGO | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| 60218627013 | L-LMW-1S MS | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| 60218627014 | L-LMW-1S MSD | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60218627

Sample: L-LMW-1S **Lab ID: 60218627001** Collected: 05/04/16 15:25 Received: 05/07/16 04:15 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|---------|---|------|-------|----|----------------|----------------|------------|-------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 142 | ug/L | 10.0 | 0.58 | 1 | 05/11/16 16:10 | 05/23/16 12:24 | 7440-39-3 | |
| Beryllium | <0.26 | ug/L | 1.0 | 0.26 | 1 | 05/11/16 16:10 | 05/23/16 12:24 | 7440-41-7 | |
| Boron | 2620 | ug/L | 100 | 50.0 | 1 | 05/11/16 16:10 | 05/23/16 12:24 | 7440-42-8 | |
| Calcium | 130000 | ug/L | 100 | 8.1 | 1 | 05/11/16 16:10 | 05/23/16 12:24 | 7440-70-2 | |
| Cobalt | 0.80J | ug/L | 5.0 | 0.72 | 1 | 05/11/16 16:10 | 05/23/16 12:24 | 7440-48-4 | |
| Lead | 3.2J | ug/L | 5.0 | 2.5 | 1 | 05/11/16 16:10 | 05/23/16 12:24 | 7439-92-1 | |
| Lithium | 20.9 | ug/L | 10.0 | 4.9 | 1 | 05/11/16 16:10 | 05/23/16 12:24 | 7439-93-2 | |
| Molybdenum | 4.0J | ug/L | 20.0 | 0.52 | 1 | 05/11/16 16:10 | 05/23/16 12:24 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | <0.058 | ug/L | 1.0 | 0.058 | 1 | 05/11/16 16:10 | 05/24/16 18:42 | 7440-36-0 | |
| Arsenic | 9.1 | ug/L | 1.0 | 0.10 | 1 | 05/11/16 16:10 | 05/24/16 18:42 | 7440-38-2 | |
| Cadmium | 0.031J | ug/L | 0.50 | 0.029 | 1 | 05/11/16 16:10 | 05/24/16 18:42 | 7440-43-9 | |
| Chromium | 0.53J | ug/L | 1.0 | 0.34 | 1 | 05/11/16 16:10 | 05/24/16 18:42 | 7440-47-3 | |
| Selenium | <0.18 | ug/L | 1.0 | 0.18 | 1 | 05/11/16 16:10 | 05/24/16 18:42 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 05/11/16 16:10 | 05/24/16 18:42 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.039 | ug/L | 0.20 | 0.039 | 1 | 05/12/16 15:30 | 05/13/16 12:02 | 7439-97-6 | M1,R1 |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 525 | mg/L | 5.0 | 5.0 | 1 | | 05/11/16 15:51 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.3 | Std. Units | 0.10 | 0.10 | 1 | | 05/10/16 12:00 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 4.3 | mg/L | 1.0 | 0.50 | 1 | | 05/31/16 11:28 | 16887-00-6 | |
| Fluoride | 0.15J | mg/L | 0.20 | 0.073 | 1 | | 05/31/16 11:28 | 16984-48-8 | |
| Sulfate | 71.6 | mg/L | 5.0 | 1.2 | 5 | | 06/01/16 11:40 | 14808-79-8 | |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60218627

Sample: L-LMW-2S **Lab ID: 60218627002** Collected: 05/05/16 11:30 Received: 05/07/16 04:15 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|---|------|-------|----|----------------|----------------|------------|-------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 56.5 | ug/L | 10.0 | 0.58 | 1 | 05/11/16 16:10 | 05/23/16 12:31 | 7440-39-3 | |
| Beryllium | <0.26 | ug/L | 1.0 | 0.26 | 1 | 05/11/16 16:10 | 05/23/16 12:31 | 7440-41-7 | |
| Boron | 6920 | ug/L | 100 | 50.0 | 1 | 05/11/16 16:10 | 05/23/16 12:31 | 7440-42-8 | |
| Calcium | 66500 | ug/L | 100 | 8.1 | 1 | 05/11/16 16:10 | 05/23/16 12:31 | 7440-70-2 | |
| Cobalt | <0.72 | ug/L | 5.0 | 0.72 | 1 | 05/11/16 16:10 | 05/23/16 12:31 | 7440-48-4 | |
| Lead | <2.5 | ug/L | 5.0 | 2.5 | 1 | 05/11/16 16:10 | 05/23/16 12:31 | 7439-92-1 | |
| Lithium | 16.6 | ug/L | 10.0 | 4.9 | 1 | 05/11/16 16:10 | 05/23/16 12:31 | 7439-93-2 | |
| Molybdenum | 137 | ug/L | 20.0 | 0.52 | 1 | 05/11/16 16:10 | 05/23/16 12:31 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | 0.064J | ug/L | 1.0 | 0.058 | 1 | 05/11/16 16:10 | 05/24/16 19:01 | 7440-36-0 | |
| Arsenic | 25.8 | ug/L | 1.0 | 0.10 | 1 | 05/11/16 16:10 | 05/24/16 19:01 | 7440-38-2 | |
| Cadmium | <0.029 | ug/L | 0.50 | 0.029 | 1 | 05/11/16 16:10 | 05/24/16 19:01 | 7440-43-9 | |
| Chromium | 0.53J | ug/L | 1.0 | 0.34 | 1 | 05/11/16 16:10 | 05/24/16 19:01 | 7440-47-3 | |
| Selenium | 0.19J | ug/L | 1.0 | 0.18 | 1 | 05/11/16 16:10 | 05/24/16 19:01 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 05/11/16 16:10 | 05/24/16 19:01 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.039 | ug/L | 0.20 | 0.039 | 1 | 05/12/16 15:30 | 05/13/16 12:09 | 7439-97-6 | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 505 | mg/L | 5.0 | 5.0 | 1 | | 05/12/16 16:50 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 9.3 | Std. Units | 0.10 | 0.10 | 1 | | 05/11/16 10:15 | | H3,H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 17.8 | mg/L | 1.0 | 0.50 | 1 | | 05/31/16 11:54 | 16887-00-6 | |
| Fluoride | 0.16J | mg/L | 0.20 | 0.073 | 1 | | 05/31/16 11:54 | 16984-48-8 | |
| Sulfate | 312 | mg/L | 20.0 | 5.0 | 20 | | 06/01/16 12:09 | 14808-79-8 | |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60218627

Sample: L-LMW-3S **Lab ID: 60218627003** Collected: 05/04/16 15:35 Received: 05/07/16 04:15 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|---------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 77.3 | ug/L | 10.0 | 0.58 | 1 | 05/11/16 16:10 | 05/23/16 12:33 | 7440-39-3 | |
| Beryllium | <0.26 | ug/L | 1.0 | 0.26 | 1 | 05/11/16 16:10 | 05/23/16 12:33 | 7440-41-7 | |
| Boron | 4040 | ug/L | 100 | 50.0 | 1 | 05/11/16 16:10 | 05/23/16 12:33 | 7440-42-8 | |
| Calcium | 54000 | ug/L | 100 | 8.1 | 1 | 05/11/16 16:10 | 05/23/16 12:33 | 7440-70-2 | |
| Cobalt | <0.72 | ug/L | 5.0 | 0.72 | 1 | 05/11/16 16:10 | 05/23/16 12:33 | 7440-48-4 | |
| Lead | <2.5 | ug/L | 5.0 | 2.5 | 1 | 05/11/16 16:10 | 05/23/16 12:33 | 7439-92-1 | |
| Lithium | 28.2 | ug/L | 10.0 | 4.9 | 1 | 05/11/16 16:10 | 05/23/16 12:33 | 7439-93-2 | |
| Molybdenum | 172 | ug/L | 20.0 | 0.52 | 1 | 05/11/16 16:10 | 05/23/16 12:33 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | <0.058 | ug/L | 1.0 | 0.058 | 1 | 05/11/16 16:10 | 05/24/16 19:04 | 7440-36-0 | |
| Arsenic | 0.79J | ug/L | 1.0 | 0.10 | 1 | 05/11/16 16:10 | 05/24/16 19:04 | 7440-38-2 | |
| Cadmium | <0.029 | ug/L | 0.50 | 0.029 | 1 | 05/11/16 16:10 | 05/24/16 19:04 | 7440-43-9 | |
| Chromium | 0.91J | ug/L | 1.0 | 0.34 | 1 | 05/11/16 16:10 | 05/24/16 19:04 | 7440-47-3 | |
| Selenium | <0.18 | ug/L | 1.0 | 0.18 | 1 | 05/11/16 16:10 | 05/24/16 19:04 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 05/11/16 16:10 | 05/24/16 19:04 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.039 | ug/L | 0.20 | 0.039 | 1 | 05/12/16 15:30 | 05/13/16 12:11 | 7439-97-6 | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 508 | mg/L | 5.0 | 5.0 | 1 | | 05/11/16 15:52 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.4 | Std. Units | 0.10 | 0.10 | 1 | | 05/10/16 12:00 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 21.3 | mg/L | 2.0 | 1.0 | 2 | | 06/01/16 12:23 | 16887-00-6 | |
| Fluoride | 0.36 | mg/L | 0.20 | 0.073 | 1 | | 05/31/16 12:07 | 16984-48-8 | |
| Sulfate | 286 | mg/L | 20.0 | 5.0 | 20 | | 06/01/16 12:37 | 14808-79-8 | |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60218627

Sample: L-LMW-4S **Lab ID: 60218627004** Collected: 05/05/16 12:35 Received: 05/07/16 04:15 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|---|------|-------|----|----------------|----------------|------------|-------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 119 | ug/L | 10.0 | 0.58 | 1 | 05/11/16 16:10 | 05/23/16 12:35 | 7440-39-3 | |
| Beryllium | <0.26 | ug/L | 1.0 | 0.26 | 1 | 05/11/16 16:10 | 05/23/16 12:35 | 7440-41-7 | |
| Boron | 9460 | ug/L | 100 | 50.0 | 1 | 05/11/16 16:10 | 05/23/16 12:35 | 7440-42-8 | |
| Calcium | 77500 | ug/L | 100 | 8.1 | 1 | 05/11/16 16:10 | 05/23/16 12:35 | 7440-70-2 | |
| Cobalt | 0.73J | ug/L | 5.0 | 0.72 | 1 | 05/11/16 16:10 | 05/23/16 12:35 | 7440-48-4 | |
| Lead | 2.5J | ug/L | 5.0 | 2.5 | 1 | 05/11/16 16:10 | 05/23/16 12:35 | 7439-92-1 | |
| Lithium | 39.6 | ug/L | 10.0 | 4.9 | 1 | 05/11/16 16:10 | 05/23/16 12:35 | 7439-93-2 | |
| Molybdenum | 218 | ug/L | 20.0 | 0.52 | 1 | 05/11/16 16:10 | 05/23/16 12:35 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | <0.058 | ug/L | 1.0 | 0.058 | 1 | 05/11/16 16:10 | 05/24/16 19:07 | 7440-36-0 | |
| Arsenic | 24.2 | ug/L | 1.0 | 0.10 | 1 | 05/11/16 16:10 | 05/24/16 19:07 | 7440-38-2 | |
| Cadmium | <0.029 | ug/L | 0.50 | 0.029 | 1 | 05/11/16 16:10 | 05/24/16 19:07 | 7440-43-9 | |
| Chromium | 1.4 | ug/L | 1.0 | 0.34 | 1 | 05/11/16 16:10 | 05/24/16 19:07 | 7440-47-3 | |
| Selenium | <0.18 | ug/L | 1.0 | 0.18 | 1 | 05/11/16 16:10 | 05/24/16 19:07 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 05/11/16 16:10 | 05/24/16 19:07 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.039 | ug/L | 0.20 | 0.039 | 1 | 05/12/16 15:30 | 05/13/16 12:18 | 7439-97-6 | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 648 | mg/L | 5.0 | 5.0 | 1 | | 05/12/16 16:50 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.2 | Std. Units | 0.10 | 0.10 | 1 | | 05/11/16 10:15 | | H3,H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 26.0 | mg/L | 2.0 | 1.0 | 2 | | 06/01/16 12:51 | 16887-00-6 | |
| Fluoride | 0.27 | mg/L | 0.20 | 0.073 | 1 | | 05/31/16 12:20 | 16984-48-8 | |
| Sulfate | 266 | mg/L | 20.0 | 5.0 | 20 | | 06/01/16 13:05 | 14808-79-8 | |

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60218627

Sample: L-LMW-5S **Lab ID: 60218627005** Collected: 05/06/16 08:55 Received: 05/07/16 04:15 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 294 | ug/L | 10.0 | 0.58 | 1 | 05/11/16 16:10 | 05/23/16 12:38 | 7440-39-3 | |
| Beryllium | <0.26 | ug/L | 1.0 | 0.26 | 1 | 05/11/16 16:10 | 05/23/16 12:38 | 7440-41-7 | |
| Boron | 65.0J | ug/L | 100 | 50.0 | 1 | 05/11/16 16:10 | 05/23/16 12:38 | 7440-42-8 | |
| Calcium | 109000 | ug/L | 100 | 8.1 | 1 | 05/11/16 16:10 | 05/23/16 12:38 | 7440-70-2 | |
| Cobalt | <0.72 | ug/L | 5.0 | 0.72 | 1 | 05/11/16 16:10 | 05/23/16 12:38 | 7440-48-4 | |
| Lead | <2.5 | ug/L | 5.0 | 2.5 | 1 | 05/11/16 16:10 | 05/23/16 12:38 | 7439-92-1 | |
| Lithium | 14.4 | ug/L | 10.0 | 4.9 | 1 | 05/11/16 16:10 | 05/23/16 12:38 | 7439-93-2 | |
| Molybdenum | 1.7J | ug/L | 20.0 | 0.52 | 1 | 05/11/16 16:10 | 05/23/16 12:38 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | 0.21J | ug/L | 1.0 | 0.058 | 1 | 05/11/16 16:10 | 05/24/16 19:10 | 7440-36-0 | |
| Arsenic | 0.30J | ug/L | 1.0 | 0.10 | 1 | 05/11/16 16:10 | 05/24/16 19:10 | 7440-38-2 | |
| Cadmium | 0.029J | ug/L | 0.50 | 0.029 | 1 | 05/11/16 16:10 | 05/24/16 19:10 | 7440-43-9 | |
| Chromium | 0.79J | ug/L | 1.0 | 0.34 | 1 | 05/11/16 16:10 | 05/24/16 19:10 | 7440-47-3 | |
| Selenium | 0.30J | ug/L | 1.0 | 0.18 | 1 | 05/11/16 16:10 | 05/24/16 19:10 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 05/11/16 16:10 | 05/24/16 19:10 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.039 | ug/L | 0.20 | 0.039 | 1 | 05/12/16 15:30 | 05/13/16 12:20 | 7439-97-6 | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 383 | mg/L | 5.0 | 5.0 | 1 | | 05/13/16 16:27 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.3 | Std. Units | 0.10 | 0.10 | 1 | | 05/12/16 11:50 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 1.7 | mg/L | 1.0 | 0.50 | 1 | | 05/31/16 12:33 | 16887-00-6 | |
| Fluoride | 0.14J | mg/L | 0.20 | 0.073 | 1 | | 05/31/16 12:33 | 16984-48-8 | |
| Sulfate | 12.2 | mg/L | 1.0 | 0.25 | 1 | | 05/31/16 12:33 | 14808-79-8 | |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60218627

Sample: L-LMW-6S **Lab ID: 60218627006** Collected: 05/05/16 14:08 Received: 05/07/16 04:15 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|---|------|-------|----|----------------|----------------|------------|-------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 278 | ug/L | 10.0 | 0.58 | 1 | 05/11/16 16:10 | 05/23/16 12:40 | 7440-39-3 | |
| Beryllium | <0.26 | ug/L | 1.0 | 0.26 | 1 | 05/11/16 16:10 | 05/23/16 12:40 | 7440-41-7 | |
| Boron | 4780 | ug/L | 100 | 50.0 | 1 | 05/11/16 16:10 | 05/23/16 12:40 | 7440-42-8 | |
| Calcium | 145000 | ug/L | 100 | 8.1 | 1 | 05/11/16 16:10 | 05/23/16 12:40 | 7440-70-2 | |
| Cobalt | 3.6J | ug/L | 5.0 | 0.72 | 1 | 05/11/16 16:10 | 05/23/16 12:40 | 7440-48-4 | |
| Lead | <2.5 | ug/L | 5.0 | 2.5 | 1 | 05/11/16 16:10 | 05/23/16 12:40 | 7439-92-1 | |
| Lithium | 44.4 | ug/L | 10.0 | 4.9 | 1 | 05/11/16 16:10 | 05/23/16 12:40 | 7439-93-2 | |
| Molybdenum | 16.8J | ug/L | 20.0 | 0.52 | 1 | 05/11/16 16:10 | 05/23/16 12:40 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | 0.065J | ug/L | 1.0 | 0.058 | 1 | 05/11/16 16:10 | 05/24/16 19:13 | 7440-36-0 | |
| Arsenic | 3.2 | ug/L | 1.0 | 0.10 | 1 | 05/11/16 16:10 | 05/24/16 19:13 | 7440-38-2 | |
| Cadmium | 0.14J | ug/L | 0.50 | 0.029 | 1 | 05/11/16 16:10 | 05/24/16 19:13 | 7440-43-9 | |
| Chromium | 0.67J | ug/L | 1.0 | 0.34 | 1 | 05/11/16 16:10 | 05/24/16 19:13 | 7440-47-3 | |
| Selenium | 0.44J | ug/L | 1.0 | 0.18 | 1 | 05/11/16 16:10 | 05/24/16 19:13 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 05/11/16 16:10 | 05/24/16 19:13 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.039 | ug/L | 0.20 | 0.039 | 1 | 05/12/16 15:30 | 05/13/16 12:22 | 7439-97-6 | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 633 | mg/L | 5.0 | 5.0 | 1 | | 05/12/16 16:51 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.2 | Std. Units | 0.10 | 0.10 | 1 | | 05/11/16 10:15 | | H3,H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 11.5 | mg/L | 1.0 | 0.50 | 1 | | 05/31/16 13:12 | 16887-00-6 | |
| Fluoride | 0.12J | mg/L | 0.20 | 0.073 | 1 | | 05/31/16 13:12 | 16984-48-8 | |
| Sulfate | 124 | mg/L | 10.0 | 2.5 | 10 | | 06/01/16 13:48 | 14808-79-8 | |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60218627

Sample: L-LMW-7S **Lab ID: 60218627007** Collected: 05/05/16 11:10 Received: 05/07/16 04:15 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|---|------|-------|----|----------------|----------------|------------|-------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 395 | ug/L | 10.0 | 0.58 | 1 | 05/11/16 16:10 | 05/23/16 12:42 | 7440-39-3 | |
| Beryllium | <0.26 | ug/L | 1.0 | 0.26 | 1 | 05/11/16 16:10 | 05/23/16 12:42 | 7440-41-7 | |
| Boron | 4150 | ug/L | 100 | 50.0 | 1 | 05/11/16 16:10 | 05/23/16 12:42 | 7440-42-8 | |
| Calcium | 157000 | ug/L | 100 | 8.1 | 1 | 05/11/16 16:10 | 05/23/16 12:42 | 7440-70-2 | |
| Cobalt | 3.7J | ug/L | 5.0 | 0.72 | 1 | 05/11/16 16:10 | 05/23/16 12:42 | 7440-48-4 | |
| Lead | <2.5 | ug/L | 5.0 | 2.5 | 1 | 05/11/16 16:10 | 05/23/16 12:42 | 7439-92-1 | |
| Lithium | 48.6 | ug/L | 10.0 | 4.9 | 1 | 05/11/16 16:10 | 05/23/16 12:42 | 7439-93-2 | |
| Molybdenum | 27.2 | ug/L | 20.0 | 0.52 | 1 | 05/11/16 16:10 | 05/23/16 12:42 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | <0.058 | ug/L | 1.0 | 0.058 | 1 | 05/11/16 16:10 | 05/24/16 19:16 | 7440-36-0 | |
| Arsenic | 10.0 | ug/L | 1.0 | 0.10 | 1 | 05/11/16 16:10 | 05/24/16 19:16 | 7440-38-2 | |
| Cadmium | 0.063J | ug/L | 0.50 | 0.029 | 1 | 05/11/16 16:10 | 05/24/16 19:16 | 7440-43-9 | |
| Chromium | 0.50J | ug/L | 1.0 | 0.34 | 1 | 05/11/16 16:10 | 05/24/16 19:16 | 7440-47-3 | |
| Selenium | 0.27J | ug/L | 1.0 | 0.18 | 1 | 05/11/16 16:10 | 05/24/16 19:16 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 05/11/16 16:10 | 05/24/16 19:16 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.039 | ug/L | 0.20 | 0.039 | 1 | 05/12/16 15:30 | 05/13/16 12:24 | 7439-97-6 | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 732 | mg/L | 5.0 | 5.0 | 1 | | 05/12/16 16:51 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.1 | Std. Units | 0.10 | 0.10 | 1 | | 05/11/16 10:15 | | H3,H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 11.6 | mg/L | 1.0 | 0.50 | 1 | | 05/31/16 13:25 | 16887-00-6 | |
| Fluoride | 0.11J | mg/L | 0.20 | 0.073 | 1 | | 05/31/16 13:25 | 16984-48-8 | |
| Sulfate | 144 | mg/L | 10.0 | 2.5 | 10 | | 06/01/16 14:02 | 14808-79-8 | |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60218627

Sample: L-LMW-8S **Lab ID: 60218627008** Collected: 05/05/16 09:55 Received: 05/07/16 04:15 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 238 | ug/L | 10.0 | 0.58 | 1 | 05/11/16 16:10 | 05/23/16 12:44 | 7440-39-3 | |
| Beryllium | <0.26 | ug/L | 1.0 | 0.26 | 1 | 05/11/16 16:10 | 05/23/16 12:44 | 7440-41-7 | |
| Boron | 7160 | ug/L | 100 | 50.0 | 1 | 05/11/16 16:10 | 05/23/16 12:44 | 7440-42-8 | |
| Calcium | 147000 | ug/L | 100 | 8.1 | 1 | 05/11/16 16:10 | 05/23/16 12:44 | 7440-70-2 | |
| Cobalt | 2.8J | ug/L | 5.0 | 0.72 | 1 | 05/11/16 16:10 | 05/23/16 12:44 | 7440-48-4 | |
| Lead | <2.5 | ug/L | 5.0 | 2.5 | 1 | 05/11/16 16:10 | 05/23/16 12:44 | 7439-92-1 | |
| Lithium | 28.1 | ug/L | 10.0 | 4.9 | 1 | 05/11/16 16:10 | 05/23/16 12:44 | 7439-93-2 | |
| Molybdenum | 206 | ug/L | 20.0 | 0.52 | 1 | 05/11/16 16:10 | 05/23/16 12:44 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | <0.058 | ug/L | 1.0 | 0.058 | 1 | 05/11/16 16:10 | 05/24/16 19:19 | 7440-36-0 | |
| Arsenic | 14.7 | ug/L | 1.0 | 0.10 | 1 | 05/11/16 16:10 | 05/24/16 19:19 | 7440-38-2 | |
| Cadmium | 0.071J | ug/L | 0.50 | 0.029 | 1 | 05/11/16 16:10 | 05/24/16 19:19 | 7440-43-9 | |
| Chromium | 1.0 | ug/L | 1.0 | 0.34 | 1 | 05/11/16 16:10 | 05/24/16 19:19 | 7440-47-3 | |
| Selenium | <0.18 | ug/L | 1.0 | 0.18 | 1 | 05/11/16 16:10 | 05/24/16 19:19 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 05/11/16 16:10 | 05/24/16 19:19 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.039 | ug/L | 0.20 | 0.039 | 1 | 05/12/16 15:30 | 05/13/16 12:27 | 7439-97-6 | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 899 | mg/L | 5.0 | 5.0 | 1 | | 05/12/16 16:51 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.2 | Std. Units | 0.10 | 0.10 | 1 | | 05/10/16 12:00 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 19.5 | mg/L | 2.0 | 1.0 | 2 | | 06/01/16 14:16 | 16887-00-6 | |
| Fluoride | 0.27 | mg/L | 0.20 | 0.073 | 1 | | 05/31/16 13:38 | 16984-48-8 | |
| Sulfate | 522 | mg/L | 50.0 | 12.4 | 50 | | 06/01/16 14:31 | 14808-79-8 | |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60218627

Sample: L-BMW-1S **Lab ID: 60218627009** Collected: 05/03/16 15:33 Received: 05/07/16 04:15 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 366 | ug/L | 10.0 | 0.58 | 1 | 05/11/16 16:10 | 05/23/16 12:51 | 7440-39-3 | |
| Beryllium | <0.26 | ug/L | 1.0 | 0.26 | 1 | 05/11/16 16:10 | 05/23/16 12:51 | 7440-41-7 | |
| Boron | 112 | ug/L | 100 | 50.0 | 1 | 05/11/16 16:10 | 05/23/16 12:51 | 7440-42-8 | |
| Calcium | 196000 | ug/L | 100 | 8.1 | 1 | 05/11/16 16:10 | 05/23/16 12:51 | 7440-70-2 | |
| Cobalt | 0.84J | ug/L | 5.0 | 0.72 | 1 | 05/11/16 16:10 | 05/23/16 12:51 | 7440-48-4 | |
| Lead | <2.5 | ug/L | 5.0 | 2.5 | 1 | 05/11/16 16:10 | 05/23/16 12:51 | 7439-92-1 | |
| Lithium | 28.4 | ug/L | 10.0 | 4.9 | 1 | 05/11/16 16:10 | 05/23/16 12:51 | 7439-93-2 | |
| Molybdenum | 0.68J | ug/L | 20.0 | 0.52 | 1 | 05/11/16 16:10 | 05/23/16 12:51 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | <0.058 | ug/L | 1.0 | 0.058 | 1 | 05/11/16 16:10 | 05/24/16 19:35 | 7440-36-0 | |
| Arsenic | 36.1 | ug/L | 1.0 | 0.10 | 1 | 05/11/16 16:10 | 05/24/16 19:35 | 7440-38-2 | |
| Cadmium | <0.029 | ug/L | 0.50 | 0.029 | 1 | 05/11/16 16:10 | 05/24/16 19:35 | 7440-43-9 | |
| Chromium | 1.1 | ug/L | 1.0 | 0.34 | 1 | 05/11/16 16:10 | 05/24/16 19:35 | 7440-47-3 | |
| Selenium | <0.18 | ug/L | 1.0 | 0.18 | 1 | 05/11/16 16:10 | 05/24/16 19:35 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 05/11/16 16:10 | 05/24/16 19:35 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.039 | ug/L | 0.20 | 0.039 | 1 | 05/12/16 15:30 | 05/13/16 12:29 | 7439-97-6 | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 772 | mg/L | 5.0 | 5.0 | 1 | | 05/11/16 13:18 | | H1 |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.2 | Std. Units | 0.10 | 0.10 | 1 | | 05/09/16 13:00 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 6.5 | mg/L | 1.0 | 0.50 | 1 | | 05/31/16 13:51 | 16887-00-6 | |
| Fluoride | 0.12J | mg/L | 0.20 | 0.073 | 1 | | 05/31/16 13:51 | 16984-48-8 | |
| Sulfate | 65.3 | mg/L | 1.0 | 0.25 | 1 | | 05/31/16 13:51 | 14808-79-8 | E |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60218627

Sample: L-BMW-2S **Lab ID: 60218627010** Collected: 05/04/16 08:55 Received: 05/07/16 04:15 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 276 | ug/L | 10.0 | 0.58 | 1 | 05/11/16 16:10 | 05/23/16 12:54 | 7440-39-3 | |
| Beryllium | <0.26 | ug/L | 1.0 | 0.26 | 1 | 05/11/16 16:10 | 05/23/16 12:54 | 7440-41-7 | |
| Boron | 54.5J | ug/L | 100 | 50.0 | 1 | 05/11/16 16:10 | 05/23/16 12:54 | 7440-42-8 | |
| Calcium | 123000 | ug/L | 100 | 8.1 | 1 | 05/11/16 16:10 | 05/23/16 12:54 | 7440-70-2 | |
| Cobalt | 0.84J | ug/L | 5.0 | 0.72 | 1 | 05/11/16 16:10 | 05/23/16 12:54 | 7440-48-4 | |
| Lead | <2.5 | ug/L | 5.0 | 2.5 | 1 | 05/11/16 16:10 | 05/23/16 12:54 | 7439-92-1 | |
| Lithium | 25.7 | ug/L | 10.0 | 4.9 | 1 | 05/11/16 16:10 | 05/23/16 12:54 | 7439-93-2 | |
| Molybdenum | 2.7J | ug/L | 20.0 | 0.52 | 1 | 05/11/16 16:10 | 05/23/16 12:54 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | 0.32J | ug/L | 1.0 | 0.058 | 1 | 05/11/16 16:10 | 05/24/16 19:38 | 7440-36-0 | |
| Arsenic | 0.42J | ug/L | 1.0 | 0.10 | 1 | 05/11/16 16:10 | 05/24/16 19:38 | 7440-38-2 | |
| Cadmium | 0.047J | ug/L | 0.50 | 0.029 | 1 | 05/11/16 16:10 | 05/24/16 19:38 | 7440-43-9 | |
| Chromium | 0.50J | ug/L | 1.0 | 0.34 | 1 | 05/11/16 16:10 | 05/24/16 19:38 | 7440-47-3 | |
| Selenium | 0.56J | ug/L | 1.0 | 0.18 | 1 | 05/11/16 16:10 | 05/24/16 19:38 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 05/11/16 16:10 | 05/24/16 19:38 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.039 | ug/L | 0.20 | 0.039 | 1 | 05/12/16 15:30 | 05/13/16 12:31 | 7439-97-6 | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 446 | mg/L | 5.0 | 5.0 | 1 | | 05/11/16 15:52 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.3 | Std. Units | 0.10 | 0.10 | 1 | | 05/09/16 13:00 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 1.5 | mg/L | 1.0 | 0.50 | 1 | | 05/31/16 14:04 | 16887-00-6 | |
| Fluoride | 0.16J | mg/L | 0.20 | 0.073 | 1 | | 05/31/16 14:04 | 16984-48-8 | |
| Sulfate | 23.5 | mg/L | 2.0 | 0.50 | 2 | | 06/01/16 14:59 | 14808-79-8 | |

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60218627

Sample: L-LMW-DUP-1 **Lab ID: 60218627011** Collected: 05/05/16 08:00 Received: 05/07/16 04:15 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|--|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 240 | ug/L | 10.0 | 0.58 | 1 | 05/11/16 16:10 | 05/23/16 12:56 | 7440-39-3 | |
| Beryllium | <0.26 | ug/L | 1.0 | 0.26 | 1 | 05/11/16 16:10 | 05/23/16 12:56 | 7440-41-7 | |
| Boron | 7250 | ug/L | 100 | 50.0 | 1 | 05/11/16 16:10 | 05/23/16 12:56 | 7440-42-8 | |
| Calcium | 147000 | ug/L | 100 | 8.1 | 1 | 05/11/16 16:10 | 05/23/16 12:56 | 7440-70-2 | |
| Cobalt | 2.4J | ug/L | 5.0 | 0.72 | 1 | 05/11/16 16:10 | 05/23/16 12:56 | 7440-48-4 | |
| Lead | 3.1J | ug/L | 5.0 | 2.5 | 1 | 05/11/16 16:10 | 05/23/16 12:56 | 7439-92-1 | |
| Lithium | 27.6 | ug/L | 10.0 | 4.9 | 1 | 05/11/16 16:10 | 05/23/16 12:56 | 7439-93-2 | |
| Molybdenum | 215 | ug/L | 20.0 | 0.52 | 1 | 05/11/16 16:10 | 05/23/16 12:56 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | <0.058 | ug/L | 1.0 | 0.058 | 1 | 05/11/16 16:10 | 05/24/16 19:41 | 7440-36-0 | |
| Arsenic | 15.0 | ug/L | 1.0 | 0.10 | 1 | 05/11/16 16:10 | 05/24/16 19:41 | 7440-38-2 | |
| Cadmium | 0.060J | ug/L | 0.50 | 0.029 | 1 | 05/11/16 16:10 | 05/24/16 19:41 | 7440-43-9 | |
| Chromium | 0.74J | ug/L | 1.0 | 0.34 | 1 | 05/11/16 16:10 | 05/24/16 19:41 | 7440-47-3 | |
| Selenium | <0.18 | ug/L | 1.0 | 0.18 | 1 | 05/11/16 16:10 | 05/24/16 19:41 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 05/11/16 16:10 | 05/24/16 19:41 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.039 | ug/L | 0.20 | 0.039 | 1 | 05/12/16 15:30 | 05/13/16 12:33 | 7439-97-6 | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 900 | mg/L | 5.0 | 5.0 | 1 | | 05/12/16 16:52 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.2 | Std. Units | 0.10 | 0.10 | 1 | | 05/10/16 12:00 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 20.0 | mg/L | 1.0 | 0.50 | 1 | | 05/31/16 14:17 | 16887-00-6 | |
| Fluoride | 0.27 | mg/L | 0.20 | 0.073 | 1 | | 05/31/16 14:17 | 16984-48-8 | |
| Sulfate | 495 | mg/L | 50.0 | 12.4 | 50 | | 06/01/16 15:13 | 14808-79-8 | |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60218627

Sample: L-LMW-FB-1 **Lab ID: 60218627012** Collected: 05/05/16 11:15 Received: 05/07/16 04:15 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|---------|---|------|-------|----|----------------|----------------|------------|-------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | <0.58 | ug/L | 10.0 | 0.58 | 1 | 05/11/16 16:10 | 05/23/16 12:58 | 7440-39-3 | |
| Beryllium | <0.26 | ug/L | 1.0 | 0.26 | 1 | 05/11/16 16:10 | 05/23/16 12:58 | 7440-41-7 | |
| Boron | <50.0 | ug/L | 100 | 50.0 | 1 | 05/11/16 16:10 | 05/23/16 12:58 | 7440-42-8 | |
| Calcium | <8.1 | ug/L | 100 | 8.1 | 1 | 05/11/16 16:10 | 05/23/16 12:58 | 7440-70-2 | |
| Cobalt | <0.72 | ug/L | 5.0 | 0.72 | 1 | 05/11/16 16:10 | 05/23/16 12:58 | 7440-48-4 | |
| Lead | <2.5 | ug/L | 5.0 | 2.5 | 1 | 05/11/16 16:10 | 05/23/16 12:58 | 7439-92-1 | |
| Lithium | <4.9 | ug/L | 10.0 | 4.9 | 1 | 05/11/16 16:10 | 05/23/16 12:58 | 7439-93-2 | |
| Molybdenum | <0.52 | ug/L | 20.0 | 0.52 | 1 | 05/11/16 16:10 | 05/23/16 12:58 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | <0.058 | ug/L | 1.0 | 0.058 | 1 | 05/11/16 16:10 | 05/24/16 19:29 | 7440-36-0 | |
| Arsenic | <0.10 | ug/L | 1.0 | 0.10 | 1 | 05/11/16 16:10 | 05/24/16 19:29 | 7440-38-2 | |
| Cadmium | <0.029 | ug/L | 0.50 | 0.029 | 1 | 05/11/16 16:10 | 05/24/16 19:29 | 7440-43-9 | |
| Chromium | 0.82J | ug/L | 1.0 | 0.34 | 1 | 05/11/16 16:10 | 05/24/16 19:29 | 7440-47-3 | |
| Selenium | <0.18 | ug/L | 1.0 | 0.18 | 1 | 05/11/16 16:10 | 05/24/16 19:29 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 05/11/16 16:10 | 05/24/16 19:29 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.039 | ug/L | 0.20 | 0.039 | 1 | 05/12/16 15:30 | 05/13/16 12:36 | 7439-97-6 | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 5.0 | mg/L | 5.0 | 5.0 | 1 | | 05/12/16 16:52 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 5.9 | Std. Units | 0.10 | 0.10 | 1 | | 05/11/16 10:15 | | H3,H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | <0.50 | mg/L | 1.0 | 0.50 | 1 | | 05/31/16 14:30 | 16887-00-6 | |
| Fluoride | <0.073 | mg/L | 0.20 | 0.073 | 1 | | 05/31/16 14:30 | 16984-48-8 | |
| Sulfate | <0.25 | mg/L | 1.0 | 0.25 | 1 | | 05/31/16 14:30 | 14808-79-8 | |

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60218627

QC Batch: MERP/10605 Analysis Method: EPA 7470
 QC Batch Method: EPA 7470 Analysis Description: 7470 Mercury
 Associated Lab Samples: 60218627001, 60218627002, 60218627003, 60218627004, 60218627005, 60218627006, 60218627007, 60218627008, 60218627009, 60218627010, 60218627011, 60218627012

METHOD BLANK: 1757320 Matrix: Water
 Associated Lab Samples: 60218627001, 60218627002, 60218627003, 60218627004, 60218627005, 60218627006, 60218627007, 60218627008, 60218627009, 60218627010, 60218627011, 60218627012

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Mercury | ug/L | <0.039 | 0.20 | 0.039 | 05/13/16 11:35 | |

LABORATORY CONTROL SAMPLE: 1757321

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Mercury | ug/L | 5 | 5.7 | 113 | 80-120 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1757322 1757323

| Parameter | Units | 60218620001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
| Mercury | ug/L | <0.039 | 5 | 5 | 6.1 | 5.5 | 122 | 109 | 75-125 | 11 | 20 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1757324 1757325

| Parameter | Units | 60218627001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|-------|
| Mercury | ug/L | <0.039 | 5 | 5 | 6.6 | 5.0 | 132 | 100 | 75-125 | 28 | 20 | M1,R1 |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60218627

QC Batch: MPRP/35870 Analysis Method: EPA 200.7
 QC Batch Method: EPA 200.7 Analysis Description: 200.7 Metals, Total
 Associated Lab Samples: 60218627001, 60218627002, 60218627003, 60218627004, 60218627005, 60218627006, 60218627007, 60218627008, 60218627009, 60218627010, 60218627011, 60218627012

METHOD BLANK: 1756505 Matrix: Water
 Associated Lab Samples: 60218627001, 60218627002, 60218627003, 60218627004, 60218627005, 60218627006, 60218627007, 60218627008, 60218627009, 60218627010, 60218627011, 60218627012

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|------------|-------|--------------|-----------------|------|----------------|------------|
| Barium | ug/L | <0.58 | 10.0 | 0.58 | 05/23/16 11:57 | |
| Beryllium | ug/L | <0.26 | 1.0 | 0.26 | 05/23/16 11:57 | |
| Boron | ug/L | <50.0 | 100 | 50.0 | 05/23/16 11:57 | |
| Calcium | ug/L | <8.1 | 100 | 8.1 | 05/23/16 11:57 | |
| Cobalt | ug/L | <0.72 | 5.0 | 0.72 | 05/23/16 11:57 | |
| Lead | ug/L | <2.5 | 5.0 | 2.5 | 05/23/16 11:57 | |
| Lithium | ug/L | <4.9 | 10.0 | 4.9 | 05/23/16 11:57 | |
| Molybdenum | ug/L | <0.52 | 20.0 | 0.52 | 05/23/16 11:57 | |

LABORATORY CONTROL SAMPLE: 1756506

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------|-------|-------------|------------|-----------|--------------|------------|
| Barium | ug/L | 1000 | 998 | 100 | 85-115 | |
| Beryllium | ug/L | 1000 | 993 | 99 | 85-115 | |
| Boron | ug/L | 1000 | 966 | 97 | 85-115 | |
| Calcium | ug/L | 10000 | 9520 | 95 | 85-115 | |
| Cobalt | ug/L | 1000 | 1010 | 101 | 85-115 | |
| Lead | ug/L | 1000 | 1010 | 101 | 85-115 | |
| Lithium | ug/L | 1000 | 990 | 99 | 85-115 | |
| Molybdenum | ug/L | 1000 | 1040 | 104 | 85-115 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1756507 1756508

| Parameter | Units | MS | | MSD | | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual | |
|------------|-------|--------------------|-------------|-------------|-----------|----------|-----------|--------------|--------|---------|------|------------|
| | | 60218620001 Result | Spike Conc. | Spike Conc. | MS Result | | | | | | | MSD Result |
| Barium | ug/L | 252 | 1000 | 1000 | 1260 | 1250 | 101 | 100 | 70-130 | 1 | 20 | |
| Beryllium | ug/L | <0.26 | 1000 | 1000 | 1010 | 997 | 101 | 100 | 70-130 | 1 | 20 | |
| Boron | ug/L | 81.6J | 1000 | 1000 | 1100 | 1070 | 101 | 99 | 70-130 | 2 | 20 | |
| Calcium | ug/L | 150000 | 10000 | 10000 | 156000 | 154000 | 55 | 34 | 70-130 | 1 | 20 | M1 |
| Cobalt | ug/L | <0.72 | 1000 | 1000 | 1000 | 992 | 100 | 99 | 70-130 | 1 | 20 | |
| Lead | ug/L | <2.5 | 1000 | 1000 | 1000 | 990 | 100 | 99 | 70-130 | 1 | 20 | |
| Lithium | ug/L | 39.1 | 1000 | 1000 | 1080 | 1070 | 104 | 103 | 70-130 | 1 | 20 | |
| Molybdenum | ug/L | 1.1J | 1000 | 1000 | 1070 | 1060 | 107 | 106 | 70-130 | 1 | 20 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60218627

| MATRIX SPIKE SAMPLE: | | 1756509 | | | | | |
|----------------------|-------|-----------------------|----------------|--------------|-------------|-----------------|------------|
| Parameter | Units | 60218627001 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
| Barium | ug/L | 142 | 1000 | 1180 | 104 | 70-130 | |
| Beryllium | ug/L | <0.26 | 1000 | 1000 | 100 | 70-130 | |
| Boron | ug/L | 2620 | 1000 | 3700 | 108 | 70-130 | |
| Calcium | ug/L | 130000 | 10000 | 142000 | 118 | 70-130 | |
| Cobalt | ug/L | 0.80J | 1000 | 1010 | 101 | 70-130 | |
| Lead | ug/L | 3.2J | 1000 | 1010 | 100 | 70-130 | |
| Lithium | ug/L | 20.9 | 1000 | 1100 | 108 | 70-130 | |
| Molybdenum | ug/L | 4.0J | 1000 | 1080 | 108 | 70-130 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60218627

QC Batch: MPRP/35871 Analysis Method: EPA 200.8
 QC Batch Method: EPA 200.8 Analysis Description: 200.8 MET
 Associated Lab Samples: 60218627001, 60218627002, 60218627003, 60218627004, 60218627005, 60218627006, 60218627007, 60218627008, 60218627009, 60218627010, 60218627011, 60218627012

METHOD BLANK: 1756511 Matrix: Water
 Associated Lab Samples: 60218627001, 60218627002, 60218627003, 60218627004, 60218627005, 60218627006, 60218627007, 60218627008, 60218627009, 60218627010, 60218627011, 60218627012

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Antimony | ug/L | <0.058 | 1.0 | 0.058 | 05/24/16 18:15 | |
| Arsenic | ug/L | <0.10 | 1.0 | 0.10 | 05/24/16 18:15 | |
| Cadmium | ug/L | <0.029 | 0.50 | 0.029 | 05/24/16 18:15 | |
| Chromium | ug/L | <0.34 | 1.0 | 0.34 | 05/24/16 18:15 | |
| Selenium | ug/L | <0.18 | 1.0 | 0.18 | 05/24/16 18:15 | |
| Thallium | ug/L | <0.50 | 1.0 | 0.50 | 05/24/16 18:15 | |

LABORATORY CONTROL SAMPLE: 1756512

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Antimony | ug/L | 40 | 41.8 | 104 | 85-115 | |
| Arsenic | ug/L | 40 | 41.8 | 105 | 85-115 | |
| Cadmium | ug/L | 40 | 42.1 | 105 | 85-115 | |
| Chromium | ug/L | 40 | 42.4 | 106 | 85-115 | |
| Selenium | ug/L | 40 | 42.6 | 107 | 85-115 | |
| Thallium | ug/L | 40 | 38.7 | 97 | 85-115 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1756513 1756514

| Parameter | Units | 60218620001 Result | MS | | MSD | | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|--------------------|-------------|-----------|-----------------|------------|----------|-----------|--------------|-----|---------|------|
| | | | Spike Conc. | MS Result | MSD Spike Conc. | MSD Result | | | | | | |
| Antimony | ug/L | <0.058 | 40 | 40 | 41.2 | 40.8 | 103 | 102 | 70-130 | 1 | 20 | |
| Arsenic | ug/L | 1.3 | 40 | 40 | 42.5 | 43.0 | 103 | 104 | 70-130 | 1 | 20 | |
| Cadmium | ug/L | 0.066J | 40 | 40 | 40.5 | 40.2 | 101 | 100 | 70-130 | 1 | 20 | |
| Chromium | ug/L | 0.45J | 40 | 40 | 41.9 | 42.5 | 104 | 105 | 70-130 | 1 | 20 | |
| Selenium | ug/L | 0.89J | 40 | 40 | 40.6 | 40.8 | 99 | 100 | 70-130 | 0 | 20 | |
| Thallium | ug/L | <0.50 | 40 | 40 | 41.5 | 41.8 | 104 | 104 | 70-130 | 1 | 20 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1756515 1756516

| Parameter | Units | 60218627001 Result | MS | | MSD | | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|--------------------|-------------|-----------|-----------------|------------|----------|-----------|--------------|-----|---------|------|
| | | | Spike Conc. | MS Result | MSD Spike Conc. | MSD Result | | | | | | |
| Antimony | ug/L | <0.058 | 40 | 40 | 41.5 | 41.2 | 104 | 103 | 70-130 | 1 | 20 | |
| Arsenic | ug/L | 9.1 | 40 | 40 | 51.6 | 51.3 | 106 | 106 | 70-130 | 1 | 20 | |
| Cadmium | ug/L | 0.031J | 40 | 40 | 40.0 | 39.9 | 100 | 100 | 70-130 | 0 | 20 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60218627

| Parameter | Units | 60218627001 | | 1756515 | | 1756516 | | % Rec | % Rec | % Rec | Limits | RPD | Max RPD | Qual |
|-----------|-------|----------------|-----------------|-----------|------------|-----------|------------|-------|--------|-------|--------|-----|---------|------|
| | | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS Result | MSD Result | | | | | | | |
| Chromium | ug/L | 0.53J | 40 | 40 | 42.3 | 42.6 | 105 | 105 | 70-130 | 1 | 20 | | | |
| Selenium | ug/L | <0.18 | 40 | 40 | 41.2 | 41.4 | 103 | 103 | 70-130 | 0 | 20 | | | |
| Thallium | ug/L | <0.50 | 40 | 40 | 41.1 | 41.1 | 103 | 103 | 70-130 | 0 | 20 | | | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60218627

| | | | |
|-------------------------|-------------|-----------------------|------------------------------|
| QC Batch: | WET/61682 | Analysis Method: | SM 2540C |
| QC Batch Method: | SM 2540C | Analysis Description: | 2540C Total Dissolved Solids |
| Associated Lab Samples: | 60218627009 | | |

METHOD BLANK: 1755338 Matrix: Water

Associated Lab Samples: 60218627009

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|------------------------|-------|--------------|-----------------|-----|----------------|------------|
| Total Dissolved Solids | mg/L | <5.0 | 5.0 | 5.0 | 05/11/16 13:16 | |

LABORATORY CONTROL SAMPLE: 1755339

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

SAMPLE DUPLICATE: 1755340

| Parameter | Units | 60218627009 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L | 772 | 759 | 2 | 10 | H1 |

SAMPLE DUPLICATE: 1755341

| Parameter | Units | 60218510003 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L | 9540 | 8340 | 13 | 10 | D6 |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60218627

QC Batch: WET/61711

Analysis Method: SM 2540C

QC Batch Method: SM 2540C

Analysis Description: 2540C Total Dissolved Solids

Associated Lab Samples: 60218627001, 60218627003, 60218627010

METHOD BLANK: 1756023

Matrix: Water

Associated Lab Samples: 60218627001, 60218627003, 60218627010

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|------------------------|-------|--------------|-----------------|-----|----------------|------------|
| Total Dissolved Solids | mg/L | <5.0 | 5.0 | 5.0 | 05/11/16 15:48 | |

LABORATORY CONTROL SAMPLE: 1756024

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

SAMPLE DUPLICATE: 1756025

| Parameter | Units | 60218569012 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L | 493 | 490 | 1 | 10 | |

SAMPLE DUPLICATE: 1756026

| Parameter | Units | 60218627001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L | 525 | 547 | 4 | 10 | |

SAMPLE DUPLICATE: 1756027

| Parameter | Units | 60218640009 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L | 455 | 471 | 3 | 10 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60218627

QC Batch: WET/61732

Analysis Method: SM 2540C

QC Batch Method: SM 2540C

Analysis Description: 2540C Total Dissolved Solids

Associated Lab Samples: 60218627002, 60218627004, 60218627006, 60218627007, 60218627008, 60218627011, 60218627012

METHOD BLANK: 1756931

Matrix: Water

Associated Lab Samples: 60218627002, 60218627004, 60218627006, 60218627007, 60218627008, 60218627011, 60218627012

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|------------------------|-------|--------------|-----------------|-----|----------------|------------|
| Total Dissolved Solids | mg/L | <5.0 | 5.0 | 5.0 | 05/12/16 16:46 | |

LABORATORY CONTROL SAMPLE: 1756932

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|-------------|------------|-----------|--------------|------------|
| Total Dissolved Solids | mg/L | 1000 | 915 | 91 | 80-120 | |

SAMPLE DUPLICATE: 1756933

| Parameter | Units | 60218620003 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L | 718 | 716 | 0 | 10 | |

SAMPLE DUPLICATE: 1756934

| Parameter | Units | 60218627011 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L | 900 | 909 | 1 | 10 | |

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60218627

QC Batch: WET/61758

Analysis Method: SM 2540C

QC Batch Method: SM 2540C

Analysis Description: 2540C Total Dissolved Solids

Associated Lab Samples: 60218627005

METHOD BLANK: 1757924

Matrix: Water

Associated Lab Samples: 60218627005

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|------------------------|-------|--------------|-----------------|-----|----------------|------------|
| Total Dissolved Solids | mg/L | <5.0 | 5.0 | 5.0 | 05/13/16 16:09 | |

LABORATORY CONTROL SAMPLE: 1757925

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|-------------|------------|-----------|--------------|------------|
| Total Dissolved Solids | mg/L | 1000 | 1160 | 116 | 80-120 | |

SAMPLE DUPLICATE: 1757926

| Parameter | Units | 60218035001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L | 3480 | 3250 | 7 | 10 | H1 |

SAMPLE DUPLICATE: 1757927

| Parameter | Units | 60218651005 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L | 2230 | 2200 | 2 | 10 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60218627

QC Batch: WET/61665 Analysis Method: SM 4500-H+B

QC Batch Method: SM 4500-H+B Analysis Description: 4500H+B pH

Associated Lab Samples: 60218627009, 60218627010

SAMPLE DUPLICATE: 1754753

| Parameter | Units | 60218420011 Result | Dup Result | RPD | Max RPD | Qualifiers |
|--------------------|------------|-----------------------|---------------|-----|------------|------------|
| pH at 25 Degrees C | Std. Units | 6.3 | 5.9 | 6 | 5 | H6 |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60218627

QC Batch: WET/61687 Analysis Method: SM 4500-H+B

QC Batch Method: SM 4500-H+B Analysis Description: 4500H+B pH

Associated Lab Samples: 60218627001, 60218627003, 60218627008, 60218627011

SAMPLE DUPLICATE: 1755369

| Parameter | Units | 60218627001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|--------------------|------------|-----------------------|---------------|-----|------------|------------|
| pH at 25 Degrees C | Std. Units | 7.3 | 7.3 | 0 | 5 | H6 |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60218627

QC Batch: WET/61703 Analysis Method: SM 4500-H+B

QC Batch Method: SM 4500-H+B Analysis Description: 4500H+B pH

Associated Lab Samples: 60218627002, 60218627004, 60218627006, 60218627007, 60218627012

SAMPLE DUPLICATE: 1755823

| Parameter | Units | 60218620001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|--------------------|------------|-----------------------|---------------|-----|------------|------------|
| pH at 25 Degrees C | Std. Units | 7.2 | 7.3 | 1 | 5 | H3,H6 |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60218627

QC Batch: WET/61710 Analysis Method: SM 4500-H+B

QC Batch Method: SM 4500-H+B Analysis Description: 4500H+B pH

Associated Lab Samples: 60218627005

SAMPLE DUPLICATE: 1756022

| Parameter | Units | 60218548001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|--------------------|------------|-----------------------|---------------|-----|------------|------------|
| pH at 25 Degrees C | Std. Units | 6.1 | 6.0 | 0 | 5 | H6 |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60218627

| | | | |
|-------------------------|--|-----------------------|-----------------|
| QC Batch: | WETA/39747 | Analysis Method: | EPA 300.0 |
| QC Batch Method: | EPA 300.0 | Analysis Description: | 300.0 IC Anions |
| Associated Lab Samples: | 60218627001, 60218627002, 60218627003, 60218627004, 60218627005, 60218627006, 60218627007, 60218627008, 60218627009, 60218627010, 60218627011, 60218627012 | | |

| | | | |
|-------------------------|--|---------|-------|
| METHOD BLANK: | 1767772 | Matrix: | Water |
| Associated Lab Samples: | 60218627001, 60218627002, 60218627003, 60218627004, 60218627005, 60218627006, 60218627007, 60218627008, 60218627009, 60218627010, 60218627011, 60218627012 | | |

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Chloride | mg/L | <0.50 | 1.0 | 0.50 | 05/31/16 08:52 | |
| Fluoride | mg/L | <0.073 | 0.20 | 0.073 | 05/31/16 08:52 | |
| Sulfate | mg/L | <0.25 | 1.0 | 0.25 | 05/31/16 08:52 | |

LABORATORY CONTROL SAMPLE: 1767773

| 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 | 104 | 90-110 | |
| Sulfate | mg/L | 5 | 5.3 | 105 | 90-110 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1767774 1767775

| Parameter | Units | 60218620001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
| Chloride | mg/L | 2.8 | 5 | 5 | 7.5 | 7.4 | 95 | 93 | 80-120 | 1 | 15 | |
| Fluoride | mg/L | 0.18J | 2.5 | 2.5 | 2.7 | 2.7 | 101 | 100 | 80-120 | 1 | 15 | |

MATRIX SPIKE SAMPLE: 1767776

| Parameter | Units | 60218627001 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|--------------------|-------------|-----------|----------|--------------|------------|
| Chloride | mg/L | 4.3 | 5 | 8.9 | 91 | 80-120 | |
| Fluoride | mg/L | 0.15J | 2.5 | 2.6 | 97 | 80-120 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60218627

QC Batch: WETA/39786

Analysis Method: EPA 300.0

QC Batch Method: EPA 300.0

Analysis Description: 300.0 IC Anions

Associated Lab Samples: 60218627001, 60218627002, 60218627003, 60218627004, 60218627006, 60218627007, 60218627008, 60218627009, 60218627010, 60218627011

METHOD BLANK: 1768478

Matrix: Water

Associated Lab Samples: 60218627001, 60218627002, 60218627003, 60218627004, 60218627006, 60218627007, 60218627008, 60218627009, 60218627010, 60218627011

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|------|----------------|------------|
| Chloride | mg/L | <0.50 | 1.0 | 0.50 | 06/01/16 08:56 | |
| Sulfate | mg/L | <0.25 | 1.0 | 0.25 | 06/01/16 08:56 | |

LABORATORY CONTROL SAMPLE: 1768479

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Chloride | mg/L | 5 | 4.9 | 97 | 90-110 | |
| Sulfate | mg/L | 5 | 5.1 | 101 | 90-110 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1768480 1768481

| Parameter | Units | 60218620001 | | MSD | | MS | | MSD | | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|-------------|----------------|-------------|-----------|------------|-------|-------|--------|--------------|-----|---------|------|
| | | Result | MS Spike Conc. | Spike Conc. | MS Result | MSD Result | % Rec | % Rec | | | | | |
| Chloride | mg/L | 2.8 | | | 52.2 | 52.2 | | | | | 0 | 15 | |
| Sulfate | mg/L | 89.5 | 50 | 50 | 141 | 140 | 103 | 102 | 80-120 | 0 | 15 | | |

MATRIX SPIKE SAMPLE: 1768482

| Parameter | Units | 60218627001 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|--------------------|-------------|-----------|----------|--------------|------------|
| Chloride | mg/L | | 4.3 | 29.0 | | | |
| Sulfate | mg/L | | 71.6 | 25 | 99.6 | 112 | 80-120 |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60218627

Sample: L-LMW-1S **Lab ID: 60218627001** Collected: 05/04/16 15:25 Received: 05/07/16 04:15 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|---|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.131 ± 0.363 (0.705) C:NA T:93% | pCi/L | 05/31/16 12:53 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 0.556 ± 0.377 (0.722) C:83% T:79% | pCi/L | 05/25/16 19:17 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60218627

Sample: L-LMW-2S **Lab ID: 60218627002** Collected: 05/05/16 11:30 Received: 05/07/16 04:15 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|---|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.000 ± 0.286 (0.583) C:NA T:86% | pCi/L | 05/31/16 13:06 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 0.848 ± 0.395 (0.676) C:81% T:80% | pCi/L | 05/25/16 23:20 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60218627

Sample: L-LMW-3S **Lab ID: 60218627003** Collected: 05/04/16 15:35 Received: 05/07/16 04:15 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|---|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.253 ± 0.394 (0.682) C:NA T:87% | pCi/L | 05/31/16 13:52 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 0.782 ± 0.448 (0.822) C:81% T:75% | pCi/L | 05/31/16 12:28 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60218627

Sample: L-LMW-4S **Lab ID: 60218627004** Collected: 05/05/16 12:35 Received: 05/07/16 04:15 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|---|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.0610 ± 0.316 (0.656) C:NA T:89% | pCi/L | 05/31/16 13:40 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 1.50 ± 0.568 (0.865) C:79% T:72% | pCi/L | 05/31/16 12:28 | 15262-20-1 | 1e |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60218627

Sample: L-LMW-5S **Lab ID: 60218627005** Collected: 05/06/16 08:55 Received: 05/07/16 04:15 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|--|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.418 ± 0.391 (0.554) C:NA T:89% | pCi/L | 05/31/16 19:04 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 0.988 ± 0.398 (0.644) C:79% T:88% | pCi/L | 05/25/16 23:20 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60218627

Sample: L-LMW-6S **Lab ID: 60218627006** Collected: 05/05/16 14:08 Received: 05/07/16 04:15 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|--|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.771 ± 0.540 (0.713) C:NA T:85% | pCi/L | 05/31/16 19:04 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 0.899 ± 0.376 (0.607) C:80% T:83% | pCi/L | 05/25/16 23:21 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60218627

Sample: L-LMW-7S **Lab ID: 60218627007** Collected: 05/05/16 11:10 Received: 05/07/16 04:15 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|---|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.409 ± 0.383 (0.543) C:NA T:93% | pCi/L | 05/31/16 19:04 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 0.914 ± 0.402 (0.664) C:79% T:78% | pCi/L | 05/25/16 23:21 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60218627

Sample: L-LMW-8S **Lab ID: 60218627008** Collected: 05/05/16 09:55 Received: 05/07/16 04:15 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|--|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.186 ± 0.323 (0.577) C:NA T:87% | pCi/L | 05/31/16 19:04 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 0.795 ± 0.467 (0.875) C:78% T:80% | pCi/L | 05/31/16 12:28 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60218627

Sample: L-BMW-1S **Lab ID: 60218627009** Collected: 05/03/16 15:33 Received: 05/07/16 04:15 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|--|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.445 ± 0.381 (0.517) C:NA T:91% | pCi/L | 05/31/16 19:22 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 1.28 ± 0.543 (0.891) C:77% T:75% | pCi/L | 05/31/16 12:29 | 15262-20-1 | 1e |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60218627

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|---|-----------|---|-------|----------------|------------|------|
| Sample: L-BMW-2S Lab ID: 60218627010 Collected: 05/04/16 08:55 Received: 05/07/16 04:15 Matrix: Water PWS: Site ID: Sample Type: | | | | | | |
| Radium-226 | EPA 903.1 | 0.310 ± 0.285 (0.168) C:NA T:86% | pCi/L | 05/31/16 19:23 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 0.879 ± 0.382 (0.635) C:82% T:83% | pCi/L | 05/25/16 23:17 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60218627

Sample: L-LMW-DUP-1 **Lab ID: 60218627011** Collected: 05/05/16 08:00 Received: 05/07/16 04:15 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|--|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.119 ± 0.331 (0.642) C:NA T:90% | pCi/L | 05/31/16 19:35 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 1.54 ± 0.568 (0.832) C:78% T:71% | pCi/L | 05/31/16 12:29 | 15262-20-1 | 1e |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60218627

Sample: L-LMW-FB-1 **Lab ID: 60218627012** Collected: 05/05/16 11:15 Received: 05/07/16 04:15 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|--|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.116 ± 0.394 (0.760) C:NA T:92% | pCi/L | 05/31/16 19:21 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 0.921 ± 0.375 (0.598) C:83% T:84% | pCi/L | 05/25/16 23:17 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60218627

Sample: L-LMW-1S MS **Lab ID: 60218627013** Collected: 05/04/16 15:25 Received: 05/07/16 04:15 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|--|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 98.9 %REC ± NA (NA) C:NA T:NA | pCi/L | 05/31/16 12:53 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 77.4 %REC +/- NA (NA) C:NA T:NA | pCi/L | 05/25/16 19:17 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60218627

Sample: L-LMW-1S MSD **Lab ID: 60218627014** Collected: 05/04/16 15:25 Received: 05/07/16 04:15 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|---|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 131.01 %REC 27.95 RPD ± NA (NA) C:NA T:NA | pCi/L | 05/31/16 12:29 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 78.4 %REC 1.27 RPD +/- NA (NA) C:NA T:NA | pCi/L | 05/25/16 19:17 | 15262-20-1 | |

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60218627

| | | | |
|-------------------------|---|-----------------------|------------------|
| QC Batch: | RADC/29468 | Analysis Method: | EPA 904.0 |
| QC Batch Method: | EPA 904.0 | Analysis Description: | 904.0 Radium 228 |
| Associated Lab Samples: | 60218627002, 60218627003, 60218627004, 60218627005, 60218627006, 60218627007, 60218627008, 60218627009, 60218627010, 60218627011, 60218627012 | | |

METHOD BLANK: 1076506 Matrix: Water

Associated Lab Samples:

| Parameter | Act ± Unc (MDC) Carr Trac | Units | Analyzed | Qualifiers |
|------------|----------------------------------|-------|----------------|------------|
| Radium-228 | 1.13 ± 0.496 (0.832) C:81% T:78% | pCi/L | 05/31/16 12:28 | 1e |
| Radium-228 | 1.22 ± 0.433 (0.648) C:81% T:84% | pCi/L | 05/25/16 23:19 | |

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60218627

QC Batch: RADC/29463

Analysis Method: EPA 903.1

QC Batch Method: EPA 903.1

Analysis Description: 903.1 Radium-226

Associated Lab Samples: 60218627001, 60218627013, 60218627014

METHOD BLANK: 1076501

Matrix: Water

Associated Lab Samples:

| Parameter | Act ± Unc (MDC) Carr Trac | Units | Analyzed | Qualifiers |
|------------|----------------------------------|-------|----------------|------------|
| Radium-226 | 0.189 ± 0.370 (0.677) C:NA T:91% | pCi/L | 05/31/16 11:25 | |

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60218627

| | | | |
|-------------------------|---|-----------------------|------------------|
| QC Batch: | RADC/29492 | Analysis Method: | EPA 903.1 |
| QC Batch Method: | EPA 903.1 | Analysis Description: | 903.1 Radium-226 |
| Associated Lab Samples: | 60218627002, 60218627003, 60218627004, 60218627005, 60218627006, 60218627007, 60218627008, 60218627009, 60218627010, 60218627011, 60218627012 | | |

METHOD BLANK: 1077500 Matrix: Water

Associated Lab Samples:

| Parameter | Act ± Unc (MDC) Carr Trac | Units | Analyzed | Qualifiers |
|------------|-----------------------------------|-------|----------------|------------|
| Radium-226 | -0.058 ± 0.265 (0.540) C:NA T:92% | pCi/L | 05/31/16 12:29 | |

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60218627

QC Batch: RADC/29467 Analysis Method: EPA 904.0

QC Batch Method: EPA 904.0 Analysis Description: 904.0 Radium 228

Associated Lab Samples: 60218627001, 60218627013, 60218627014

METHOD BLANK: 1076505 Matrix: Water

Associated Lab Samples:

| Parameter | Act ± Unc (MDC) Carr Trac | Units | Analyzed | Qualifiers |
|------------|-----------------------------------|-------|----------------|------------|
| Radium-228 | 0.148 ± 0.306 (0.675) C:85% T:85% | pCi/L | 05/25/16 19:18 | |

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 LABADIE ENERGY CTR-FLY

Pace Project No.: 60218627

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.

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.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

Act - Activity

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

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

LABORATORIES

PASI-K Pace Analytical Services - Kansas City

PASI-PA Pace Analytical Services - Greensburg

ANALYTE QUALIFIERS

1e The MB failed high on the 1st and 2nd counts. All samples above 1.0 were re-ingrowthed, re-counted, and verified.

D6 The precision between the sample and sample duplicate exceeded laboratory control limits.

E Analyte concentration exceeded the calibration range. The reported result is estimated.

H1 Analysis conducted outside the EPA method holding time.

H3 Sample was received or analysis requested beyond the recognized method holding time.

H6 Analysis initiated outside of the 15 minute EPA required holding time.

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

R1 RPD value was outside control limits.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60218627

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|-------------|-------------|-----------------|------------|-------------------|------------------|
| 60218627001 | L-LMW-1S | EPA 200.7 | MPRP/35870 | EPA 200.7 | ICP/26196 |
| 60218627002 | L-LMW-2S | EPA 200.7 | MPRP/35870 | EPA 200.7 | ICP/26196 |
| 60218627003 | L-LMW-3S | EPA 200.7 | MPRP/35870 | EPA 200.7 | ICP/26196 |
| 60218627004 | L-LMW-4S | EPA 200.7 | MPRP/35870 | EPA 200.7 | ICP/26196 |
| 60218627005 | L-LMW-5S | EPA 200.7 | MPRP/35870 | EPA 200.7 | ICP/26196 |
| 60218627006 | L-LMW-6S | EPA 200.7 | MPRP/35870 | EPA 200.7 | ICP/26196 |
| 60218627007 | L-LMW-7S | EPA 200.7 | MPRP/35870 | EPA 200.7 | ICP/26196 |
| 60218627008 | L-LMW-8S | EPA 200.7 | MPRP/35870 | EPA 200.7 | ICP/26196 |
| 60218627009 | L-BMW-1S | EPA 200.7 | MPRP/35870 | EPA 200.7 | ICP/26196 |
| 60218627010 | L-BMW-2S | EPA 200.7 | MPRP/35870 | EPA 200.7 | ICP/26196 |
| 60218627011 | L-LMW-DUP-1 | EPA 200.7 | MPRP/35870 | EPA 200.7 | ICP/26196 |
| 60218627012 | L-LMW-FB-1 | EPA 200.7 | MPRP/35870 | EPA 200.7 | ICP/26196 |
| 60218627001 | L-LMW-1S | EPA 200.8 | MPRP/35871 | EPA 200.8 | ICPM/4261 |
| 60218627002 | L-LMW-2S | EPA 200.8 | MPRP/35871 | EPA 200.8 | ICPM/4261 |
| 60218627003 | L-LMW-3S | EPA 200.8 | MPRP/35871 | EPA 200.8 | ICPM/4261 |
| 60218627004 | L-LMW-4S | EPA 200.8 | MPRP/35871 | EPA 200.8 | ICPM/4261 |
| 60218627005 | L-LMW-5S | EPA 200.8 | MPRP/35871 | EPA 200.8 | ICPM/4261 |
| 60218627006 | L-LMW-6S | EPA 200.8 | MPRP/35871 | EPA 200.8 | ICPM/4261 |
| 60218627007 | L-LMW-7S | EPA 200.8 | MPRP/35871 | EPA 200.8 | ICPM/4261 |
| 60218627008 | L-LMW-8S | EPA 200.8 | MPRP/35871 | EPA 200.8 | ICPM/4261 |
| 60218627009 | L-BMW-1S | EPA 200.8 | MPRP/35871 | EPA 200.8 | ICPM/4261 |
| 60218627010 | L-BMW-2S | EPA 200.8 | MPRP/35871 | EPA 200.8 | ICPM/4261 |
| 60218627011 | L-LMW-DUP-1 | EPA 200.8 | MPRP/35871 | EPA 200.8 | ICPM/4261 |
| 60218627012 | L-LMW-FB-1 | EPA 200.8 | MPRP/35871 | EPA 200.8 | ICPM/4261 |
| 60218627001 | L-LMW-1S | EPA 7470 | MERP/10605 | EPA 7470 | MERC/10552 |
| 60218627002 | L-LMW-2S | EPA 7470 | MERP/10605 | EPA 7470 | MERC/10552 |
| 60218627003 | L-LMW-3S | EPA 7470 | MERP/10605 | EPA 7470 | MERC/10552 |
| 60218627004 | L-LMW-4S | EPA 7470 | MERP/10605 | EPA 7470 | MERC/10552 |
| 60218627005 | L-LMW-5S | EPA 7470 | MERP/10605 | EPA 7470 | MERC/10552 |
| 60218627006 | L-LMW-6S | EPA 7470 | MERP/10605 | EPA 7470 | MERC/10552 |
| 60218627007 | L-LMW-7S | EPA 7470 | MERP/10605 | EPA 7470 | MERC/10552 |
| 60218627008 | L-LMW-8S | EPA 7470 | MERP/10605 | EPA 7470 | MERC/10552 |
| 60218627009 | L-BMW-1S | EPA 7470 | MERP/10605 | EPA 7470 | MERC/10552 |
| 60218627010 | L-BMW-2S | EPA 7470 | MERP/10605 | EPA 7470 | MERC/10552 |
| 60218627011 | L-LMW-DUP-1 | EPA 7470 | MERP/10605 | EPA 7470 | MERC/10552 |
| 60218627012 | L-LMW-FB-1 | EPA 7470 | MERP/10605 | EPA 7470 | MERC/10552 |
| 60218627001 | L-LMW-1S | EPA 903.1 | RADC/29463 | | |
| 60218627002 | L-LMW-2S | EPA 903.1 | RADC/29492 | | |
| 60218627003 | L-LMW-3S | EPA 903.1 | RADC/29492 | | |
| 60218627004 | L-LMW-4S | EPA 903.1 | RADC/29492 | | |
| 60218627005 | L-LMW-5S | EPA 903.1 | RADC/29492 | | |
| 60218627006 | L-LMW-6S | EPA 903.1 | RADC/29492 | | |
| 60218627007 | L-LMW-7S | EPA 903.1 | RADC/29492 | | |
| 60218627008 | L-LMW-8S | EPA 903.1 | RADC/29492 | | |
| 60218627009 | L-BMW-1S | EPA 903.1 | RADC/29492 | | |
| 60218627010 | L-BMW-2S | EPA 903.1 | RADC/29492 | | |
| 60218627011 | L-LMW-DUP-1 | EPA 903.1 | RADC/29492 | | |

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60218627

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|-------------|--------------|-----------------|------------|-------------------|------------------|
| 60218627012 | L-LMW-FB-1 | EPA 903.1 | RADC/29492 | | |
| 60218627013 | L-LMW-1S MS | EPA 903.1 | RADC/29463 | | |
| 60218627014 | L-LMW-1S MSD | EPA 903.1 | RADC/29463 | | |
| 60218627001 | L-LMW-1S | EPA 904.0 | RADC/29467 | | |
| 60218627002 | L-LMW-2S | EPA 904.0 | RADC/29468 | | |
| 60218627003 | L-LMW-3S | EPA 904.0 | RADC/29468 | | |
| 60218627004 | L-LMW-4S | EPA 904.0 | RADC/29468 | | |
| 60218627005 | L-LMW-5S | EPA 904.0 | RADC/29468 | | |
| 60218627006 | L-LMW-6S | EPA 904.0 | RADC/29468 | | |
| 60218627007 | L-LMW-7S | EPA 904.0 | RADC/29468 | | |
| 60218627008 | L-LMW-8S | EPA 904.0 | RADC/29468 | | |
| 60218627009 | L-BMW-1S | EPA 904.0 | RADC/29468 | | |
| 60218627010 | L-BMW-2S | EPA 904.0 | RADC/29468 | | |
| 60218627011 | L-LMW-DUP-1 | EPA 904.0 | RADC/29468 | | |
| 60218627012 | L-LMW-FB-1 | EPA 904.0 | RADC/29468 | | |
| 60218627013 | L-LMW-1S MS | EPA 904.0 | RADC/29467 | | |
| 60218627014 | L-LMW-1S MSD | EPA 904.0 | RADC/29467 | | |
| 60218627001 | L-LMW-1S | SM 2540C | WET/61711 | | |
| 60218627002 | L-LMW-2S | SM 2540C | WET/61732 | | |
| 60218627003 | L-LMW-3S | SM 2540C | WET/61711 | | |
| 60218627004 | L-LMW-4S | SM 2540C | WET/61732 | | |
| 60218627005 | L-LMW-5S | SM 2540C | WET/61758 | | |
| 60218627006 | L-LMW-6S | SM 2540C | WET/61732 | | |
| 60218627007 | L-LMW-7S | SM 2540C | WET/61732 | | |
| 60218627008 | L-LMW-8S | SM 2540C | WET/61732 | | |
| 60218627009 | L-BMW-1S | SM 2540C | WET/61682 | | |
| 60218627010 | L-BMW-2S | SM 2540C | WET/61711 | | |
| 60218627011 | L-LMW-DUP-1 | SM 2540C | WET/61732 | | |
| 60218627012 | L-LMW-FB-1 | SM 2540C | WET/61732 | | |
| 60218627001 | L-LMW-1S | SM 4500-H+B | WET/61687 | | |
| 60218627002 | L-LMW-2S | SM 4500-H+B | WET/61703 | | |
| 60218627003 | L-LMW-3S | SM 4500-H+B | WET/61687 | | |
| 60218627004 | L-LMW-4S | SM 4500-H+B | WET/61703 | | |
| 60218627005 | L-LMW-5S | SM 4500-H+B | WET/61710 | | |
| 60218627006 | L-LMW-6S | SM 4500-H+B | WET/61703 | | |
| 60218627007 | L-LMW-7S | SM 4500-H+B | WET/61703 | | |
| 60218627008 | L-LMW-8S | SM 4500-H+B | WET/61687 | | |
| 60218627009 | L-BMW-1S | SM 4500-H+B | WET/61665 | | |

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60218627

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|-------------|-------------|-----------------|------------|-------------------|------------------|
| 60218627010 | L-BMW-2S | SM 4500-H+B | WET/61665 | | |
| 60218627011 | L-LMW-DUP-1 | SM 4500-H+B | WET/61687 | | |
| 60218627012 | L-LMW-FB-1 | SM 4500-H+B | WET/61703 | | |
| 60218627001 | L-LMW-1S | EPA 300.0 | WETA/39747 | | |
| 60218627001 | L-LMW-1S | EPA 300.0 | WETA/39786 | | |
| 60218627002 | L-LMW-2S | EPA 300.0 | WETA/39747 | | |
| 60218627002 | L-LMW-2S | EPA 300.0 | WETA/39786 | | |
| 60218627003 | L-LMW-3S | EPA 300.0 | WETA/39747 | | |
| 60218627003 | L-LMW-3S | EPA 300.0 | WETA/39786 | | |
| 60218627004 | L-LMW-4S | EPA 300.0 | WETA/39747 | | |
| 60218627004 | L-LMW-4S | EPA 300.0 | WETA/39786 | | |
| 60218627005 | L-LMW-5S | EPA 300.0 | WETA/39747 | | |
| 60218627006 | L-LMW-6S | EPA 300.0 | WETA/39747 | | |
| 60218627006 | L-LMW-6S | EPA 300.0 | WETA/39786 | | |
| 60218627007 | L-LMW-7S | EPA 300.0 | WETA/39747 | | |
| 60218627007 | L-LMW-7S | EPA 300.0 | WETA/39786 | | |
| 60218627008 | L-LMW-8S | EPA 300.0 | WETA/39747 | | |
| 60218627008 | L-LMW-8S | EPA 300.0 | WETA/39786 | | |
| 60218627009 | L-BMW-1S | EPA 300.0 | WETA/39747 | | |
| 60218627009 | L-BMW-1S | EPA 300.0 | WETA/39786 | | |
| 60218627010 | L-BMW-2S | EPA 300.0 | WETA/39747 | | |
| 60218627010 | L-BMW-2S | EPA 300.0 | WETA/39786 | | |
| 60218627011 | L-LMW-DUP-1 | EPA 300.0 | WETA/39747 | | |
| 60218627011 | L-LMW-DUP-1 | EPA 300.0 | WETA/39786 | | |
| 60218627012 | L-LMW-FB-1 | EPA 300.0 | WETA/39747 | | |

REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

WO# : 60218627



Client Name: Golder

Courier: FedEx UPS VIA Clay PEX ECI Pace Other Client

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-239 / T-262 Type of Ice: Wet Blue None Samples received on ice, cooling process has begun.

Cooler Temperature: →

Temperature should be above freezing to 6°C

Date and initials of person examining contents: BB 5/9/16

| | | |
|--|---|-----------------------------|
| Chain of Custody present: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 1. |
| Chain of Custody filled out: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 2. <u>MS/MSD</u> |
| Chain of Custody relinquished: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 3. |
| Sampler name & signature on COC: | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | 4. |
| Samples arrived within holding time: | <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | 5. |
| Short Hold Time analyses (<72hr): | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 6. <u>PH</u> |
| Rush Turn Around Time requested: | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | 7. |
| Sufficient volume: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 8. |
| Correct containers used: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Pace containers used: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 9. |
| Containers intact: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 10. |
| Unpreserved 5035A soils frozen w/in 48hrs? | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | 11. |
| Filtered volume received for dissolved tests? | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | 12. |
| Sample labels match COC: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Includes date/time/ID/analyses <u>Y</u> Matrix: <u>WT</u> | | 13. |
| All containers needing preservation have been checked. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| All containers needing preservation are found to be in compliance with EPA recommendation. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 14. |
| Exceptions: VOA, Coliform, O&G, WI-DRO (water) | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Initial when completed |
| Trip Blank present: | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Lot # of added preservative |
| Pace Trip Blank lot # (if purchased): | | 15. |
| Headspace in VOA vials (>6mm): | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | 16. |
| Project sampled in USDA Regulated Area: | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | 17. List State: |
| Additional labels attached to 5035A vials in the field? | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | 18. |

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: Jami Church _____ Date: 5/9/16

Project Manager Review: _____ Date: _____

August 09, 2016

Mark Haddock
Golder Associates
820 S. Main St
Suite 100
Saint Charles, MO 63301

RE: Project: AMEREN LABADIE ENERGY CTR-FLY
Pace Project No.: 60223486

Dear Mark Haddock:

Enclosed are the analytical results for sample(s) received by the laboratory on July 14, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Emily Webb for
Jamie Church
jamie.church@pacelabs.com
Project Manager

Enclosures

cc: Jeffrey Ingram, Golder Associates
John Suozzi, Golder Associates



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60223486

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601

L-A-B DOD-ELAP Accreditation #: L2417

Alabama Certification #: 41590

Arizona Certification #: AZ0734

Arkansas Certification

California Certification #: 04222CA

Colorado Certification

Connecticut Certification #: PH-0694

Delaware Certification

Florida/TNI Certification #: E87683

Georgia Certification #: C040

Guam Certification

Hawaii Certification

Idaho Certification

Illinois Certification

Indiana Certification

Iowa Certification #: 391

Kansas/TNI Certification #: E-10358

Kentucky Certification #: 90133

Louisiana DHH/TNI Certification #: LA140008

Louisiana DEQ/TNI Certification #: 4086

Maine Certification #: PA00091

Maryland Certification #: 308

Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification

Missouri Certification #: 235

Montana Certification #: Cert 0082

Nebraska Certification #: NE-05-29-14

Nevada Certification #: PA014572015-1

New Hampshire/TNI Certification #: 2976

New Jersey/TNI Certification #: PA 051

New Mexico Certification #: PA01457

New York/TNI Certification #: 10888

North Carolina Certification #: 42706

North Dakota Certification #: R-190

Oregon/TNI Certification #: PA200002

Pennsylvania/TNI Certification #: 65-00282

Puerto Rico Certification #: PA01457

Rhode Island Certification #: 65-00282

South Dakota Certification

Tennessee Certification #: TN2867

Texas/TNI Certification #: T104704188-14-8

Utah/TNI Certification #: PA014572015-5

USDA Soil Permit #: P330-14-00213

Vermont Dept. of Health: ID# VT-0282

Virgin Island/PADEP Certification

Virginia/VELAP Certification #: 460198

Washington Certification #: C868

West Virginia DEP Certification #: 143

West Virginia DHHR Certification #: 9964C

Wisconsin Certification

Wyoming Certification #: 8TMS-L

Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 15-016-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407

Utah Certification #: KS00021

Kansas Field Laboratory Accreditation: # E-92587

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60223486

| Lab ID | Sample ID | Matrix | Date Collected | Date Received |
|-------------|--------------|--------|----------------|----------------|
| 60223486001 | L-LMW-1S | Water | 07/11/16 15:05 | 07/14/16 04:55 |
| 60223486002 | L-LMW-2S | Water | 07/13/16 11:17 | 07/14/16 04:55 |
| 60223486003 | L-LMW-3S | Water | 07/12/16 15:15 | 07/14/16 04:55 |
| 60223486004 | L-LMW-4S | Water | 07/13/16 12:58 | 07/14/16 04:55 |
| 60223486005 | L-LMW-5S | Water | 07/13/16 12:44 | 07/14/16 04:55 |
| 60223486006 | L-LMW-6S | Water | 07/12/16 16:10 | 07/14/16 04:55 |
| 60223486007 | L-LMW-7S | Water | 07/12/16 14:40 | 07/14/16 04:55 |
| 60223486008 | L-LMW-8S | Water | 07/12/16 12:57 | 07/14/16 04:55 |
| 60223486009 | L-BMW-1S | Water | 07/11/16 12:20 | 07/14/16 04:55 |
| 60223486010 | L-BMW-2S | Water | 07/11/16 13:38 | 07/14/16 04:55 |
| 60223486011 | L-LMW-DUP-1 | Water | 07/11/16 00:00 | 07/14/16 04:55 |
| 60223486012 | L-LMW-FB-1 | Water | 07/12/16 15:25 | 07/14/16 04:55 |
| 60223486013 | L-LMW-8S MS | Water | 07/12/16 12:57 | 07/14/16 04:55 |
| 60223486014 | L-LMW-8S MSD | Water | 07/12/16 12:57 | 07/14/16 04:55 |

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60223486

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|-------------|-----------|-------------|----------|-------------------|------------|
| 60223486001 | L-LMW-1S | EPA 200.7 | SMW | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |
| | | EPA 7470 | NDJ | 1 | PASI-K |
| | | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| | | SM 2540C | HAC | 1 | PASI-K |
| | | SM 4500-H+B | LDB | 1 | PASI-K |
| 60223486002 | L-LMW-2S | EPA 300.0 | OL | 3 | PASI-K |
| | | EPA 200.7 | SMW | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |
| | | EPA 7470 | NDJ | 1 | PASI-K |
| | | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| | | SM 2540C | HAC | 1 | PASI-K |
| 60223486003 | L-LMW-3S | SM 4500-H+B | LDB | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| | | EPA 200.7 | SMW | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |
| | | EPA 7470 | NDJ | 1 | PASI-K |
| | | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| 60223486004 | L-LMW-4S | SM 2540C | HAC | 1 | PASI-K |
| | | SM 4500-H+B | LDB | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| | | EPA 200.7 | SMW | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |
| | | EPA 7470 | NDJ | 1 | PASI-K |
| | | EPA 903.1 | WRR | 1 | PASI-PA |
| 60223486005 | L-LMW-5S | EPA 904.0 | JLW | 1 | PASI-PA |
| | | SM 2540C | HAC | 1 | PASI-K |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| | | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 7470 | NDJ | 1 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |
| | | EPA 200.7 | SMW | 8 | PASI-K |

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SAMPLE ANALYTE COUNT

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60223486

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|-------------|-----------|-------------|----------|-------------------|------------|
| 60223486006 | L-LMW-6S | SM 2540C | HAC | 1 | PASI-K |
| | | SM 4500-H+B | LDB | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| | | EPA 200.7 | SMW | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |
| | | EPA 7470 | NDJ | 1 | PASI-K |
| | | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| 60223486007 | L-LMW-7S | SM 2540C | HAC | 1 | PASI-K |
| | | SM 4500-H+B | LDB | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| | | EPA 200.7 | SMW | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |
| | | EPA 7470 | NDJ | 1 | PASI-K |
| | | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| 60223486008 | L-LMW-8S | SM 2540C | HAC | 1 | PASI-K |
| | | SM 4500-H+B | LDB | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| | | EPA 200.7 | SMW | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |
| | | EPA 7470 | NDJ | 1 | PASI-K |
| | | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| 60223486009 | L-BMW-1S | SM 2540C | HAC | 1 | PASI-K |
| | | SM 4500-H+B | LDB | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| | | EPA 200.7 | SMW | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |
| | | EPA 7470 | NDJ | 1 | PASI-K |
| | | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| 60223486010 | L-BMW-2S | SM 2540C | HAC | 1 | PASI-K |
| | | SM 4500-H+B | LDB | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| | | EPA 200.7 | SMW | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |

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SAMPLE ANALYTE COUNT

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60223486

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|--------------------|---------------------|-------------|----------|-------------------|------------|
| | | EPA 7470 | NDJ | 1 | PASI-K |
| | | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| | | SM 2540C | HAC | 1 | PASI-K |
| | | SM 4500-H+B | LDB | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| 60223486011 | L-LMW-DUP-1 | EPA 200.7 | SMW | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |
| | | EPA 7470 | NDJ | 1 | PASI-K |
| | | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| | | SM 2540C | HAC | 1 | PASI-K |
| | | SM 4500-H+B | LDB | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| 60223486012 | L-LMW-FB-1 | EPA 200.7 | SMW | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |
| | | EPA 7470 | NDJ | 1 | PASI-K |
| | | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| | | SM 2540C | HAC | 1 | PASI-K |
| | | SM 4500-H+B | LDB | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| 60223486013 | L-LMW-8S MS | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| 60223486014 | L-LMW-8S MSD | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60223486

Sample: L-LMW-1S **Lab ID: 60223486001** Collected: 07/11/16 15:05 Received: 07/14/16 04:55 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|---------|--|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 127 | ug/L | 10.0 | 0.58 | 1 | 07/15/16 16:30 | 07/19/16 16:36 | 7440-39-3 | |
| Beryllium | <0.26 | ug/L | 1.0 | 0.26 | 1 | 07/15/16 16:30 | 07/19/16 16:36 | 7440-41-7 | |
| Boron | 2320 | ug/L | 100 | 50.0 | 1 | 07/15/16 16:30 | 07/19/16 16:36 | 7440-42-8 | |
| Calcium | 133000 | ug/L | 100 | 8.1 | 1 | 07/15/16 16:30 | 07/19/16 16:36 | 7440-70-2 | |
| Cobalt | 1.2J | ug/L | 5.0 | 0.72 | 1 | 07/15/16 16:30 | 07/19/16 16:36 | 7440-48-4 | |
| Lead | <2.5 | ug/L | 5.0 | 2.5 | 1 | 07/15/16 16:30 | 07/19/16 16:36 | 7439-92-1 | |
| Lithium | 19.0 | ug/L | 10.0 | 4.9 | 1 | 07/15/16 16:30 | 07/19/16 16:36 | 7439-93-2 | |
| Molybdenum | 4.5J | ug/L | 20.0 | 0.52 | 1 | 07/15/16 16:30 | 07/19/16 16:36 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | <0.058 | ug/L | 1.0 | 0.058 | 1 | 07/15/16 16:30 | 07/22/16 17:24 | 7440-36-0 | |
| Arsenic | 8.8 | ug/L | 1.0 | 0.10 | 1 | 07/15/16 16:30 | 07/22/16 17:24 | 7440-38-2 | |
| Cadmium | <0.029 | ug/L | 0.50 | 0.029 | 1 | 07/15/16 16:30 | 07/22/16 17:24 | 7440-43-9 | |
| Chromium | <0.34 | ug/L | 1.0 | 0.34 | 1 | 07/15/16 16:30 | 07/22/16 17:24 | 7440-47-3 | |
| Selenium | <0.18 | ug/L | 1.0 | 0.18 | 1 | 07/15/16 16:30 | 07/22/16 17:24 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 07/15/16 16:30 | 07/22/16 17:24 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.039 | ug/L | 0.20 | 0.039 | 1 | 07/14/16 16:15 | 07/15/16 10:26 | 7439-97-6 | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 552 | mg/L | 5.0 | 5.0 | 1 | | 07/18/16 16:37 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.4 | Std. Units | 0.10 | 0.10 | 1 | | 07/19/16 08:30 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 4.0 | mg/L | 1.0 | 0.50 | 1 | | 08/01/16 00:07 | 16887-00-6 | |
| Fluoride | 0.14J | mg/L | 0.20 | 0.027 | 1 | | 08/01/16 00:07 | 16984-48-8 | |
| Sulfate | 52.7 | mg/L | 5.0 | 0.77 | 5 | | 08/03/16 12:01 | 14808-79-8 | |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60223486

Sample: L-LMW-2S **Lab ID: 60223486002** Collected: 07/13/16 11:17 Received: 07/14/16 04:55 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 53.8 | ug/L | 10.0 | 0.58 | 1 | 07/15/16 16:30 | 07/19/16 16:39 | 7440-39-3 | |
| Beryllium | <0.26 | ug/L | 1.0 | 0.26 | 1 | 07/15/16 16:30 | 07/19/16 16:39 | 7440-41-7 | |
| Boron | 6720 | ug/L | 100 | 50.0 | 1 | 07/15/16 16:30 | 07/19/16 16:39 | 7440-42-8 | |
| Calcium | 74700 | ug/L | 100 | 8.1 | 1 | 07/15/16 16:30 | 07/19/16 16:39 | 7440-70-2 | |
| Cobalt | <0.72 | ug/L | 5.0 | 0.72 | 1 | 07/15/16 16:30 | 07/19/16 16:39 | 7440-48-4 | |
| Lead | <2.5 | ug/L | 5.0 | 2.5 | 1 | 07/15/16 16:30 | 07/19/16 16:39 | 7439-92-1 | |
| Lithium | 16.1 | ug/L | 10.0 | 4.9 | 1 | 07/15/16 16:30 | 07/19/16 16:39 | 7439-93-2 | |
| Molybdenum | 123 | ug/L | 20.0 | 0.52 | 1 | 07/15/16 16:30 | 07/19/16 16:39 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | <0.058 | ug/L | 1.0 | 0.058 | 1 | 07/15/16 16:30 | 07/22/16 17:29 | 7440-36-0 | |
| Arsenic | 25.8 | ug/L | 1.0 | 0.10 | 1 | 07/15/16 16:30 | 07/22/16 17:29 | 7440-38-2 | |
| Cadmium | <0.029 | ug/L | 0.50 | 0.029 | 1 | 07/15/16 16:30 | 07/22/16 17:29 | 7440-43-9 | |
| Chromium | <0.34 | ug/L | 1.0 | 0.34 | 1 | 07/15/16 16:30 | 07/22/16 17:29 | 7440-47-3 | |
| Selenium | <0.18 | ug/L | 1.0 | 0.18 | 1 | 07/15/16 16:30 | 07/22/16 17:29 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 07/15/16 16:30 | 07/22/16 17:29 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.039 | ug/L | 0.20 | 0.039 | 1 | 07/14/16 16:15 | 07/15/16 10:33 | 7439-97-6 | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 519 | mg/L | 5.0 | 5.0 | 1 | | 07/20/16 11:32 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 9.3 | Std. Units | 0.10 | 0.10 | 1 | | 07/19/16 08:30 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 19.2 | mg/L | 1.0 | 0.50 | 1 | | 08/01/16 00:21 | 16887-00-6 | |
| Fluoride | 0.15J | mg/L | 0.20 | 0.027 | 1 | | 08/01/16 00:21 | 16984-48-8 | |
| Sulfate | 365 | mg/L | 50.0 | 7.7 | 50 | | 08/02/16 13:48 | 14808-79-8 | |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60223486

Sample: L-LMW-3S **Lab ID: 60223486003** Collected: 07/12/16 15:15 Received: 07/14/16 04:55 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 77.7 | ug/L | 10.0 | 0.58 | 1 | 07/15/16 16:30 | 07/19/16 16:41 | 7440-39-3 | |
| Beryllium | <0.26 | ug/L | 1.0 | 0.26 | 1 | 07/15/16 16:30 | 07/19/16 16:41 | 7440-41-7 | |
| Boron | 4300 | ug/L | 100 | 50.0 | 1 | 07/15/16 16:30 | 07/19/16 16:41 | 7440-42-8 | |
| Calcium | 67100 | ug/L | 100 | 8.1 | 1 | 07/15/16 16:30 | 07/19/16 16:41 | 7440-70-2 | |
| Cobalt | <0.72 | ug/L | 5.0 | 0.72 | 1 | 07/15/16 16:30 | 07/19/16 16:41 | 7440-48-4 | |
| Lead | <2.5 | ug/L | 5.0 | 2.5 | 1 | 07/15/16 16:30 | 07/19/16 16:41 | 7439-92-1 | |
| Lithium | 25.8 | ug/L | 10.0 | 4.9 | 1 | 07/15/16 16:30 | 07/19/16 16:41 | 7439-93-2 | |
| Molybdenum | 173 | ug/L | 20.0 | 0.52 | 1 | 07/15/16 16:30 | 07/19/16 16:41 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | <0.058 | ug/L | 1.0 | 0.058 | 1 | 07/15/16 16:30 | 07/22/16 17:33 | 7440-36-0 | |
| Arsenic | 5.4 | ug/L | 1.0 | 0.10 | 1 | 07/15/16 16:30 | 07/22/16 17:33 | 7440-38-2 | |
| Cadmium | <0.029 | ug/L | 0.50 | 0.029 | 1 | 07/15/16 16:30 | 07/22/16 17:33 | 7440-43-9 | |
| Chromium | 1.3 | ug/L | 1.0 | 0.34 | 1 | 07/15/16 16:30 | 07/22/16 17:33 | 7440-47-3 | |
| Selenium | <0.18 | ug/L | 1.0 | 0.18 | 1 | 07/15/16 16:30 | 07/22/16 17:33 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 07/15/16 16:30 | 07/22/16 17:33 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.039 | ug/L | 0.20 | 0.039 | 1 | 07/14/16 16:15 | 07/15/16 10:35 | 7439-97-6 | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 576 | mg/L | 5.0 | 5.0 | 1 | | 07/19/16 09:31 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.4 | Std. Units | 0.10 | 0.10 | 1 | | 07/19/16 08:30 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 20.8 | mg/L | 2.0 | 1.0 | 2 | | 08/02/16 14:02 | 16887-00-6 | |
| Fluoride | 0.36 | mg/L | 0.20 | 0.027 | 1 | | 08/01/16 00:35 | 16984-48-8 | |
| Sulfate | 256 | mg/L | 50.0 | 7.7 | 50 | | 08/02/16 14:17 | 14808-79-8 | |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60223486

Sample: L-LMW-4S **Lab ID: 60223486004** Collected: 07/13/16 12:58 Received: 07/14/16 04:55 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|--|---------|------------|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | | | |
| Barium | 120 | ug/L | 10.0 | 0.58 | 1 | 07/15/16 16:30 | 07/19/16 16:45 | 7440-39-3 | |
| Beryllium | <0.26 | ug/L | 1.0 | 0.26 | 1 | 07/15/16 16:30 | 07/19/16 16:45 | 7440-41-7 | |
| Boron | 9480 | ug/L | 100 | 50.0 | 1 | 07/15/16 16:30 | 07/19/16 16:45 | 7440-42-8 | |
| Calcium | 109000 | ug/L | 100 | 8.1 | 1 | 07/15/16 16:30 | 07/19/16 16:45 | 7440-70-2 | |
| Cobalt | 0.95J | ug/L | 5.0 | 0.72 | 1 | 07/15/16 16:30 | 07/19/16 16:45 | 7440-48-4 | |
| Lead | <2.5 | ug/L | 5.0 | 2.5 | 1 | 07/15/16 16:30 | 07/19/16 16:45 | 7439-92-1 | |
| Lithium | 36.5 | ug/L | 10.0 | 4.9 | 1 | 07/15/16 16:30 | 07/19/16 16:45 | 7439-93-2 | |
| Molybdenum | 142 | ug/L | 20.0 | 0.52 | 1 | 07/15/16 16:30 | 07/19/16 16:45 | 7439-98-7 | |
| 200.8 MET ICPMS Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | | | |
| Antimony | <0.058 | ug/L | 1.0 | 0.058 | 1 | 07/15/16 16:30 | 07/22/16 17:37 | 7440-36-0 | |
| Arsenic | 18.4 | ug/L | 1.0 | 0.10 | 1 | 07/15/16 16:30 | 07/22/16 17:37 | 7440-38-2 | |
| Cadmium | <0.029 | ug/L | 0.50 | 0.029 | 1 | 07/15/16 16:30 | 07/22/16 17:37 | 7440-43-9 | |
| Chromium | <0.34 | ug/L | 1.0 | 0.34 | 1 | 07/15/16 16:30 | 07/22/16 17:37 | 7440-47-3 | |
| Selenium | <0.18 | ug/L | 1.0 | 0.18 | 1 | 07/15/16 16:30 | 07/22/16 17:37 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 07/15/16 16:30 | 07/22/16 17:37 | 7440-28-0 | |
| 7470 Mercury Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | | | |
| Mercury | <0.039 | ug/L | 0.20 | 0.039 | 1 | 07/14/16 16:15 | 07/15/16 10:37 | 7439-97-6 | |
| 2540C Total Dissolved Solids Analytical Method: SM 2540C | | | | | | | | | |
| Total Dissolved Solids | 712 | mg/L | 5.0 | 5.0 | 1 | | 07/20/16 11:33 | | |
| 4500H+ pH, Electrometric Analytical Method: SM 4500-H+B | | | | | | | | | |
| pH at 25 Degrees C | 7.4 | Std. Units | 0.10 | 0.10 | 1 | | 07/19/16 08:30 | | H6 |
| 300.0 IC Anions 28 Days Analytical Method: EPA 300.0 | | | | | | | | | |
| Chloride | 23.9 | mg/L | 2.0 | 1.0 | 2 | | 08/02/16 15:00 | 16887-00-6 | |
| Fluoride | 0.24 | mg/L | 0.20 | 0.027 | 1 | | 08/01/16 01:18 | 16984-48-8 | |
| Sulfate | 247 | mg/L | 20.0 | 3.1 | 20 | | 08/02/16 15:14 | 14808-79-8 | |

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60223486

Sample: L-LMW-5S **Lab ID: 60223486005** Collected: 07/13/16 12:44 Received: 07/14/16 04:55 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 253 | ug/L | 10.0 | 0.58 | 1 | 07/15/16 16:30 | 07/19/16 16:47 | 7440-39-3 | |
| Beryllium | <0.26 | ug/L | 1.0 | 0.26 | 1 | 07/15/16 16:30 | 07/19/16 16:47 | 7440-41-7 | |
| Boron | 59.4J | ug/L | 100 | 50.0 | 1 | 07/15/16 16:30 | 07/19/16 16:47 | 7440-42-8 | |
| Calcium | 111000 | ug/L | 100 | 8.1 | 1 | 07/15/16 16:30 | 07/19/16 16:47 | 7440-70-2 | |
| Cobalt | <0.72 | ug/L | 5.0 | 0.72 | 1 | 07/15/16 16:30 | 07/19/16 16:47 | 7440-48-4 | |
| Lead | <2.5 | ug/L | 5.0 | 2.5 | 1 | 07/15/16 16:30 | 07/19/16 16:47 | 7439-92-1 | |
| Lithium | 9.8J | ug/L | 10.0 | 4.9 | 1 | 07/15/16 16:30 | 07/19/16 16:47 | 7439-93-2 | |
| Molybdenum | 2.3J | ug/L | 20.0 | 0.52 | 1 | 07/15/16 16:30 | 07/19/16 16:47 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | 0.14J | ug/L | 1.0 | 0.058 | 1 | 07/15/16 16:30 | 07/22/16 17:41 | 7440-36-0 | |
| Arsenic | 0.46J | ug/L | 1.0 | 0.10 | 1 | 07/15/16 16:30 | 07/22/16 17:41 | 7440-38-2 | |
| Cadmium | <0.029 | ug/L | 0.50 | 0.029 | 1 | 07/15/16 16:30 | 07/22/16 17:41 | 7440-43-9 | |
| Chromium | 0.57J | ug/L | 1.0 | 0.34 | 1 | 07/15/16 16:30 | 07/22/16 17:41 | 7440-47-3 | |
| Selenium | 0.49J | ug/L | 1.0 | 0.18 | 1 | 07/15/16 16:30 | 07/22/16 17:41 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 07/15/16 16:30 | 07/22/16 17:41 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.039 | ug/L | 0.20 | 0.039 | 1 | 07/14/16 16:15 | 07/15/16 10:39 | 7439-97-6 | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 363 | mg/L | 5.0 | 5.0 | 1 | | 07/20/16 11:33 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.2 | Std. Units | 0.10 | 0.10 | 1 | | 07/19/16 08:30 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 2.0 | mg/L | 1.0 | 0.50 | 1 | | 08/01/16 01:32 | 16887-00-6 | |
| Fluoride | 0.15J | mg/L | 0.20 | 0.027 | 1 | | 08/01/16 01:32 | 16984-48-8 | |
| Sulfate | 13.4 | mg/L | 1.0 | 0.15 | 1 | | 08/01/16 01:32 | 14808-79-8 | |

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60223486

Sample: L-LMW-6S **Lab ID: 60223486006** Collected: 07/12/16 16:10 Received: 07/14/16 04:55 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 283 | ug/L | 10.0 | 0.58 | 1 | 07/15/16 16:30 | 07/19/16 16:50 | 7440-39-3 | |
| Beryllium | <0.26 | ug/L | 1.0 | 0.26 | 1 | 07/15/16 16:30 | 07/19/16 16:50 | 7440-41-7 | |
| Boron | 5150 | ug/L | 100 | 50.0 | 1 | 07/15/16 16:30 | 07/19/16 16:50 | 7440-42-8 | |
| Calcium | 164000 | ug/L | 100 | 8.1 | 1 | 07/15/16 16:30 | 07/19/16 16:50 | 7440-70-2 | |
| Cobalt | 9.5 | ug/L | 5.0 | 0.72 | 1 | 07/15/16 16:30 | 07/19/16 16:50 | 7440-48-4 | |
| Lead | <2.5 | ug/L | 5.0 | 2.5 | 1 | 07/15/16 16:30 | 07/19/16 16:50 | 7439-92-1 | |
| Lithium | 37.6 | ug/L | 10.0 | 4.9 | 1 | 07/15/16 16:30 | 07/19/16 16:50 | 7439-93-2 | |
| Molybdenum | 16.5J | ug/L | 20.0 | 0.52 | 1 | 07/15/16 16:30 | 07/19/16 16:50 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | 0.060J | ug/L | 1.0 | 0.058 | 1 | 07/15/16 16:30 | 07/22/16 17:46 | 7440-36-0 | |
| Arsenic | 2.3 | ug/L | 1.0 | 0.10 | 1 | 07/15/16 16:30 | 07/22/16 17:46 | 7440-38-2 | |
| Cadmium | 0.059J | ug/L | 0.50 | 0.029 | 1 | 07/15/16 16:30 | 07/22/16 17:46 | 7440-43-9 | |
| Chromium | <0.34 | ug/L | 1.0 | 0.34 | 1 | 07/15/16 16:30 | 07/22/16 17:46 | 7440-47-3 | |
| Selenium | <0.18 | ug/L | 1.0 | 0.18 | 1 | 07/15/16 16:30 | 07/22/16 17:46 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 07/15/16 16:30 | 07/22/16 17:46 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.039 | ug/L | 0.20 | 0.039 | 1 | 07/14/16 16:15 | 07/15/16 10:42 | 7439-97-6 | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 656 | mg/L | 5.0 | 5.0 | 1 | | 07/19/16 09:32 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.6 | Std. Units | 0.10 | 0.10 | 1 | | 07/19/16 08:30 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 11.3 | mg/L | 1.0 | 0.50 | 1 | | 08/01/16 01:46 | 16887-00-6 | |
| Fluoride | 0.12J | mg/L | 0.20 | 0.027 | 1 | | 08/01/16 01:46 | 16984-48-8 | |
| Sulfate | 107 | mg/L | 10.0 | 1.5 | 10 | | 08/02/16 15:29 | 14808-79-8 | |

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60223486

Sample: L-LMW-7S **Lab ID: 60223486007** Collected: 07/12/16 14:40 Received: 07/14/16 04:55 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 295 | ug/L | 10.0 | 0.58 | 1 | 07/15/16 16:30 | 07/19/16 16:52 | 7440-39-3 | |
| Beryllium | <0.26 | ug/L | 1.0 | 0.26 | 1 | 07/15/16 16:30 | 07/19/16 16:52 | 7440-41-7 | |
| Boron | 6400 | ug/L | 100 | 50.0 | 1 | 07/15/16 16:30 | 07/19/16 16:52 | 7440-42-8 | |
| Calcium | 136000 | ug/L | 100 | 8.1 | 1 | 07/15/16 16:30 | 07/19/16 16:52 | 7440-70-2 | |
| Cobalt | 3.2J | ug/L | 5.0 | 0.72 | 1 | 07/15/16 16:30 | 07/19/16 16:52 | 7440-48-4 | |
| Lead | <2.5 | ug/L | 5.0 | 2.5 | 1 | 07/15/16 16:30 | 07/19/16 16:52 | 7439-92-1 | |
| Lithium | 36.3 | ug/L | 10.0 | 4.9 | 1 | 07/15/16 16:30 | 07/19/16 16:52 | 7439-93-2 | |
| Molybdenum | 54.1 | ug/L | 20.0 | 0.52 | 1 | 07/15/16 16:30 | 07/19/16 16:52 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | <0.058 | ug/L | 1.0 | 0.058 | 1 | 07/15/16 16:30 | 07/22/16 17:50 | 7440-36-0 | |
| Arsenic | 9.2 | ug/L | 1.0 | 0.10 | 1 | 07/15/16 16:30 | 07/22/16 17:50 | 7440-38-2 | |
| Cadmium | 0.035J | ug/L | 0.50 | 0.029 | 1 | 07/15/16 16:30 | 07/22/16 17:50 | 7440-43-9 | |
| Chromium | <0.34 | ug/L | 1.0 | 0.34 | 1 | 07/15/16 16:30 | 07/22/16 17:50 | 7440-47-3 | |
| Selenium | <0.18 | ug/L | 1.0 | 0.18 | 1 | 07/15/16 16:30 | 07/22/16 17:50 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 07/15/16 16:30 | 07/22/16 17:50 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.039 | ug/L | 0.20 | 0.039 | 1 | 07/14/16 16:15 | 07/15/16 10:44 | 7439-97-6 | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 687 | mg/L | 5.0 | 5.0 | 1 | | 07/19/16 09:32 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.2 | Std. Units | 0.10 | 0.10 | 1 | | 07/19/16 08:30 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 19.0 | mg/L | 1.0 | 0.50 | 1 | | 08/01/16 02:00 | 16887-00-6 | |
| Fluoride | 0.12J | mg/L | 0.20 | 0.027 | 1 | | 08/01/16 02:00 | 16984-48-8 | |
| Sulfate | 191 | mg/L | 20.0 | 3.1 | 20 | | 08/02/16 15:43 | 14808-79-8 | |

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60223486

Sample: L-LMW-8S **Lab ID: 60223486008** Collected: 07/12/16 12:57 Received: 07/14/16 04:55 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 170 | ug/L | 10.0 | 0.58 | 1 | 07/15/16 16:30 | 07/19/16 16:58 | 7440-39-3 | |
| Beryllium | <0.26 | ug/L | 1.0 | 0.26 | 1 | 07/15/16 16:30 | 07/19/16 16:58 | 7440-41-7 | |
| Boron | 6220 | ug/L | 100 | 50.0 | 1 | 07/15/16 16:30 | 07/19/16 16:58 | 7440-42-8 | |
| Calcium | 183000 | ug/L | 100 | 8.1 | 1 | 07/15/16 16:30 | 07/19/16 16:58 | 7440-70-2 | M1 |
| Cobalt | 2.4J | ug/L | 5.0 | 0.72 | 1 | 07/15/16 16:30 | 07/19/16 16:58 | 7440-48-4 | |
| Lead | <2.5 | ug/L | 5.0 | 2.5 | 1 | 07/15/16 16:30 | 07/19/16 16:58 | 7439-92-1 | |
| Lithium | 28.4 | ug/L | 10.0 | 4.9 | 1 | 07/15/16 16:30 | 07/19/16 16:58 | 7439-93-2 | |
| Molybdenum | 80.7 | ug/L | 20.0 | 0.52 | 1 | 07/15/16 16:30 | 07/19/16 16:58 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | 0.062J | ug/L | 1.0 | 0.058 | 1 | 07/15/16 16:30 | 07/22/16 17:54 | 7440-36-0 | |
| Arsenic | 5.9 | ug/L | 1.0 | 0.10 | 1 | 07/15/16 16:30 | 07/22/16 17:54 | 7440-38-2 | |
| Cadmium | 0.049J | ug/L | 0.50 | 0.029 | 1 | 07/15/16 16:30 | 07/22/16 17:54 | 7440-43-9 | |
| Chromium | <0.34 | ug/L | 1.0 | 0.34 | 1 | 07/15/16 16:30 | 07/22/16 17:54 | 7440-47-3 | |
| Selenium | <0.18 | ug/L | 1.0 | 0.18 | 1 | 07/15/16 16:30 | 07/22/16 17:54 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 07/15/16 16:30 | 07/22/16 17:54 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.039 | ug/L | 0.20 | 0.039 | 1 | 07/14/16 16:15 | 07/15/16 10:46 | 7439-97-6 | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 865 | mg/L | 5.0 | 5.0 | 1 | | 07/19/16 09:33 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.3 | Std. Units | 0.10 | 0.10 | 1 | | 07/19/16 08:30 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 18.4 | mg/L | 2.0 | 1.0 | 2 | | 08/02/16 15:58 | 16887-00-6 | |
| Fluoride | 0.23 | mg/L | 0.20 | 0.027 | 1 | | 08/01/16 02:14 | 16984-48-8 | |
| Sulfate | 338 | mg/L | 50.0 | 7.7 | 50 | | 08/02/16 16:26 | 14808-79-8 | |

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60223486

Sample: L-BMW-1S **Lab ID: 60223486009** Collected: 07/11/16 12:20 Received: 07/14/16 04:55 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 334 | ug/L | 10.0 | 0.58 | 1 | 07/15/16 16:30 | 07/19/16 17:05 | 7440-39-3 | |
| Beryllium | <0.26 | ug/L | 1.0 | 0.26 | 1 | 07/15/16 16:30 | 07/19/16 17:05 | 7440-41-7 | |
| Boron | 120 | ug/L | 100 | 50.0 | 1 | 07/15/16 16:30 | 07/19/16 17:05 | 7440-42-8 | |
| Calcium | 219000 | ug/L | 100 | 8.1 | 1 | 07/15/16 16:30 | 07/19/16 17:05 | 7440-70-2 | |
| Cobalt | <0.72 | ug/L | 5.0 | 0.72 | 1 | 07/15/16 16:30 | 07/19/16 17:05 | 7440-48-4 | |
| Lead | <2.5 | ug/L | 5.0 | 2.5 | 1 | 07/15/16 16:30 | 07/19/16 17:05 | 7439-92-1 | |
| Lithium | 20.0 | ug/L | 10.0 | 4.9 | 1 | 07/15/16 16:30 | 07/19/16 17:05 | 7439-93-2 | |
| Molybdenum | 1.4J | ug/L | 20.0 | 0.52 | 1 | 07/15/16 16:30 | 07/19/16 17:05 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | <0.058 | ug/L | 1.0 | 0.058 | 1 | 07/15/16 16:30 | 07/22/16 18:21 | 7440-36-0 | |
| Arsenic | 34.0 | ug/L | 1.0 | 0.10 | 1 | 07/15/16 16:30 | 07/22/16 18:21 | 7440-38-2 | |
| Cadmium | <0.029 | ug/L | 0.50 | 0.029 | 1 | 07/15/16 16:30 | 07/22/16 18:21 | 7440-43-9 | |
| Chromium | <0.34 | ug/L | 1.0 | 0.34 | 1 | 07/15/16 16:30 | 07/22/16 18:21 | 7440-47-3 | |
| Selenium | <0.18 | ug/L | 1.0 | 0.18 | 1 | 07/15/16 16:30 | 07/22/16 18:21 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 07/15/16 16:30 | 07/22/16 18:21 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.039 | ug/L | 0.20 | 0.039 | 1 | 07/14/16 16:15 | 07/15/16 10:53 | 7439-97-6 | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 780 | mg/L | 5.0 | 5.0 | 1 | | 07/18/16 16:37 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 6.9 | Std. Units | 0.10 | 0.10 | 1 | | 07/19/16 08:30 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 6.0 | mg/L | 1.0 | 0.50 | 1 | | 08/01/16 02:42 | 16887-00-6 | |
| Fluoride | 0.12J | mg/L | 0.20 | 0.027 | 1 | | 08/01/16 02:42 | 16984-48-8 | |
| Sulfate | 51.9 | mg/L | 5.0 | 0.77 | 5 | | 08/02/16 16:55 | 14808-79-8 | |

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60223486

Sample: L-BMW-2S **Lab ID: 60223486010** Collected: 07/11/16 13:38 Received: 07/14/16 04:55 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 245 | ug/L | 10.0 | 0.58 | 1 | 07/15/16 16:30 | 07/19/16 17:07 | 7440-39-3 | |
| Beryllium | <0.26 | ug/L | 1.0 | 0.26 | 1 | 07/15/16 16:30 | 07/19/16 17:07 | 7440-41-7 | |
| Boron | 58.2J | ug/L | 100 | 50.0 | 1 | 07/15/16 16:30 | 07/19/16 17:07 | 7440-42-8 | |
| Calcium | 136000 | ug/L | 100 | 8.1 | 1 | 07/15/16 16:30 | 07/19/16 17:07 | 7440-70-2 | |
| Cobalt | <0.72 | ug/L | 5.0 | 0.72 | 1 | 07/15/16 16:30 | 07/19/16 17:07 | 7440-48-4 | |
| Lead | <2.5 | ug/L | 5.0 | 2.5 | 1 | 07/15/16 16:30 | 07/19/16 17:07 | 7439-92-1 | |
| Lithium | 19.2 | ug/L | 10.0 | 4.9 | 1 | 07/15/16 16:30 | 07/19/16 17:07 | 7439-93-2 | |
| Molybdenum | 2.9J | ug/L | 20.0 | 0.52 | 1 | 07/15/16 16:30 | 07/19/16 17:07 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | 0.24J | ug/L | 1.0 | 0.058 | 1 | 07/15/16 16:30 | 07/22/16 18:25 | 7440-36-0 | |
| Arsenic | 0.41J | ug/L | 1.0 | 0.10 | 1 | 07/15/16 16:30 | 07/22/16 18:25 | 7440-38-2 | |
| Cadmium | 0.045J | ug/L | 0.50 | 0.029 | 1 | 07/15/16 16:30 | 07/22/16 18:25 | 7440-43-9 | |
| Chromium | <0.34 | ug/L | 1.0 | 0.34 | 1 | 07/15/16 16:30 | 07/22/16 18:25 | 7440-47-3 | |
| Selenium | 0.75J | ug/L | 1.0 | 0.18 | 1 | 07/15/16 16:30 | 07/22/16 18:25 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 07/15/16 16:30 | 07/22/16 18:25 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.039 | ug/L | 0.20 | 0.039 | 1 | 07/14/16 16:15 | 07/15/16 10:59 | 7439-97-6 | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 494 | mg/L | 5.0 | 5.0 | 1 | | 07/18/16 16:38 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.7 | Std. Units | 0.10 | 0.10 | 1 | | 07/19/16 08:30 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 8.2 | mg/L | 1.0 | 0.50 | 1 | | 08/01/16 02:56 | 16887-00-6 | |
| Fluoride | 0.15J | mg/L | 0.20 | 0.027 | 1 | | 08/01/16 02:56 | 16984-48-8 | |
| Sulfate | 24.8 | mg/L | 2.0 | 0.31 | 2 | | 08/02/16 17:10 | 14808-79-8 | |

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60223486

Sample: L-LMW-DUP-1 **Lab ID: 60223486011** Collected: 07/11/16 00:00 Received: 07/14/16 04:55 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|--|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 126 | ug/L | 10.0 | 0.58 | 1 | 07/15/16 16:30 | 07/19/16 17:09 | 7440-39-3 | |
| Beryllium | <0.26 | ug/L | 1.0 | 0.26 | 1 | 07/15/16 16:30 | 07/19/16 17:09 | 7440-41-7 | |
| Boron | 2360 | ug/L | 100 | 50.0 | 1 | 07/15/16 16:30 | 07/19/16 17:09 | 7440-42-8 | |
| Calcium | 136000 | ug/L | 100 | 8.1 | 1 | 07/15/16 16:30 | 07/19/16 17:09 | 7440-70-2 | |
| Cobalt | <0.72 | ug/L | 5.0 | 0.72 | 1 | 07/15/16 16:30 | 07/19/16 17:09 | 7440-48-4 | |
| Lead | <2.5 | ug/L | 5.0 | 2.5 | 1 | 07/15/16 16:30 | 07/19/16 17:09 | 7439-92-1 | |
| Lithium | 17.6 | ug/L | 10.0 | 4.9 | 1 | 07/15/16 16:30 | 07/19/16 17:09 | 7439-93-2 | |
| Molybdenum | 4.3J | ug/L | 20.0 | 0.52 | 1 | 07/15/16 16:30 | 07/19/16 17:09 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | <0.058 | ug/L | 1.0 | 0.058 | 1 | 07/15/16 16:30 | 07/22/16 18:34 | 7440-36-0 | |
| Arsenic | 8.9 | ug/L | 1.0 | 0.10 | 1 | 07/15/16 16:30 | 07/22/16 18:34 | 7440-38-2 | |
| Cadmium | <0.029 | ug/L | 0.50 | 0.029 | 1 | 07/15/16 16:30 | 07/22/16 18:34 | 7440-43-9 | |
| Chromium | <0.34 | ug/L | 1.0 | 0.34 | 1 | 07/15/16 16:30 | 07/22/16 18:34 | 7440-47-3 | |
| Selenium | <0.18 | ug/L | 1.0 | 0.18 | 1 | 07/15/16 16:30 | 07/22/16 18:34 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 07/15/16 16:30 | 07/22/16 18:34 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.039 | ug/L | 0.20 | 0.039 | 1 | 07/14/16 16:15 | 07/15/16 11:02 | 7439-97-6 | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 482 | mg/L | 5.0 | 5.0 | 1 | | 07/18/16 16:39 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 8.0 | Std. Units | 0.10 | 0.10 | 1 | | 07/19/16 08:30 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 4.0 | mg/L | 1.0 | 0.50 | 1 | | 08/01/16 03:11 | 16887-00-6 | |
| Fluoride | 0.14J | mg/L | 0.20 | 0.027 | 1 | | 08/01/16 03:11 | 16984-48-8 | |
| Sulfate | 49.0 | mg/L | 5.0 | 0.77 | 5 | | 08/02/16 17:53 | 14808-79-8 | |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60223486

Sample: L-LMW-FB-1 **Lab ID: 60223486012** Collected: 07/12/16 15:25 Received: 07/14/16 04:55 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|---------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 1.7J | ug/L | 10.0 | 0.58 | 1 | 07/15/16 16:30 | 07/19/16 17:11 | 7440-39-3 | |
| Beryllium | <0.26 | ug/L | 1.0 | 0.26 | 1 | 07/15/16 16:30 | 07/19/16 17:11 | 7440-41-7 | |
| Boron | <50.0 | ug/L | 100 | 50.0 | 1 | 07/15/16 16:30 | 07/19/16 17:11 | 7440-42-8 | |
| Calcium | 26.1J | ug/L | 100 | 8.1 | 1 | 07/15/16 16:30 | 07/19/16 17:11 | 7440-70-2 | |
| Cobalt | <0.72 | ug/L | 5.0 | 0.72 | 1 | 07/15/16 16:30 | 07/19/16 17:11 | 7440-48-4 | |
| Lead | <2.5 | ug/L | 5.0 | 2.5 | 1 | 07/15/16 16:30 | 07/19/16 17:11 | 7439-92-1 | |
| Lithium | <4.9 | ug/L | 10.0 | 4.9 | 1 | 07/15/16 16:30 | 07/19/16 17:11 | 7439-93-2 | |
| Molybdenum | <0.52 | ug/L | 20.0 | 0.52 | 1 | 07/15/16 16:30 | 07/19/16 17:11 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | <0.058 | ug/L | 1.0 | 0.058 | 1 | 07/15/16 16:30 | 07/22/16 18:08 | 7440-36-0 | |
| Arsenic | <0.10 | ug/L | 1.0 | 0.10 | 1 | 07/15/16 16:30 | 07/22/16 18:08 | 7440-38-2 | |
| Cadmium | <0.029 | ug/L | 0.50 | 0.029 | 1 | 07/15/16 16:30 | 07/22/16 18:08 | 7440-43-9 | |
| Chromium | <0.34 | ug/L | 1.0 | 0.34 | 1 | 07/15/16 16:30 | 07/22/16 18:08 | 7440-47-3 | |
| Selenium | <0.18 | ug/L | 1.0 | 0.18 | 1 | 07/15/16 16:30 | 07/22/16 18:08 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 07/15/16 16:30 | 07/22/16 18:08 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.039 | ug/L | 0.20 | 0.039 | 1 | 07/14/16 16:15 | 07/15/16 11:04 | 7439-97-6 | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 26.0 | mg/L | 5.0 | 5.0 | 1 | | 07/19/16 09:35 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 5.9 | Std. Units | 0.10 | 0.10 | 1 | | 07/19/16 08:30 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | <0.50 | mg/L | 1.0 | 0.50 | 1 | | 08/01/16 03:25 | 16887-00-6 | |
| Fluoride | <0.027 | mg/L | 0.20 | 0.027 | 1 | | 08/01/16 03:25 | 16984-48-8 | |
| Sulfate | <0.15 | mg/L | 1.0 | 0.15 | 1 | | 08/01/16 03:25 | 14808-79-8 | |

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60223486

QC Batch: 438582

Analysis Method: EPA 7470

QC Batch Method: EPA 7470

Analysis Description: 7470 Mercury

Associated Lab Samples: 60223486001, 60223486002, 60223486003, 60223486004, 60223486005, 60223486006, 60223486007, 60223486008, 60223486009, 60223486010, 60223486011, 60223486012

METHOD BLANK: 1793921

Matrix: Water

Associated Lab Samples: 60223486001, 60223486002, 60223486003, 60223486004, 60223486005, 60223486006, 60223486007, 60223486008, 60223486009, 60223486010, 60223486011, 60223486012

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Mercury | ug/L | <0.039 | 0.20 | 0.039 | 07/15/16 10:17 | |

LABORATORY CONTROL SAMPLE: 1793922

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Mercury | ug/L | 5 | 4.9 | 97 | 80-120 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1793923 1793924

| Parameter | Units | 60223486008 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
| Mercury | ug/L | <0.039 | 5 | 5 | 5.1 | 4.2 | 103 | 85 | 75-125 | 19 | 20 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60223486

| | | | |
|-------------------------|--|-----------------------|---------------------|
| QC Batch: | 438694 | Analysis Method: | EPA 200.7 |
| QC Batch Method: | EPA 200.7 | Analysis Description: | 200.7 Metals, Total |
| Associated Lab Samples: | 60223486001, 60223486002, 60223486003, 60223486004, 60223486005, 60223486006, 60223486007, 60223486008, 60223486009, 60223486010, 60223486011, 60223486012 | | |

| | | | |
|-------------------------|--|---------|-------|
| METHOD BLANK: | 1794434 | Matrix: | Water |
| Associated Lab Samples: | 60223486001, 60223486002, 60223486003, 60223486004, 60223486005, 60223486006, 60223486007, 60223486008, 60223486009, 60223486010, 60223486011, 60223486012 | | |

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|------------|-------|--------------|-----------------|------|----------------|------------|
| Barium | ug/L | <0.58 | 10.0 | 0.58 | 07/19/16 16:32 | |
| Beryllium | ug/L | <0.26 | 1.0 | 0.26 | 07/19/16 16:32 | |
| Boron | ug/L | <50.0 | 100 | 50.0 | 07/19/16 16:32 | |
| Calcium | ug/L | <8.1 | 100 | 8.1 | 07/19/16 16:32 | |
| Cobalt | ug/L | <0.72 | 5.0 | 0.72 | 07/19/16 16:32 | |
| Lead | ug/L | <2.5 | 5.0 | 2.5 | 07/19/16 16:32 | |
| Lithium | ug/L | <4.9 | 10.0 | 4.9 | 07/19/16 16:32 | |
| Molybdenum | ug/L | <0.52 | 20.0 | 0.52 | 07/19/16 16:32 | |

LABORATORY CONTROL SAMPLE: 1794435

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------|-------|-------------|------------|-----------|--------------|------------|
| Barium | ug/L | 1000 | 984 | 98 | 85-115 | |
| Beryllium | ug/L | 1000 | 1020 | 102 | 85-115 | |
| Boron | ug/L | 1000 | 984 | 98 | 85-115 | |
| Calcium | ug/L | 10000 | 10100 | 101 | 85-115 | |
| Cobalt | ug/L | 1000 | 1060 | 106 | 85-115 | |
| Lead | ug/L | 1000 | 1040 | 104 | 85-115 | |
| Lithium | ug/L | 1000 | 961 | 96 | 85-115 | |
| Molybdenum | ug/L | 1000 | 1080 | 108 | 85-115 | |

MATRIX SPIKE SAMPLE: 1794436

| Parameter | Units | 60223486003 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|------------|-------|--------------------|-------------|-----------|----------|--------------|------------|
| Barium | ug/L | 77.7 | 1000 | 1050 | 97 | 70-130 | |
| Beryllium | ug/L | <0.26 | 1000 | 1030 | 103 | 70-130 | |
| Boron | ug/L | 4300 | 1000 | 5410 | 111 | 70-130 | |
| Calcium | ug/L | 67100 | 10000 | 79800 | 127 | 70-130 | |
| Cobalt | ug/L | <0.72 | 1000 | 1040 | 104 | 70-130 | |
| Lead | ug/L | <2.5 | 1000 | 1010 | 101 | 70-130 | |
| Lithium | ug/L | 25.8 | 1000 | 1010 | 99 | 70-130 | |
| Molybdenum | ug/L | 173 | 1000 | 1260 | 109 | 70-130 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60223486

| Parameter | Units | 60223486008 | | 1794437 | | 1794438 | | % Rec | % Rec | % Rec | Limits | RPD | Max RPD | Qual |
|------------|-------|-------------|----------------|-----------------|-----------|------------|----------|-------|--------|-------|--------|-----|---------|------|
| | | Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | | | | | | | |
| Barium | ug/L | 170 | 1000 | 1000 | 1140 | 1150 | 97 | 98 | 70-130 | 0 | 20 | | | |
| Beryllium | ug/L | <0.26 | 1000 | 1000 | 1030 | 1040 | 103 | 104 | 70-130 | 0 | 20 | | | |
| Boron | ug/L | 6220 | 1000 | 1000 | 7220 | 7210 | 101 | 99 | 70-130 | 0 | 20 | | | |
| Calcium | ug/L | 183000 | 10000 | 10000 | 196000 | 194000 | 131 | 109 | 70-130 | 1 | 20 | M1 | | |
| Cobalt | ug/L | 2.4J | 1000 | 1000 | 1050 | 1050 | 105 | 105 | 70-130 | 0 | 20 | | | |
| Lead | ug/L | <2.5 | 1000 | 1000 | 1020 | 1030 | 102 | 103 | 70-130 | 1 | 20 | | | |
| Lithium | ug/L | 28.4 | 1000 | 1000 | 1010 | 1030 | 98 | 100 | 70-130 | 1 | 20 | | | |
| Molybdenum | ug/L | 80.7 | 1000 | 1000 | 1180 | 1190 | 110 | 111 | 70-130 | 0 | 20 | | | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60223486

| | | | |
|-------------------------|--|-----------------------|-----------|
| QC Batch: | 438697 | Analysis Method: | EPA 200.8 |
| QC Batch Method: | EPA 200.8 | Analysis Description: | 200.8 MET |
| Associated Lab Samples: | 60223486001, 60223486002, 60223486003, 60223486004, 60223486005, 60223486006, 60223486007, 60223486008, 60223486009, 60223486010, 60223486011, 60223486012 | | |

| | | | |
|-------------------------|--|---------|-------|
| METHOD BLANK: | 1794447 | Matrix: | Water |
| Associated Lab Samples: | 60223486001, 60223486002, 60223486003, 60223486004, 60223486005, 60223486006, 60223486007, 60223486008, 60223486009, 60223486010, 60223486011, 60223486012 | | |

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Antimony | ug/L | <0.058 | 1.0 | 0.058 | 07/22/16 17:16 | |
| Arsenic | ug/L | <0.10 | 1.0 | 0.10 | 07/22/16 17:16 | |
| Cadmium | ug/L | <0.029 | 0.50 | 0.029 | 07/22/16 17:16 | |
| Chromium | ug/L | <0.34 | 1.0 | 0.34 | 07/22/16 17:16 | |
| Selenium | ug/L | <0.18 | 1.0 | 0.18 | 07/22/16 17:16 | |
| Thallium | ug/L | <0.50 | 1.0 | 0.50 | 07/22/16 17:16 | |

LABORATORY CONTROL SAMPLE: 1794448

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Antimony | ug/L | 40 | 41.2 | 103 | 85-115 | |
| Arsenic | ug/L | 40 | 41.5 | 104 | 85-115 | |
| Cadmium | ug/L | 40 | 41.4 | 103 | 85-115 | |
| Chromium | ug/L | 40 | 41.4 | 104 | 85-115 | |
| Selenium | ug/L | 40 | 42.0 | 105 | 85-115 | |
| Thallium | ug/L | 40 | 37.6 | 94 | 85-115 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1794450 1794451

| Parameter | Units | 60223486008 Result | MS | | MSD | | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|--------------------|-------------|-----------|-------------|------------|----------|-----------|--------------|-----|---------|------|
| | | | Spike Conc. | MS Result | Spike Conc. | MSD Result | | | | | | |
| Antimony | ug/L | 0.062J | 40 | 40 | 41.1 | 41.4 | 102 | 103 | 70-130 | 1 | 20 | |
| Arsenic | ug/L | 5.9 | 40 | 40 | 47.4 | 47.9 | 104 | 105 | 70-130 | 1 | 20 | |
| Cadmium | ug/L | 0.049J | 40 | 40 | 39.9 | 39.7 | 100 | 99 | 70-130 | 1 | 20 | |
| Chromium | ug/L | <0.34 | 40 | 40 | 40.8 | 40.8 | 101 | 101 | 70-130 | 0 | 20 | |
| Selenium | ug/L | <0.18 | 40 | 40 | 40.1 | 40.6 | 100 | 102 | 70-130 | 1 | 20 | |
| Thallium | ug/L | <0.50 | 40 | 40 | 40.5 | 40.6 | 101 | 101 | 70-130 | 0 | 20 | |

MATRIX SPIKE SAMPLE: 1794452

| Parameter | Units | 60223486010 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|--------------------|-------------|-----------|----------|--------------|------------|
| Antimony | ug/L | 0.24J | 40 | 41.3 | 103 | 70-130 | |
| Arsenic | ug/L | 0.41J | 40 | 42.0 | 104 | 70-130 | |
| Cadmium | ug/L | 0.045J | 40 | 40.6 | 101 | 70-130 | |
| Chromium | ug/L | <0.34 | 40 | 41.2 | 102 | 70-130 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60223486

| MATRIX SPIKE SAMPLE: | | 1794452 | | | | | |
|----------------------|-------|-----------------------|----------------|--------------|-------------|-----------------|------------|
| Parameter | Units | 60223486010 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
| Selenium | ug/L | 0.75J | 40 | 41.4 | 102 | 70-130 | |
| Thallium | ug/L | <0.50 | 40 | 39.6 | 99 | 70-130 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60223486

QC Batch: 438865

Analysis Method: SM 2540C

QC Batch Method: SM 2540C

Analysis Description: 2540C Total Dissolved Solids

Associated Lab Samples: 60223486001, 60223486009, 60223486010, 60223486011

METHOD BLANK: 1795295

Matrix: Water

Associated Lab Samples: 60223486001, 60223486009, 60223486010, 60223486011

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|------------------------|-------|--------------|-----------------|-----|----------------|------------|
| Total Dissolved Solids | mg/L | <5.0 | 5.0 | 5.0 | 07/18/16 16:03 | |

LABORATORY CONTROL SAMPLE: 1795296

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

SAMPLE DUPLICATE: 1795297

| Parameter | Units | 60223225002 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L | 1910 | 1840 | | | |

SAMPLE DUPLICATE: 1795298

| Parameter | Units | 60223337001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L | 5440 | 5450 | 0 | 10 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60223486

QC Batch: 439017

Analysis Method: SM 2540C

QC Batch Method: SM 2540C

Analysis Description: 2540C Total Dissolved Solids

Associated Lab Samples: 60223486003, 60223486006, 60223486007, 60223486008, 60223486012

METHOD BLANK: 1795646

Matrix: Water

Associated Lab Samples: 60223486003, 60223486006, 60223486007, 60223486008, 60223486012

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|------------------------|-------|--------------|-----------------|-----|----------------|------------|
| Total Dissolved Solids | mg/L | <5.0 | 5.0 | 5.0 | 07/19/16 09:17 | |

LABORATORY CONTROL SAMPLE: 1795647

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|-------------|------------|-----------|--------------|------------|
| Total Dissolved Solids | mg/L | 1000 | 994 | 99 | 80-120 | |

SAMPLE DUPLICATE: 1795648

| Parameter | Units | 60223480001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L | 465 | 464 | 0 | 10 | |

SAMPLE DUPLICATE: 1795649

| Parameter | Units | 60223486008 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L | 865 | 862 | 0 | 10 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60223486

QC Batch: 439282

Analysis Method: SM 2540C

QC Batch Method: SM 2540C

Analysis Description: 2540C Total Dissolved Solids

Associated Lab Samples: 60223486002, 60223486004, 60223486005

METHOD BLANK: 1796642

Matrix: Water

Associated Lab Samples: 60223486002, 60223486004, 60223486005

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|------------------------|-------|--------------|-----------------|-----|----------------|------------|
| Total Dissolved Solids | mg/L | <5.0 | 5.0 | 5.0 | 07/20/16 11:26 | |

LABORATORY CONTROL SAMPLE: 1796643

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|-------------|------------|-----------|--------------|------------|
| Total Dissolved Solids | mg/L | 1000 | 929 | 93 | 80-120 | |

SAMPLE DUPLICATE: 1796644

| Parameter | Units | 60223538001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L | 541 | 524 | 3 | 10 | |

SAMPLE DUPLICATE: 1796645

| Parameter | Units | 60223538003 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L | 583 | 579 | 1 | 10 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60223486

| | | | |
|-------------------------|--|-----------------------|-------------|
| QC Batch: | 438986 | Analysis Method: | SM 4500-H+B |
| QC Batch Method: | SM 4500-H+B | Analysis Description: | 4500H+B pH |
| Associated Lab Samples: | 60223486001, 60223486002, 60223486003, 60223486004, 60223486005, 60223486006, 60223486007, 60223486008, 60223486009, 60223486010, 60223486011, 60223486012 | | |

SAMPLE DUPLICATE: 1795581

| Parameter | Units | 60223486008 Result | Dup Result | RPD | Max RPD | Qualifiers |
|--------------------|------------|-----------------------|---------------|-----|------------|------------|
| pH at 25 Degrees C | Std. Units | 7.3 | 7.3 | 0 | 5 | H6 |

SAMPLE DUPLICATE: 1795582

| Parameter | Units | 60223608001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|--------------------|------------|-----------------------|---------------|-----|------------|------------|
| pH at 25 Degrees C | Std. Units | 8.3 | 8.3 | 0 | 5 | H6 |

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60223486

| | | | |
|-------------------------|--|-----------------------|-----------------|
| QC Batch: | 440718 | Analysis Method: | EPA 300.0 |
| QC Batch Method: | EPA 300.0 | Analysis Description: | 300.0 IC Anions |
| Associated Lab Samples: | 60223486001, 60223486002, 60223486003, 60223486004, 60223486005, 60223486006, 60223486007, 60223486008, 60223486009, 60223486010, 60223486011, 60223486012 | | |

| | | | |
|-------------------------|--|---------|-------|
| METHOD BLANK: | 1803297 | Matrix: | Water |
| Associated Lab Samples: | 60223486001, 60223486002, 60223486003, 60223486004, 60223486005, 60223486006, 60223486007, 60223486008, 60223486009, 60223486010, 60223486011, 60223486012 | | |

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Chloride | mg/L | <0.50 | 1.0 | 0.50 | 07/31/16 21:18 | |
| Fluoride | mg/L | <0.027 | 0.20 | 0.027 | 07/31/16 21:18 | |
| Sulfate | mg/L | <0.15 | 1.0 | 0.15 | 07/31/16 21:18 | |

LABORATORY CONTROL SAMPLE: 1803298

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Chloride | mg/L | 5 | 4.7 | 94 | 90-110 | |
| Fluoride | mg/L | 2.5 | 2.3 | 94 | 90-110 | |
| Sulfate | mg/L | 5 | 4.7 | 93 | 90-110 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1803299 1803300

| Parameter | Units | 60223484002 | | 1803300 | | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|-------------|-----------------|-----------|-----------------|----------|-----------|--------------|-----|---------|------|
| | | MS Result | MSD Spike Conc. | MS Result | MSD Spike Conc. | | | | | | |
| Chloride | mg/L | 6.1 | 5 | 11.0 | 5 | 98 | 96 | 80-120 | 1 | 15 | |
| Fluoride | mg/L | 0.14J | 2.5 | 2.6 | 2.5 | 98 | 95 | 80-120 | 3 | 15 | |

MATRIX SPIKE SAMPLE: 1803301

| Parameter | Units | 60223486008 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|--------------------|-------------|-----------|----------|--------------|------------|
| Fluoride | mg/L | 0.23 | 2.5 | 2.6 | 96 | 80-120 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60223486

| | | | |
|-------------------------|---|-----------------------|-----------------|
| QC Batch: | 440989 | Analysis Method: | EPA 300.0 |
| QC Batch Method: | EPA 300.0 | Analysis Description: | 300.0 IC Anions |
| Associated Lab Samples: | 60223486002, 60223486003, 60223486004, 60223486006, 60223486007, 60223486008, 60223486009, 60223486010, 60223486011 | | |

| | | | |
|-------------------------|---|---------|-------|
| METHOD BLANK: | 1803969 | Matrix: | Water |
| Associated Lab Samples: | 60223486002, 60223486003, 60223486004, 60223486006, 60223486007, 60223486008, 60223486009, 60223486010, 60223486011 | | |

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|------|----------------|------------|
| Chloride | mg/L | <0.50 | 1.0 | 0.50 | 08/02/16 08:57 | |
| Sulfate | mg/L | <0.15 | 1.0 | 0.15 | 08/02/16 08:57 | |

| LABORATORY CONTROL SAMPLE: 1803970 | | | | | | |
|------------------------------------|-------|-------------|------------|-----------|--------------|------------|
| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
| Chloride | mg/L | 5 | 4.7 | 95 | 90-110 | |
| Sulfate | mg/L | 5 | 4.9 | 98 | 90-110 | |

| MATRIX SPIKE SAMPLE: 1803971 | | | | | | | |
|------------------------------|-------|--------------------|-------------|-----------|----------|--------------|------------|
| Parameter | Units | 60223486008 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
| Chloride | mg/L | 18.4 | 10 | 27.5 | 91 | 80-120 | |
| Sulfate | mg/L | 338 | 250 | 574 | 95 | 80-120 | |

| MATRIX SPIKE SAMPLE: 1803972 | | | | | | | |
|------------------------------|-------|--------------------|-------------|-----------|----------|--------------|------------|
| Parameter | Units | 60224349003 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
| Chloride | mg/L | 28.3 | 10 | 36.9 | 86 | 80-120 | |
| Sulfate | mg/L | 174 | 100 | 266 | 92 | 80-120 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY
Pace Project No.: 60223486

QC Batch: 441128 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 60223486001

METHOD BLANK: 1804523 Matrix: Water
Associated Lab Samples: 60223486001

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|------|----------------|------------|
| Sulfate | mg/L | <0.15 | 1.0 | 0.15 | 08/03/16 08:56 | |

LABORATORY CONTROL SAMPLE: 1804524

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Sulfate | mg/L | 5 | 4.9 | 99 | 90-110 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1804525 1804526

| Parameter | Units | 60224567001 Result | MS | | MSD | | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|--------------------|-------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
| | | | Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | | | | | | |
| Sulfate | mg/L | ND | 500 | 500 | 545 | 547 | 98 | 98 | 80-120 | 0 | 15 | |

MATRIX SPIKE SAMPLE: 1804527

| Parameter | Units | 60224567004 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|--------------------|-------------|-----------|----------|--------------|------------|
| Sulfate | mg/L | 74.6 | 250 | 320 | 98 | 80-120 | |

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REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60223486

Sample: L-LMW-1S **Lab ID: 60223486001** Collected: 07/11/16 15:05 Received: 07/14/16 04:55 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|---|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.000 ± 0.328 (0.735) C:NA T:92% | pCi/L | 08/08/16 19:49 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 0.290 ± 0.310 (0.644) C:73% T:91% | pCi/L | 08/08/16 12:05 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60223486

Sample: L-LMW-2S **Lab ID: 60223486002** Collected: 07/13/16 11:17 Received: 07/14/16 04:55 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|--|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | -0.078 ± 0.402 (0.931) C:NA T:85% | pCi/L | 08/08/16 20:23 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 0.764 ± 0.423 (0.756) C:73% T:77% | pCi/L | 08/08/16 12:05 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60223486

Sample: L-LMW-3S **Lab ID: 60223486003** Collected: 07/12/16 15:15 Received: 07/14/16 04:55 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|--|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.411 ± 0.383 (0.504) C:NA T:96% | pCi/L | 08/08/16 19:50 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 1.12 ± 0.455 (0.711) C:75% T:84% | pCi/L | 08/08/16 12:05 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60223486

Sample: L-LMW-4S **Lab ID: 60223486004** Collected: 07/13/16 12:58 Received: 07/14/16 04:55 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|--|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.222 ± 0.338 (0.544) C:NA T:86% | pCi/L | 08/08/16 19:37 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 1.40 ± 0.502 (0.734) C:77% T:86% | pCi/L | 08/08/16 12:06 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60223486

Sample: L-LMW-5S **Lab ID: 60223486005** Collected: 07/13/16 12:44 Received: 07/14/16 04:55 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|--|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | -0.211 ± 0.414 (0.991) C:NA T:93% | pCi/L | 08/08/16 19:59 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 1.51 ± 0.492 (0.656) C:75% T:93% | pCi/L | 08/08/16 12:05 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60223486

Sample: L-LMW-6S **Lab ID: 60223486006** Collected: 07/12/16 16:10 Received: 07/14/16 04:55 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|--|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.000 ± 0.341 (0.765) C:NA T:92% | pCi/L | 08/08/16 20:13 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 1.10 ± 0.489 (0.831) C:73% T:87% | pCi/L | 08/08/16 12:05 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60223486

Sample: L-LMW-7S **Lab ID: 60223486007** Collected: 07/12/16 14:40 Received: 07/14/16 04:55 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|--|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.145 ± 0.349 (0.674) C:NA T:95% | pCi/L | 08/08/16 21:10 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 2.01 ± 0.573 (0.662) C:77% T:93% | pCi/L | 08/08/16 12:05 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60223486

Sample: L-LMW-8S **Lab ID: 60223486008** Collected: 07/12/16 12:57 Received: 07/14/16 04:55 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|--|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.148 ± 0.339 (0.546) C:NA T:90% | pCi/L | 08/08/16 20:25 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 0.0628 ± 0.351 (0.802) C:75% T:79% | pCi/L | 08/08/16 15:41 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60223486

| Sample: L-BMW-1S | | Lab ID: 60223486009 | Collected: 07/11/16 12:20 | Received: 07/14/16 04:55 | Matrix: Water | | |
|------------------|-----------|------------------------------|---------------------------|--------------------------|----------------|------------|------|
| PWS: | | Site ID: | Sample Type: | | | | |
| Parameters | Method | Act ± Unc (MDC) Carr Trac | | Units | Analyzed | CAS No. | Qual |
| Radium-226 | EPA 903.1 | 0.902 ± 0.667 (0.903) | | pCi/L | 08/08/16 20:11 | 13982-63-3 | |
| | | C:NA T:92% | | | | | |
| Radium-228 | EPA 904.0 | 1.59 ± 0.540 (0.752) | | pCi/L | 08/08/16 15:41 | 15262-20-1 | |
| | | C:77% T:82% | | | | | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60223486

| Sample: L-BMW-2S | | Lab ID: 60223486010 | Collected: 07/11/16 13:38 | Received: 07/14/16 04:55 | Matrix: Water | | |
|------------------|-----------|------------------------------|---------------------------|--------------------------|----------------|------------|------|
| PWS: | | Site ID: | Sample Type: | | | | |
| Parameters | Method | Act ± Unc (MDC) Carr Trac | | Units | Analyzed | CAS No. | Qual |
| Radium-226 | EPA 903.1 | 0.152 ± 0.472 (0.913) | | pCi/L | 08/08/16 20:55 | 13982-63-3 | |
| | | C:NA T:91% | | | | | |
| Radium-228 | EPA 904.0 | 0.169 ± 0.323 (0.711) | | pCi/L | 08/08/16 15:42 | 15262-20-1 | |
| | | C:77% T:84% | | | | | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60223486

Sample: L-LMW-DUP-1 **Lab ID: 60223486011** Collected: 07/11/16 00:00 Received: 07/14/16 04:55 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|---|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.135 ± 0.324 (0.625) C:NA T:99% | pCi/L | 08/08/16 20:42 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 0.339 ± 0.347 (0.717) C:75% T:82% | pCi/L | 08/08/16 15:42 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60223486

Sample: L-LMW-FB-1 **Lab ID: 60223486012** Collected: 07/12/16 15:25 Received: 07/14/16 04:55 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|--|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.292 ± 0.543 (0.924) C:NA T:92% | pCi/L | 08/08/16 20:43 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 0.00508 ± 0.312 (0.727) C:76% T:86% | pCi/L | 08/08/16 15:42 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60223486

Sample: L-LMW-8S MS **Lab ID: 60223486013** Collected: 07/12/16 12:57 Received: 07/14/16 04:55 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|--|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 87.4 %REC ± NA (NA) C:NA T:NA | pCi/L | 08/08/16 21:21 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 95.5 %REC +/- NA (NA) C:NA T:NA | pCi/L | 08/08/16 15:42 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60223486

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|---|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 99.0 %REC 12.5 RPD ± NA (NA) C:NA T:NA | pCi/L | 08/08/16 20:43 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 139 %REC 35.8 RPD +/- NA (NA) C:NA T:NA | pCi/L | 08/08/16 15:43 | 15262-20-1 | 1e |

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60223486

| | | | |
|-------------------------|--|-----------------------|------------------|
| QC Batch: | 227880 | Analysis Method: | EPA 903.1 |
| QC Batch Method: | EPA 903.1 | Analysis Description: | 903.1 Radium-226 |
| Associated Lab Samples: | 60223486001, 60223486002, 60223486003, 60223486004, 60223486005, 60223486006, 60223486007, 60223486008, 60223486009, 60223486010, 60223486011, 60223486012, 60223486013, 60223486014 | | |

METHOD BLANK: 1116165 Matrix: Water

Associated Lab Samples:

| Parameter | Act ± Unc (MDC) Carr Trac | Units | Analyzed | Qualifiers |
|------------|-----------------------------------|-------|----------------|------------|
| Radium-226 | -0.204 ± 0.353 (0.889) C:NA T:96% | pCi/L | 08/08/16 19:24 | |

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60223486

| | | | |
|-------------------------|--|-----------------------|------------------|
| QC Batch: | 227854 | Analysis Method: | EPA 904.0 |
| QC Batch Method: | EPA 904.0 | Analysis Description: | 904.0 Radium 228 |
| Associated Lab Samples: | 60223486001, 60223486002, 60223486003, 60223486004, 60223486005, 60223486006, 60223486007, 60223486008, 60223486009, 60223486010, 60223486011, 60223486012, 60223486013, 60223486014 | | |

METHOD BLANK: 1116121 Matrix: Water

Associated Lab Samples:

| Parameter | Act ± Unc (MDC) Carr Trac | Units | Analyzed | Qualifiers |
|------------|-----------------------------------|-------|----------------|------------|
| Radium-228 | 0.520 ± 0.358 (0.690) C:76% T:91% | pCi/L | 08/08/16 12:05 | |

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QUALIFIERS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60223486

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.

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.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

Act - Activity

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

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

LABORATORIES

PASI-K Pace Analytical Services - Kansas City

PASI-PA Pace Analytical Services - Greensburg

ANALYTE QUALIFIERS

1e The % recovery for the Ra-228 matrix spike dup performed on sample 60223486014 was high and outside of Pace's default acceptance criteria at 137.19%. The high bias may be due to sample matrix interference and indicate a high bias in the sample result.

H6 Analysis initiated outside of the 15 minute EPA required holding time.

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60223486

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|-------------|-------------|-----------------|----------|-------------------|------------------|
| 60223486001 | L-LMW-1S | EPA 200.7 | 438694 | EPA 200.7 | 438764 |
| 60223486002 | L-LMW-2S | EPA 200.7 | 438694 | EPA 200.7 | 438764 |
| 60223486003 | L-LMW-3S | EPA 200.7 | 438694 | EPA 200.7 | 438764 |
| 60223486004 | L-LMW-4S | EPA 200.7 | 438694 | EPA 200.7 | 438764 |
| 60223486005 | L-LMW-5S | EPA 200.7 | 438694 | EPA 200.7 | 438764 |
| 60223486006 | L-LMW-6S | EPA 200.7 | 438694 | EPA 200.7 | 438764 |
| 60223486007 | L-LMW-7S | EPA 200.7 | 438694 | EPA 200.7 | 438764 |
| 60223486008 | L-LMW-8S | EPA 200.7 | 438694 | EPA 200.7 | 438764 |
| 60223486009 | L-BMW-1S | EPA 200.7 | 438694 | EPA 200.7 | 438764 |
| 60223486010 | L-BMW-2S | EPA 200.7 | 438694 | EPA 200.7 | 438764 |
| 60223486011 | L-LMW-DUP-1 | EPA 200.7 | 438694 | EPA 200.7 | 438764 |
| 60223486012 | L-LMW-FB-1 | EPA 200.7 | 438694 | EPA 200.7 | 438764 |
| 60223486001 | L-LMW-1S | EPA 200.8 | 438697 | EPA 200.8 | 438765 |
| 60223486002 | L-LMW-2S | EPA 200.8 | 438697 | EPA 200.8 | 438765 |
| 60223486003 | L-LMW-3S | EPA 200.8 | 438697 | EPA 200.8 | 438765 |
| 60223486004 | L-LMW-4S | EPA 200.8 | 438697 | EPA 200.8 | 438765 |
| 60223486005 | L-LMW-5S | EPA 200.8 | 438697 | EPA 200.8 | 438765 |
| 60223486006 | L-LMW-6S | EPA 200.8 | 438697 | EPA 200.8 | 438765 |
| 60223486007 | L-LMW-7S | EPA 200.8 | 438697 | EPA 200.8 | 438765 |
| 60223486008 | L-LMW-8S | EPA 200.8 | 438697 | EPA 200.8 | 438765 |
| 60223486009 | L-BMW-1S | EPA 200.8 | 438697 | EPA 200.8 | 438765 |
| 60223486010 | L-BMW-2S | EPA 200.8 | 438697 | EPA 200.8 | 438765 |
| 60223486011 | L-LMW-DUP-1 | EPA 200.8 | 438697 | EPA 200.8 | 438765 |
| 60223486012 | L-LMW-FB-1 | EPA 200.8 | 438697 | EPA 200.8 | 438765 |
| 60223486001 | L-LMW-1S | EPA 7470 | 438582 | EPA 7470 | 438589 |
| 60223486002 | L-LMW-2S | EPA 7470 | 438582 | EPA 7470 | 438589 |
| 60223486003 | L-LMW-3S | EPA 7470 | 438582 | EPA 7470 | 438589 |
| 60223486004 | L-LMW-4S | EPA 7470 | 438582 | EPA 7470 | 438589 |
| 60223486005 | L-LMW-5S | EPA 7470 | 438582 | EPA 7470 | 438589 |
| 60223486006 | L-LMW-6S | EPA 7470 | 438582 | EPA 7470 | 438589 |
| 60223486007 | L-LMW-7S | EPA 7470 | 438582 | EPA 7470 | 438589 |
| 60223486008 | L-LMW-8S | EPA 7470 | 438582 | EPA 7470 | 438589 |
| 60223486009 | L-BMW-1S | EPA 7470 | 438582 | EPA 7470 | 438589 |
| 60223486010 | L-BMW-2S | EPA 7470 | 438582 | EPA 7470 | 438589 |
| 60223486011 | L-LMW-DUP-1 | EPA 7470 | 438582 | EPA 7470 | 438589 |
| 60223486012 | L-LMW-FB-1 | EPA 7470 | 438582 | EPA 7470 | 438589 |
| 60223486001 | L-LMW-1S | EPA 903.1 | 227880 | | |
| 60223486002 | L-LMW-2S | EPA 903.1 | 227880 | | |
| 60223486003 | L-LMW-3S | EPA 903.1 | 227880 | | |
| 60223486004 | L-LMW-4S | EPA 903.1 | 227880 | | |
| 60223486005 | L-LMW-5S | EPA 903.1 | 227880 | | |
| 60223486006 | L-LMW-6S | EPA 903.1 | 227880 | | |
| 60223486007 | L-LMW-7S | EPA 903.1 | 227880 | | |
| 60223486008 | L-LMW-8S | EPA 903.1 | 227880 | | |
| 60223486009 | L-BMW-1S | EPA 903.1 | 227880 | | |
| 60223486010 | L-BMW-2S | EPA 903.1 | 227880 | | |
| 60223486011 | L-LMW-DUP-1 | EPA 903.1 | 227880 | | |

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60223486

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|-------------|--------------|-----------------|----------|-------------------|------------------|
| 60223486012 | L-LMW-FB-1 | EPA 903.1 | 227880 | | |
| 60223486013 | L-LMW-8S MS | EPA 903.1 | 227880 | | |
| 60223486014 | L-LMW-8S MSD | EPA 903.1 | 227880 | | |
| 60223486001 | L-LMW-1S | EPA 904.0 | 227854 | | |
| 60223486002 | L-LMW-2S | EPA 904.0 | 227854 | | |
| 60223486003 | L-LMW-3S | EPA 904.0 | 227854 | | |
| 60223486004 | L-LMW-4S | EPA 904.0 | 227854 | | |
| 60223486005 | L-LMW-5S | EPA 904.0 | 227854 | | |
| 60223486006 | L-LMW-6S | EPA 904.0 | 227854 | | |
| 60223486007 | L-LMW-7S | EPA 904.0 | 227854 | | |
| 60223486008 | L-LMW-8S | EPA 904.0 | 227854 | | |
| 60223486009 | L-BMW-1S | EPA 904.0 | 227854 | | |
| 60223486010 | L-BMW-2S | EPA 904.0 | 227854 | | |
| 60223486011 | L-LMW-DUP-1 | EPA 904.0 | 227854 | | |
| 60223486012 | L-LMW-FB-1 | EPA 904.0 | 227854 | | |
| 60223486013 | L-LMW-8S MS | EPA 904.0 | 227854 | | |
| 60223486014 | L-LMW-8S MSD | EPA 904.0 | 227854 | | |
| 60223486001 | L-LMW-1S | SM 2540C | 438865 | | |
| 60223486002 | L-LMW-2S | SM 2540C | 439282 | | |
| 60223486003 | L-LMW-3S | SM 2540C | 439017 | | |
| 60223486004 | L-LMW-4S | SM 2540C | 439282 | | |
| 60223486005 | L-LMW-5S | SM 2540C | 439282 | | |
| 60223486006 | L-LMW-6S | SM 2540C | 439017 | | |
| 60223486007 | L-LMW-7S | SM 2540C | 439017 | | |
| 60223486008 | L-LMW-8S | SM 2540C | 439017 | | |
| 60223486009 | L-BMW-1S | SM 2540C | 438865 | | |
| 60223486010 | L-BMW-2S | SM 2540C | 438865 | | |
| 60223486011 | L-LMW-DUP-1 | SM 2540C | 438865 | | |
| 60223486012 | L-LMW-FB-1 | SM 2540C | 439017 | | |
| 60223486001 | L-LMW-1S | SM 4500-H+B | 438986 | | |
| 60223486002 | L-LMW-2S | SM 4500-H+B | 438986 | | |
| 60223486003 | L-LMW-3S | SM 4500-H+B | 438986 | | |
| 60223486004 | L-LMW-4S | SM 4500-H+B | 438986 | | |
| 60223486005 | L-LMW-5S | SM 4500-H+B | 438986 | | |
| 60223486006 | L-LMW-6S | SM 4500-H+B | 438986 | | |
| 60223486007 | L-LMW-7S | SM 4500-H+B | 438986 | | |
| 60223486008 | L-LMW-8S | SM 4500-H+B | 438986 | | |
| 60223486009 | L-BMW-1S | SM 4500-H+B | 438986 | | |
| 60223486010 | L-BMW-2S | SM 4500-H+B | 438986 | | |
| 60223486011 | L-LMW-DUP-1 | SM 4500-H+B | 438986 | | |
| 60223486012 | L-LMW-FB-1 | SM 4500-H+B | 438986 | | |
| 60223486001 | L-LMW-1S | EPA 300.0 | 440718 | | |
| 60223486001 | L-LMW-1S | EPA 300.0 | 441128 | | |

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60223486

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|-------------|-------------|-----------------|----------|-------------------|------------------|
| 60223486002 | L-LMW-2S | EPA 300.0 | 440718 | | |
| 60223486002 | L-LMW-2S | EPA 300.0 | 440989 | | |
| 60223486003 | L-LMW-3S | EPA 300.0 | 440718 | | |
| 60223486003 | L-LMW-3S | EPA 300.0 | 440989 | | |
| 60223486004 | L-LMW-4S | EPA 300.0 | 440718 | | |
| 60223486004 | L-LMW-4S | EPA 300.0 | 440989 | | |
| 60223486005 | L-LMW-5S | EPA 300.0 | 440718 | | |
| 60223486006 | L-LMW-6S | EPA 300.0 | 440718 | | |
| 60223486006 | L-LMW-6S | EPA 300.0 | 440989 | | |
| 60223486007 | L-LMW-7S | EPA 300.0 | 440718 | | |
| 60223486007 | L-LMW-7S | EPA 300.0 | 440989 | | |
| 60223486008 | L-LMW-8S | EPA 300.0 | 440718 | | |
| 60223486008 | L-LMW-8S | EPA 300.0 | 440989 | | |
| 60223486009 | L-BMW-1S | EPA 300.0 | 440718 | | |
| 60223486009 | L-BMW-1S | EPA 300.0 | 440989 | | |
| 60223486010 | L-BMW-2S | EPA 300.0 | 440718 | | |
| 60223486010 | L-BMW-2S | EPA 300.0 | 440989 | | |
| 60223486011 | L-LMW-DUP-1 | EPA 300.0 | 440718 | | |
| 60223486011 | L-LMW-DUP-1 | EPA 300.0 | 440989 | | |
| 60223486012 | L-LMW-FB-1 | EPA 300.0 | 440718 | | |

REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

WO#: 60223486
Barcode
60223486

Client Name: Golder

Courier: FedEx [] UPS [] VIA [] Clay [] PEX [] ECI [] Pace [] Other [x] Client []

Tracking #: Xroads Pace Shipping Label Used? Yes [] No [x]

Custody Seal on Cooler/Box Present: Yes [x] No [] Seals intact: Yes [x] No []

Packing Material: Bubble Wrap [] Bubble Bags [] Foam [] None [x] Other []

Thermometer Used: T-266 / T-239 Type of Ice: Wet [x] Blue [] None [] Samples received on ice, cooling process has begun.

Cooler Temperature: 20.3 22.4 3.3
Temperature should be above freezing to 6°C

Optional
Proj Due Date:
Proj Name:
Date and initials of person examining contents: JW 7/14/16

Table with 18 rows of inspection items and checkboxes. Includes items like 'Chain of Custody present', 'Short Hold Time analyses (<72hr):', 'Rush Turn Around Time requested:', 'Sufficient volume:', 'Correct containers used:', 'Includes date/time/ID/analyses Matrix: WT', 'All containers needing preservation have been checked.', 'Exceptions: VOA, Coliform, O&G, WI-DRO (water)', 'Trip Blank present:', 'Pace Trip Blank lot # (if purchased):', 'Headspace in VOA vials (>6mm):', 'Project sampled in USDA Regulated Area:', 'Additional labels attached to 5035A vials in the field?'

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

Person Contacted: Jami Church Date/Time: 7/14/16

Comments/ Resolution: Project Manager Review: Date:

Chain of Custody

30190173



Workorder: 60223486 Workorder Name: AMEREN LABADIE ENERGY CTR-FLY Owner Received Date: 7/14/2016 Results Requested By: 7/28/2016

Report To: Subcontract To: Requested Analysis:

Jamie Church
Pace Analytical Kansas
9608 Loiret Blvd.
Lenexa, KS 66219
Phone (913)599-5665

Pace Analytical Pittsburgh
1638 Roseytown Road
Suites 2,3, & 4
Greensburg, PA 15601
Phone (724)850-5600

WO#: 30190173



Radium 226 & 228

| Item | Sample ID | Sample Type | Collect Date/Time | Lab ID | Matrix | Preserved Containers | | | | | | | | | | LAB USE ONLY | | | | | | | | | |
|------|--------------|-------------|-------------------|-------------|--------|----------------------|---|---|---|---|---|---|---|---|----|--------------|----|----|----|----|--|--|--|-----|-----|
| | | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | | 11 | 12 | 13 | 14 | | | | | |
| 1 | L-LMW-1S | PS | 7/11/2016 15:05 | 60223486001 | Water | | | | | | | | | | | | | | | | | | | 001 | |
| 2 | L-LMW-2S | PS | 7/13/2016 11:17 | 60223486002 | Water | | | | | | | | | | | | | | | | | | | | 002 |
| 3 | L-LMW-3S | PS | 7/12/2016 15:15 | 60223486003 | Water | | | | | | | | | | | | | | | | | | | | 003 |
| 4 | L-LMW-4S | PS | 7/13/2016 12:58 | 60223486004 | Water | | | | | | | | | | | | | | | | | | | | 004 |
| 5 | L-LMW-5S | PS | 7/13/2016 12:44 | 60223486005 | Water | | | | | | | | | | | | | | | | | | | | 005 |
| 6 | L-LMW-6S | PS | 7/12/2016 16:10 | 60223486006 | Water | | | | | | | | | | | | | | | | | | | | 006 |
| 7 | L-LMW-7S | PS | 7/12/2016 14:40 | 60223486007 | Water | | | | | | | | | | | | | | | | | | | | 007 |
| 8 | L-LMW-8S | RQS | 7/12/2016 12:57 | 60223486008 | Water | | | | | | | | | | | | | | | | | | | | 008 |
| 9 | L-BMW-1S | PS | 7/11/2016 12:20 | 60223486009 | Water | | | | | | | | | | | | | | | | | | | | 009 |
| 10 | L-BMW-2S | PS | 7/11/2016 13:38 | 60223486010 | Water | | | | | | | | | | | | | | | | | | | | 010 |
| 11 | L-LMW-DUP-1 | PS | 7/11/2016 00:00 | 60223486011 | Water | | | | | | | | | | | | | | | | | | | | 011 |
| 12 | L-LMW-FB-1 | PS | 7/12/2016 15:25 | 60223486012 | Water | | | | | | | | | | | | | | | | | | | | 012 |
| 13 | L-LMW-8S MS | PS | 7/12/2016 12:57 | 60223486013 | Water | | | | | | | | | | | | | | | | | | | | 013 |
| 14 | L-LMW-8S MSD | PS | 7/12/2016 12:57 | 60223486014 | Water | | | | | | | | | | | | | | | | | | | | 014 |

| Transfers | Released By | Date/Time | Received | Date/Time | Comments |
|-----------|--------------------|----------------|---------------|--------------|----------|
| 1 | <i>[Signature]</i> | 07/15/16 17:00 | Karen E. Hill | 7/14/16 0455 | |
| 2 | | | | | |
| 3 | | | | | |

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

Sample Condition Upon Receipt Pittsburgh

30190173



Client Name: Pace, Kansas Project # _____

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

Tracking #: 6703 1646 4300

Custody Seal on Cooler/Box Present: yes no Seals intact: yes no

Thermometer Used N/A Type of Ice: Wet Blue (None)

Cooler Temperature Observed Temp N/A °C Correction Factor: N/A °C Final Temp: N/A °C

Temp should be above freezing to 6°C

Date and Initials of person examining contents: KD 7/19/10

Comments:

| | Yes | No | N/A | |
|--|-------------------------------------|-------------------------------------|-------------------------------------|--|
| Chain of Custody Present: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 1. |
| Chain of Custody Filled Out: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 2. |
| Chain of Custody Relinquished: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 3. |
| Sampler Name & Signature on COC: | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 4. |
| Sample Labels match COC: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 5. |
| -Includes date/time/ID/Analysis Matrix: <u>WT</u> | | | | |
| Samples Arrived within Hold Time: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 6. |
| Short Hold Time Analysis (<72hr remaining): | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 7. |
| Rush Turn Around Time Requested: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 8. |
| Sufficient Volume: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 9. |
| Correct Containers Used: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 10. |
| -Pace Containers Used: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Containers Intact: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 11. |
| Filtered volume received for Dissolved tests | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | 12. |
| All containers needing preservation have been checked. | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 13. |
| All containers needing preservation are found to be in compliance with EPA recommendation. | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| exceptions: VOA, coliform, TOC, O&G, Phenolics | | | | Initial when completed: <u>KD</u> Date/time of preservation: _____ |
| | | | | Lot # of added preservative: _____ |
| Headspace in VOA Vials (>6mm): | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | 14. |
| Trip Blank Present: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | 15. |
| Trip Blank Custody Seals Present | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____ Contacted By: _____

Comments/ Resolution: _____

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

October 12, 2016

Mark Haddock
Golder Associates
820 S. Main St
Suite 100
Saint Charles, MO 63301

RE: Project: AMEREN LABADIE ENERGY CTR-FLY
Pace Project No.: 60227402

Dear Mark Haddock:

Enclosed are the analytical results for sample(s) received by the laboratory between September 10, 2016 and September 14, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Jamie Church
jamie.church@pacelabs.com
Project Manager

Enclosures

cc: Jeffrey Ingram, Golder Associates
John Suozzi, Golder Associates



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60227402

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601

L-A-B DOD-ELAP Accreditation #: L2417

Alabama Certification #: 41590

Arizona Certification #: AZ0734

Arkansas Certification

California Certification #: 04222CA

Colorado Certification

Connecticut Certification #: PH-0694

Delaware Certification

Florida/TNI Certification #: E87683

Georgia Certification #: C040

Guam Certification

Hawaii Certification

Idaho Certification

Illinois Certification

Indiana Certification

Iowa Certification #: 391

Kansas/TNI Certification #: E-10358

Kentucky Certification #: 90133

Louisiana DHH/TNI Certification #: LA140008

Louisiana DEQ/TNI Certification #: 4086

Maine Certification #: PA00091

Maryland Certification #: 308

Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification

Missouri Certification #: 235

Montana Certification #: Cert 0082

Nebraska Certification #: NE-05-29-14

Nevada Certification #: PA014572015-1

New Hampshire/TNI Certification #: 2976

New Jersey/TNI Certification #: PA 051

New Mexico Certification #: PA01457

New York/TNI Certification #: 10888

North Carolina Certification #: 42706

North Dakota Certification #: R-190

Oregon/TNI Certification #: PA200002

Pennsylvania/TNI Certification #: 65-00282

Puerto Rico Certification #: PA01457

Rhode Island Certification #: 65-00282

South Dakota Certification

Tennessee Certification #: TN2867

Texas/TNI Certification #: T104704188-14-8

Utah/TNI Certification #: PA014572015-5

USDA Soil Permit #: P330-14-00213

Vermont Dept. of Health: ID# VT-0282

Virgin Island/PADEP Certification

Virginia/VELAP Certification #: 460198

Washington Certification #: C868

West Virginia DEP Certification #: 143

West Virginia DHHR Certification #: 9964C

Wisconsin Certification

Wyoming Certification #: 8TMS-L

Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 15-016-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407

Utah Certification #: KS00021

Kansas Field Laboratory Accreditation: # E-92587

Missouri Certification: 10070

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60227402

| Lab ID | Sample ID | Matrix | Date Collected | Date Received |
|-------------|--------------|--------|----------------|----------------|
| 60227402001 | L-LMW-2S | Water | 09/09/16 10:55 | 09/10/16 03:30 |
| 60227402002 | L-BMW-2S | Water | 09/09/16 09:25 | 09/10/16 03:30 |
| 60227402003 | L-LMW-2S MS | Water | 09/09/16 10:55 | 09/10/16 03:30 |
| 60227402004 | L-LMW-2S MSD | Water | 09/09/16 10:55 | 09/10/16 03:30 |
| 60227402005 | L-LMW-1S | Water | 09/12/16 14:55 | 09/14/16 04:40 |
| 60227402006 | L-LMW-3S | Water | 09/13/16 13:13 | 09/14/16 04:40 |
| 60227402007 | L-LMW-4S | Water | 09/13/16 11:18 | 09/14/16 04:40 |
| 60227402008 | L-LMW-5S | Water | 09/13/16 11:25 | 09/14/16 04:40 |
| 60227402009 | L-LMW-6S | Water | 09/12/16 13:20 | 09/14/16 04:40 |
| 60227402010 | L-LMW-7S | Water | 09/12/16 11:10 | 09/14/16 04:40 |
| 60227402011 | L-LMW-8S | Water | 09/12/16 09:40 | 09/14/16 04:40 |
| 60227402012 | L-BMW-1S | Water | 09/13/16 15:06 | 09/14/16 04:40 |
| 60227402013 | L-LMW-DUP-1 | Water | 09/12/16 08:00 | 09/14/16 04:40 |
| 60227402014 | L-LMW-FB-1 | Water | 09/12/16 14:25 | 09/14/16 04:40 |

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60227402

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|-------------|--------------|-------------|----------|-------------------|------------|
| 60227402001 | L-LMW-2S | EPA 200.7 | SMW | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |
| | | EPA 7470 | NDJ | 1 | PASI-K |
| | | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| | | SM 2540C | JMC1 | 1 | PASI-K |
| | | SM 4500-H+B | HAC | 1 | PASI-K |
| 60227402002 | L-BMW-2S | EPA 300.0 | OL | 3 | PASI-K |
| | | EPA 200.7 | SMW | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |
| | | EPA 7470 | NDJ | 1 | PASI-K |
| | | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| | | SM 2540C | JMC1 | 1 | PASI-K |
| 60227402003 | L-LMW-2S MS | SM 4500-H+B | HAC | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| 60227402004 | L-LMW-2S MSD | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| 60227402005 | L-LMW-1S | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| | | EPA 200.7 | SMW | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |
| | | EPA 7470 | NDJ | 1 | PASI-K |
| | | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| 60227402006 | L-LMW-3S | SM 2540C | JMC1 | 1 | PASI-K |
| | | SM 4500-H+B | HAC | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| | | EPA 200.7 | SMW | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |
| | | EPA 7470 | NDJ | 1 | PASI-K |
| | | EPA 903.1 | WRR | 1 | PASI-PA |
| 60227402007 | L-LMW-4S | EPA 904.0 | JLW | 1 | PASI-PA |
| | | SM 2540C | JMC1 | 1 | PASI-K |
| | | SM 4500-H+B | HAC | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| | | EPA 200.7 | SMW | 8 | PASI-K |

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SAMPLE ANALYTE COUNT

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60227402

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|-------------|-----------|-------------|----------|-------------------|------------|
| 60227402008 | L-LMW-5S | EPA 200.8 | JGP | 6 | PASI-K |
| | | EPA 7470 | NDJ | 1 | PASI-K |
| | | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| | | SM 2540C | JMC1 | 1 | PASI-K |
| | | SM 4500-H+B | HAC | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| | | EPA 200.7 | SMW | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |
| | | EPA 7470 | NDJ | 1 | PASI-K |
| | | EPA 903.1 | WRR | 1 | PASI-PA |
| 60227402009 | L-LMW-6S | EPA 904.0 | JLW | 1 | PASI-PA |
| | | SM 2540C | JMC1 | 1 | PASI-K |
| | | SM 4500-H+B | HAC | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| | | EPA 200.7 | SMW | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |
| | | EPA 7470 | NDJ | 1 | PASI-K |
| | | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| | | SM 2540C | JMC1 | 1 | PASI-K |
| | | SM 4500-H+B | HAC | 1 | PASI-K |
| 60227402010 | L-LMW-7S | EPA 300.0 | OL | 3 | PASI-K |
| | | EPA 200.7 | SMW | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |
| | | EPA 7470 | NDJ | 1 | PASI-K |
| | | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| | | SM 2540C | JMC1 | 1 | PASI-K |
| | | SM 4500-H+B | HAC | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| | | EPA 200.7 | SMW | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |
| 60227402011 | L-LMW-8S | EPA 7470 | NDJ | 1 | PASI-K |
| | | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| | | SM 2540C | JMC1 | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| | | EPA 200.7 | SMW | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |
| | | EPA 7470 | NDJ | 1 | PASI-K |
| | | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| | | SM 2540C | JMC1 | 1 | PASI-K |

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SAMPLE ANALYTE COUNT

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60227402

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|-------------|-------------|-------------|----------|-------------------|------------|
| 60227402012 | L-BMW-1S | SM 4500-H+B | HAC | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| | | EPA 200.7 | SMW | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |
| | | EPA 7470 | NDJ | 1 | PASI-K |
| | | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| | | SM 2540C | JMC1 | 1 | PASI-K |
| 60227402013 | L-LMW-DUP-1 | SM 4500-H+B | HAC | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| | | EPA 200.7 | SMW | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |
| | | EPA 7470 | NDJ | 1 | PASI-K |
| | | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| | | SM 2540C | JMC1 | 1 | PASI-K |
| 60227402014 | L-LMW-FB-1 | SM 4500-H+B | HAC | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| | | EPA 200.7 | SMW | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |
| | | EPA 7470 | NDJ | 1 | PASI-K |
| | | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| | | SM 2540C | JMC1 | 1 | PASI-K |
| | | SM 4500-H+B | HAC | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60227402

Sample: L-LMW-2S **Lab ID: 60227402001** Collected: 09/09/16 10:55 Received: 09/10/16 03:30 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 55.4 | ug/L | 10.0 | 0.58 | 1 | 09/13/16 10:25 | 09/13/16 16:27 | 7440-39-3 | |
| Beryllium | <0.26 | ug/L | 1.0 | 0.26 | 1 | 09/13/16 10:25 | 09/13/16 16:27 | 7440-41-7 | |
| Boron | 6900 | ug/L | 100 | 50.0 | 1 | 09/13/16 10:25 | 09/13/16 16:27 | 7440-42-8 | |
| Calcium | 76400 | ug/L | 100 | 8.1 | 1 | 09/13/16 10:25 | 09/13/16 16:27 | 7440-70-2 | |
| Cobalt | <0.72 | ug/L | 5.0 | 0.72 | 1 | 09/13/16 10:25 | 09/13/16 16:27 | 7440-48-4 | |
| Lead | <2.5 | ug/L | 5.0 | 2.5 | 1 | 09/13/16 10:25 | 09/13/16 16:27 | 7439-92-1 | |
| Lithium | 14.3 | ug/L | 10.0 | 4.9 | 1 | 09/13/16 10:25 | 09/13/16 16:27 | 7439-93-2 | |
| Molybdenum | 119 | ug/L | 20.0 | 0.52 | 1 | 09/13/16 10:25 | 09/13/16 16:27 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | 0.066J | ug/L | 1.0 | 0.058 | 1 | 09/13/16 10:25 | 09/20/16 14:22 | 7440-36-0 | |
| Arsenic | 27.3 | ug/L | 1.0 | 0.10 | 1 | 09/13/16 10:25 | 09/20/16 14:22 | 7440-38-2 | |
| Cadmium | <0.029 | ug/L | 0.50 | 0.029 | 1 | 09/13/16 10:25 | 09/20/16 14:22 | 7440-43-9 | |
| Chromium | <0.34 | ug/L | 1.0 | 0.34 | 1 | 09/13/16 10:25 | 09/20/16 14:22 | 7440-47-3 | |
| Selenium | <0.18 | ug/L | 1.0 | 0.18 | 1 | 09/13/16 10:25 | 09/20/16 14:22 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 09/13/16 10:25 | 09/20/16 14:22 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.039 | ug/L | 0.20 | 0.039 | 1 | 09/13/16 08:30 | 09/13/16 11:50 | 7439-97-6 | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 526 | mg/L | 5.0 | 5.0 | 1 | | 09/16/16 10:03 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 9.4 | Std. Units | 0.10 | 0.10 | 1 | | 09/13/16 10:15 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 19.1 | mg/L | 1.0 | 0.50 | 1 | | 10/01/16 09:55 | 16887-00-6 | |
| Fluoride | 0.13J | mg/L | 0.20 | 0.027 | 1 | | 10/01/16 09:55 | 16984-48-8 | |
| Sulfate | 311 | mg/L | 20.0 | 3.1 | 20 | | 10/02/16 11:51 | 14808-79-8 | |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60227402

Sample: L-BMW-2S **Lab ID: 60227402002** Collected: 09/09/16 09:25 Received: 09/10/16 03:30 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 249 | ug/L | 10.0 | 0.58 | 1 | 09/13/16 10:25 | 09/13/16 16:38 | 7440-39-3 | |
| Beryllium | <0.26 | ug/L | 1.0 | 0.26 | 1 | 09/13/16 10:25 | 09/13/16 16:38 | 7440-41-7 | |
| Boron | 61.0J | ug/L | 100 | 50.0 | 1 | 09/13/16 10:25 | 09/13/16 16:38 | 7440-42-8 | |
| Calcium | 137000 | ug/L | 100 | 8.1 | 1 | 09/13/16 10:25 | 09/13/16 16:38 | 7440-70-2 | |
| Cobalt | <0.72 | ug/L | 5.0 | 0.72 | 1 | 09/13/16 10:25 | 09/13/16 16:38 | 7440-48-4 | |
| Lead | <2.5 | ug/L | 5.0 | 2.5 | 1 | 09/13/16 10:25 | 09/13/16 16:38 | 7439-92-1 | |
| Lithium | 17.6 | ug/L | 10.0 | 4.9 | 1 | 09/13/16 10:25 | 09/13/16 16:38 | 7439-93-2 | |
| Molybdenum | 3.0J | ug/L | 20.0 | 0.52 | 1 | 09/13/16 10:25 | 09/13/16 16:38 | 7439-98-7 | B |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | 0.20J | ug/L | 1.0 | 0.058 | 1 | 09/13/16 10:25 | 09/20/16 14:35 | 7440-36-0 | |
| Arsenic | 0.49J | ug/L | 1.0 | 0.10 | 1 | 09/13/16 10:25 | 09/20/16 14:35 | 7440-38-2 | |
| Cadmium | 0.040J | ug/L | 0.50 | 0.029 | 1 | 09/13/16 10:25 | 09/20/16 14:35 | 7440-43-9 | |
| Chromium | <0.34 | ug/L | 1.0 | 0.34 | 1 | 09/13/16 10:25 | 09/20/16 14:35 | 7440-47-3 | |
| Selenium | 0.75J | ug/L | 1.0 | 0.18 | 1 | 09/13/16 10:25 | 09/20/16 14:35 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 09/13/16 10:25 | 09/20/16 14:35 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.039 | ug/L | 0.20 | 0.039 | 1 | 09/13/16 08:30 | 09/13/16 11:56 | 7439-97-6 | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 480 | mg/L | 5.0 | 5.0 | 1 | | 09/16/16 10:17 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.2 | Std. Units | 0.10 | 0.10 | 1 | | 09/13/16 11:25 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 1.9 | mg/L | 1.0 | 0.50 | 1 | | 10/01/16 10:38 | 16887-00-6 | |
| Fluoride | 0.14J | mg/L | 0.20 | 0.027 | 1 | | 10/01/16 10:38 | 16984-48-8 | |
| Sulfate | 15.4 | mg/L | 1.0 | 0.15 | 1 | | 10/01/16 10:38 | 14808-79-8 | |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60227402

Sample: L-LMW-1S **Lab ID: 60227402005** Collected: 09/12/16 14:55 Received: 09/14/16 04:40 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 141 | ug/L | 10.0 | 0.58 | 1 | 09/14/16 15:40 | 09/15/16 16:46 | 7440-39-3 | |
| Beryllium | <0.26 | ug/L | 1.0 | 0.26 | 1 | 09/14/16 15:40 | 09/15/16 16:46 | 7440-41-7 | |
| Boron | 4340 | ug/L | 100 | 50.0 | 1 | 09/14/16 15:40 | 09/15/16 16:46 | 7440-42-8 | |
| Calcium | 139000 | ug/L | 100 | 8.1 | 1 | 09/14/16 15:40 | 09/15/16 16:46 | 7440-70-2 | |
| Cobalt | 1.5J | ug/L | 5.0 | 0.72 | 1 | 09/14/16 15:40 | 09/15/16 16:46 | 7440-48-4 | |
| Lead | <2.5 | ug/L | 5.0 | 2.5 | 1 | 09/14/16 15:40 | 09/15/16 16:46 | 7439-92-1 | |
| Lithium | 13.4 | ug/L | 10.0 | 4.9 | 1 | 09/14/16 15:40 | 09/15/16 16:46 | 7439-93-2 | |
| Molybdenum | 3.0J | ug/L | 20.0 | 0.52 | 1 | 09/14/16 15:40 | 09/15/16 16:46 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | 0.13J | ug/L | 1.0 | 0.058 | 1 | 09/14/16 15:40 | 09/21/16 15:51 | 7440-36-0 | |
| Arsenic | 5.2 | ug/L | 1.0 | 0.10 | 1 | 09/14/16 15:40 | 09/21/16 15:51 | 7440-38-2 | |
| Cadmium | 0.061J | ug/L | 0.50 | 0.029 | 1 | 09/14/16 15:40 | 09/21/16 15:51 | 7440-43-9 | |
| Chromium | 0.42J | ug/L | 1.0 | 0.34 | 1 | 09/14/16 15:40 | 09/21/16 15:51 | 7440-47-3 | |
| Selenium | 0.72J | ug/L | 1.0 | 0.18 | 1 | 09/14/16 15:40 | 09/21/16 15:51 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 09/14/16 15:40 | 09/21/16 15:51 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.039 | ug/L | 0.20 | 0.039 | 1 | 09/15/16 08:30 | 09/15/16 13:15 | 7439-97-6 | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 615 | mg/L | 5.0 | 5.0 | 1 | | 09/19/16 08:59 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.2 | Std. Units | 0.10 | 0.10 | 1 | | 09/19/16 15:30 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 3.2 | mg/L | 1.0 | 0.50 | 1 | | 10/06/16 15:56 | 16887-00-6 | |
| Fluoride | 0.092J | mg/L | 0.20 | 0.027 | 1 | | 10/06/16 15:56 | 16984-48-8 | |
| Sulfate | 118 | mg/L | 10.0 | 1.5 | 10 | | 10/08/16 01:40 | 14808-79-8 | |

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60227402

Sample: L-LMW-3S **Lab ID: 60227402006** Collected: 09/13/16 13:13 Received: 09/14/16 04:40 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|---------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 67.2 | ug/L | 10.0 | 0.58 | 1 | 09/14/16 15:40 | 09/15/16 16:50 | 7440-39-3 | |
| Beryllium | <0.26 | ug/L | 1.0 | 0.26 | 1 | 09/14/16 15:40 | 09/15/16 16:50 | 7440-41-7 | |
| Boron | 3950 | ug/L | 100 | 50.0 | 1 | 09/14/16 15:40 | 09/15/16 16:50 | 7440-42-8 | |
| Calcium | 53600 | ug/L | 100 | 8.1 | 1 | 09/14/16 15:40 | 09/15/16 16:50 | 7440-70-2 | |
| Cobalt | <0.72 | ug/L | 5.0 | 0.72 | 1 | 09/14/16 15:40 | 09/15/16 16:50 | 7440-48-4 | |
| Lead | <2.5 | ug/L | 5.0 | 2.5 | 1 | 09/14/16 15:40 | 09/15/16 16:50 | 7439-92-1 | |
| Lithium | 23.5 | ug/L | 10.0 | 4.9 | 1 | 09/14/16 15:40 | 09/15/16 16:50 | 7439-93-2 | |
| Molybdenum | 171 | ug/L | 20.0 | 0.52 | 1 | 09/14/16 15:40 | 09/15/16 16:50 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | <0.058 | ug/L | 1.0 | 0.058 | 1 | 09/14/16 15:40 | 09/21/16 16:09 | 7440-36-0 | |
| Arsenic | 1.5 | ug/L | 1.0 | 0.10 | 1 | 09/14/16 15:40 | 09/21/16 16:09 | 7440-38-2 | |
| Cadmium | <0.029 | ug/L | 0.50 | 0.029 | 1 | 09/14/16 15:40 | 09/21/16 16:09 | 7440-43-9 | |
| Chromium | 0.98J | ug/L | 1.0 | 0.34 | 1 | 09/14/16 15:40 | 09/21/16 16:09 | 7440-47-3 | |
| Selenium | 0.19J | ug/L | 1.0 | 0.18 | 1 | 09/14/16 15:40 | 09/21/16 16:09 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 09/14/16 15:40 | 09/21/16 16:09 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.039 | ug/L | 0.20 | 0.039 | 1 | 09/15/16 08:30 | 09/15/16 13:17 | 7439-97-6 | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 501 | mg/L | 5.0 | 5.0 | 1 | | 09/19/16 09:09 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.6 | Std. Units | 0.10 | 0.10 | 1 | | 09/20/16 10:55 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 20.8 | mg/L | 2.0 | 1.0 | 2 | | 10/08/16 01:54 | 16887-00-6 | |
| Fluoride | 0.34 | mg/L | 0.20 | 0.027 | 1 | | 10/06/16 16:12 | 16984-48-8 | |
| Sulfate | 256 | mg/L | 20.0 | 3.1 | 20 | | 10/08/16 02:08 | 14808-79-8 | |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60227402

Sample: L-LMW-4S **Lab ID: 60227402007** Collected: 09/13/16 11:18 Received: 09/14/16 04:40 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|--|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 109 | ug/L | 10.0 | 0.58 | 1 | 09/14/16 15:40 | 09/15/16 16:54 | 7440-39-3 | |
| Beryllium | <0.26 | ug/L | 1.0 | 0.26 | 1 | 09/14/16 15:40 | 09/15/16 16:54 | 7440-41-7 | |
| Boron | 9560 | ug/L | 100 | 50.0 | 1 | 09/14/16 15:40 | 09/15/16 16:54 | 7440-42-8 | |
| Calcium | 79800 | ug/L | 100 | 8.1 | 1 | 09/14/16 15:40 | 09/15/16 16:54 | 7440-70-2 | |
| Cobalt | <0.72 | ug/L | 5.0 | 0.72 | 1 | 09/14/16 15:40 | 09/15/16 16:54 | 7440-48-4 | |
| Lead | <2.5 | ug/L | 5.0 | 2.5 | 1 | 09/14/16 15:40 | 09/15/16 16:54 | 7439-92-1 | |
| Lithium | 35.0 | ug/L | 10.0 | 4.9 | 1 | 09/14/16 15:40 | 09/15/16 16:54 | 7439-93-2 | |
| Molybdenum | 214 | ug/L | 20.0 | 0.52 | 1 | 09/14/16 15:40 | 09/15/16 16:54 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | <0.058 | ug/L | 1.0 | 0.058 | 1 | 09/14/16 15:40 | 09/21/16 16:13 | 7440-36-0 | |
| Arsenic | 25.2 | ug/L | 1.0 | 0.10 | 1 | 09/14/16 15:40 | 09/21/16 16:13 | 7440-38-2 | |
| Cadmium | <0.029 | ug/L | 0.50 | 0.029 | 1 | 09/14/16 15:40 | 09/21/16 16:13 | 7440-43-9 | |
| Chromium | 0.83J | ug/L | 1.0 | 0.34 | 1 | 09/14/16 15:40 | 09/21/16 16:13 | 7440-47-3 | |
| Selenium | <0.18 | ug/L | 1.0 | 0.18 | 1 | 09/14/16 15:40 | 09/21/16 16:13 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 09/14/16 15:40 | 09/21/16 16:13 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.039 | ug/L | 0.20 | 0.039 | 1 | 09/15/16 08:30 | 09/15/16 13:24 | 7439-97-6 | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 677 | mg/L | 5.0 | 5.0 | 1 | | 09/19/16 09:10 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.4 | Std. Units | 0.10 | 0.10 | 1 | | 09/20/16 10:55 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 25.2 | mg/L | 2.0 | 1.0 | 2 | | 10/08/16 02:22 | 16887-00-6 | |
| Fluoride | 0.27 | mg/L | 0.20 | 0.027 | 1 | | 10/06/16 16:27 | 16984-48-8 | |
| Sulfate | 243 | mg/L | 20.0 | 3.1 | 20 | | 10/08/16 02:36 | 14808-79-8 | |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60227402

Sample: L-LMW-5S **Lab ID: 60227402008** Collected: 09/13/16 11:25 Received: 09/14/16 04:40 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|--|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 259 | ug/L | 10.0 | 0.58 | 1 | 09/14/16 15:40 | 09/15/16 16:57 | 7440-39-3 | |
| Beryllium | <0.26 | ug/L | 1.0 | 0.26 | 1 | 09/14/16 15:40 | 09/15/16 16:57 | 7440-41-7 | |
| Boron | 63.8J | ug/L | 100 | 50.0 | 1 | 09/14/16 15:40 | 09/15/16 16:57 | 7440-42-8 | |
| Calcium | 95100 | ug/L | 100 | 8.1 | 1 | 09/14/16 15:40 | 09/15/16 16:57 | 7440-70-2 | |
| Cobalt | <0.72 | ug/L | 5.0 | 0.72 | 1 | 09/14/16 15:40 | 09/15/16 16:57 | 7440-48-4 | |
| Lead | <2.5 | ug/L | 5.0 | 2.5 | 1 | 09/14/16 15:40 | 09/15/16 16:57 | 7439-92-1 | |
| Lithium | 9.4J | ug/L | 10.0 | 4.9 | 1 | 09/14/16 15:40 | 09/15/16 16:57 | 7439-93-2 | |
| Molybdenum | 2.7J | ug/L | 20.0 | 0.52 | 1 | 09/14/16 15:40 | 09/15/16 16:57 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | 0.20J | ug/L | 1.0 | 0.058 | 1 | 09/14/16 15:40 | 09/21/16 16:17 | 7440-36-0 | |
| Arsenic | 0.61J | ug/L | 1.0 | 0.10 | 1 | 09/14/16 15:40 | 09/21/16 16:17 | 7440-38-2 | |
| Cadmium | <0.029 | ug/L | 0.50 | 0.029 | 1 | 09/14/16 15:40 | 09/21/16 16:17 | 7440-43-9 | |
| Chromium | 0.43J | ug/L | 1.0 | 0.34 | 1 | 09/14/16 15:40 | 09/21/16 16:17 | 7440-47-3 | |
| Selenium | 0.67J | ug/L | 1.0 | 0.18 | 1 | 09/14/16 15:40 | 09/21/16 16:17 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 09/14/16 15:40 | 09/21/16 16:17 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.039 | ug/L | 0.20 | 0.039 | 1 | 09/15/16 08:30 | 09/15/16 13:26 | 7439-97-6 | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 358 | mg/L | 5.0 | 5.0 | 1 | | 09/19/16 09:10 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.4 | Std. Units | 0.10 | 0.10 | 1 | | 09/20/16 10:55 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 2.6 | mg/L | 1.0 | 0.50 | 1 | | 10/06/16 16:43 | 16887-00-6 | |
| Fluoride | 0.11J | mg/L | 0.20 | 0.027 | 1 | | 10/06/16 16:43 | 16984-48-8 | |
| Sulfate | 21.6 | mg/L | 2.0 | 0.31 | 2 | | 10/08/16 03:19 | 14808-79-8 | |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60227402

Sample: L-LMW-6S **Lab ID: 6022740209** Collected: 09/12/16 13:20 Received: 09/14/16 04:40 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 279 | ug/L | 10.0 | 0.58 | 1 | 09/14/16 15:40 | 09/15/16 17:01 | 7440-39-3 | |
| Beryllium | <0.26 | ug/L | 1.0 | 0.26 | 1 | 09/14/16 15:40 | 09/15/16 17:01 | 7440-41-7 | |
| Boron | 2260 | ug/L | 100 | 50.0 | 1 | 09/14/16 15:40 | 09/15/16 17:01 | 7440-42-8 | |
| Calcium | 158000 | ug/L | 100 | 8.1 | 1 | 09/14/16 15:40 | 09/15/16 17:01 | 7440-70-2 | |
| Cobalt | 2.3J | ug/L | 5.0 | 0.72 | 1 | 09/14/16 15:40 | 09/15/16 17:01 | 7440-48-4 | |
| Lead | <2.5 | ug/L | 5.0 | 2.5 | 1 | 09/14/16 15:40 | 09/15/16 17:01 | 7439-92-1 | |
| Lithium | 34.5 | ug/L | 10.0 | 4.9 | 1 | 09/14/16 15:40 | 09/15/16 17:01 | 7439-93-2 | |
| Molybdenum | 9.4J | ug/L | 20.0 | 0.52 | 1 | 09/14/16 15:40 | 09/15/16 17:01 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | <0.058 | ug/L | 1.0 | 0.058 | 1 | 09/14/16 15:40 | 09/21/16 16:22 | 7440-36-0 | |
| Arsenic | 1.7 | ug/L | 1.0 | 0.10 | 1 | 09/14/16 15:40 | 09/21/16 16:22 | 7440-38-2 | |
| Cadmium | 0.093J | ug/L | 0.50 | 0.029 | 1 | 09/14/16 15:40 | 09/21/16 16:22 | 7440-43-9 | |
| Chromium | 0.53J | ug/L | 1.0 | 0.34 | 1 | 09/14/16 15:40 | 09/21/16 16:22 | 7440-47-3 | |
| Selenium | 0.41J | ug/L | 1.0 | 0.18 | 1 | 09/14/16 15:40 | 09/21/16 16:22 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 09/14/16 15:40 | 09/21/16 16:22 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.039 | ug/L | 0.20 | 0.039 | 1 | 09/15/16 08:30 | 09/15/16 13:28 | 7439-97-6 | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 659 | mg/L | 5.0 | 5.0 | 1 | | 09/19/16 08:59 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.4 | Std. Units | 0.10 | 0.10 | 1 | | 09/19/16 15:30 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 5.9 | mg/L | 1.0 | 0.50 | 1 | | 10/06/16 16:58 | 16887-00-6 | |
| Fluoride | 0.076J | mg/L | 0.20 | 0.027 | 1 | | 10/06/16 16:58 | 16984-48-8 | |
| Sulfate | 78.4 | mg/L | 5.0 | 0.77 | 5 | | 10/08/16 03:33 | 14808-79-8 | |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60227402

Sample: L-LMW-7S **Lab ID: 60227402010** Collected: 09/12/16 11:10 Received: 09/14/16 04:40 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|--|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 339 | ug/L | 10.0 | 0.58 | 1 | 09/14/16 15:40 | 09/15/16 17:05 | 7440-39-3 | |
| Beryllium | <0.26 | ug/L | 1.0 | 0.26 | 1 | 09/14/16 15:40 | 09/15/16 17:05 | 7440-41-7 | |
| Boron | 4280 | ug/L | 100 | 50.0 | 1 | 09/14/16 15:40 | 09/15/16 17:05 | 7440-42-8 | |
| Calcium | 144000 | ug/L | 100 | 8.1 | 1 | 09/14/16 15:40 | 09/15/16 17:05 | 7440-70-2 | |
| Cobalt | 3.1J | ug/L | 5.0 | 0.72 | 1 | 09/14/16 15:40 | 09/15/16 17:05 | 7440-48-4 | |
| Lead | <2.5 | ug/L | 5.0 | 2.5 | 1 | 09/14/16 15:40 | 09/15/16 17:05 | 7439-92-1 | |
| Lithium | 35.5 | ug/L | 10.0 | 4.9 | 1 | 09/14/16 15:40 | 09/15/16 17:05 | 7439-93-2 | |
| Molybdenum | 46.2 | ug/L | 20.0 | 0.52 | 1 | 09/14/16 15:40 | 09/15/16 17:05 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | <0.058 | ug/L | 1.0 | 0.058 | 1 | 09/14/16 15:40 | 09/21/16 16:26 | 7440-36-0 | |
| Arsenic | 9.4 | ug/L | 1.0 | 0.10 | 1 | 09/14/16 15:40 | 09/21/16 16:26 | 7440-38-2 | |
| Cadmium | <0.029 | ug/L | 0.50 | 0.029 | 1 | 09/14/16 15:40 | 09/21/16 16:26 | 7440-43-9 | |
| Chromium | 0.53J | ug/L | 1.0 | 0.34 | 1 | 09/14/16 15:40 | 09/21/16 16:26 | 7440-47-3 | |
| Selenium | 0.25J | ug/L | 1.0 | 0.18 | 1 | 09/14/16 15:40 | 09/21/16 16:26 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 09/14/16 15:40 | 09/21/16 16:26 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.039 | ug/L | 0.20 | 0.039 | 1 | 09/15/16 08:30 | 09/15/16 13:30 | 7439-97-6 | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 722 | mg/L | 5.0 | 5.0 | 1 | | 09/19/16 08:59 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 8.0 | Std. Units | 0.10 | 0.10 | 1 | | 09/19/16 15:30 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 13.8 | mg/L | 1.0 | 0.50 | 1 | | 10/06/16 17:13 | 16887-00-6 | |
| Fluoride | 0.059J | mg/L | 0.20 | 0.027 | 1 | | 10/06/16 17:13 | 16984-48-8 | |
| Sulfate | 156 | mg/L | 20.0 | 3.1 | 20 | | 10/08/16 03:47 | 14808-79-8 | |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60227402

Sample: L-LMW-8S **Lab ID: 6022740211** Collected: 09/12/16 09:40 Received: 09/14/16 04:40 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 147 | ug/L | 10.0 | 0.58 | 1 | 09/14/16 15:40 | 09/15/16 17:12 | 7440-39-3 | |
| Beryllium | <0.26 | ug/L | 1.0 | 0.26 | 1 | 09/14/16 15:40 | 09/15/16 17:12 | 7440-41-7 | |
| Boron | 5220 | ug/L | 100 | 50.0 | 1 | 09/14/16 15:40 | 09/15/16 17:12 | 7440-42-8 | |
| Calcium | 160000 | ug/L | 100 | 8.1 | 1 | 09/14/16 15:40 | 09/15/16 17:12 | 7440-70-2 | |
| Cobalt | 2.4J | ug/L | 5.0 | 0.72 | 1 | 09/14/16 15:40 | 09/15/16 17:12 | 7440-48-4 | |
| Lead | <2.5 | ug/L | 5.0 | 2.5 | 1 | 09/14/16 15:40 | 09/15/16 17:12 | 7439-92-1 | |
| Lithium | 22.5 | ug/L | 10.0 | 4.9 | 1 | 09/14/16 15:40 | 09/15/16 17:12 | 7439-93-2 | |
| Molybdenum | 110 | ug/L | 20.0 | 0.52 | 1 | 09/14/16 15:40 | 09/15/16 17:12 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | <0.058 | ug/L | 1.0 | 0.058 | 1 | 09/14/16 15:40 | 09/21/16 16:34 | 7440-36-0 | |
| Arsenic | 6.3 | ug/L | 1.0 | 0.10 | 1 | 09/14/16 15:40 | 09/21/16 16:34 | 7440-38-2 | |
| Cadmium | <0.029 | ug/L | 0.50 | 0.029 | 1 | 09/14/16 15:40 | 09/21/16 16:34 | 7440-43-9 | |
| Chromium | <0.34 | ug/L | 1.0 | 0.34 | 1 | 09/14/16 15:40 | 09/21/16 16:34 | 7440-47-3 | |
| Selenium | <0.18 | ug/L | 1.0 | 0.18 | 1 | 09/14/16 15:40 | 09/21/16 16:34 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 09/14/16 15:40 | 09/21/16 16:34 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.039 | ug/L | 0.20 | 0.039 | 1 | 09/15/16 08:30 | 09/15/16 13:32 | 7439-97-6 | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 845 | mg/L | 5.0 | 5.0 | 1 | | 09/19/16 08:59 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.2 | Std. Units | 0.10 | 0.10 | 1 | | 09/19/16 13:15 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 18.2 | mg/L | 1.0 | 0.50 | 1 | | 10/06/16 17:29 | 16887-00-6 | |
| Fluoride | 0.19J | mg/L | 0.20 | 0.027 | 1 | | 10/06/16 17:29 | 16984-48-8 | |
| Sulfate | 309 | mg/L | 50.0 | 7.7 | 50 | | 10/08/16 04:01 | 14808-79-8 | |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60227402

Sample: L-BMW-1S **Lab ID: 60227402012** Collected: 09/13/16 15:06 Received: 09/14/16 04:40 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 338 | ug/L | 10.0 | 0.58 | 1 | 09/14/16 15:40 | 09/15/16 17:16 | 7440-39-3 | |
| Beryllium | <0.26 | ug/L | 1.0 | 0.26 | 1 | 09/14/16 15:40 | 09/15/16 17:16 | 7440-41-7 | |
| Boron | 103 | ug/L | 100 | 50.0 | 1 | 09/14/16 15:40 | 09/15/16 17:16 | 7440-42-8 | |
| Calcium | 188000 | ug/L | 100 | 8.1 | 1 | 09/14/16 15:40 | 09/15/16 17:16 | 7440-70-2 | |
| Cobalt | 0.78J | ug/L | 5.0 | 0.72 | 1 | 09/14/16 15:40 | 09/15/16 17:16 | 7440-48-4 | |
| Lead | <2.5 | ug/L | 5.0 | 2.5 | 1 | 09/14/16 15:40 | 09/15/16 17:16 | 7439-92-1 | |
| Lithium | 16.1 | ug/L | 10.0 | 4.9 | 1 | 09/14/16 15:40 | 09/15/16 17:16 | 7439-93-2 | |
| Molybdenum | <0.52 | ug/L | 20.0 | 0.52 | 1 | 09/14/16 15:40 | 09/15/16 17:16 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | <0.058 | ug/L | 1.0 | 0.058 | 1 | 09/14/16 15:40 | 09/21/16 16:39 | 7440-36-0 | |
| Arsenic | 29.4 | ug/L | 1.0 | 0.10 | 1 | 09/14/16 15:40 | 09/21/16 16:39 | 7440-38-2 | |
| Cadmium | <0.029 | ug/L | 0.50 | 0.029 | 1 | 09/14/16 15:40 | 09/21/16 16:39 | 7440-43-9 | |
| Chromium | 0.39J | ug/L | 1.0 | 0.34 | 1 | 09/14/16 15:40 | 09/21/16 16:39 | 7440-47-3 | |
| Selenium | <0.18 | ug/L | 1.0 | 0.18 | 1 | 09/14/16 15:40 | 09/21/16 16:39 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 09/14/16 15:40 | 09/21/16 16:39 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.039 | ug/L | 0.20 | 0.039 | 1 | 09/15/16 08:30 | 09/15/16 13:35 | 7439-97-6 | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 752 | mg/L | 5.0 | 5.0 | 1 | | 09/19/16 09:10 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.0 | Std. Units | 0.10 | 0.10 | 1 | | 09/20/16 10:55 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 5.0 | mg/L | 1.0 | 0.50 | 1 | | 10/06/16 17:44 | 16887-00-6 | |
| Fluoride | 0.069J | mg/L | 0.20 | 0.027 | 1 | | 10/06/16 17:44 | 16984-48-8 | |
| Sulfate | 50.0 | mg/L | 5.0 | 0.77 | 5 | | 10/08/16 04:15 | 14808-79-8 | |

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60227402

Sample: L-LMW-DUP-1 **Lab ID:** 60227402013 Collected: 09/12/16 08:00 Received: 09/14/16 04:40 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|---------|--|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 148 | ug/L | 10.0 | 0.58 | 1 | 09/14/16 15:40 | 09/15/16 17:19 | 7440-39-3 | |
| Beryllium | <0.26 | ug/L | 1.0 | 0.26 | 1 | 09/14/16 15:40 | 09/15/16 17:19 | 7440-41-7 | |
| Boron | 5130 | ug/L | 100 | 50.0 | 1 | 09/14/16 15:40 | 09/15/16 17:19 | 7440-42-8 | |
| Calcium | 159000 | ug/L | 100 | 8.1 | 1 | 09/14/16 15:40 | 09/15/16 17:19 | 7440-70-2 | |
| Cobalt | 2.7J | ug/L | 5.0 | 0.72 | 1 | 09/14/16 15:40 | 09/15/16 17:19 | 7440-48-4 | |
| Lead | <2.5 | ug/L | 5.0 | 2.5 | 1 | 09/14/16 15:40 | 09/15/16 17:19 | 7439-92-1 | |
| Lithium | 22.7 | ug/L | 10.0 | 4.9 | 1 | 09/14/16 15:40 | 09/15/16 17:19 | 7439-93-2 | |
| Molybdenum | 104 | ug/L | 20.0 | 0.52 | 1 | 09/14/16 15:40 | 09/15/16 17:19 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | 0.063J | ug/L | 1.0 | 0.058 | 1 | 09/14/16 15:40 | 09/21/16 16:43 | 7440-36-0 | |
| Arsenic | 6.8 | ug/L | 1.0 | 0.10 | 1 | 09/14/16 15:40 | 09/21/16 16:43 | 7440-38-2 | |
| Cadmium | 0.047J | ug/L | 0.50 | 0.029 | 1 | 09/14/16 15:40 | 09/21/16 16:43 | 7440-43-9 | |
| Chromium | 0.54J | ug/L | 1.0 | 0.34 | 1 | 09/14/16 15:40 | 09/21/16 16:43 | 7440-47-3 | |
| Selenium | <0.18 | ug/L | 1.0 | 0.18 | 1 | 09/14/16 15:40 | 09/21/16 16:43 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 09/14/16 15:40 | 09/21/16 16:43 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.039 | ug/L | 0.20 | 0.039 | 1 | 09/15/16 08:30 | 09/15/16 13:37 | 7439-97-6 | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 855 | mg/L | 5.0 | 5.0 | 1 | | 09/19/16 09:00 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.2 | Std. Units | 0.10 | 0.10 | 1 | | 09/19/16 13:15 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 18.0 | mg/L | 1.0 | 0.50 | 1 | | 10/06/16 18:00 | 16887-00-6 | |
| Fluoride | 0.19J | mg/L | 0.20 | 0.027 | 1 | | 10/06/16 18:00 | 16984-48-8 | |
| Sulfate | 302 | mg/L | 50.0 | 7.7 | 50 | | 10/08/16 04:29 | 14808-79-8 | |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60227402

Sample: L-LMW-FB-1 **Lab ID: 60227402014** Collected: 09/12/16 14:25 Received: 09/14/16 04:40 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|---------|--|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | <0.58 | ug/L | 10.0 | 0.58 | 1 | 09/14/16 15:40 | 09/15/16 17:30 | 7440-39-3 | |
| Beryllium | <0.26 | ug/L | 1.0 | 0.26 | 1 | 09/14/16 15:40 | 09/15/16 17:30 | 7440-41-7 | |
| Boron | <50.0 | ug/L | 100 | 50.0 | 1 | 09/14/16 15:40 | 09/15/16 17:30 | 7440-42-8 | |
| Calcium | <8.1 | ug/L | 100 | 8.1 | 1 | 09/14/16 15:40 | 09/15/16 17:30 | 7440-70-2 | |
| Cobalt | <0.72 | ug/L | 5.0 | 0.72 | 1 | 09/14/16 15:40 | 09/15/16 17:30 | 7440-48-4 | |
| Lead | <2.5 | ug/L | 5.0 | 2.5 | 1 | 09/14/16 15:40 | 09/15/16 17:30 | 7439-92-1 | |
| Lithium | <4.9 | ug/L | 10.0 | 4.9 | 1 | 09/14/16 15:40 | 09/15/16 17:30 | 7439-93-2 | |
| Molybdenum | <0.52 | ug/L | 20.0 | 0.52 | 1 | 09/14/16 15:40 | 09/15/16 17:30 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | <0.058 | ug/L | 1.0 | 0.058 | 1 | 09/14/16 15:40 | 09/21/16 16:56 | 7440-36-0 | |
| Arsenic | <0.10 | ug/L | 1.0 | 0.10 | 1 | 09/14/16 15:40 | 09/21/16 16:56 | 7440-38-2 | |
| Cadmium | <0.029 | ug/L | 0.50 | 0.029 | 1 | 09/14/16 15:40 | 09/21/16 16:56 | 7440-43-9 | |
| Chromium | <0.34 | ug/L | 1.0 | 0.34 | 1 | 09/14/16 15:40 | 09/21/16 16:56 | 7440-47-3 | |
| Selenium | <0.18 | ug/L | 1.0 | 0.18 | 1 | 09/14/16 15:40 | 09/21/16 16:56 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 09/14/16 15:40 | 09/21/16 16:56 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.039 | ug/L | 0.20 | 0.039 | 1 | 09/15/16 08:30 | 09/15/16 13:39 | 7439-97-6 | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 9.0 | mg/L | 5.0 | 5.0 | 1 | | 09/19/16 09:01 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.3 | Std. Units | 0.10 | 0.10 | 1 | | 09/19/16 15:30 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | <0.50 | mg/L | 1.0 | 0.50 | 1 | | 10/08/16 04:44 | 16887-00-6 | |
| Fluoride | <0.027 | mg/L | 0.20 | 0.027 | 1 | | 10/08/16 04:44 | 16984-48-8 | |
| Sulfate | <0.15 | mg/L | 1.0 | 0.15 | 1 | | 10/08/16 04:44 | 14808-79-8 | |

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60227402

QC Batch: 446246 Analysis Method: EPA 7470
 QC Batch Method: EPA 7470 Analysis Description: 7470 Mercury
 Associated Lab Samples: 60227402001, 60227402002

METHOD BLANK: 1824355 Matrix: Water

Associated Lab Samples: 60227402001, 60227402002

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Mercury | ug/L | <0.039 | 0.20 | 0.039 | 09/13/16 11:45 | |

LABORATORY CONTROL SAMPLE: 1824356

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Mercury | ug/L | 5 | 5.2 | 104 | 80-120 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1824357 1824358

| Parameter | Units | 60227403003 Result | MS | MSD | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|--------------------|-------------|-------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
| | | | Spike Conc. | Spike Conc. | | | | | | | | |
| Mercury | ug/L | <0.039 | 5 | 5 | 5.1 | 4.6 | 102 | 91 | 75-125 | 11 | 20 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1824359 1824360

| Parameter | Units | 60227172005 Result | MS | MSD | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|--------------------|-------------|-------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
| | | | Spike Conc. | Spike Conc. | | | | | | | | |
| Mercury | ug/L | <0.039 | 5 | 5 | 3.8 | 3.5 | 77 | 70 | 75-125 | 10 | 20 | M1 |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1824485 1824486

| Parameter | Units | 60227402001 Result | MS | MSD | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|--------------------|-------------|-------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
| | | | Spike Conc. | Spike Conc. | | | | | | | | |
| Mercury | ug/L | <0.039 | 5 | 5 | 4.9 | 6.0 | 98 | 119 | 75-125 | 19 | 20 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60227402

QC Batch: 446591

Analysis Method: EPA 7470

QC Batch Method: EPA 7470

Analysis Description: 7470 Mercury

Associated Lab Samples: 60227402005, 60227402006, 60227402007, 60227402008, 60227402009, 60227402010, 60227402011, 60227402012, 60227402013, 60227402014

METHOD BLANK: 1826124

Matrix: Water

Associated Lab Samples: 60227402005, 60227402006, 60227402007, 60227402008, 60227402009, 60227402010, 60227402011, 60227402012, 60227402013, 60227402014

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Mercury | ug/L | <0.039 | 0.20 | 0.039 | 09/15/16 12:57 | |

LABORATORY CONTROL SAMPLE: 1826125

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Mercury | ug/L | 5 | 4.9 | 97 | 80-120 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1826126 1826127

| Parameter | Units | 60227580001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|-------|
| Mercury | ug/L | <0.039 | 5 | 5 | 6.4 | 5.2 | 129 | 104 | 75-125 | 22 | 20 | M1,R1 |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY
 Pace Project No.: 60227402

QC Batch: 446273 Analysis Method: EPA 200.7
 QC Batch Method: EPA 200.7 Analysis Description: 200.7 Metals, Total
 Associated Lab Samples: 60227402001, 60227402002

METHOD BLANK: 1824423 Matrix: Water
 Associated Lab Samples: 60227402001, 60227402002

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|------------|-------|--------------|-----------------|------|----------------|------------|
| Barium | ug/L | <0.58 | 5.0 | 0.58 | 09/13/16 16:24 | |
| Beryllium | ug/L | <0.26 | 1.0 | 0.26 | 09/13/16 16:24 | |
| Boron | ug/L | <50.0 | 100 | 50.0 | 09/13/16 16:24 | |
| Calcium | ug/L | 16.1J | 100 | 8.1 | 09/13/16 16:24 | |
| Cobalt | ug/L | <0.72 | 5.0 | 0.72 | 09/13/16 16:24 | |
| Lead | ug/L | <2.5 | 5.0 | 2.5 | 09/13/16 16:24 | |
| Lithium | ug/L | <4.9 | 10.0 | 4.9 | 09/13/16 16:24 | |
| Molybdenum | ug/L | 0.66J | 20.0 | 0.52 | 09/13/16 16:24 | |

LABORATORY CONTROL SAMPLE: 1824424

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------|-------|-------------|------------|-----------|--------------|------------|
| Barium | ug/L | 1000 | 1020 | 102 | 85-115 | |
| Beryllium | ug/L | 1000 | 1020 | 102 | 85-115 | |
| Boron | ug/L | 1000 | 962 | 96 | 85-115 | |
| Calcium | ug/L | 10000 | 10100 | 101 | 85-115 | |
| Cobalt | ug/L | 1000 | 996 | 100 | 85-115 | |
| Lead | ug/L | 1000 | 1000 | 100 | 85-115 | |
| Lithium | ug/L | 1000 | 1010 | 101 | 85-115 | |
| Molybdenum | ug/L | 1000 | 1060 | 106 | 85-115 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1824425 1824426

| Parameter | Units | 60227402001 | | 1824425 | | 1824426 | | % Rec | % Rec | % Rec | Limits | RPD | Max RPD | Qual |
|------------|-------|-------------|-----------------|----------------|-----------------|-----------|------------|-------|-------|--------|--------|-----|---------|------|
| | | MS Result | MSD Spike Conc. | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | | | | | | | |
| Barium | ug/L | 55.4 | 1000 | 1000 | 1000 | 1080 | 1110 | 103 | 105 | 70-130 | 2 | 20 | | |
| Beryllium | ug/L | <0.26 | 1000 | 1000 | 1000 | 1030 | 1060 | 103 | 106 | 70-130 | 2 | 20 | | |
| Boron | ug/L | 6900 | 1000 | 1000 | 1000 | 7940 | 8000 | 104 | 110 | 70-130 | 1 | 20 | | |
| Calcium | ug/L | 76400 | 10000 | 10000 | 10000 | 87500 | 89200 | 111 | 127 | 70-130 | 2 | 20 | | |
| Cobalt | ug/L | <0.72 | 1000 | 1000 | 1000 | 983 | 982 | 98 | 98 | 70-130 | 0 | 20 | | |
| Lead | ug/L | <2.5 | 1000 | 1000 | 1000 | 982 | 980 | 98 | 98 | 70-130 | 0 | 20 | | |
| Lithium | ug/L | 14.3 | 1000 | 1000 | 1000 | 1060 | 1070 | 104 | 106 | 70-130 | 2 | 20 | | |
| Molybdenum | ug/L | 119 | 1000 | 1000 | 1000 | 1200 | 1200 | 108 | 108 | 70-130 | 0 | 20 | | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60227402

| MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1824427 | | | | | | | | | | | | 1824428 | |
|--|-------|-----------------------|----------------|----------------|--------------|---------------|-------------|--------------|-----------------|-----|------------|---------|--|
| Parameter | Units | 60227403003 Result | MS | MSD | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual | |
| | | | Spike Conc. | Spike Conc. | | | | | | | | | |
| Barium | ug/L | 68.9 | 1000 | 1000 | 1110 | 1100 | 105 | 103 | 70-130 | 1 | 20 | | |
| Beryllium | ug/L | <0.26 | 1000 | 1000 | 1040 | 1040 | 104 | 104 | 70-130 | 1 | 20 | | |
| Boron | ug/L | 5080 | 1000 | 1000 | 6190 | 6100 | 111 | 102 | 70-130 | 2 | 20 | | |
| Calcium | ug/L | 81300 | 10000 | 10000 | 89800 | 90600 | 85 | 93 | 70-130 | 1 | 20 | | |
| Cobalt | ug/L | <0.72 | 1000 | 1000 | 975 | 962 | 98 | 96 | 70-130 | 1 | 20 | | |
| Lead | ug/L | <2.5 | 1000 | 1000 | 981 | 972 | 98 | 97 | 70-130 | 1 | 20 | | |
| Lithium | ug/L | 23.4 | 1000 | 1000 | 1070 | 1060 | 105 | 104 | 70-130 | 1 | 20 | | |
| Molybdenum | ug/L | 120 | 1000 | 1000 | 1200 | 1190 | 108 | 107 | 70-130 | 1 | 20 | | |

| MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1824429 | | | | | | | | | | | | 1824430 | |
|--|-------|-----------------------|----------------|----------------|--------------|---------------|-------------|--------------|-----------------|-----|------------|---------|--|
| Parameter | Units | 60227172005 Result | MS | MSD | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual | |
| | | | Spike Conc. | Spike Conc. | | | | | | | | | |
| Barium | ug/L | 515 | 1000 | 1000 | 1590 | 1550 | 107 | 103 | 70-130 | 2 | 20 | | |
| Beryllium | ug/L | <0.26 | 1000 | 1000 | 1050 | 1020 | 105 | 102 | 70-130 | 2 | 20 | | |
| Boron | ug/L | 4740 | 1000 | 1000 | 5800 | 5710 | 106 | 97 | 70-130 | 2 | 20 | | |
| Calcium | ug/L | 134000 | 10000 | 10000 | 144000 | 142000 | 95 | 75 | 70-130 | 1 | 20 | | |
| Cobalt | ug/L | <0.72 | 1000 | 1000 | 976 | 963 | 98 | 96 | 70-130 | 1 | 20 | | |
| Lead | ug/L | 2.7J | 1000 | 1000 | 989 | 972 | 99 | 97 | 70-130 | 2 | 20 | | |
| Lithium | ug/L | <4.9 | 1000 | 1000 | 1070 | 1040 | 107 | 104 | 70-130 | 2 | 20 | | |
| Molybdenum | ug/L | 0.63J | 1000 | 1000 | 1090 | 1080 | 109 | 108 | 70-130 | 1 | 20 | | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60227402

QC Batch: 446525

Analysis Method: EPA 200.7

QC Batch Method: EPA 200.7

Analysis Description: 200.7 Metals, Total

Associated Lab Samples: 60227402005, 60227402006, 60227402007, 60227402008, 60227402009, 60227402010, 60227402011, 60227402012, 60227402013, 60227402014

METHOD BLANK: 1825615

Matrix: Water

Associated Lab Samples: 60227402005, 60227402006, 60227402007, 60227402008, 60227402009, 60227402010, 60227402011, 60227402012, 60227402013, 60227402014

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|------------|-------|--------------|-----------------|------|----------------|------------|
| Barium | ug/L | <0.58 | 5.0 | 0.58 | 09/15/16 16:02 | |
| Beryllium | ug/L | <0.26 | 1.0 | 0.26 | 09/15/16 16:02 | |
| Boron | ug/L | <50.0 | 100 | 50.0 | 09/15/16 16:02 | |
| Calcium | ug/L | 10.2J | 100 | 8.1 | 09/15/16 16:02 | |
| Cobalt | ug/L | <0.72 | 5.0 | 0.72 | 09/15/16 16:02 | |
| Lead | ug/L | <2.5 | 5.0 | 2.5 | 09/15/16 16:02 | |
| Lithium | ug/L | <4.9 | 10.0 | 4.9 | 09/15/16 16:02 | |
| Molybdenum | ug/L | <0.52 | 20.0 | 0.52 | 09/15/16 16:02 | |

LABORATORY CONTROL SAMPLE: 1825616

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------|-------|-------------|------------|-----------|--------------|------------|
| Barium | ug/L | 1000 | 1030 | 103 | 85-115 | |
| Beryllium | ug/L | 1000 | 966 | 97 | 85-115 | |
| Boron | ug/L | 1000 | 982 | 98 | 85-115 | |
| Calcium | ug/L | 10000 | 9480 | 95 | 85-115 | |
| Cobalt | ug/L | 1000 | 1040 | 104 | 85-115 | |
| Lead | ug/L | 1000 | 1030 | 103 | 85-115 | |
| Lithium | ug/L | 1000 | 1010 | 101 | 85-115 | |
| Molybdenum | ug/L | 1000 | 1060 | 106 | 85-115 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1825617 1825618

| Parameter | Units | 60227403014 | | 1825618 | | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|------------|-------|-------------|-----------------|-----------|-----------------|----------|-----------|--------------|-----|---------|------|
| | | MS Result | MSD Spike Conc. | MS Result | MSD Spike Conc. | | | | | | |
| Barium | ug/L | 105 | 1000 | 1130 | 1120 | 103 | 101 | 70-130 | 2 | 20 | |
| Beryllium | ug/L | <0.26 | 1000 | 958 | 946 | 96 | 95 | 70-130 | 1 | 20 | |
| Boron | ug/L | 4820 | 1000 | 5850 | 5760 | 102 | 94 | 70-130 | 1 | 20 | |
| Calcium | ug/L | 144000 | 10000 | 154000 | 150000 | 95 | 55 | 70-130 | 3 | 20 M1 | |
| Cobalt | ug/L | <0.72 | 1000 | 1010 | 998 | 101 | 100 | 70-130 | 1 | 20 | |
| Lead | ug/L | <2.5 | 1000 | 993 | 986 | 99 | 99 | 70-130 | 1 | 20 | |
| Lithium | ug/L | 19.1 | 1000 | 1060 | 1050 | 104 | 103 | 70-130 | 1 | 20 | |
| Molybdenum | ug/L | 205 | 1000 | 1270 | 1260 | 107 | 106 | 70-130 | 1 | 20 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60227402

| MATRIX SPIKE SAMPLE: | | 1825619 | | | | | |
|----------------------|-------|-----------------------|----------------|--------------|-------------|-----------------|------------|
| Parameter | Units | 60227402010 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
| Barium | ug/L | 339 | 1000 | 1370 | 103 | 70-130 | |
| Beryllium | ug/L | <0.26 | 1000 | 956 | 96 | 70-130 | |
| Boron | ug/L | 4280 | 1000 | 5310 | 102 | 70-130 | |
| Calcium | ug/L | 144000 | 10000 | 152000 | 82 | 70-130 | |
| Cobalt | ug/L | 3.1J | 1000 | 1000 | 100 | 70-130 | |
| Lead | ug/L | <2.5 | 1000 | 990 | 99 | 70-130 | |
| Lithium | ug/L | 35.5 | 1000 | 1090 | 105 | 70-130 | |
| Molybdenum | ug/L | 46.2 | 1000 | 1110 | 106 | 70-130 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60227402

QC Batch: 446276 Analysis Method: EPA 200.8
 QC Batch Method: EPA 200.8 Analysis Description: 200.8 MET
 Associated Lab Samples: 60227402001, 60227402002

METHOD BLANK: 1824434 Matrix: Water

Associated Lab Samples: 60227402001, 60227402002

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Antimony | ug/L | <0.058 | 1.0 | 0.058 | 09/20/16 14:13 | |
| Arsenic | ug/L | <0.10 | 1.0 | 0.10 | 09/20/16 14:13 | |
| Cadmium | ug/L | <0.029 | 0.50 | 0.029 | 09/20/16 14:13 | |
| Chromium | ug/L | <0.34 | 1.0 | 0.34 | 09/20/16 14:13 | |
| Selenium | ug/L | <0.18 | 1.0 | 0.18 | 09/20/16 14:13 | |
| Thallium | ug/L | <0.50 | 1.0 | 0.50 | 09/20/16 14:13 | |

LABORATORY CONTROL SAMPLE: 1824435

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Antimony | ug/L | 40 | 40.0 | 100 | 85-115 | |
| Arsenic | ug/L | 40 | 41.9 | 105 | 85-115 | |
| Cadmium | ug/L | 40 | 40.4 | 101 | 85-115 | |
| Chromium | ug/L | 40 | 41.7 | 104 | 85-115 | |
| Selenium | ug/L | 40 | 41.7 | 104 | 85-115 | |
| Thallium | ug/L | 40 | 40.2 | 100 | 85-115 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1824436 1824437

| Parameter | Units | 60227402001 | | MSD | | MS | | MSD | | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|-------------|-------------|-------------|--------|--------|-------|-------|--------|--------------|-----|---------|------|
| | | Result | Spike Conc. | Spike Conc. | Result | Result | % Rec | % Rec | | | | | |
| Antimony | ug/L | 0.066J | 40 | 40 | 39.8 | 39.9 | 99 | 100 | 70-130 | 0 | 20 | | |
| Arsenic | ug/L | 27.3 | 40 | 40 | 68.9 | 68.7 | 104 | 104 | 70-130 | 0 | 20 | | |
| Cadmium | ug/L | <0.029 | 40 | 40 | 38.4 | 38.6 | 96 | 96 | 70-130 | 0 | 20 | | |
| Chromium | ug/L | <0.34 | 40 | 40 | 40.7 | 40.7 | 101 | 101 | 70-130 | 0 | 20 | | |
| Selenium | ug/L | <0.18 | 40 | 40 | 38.5 | 39.1 | 96 | 97 | 70-130 | 1 | 20 | | |
| Thallium | ug/L | <0.50 | 40 | 40 | 42.1 | 42.0 | 105 | 105 | 70-130 | 0 | 20 | | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1824438 1824439

| Parameter | Units | 60227403003 | | MSD | | MS | | MSD | | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|-------------|-------------|-------------|--------|--------|-------|-------|--------|--------------|-----|---------|------|
| | | Result | Spike Conc. | Spike Conc. | Result | Result | % Rec | % Rec | | | | | |
| Antimony | ug/L | 0.084J | 40 | 40 | 39.7 | 39.5 | 99 | 98 | 70-130 | 1 | 20 | | |
| Arsenic | ug/L | 17.7 | 40 | 40 | 58.4 | 59.6 | 102 | 105 | 70-130 | 2 | 20 | | |
| Cadmium | ug/L | <0.029 | 40 | 40 | 38.6 | 38.4 | 96 | 96 | 70-130 | 0 | 20 | | |
| Chromium | ug/L | <0.34 | 40 | 40 | 41.3 | 41.4 | 103 | 103 | 70-130 | 0 | 20 | | |
| Selenium | ug/L | <0.18 | 40 | 40 | 35.0 | 35.6 | 87 | 89 | 70-130 | 2 | 20 | | |

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60227402

| MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1824438 1824439 | | | | | | | | | | | | |
|--|-------|-----------------------|----------------|----------------|--------------|---------------|-------------|--------------|-----------------|-----|------------|------|
| Parameter | Units | 60227403003 Result | MS | MSD | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
| | | | Spike Conc. | Spike Conc. | | | | | | | | |
| Thallium | ug/L | <0.50 | 40 | 40 | 41.5 | 41.8 | 104 | 105 | 70-130 | 1 | 20 | |

| MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1824440 1824441 | | | | | | | | | | | | |
|--|-------|-----------------------|----------------|----------------|--------------|---------------|-------------|--------------|-----------------|-----|------------|------|
| Parameter | Units | 60227172005 Result | MS | MSD | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
| | | | Spike Conc. | Spike Conc. | | | | | | | | |
| Antimony | ug/L | <0.058 | 40 | 40 | 39.0 | 39.0 | 98 | 97 | 70-130 | 0 | 20 | |
| Arsenic | ug/L | 1.6 | 40 | 40 | 43.6 | 43.8 | 105 | 105 | 70-130 | 1 | 20 | |
| Cadmium | ug/L | <0.029 | 40 | 40 | 38.2 | 37.9 | 95 | 95 | 70-130 | 1 | 20 | |
| Chromium | ug/L | 1.3 | 40 | 40 | 41.9 | 42.6 | 102 | 103 | 70-130 | 2 | 20 | |
| Selenium | ug/L | <0.18 | 40 | 40 | 38.1 | 38.8 | 95 | 97 | 70-130 | 2 | 20 | |
| Thallium | ug/L | <0.50 | 40 | 40 | 42.5 | 42.6 | 106 | 107 | 70-130 | 0 | 20 | |

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60227402

QC Batch: 446524 Analysis Method: EPA 200.8
 QC Batch Method: EPA 200.8 Analysis Description: 200.8 MET
 Associated Lab Samples: 60227402005, 60227402006, 60227402007, 60227402008, 60227402009, 60227402010, 60227402011, 60227402012, 60227402013, 60227402014

METHOD BLANK: 1825609 Matrix: Water
 Associated Lab Samples: 60227402005, 60227402006, 60227402007, 60227402008, 60227402009, 60227402010, 60227402011, 60227402012, 60227402013, 60227402014

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Antimony | ug/L | <0.058 | 1.0 | 0.058 | 09/21/16 15:13 | |
| Arsenic | ug/L | <0.10 | 1.0 | 0.10 | 09/21/16 15:13 | |
| Cadmium | ug/L | <0.029 | 0.50 | 0.029 | 09/21/16 15:13 | |
| Chromium | ug/L | <0.34 | 1.0 | 0.34 | 09/21/16 15:13 | |
| Selenium | ug/L | <0.18 | 1.0 | 0.18 | 09/21/16 15:13 | |
| Thallium | ug/L | <0.50 | 1.0 | 0.50 | 09/21/16 15:13 | |

LABORATORY CONTROL SAMPLE: 1825610

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Antimony | ug/L | 40 | 40.3 | 101 | 85-115 | |
| Arsenic | ug/L | 40 | 41.4 | 104 | 85-115 | |
| Cadmium | ug/L | 40 | 40.9 | 102 | 85-115 | |
| Chromium | ug/L | 40 | 41.1 | 103 | 85-115 | |
| Selenium | ug/L | 40 | 41.7 | 104 | 85-115 | |
| Thallium | ug/L | 40 | 40.4 | 101 | 85-115 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1825611 1825612

| Parameter | Units | 60227403015 | | MSD | | MS | | MSD | | % Rec Limits | Max RPD | Qual |
|-----------|-------|-------------|-------------|-------------|--------|--------|-------|-------|--------|--------------|---------|------|
| | | Result | Spike Conc. | Spike Conc. | Result | Result | % Rec | % Rec | | | | |
| Antimony | ug/L | <0.058 | 40 | 40 | 39.8 | 39.9 | 100 | 100 | 70-130 | 0 | 20 | |
| Arsenic | ug/L | 31.8 | 40 | 40 | 72.9 | 74.0 | 103 | 105 | 70-130 | 2 | 20 | |
| Cadmium | ug/L | <0.029 | 40 | 40 | 38.9 | 38.4 | 97 | 96 | 70-130 | 1 | 20 | |
| Chromium | ug/L | 1.0 | 40 | 40 | 41.9 | 42.4 | 102 | 104 | 70-130 | 1 | 20 | |
| Selenium | ug/L | <0.18 | 40 | 40 | 37.7 | 37.4 | 94 | 93 | 70-130 | 1 | 20 | |
| Thallium | ug/L | <0.50 | 40 | 40 | 42.9 | 43.0 | 107 | 108 | 70-130 | 0 | 20 | |

MATRIX SPIKE SAMPLE: 1825613

| Parameter | Units | 60227402010 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|--------------------|-------------|-----------|----------|--------------|------------|
| Antimony | ug/L | <0.058 | 40 | 40.1 | 100 | 70-130 | |
| Arsenic | ug/L | 9.4 | 40 | 51.5 | 105 | 70-130 | |
| Cadmium | ug/L | <0.029 | 40 | 38.8 | 97 | 70-130 | |
| Chromium | ug/L | 0.53J | 40 | 41.0 | 101 | 70-130 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60227402

| MATRIX SPIKE SAMPLE: | | 1825613 | | | | | |
|----------------------|-------|-----------------------|----------------|--------------|-------------|-----------------|------------|
| Parameter | Units | 60227402010 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
| Selenium | ug/L | 0.25J | 40 | 38.9 | 97 | 70-130 | |
| Thallium | ug/L | <0.50 | 40 | 43.4 | 109 | 70-130 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60227402

QC Batch: 446819

Analysis Method: SM 2540C

QC Batch Method: SM 2540C

Analysis Description: 2540C Total Dissolved Solids

Associated Lab Samples: 60227402001, 60227402002

METHOD BLANK: 1827312

Matrix: Water

Associated Lab Samples: 60227402001, 60227402002

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|------------------------|-------|--------------|-----------------|-----|----------------|------------|
| Total Dissolved Solids | mg/L | <5.0 | 5.0 | 5.0 | 09/16/16 10:02 | |

LABORATORY CONTROL SAMPLE: 1827313

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|-------------|------------|-----------|--------------|------------|
| Total Dissolved Solids | mg/L | 1000 | 982 | 98 | 80-120 | |

SAMPLE DUPLICATE: 1827314

| Parameter | Units | 60227402001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L | 526 | 522 | 1 | 10 | |

SAMPLE DUPLICATE: 1827315

| Parameter | Units | 60227403003 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L | 513 | 519 | 1 | 10 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60227402

QC Batch: 446979

Analysis Method: SM 2540C

QC Batch Method: SM 2540C

Analysis Description: 2540C Total Dissolved Solids

Associated Lab Samples: 60227402005, 60227402009, 60227402010, 60227402011, 60227402013, 60227402014

METHOD BLANK: 1828613

Matrix: Water

Associated Lab Samples: 60227402005, 60227402009, 60227402010, 60227402011, 60227402013, 60227402014

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|------------------------|-------|--------------|-----------------|-----|----------------|------------|
| Total Dissolved Solids | mg/L | <5.0 | 5.0 | 5.0 | 09/19/16 08:57 | |

LABORATORY CONTROL SAMPLE: 1828614

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

SAMPLE DUPLICATE: 1828615

| Parameter | Units | 60227547007 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L | 202 | 201 | 0 | 10 | |

SAMPLE DUPLICATE: 1828616

| Parameter | Units | 60227580002 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L | 743 | 730 | 2 | 10 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60227402

QC Batch: 446982

Analysis Method: SM 2540C

QC Batch Method: SM 2540C

Analysis Description: 2540C Total Dissolved Solids

Associated Lab Samples: 60227402006, 60227402007, 60227402008, 60227402012

METHOD BLANK: 1828622

Matrix: Water

Associated Lab Samples: 60227402006, 60227402007, 60227402008, 60227402012

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|------------------------|-------|--------------|-----------------|-----|----------------|------------|
| Total Dissolved Solids | mg/L | <5.0 | 5.0 | 5.0 | 09/19/16 09:04 | |

LABORATORY CONTROL SAMPLE: 1828623

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

SAMPLE DUPLICATE: 1828624

| Parameter | Units | 60227573001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L | 743 | 733 | 1 | 10 | |

SAMPLE DUPLICATE: 1828627

| Parameter | Units | 60227580001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L | 647 | 637 | 2 | 10 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60227402

QC Batch: 446274 Analysis Method: SM 4500-H+B

QC Batch Method: SM 4500-H+B Analysis Description: 4500H+B pH

Associated Lab Samples: 60227402002

SAMPLE DUPLICATE: 1824431

| Parameter | Units | 60227283001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|--------------------|------------|-----------------------|---------------|-----|------------|------------|
| pH at 25 Degrees C | Std. Units | 8.4 | 8.3 | 0 | 5 | H6 |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60227402

QC Batch: 446275 Analysis Method: SM 4500-H+B

QC Batch Method: SM 4500-H+B Analysis Description: 4500H+B pH

Associated Lab Samples: 60227402001

SAMPLE DUPLICATE: 1824432

| Parameter | Units | 60227402001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|--------------------|------------|-----------------------|---------------|-----|------------|------------|
| pH at 25 Degrees C | Std. Units | 9.4 | 9.4 | 0 | 5 | H6 |

SAMPLE DUPLICATE: 1824433

| Parameter | Units | 60227403003 Result | Dup Result | RPD | Max RPD | Qualifiers |
|--------------------|------------|-----------------------|---------------|-----|------------|------------|
| pH at 25 Degrees C | Std. Units | 9.2 | 9.2 | 0 | 5 | H6 |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60227402

QC Batch: 446980 Analysis Method: SM 4500-H+B

QC Batch Method: SM 4500-H+B Analysis Description: 4500H+B pH

Associated Lab Samples: 60227402011, 60227402013

SAMPLE DUPLICATE: 1828617

| Parameter | Units | 60227731001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|--------------------|------------|-----------------------|---------------|-----|------------|------------|
| pH at 25 Degrees C | Std. Units | 8.5 | 8.5 | 0 | 5 | H6 |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60227402

QC Batch: 446989 Analysis Method: SM 4500-H+B

QC Batch Method: SM 4500-H+B Analysis Description: 4500H+B pH

Associated Lab Samples: 60227402005, 60227402009, 60227402010, 60227402014

SAMPLE DUPLICATE: 1828631

| Parameter | Units | 60227580001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|--------------------|------------|-----------------------|---------------|-----|------------|------------|
| pH at 25 Degrees C | Std. Units | 7.6 | 7.6 | 0 | 5 | H6 |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60227402

QC Batch: 447131 Analysis Method: SM 4500-H+B

QC Batch Method: SM 4500-H+B Analysis Description: 4500H+B pH

Associated Lab Samples: 60227402006, 60227402007, 60227402008, 60227402012

SAMPLE DUPLICATE: 1828952

| Parameter | Units | 60227704003 Result | Dup Result | RPD | Max RPD | Qualifiers |
|--------------------|------------|-----------------------|---------------|-----|------------|------------|
| pH at 25 Degrees C | Std. Units | 8.0 | 8.0 | 0 | 5 | H6 |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60227402

QC Batch: 448782 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 60227402001, 60227402002

METHOD BLANK: 1836679 Matrix: Water

Associated Lab Samples: 60227402001, 60227402002

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Chloride | mg/L | <0.50 | 1.0 | 0.50 | 10/01/16 09:27 | |
| Fluoride | mg/L | <0.027 | 0.20 | 0.027 | 10/01/16 09:27 | |
| Sulfate | mg/L | <0.15 | 1.0 | 0.15 | 10/01/16 09:27 | |

LABORATORY CONTROL SAMPLE: 1836680

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Chloride | mg/L | 5 | 4.6 | 93 | 90-110 | |
| Fluoride | mg/L | 2.5 | 2.6 | 102 | 90-110 | |
| Sulfate | mg/L | 5 | 5.3 | 106 | 90-110 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1836681 1836682

| Parameter | Units | 60227402001 Result | MS | MSD | MS | MSD | MS | MSD | % Rec | Max | Qual |
|-----------|-------|--------------------|-------------|-------------|--------|--------|-------|-------|--------|-----|------|
| | | | Spike Conc. | Spike Conc. | Result | Result | % Rec | % Rec | Limits | RPD | |
| Fluoride | mg/L | 0.13J | 2.5 | 2.5 | 2.6 | 2.6 | 100 | 97 | 80-120 | 2 | 15 |

MATRIX SPIKE SAMPLE: 1836683

| Parameter | Units | 60227403003 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|--------------------|-------------|-----------|----------|--------------|------------|
| Fluoride | mg/L | 0.082J | 2.5 | 2.5 | 96 | 80-120 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60227402

| | |
|-------------------------------------|---------------------------------------|
| QC Batch: 448790 | Analysis Method: EPA 300.0 |
| QC Batch Method: EPA 300.0 | Analysis Description: 300.0 IC Anions |
| Associated Lab Samples: 60227402001 | |

METHOD BLANK: 1836865 Matrix: Water
Associated Lab Samples: 60227402001

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|------|----------------|------------|
| Sulfate | mg/L | <0.15 | 1.0 | 0.15 | 10/02/16 11:23 | |

LABORATORY CONTROL SAMPLE: 1836866

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Sulfate | mg/L | 5 | 5.1 | 102 | 90-110 | |

MATRIX SPIKE SAMPLE: 1836867

| Parameter | Units | 60227403003 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|--------------------|-------------|-----------|----------|--------------|------------|
| Sulfate | mg/L | 275 | 100 | 373 | 98 | 80-120 | |

MATRIX SPIKE SAMPLE: 1836870

| Parameter | Units | 60227580001 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|--------------------|-------------|-----------|----------|--------------|------------|
| Sulfate | mg/L | 63.4 | 25 | 85.9 | 90 | 80-120 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60227402

QC Batch: 449284

Analysis Method: EPA 300.0

QC Batch Method: EPA 300.0

Analysis Description: 300.0 IC Anions

Associated Lab Samples: 60227402005, 60227402006, 60227402007, 60227402008, 60227402009, 60227402010, 60227402011, 60227402012, 60227402013

METHOD BLANK: 1838547

Matrix: Water

Associated Lab Samples: 60227402005, 60227402006, 60227402007, 60227402008, 60227402009, 60227402010, 60227402011, 60227402012, 60227402013

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Chloride | mg/L | <0.50 | 1.0 | 0.50 | 10/06/16 08:27 | |
| Fluoride | mg/L | <0.027 | 0.20 | 0.027 | 10/06/16 08:27 | |

LABORATORY CONTROL SAMPLE: 1838548

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Chloride | mg/L | 5 | 4.7 | 93 | 90-110 | |
| Fluoride | mg/L | 2.5 | 2.5 | 101 | 90-110 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1838549 1838550

| Parameter | Units | 60227403012 | | 60227403013 | | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|----------------|-----------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
| | | MS Spike Conc. | MSD Spike Conc. | MS Spike Conc. | MSD Spike Conc. | | | | | | | | |
| Chloride | mg/L | 13.9 | 5 | 5 | 18.7 | 18.8 | 95 | 98 | 80-120 | 1 | 15 | | |
| Fluoride | mg/L | 0.12J | 2.5 | 2.5 | 2.4 | 2.5 | 93 | 96 | 80-120 | 3 | 15 | | |

MATRIX SPIKE SAMPLE: 1838551

| Parameter | Units | 60227403013 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|--------------------|-------------|-----------|----------|--------------|------------|
| Fluoride | mg/L | 0.34 | 2.5 | 2.6 | 92 | 80-120 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY
Pace Project No.: 60227402

QC Batch: 449623 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 60227402005, 60227402006, 60227402007, 60227402008, 60227402009, 60227402010, 60227402011, 60227402012, 60227402013, 60227402014

METHOD BLANK: 1839827 Matrix: Water
Associated Lab Samples: 60227402005, 60227402006, 60227402007, 60227402008, 60227402009, 60227402010, 60227402011, 60227402012, 60227402013, 60227402014

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Chloride | mg/L | <0.50 | 1.0 | 0.50 | 10/07/16 22:21 | |
| Fluoride | mg/L | <0.027 | 0.20 | 0.027 | 10/07/16 22:21 | |
| Sulfate | mg/L | <0.15 | 1.0 | 0.15 | 10/07/16 22:21 | |

LABORATORY CONTROL SAMPLE: 1839828

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Chloride | mg/L | 5 | 4.6 | 92 | 90-110 | |
| Fluoride | mg/L | 2.5 | 2.3 | 90 | 90-110 | |
| Sulfate | mg/L | 5 | 4.7 | 94 | 90-110 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1839829 1839830

| Parameter | Units | 60227403012 | | 1839830 | | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|----------------|-----------------|-----------|------------|----------|-----------|--------------|--------|---------|------|
| | | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | | | | | | |
| Chloride | mg/L | 13.9 | | 248 | 248 | | | | 0 | 15 | |
| Fluoride | mg/L | 0.12J | | 118 | 117 | | | | 1 | 15 | |
| Sulfate | mg/L | 454 | 250 | 250 | 704 | 705 | 100 | 100 | 80-120 | 0 | 15 |

MATRIX SPIKE SAMPLE: 1839831

| Parameter | Units | 60227403014 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|--------------------|-------------|-----------|----------|--------------|------------|
| Chloride | mg/L | 12.0 | | 109 | | | |
| Fluoride | mg/L | 0.28 | | 49.7 | | | |
| Sulfate | mg/L | 213 | 100 | 313 | 100 | 80-120 | |

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

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60227402

Sample: L-LMW-2S **Lab ID: 60227402001** Collected: 09/09/16 10:55 Received: 09/10/16 03:30 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|---|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.0625 ± 0.368 (0.751) C:NA T:81% | pCi/L | 09/28/16 11:50 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 1.73 ± 0.539 (0.624) C:77% T:86% | pCi/L | 10/03/16 13:01 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60227402

Sample: L-BMW-2S **Lab ID: 60227402002** Collected: 09/09/16 09:25 Received: 09/10/16 03:30 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|--|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.166 ± 0.392 (0.727) C:NA T:90% | pCi/L | 09/28/16 12:08 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 1.96 ± 0.603 (0.742) C:76% T:89% | pCi/L | 10/03/16 13:01 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60227402

Sample: L-LMW-2S MS **Lab ID: 60227402003** Collected: 09/09/16 10:55 Received: 09/10/16 03:30 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|---|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 72.7 %REC ± NA (NA) C:NA T:NA | pCi/L | 09/28/16 12:08 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 140 %REC +/- NA (NA) C:NA T:NA | pCi/L | 10/03/16 13:01 | 15262-20-1 | 1e |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60227402

Sample: L-LMW-2S MSD **Lab ID: 60227402004** Collected: 09/09/16 10:55 Received: 09/10/16 03:30 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|--|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 79.9 %REC 9.5 RPD ± NA (NA) C:NA T:NA | pCi/L | 09/28/16 12:08 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 126 %REC 10.4 RPD +/- NA (NA) C:NA T:NA | pCi/L | 10/03/16 13:02 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60227402

Sample: L-LMW-1S **Lab ID: 60227402005** Collected: 09/12/16 14:55 Received: 09/14/16 04:40 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|--|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.172 ± 0.533 (1.03) C:NA T:86% | pCi/L | 09/30/16 10:49 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 0.816 ± 0.393 (0.659) C:71% T:79% | pCi/L | 09/29/16 02:47 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60227402

Sample: L-LMW-3S **Lab ID: 60227402006** Collected: 09/13/16 13:13 Received: 09/14/16 04:40 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|---|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.0941 ± 0.714 (1.41) C:NA T:82% | pCi/L | 09/30/16 10:14 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 1.04 ± 0.492 (0.840) C:68% T:74% | pCi/L | 09/29/16 02:44 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60227402

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|---|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.282 ± 0.714 (1.32) C:NA T:79% | pCi/L | 09/30/16 10:14 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 0.775 ± 0.439 (0.797) C:72% T:78% | pCi/L | 09/29/16 02:44 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60227402

Sample: L-LMW-5S **Lab ID: 60227402008** Collected: 09/13/16 11:25 Received: 09/14/16 04:40 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|--|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.000 ± 0.589 (1.22) C:NA T:88% | pCi/L | 09/30/16 10:16 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 0.919 ± 0.468 (0.833) C:68% T:86% | pCi/L | 09/29/16 02:44 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60227402

Sample: L-LMW-6S **Lab ID: 60227402009** Collected: 09/12/16 13:20 Received: 09/14/16 04:40 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|--|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.193 ± 0.706 (1.36) C:NA T:82% | pCi/L | 09/30/16 10:16 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 0.887 ± 0.475 (0.848) C:65% T:81% | pCi/L | 09/29/16 02:44 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60227402

Sample: L-LMW-7S **Lab ID: 60227402010** Collected: 09/12/16 11:10 Received: 09/14/16 04:40 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|---|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.291 ± 0.505 (0.901) C:NA T:82% | pCi/L | 09/30/16 10:17 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 1.88 ± 0.633 (0.885) C:67% T:70% | pCi/L | 09/29/16 02:44 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60227402

Sample: L-LMW-8S **Lab ID: 60227402011** Collected: 09/12/16 09:40 Received: 09/14/16 04:40 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|---|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.000 ± 0.482 (1.08) C:NA T:82% | pCi/L | 09/30/16 10:33 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 1.21 ± 0.571 (0.967) C:57% T:75% | pCi/L | 09/29/16 02:44 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60227402

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|--|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.850 ± 0.675 (0.877) C:NA T:82% | pCi/L | 09/30/16 10:35 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 2.77 ± 0.712 (0.699) C:72% T:76% | pCi/L | 09/29/16 02:45 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60227402

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|-------------------------------------|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 1.41 ± 0.825 (0.947) C:NA T:86% | pCi/L | 09/30/16 10:35 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 1.03 ± 0.415 (0.643) C:76% T:76% | pCi/L | 09/29/16 02:45 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60227402

Sample: L-LMW-FB-1 **Lab ID: 60227402014** Collected: 09/12/16 14:25 Received: 09/14/16 04:40 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|--|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | -0.080 ± 0.413 (0.957) C:NA T:92% | pCi/L | 09/30/16 10:34 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 0.313 ± 0.330 (0.664) C:75% T:76% | pCi/L | 09/29/16 03:01 | 15262-20-1 | |

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60227402

| | | | |
|-------------------------|---|-----------------------|------------------|
| QC Batch: | 233812 | Analysis Method: | EPA 904.0 |
| QC Batch Method: | EPA 904.0 | Analysis Description: | 904.0 Radium 228 |
| Associated Lab Samples: | 60227402006, 60227402007, 60227402008, 60227402009, 60227402010, 60227402011, 60227402012, 60227402013, 60227402014 | | |

| | | | |
|-------------------------|---|---------|-------|
| METHOD BLANK: | 1146451 | Matrix: | Water |
| Associated Lab Samples: | 60227402006, 60227402007, 60227402008, 60227402009, 60227402010, 60227402011, 60227402012, 60227402013, 60227402014 | | |

| Parameter | Act ± Unc (MDC) Carr Trac | Units | Analyzed | Qualifiers |
|------------|-----------------------------------|-------|----------------|------------|
| Radium-228 | 0.598 ± 0.378 (0.704) C:75% T:80% | pCi/L | 09/29/16 02:43 | |

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60227402

| | | | |
|-------------------------|--|-----------------------|------------------|
| QC Batch: | 234044 | Analysis Method: | EPA 903.1 |
| QC Batch Method: | EPA 903.1 | Analysis Description: | 903.1 Radium-226 |
| Associated Lab Samples: | 60227402005, 60227402006, 60227402007, 60227402008, 60227402009, 60227402010, 60227402011, 60227402012, 60227402013, 60227402014 | | |

| | | | |
|-------------------------|--|---------|-------|
| METHOD BLANK: | 1147794 | Matrix: | Water |
| Associated Lab Samples: | 60227402005, 60227402006, 60227402007, 60227402008, 60227402009, 60227402010, 60227402011, 60227402012, 60227402013, 60227402014 | | |

| Parameter | Act ± Unc (MDC) Carr Trac | Units | Analyzed | Qualifiers |
|------------|-----------------------------------|-------|----------------|------------|
| Radium-226 | -0.081 ± 0.370 (0.873) C:NA T:94% | pCi/L | 09/30/16 10:03 | |

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60227402

QC Batch: 233282 Analysis Method: EPA 903.1

QC Batch Method: EPA 903.1 Analysis Description: 903.1 Radium-226

Associated Lab Samples: 60227402001, 60227402002, 60227402003, 60227402004

METHOD BLANK: 1143381 Matrix: Water

Associated Lab Samples: 60227402001, 60227402002, 60227402003, 60227402004

| Parameter | Act ± Unc (MDC) Carr Trac | Units | Analyzed | Qualifiers |
|------------|-----------------------------------|-------|----------------|------------|
| Radium-226 | -0.158 ± 0.242 (0.634) C:NA T:95% | pCi/L | 09/28/16 11:20 | |

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60227402

QC Batch: 233297 Analysis Method: EPA 904.0

QC Batch Method: EPA 904.0 Analysis Description: 904.0 Radium 228

Associated Lab Samples: 60227402001, 60227402002, 60227402003, 60227402004

METHOD BLANK: 1143403 Matrix: Water

Associated Lab Samples: 60227402001, 60227402002, 60227402003, 60227402004

| Parameter | Act ± Unc (MDC) Carr Trac | Units | Analyzed | Qualifiers |
|------------|-----------------------------------|-------|----------------|------------|
| Radium-228 | 0.776 ± 0.424 (0.778) C:82% T:89% | pCi/L | 10/03/16 12:57 | |

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60227402

QC Batch: 233941

Analysis Method: EPA 904.0

QC Batch Method: EPA 904.0

Analysis Description: 904.0 Radium 228

Associated Lab Samples: 60227402005

METHOD BLANK: 1147217

Matrix: Water

Associated Lab Samples: 60227402005

| Parameter | Act ± Unc (MDC) Carr Trac | Units | Analyzed | Qualifiers |
|------------|-----------------------------------|-------|----------------|------------|
| Radium-228 | 0.976 ± 0.455 (0.758) C:69% T:90% | pCi/L | 09/28/16 22:34 | |

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QUALIFIERS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60227402

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.

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.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

Act - Activity

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

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

LABORATORIES

PASI-K Pace Analytical Services - Kansas City

PASI-PA Pace Analytical Services - Greensburg

ANALYTE QUALIFIERS

1e The % recovery for the Ra-228 matrix spike performed on sample 60227402003 was high and outside of Pace's default acceptance criteria at 140%. The high bias may be due to sample matrix interference and indicate a high bias in the sample result.

B Analyte was detected in the associated method blank.

H6 Analysis initiated outside of the 15 minute EPA required holding time.

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

R1 RPD value was outside control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60227402

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|-------------|--------------|-----------------|----------|-------------------|------------------|
| 60227402001 | L-LMW-2S | EPA 200.7 | 446273 | EPA 200.7 | 446311 |
| 60227402002 | L-BMW-2S | EPA 200.7 | 446273 | EPA 200.7 | 446311 |
| 60227402005 | L-LMW-1S | EPA 200.7 | 446525 | EPA 200.7 | 446567 |
| 60227402006 | L-LMW-3S | EPA 200.7 | 446525 | EPA 200.7 | 446567 |
| 60227402007 | L-LMW-4S | EPA 200.7 | 446525 | EPA 200.7 | 446567 |
| 60227402008 | L-LMW-5S | EPA 200.7 | 446525 | EPA 200.7 | 446567 |
| 60227402009 | L-LMW-6S | EPA 200.7 | 446525 | EPA 200.7 | 446567 |
| 60227402010 | L-LMW-7S | EPA 200.7 | 446525 | EPA 200.7 | 446567 |
| 60227402011 | L-LMW-8S | EPA 200.7 | 446525 | EPA 200.7 | 446567 |
| 60227402012 | L-BMW-1S | EPA 200.7 | 446525 | EPA 200.7 | 446567 |
| 60227402013 | L-LMW-DUP-1 | EPA 200.7 | 446525 | EPA 200.7 | 446567 |
| 60227402014 | L-LMW-FB-1 | EPA 200.7 | 446525 | EPA 200.7 | 446567 |
| 60227402001 | L-LMW-2S | EPA 200.8 | 446276 | EPA 200.8 | 446312 |
| 60227402002 | L-BMW-2S | EPA 200.8 | 446276 | EPA 200.8 | 446312 |
| 60227402005 | L-LMW-1S | EPA 200.8 | 446524 | EPA 200.8 | 446573 |
| 60227402006 | L-LMW-3S | EPA 200.8 | 446524 | EPA 200.8 | 446573 |
| 60227402007 | L-LMW-4S | EPA 200.8 | 446524 | EPA 200.8 | 446573 |
| 60227402008 | L-LMW-5S | EPA 200.8 | 446524 | EPA 200.8 | 446573 |
| 60227402009 | L-LMW-6S | EPA 200.8 | 446524 | EPA 200.8 | 446573 |
| 60227402010 | L-LMW-7S | EPA 200.8 | 446524 | EPA 200.8 | 446573 |
| 60227402011 | L-LMW-8S | EPA 200.8 | 446524 | EPA 200.8 | 446573 |
| 60227402012 | L-BMW-1S | EPA 200.8 | 446524 | EPA 200.8 | 446573 |
| 60227402013 | L-LMW-DUP-1 | EPA 200.8 | 446524 | EPA 200.8 | 446573 |
| 60227402014 | L-LMW-FB-1 | EPA 200.8 | 446524 | EPA 200.8 | 446573 |
| 60227402001 | L-LMW-2S | EPA 7470 | 446246 | EPA 7470 | 446282 |
| 60227402002 | L-BMW-2S | EPA 7470 | 446246 | EPA 7470 | 446282 |
| 60227402005 | L-LMW-1S | EPA 7470 | 446591 | EPA 7470 | 446630 |
| 60227402006 | L-LMW-3S | EPA 7470 | 446591 | EPA 7470 | 446630 |
| 60227402007 | L-LMW-4S | EPA 7470 | 446591 | EPA 7470 | 446630 |
| 60227402008 | L-LMW-5S | EPA 7470 | 446591 | EPA 7470 | 446630 |
| 60227402009 | L-LMW-6S | EPA 7470 | 446591 | EPA 7470 | 446630 |
| 60227402010 | L-LMW-7S | EPA 7470 | 446591 | EPA 7470 | 446630 |
| 60227402011 | L-LMW-8S | EPA 7470 | 446591 | EPA 7470 | 446630 |
| 60227402012 | L-BMW-1S | EPA 7470 | 446591 | EPA 7470 | 446630 |
| 60227402013 | L-LMW-DUP-1 | EPA 7470 | 446591 | EPA 7470 | 446630 |
| 60227402014 | L-LMW-FB-1 | EPA 7470 | 446591 | EPA 7470 | 446630 |
| 60227402001 | L-LMW-2S | EPA 903.1 | 233282 | | |
| 60227402002 | L-BMW-2S | EPA 903.1 | 233282 | | |
| 60227402003 | L-LMW-2S MS | EPA 903.1 | 233282 | | |
| 60227402004 | L-LMW-2S MSD | EPA 903.1 | 233282 | | |
| 60227402005 | L-LMW-1S | EPA 903.1 | 234044 | | |
| 60227402006 | L-LMW-3S | EPA 903.1 | 234044 | | |
| 60227402007 | L-LMW-4S | EPA 903.1 | 234044 | | |
| 60227402008 | L-LMW-5S | EPA 903.1 | 234044 | | |
| 60227402009 | L-LMW-6S | EPA 903.1 | 234044 | | |

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60227402

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|-------------|--------------|-----------------|----------|-------------------|------------------|
| 60227402010 | L-LMW-7S | EPA 903.1 | 234044 | | |
| 60227402011 | L-LMW-8S | EPA 903.1 | 234044 | | |
| 60227402012 | L-BMW-1S | EPA 903.1 | 234044 | | |
| 60227402013 | L-LMW-DUP-1 | EPA 903.1 | 234044 | | |
| 60227402014 | L-LMW-FB-1 | EPA 903.1 | 234044 | | |
| 60227402001 | L-LMW-2S | EPA 904.0 | 233297 | | |
| 60227402002 | L-BMW-2S | EPA 904.0 | 233297 | | |
| 60227402003 | L-LMW-2S MS | EPA 904.0 | 233297 | | |
| 60227402004 | L-LMW-2S MSD | EPA 904.0 | 233297 | | |
| 60227402005 | L-LMW-1S | EPA 904.0 | 233941 | | |
| 60227402006 | L-LMW-3S | EPA 904.0 | 233812 | | |
| 60227402007 | L-LMW-4S | EPA 904.0 | 233812 | | |
| 60227402008 | L-LMW-5S | EPA 904.0 | 233812 | | |
| 60227402009 | L-LMW-6S | EPA 904.0 | 233812 | | |
| 60227402010 | L-LMW-7S | EPA 904.0 | 233812 | | |
| 60227402011 | L-LMW-8S | EPA 904.0 | 233812 | | |
| 60227402012 | L-BMW-1S | EPA 904.0 | 233812 | | |
| 60227402013 | L-LMW-DUP-1 | EPA 904.0 | 233812 | | |
| 60227402014 | L-LMW-FB-1 | EPA 904.0 | 233812 | | |
| 60227402001 | L-LMW-2S | SM 2540C | 446819 | | |
| 60227402002 | L-BMW-2S | SM 2540C | 446819 | | |
| 60227402005 | L-LMW-1S | SM 2540C | 446979 | | |
| 60227402006 | L-LMW-3S | SM 2540C | 446982 | | |
| 60227402007 | L-LMW-4S | SM 2540C | 446982 | | |
| 60227402008 | L-LMW-5S | SM 2540C | 446982 | | |
| 60227402009 | L-LMW-6S | SM 2540C | 446979 | | |
| 60227402010 | L-LMW-7S | SM 2540C | 446979 | | |
| 60227402011 | L-LMW-8S | SM 2540C | 446979 | | |
| 60227402012 | L-BMW-1S | SM 2540C | 446982 | | |
| 60227402013 | L-LMW-DUP-1 | SM 2540C | 446979 | | |
| 60227402014 | L-LMW-FB-1 | SM 2540C | 446979 | | |
| 60227402001 | L-LMW-2S | SM 4500-H+B | 446275 | | |
| 60227402002 | L-BMW-2S | SM 4500-H+B | 446274 | | |
| 60227402005 | L-LMW-1S | SM 4500-H+B | 446989 | | |
| 60227402006 | L-LMW-3S | SM 4500-H+B | 447131 | | |
| 60227402007 | L-LMW-4S | SM 4500-H+B | 447131 | | |
| 60227402008 | L-LMW-5S | SM 4500-H+B | 447131 | | |
| 60227402009 | L-LMW-6S | SM 4500-H+B | 446989 | | |
| 60227402010 | L-LMW-7S | SM 4500-H+B | 446989 | | |
| 60227402011 | L-LMW-8S | SM 4500-H+B | 446980 | | |
| 60227402012 | L-BMW-1S | SM 4500-H+B | 447131 | | |

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60227402

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|-------------|-------------|-----------------|----------|-------------------|------------------|
| 60227402013 | L-LMW-DUP-1 | SM 4500-H+B | 446980 | | |
| 60227402014 | L-LMW-FB-1 | SM 4500-H+B | 446989 | | |
| 60227402001 | L-LMW-2S | EPA 300.0 | 448782 | | |
| 60227402001 | L-LMW-2S | EPA 300.0 | 448790 | | |
| 60227402002 | L-BMW-2S | EPA 300.0 | 448782 | | |
| 60227402005 | L-LMW-1S | EPA 300.0 | 449284 | | |
| 60227402005 | L-LMW-1S | EPA 300.0 | 449623 | | |
| 60227402006 | L-LMW-3S | EPA 300.0 | 449284 | | |
| 60227402006 | L-LMW-3S | EPA 300.0 | 449623 | | |
| 60227402007 | L-LMW-4S | EPA 300.0 | 449284 | | |
| 60227402007 | L-LMW-4S | EPA 300.0 | 449623 | | |
| 60227402008 | L-LMW-5S | EPA 300.0 | 449284 | | |
| 60227402008 | L-LMW-5S | EPA 300.0 | 449623 | | |
| 60227402009 | L-LMW-6S | EPA 300.0 | 449284 | | |
| 60227402009 | L-LMW-6S | EPA 300.0 | 449623 | | |
| 60227402010 | L-LMW-7S | EPA 300.0 | 449284 | | |
| 60227402010 | L-LMW-7S | EPA 300.0 | 449623 | | |
| 60227402011 | L-LMW-8S | EPA 300.0 | 449284 | | |
| 60227402011 | L-LMW-8S | EPA 300.0 | 449623 | | |
| 60227402012 | L-BMW-1S | EPA 300.0 | 449284 | | |
| 60227402012 | L-BMW-1S | EPA 300.0 | 449623 | | |
| 60227402013 | L-LMW-DUP-1 | EPA 300.0 | 449284 | | |
| 60227402013 | L-LMW-DUP-1 | EPA 300.0 | 449623 | | |
| 60227402014 | L-LMW-FB-1 | EPA 300.0 | 449623 | | |

REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

WO#: 60227402
60227402

Client Name: Golder

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

Tracking #: _____ Pace Shipping Label Used? Yes No

Custody Seal on Cooler/Box Present: Yes No Seals intact: Yes No RS 9/6

Packing Material: Bubble Wrap Bubble Bags Foam None Other

Thermometer Used: T-266 / T-239 Type of Ice: Wet Blue None

Cooler Temperature (°C): As-read 3.5, 13.1, 15.0 Corr. Factor CF +1.1 CF -0.1 Corrected 4.6, 14.2, 16.1

Date and initials of person examining contents: RS 9/6/16

Temperature should be above freezing to 6°C

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

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

_____ 9/12/16 _____

Project Manager Review: Jamie Church Date: _____



Sample Condition Upon Receipt

multi COC

WO#: 60227402
Barcode
60227402
2nd COC

Client Name: Golder

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

Tracking #: Pace Shipping Label Used? Yes No

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

Packing Material: Bubble Wrap Bubble Bags Foam None Other

Thermometer Used: T-268 / T-239 Type of Ice: Wet Blue None

Cooler Temperature (°C): As-read -1.00 / 0.00 Corr. Factor CF +1.1 CF -0.1 Corrected 0.116, 1.7
Temperature should be above freezing to 6°C 19.1, 21.0, 20.8, 19.2 20.2, 22.1, 21.9, 20.3

Date and initials of person examining contents: 9/14/16

Table with 3 columns: Question, Yes/No/N/A checkboxes, and handwritten notes (e.g., PHH, wet R).

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

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: Jamie Church 9/14/16



CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A
 Required Client Information:
 Company: Golder Associates
 Address: 820 South Main Street, Suite 100
 St Charles, MO 63301
 Email To: mhaddock@golder.com
 Phone: 636-724-9191 Fax: 636-724-9323
 Requested Due Date/TAT: Standard

Section B
 Required Project Information:
 Report To: Mark Haddock (mhaddock@golder.com)
 Copy To: Jeffrey Ingram
 Purchase Order No.:
 Project Name: Ameren Labadie Energy Center - Fly Ash
 Project Number: 153-1406.0001B

Section C
 Invoice Information:
 Attention:
 Company Name:
 Address:
 Pace Quote Reference:
 Pace Project Manager: Jamie Church
 Pace Profile #: 9285
 Regulatory Agency: MO
 NPDES GROUND WATER DRINKING WATER
 UST RCRA OTHER

| ITEM # | Valid Matrix Codes MATRIX CODE DRINKING WATER DW WASTE WATER WW PRODUCT P SOILSOLID SL OIL OL WP AR OT TS | COLLECTED | | SAMPLE TYPE (G=GRAB C=COMP) | MATRIX CODE (see valid codes to left) | # OF CONTAINERS | Requested Analysis Filtered (Y/N) | | | | | | | | | | Residual Chlorine (Y/N) | Pace Project No./ Lab I.D. | | |
|--------|---|-----------------|--------------------|-----------------------------|---------------------------------------|-----------------|-----------------------------------|-------|------|------|------|-------|----------|-------|---------|---------------------------|-------------------------|----------------------------|------------------|--------------------------|
| | | COMPOSITE START | COMPOSITE END/GRAB | | | | DATE | TIME | DATE | TIME | Y | N | Y | N | Y | N | | | Y | N |
| 1 | L-LMW-1S | | | G | WT | 4 | Unpreserved | H2SO4 | HNO3 | HCl | NaOH | Na2O2 | Methanol | Other | Metals* | Chloride/Fluoride/Sulfate | TDS | pH | Radium 226 & 228 | (885N) (885N) 2 (885N) 5 |
| 2 | L-LMW-2S | | | G | WT | 4 | Unpreserved | H2SO4 | HNO3 | HCl | NaOH | Na2O2 | Methanol | Other | Metals* | Chloride/Fluoride/Sulfate | TDS | pH | Radium 226 & 228 | (885N) (885N) 2 (885N) 5 |
| 3 | L-LMW-3S | | | G | WT | 4 | Unpreserved | H2SO4 | HNO3 | HCl | NaOH | Na2O2 | Methanol | Other | Metals* | Chloride/Fluoride/Sulfate | TDS | pH | Radium 226 & 228 | (885N) (885N) 2 (885N) 5 |
| 4 | L-LMW-4S | | | G | WT | 4 | Unpreserved | H2SO4 | HNO3 | HCl | NaOH | Na2O2 | Methanol | Other | Metals* | Chloride/Fluoride/Sulfate | TDS | pH | Radium 226 & 228 | (885N) (885N) 2 (885N) 5 |
| 5 | L-LMW-5S | | | G | WT | 4 | Unpreserved | H2SO4 | HNO3 | HCl | NaOH | Na2O2 | Methanol | Other | Metals* | Chloride/Fluoride/Sulfate | TDS | pH | Radium 226 & 228 | (885N) (885N) 2 (885N) 5 |
| 6 | L-LMW-6S | | | G | WT | 4 | Unpreserved | H2SO4 | HNO3 | HCl | NaOH | Na2O2 | Methanol | Other | Metals* | Chloride/Fluoride/Sulfate | TDS | pH | Radium 226 & 228 | (885N) (885N) 2 (885N) 5 |
| 7 | L-LMW-7S | | | G | WT | 4 | Unpreserved | H2SO4 | HNO3 | HCl | NaOH | Na2O2 | Methanol | Other | Metals* | Chloride/Fluoride/Sulfate | TDS | pH | Radium 226 & 228 | (885N) (885N) 2 (885N) 5 |
| 8 | L-LMW-8S | | | G | WT | 4 | Unpreserved | H2SO4 | HNO3 | HCl | NaOH | Na2O2 | Methanol | Other | Metals* | Chloride/Fluoride/Sulfate | TDS | pH | Radium 226 & 228 | (885N) (885N) 2 (885N) 5 |
| 9 | L-BMW-1S | | | G | WT | 4 | Unpreserved | H2SO4 | HNO3 | HCl | NaOH | Na2O2 | Methanol | Other | Metals* | Chloride/Fluoride/Sulfate | TDS | pH | Radium 226 & 228 | (885N) (885N) 2 (885N) 5 |
| 10 | L-BMW-2S | | | G | WT | 4 | Unpreserved | H2SO4 | HNO3 | HCl | NaOH | Na2O2 | Methanol | Other | Metals* | Chloride/Fluoride/Sulfate | TDS | pH | Radium 226 & 228 | (885N) (885N) 2 (885N) 5 |
| 11 | L-LMW-DUP-1 | | | G | WT | 4 | Unpreserved | H2SO4 | HNO3 | HCl | NaOH | Na2O2 | Methanol | Other | Metals* | Chloride/Fluoride/Sulfate | TDS | pH | Radium 226 & 228 | (885N) (885N) 2 (885N) 5 |
| 12 | L-LMW-FB-1 | | | G | WT | 4 | Unpreserved | H2SO4 | HNO3 | HCl | NaOH | Na2O2 | Methanol | Other | Metals* | Chloride/Fluoride/Sulfate | TDS | pH | Radium 226 & 228 | (885N) (885N) 2 (885N) 5 |

ADDITIONAL COMMENTS
 EPA 200.7: Ba, Be, B, Ca, Co, Pb, Li, Mo + EPA 7470A Hg
 EPA 200.8: Sb, As, Cd, Cr, Se, Tl

RELINQUISHED BY / AFFILIATION
 DATE: 9/13/16 1800
 TIME: 1800
 SIGNATURE: Jeff Ingram

ACCEPTED BY / AFFILIATION
 DATE: 9/13/16 1800
 TIME: 1800
 SIGNATURE: Jeff Ingram

RECEIVED ON
 DATE: 9/13/16 1800
 TIME: 1800
 SIGNATURE: Jeff Ingram

Temp in °C
 21.9

Received on
 DATE: 9/13/16 1800
 TIME: 1800
 SIGNATURE: Jeff Ingram

Cooler Sealed
 Y

Samples Intact
 Y

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

December 22, 2016

Mark Haddock
Golder Associates
820 S. Main St
Suite 100
Saint Charles, MO 63301

RE: Project: AMEREN LABADIE ENERGY CTR-FLY
Pace Project No.: 60232172

Dear Mark Haddock:

Enclosed are the analytical results for sample(s) received by the laboratory between November 12, 2016 and November 16, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Jamie Church
jamie.church@pacelabs.com
Project Manager

Enclosures

cc: Jeffrey Ingram, Golder Associates
John Suozzi, Golder Associates



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60232172

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601

L-A-B DOD-ELAP Accreditation #: L2417

Alabama Certification #: 41590

Arizona Certification #: AZ0734

Arkansas Certification

California Certification #: 04222CA

Colorado Certification

Connecticut Certification #: PH-0694

Delaware Certification

Florida/TNI Certification #: E87683

Georgia Certification #: C040

Guam Certification

Hawaii Certification

Idaho Certification

Illinois Certification

Indiana Certification

Iowa Certification #: 391

Kansas/TNI Certification #: E-10358

Kentucky Certification #: 90133

Louisiana DHH/TNI Certification #: LA140008

Louisiana DEQ/TNI Certification #: 4086

Maine Certification #: PA00091

Maryland Certification #: 308

Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification

Missouri Certification #: 235

Montana Certification #: Cert 0082

Nebraska Certification #: NE-05-29-14

Nevada Certification #: PA014572015-1

New Hampshire/TNI Certification #: 2976

New Jersey/TNI Certification #: PA 051

New Mexico Certification #: PA01457

New York/TNI Certification #: 10888

North Carolina Certification #: 42706

North Dakota Certification #: R-190

Oregon/TNI Certification #: PA200002

Pennsylvania/TNI Certification #: 65-00282

Puerto Rico Certification #: PA01457

Rhode Island Certification #: 65-00282

South Dakota Certification

Tennessee Certification #: TN2867

Texas/TNI Certification #: T104704188-14-8

Utah/TNI Certification #: PA014572015-5

USDA Soil Permit #: P330-14-00213

Vermont Dept. of Health: ID# VT-0282

Virgin Island/PADEP Certification

Virginia/VELAP Certification #: 460198

Washington Certification #: C868

West Virginia DEP Certification #: 143

West Virginia DHHR Certification #: 9964C

Wisconsin Certification

Wyoming Certification #: 8TMS-L

Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 15-016-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407

Utah Certification #: KS00021

Kansas Field Laboratory Accreditation: # E-92587

Missouri Certification: 10070

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60232172

| Lab ID | Sample ID | Matrix | Date Collected | Date Received |
|-------------|--------------|--------|----------------|----------------|
| 60232172001 | L-BMW-1S | Water | 11/11/16 12:42 | 11/12/16 03:35 |
| 60232172002 | L-BMW-2S | Water | 11/11/16 08:45 | 11/12/16 03:35 |
| 60232344001 | L-LMW-1S | Water | 11/14/16 12:20 | 11/16/16 03:45 |
| 60232344002 | L-LMW-2S | Water | 11/14/16 13:46 | 11/16/16 03:45 |
| 60232344003 | L-LMW-3S | Water | 11/14/16 16:02 | 11/16/16 03:45 |
| 60232344004 | L-LMW-4S | Water | 11/14/16 15:50 | 11/16/16 03:45 |
| 60232344005 | L-LMW-5S | Water | 11/15/16 09:05 | 11/16/16 03:45 |
| 60232344006 | L-LMW-6S | Water | 11/14/16 15:02 | 11/16/16 03:45 |
| 60232344007 | L-LMW-7S | Water | 11/14/16 14:20 | 11/16/16 03:45 |
| 60232344008 | L-LMW-8S | Water | 11/14/16 13:27 | 11/16/16 03:45 |
| 60232344009 | L-LMW-DUP-1 | Water | 11/14/16 08:00 | 11/16/16 03:45 |
| 60232344010 | L-LMW-FB-1 | Water | 11/15/16 08:47 | 11/16/16 03:45 |
| 60232172013 | L-LMW-1S MS | Water | 11/14/16 12:20 | 11/16/16 03:45 |
| 60232172014 | L-LMW-1S MSD | Water | 11/14/16 12:20 | 11/16/16 03:45 |

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60232172

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|-------------|-----------|-------------|----------|-------------------|------------|
| 60232172001 | L-BMW-1S | EPA 200.7 | NDJ | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |
| | | EPA 7470 | ZBM | 1 | PASI-K |
| | | EPA 903.1 | ACM | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| | | SM 2540C | JSS | 1 | PASI-K |
| | | SM 4500-H+B | JMC1 | 1 | PASI-K |
| 60232172002 | L-BMW-2S | EPA 300.0 | OL | 3 | PASI-K |
| | | EPA 200.7 | NDJ | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |
| | | EPA 7470 | ZBM | 1 | PASI-K |
| | | EPA 903.1 | ACM | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| | | SM 2540C | JSS | 1 | PASI-K |
| 60232344001 | L-LMW-1S | SM 4500-H+B | JMC1 | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| | | EPA 200.7 | SMW | 8 | PASI-K |
| | | EPA 200.8 | SMW | 6 | PASI-K |
| | | EPA 7470 | NDJ | 1 | PASI-K |
| | | EPA 903.1 | ACM | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| 60232344002 | L-LMW-2S | SM 2540C | JSS | 1 | PASI-K |
| | | SM 4500-H+B | AGO | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| | | EPA 200.7 | SMW | 8 | PASI-K |
| | | EPA 200.8 | SMW | 6 | PASI-K |
| | | EPA 7470 | NDJ | 1 | PASI-K |
| | | EPA 903.1 | ACM | 1 | PASI-PA |
| 60232344003 | L-LMW-3S | EPA 904.0 | JLW | 1 | PASI-PA |
| | | SM 2540C | JSS | 1 | PASI-K |
| | | SM 4500-H+B | AGO | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| | | EPA 200.7 | SMW | 8 | PASI-K |
| | | EPA 200.8 | SMW | 6 | PASI-K |
| | | EPA 7470 | NDJ | 1 | PASI-K |
| 60232344003 | L-LMW-3S | EPA 903.1 | ACM | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60232172

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|-------------|-----------|-------------|----------|-------------------|------------|
| 60232344004 | L-LMW-4S | SM 2540C | JSS | 1 | PASI-K |
| | | SM 4500-H+B | AGO | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| | | EPA 200.7 | SMW | 8 | PASI-K |
| | | EPA 200.8 | SMW | 6 | PASI-K |
| | | EPA 7470 | NDJ | 1 | PASI-K |
| | | EPA 903.1 | ACM | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| 60232344005 | L-LMW-5S | SM 2540C | JSS | 1 | PASI-K |
| | | SM 4500-H+B | AGO | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| | | EPA 200.7 | SMW | 8 | PASI-K |
| | | EPA 200.8 | SMW | 6 | PASI-K |
| | | EPA 7470 | NDJ | 1 | PASI-K |
| | | EPA 903.1 | ACM | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| 60232344006 | L-LMW-6S | SM 2540C | JSS | 1 | PASI-K |
| | | SM 4500-H+B | AGO | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| | | EPA 200.7 | SMW | 8 | PASI-K |
| | | EPA 200.8 | SMW | 6 | PASI-K |
| | | EPA 7470 | NDJ | 1 | PASI-K |
| | | EPA 903.1 | ACM | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| 60232344007 | L-LMW-7S | SM 2540C | JSS | 1 | PASI-K |
| | | SM 4500-H+B | AGO | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| | | EPA 200.7 | SMW | 8 | PASI-K |
| | | EPA 200.8 | SMW | 6 | PASI-K |
| | | EPA 7470 | NDJ | 1 | PASI-K |
| | | EPA 903.1 | ACM | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| 60232344008 | L-LMW-8S | SM 2540C | JSS | 1 | PASI-K |
| | | SM 4500-H+B | AGO | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| | | EPA 200.7 | SMW | 8 | PASI-K |
| | | EPA 200.8 | SMW | 6 | PASI-K |

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SAMPLE ANALYTE COUNT

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60232172

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|-------------|--------------|-------------|----------|-------------------|------------|
| | | EPA 7470 | NDJ | 1 | PASI-K |
| | | EPA 903.1 | ACM | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| | | SM 2540C | JSS | 1 | PASI-K |
| | | SM 4500-H+B | AGO | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| 60232344009 | L-LMW-DUP-1 | EPA 200.7 | SMW | 8 | PASI-K |
| | | EPA 200.8 | SMW | 6 | PASI-K |
| | | EPA 7470 | NDJ | 1 | PASI-K |
| | | EPA 903.1 | ACM | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| | | SM 2540C | JSS | 1 | PASI-K |
| | | SM 4500-H+B | AGO | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| 60232344010 | L-LMW-FB-1 | EPA 200.7 | SMW | 8 | PASI-K |
| | | EPA 200.8 | SMW | 6 | PASI-K |
| | | EPA 7470 | NDJ | 1 | PASI-K |
| | | EPA 903.1 | ACM | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| | | SM 2540C | JSS | 1 | PASI-K |
| | | SM 4500-H+B | AGO | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| 60232172013 | L-LMW-1S MS | EPA 903.1 | ACM | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| 60232172014 | L-LMW-1S MSD | EPA 903.1 | ACM | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60232172

Sample: L-BMW-1S **Lab ID: 60232172001** Collected: 11/11/16 12:42 Received: 11/12/16 03:35 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|--|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 338 | ug/L | 5.0 | 0.58 | 1 | 11/15/16 08:30 | 11/15/16 17:10 | 7440-39-3 | |
| Beryllium | <0.26 | ug/L | 1.0 | 0.26 | 1 | 11/15/16 08:30 | 11/15/16 17:10 | 7440-41-7 | |
| Boron | 88.1J | ug/L | 100 | 50.0 | 1 | 11/15/16 08:30 | 11/15/16 17:10 | 7440-42-8 | |
| Calcium | 200000 | ug/L | 100 | 8.1 | 1 | 11/15/16 08:30 | 11/15/16 17:10 | 7440-70-2 | |
| Cobalt | 1.8J | ug/L | 5.0 | 0.72 | 1 | 11/15/16 08:30 | 11/15/16 17:10 | 7440-48-4 | |
| Lead | <2.5 | ug/L | 5.0 | 2.5 | 1 | 11/15/16 08:30 | 11/15/16 17:10 | 7439-92-1 | |
| Lithium | 20.0 | ug/L | 10.0 | 4.9 | 1 | 11/15/16 08:30 | 11/15/16 17:10 | 7439-93-2 | |
| Molybdenum | <0.52 | ug/L | 20.0 | 0.52 | 1 | 11/15/16 08:30 | 11/15/16 17:10 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | <0.058 | ug/L | 1.0 | 0.058 | 1 | 11/15/16 08:30 | 11/28/16 13:11 | 7440-36-0 | |
| Arsenic | 22.9 | ug/L | 1.0 | 0.10 | 1 | 11/15/16 08:30 | 11/28/16 13:11 | 7440-38-2 | |
| Cadmium | <0.029 | ug/L | 0.50 | 0.029 | 1 | 11/15/16 08:30 | 11/28/16 13:11 | 7440-43-9 | |
| Chromium | 0.48J | ug/L | 1.0 | 0.34 | 1 | 11/15/16 08:30 | 11/28/16 13:11 | 7440-47-3 | |
| Selenium | <0.18 | ug/L | 1.0 | 0.18 | 1 | 11/15/16 08:30 | 11/28/16 13:11 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 11/15/16 08:30 | 11/28/16 13:11 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.039 | ug/L | 0.20 | 0.039 | 1 | 11/23/16 08:35 | 11/23/16 12:17 | 7439-97-6 | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 692 | mg/L | 5.0 | 5.0 | 1 | | 11/17/16 16:04 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 6.9 | Std. Units | 0.10 | 0.10 | 1 | | 11/19/16 08:41 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 5.3 | mg/L | 1.0 | 0.50 | 1 | | 12/04/16 02:16 | 16887-00-6 | |
| Fluoride | 0.11J | mg/L | 0.20 | 0.027 | 1 | | 12/04/16 02:16 | 16984-48-8 | |
| Sulfate | 43.1 | mg/L | 5.0 | 0.77 | 5 | | 12/05/16 01:25 | 14808-79-8 | |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60232172

Sample: L-BMW-2S **Lab ID: 60232172002** Collected: 11/11/16 08:45 Received: 11/12/16 03:35 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 218 | ug/L | 5.0 | 0.58 | 1 | 11/15/16 08:30 | 11/15/16 17:12 | 7440-39-3 | |
| Beryllium | <0.26 | ug/L | 1.0 | 0.26 | 1 | 11/15/16 08:30 | 11/15/16 17:12 | 7440-41-7 | |
| Boron | <50.0 | ug/L | 100 | 50.0 | 1 | 11/15/16 08:30 | 11/15/16 17:12 | 7440-42-8 | |
| Calcium | 119000 | ug/L | 100 | 8.1 | 1 | 11/15/16 08:30 | 11/15/16 17:12 | 7440-70-2 | |
| Cobalt | <0.72 | ug/L | 5.0 | 0.72 | 1 | 11/15/16 08:30 | 11/15/16 17:12 | 7440-48-4 | |
| Lead | <2.5 | ug/L | 5.0 | 2.5 | 1 | 11/15/16 08:30 | 11/15/16 17:12 | 7439-92-1 | |
| Lithium | 19.2 | ug/L | 10.0 | 4.9 | 1 | 11/15/16 08:30 | 11/15/16 17:12 | 7439-93-2 | |
| Molybdenum | 2.1J | ug/L | 20.0 | 0.52 | 1 | 11/15/16 08:30 | 11/15/16 17:12 | 7439-98-7 | B |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | 0.22J | ug/L | 1.0 | 0.058 | 1 | 11/15/16 08:30 | 11/28/16 13:15 | 7440-36-0 | |
| Arsenic | 0.41J | ug/L | 1.0 | 0.10 | 1 | 11/15/16 08:30 | 11/28/16 13:15 | 7440-38-2 | |
| Cadmium | 0.036J | ug/L | 0.50 | 0.029 | 1 | 11/15/16 08:30 | 11/28/16 13:15 | 7440-43-9 | |
| Chromium | 0.64J | ug/L | 1.0 | 0.34 | 1 | 11/15/16 08:30 | 11/28/16 13:15 | 7440-47-3 | |
| Selenium | 1.3 | ug/L | 1.0 | 0.18 | 1 | 11/15/16 08:30 | 11/28/16 13:15 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 11/15/16 08:30 | 11/28/16 13:15 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.039 | ug/L | 0.20 | 0.039 | 1 | 11/23/16 08:35 | 11/23/16 12:23 | 7439-97-6 | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 405 | mg/L | 5.0 | 5.0 | 1 | | 11/17/16 16:05 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.2 | Std. Units | 0.10 | 0.10 | 1 | | 11/19/16 08:43 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 2.0 | mg/L | 1.0 | 0.50 | 1 | | 12/04/16 02:30 | 16887-00-6 | |
| Fluoride | 0.16J | mg/L | 0.20 | 0.027 | 1 | | 12/04/16 02:30 | 16984-48-8 | |
| Sulfate | 12.3 | mg/L | 1.0 | 0.15 | 1 | | 12/04/16 02:30 | 14808-79-8 | |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60232172

Sample: L-LMW-1S **Lab ID: 60232344001** Collected: 11/14/16 12:20 Received: 11/16/16 03:45 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 156 | ug/L | 5.0 | 0.58 | 1 | 11/16/16 18:45 | 11/21/16 15:03 | 7440-39-3 | |
| Beryllium | 0.34J | ug/L | 1.0 | 0.26 | 1 | 11/16/16 18:45 | 11/21/16 15:03 | 7440-41-7 | |
| Boron | 6230 | ug/L | 100 | 50.0 | 1 | 11/16/16 18:45 | 11/21/16 15:03 | 7440-42-8 | M1 |
| Calcium | 169000 | ug/L | 100 | 8.1 | 1 | 11/16/16 18:45 | 11/21/16 15:03 | 7440-70-2 | M1 |
| Cobalt | 2.7J | ug/L | 5.0 | 0.72 | 1 | 11/16/16 18:45 | 11/21/16 15:03 | 7440-48-4 | |
| Lead | 5.5 | ug/L | 5.0 | 2.5 | 1 | 11/16/16 18:45 | 11/21/16 15:03 | 7439-92-1 | |
| Lithium | 17.0 | ug/L | 10.0 | 4.9 | 1 | 11/16/16 18:45 | 11/21/16 15:03 | 7439-93-2 | |
| Molybdenum | 4.0J | ug/L | 20.0 | 0.52 | 1 | 11/16/16 18:45 | 11/21/16 15:03 | 7439-98-7 | B |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | 0.25J | ug/L | 1.0 | 0.058 | 1 | 11/16/16 18:45 | 11/30/16 12:24 | 7440-36-0 | B |
| Arsenic | 3.4 | ug/L | 1.0 | 0.10 | 1 | 11/16/16 18:45 | 11/30/16 12:24 | 7440-38-2 | |
| Cadmium | 0.16J | ug/L | 0.50 | 0.029 | 1 | 11/16/16 18:45 | 11/30/16 12:24 | 7440-43-9 | B |
| Chromium | <0.34 | ug/L | 1.0 | 0.34 | 1 | 11/16/16 18:45 | 11/30/16 12:24 | 7440-47-3 | |
| Selenium | 0.60J | ug/L | 1.0 | 0.18 | 1 | 11/16/16 18:45 | 11/30/16 12:24 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 11/16/16 18:45 | 11/30/16 12:24 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.039 | ug/L | 0.20 | 0.039 | 1 | 11/28/16 09:45 | 11/28/16 13:12 | 7439-97-6 | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 688 | mg/L | 5.0 | 5.0 | 1 | | 11/18/16 14:55 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.1 | Std. Units | 0.10 | 0.10 | 1 | | 11/22/16 09:00 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 3.8 | mg/L | 1.0 | 0.50 | 1 | | 12/09/16 10:53 | 16887-00-6 | |
| Fluoride | 0.17J | mg/L | 0.20 | 0.027 | 1 | | 12/09/16 10:53 | 16984-48-8 | |
| Sulfate | 224 | mg/L | 20.0 | 3.1 | 20 | | 12/12/16 06:41 | 14808-79-8 | M1 |

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60232172

Sample: L-LMW-2S **Lab ID: 60232344002** Collected: 11/14/16 13:46 Received: 11/16/16 03:45 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 51.3 | ug/L | 5.0 | 0.58 | 1 | 11/16/16 18:45 | 11/21/16 15:25 | 7440-39-3 | |
| Beryllium | 0.49J | ug/L | 1.0 | 0.26 | 1 | 11/16/16 18:45 | 11/21/16 15:25 | 7440-41-7 | |
| Boron | 7190 | ug/L | 100 | 50.0 | 1 | 11/16/16 18:45 | 11/22/16 15:38 | 7440-42-8 | |
| Calcium | 67000 | ug/L | 100 | 8.1 | 1 | 11/16/16 18:45 | 11/21/16 15:25 | 7440-70-2 | |
| Cobalt | <0.72 | ug/L | 5.0 | 0.72 | 1 | 11/16/16 18:45 | 11/21/16 15:25 | 7440-48-4 | |
| Lead | 3.2J | ug/L | 5.0 | 2.5 | 1 | 11/16/16 18:45 | 11/21/16 15:25 | 7439-92-1 | |
| Lithium | 12.8 | ug/L | 10.0 | 4.9 | 1 | 11/16/16 18:45 | 11/21/16 15:25 | 7439-93-2 | |
| Molybdenum | 111 | ug/L | 20.0 | 0.52 | 1 | 11/16/16 18:45 | 11/21/16 15:25 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | 0.25J | ug/L | 1.0 | 0.058 | 1 | 11/16/16 18:45 | 11/30/16 12:37 | 7440-36-0 | B |
| Arsenic | 29.7 | ug/L | 1.0 | 0.10 | 1 | 11/16/16 18:45 | 11/30/16 12:37 | 7440-38-2 | |
| Cadmium | 0.034J | ug/L | 0.50 | 0.029 | 1 | 11/16/16 18:45 | 11/30/16 12:37 | 7440-43-9 | B |
| Chromium | 0.35J | ug/L | 1.0 | 0.34 | 1 | 11/16/16 18:45 | 11/30/16 12:37 | 7440-47-3 | |
| Selenium | <0.18 | ug/L | 1.0 | 0.18 | 1 | 11/16/16 18:45 | 11/30/16 12:37 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 11/16/16 18:45 | 11/30/16 12:37 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.039 | ug/L | 0.20 | 0.039 | 1 | 11/28/16 09:45 | 11/28/16 13:19 | 7439-97-6 | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 466 | mg/L | 5.0 | 5.0 | 1 | | 11/18/16 14:59 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 9.3 | Std. Units | 0.10 | 0.10 | 1 | | 11/22/16 09:00 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 18.3 | mg/L | 1.0 | 0.50 | 1 | | 12/09/16 11:34 | 16887-00-6 | |
| Fluoride | 0.17J | mg/L | 0.20 | 0.027 | 1 | | 12/09/16 11:34 | 16984-48-8 | |
| Sulfate | 275 | mg/L | 20.0 | 3.1 | 20 | | 12/12/16 07:13 | 14808-79-8 | |

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60232172

Sample: L-LMW-3S **Lab ID: 60232344003** Collected: 11/14/16 16:02 Received: 11/16/16 03:45 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 97.0 | ug/L | 5.0 | 0.58 | 1 | 11/16/16 18:45 | 11/21/16 15:29 | 7440-39-3 | |
| Beryllium | <0.26 | ug/L | 1.0 | 0.26 | 1 | 11/16/16 18:45 | 11/21/16 15:29 | 7440-41-7 | |
| Boron | 5310 | ug/L | 100 | 50.0 | 1 | 11/16/16 18:45 | 11/22/16 15:42 | 7440-42-8 | |
| Calcium | 76900 | ug/L | 100 | 8.1 | 1 | 11/16/16 18:45 | 11/21/16 15:29 | 7440-70-2 | |
| Cobalt | <0.72 | ug/L | 5.0 | 0.72 | 1 | 11/16/16 18:45 | 11/21/16 15:29 | 7440-48-4 | |
| Lead | 2.6J | ug/L | 5.0 | 2.5 | 1 | 11/16/16 18:45 | 11/21/16 15:29 | 7439-92-1 | |
| Lithium | 21.8 | ug/L | 10.0 | 4.9 | 1 | 11/16/16 18:45 | 11/21/16 15:29 | 7439-93-2 | |
| Molybdenum | 207 | ug/L | 20.0 | 0.52 | 1 | 11/16/16 18:45 | 11/21/16 15:29 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | 0.19J | ug/L | 1.0 | 0.058 | 1 | 11/16/16 18:45 | 11/30/16 12:41 | 7440-36-0 | B |
| Arsenic | 15.3 | ug/L | 1.0 | 0.10 | 1 | 11/16/16 18:45 | 11/30/16 12:41 | 7440-38-2 | |
| Cadmium | <0.029 | ug/L | 0.50 | 0.029 | 1 | 11/16/16 18:45 | 11/30/16 12:41 | 7440-43-9 | |
| Chromium | <0.34 | ug/L | 1.0 | 0.34 | 1 | 11/16/16 18:45 | 11/30/16 12:41 | 7440-47-3 | |
| Selenium | <0.18 | ug/L | 1.0 | 0.18 | 1 | 11/16/16 18:45 | 11/30/16 12:41 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 11/16/16 18:45 | 11/30/16 12:41 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.039 | ug/L | 0.20 | 0.039 | 1 | 11/28/16 09:45 | 11/28/16 13:21 | 7439-97-6 | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 641 | mg/L | 5.0 | 5.0 | 1 | | 11/18/16 15:00 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.4 | Std. Units | 0.10 | 0.10 | 1 | | 11/22/16 09:00 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 20.7 | mg/L | 2.0 | 1.0 | 2 | | 12/12/16 08:01 | 16887-00-6 | |
| Fluoride | 0.43 | mg/L | 0.20 | 0.027 | 1 | | 12/09/16 11:48 | 16984-48-8 | |
| Sulfate | 260 | mg/L | 20.0 | 3.1 | 20 | | 12/12/16 08:16 | 14808-79-8 | |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60232172

Sample: L-LMW-4S **Lab ID: 60232344004** Collected: 11/14/16 15:50 Received: 11/16/16 03:45 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 143 | ug/L | 5.0 | 0.58 | 1 | 11/16/16 18:45 | 11/21/16 15:32 | 7440-39-3 | |
| Beryllium | <0.26 | ug/L | 1.0 | 0.26 | 1 | 11/16/16 18:45 | 11/21/16 15:32 | 7440-41-7 | |
| Boron | 7600 | ug/L | 100 | 50.0 | 1 | 11/16/16 18:45 | 11/22/16 15:45 | 7440-42-8 | |
| Calcium | 145000 | ug/L | 100 | 8.1 | 1 | 11/16/16 18:45 | 11/21/16 15:32 | 7440-70-2 | |
| Cobalt | 1.9J | ug/L | 5.0 | 0.72 | 1 | 11/16/16 18:45 | 11/21/16 15:32 | 7440-48-4 | |
| Lead | 3.3J | ug/L | 5.0 | 2.5 | 1 | 11/16/16 18:45 | 11/21/16 15:32 | 7439-92-1 | |
| Lithium | 38.2 | ug/L | 10.0 | 4.9 | 1 | 11/16/16 18:45 | 11/21/16 15:32 | 7439-93-2 | |
| Molybdenum | 37.9 | ug/L | 20.0 | 0.52 | 1 | 11/16/16 18:45 | 11/21/16 15:32 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | 0.20J | ug/L | 1.0 | 0.058 | 1 | 11/16/16 18:45 | 11/30/16 12:46 | 7440-36-0 | B |
| Arsenic | 11.8 | ug/L | 1.0 | 0.10 | 1 | 11/16/16 18:45 | 11/30/16 12:46 | 7440-38-2 | |
| Cadmium | 0.040J | ug/L | 0.50 | 0.029 | 1 | 11/16/16 18:45 | 11/30/16 12:46 | 7440-43-9 | B |
| Chromium | <0.34 | ug/L | 1.0 | 0.34 | 1 | 11/16/16 18:45 | 11/30/16 12:46 | 7440-47-3 | |
| Selenium | <0.18 | ug/L | 1.0 | 0.18 | 1 | 11/16/16 18:45 | 11/30/16 12:46 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 11/16/16 18:45 | 11/30/16 12:46 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.039 | ug/L | 0.20 | 0.039 | 1 | 11/28/16 09:45 | 11/28/16 13:23 | 7439-97-6 | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 748 | mg/L | 5.0 | 5.0 | 1 | | 11/18/16 15:01 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.1 | Std. Units | 0.10 | 0.10 | 1 | | 11/22/16 09:00 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 23.3 | mg/L | 2.0 | 1.0 | 2 | | 12/12/16 08:32 | 16887-00-6 | |
| Fluoride | 0.18J | mg/L | 0.20 | 0.027 | 1 | | 12/09/16 12:02 | 16984-48-8 | |
| Sulfate | 208 | mg/L | 20.0 | 3.1 | 20 | | 12/12/16 08:48 | 14808-79-8 | |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60232172

Sample: L-LMW-5S **Lab ID: 60232344005** Collected: 11/15/16 09:05 Received: 11/16/16 03:45 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 263 | ug/L | 5.0 | 0.58 | 1 | 11/16/16 18:45 | 11/21/16 15:36 | 7440-39-3 | |
| Beryllium | <0.26 | ug/L | 1.0 | 0.26 | 1 | 11/16/16 18:45 | 11/21/16 15:36 | 7440-41-7 | |
| Boron | 62.9J | ug/L | 100 | 50.0 | 1 | 11/16/16 18:45 | 11/22/16 15:49 | 7440-42-8 | |
| Calcium | 107000 | ug/L | 100 | 8.1 | 1 | 11/16/16 18:45 | 11/21/16 15:36 | 7440-70-2 | |
| Cobalt | <0.72 | ug/L | 5.0 | 0.72 | 1 | 11/16/16 18:45 | 11/21/16 15:36 | 7440-48-4 | |
| Lead | 2.5J | ug/L | 5.0 | 2.5 | 1 | 11/16/16 18:45 | 11/21/16 15:36 | 7439-92-1 | |
| Lithium | 8.6J | ug/L | 10.0 | 4.9 | 1 | 11/16/16 18:45 | 11/21/16 15:36 | 7439-93-2 | |
| Molybdenum | 2.4J | ug/L | 20.0 | 0.52 | 1 | 11/16/16 18:45 | 11/21/16 15:36 | 7439-98-7 | B |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | 0.31J | ug/L | 1.0 | 0.058 | 1 | 11/16/16 18:45 | 11/30/16 13:38 | 7440-36-0 | B |
| Arsenic | 0.62J | ug/L | 1.0 | 0.10 | 1 | 11/16/16 18:45 | 11/30/16 13:38 | 7440-38-2 | B |
| Cadmium | 0.069J | ug/L | 0.50 | 0.029 | 1 | 11/16/16 18:45 | 11/30/16 13:38 | 7440-43-9 | B |
| Chromium | 0.38J | ug/L | 1.0 | 0.34 | 1 | 11/16/16 18:45 | 11/30/16 13:38 | 7440-47-3 | |
| Selenium | 0.78J | ug/L | 1.0 | 0.18 | 1 | 11/16/16 18:45 | 11/30/16 13:38 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 11/16/16 18:45 | 11/30/16 13:38 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.039 | ug/L | 0.20 | 0.039 | 1 | 11/28/16 09:45 | 11/28/16 13:26 | 7439-97-6 | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 320 | mg/L | 5.0 | 5.0 | 1 | | 11/18/16 15:19 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.3 | Std. Units | 0.10 | 0.10 | 1 | | 11/22/16 09:00 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 1.6 | mg/L | 1.0 | 0.50 | 1 | | 12/09/16 17:50 | 16887-00-6 | |
| Fluoride | 0.20 | mg/L | 0.20 | 0.027 | 1 | | 12/09/16 17:50 | 16984-48-8 | |
| Sulfate | 13.2 | mg/L | 1.0 | 0.15 | 1 | | 12/09/16 17:50 | 14808-79-8 | |

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60232172

Sample: L-LMW-6S **Lab ID: 60232344006** Collected: 11/14/16 15:02 Received: 11/16/16 03:45 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 290 | ug/L | 5.0 | 0.58 | 1 | 11/16/16 18:45 | 11/21/16 15:40 | 7440-39-3 | |
| Beryllium | <0.26 | ug/L | 1.0 | 0.26 | 1 | 11/16/16 18:45 | 11/21/16 15:40 | 7440-41-7 | |
| Boron | 576 | ug/L | 100 | 50.0 | 1 | 11/16/16 18:45 | 11/22/16 15:53 | 7440-42-8 | |
| Calcium | 179000 | ug/L | 100 | 8.1 | 1 | 11/16/16 18:45 | 11/21/16 15:40 | 7440-70-2 | |
| Cobalt | 1.9J | ug/L | 5.0 | 0.72 | 1 | 11/16/16 18:45 | 11/21/16 15:40 | 7440-48-4 | |
| Lead | <2.5 | ug/L | 5.0 | 2.5 | 1 | 11/16/16 18:45 | 11/21/16 15:40 | 7439-92-1 | |
| Lithium | 36.6 | ug/L | 10.0 | 4.9 | 1 | 11/16/16 18:45 | 11/21/16 15:40 | 7439-93-2 | |
| Molybdenum | 5.6J | ug/L | 20.0 | 0.52 | 1 | 11/16/16 18:45 | 11/21/16 15:40 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | 0.27J | ug/L | 1.0 | 0.058 | 1 | 11/16/16 18:45 | 11/30/16 13:42 | 7440-36-0 | B |
| Arsenic | 0.89J | ug/L | 1.0 | 0.10 | 1 | 11/16/16 18:45 | 11/30/16 13:42 | 7440-38-2 | B |
| Cadmium | 0.14J | ug/L | 0.50 | 0.029 | 1 | 11/16/16 18:45 | 11/30/16 13:42 | 7440-43-9 | B |
| Chromium | <0.34 | ug/L | 1.0 | 0.34 | 1 | 11/16/16 18:45 | 11/30/16 13:42 | 7440-47-3 | |
| Selenium | 0.70J | ug/L | 1.0 | 0.18 | 1 | 11/16/16 18:45 | 11/30/16 13:42 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 11/16/16 18:45 | 11/30/16 13:42 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.039 | ug/L | 0.20 | 0.039 | 1 | 11/28/16 09:45 | 11/28/16 13:28 | 7439-97-6 | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 608 | mg/L | 5.0 | 5.0 | 1 | | 11/18/16 15:02 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 6.9 | Std. Units | 0.10 | 0.10 | 1 | | 11/22/16 09:00 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 2.6 | mg/L | 1.0 | 0.50 | 1 | | 12/09/16 12:16 | 16887-00-6 | |
| Fluoride | 0.14J | mg/L | 0.20 | 0.027 | 1 | | 12/09/16 12:16 | 16984-48-8 | |
| Sulfate | 53.5 | mg/L | 5.0 | 0.77 | 5 | | 12/12/16 09:04 | 14808-79-8 | |

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60232172

Sample: L-LMW-7S **Lab ID: 60232344007** Collected: 11/14/16 14:20 Received: 11/16/16 03:45 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 304 | ug/L | 5.0 | 0.58 | 1 | 11/16/16 18:45 | 11/21/16 15:43 | 7440-39-3 | |
| Beryllium | <0.26 | ug/L | 1.0 | 0.26 | 1 | 11/16/16 18:45 | 11/21/16 15:43 | 7440-41-7 | |
| Boron | 679 | ug/L | 100 | 50.0 | 1 | 11/16/16 18:45 | 11/22/16 15:56 | 7440-42-8 | |
| Calcium | 160000 | ug/L | 100 | 8.1 | 1 | 11/16/16 18:45 | 11/21/16 15:43 | 7440-70-2 | |
| Cobalt | 2.4J | ug/L | 5.0 | 0.72 | 1 | 11/16/16 18:45 | 11/21/16 15:43 | 7440-48-4 | |
| Lead | 3.1J | ug/L | 5.0 | 2.5 | 1 | 11/16/16 18:45 | 11/21/16 15:43 | 7439-92-1 | |
| Lithium | 31.9 | ug/L | 10.0 | 4.9 | 1 | 11/16/16 18:45 | 11/21/16 15:43 | 7439-93-2 | |
| Molybdenum | 11.8J | ug/L | 20.0 | 0.52 | 1 | 11/16/16 18:45 | 11/21/16 15:43 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | 0.25J | ug/L | 1.0 | 0.058 | 1 | 11/16/16 18:45 | 11/30/16 13:55 | 7440-36-0 | B |
| Arsenic | 3.3 | ug/L | 1.0 | 0.10 | 1 | 11/16/16 18:45 | 11/30/16 13:55 | 7440-38-2 | |
| Cadmium | 0.15J | ug/L | 0.50 | 0.029 | 1 | 11/16/16 18:45 | 11/30/16 13:55 | 7440-43-9 | B |
| Chromium | <0.34 | ug/L | 1.0 | 0.34 | 1 | 11/16/16 18:45 | 11/30/16 13:55 | 7440-47-3 | |
| Selenium | 0.91J | ug/L | 1.0 | 0.18 | 1 | 11/16/16 18:45 | 11/30/16 13:55 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 11/16/16 18:45 | 11/30/16 13:55 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.039 | ug/L | 0.20 | 0.039 | 1 | 11/28/16 09:45 | 11/28/16 13:30 | 7439-97-6 | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 578 | mg/L | 5.0 | 5.0 | 1 | | 11/18/16 15:03 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.1 | Std. Units | 0.10 | 0.10 | 1 | | 11/22/16 09:00 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 4.7 | mg/L | 1.0 | 0.50 | 1 | | 12/09/16 12:30 | 16887-00-6 | |
| Fluoride | 0.12J | mg/L | 0.20 | 0.027 | 1 | | 12/09/16 12:30 | 16984-48-8 | |
| Sulfate | 46.1 | mg/L | 5.0 | 0.77 | 5 | | 12/10/16 19:23 | 14808-79-8 | M1 |

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60232172

Sample: L-LMW-8S **Lab ID: 60232344008** Collected: 11/14/16 13:27 Received: 11/16/16 03:45 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 134 | ug/L | 5.0 | 0.58 | 1 | 11/16/16 18:45 | 11/21/16 15:47 | 7440-39-3 | |
| Beryllium | <0.26 | ug/L | 1.0 | 0.26 | 1 | 11/16/16 18:45 | 11/21/16 15:47 | 7440-41-7 | |
| Boron | 2800 | ug/L | 100 | 50.0 | 1 | 11/16/16 18:45 | 11/22/16 16:00 | 7440-42-8 | |
| Calcium | 169000 | ug/L | 100 | 8.1 | 1 | 11/16/16 18:45 | 11/21/16 15:47 | 7440-70-2 | |
| Cobalt | 1.4J | ug/L | 5.0 | 0.72 | 1 | 11/16/16 18:45 | 11/21/16 15:47 | 7440-48-4 | |
| Lead | <2.5 | ug/L | 5.0 | 2.5 | 1 | 11/16/16 18:45 | 11/21/16 15:47 | 7439-92-1 | |
| Lithium | 24.3 | ug/L | 10.0 | 4.9 | 1 | 11/16/16 18:45 | 11/21/16 15:47 | 7439-93-2 | |
| Molybdenum | 17.4J | ug/L | 20.0 | 0.52 | 1 | 11/16/16 18:45 | 11/21/16 15:47 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | 0.29J | ug/L | 1.0 | 0.058 | 1 | 11/16/16 18:45 | 11/30/16 13:59 | 7440-36-0 | B |
| Arsenic | 1.2 | ug/L | 1.0 | 0.10 | 1 | 11/16/16 18:45 | 11/30/16 13:59 | 7440-38-2 | B |
| Cadmium | 0.22J | ug/L | 0.50 | 0.029 | 1 | 11/16/16 18:45 | 11/30/16 13:59 | 7440-43-9 | B |
| Chromium | <0.34 | ug/L | 1.0 | 0.34 | 1 | 11/16/16 18:45 | 11/30/16 13:59 | 7440-47-3 | |
| Selenium | <0.18 | ug/L | 1.0 | 0.18 | 1 | 11/16/16 18:45 | 11/30/16 13:59 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 11/16/16 18:45 | 11/30/16 13:59 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.039 | ug/L | 0.20 | 0.039 | 1 | 11/28/16 09:45 | 11/28/16 13:37 | 7439-97-6 | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 649 | mg/L | 5.0 | 5.0 | 1 | | 11/18/16 15:03 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.1 | Std. Units | 0.10 | 0.10 | 1 | | 11/22/16 09:00 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 11.4 | mg/L | 1.0 | 0.50 | 1 | | 12/09/16 12:44 | 16887-00-6 | |
| Fluoride | 0.18J | mg/L | 0.20 | 0.027 | 1 | | 12/09/16 12:44 | 16984-48-8 | |
| Sulfate | 127 | mg/L | 10.0 | 1.5 | 10 | | 12/10/16 20:06 | 14808-79-8 | |

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60232172

Sample: L-LMW-DUP-1 **Lab ID: 60232344009** Collected: 11/14/16 08:00 Received: 11/16/16 03:45 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 149 | ug/L | 5.0 | 0.58 | 1 | 11/16/16 18:45 | 11/21/16 15:51 | 7440-39-3 | |
| Beryllium | <0.26 | ug/L | 1.0 | 0.26 | 1 | 11/16/16 18:45 | 11/21/16 15:51 | 7440-41-7 | |
| Boron | 7860 | ug/L | 100 | 50.0 | 1 | 11/16/16 18:45 | 11/22/16 16:11 | 7440-42-8 | |
| Calcium | 149000 | ug/L | 100 | 8.1 | 1 | 11/16/16 18:45 | 11/21/16 15:51 | 7440-70-2 | |
| Cobalt | 2.1J | ug/L | 5.0 | 0.72 | 1 | 11/16/16 18:45 | 11/21/16 15:51 | 7440-48-4 | |
| Lead | <2.5 | ug/L | 5.0 | 2.5 | 1 | 11/16/16 18:45 | 11/21/16 15:51 | 7439-92-1 | |
| Lithium | 39.9 | ug/L | 10.0 | 4.9 | 1 | 11/16/16 18:45 | 11/21/16 15:51 | 7439-93-2 | |
| Molybdenum | 38.7 | ug/L | 20.0 | 0.52 | 1 | 11/16/16 18:45 | 11/21/16 15:51 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | 0.20J | ug/L | 1.0 | 0.058 | 1 | 11/16/16 18:45 | 11/30/16 14:04 | 7440-36-0 | B |
| Arsenic | 12.5 | ug/L | 1.0 | 0.10 | 1 | 11/16/16 18:45 | 11/30/16 14:04 | 7440-38-2 | |
| Cadmium | 0.037J | ug/L | 0.50 | 0.029 | 1 | 11/16/16 18:45 | 11/30/16 14:04 | 7440-43-9 | B |
| Chromium | <0.34 | ug/L | 1.0 | 0.34 | 1 | 11/16/16 18:45 | 11/30/16 14:04 | 7440-47-3 | |
| Selenium | <0.18 | ug/L | 1.0 | 0.18 | 1 | 11/16/16 18:45 | 11/30/16 14:04 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 11/16/16 18:45 | 11/30/16 14:04 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.039 | ug/L | 0.20 | 0.039 | 1 | 11/28/16 09:45 | 11/28/16 13:39 | 7439-97-6 | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 743 | mg/L | 5.0 | 5.0 | 1 | | 11/18/16 15:04 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.0 | Std. Units | 0.10 | 0.10 | 1 | | 11/22/16 09:00 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 24.1 | mg/L | 2.0 | 1.0 | 2 | | 12/10/16 20:20 | 16887-00-6 | |
| Fluoride | 0.18J | mg/L | 0.20 | 0.027 | 1 | | 12/09/16 13:26 | 16984-48-8 | |
| Sulfate | 220 | mg/L | 20.0 | 3.1 | 20 | | 12/10/16 20:34 | 14808-79-8 | |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60232172

Sample: L-LMW-FB-1 **Lab ID:** 60232344010 Collected: 11/15/16 08:47 Received: 11/16/16 03:45 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|---------|--|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | <0.58 | ug/L | 5.0 | 0.58 | 1 | 11/16/16 18:45 | 11/21/16 16:02 | 7440-39-3 | |
| Beryllium | <0.26 | ug/L | 1.0 | 0.26 | 1 | 11/16/16 18:45 | 11/21/16 16:02 | 7440-41-7 | |
| Boron | <50.0 | ug/L | 100 | 50.0 | 1 | 11/16/16 18:45 | 11/22/16 16:15 | 7440-42-8 | |
| Calcium | 33.6J | ug/L | 100 | 8.1 | 1 | 11/16/16 18:45 | 11/21/16 16:02 | 7440-70-2 | B |
| Cobalt | <0.72 | ug/L | 5.0 | 0.72 | 1 | 11/16/16 18:45 | 11/21/16 16:02 | 7440-48-4 | |
| Lead | <2.5 | ug/L | 5.0 | 2.5 | 1 | 11/16/16 18:45 | 11/21/16 16:02 | 7439-92-1 | |
| Lithium | <4.9 | ug/L | 10.0 | 4.9 | 1 | 11/16/16 18:45 | 11/21/16 16:02 | 7439-93-2 | |
| Molybdenum | <0.52 | ug/L | 20.0 | 0.52 | 1 | 11/16/16 18:45 | 11/21/16 16:02 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | 0.18J | ug/L | 1.0 | 0.058 | 1 | 11/16/16 18:45 | 11/30/16 12:50 | 7440-36-0 | B |
| Arsenic | 0.12J | ug/L | 1.0 | 0.10 | 1 | 11/16/16 18:45 | 11/30/16 12:50 | 7440-38-2 | B |
| Cadmium | 0.044J | ug/L | 0.50 | 0.029 | 1 | 11/16/16 18:45 | 11/30/16 12:50 | 7440-43-9 | B |
| Chromium | <0.34 | ug/L | 1.0 | 0.34 | 1 | 11/16/16 18:45 | 11/30/16 12:50 | 7440-47-3 | |
| Selenium | <0.18 | ug/L | 1.0 | 0.18 | 1 | 11/16/16 18:45 | 11/30/16 12:50 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 11/16/16 18:45 | 11/30/16 12:50 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.039 | ug/L | 0.20 | 0.039 | 1 | 11/28/16 09:45 | 11/28/16 13:41 | 7439-97-6 | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | <5.0 | mg/L | 5.0 | 5.0 | 1 | | 11/18/16 15:20 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 6.3 | Std. Units | 0.10 | 0.10 | 1 | | 11/22/16 14:30 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | <0.50 | mg/L | 1.0 | 0.50 | 1 | | 12/09/16 18:04 | 16887-00-6 | |
| Fluoride | <0.027 | mg/L | 0.20 | 0.027 | 1 | | 12/09/16 18:04 | 16984-48-8 | |
| Sulfate | <0.15 | mg/L | 1.0 | 0.15 | 1 | | 12/09/16 18:04 | 14808-79-8 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60232172

QC Batch: 456114 Analysis Method: EPA 7470
 QC Batch Method: EPA 7470 Analysis Description: 7470 Mercury
 Associated Lab Samples: 60232172001, 60232172002

METHOD BLANK: 1867553 Matrix: Water

Associated Lab Samples: 60232172001, 60232172002

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Mercury | ug/L | <0.039 | 0.20 | 0.039 | 11/23/16 11:30 | |

LABORATORY CONTROL SAMPLE: 1867554

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Mercury | ug/L | 5 | 5.0 | 99 | 80-120 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1867555 1867556

| Parameter | Units | 60232056010 | | 1867555 | | 1867556 | | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|-------------|-----------------|----------------|-----------------|-----------|------------|--------------|--------|---------|------|
| | | MS Result | MSD Spike Conc. | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | | | | |
| Mercury | ug/L | <0.039 | 5 | 5 | 5.3 | 5.0 | 105 | 100 | 75-125 | 5 | 20 |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60232172

QC Batch: 456521 Analysis Method: EPA 7470
 QC Batch Method: EPA 7470 Analysis Description: 7470 Mercury
 Associated Lab Samples: 60232344001, 60232344002, 60232344003, 60232344004, 60232344005, 60232344006, 60232344007, 60232344008, 60232344009, 60232344010

METHOD BLANK: 1869421 Matrix: Water
 Associated Lab Samples: 60232344001, 60232344002, 60232344003, 60232344004, 60232344005, 60232344006, 60232344007, 60232344008, 60232344009, 60232344010

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Mercury | ug/L | <0.039 | 0.20 | 0.039 | 11/28/16 13:03 | |

LABORATORY CONTROL SAMPLE: 1869422

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Mercury | ug/L | 5 | 5.4 | 109 | 80-120 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1869423 1869424

| Parameter | Units | 60232344001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
| Mercury | ug/L | <0.039 | 5 | 5 | 5.5 | 6.0 | 110 | 120 | 75-125 | 8 | 20 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1869425 1869426

| Parameter | Units | 60232345009 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
| Mercury | ug/L | <0.039 | 5 | 5 | 5.1 | 5.8 | 102 | 117 | 75-125 | 14 | 20 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY
Pace Project No.: 60232172

QC Batch: 454893 Analysis Method: EPA 200.7
QC Batch Method: EPA 200.7 Analysis Description: 200.7 Metals, Total
Associated Lab Samples: 60232172001, 60232172002

METHOD BLANK: 1862815 Matrix: Water
Associated Lab Samples: 60232172001, 60232172002

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|------------|-------|--------------|-----------------|------|----------------|------------|
| Barium | ug/L | 0.87J | 5.0 | 0.58 | 11/15/16 17:03 | |
| Beryllium | ug/L | 0.56J | 1.0 | 0.26 | 11/15/16 17:03 | |
| Boron | ug/L | <50.0 | 100 | 50.0 | 11/15/16 17:03 | |
| Calcium | ug/L | 12.6J | 100 | 8.1 | 11/15/16 17:03 | |
| Cobalt | ug/L | <0.72 | 5.0 | 0.72 | 11/15/16 17:03 | |
| Lead | ug/L | <2.5 | 5.0 | 2.5 | 11/15/16 17:03 | |
| Lithium | ug/L | <4.9 | 10.0 | 4.9 | 11/15/16 17:03 | |
| Molybdenum | ug/L | 1.0J | 20.0 | 0.52 | 11/15/16 17:03 | |

LABORATORY CONTROL SAMPLE: 1862816

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------|-------|-------------|------------|-----------|--------------|------------|
| Barium | ug/L | 1000 | 989 | 99 | 85-115 | |
| Beryllium | ug/L | 1000 | 989 | 99 | 85-115 | |
| Boron | ug/L | 1000 | 954 | 95 | 85-115 | |
| Calcium | ug/L | 10000 | 9980 | 100 | 85-115 | |
| Cobalt | ug/L | 1000 | 1010 | 101 | 85-115 | |
| Lead | ug/L | 1000 | 1020 | 102 | 85-115 | |
| Lithium | ug/L | 1000 | 985 | 99 | 85-115 | |
| Molybdenum | ug/L | 1000 | 1040 | 104 | 85-115 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1862817 1862818

| Parameter | Units | 60232174003 | | 1862817 | | 1862818 | | % Rec | % Rec | % Rec | Limits | RPD | Max RPD | Qual |
|------------|-------|-------------|-----------------|----------------|-----------------|-----------|------------|-------|-------|-------|--------|-----|---------|------|
| | | MS Result | MSD Spike Conc. | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | | | | | | | |
| Barium | ug/L | 244 | 1000 | 1000 | 1000 | 1240 | 1240 | 100 | 100 | 100 | 70-130 | 0 | 20 | |
| Beryllium | ug/L | <0.26 | 1000 | 1000 | 1000 | 984 | 981 | 98 | 98 | 98 | 70-130 | 0 | 20 | |
| Boron | ug/L | 8410 | 1000 | 1000 | 1000 | 9490 | 9440 | 108 | 102 | 102 | 70-130 | 1 | 20 | |
| Calcium | ug/L | 161000 | 10000 | 10000 | 10000 | 172000 | 171000 | 107 | 100 | 100 | 70-130 | 0 | 20 | |
| Cobalt | ug/L | 1.5J | 1000 | 1000 | 1000 | 984 | 979 | 98 | 98 | 98 | 70-130 | 1 | 20 | |
| Lead | ug/L | <2.5 | 1000 | 1000 | 1000 | 984 | 980 | 98 | 98 | 98 | 70-130 | 0 | 20 | |
| Lithium | ug/L | 5.6J | 1000 | 1000 | 1000 | 1020 | 1020 | 102 | 102 | 102 | 70-130 | 0 | 20 | |
| Molybdenum | ug/L | 6.4J | 1000 | 1000 | 1000 | 1060 | 1060 | 106 | 105 | 105 | 70-130 | 1 | 20 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60232172

| MATRIX SPIKE SAMPLE: | | 1862819 | | | | | |
|----------------------|-------|-----------------------|----------------|--------------|-------------|-----------------|------------|
| Parameter | Units | 60232174004 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
| Barium | ug/L | 213 | 1000 | 1200 | 99 | 70-130 | |
| Beryllium | ug/L | 0.56J | 1000 | 977 | 98 | 70-130 | |
| Boron | ug/L | 8580 | 1000 | 9230 | 65 | 70-130 | M1 |
| Calcium | ug/L | 174000 | 10000 | 178000 | 34 | 70-130 | M1 |
| Cobalt | ug/L | <0.72 | 1000 | 977 | 98 | 70-130 | |
| Lead | ug/L | <2.5 | 1000 | 978 | 98 | 70-130 | |
| Lithium | ug/L | 26.3 | 1000 | 1040 | 101 | 70-130 | |
| Molybdenum | ug/L | 54.4 | 1000 | 1100 | 105 | 70-130 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY
Pace Project No.: 60232172

QC Batch: 455260 Analysis Method: EPA 200.7
QC Batch Method: EPA 200.7 Analysis Description: 200.7 Metals, Total
Associated Lab Samples: 60232344001, 60232344002, 60232344003, 60232344004, 60232344005, 60232344006, 60232344007, 60232344008, 60232344009, 60232344010

METHOD BLANK: 1864224 Matrix: Water
Associated Lab Samples: 60232344001, 60232344002, 60232344003, 60232344004, 60232344005, 60232344006, 60232344007, 60232344008, 60232344009, 60232344010

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|------------|-------|--------------|-----------------|------|----------------|------------|
| Barium | ug/L | 0.74J | 5.0 | 0.58 | 11/21/16 14:56 | |
| Beryllium | ug/L | <0.26 | 1.0 | 0.26 | 11/21/16 14:56 | |
| Boron | ug/L | <50.0 | 100 | 50.0 | 11/21/16 14:56 | |
| Calcium | ug/L | 55.0J | 100 | 8.1 | 11/21/16 15:18 | |
| Cobalt | ug/L | <0.72 | 5.0 | 0.72 | 11/21/16 14:56 | |
| Lead | ug/L | <2.5 | 5.0 | 2.5 | 11/21/16 14:56 | |
| Lithium | ug/L | <4.9 | 10.0 | 4.9 | 11/21/16 14:56 | |
| Molybdenum | ug/L | 0.53J | 20.0 | 0.52 | 11/21/16 14:56 | |

LABORATORY CONTROL SAMPLE: 1864225

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------|-------|-------------|------------|-----------|--------------|------------|
| Barium | ug/L | 1000 | 1080 | 108 | 85-115 | |
| Beryllium | ug/L | 1000 | 1020 | 102 | 85-115 | |
| Boron | ug/L | 1000 | 1060 | 106 | 85-115 | |
| Calcium | ug/L | 10000 | 10200 | 102 | 85-115 | |
| Cobalt | ug/L | 1000 | 1080 | 108 | 85-115 | |
| Lead | ug/L | 1000 | 1080 | 108 | 85-115 | |
| Lithium | ug/L | 1000 | 1020 | 102 | 85-115 | |
| Molybdenum | ug/L | 1000 | 1130 | 113 | 85-115 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1864226 1864227

| Parameter | Units | MS | | MSD | | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual | |
|------------|-------|--------------------|-------------|-------------|-----------|----------|-----------|--------------|--------|---------|------|------------|
| | | 60232344001 Result | Spike Conc. | Spike Conc. | MS Result | | | | | | | MSD Result |
| Barium | ug/L | 156 | 1000 | 1000 | 1200 | 1240 | 105 | 108 | 70-130 | 3 | 20 | |
| Beryllium | ug/L | 0.34J | 1000 | 1000 | 988 | 1010 | 99 | 101 | 70-130 | 3 | 20 | |
| Boron | ug/L | 6230 | 1000 | 1000 | 7450 | 6810 | 122 | 58 | 70-130 | 9 | 20 | M1 |
| Calcium | ug/L | 169000 | 10000 | 10000 | 183000 | 180000 | 136 | 112 | 70-130 | 1 | 20 | M1 |
| Cobalt | ug/L | 2.7J | 1000 | 1000 | 1000 | 1040 | 100 | 104 | 70-130 | 4 | 20 | |
| Lead | ug/L | 5.5 | 1000 | 1000 | 994 | 1040 | 99 | 103 | 70-130 | 4 | 20 | |
| Lithium | ug/L | 17.0 | 1000 | 1000 | 1030 | 1060 | 102 | 104 | 70-130 | 2 | 20 | |
| Molybdenum | ug/L | 4.0J | 1000 | 1000 | 1090 | 1130 | 109 | 112 | 70-130 | 3 | 20 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60232172

| Parameter | Units | MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1864229 | | 1864230 | | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | Max RPD | RPD | Qual |
|------------|-------|--|----------------------|-----------------------|--------------|--------------|---------------|-------------|--------------|-----------------|------------|-----|------|
| | | 60232361003 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | | | | | | | | |
| Barium | ug/L | 324 | 1000 | 1000 | 1440 | 1380 | 111 | 106 | 70-130 | 4 | 20 | | |
| Beryllium | ug/L | <0.26 | 1000 | 1000 | 1030 | 988 | 103 | 99 | 70-130 | 4 | 20 | | |
| Boron | ug/L | 115 | 1000 | 1000 | 1110 | 1080 | 100 | 97 | 70-130 | 3 | 20 | | |
| Calcium | ug/L | 191000 | 10000 | 10000 | 198000 | 200000 | 72 | 94 | 70-130 | 1 | 20 | | |
| Cobalt | ug/L | 3.1J | 1000 | 1000 | 1040 | 995 | 103 | 99 | 70-130 | 4 | 20 | | |
| Lead | ug/L | <2.5 | 1000 | 1000 | 1040 | 993 | 104 | 99 | 70-130 | 4 | 20 | | |
| Lithium | ug/L | 55.2 | 1000 | 1000 | 1120 | 1080 | 106 | 102 | 70-130 | 4 | 20 | | |
| Molybdenum | ug/L | 0.73J | 1000 | 1000 | 1130 | 1090 | 113 | 109 | 70-130 | 4 | 20 | | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60232172

QC Batch: 454894 Analysis Method: EPA 200.8
 QC Batch Method: EPA 200.8 Analysis Description: 200.8 MET
 Associated Lab Samples: 60232172001, 60232172002

METHOD BLANK: 1862820 Matrix: Water

Associated Lab Samples: 60232172001, 60232172002

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Antimony | ug/L | <0.058 | 1.0 | 0.058 | 11/28/16 13:02 | |
| Arsenic | ug/L | <0.10 | 1.0 | 0.10 | 11/28/16 13:02 | |
| Cadmium | ug/L | <0.029 | 0.50 | 0.029 | 11/28/16 13:02 | |
| Chromium | ug/L | <0.34 | 1.0 | 0.34 | 11/28/16 13:02 | |
| Selenium | ug/L | <0.18 | 1.0 | 0.18 | 11/28/16 13:02 | |
| Thallium | ug/L | <0.50 | 1.0 | 0.50 | 11/28/16 13:02 | |

LABORATORY CONTROL SAMPLE: 1862821

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Antimony | ug/L | 40 | 39.2 | 98 | 85-115 | |
| Arsenic | ug/L | 40 | 40.0 | 100 | 85-115 | |
| Cadmium | ug/L | 40 | 40.1 | 100 | 85-115 | |
| Chromium | ug/L | 40 | 40.9 | 102 | 85-115 | |
| Selenium | ug/L | 40 | 40.2 | 101 | 85-115 | |
| Thallium | ug/L | 40 | 38.4 | 96 | 85-115 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1862822 1862823

| Parameter | Units | 60232174003 | | MSD | | MS | | MSD | | % Rec Limits | Max RPD | Qual |
|-----------|-------|-------------|----------------|-------------|--------|--------|-------|-------|--------|--------------|---------|------|
| | | Result | MS Spike Conc. | Spike Conc. | Result | Result | % Rec | % Rec | | | | |
| Antimony | ug/L | <0.058 | 40 | 40 | 40.6 | 39.9 | 102 | 100 | 70-130 | 2 | 20 | |
| Arsenic | ug/L | 7.8 | 40 | 40 | 48.8 | 48.0 | 103 | 101 | 70-130 | 2 | 20 | |
| Cadmium | ug/L | <0.029 | 40 | 40 | 38.8 | 38.1 | 97 | 95 | 70-130 | 2 | 20 | |
| Chromium | ug/L | 0.52J | 40 | 40 | 40.3 | 40.3 | 100 | 100 | 70-130 | 0 | 20 | |
| Selenium | ug/L | <0.18 | 40 | 40 | 38.4 | 38.3 | 96 | 96 | 70-130 | 0 | 20 | |
| Thallium | ug/L | <0.50 | 40 | 40 | 37.5 | 36.6 | 94 | 91 | 70-130 | 2 | 20 | |

MATRIX SPIKE SAMPLE: 1862824

| Parameter | Units | 60232174005 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|--------------------|-------------|-----------|----------|--------------|------------|
| Antimony | ug/L | <0.058 | 40 | 40.2 | 100 | 70-130 | |
| Arsenic | ug/L | 19.9 | 40 | 61.4 | 104 | 70-130 | |
| Cadmium | ug/L | <0.029 | 40 | 38.0 | 95 | 70-130 | |
| Chromium | ug/L | 0.37J | 40 | 39.9 | 99 | 70-130 | |
| Selenium | ug/L | <0.18 | 40 | 38.6 | 97 | 70-130 | |
| Thallium | ug/L | <0.50 | 40 | 36.6 | 91 | 70-130 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60232172

QC Batch: 455259 Analysis Method: EPA 200.8
 QC Batch Method: EPA 200.8 Analysis Description: 200.8 MET
 Associated Lab Samples: 60232344001, 60232344002, 60232344003, 60232344004, 60232344005, 60232344006, 60232344007, 60232344008, 60232344009, 60232344010

METHOD BLANK: 1864217 Matrix: Water
 Associated Lab Samples: 60232344001, 60232344002, 60232344003, 60232344004, 60232344005, 60232344006, 60232344007, 60232344008, 60232344009, 60232344010

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Antimony | ug/L | 0.18J | 1.0 | 0.058 | 11/30/16 12:11 | |
| Arsenic | ug/L | 0.13J | 1.0 | 0.10 | 11/30/16 12:11 | |
| Cadmium | ug/L | 0.043J | 0.50 | 0.029 | 11/30/16 12:11 | |
| Chromium | ug/L | <0.34 | 1.0 | 0.34 | 11/30/16 12:11 | |
| Selenium | ug/L | <0.18 | 1.0 | 0.18 | 11/30/16 12:11 | |
| Thallium | ug/L | <0.50 | 1.0 | 0.50 | 11/30/16 12:11 | |

LABORATORY CONTROL SAMPLE: 1864218

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Antimony | ug/L | 40 | 40.6 | 102 | 85-115 | |
| Arsenic | ug/L | 40 | 40.8 | 102 | 85-115 | |
| Cadmium | ug/L | 40 | 40.6 | 101 | 85-115 | |
| Chromium | ug/L | 40 | 41.9 | 105 | 85-115 | |
| Selenium | ug/L | 40 | 39.3 | 98 | 85-115 | |
| Thallium | ug/L | 40 | 39.3 | 98 | 85-115 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1864219 1864220

| Parameter | Units | 60232344001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | Max | | Qual |
|-----------|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|-----|------|
| | | | | | | | | | | RPD | RPD | |
| Antimony | ug/L | 0.25J | 40 | 40 | 42.0 | 41.6 | 104 | 103 | 70-130 | 1 | 20 | |
| Arsenic | ug/L | 3.4 | 40 | 40 | 44.8 | 45.0 | 103 | 104 | 70-130 | 0 | 20 | |
| Cadmium | ug/L | 0.16J | 40 | 40 | 39.8 | 39.7 | 99 | 99 | 70-130 | 0 | 20 | |
| Chromium | ug/L | <0.34 | 40 | 40 | 41.6 | 41.2 | 103 | 102 | 70-130 | 1 | 20 | |
| Selenium | ug/L | 0.60J | 40 | 40 | 38.0 | 37.8 | 94 | 93 | 70-130 | 1 | 20 | |
| Thallium | ug/L | <0.50 | 40 | 40 | 41.1 | 40.5 | 103 | 101 | 70-130 | 2 | 20 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1864221 1864222

| Parameter | Units | 60232361003 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | Max | | Qual |
|-----------|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|-----|------|
| | | | | | | | | | | RPD | RPD | |
| Antimony | ug/L | 0.22J | 40 | 40 | 39.9 | 41.1 | 99 | 102 | 70-130 | 3 | 20 | |
| Arsenic | ug/L | 3.9 | 40 | 40 | 42.8 | 44.3 | 97 | 101 | 70-130 | 3 | 20 | |
| Cadmium | ug/L | 0.12J | 40 | 40 | 38.1 | 39.4 | 95 | 98 | 70-130 | 3 | 20 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60232172

| Parameter | Units | 60232361003 | | 1864221 | | 1864222 | | % Rec | % Rec | % Rec | Limits | RPD | Max RPD | Qual |
|-----------|-------|----------------|-----------------|-----------|------------|-----------|------------|-------|--------|-------|--------|-----|---------|------|
| | | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS Result | MSD Result | | | | | | | |
| Chromium | ug/L | <0.34 | 40 | 40 | 39.3 | 40.8 | 98 | 101 | 70-130 | 4 | 20 | | | |
| Selenium | ug/L | 0.27J | 40 | 40 | 35.7 | 36.6 | 89 | 91 | 70-130 | 2 | 20 | | | |
| Thallium | ug/L | <0.50 | 40 | 40 | 39.6 | 40.3 | 99 | 101 | 70-130 | 2 | 20 | | | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60232172

QC Batch: 455505

Analysis Method: SM 2540C

QC Batch Method: SM 2540C

Analysis Description: 2540C Total Dissolved Solids

Associated Lab Samples: 60232172001, 60232172002

METHOD BLANK: 1865080

Matrix: Water

Associated Lab Samples: 60232172001, 60232172002

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|------------------------|-------|--------------|-----------------|-----|----------------|------------|
| Total Dissolved Solids | mg/L | <5.0 | 5.0 | 5.0 | 11/17/16 16:00 | |

LABORATORY CONTROL SAMPLE: 1865081

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|-------------|------------|-----------|--------------|------------|
| Total Dissolved Solids | mg/L | 1000 | 973 | 97 | 80-120 | |

SAMPLE DUPLICATE: 1865082

| Parameter | Units | 60232172001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L | 692 | 661 | 5 | 10 | |

SAMPLE DUPLICATE: 1865083

| Parameter | Units | 60232173003 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L | 470 | 480 | 2 | 10 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60232172

QC Batch: 455613

Analysis Method: SM 2540C

QC Batch Method: SM 2540C

Analysis Description: 2540C Total Dissolved Solids

Associated Lab Samples: 60232344001, 60232344002, 60232344003, 60232344004, 60232344006, 60232344007, 60232344008, 60232344009

METHOD BLANK: 1865557

Matrix: Water

Associated Lab Samples: 60232344001, 60232344002, 60232344003, 60232344004, 60232344006, 60232344007, 60232344008, 60232344009

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|------------------------|-------|--------------|-----------------|-----|----------------|------------|
| Total Dissolved Solids | mg/L | <5.0 | 5.0 | 5.0 | 11/18/16 14:53 | |

LABORATORY CONTROL SAMPLE: 1865558

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|-------------|------------|-----------|--------------|------------|
| Total Dissolved Solids | mg/L | 1000 | 954 | 95 | 80-120 | |

SAMPLE DUPLICATE: 1865559

| Parameter | Units | 60232344001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L | 688 | 699 | 2 | 10 | |

SAMPLE DUPLICATE: 1865560

| Parameter | Units | 60232345009 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L | 740 | 752 | 2 | 10 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60232172

QC Batch: 455652

Analysis Method: SM 2540C

QC Batch Method: SM 2540C

Analysis Description: 2540C Total Dissolved Solids

Associated Lab Samples: 60232344005, 60232344010

METHOD BLANK: 1865724

Matrix: Water

Associated Lab Samples: 60232344005, 60232344010

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|------------------------|-------|--------------|-----------------|-----|----------------|------------|
| Total Dissolved Solids | mg/L | <5.0 | 5.0 | 5.0 | 11/18/16 15:14 | |

LABORATORY CONTROL SAMPLE: 1865725

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|-------------|------------|-----------|--------------|------------|
| Total Dissolved Solids | mg/L | 1000 | 956 | 96 | 80-120 | |

SAMPLE DUPLICATE: 1865726

| Parameter | Units | 60232259001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L | 31.0 | 26.0 | 18 | 10 | D6 |

SAMPLE DUPLICATE: 1865727

| Parameter | Units | 60232361003 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L | 717 | 714 | 0 | 10 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60232172

QC Batch: 455737 Analysis Method: SM 4500-H+B

QC Batch Method: SM 4500-H+B Analysis Description: 4500H+B pH

Associated Lab Samples: 60232172001, 60232172002

SAMPLE DUPLICATE: 1866223

| Parameter | Units | 60231804003 Result | Dup Result | RPD | Max RPD | Qualifiers |
|--------------------|------------|-----------------------|---------------|-----|------------|------------|
| pH at 25 Degrees C | Std. Units | 7.1 | 7.2 | 1 | 5 | H6 |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60232172

QC Batch: 455934 Analysis Method: SM 4500-H+B

QC Batch Method: SM 4500-H+B Analysis Description: 4500H+B pH

Associated Lab Samples: 60232344001, 60232344002, 60232344003, 60232344004, 60232344005, 60232344006, 60232344007, 60232344008, 60232344009

SAMPLE DUPLICATE: 1867070

| Parameter | Units | 60232344001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|--------------------|------------|-----------------------|---------------|-----|------------|------------|
| pH at 25 Degrees C | Std. Units | 7.1 | 7.1 | 0 | 5 | H6 |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60232172

QC Batch: 456166 Analysis Method: SM 4500-H+B

QC Batch Method: SM 4500-H+B Analysis Description: 4500H+B pH

Associated Lab Samples: 60232344010

SAMPLE DUPLICATE: 1867771

| Parameter | Units | 60232345009 Result | Dup Result | RPD | Max RPD | Qualifiers |
|--------------------|------------|-----------------------|---------------|-----|------------|------------|
| pH at 25 Degrees C | Std. Units | 7.5 | 7.5 | 0 | 5 | H6 |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60232172

QC Batch: 457500 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 60232172001, 60232172002

METHOD BLANK: 1873090 Matrix: Water

Associated Lab Samples: 60232172001, 60232172002

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Chloride | mg/L | <0.50 | 1.0 | 0.50 | 12/03/16 20:42 | |
| Fluoride | mg/L | <0.027 | 0.20 | 0.027 | 12/03/16 20:42 | |
| Sulfate | mg/L | <0.15 | 1.0 | 0.15 | 12/03/16 20:42 | |

LABORATORY CONTROL SAMPLE: 1873091

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Chloride | mg/L | 5 | 4.9 | 98 | 90-110 | |
| Fluoride | mg/L | 2.5 | 2.5 | 102 | 90-110 | |
| Sulfate | mg/L | 5 | 5.0 | 100 | 90-110 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1873092 1873093

| Parameter | Units | 60232174001 | | 60232174003 | | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|----------------|-----------------|-------------|------------|----------|-----------|--------------|--------|---------|------|
| | | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | | | | | | |
| Fluoride | mg/L | 0.24 | 2.5 | 2.5 | 3.2 | 3.2 | 117 | 116 | 80-120 | 0 | 15 |

MATRIX SPIKE SAMPLE: 1873094

| Parameter | Units | 60232174003 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|--------------------|-------------|-----------|----------|--------------|------------|
| Fluoride | mg/L | 0.091J | 2.5 | 3.0 | 117 | 80-120 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60232172

| | |
|-------------------------------------|---------------------------------------|
| QC Batch: 457515 | Analysis Method: EPA 300.0 |
| QC Batch Method: EPA 300.0 | Analysis Description: 300.0 IC Anions |
| Associated Lab Samples: 60232172001 | |

METHOD BLANK: 1873341 Matrix: Water
Associated Lab Samples: 60232172001

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|------|----------------|------------|
| Sulfate | mg/L | <0.15 | 1.0 | 0.15 | 12/04/16 16:24 | |

LABORATORY CONTROL SAMPLE: 1873342

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Sulfate | mg/L | 5 | 4.6 | 92 | 90-110 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1873343 1873344

| Parameter | Units | 60232174001 | | 60232174003 | | 60232174003 | | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|-------------|-----------------|-------------|-----------------|-------------|-----------|--------------|--------|---------|------|
| | | MS Result | MSD Spike Conc. | MS Result | MSD Spike Conc. | MS Result | MSD % Rec | | | | |
| Sulfate | mg/L | 99.1 | 50 | 50 | 157 | 157 | 115 | 116 | 80-120 | 0 | 15 |

MATRIX SPIKE SAMPLE: 1873345

| Parameter | Units | 60232174003 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|--------------------|-------------|-----------|----------|--------------|------------|
| Sulfate | mg/L | 348 | 250 | 625 | 111 | 80-120 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60232172

QC Batch: 458212 Analysis Method: EPA 300.0
 QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
 Associated Lab Samples: 60232344001, 60232344002, 60232344003, 60232344004, 60232344006, 60232344007, 60232344008, 60232344009

METHOD BLANK: 1875980 Matrix: Water
 Associated Lab Samples: 60232344001, 60232344002, 60232344003, 60232344004, 60232344006, 60232344007, 60232344008, 60232344009

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Chloride | mg/L | <0.50 | 1.0 | 0.50 | 12/09/16 09:57 | |
| Fluoride | mg/L | <0.027 | 0.20 | 0.027 | 12/09/16 09:57 | |

LABORATORY CONTROL SAMPLE: 1875981

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Chloride | mg/L | 5 | 5.0 | 99 | 90-110 | |
| Fluoride | mg/L | 2.5 | 2.6 | 104 | 90-110 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1875982 1875983

| Parameter | Units | 60232344001 | | 60232344002 | | 60232344003 | | 60232344004 | | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|-------------|------------|----------------|-----------------|-------------|------------|-------------|-----------|--------------|-----|---------|------|
| | | MS Result | MSD Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | | | | |
| Chloride | mg/L | 3.8 | 3.8 | 5 | 5 | 9.5 | 9.5 | 113 | 115 | 80-120 | 1 | 15 | |
| Fluoride | mg/L | 0.17J | 0.17J | 2.5 | 2.5 | 3.1 | 3.1 | 115 | 116 | 80-120 | 1 | 15 | |

MATRIX SPIKE SAMPLE: 1875984

| Parameter | Units | 60232345009 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|--------------------|-------------|-----------|----------|--------------|------------|
| Chloride | mg/L | 12.5 | 5 | 18.5 | 121 | 80-120 | M1 |
| Fluoride | mg/L | 0.29 | 2.5 | 3.1 | 112 | 80-120 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60232172

QC Batch: 458213 Analysis Method: EPA 300.0
 QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
 Associated Lab Samples: 60232344005, 60232344010

METHOD BLANK: 1875985 Matrix: Water

Associated Lab Samples: 60232344005, 60232344010

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Chloride | mg/L | <0.50 | 1.0 | 0.50 | 12/09/16 17:08 | |
| Fluoride | mg/L | <0.027 | 0.20 | 0.027 | 12/09/16 17:08 | |
| Sulfate | mg/L | <0.15 | 1.0 | 0.15 | 12/09/16 17:08 | |

LABORATORY CONTROL SAMPLE: 1875986

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Chloride | mg/L | 5 | 4.6 | 92 | 90-110 | |
| Fluoride | mg/L | 2.5 | 2.4 | 96 | 90-110 | |
| Sulfate | mg/L | 5 | 4.8 | 96 | 90-110 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1875987 1875988

| Parameter | Units | 60232589004 | | 1875987 | | 1875988 | | % Rec Limits | Max RPD | Qual |
|-----------|-------|----------------|-----------------|-----------|------------|----------|-----------|--------------|---------|------|
| | | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | | | |
| Fluoride | mg/L | 0.80 | 2.5 | 2.5 | 3.6 | 3.7 | 111 | 115 | 80-120 | 3 15 |

MATRIX SPIKE SAMPLE: 1875989

| Parameter | Units | 60232361003 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|--------------------|-------------|-----------|----------|--------------|------------|
| Chloride | mg/L | 7.1 | 5 | 13.2 | 121 | 80-120 | M1 |
| Fluoride | mg/L | 0.14J | 2.5 | 3.0 | 114 | 80-120 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60232172

QC Batch: 458451 Analysis Method: EPA 300.0

QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions

Associated Lab Samples: 60232344007, 60232344008, 60232344009

METHOD BLANK: 1876991 Matrix: Water

Associated Lab Samples: 60232344007, 60232344008, 60232344009

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|------|----------------|------------|
| Chloride | mg/L | <0.50 | 1.0 | 0.50 | 12/10/16 18:55 | |
| Sulfate | mg/L | <0.15 | 1.0 | 0.15 | 12/10/16 18:55 | |

LABORATORY CONTROL SAMPLE: 1876992

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1876993 1876994

| Parameter | Units | 60232344007 | | 1876993 | | 1876994 | | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|-------------|----------------|-----------------|-----------|------------|----------|--------------|--------|---------|-------|
| | | Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | | | | |
| Sulfate | mg/L | 46.1 | 25 | 25 | 77.1 | 76.1 | 124 | 120 | 80-120 | 1 | 15 M1 |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60232172

QC Batch: 458459 Analysis Method: EPA 300.0
 QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
 Associated Lab Samples: 60232344001, 60232344002, 60232344003, 60232344004, 60232344006

METHOD BLANK: 1877110 Matrix: Water
 Associated Lab Samples: 60232344001, 60232344002, 60232344003, 60232344004, 60232344006

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|------|----------------|------------|
| Chloride | mg/L | <0.50 | 1.0 | 0.50 | 12/12/16 09:20 | |
| Sulfate | mg/L | <0.15 | 1.0 | 0.15 | 12/12/16 09:20 | |

LABORATORY CONTROL SAMPLE: 1877111

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Chloride | mg/L | 5 | 4.7 | 93 | 90-110 | |
| Sulfate | mg/L | 5 | 4.7 | 94 | 90-110 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1877112 1877113

| Parameter | Units | 60232345008 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
| Sulfate | mg/L | 774 | 250 | 250 | 1090 | 1090 | 127 | 127 | 80-120 | 0 | 15 | M1 |

MATRIX SPIKE SAMPLE: 1877114

| Parameter | Units | 60232345009 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|--------------------|-------------|-----------|----------|--------------|------------|
| Sulfate | mg/L | | 252 | 100 | 372 | 120 | 80-120 |

MATRIX SPIKE SAMPLE: 1877590

| Parameter | Units | 60232344001 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|--------------------|-------------|-----------|----------|--------------|------------|
| Sulfate | mg/L | | 224 | 100 | 345 | 121 | 80-120 M1 |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60232172

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|---|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.0609 ± 0.278 (0.566) C:NA T:93% | pCi/L | 12/14/16 11:41 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 2.03 ± 0.690 (1.00) C:73% T:83% | pCi/L | 12/21/16 11:34 | 15262-20-1 | |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60232172

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|---|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.252 ± 0.428 (0.756) C:NA T:94% | pCi/L | 12/14/16 11:50 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 0.334 ± 0.337 (0.696) C:74% T:90% | pCi/L | 12/21/16 11:34 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60232172

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|---|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.153 ± 0.367 (0.710) C:NA T:86% | pCi/L | 12/18/16 12:05 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 2.19 ± 0.725 (0.995) C:58% T:84% | pCi/L | 12/17/16 14:31 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60232172

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|--|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.301 ± 0.363 (0.554) C:NA T:88% | pCi/L | 12/18/16 12:05 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 0.667 ± 0.458 (0.882) C:59% T:92% | pCi/L | 12/17/16 14:31 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60232172

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|---|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.0702 ± 0.320 (0.651) C:NA T:91% | pCi/L | 12/18/16 12:05 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 1.20 ± 0.599 (1.06) C:61% T:81% | pCi/L | 12/17/16 14:31 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60232172

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|--|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.283 ± 0.440 (0.762) C:NA T:91% | pCi/L | 12/18/16 12:05 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 1.15 ± 0.503 (0.828) C:63% T:94% | pCi/L | 12/17/16 14:31 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60232172

Sample: L-LMW-5S **Lab ID: 60232344005** Collected: 11/15/16 09:05 Received: 11/16/16 03:45 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|--|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.261 ± 0.364 (0.607) C:NA T:97% | pCi/L | 12/18/16 12:05 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 2.11 ± 0.711 (0.972) C:57% T:85% | pCi/L | 12/17/16 14:31 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60232172

Sample: L-LMW-6S **Lab ID: 60232344006** Collected: 11/14/16 15:02 Received: 11/16/16 03:45 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|--|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.000 ± 0.329 (0.670) C:NA T:91% | pCi/L | 12/18/16 12:05 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 0.945 ± 0.479 (0.839) C:62% T:90% | pCi/L | 12/17/16 14:31 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60232172

Sample: L-LMW-7S **Lab ID: 60232344007** Collected: 11/14/16 14:20 Received: 11/16/16 03:45 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|---|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.130 ± 0.298 (0.479) C:NA T:98% | pCi/L | 12/18/16 12:21 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 1.79 ± 0.660 (0.991) C:62% T:82% | pCi/L | 12/17/16 14:31 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60232172

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|---|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.305 ± 0.368 (0.562) C:NA T:88% | pCi/L | 12/18/16 12:21 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 1.97 ± 0.725 (1.08) C:54% T:85% | pCi/L | 12/17/16 14:31 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60232172

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|---|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 2.00 ± 0.848 (0.590) C:NA T:83% | pCi/L | 12/18/16 12:21 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 1.47 ± 0.610 (0.967) C:56% T:85% | pCi/L | 12/17/16 14:31 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60232172

Sample: L-LMW-FB-1 **Lab ID: 60232344010** Collected: 11/15/16 08:47 Received: 11/16/16 03:45 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|--|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.200 ± 0.305 (0.491) C:NA T:98% | pCi/L | 12/18/16 12:21 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 0.677 ± 0.472 (0.912) C:60% T:88% | pCi/L | 12/17/16 14:31 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60232172

| Sample: L-LMW-1S MS | | Lab ID: 60232172013 | Collected: 11/14/16 12:20 | Received: 11/16/16 03:45 | Matrix: Water | |
|---------------------|-----------|--|---------------------------|--------------------------|---------------|------|
| PWS: | | Site ID: | Sample Type: | | | |
| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
| Radium-226 | EPA 903.1 | 61.7 %REC +/- NA (NA) C:NA T:NA | pCi/L | 12/18/16 12:05 | 13982-63-3 | 2e |
| Radium-228 | EPA 904.0 | 144.57 %REC ± NA (NA) C:NA T:NA | pCi/L | 12/17/16 14:32 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60232172

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|--|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 70.3 %REC 13.0 RPD +/- NA (NA) C:NA T:NA | pCi/L | 12/18/16 12:21 | 13982-63-3 | 1e |
| Radium-228 | EPA 904.0 | 147.39 %REC 1.93 RPD ± NA (NA) C:NA T:NA | pCi/L | 12/17/16 14:32 | 15262-20-1 | |

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60232172

| | | | |
|-------------------------|--|-----------------------|------------------|
| QC Batch: | 242462 | Analysis Method: | EPA 903.1 |
| QC Batch Method: | EPA 903.1 | Analysis Description: | 903.1 Radium-226 |
| Associated Lab Samples: | 60232172013, 60232172014, 60232344001, 60232344002, 60232344003, 60232344004, 60232344005, 60232344006, 60232344007, 60232344008, 60232344009, 60232344010 | | |

| | | | |
|-------------------------|--|---------|-------|
| METHOD BLANK: | 1191881 | Matrix: | Water |
| Associated Lab Samples: | 60232172013, 60232172014, 60232344001, 60232344002, 60232344003, 60232344004, 60232344005, 60232344006, 60232344007, 60232344008, 60232344009, 60232344010 | | |

| Parameter | Act ± Unc (MDC) Carr Trac | Units | Analyzed | Qualifiers |
|------------|----------------------------------|-------|----------------|------------|
| Radium-226 | 0.135 ± 0.308 (0.496) C:NA T:96% | pCi/L | 12/18/16 12:05 | |

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60232172

| | | | |
|-------------------------|--|-----------------------|------------------|
| QC Batch: | 242463 | Analysis Method: | EPA 904.0 |
| QC Batch Method: | EPA 904.0 | Analysis Description: | 904.0 Radium 228 |
| Associated Lab Samples: | 60232172013, 60232172014, 60232344001, 60232344002, 60232344003, 60232344004, 60232344005, 60232344006, 60232344007, 60232344008, 60232344009, 60232344010 | | |

| | | | |
|-------------------------|--|---------|-------|
| METHOD BLANK: | 1191883 | Matrix: | Water |
| Associated Lab Samples: | 60232172013, 60232172014, 60232344001, 60232344002, 60232344003, 60232344004, 60232344005, 60232344006, 60232344007, 60232344008, 60232344009, 60232344010 | | |

| Parameter | Act ± Unc (MDC) Carr Trac | Units | Analyzed | Qualifiers |
|------------|-----------------------------------|-------|----------------|------------|
| Radium-228 | 0.926 ± 0.480 (0.858) C:70% T:86% | pCi/L | 12/17/16 14:31 | |

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60232172

QC Batch: 242425 Analysis Method: EPA 903.1

QC Batch Method: EPA 903.1 Analysis Description: 903.1 Radium-226

Associated Lab Samples: 60232172001, 60232172002

METHOD BLANK: 1191788 Matrix: Water

Associated Lab Samples: 60232172001, 60232172002

| Parameter | Act ± Unc (MDC) Carr Trac | Units | Analyzed | Qualifiers |
|------------|-----------------------------------|-------|----------------|------------|
| Radium-226 | -0.066 ± 0.341 (0.790) C:NA T:87% | pCi/L | 12/14/16 11:19 | |

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60232172

QC Batch: 242430

Analysis Method: EPA 904.0

QC Batch Method: EPA 904.0

Analysis Description: 904.0 Radium 228

Associated Lab Samples: 60232172001, 60232172002

METHOD BLANK: 1191795

Matrix: Water

Associated Lab Samples: 60232172001, 60232172002

| Parameter | Act ± Unc (MDC) Carr Trac | Units | Analyzed | Qualifiers |
|------------|-----------------------------------|-------|----------------|------------|
| Radium-228 | 0.457 ± 0.414 (0.844) C:70% T:80% | pCi/L | 12/21/16 11:33 | |

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60232172

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.

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.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

Act - Activity

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

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

LABORATORIES

PASI-K Pace Analytical Services - Kansas City

PASI-PA Pace Analytical Services - Greensburg

ANALYTE QUALIFIERS

1e The % recovery for the Ra-226 matrix spike dup performed on sample 60232172014 was low and outside of Pace's default acceptance criteria at 70.26%. The low bias may be due to sample matrix interference and indicate a low bias in the sample result.

2e The % recovery for the Ra-226 matrix spike performed on sample 60232172013 was low and outside of Pace's default acceptance criteria at 61.71%. The low bias may be due to sample matrix interference and indicate a low bias in the sample result.

B Analyte was detected in the associated method blank.

D6 The precision between the sample and sample duplicate exceeded laboratory control limits.

H6 Analysis initiated outside of the 15 minute EPA required holding time.

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

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60232172

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|-------------|-------------|-----------------|----------|-------------------|------------------|
| 60232172001 | L-BMW-1S | EPA 200.7 | 454893 | EPA 200.7 | 455015 |
| 60232172002 | L-BMW-2S | EPA 200.7 | 454893 | EPA 200.7 | 455015 |
| 60232344001 | L-LMW-1S | EPA 200.7 | 455260 | EPA 200.7 | 455379 |
| 60232344002 | L-LMW-2S | EPA 200.7 | 455260 | EPA 200.7 | 455379 |
| 60232344003 | L-LMW-3S | EPA 200.7 | 455260 | EPA 200.7 | 455379 |
| 60232344004 | L-LMW-4S | EPA 200.7 | 455260 | EPA 200.7 | 455379 |
| 60232344005 | L-LMW-5S | EPA 200.7 | 455260 | EPA 200.7 | 455379 |
| 60232344006 | L-LMW-6S | EPA 200.7 | 455260 | EPA 200.7 | 455379 |
| 60232344007 | L-LMW-7S | EPA 200.7 | 455260 | EPA 200.7 | 455379 |
| 60232344008 | L-LMW-8S | EPA 200.7 | 455260 | EPA 200.7 | 455379 |
| 60232344009 | L-LMW-DUP-1 | EPA 200.7 | 455260 | EPA 200.7 | 455379 |
| 60232344010 | L-LMW-FB-1 | EPA 200.7 | 455260 | EPA 200.7 | 455379 |
| 60232172001 | L-BMW-1S | EPA 200.8 | 454894 | EPA 200.8 | 455017 |
| 60232172002 | L-BMW-2S | EPA 200.8 | 454894 | EPA 200.8 | 455017 |
| 60232344001 | L-LMW-1S | EPA 200.8 | 455259 | EPA 200.8 | 455381 |
| 60232344002 | L-LMW-2S | EPA 200.8 | 455259 | EPA 200.8 | 455381 |
| 60232344003 | L-LMW-3S | EPA 200.8 | 455259 | EPA 200.8 | 455381 |
| 60232344004 | L-LMW-4S | EPA 200.8 | 455259 | EPA 200.8 | 455381 |
| 60232344005 | L-LMW-5S | EPA 200.8 | 455259 | EPA 200.8 | 455381 |
| 60232344006 | L-LMW-6S | EPA 200.8 | 455259 | EPA 200.8 | 455381 |
| 60232344007 | L-LMW-7S | EPA 200.8 | 455259 | EPA 200.8 | 455381 |
| 60232344008 | L-LMW-8S | EPA 200.8 | 455259 | EPA 200.8 | 455381 |
| 60232344009 | L-LMW-DUP-1 | EPA 200.8 | 455259 | EPA 200.8 | 455381 |
| 60232344010 | L-LMW-FB-1 | EPA 200.8 | 455259 | EPA 200.8 | 455381 |
| 60232172001 | L-BMW-1S | EPA 7470 | 456114 | EPA 7470 | 456252 |
| 60232172002 | L-BMW-2S | EPA 7470 | 456114 | EPA 7470 | 456252 |
| 60232344001 | L-LMW-1S | EPA 7470 | 456521 | EPA 7470 | 456569 |
| 60232344002 | L-LMW-2S | EPA 7470 | 456521 | EPA 7470 | 456569 |
| 60232344003 | L-LMW-3S | EPA 7470 | 456521 | EPA 7470 | 456569 |
| 60232344004 | L-LMW-4S | EPA 7470 | 456521 | EPA 7470 | 456569 |
| 60232344005 | L-LMW-5S | EPA 7470 | 456521 | EPA 7470 | 456569 |
| 60232344006 | L-LMW-6S | EPA 7470 | 456521 | EPA 7470 | 456569 |
| 60232344007 | L-LMW-7S | EPA 7470 | 456521 | EPA 7470 | 456569 |
| 60232344008 | L-LMW-8S | EPA 7470 | 456521 | EPA 7470 | 456569 |
| 60232344009 | L-LMW-DUP-1 | EPA 7470 | 456521 | EPA 7470 | 456569 |
| 60232344010 | L-LMW-FB-1 | EPA 7470 | 456521 | EPA 7470 | 456569 |
| 60232172001 | L-BMW-1S | EPA 903.1 | 242425 | | |
| 60232172002 | L-BMW-2S | EPA 903.1 | 242425 | | |
| 60232344001 | L-LMW-1S | EPA 903.1 | 242462 | | |
| 60232344002 | L-LMW-2S | EPA 903.1 | 242462 | | |
| 60232344003 | L-LMW-3S | EPA 903.1 | 242462 | | |
| 60232344004 | L-LMW-4S | EPA 903.1 | 242462 | | |
| 60232344005 | L-LMW-5S | EPA 903.1 | 242462 | | |
| 60232344006 | L-LMW-6S | EPA 903.1 | 242462 | | |
| 60232344007 | L-LMW-7S | EPA 903.1 | 242462 | | |

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60232172

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|-------------|--------------|-----------------|----------|-------------------|------------------|
| 60232344008 | L-LMW-8S | EPA 903.1 | 242462 | | |
| 60232344009 | L-LMW-DUP-1 | EPA 903.1 | 242462 | | |
| 60232344010 | L-LMW-FB-1 | EPA 903.1 | 242462 | | |
| 60232172013 | L-LMW-1S MS | EPA 903.1 | 242462 | | |
| 60232172014 | L-LMW-1S MSD | EPA 903.1 | 242462 | | |
| 60232172001 | L-BMW-1S | EPA 904.0 | 242430 | | |
| 60232172002 | L-BMW-2S | EPA 904.0 | 242430 | | |
| 60232344001 | L-LMW-1S | EPA 904.0 | 242463 | | |
| 60232344002 | L-LMW-2S | EPA 904.0 | 242463 | | |
| 60232344003 | L-LMW-3S | EPA 904.0 | 242463 | | |
| 60232344004 | L-LMW-4S | EPA 904.0 | 242463 | | |
| 60232344005 | L-LMW-5S | EPA 904.0 | 242463 | | |
| 60232344006 | L-LMW-6S | EPA 904.0 | 242463 | | |
| 60232344007 | L-LMW-7S | EPA 904.0 | 242463 | | |
| 60232344008 | L-LMW-8S | EPA 904.0 | 242463 | | |
| 60232344009 | L-LMW-DUP-1 | EPA 904.0 | 242463 | | |
| 60232344010 | L-LMW-FB-1 | EPA 904.0 | 242463 | | |
| 60232172013 | L-LMW-1S MS | EPA 904.0 | 242463 | | |
| 60232172014 | L-LMW-1S MSD | EPA 904.0 | 242463 | | |
| 60232172001 | L-BMW-1S | SM 2540C | 455505 | | |
| 60232172002 | L-BMW-2S | SM 2540C | 455505 | | |
| 60232344001 | L-LMW-1S | SM 2540C | 455613 | | |
| 60232344002 | L-LMW-2S | SM 2540C | 455613 | | |
| 60232344003 | L-LMW-3S | SM 2540C | 455613 | | |
| 60232344004 | L-LMW-4S | SM 2540C | 455613 | | |
| 60232344005 | L-LMW-5S | SM 2540C | 455652 | | |
| 60232344006 | L-LMW-6S | SM 2540C | 455613 | | |
| 60232344007 | L-LMW-7S | SM 2540C | 455613 | | |
| 60232344008 | L-LMW-8S | SM 2540C | 455613 | | |
| 60232344009 | L-LMW-DUP-1 | SM 2540C | 455613 | | |
| 60232344010 | L-LMW-FB-1 | SM 2540C | 455652 | | |
| 60232172001 | L-BMW-1S | SM 4500-H+B | 455737 | | |
| 60232172002 | L-BMW-2S | SM 4500-H+B | 455737 | | |
| 60232344001 | L-LMW-1S | SM 4500-H+B | 455934 | | |
| 60232344002 | L-LMW-2S | SM 4500-H+B | 455934 | | |
| 60232344003 | L-LMW-3S | SM 4500-H+B | 455934 | | |
| 60232344004 | L-LMW-4S | SM 4500-H+B | 455934 | | |
| 60232344005 | L-LMW-5S | SM 4500-H+B | 455934 | | |
| 60232344006 | L-LMW-6S | SM 4500-H+B | 455934 | | |
| 60232344007 | L-LMW-7S | SM 4500-H+B | 455934 | | |
| 60232344008 | L-LMW-8S | SM 4500-H+B | 455934 | | |
| 60232344009 | L-LMW-DUP-1 | SM 4500-H+B | 455934 | | |
| 60232344010 | L-LMW-FB-1 | SM 4500-H+B | 456166 | | |

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60232172

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|-------------|-------------|-----------------|----------|-------------------|------------------|
| 60232172001 | L-BMW-1S | EPA 300.0 | 457500 | | |
| 60232172001 | L-BMW-1S | EPA 300.0 | 457515 | | |
| 60232172002 | L-BMW-2S | EPA 300.0 | 457500 | | |
| 60232344001 | L-LMW-1S | EPA 300.0 | 458212 | | |
| 60232344001 | L-LMW-1S | EPA 300.0 | 458459 | | |
| 60232344002 | L-LMW-2S | EPA 300.0 | 458212 | | |
| 60232344002 | L-LMW-2S | EPA 300.0 | 458459 | | |
| 60232344003 | L-LMW-3S | EPA 300.0 | 458212 | | |
| 60232344003 | L-LMW-3S | EPA 300.0 | 458459 | | |
| 60232344004 | L-LMW-4S | EPA 300.0 | 458212 | | |
| 60232344004 | L-LMW-4S | EPA 300.0 | 458459 | | |
| 60232344005 | L-LMW-5S | EPA 300.0 | 458213 | | |
| 60232344006 | L-LMW-6S | EPA 300.0 | 458212 | | |
| 60232344006 | L-LMW-6S | EPA 300.0 | 458459 | | |
| 60232344007 | L-LMW-7S | EPA 300.0 | 458212 | | |
| 60232344007 | L-LMW-7S | EPA 300.0 | 458451 | | |
| 60232344008 | L-LMW-8S | EPA 300.0 | 458212 | | |
| 60232344008 | L-LMW-8S | EPA 300.0 | 458451 | | |
| 60232344009 | L-LMW-DUP-1 | EPA 300.0 | 458212 | | |
| 60232344009 | L-LMW-DUP-1 | EPA 300.0 | 458451 | | |
| 60232344010 | L-LMW-FB-1 | EPA 300.0 | 458213 | | |

REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

WO#: 60232172



60232172

Client Name: Golden

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-266 T-239 Type of Ice: Wet Blue None → radium samples

Cooler Temperature (°C): As-read 11/17.6 Corr. Factor CF +0.7 CF -0.5 Corrected 11.8/17.8

Date and initials of person examining contents: RS 11/12/16

Temperature should be above freezing to 6°C

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

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: Jam Check Date: 11/14/16

CHAIN-OF-CUSTODY / Analytical Request Document

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

| | | | | | |
|--|--|--|--|--|--|
| Section A Required Client Information: Company: Golder Associates Address: 820 South Main Street, Suite 100 Email To: maddock@golder.com Phone: 636-724-9191 Fax: 636-724-9323 Requested Due Date/TAT: Standard | | Section B Required Project Information: Report To: Mark Haddock (mhaddock@golder.com) Copy To: Jeffrey Ingram Purchase Order No.: Project Name: Ameren Labadie Energy Center - Fly Ash Project Number: 153-1406.0001B | | Section C Invoice Information: Attention: Company Name: Address: Pace Quote Reference: Pace Project Manager: Jamie Church Pace Profile #: 9285 | |
| REGULATORY AGENCY <input type="checkbox"/> NPDES <input checked="" type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER | | Site Location STATE: MO | | Requested Analysis Filtered (Y/N) | |

| ITEM # | Section D Required Client Information | Valid Matrix Codes MATRIX CODE DW WATER WT WASTE WATER WW WASTE WATER P PRODUCT SL SOIL/SOLID OL OIL WP AR OT TS | COLLECTED | | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | Preservatives H ₂ SO ₄ HNO ₃ HCl NaOH Na ₂ S ₂ O ₃ Methanol Other | Y/N | Requested Analysis Filtered (Y/N) | Temp in °C | Received on | Custody Sealed | Cooler (Y/N) | Samples Intact (Y/N) |
|--|--|---|-----------|------|---------------------------|-----------------|--|-----|-----------------------------------|------------|-------------|----------------|--------------|----------------------|
| | | | DATE | TIME | | | | | | | | | | |
| 1 | L-LMW-1S | WT G | | | | | | | | | | | | |
| 2 | L-LMW-2S | WT G | | | | | | | | | | | | |
| 3 | L-LMW-3S | WT G | | | | | | | | | | | | |
| 4 | L-LMW-4S | WT G | | | | | | | | | | | | |
| 5 | L-LMW-5S | WT G | | | | | | | | | | | | |
| 6 | L-LMW-6S | WT G | | | | | | | | | | | | |
| 7 | L-LMW-7S | WT G | | | | | | | | | | | | |
| 8 | L-LMW-8S | WT G | | | | | | | | | | | | |
| 9 | L-BMW-1S | WT G | 11/11/16 | 1242 | | 4 | 1 | 3 | | 11 | 1 | 1 | 2 | |
| 10 | L-BMW-2S | WT G | 11/11/16 | 0845 | | 4 | 1 | 3 | | 11 | 1 | 1 | 2 | |
| 11 | L-LMW-DUP-1 | WT G | | | | | | | | | | | | |
| 12 | L-LMW-FB-1 | WT G | | | | | | | | | | | | |
| ADDITIONAL COMMENTS EPA 200.7: Ba, Be, B, Ca, Co, Pb, Li, Mo + EPA 7470A Hg EPA 200.8: Sb, As, Cd, Cr, Se, Tl Relinquished by: <i>John Suter / Golder</i> DATE: <i>11/11/16</i> TIME: <i>1030</i> Relinquished by: <i>John Suter / Golder</i> DATE: <i>11/11/16</i> TIME: <i>0835</i> Accepted by: <i>Jamie Church / Pace</i> DATE: <i>11/11/16</i> TIME: <i>1030</i> Accepted by: <i>Jamie Church / Pace</i> DATE: <i>11/11/16</i> TIME: <i>0835</i> Residual Chlorine (Y/N) <i>60032172</i> Pace Project No. / Lab I.D. | | | | | | | | | | | | | | |

| | | | | | |
|---|--|---|--|-------------------------|--|
| Relinquished by / Affiliation <i>John Suter / Golder</i> DATE: <i>11/11/16</i> TIME: <i>1030</i> <i>John Suter / Golder</i> DATE: <i>11/11/16</i> TIME: <i>0835</i> | | Accepted by / Affiliation <i>Jamie Church / Pace</i> DATE: <i>11/11/16</i> TIME: <i>1030</i> <i>Jamie Church / Pace</i> DATE: <i>11/11/16</i> TIME: <i>0835</i> | | DATE <i>11/11/16</i> | TIME <i>1030</i> <i>0835</i> |
| Relinquished by / Affiliation DATE TIME | | Accepted by / Affiliation DATE TIME | | DATE TIME | DATE TIME |
| Relinquished by / Affiliation DATE TIME | | Accepted by / Affiliation DATE TIME | | DATE TIME | DATE TIME |
| Relinquished by / Affiliation DATE TIME | | Accepted by / Affiliation DATE TIME | | DATE TIME | DATE TIME |



Sample Condition Upon Receipt

WO#: 60232344
60232344

Client Name: Golder

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

Tracking #: _____ Pace Shipping Label Used? Yes No

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

Packing Material: Bubble Wrap Bubble Bags Foam None Other

Thermometer Used: T-266 / T-239 Type of Ice: Wet Blue None

Cooler Temperature (°C): As-read 0-1/17.0/16.8 Corr. Factor CF +0.7 CF -0.5 Corrected 0.3/17.7/16.7

Date and initials of person examining contents:
P 11/16/16

Temperature should be above freezing to 6°C

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

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: Jamie Chok _____ Date: 11/16/16



CHAIN-OF-CUSTODY / Analytical Request Document

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

| | | |
|--|--|--|
| Section A Required Client Information: Company: Golder Associates Address: 820 South Main Street, Suite 100 St Charles, MO 63301 Email To: maddock@golder.com Phone: 636-724-9191 Fax: 636-724-9323 Requested Due Date/TAT: Standard | Section B Required Project Information: Report To: Mark Haddock (mhaddock@golder.com) Copy To: Jeffrey Ingram Purchase Order No.: Project Name: Ameren Labadie Energy Center - Fly Ash Project Number: 153-1406.0001B | Section C Invoice Information: Attention: Company Name: Address: Pace Quote Reference: Pace Project Manager: Jamie Church Pace Profile #: 9285 |
| REGULATORY AGENCY <input type="checkbox"/> NPDES <input checked="" type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER | | Site Location: MO STATE: MO |

| ITEM # | Section D Required Client Information | Valid Matrix Codes | COLLECTED | | SAMPLE TYPE (G=GRAB C=COMP) | MATRIX CODE (see valid codes to left) | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | | Preservatives | Requested Analysis Filtered (Y/N) | | | | | | | | | | | | Pace Project No./ Lab I.D. | | | |
|--------|--|--------------------|-----------------|--------------------|-----------------------------|---------------------------------------|---------------------------|-----------------|------|---------------|-----------------------------------|--------------------------------|------------------|-----|------|--------------------------------|----------|-------|-----------------|---------|---------------------------|-----|----------------------------|----|------------------|-------------------------|
| | | | COMPOSITE START | COMPOSITE END/GRAB | | | | DATE | TIME | | UNPRESERVED | H ₂ SO ₄ | HNO ₃ | HCl | NaOH | Na ₂ O ₃ | Methanol | Other | Analysis Test ↑ | Metals* | Chloride/Fluoride/Sulfate | TDS | | pH | Radium 226 & 228 | Residual Chlorine (Y/N) |
| 1 | L-LMW-1S | DRINKING WATER | | | G | WT | | 123 | 9 | | | | | | | | | | | | | | | | | 60232344 |
| 2 | L-LMW-2S | WASTE WATER | | | G | WT | | 141 | 3 | | | | | | | | | | | | | | | | | 60232344 |
| 3 | L-LMW-3S | WASTE WATER | | | G | WT | | 1 | 1 | | | | | | | | | | | | | | | | | 60232344 |
| 4 | L-LMW-4S | PRODUCT SOLID | | | G | WT | | 1 | 1 | | | | | | | | | | | | | | | | | 60232344 |
| 5 | L-LMW-5S | OIL | | | G | WT | | 1 | 1 | | | | | | | | | | | | | | | | | 60232344 |
| 6 | L-LMW-6S | | | | G | WT | | 1 | 1 | | | | | | | | | | | | | | | | | 60232344 |
| 7 | L-LMW-7S | | | | G | WT | | 1 | 1 | | | | | | | | | | | | | | | | | 60232344 |
| 8 | L-LMW-8S | | | | G | WT | | 1 | 1 | | | | | | | | | | | | | | | | | 60232344 |
| 9 | L-BMW-1S | | | | G | WT | | 1 | 1 | | | | | | | | | | | | | | | | | 60232344 |
| 10 | L-BMW-2S | | | | G | WT | | 1 | 1 | | | | | | | | | | | | | | | | | 60232344 |
| 11 | L-LMW-DUP-1 | | | | G | WT | | 1 | 1 | | | | | | | | | | | | | | | | | 60232344 |
| 12 | L-LMW-FB-1 | | | | G | WT | | 1 | 1 | | | | | | | | | | | | | | | | | 60232344 |

| | | | | | | | | |
|--|---|------------------|--------------|---|------------------|--------------|---|--------------------------|
| ADDITIONAL COMMENTS 6. Nos 11/15/16 11/15/16 | RELINQUISHED BY / AFFILIATION J. Haddock / GOLDER ASSOCIATES | DATE 11/15/16 | TIME 1620 | ACCEPTED BY / AFFILIATION J. Haddock / GOLDER ASSOCIATES | DATE 11/15/16 | TIME 1620 | SAMPLE CONDITIONS Received on: X Ice (Y/N): M Custody Sealed: M Cooler (Y/N): X Samples In tact: X | |
| SAMPLER NAME AND SIGNATURE PRINT Name of SAMPLER: J. Haddock SIGNATURE of SAMPLER: [Signature] | | | | DATE Signed (MM/DD/YYYY): 11/15/16 | | | | Temp in °C: 17.7 16.7 |

*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 invoices not paid within 30 days.

February 10, 2017

Mark Haddock
Golder Associates
820 S. Main St
Suite 100
Saint Charles, MO 63301

RE: Project: AMEREN LABADIE ENERGY CTR-FLY
Pace Project No.: 60236164

Dear Mark Haddock:

Enclosed are the analytical results for sample(s) received by the laboratory between January 18, 2017 and January 19, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Jamie Church
jamie.church@pacelabs.com
Project Manager

Enclosures

cc: Jeffrey Ingram, Golder Associates
John Suozzi, Golder Associates



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60236164

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601

L-A-B DOD-ELAP Accreditation #: L2417

Alabama Certification #: 41590

Arizona Certification #: AZ0734

Arkansas Certification

California Certification #: 04222CA

Colorado Certification

Connecticut Certification #: PH-0694

Delaware Certification

Florida/TNI Certification #: E87683

Georgia Certification #: C040

Guam Certification

Hawaii Certification

Idaho Certification

Illinois Certification

Indiana Certification

Iowa Certification #: 391

Kansas/TNI Certification #: E-10358

Kentucky Certification #: 90133

Louisiana DHH/TNI Certification #: LA140008

Louisiana DEQ/TNI Certification #: 4086

Maine Certification #: PA00091

Maryland Certification #: 308

Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification

Missouri Certification #: 235

Montana Certification #: Cert 0082

Nebraska Certification #: NE-05-29-14

Nevada Certification #: PA014572015-1

New Hampshire/TNI Certification #: 2976

New Jersey/TNI Certification #: PA 051

New Mexico Certification #: PA01457

New York/TNI Certification #: 10888

North Carolina Certification #: 42706

North Dakota Certification #: R-190

Oregon/TNI Certification #: PA200002

Pennsylvania/TNI Certification #: 65-00282

Puerto Rico Certification #: PA01457

Rhode Island Certification #: 65-00282

South Dakota Certification

Tennessee Certification #: TN2867

Texas/TNI Certification #: T104704188-14-8

Utah/TNI Certification #: PA014572015-5

USDA Soil Permit #: P330-14-00213

Vermont Dept. of Health: ID# VT-0282

Virgin Island/PADEP Certification

Virginia/VELAP Certification #: 460198

Washington Certification #: C868

West Virginia DEP Certification #: 143

West Virginia DHHR Certification #: 9964C

Wisconsin Certification

Wyoming Certification #: 8TMS-L

Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 15-016-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407

Utah Certification #: KS00021

Kansas Field Laboratory Accreditation: # E-92587

Missouri Certification: 10070

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60236164

| Lab ID | Sample ID | Matrix | Date Collected | Date Received |
|-------------|--------------|--------|----------------|----------------|
| 60236164001 | L-LMW-2S | Water | 01/17/17 14:15 | 01/18/17 04:20 |
| 60236164002 | L-LMW-3S | Water | 01/16/17 15:21 | 01/18/17 04:20 |
| 60236164003 | L-LMW-7S | Water | 01/17/17 15:23 | 01/18/17 04:20 |
| 60236164004 | L-LMW-8S | Water | 01/17/17 14:23 | 01/18/17 04:20 |
| 60236164005 | L-BMW-1S | Water | 01/16/17 11:15 | 01/18/17 04:20 |
| 60236164006 | L-BMW-2S | Water | 01/16/17 13:20 | 01/18/17 04:20 |
| 60236164007 | L-LMW-DUP-1 | Water | 01/16/17 08:00 | 01/18/17 04:20 |
| 60236164008 | L-LMW-2S MS | Water | 01/17/17 14:15 | 01/18/17 04:20 |
| 60236164009 | L-LMW-2S MSD | Water | 01/17/17 14:15 | 01/18/17 04:20 |
| 60236273001 | L-LMW-1S | Water | 01/18/17 10:22 | 01/19/17 04:55 |
| 60236273002 | L-LMW-4S | Water | 01/18/17 11:33 | 01/19/17 04:55 |
| 60236273003 | L-LMW-5S | Water | 01/18/17 13:03 | 01/19/17 04:55 |
| 60236273004 | L-LMW-6S | Water | 01/18/17 12:03 | 01/19/17 04:55 |
| 60236273005 | L-LMW-FB-1 | Water | 01/18/17 12:40 | 01/19/17 04:55 |

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60236164

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|-------------|-----------|-------------|----------|-------------------|------------|
| 60236164001 | L-LMW-2S | EPA 200.7 | ZBM | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |
| | | EPA 7470 | ZBM | 1 | PASI-K |
| | | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| | | SM 2540C | AGO | 1 | PASI-K |
| | | SM 4500-H+B | HMM | 1 | PASI-K |
| 60236164002 | L-LMW-3S | EPA 300.0 | OL | 3 | PASI-K |
| | | EPA 200.7 | ZBM | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |
| | | EPA 7470 | ZBM | 1 | PASI-K |
| | | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| | | SM 2540C | JSS | 1 | PASI-K |
| 60236164003 | L-LMW-7S | SM 4500-H+B | AGO | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| | | EPA 200.7 | ZBM | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |
| | | EPA 7470 | ZBM | 1 | PASI-K |
| | | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| 60236164004 | L-LMW-8S | SM 2540C | AGO | 1 | PASI-K |
| | | SM 4500-H+B | HMM | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| | | EPA 200.7 | ZBM | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |
| | | EPA 7470 | ZBM | 1 | PASI-K |
| | | EPA 903.1 | WRR | 1 | PASI-PA |
| 60236164005 | L-BMW-1S | EPA 904.0 | JLW | 1 | PASI-PA |
| | | SM 2540C | AGO | 1 | PASI-K |
| | | SM 4500-H+B | HMM | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| | | EPA 200.7 | ZBM | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |
| | | EPA 7470 | ZBM | 1 | PASI-K |

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60236164

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|-------------|--------------|-------------|----------|-------------------|------------|
| 60236164006 | L-BMW-2S | SM 2540C | JSS | 1 | PASI-K |
| | | SM 4500-H+B | AGO | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| | | EPA 200.7 | ZBM | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |
| | | EPA 7470 | ZBM | 1 | PASI-K |
| | | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| 60236164007 | L-LMW-DUP-1 | SM 2540C | JSS | 1 | PASI-K |
| | | SM 4500-H+B | AGO | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| | | EPA 200.7 | ZBM | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |
| | | EPA 7470 | ZBM | 1 | PASI-K |
| | | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| 60236164008 | L-LMW-2S MS | SM 2540C | JSS | 1 | PASI-K |
| | | SM 4500-H+B | AGO | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| | | EPA 903.1 | WRR | 1 | PASI-PA |
| 60236164009 | L-LMW-2S MSD | EPA 904.0 | JLW | 1 | PASI-PA |
| | | EPA 903.1 | WRR | 1 | PASI-PA |
| 60236273001 | L-LMW-1S | EPA 904.0 | JLW | 1 | PASI-PA |
| | | EPA 200.7 | ZBM | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |
| | | EPA 7470 | ZBM | 1 | PASI-K |
| 60236273002 | L-LMW-4S | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| | | SM 2540C | JSS | 1 | PASI-K |
| | | SM 4500-H+B | HMM | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| | | EPA 200.7 | ZBM | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |
| | | EPA 7470 | ZBM | 1 | PASI-K |
| 60236273001 | L-LMW-1S | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| | | SM 2540C | JSS | 1 | PASI-K |
| | | SM 4500-H+B | HMM | 1 | PASI-K |

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SAMPLE ANALYTE COUNT

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60236164

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|-------------|------------|-------------|----------|-------------------|------------|
| 60236273003 | L-LMW-5S | SM 4500-H+B | HMM | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| | | EPA 200.7 | ZBM | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |
| | | EPA 7470 | ZBM | 1 | PASI-K |
| | | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| | | SM 2540C | JSS | 1 | PASI-K |
| 60236273004 | L-LMW-6S | SM 4500-H+B | HMM | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| | | EPA 200.7 | ZBM | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |
| | | EPA 7470 | ZBM | 1 | PASI-K |
| | | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| | | SM 2540C | JSS | 1 | PASI-K |
| 60236273005 | L-LMW-FB-1 | SM 4500-H+B | HMM | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| | | EPA 200.7 | ZBM | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |
| | | EPA 7470 | ZBM | 1 | PASI-K |
| | | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| | | SM 2540C | JSS | 1 | PASI-K |
| | | SM 4500-H+B | HMM | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60236164

Sample: L-LMW-2S **Lab ID: 60236164001** Collected: 01/17/17 14:15 Received: 01/18/17 04:20 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 52.0 | ug/L | 5.0 | 0.58 | 1 | 01/18/17 14:00 | 01/27/17 10:09 | 7440-39-3 | |
| Beryllium | <0.26 | ug/L | 1.0 | 0.26 | 1 | 01/18/17 14:00 | 01/27/17 10:09 | 7440-41-7 | |
| Boron | 6860 | ug/L | 100 | 50.0 | 1 | 01/18/17 14:00 | 01/27/17 10:09 | 7440-42-8 | |
| Calcium | 68900 | ug/L | 100 | 8.1 | 1 | 01/18/17 14:00 | 01/27/17 10:09 | 7440-70-2 | M1 |
| Cobalt | <0.72 | ug/L | 5.0 | 0.72 | 1 | 01/18/17 14:00 | 01/27/17 10:09 | 7440-48-4 | |
| Lead | <2.5 | ug/L | 5.0 | 2.5 | 1 | 01/18/17 14:00 | 01/27/17 10:09 | 7439-92-1 | |
| Lithium | 15.2 | ug/L | 10.0 | 4.9 | 1 | 01/18/17 14:00 | 01/27/17 10:09 | 7439-93-2 | |
| Molybdenum | 115 | ug/L | 20.0 | 0.52 | 1 | 01/18/17 14:00 | 01/27/17 10:09 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | <0.058 | ug/L | 1.0 | 0.058 | 1 | 01/18/17 14:00 | 01/19/17 16:08 | 7440-36-0 | |
| Arsenic | 32.1 | ug/L | 1.0 | 0.10 | 1 | 01/18/17 14:00 | 01/19/17 16:08 | 7440-38-2 | |
| Cadmium | <0.029 | ug/L | 0.50 | 0.029 | 1 | 01/18/17 14:00 | 01/19/17 16:08 | 7440-43-9 | |
| Chromium | 0.37J | ug/L | 1.0 | 0.34 | 1 | 01/18/17 14:00 | 01/19/17 16:08 | 7440-47-3 | B |
| Selenium | <0.18 | ug/L | 1.0 | 0.18 | 1 | 01/18/17 14:00 | 01/19/17 16:08 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 01/18/17 14:00 | 01/19/17 16:08 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.039 | ug/L | 0.20 | 0.039 | 1 | 02/02/17 15:15 | 02/03/17 11:07 | 7439-97-6 | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 484 | mg/L | 5.0 | 5.0 | 1 | | 01/24/17 09:55 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 9.2 | Std. Units | 0.10 | 0.10 | 1 | | 01/25/17 10:48 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 19.4 | mg/L | 1.0 | 0.50 | 1 | | 01/24/17 13:00 | 16887-00-6 | |
| Fluoride | 0.19J | mg/L | 0.20 | 0.027 | 1 | | 01/24/17 13:00 | 16984-48-8 | |
| Sulfate | 285 | mg/L | 20.0 | 3.1 | 20 | | 01/25/17 16:25 | 14808-79-8 | |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60236164

Sample: L-LMW-3S **Lab ID: 60236164002** Collected: 01/16/17 15:21 Received: 01/18/17 04:20 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 90.8 | ug/L | 5.0 | 0.58 | 1 | 01/18/17 14:00 | 01/27/17 10:16 | 7440-39-3 | |
| Beryllium | <0.26 | ug/L | 1.0 | 0.26 | 1 | 01/18/17 14:00 | 01/27/17 10:16 | 7440-41-7 | |
| Boron | 5550 | ug/L | 100 | 50.0 | 1 | 01/18/17 14:00 | 01/27/17 10:16 | 7440-42-8 | |
| Calcium | 76600 | ug/L | 100 | 8.1 | 1 | 01/18/17 14:00 | 01/27/17 10:16 | 7440-70-2 | |
| Cobalt | <0.72 | ug/L | 5.0 | 0.72 | 1 | 01/18/17 14:00 | 01/27/17 10:16 | 7440-48-4 | |
| Lead | <2.5 | ug/L | 5.0 | 2.5 | 1 | 01/18/17 14:00 | 01/27/17 10:16 | 7439-92-1 | |
| Lithium | 24.6 | ug/L | 10.0 | 4.9 | 1 | 01/18/17 14:00 | 01/27/17 10:16 | 7439-93-2 | |
| Molybdenum | 197 | ug/L | 20.0 | 0.52 | 1 | 01/18/17 14:00 | 01/27/17 10:16 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | <0.058 | ug/L | 1.0 | 0.058 | 1 | 01/18/17 14:00 | 01/19/17 16:21 | 7440-36-0 | |
| Arsenic | 17.0 | ug/L | 1.0 | 0.10 | 1 | 01/18/17 14:00 | 01/19/17 16:21 | 7440-38-2 | |
| Cadmium | 0.029J | ug/L | 0.50 | 0.029 | 1 | 01/18/17 14:00 | 01/19/17 16:21 | 7440-43-9 | |
| Chromium | 0.36J | ug/L | 1.0 | 0.34 | 1 | 01/18/17 14:00 | 01/19/17 16:21 | 7440-47-3 | B |
| Selenium | <0.18 | ug/L | 1.0 | 0.18 | 1 | 01/18/17 14:00 | 01/19/17 16:21 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 01/18/17 14:00 | 01/19/17 16:21 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.039 | ug/L | 0.20 | 0.039 | 1 | 02/02/17 15:15 | 02/03/17 11:14 | 7439-97-6 | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 666 | mg/L | 5.0 | 5.0 | 1 | | 01/20/17 10:00 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.4 | Std. Units | 0.10 | 0.10 | 1 | | 01/24/17 15:40 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 21.6 | mg/L | 2.0 | 1.0 | 2 | | 01/27/17 10:49 | 16887-00-6 | |
| Fluoride | 0.46 | mg/L | 0.20 | 0.027 | 1 | | 01/24/17 13:31 | 16984-48-8 | |
| Sulfate | 257 | mg/L | 20.0 | 3.1 | 20 | | 01/25/17 17:33 | 14808-79-8 | |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60236164

Sample: L-LMW-7S **Lab ID: 60236164003** Collected: 01/17/17 15:23 Received: 01/18/17 04:20 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 300 | ug/L | 5.0 | 0.58 | 1 | 01/18/17 14:00 | 01/27/17 10:18 | 7440-39-3 | |
| Beryllium | <0.26 | ug/L | 1.0 | 0.26 | 1 | 01/18/17 14:00 | 01/27/17 10:18 | 7440-41-7 | |
| Boron | 289 | ug/L | 100 | 50.0 | 1 | 01/18/17 14:00 | 01/27/17 10:18 | 7440-42-8 | |
| Calcium | 176000 | ug/L | 100 | 8.1 | 1 | 01/18/17 14:00 | 01/27/17 10:18 | 7440-70-2 | |
| Cobalt | 2.1J | ug/L | 5.0 | 0.72 | 1 | 01/18/17 14:00 | 01/27/17 10:18 | 7440-48-4 | |
| Lead | <2.5 | ug/L | 5.0 | 2.5 | 1 | 01/18/17 14:00 | 01/27/17 10:18 | 7439-92-1 | |
| Lithium | 36.9 | ug/L | 10.0 | 4.9 | 1 | 01/18/17 14:00 | 01/27/17 10:18 | 7439-93-2 | |
| Molybdenum | 4.1J | ug/L | 20.0 | 0.52 | 1 | 01/18/17 14:00 | 01/27/17 10:18 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | <0.058 | ug/L | 1.0 | 0.058 | 1 | 01/18/17 14:00 | 01/19/17 16:25 | 7440-36-0 | |
| Arsenic | 1.2 | ug/L | 1.0 | 0.10 | 1 | 01/18/17 14:00 | 01/19/17 16:25 | 7440-38-2 | |
| Cadmium | 0.077J | ug/L | 0.50 | 0.029 | 1 | 01/18/17 14:00 | 01/19/17 16:25 | 7440-43-9 | |
| Chromium | <0.34 | ug/L | 1.0 | 0.34 | 1 | 01/18/17 14:00 | 01/19/17 16:25 | 7440-47-3 | |
| Selenium | 0.54J | ug/L | 1.0 | 0.18 | 1 | 01/18/17 14:00 | 01/19/17 16:25 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 01/18/17 14:00 | 01/19/17 16:25 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.039 | ug/L | 0.20 | 0.039 | 1 | 02/02/17 15:15 | 02/03/17 11:16 | 7439-97-6 | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 607 | mg/L | 5.0 | 5.0 | 1 | | 01/24/17 09:56 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.4 | Std. Units | 0.10 | 0.10 | 1 | | 01/26/17 11:41 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 7.4 | mg/L | 1.0 | 0.50 | 1 | | 01/24/17 13:46 | 16887-00-6 | |
| Fluoride | 0.13J | mg/L | 0.20 | 0.027 | 1 | | 01/24/17 13:46 | 16984-48-8 | |
| Sulfate | 34.0 | mg/L | 5.0 | 0.77 | 5 | | 01/25/17 17:47 | 14808-79-8 | |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60236164

Sample: L-LMW-8S **Lab ID: 60236164004** Collected: 01/17/17 14:23 Received: 01/18/17 04:20 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 136 | ug/L | 5.0 | 0.58 | 1 | 01/18/17 14:00 | 01/27/17 10:20 | 7440-39-3 | |
| Beryllium | <0.26 | ug/L | 1.0 | 0.26 | 1 | 01/18/17 14:00 | 01/27/17 10:20 | 7440-41-7 | |
| Boron | 1950 | ug/L | 100 | 50.0 | 1 | 01/18/17 14:00 | 01/27/17 10:20 | 7440-42-8 | |
| Calcium | 162000 | ug/L | 100 | 8.1 | 1 | 01/18/17 14:00 | 01/27/17 10:20 | 7440-70-2 | |
| Cobalt | 1.4J | ug/L | 5.0 | 0.72 | 1 | 01/18/17 14:00 | 01/27/17 10:20 | 7440-48-4 | |
| Lead | <2.5 | ug/L | 5.0 | 2.5 | 1 | 01/18/17 14:00 | 01/27/17 10:20 | 7439-92-1 | |
| Lithium | 23.3 | ug/L | 10.0 | 4.9 | 1 | 01/18/17 14:00 | 01/27/17 10:20 | 7439-93-2 | |
| Molybdenum | 11.0J | ug/L | 20.0 | 0.52 | 1 | 01/18/17 14:00 | 01/27/17 10:20 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | 0.073J | ug/L | 1.0 | 0.058 | 1 | 01/18/17 14:00 | 01/19/17 16:29 | 7440-36-0 | |
| Arsenic | 3.2 | ug/L | 1.0 | 0.10 | 1 | 01/18/17 14:00 | 01/19/17 16:29 | 7440-38-2 | |
| Cadmium | 0.17J | ug/L | 0.50 | 0.029 | 1 | 01/18/17 14:00 | 01/19/17 16:29 | 7440-43-9 | |
| Chromium | 0.46J | ug/L | 1.0 | 0.34 | 1 | 01/18/17 14:00 | 01/19/17 16:29 | 7440-47-3 | B |
| Selenium | 0.23J | ug/L | 1.0 | 0.18 | 1 | 01/18/17 14:00 | 01/19/17 16:29 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 01/18/17 14:00 | 01/19/17 16:29 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.039 | ug/L | 0.20 | 0.039 | 1 | 02/02/17 15:15 | 02/03/17 11:18 | 7439-97-6 | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 596 | mg/L | 5.0 | 5.0 | 1 | | 01/24/17 09:56 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.9 | Std. Units | 0.10 | 0.10 | 1 | | 01/30/17 00:00 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 2.5 | mg/L | 1.0 | 0.50 | 1 | | 01/24/17 14:02 | 16887-00-6 | |
| Fluoride | 0.18J | mg/L | 0.20 | 0.027 | 1 | | 01/24/17 14:02 | 16984-48-8 | |
| Sulfate | 12.8 | mg/L | 1.0 | 0.15 | 1 | | 01/24/17 14:02 | 14808-79-8 | |

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60236164

Sample: L-BMW-1S **Lab ID: 60236164005** Collected: 01/16/17 11:15 Received: 01/18/17 04:20 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 359 | ug/L | 5.0 | 0.58 | 1 | 01/18/17 14:00 | 01/27/17 10:23 | 7440-39-3 | |
| Beryllium | <0.26 | ug/L | 1.0 | 0.26 | 1 | 01/18/17 14:00 | 01/27/17 10:23 | 7440-41-7 | |
| Boron | 105 | ug/L | 100 | 50.0 | 1 | 01/18/17 14:00 | 01/27/17 10:23 | 7440-42-8 | |
| Calcium | 204000 | ug/L | 100 | 8.1 | 1 | 01/18/17 14:00 | 01/27/17 10:23 | 7440-70-2 | |
| Cobalt | 0.81J | ug/L | 5.0 | 0.72 | 1 | 01/18/17 14:00 | 01/27/17 10:23 | 7440-48-4 | |
| Lead | 2.7J | ug/L | 5.0 | 2.5 | 1 | 01/18/17 14:00 | 01/27/17 10:23 | 7439-92-1 | |
| Lithium | 17.6 | ug/L | 10.0 | 4.9 | 1 | 01/18/17 14:00 | 01/27/17 10:23 | 7439-93-2 | |
| Molybdenum | 1.4J | ug/L | 20.0 | 0.52 | 1 | 01/18/17 14:00 | 01/27/17 10:23 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | <0.058 | ug/L | 1.0 | 0.058 | 1 | 01/18/17 14:00 | 01/19/17 16:33 | 7440-36-0 | |
| Arsenic | 22.4 | ug/L | 1.0 | 0.10 | 1 | 01/18/17 14:00 | 01/19/17 16:33 | 7440-38-2 | |
| Cadmium | <0.029 | ug/L | 0.50 | 0.029 | 1 | 01/18/17 14:00 | 01/19/17 16:33 | 7440-43-9 | |
| Chromium | 0.89J | ug/L | 1.0 | 0.34 | 1 | 01/18/17 14:00 | 01/19/17 16:33 | 7440-47-3 | B |
| Selenium | <0.18 | ug/L | 1.0 | 0.18 | 1 | 01/18/17 14:00 | 01/19/17 16:33 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 01/18/17 14:00 | 01/19/17 16:33 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.039 | ug/L | 0.20 | 0.039 | 1 | 02/02/17 15:15 | 02/03/17 11:21 | 7439-97-6 | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 704 | mg/L | 5.0 | 5.0 | 1 | | 01/20/17 10:00 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.0 | Std. Units | 0.10 | 0.10 | 1 | | 01/24/17 15:40 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 7.4 | mg/L | 1.0 | 0.50 | 1 | | 01/24/17 14:17 | 16887-00-6 | |
| Fluoride | 0.13J | mg/L | 0.20 | 0.027 | 1 | | 01/24/17 14:17 | 16984-48-8 | |
| Sulfate | 42.9 | mg/L | 5.0 | 0.77 | 5 | | 01/25/17 18:01 | 14808-79-8 | |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60236164

Sample: L-BMW-2S **Lab ID: 60236164006** Collected: 01/16/17 13:20 Received: 01/18/17 04:20 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 232 | ug/L | 5.0 | 0.58 | 1 | 01/18/17 14:00 | 01/27/17 10:25 | 7440-39-3 | |
| Beryllium | <0.26 | ug/L | 1.0 | 0.26 | 1 | 01/18/17 14:00 | 01/27/17 10:25 | 7440-41-7 | |
| Boron | <50.0 | ug/L | 100 | 50.0 | 1 | 01/18/17 14:00 | 01/27/17 10:25 | 7440-42-8 | |
| Calcium | 116000 | ug/L | 100 | 8.1 | 1 | 01/18/17 14:00 | 01/27/17 10:25 | 7440-70-2 | |
| Cobalt | <0.72 | ug/L | 5.0 | 0.72 | 1 | 01/18/17 14:00 | 01/27/17 10:25 | 7440-48-4 | |
| Lead | 3.1J | ug/L | 5.0 | 2.5 | 1 | 01/18/17 14:00 | 01/27/17 10:25 | 7439-92-1 | |
| Lithium | 16.6 | ug/L | 10.0 | 4.9 | 1 | 01/18/17 14:00 | 01/27/17 10:25 | 7439-93-2 | |
| Molybdenum | 1.9J | ug/L | 20.0 | 0.52 | 1 | 01/18/17 14:00 | 01/27/17 10:25 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | 0.18J | ug/L | 1.0 | 0.058 | 1 | 01/18/17 14:00 | 01/19/17 16:46 | 7440-36-0 | |
| Arsenic | 0.26J | ug/L | 1.0 | 0.10 | 1 | 01/18/17 14:00 | 01/19/17 16:46 | 7440-38-2 | |
| Cadmium | 0.054J | ug/L | 0.50 | 0.029 | 1 | 01/18/17 14:00 | 01/19/17 16:46 | 7440-43-9 | |
| Chromium | 0.53J | ug/L | 1.0 | 0.34 | 1 | 01/18/17 14:00 | 01/19/17 16:46 | 7440-47-3 | B |
| Selenium | 1.7 | ug/L | 1.0 | 0.18 | 1 | 01/18/17 14:00 | 01/19/17 16:46 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 01/18/17 14:00 | 01/19/17 16:46 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.039 | ug/L | 0.20 | 0.039 | 1 | 02/02/17 15:15 | 02/03/17 11:23 | 7439-97-6 | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 366 | mg/L | 5.0 | 5.0 | 1 | | 01/20/17 10:01 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.3 | Std. Units | 0.10 | 0.10 | 1 | | 01/24/17 15:40 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 2.5 | mg/L | 1.0 | 0.50 | 1 | | 01/24/17 14:32 | 16887-00-6 | |
| Fluoride | 0.18J | mg/L | 0.20 | 0.027 | 1 | | 01/24/17 14:32 | 16984-48-8 | |
| Sulfate | 12.8 | mg/L | 1.0 | 0.15 | 1 | | 01/24/17 14:32 | 14808-79-8 | |

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60236164

Sample: L-LMW-DUP-1 **Lab ID: 60236164007** Collected: 01/16/17 08:00 Received: 01/18/17 04:20 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 88.7 | ug/L | 5.0 | 0.58 | 1 | 01/18/17 14:00 | 01/27/17 10:32 | 7440-39-3 | |
| Beryllium | <0.26 | ug/L | 1.0 | 0.26 | 1 | 01/18/17 14:00 | 01/27/17 10:32 | 7440-41-7 | |
| Boron | 5340 | ug/L | 100 | 50.0 | 1 | 01/18/17 14:00 | 01/27/17 10:32 | 7440-42-8 | |
| Calcium | 73900 | ug/L | 100 | 8.1 | 1 | 01/18/17 14:00 | 01/27/17 10:32 | 7440-70-2 | |
| Cobalt | <0.72 | ug/L | 5.0 | 0.72 | 1 | 01/18/17 14:00 | 01/27/17 10:32 | 7440-48-4 | |
| Lead | <2.5 | ug/L | 5.0 | 2.5 | 1 | 01/18/17 14:00 | 01/27/17 10:32 | 7439-92-1 | |
| Lithium | 21.4 | ug/L | 10.0 | 4.9 | 1 | 01/18/17 14:00 | 01/27/17 10:32 | 7439-93-2 | |
| Molybdenum | 190 | ug/L | 20.0 | 0.52 | 1 | 01/18/17 14:00 | 01/27/17 10:32 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | <0.058 | ug/L | 1.0 | 0.058 | 1 | 01/18/17 14:00 | 01/19/17 16:51 | 7440-36-0 | |
| Arsenic | 17.0 | ug/L | 1.0 | 0.10 | 1 | 01/18/17 14:00 | 01/19/17 16:51 | 7440-38-2 | |
| Cadmium | <0.029 | ug/L | 0.50 | 0.029 | 1 | 01/18/17 14:00 | 01/19/17 16:51 | 7440-43-9 | |
| Chromium | 0.40J | ug/L | 1.0 | 0.34 | 1 | 01/18/17 14:00 | 01/19/17 16:51 | 7440-47-3 | B |
| Selenium | <0.18 | ug/L | 1.0 | 0.18 | 1 | 01/18/17 14:00 | 01/19/17 16:51 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 01/18/17 14:00 | 01/19/17 16:51 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.039 | ug/L | 0.20 | 0.039 | 1 | 02/02/17 15:15 | 02/03/17 11:30 | 7439-97-6 | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 669 | mg/L | 5.0 | 5.0 | 1 | | 01/20/17 10:02 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.3 | Std. Units | 0.10 | 0.10 | 1 | | 01/24/17 15:40 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 20.7 | mg/L | 2.0 | 1.0 | 2 | | 01/25/17 18:15 | 16887-00-6 | |
| Fluoride | 0.46 | mg/L | 0.20 | 0.027 | 1 | | 01/24/17 15:19 | 16984-48-8 | |
| Sulfate | 266 | mg/L | 20.0 | 3.1 | 20 | | 01/25/17 18:28 | 14808-79-8 | |

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60236164

Sample: L-LMW-1S **Lab ID: 60236273001** Collected: 01/18/17 10:22 Received: 01/19/17 04:55 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 121 | ug/L | 5.0 | 0.58 | 1 | 01/20/17 09:30 | 01/20/17 16:21 | 7440-39-3 | |
| Beryllium | <0.26 | ug/L | 1.0 | 0.26 | 1 | 01/20/17 09:30 | 01/20/17 16:21 | 7440-41-7 | |
| Boron | 3450 | ug/L | 100 | 50.0 | 1 | 01/20/17 09:30 | 01/20/17 16:21 | 7440-42-8 | |
| Calcium | 138000 | ug/L | 100 | 8.1 | 1 | 01/20/17 09:30 | 01/20/17 16:21 | 7440-70-2 | |
| Cobalt | 3.2J | ug/L | 5.0 | 0.72 | 1 | 01/20/17 09:30 | 01/20/17 16:21 | 7440-48-4 | |
| Lead | <2.5 | ug/L | 5.0 | 2.5 | 1 | 01/20/17 09:30 | 01/20/17 16:21 | 7439-92-1 | |
| Lithium | 15.6 | ug/L | 10.0 | 4.9 | 1 | 01/20/17 09:30 | 01/20/17 16:21 | 7439-93-2 | |
| Molybdenum | 3.3J | ug/L | 20.0 | 0.52 | 1 | 01/20/17 09:30 | 01/20/17 16:21 | 7439-98-7 | B |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | 0.065J | ug/L | 1.0 | 0.058 | 1 | 01/20/17 09:30 | 01/23/17 14:27 | 7440-36-0 | |
| Arsenic | 3.4 | ug/L | 1.0 | 0.10 | 1 | 01/20/17 09:30 | 01/23/17 14:27 | 7440-38-2 | |
| Cadmium | 0.093J | ug/L | 0.50 | 0.029 | 1 | 01/20/17 09:30 | 01/23/17 14:27 | 7440-43-9 | |
| Chromium | <0.34 | ug/L | 1.0 | 0.34 | 1 | 01/20/17 09:30 | 01/23/17 14:27 | 7440-47-3 | |
| Selenium | 0.59J | ug/L | 1.0 | 0.18 | 1 | 01/20/17 09:30 | 01/23/17 14:27 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 01/20/17 09:30 | 01/23/17 14:27 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.039 | ug/L | 0.20 | 0.039 | 1 | 02/02/17 15:15 | 02/03/17 11:32 | 7439-97-6 | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 519 | mg/L | 5.0 | 5.0 | 1 | | 01/25/17 14:37 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.4 | Std. Units | 0.10 | 0.10 | 1 | | 01/26/17 12:00 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 3.7 | mg/L | 1.0 | 0.50 | 1 | | 01/24/17 16:05 | 16887-00-6 | |
| Fluoride | 0.18J | mg/L | 0.20 | 0.027 | 1 | | 01/24/17 16:05 | 16984-48-8 | |
| Sulfate | 90.8 | mg/L | 10.0 | 1.5 | 10 | | 01/25/17 18:42 | 14808-79-8 | |

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60236164

Sample: L-LMW-4S **Lab ID: 60236273002** Collected: 01/18/17 11:33 Received: 01/19/17 04:55 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 122 | ug/L | 5.0 | 0.58 | 1 | 01/20/17 09:30 | 01/20/17 16:23 | 7440-39-3 | |
| Beryllium | <0.26 | ug/L | 1.0 | 0.26 | 1 | 01/20/17 09:30 | 01/20/17 16:23 | 7440-41-7 | |
| Boron | 8120 | ug/L | 100 | 50.0 | 1 | 01/20/17 09:30 | 01/20/17 16:23 | 7440-42-8 | |
| Calcium | 126000 | ug/L | 100 | 8.1 | 1 | 01/20/17 09:30 | 01/20/17 16:23 | 7440-70-2 | |
| Cobalt | 2.3J | ug/L | 5.0 | 0.72 | 1 | 01/20/17 09:30 | 01/20/17 16:23 | 7440-48-4 | |
| Lead | <2.5 | ug/L | 5.0 | 2.5 | 1 | 01/20/17 09:30 | 01/20/17 16:23 | 7439-92-1 | |
| Lithium | 37.5 | ug/L | 10.0 | 4.9 | 1 | 01/20/17 09:30 | 01/20/17 16:23 | 7439-93-2 | |
| Molybdenum | 33.6 | ug/L | 20.0 | 0.52 | 1 | 01/20/17 09:30 | 01/20/17 16:23 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | <0.058 | ug/L | 1.0 | 0.058 | 1 | 01/20/17 09:30 | 01/23/17 14:31 | 7440-36-0 | |
| Arsenic | 9.5 | ug/L | 1.0 | 0.10 | 1 | 01/20/17 09:30 | 01/23/17 14:31 | 7440-38-2 | |
| Cadmium | <0.029 | ug/L | 0.50 | 0.029 | 1 | 01/20/17 09:30 | 01/23/17 14:31 | 7440-43-9 | |
| Chromium | 0.35J | ug/L | 1.0 | 0.34 | 1 | 01/20/17 09:30 | 01/23/17 14:31 | 7440-47-3 | |
| Selenium | <0.18 | ug/L | 1.0 | 0.18 | 1 | 01/20/17 09:30 | 01/23/17 14:31 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 01/20/17 09:30 | 01/23/17 14:31 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.039 | ug/L | 0.20 | 0.039 | 1 | 02/02/17 15:15 | 02/03/17 11:34 | 7439-97-6 | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 724 | mg/L | 5.0 | 5.0 | 1 | | 01/25/17 14:37 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.4 | Std. Units | 0.10 | 0.10 | 1 | | 01/26/17 12:04 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 23.1 | mg/L | 2.0 | 1.0 | 2 | | 01/25/17 18:56 | 16887-00-6 | |
| Fluoride | 0.22 | mg/L | 0.20 | 0.027 | 1 | | 01/24/17 16:20 | 16984-48-8 | |
| Sulfate | 231 | mg/L | 20.0 | 3.1 | 20 | | 01/25/17 19:09 | 14808-79-8 | |

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60236164

Sample: L-LMW-5S **Lab ID: 60236273003** Collected: 01/18/17 13:03 Received: 01/19/17 04:55 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 333 | ug/L | 5.0 | 0.58 | 1 | 01/20/17 09:30 | 01/20/17 16:25 | 7440-39-3 | |
| Beryllium | <0.26 | ug/L | 1.0 | 0.26 | 1 | 01/20/17 09:30 | 01/20/17 16:25 | 7440-41-7 | |
| Boron | 84.0J | ug/L | 100 | 50.0 | 1 | 01/20/17 09:30 | 01/20/17 16:25 | 7440-42-8 | |
| Calcium | 140000 | ug/L | 100 | 8.1 | 1 | 01/20/17 09:30 | 01/20/17 16:25 | 7440-70-2 | |
| Cobalt | <0.72 | ug/L | 5.0 | 0.72 | 1 | 01/20/17 09:30 | 01/20/17 16:25 | 7440-48-4 | |
| Lead | <2.5 | ug/L | 5.0 | 2.5 | 1 | 01/20/17 09:30 | 01/20/17 16:25 | 7439-92-1 | |
| Lithium | 9.4J | ug/L | 10.0 | 4.9 | 1 | 01/20/17 09:30 | 01/20/17 16:25 | 7439-93-2 | |
| Molybdenum | 1.3J | ug/L | 20.0 | 0.52 | 1 | 01/20/17 09:30 | 01/20/17 16:25 | 7439-98-7 | B |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | 0.15J | ug/L | 1.0 | 0.058 | 1 | 01/20/17 09:30 | 01/23/17 14:36 | 7440-36-0 | |
| Arsenic | 0.56J | ug/L | 1.0 | 0.10 | 1 | 01/20/17 09:30 | 01/23/17 14:36 | 7440-38-2 | |
| Cadmium | 0.029J | ug/L | 0.50 | 0.029 | 1 | 01/20/17 09:30 | 01/23/17 14:36 | 7440-43-9 | |
| Chromium | 0.46J | ug/L | 1.0 | 0.34 | 1 | 01/20/17 09:30 | 01/23/17 14:36 | 7440-47-3 | |
| Selenium | 0.54J | ug/L | 1.0 | 0.18 | 1 | 01/20/17 09:30 | 01/23/17 14:36 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 01/20/17 09:30 | 01/23/17 14:36 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.039 | ug/L | 0.20 | 0.039 | 1 | 02/02/17 15:15 | 02/03/17 11:36 | 7439-97-6 | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 471 | mg/L | 5.0 | 5.0 | 1 | | 01/25/17 14:38 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.9 | Std. Units | 0.10 | 0.10 | 1 | | 01/30/17 00:00 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 5.3 | mg/L | 1.0 | 0.50 | 1 | | 01/24/17 16:36 | 16887-00-6 | |
| Fluoride | 0.17J | mg/L | 0.20 | 0.027 | 1 | | 01/24/17 16:36 | 16984-48-8 | |
| Sulfate | 14.7 | mg/L | 1.0 | 0.15 | 1 | | 01/24/17 16:36 | 14808-79-8 | |

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60236164

Sample: L-LMW-6S **Lab ID: 60236273004** Collected: 01/18/17 12:03 Received: 01/19/17 04:55 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 270 | ug/L | 5.0 | 0.58 | 1 | 01/20/17 09:30 | 01/20/17 16:27 | 7440-39-3 | |
| Beryllium | <0.26 | ug/L | 1.0 | 0.26 | 1 | 01/20/17 09:30 | 01/20/17 16:27 | 7440-41-7 | |
| Boron | 364 | ug/L | 100 | 50.0 | 1 | 01/20/17 09:30 | 01/20/17 16:27 | 7440-42-8 | |
| Calcium | 164000 | ug/L | 100 | 8.1 | 1 | 01/20/17 09:30 | 01/20/17 16:27 | 7440-70-2 | |
| Cobalt | 3.5J | ug/L | 5.0 | 0.72 | 1 | 01/20/17 09:30 | 01/20/17 16:27 | 7440-48-4 | |
| Lead | <2.5 | ug/L | 5.0 | 2.5 | 1 | 01/20/17 09:30 | 01/20/17 16:27 | 7439-92-1 | |
| Lithium | 34.7 | ug/L | 10.0 | 4.9 | 1 | 01/20/17 09:30 | 01/20/17 16:27 | 7439-93-2 | |
| Molybdenum | 3.3J | ug/L | 20.0 | 0.52 | 1 | 01/20/17 09:30 | 01/20/17 16:27 | 7439-98-7 | B |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | 0.089J | ug/L | 1.0 | 0.058 | 1 | 01/20/17 09:30 | 01/23/17 14:40 | 7440-36-0 | |
| Arsenic | 0.92J | ug/L | 1.0 | 0.10 | 1 | 01/20/17 09:30 | 01/23/17 14:40 | 7440-38-2 | |
| Cadmium | 0.071J | ug/L | 0.50 | 0.029 | 1 | 01/20/17 09:30 | 01/23/17 14:40 | 7440-43-9 | |
| Chromium | 0.39J | ug/L | 1.0 | 0.34 | 1 | 01/20/17 09:30 | 01/23/17 14:40 | 7440-47-3 | |
| Selenium | 0.40J | ug/L | 1.0 | 0.18 | 1 | 01/20/17 09:30 | 01/23/17 14:40 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 01/20/17 09:30 | 01/23/17 14:40 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.039 | ug/L | 0.20 | 0.039 | 1 | 02/02/17 15:15 | 02/03/17 11:38 | 7439-97-6 | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 602 | mg/L | 5.0 | 5.0 | 1 | | 01/25/17 14:39 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.6 | Std. Units | 0.10 | 0.10 | 1 | | 01/30/17 00:00 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 2.1 | mg/L | 1.0 | 0.50 | 1 | | 01/24/17 16:51 | 16887-00-6 | |
| Fluoride | 0.13J | mg/L | 0.20 | 0.027 | 1 | | 01/24/17 16:51 | 16984-48-8 | |
| Sulfate | 49.4 | mg/L | 5.0 | 0.77 | 5 | | 01/25/17 19:23 | 14808-79-8 | |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60236164

Sample: L-LMW-FB-1 **Lab ID: 60236273005** Collected: 01/18/17 12:40 Received: 01/19/17 04:55 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|---------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | <0.58 | ug/L | 5.0 | 0.58 | 1 | 01/20/17 09:30 | 01/20/17 16:29 | 7440-39-3 | |
| Beryllium | <0.26 | ug/L | 1.0 | 0.26 | 1 | 01/20/17 09:30 | 01/20/17 16:29 | 7440-41-7 | |
| Boron | <50.0 | ug/L | 100 | 50.0 | 1 | 01/20/17 09:30 | 01/20/17 16:29 | 7440-42-8 | |
| Calcium | 26.0J | ug/L | 100 | 8.1 | 1 | 01/20/17 09:30 | 01/20/17 16:29 | 7440-70-2 | |
| Cobalt | <0.72 | ug/L | 5.0 | 0.72 | 1 | 01/20/17 09:30 | 01/20/17 16:29 | 7440-48-4 | |
| Lead | <2.5 | ug/L | 5.0 | 2.5 | 1 | 01/20/17 09:30 | 01/20/17 16:29 | 7439-92-1 | |
| Lithium | <4.9 | ug/L | 10.0 | 4.9 | 1 | 01/20/17 09:30 | 01/20/17 16:29 | 7439-93-2 | |
| Molybdenum | <0.52 | ug/L | 20.0 | 0.52 | 1 | 01/20/17 09:30 | 01/20/17 16:29 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | <0.058 | ug/L | 1.0 | 0.058 | 1 | 01/20/17 09:30 | 01/23/17 14:23 | 7440-36-0 | |
| Arsenic | <0.10 | ug/L | 1.0 | 0.10 | 1 | 01/20/17 09:30 | 01/23/17 14:23 | 7440-38-2 | |
| Cadmium | <0.029 | ug/L | 0.50 | 0.029 | 1 | 01/20/17 09:30 | 01/23/17 14:23 | 7440-43-9 | |
| Chromium | 0.36J | ug/L | 1.0 | 0.34 | 1 | 01/20/17 09:30 | 01/23/17 14:23 | 7440-47-3 | |
| Selenium | <0.18 | ug/L | 1.0 | 0.18 | 1 | 01/20/17 09:30 | 01/23/17 14:23 | 7782-49-2 | |
| Thallium | <0.50 | ug/L | 1.0 | 0.50 | 1 | 01/20/17 09:30 | 01/23/17 14:23 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.039 | ug/L | 0.20 | 0.039 | 1 | 02/02/17 15:15 | 02/03/17 11:41 | 7439-97-6 | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | <10.0 | mg/L | 10.0 | 10.0 | 2 | | 01/25/17 14:40 | | |
| Total Dissolved Solids | <5.0 | mg/L | 5.0 | 5.0 | 1 | | 01/27/17 10:56 | | H1 |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 5.3 | Std. Units | 0.10 | 0.10 | 1 | | 01/30/17 00:00 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | <0.50 | mg/L | 1.0 | 0.50 | 1 | | 01/24/17 17:06 | 16887-00-6 | |
| Fluoride | <0.027 | mg/L | 0.20 | 0.027 | 1 | | 01/24/17 17:06 | 16984-48-8 | |
| Sulfate | <0.15 | mg/L | 1.0 | 0.15 | 1 | | 01/24/17 17:06 | 14808-79-8 | |

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60236164

QC Batch: 464216 Analysis Method: EPA 7470
 QC Batch Method: EPA 7470 Analysis Description: 7470 Mercury
 Associated Lab Samples: 60236164001, 60236164002, 60236164003, 60236164004, 60236164005, 60236164006, 60236164007, 60236273001, 60236273002, 60236273003, 60236273004, 60236273005

METHOD BLANK: 1899875 Matrix: Water
 Associated Lab Samples: 60236164001, 60236164002, 60236164003, 60236164004, 60236164005, 60236164006, 60236164007, 60236273001, 60236273002, 60236273003, 60236273004, 60236273005

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Mercury | ug/L | <0.039 | 0.20 | 0.039 | 02/03/17 11:03 | |

LABORATORY CONTROL SAMPLE: 1899876

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Mercury | ug/L | 5 | 5.1 | 102 | 80-120 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1899877 1899878

| Parameter | Units | 60236164001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
| Mercury | ug/L | <0.039 | 5 | 5 | 5.0 | 5.0 | 100 | 99 | 75-125 | 1 | 20 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60236164

| | | | |
|-------------------------|---|-----------------------|---------------------|
| QC Batch: | 462399 | Analysis Method: | EPA 200.7 |
| QC Batch Method: | EPA 200.7 | Analysis Description: | 200.7 Metals, Total |
| Associated Lab Samples: | 60236164001, 60236164002, 60236164003, 60236164004, 60236164005, 60236164006, 60236164007 | | |

| | | | |
|-------------------------|---|---------|-------|
| METHOD BLANK: | 1893094 | Matrix: | Water |
| Associated Lab Samples: | 60236164001, 60236164002, 60236164003, 60236164004, 60236164005, 60236164006, 60236164007 | | |

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|------------|-------|--------------|-----------------|------|----------------|------------|
| Barium | ug/L | <0.91 | 5.0 | 0.91 | 01/27/17 10:05 | |
| Beryllium | ug/L | <0.16 | 1.0 | 0.16 | 01/27/17 10:05 | |
| Boron | ug/L | <3.5 | 100 | 3.5 | 01/27/17 10:05 | |
| Calcium | ug/L | <36.0 | 100 | 36.0 | 01/27/17 10:05 | |
| Cobalt | ug/L | <0.73 | 5.0 | 0.73 | 01/27/17 10:05 | |
| Lead | ug/L | <2.4 | 5.0 | 2.4 | 01/27/17 10:05 | |
| Lithium | ug/L | <2.9 | 10.0 | 2.9 | 01/27/17 10:05 | |
| Molybdenum | ug/L | <1.3 | 20.0 | 1.3 | 01/27/17 10:05 | |

LABORATORY CONTROL SAMPLE: 1893095

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------|-------|-------------|------------|-----------|--------------|------------|
| Barium | ug/L | 1000 | 1040 | 104 | 85-115 | |
| Beryllium | ug/L | 1000 | 1030 | 103 | 85-115 | |
| Boron | ug/L | 1000 | 967 | 97 | 85-115 | |
| Calcium | ug/L | 10000 | 9860 | 99 | 85-115 | |
| Cobalt | ug/L | 1000 | 989 | 99 | 85-115 | |
| Lead | ug/L | 1000 | 1040 | 104 | 85-115 | |
| Lithium | ug/L | 1000 | 1070 | 107 | 85-115 | |
| Molybdenum | ug/L | 1000 | 992 | 99 | 85-115 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1893096 1893097

| Parameter | Units | MS | | MSD | | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|------------|-------|-------------|--------|-------------|--------|----------|-----------|--------------|-----|---------|------|
| | | Spike Conc. | Result | Spike Conc. | Result | | | | | | |
| Barium | ug/L | 52.0 | 1000 | 1000 | 1120 | 107 | 102 | 70-130 | 4 | 20 | |
| Beryllium | ug/L | <0.26 | 1000 | 1000 | 1060 | 106 | 102 | 70-130 | 4 | 20 | |
| Boron | ug/L | 6860 | 1000 | 1000 | 8080 | 123 | 74 | 70-130 | 6 | 20 | |
| Calcium | ug/L | 68900 | 10000 | 10000 | 80700 | 118 | 67 | 70-130 | 7 | 20 M1 | |
| Cobalt | ug/L | <0.72 | 1000 | 1000 | 995 | 99 | 97 | 70-130 | 3 | 20 | |
| Lead | ug/L | <2.5 | 1000 | 1000 | 1030 | 103 | 100 | 70-130 | 3 | 20 | |
| Lithium | ug/L | 15.2 | 1000 | 1000 | 1120 | 110 | 106 | 70-130 | 4 | 20 | |
| Molybdenum | ug/L | 115 | 1000 | 1000 | 1130 | 102 | 98 | 70-130 | 3 | 20 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60236164

QC Batch: 462631 Analysis Method: EPA 200.7
QC Batch Method: EPA 200.7 Analysis Description: 200.7 Metals, Total
Associated Lab Samples: 60236273001, 60236273002, 60236273003, 60236273004, 60236273005

METHOD BLANK: 1894039 Matrix: Water
Associated Lab Samples: 60236273001, 60236273002, 60236273003, 60236273004, 60236273005

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|------------|-------|--------------|-----------------|------|----------------|------------|
| Barium | ug/L | <0.58 | 5.0 | 0.58 | 01/20/17 15:36 | |
| Beryllium | ug/L | <0.26 | 1.0 | 0.26 | 01/20/17 15:36 | |
| Boron | ug/L | <50.0 | 100 | 50.0 | 01/20/17 15:36 | |
| Calcium | ug/L | <8.1 | 100 | 8.1 | 01/20/17 15:36 | |
| Cobalt | ug/L | <0.72 | 5.0 | 0.72 | 01/20/17 15:36 | |
| Lead | ug/L | <2.5 | 5.0 | 2.5 | 01/20/17 15:36 | |
| Lithium | ug/L | <4.9 | 10.0 | 4.9 | 01/20/17 15:36 | |
| Molybdenum | ug/L | 0.89J | 20.0 | 0.52 | 01/20/17 15:36 | |

LABORATORY CONTROL SAMPLE: 1894040

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------|-------|-------------|------------|-----------|--------------|------------|
| Barium | ug/L | 1000 | 998 | 100 | 85-115 | |
| Beryllium | ug/L | 1000 | 980 | 98 | 85-115 | |
| Boron | ug/L | 1000 | 952 | 95 | 85-115 | |
| Calcium | ug/L | 10000 | 9740 | 97 | 85-115 | |
| Cobalt | ug/L | 1000 | 1020 | 102 | 85-115 | |
| Lead | ug/L | 1000 | 1020 | 102 | 85-115 | |
| Lithium | ug/L | 1000 | 1020 | 102 | 85-115 | |
| Molybdenum | ug/L | 1000 | 1070 | 107 | 85-115 | |

MATRIX SPIKE SAMPLE: 1894041

| Parameter | Units | 60236322002 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|------------|-------|--------------------|-------------|-----------|----------|--------------|------------|
| Barium | ug/L | 0.047 mg/L | 1000 | 1050 | 100 | 70-130 | |
| Beryllium | ug/L | ND | 1000 | 991 | 99 | 70-130 | |
| Boron | ug/L | ND | 1000 | 968 | 95 | 70-130 | |
| Calcium | ug/L | 35.8 mg/L | 10000 | 45200 | 94 | 70-130 | |
| Cobalt | ug/L | ND | 1000 | 1010 | 101 | 70-130 | |
| Lead | ug/L | ND | 1000 | 1020 | 101 | 70-130 | |
| Lithium | ug/L | ND | 1000 | 1040 | 103 | 70-130 | |
| Molybdenum | ug/L | ND | 1000 | 1070 | 107 | 70-130 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60236164

| Parameter | Units | MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1894042 | | 1894043 | | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | Max RPD | RPD | Qual |
|------------|-------|--|----------------------|-----------------------|--------------|--------------|---------------|-------------|--------------|-----------------|------------|-----|------|
| | | 60236274001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | | | | | | | | |
| Barium | ug/L | 113 | 1000 | 1000 | 1110 | 1120 | 100 | 101 | 70-130 | 1 | 20 | | |
| Beryllium | ug/L | <0.26 | 1000 | 1000 | 967 | 982 | 97 | 98 | 70-130 | 1 | 20 | | |
| Boron | ug/L | 5570 | 1000 | 1000 | 6680 | 6490 | 110 | 92 | 70-130 | 3 | 20 | | |
| Calcium | ug/L | 156000 | 10000 | 10000 | 167000 | 172000 | 107 | 156 | 70-130 | 3 | 20 | M1 | |
| Cobalt | ug/L | <0.72 | 1000 | 1000 | 1010 | 1000 | 101 | 100 | 70-130 | 1 | 20 | | |
| Lead | ug/L | <2.5 | 1000 | 1000 | 1000 | 996 | 100 | 100 | 70-130 | 1 | 20 | | |
| Lithium | ug/L | 18.2 | 1000 | 1000 | 1050 | 1060 | 103 | 104 | 70-130 | 0 | 20 | | |
| Molybdenum | ug/L | 205 | 1000 | 1000 | 1310 | 1310 | 111 | 111 | 70-130 | 0 | 20 | | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY
Pace Project No.: 60236164

| | | | |
|---|-----------|-----------------------|-----------|
| QC Batch: | 462400 | Analysis Method: | EPA 200.8 |
| QC Batch Method: | EPA 200.8 | Analysis Description: | 200.8 MET |
| Associated Lab Samples: 60236164001, 60236164002, 60236164003, 60236164004, 60236164005, 60236164006, 60236164007 | | | |

METHOD BLANK: 1893098 Matrix: Water
Associated Lab Samples: 60236164001, 60236164002, 60236164003, 60236164004, 60236164005, 60236164006, 60236164007

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Antimony | ug/L | <0.055 | 1.0 | 0.055 | 01/19/17 15:54 | |
| Arsenic | ug/L | <0.25 | 1.0 | 0.25 | 01/19/17 15:54 | |
| Cadmium | ug/L | <0.082 | 0.50 | 0.082 | 01/19/17 15:54 | |
| Chromium | ug/L | 0.40J | 1.0 | 0.16 | 01/19/17 15:54 | |
| Selenium | ug/L | <0.12 | 1.0 | 0.12 | 01/19/17 15:54 | |
| Thallium | ug/L | <0.052 | 1.0 | 0.052 | 01/19/17 15:54 | |

LABORATORY CONTROL SAMPLE: 1893099

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Antimony | ug/L | 40 | 40.2 | 101 | 85-115 | |
| Arsenic | ug/L | 40 | 41.4 | 103 | 85-115 | |
| Cadmium | ug/L | 40 | 41.0 | 102 | 85-115 | |
| Chromium | ug/L | 40 | 40.2 | 101 | 85-115 | |
| Selenium | ug/L | 40 | 42.2 | 106 | 85-115 | |
| Thallium | ug/L | 40 | 39.8 | 99 | 85-115 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1893100 1893101

| Parameter | Units | MS | | MSD | | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|--------------------|-------------|-------------|--------|----------|-----------|--------------|--------|---------|------|
| | | 60236164001 Result | Spike Conc. | Spike Conc. | Result | | | | | | |
| Antimony | ug/L | <0.058 | 40 | 40 | 41.0 | 40.2 | 102 | 100 | 70-130 | 2 | 20 |
| Arsenic | ug/L | 32.1 | 40 | 40 | 72.1 | 72.0 | 100 | 100 | 70-130 | 0 | 20 |
| Cadmium | ug/L | <0.029 | 40 | 40 | 39.7 | 38.8 | 99 | 97 | 70-130 | 2 | 20 |
| Chromium | ug/L | 0.37J | 40 | 40 | 40.1 | 39.7 | 99 | 98 | 70-130 | 1 | 20 |
| Selenium | ug/L | <0.18 | 40 | 40 | 38.2 | 37.7 | 95 | 94 | 70-130 | 1 | 20 |
| Thallium | ug/L | <0.50 | 40 | 40 | 42.2 | 40.2 | 106 | 101 | 70-130 | 5 | 20 |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60236164

QC Batch: 462633 Analysis Method: EPA 200.8
QC Batch Method: EPA 200.8 Analysis Description: 200.8 MET
Associated Lab Samples: 60236273001, 60236273002, 60236273003, 60236273004, 60236273005

METHOD BLANK: 1894047 Matrix: Water
Associated Lab Samples: 60236273001, 60236273002, 60236273003, 60236273004, 60236273005

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Antimony | ug/L | <0.026 | 1.0 | 0.026 | 01/23/17 13:05 | |
| Arsenic | ug/L | <0.052 | 1.0 | 0.052 | 01/23/17 13:05 | |
| Cadmium | ug/L | <0.018 | 0.50 | 0.018 | 01/23/17 13:05 | |
| Chromium | ug/L | 0.11J | 1.0 | 0.054 | 01/23/17 13:05 | |
| Selenium | ug/L | <0.086 | 1.0 | 0.086 | 01/23/17 13:05 | |
| Thallium | ug/L | 0.085J | 1.0 | 0.036 | 01/23/17 13:05 | |

LABORATORY CONTROL SAMPLE: 1894048

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Antimony | ug/L | 40 | 40.0 | 100 | 85-115 | |
| Arsenic | ug/L | 40 | 40.6 | 102 | 85-115 | |
| Cadmium | ug/L | 40 | 41.0 | 103 | 85-115 | |
| Chromium | ug/L | 40 | 40.3 | 101 | 85-115 | |
| Selenium | ug/L | 40 | 41.9 | 105 | 85-115 | |
| Thallium | ug/L | 40 | 39.5 | 99 | 85-115 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1894049 1894050

| Parameter | Units | 60236274001 | | 60236274001 | | 60236274001 | | 60236274001 | | % Rec Limits | Max RPD | Qual |
|-----------|-------|-------------|-----------------|----------------|-----------------|-------------|------------|-------------|-----------|--------------|---------|------|
| | | MS Result | MSD Spike Conc. | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | | | |
| Antimony | ug/L | <0.058 | 40 | 40 | 40 | 39.9 | 38.9 | 100 | 97 | 70-130 | 2 | 20 |
| Arsenic | ug/L | 20.9 | 40 | 40 | 40 | 61.4 | 59.8 | 101 | 97 | 70-130 | 3 | 20 |
| Cadmium | ug/L | <0.029 | 40 | 40 | 40 | 38.9 | 37.9 | 97 | 95 | 70-130 | 3 | 20 |
| Chromium | ug/L | <0.34 | 40 | 40 | 40 | 38.8 | 38.1 | 96 | 95 | 70-130 | 2 | 20 |
| Selenium | ug/L | <0.18 | 40 | 40 | 40 | 39.3 | 37.6 | 98 | 94 | 70-130 | 4 | 20 |
| Thallium | ug/L | <0.50 | 40 | 40 | 40 | 40.7 | 40.6 | 101 | 101 | 70-130 | 0 | 20 |

MATRIX SPIKE SAMPLE: 1894051

| Parameter | Units | 60236365001 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|--------------------|-------------|-----------|----------|--------------|------------|
| Antimony | ug/L | 0.62J | 40 | 40.3 | 99 | 70-130 | |
| Arsenic | ug/L | 1.0 | 40 | 41.6 | 102 | 70-130 | |
| Cadmium | ug/L | 5.8 | 40 | 45.5 | 99 | 70-130 | |
| Chromium | ug/L | 1.7 | 40 | 41.1 | 98 | 70-130 | |
| Selenium | ug/L | 4.1 | 40 | 44.6 | 101 | 70-130 | |
| Thallium | ug/L | 6.4 | 40 | 47.9 | 104 | 70-130 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60236164

QC Batch: 462642

Analysis Method: SM 2540C

QC Batch Method: SM 2540C

Analysis Description: 2540C Total Dissolved Solids

Associated Lab Samples: 60236164002, 60236164005, 60236164006, 60236164007

METHOD BLANK: 1894078

Matrix: Water

Associated Lab Samples: 60236164002, 60236164005, 60236164006, 60236164007

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|------------------------|-------|--------------|-----------------|-----|----------------|------------|
| Total Dissolved Solids | mg/L | <5.0 | 5.0 | 5.0 | 01/20/17 09:53 | |

LABORATORY CONTROL SAMPLE: 1894079

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|-------------|------------|-----------|--------------|------------|
| Total Dissolved Solids | mg/L | 1000 | 950 | 95 | 80-120 | |

SAMPLE DUPLICATE: 1894080

| Parameter | Units | 60235643003 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L | 7870 | 7930 | 1 | 10 | H3 |

SAMPLE DUPLICATE: 1894081

| Parameter | Units | 60236164005 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L | 704 | 708 | 1 | 10 | |

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60236164

QC Batch: 462912

Analysis Method: SM 2540C

QC Batch Method: SM 2540C

Analysis Description: 2540C Total Dissolved Solids

Associated Lab Samples: 60236164001, 60236164003, 60236164004

METHOD BLANK: 1895338

Matrix: Water

Associated Lab Samples: 60236164001, 60236164003, 60236164004

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|------------------------|-------|--------------|-----------------|-----|----------------|------------|
| Total Dissolved Solids | mg/L | <5.0 | 5.0 | 5.0 | 01/24/17 09:49 | |

LABORATORY CONTROL SAMPLE: 1895339

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|-------------|------------|-----------|--------------|------------|
| Total Dissolved Solids | mg/L | 1000 | 980 | 98 | 80-120 | |

SAMPLE DUPLICATE: 1895340

| Parameter | Units | 60236163003 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L | 668 | 657 | 2 | 10 | |

SAMPLE DUPLICATE: 1895341

| Parameter | Units | 60236164001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L | 484 | 481 | 1 | 10 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60236164

QC Batch: 463211

Analysis Method: SM 2540C

QC Batch Method: SM 2540C

Analysis Description: 2540C Total Dissolved Solids

Associated Lab Samples: 60236273001, 60236273002, 60236273003, 60236273004, 60236273005

METHOD BLANK: 1896338

Matrix: Water

Associated Lab Samples: 60236273001, 60236273002, 60236273003, 60236273004, 60236273005

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|------------------------|-------|--------------|-----------------|-----|----------------|------------|
| Total Dissolved Solids | mg/L | <5.0 | 5.0 | 5.0 | 01/25/17 14:32 | |

LABORATORY CONTROL SAMPLE: 1896339

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|-------------|------------|-----------|--------------|------------|
| Total Dissolved Solids | mg/L | 1000 | 973 | 97 | 80-120 | |

SAMPLE DUPLICATE: 1896340

| Parameter | Units | 60236263001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L | 5900 | 6030 | 2 | 10 | |

SAMPLE DUPLICATE: 1896341

| Parameter | Units | 60236274001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L | 800 | 773 | 3 | 10 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60236164

QC Batch: 463484

Analysis Method: SM 2540C

QC Batch Method: SM 2540C

Analysis Description: 2540C Total Dissolved Solids

Associated Lab Samples: 60236273005

METHOD BLANK: 1897372

Matrix: Water

Associated Lab Samples: 60236273005

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|------------------------|-------|--------------|-----------------|-----|----------------|------------|
| Total Dissolved Solids | mg/L | <5.0 | 5.0 | 5.0 | 01/27/17 10:54 | |

LABORATORY CONTROL SAMPLE: 1897373

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|-------------|------------|-----------|--------------|------------|
| Total Dissolved Solids | mg/L | 1000 | 994 | 99 | 80-120 | |

SAMPLE DUPLICATE: 1897374

| Parameter | Units | 60236751001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L | 587 | 610 | 4 | 10 | H1 |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60236164

QC Batch: 462921 Analysis Method: SM 4500-H+B

QC Batch Method: SM 4500-H+B Analysis Description: 4500H+B pH

Associated Lab Samples: 60236164002, 60236164005, 60236164006, 60236164007

SAMPLE DUPLICATE: 1895373

| Parameter | Units | 60236163005 Result | Dup Result | RPD | Max RPD | Qualifiers |
|--------------------|------------|-----------------------|---------------|-----|------------|------------|
| pH at 25 Degrees C | Std. Units | 7.3 | 7.3 | 0 | 5 | H6 |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60236164

QC Batch: 462929 Analysis Method: SM 4500-H+B

QC Batch Method: SM 4500-H+B Analysis Description: 4500H+B pH

Associated Lab Samples: 60236164001

SAMPLE DUPLICATE: 1895398

| Parameter | Units | 60236163003 Result | Dup Result | RPD | Max RPD | Qualifiers |
|--------------------|------------|-----------------------|---------------|-----|------------|------------|
| pH at 25 Degrees C | Std. Units | 7.0 | 6.9 | 2 | 5 | H6 |

SAMPLE DUPLICATE: 1895399

| Parameter | Units | 60236164001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|--------------------|------------|-----------------------|---------------|-----|------------|------------|
| pH at 25 Degrees C | Std. Units | 9.2 | 9.2 | 0 | 5 | H6 |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60236164

QC Batch: 463214 Analysis Method: SM 4500-H+B

QC Batch Method: SM 4500-H+B Analysis Description: 4500H+B pH

Associated Lab Samples: 60236164003, 60236273001, 60236273002

SAMPLE DUPLICATE: 1896353

| Parameter | Units | 60236274001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|--------------------|------------|-----------------------|---------------|-----|------------|------------|
| pH at 25 Degrees C | Std. Units | 7.3 | 7.3 | 0 | 5 | H6 |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60236164

QC Batch: 463390 Analysis Method: SM 4500-H+B

QC Batch Method: SM 4500-H+B Analysis Description: 4500H+B pH

Associated Lab Samples: 60236164004, 60236273003, 60236273004, 60236273005

SAMPLE DUPLICATE: 1897002

| Parameter | Units | 60236412011 Result | Dup Result | RPD | Max RPD | Qualifiers |
|--------------------|------------|-----------------------|---------------|-----|------------|------------|
| pH at 25 Degrees C | Std. Units | 7.1 | 7.1 | 0 | 5 | H6 |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60236164

| | | | |
|-------------------------|---|-----------------------|-----------------|
| QC Batch: | 462964 | Analysis Method: | EPA 300.0 |
| QC Batch Method: | EPA 300.0 | Analysis Description: | 300.0 IC Anions |
| Associated Lab Samples: | 60236164001, 60236164002, 60236164003, 60236164004, 60236164005, 60236164006, 60236164007, 60236273003, 60236273005 | | |

| | | | |
|-------------------------|---|---------|-------|
| METHOD BLANK: | 1895533 | Matrix: | Water |
| Associated Lab Samples: | 60236164001, 60236164002, 60236164003, 60236164004, 60236164005, 60236164006, 60236164007, 60236273003, 60236273005 | | |

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Chloride | mg/L | <0.50 | 1.0 | 0.50 | 01/24/17 09:12 | |
| Fluoride | mg/L | <0.027 | 0.20 | 0.027 | 01/24/17 09:12 | |
| Sulfate | mg/L | <0.15 | 1.0 | 0.15 | 01/24/17 09:12 | |

LABORATORY CONTROL SAMPLE: 1895534

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Chloride | mg/L | 5 | 4.9 | 97 | 90-110 | |
| Fluoride | mg/L | 2.5 | 2.5 | 101 | 90-110 | |
| Sulfate | mg/L | 5 | 5.0 | 99 | 90-110 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1895535 1895536

| Parameter | Units | 60236163003 | | 1895535 | | 1895536 | | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|-------------|------------|----------------|-----------------|-----------|------------|--------------|--------|---------|------|
| | | MS Result | MSD Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | | | | |
| Chloride | mg/L | 6.6 | 5 | 5 | 11.9 | 11.7 | 105 | 103 | 80-120 | 1 | 15 |
| Fluoride | mg/L | 0.15J | 2.5 | 2.5 | 2.7 | 2.7 | 101 | 100 | 80-120 | 1 | 15 |

MATRIX SPIKE SAMPLE: 1895537

| Parameter | Units | 60236164001 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|--------------------|-------------|-----------|----------|--------------|------------|
| Fluoride | mg/L | 0.19J | 2.5 | 2.7 | 101 | 80-120 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60236164

QC Batch: 462968 Analysis Method: EPA 300.0
 QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
 Associated Lab Samples: 60236273001, 60236273002, 60236273004

METHOD BLANK: 1895542 Matrix: Water
 Associated Lab Samples: 60236273001, 60236273002, 60236273004

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Chloride | mg/L | <0.50 | 1.0 | 0.50 | 01/24/17 15:34 | |
| Fluoride | mg/L | <0.027 | 0.20 | 0.027 | 01/24/17 15:34 | |

LABORATORY CONTROL SAMPLE: 1895543

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1895544 1895545

| Parameter | Units | 60236274001 | | 1895545 | | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
| | | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | | | | | | |
| Chloride | mg/L | 13.2 | 5 | 5 | 18.7 | 109 | 113 | 80-120 | 1 | 15 | |
| Fluoride | mg/L | 0.28 | 2.5 | 2.5 | 2.8 | 101 | 104 | 80-120 | 3 | 15 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60236164

| | | | |
|-------------------------|--|-----------------------|-----------------|
| QC Batch: | 463225 | Analysis Method: | EPA 300.0 |
| QC Batch Method: | EPA 300.0 | Analysis Description: | 300.0 IC Anions |
| Associated Lab Samples: | 60236164001, 60236164002, 60236164003, 60236164005, 60236164007, 60236273001, 60236273002, 60236273004 | | |

| | | | |
|-------------------------|--|---------|-------|
| METHOD BLANK: | 1896369 | Matrix: | Water |
| Associated Lab Samples: | 60236164001, 60236164002, 60236164003, 60236164005, 60236164007, 60236273001, 60236273002, 60236273004 | | |

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|------|----------------|------------|
| Chloride | mg/L | <0.50 | 1.0 | 0.50 | 01/25/17 10:55 | |
| Sulfate | mg/L | 0.29J | 1.0 | 0.15 | 01/25/17 10:55 | |

| LABORATORY CONTROL SAMPLE: 1896370 | | | | | | |
|------------------------------------|-------|-------------|------------|-----------|--------------|------------|
| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
| Chloride | mg/L | 5 | 4.8 | 96 | 90-110 | |
| Sulfate | mg/L | 5 | 4.8 | 97 | 90-110 | |

| MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1896371 1896372 | | | | | | | | | | | | |
|--|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
| Parameter | Units | 60236163003 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
| Sulfate | mg/L | 73.5 | 25 | 25 | 101 | 101 | 108 | 112 | 80-120 | 1 | 15 | |

| MATRIX SPIKE SAMPLE: 1896373 | | | | | | | |
|------------------------------|-------|--------------------|-------------|-----------|----------|--------------|------------|
| Parameter | Units | 60236164001 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
| Sulfate | mg/L | | 285 | 100 | 388 | 103 | 80-120 |

| MATRIX SPIKE SAMPLE: 1896374 | | | | | | | |
|------------------------------|-------|--------------------|-------------|-----------|----------|--------------|------------|
| Parameter | Units | 60236274001 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
| Sulfate | mg/L | | 318 | 250 | 582 | 106 | 80-120 |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60236164

QC Batch: 463454

Analysis Method: EPA 300.0

QC Batch Method: EPA 300.0

Analysis Description: 300.0 IC Anions

Associated Lab Samples: 60236164002

METHOD BLANK: 1897214

Matrix: Water

Associated Lab Samples: 60236164002

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|------|----------------|------------|
| Chloride | mg/L | <0.50 | 1.0 | 0.50 | 01/27/17 09:02 | |

LABORATORY CONTROL SAMPLE: 1897215

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Chloride | mg/L | 5 | 5.1 | 103 | 90-110 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60236164

Sample: L-LMW-2S **Lab ID: 60236164001** Collected: 01/17/17 14:15 Received: 01/18/17 04:20 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|---|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.000 ± 0.261 (0.531) C:NA T:87% | pCi/L | 02/09/17 23:49 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 0.439 ± 0.477 (0.996) C:65% T:72% | pCi/L | 02/09/17 15:21 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60236164

Sample: L-LMW-3S **Lab ID: 60236164002** Collected: 01/16/17 15:21 Received: 01/18/17 04:20 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|---|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.116 ± 0.279 (0.540) C:NA T:86% | pCi/L | 02/10/17 00:42 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 0.672 ± 0.510 (1.01) C:67% T:76% | pCi/L | 02/09/17 15:21 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60236164

Sample: L-LMW-7S **Lab ID: 60236164003** Collected: 01/17/17 15:23 Received: 01/18/17 04:20 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|--|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | -0.058 ± 0.264 (0.537) C:NA T:87% | pCi/L | 02/10/17 00:42 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 0.633 ± 0.445 (0.859) C:64% T:85% | pCi/L | 02/09/17 15:21 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60236164

Sample: L-LMW-8S **Lab ID: 60236164004** Collected: 01/17/17 14:23 Received: 01/18/17 04:20 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|---|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.169 ± 0.399 (0.740) C:NA T:84% | pCi/L | 02/10/17 00:42 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 0.203 ± 0.391 (0.861) C:65% T:82% | pCi/L | 02/09/17 15:21 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60236164

Sample: L-BMW-1S **Lab ID: 60236164005** Collected: 01/16/17 11:15 Received: 01/18/17 04:20 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|---|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.340 ± 0.317 (0.417) C:NA T:86% | pCi/L | 02/10/17 00:42 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 1.07 ± 0.328 (0.394) C:127% T:85% | pCi/L | 02/09/17 15:21 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60236164

Sample: L-BMW-2S **Lab ID: 60236164006** Collected: 01/16/17 13:20 Received: 01/18/17 04:20 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|---|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.118 ± 0.283 (0.547) C:NA T:84% | pCi/L | 02/10/17 01:10 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 0.0680 ± 0.324 (0.744) C:65% T:85% | pCi/L | 02/09/17 15:23 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60236164

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|---|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.0602 ± 0.354 (0.723) C:NA T:79% | pCi/L | 02/10/17 01:10 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 0.809 ± 0.458 (0.814) C:73% T:70% | pCi/L | 02/09/17 15:23 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60236164

Sample: L-LMW-2S MS **Lab ID: 60236164008** Collected: 01/17/17 14:15 Received: 01/18/17 04:20 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|---|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 96.6%REC ± NA (NA) | pCi/L | 02/09/17 23:49 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 136 %REC +/- NA (NA) C:NA T:NA | pCi/L | 02/09/17 15:20 | 15262-20-1 | 1e |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60236164

Sample: L-LMW-2S MSD **Lab ID: 60236164009** Collected: 01/17/17 14:15 Received: 01/18/17 04:20 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|--|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 86.0%REC 11.63RPD ± NA (NA) | pCi/L | 02/10/17 00:19 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 101 %REC 30.1 RPD +/- NA (NA) C:NA T:NA | pCi/L | 02/09/17 15:20 | 15262-20-1 | |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60236164

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|---|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.181 ± 0.277 (0.445) C:NA T:82% | pCi/L | 02/10/17 01:35 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 0.189 ± 0.419 (0.931) C:60% T:75% | pCi/L | 02/09/17 15:23 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60236164

Sample: L-LMW-4S **Lab ID: 60236273002** Collected: 01/18/17 11:33 Received: 01/19/17 04:55 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|---|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.463 ± 0.363 (0.426) C:NA T:82% | pCi/L | 02/10/17 01:30 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 0.232 ± 0.426 (0.935) C:61% T:75% | pCi/L | 02/09/17 15:24 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60236164

Sample: L-LMW-5S **Lab ID: 60236273003** Collected: 01/18/17 13:03 Received: 01/19/17 04:55 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|---|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.300 ± 0.391 (0.645) C:NA T:81% | pCi/L | 02/10/17 01:30 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 0.547 ± 0.274 (0.477) C:128% T:78% | pCi/L | 02/09/17 15:24 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60236164

Sample: L-LMW-6S **Lab ID: 60236273004** Collected: 01/18/17 12:03 Received: 01/19/17 04:55 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|--|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.224 ± 0.270 (0.412) C:NA T:92% | pCi/L | 02/10/17 01:31 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 0.909 ± 0.554 (1.02) C:55% T:76% | pCi/L | 02/09/17 15:24 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60236164

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|--|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | -0.055 ± 0.249 (0.588) C:NA T:89% | pCi/L | 02/10/17 01:46 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 0.267 ± 0.397 (0.854) C:64% T:73% | pCi/L | 02/09/17 15:24 | 15262-20-1 | |

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60236164

| | | | |
|-------------------------|--|-----------------------|------------------|
| QC Batch: | 247726 | Analysis Method: | EPA 904.0 |
| QC Batch Method: | EPA 904.0 | Analysis Description: | 904.0 Radium 228 |
| Associated Lab Samples: | 60236164001, 60236164002, 60236164003, 60236164004, 60236164005, 60236164006, 60236164007, 60236164008, 60236164009, 60236273001, 60236273002, 60236273003, 60236273004, 60236273005 | | |

| | | | |
|-------------------------|--|---------|-------|
| METHOD BLANK: | 1218302 | Matrix: | Water |
| Associated Lab Samples: | 60236164001, 60236164002, 60236164003, 60236164004, 60236164005, 60236164006, 60236164007, 60236164008, 60236164009, 60236273001, 60236273002, 60236273003, 60236273004, 60236273005 | | |

| Parameter | Act ± Unc (MDC) Carr Trac | Units | Analyzed | Qualifiers |
|------------|-----------------------------------|-------|----------------|------------|
| Radium-228 | 0.156 ± 0.361 (0.805) C:71% T:75% | pCi/L | 02/09/17 15:22 | |

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

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60236164

| | | | |
|-------------------------|--|-----------------------|------------------|
| QC Batch: | 247725 | Analysis Method: | EPA 903.1 |
| QC Batch Method: | EPA 903.1 | Analysis Description: | 903.1 Radium-226 |
| Associated Lab Samples: | 60236164001, 60236164002, 60236164003, 60236164004, 60236164005, 60236164006, 60236164007, 60236164008, 60236164009, 60236273001, 60236273002, 60236273003, 60236273004, 60236273005 | | |

| | | | |
|-------------------------|--|---------|-------|
| METHOD BLANK: | 1218299 | Matrix: | Water |
| Associated Lab Samples: | 60236164001, 60236164002, 60236164003, 60236164004, 60236164005, 60236164006, 60236164007, 60236164008, 60236164009, 60236273001, 60236273002, 60236273003, 60236273004, 60236273005 | | |

| Parameter | Act ± Unc (MDC) Carr Trac | Units | Analyzed | Qualifiers |
|------------|-----------------------------------|-------|----------------|------------|
| Radium-226 | 0.0604 ± 0.276 (0.445) C:NA T:81% | pCi/L | 02/09/17 23:49 | |

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 LABADIE ENERGY CTR-FLY

Pace Project No.: 60236164

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.

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.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

Act - Activity

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

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

LABORATORIES

PASI-K Pace Analytical Services - Kansas City

PASI-PA Pace Analytical Services - Greensburg

ANALYTE QUALIFIERS

1e The % recovery for the Ra-228 matrix spike performed on sample 60236164008 was high and outside of Pace's default acceptance criteria at 136.20%. The high bias may be due to sample matrix interference and indicate a high bias in the sample result.

B Analyte was detected in the associated method blank.

H1 Analysis conducted outside the EPA method holding time.

H3 Sample was received or analysis requested beyond the recognized method holding time.

H6 Analysis initiated outside of the 15 minute EPA required holding time.

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60236164

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|-------------|--------------|-----------------|----------|-------------------|------------------|
| 60236164001 | L-LMW-2S | EPA 200.7 | 462399 | EPA 200.7 | 462408 |
| 60236164002 | L-LMW-3S | EPA 200.7 | 462399 | EPA 200.7 | 462408 |
| 60236164003 | L-LMW-7S | EPA 200.7 | 462399 | EPA 200.7 | 462408 |
| 60236164004 | L-LMW-8S | EPA 200.7 | 462399 | EPA 200.7 | 462408 |
| 60236164005 | L-BMW-1S | EPA 200.7 | 462399 | EPA 200.7 | 462408 |
| 60236164006 | L-BMW-2S | EPA 200.7 | 462399 | EPA 200.7 | 462408 |
| 60236164007 | L-LMW-DUP-1 | EPA 200.7 | 462399 | EPA 200.7 | 462408 |
| 60236273001 | L-LMW-1S | EPA 200.7 | 462631 | EPA 200.7 | 462676 |
| 60236273002 | L-LMW-4S | EPA 200.7 | 462631 | EPA 200.7 | 462676 |
| 60236273003 | L-LMW-5S | EPA 200.7 | 462631 | EPA 200.7 | 462676 |
| 60236273004 | L-LMW-6S | EPA 200.7 | 462631 | EPA 200.7 | 462676 |
| 60236273005 | L-LMW-FB-1 | EPA 200.7 | 462631 | EPA 200.7 | 462676 |
| 60236164001 | L-LMW-2S | EPA 200.8 | 462400 | EPA 200.8 | 462409 |
| 60236164002 | L-LMW-3S | EPA 200.8 | 462400 | EPA 200.8 | 462409 |
| 60236164003 | L-LMW-7S | EPA 200.8 | 462400 | EPA 200.8 | 462409 |
| 60236164004 | L-LMW-8S | EPA 200.8 | 462400 | EPA 200.8 | 462409 |
| 60236164005 | L-BMW-1S | EPA 200.8 | 462400 | EPA 200.8 | 462409 |
| 60236164006 | L-BMW-2S | EPA 200.8 | 462400 | EPA 200.8 | 462409 |
| 60236164007 | L-LMW-DUP-1 | EPA 200.8 | 462400 | EPA 200.8 | 462409 |
| 60236273001 | L-LMW-1S | EPA 200.8 | 462633 | EPA 200.8 | 462677 |
| 60236273002 | L-LMW-4S | EPA 200.8 | 462633 | EPA 200.8 | 462677 |
| 60236273003 | L-LMW-5S | EPA 200.8 | 462633 | EPA 200.8 | 462677 |
| 60236273004 | L-LMW-6S | EPA 200.8 | 462633 | EPA 200.8 | 462677 |
| 60236273005 | L-LMW-FB-1 | EPA 200.8 | 462633 | EPA 200.8 | 462677 |
| 60236164001 | L-LMW-2S | EPA 7470 | 464216 | EPA 7470 | 464287 |
| 60236164002 | L-LMW-3S | EPA 7470 | 464216 | EPA 7470 | 464287 |
| 60236164003 | L-LMW-7S | EPA 7470 | 464216 | EPA 7470 | 464287 |
| 60236164004 | L-LMW-8S | EPA 7470 | 464216 | EPA 7470 | 464287 |
| 60236164005 | L-BMW-1S | EPA 7470 | 464216 | EPA 7470 | 464287 |
| 60236164006 | L-BMW-2S | EPA 7470 | 464216 | EPA 7470 | 464287 |
| 60236164007 | L-LMW-DUP-1 | EPA 7470 | 464216 | EPA 7470 | 464287 |
| 60236273001 | L-LMW-1S | EPA 7470 | 464216 | EPA 7470 | 464287 |
| 60236273002 | L-LMW-4S | EPA 7470 | 464216 | EPA 7470 | 464287 |
| 60236273003 | L-LMW-5S | EPA 7470 | 464216 | EPA 7470 | 464287 |
| 60236273004 | L-LMW-6S | EPA 7470 | 464216 | EPA 7470 | 464287 |
| 60236273005 | L-LMW-FB-1 | EPA 7470 | 464216 | EPA 7470 | 464287 |
| 60236164001 | L-LMW-2S | EPA 903.1 | 247725 | | |
| 60236164002 | L-LMW-3S | EPA 903.1 | 247725 | | |
| 60236164003 | L-LMW-7S | EPA 903.1 | 247725 | | |
| 60236164004 | L-LMW-8S | EPA 903.1 | 247725 | | |
| 60236164005 | L-BMW-1S | EPA 903.1 | 247725 | | |
| 60236164006 | L-BMW-2S | EPA 903.1 | 247725 | | |
| 60236164007 | L-LMW-DUP-1 | EPA 903.1 | 247725 | | |
| 60236164008 | L-LMW-2S MS | EPA 903.1 | 247725 | | |
| 60236164009 | L-LMW-2S MSD | EPA 903.1 | 247725 | | |
| 60236273001 | L-LMW-1S | EPA 903.1 | 247725 | | |

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60236164

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|-------------|--------------|-----------------|----------|-------------------|------------------|
| 60236273002 | L-LMW-4S | EPA 903.1 | 247725 | | |
| 60236273003 | L-LMW-5S | EPA 903.1 | 247725 | | |
| 60236273004 | L-LMW-6S | EPA 903.1 | 247725 | | |
| 60236273005 | L-LMW-FB-1 | EPA 903.1 | 247725 | | |
| 60236164001 | L-LMW-2S | EPA 904.0 | 247726 | | |
| 60236164002 | L-LMW-3S | EPA 904.0 | 247726 | | |
| 60236164003 | L-LMW-7S | EPA 904.0 | 247726 | | |
| 60236164004 | L-LMW-8S | EPA 904.0 | 247726 | | |
| 60236164005 | L-BMW-1S | EPA 904.0 | 247726 | | |
| 60236164006 | L-BMW-2S | EPA 904.0 | 247726 | | |
| 60236164007 | L-LMW-DUP-1 | EPA 904.0 | 247726 | | |
| 60236164008 | L-LMW-2S MS | EPA 904.0 | 247726 | | |
| 60236164009 | L-LMW-2S MSD | EPA 904.0 | 247726 | | |
| 60236273001 | L-LMW-1S | EPA 904.0 | 247726 | | |
| 60236273002 | L-LMW-4S | EPA 904.0 | 247726 | | |
| 60236273003 | L-LMW-5S | EPA 904.0 | 247726 | | |
| 60236273004 | L-LMW-6S | EPA 904.0 | 247726 | | |
| 60236273005 | L-LMW-FB-1 | EPA 904.0 | 247726 | | |
| 60236164001 | L-LMW-2S | SM 2540C | 462912 | | |
| 60236164002 | L-LMW-3S | SM 2540C | 462642 | | |
| 60236164003 | L-LMW-7S | SM 2540C | 462912 | | |
| 60236164004 | L-LMW-8S | SM 2540C | 462912 | | |
| 60236164005 | L-BMW-1S | SM 2540C | 462642 | | |
| 60236164006 | L-BMW-2S | SM 2540C | 462642 | | |
| 60236164007 | L-LMW-DUP-1 | SM 2540C | 462642 | | |
| 60236273001 | L-LMW-1S | SM 2540C | 463211 | | |
| 60236273002 | L-LMW-4S | SM 2540C | 463211 | | |
| 60236273003 | L-LMW-5S | SM 2540C | 463211 | | |
| 60236273004 | L-LMW-6S | SM 2540C | 463211 | | |
| 60236273005 | L-LMW-FB-1 | SM 2540C | 463211 | | |
| 60236273005 | L-LMW-FB-1 | SM 2540C | 463484 | | |
| 60236164001 | L-LMW-2S | SM 4500-H+B | 462929 | | |
| 60236164002 | L-LMW-3S | SM 4500-H+B | 462921 | | |
| 60236164003 | L-LMW-7S | SM 4500-H+B | 463214 | | |
| 60236164004 | L-LMW-8S | SM 4500-H+B | 463390 | | |
| 60236164005 | L-BMW-1S | SM 4500-H+B | 462921 | | |
| 60236164006 | L-BMW-2S | SM 4500-H+B | 462921 | | |
| 60236164007 | L-LMW-DUP-1 | SM 4500-H+B | 462921 | | |
| 60236273001 | L-LMW-1S | SM 4500-H+B | 463214 | | |
| 60236273002 | L-LMW-4S | SM 4500-H+B | 463214 | | |
| 60236273003 | L-LMW-5S | SM 4500-H+B | 463390 | | |
| 60236273004 | L-LMW-6S | SM 4500-H+B | 463390 | | |

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60236164

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|-------------|-------------|-----------------|----------|-------------------|------------------|
| 60236273005 | L-LMW-FB-1 | SM 4500-H+B | 463390 | | |
| 60236164001 | L-LMW-2S | EPA 300.0 | 462964 | | |
| 60236164001 | L-LMW-2S | EPA 300.0 | 463225 | | |
| 60236164002 | L-LMW-3S | EPA 300.0 | 462964 | | |
| 60236164002 | L-LMW-3S | EPA 300.0 | 463225 | | |
| 60236164002 | L-LMW-3S | EPA 300.0 | 463454 | | |
| 60236164003 | L-LMW-7S | EPA 300.0 | 462964 | | |
| 60236164003 | L-LMW-7S | EPA 300.0 | 463225 | | |
| 60236164004 | L-LMW-8S | EPA 300.0 | 462964 | | |
| 60236164005 | L-BMW-1S | EPA 300.0 | 462964 | | |
| 60236164005 | L-BMW-1S | EPA 300.0 | 463225 | | |
| 60236164006 | L-BMW-2S | EPA 300.0 | 462964 | | |
| 60236164007 | L-LMW-DUP-1 | EPA 300.0 | 462964 | | |
| 60236164007 | L-LMW-DUP-1 | EPA 300.0 | 463225 | | |
| 60236273001 | L-LMW-1S | EPA 300.0 | 462968 | | |
| 60236273001 | L-LMW-1S | EPA 300.0 | 463225 | | |
| 60236273002 | L-LMW-4S | EPA 300.0 | 462968 | | |
| 60236273002 | L-LMW-4S | EPA 300.0 | 463225 | | |
| 60236273003 | L-LMW-5S | EPA 300.0 | 462964 | | |
| 60236273004 | L-LMW-6S | EPA 300.0 | 462968 | | |
| 60236273004 | L-LMW-6S | EPA 300.0 | 463225 | | |
| 60236273005 | L-LMW-FB-1 | EPA 300.0 | 462964 | | |

REPORT OF LABORATORY ANALYSIS

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WO#: 60236164



Sample Condition Upon Receipt

Client Name: Goldner

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-266 / T-239 Type of Ice: Wet Blue None

Cooler Temperature (°C): As-read 13.2/12.3/1.1 Corr. Factor CF -1.5 / CF +0.9 Corrected 14.7/13.8/2.0

Date and initials of person examining contents:

pv1/10/17

Temperature should be above freezing to 6°C

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

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: Jami Chok _____ Date: 1/18/17



CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: **1** of **1**

| | | | | | |
|--|----------------------------------|---|--|--|--------------|
| Section A Required Client Information: | | Section B Required Project Information: | | Section C Invoice Information: | |
| Company: | Golder Associates | Report To: | Mark Haddock (mhaddock@golder.com) | Attention: | |
| Address: | 820 South Main Street, Suite 100 | Copy To: | Jeffrey Ingram | Company Name: | |
| | St Charles, MO 63301 | | | Address: | |
| Email To: | mhaddock@golder.com | Purchase Order No.: | | Pace Quote Reference: | |
| Phone: | 636-724-9191 | Project Name: | Ameren Labadie Energy Center - Fly Ash | Pace Project Manager: | Jamie Church |
| Requested Due Date/TAT: | Standard | Project Number: | 153-1406.0001B | Pace Profile #: | 9285 |

REGULATORY AGENCY

NPDES GROUND WATER DRINKING WATER

UST RCRA OTHER

Site Location: MO

| ITEM # | Valid Matrix Codes MATRIX CODE DRINKING WATER DW WATER WT WASTE WATER WW PRODUCT P SOILSOLID SL OIL OL WP AR OT TS | COLLECTED | | SAMPLE TYPE (G=GRAB C=COMP) | MATRIX CODE (see valid codes to left) | # OF CONTAINERS | Preservatives HCl HNO ₃ H ₂ SO ₄ NaOH Na ₂ S ₂ O ₃ Methanol Other | Analysis Test ↑ Metals* Chloride/Fluoride/Sulfate TDS PH Radium 226 & 228 | Requested Analysis Filtered (Y/N) | Temp in °C | Received on Cooler (Y/N) Ice (Y/N) Custody Sealed Samples Intact |
|--------|---|------------------------------|---------------------------------|-----------------------------|---------------------------------------|-----------------|--|--|-----------------------------------|------------|--|
| | | COMPOSITE START DATE TIME | COMPOSITE END/GRAB DATE TIME | | | | | | | | |
| 1 | L-LMW-1S | | 1/17/17 1415 | G | WT G | 12 | | 3 | | | |
| 2 | L-LMW-2S | | 1/17/17 1521 | G | WT G | 4 | | 3 | | | |
| 3 | L-LMW-3S | | | G | WT G | | | 1 | | | |
| 4 | L-LMW-4S | | | G | WT G | | | 1 | | | |
| 5 | L-LMW-5S | | | G | WT G | | | 1 | | | |
| 6 | L-LMW-6S | | | G | WT G | | | 1 | | | |
| 7 | L-LMW-7S | | 1/17/17 1523 | G | WT G | 4 | | 1 | | | |
| 8 | L-LMW-8S | | 1/17/17 1423 | G | WT G | 4 | | 1 | | | |
| 9 | L-BMW-1S | | 1/16/17 1115 | G | WT G | 4 | | 1 | | | |
| 10 | L-BMW-2S | | 1/16/17 1322 | G | WT G | 4 | | 1 | | | |
| 11 | L-LMW-DUP-1 | | 1/16/17 | G | WT G | 4 | | 1 | | | |
| 12 | L-LMW-FB-1 | | | G | WT G | | | 1 | | | |

ADDITIONAL COMMENTS

EPA 200.7: Ba, Be, B, Ca, Co, Pb, Li, Mo + EPA 7470A Hg
EPA 200.8: Sb, As, Cd, Cr, Se, Tl

RELINQUISHED BY / AFFILIATION
Tommy Gaudin/Golder

DATE
1/17/17

TIME
1715

ACCEPTED BY / AFFILIATION
Jeffrey Ingram

DATE
1/18/17

TIME
0420

Temp in °C
14.7

Received on
138 N

Cooler (Y/N)
Y

Custody Sealed
Y

Samples Intact
Y

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Tommy Gaudin
SIGNATURE of SAMPLER: Tommy Gaudin

DATE Signed (MM/DD/YY): 1/17/17



Sample Condition Upon Receipt

WO#: 60236273
60236273

Client Name: Golder

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

Tracking #: _____ Pace Shipping Label Used? Yes No

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

Packing Material: Bubble Wrap Bubble Bags Foam None Other

Thermometer Used: T-266 / T-239 Type of Ice: Met Blue None

Cooler Temperature (°C): As-read 0.7/1.0 Corr. Factor CF +1.5 / CF +0.9 Corrected 2.2/13.3

Date and initials of person examining contents:

pv/19/17

Temperature should be above freezing to 6°C

| | | |
|--|---|-----------------|
| Chain of Custody present: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Chain of Custody relinquished: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Samples arrived within holding time: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Short Hold Time analyses (<72hr): | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | <u>PH</u> |
| Rush Turn Around Time requested: | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | |
| Sufficient volume: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Correct containers used: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Pace containers used: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Containers intact: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs? | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | |
| Filtered volume received for dissolved tests? | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | |
| Sample labels match COC: Date / time / ID / analyses | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Samples contain multiple phases? Matrix: <u>WT</u> | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | |
| Containers requiring pH preservation in compliance? (HNO ₃ , H ₂ SO ₄ , HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO) | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | <u>pv/19/17</u> |
| Cyanide water sample checks: | <input checked="" type="checkbox"/> N/A | |
| Lead acetate strip turns dark? (Record only) | <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| Potassium iodide test strip turns blue/purple? (Preserve) | <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| Trip Blank present: | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | |
| Headspace in VOA vials (>6mm): | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | |
| Samples from USDA Regulated Area: State: | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | |
| Additional labels attached to 5035A / TX1005 vials in the field? | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | |

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: Jamie Chubb _____ 1/19/17 _____

Project Manager Review: _____ Date



CHAIN-OF-CUSTODY / Analytical Request Document

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

| | | | | | |
|--|----------------------------------|---|--|--|--------------|
| Section A Required Client Information: | | Section B Required Project Information: | | Section C Invoice Information: | |
| Company: | Golder Associates | Report To: | Mark Haddock (mhaddock@golder.com) | Attention: | |
| Address: | 820 South Main Street, Suite 100 | Copy To: | Jeffrey Ingram | Company Name: | |
| | St Charles, MO 63301 | | | Address: | |
| Email To: | mhaddock@golder.com | Purchase Order No.: | | Pace Quote Reference: | |
| Phone: | 636-724-9191 | Project Name: | Ameren Labadie Energy Center - Fly Ash | Pace Project Manager: | Jamie Church |
| Requested Due Date/TAT: | Standard | Project Number: | 153-1406.0001B | Pace Profile #: | 9285 |

| ITEM # | 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 WP AR AR OT OT TS TS | COLLECTED | | SAMPLE TYPE (G=GRAB C=COMP) | MATRIX CODE (see valid codes to left) | # OF CONTAINERS | PRESERVATIVES | | ↑ Analysis Test ↑ Y/N | Requested Analysis Filtered (Y/N) | | | | | | Residual Chlorine (Y/N) | Pace Project No./ Lab I.D. | SAMPLE CONDITIONS | | | | | | | | | | | | | | | | | |
|---------------------|--|--|-----------------|--------------------|-----------------------------|---------------------------------------|-----------------|---------------------------|------|--------------------------|-----------------------------------|------|-----|-------------------|---------|----------|----------------------------|----------------------------|-------------------|---------|---------------------------|-----|----|------------------|-------------|----------------|--------------|----------------|--|--|--|--|--|--|--|--|
| | | | COMPOSITE START | COMPOSITE END/GRAB | | | | DATE | TIME | | H2SO4 | HNO3 | HCl | NaOH | Na2S2O3 | Methanol | | | Other | Metals* | Chloride/Fluoride/Sulfate | TDS | pH | Radium 226 & 228 | Received on | Custody Sealed | Cooler (Y/N) | Samples Intact | | | | | | | | |
| 1 | L-LMW-1S | | | 1/18/17 | 1022 | G | | 4 | 3 | | | | | | | | 18-P3N2° 13-PUN 08/P1N 0/1 | | | | | | | | | | | | | | | | | | | |
| 2 | L-LMW-2S | | | | | G | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | L-LMW-3S | | | | | G | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | L-LMW-4S | | | 1/18/17 | 133 | G | | 4 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | L-LMW-5S | | | 1/18/17 | 1303 | G | | 4 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | L-LMW-6S | | | 1/18/17 | 1203 | G | | 4 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | L-LMW-7S | | | | | G | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | L-LMW-8S | | | | | G | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | L-LMW-9S | | | | | G | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | L-LMW-10S | | | | | G | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | L-LMW-DUP-T | | | | | G | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | L-LMW-FB-1 | | | 1/19/17 | 1240 | G | | 4 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ADDITIONAL COMMENTS | | RELINQUISHED BY / AFFILIATION | | DATE | | TIME | | ACCEPTED BY / AFFILIATION | | DATE | | TIME | | SAMPLE CONDITIONS | | | | | | | | | | | | | | | | | | | | | | |
| Johannes Haddock | | Johannes Haddock / PACE | | 1/18/17 | | 1500 | | Johannes Haddock | | 1/18/17 | | 1500 | | Y Y Y Y | | | | | | | | | | | | | | | | | | | | | | |
| | | Johannes Haddock / PACE | | 1/18/17 | | 1700 | | Johannes Haddock | | 1/18/17 | | 0455 | | 2.2 Y Y Y Y | | | | | | | | | | | | | | | | | | | | | | |

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

March 27, 2017

Mark Haddock
Golder Associates
820 S. Main St
Suite 100
Saint Charles, MO 63301

RE: Project: AMEREN LABADIE ENERGY CTR-FLY
Pace Project No.: 60239001

Dear Mark Haddock:

Enclosed are the analytical results for sample(s) received by the laboratory on March 04, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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, Golder Associates
John Suozzi, Golder Associates



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60239001

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601

L-A-B DOD-ELAP Accreditation #: L2417

Alabama Certification #: 41590

Arizona Certification #: AZ0734

Arkansas Certification

California Certification #: 04222CA

Colorado Certification

Connecticut Certification #: PH-0694

Delaware Certification

Florida/TNI Certification #: E87683

Georgia Certification #: C040

Guam Certification

Hawaii Certification

Idaho Certification

Illinois Certification

Indiana Certification

Iowa Certification #: 391

Kansas/TNI Certification #: E-10358

Kentucky Certification #: 90133

Louisiana DHH/TNI Certification #: LA140008

Louisiana DEQ/TNI Certification #: 4086

Maine Certification #: PA00091

Maryland Certification #: 308

Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification

Missouri Certification #: 235

Montana Certification #: Cert 0082

Nebraska Certification #: NE-05-29-14

Nevada Certification #: PA014572015-1

New Hampshire/TNI Certification #: 2976

New Jersey/TNI Certification #: PA 051

New Mexico Certification #: PA01457

New York/TNI Certification #: 10888

North Carolina Certification #: 42706

North Dakota Certification #: R-190

Oregon/TNI Certification #: PA200002

Pennsylvania/TNI Certification #: 65-00282

Puerto Rico Certification #: PA01457

Rhode Island Certification #: 65-00282

South Dakota Certification

Tennessee Certification #: TN2867

Texas/TNI Certification #: T104704188-14-8

Utah/TNI Certification #: PA014572015-5

USDA Soil Permit #: P330-14-00213

Vermont Dept. of Health: ID# VT-0282

Virgin Island/PADEP Certification

Virginia/VELAP Certification #: 460198

Washington Certification #: C868

West Virginia DEP Certification #: 143

West Virginia DHHR Certification #: 9964C

Wisconsin Certification

Wyoming Certification #: 8TMS-L

Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 15-016-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407

Utah Certification #: KS00021

Kansas Field Laboratory Accreditation: # E-92587

Missouri Certification: 10070

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60239001

| Lab ID | Sample ID | Matrix | Date Collected | Date Received |
|-------------|--------------|--------|----------------|----------------|
| 60239001001 | L-LMW-1S | Water | 03/02/17 11:34 | 03/04/17 03:10 |
| 60239001002 | L-LMW-2S | Water | 03/02/17 13:51 | 03/04/17 03:10 |
| 60239001003 | L-LMW-3S | Water | 03/03/17 10:17 | 03/04/17 03:10 |
| 60239001004 | L-LMW-4S | Water | 03/03/17 11:00 | 03/04/17 03:10 |
| 60239001005 | L-LMW-5S | Water | 03/02/17 15:30 | 03/04/17 03:10 |
| 60239001006 | L-LMW-6S | Water | 03/02/17 14:45 | 03/04/17 03:10 |
| 60239001007 | L-LMW-7S | Water | 03/02/17 13:30 | 03/04/17 03:10 |
| 60239001008 | L-LMW-8S | Water | 03/02/17 12:45 | 03/04/17 03:10 |
| 60239001009 | L-BMW-1S | Water | 03/01/17 14:30 | 03/04/17 03:10 |
| 60239001010 | L-BMW-2S | Water | 03/01/17 15:38 | 03/04/17 03:10 |
| 60239001011 | L-LMW-DUP-1 | Water | 03/02/17 08:00 | 03/04/17 03:10 |
| 60239001012 | L-LMW-FB-1 | Water | 03/03/17 10:00 | 03/04/17 03:10 |
| 60239001013 | L-LMW-1S MS | Water | 03/02/17 11:34 | 03/04/17 03:10 |
| 60239001014 | L-LMW-1S MSD | Water | 03/02/17 11:34 | 03/04/17 03:10 |

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60239001

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|-------------|-----------|-------------|----------|-------------------|------------|
| 60239001001 | L-LMW-1S | EPA 200.7 | TDS | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |
| | | EPA 7470 | NDJ | 1 | PASI-K |
| | | EPA 903.1 | KAC | 1 | PASI-PA |
| | | EPA 904.0 | JJY | 1 | PASI-PA |
| | | SM 2540C | LDF | 1 | PASI-K |
| | | SM 4500-H+B | JSS | 1 | PASI-K |
| 60239001002 | L-LMW-2S | EPA 300.0 | OL | 3 | PASI-K |
| | | EPA 200.7 | TDS | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |
| | | EPA 7470 | NDJ | 1 | PASI-K |
| | | EPA 903.1 | KAC | 1 | PASI-PA |
| | | EPA 904.0 | JJY | 1 | PASI-PA |
| | | SM 2540C | LDF | 1 | PASI-K |
| 60239001003 | L-LMW-3S | SM 4500-H+B | JSS | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| | | EPA 200.7 | TDS | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |
| | | EPA 7470 | NDJ | 1 | PASI-K |
| | | EPA 903.1 | KAC | 1 | PASI-PA |
| | | EPA 904.0 | JJY | 1 | PASI-PA |
| 60239001004 | L-LMW-4S | SM 2540C | LDF | 1 | PASI-K |
| | | SM 4500-H+B | JSS | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| | | EPA 200.7 | TDS | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |
| | | EPA 7470 | NDJ | 1 | PASI-K |
| | | EPA 903.1 | KAC | 1 | PASI-PA |
| 60239001005 | L-LMW-5S | EPA 904.0 | JJY | 1 | PASI-PA |
| | | SM 2540C | LDF | 1 | PASI-K |
| | | SM 4500-H+B | JSS | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| | | EPA 200.7 | TDS | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |
| | | EPA 7470 | NDJ | 1 | PASI-K |
| 60239001005 | L-LMW-5S | EPA 903.1 | KAC | 1 | PASI-PA |
| | | EPA 904.0 | JJY | 1 | PASI-PA |
| | | EPA 904.0 | JJY | 1 | PASI-PA |

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SAMPLE ANALYTE COUNT

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60239001

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|-------------|-----------|-------------|----------|-------------------|------------|
| 60239001006 | L-LMW-6S | SM 2540C | LDF | 1 | PASI-K |
| | | SM 4500-H+B | JSS | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| | | EPA 200.7 | TDS | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |
| | | EPA 7470 | NDJ | 1 | PASI-K |
| | | EPA 903.1 | KAC | 1 | PASI-PA |
| | | EPA 904.0 | JJY | 1 | PASI-PA |
| 60239001007 | L-LMW-7S | SM 2540C | LDF | 1 | PASI-K |
| | | SM 4500-H+B | JSS | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| | | EPA 200.7 | TDS | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |
| | | EPA 7470 | NDJ | 1 | PASI-K |
| | | EPA 903.1 | KAC | 1 | PASI-PA |
| | | EPA 904.0 | JJY | 1 | PASI-PA |
| 60239001008 | L-LMW-8S | SM 2540C | LDF | 1 | PASI-K |
| | | SM 4500-H+B | JSS | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| | | EPA 200.7 | TDS | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |
| | | EPA 7470 | NDJ | 1 | PASI-K |
| | | EPA 903.1 | KAC | 1 | PASI-PA |
| | | EPA 904.0 | JJY | 1 | PASI-PA |
| 60239001009 | L-BMW-1S | SM 2540C | LDF | 1 | PASI-K |
| | | SM 4500-H+B | JSS | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| | | EPA 200.7 | TDS | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |
| | | EPA 7470 | NDJ | 1 | PASI-K |
| | | EPA 903.1 | KAC | 1 | PASI-PA |
| | | EPA 904.0 | JJY | 1 | PASI-PA |
| 60239001010 | L-BMW-2S | SM 2540C | LDF | 1 | PASI-K |
| | | SM 4500-H+B | JSS | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| | | EPA 200.7 | TDS | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60239001

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|-------------|--------------|-------------|----------|-------------------|------------|
| | | EPA 7470 | NDJ | 1 | PASI-K |
| | | EPA 903.1 | KAC | 1 | PASI-PA |
| | | EPA 904.0 | JJY | 1 | PASI-PA |
| | | SM 2540C | LDF | 1 | PASI-K |
| | | SM 4500-H+B | JSS | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| 60239001011 | L-LMW-DUP-1 | EPA 200.7 | TDS | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |
| | | EPA 7470 | NDJ | 1 | PASI-K |
| | | EPA 903.1 | KAC | 1 | PASI-PA |
| | | EPA 904.0 | JJY | 1 | PASI-PA |
| | | SM 2540C | LDF | 1 | PASI-K |
| | | SM 4500-H+B | JSS | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| 60239001012 | L-LMW-FB-1 | EPA 200.7 | TDS | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |
| | | EPA 7470 | NDJ | 1 | PASI-K |
| | | EPA 903.1 | KAC | 1 | PASI-PA |
| | | EPA 904.0 | JJY | 1 | PASI-PA |
| | | SM 2540C | LDF | 1 | PASI-K |
| | | SM 4500-H+B | JSS | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| 60239001013 | L-LMW-1S MS | EPA 903.1 | KAC | 1 | PASI-PA |
| | | EPA 904.0 | JJY | 1 | PASI-PA |
| 60239001014 | L-LMW-1S MSD | EPA 903.1 | KAC | 1 | PASI-PA |
| | | EPA 904.0 | JJY | 1 | PASI-PA |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60239001

Sample: L-LMW-1S **Lab ID: 60239001001** Collected: 03/02/17 11:34 Received: 03/04/17 03:10 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 138 | ug/L | 5.0 | 0.91 | 1 | 03/06/17 14:25 | 03/07/17 13:44 | 7440-39-3 | |
| Beryllium | 0.24J | ug/L | 1.0 | 0.16 | 1 | 03/06/17 14:25 | 03/07/17 13:44 | 7440-41-7 | |
| Boron | 2560 | ug/L | 100 | 3.5 | 1 | 03/06/17 14:25 | 03/07/17 13:44 | 7440-42-8 | |
| Calcium | 153000 | ug/L | 100 | 36.0 | 1 | 03/06/17 14:25 | 03/07/17 13:44 | 7440-70-2 | M1 |
| Cobalt | 2.6J | ug/L | 5.0 | 0.73 | 1 | 03/06/17 14:25 | 03/07/17 13:44 | 7440-48-4 | |
| Lead | <2.4 | ug/L | 5.0 | 2.4 | 1 | 03/06/17 14:25 | 03/07/17 13:44 | 7439-92-1 | |
| Lithium | 21.7 | ug/L | 10.0 | 2.9 | 1 | 03/06/17 14:25 | 03/07/17 13:44 | 7439-93-2 | |
| Molybdenum | 3.3J | ug/L | 20.0 | 1.3 | 1 | 03/06/17 14:25 | 03/07/17 13:44 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | 0.058J | ug/L | 1.0 | 0.026 | 1 | 03/06/17 14:25 | 03/07/17 12:12 | 7440-36-0 | |
| Arsenic | 5.6 | ug/L | 1.0 | 0.052 | 1 | 03/06/17 14:25 | 03/07/17 12:12 | 7440-38-2 | |
| Cadmium | 0.072J | ug/L | 0.50 | 0.018 | 1 | 03/06/17 14:25 | 03/07/17 12:12 | 7440-43-9 | |
| Chromium | 0.38J | ug/L | 1.0 | 0.054 | 1 | 03/06/17 14:25 | 03/07/17 12:12 | 7440-47-3 | B |
| Selenium | 0.34J | ug/L | 1.0 | 0.086 | 1 | 03/06/17 14:25 | 03/07/17 12:12 | 7782-49-2 | |
| Thallium | 0.055J | ug/L | 1.0 | 0.036 | 1 | 03/06/17 14:25 | 03/07/17 12:12 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.046 | ug/L | 0.20 | 0.046 | 1 | 03/06/17 13:45 | 03/07/17 11:28 | 7439-97-6 | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 521 | mg/L | 5.0 | 5.0 | 1 | | 03/06/17 13:37 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.1 | Std. Units | 0.10 | 0.10 | 1 | | 03/08/17 12:09 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 4.8 | mg/L | 1.0 | 0.50 | 1 | | 03/07/17 12:04 | 16887-00-6 | |
| Fluoride | 0.16J | mg/L | 0.20 | 0.10 | 1 | | 03/07/17 12:04 | 16984-48-8 | |
| Sulfate | 57.6 | mg/L | 5.0 | 2.5 | 5 | | 03/08/17 10:20 | 14808-79-8 | |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60239001

Sample: L-LMW-2S **Lab ID: 60239001002** Collected: 03/02/17 13:51 Received: 03/04/17 03:10 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 53.2 | ug/L | 5.0 | 0.91 | 1 | 03/06/17 14:25 | 03/07/17 13:51 | 7440-39-3 | |
| Beryllium | 0.33J | ug/L | 1.0 | 0.16 | 1 | 03/06/17 14:25 | 03/07/17 13:51 | 7440-41-7 | |
| Boron | 6680 | ug/L | 100 | 3.5 | 1 | 03/06/17 14:25 | 03/07/17 13:51 | 7440-42-8 | |
| Calcium | 77600 | ug/L | 100 | 36.0 | 1 | 03/06/17 14:25 | 03/07/17 13:51 | 7440-70-2 | |
| Cobalt | <0.73 | ug/L | 5.0 | 0.73 | 1 | 03/06/17 14:25 | 03/07/17 13:51 | 7440-48-4 | |
| Lead | <2.4 | ug/L | 5.0 | 2.4 | 1 | 03/06/17 14:25 | 03/07/17 13:51 | 7439-92-1 | |
| Lithium | 16.4 | ug/L | 10.0 | 2.9 | 1 | 03/06/17 14:25 | 03/07/17 13:51 | 7439-93-2 | |
| Molybdenum | 151 | ug/L | 20.0 | 1.3 | 1 | 03/06/17 14:25 | 03/07/17 13:51 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | 0.066J | ug/L | 1.0 | 0.026 | 1 | 03/06/17 14:25 | 03/07/17 12:25 | 7440-36-0 | |
| Arsenic | 30.2 | ug/L | 1.0 | 0.052 | 1 | 03/06/17 14:25 | 03/07/17 12:25 | 7440-38-2 | |
| Cadmium | <0.018 | ug/L | 0.50 | 0.018 | 1 | 03/06/17 14:25 | 03/07/17 12:25 | 7440-43-9 | |
| Chromium | 0.22J | ug/L | 1.0 | 0.054 | 1 | 03/06/17 14:25 | 03/07/17 12:25 | 7440-47-3 | B |
| Selenium | 0.12J | ug/L | 1.0 | 0.086 | 1 | 03/06/17 14:25 | 03/07/17 12:25 | 7782-49-2 | |
| Thallium | 0.056J | ug/L | 1.0 | 0.036 | 1 | 03/06/17 14:25 | 03/07/17 12:25 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.046 | ug/L | 0.20 | 0.046 | 1 | 03/06/17 13:45 | 03/07/17 11:34 | 7439-97-6 | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 519 | mg/L | 5.0 | 5.0 | 1 | | 03/06/17 13:37 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 9.0 | Std. Units | 0.10 | 0.10 | 1 | | 03/10/17 11:27 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 18.1 | mg/L | 1.0 | 0.50 | 1 | | 03/07/17 12:45 | 16887-00-6 | |
| Fluoride | 0.15J | mg/L | 0.20 | 0.10 | 1 | | 03/07/17 12:45 | 16984-48-8 | |
| Sulfate | 293 | mg/L | 20.0 | 10.0 | 20 | | 03/08/17 11:03 | 14808-79-8 | |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60239001

Sample: L-LMW-3S **Lab ID: 60239001003** Collected: 03/03/17 10:17 Received: 03/04/17 03:10 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 65.8 | ug/L | 5.0 | 0.91 | 1 | 03/06/17 14:25 | 03/07/17 13:53 | 7440-39-3 | |
| Beryllium | 0.21J | ug/L | 1.0 | 0.16 | 1 | 03/06/17 14:25 | 03/07/17 13:53 | 7440-41-7 | |
| Boron | 4530 | ug/L | 100 | 3.5 | 1 | 03/06/17 14:25 | 03/07/17 13:53 | 7440-42-8 | |
| Calcium | 63200 | ug/L | 100 | 36.0 | 1 | 03/06/17 14:25 | 03/07/17 13:53 | 7440-70-2 | |
| Cobalt | <0.73 | ug/L | 5.0 | 0.73 | 1 | 03/06/17 14:25 | 03/07/17 13:53 | 7440-48-4 | |
| Lead | <2.4 | ug/L | 5.0 | 2.4 | 1 | 03/06/17 14:25 | 03/07/17 13:53 | 7439-92-1 | |
| Lithium | 29.0 | ug/L | 10.0 | 2.9 | 1 | 03/06/17 14:25 | 03/07/17 13:53 | 7439-93-2 | |
| Molybdenum | 172 | ug/L | 20.0 | 1.3 | 1 | 03/06/17 14:25 | 03/07/17 13:53 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | <0.026 | ug/L | 1.0 | 0.026 | 1 | 03/06/17 14:25 | 03/07/17 12:29 | 7440-36-0 | |
| Arsenic | 2.2 | ug/L | 1.0 | 0.052 | 1 | 03/06/17 14:25 | 03/07/17 12:29 | 7440-38-2 | |
| Cadmium | <0.018 | ug/L | 0.50 | 0.018 | 1 | 03/06/17 14:25 | 03/07/17 12:29 | 7440-43-9 | |
| Chromium | 0.41J | ug/L | 1.0 | 0.054 | 1 | 03/06/17 14:25 | 03/07/17 12:29 | 7440-47-3 | B |
| Selenium | <0.086 | ug/L | 1.0 | 0.086 | 1 | 03/06/17 14:25 | 03/07/17 12:29 | 7782-49-2 | |
| Thallium | <0.036 | ug/L | 1.0 | 0.036 | 1 | 03/06/17 14:25 | 03/07/17 12:29 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.046 | ug/L | 0.20 | 0.046 | 1 | 03/06/17 13:45 | 03/07/17 11:36 | 7439-97-6 | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 516 | mg/L | 5.0 | 5.0 | 1 | | 03/06/17 16:47 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.5 | Std. Units | 0.10 | 0.10 | 1 | | 03/08/17 15:32 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 20.2 | mg/L | 2.0 | 1.0 | 2 | | 03/08/17 11:17 | 16887-00-6 | |
| Fluoride | 0.34 | mg/L | 0.20 | 0.10 | 1 | | 03/07/17 12:58 | 16984-48-8 | |
| Sulfate | 239 | mg/L | 20.0 | 10.0 | 20 | | 03/08/17 14:14 | 14808-79-8 | |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60239001

Sample: L-LMW-4S **Lab ID: 60239001004** Collected: 03/03/17 11:00 Received: 03/04/17 03:10 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 132 | ug/L | 5.0 | 0.91 | 1 | 03/06/17 14:25 | 03/07/17 13:55 | 7440-39-3 | |
| Beryllium | <0.16 | ug/L | 1.0 | 0.16 | 1 | 03/06/17 14:25 | 03/07/17 13:55 | 7440-41-7 | |
| Boron | 9500 | ug/L | 100 | 3.5 | 1 | 03/06/17 14:25 | 03/07/17 13:55 | 7440-42-8 | |
| Calcium | 136000 | ug/L | 100 | 36.0 | 1 | 03/06/17 14:25 | 03/07/17 13:55 | 7440-70-2 | |
| Cobalt | 2.0J | ug/L | 5.0 | 0.73 | 1 | 03/06/17 14:25 | 03/07/17 13:55 | 7440-48-4 | |
| Lead | <2.4 | ug/L | 5.0 | 2.4 | 1 | 03/06/17 14:25 | 03/07/17 13:55 | 7439-92-1 | |
| Lithium | 44.6 | ug/L | 10.0 | 2.9 | 1 | 03/06/17 14:25 | 03/07/17 13:55 | 7439-93-2 | |
| Molybdenum | 69.3 | ug/L | 20.0 | 1.3 | 1 | 03/06/17 14:25 | 03/07/17 13:55 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | 0.030J | ug/L | 1.0 | 0.026 | 1 | 03/06/17 14:25 | 03/07/17 12:33 | 7440-36-0 | |
| Arsenic | 13.5 | ug/L | 1.0 | 0.052 | 1 | 03/06/17 14:25 | 03/07/17 12:33 | 7440-38-2 | |
| Cadmium | <0.018 | ug/L | 0.50 | 0.018 | 1 | 03/06/17 14:25 | 03/07/17 12:33 | 7440-43-9 | |
| Chromium | 0.72J | ug/L | 1.0 | 0.054 | 1 | 03/06/17 14:25 | 03/07/17 12:33 | 7440-47-3 | B |
| Selenium | <0.086 | ug/L | 1.0 | 0.086 | 1 | 03/06/17 14:25 | 03/07/17 12:33 | 7782-49-2 | |
| Thallium | <0.036 | ug/L | 1.0 | 0.036 | 1 | 03/06/17 14:25 | 03/07/17 12:33 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.046 | ug/L | 0.20 | 0.046 | 1 | 03/06/17 13:45 | 03/07/17 11:39 | 7439-97-6 | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 740 | mg/L | 5.0 | 5.0 | 1 | | 03/06/17 16:48 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.3 | Std. Units | 0.10 | 0.10 | 1 | | 03/08/17 15:33 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 23.2 | mg/L | 2.0 | 1.0 | 2 | | 03/08/17 14:29 | 16887-00-6 | |
| Fluoride | 0.20 | mg/L | 0.20 | 0.10 | 1 | | 03/07/17 13:38 | 16984-48-8 | |
| Sulfate | 233 | mg/L | 20.0 | 10.0 | 20 | | 03/08/17 14:43 | 14808-79-8 | |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60239001

Sample: L-LMW-5S **Lab ID: 60239001005** Collected: 03/02/17 15:30 Received: 03/04/17 03:10 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 374 | ug/L | 5.0 | 0.91 | 1 | 03/06/17 14:25 | 03/07/17 13:57 | 7440-39-3 | |
| Beryllium | 0.17J | ug/L | 1.0 | 0.16 | 1 | 03/06/17 14:25 | 03/07/17 13:57 | 7440-41-7 | |
| Boron | 86.9J | ug/L | 100 | 3.5 | 1 | 03/06/17 14:25 | 03/07/17 13:57 | 7440-42-8 | |
| Calcium | 154000 | ug/L | 100 | 36.0 | 1 | 03/06/17 14:25 | 03/07/17 13:57 | 7440-70-2 | |
| Cobalt | <0.73 | ug/L | 5.0 | 0.73 | 1 | 03/06/17 14:25 | 03/07/17 13:57 | 7440-48-4 | |
| Lead | <2.4 | ug/L | 5.0 | 2.4 | 1 | 03/06/17 14:25 | 03/07/17 13:57 | 7439-92-1 | |
| Lithium | 11.9 | ug/L | 10.0 | 2.9 | 1 | 03/06/17 14:25 | 03/07/17 13:57 | 7439-93-2 | |
| Molybdenum | <1.3 | ug/L | 20.0 | 1.3 | 1 | 03/06/17 14:25 | 03/07/17 13:57 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | 0.13J | ug/L | 1.0 | 0.026 | 1 | 03/06/17 14:25 | 03/07/17 12:42 | 7440-36-0 | |
| Arsenic | 0.58J | ug/L | 1.0 | 0.052 | 1 | 03/06/17 14:25 | 03/07/17 12:42 | 7440-38-2 | |
| Cadmium | 0.034J | ug/L | 0.50 | 0.018 | 1 | 03/06/17 14:25 | 03/07/17 12:42 | 7440-43-9 | |
| Chromium | 1.4 | ug/L | 1.0 | 0.054 | 1 | 03/06/17 14:25 | 03/07/17 12:42 | 7440-47-3 | |
| Selenium | 0.66J | ug/L | 1.0 | 0.086 | 1 | 03/06/17 14:25 | 03/07/17 12:42 | 7782-49-2 | |
| Thallium | 0.041J | ug/L | 1.0 | 0.036 | 1 | 03/06/17 14:25 | 03/07/17 12:42 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.046 | ug/L | 0.20 | 0.046 | 1 | 03/06/17 13:45 | 03/07/17 11:41 | 7439-97-6 | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 494 | mg/L | 5.0 | 5.0 | 1 | | 03/06/17 13:37 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.4 | Std. Units | 0.10 | 0.10 | 1 | | 03/08/17 15:21 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 5.7 | mg/L | 1.0 | 0.50 | 1 | | 03/07/17 13:52 | 16887-00-6 | |
| Fluoride | 0.17J | mg/L | 0.20 | 0.10 | 1 | | 03/07/17 13:52 | 16984-48-8 | |
| Sulfate | 14.4 | mg/L | 1.0 | 0.50 | 1 | | 03/07/17 13:52 | 14808-79-8 | |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60239001

Sample: L-LMW-6S **Lab ID: 60239001006** Collected: 03/02/17 14:45 Received: 03/04/17 03:10 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 298 | ug/L | 5.0 | 0.91 | 1 | 03/06/17 14:25 | 03/07/17 14:00 | 7440-39-3 | |
| Beryllium | 0.21J | ug/L | 1.0 | 0.16 | 1 | 03/06/17 14:25 | 03/07/17 14:00 | 7440-41-7 | |
| Boron | 269 | ug/L | 100 | 3.5 | 1 | 03/06/17 14:25 | 03/07/17 14:00 | 7440-42-8 | |
| Calcium | 182000 | ug/L | 100 | 36.0 | 1 | 03/06/17 14:25 | 03/07/17 14:00 | 7440-70-2 | |
| Cobalt | 4.9J | ug/L | 5.0 | 0.73 | 1 | 03/06/17 14:25 | 03/07/17 14:00 | 7440-48-4 | |
| Lead | <2.4 | ug/L | 5.0 | 2.4 | 1 | 03/06/17 14:25 | 03/07/17 14:00 | 7439-92-1 | |
| Lithium | 41.3 | ug/L | 10.0 | 2.9 | 1 | 03/06/17 14:25 | 03/07/17 14:00 | 7439-93-2 | |
| Molybdenum | 3.2J | ug/L | 20.0 | 1.3 | 1 | 03/06/17 14:25 | 03/07/17 14:00 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | 0.097J | ug/L | 1.0 | 0.026 | 1 | 03/06/17 14:25 | 03/07/17 13:00 | 7440-36-0 | |
| Arsenic | 1.3 | ug/L | 1.0 | 0.052 | 1 | 03/06/17 14:25 | 03/07/17 13:00 | 7440-38-2 | |
| Cadmium | 0.11J | ug/L | 0.50 | 0.018 | 1 | 03/06/17 14:25 | 03/07/17 13:00 | 7440-43-9 | |
| Chromium | 0.53J | ug/L | 1.0 | 0.054 | 1 | 03/06/17 14:25 | 03/07/17 13:00 | 7440-47-3 | B |
| Selenium | 0.73J | ug/L | 1.0 | 0.086 | 1 | 03/06/17 14:25 | 03/07/17 13:00 | 7782-49-2 | |
| Thallium | <0.036 | ug/L | 1.0 | 0.036 | 1 | 03/06/17 14:25 | 03/07/17 13:00 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.046 | ug/L | 0.20 | 0.046 | 1 | 03/06/17 13:45 | 03/07/17 11:43 | 7439-97-6 | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 599 | mg/L | 5.0 | 5.0 | 1 | | 03/06/17 13:38 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.0 | Std. Units | 0.10 | 0.10 | 1 | | 03/08/17 15:17 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 1.7 | mg/L | 1.0 | 0.50 | 1 | | 03/07/17 14:05 | 16887-00-6 | |
| Fluoride | 0.13J | mg/L | 0.20 | 0.10 | 1 | | 03/07/17 14:05 | 16984-48-8 | |
| Sulfate | 43.7 | mg/L | 5.0 | 2.5 | 5 | | 03/08/17 14:58 | 14808-79-8 | |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60239001

Sample: L-LMW-7S **Lab ID: 60239001007** Collected: 03/02/17 13:30 Received: 03/04/17 03:10 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 290 | ug/L | 5.0 | 0.91 | 1 | 03/06/17 14:25 | 03/07/17 14:07 | 7440-39-3 | |
| Beryllium | 0.21J | ug/L | 1.0 | 0.16 | 1 | 03/06/17 14:25 | 03/07/17 14:07 | 7440-41-7 | |
| Boron | 237 | ug/L | 100 | 3.5 | 1 | 03/06/17 14:25 | 03/07/17 14:07 | 7440-42-8 | |
| Calcium | 190000 | ug/L | 100 | 36.0 | 1 | 03/06/17 14:25 | 03/07/17 14:07 | 7440-70-2 | |
| Cobalt | 2.0J | ug/L | 5.0 | 0.73 | 1 | 03/06/17 14:25 | 03/07/17 14:07 | 7440-48-4 | |
| Lead | <2.4 | ug/L | 5.0 | 2.4 | 1 | 03/06/17 14:25 | 03/07/17 14:07 | 7439-92-1 | |
| Lithium | 40.2 | ug/L | 10.0 | 2.9 | 1 | 03/06/17 14:25 | 03/07/17 14:07 | 7439-93-2 | |
| Molybdenum | 3.4J | ug/L | 20.0 | 1.3 | 1 | 03/06/17 14:25 | 03/07/17 14:07 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | 0.052J | ug/L | 1.0 | 0.026 | 1 | 03/06/17 14:25 | 03/07/17 13:04 | 7440-36-0 | |
| Arsenic | 1.4 | ug/L | 1.0 | 0.052 | 1 | 03/06/17 14:25 | 03/07/17 13:04 | 7440-38-2 | |
| Cadmium | 0.10J | ug/L | 0.50 | 0.018 | 1 | 03/06/17 14:25 | 03/07/17 13:04 | 7440-43-9 | |
| Chromium | 3.5 | ug/L | 1.0 | 0.054 | 1 | 03/06/17 14:25 | 03/07/17 13:04 | 7440-47-3 | |
| Selenium | 0.34J | ug/L | 1.0 | 0.086 | 1 | 03/06/17 14:25 | 03/07/17 13:04 | 7782-49-2 | |
| Thallium | <0.036 | ug/L | 1.0 | 0.036 | 1 | 03/06/17 14:25 | 03/07/17 13:04 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.046 | ug/L | 0.20 | 0.046 | 1 | 03/06/17 13:45 | 03/07/17 11:50 | 7439-97-6 | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 636 | mg/L | 5.0 | 5.0 | 1 | | 03/06/17 13:38 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 6.9 | Std. Units | 0.10 | 0.10 | 1 | | 03/08/17 12:26 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 3.3 | mg/L | 1.0 | 0.50 | 1 | | 03/07/17 14:19 | 16887-00-6 | |
| Fluoride | <0.10 | mg/L | 0.20 | 0.10 | 1 | | 03/07/17 14:19 | 16984-48-8 | |
| Sulfate | 31.0 | mg/L | 2.0 | 1.0 | 2 | | 03/08/17 15:12 | 14808-79-8 | |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60239001

Sample: L-LMW-8S **Lab ID: 60239001008** Collected: 03/02/17 12:45 Received: 03/04/17 03:10 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 120 | ug/L | 5.0 | 0.91 | 1 | 03/06/17 14:25 | 03/07/17 14:09 | 7440-39-3 | |
| Beryllium | 0.21J | ug/L | 1.0 | 0.16 | 1 | 03/06/17 14:25 | 03/07/17 14:09 | 7440-41-7 | |
| Boron | 1870 | ug/L | 100 | 3.5 | 1 | 03/06/17 14:25 | 03/07/17 14:09 | 7440-42-8 | |
| Calcium | 163000 | ug/L | 100 | 36.0 | 1 | 03/06/17 14:25 | 03/07/17 14:09 | 7440-70-2 | |
| Cobalt | 1.5J | ug/L | 5.0 | 0.73 | 1 | 03/06/17 14:25 | 03/07/17 14:09 | 7440-48-4 | |
| Lead | <2.4 | ug/L | 5.0 | 2.4 | 1 | 03/06/17 14:25 | 03/07/17 14:09 | 7439-92-1 | |
| Lithium | 24.5 | ug/L | 10.0 | 2.9 | 1 | 03/06/17 14:25 | 03/07/17 14:09 | 7439-93-2 | |
| Molybdenum | 9.3J | ug/L | 20.0 | 1.3 | 1 | 03/06/17 14:25 | 03/07/17 14:09 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | 0.095J | ug/L | 1.0 | 0.026 | 1 | 03/06/17 14:25 | 03/07/17 13:08 | 7440-36-0 | |
| Arsenic | 0.73J | ug/L | 1.0 | 0.052 | 1 | 03/06/17 14:25 | 03/07/17 13:08 | 7440-38-2 | |
| Cadmium | 0.13J | ug/L | 0.50 | 0.018 | 1 | 03/06/17 14:25 | 03/07/17 13:08 | 7440-43-9 | |
| Chromium | 0.70J | ug/L | 1.0 | 0.054 | 1 | 03/06/17 14:25 | 03/07/17 13:08 | 7440-47-3 | B |
| Selenium | 0.11J | ug/L | 1.0 | 0.086 | 1 | 03/06/17 14:25 | 03/07/17 13:08 | 7782-49-2 | |
| Thallium | <0.036 | ug/L | 1.0 | 0.036 | 1 | 03/06/17 14:25 | 03/07/17 13:08 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.046 | ug/L | 0.20 | 0.046 | 1 | 03/06/17 13:45 | 03/07/17 11:52 | 7439-97-6 | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 585 | mg/L | 5.0 | 5.0 | 1 | | 03/06/17 13:38 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.1 | Std. Units | 0.10 | 0.10 | 1 | | 03/08/17 12:19 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 6.9 | mg/L | 1.0 | 0.50 | 1 | | 03/07/17 14:32 | 16887-00-6 | |
| Fluoride | 0.18J | mg/L | 0.20 | 0.10 | 1 | | 03/07/17 14:32 | 16984-48-8 | |
| Sulfate | 81.8 | mg/L | 5.0 | 2.5 | 5 | | 03/08/17 15:26 | 14808-79-8 | |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60239001

Sample: L-BMW-1S **Lab ID: 60239001009** Collected: 03/01/17 14:30 Received: 03/04/17 03:10 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 351 | ug/L | 5.0 | 0.91 | 1 | 03/06/17 14:25 | 03/07/17 14:11 | 7440-39-3 | |
| Beryllium | <0.16 | ug/L | 1.0 | 0.16 | 1 | 03/06/17 14:25 | 03/07/17 14:11 | 7440-41-7 | |
| Boron | 102 | ug/L | 100 | 3.5 | 1 | 03/06/17 14:25 | 03/07/17 14:11 | 7440-42-8 | |
| Calcium | 209000 | ug/L | 100 | 36.0 | 1 | 03/06/17 14:25 | 03/07/17 14:11 | 7440-70-2 | |
| Cobalt | 0.88J | ug/L | 5.0 | 0.73 | 1 | 03/06/17 14:25 | 03/07/17 14:11 | 7440-48-4 | |
| Lead | <2.4 | ug/L | 5.0 | 2.4 | 1 | 03/06/17 14:25 | 03/07/17 14:11 | 7439-92-1 | |
| Lithium | 18.9 | ug/L | 10.0 | 2.9 | 1 | 03/06/17 14:25 | 03/07/17 14:11 | 7439-93-2 | |
| Molybdenum | 1.4J | ug/L | 20.0 | 1.3 | 1 | 03/06/17 14:25 | 03/07/17 14:11 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | 0.027J | ug/L | 1.0 | 0.026 | 1 | 03/06/17 14:25 | 03/07/17 13:12 | 7440-36-0 | |
| Arsenic | 27.1 | ug/L | 1.0 | 0.052 | 1 | 03/06/17 14:25 | 03/07/17 13:12 | 7440-38-2 | |
| Cadmium | <0.018 | ug/L | 0.50 | 0.018 | 1 | 03/06/17 14:25 | 03/07/17 13:12 | 7440-43-9 | |
| Chromium | 2.2 | ug/L | 1.0 | 0.054 | 1 | 03/06/17 14:25 | 03/07/17 13:12 | 7440-47-3 | |
| Selenium | <0.086 | ug/L | 1.0 | 0.086 | 1 | 03/06/17 14:25 | 03/07/17 13:12 | 7782-49-2 | |
| Thallium | <0.036 | ug/L | 1.0 | 0.036 | 1 | 03/06/17 14:25 | 03/07/17 13:12 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.046 | ug/L | 0.20 | 0.046 | 1 | 03/06/17 13:45 | 03/07/17 11:54 | 7439-97-6 | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 748 | mg/L | 5.0 | 5.0 | 1 | | 03/06/17 13:34 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.0 | Std. Units | 0.10 | 0.10 | 1 | | 03/07/17 17:35 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 6.3 | mg/L | 1.0 | 0.50 | 1 | | 03/07/17 14:45 | 16887-00-6 | |
| Fluoride | 0.14J | mg/L | 0.20 | 0.10 | 1 | | 03/07/17 14:45 | 16984-48-8 | |
| Sulfate | 53.3 | mg/L | 5.0 | 2.5 | 5 | | 03/08/17 15:41 | 14808-79-8 | |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60239001

Sample: L-BMW-2S **Lab ID: 60239001010** Collected: 03/01/17 15:38 Received: 03/04/17 03:10 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 250 | ug/L | 5.0 | 0.91 | 1 | 03/06/17 14:25 | 03/07/17 14:13 | 7440-39-3 | |
| Beryllium | 0.25J | ug/L | 1.0 | 0.16 | 1 | 03/06/17 14:25 | 03/07/17 14:13 | 7440-41-7 | |
| Boron | 49.1J | ug/L | 100 | 3.5 | 1 | 03/06/17 14:25 | 03/07/17 14:13 | 7440-42-8 | |
| Calcium | 131000 | ug/L | 100 | 36.0 | 1 | 03/06/17 14:25 | 03/07/17 14:13 | 7440-70-2 | M1 |
| Cobalt | <0.73 | ug/L | 5.0 | 0.73 | 1 | 03/06/17 14:25 | 03/07/17 14:13 | 7440-48-4 | |
| Lead | <2.4 | ug/L | 5.0 | 2.4 | 1 | 03/06/17 14:25 | 03/07/17 14:13 | 7439-92-1 | |
| Lithium | 17.9 | ug/L | 10.0 | 2.9 | 1 | 03/06/17 14:25 | 03/07/17 14:13 | 7439-93-2 | |
| Molybdenum | 2.3J | ug/L | 20.0 | 1.3 | 1 | 03/06/17 14:25 | 03/07/17 14:13 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | 0.21J | ug/L | 1.0 | 0.026 | 1 | 03/06/17 14:25 | 03/07/17 13:17 | 7440-36-0 | |
| Arsenic | 0.46J | ug/L | 1.0 | 0.052 | 1 | 03/06/17 14:25 | 03/07/17 13:17 | 7440-38-2 | |
| Cadmium | 0.033J | ug/L | 0.50 | 0.018 | 1 | 03/06/17 14:25 | 03/07/17 13:17 | 7440-43-9 | |
| Chromium | 0.39J | ug/L | 1.0 | 0.054 | 1 | 03/06/17 14:25 | 03/07/17 13:17 | 7440-47-3 | B |
| Selenium | 1.6 | ug/L | 1.0 | 0.086 | 1 | 03/06/17 14:25 | 03/07/17 13:17 | 7782-49-2 | |
| Thallium | <0.036 | ug/L | 1.0 | 0.036 | 1 | 03/06/17 14:25 | 03/07/17 13:17 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.046 | ug/L | 0.20 | 0.046 | 1 | 03/06/17 13:45 | 03/07/17 11:56 | 7439-97-6 | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 413 | mg/L | 5.0 | 5.0 | 1 | | 03/06/17 13:34 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.4 | Std. Units | 0.10 | 0.10 | 1 | | 03/07/17 17:36 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 2.2 | mg/L | 1.0 | 0.50 | 1 | | 03/07/17 14:59 | 16887-00-6 | |
| Fluoride | 0.17J | mg/L | 0.20 | 0.10 | 1 | | 03/07/17 14:59 | 16984-48-8 | |
| Sulfate | 14.3 | mg/L | 1.0 | 0.50 | 1 | | 03/07/17 14:59 | 14808-79-8 | |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60239001

Sample: L-LMW-DUP-1 **Lab ID: 60239001011** Collected: 03/02/17 08:00 Received: 03/04/17 03:10 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 356 | ug/L | 5.0 | 0.91 | 1 | 03/06/17 14:25 | 03/07/17 14:17 | 7440-39-3 | |
| Beryllium | 0.30J | ug/L | 1.0 | 0.16 | 1 | 03/06/17 14:25 | 03/07/17 14:17 | 7440-41-7 | |
| Boron | 71.4J | ug/L | 100 | 3.5 | 1 | 03/06/17 14:25 | 03/07/17 14:17 | 7440-42-8 | |
| Calcium | 152000 | ug/L | 100 | 36.0 | 1 | 03/06/17 14:25 | 03/07/17 14:17 | 7440-70-2 | |
| Cobalt | <0.73 | ug/L | 5.0 | 0.73 | 1 | 03/06/17 14:25 | 03/07/17 14:17 | 7440-48-4 | |
| Lead | <2.4 | ug/L | 5.0 | 2.4 | 1 | 03/06/17 14:25 | 03/07/17 14:17 | 7439-92-1 | |
| Lithium | 12.6 | ug/L | 10.0 | 2.9 | 1 | 03/06/17 14:25 | 03/07/17 14:17 | 7439-93-2 | |
| Molybdenum | <1.3 | ug/L | 20.0 | 1.3 | 1 | 03/06/17 14:25 | 03/07/17 14:17 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | 0.28J | ug/L | 1.0 | 0.026 | 1 | 03/06/17 14:25 | 03/07/17 13:21 | 7440-36-0 | |
| Arsenic | 0.56J | ug/L | 1.0 | 0.052 | 1 | 03/06/17 14:25 | 03/07/17 13:21 | 7440-38-2 | |
| Cadmium | 0.024J | ug/L | 0.50 | 0.018 | 1 | 03/06/17 14:25 | 03/07/17 13:21 | 7440-43-9 | |
| Chromium | 0.83J | ug/L | 1.0 | 0.054 | 1 | 03/06/17 14:25 | 03/07/17 13:21 | 7440-47-3 | B |
| Selenium | 0.54J | ug/L | 1.0 | 0.086 | 1 | 03/06/17 14:25 | 03/07/17 13:21 | 7782-49-2 | |
| Thallium | <0.036 | ug/L | 1.0 | 0.036 | 1 | 03/06/17 14:25 | 03/07/17 13:21 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.046 | ug/L | 0.20 | 0.046 | 1 | 03/06/17 13:45 | 03/07/17 11:58 | 7439-97-6 | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 498 | mg/L | 5.0 | 5.0 | 1 | | 03/06/17 13:38 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.1 | Std. Units | 0.10 | 0.10 | 1 | | 03/07/17 17:43 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 5.9 | mg/L | 1.0 | 0.50 | 1 | | 03/07/17 15:12 | 16887-00-6 | |
| Fluoride | 0.18J | mg/L | 0.20 | 0.10 | 1 | | 03/07/17 15:12 | 16984-48-8 | |
| Sulfate | 14.9 | mg/L | 1.0 | 0.50 | 1 | | 03/07/17 15:12 | 14808-79-8 | |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60239001

Sample: L-LMW-FB-1 **Lab ID: 60239001012** Collected: 03/03/17 10:00 Received: 03/04/17 03:10 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|---------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | <0.91 | ug/L | 5.0 | 0.91 | 1 | 03/06/17 14:25 | 03/07/17 14:20 | 7440-39-3 | |
| Beryllium | 0.31J | ug/L | 1.0 | 0.16 | 1 | 03/06/17 14:25 | 03/07/17 14:20 | 7440-41-7 | |
| Boron | <3.5 | ug/L | 100 | 3.5 | 1 | 03/06/17 14:25 | 03/07/17 14:20 | 7440-42-8 | |
| Calcium | 38.9J | ug/L | 100 | 36.0 | 1 | 03/06/17 14:25 | 03/07/17 14:20 | 7440-70-2 | |
| Cobalt | <0.73 | ug/L | 5.0 | 0.73 | 1 | 03/06/17 14:25 | 03/07/17 14:20 | 7440-48-4 | |
| Lead | <2.4 | ug/L | 5.0 | 2.4 | 1 | 03/06/17 14:25 | 03/07/17 14:20 | 7439-92-1 | |
| Lithium | <2.9 | ug/L | 10.0 | 2.9 | 1 | 03/06/17 14:25 | 03/07/17 14:20 | 7439-93-2 | |
| Molybdenum | <1.3 | ug/L | 20.0 | 1.3 | 1 | 03/06/17 14:25 | 03/07/17 14:20 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | <0.026 | ug/L | 1.0 | 0.026 | 1 | 03/06/17 14:25 | 03/07/17 12:55 | 7440-36-0 | |
| Arsenic | 0.068J | ug/L | 1.0 | 0.052 | 1 | 03/06/17 14:25 | 03/07/17 12:55 | 7440-38-2 | |
| Cadmium | <0.018 | ug/L | 0.50 | 0.018 | 1 | 03/06/17 14:25 | 03/07/17 12:55 | 7440-43-9 | |
| Chromium | 0.56J | ug/L | 1.0 | 0.054 | 1 | 03/06/17 14:25 | 03/07/17 12:55 | 7440-47-3 | B |
| Selenium | <0.086 | ug/L | 1.0 | 0.086 | 1 | 03/06/17 14:25 | 03/07/17 12:55 | 7782-49-2 | |
| Thallium | <0.036 | ug/L | 1.0 | 0.036 | 1 | 03/06/17 14:25 | 03/07/17 12:55 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | <0.046 | ug/L | 0.20 | 0.046 | 1 | 03/06/17 13:45 | 03/07/17 12:01 | 7439-97-6 | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | <5.0 | mg/L | 5.0 | 5.0 | 1 | | 03/06/17 16:48 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.9 | Std. Units | 0.10 | 0.10 | 1 | | 03/13/17 09:08 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | <0.50 | mg/L | 1.0 | 0.50 | 1 | | 03/07/17 15:26 | 16887-00-6 | |
| Fluoride | <0.10 | mg/L | 0.20 | 0.10 | 1 | | 03/07/17 15:26 | 16984-48-8 | |
| Sulfate | <0.50 | mg/L | 1.0 | 0.50 | 1 | | 03/07/17 15:26 | 14808-79-8 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60239001

QC Batch: 467663 Analysis Method: EPA 7470
 QC Batch Method: EPA 7470 Analysis Description: 7470 Mercury
 Associated Lab Samples: 60239001001, 60239001002, 60239001003, 60239001004, 60239001005, 60239001006, 60239001007, 60239001008, 60239001009, 60239001010, 60239001011, 60239001012

METHOD BLANK: 1914206 Matrix: Water
 Associated Lab Samples: 60239001001, 60239001002, 60239001003, 60239001004, 60239001005, 60239001006, 60239001007, 60239001008, 60239001009, 60239001010, 60239001011, 60239001012

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Mercury | ug/L | <0.046 | 0.20 | 0.046 | 03/07/17 11:23 | |

LABORATORY CONTROL SAMPLE: 1914207

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Mercury | ug/L | 5 | 5.3 | 107 | 80-120 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1914208 1914209

| Parameter | Units | 60239001001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
| Mercury | ug/L | <0.046 | 5 | 5 | 4.6 | 5.2 | 92 | 104 | 75-125 | 12 | 20 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1914210 1914211

| Parameter | Units | 60239002007 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
| Mercury | ug/L | <0.046 | 5 | 5 | 5.0 | 4.2 | 100 | 83 | 75-125 | 19 | 20 | |

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60239001

| | | | |
|-------------------------|--|-----------------------|---------------------|
| QC Batch: | 467645 | Analysis Method: | EPA 200.7 |
| QC Batch Method: | EPA 200.7 | Analysis Description: | 200.7 Metals, Total |
| Associated Lab Samples: | 60239001001, 60239001002, 60239001003, 60239001004, 60239001005, 60239001006, 60239001007, 60239001008, 60239001009, 60239001010, 60239001011, 60239001012 | | |

| | | | |
|-------------------------|--|---------|-------|
| METHOD BLANK: | 1914146 | Matrix: | Water |
| Associated Lab Samples: | 60239001001, 60239001002, 60239001003, 60239001004, 60239001005, 60239001006, 60239001007, 60239001008, 60239001009, 60239001010, 60239001011, 60239001012 | | |

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|------------|-------|--------------|-----------------|------|----------------|------------|
| Barium | ug/L | <0.91 | 5.0 | 0.91 | 03/07/17 13:40 | |
| Beryllium | ug/L | <0.16 | 1.0 | 0.16 | 03/07/17 13:40 | |
| Boron | ug/L | <3.5 | 100 | 3.5 | 03/07/17 13:40 | |
| Calcium | ug/L | <36.0 | 100 | 36.0 | 03/07/17 13:40 | |
| Cobalt | ug/L | <0.73 | 5.0 | 0.73 | 03/07/17 13:40 | |
| Lead | ug/L | <2.4 | 5.0 | 2.4 | 03/07/17 13:40 | |
| Lithium | ug/L | <2.9 | 10.0 | 2.9 | 03/07/17 13:40 | |
| Molybdenum | ug/L | <1.3 | 20.0 | 1.3 | 03/07/17 13:40 | |

LABORATORY CONTROL SAMPLE: 1914147

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------|-------|-------------|------------|-----------|--------------|------------|
| Barium | ug/L | 1000 | 1030 | 103 | 85-115 | |
| Beryllium | ug/L | 1000 | 1080 | 108 | 85-115 | |
| Boron | ug/L | 1000 | 1040 | 104 | 85-115 | |
| Calcium | ug/L | 10000 | 10400 | 104 | 85-115 | |
| Cobalt | ug/L | 1000 | 1060 | 106 | 85-115 | |
| Lead | ug/L | 1000 | 1020 | 102 | 85-115 | |
| Lithium | ug/L | 1000 | 1090 | 109 | 85-115 | |
| Molybdenum | ug/L | 1000 | 1080 | 108 | 85-115 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1914148 1914149

| Parameter | Units | MS | | MSD | | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|------------|-------|--------------------|-------------|-------------|-----------|----------|-----------|--------------|--------|---------|-------|
| | | 60239001001 Result | Spike Conc. | Spike Conc. | MS Result | | | | | | |
| Barium | ug/L | 138 | 1000 | 1000 | 1180 | 1160 | 104 | 102 | 70-130 | 1 | 20 |
| Beryllium | ug/L | 0.24J | 1000 | 1000 | 1110 | 1100 | 111 | 110 | 70-130 | 1 | 20 |
| Boron | ug/L | 2560 | 1000 | 1000 | 3520 | 3490 | 96 | 93 | 70-130 | 1 | 20 |
| Calcium | ug/L | 153000 | 10000 | 10000 | 156000 | 156000 | 27 | 26 | 70-130 | 0 | 20 M1 |
| Cobalt | ug/L | 2.6J | 1000 | 1000 | 1040 | 1030 | 103 | 102 | 70-130 | 1 | 20 |
| Lead | ug/L | <2.4 | 1000 | 1000 | 988 | 982 | 99 | 98 | 70-130 | 1 | 20 |
| Lithium | ug/L | 21.7 | 1000 | 1000 | 1150 | 1130 | 113 | 111 | 70-130 | 2 | 20 |
| Molybdenum | ug/L | 3.3J | 1000 | 1000 | 1100 | 1080 | 109 | 108 | 70-130 | 1 | 20 |

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60239001

| MATRIX SPIKE SAMPLE: | | 1914150 | | | | | |
|----------------------|-------|-----------------------|----------------|--------------|-------------|-----------------|------------|
| Parameter | Units | 60239001010 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
| Barium | ug/L | 250 | 1000 | 1280 | 103 | 70-130 | |
| Beryllium | ug/L | 0.25J | 1000 | 1080 | 108 | 70-130 | |
| Boron | ug/L | 49.1J | 1000 | 1110 | 106 | 70-130 | |
| Calcium | ug/L | 131000 | 10000 | 134000 | 26 | 70-130 | M1 |
| Cobalt | ug/L | <0.73 | 1000 | 1030 | 103 | 70-130 | |
| Lead | ug/L | <2.4 | 1000 | 987 | 99 | 70-130 | |
| Lithium | ug/L | 17.9 | 1000 | 1130 | 111 | 70-130 | |
| Molybdenum | ug/L | 2.3J | 1000 | 1090 | 109 | 70-130 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60239001

| | | | |
|-------------------------|--|-----------------------|-----------|
| QC Batch: | 467646 | Analysis Method: | EPA 200.8 |
| QC Batch Method: | EPA 200.8 | Analysis Description: | 200.8 MET |
| Associated Lab Samples: | 60239001001, 60239001002, 60239001003, 60239001004, 60239001005, 60239001006, 60239001007, 60239001008, 60239001009, 60239001010, 60239001011, 60239001012 | | |

| | | | |
|-------------------------|--|---------|-------|
| METHOD BLANK: | 1914151 | Matrix: | Water |
| Associated Lab Samples: | 60239001001, 60239001002, 60239001003, 60239001004, 60239001005, 60239001006, 60239001007, 60239001008, 60239001009, 60239001010, 60239001011, 60239001012 | | |

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Antimony | ug/L | <0.026 | 1.0 | 0.026 | 03/07/17 12:03 | |
| Arsenic | ug/L | <0.052 | 1.0 | 0.052 | 03/07/17 12:03 | |
| Cadmium | ug/L | <0.018 | 0.50 | 0.018 | 03/07/17 12:03 | |
| Chromium | ug/L | 0.092J | 1.0 | 0.054 | 03/07/17 12:03 | |
| Selenium | ug/L | <0.086 | 1.0 | 0.086 | 03/07/17 12:03 | |
| Thallium | ug/L | <0.036 | 1.0 | 0.036 | 03/07/17 12:03 | |

LABORATORY CONTROL SAMPLE: 1914152

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Antimony | ug/L | 40 | 38.6 | 96 | 85-115 | |
| Arsenic | ug/L | 40 | 39.3 | 98 | 85-115 | |
| Cadmium | ug/L | 40 | 39.5 | 99 | 85-115 | |
| Chromium | ug/L | 40 | 39.9 | 100 | 85-115 | |
| Selenium | ug/L | 40 | 38.3 | 96 | 85-115 | |
| Thallium | ug/L | 40 | 39.4 | 98 | 85-115 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1914153 1914154

| Parameter | Units | 60239001001 | | MSD | | MS | | MSD | | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|-------------|-------------|-------------|--------|--------|-------|-------|--------|--------------|-----|---------|------|
| | | Result | Spike Conc. | Spike Conc. | Result | Result | % Rec | % Rec | | | | | |
| Antimony | ug/L | 0.058J | 40 | 40 | 38.9 | 37.7 | 97 | 94 | 70-130 | 3 | 20 | | |
| Arsenic | ug/L | 5.6 | 40 | 40 | 44.5 | 44.4 | 97 | 97 | 70-130 | 0 | 20 | | |
| Cadmium | ug/L | 0.072J | 40 | 40 | 37.9 | 38.3 | 95 | 96 | 70-130 | 1 | 20 | | |
| Chromium | ug/L | 0.38J | 40 | 40 | 41.6 | 41.4 | 103 | 102 | 70-130 | 1 | 20 | | |
| Selenium | ug/L | 0.34J | 40 | 40 | 37.1 | 38.0 | 92 | 94 | 70-130 | 2 | 20 | | |
| Thallium | ug/L | 0.055J | 40 | 40 | 40.1 | 39.7 | 100 | 99 | 70-130 | 1 | 20 | | |

MATRIX SPIKE SAMPLE: 1914155

| Parameter | Units | 60239001004 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|--------------------|-------------|-----------|----------|--------------|------------|
| Antimony | ug/L | 0.030J | 40 | 38.9 | 97 | 70-130 | |
| Arsenic | ug/L | 13.5 | 40 | 53.2 | 99 | 70-130 | |
| Cadmium | ug/L | <0.018 | 40 | 38.4 | 96 | 70-130 | |
| Chromium | ug/L | 0.72J | 40 | 39.8 | 98 | 70-130 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60239001

| MATRIX SPIKE SAMPLE: | | 1914155 | | | | | |
|----------------------|-------|-----------------------|----------------|--------------|-------------|-----------------|------------|
| Parameter | Units | 60239001004 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
| Selenium | ug/L | <0.086 | 40 | 37.0 | 92 | 70-130 | |
| Thallium | ug/L | <0.036 | 40 | 40.3 | 101 | 70-130 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60239001

| | | | |
|-------------------------|---|-----------------------|------------------------------|
| QC Batch: | 467655 | Analysis Method: | SM 2540C |
| QC Batch Method: | SM 2540C | Analysis Description: | 2540C Total Dissolved Solids |
| Associated Lab Samples: | 60239001001, 60239001002, 60239001005, 60239001006, 60239001007, 60239001008, 60239001009, 60239001010, 60239001011 | | |

| | | | |
|-------------------------|---|---------|-------|
| METHOD BLANK: | 1914179 | Matrix: | Water |
| Associated Lab Samples: | 60239001001, 60239001002, 60239001005, 60239001006, 60239001007, 60239001008, 60239001009, 60239001010, 60239001011 | | |

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|------------------------|-------|--------------|-----------------|-----|----------------|------------|
| Total Dissolved Solids | mg/L | <5.0 | 5.0 | 5.0 | 03/06/17 13:33 | |

LABORATORY CONTROL SAMPLE: 1914180

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

SAMPLE DUPLICATE: 1914181

| Parameter | Units | 60239001001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L | 521 | 518 | 1 | 10 | |

SAMPLE DUPLICATE: 1914182

| Parameter | Units | 60239002007 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L | 801 | 787 | 2 | 10 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60239001

QC Batch: 467708

Analysis Method: SM 2540C

QC Batch Method: SM 2540C

Analysis Description: 2540C Total Dissolved Solids

Associated Lab Samples: 60239001003, 60239001004, 60239001012

METHOD BLANK: 1914312

Matrix: Water

Associated Lab Samples: 60239001003, 60239001004, 60239001012

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|------------------------|-------|--------------|-----------------|-----|----------------|------------|
| Total Dissolved Solids | mg/L | <5.0 | 5.0 | 5.0 | 03/06/17 16:41 | |

LABORATORY CONTROL SAMPLE: 1914313

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|-------------|------------|-----------|--------------|------------|
| Total Dissolved Solids | mg/L | 1000 | 967 | 97 | 80-120 | |

SAMPLE DUPLICATE: 1914314

| Parameter | Units | 60239002009 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L | 458 | 463 | 1 | 10 | |

SAMPLE DUPLICATE: 1914315

| Parameter | Units | 60239003003 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L | 684 | 678 | 1 | 10 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60239001

QC Batch: 467783 Analysis Method: SM 4500-H+B

QC Batch Method: SM 4500-H+B Analysis Description: 4500H+B pH

Associated Lab Samples: 60239001009, 60239001010, 60239001011

SAMPLE DUPLICATE: 1914609

| Parameter | Units | 60238737003 Result | Dup Result | RPD | Max RPD | Qualifiers |
|--------------------|------------|-----------------------|---------------|-----|------------|------------|
| pH at 25 Degrees C | Std. Units | 7.4 | 7.5 | 0 | 5 | H6 |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60239001

QC Batch: 467953 Analysis Method: SM 4500-H+B

QC Batch Method: SM 4500-H+B Analysis Description: 4500H+B pH

Associated Lab Samples: 60239001001, 60239001007, 60239001008

SAMPLE DUPLICATE: 1915231

| Parameter | Units | 60239001001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|--------------------|------------|-----------------------|---------------|-----|------------|------------|
| pH at 25 Degrees C | Std. Units | 7.1 | 7.1 | 0 | 5 | H6 |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60239001

QC Batch: 468014 Analysis Method: SM 4500-H+B

QC Batch Method: SM 4500-H+B Analysis Description: 4500H+B pH

Associated Lab Samples: 60239001003, 60239001004, 60239001005, 60239001006

SAMPLE DUPLICATE: 1915494

| Parameter | Units | 60239003003 Result | Dup Result | RPD | Max RPD | Qualifiers |
|--------------------|------------|-----------------------|---------------|-----|------------|------------|
| pH at 25 Degrees C | Std. Units | 6.9 | 6.9 | 0 | 5 | H6 |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60239001

QC Batch: 468118 Analysis Method: SM 4500-H+B

QC Batch Method: SM 4500-H+B Analysis Description: 4500H+B pH

Associated Lab Samples: 60239001002

SAMPLE DUPLICATE: 1915886

| Parameter | Units | 60238916002 Result | Dup Result | RPD | Max RPD | Qualifiers |
|--------------------|------------|-----------------------|---------------|-----|------------|------------|
| pH at 25 Degrees C | Std. Units | 11.8 | 11.6 | 0 | 5 | H6 |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60239001

QC Batch: 468396 Analysis Method: SM 4500-H+B

QC Batch Method: SM 4500-H+B Analysis Description: 4500H+B pH

Associated Lab Samples: 60239001012

SAMPLE DUPLICATE: 1917819

| Parameter | Units | 60238916002 Result | Dup Result | RPD | Max RPD | Qualifiers |
|--------------------|------------|-----------------------|---------------|-----|------------|------------|
| pH at 25 Degrees C | Std. Units | 11.8 | 11.8 | 0 | 5 | H6 |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60239001

| | | | |
|-------------------------|--|-----------------------|-----------------|
| QC Batch: | 467750 | Analysis Method: | EPA 300.0 |
| QC Batch Method: | EPA 300.0 | Analysis Description: | 300.0 IC Anions |
| Associated Lab Samples: | 60239001001, 60239001002, 60239001003, 60239001004, 60239001005, 60239001006, 60239001007, 60239001008, 60239001009, 60239001010, 60239001011, 60239001012 | | |

| | | | |
|-------------------------|--|---------|-------|
| METHOD BLANK: | 1914482 | Matrix: | Water |
| Associated Lab Samples: | 60239001001, 60239001002, 60239001003, 60239001004, 60239001005, 60239001006, 60239001007, 60239001008, 60239001009, 60239001010, 60239001011, 60239001012 | | |

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|------|----------------|------------|
| Chloride | mg/L | <0.50 | 1.0 | 0.50 | 03/07/17 09:11 | |
| Fluoride | mg/L | <0.10 | 0.20 | 0.10 | 03/07/17 09:11 | |
| Sulfate | mg/L | <0.50 | 1.0 | 0.50 | 03/07/17 09:11 | |

LABORATORY CONTROL SAMPLE: 1914483

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Chloride | mg/L | 5 | 4.8 | 96 | 90-110 | |
| Fluoride | mg/L | 2.5 | 2.4 | 97 | 90-110 | |
| Sulfate | mg/L | 5 | 5.0 | 100 | 90-110 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1914484 1914485

| Parameter | Units | 60239001001 | | 60239001001 | | 60239003003 | | 60239003003 | | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|-------------|------------|----------------|-----------------|-------------|------------|-------------|-----------|--------------|-----|---------|------|
| | | MS Result | MSD Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | | | | |
| Chloride | mg/L | 4.8 | 5 | 5 | 9.9 | 10.1 | 102 | 105 | 80-120 | 2 | 15 | | |
| Fluoride | mg/L | 0.16J | 2.5 | 2.5 | 2.7 | 2.8 | 103 | 106 | 80-120 | 3 | 15 | | |

MATRIX SPIKE SAMPLE: 1914486

| Parameter | Units | 60239003003 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|--------------------|-------------|-----------|----------|--------------|------------|
| Chloride | mg/L | 7.0 | 5 | 11.8 | 96 | 80-120 | |
| Fluoride | mg/L | 0.14J | 2.5 | 2.7 | 100 | 80-120 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60239001

QC Batch: 467870 Analysis Method: EPA 300.0
 QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
 Associated Lab Samples: 60239001001, 60239001002, 60239001003, 60239001004, 60239001006, 60239001007, 60239001008, 60239001009

METHOD BLANK: 1914965 Matrix: Water
 Associated Lab Samples: 60239001001, 60239001002, 60239001003, 60239001004, 60239001006, 60239001007, 60239001008, 60239001009

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|------|----------------|------------|
| Chloride | mg/L | <0.50 | 1.0 | 0.50 | 03/08/17 09:09 | |
| Sulfate | mg/L | <0.50 | 1.0 | 0.50 | 03/08/17 09:09 | |

LABORATORY CONTROL SAMPLE: 1914966

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Chloride | mg/L | 5 | 5.1 | 103 | 90-110 | |
| Sulfate | mg/L | 5 | 5.3 | 105 | 90-110 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1914967 1914968

| Parameter | Units | 60239001001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
| Chloride | mg/L | 4.8 | | | 31.7 | 31.9 | | | | 1 | 15 | |
| Sulfate | mg/L | 57.6 | 25 | 25 | 84.6 | 84.9 | 108 | 109 | 80-120 | 0 | 15 | |

MATRIX SPIKE SAMPLE: 1914969

| Parameter | Units | 60239002007 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|--------------------|-------------|-----------|----------|--------------|------------|
| Chloride | mg/L | | 12.8 | | 121 | | |

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REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60239001

Sample: L-LMW-1S **Lab ID: 60239001001** Collected: 03/02/17 11:34 Received: 03/04/17 03:10 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|--|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.000 ± 0.317 (0.687) C:NA T:92% | pCi/L | 03/23/17 21:41 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 0.663 ± 0.365 (0.653) C:78% T:87% | pCi/L | 03/23/17 12:27 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60239001

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|--|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.318 ± 0.451 (0.764) C:NA T:86% | pCi/L | 03/23/17 21:41 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 0.319 ± 0.401 (0.852) C:74% T:83% | pCi/L | 03/23/17 12:28 | 15262-20-1 | |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60239001

Sample: L-LMW-3S **Lab ID: 60239001003** Collected: 03/03/17 10:17 Received: 03/04/17 03:10 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|---|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | -0.164 ± 0.251 (0.658) C:NA T:94% | pCi/L | 03/23/17 21:41 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 0.0893 ± 0.301 (0.680) C:79% T:87% | pCi/L | 03/23/17 12:27 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60239001

Sample: L-LMW-4S **Lab ID: 60239001004** Collected: 03/03/17 11:00 Received: 03/04/17 03:10 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|--|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.368 ± 0.343 (0.452) C:NA T:84% | pCi/L | 03/23/17 21:41 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 0.192 ± 0.335 (0.732) C:75% T:74% | pCi/L | 03/23/17 11:58 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60239001

Sample: L-LMW-5S **Lab ID: 60239001005** Collected: 03/02/17 15:30 Received: 03/04/17 03:10 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|--|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.000 ± 0.339 (0.717) C:NA T:94% | pCi/L | 03/23/17 21:41 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 0.296 ± 0.307 (0.635) C:79% T:88% | pCi/L | 03/23/17 11:58 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60239001

Sample: L-LMW-6S **Lab ID: 60239001006** Collected: 03/02/17 14:45 Received: 03/04/17 03:10 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|---|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.000 ± 0.260 (0.530) C:NA T:88% | pCi/L | 03/23/17 21:41 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 0.540 ± 0.315 (0.564) C:80% T:85% | pCi/L | 03/23/17 11:58 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60239001

Sample: L-LMW-7S **Lab ID: 60239001007** Collected: 03/02/17 13:30 Received: 03/04/17 03:10 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|---|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.523 ± 0.360 (0.385) C:NA T:99% | pCi/L | 03/23/17 22:11 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 0.488 ± 0.408 (0.822) C:75% T:86% | pCi/L | 03/23/17 15:29 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60239001

Sample: L-LMW-8S **Lab ID: 60239001008** Collected: 03/02/17 12:45 Received: 03/04/17 03:10 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|---|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.130 ± 0.360 (0.698) C:NA T:82% | pCi/L | 03/23/17 22:11 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 0.145 ± 0.352 (0.784) C:73% T:80% | pCi/L | 03/23/17 15:16 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60239001

Sample: L-BMW-1S **Lab ID: 60239001009** Collected: 03/01/17 14:30 Received: 03/04/17 03:10 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|---|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | -0.059 ± 0.270 (0.637) C:NA T:90% | pCi/L | 03/23/17 22:11 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 1.28 ± 0.464 (0.653) C:77% T:85% | pCi/L | 03/23/17 15:15 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60239001

Sample: L-BMW-2S **Lab ID: 60239001010** Collected: 03/01/17 15:38 Received: 03/04/17 03:10 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|--|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.167 ± 0.289 (0.515) C:NA T:91% | pCi/L | 03/23/17 22:11 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | -0.151 ± 0.254 (0.630) C:78% T:94% | pCi/L | 03/23/17 15:15 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60239001

Sample: L-LMW-DUP-1 **Lab ID: 60239001011** Collected: 03/02/17 08:00 Received: 03/04/17 03:10 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|---|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | -0.052 ± 0.269 (0.624) C:NA T:95% | pCi/L | 03/23/17 22:11 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 0.899 ± 0.409 (0.663) C:74% T:85% | pCi/L | 03/23/17 15:16 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60239001

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|--|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.000 ± 0.275 (0.444) C:NA T:88% | pCi/L | 03/23/17 22:11 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 0.396 ± 0.358 (0.723) C:80% T:77% | pCi/L | 03/23/17 15:16 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60239001

Sample: L-LMW-1S MS **Lab ID: 60239001013** Collected: 03/02/17 11:34 Received: 03/04/17 03:10 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|--|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 84.6%REC ± NA (NA) | pCi/L | 03/23/17 22:31 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 154.15 %REC ± NA (NA) C:NA T:NA | pCi/L | 03/23/17 11:59 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60239001

Sample: L-LMW-1S MSD **Lab ID: 60239001014** Collected: 03/02/17 11:34 Received: 03/04/17 03:10 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|--|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 98.7%REC 15.44RPD ± NA (NA) | pCi/L | 03/23/17 22:31 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 118.08 %REC 26.50 RPD ± NA (NA) C:NA T:NA | pCi/L | 03/23/17 11:59 | 15262-20-1 | |

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60239001

| | | | |
|-------------------------|--|-----------------------|------------------|
| QC Batch: | 252116 | Analysis Method: | EPA 903.1 |
| QC Batch Method: | EPA 903.1 | Analysis Description: | 903.1 Radium-226 |
| Associated Lab Samples: | 60239001001, 60239001002, 60239001003, 60239001004, 60239001005, 60239001006, 60239001007, 60239001008, 60239001009, 60239001010, 60239001011, 60239001012, 60239001013, 60239001014 | | |

| | | | |
|-------------------------|--|---------|-------|
| METHOD BLANK: | 1240451 | Matrix: | Water |
| Associated Lab Samples: | 60239001001, 60239001002, 60239001003, 60239001004, 60239001005, 60239001006, 60239001007, 60239001008, 60239001009, 60239001010, 60239001011, 60239001012, 60239001013, 60239001014 | | |

| Parameter | Act ± Unc (MDC) Carr Trac | Units | Analyzed | Qualifiers |
|------------|----------------------------------|-------|----------------|------------|
| Radium-226 | 0.119 ± 0.330 (0.639) C:NA T:85% | pCi/L | 03/23/17 21:24 | |

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

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60239001

| | | | |
|-------------------------|--|-----------------------|------------------|
| QC Batch: | 252117 | Analysis Method: | EPA 904.0 |
| QC Batch Method: | EPA 904.0 | Analysis Description: | 904.0 Radium 228 |
| Associated Lab Samples: | 60239001001, 60239001002, 60239001003, 60239001004, 60239001005, 60239001006, 60239001007, 60239001008, 60239001009, 60239001010, 60239001011, 60239001012, 60239001013, 60239001014 | | |

| | | | |
|-------------------------|--|---------|-------|
| METHOD BLANK: | 1240452 | Matrix: | Water |
| Associated Lab Samples: | 60239001001, 60239001002, 60239001003, 60239001004, 60239001005, 60239001006, 60239001007, 60239001008, 60239001009, 60239001010, 60239001011, 60239001012, 60239001013, 60239001014 | | |

| Parameter | Act ± Unc (MDC) Carr Trac | Units | Analyzed | Qualifiers |
|------------|-----------------------------------|-------|----------------|------------|
| Radium-228 | 0.524 ± 0.375 (0.725) C:74% T:80% | pCi/L | 03/23/17 11:58 | |

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60239001

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.

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.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

Act - Activity

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

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

LABORATORIES

PASI-K Pace Analytical Services - Kansas City

PASI-PA Pace Analytical Services - Greensburg

ANALYTE QUALIFIERS

B Analyte was detected in the associated method blank.

H6 Analysis initiated outside of the 15 minute EPA required holding time.

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60239001

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|-------------|-------------|-----------------|----------|-------------------|------------------|
| 60239001001 | L-LMW-1S | EPA 200.7 | 467645 | EPA 200.7 | 467729 |
| 60239001002 | L-LMW-2S | EPA 200.7 | 467645 | EPA 200.7 | 467729 |
| 60239001003 | L-LMW-3S | EPA 200.7 | 467645 | EPA 200.7 | 467729 |
| 60239001004 | L-LMW-4S | EPA 200.7 | 467645 | EPA 200.7 | 467729 |
| 60239001005 | L-LMW-5S | EPA 200.7 | 467645 | EPA 200.7 | 467729 |
| 60239001006 | L-LMW-6S | EPA 200.7 | 467645 | EPA 200.7 | 467729 |
| 60239001007 | L-LMW-7S | EPA 200.7 | 467645 | EPA 200.7 | 467729 |
| 60239001008 | L-LMW-8S | EPA 200.7 | 467645 | EPA 200.7 | 467729 |
| 60239001009 | L-BMW-1S | EPA 200.7 | 467645 | EPA 200.7 | 467729 |
| 60239001010 | L-BMW-2S | EPA 200.7 | 467645 | EPA 200.7 | 467729 |
| 60239001011 | L-LMW-DUP-1 | EPA 200.7 | 467645 | EPA 200.7 | 467729 |
| 60239001012 | L-LMW-FB-1 | EPA 200.7 | 467645 | EPA 200.7 | 467729 |
| 60239001001 | L-LMW-1S | EPA 200.8 | 467646 | EPA 200.8 | 467731 |
| 60239001002 | L-LMW-2S | EPA 200.8 | 467646 | EPA 200.8 | 467731 |
| 60239001003 | L-LMW-3S | EPA 200.8 | 467646 | EPA 200.8 | 467731 |
| 60239001004 | L-LMW-4S | EPA 200.8 | 467646 | EPA 200.8 | 467731 |
| 60239001005 | L-LMW-5S | EPA 200.8 | 467646 | EPA 200.8 | 467731 |
| 60239001006 | L-LMW-6S | EPA 200.8 | 467646 | EPA 200.8 | 467731 |
| 60239001007 | L-LMW-7S | EPA 200.8 | 467646 | EPA 200.8 | 467731 |
| 60239001008 | L-LMW-8S | EPA 200.8 | 467646 | EPA 200.8 | 467731 |
| 60239001009 | L-BMW-1S | EPA 200.8 | 467646 | EPA 200.8 | 467731 |
| 60239001010 | L-BMW-2S | EPA 200.8 | 467646 | EPA 200.8 | 467731 |
| 60239001011 | L-LMW-DUP-1 | EPA 200.8 | 467646 | EPA 200.8 | 467731 |
| 60239001012 | L-LMW-FB-1 | EPA 200.8 | 467646 | EPA 200.8 | 467731 |
| 60239001001 | L-LMW-1S | EPA 7470 | 467663 | EPA 7470 | 467684 |
| 60239001002 | L-LMW-2S | EPA 7470 | 467663 | EPA 7470 | 467684 |
| 60239001003 | L-LMW-3S | EPA 7470 | 467663 | EPA 7470 | 467684 |
| 60239001004 | L-LMW-4S | EPA 7470 | 467663 | EPA 7470 | 467684 |
| 60239001005 | L-LMW-5S | EPA 7470 | 467663 | EPA 7470 | 467684 |
| 60239001006 | L-LMW-6S | EPA 7470 | 467663 | EPA 7470 | 467684 |
| 60239001007 | L-LMW-7S | EPA 7470 | 467663 | EPA 7470 | 467684 |
| 60239001008 | L-LMW-8S | EPA 7470 | 467663 | EPA 7470 | 467684 |
| 60239001009 | L-BMW-1S | EPA 7470 | 467663 | EPA 7470 | 467684 |
| 60239001010 | L-BMW-2S | EPA 7470 | 467663 | EPA 7470 | 467684 |
| 60239001011 | L-LMW-DUP-1 | EPA 7470 | 467663 | EPA 7470 | 467684 |
| 60239001012 | L-LMW-FB-1 | EPA 7470 | 467663 | EPA 7470 | 467684 |
| 60239001001 | L-LMW-1S | EPA 903.1 | 252116 | | |
| 60239001002 | L-LMW-2S | EPA 903.1 | 252116 | | |
| 60239001003 | L-LMW-3S | EPA 903.1 | 252116 | | |
| 60239001004 | L-LMW-4S | EPA 903.1 | 252116 | | |
| 60239001005 | L-LMW-5S | EPA 903.1 | 252116 | | |
| 60239001006 | L-LMW-6S | EPA 903.1 | 252116 | | |
| 60239001007 | L-LMW-7S | EPA 903.1 | 252116 | | |
| 60239001008 | L-LMW-8S | EPA 903.1 | 252116 | | |
| 60239001009 | L-BMW-1S | EPA 903.1 | 252116 | | |
| 60239001010 | L-BMW-2S | EPA 903.1 | 252116 | | |
| 60239001011 | L-LMW-DUP-1 | EPA 903.1 | 252116 | | |

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60239001

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|-------------|--------------|-----------------|----------|-------------------|------------------|
| 60239001012 | L-LMW-FB-1 | EPA 903.1 | 252116 | | |
| 60239001013 | L-LMW-1S MS | EPA 903.1 | 252116 | | |
| 60239001014 | L-LMW-1S MSD | EPA 903.1 | 252116 | | |
| 60239001001 | L-LMW-1S | EPA 904.0 | 252117 | | |
| 60239001002 | L-LMW-2S | EPA 904.0 | 252117 | | |
| 60239001003 | L-LMW-3S | EPA 904.0 | 252117 | | |
| 60239001004 | L-LMW-4S | EPA 904.0 | 252117 | | |
| 60239001005 | L-LMW-5S | EPA 904.0 | 252117 | | |
| 60239001006 | L-LMW-6S | EPA 904.0 | 252117 | | |
| 60239001007 | L-LMW-7S | EPA 904.0 | 252117 | | |
| 60239001008 | L-LMW-8S | EPA 904.0 | 252117 | | |
| 60239001009 | L-BMW-1S | EPA 904.0 | 252117 | | |
| 60239001010 | L-BMW-2S | EPA 904.0 | 252117 | | |
| 60239001011 | L-LMW-DUP-1 | EPA 904.0 | 252117 | | |
| 60239001012 | L-LMW-FB-1 | EPA 904.0 | 252117 | | |
| 60239001013 | L-LMW-1S MS | EPA 904.0 | 252117 | | |
| 60239001014 | L-LMW-1S MSD | EPA 904.0 | 252117 | | |
| 60239001001 | L-LMW-1S | SM 2540C | 467655 | | |
| 60239001002 | L-LMW-2S | SM 2540C | 467655 | | |
| 60239001003 | L-LMW-3S | SM 2540C | 467708 | | |
| 60239001004 | L-LMW-4S | SM 2540C | 467708 | | |
| 60239001005 | L-LMW-5S | SM 2540C | 467655 | | |
| 60239001006 | L-LMW-6S | SM 2540C | 467655 | | |
| 60239001007 | L-LMW-7S | SM 2540C | 467655 | | |
| 60239001008 | L-LMW-8S | SM 2540C | 467655 | | |
| 60239001009 | L-BMW-1S | SM 2540C | 467655 | | |
| 60239001010 | L-BMW-2S | SM 2540C | 467655 | | |
| 60239001011 | L-LMW-DUP-1 | SM 2540C | 467655 | | |
| 60239001012 | L-LMW-FB-1 | SM 2540C | 467708 | | |
| 60239001001 | L-LMW-1S | SM 4500-H+B | 467953 | | |
| 60239001002 | L-LMW-2S | SM 4500-H+B | 468118 | | |
| 60239001003 | L-LMW-3S | SM 4500-H+B | 468014 | | |
| 60239001004 | L-LMW-4S | SM 4500-H+B | 468014 | | |
| 60239001005 | L-LMW-5S | SM 4500-H+B | 468014 | | |
| 60239001006 | L-LMW-6S | SM 4500-H+B | 468014 | | |
| 60239001007 | L-LMW-7S | SM 4500-H+B | 467953 | | |
| 60239001008 | L-LMW-8S | SM 4500-H+B | 467953 | | |
| 60239001009 | L-BMW-1S | SM 4500-H+B | 467783 | | |
| 60239001010 | L-BMW-2S | SM 4500-H+B | 467783 | | |
| 60239001011 | L-LMW-DUP-1 | SM 4500-H+B | 467783 | | |
| 60239001012 | L-LMW-FB-1 | SM 4500-H+B | 468396 | | |
| 60239001001 | L-LMW-1S | EPA 300.0 | 467750 | | |

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60239001

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|-------------|-------------|-----------------|----------|-------------------|------------------|
| 60239001001 | L-LMW-1S | EPA 300.0 | 467870 | | |
| 60239001002 | L-LMW-2S | EPA 300.0 | 467750 | | |
| 60239001002 | L-LMW-2S | EPA 300.0 | 467870 | | |
| 60239001003 | L-LMW-3S | EPA 300.0 | 467750 | | |
| 60239001003 | L-LMW-3S | EPA 300.0 | 467870 | | |
| 60239001004 | L-LMW-4S | EPA 300.0 | 467750 | | |
| 60239001004 | L-LMW-4S | EPA 300.0 | 467870 | | |
| 60239001005 | L-LMW-5S | EPA 300.0 | 467750 | | |
| 60239001006 | L-LMW-6S | EPA 300.0 | 467750 | | |
| 60239001006 | L-LMW-6S | EPA 300.0 | 467870 | | |
| 60239001007 | L-LMW-7S | EPA 300.0 | 467750 | | |
| 60239001007 | L-LMW-7S | EPA 300.0 | 467870 | | |
| 60239001008 | L-LMW-8S | EPA 300.0 | 467750 | | |
| 60239001008 | L-LMW-8S | EPA 300.0 | 467870 | | |
| 60239001009 | L-BMW-1S | EPA 300.0 | 467750 | | |
| 60239001009 | L-BMW-1S | EPA 300.0 | 467870 | | |
| 60239001010 | L-BMW-2S | EPA 300.0 | 467750 | | |
| 60239001011 | L-LMW-DUP-1 | EPA 300.0 | 467750 | | |
| 60239001012 | L-LMW-FB-1 | EPA 300.0 | 467750 | | |

REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

WO#: 60239001



60239001

Client Name: Goldor

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-266 / T-239 Type of Ice: Wet Blue None

Cooler Temperature (°C): As-read 0-2/12.9 Corr. Factor CF +1.5 CF +0.9 Corrected 1.7/14.4 3/14.9 Date and initials of person examining contents: p 3/4/17 pu 3/4/17

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

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: Jami Check _____ Date: 3/6/17



CHAIN-OF-CUSTODY / Analytical Request Document

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

| | | | | | |
|--|---|---|-----------------------|--|---|
| Section A Required Client Information: | | Section B Required Project Information: | | Section C Invoice Information: | |
| Company: Golder Associates | Report To: Mark Haddock (mhaddock@golder.com) | Attention: | Company Name: | Company Name: | REGULATORY AGENCY |
| Address: 820 South Main Street, Suite 100 | Copy To: Jeffrey Ingram | Address: | Address: | <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER | <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER |
| City: St Charles, MO 63301 | Purchase Order No.: | Pace Quote Reference: | Pace Project Manager: | Site Location | MO |
| Email To: mhaddock@golder.com | Project Name: Ameren Labadie Energy Center - Fly Ash | Jamie Church | Jamie Church | STATE: | |
| Phone: 636-724-9191 | Project Number: 153-1406-0001B | Pace Profile #: | Pace Profile #: | | |
| Requested Due Date/TAT: Standard | | | | | |

| ITEM # | Valid Matrix Codes MATRIX CODE DRINKING WATER DW WATER WT WASTE WATER WW PRODUCT P SOIL/SOLID S OIL O WIP WP AR AR OT OT TS TS | MATRIX CODE (see valid codes to left) | SAMPLE TYPE (G=GRAB C=COMP) | COLLECTED | | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | Unpreserved | HCl | HNO ₃ | NaOH | Na ₂ O ₃ | Methanol | Other | Requested Analysis Filtered (Y/N) | | | | | | Residual Chlorine (Y/N) | Pace Project No./ Lab I.D. | | | |
|--------|---|---------------------------------------|-----------------------------|-----------|------|---------------------------|-----------------|-------------|-----|------------------|------|--------------------------------|----------|-------|-----------------------------------|------|-----------------|--------------------|---------------|---------|-------------------------|----------------------------|---------------------------|----------|------|
| | | | | DATE | TIME | | | | | | | | | | DATE | TIME | COMPOSITE START | COMPOSITE END/GRAB | Analysis Test | Metals* | | | Chloride/Fluoride/Sulfate | TDS | pH |
| 1 | L-LMW-1S | WT | G | 3/21/17 | 1134 | | 12 | 3 | 9 | | | | | | Y | N | N | N | N | N | N | N | N | 60239001 | 6BPN |
| 2 | L-LMW-2S | WT | G | 3/21/17 | 1351 | | 4 | 1 | 3 | | | | | | Y | N | N | N | N | N | N | N | N | 60239002 | 6BPN |
| 3 | L-LMW-3S | WT | G | 3/21/17 | 1017 | | 1 | 1 | | | | | | | Y | N | N | N | N | N | N | N | N | 60239003 | 6BPN |
| 4 | L-LMW-4S | WT | G | 3/21/17 | 1100 | | 1 | 1 | | | | | | | Y | N | N | N | N | N | N | N | N | 60239004 | 6BPN |
| 5 | L-LMW-5S | WT | G | 3/21/17 | 1530 | | 1 | 1 | | | | | | | Y | N | N | N | N | N | N | N | N | 60239005 | 6BPN |
| 6 | L-LMW-6S | WT | G | 3/21/17 | 1445 | | 1 | 1 | | | | | | | Y | N | N | N | N | N | N | N | N | 60239006 | 6BPN |
| 7 | L-LMW-7S | WT | G | 3/21/17 | 1330 | | 1 | 1 | | | | | | | Y | N | N | N | N | N | N | N | N | 60239007 | 6BPN |
| 8 | L-LMW-8S | WT | G | 3/21/17 | 1245 | | 1 | 1 | | | | | | | Y | N | N | N | N | N | N | N | N | 60239008 | 6BPN |
| 9 | L-BMW-1S | WT | G | 3/21/17 | 1430 | | 1 | 1 | | | | | | | Y | N | N | N | N | N | N | N | N | 60239009 | 6BPN |
| 10 | L-BMW-2S | WT | G | 3/21/17 | 1538 | | 1 | 1 | | | | | | | Y | N | N | N | N | N | N | N | N | 60239010 | 6BPN |
| 11 | L-LMW-DUP-1 | WT | G | 3/21/17 | 1000 | | 1 | 1 | | | | | | | Y | N | N | N | N | N | N | N | N | 60239011 | 6BPN |
| 12 | L-LMW-FB-1 | WT | G | 3/21/17 | 1000 | | 1 | 1 | | | | | | | Y | N | N | N | N | N | N | N | N | 60239012 | 6BPN |

| ADDITIONAL COMMENTS | RELINQUISHED BY / AFFILIATION | | ACCEPTED BY / AFFILIATION | | SAMPLE CONDITIONS | |
|---------------------|-------------------------------|------|---------------------------|------|-------------------|-------------|
| | DATE | TIME | DATE | TIME | Temp in °C | Received on |
| 153-1406-0001B | 3/21/17 | 1430 | 3/21/17 | 1430 | 14.7 | X |
| 153-1406-0001B | 3/21/17 | 1700 | 3/21/17 | 0310 | 14.3 | N |
| | | | | | 14.9 | + |

| | | | |
|--|---|-------------------------|----------------------|
| SAMPLER NAME AND SIGNATURE | | DATE Signed (MM/DD/YY): | Samples Intact (Y/N) |
| PRINT Name of SAMPLER: <i>Jeffrey Ingram</i> | SIGNATURE of SAMPLER: <i>Jeffrey Ingram</i> | 3/21/17 | Cooler (Y/N) |
| | | | Received on (Y/N) |
| | | | Temp in °C |

*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.

June 26, 2017

Mark Haddock
Golder Associates
820 S. Main St
Suite 100
Saint Charles, MO 63301

RE: Project: AMEREN LABADIE ENERGY CTR -FLY
Pace Project No.: 60245569

Dear Mark Haddock:

Enclosed are the analytical results for sample(s) received by the laboratory between June 02, 2017 and June 03, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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, Golder Associates
John Suozzi, Golder Associates



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: AMEREN LABADIE ENERGY CTR -FLY

Pace Project No.: 60245569

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601

L-A-B DOD-ELAP Accreditation #: L2417

Alabama Certification #: 41590

Arizona Certification #: AZ0734

Arkansas Certification

California Certification #: 04222CA

Colorado Certification

Connecticut Certification #: PH-0694

Delaware Certification

Florida/TNI Certification #: E87683

Georgia Certification #: C040

Guam Certification

Hawaii Certification

Idaho Certification

Illinois Certification

Indiana Certification

Iowa Certification #: 391

Kansas/TNI Certification #: E-10358

Kentucky Certification #: 90133

Louisiana DHH/TNI Certification #: LA140008

Louisiana DEQ/TNI Certification #: 4086

Maine Certification #: PA00091

Maryland Certification #: 308

Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification

Missouri Certification #: 235

Montana Certification #: Cert 0082

Nebraska Certification #: NE-05-29-14

Nevada Certification #: PA014572015-1

New Hampshire/TNI Certification #: 2976

New Jersey/TNI Certification #: PA 051

New Mexico Certification #: PA01457

New York/TNI Certification #: 10888

North Carolina Certification #: 42706

North Dakota Certification #: R-190

Oregon/TNI Certification #: PA200002

Pennsylvania/TNI Certification #: 65-00282

Puerto Rico Certification #: PA01457

Rhode Island Certification #: 65-00282

South Dakota Certification

Tennessee Certification #: TN2867

Texas/TNI Certification #: T104704188-14-8

Utah/TNI Certification #: PA014572015-5

USDA Soil Permit #: P330-14-00213

Vermont Dept. of Health: ID# VT-0282

Virgin Island/PADEP Certification

Virginia/VELAP Certification #: 460198

Washington Certification #: C868

West Virginia DEP Certification #: 143

West Virginia DHHR Certification #: 9964C

Wisconsin Certification

Wyoming Certification #: 8TMS-L

Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 15-016-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407

Utah Certification #: KS00021

Kansas Field Laboratory Accreditation: # E-92587

Missouri Certification: 10070

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: AMEREN LABADIE ENERGY CTR -FLY

Pace Project No.: 60245569

| Lab ID | Sample ID | Matrix | Date Collected | Date Received |
|-------------|--------------|--------|----------------|----------------|
| 60245569001 | L-LMW-1S | Water | 06/01/17 11:14 | 06/02/17 04:05 |
| 60245569002 | L-LMW-2S | Water | 06/01/17 10:53 | 06/02/17 04:05 |
| 60245569003 | L-LMW-3S | Water | 06/01/17 15:15 | 06/02/17 04:05 |
| 60245569004 | L-LMW-4S | Water | 06/01/17 16:43 | 06/02/17 04:05 |
| 60245569005 | L-LMW-8S | Water | 06/01/17 14:31 | 06/02/17 04:05 |
| 60245569006 | L-BMW-1S | Water | 05/31/17 10:47 | 06/02/17 04:05 |
| 60245569007 | L-BMW-2S | Water | 05/31/17 12:01 | 06/02/17 04:05 |
| 60245569008 | L-LMW-DUP-1 | Water | 06/01/17 08:00 | 06/02/17 04:05 |
| 60245678001 | L-LMW-5S | Water | 06/02/17 11:30 | 06/03/17 08:00 |
| 60245678002 | L-LMW-6S | Water | 06/02/17 09:20 | 06/03/17 08:00 |
| 60245678003 | L-LMW-7S | Water | 06/02/17 10:30 | 06/03/17 08:00 |
| 60245678004 | L-LMW-FB-1 | Water | 06/02/17 11:03 | 06/03/17 08:00 |
| 60245569013 | L-LMW-1S MS | Water | 06/01/17 11:14 | 06/02/17 04:05 |
| 60245569014 | L-LMW-1S MSD | Water | 06/01/17 11:14 | 06/02/17 04:05 |

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: AMEREN LABADIE ENERGY CTR -FLY

Pace Project No.: 60245569

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|-------------|-----------|-------------|----------|-------------------|------------|
| 60245569001 | L-LMW-1S | EPA 200.7 | TDS | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |
| | | EPA 7470 | SMW | 1 | PASI-K |
| | | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| | | SM 2540C | LDF | 1 | PASI-K |
| | | SM 4500-H+B | JSS | 1 | PASI-K |
| 60245569002 | L-LMW-2S | EPA 300.0 | RAD | 3 | PASI-K |
| | | EPA 200.7 | TDS | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |
| | | EPA 7470 | SMW | 1 | PASI-K |
| | | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| | | SM 2540C | LDF | 1 | PASI-K |
| 60245569003 | L-LMW-3S | SM 4500-H+B | JSS | 1 | PASI-K |
| | | EPA 300.0 | RAD | 3 | PASI-K |
| | | EPA 200.7 | TDS | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |
| | | EPA 7470 | SMW | 1 | PASI-K |
| | | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| 60245569004 | L-LMW-4S | SM 2540C | LDF | 1 | PASI-K |
| | | SM 4500-H+B | JSS | 1 | PASI-K |
| | | EPA 300.0 | RAD | 3 | PASI-K |
| | | EPA 200.7 | TDS | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |
| | | EPA 7470 | SMW | 1 | PASI-K |
| | | EPA 903.1 | WRR | 1 | PASI-PA |
| 60245569005 | L-LMW-8S | EPA 904.0 | JLW | 1 | PASI-PA |
| | | SM 2540C | LDF | 1 | PASI-K |
| | | SM 4500-H+B | JSS | 1 | PASI-K |
| | | EPA 300.0 | RAD | 3 | PASI-K |
| | | EPA 200.7 | TDS | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |
| | | EPA 7470 | SMW | 1 | PASI-K |
| 60245569005 | L-LMW-8S | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |

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SAMPLE ANALYTE COUNT

Project: AMEREN LABADIE ENERGY CTR -FLY

Pace Project No.: 60245569

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|-------------|-------------|-------------|----------|-------------------|------------|
| 60245569006 | L-BMW-1S | SM 2540C | LDF | 1 | PASI-K |
| | | SM 4500-H+B | JSS | 1 | PASI-K |
| | | EPA 300.0 | RAD | 3 | PASI-K |
| | | EPA 200.7 | TDS | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |
| | | EPA 7470 | SMW | 1 | PASI-K |
| | | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| 60245569007 | L-BMW-2S | SM 2540C | LDF | 1 | PASI-K |
| | | SM 4500-H+B | JSS | 1 | PASI-K |
| | | EPA 300.0 | RAD | 3 | PASI-K |
| | | EPA 200.7 | TDS | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |
| | | EPA 7470 | SMW | 1 | PASI-K |
| | | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| 60245569008 | L-LMW-DUP-1 | SM 2540C | LDF | 1 | PASI-K |
| | | SM 4500-H+B | JSS | 1 | PASI-K |
| | | EPA 300.0 | RAD | 3 | PASI-K |
| | | EPA 200.7 | TDS | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |
| | | EPA 7470 | SMW | 1 | PASI-K |
| | | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| 60245678001 | L-LMW-5S | SM 2540C | LDF | 1 | PASI-K |
| | | SM 4500-H+B | JSS | 1 | PASI-K |
| | | EPA 300.0 | RAD | 3 | PASI-K |
| | | EPA 200.7 | TDS | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |
| | | EPA 7470 | SMW | 1 | PASI-K |
| | | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| 60245678002 | L-LMW-6S | SM 2540C | LDF | 1 | PASI-K |
| | | SM 4500-H+B | JSS | 1 | PASI-K |
| | | EPA 300.0 | RAD | 3 | PASI-K |
| | | EPA 200.7 | TDS | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: AMEREN LABADIE ENERGY CTR -FLY

Pace Project No.: 60245569

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|--------------------|---------------------|-------------|----------|-------------------|------------|
| | | EPA 7470 | SMW | 1 | PASI-K |
| | | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| | | SM 2540C | LDF | 1 | PASI-K |
| | | SM 4500-H+B | JSS | 1 | PASI-K |
| | | EPA 300.0 | RAD | 3 | PASI-K |
| 60245678003 | L-LMW-7S | EPA 200.7 | TDS | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |
| | | EPA 7470 | SMW | 1 | PASI-K |
| | | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| | | SM 2540C | LDF | 1 | PASI-K |
| | | SM 4500-H+B | JSS | 1 | PASI-K |
| | | EPA 300.0 | RAD | 3 | PASI-K |
| 60245678004 | L-LMW-FB-1 | EPA 200.7 | TDS | 8 | PASI-K |
| | | EPA 200.8 | JGP | 6 | PASI-K |
| | | EPA 7470 | SMW | 1 | PASI-K |
| | | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| | | SM 2540C | LDF | 1 | PASI-K |
| | | SM 4500-H+B | JSS | 1 | PASI-K |
| | | EPA 300.0 | RAD | 3 | PASI-K |
| 60245569013 | L-LMW-1S MS | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |
| 60245569014 | L-LMW-1S MSD | EPA 903.1 | WRR | 1 | PASI-PA |
| | | EPA 904.0 | JLW | 1 | PASI-PA |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR -FLY

Pace Project No.: 60245569

Sample: L-LMW-1S **Lab ID: 60245569001** Collected: 06/01/17 11:14 Received: 06/02/17 04:05 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|-----------------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 230 | ug/L | 5.0 | 0.91 | 1 | 06/07/17 15:52 | 06/09/17 18:31 | 7440-39-3 | |
| Beryllium | <0.16 | ug/L | 1.0 | 0.16 | 1 | 06/07/17 15:52 | 06/09/17 18:31 | 7440-41-7 | |
| Boron | 3260 | ug/L | 100 | 3.5 | 1 | 06/07/17 15:52 | 06/09/17 18:31 | 7440-42-8 | |
| Calcium | 190000 | ug/L | 100 | 36.0 | 1 | 06/07/17 15:52 | 06/09/17 18:31 | 7440-70-2 | |
| Cobalt | 1.5J | ug/L | 5.0 | 0.73 | 1 | 06/07/17 15:52 | 06/09/17 18:31 | 7440-48-4 | |
| Lead | <2.4 | ug/L | 5.0 | 2.4 | 1 | 06/07/17 15:52 | 06/09/17 18:31 | 7439-92-1 | |
| Lithium | 18.6 | ug/L | 10.0 | 2.9 | 1 | 06/07/17 15:52 | 06/09/17 18:31 | 7439-93-2 | |
| Molybdenum | 4.7J | ug/L | 20.0 | 1.3 | 1 | 06/07/17 15:52 | 06/09/17 18:31 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | 0.033J | ug/L | 1.0 | 0.026 | 1 | 06/07/17 15:52 | 06/08/17 14:35 | 7440-36-0 | |
| Arsenic | 10.6 | ug/L | 1.0 | 0.052 | 1 | 06/07/17 15:52 | 06/08/17 14:35 | 7440-38-2 | |
| Cadmium | 0.025J | ug/L | 0.50 | 0.018 | 1 | 06/07/17 15:52 | 06/08/17 14:35 | 7440-43-9 | |
| Chromium | 0.18J | ug/L | 1.0 | 0.054 | 1 | 06/07/17 15:52 | 06/08/17 14:35 | 7440-47-3 | B |
| Selenium | 0.13J | ug/L | 1.0 | 0.086 | 1 | 06/07/17 15:52 | 06/08/17 14:35 | 7782-49-2 | |
| Thallium | 0.090J | ug/L | 1.0 | 0.036 | 1 | 06/07/17 15:52 | 06/08/17 14:35 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | 0.14J | ug/L | 0.20 | 0.046 | 1 | 06/07/17 17:21 | 06/08/17 11:55 | 7439-97-6 | B,M1 |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 685 | mg/L | 5.0 | 5.0 | 1 | | 06/06/17 09:39 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.2 | Std. Units | 0.10 | 0.10 | 1 | | 06/07/17 11:48 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 5.1 | mg/L | 1.0 | 0.50 | 1 | | 06/05/17 22:23 | 16887-00-6 | |
| Fluoride | 0.26 | mg/L | 0.20 | 0.10 | 1 | | 06/05/17 22:23 | 16984-48-8 | |
| Sulfate | 154 | mg/L | 20.0 | 10.0 | 20 | | 06/06/17 16:33 | 14808-79-8 | |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR -FLY

Pace Project No.: 60245569

Sample: L-LMW-2S **Lab ID: 60245569002** Collected: 06/01/17 10:53 Received: 06/02/17 04:05 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 54.7 | ug/L | 5.0 | 0.91 | 1 | 06/07/17 15:52 | 06/09/17 18:37 | 7440-39-3 | |
| Beryllium | <0.16 | ug/L | 1.0 | 0.16 | 1 | 06/07/17 15:52 | 06/09/17 18:37 | 7440-41-7 | |
| Boron | 7300 | ug/L | 100 | 3.5 | 1 | 06/07/17 15:52 | 06/09/17 18:37 | 7440-42-8 | |
| Calcium | 79600 | ug/L | 100 | 36.0 | 1 | 06/07/17 15:52 | 06/09/17 18:37 | 7440-70-2 | |
| Cobalt | <0.73 | ug/L | 5.0 | 0.73 | 1 | 06/07/17 15:52 | 06/09/17 18:37 | 7440-48-4 | |
| Lead | <2.4 | ug/L | 5.0 | 2.4 | 1 | 06/07/17 15:52 | 06/09/17 18:37 | 7439-92-1 | |
| Lithium | 13.4 | ug/L | 10.0 | 2.9 | 1 | 06/07/17 15:52 | 06/09/17 18:37 | 7439-93-2 | |
| Molybdenum | 148 | ug/L | 20.0 | 1.3 | 1 | 06/07/17 15:52 | 06/09/17 18:37 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | 0.073J | ug/L | 1.0 | 0.026 | 1 | 06/07/17 15:52 | 06/08/17 14:45 | 7440-36-0 | |
| Arsenic | 28.5 | ug/L | 1.0 | 0.052 | 1 | 06/07/17 15:52 | 06/08/17 14:45 | 7440-38-2 | |
| Cadmium | <0.018 | ug/L | 0.50 | 0.018 | 1 | 06/07/17 15:52 | 06/08/17 14:45 | 7440-43-9 | |
| Chromium | 0.15J | ug/L | 1.0 | 0.054 | 1 | 06/07/17 15:52 | 06/08/17 14:45 | 7440-47-3 | B |
| Selenium | 0.12J | ug/L | 1.0 | 0.086 | 1 | 06/07/17 15:52 | 06/08/17 14:45 | 7782-49-2 | |
| Thallium | 0.093J | ug/L | 1.0 | 0.036 | 1 | 06/07/17 15:52 | 06/08/17 14:45 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | 0.14J | ug/L | 0.20 | 0.046 | 1 | 06/07/17 17:21 | 06/08/17 12:02 | 7439-97-6 | B |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 523 | mg/L | 5.0 | 5.0 | 1 | | 06/06/17 09:40 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 9.3 | Std. Units | 0.10 | 0.10 | 1 | | 06/07/17 11:46 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 18.8 | mg/L | 1.0 | 0.50 | 1 | | 06/06/17 00:33 | 16887-00-6 | |
| Fluoride | 0.15J | mg/L | 0.20 | 0.10 | 1 | | 06/06/17 00:33 | 16984-48-8 | |
| Sulfate | 317 | mg/L | 20.0 | 10.0 | 20 | | 06/06/17 00:49 | 14808-79-8 | |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR -FLY

Pace Project No.: 60245569

Sample: L-LMW-3S **Lab ID: 60245569003** Collected: 06/01/17 15:15 Received: 06/02/17 04:05 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 84.1 | ug/L | 5.0 | 0.91 | 1 | 06/07/17 15:52 | 06/09/17 18:40 | 7440-39-3 | |
| Beryllium | <0.16 | ug/L | 1.0 | 0.16 | 1 | 06/07/17 15:52 | 06/09/17 18:40 | 7440-41-7 | |
| Boron | 5390 | ug/L | 100 | 3.5 | 1 | 06/07/17 15:52 | 06/09/17 18:40 | 7440-42-8 | |
| Calcium | 74900 | ug/L | 100 | 36.0 | 1 | 06/07/17 15:52 | 06/09/17 18:40 | 7440-70-2 | |
| Cobalt | <0.73 | ug/L | 5.0 | 0.73 | 1 | 06/07/17 15:52 | 06/09/17 18:40 | 7440-48-4 | |
| Lead | <2.4 | ug/L | 5.0 | 2.4 | 1 | 06/07/17 15:52 | 06/09/17 18:40 | 7439-92-1 | |
| Lithium | 21.7 | ug/L | 10.0 | 2.9 | 1 | 06/07/17 15:52 | 06/09/17 18:40 | 7439-93-2 | |
| Molybdenum | 187 | ug/L | 20.0 | 1.3 | 1 | 06/07/17 15:52 | 06/09/17 18:40 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | <0.026 | ug/L | 1.0 | 0.026 | 1 | 06/07/17 15:52 | 06/08/17 14:48 | 7440-36-0 | |
| Arsenic | 6.0 | ug/L | 1.0 | 0.052 | 1 | 06/07/17 15:52 | 06/08/17 14:48 | 7440-38-2 | |
| Cadmium | <0.018 | ug/L | 0.50 | 0.018 | 1 | 06/07/17 15:52 | 06/08/17 14:48 | 7440-43-9 | |
| Chromium | 0.19J | ug/L | 1.0 | 0.054 | 1 | 06/07/17 15:52 | 06/08/17 14:48 | 7440-47-3 | B |
| Selenium | 0.099J | ug/L | 1.0 | 0.086 | 1 | 06/07/17 15:52 | 06/08/17 14:48 | 7782-49-2 | |
| Thallium | 0.038J | ug/L | 1.0 | 0.036 | 1 | 06/07/17 15:52 | 06/08/17 14:48 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | 0.14J | ug/L | 0.20 | 0.046 | 1 | 06/07/17 17:21 | 06/08/17 12:04 | 7439-97-6 | B |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 627 | mg/L | 5.0 | 5.0 | 1 | | 06/06/17 09:40 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 8.0 | Std. Units | 0.10 | 0.10 | 1 | | 06/07/17 12:04 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 21.4 | mg/L | 2.0 | 1.0 | 2 | | 06/06/17 01:22 | 16887-00-6 | |
| Fluoride | 0.50 | mg/L | 0.20 | 0.10 | 1 | | 06/06/17 01:05 | 16984-48-8 | |
| Sulfate | 271 | mg/L | 20.0 | 10.0 | 20 | | 06/06/17 01:38 | 14808-79-8 | |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR -FLY

Pace Project No.: 60245569

Sample: L-LMW-4S **Lab ID: 60245569004** Collected: 06/01/17 16:43 Received: 06/02/17 04:05 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 142 | ug/L | 5.0 | 0.91 | 1 | 06/07/17 15:52 | 06/09/17 18:42 | 7440-39-3 | |
| Beryllium | <0.16 | ug/L | 1.0 | 0.16 | 1 | 06/07/17 15:52 | 06/09/17 18:42 | 7440-41-7 | |
| Boron | 10600 | ug/L | 100 | 3.5 | 1 | 06/07/17 15:52 | 06/09/17 18:42 | 7440-42-8 | |
| Calcium | 108000 | ug/L | 100 | 36.0 | 1 | 06/07/17 15:52 | 06/09/17 18:42 | 7440-70-2 | |
| Cobalt | 0.95J | ug/L | 5.0 | 0.73 | 1 | 06/07/17 15:52 | 06/09/17 18:42 | 7440-48-4 | |
| Lead | <2.4 | ug/L | 5.0 | 2.4 | 1 | 06/07/17 15:52 | 06/09/17 18:42 | 7439-92-1 | |
| Lithium | 37.9 | ug/L | 10.0 | 2.9 | 1 | 06/07/17 15:52 | 06/09/17 18:42 | 7439-93-2 | |
| Molybdenum | 130 | ug/L | 20.0 | 1.3 | 1 | 06/07/17 15:52 | 06/09/17 18:42 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | <0.026 | ug/L | 1.0 | 0.026 | 1 | 06/07/17 15:52 | 06/08/17 14:51 | 7440-36-0 | |
| Arsenic | 19.4 | ug/L | 1.0 | 0.052 | 1 | 06/07/17 15:52 | 06/08/17 14:51 | 7440-38-2 | |
| Cadmium | <0.018 | ug/L | 0.50 | 0.018 | 1 | 06/07/17 15:52 | 06/08/17 14:51 | 7440-43-9 | |
| Chromium | 0.53J | ug/L | 1.0 | 0.054 | 1 | 06/07/17 15:52 | 06/08/17 14:51 | 7440-47-3 | B |
| Selenium | 0.12J | ug/L | 1.0 | 0.086 | 1 | 06/07/17 15:52 | 06/08/17 14:51 | 7782-49-2 | |
| Thallium | <0.036 | ug/L | 1.0 | 0.036 | 1 | 06/07/17 15:52 | 06/08/17 14:51 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | 0.14J | ug/L | 0.20 | 0.046 | 1 | 06/07/17 17:21 | 06/08/17 12:06 | 7439-97-6 | B |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 695 | mg/L | 5.0 | 5.0 | 1 | | 06/06/17 09:41 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.3 | Std. Units | 0.10 | 0.10 | 1 | | 06/07/17 12:05 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 24.4 | mg/L | 2.0 | 1.0 | 2 | | 06/06/17 02:10 | 16887-00-6 | |
| Fluoride | 0.27 | mg/L | 0.20 | 0.10 | 1 | | 06/06/17 01:54 | 16984-48-8 | |
| Sulfate | 264 | mg/L | 20.0 | 10.0 | 20 | | 06/06/17 02:26 | 14808-79-8 | |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR -FLY

Pace Project No.: 60245569

Sample: L-LMW-8S **Lab ID: 60245569005** Collected: 06/01/17 14:31 Received: 06/02/17 04:05 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 238 | ug/L | 5.0 | 0.91 | 1 | 06/07/17 15:52 | 06/09/17 18:44 | 7440-39-3 | |
| Beryllium | <0.16 | ug/L | 1.0 | 0.16 | 1 | 06/07/17 15:52 | 06/09/17 18:44 | 7440-41-7 | |
| Boron | 8730 | ug/L | 100 | 3.5 | 1 | 06/07/17 15:52 | 06/09/17 18:44 | 7440-42-8 | |
| Calcium | 169000 | ug/L | 100 | 36.0 | 1 | 06/07/17 15:52 | 06/09/17 18:44 | 7440-70-2 | |
| Cobalt | 3.2J | ug/L | 5.0 | 0.73 | 1 | 06/07/17 15:52 | 06/09/17 18:44 | 7440-48-4 | |
| Lead | <2.4 | ug/L | 5.0 | 2.4 | 1 | 06/07/17 15:52 | 06/09/17 18:44 | 7439-92-1 | |
| Lithium | 18.7 | ug/L | 10.0 | 2.9 | 1 | 06/07/17 15:52 | 06/09/17 18:44 | 7439-93-2 | |
| Molybdenum | 258 | ug/L | 20.0 | 1.3 | 1 | 06/07/17 15:52 | 06/09/17 18:44 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | 0.029J | ug/L | 1.0 | 0.026 | 1 | 06/07/17 15:52 | 06/08/17 14:54 | 7440-36-0 | |
| Arsenic | 11.7 | ug/L | 1.0 | 0.052 | 1 | 06/07/17 15:52 | 06/08/17 14:54 | 7440-38-2 | |
| Cadmium | 0.11J | ug/L | 0.50 | 0.018 | 1 | 06/07/17 15:52 | 06/08/17 14:54 | 7440-43-9 | |
| Chromium | 0.18J | ug/L | 1.0 | 0.054 | 1 | 06/07/17 15:52 | 06/08/17 14:54 | 7440-47-3 | B |
| Selenium | <0.086 | ug/L | 1.0 | 0.086 | 1 | 06/07/17 15:52 | 06/08/17 14:54 | 7782-49-2 | |
| Thallium | 0.039J | ug/L | 1.0 | 0.036 | 1 | 06/07/17 15:52 | 06/08/17 14:54 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | 0.14J | ug/L | 0.20 | 0.046 | 1 | 06/07/17 17:21 | 06/08/17 12:08 | 7439-97-6 | B |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 913 | mg/L | 5.0 | 5.0 | 1 | | 06/06/17 09:41 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.3 | Std. Units | 0.10 | 0.10 | 1 | | 06/07/17 12:02 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 19.8 | mg/L | 2.0 | 1.0 | 2 | | 06/06/17 17:05 | 16887-00-6 | |
| Fluoride | 0.46 | mg/L | 0.20 | 0.10 | 1 | | 06/06/17 02:43 | 16984-48-8 | |
| Sulfate | 448 | mg/L | 50.0 | 25.0 | 50 | | 06/06/17 17:21 | 14808-79-8 | |

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR -FLY

Pace Project No.: 60245569

Sample: L-BMW-1S **Lab ID: 60245569006** Collected: 05/31/17 10:47 Received: 06/02/17 04:05 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 352 | ug/L | 5.0 | 0.91 | 1 | 06/07/17 15:52 | 06/09/17 18:46 | 7440-39-3 | |
| Beryllium | <0.16 | ug/L | 1.0 | 0.16 | 1 | 06/07/17 15:52 | 06/09/17 18:46 | 7440-41-7 | |
| Boron | 122 | ug/L | 100 | 3.5 | 1 | 06/07/17 15:52 | 06/09/17 18:46 | 7440-42-8 | |
| Calcium | 217000 | ug/L | 100 | 36.0 | 1 | 06/07/17 15:52 | 06/09/17 18:46 | 7440-70-2 | |
| Cobalt | 1.3J | ug/L | 5.0 | 0.73 | 1 | 06/07/17 15:52 | 06/09/17 18:46 | 7440-48-4 | |
| Lead | <2.4 | ug/L | 5.0 | 2.4 | 1 | 06/07/17 15:52 | 06/09/17 18:46 | 7439-92-1 | |
| Lithium | 13.0 | ug/L | 10.0 | 2.9 | 1 | 06/07/17 15:52 | 06/09/17 18:46 | 7439-93-2 | |
| Molybdenum | 1.5J | ug/L | 20.0 | 1.3 | 1 | 06/07/17 15:52 | 06/09/17 18:46 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | <0.026 | ug/L | 1.0 | 0.026 | 1 | 06/07/17 15:52 | 06/08/17 14:57 | 7440-36-0 | |
| Arsenic | 30.4 | ug/L | 1.0 | 0.052 | 1 | 06/07/17 15:52 | 06/08/17 14:57 | 7440-38-2 | |
| Cadmium | <0.018 | ug/L | 0.50 | 0.018 | 1 | 06/07/17 15:52 | 06/08/17 14:57 | 7440-43-9 | |
| Chromium | 0.22J | ug/L | 1.0 | 0.054 | 1 | 06/07/17 15:52 | 06/08/17 14:57 | 7440-47-3 | B |
| Selenium | <0.086 | ug/L | 1.0 | 0.086 | 1 | 06/07/17 15:52 | 06/08/17 14:57 | 7782-49-2 | |
| Thallium | <0.036 | ug/L | 1.0 | 0.036 | 1 | 06/07/17 15:52 | 06/08/17 14:57 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | 0.14J | ug/L | 0.20 | 0.046 | 1 | 06/07/17 17:21 | 06/08/17 12:10 | 7439-97-6 | B |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 749 | mg/L | 5.0 | 5.0 | 1 | | 06/05/17 08:42 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.2 | Std. Units | 0.10 | 0.10 | 1 | | 06/07/17 13:19 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 5.6 | mg/L | 1.0 | 0.50 | 1 | | 06/06/17 17:37 | 16887-00-6 | |
| Fluoride | 0.17J | mg/L | 0.20 | 0.10 | 1 | | 06/06/17 17:37 | 16984-48-8 | |
| Sulfate | 51.6 | mg/L | 5.0 | 2.5 | 5 | | 06/07/17 11:17 | 14808-79-8 | |

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR -FLY

Pace Project No.: 60245569

Sample: L-BMW-2S **Lab ID: 60245569007** Collected: 05/31/17 12:01 Received: 06/02/17 04:05 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|-----------------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 306 | ug/L | 5.0 | 0.91 | 1 | 06/07/17 15:52 | 06/09/17 18:53 | 7440-39-3 | |
| Beryllium | <0.16 | ug/L | 1.0 | 0.16 | 1 | 06/07/17 15:52 | 06/09/17 18:53 | 7440-41-7 | |
| Boron | 37.3J | ug/L | 100 | 3.5 | 1 | 06/07/17 15:52 | 06/09/17 18:53 | 7440-42-8 | |
| Calcium | 139000 | ug/L | 100 | 36.0 | 1 | 06/07/17 15:52 | 06/09/17 18:53 | 7440-70-2 | |
| Cobalt | <0.73 | ug/L | 5.0 | 0.73 | 1 | 06/07/17 15:52 | 06/09/17 18:53 | 7440-48-4 | |
| Lead | <2.4 | ug/L | 5.0 | 2.4 | 1 | 06/07/17 15:52 | 06/09/17 18:53 | 7439-92-1 | |
| Lithium | 17.8 | ug/L | 10.0 | 2.9 | 1 | 06/07/17 15:52 | 06/09/17 18:53 | 7439-93-2 | |
| Molybdenum | 2.0J | ug/L | 20.0 | 1.3 | 1 | 06/07/17 15:52 | 06/09/17 18:53 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | 0.24J | ug/L | 1.0 | 0.026 | 1 | 06/07/17 15:52 | 06/08/17 15:09 | 7440-36-0 | |
| Arsenic | 0.46J | ug/L | 1.0 | 0.052 | 1 | 06/07/17 15:52 | 06/08/17 15:09 | 7440-38-2 | |
| Cadmium | 0.031J | ug/L | 0.50 | 0.018 | 1 | 06/07/17 15:52 | 06/08/17 15:09 | 7440-43-9 | |
| Chromium | 0.17J | ug/L | 1.0 | 0.054 | 1 | 06/07/17 15:52 | 06/08/17 15:09 | 7440-47-3 | B |
| Selenium | 0.57J | ug/L | 1.0 | 0.086 | 1 | 06/07/17 15:52 | 06/08/17 15:09 | 7782-49-2 | |
| Thallium | 0.044J | ug/L | 1.0 | 0.036 | 1 | 06/07/17 15:52 | 06/08/17 15:09 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | 0.14J | ug/L | 0.20 | 0.046 | 1 | 06/07/17 17:21 | 06/08/17 12:17 | 7439-97-6 | B |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 472 | mg/L | 5.0 | 5.0 | 1 | | 06/05/17 08:42 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.4 | Std. Units | 0.10 | 0.10 | 1 | | 06/07/17 10:01 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 2.3 | mg/L | 1.0 | 0.50 | 1 | | 06/06/17 04:20 | 16887-00-6 | |
| Fluoride | 0.23 | mg/L | 0.20 | 0.10 | 1 | | 06/06/17 04:20 | 16984-48-8 | |
| Sulfate | 23.6 | mg/L | 2.0 | 1.0 | 2 | | 06/24/17 14:42 | 14808-79-8 | |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR -FLY

Pace Project No.: 60245569

Sample: L-LMW-DUP-1 **Lab ID: 60245569008** Collected: 06/01/17 08:00 Received: 06/02/17 04:05 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|------------------|---|------|-------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Barium | 54.6 | ug/L | 5.0 | 0.91 | 1 | 06/07/17 15:52 | 06/09/17 18:56 | 7440-39-3 | |
| Beryllium | <0.16 | ug/L | 1.0 | 0.16 | 1 | 06/07/17 15:52 | 06/09/17 18:56 | 7440-41-7 | |
| Boron | 7320 | ug/L | 100 | 3.5 | 1 | 06/07/17 15:52 | 06/09/17 18:56 | 7440-42-8 | |
| Calcium | 80000 | ug/L | 100 | 36.0 | 1 | 06/07/17 15:52 | 06/09/17 18:56 | 7440-70-2 | |
| Cobalt | <0.73 | ug/L | 5.0 | 0.73 | 1 | 06/07/17 15:52 | 06/09/17 18:56 | 7440-48-4 | |
| Lead | <2.4 | ug/L | 5.0 | 2.4 | 1 | 06/07/17 15:52 | 06/09/17 18:56 | 7439-92-1 | |
| Lithium | 13.1 | ug/L | 10.0 | 2.9 | 1 | 06/07/17 15:52 | 06/09/17 18:56 | 7439-93-2 | |
| Molybdenum | 146 | ug/L | 20.0 | 1.3 | 1 | 06/07/17 15:52 | 06/09/17 18:56 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | 0.064J | ug/L | 1.0 | 0.026 | 1 | 06/07/17 15:52 | 06/08/17 15:13 | 7440-36-0 | |
| Arsenic | 28.9 | ug/L | 1.0 | 0.052 | 1 | 06/07/17 15:52 | 06/08/17 15:13 | 7440-38-2 | |
| Cadmium | <0.018 | ug/L | 0.50 | 0.018 | 1 | 06/07/17 15:52 | 06/08/17 15:13 | 7440-43-9 | |
| Chromium | 0.14J | ug/L | 1.0 | 0.054 | 1 | 06/07/17 15:52 | 06/08/17 15:13 | 7440-47-3 | B |
| Selenium | 0.17J | ug/L | 1.0 | 0.086 | 1 | 06/07/17 15:52 | 06/08/17 15:13 | 7782-49-2 | |
| Thallium | <0.036 | ug/L | 1.0 | 0.036 | 1 | 06/07/17 15:52 | 06/08/17 15:13 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | 0.13J | ug/L | 0.20 | 0.046 | 1 | 06/07/17 17:21 | 06/08/17 12:19 | 7439-97-6 | B |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 522 | mg/L | 5.0 | 5.0 | 1 | | 06/06/17 09:41 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 9.1 | Std. Units | 0.10 | 0.10 | 1 | | 06/07/17 12:09 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 18.9 | mg/L | 1.0 | 0.50 | 1 | | 06/08/17 16:06 | 16887-00-6 | |
| Fluoride | 0.16J | mg/L | 0.20 | 0.10 | 1 | | 06/08/17 16:06 | 16984-48-8 | |
| Sulfate | 309 | mg/L | 50.0 | 25.0 | 50 | | 06/09/17 04:31 | 14808-79-8 | |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR -FLY

Pace Project No.: 60245569

Sample: L-LMW-5S **Lab ID: 60245678001** Collected: 06/02/17 11:30 Received: 06/03/17 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 | | | | | | | |
| Barium | 314 | ug/L | 5.0 | 0.91 | 1 | 06/07/17 15:52 | 06/09/17 18:58 | 7440-39-3 | |
| Beryllium | <0.16 | ug/L | 1.0 | 0.16 | 1 | 06/07/17 15:52 | 06/09/17 18:58 | 7440-41-7 | |
| Boron | 56.4J | ug/L | 100 | 3.5 | 1 | 06/07/17 15:52 | 06/09/17 18:58 | 7440-42-8 | |
| Calcium | 136000 | ug/L | 100 | 36.0 | 1 | 06/07/17 15:52 | 06/09/17 18:58 | 7440-70-2 | |
| Cobalt | <0.73 | ug/L | 5.0 | 0.73 | 1 | 06/07/17 15:52 | 06/09/17 18:58 | 7440-48-4 | |
| Lead | <2.4 | ug/L | 5.0 | 2.4 | 1 | 06/07/17 15:52 | 06/09/17 18:58 | 7439-92-1 | |
| Lithium | 8.3J | ug/L | 10.0 | 2.9 | 1 | 06/07/17 15:52 | 06/09/17 18:58 | 7439-93-2 | |
| Molybdenum | 1.6J | ug/L | 20.0 | 1.3 | 1 | 06/07/17 15:52 | 06/09/17 18:58 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | 0.13J | ug/L | 1.0 | 0.026 | 1 | 06/07/17 15:52 | 06/08/17 15:16 | 7440-36-0 | |
| Arsenic | 0.52J | ug/L | 1.0 | 0.052 | 1 | 06/07/17 15:52 | 06/08/17 15:16 | 7440-38-2 | |
| Cadmium | 0.049J | ug/L | 0.50 | 0.018 | 1 | 06/07/17 15:52 | 06/08/17 15:16 | 7440-43-9 | |
| Chromium | 0.35J | ug/L | 1.0 | 0.054 | 1 | 06/07/17 15:52 | 06/08/17 15:16 | 7440-47-3 | B |
| Selenium | 0.41J | ug/L | 1.0 | 0.086 | 1 | 06/07/17 15:52 | 06/08/17 15:16 | 7782-49-2 | |
| Thallium | <0.036 | ug/L | 1.0 | 0.036 | 1 | 06/07/17 15:52 | 06/08/17 15:16 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | 0.13J | ug/L | 0.20 | 0.046 | 1 | 06/07/17 17:21 | 06/08/17 12:26 | 7439-97-6 | B |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 401 | mg/L | 5.0 | 5.0 | 1 | | 06/07/17 09:48 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.1 | Std. Units | 0.10 | 0.10 | 1 | | 06/07/17 13:54 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 3.0 | mg/L | 1.0 | 0.50 | 1 | | 06/06/17 18:26 | 16887-00-6 | |
| Fluoride | 0.18J | mg/L | 0.20 | 0.10 | 1 | | 06/06/17 18:26 | 16984-48-8 | |
| Sulfate | 13.0 | mg/L | 1.0 | 0.50 | 1 | | 06/06/17 18:26 | 14808-79-8 | |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR -FLY

Pace Project No.: 60245569

Sample: L-LMW-6S **Lab ID: 60245678002** Collected: 06/02/17 09:20 Received: 06/03/17 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 | | | | | | | |
| Barium | 318 | ug/L | 5.0 | 0.91 | 1 | 06/07/17 15:52 | 06/09/17 19:02 | 7440-39-3 | |
| Beryllium | <0.16 | ug/L | 1.0 | 0.16 | 1 | 06/07/17 15:52 | 06/09/17 19:02 | 7440-41-7 | |
| Boron | 5770 | ug/L | 100 | 3.5 | 1 | 06/07/17 15:52 | 06/09/17 19:02 | 7440-42-8 | |
| Calcium | 160000 | ug/L | 100 | 36.0 | 1 | 06/07/17 15:52 | 06/09/17 19:02 | 7440-70-2 | |
| Cobalt | 6.1 | ug/L | 5.0 | 0.73 | 1 | 06/07/17 15:52 | 06/09/17 19:02 | 7440-48-4 | |
| Lead | <2.4 | ug/L | 5.0 | 2.4 | 1 | 06/07/17 15:52 | 06/09/17 19:02 | 7439-92-1 | |
| Lithium | 40.8 | ug/L | 10.0 | 2.9 | 1 | 06/07/17 15:52 | 06/09/17 19:02 | 7439-93-2 | |
| Molybdenum | 27.8 | ug/L | 20.0 | 1.3 | 1 | 06/07/17 15:52 | 06/09/17 19:02 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | 0.070J | ug/L | 1.0 | 0.026 | 1 | 06/07/17 15:52 | 06/08/17 15:19 | 7440-36-0 | |
| Arsenic | 9.0 | ug/L | 1.0 | 0.052 | 1 | 06/07/17 15:52 | 06/08/17 15:19 | 7440-38-2 | |
| Cadmium | 0.055J | ug/L | 0.50 | 0.018 | 1 | 06/07/17 15:52 | 06/08/17 15:19 | 7440-43-9 | |
| Chromium | 0.33J | ug/L | 1.0 | 0.054 | 1 | 06/07/17 15:52 | 06/08/17 15:19 | 7440-47-3 | B |
| Selenium | 0.12J | ug/L | 1.0 | 0.086 | 1 | 06/07/17 15:52 | 06/08/17 15:19 | 7782-49-2 | |
| Thallium | <0.036 | ug/L | 1.0 | 0.036 | 1 | 06/07/17 15:52 | 06/08/17 15:19 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | 0.14J | ug/L | 0.20 | 0.046 | 1 | 06/07/17 17:21 | 06/08/17 12:28 | 7439-97-6 | B |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 627 | mg/L | 5.0 | 5.0 | 1 | | 06/07/17 09:49 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.2 | Std. Units | 0.10 | 0.10 | 1 | | 06/07/17 13:42 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 12.6 | mg/L | 1.0 | 0.50 | 1 | | 06/06/17 18:42 | 16887-00-6 | |
| Fluoride | 0.23 | mg/L | 0.20 | 0.10 | 1 | | 06/06/17 18:42 | 16984-48-8 | |
| Sulfate | 108 | mg/L | 10.0 | 5.0 | 10 | | 06/07/17 17:11 | 14808-79-8 | |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR -FLY

Pace Project No.: 60245569

Sample: L-LMW-7S **Lab ID: 60245678003** Collected: 06/02/17 10:30 Received: 06/03/17 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 | | | | | | | |
| Barium | 372 | ug/L | 5.0 | 0.91 | 1 | 06/07/17 15:52 | 06/09/17 19:05 | 7440-39-3 | |
| Beryllium | <0.16 | ug/L | 1.0 | 0.16 | 1 | 06/07/17 15:52 | 06/09/17 19:05 | 7440-41-7 | |
| Boron | 5660 | ug/L | 100 | 3.5 | 1 | 06/07/17 15:52 | 06/09/17 19:05 | 7440-42-8 | |
| Calcium | 181000 | ug/L | 100 | 36.0 | 1 | 06/07/17 15:52 | 06/09/17 19:05 | 7440-70-2 | |
| Cobalt | 5.1 | ug/L | 5.0 | 0.73 | 1 | 06/07/17 15:52 | 06/09/17 19:05 | 7440-48-4 | |
| Lead | <2.4 | ug/L | 5.0 | 2.4 | 1 | 06/07/17 15:52 | 06/09/17 19:05 | 7439-92-1 | |
| Lithium | 44.2 | ug/L | 10.0 | 2.9 | 1 | 06/07/17 15:52 | 06/09/17 19:05 | 7439-93-2 | |
| Molybdenum | 46.0 | ug/L | 20.0 | 1.3 | 1 | 06/07/17 15:52 | 06/09/17 19:05 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | 0.029J | ug/L | 1.0 | 0.026 | 1 | 06/07/17 15:52 | 06/08/17 15:25 | 7440-36-0 | |
| Arsenic | 6.2 | ug/L | 1.0 | 0.052 | 1 | 06/07/17 15:52 | 06/08/17 15:25 | 7440-38-2 | |
| Cadmium | 0.031J | ug/L | 0.50 | 0.018 | 1 | 06/07/17 15:52 | 06/08/17 15:25 | 7440-43-9 | |
| Chromium | 0.20J | ug/L | 1.0 | 0.054 | 1 | 06/07/17 15:52 | 06/08/17 15:25 | 7440-47-3 | B |
| Selenium | <0.086 | ug/L | 1.0 | 0.086 | 1 | 06/07/17 15:52 | 06/08/17 15:25 | 7782-49-2 | |
| Thallium | 0.073J | ug/L | 1.0 | 0.036 | 1 | 06/07/17 15:52 | 06/08/17 15:25 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | 0.14J | ug/L | 0.20 | 0.046 | 1 | 06/07/17 17:21 | 06/08/17 12:31 | 7439-97-6 | B |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 752 | mg/L | 5.0 | 5.0 | 1 | | 06/07/17 09:49 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.0 | Std. Units | 0.10 | 0.10 | 1 | | 06/07/17 13:48 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 16.6 | mg/L | 1.0 | 0.50 | 1 | | 06/06/17 19:47 | 16887-00-6 | |
| Fluoride | 0.19J | mg/L | 0.20 | 0.10 | 1 | | 06/06/17 19:47 | 16984-48-8 | |
| Sulfate | 174 | mg/L | 25.0 | 12.5 | 25 | | 06/07/17 17:26 | 14808-79-8 | |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR -FLY

Pace Project No.: 60245569

Sample: L-LMW-FB-1 **Lab ID: 60245678004** Collected: 06/02/17 11:03 Received: 06/03/17 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 | | | | | | | |
| Barium | 1.0J | ug/L | 5.0 | 0.91 | 1 | 06/07/17 15:52 | 06/09/17 19:07 | 7440-39-3 | B |
| Beryllium | <0.16 | ug/L | 1.0 | 0.16 | 1 | 06/07/17 15:52 | 06/09/17 19:07 | 7440-41-7 | |
| Boron | <3.5 | ug/L | 100 | 3.5 | 1 | 06/07/17 15:52 | 06/09/17 19:07 | 7440-42-8 | |
| Calcium | <36.0 | ug/L | 100 | 36.0 | 1 | 06/07/17 15:52 | 06/09/17 19:07 | 7440-70-2 | |
| Cobalt | <0.73 | ug/L | 5.0 | 0.73 | 1 | 06/07/17 15:52 | 06/09/17 19:07 | 7440-48-4 | |
| Lead | <2.4 | ug/L | 5.0 | 2.4 | 1 | 06/07/17 15:52 | 06/09/17 19:07 | 7439-92-1 | |
| Lithium | <2.9 | ug/L | 10.0 | 2.9 | 1 | 06/07/17 15:52 | 06/09/17 19:07 | 7439-93-2 | |
| Molybdenum | <1.3 | ug/L | 20.0 | 1.3 | 1 | 06/07/17 15:52 | 06/09/17 19:07 | 7439-98-7 | |
| 200.8 MET ICPMS | | Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 | | | | | | | |
| Antimony | <0.026 | ug/L | 1.0 | 0.026 | 1 | 06/07/17 15:52 | 06/08/17 15:06 | 7440-36-0 | |
| Arsenic | <0.052 | ug/L | 1.0 | 0.052 | 1 | 06/07/17 15:52 | 06/08/17 15:06 | 7440-38-2 | |
| Cadmium | <0.018 | ug/L | 0.50 | 0.018 | 1 | 06/07/17 15:52 | 06/08/17 15:06 | 7440-43-9 | |
| Chromium | 0.19J | ug/L | 1.0 | 0.054 | 1 | 06/07/17 15:52 | 06/08/17 15:06 | 7440-47-3 | B |
| Selenium | <0.086 | ug/L | 1.0 | 0.086 | 1 | 06/07/17 15:52 | 06/08/17 15:06 | 7782-49-2 | |
| Thallium | <0.036 | ug/L | 1.0 | 0.036 | 1 | 06/07/17 15:52 | 06/08/17 15:06 | 7440-28-0 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | |
| Mercury | 0.14J | ug/L | 0.20 | 0.046 | 1 | 06/07/17 17:21 | 06/08/17 12:33 | 7439-97-6 | B |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | <5.0 | mg/L | 5.0 | 5.0 | 1 | | 06/07/17 09:49 | | |
| 4500H+ pH, Electrometric | | Analytical Method: SM 4500-H+B | | | | | | | |
| pH at 25 Degrees C | 7.2 | Std. Units | 0.10 | 0.10 | 1 | | 06/07/17 13:50 | | H6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | <0.50 | mg/L | 1.0 | 0.50 | 1 | | 06/06/17 01:13 | 16887-00-6 | |
| Fluoride | <0.10 | mg/L | 0.20 | 0.10 | 1 | | 06/06/17 01:13 | 16984-48-8 | |
| Sulfate | <0.50 | mg/L | 1.0 | 0.50 | 1 | | 06/06/17 01:13 | 14808-79-8 | |

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR -FLY
Pace Project No.: 60245569

QC Batch: 480125 Analysis Method: EPA 7470
QC Batch Method: EPA 7470 Analysis Description: 7470 Mercury
Associated Lab Samples: 60245569001, 60245569002, 60245569003, 60245569004, 60245569005, 60245569006, 60245569007, 60245569008, 60245678001, 60245678002, 60245678003, 60245678004

METHOD BLANK: 1966554 Matrix: Water
Associated Lab Samples: 60245569001, 60245569002, 60245569003, 60245569004, 60245569005, 60245569006, 60245569007, 60245569008, 60245678001, 60245678002, 60245678003, 60245678004

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Mercury | ug/L | 0.14J | 0.20 | 0.046 | 06/08/17 11:51 | |

LABORATORY CONTROL SAMPLE: 1966555

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Mercury | ug/L | 5 | 4.3 | 85 | 80-120 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1966556 1966557

| Parameter | Units | 60245569001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
| Mercury | ug/L | 0.14J | 5 | 5 | 2.8 | 3.1 | 53 | 59 | 75-125 | 11 | 20 | M1 |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1966558 1966559

| Parameter | Units | 60245680003 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
| Mercury | ug/L | 0.14J | 5 | 5 | 3.9 | 3.9 | 75 | 75 | 75-125 | 1 | 20 | |

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR -FLY
Pace Project No.: 60245569

QC Batch: 480092 Analysis Method: EPA 200.7
QC Batch Method: EPA 200.7 Analysis Description: 200.7 Metals, Total
Associated Lab Samples: 60245569001, 60245569002, 60245569003, 60245569004, 60245569005, 60245569006, 60245569007, 60245569008, 60245678001, 60245678002, 60245678003, 60245678004

METHOD BLANK: 1966370 Matrix: Water
Associated Lab Samples: 60245569001, 60245569002, 60245569003, 60245569004, 60245569005, 60245569006, 60245569007, 60245569008, 60245678001, 60245678002, 60245678003, 60245678004

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|------------|-------|--------------|-----------------|------|----------------|------------|
| Barium | ug/L | 4.1J | 5.0 | 0.91 | 06/09/17 18:28 | |
| Beryllium | ug/L | <0.16 | 1.0 | 0.16 | 06/09/17 18:28 | |
| Boron | ug/L | <3.5 | 100 | 3.5 | 06/09/17 18:28 | |
| Calcium | ug/L | 51.6J | 100 | 36.0 | 06/09/17 18:28 | |
| Cobalt | ug/L | <0.73 | 5.0 | 0.73 | 06/09/17 18:28 | |
| Lead | ug/L | <2.4 | 5.0 | 2.4 | 06/09/17 18:28 | |
| Lithium | ug/L | <2.9 | 10.0 | 2.9 | 06/09/17 18:28 | |
| Molybdenum | ug/L | <1.3 | 20.0 | 1.3 | 06/09/17 18:28 | |

LABORATORY CONTROL SAMPLE: 1966371

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------|-------|-------------|------------|-----------|--------------|------------|
| Barium | ug/L | 1000 | 1030 | 103 | 85-115 | |
| Beryllium | ug/L | 1000 | 1040 | 104 | 85-115 | |
| Boron | ug/L | 1000 | 1030 | 103 | 85-115 | |
| Calcium | ug/L | 10000 | 10400 | 104 | 85-115 | |
| Cobalt | ug/L | 1000 | 1050 | 105 | 85-115 | |
| Lead | ug/L | 1000 | 1010 | 101 | 85-115 | |
| Lithium | ug/L | 1000 | 1020 | 102 | 85-115 | |
| Molybdenum | ug/L | 1000 | 1050 | 105 | 85-115 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1966372 1966373

| Parameter | Units | MS | | MSD | | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual | |
|------------|-------|--------------------|-------------|-------------|-----------|----------|-----------|--------------|--------|---------|------|------------|
| | | 60245569001 Result | Spike Conc. | Spike Conc. | MS Result | | | | | | | MSD Result |
| Barium | ug/L | 230 | 1000 | 1000 | 1250 | 1250 | 102 | 102 | 70-130 | 0 | 20 | |
| Beryllium | ug/L | <0.16 | 1000 | 1000 | 1030 | 1030 | 103 | 103 | 70-130 | 0 | 20 | |
| Boron | ug/L | 3260 | 1000 | 1000 | 4320 | 4380 | 106 | 112 | 70-130 | 1 | 20 | |
| Calcium | ug/L | 190000 | 10000 | 10000 | 200000 | 202000 | 96 | 118 | 70-130 | 1 | 20 | |
| Cobalt | ug/L | 1.5J | 1000 | 1000 | 1020 | 1020 | 102 | 102 | 70-130 | 0 | 20 | |
| Lead | ug/L | <2.4 | 1000 | 1000 | 987 | 987 | 99 | 98 | 70-130 | 0 | 20 | |
| Lithium | ug/L | 18.6 | 1000 | 1000 | 1080 | 1080 | 106 | 106 | 70-130 | 0 | 20 | |
| Molybdenum | ug/L | 4.7J | 1000 | 1000 | 1060 | 1060 | 106 | 106 | 70-130 | 0 | 20 | |

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR -FLY

Pace Project No.: 60245569

| MATRIX SPIKE SAMPLE: | | 1966374 | | | | | |
|----------------------|-------|-----------------------|----------------|--------------|-------------|-----------------|------------|
| Parameter | Units | 60245678001 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
| Barium | ug/L | 314 | 1000 | 1330 | 101 | 70-130 | |
| Beryllium | ug/L | <0.16 | 1000 | 1040 | 104 | 70-130 | |
| Boron | ug/L | 56.4J | 1000 | 1130 | 108 | 70-130 | |
| Calcium | ug/L | 136000 | 10000 | 146000 | 99 | 70-130 | |
| Cobalt | ug/L | <0.73 | 1000 | 1020 | 102 | 70-130 | |
| Lead | ug/L | <2.4 | 1000 | 983 | 98 | 70-130 | |
| Lithium | ug/L | 8.3J | 1000 | 1060 | 105 | 70-130 | |
| Molybdenum | ug/L | 1.6J | 1000 | 1050 | 105 | 70-130 | |

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR -FLY

Pace Project No.: 60245569

QC Batch: 480093 Analysis Method: EPA 200.8
 QC Batch Method: EPA 200.8 Analysis Description: 200.8 MET
 Associated Lab Samples: 60245569001, 60245569002, 60245569003, 60245569004, 60245569005, 60245569006, 60245569007, 60245569008, 60245678001, 60245678002, 60245678003, 60245678004

METHOD BLANK: 1966376 Matrix: Water
 Associated Lab Samples: 60245569001, 60245569002, 60245569003, 60245569004, 60245569005, 60245569006, 60245569007, 60245569008, 60245678001, 60245678002, 60245678003, 60245678004

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|-------|----------------|------------|
| Antimony | ug/L | <0.026 | 1.0 | 0.026 | 06/08/17 14:29 | |
| Arsenic | ug/L | <0.052 | 1.0 | 0.052 | 06/08/17 14:29 | |
| Cadmium | ug/L | <0.018 | 0.50 | 0.018 | 06/08/17 14:29 | |
| Chromium | ug/L | 0.12J | 1.0 | 0.054 | 06/08/17 14:29 | |
| Selenium | ug/L | <0.086 | 1.0 | 0.086 | 06/08/17 14:29 | |
| Thallium | ug/L | <0.036 | 1.0 | 0.036 | 06/08/17 14:29 | |

LABORATORY CONTROL SAMPLE: 1966377

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Antimony | ug/L | 40 | 39.4 | 99 | 85-115 | |
| Arsenic | ug/L | 40 | 40.4 | 101 | 85-115 | |
| Cadmium | ug/L | 40 | 39.2 | 98 | 85-115 | |
| Chromium | ug/L | 40 | 40.5 | 101 | 85-115 | |
| Selenium | ug/L | 40 | 39.0 | 97 | 85-115 | |
| Thallium | ug/L | 40 | 37.0 | 93 | 85-115 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1966378 1966379

| Parameter | Units | 60245569001 Result | MS | | MSD | | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|--------------------|-------------|-----------|------------|------------|----------|-----------|--------------|-----|---------|------|
| | | | Spike Conc. | MS Result | MSD Result | MSD Result | | | | | | |
| Antimony | ug/L | 0.033J | 40 | 38.8 | 38.9 | 97 | 97 | 70-130 | 0 | 20 | | |
| Arsenic | ug/L | 10.6 | 40 | 50.5 | 50.5 | 100 | 100 | 70-130 | 0 | 20 | | |
| Cadmium | ug/L | 0.025J | 40 | 37.1 | 37.8 | 93 | 94 | 70-130 | 2 | 20 | | |
| Chromium | ug/L | 0.18J | 40 | 40.1 | 39.8 | 100 | 99 | 70-130 | 1 | 20 | | |
| Selenium | ug/L | 0.13J | 40 | 36.8 | 35.5 | 92 | 89 | 70-130 | 4 | 20 | | |
| Thallium | ug/L | 0.090J | 40 | 39.6 | 40.0 | 99 | 100 | 70-130 | 1 | 20 | | |

MATRIX SPIKE SAMPLE: 1966380

| Parameter | Units | 60245569003 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|--------------------|-------------|-----------|----------|--------------|------------|
| Antimony | ug/L | <0.026 | 40 | 39.2 | 98 | 70-130 | |
| Arsenic | ug/L | 6.0 | 40 | 48.7 | 107 | 70-130 | |
| Cadmium | ug/L | <0.018 | 40 | 37.7 | 94 | 70-130 | |
| Chromium | ug/L | 0.19J | 40 | 39.9 | 99 | 70-130 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR -FLY

Pace Project No.: 60245569

| MATRIX SPIKE SAMPLE: | | 1966380 | | | | | |
|----------------------|-------|-----------------------|----------------|--------------|-------------|-----------------|------------|
| Parameter | Units | 60245569003 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
| Selenium | ug/L | 0.099J | 40 | 36.6 | 91 | 70-130 | |
| Thallium | ug/L | 0.038J | 40 | 39.6 | 99 | 70-130 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR -FLY

Pace Project No.: 60245569

QC Batch: 479556

Analysis Method: SM 2540C

QC Batch Method: SM 2540C

Analysis Description: 2540C Total Dissolved Solids

Associated Lab Samples: 60245569006, 60245569007

METHOD BLANK: 1964508

Matrix: Water

Associated Lab Samples: 60245569006, 60245569007

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|------------------------|-------|--------------|-----------------|-----|----------------|------------|
| Total Dissolved Solids | mg/L | <5.0 | 5.0 | 5.0 | 06/05/17 08:38 | |

LABORATORY CONTROL SAMPLE: 1964509

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|-------------|------------|-----------|--------------|------------|
| Total Dissolved Solids | mg/L | 1000 | 980 | 98 | 80-120 | |

SAMPLE DUPLICATE: 1964510

| Parameter | Units | 60245386001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L | 646 | 654 | 1 | 10 | |

SAMPLE DUPLICATE: 1964511

| Parameter | Units | 60245563004 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L | 493 | 483 | 2 | 10 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR -FLY

Pace Project No.: 60245569

QC Batch: 479750

Analysis Method: SM 2540C

QC Batch Method: SM 2540C

Analysis Description: 2540C Total Dissolved Solids

Associated Lab Samples: 60245569001, 60245569002, 60245569003, 60245569004, 60245569005, 60245569008

METHOD BLANK: 1964958

Matrix: Water

Associated Lab Samples: 60245569001, 60245569002, 60245569003, 60245569004, 60245569005, 60245569008

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|------------------------|-------|--------------|-----------------|-----|----------------|------------|
| Total Dissolved Solids | mg/L | <5.0 | 5.0 | 5.0 | 06/06/17 09:34 | |

LABORATORY CONTROL SAMPLE: 1964959

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|-------------|------------|-----------|--------------|------------|
| Total Dissolved Solids | mg/L | 1000 | 964 | 96 | 80-120 | |

SAMPLE DUPLICATE: 1964960

| Parameter | Units | 60245569001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L | 645 | 635 | 2 | 10 | |

SAMPLE DUPLICATE: 1964961

| Parameter | Units | 60245569001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L | 685 | 707 | 3 | 10 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR -FLY

Pace Project No.: 60245569

QC Batch: 479930

Analysis Method: SM 2540C

QC Batch Method: SM 2540C

Analysis Description: 2540C Total Dissolved Solids

Associated Lab Samples: 60245678001, 60245678002, 60245678003, 60245678004

METHOD BLANK: 1965744

Matrix: Water

Associated Lab Samples: 60245678001, 60245678002, 60245678003, 60245678004

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|------------------------|-------|--------------|-----------------|-----|----------------|------------|
| Total Dissolved Solids | mg/L | <5.0 | 5.0 | 5.0 | 06/07/17 09:45 | |

LABORATORY CONTROL SAMPLE: 1965745

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|-------------|------------|-----------|--------------|------------|
| Total Dissolved Solids | mg/L | 1000 | 959 | 96 | 80-120 | |

SAMPLE DUPLICATE: 1965746

| Parameter | Units | 60245701011 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L | ND | <5.0 | | 10 | |

SAMPLE DUPLICATE: 1965747

| Parameter | Units | 60245680003 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L | 711 | 707 | 1 | 10 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR -FLY

Pace Project No.: 60245569

QC Batch: 480008 Analysis Method: SM 4500-H+B

QC Batch Method: SM 4500-H+B Analysis Description: 4500H+B pH

Associated Lab Samples: 60245569007

SAMPLE DUPLICATE: 1965881

| Parameter | Units | 60245388001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|--------------------|------------|-----------------------|---------------|-----|------------|------------|
| pH at 25 Degrees C | Std. Units | 7.0 | 7.1 | 0 | 5 | H6 |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR -FLY

Pace Project No.: 60245569

QC Batch: 480042 Analysis Method: SM 4500-H+B

QC Batch Method: SM 4500-H+B Analysis Description: 4500H+B pH

Associated Lab Samples: 60245569001, 60245569002, 60245569003, 60245569004, 60245569005, 60245569008

SAMPLE DUPLICATE: 1966011

| Parameter | Units | 60245569001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|--------------------|------------|-----------------------|---------------|-----|------------|------------|
| pH at 25 Degrees C | Std. Units | 7.2 | 7.1 | 1 | 5 | H6 |

SAMPLE DUPLICATE: 1966012

| Parameter | Units | 60245563004 Result | Dup Result | RPD | Max RPD | Qualifiers |
|--------------------|------------|-----------------------|---------------|-----|------------|------------|
| pH at 25 Degrees C | Std. Units | 9.3 | 9.2 | 0 | 5 | H6 |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR -FLY

Pace Project No.: 60245569

QC Batch: 480061 Analysis Method: SM 4500-H+B

QC Batch Method: SM 4500-H+B Analysis Description: 4500H+B pH

Associated Lab Samples: 60245569006, 60245678001, 60245678002, 60245678003, 60245678004

SAMPLE DUPLICATE: 1966184

| Parameter | Units | 60245569006 Result | Dup Result | RPD | Max RPD | Qualifiers |
|--------------------|------------|-----------------------|---------------|-----|------------|------------|
| pH at 25 Degrees C | Std. Units | 7.2 | 7.3 | 1 | 5 | H6 |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR -FLY

Pace Project No.: 60245569

QC Batch: 479652 Analysis Method: EPA 300.0
 QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
 Associated Lab Samples: 60245678004

METHOD BLANK: 1964700 Matrix: Water
 Associated Lab Samples: 60245678004

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|------|----------------|------------|
| Chloride | mg/L | <0.50 | 1.0 | 0.50 | 06/05/17 08:44 | |
| Fluoride | mg/L | <0.10 | 0.20 | 0.10 | 06/05/17 08:44 | |
| Sulfate | mg/L | <0.50 | 1.0 | 0.50 | 06/05/17 08:44 | |

LABORATORY CONTROL SAMPLE: 1964701

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Chloride | mg/L | 5 | 5.0 | 100 | 90-110 | |
| Fluoride | mg/L | 2.5 | 2.6 | 103 | 90-110 | |
| Sulfate | mg/L | 5 | 4.8 | 95 | 90-110 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1964702 1964703

| Parameter | Units | 60245660006 | | MS | | MSD | | MS | | MSD | | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|-------------|----------------|-----------------|-----------|------------|----------|-----------|--------|-----|----|--------------|-----|---------|------|
| | | Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | | | | | | | |
| Chloride | mg/L | 1980 | 1000 | 1000 | 3130 | 3110 | 115 | 114 | 80-120 | 0 | 15 | | | | |
| Fluoride | mg/L | ND | 500 | 500 | 517 | 516 | 103 | 103 | 80-120 | 0 | 15 | | | | |
| Sulfate | mg/L | ND | 1000 | 1000 | 949 | 951 | 95 | 95 | 80-120 | 0 | 15 | | | | |

MATRIX SPIKE SAMPLE: 1964833

| Parameter | Units | 60245563004 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|--------------------|-------------|-----------|----------|--------------|------------|
| Chloride | mg/L | 19.0 | 10 | 30.1 | 111 | 80-120 | |
| Fluoride | mg/L | <0.10 | 2.5 | 2.6 | 102 | 80-120 | |
| Sulfate | mg/L | 246 | 100 | 343 | 96 | 80-120 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR -FLY

Pace Project No.: 60245569

QC Batch: 479757

Analysis Method: EPA 300.0

QC Batch Method: EPA 300.0

Analysis Description: 300.0 IC Anions

Associated Lab Samples: 60245569001, 60245569002, 60245569003, 60245569004, 60245569005, 60245569007

METHOD BLANK: 1964983

Matrix: Water

Associated Lab Samples: 60245569001, 60245569002, 60245569003, 60245569004, 60245569005, 60245569007

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|------|----------------|------------|
| Chloride | mg/L | <0.50 | 1.0 | 0.50 | 06/05/17 08:46 | |
| Fluoride | mg/L | <0.10 | 0.20 | 0.10 | 06/05/17 08:46 | |
| Sulfate | mg/L | <0.50 | 1.0 | 0.50 | 06/05/17 08:46 | |

LABORATORY CONTROL SAMPLE: 1964984

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Chloride | mg/L | 5 | 4.8 | 97 | 90-110 | |
| Fluoride | mg/L | 2.5 | 2.6 | 104 | 90-110 | |
| Sulfate | mg/L | 5 | 4.9 | 98 | 90-110 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1964985 1964986

| Parameter | Units | 60245569001 | | 60245569002 | | 60245569003 | | 60245569004 | | % Rec Limits | Max RPD | Qual |
|-----------|-------|----------------|-----------------|-------------|------------|-------------|-----------|-------------|--------|--------------|---------|------|
| | | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | | | | | |
| Chloride | mg/L | 5.1 | 5 | 5 | 10.3 | 10.3 | 103 | 105 | 80-120 | 1 | 15 | |
| Fluoride | mg/L | 0.26 | 2.5 | 2.5 | 3.0 | 3.1 | 111 | 113 | 80-120 | 1 | 15 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR -FLY

Pace Project No.: 60245569

QC Batch: 479826

Analysis Method: EPA 300.0

QC Batch Method: EPA 300.0

Analysis Description: 300.0 IC Anions

Associated Lab Samples: 60245569001, 60245569005, 60245569006, 60245678001, 60245678002, 60245678003

METHOD BLANK: 1965201

Matrix: Water

Associated Lab Samples: 60245569001, 60245569005, 60245569006, 60245678001, 60245678002, 60245678003

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|------|----------------|------------|
| Chloride | mg/L | <0.50 | 1.0 | 0.50 | 06/06/17 09:04 | |
| Fluoride | mg/L | <0.10 | 0.20 | 0.10 | 06/06/17 09:04 | |
| Sulfate | mg/L | <0.50 | 1.0 | 0.50 | 06/06/17 09:04 | |

LABORATORY CONTROL SAMPLE: 1965202

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Chloride | mg/L | 5 | 5.0 | 99 | 90-110 | |
| Fluoride | mg/L | 2.5 | 2.7 | 106 | 90-110 | |
| Sulfate | mg/L | 5 | 5.0 | 101 | 90-110 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1965203 1965204

| Parameter | Units | 60245683010 | | MS | | MSD | | MS | | MSD | | % Rec Limits | Max RPD | Qual |
|-----------|-------|-------------|-------|-------------|-------|--------|--------|-------|--------|-----|----|--------------|---------|------|
| | | Result | Conc. | Spike Conc. | Conc. | Result | Result | % Rec | % Rec | | | | | |
| Chloride | mg/L | 80.6 | 125 | 125 | 209 | 210 | 103 | 103 | 80-120 | 0 | 15 | | | |
| Fluoride | mg/L | ND | 62.5 | 62.5 | 70.4 | 70.8 | 110 | 111 | 80-120 | 1 | 15 | | | |
| Sulfate | mg/L | 297 | 125 | 125 | 430 | 428 | 107 | 105 | 80-120 | 1 | 15 | | | |

MATRIX SPIKE SAMPLE: 1965205

| Parameter | Units | 60245569001 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|--------------------|-------------|-----------|----------|--------------|------------|
| Sulfate | mg/L | 154 | 100 | 258 | 104 | 80-120 | |

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR -FLY

Pace Project No.: 60245569

QC Batch: 480020 Analysis Method: EPA 300.0

QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions

Associated Lab Samples: 60245569006, 60245678002, 60245678003

METHOD BLANK: 1965938 Matrix: Water

Associated Lab Samples: 60245569006, 60245678002, 60245678003

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|------|----------------|------------|
| Sulfate | mg/L | <0.50 | 1.0 | 0.50 | 06/07/17 18:43 | |

LABORATORY CONTROL SAMPLE: 1965939

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Sulfate | mg/L | 5 | 5.0 | 99 | 90-110 | |

MATRIX SPIKE SAMPLE: 1965942

| Parameter | Units | 60245794001 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|--------------------|-------------|-----------|----------|--------------|------------|
| Sulfate | mg/L | 31.6 | 25 | 56.6 | 100 | 80-120 | |

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR -FLY
Pace Project No.: 60245569

QC Batch: 480192 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 60245569008

METHOD BLANK: 1966778 Matrix: Water
Associated Lab Samples: 60245569008

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|------|----------------|------------|
| Chloride | mg/L | <0.50 | 1.0 | 0.50 | 06/08/17 08:47 | |
| Fluoride | mg/L | <0.10 | 0.20 | 0.10 | 06/08/17 08:47 | |
| Sulfate | mg/L | <0.50 | 1.0 | 0.50 | 06/08/17 08:47 | |

LABORATORY CONTROL SAMPLE: 1966779

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Chloride | mg/L | 5 | 5.0 | 99 | 90-110 | |
| Fluoride | mg/L | 2.5 | 2.7 | 109 | 90-110 | |
| Sulfate | mg/L | 5 | 5.1 | 102 | 90-110 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1966780 1966781

| Parameter | Units | 60245829001 | | 1966780 | | 1966781 | | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|----------------|-----------------|-----------|------------|----------|-----------|--------------|--------|---------|------|
| | | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | | | | |
| Chloride | mg/L | 579 | 1250 | 1250 | 1830 | 1830 | 100 | 100 | 80-120 | 0 | 15 |
| Fluoride | mg/L | ND | 625 | 625 | 704 | 699 | 113 | 112 | 80-120 | 1 | 15 |
| Sulfate | mg/L | 3780 | 1250 | 1250 | 5090 | 5090 | 105 | 105 | 80-120 | 0 | 15 |

MATRIX SPIKE SAMPLE: 1966782

| Parameter | Units | 60245944001 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|--------------------|-------------|-----------|----------|--------------|------------|
| Chloride | mg/L | 2270 | 1000 | 3400 | 113 | 80-120 | |
| Fluoride | mg/L | ND | 500 | 560 | 112 | 80-120 | |
| Sulfate | mg/L | ND | 1000 | 1100 | 100 | 80-120 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR -FLY

Pace Project No.: 60245569

QC Batch: 482449

Analysis Method: EPA 300.0

QC Batch Method: EPA 300.0

Analysis Description: 300.0 IC Anions

Associated Lab Samples: 60245569007

METHOD BLANK: 1976681

Matrix: Water

Associated Lab Samples: 60245569007

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|------|----------------|------------|
| Sulfate | mg/L | <0.50 | 1.0 | 0.50 | 06/24/17 13:25 | |

LABORATORY CONTROL SAMPLE: 1976682

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

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REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR -FLY

Pace Project No.: 60245569

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|--|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.170 ± 0.259 (0.417) C:NA T:97% | pCi/L | 06/15/17 23:52 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 0.815 ± 0.394 (0.667) C:84% T:77% | pCi/L | 06/20/17 16:02 | 15262-20-1 | |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR -FLY

Pace Project No.: 60245569

Sample: L-LMW-2S **Lab ID: 60245569002** Collected: 06/01/17 10:53 Received: 06/02/17 04:05 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|--|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.240 ± 0.275 (0.162) C:NA T:93% | pCi/L | 06/15/17 23:52 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 0.219 ± 0.280 (0.594) C:77% T:87% | pCi/L | 06/20/17 16:02 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR -FLY

Pace Project No.: 60245569

Sample: L-LMW-3S **Lab ID: 60245569003** Collected: 06/01/17 15:15 Received: 06/02/17 04:05 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|---|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.182 ± 0.316 (0.564) C:NA T:85% | pCi/L | 06/15/17 23:52 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 0.454 ± 0.293 (0.537) C:78% T:87% | pCi/L | 06/20/17 16:02 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR -FLY

Pace Project No.: 60245569

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|---|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | -0.053 ± 0.431 (0.889) C:NA T:94% | pCi/L | 06/16/17 10:11 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 0.385 ± 0.397 (0.825) C:77% T:81% | pCi/L | 06/20/17 14:39 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR -FLY

Pace Project No.: 60245569

Sample: L-LMW-8S **Lab ID: 60245569005** Collected: 06/01/17 14:31 Received: 06/02/17 04:05 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|--|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.477 ± 0.316 (0.144) C:NA T:104% | pCi/L | 06/16/17 10:11 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 0.498 ± 0.441 (0.895) C:71% T:87% | pCi/L | 06/20/17 14:40 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR -FLY

Pace Project No.: 60245569

Sample: L-BMW-1S **Lab ID: 60245569006** Collected: 05/31/17 10:47 Received: 06/02/17 04:05 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|---|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.509 ± 0.357 (0.172) C:NA T:84% | pCi/L | 06/16/17 10:11 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 1.88 ± 0.592 (0.767) C:74% T:85% | pCi/L | 06/20/17 14:40 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR -FLY

Pace Project No.: 60245569

Sample: L-BMW-2S **Lab ID: 60245569007** Collected: 05/31/17 12:01 Received: 06/02/17 04:05 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|--|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.528 ± 0.333 (0.143) C:NA T:99% | pCi/L | 06/16/17 10:11 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 0.181 ± 0.448 (0.994) C:73% T:88% | pCi/L | 06/20/17 14:40 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR -FLY

Pace Project No.: 60245569

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|--|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.0543 ± 0.248 (0.400) C:NA T:97% | pCi/L | 06/16/17 10:11 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 0.0423 ± 0.389 (0.896) C:72% T:81% | pCi/L | 06/20/17 14:40 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR -FLY

Pace Project No.: 60245569

Sample: L-LMW-5S **Lab ID: 60245678001** Collected: 06/02/17 11:30 Received: 06/03/17 08:00 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|---|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.460 ± 0.431 (0.610) C:NA T:82% | pCi/L | 06/16/17 10:30 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 1.07 ± 0.447 (0.716) C:70% T:98% | pCi/L | 06/20/17 14:40 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR -FLY

Pace Project No.: 60245569

Sample: L-LMW-6S **Lab ID: 60245678002** Collected: 06/02/17 09:20 Received: 06/03/17 08:00 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|--|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.690 ± 0.483 (0.637) C:NA T:100% | pCi/L | 06/16/17 10:30 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 0.667 ± 0.453 (0.871) C:77% T:74% | pCi/L | 06/20/17 14:41 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR -FLY

Pace Project No.: 60245569

Sample: L-LMW-7S **Lab ID: 60245678003** Collected: 06/02/17 10:30 Received: 06/03/17 08:00 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|---|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.473 ± 0.333 (0.160) C:NA T:94% | pCi/L | 06/16/17 10:30 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 0.256 ± 0.377 (0.813) C:77% T:79% | pCi/L | 06/20/17 14:41 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR -FLY

Pace Project No.: 60245569

Sample: L-LMW-FB-1 **Lab ID: 60245678004** Collected: 06/02/17 11:03 Received: 06/03/17 08:00 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|---|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 0.284 ± 0.484 (0.854) C:NA T:71% | pCi/L | 06/16/17 10:30 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 0.736 ± 0.413 (0.742) C:72% T:83% | pCi/L | 06/20/17 14:41 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR -FLY

Pace Project No.: 60245569

Sample: L-LMW-1S MS **Lab ID: 60245569013** Collected: 06/01/17 11:14 Received: 06/02/17 04:05 Matrix: Water
PWS: Site ID: Sample Type:

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|---|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 107 %REC +/- NA (NA) C:NA T:NA | pCi/L | 06/16/17 10:30 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 123 %REC +/- NA (NA) C:NA T:NA | pCi/L | 06/20/17 14:41 | 15262-20-1 | |

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR -FLY

Pace Project No.: 60245569

| Parameters | Method | Act ± Unc (MDC) Carr Trac | Units | Analyzed | CAS No. | Qual |
|------------|-----------|--|-------|----------------|------------|------|
| Radium-226 | EPA 903.1 | 103 %REC 3.28 RPD +/- NA (NA) C:NA T:NA | pCi/L | 06/16/17 10:30 | 13982-63-3 | |
| Radium-228 | EPA 904.0 | 101 %REC 19.5 RPD +/- NA (NA) C:NA T:NA | pCi/L | 06/20/17 14:41 | 15262-20-1 | |

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR -FLY

Pace Project No.: 60245569

| | | | |
|-------------------------|---|-----------------------|------------------|
| QC Batch: | 261084 | Analysis Method: | EPA 904.0 |
| QC Batch Method: | EPA 904.0 | Analysis Description: | 904.0 Radium 228 |
| Associated Lab Samples: | 60245569004, 60245569005, 60245569006, 60245569007, 60245569008, 60245569013, 60245569014, 60245678001, 60245678002, 60245678003, 60245678004 | | |

| | | | |
|-------------------------|---|---------|-------|
| METHOD BLANK: | 1285493 | Matrix: | Water |
| Associated Lab Samples: | 60245569004, 60245569005, 60245569006, 60245569007, 60245569008, 60245569013, 60245569014, 60245678001, 60245678002, 60245678003, 60245678004 | | |

| Parameter | Act ± Unc (MDC) Carr Trac | Units | Analyzed | Qualifiers |
|------------|-----------------------------------|-------|----------------|------------|
| Radium-228 | 0.432 ± 0.370 (0.743) C:76% T:81% | pCi/L | 06/20/17 14:39 | |

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR -FLY

Pace Project No.: 60245569

QC Batch: 261083 Analysis Method: EPA 904.0

QC Batch Method: EPA 904.0 Analysis Description: 904.0 Radium 228

Associated Lab Samples: 60245569001, 60245569002, 60245569003

METHOD BLANK: 1285492 Matrix: Water

Associated Lab Samples: 60245569001, 60245569002, 60245569003

| Parameter | Act ± Unc (MDC) Carr Trac | Units | Analyzed | Qualifiers |
|------------|-----------------------------------|-------|----------------|------------|
| Radium-228 | 0.374 ± 0.360 (0.742) C:77% T:88% | pCi/L | 06/20/17 16:00 | |

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR -FLY

Pace Project No.: 60245569

QC Batch: 261072 Analysis Method: EPA 903.1

QC Batch Method: EPA 903.1 Analysis Description: 903.1 Radium-226

Associated Lab Samples: 60245569001, 60245569002, 60245569003

METHOD BLANK: 1285474 Matrix: Water

Associated Lab Samples: 60245569001, 60245569002, 60245569003

| Parameter | Act ± Unc (MDC) Carr Trac | Units | Analyzed | Qualifiers |
|------------|----------------------------------|-------|----------------|------------|
| Radium-226 | 0.235 ± 0.327 (0.547) C:NA T:94% | pCi/L | 06/15/17 23:06 | |

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QUALITY CONTROL - RADIOCHEMISTRY

Project: AMEREN LABADIE ENERGY CTR -FLY

Pace Project No.: 60245569

| | | | |
|-------------------------|---|-----------------------|------------------|
| QC Batch: | 261073 | Analysis Method: | EPA 903.1 |
| QC Batch Method: | EPA 903.1 | Analysis Description: | 903.1 Radium-226 |
| Associated Lab Samples: | 60245569004, 60245569005, 60245569006, 60245569007, 60245569008, 60245569013, 60245569014, 60245678001, 60245678002, 60245678003, 60245678004 | | |

| | | | |
|-------------------------|---|---------|-------|
| METHOD BLANK: | 1285475 | Matrix: | Water |
| Associated Lab Samples: | 60245569004, 60245569005, 60245569006, 60245569007, 60245569008, 60245569013, 60245569014, 60245678001, 60245678002, 60245678003, 60245678004 | | |

| Parameter | Act ± Unc (MDC) Carr Trac | Units | Analyzed | Qualifiers |
|------------|----------------------------------|-------|----------------|------------|
| Radium-226 | 1.21 ± 0.533 (0.386) C:NA T:102% | pCi/L | 06/16/17 11:01 | 1e |

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: AMEREN LABADIE ENERGY CTR -FLY

Pace Project No.: 60245569

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.

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.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

Act - Activity

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

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

LABORATORIES

PASI-K Pace Analytical Services - Kansas City

PASI-PA Pace Analytical Services - Greensburg

ANALYTE QUALIFIERS

1e The Ra-226 MB associated with batch 36049 was greater than the associated MDC, but less than the analysis RL. Pace allows reporting of results when the MB result is less than the RL.

B Analyte was detected in the associated method blank.

H6 Analysis initiated outside of the 15 minute EPA required holding time.

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

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN LABADIE ENERGY CTR -FLY

Pace Project No.: 60245569

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|-------------|-------------|-----------------|----------|-------------------|------------------|
| 60245569001 | L-LMW-1S | EPA 200.7 | 480092 | EPA 200.7 | 480184 |
| 60245569002 | L-LMW-2S | EPA 200.7 | 480092 | EPA 200.7 | 480184 |
| 60245569003 | L-LMW-3S | EPA 200.7 | 480092 | EPA 200.7 | 480184 |
| 60245569004 | L-LMW-4S | EPA 200.7 | 480092 | EPA 200.7 | 480184 |
| 60245569005 | L-LMW-8S | EPA 200.7 | 480092 | EPA 200.7 | 480184 |
| 60245569006 | L-BMW-1S | EPA 200.7 | 480092 | EPA 200.7 | 480184 |
| 60245569007 | L-BMW-2S | EPA 200.7 | 480092 | EPA 200.7 | 480184 |
| 60245569008 | L-LMW-DUP-1 | EPA 200.7 | 480092 | EPA 200.7 | 480184 |
| 60245678001 | L-LMW-5S | EPA 200.7 | 480092 | EPA 200.7 | 480184 |
| 60245678002 | L-LMW-6S | EPA 200.7 | 480092 | EPA 200.7 | 480184 |
| 60245678003 | L-LMW-7S | EPA 200.7 | 480092 | EPA 200.7 | 480184 |
| 60245678004 | L-LMW-FB-1 | EPA 200.7 | 480092 | EPA 200.7 | 480184 |
| 60245569001 | L-LMW-1S | EPA 200.8 | 480093 | EPA 200.8 | 480185 |
| 60245569002 | L-LMW-2S | EPA 200.8 | 480093 | EPA 200.8 | 480185 |
| 60245569003 | L-LMW-3S | EPA 200.8 | 480093 | EPA 200.8 | 480185 |
| 60245569004 | L-LMW-4S | EPA 200.8 | 480093 | EPA 200.8 | 480185 |
| 60245569005 | L-LMW-8S | EPA 200.8 | 480093 | EPA 200.8 | 480185 |
| 60245569006 | L-BMW-1S | EPA 200.8 | 480093 | EPA 200.8 | 480185 |
| 60245569007 | L-BMW-2S | EPA 200.8 | 480093 | EPA 200.8 | 480185 |
| 60245569008 | L-LMW-DUP-1 | EPA 200.8 | 480093 | EPA 200.8 | 480185 |
| 60245678001 | L-LMW-5S | EPA 200.8 | 480093 | EPA 200.8 | 480185 |
| 60245678002 | L-LMW-6S | EPA 200.8 | 480093 | EPA 200.8 | 480185 |
| 60245678003 | L-LMW-7S | EPA 200.8 | 480093 | EPA 200.8 | 480185 |
| 60245678004 | L-LMW-FB-1 | EPA 200.8 | 480093 | EPA 200.8 | 480185 |
| 60245569001 | L-LMW-1S | EPA 7470 | 480125 | EPA 7470 | 480203 |
| 60245569002 | L-LMW-2S | EPA 7470 | 480125 | EPA 7470 | 480203 |
| 60245569003 | L-LMW-3S | EPA 7470 | 480125 | EPA 7470 | 480203 |
| 60245569004 | L-LMW-4S | EPA 7470 | 480125 | EPA 7470 | 480203 |
| 60245569005 | L-LMW-8S | EPA 7470 | 480125 | EPA 7470 | 480203 |
| 60245569006 | L-BMW-1S | EPA 7470 | 480125 | EPA 7470 | 480203 |
| 60245569007 | L-BMW-2S | EPA 7470 | 480125 | EPA 7470 | 480203 |
| 60245569008 | L-LMW-DUP-1 | EPA 7470 | 480125 | EPA 7470 | 480203 |
| 60245678001 | L-LMW-5S | EPA 7470 | 480125 | EPA 7470 | 480203 |
| 60245678002 | L-LMW-6S | EPA 7470 | 480125 | EPA 7470 | 480203 |
| 60245678003 | L-LMW-7S | EPA 7470 | 480125 | EPA 7470 | 480203 |
| 60245678004 | L-LMW-FB-1 | EPA 7470 | 480125 | EPA 7470 | 480203 |
| 60245569001 | L-LMW-1S | EPA 903.1 | 261072 | | |
| 60245569002 | L-LMW-2S | EPA 903.1 | 261072 | | |
| 60245569003 | L-LMW-3S | EPA 903.1 | 261072 | | |
| 60245569004 | L-LMW-4S | EPA 903.1 | 261073 | | |
| 60245569005 | L-LMW-8S | EPA 903.1 | 261073 | | |
| 60245569006 | L-BMW-1S | EPA 903.1 | 261073 | | |
| 60245569007 | L-BMW-2S | EPA 903.1 | 261073 | | |
| 60245569008 | L-LMW-DUP-1 | EPA 903.1 | 261073 | | |
| 60245678001 | L-LMW-5S | EPA 903.1 | 261073 | | |
| 60245678002 | L-LMW-6S | EPA 903.1 | 261073 | | |
| 60245678003 | L-LMW-7S | EPA 903.1 | 261073 | | |

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN LABADIE ENERGY CTR -FLY

Pace Project No.: 60245569

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|-------------|--------------|-----------------|----------|-------------------|------------------|
| 60245678004 | L-LMW-FB-1 | EPA 903.1 | 261073 | | |
| 60245569013 | L-LMW-1S MS | EPA 903.1 | 261073 | | |
| 60245569014 | L-LMW-1S MSD | EPA 903.1 | 261073 | | |
| 60245569001 | L-LMW-1S | EPA 904.0 | 261083 | | |
| 60245569002 | L-LMW-2S | EPA 904.0 | 261083 | | |
| 60245569003 | L-LMW-3S | EPA 904.0 | 261083 | | |
| 60245569004 | L-LMW-4S | EPA 904.0 | 261084 | | |
| 60245569005 | L-LMW-8S | EPA 904.0 | 261084 | | |
| 60245569006 | L-BMW-1S | EPA 904.0 | 261084 | | |
| 60245569007 | L-BMW-2S | EPA 904.0 | 261084 | | |
| 60245569008 | L-LMW-DUP-1 | EPA 904.0 | 261084 | | |
| 60245678001 | L-LMW-5S | EPA 904.0 | 261084 | | |
| 60245678002 | L-LMW-6S | EPA 904.0 | 261084 | | |
| 60245678003 | L-LMW-7S | EPA 904.0 | 261084 | | |
| 60245678004 | L-LMW-FB-1 | EPA 904.0 | 261084 | | |
| 60245569013 | L-LMW-1S MS | EPA 904.0 | 261084 | | |
| 60245569014 | L-LMW-1S MSD | EPA 904.0 | 261084 | | |
| 60245569001 | L-LMW-1S | SM 2540C | 479750 | | |
| 60245569002 | L-LMW-2S | SM 2540C | 479750 | | |
| 60245569003 | L-LMW-3S | SM 2540C | 479750 | | |
| 60245569004 | L-LMW-4S | SM 2540C | 479750 | | |
| 60245569005 | L-LMW-8S | SM 2540C | 479750 | | |
| 60245569006 | L-BMW-1S | SM 2540C | 479556 | | |
| 60245569007 | L-BMW-2S | SM 2540C | 479556 | | |
| 60245569008 | L-LMW-DUP-1 | SM 2540C | 479750 | | |
| 60245678001 | L-LMW-5S | SM 2540C | 479930 | | |
| 60245678002 | L-LMW-6S | SM 2540C | 479930 | | |
| 60245678003 | L-LMW-7S | SM 2540C | 479930 | | |
| 60245678004 | L-LMW-FB-1 | SM 2540C | 479930 | | |
| 60245569001 | L-LMW-1S | SM 4500-H+B | 480042 | | |
| 60245569002 | L-LMW-2S | SM 4500-H+B | 480042 | | |
| 60245569003 | L-LMW-3S | SM 4500-H+B | 480042 | | |
| 60245569004 | L-LMW-4S | SM 4500-H+B | 480042 | | |
| 60245569005 | L-LMW-8S | SM 4500-H+B | 480042 | | |
| 60245569006 | L-BMW-1S | SM 4500-H+B | 480061 | | |
| 60245569007 | L-BMW-2S | SM 4500-H+B | 480008 | | |
| 60245569008 | L-LMW-DUP-1 | SM 4500-H+B | 480042 | | |
| 60245678001 | L-LMW-5S | SM 4500-H+B | 480061 | | |
| 60245678002 | L-LMW-6S | SM 4500-H+B | 480061 | | |
| 60245678003 | L-LMW-7S | SM 4500-H+B | 480061 | | |
| 60245678004 | L-LMW-FB-1 | SM 4500-H+B | 480061 | | |
| 60245569001 | L-LMW-1S | EPA 300.0 | 479757 | | |

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN LABADIE ENERGY CTR -FLY

Pace Project No.: 60245569

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|-------------|-------------|-----------------|----------|-------------------|------------------|
| 60245569001 | L-LMW-1S | EPA 300.0 | 479826 | | |
| 60245569002 | L-LMW-2S | EPA 300.0 | 479757 | | |
| 60245569003 | L-LMW-3S | EPA 300.0 | 479757 | | |
| 60245569004 | L-LMW-4S | EPA 300.0 | 479757 | | |
| 60245569005 | L-LMW-8S | EPA 300.0 | 479757 | | |
| 60245569005 | L-LMW-8S | EPA 300.0 | 479826 | | |
| 60245569006 | L-BMW-1S | EPA 300.0 | 479826 | | |
| 60245569006 | L-BMW-1S | EPA 300.0 | 480020 | | |
| 60245569007 | L-BMW-2S | EPA 300.0 | 479757 | | |
| 60245569007 | L-BMW-2S | EPA 300.0 | 482449 | | |
| 60245569008 | L-LMW-DUP-1 | EPA 300.0 | 480192 | | |
| 60245678001 | L-LMW-5S | EPA 300.0 | 479826 | | |
| 60245678002 | L-LMW-6S | EPA 300.0 | 479826 | | |
| 60245678002 | L-LMW-6S | EPA 300.0 | 480020 | | |
| 60245678003 | L-LMW-7S | EPA 300.0 | 479826 | | |
| 60245678003 | L-LMW-7S | EPA 300.0 | 480020 | | |
| 60245678004 | L-LMW-FB-1 | EPA 300.0 | 479652 | | |

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Sample Condition Upon Receipt

WO#: 60245569



26

Client Name: Golder

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

Tracking #: _____ Pace Shipping Label Used? Yes No

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

Packing Material: Bubble Wrap Bubble Bags Foam None Other

Thermometer Used: T-266 / T-239 Type of Ice: Wet Blue None

Cooler Temperature (°C): As-read 1.0/17.2 Corr. Factor CF +2.9 CF +0.2 Corrected 1.2/17.4/15.2

Date and initials of person examining contents:

Temperature should be above freezing to 6°C 15.0

p 6/2/17

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

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

January 02, 2018

Mark Haddock
Golder Associates
820 S. Main St
Suite 100
Saint Charles, MO 63301

RE: Project: AMEREN LABADIE ENERGY CTR-FLY
Pace Project No.: 60257955

Dear Mark Haddock:

Enclosed are the analytical results for sample(s) received by the laboratory on November 11, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

REV-1, 1/2/18: Sample bottle mislabel for metals L-LMW-1S/L-BMW-1S and L-LMW-2S/L-BMW-2S.

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

Sincerely,



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

Enclosures

cc: Ryan Feldmann, Golder
Jeffrey Ingram, Golder Associates
John Suozzi, Golder Associates



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60257955

Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 17-016-0

Illinois Certification #: 200030

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212018-1

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407

Utah Certification #: KS00021

Kansas Field Laboratory Accreditation: # E-92587

Missouri Certification: 10070

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60257955

| Lab ID | Sample ID | Matrix | Date Collected | Date Received |
|-------------|-------------|--------|----------------|----------------|
| 60257955001 | L-LMW-1S | Water | 11/08/17 11:38 | 11/11/17 03:20 |
| 60257955002 | L-LMW-2S | Water | 11/07/17 11:28 | 11/11/17 03:20 |
| 60257955003 | L-LMW-3S | Water | 11/08/17 12:20 | 11/11/17 03:20 |
| 60257955004 | L-LMW-4S | Water | 11/08/17 13:10 | 11/11/17 03:20 |
| 60257955005 | L-LMW-5S | Water | 11/08/17 14:00 | 11/11/17 03:20 |
| 60257955006 | L-LMW-6S | Water | 11/08/17 14:45 | 11/11/17 03:20 |
| 60257955007 | L-LMW-7S | Water | 11/08/17 13:50 | 11/11/17 03:20 |
| 60257955008 | L-LMW-8S | Water | 11/08/17 12:50 | 11/11/17 03:20 |
| 60257955009 | L-BMW-1S | Water | 11/07/17 10:25 | 11/11/17 03:20 |
| 60257955010 | L-BMW-2S | Water | 11/07/17 11:28 | 11/11/17 03:20 |
| 60257955011 | L-LMW-DUP-1 | Water | 11/08/17 08:00 | 11/11/17 03:20 |
| 60257955012 | L-LMW-FB-1 | Water | 11/08/17 11:45 | 11/11/17 03:20 |

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60257955

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|-------------|-----------|-----------|----------|-------------------|------------|
| 60257955001 | L-LMW-1S | EPA 200.7 | TDS | 7 | PASI-K |
| | | SM 2320B | JSS | 1 | PASI-K |
| | | SM 2540C | HMM | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| 60257955002 | L-LMW-2S | EPA 200.7 | TDS | 7 | PASI-K |
| | | SM 2320B | JSS | 1 | PASI-K |
| | | SM 2540C | HMM | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| 60257955003 | L-LMW-3S | EPA 200.7 | TDS | 7 | PASI-K |
| | | SM 2320B | JSS | 1 | PASI-K |
| | | SM 2540C | HMM | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| 60257955004 | L-LMW-4S | EPA 200.7 | TDS | 7 | PASI-K |
| | | SM 2320B | JSS | 1 | PASI-K |
| | | SM 2540C | HMM | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| 60257955005 | L-LMW-5S | EPA 200.7 | TDS | 7 | PASI-K |
| | | SM 2320B | JSS | 1 | PASI-K |
| | | SM 2540C | HMM | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| 60257955006 | L-LMW-6S | EPA 200.7 | TDS | 7 | PASI-K |
| | | SM 2320B | JSS | 1 | PASI-K |
| | | SM 2540C | HMM | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| 60257955007 | L-LMW-7S | EPA 200.7 | TDS | 7 | PASI-K |
| | | SM 2320B | JSS | 1 | PASI-K |
| | | SM 2540C | HMM | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| 60257955008 | L-LMW-8S | EPA 200.7 | TDS | 7 | PASI-K |
| | | SM 2320B | JSS | 1 | PASI-K |
| | | SM 2540C | HMM | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| 60257955009 | L-BMW-1S | EPA 200.7 | TDS | 7 | PASI-K |
| | | SM 2320B | JSS | 1 | PASI-K |
| | | SM 2540C | HMM | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| 60257955010 | L-BMW-2S | EPA 200.7 | SMW | 7 | PASI-K |

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SAMPLE ANALYTE COUNT

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60257955

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|-------------|-------------|-----------|----------|-------------------|------------|
| 60257955011 | L-LMW-DUP-1 | SM 2320B | JSS | 1 | PASI-K |
| | | SM 2540C | HMM | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |
| | | EPA 200.7 | TDS | 7 | PASI-K |
| | | SM 2320B | JSS | 1 | PASI-K |
| | | SM 2540C | HMM | 1 | PASI-K |
| 60257955012 | L-LMW-FB-1 | EPA 300.0 | OL | 3 | PASI-K |
| | | EPA 200.7 | TDS | 7 | PASI-K |
| | | SM 2320B | JSS | 1 | PASI-K |
| | | SM 2540C | HMM | 1 | PASI-K |
| | | EPA 300.0 | OL | 3 | PASI-K |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60257955

Sample: L-LMW-1S **Lab ID: 60257955001** Collected: 11/08/17 11:38 Received: 11/11/17 03:20 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|--|---------------|---|------|------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Boron | 4570 | ug/L | 100 | 3.5 | 1 | 11/18/17 12:30 | 11/25/17 14:36 | 7440-42-8 | |
| Calcium | 178000 | ug/L | 100 | 36.0 | 1 | 11/18/17 12:30 | 11/25/17 14:36 | 7440-70-2 | |
| Iron | 4940 | ug/L | 50.0 | 12.4 | 1 | 11/18/17 12:30 | 11/25/17 14:36 | 7439-89-6 | |
| Magnesium | 31800 | ug/L | 50.0 | 15.4 | 1 | 11/18/17 12:30 | 11/25/17 14:36 | 7439-95-4 | |
| Manganese | 1620 | ug/L | 5.0 | 1.8 | 1 | 11/18/17 12:30 | 11/25/17 14:36 | 7439-96-5 | |
| Potassium | 5590 | ug/L | 500 | 52.3 | 1 | 11/18/17 12:30 | 11/25/17 14:36 | 7440-09-7 | |
| Sodium | 10800 | ug/L | 500 | 28.4 | 1 | 11/18/17 12:30 | 11/25/17 14:36 | 7440-23-5 | |
| 2320B Alkalinity | | Analytical Method: SM 2320B | | | | | | | |
| Alkalinity, Total as CaCO ₃ | 633 | mg/L | 20.0 | 4.9 | 1 | | 11/16/17 13:21 | | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 703 | mg/L | 5.0 | 5.0 | 1 | | 11/15/17 22:13 | | |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 5.4 | mg/L | 1.0 | 0.50 | 1 | | 11/26/17 00:42 | 16887-00-6 | |
| Fluoride | 0.16J | mg/L | 0.20 | 0.10 | 1 | | 11/26/17 00:42 | 16984-48-8 | |
| Sulfate | 49.1 | mg/L | 5.0 | 2.5 | 5 | | 11/26/17 22:35 | 14808-79-8 | |

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60257955

Sample: L-LMW-2S **Lab ID: 60257955002** Collected: 11/07/17 11:28 Received: 11/11/17 03:20 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|--|-----------------|---|------|------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Boron | 6350 | ug/L | 100 | 3.5 | 1 | 11/18/17 12:30 | 11/25/17 14:09 | 7440-42-8 | |
| Calcium | 62200 | ug/L | 100 | 36.0 | 1 | 11/18/17 12:30 | 11/25/17 14:09 | 7440-70-2 | |
| Iron | <12.4 | ug/L | 50.0 | 12.4 | 1 | 11/18/17 12:30 | 11/25/17 14:09 | 7439-89-6 | |
| Magnesium | 143 | ug/L | 50.0 | 15.4 | 1 | 11/18/17 12:30 | 11/25/17 14:09 | 7439-95-4 | |
| Manganese | 2.1J | ug/L | 5.0 | 1.8 | 1 | 11/18/17 12:30 | 11/25/17 14:09 | 7439-96-5 | |
| Potassium | 8620 | ug/L | 500 | 52.3 | 1 | 11/18/17 12:30 | 11/25/17 14:09 | 7440-09-7 | |
| Sodium | 62000 | ug/L | 500 | 28.4 | 1 | 11/18/17 12:30 | 11/25/17 14:09 | 7440-23-5 | |
| 2320B Alkalinity | | Analytical Method: SM 2320B | | | | | | | |
| Alkalinity, Total as CaCO ₃ | 34.0 | mg/L | 20.0 | 4.9 | 1 | | 11/15/17 13:31 | | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 428 | mg/L | 5.0 | 5.0 | 1 | | 11/14/17 18:33 | | D6 |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 21.0 | mg/L | 2.0 | 1.0 | 2 | | 11/26/17 22:50 | 16887-00-6 | |
| Fluoride | 0.18J | mg/L | 0.20 | 0.10 | 1 | | 11/26/17 00:56 | 16984-48-8 | |
| Sulfate | 232 | mg/L | 20.0 | 10.0 | 20 | | 11/26/17 23:47 | 14808-79-8 | |

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60257955

Sample: L-LMW-3S **Lab ID: 60257955003** Collected: 11/08/17 12:20 Received: 11/11/17 03:20 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|--|---------------|---|------|------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Boron | 5350 | ug/L | 100 | 3.5 | 1 | 11/18/17 12:30 | 11/25/17 14:15 | 7440-42-8 | |
| Calcium | 74100 | ug/L | 100 | 36.0 | 1 | 11/18/17 12:30 | 11/25/17 14:15 | 7440-70-2 | |
| Iron | 5180 | ug/L | 50.0 | 12.4 | 1 | 11/18/17 12:30 | 11/25/17 14:15 | 7439-89-6 | |
| Magnesium | 7860 | ug/L | 50.0 | 15.4 | 1 | 11/18/17 12:30 | 11/25/17 14:15 | 7439-95-4 | |
| Manganese | 533 | ug/L | 5.0 | 1.8 | 1 | 11/18/17 12:30 | 11/25/17 14:15 | 7439-96-5 | |
| Potassium | 7120 | ug/L | 500 | 52.3 | 1 | 11/18/17 12:30 | 11/25/17 14:15 | 7440-09-7 | |
| Sodium | 115000 | ug/L | 500 | 28.4 | 1 | 11/18/17 12:30 | 11/25/17 14:15 | 7440-23-5 | |
| 2320B Alkalinity | | Analytical Method: SM 2320B | | | | | | | |
| Alkalinity, Total as CaCO ₃ | 199 | mg/L | 20.0 | 4.9 | 1 | | 11/16/17 13:25 | | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 632 | mg/L | 5.0 | 5.0 | 1 | | 11/15/17 22:14 | | |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 20.3 | mg/L | 2.0 | 1.0 | 2 | | 11/27/17 00:16 | 16887-00-6 | |
| Fluoride | 0.42 | mg/L | 0.20 | 0.10 | 1 | | 11/26/17 01:25 | 16984-48-8 | |
| Sulfate | 255 | mg/L | 20.0 | 10.0 | 20 | | 11/27/17 00:30 | 14808-79-8 | |

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60257955

Sample: L-LMW-4S **Lab ID: 60257955004** Collected: 11/08/17 13:10 Received: 11/11/17 03:20 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|--|---------------|---|------|------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Boron | 9160 | ug/L | 100 | 3.5 | 1 | 11/18/17 12:30 | 11/25/17 14:19 | 7440-42-8 | |
| Calcium | 139000 | ug/L | 100 | 36.0 | 1 | 11/18/17 12:30 | 11/25/17 14:19 | 7440-70-2 | |
| Iron | 5870 | ug/L | 50.0 | 12.4 | 1 | 11/18/17 12:30 | 11/25/17 14:19 | 7439-89-6 | |
| Magnesium | 26800 | ug/L | 50.0 | 15.4 | 1 | 11/18/17 12:30 | 11/25/17 14:19 | 7439-95-4 | |
| Manganese | 1680 | ug/L | 5.0 | 1.8 | 1 | 11/18/17 12:30 | 11/25/17 14:19 | 7439-96-5 | |
| Potassium | 7550 | ug/L | 500 | 52.3 | 1 | 11/18/17 12:30 | 11/25/17 14:19 | 7440-09-7 | |
| Sodium | 80100 | ug/L | 500 | 28.4 | 1 | 11/18/17 12:30 | 11/25/17 14:19 | 7440-23-5 | |
| 2320B Alkalinity | | Analytical Method: SM 2320B | | | | | | | |
| Alkalinity, Total as CaCO ₃ | 344 | mg/L | 20.0 | 4.9 | 1 | | 11/16/17 13:30 | | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 780 | mg/L | 5.0 | 5.0 | 1 | | 11/15/17 22:14 | | |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 22.6 | mg/L | 2.0 | 1.0 | 2 | | 11/27/17 00:45 | 16887-00-6 | |
| Fluoride | 0.22 | mg/L | 0.20 | 0.10 | 1 | | 11/26/17 01:39 | 16984-48-8 | |
| Sulfate | 250 | mg/L | 20.0 | 10.0 | 20 | | 11/27/17 00:59 | 14808-79-8 | |

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60257955

Sample: L-LMW-5S **Lab ID: 60257955005** Collected: 11/08/17 14:00 Received: 11/11/17 03:20 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|--|---------------|---|------|------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Boron | 108 | ug/L | 100 | 3.5 | 1 | 11/18/17 12:30 | 11/25/17 14:22 | 7440-42-8 | |
| Calcium | 131000 | ug/L | 100 | 36.0 | 1 | 11/18/17 12:30 | 11/25/17 14:22 | 7440-70-2 | |
| Iron | 20.4J | ug/L | 50.0 | 12.4 | 1 | 11/18/17 12:30 | 11/25/17 14:22 | 7439-89-6 | |
| Magnesium | 15400 | ug/L | 50.0 | 15.4 | 1 | 11/18/17 12:30 | 11/25/17 14:22 | 7439-95-4 | |
| Manganese | 21.1 | ug/L | 5.0 | 1.8 | 1 | 11/18/17 12:30 | 11/25/17 14:22 | 7439-96-5 | |
| Potassium | 3260 | ug/L | 500 | 52.3 | 1 | 11/18/17 12:30 | 11/25/17 14:22 | 7440-09-7 | |
| Sodium | 8450 | ug/L | 500 | 28.4 | 1 | 11/18/17 12:30 | 11/25/17 14:22 | 7440-23-5 | |
| 2320B Alkalinity | | Analytical Method: SM 2320B | | | | | | | |
| Alkalinity, Total as CaCO ₃ | 381 | mg/L | 20.0 | 4.9 | 1 | | 11/16/17 13:37 | | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 427 | mg/L | 5.0 | 5.0 | 1 | | 11/15/17 22:14 | | |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 3.6 | mg/L | 1.0 | 0.50 | 1 | | 11/26/17 02:23 | 16887-00-6 | |
| Fluoride | 0.19J | mg/L | 0.20 | 0.10 | 1 | | 11/26/17 02:23 | 16984-48-8 | |
| Sulfate | 13.3 | mg/L | 1.0 | 0.50 | 1 | | 11/26/17 02:23 | 14808-79-8 | |

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60257955

Sample: L-LMW-6S **Lab ID: 60257955006** Collected: 11/08/17 14:45 Received: 11/11/17 03:20 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|--|---------------|---|------|------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Boron | 843 | ug/L | 100 | 3.5 | 1 | 11/18/17 12:30 | 11/25/17 14:29 | 7440-42-8 | |
| Calcium | 167000 | ug/L | 100 | 36.0 | 1 | 11/18/17 12:30 | 11/25/17 14:29 | 7440-70-2 | |
| Iron | 722 | ug/L | 50.0 | 12.4 | 1 | 11/18/17 12:30 | 11/25/17 14:29 | 7439-89-6 | |
| Magnesium | 29500 | ug/L | 50.0 | 15.4 | 1 | 11/18/17 12:30 | 11/25/17 14:29 | 7439-95-4 | |
| Manganese | 786 | ug/L | 5.0 | 1.8 | 1 | 11/18/17 12:30 | 11/25/17 14:29 | 7439-96-5 | |
| Potassium | 6250 | ug/L | 500 | 52.3 | 1 | 11/18/17 12:30 | 11/25/17 14:29 | 7440-09-7 | |
| Sodium | 10900 | ug/L | 500 | 28.4 | 1 | 11/18/17 12:30 | 11/25/17 14:29 | 7440-23-5 | |
| 2320B Alkalinity | | Analytical Method: SM 2320B | | | | | | | |
| Alkalinity, Total as CaCO ₃ | 496 | mg/L | 20.0 | 4.9 | 1 | | 11/16/17 13:53 | | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 605 | mg/L | 5.0 | 5.0 | 1 | | 11/15/17 22:14 | | |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 3.0 | mg/L | 1.0 | 0.50 | 1 | | 11/26/17 02:37 | 16887-00-6 | |
| Fluoride | 0.17J | mg/L | 0.20 | 0.10 | 1 | | 11/26/17 02:37 | 16984-48-8 | |
| Sulfate | 51.2 | mg/L | 5.0 | 2.5 | 5 | | 11/27/17 01:14 | 14808-79-8 | |

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60257955

Sample: L-LMW-7S **Lab ID: 60257955007** Collected: 11/08/17 13:50 Received: 11/11/17 03:20 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|--|---------------|---|------|------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Boron | 3690 | ug/L | 100 | 3.5 | 1 | 11/18/17 12:30 | 11/25/17 14:31 | 7440-42-8 | |
| Calcium | 179000 | ug/L | 100 | 36.0 | 1 | 11/18/17 12:30 | 11/25/17 14:31 | 7440-70-2 | |
| Iron | 1460 | ug/L | 50.0 | 12.4 | 1 | 11/18/17 12:30 | 11/25/17 14:31 | 7439-89-6 | |
| Magnesium | 38800 | ug/L | 50.0 | 15.4 | 1 | 11/18/17 12:30 | 11/25/17 14:31 | 7439-95-4 | |
| Manganese | 1230 | ug/L | 5.0 | 1.8 | 1 | 11/18/17 12:30 | 11/25/17 14:31 | 7439-96-5 | |
| Potassium | 6690 | ug/L | 500 | 52.3 | 1 | 11/18/17 12:30 | 11/25/17 14:31 | 7440-09-7 | |
| Sodium | 20900 | ug/L | 500 | 28.4 | 1 | 11/18/17 12:30 | 11/25/17 14:31 | 7440-23-5 | |
| 2320B Alkalinity | | Analytical Method: SM 2320B | | | | | | | |
| Alkalinity, Total as CaCO ₃ | 464 | mg/L | 20.0 | 4.9 | 1 | | 11/16/17 14:00 | | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 734 | mg/L | 5.0 | 5.0 | 1 | | 11/15/17 22:15 | | |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 11.5 | mg/L | 1.0 | 0.50 | 1 | | 11/26/17 02:51 | 16887-00-6 | |
| Fluoride | 0.14J | mg/L | 0.20 | 0.10 | 1 | | 11/26/17 02:51 | 16984-48-8 | |
| Sulfate | 139 | mg/L | 10.0 | 5.0 | 10 | | 11/27/17 01:28 | 14808-79-8 | |

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60257955

Sample: L-LMW-8S **Lab ID: 60257955008** Collected: 11/08/17 12:50 Received: 11/11/17 03:20 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|--|---------------|---|------|------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Boron | 4430 | ug/L | 100 | 3.5 | 1 | 11/18/17 12:30 | 11/25/17 14:33 | 7440-42-8 | |
| Calcium | 173000 | ug/L | 100 | 36.0 | 1 | 11/18/17 12:30 | 11/25/17 14:33 | 7440-70-2 | |
| Iron | 1540 | ug/L | 50.0 | 12.4 | 1 | 11/18/17 12:30 | 11/25/17 14:33 | 7439-89-6 | |
| Magnesium | 28300 | ug/L | 50.0 | 15.4 | 1 | 11/18/17 12:30 | 11/25/17 14:33 | 7439-95-4 | |
| Manganese | 762 | ug/L | 5.0 | 1.8 | 1 | 11/18/17 12:30 | 11/25/17 14:33 | 7439-96-5 | |
| Potassium | 5840 | ug/L | 500 | 52.3 | 1 | 11/18/17 12:30 | 11/25/17 14:33 | 7440-09-7 | |
| Sodium | 31800 | ug/L | 500 | 28.4 | 1 | 11/18/17 12:30 | 11/25/17 14:33 | 7440-23-5 | |
| 2320B Alkalinity | | Analytical Method: SM 2320B | | | | | | | |
| Alkalinity, Total as CaCO ₃ | 411 | mg/L | 20.0 | 4.9 | 1 | | 11/16/17 14:05 | | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 731 | mg/L | 5.0 | 5.0 | 1 | | 11/15/17 22:15 | | |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 15.0 | mg/L | 1.0 | 0.50 | 1 | | 11/26/17 03:06 | 16887-00-6 | |
| Fluoride | 0.22 | mg/L | 0.20 | 0.10 | 1 | | 11/26/17 03:06 | 16984-48-8 | |
| Sulfate | 191 | mg/L | 20.0 | 10.0 | 20 | | 11/27/17 01:42 | 14808-79-8 | |

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60257955

Sample: L-BMW-1S **Lab ID: 60257955009** Collected: 11/07/17 10:25 Received: 11/11/17 03:20 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|--|---------------|---|------|------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Boron | 100 | ug/L | 100 | 3.5 | 1 | 11/18/17 12:30 | 11/25/17 14:06 | 7440-42-8 | |
| Calcium | 197000 | ug/L | 100 | 36.0 | 1 | 11/18/17 12:30 | 11/25/17 14:06 | 7440-70-2 | |
| Iron | 28000 | ug/L | 50.0 | 12.4 | 1 | 11/18/17 12:30 | 11/25/17 14:06 | 7439-89-6 | |
| Magnesium | 44500 | ug/L | 50.0 | 15.4 | 1 | 11/18/17 12:30 | 11/25/17 14:06 | 7439-95-4 | |
| Manganese | 2440 | ug/L | 5.0 | 1.8 | 1 | 11/18/17 12:30 | 11/25/17 14:06 | 7439-96-5 | |
| Potassium | 5910 | ug/L | 500 | 52.3 | 1 | 11/18/17 12:30 | 11/25/17 14:06 | 7440-09-7 | |
| Sodium | 17400 | ug/L | 500 | 28.4 | 1 | 11/18/17 12:30 | 11/25/17 14:06 | 7440-23-5 | |
| 2320B Alkalinity | | Analytical Method: SM 2320B | | | | | | | |
| Alkalinity, Total as CaCO ₃ | 410 | mg/L | 20.0 | 4.9 | 1 | | 11/15/17 13:42 | | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 653 | mg/L | 5.0 | 5.0 | 1 | | 11/14/17 18:33 | | |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 4.6 | mg/L | 1.0 | 0.50 | 1 | | 11/26/17 03:20 | 16887-00-6 | |
| Fluoride | 0.18J | mg/L | 0.20 | 0.10 | 1 | | 11/26/17 03:20 | 16984-48-8 | |
| Sulfate | 157 | mg/L | 10.0 | 5.0 | 10 | | 11/27/17 02:26 | 14808-79-8 | |

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60257955

Sample: L-BMW-2S **Lab ID: 60257955010** Collected: 11/07/17 11:28 Received: 11/11/17 03:20 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------------------|-----------------|---|------|------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Boron | 46.3J | ug/L | 100 | 3.5 | 1 | 12/02/17 12:17 | 12/04/17 11:44 | 7440-42-8 | |
| Calcium | 120000 | ug/L | 100 | 36.0 | 1 | 12/02/17 12:17 | 12/04/17 11:44 | 7440-70-2 | |
| Iron | <12.4 | ug/L | 50.0 | 12.4 | 1 | 12/02/17 12:17 | 12/04/17 11:44 | 7439-89-6 | |
| Magnesium | 17800 | ug/L | 50.0 | 15.4 | 1 | 12/02/17 12:17 | 12/04/17 11:44 | 7439-95-4 | |
| Manganese | <1.8 | ug/L | 5.0 | 1.8 | 1 | 12/02/17 12:17 | 12/04/17 11:44 | 7439-96-5 | |
| Potassium | 5780 | ug/L | 500 | 52.3 | 1 | 12/02/17 12:17 | 12/04/17 11:44 | 7440-09-7 | |
| Sodium | 5540 | ug/L | 500 | 28.4 | 1 | 12/02/17 12:17 | 12/04/17 11:44 | 7440-23-5 | |
| 2320B Alkalinity | | Analytical Method: SM 2320B | | | | | | | |
| Alkalinity, Total as CaCO3 | 35.8 | mg/L | 20.0 | 4.9 | 1 | | 11/15/17 13:46 | | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 414 | mg/L | 5.0 | 5.0 | 1 | | 11/14/17 18:34 | | |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 21.2 | mg/L | 2.0 | 1.0 | 2 | | 11/27/17 02:40 | 16887-00-6 | |
| Fluoride | 0.18J | mg/L | 0.20 | 0.10 | 1 | | 11/26/17 03:35 | 16984-48-8 | |
| Sulfate | 246 | mg/L | 20.0 | 10.0 | 20 | | 11/27/17 02:54 | 14808-79-8 | |

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60257955

Sample: L-LMW-DUP-1 **Lab ID: 60257955011** Collected: 11/08/17 08:00 Received: 11/11/17 03:20 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|--|---------------|---|------|------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Boron | 4540 | ug/L | 100 | 3.5 | 1 | 11/18/17 12:30 | 11/25/17 14:40 | 7440-42-8 | |
| Calcium | 176000 | ug/L | 100 | 36.0 | 1 | 11/18/17 12:30 | 11/25/17 14:40 | 7440-70-2 | |
| Iron | 4990 | ug/L | 50.0 | 12.4 | 1 | 11/18/17 12:30 | 11/25/17 14:40 | 7439-89-6 | |
| Magnesium | 31400 | ug/L | 50.0 | 15.4 | 1 | 11/18/17 12:30 | 11/25/17 14:40 | 7439-95-4 | |
| Manganese | 1620 | ug/L | 5.0 | 1.8 | 1 | 11/18/17 12:30 | 11/25/17 14:40 | 7439-96-5 | |
| Potassium | 5580 | ug/L | 500 | 52.3 | 1 | 11/18/17 12:30 | 11/25/17 14:40 | 7440-09-7 | |
| Sodium | 10700 | ug/L | 500 | 28.4 | 1 | 11/18/17 12:30 | 11/25/17 14:40 | 7440-23-5 | |
| 2320B Alkalinity | | Analytical Method: SM 2320B | | | | | | | |
| Alkalinity, Total as CaCO ₃ | 418 | mg/L | 20.0 | 4.9 | 1 | | 11/16/17 14:11 | | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | 684 | mg/L | 5.0 | 5.0 | 1 | | 11/15/17 22:15 | | |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | 4.6 | mg/L | 1.0 | 0.50 | 1 | | 11/26/17 03:49 | 16887-00-6 | |
| Fluoride | 0.17J | mg/L | 0.20 | 0.10 | 1 | | 11/26/17 03:49 | 16984-48-8 | |
| Sulfate | 153 | mg/L | 10.0 | 5.0 | 10 | | 11/27/17 03:09 | 14808-79-8 | |

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ANALYTICAL RESULTS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60257955

Sample: L-LMW-FB-1 **Lab ID: 60257955012** Collected: 11/08/17 11:45 Received: 11/11/17 03:20 Matrix: Water

| Parameters | Results | Units | PQL | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|--|-----------------|---|------|------|----|----------------|----------------|------------|------|
| 200.7 Metals, Total | | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 | | | | | | | |
| Boron | 30.4J | ug/L | 100 | 3.5 | 1 | 11/18/17 12:30 | 11/25/17 14:42 | 7440-42-8 | |
| Calcium | <36.0 | ug/L | 100 | 36.0 | 1 | 11/18/17 12:30 | 11/25/17 14:42 | 7440-70-2 | |
| Iron | <12.4 | ug/L | 50.0 | 12.4 | 1 | 11/18/17 12:30 | 11/25/17 14:42 | 7439-89-6 | |
| Magnesium | <15.4 | ug/L | 50.0 | 15.4 | 1 | 11/18/17 12:30 | 11/25/17 14:42 | 7439-95-4 | |
| Manganese | <1.8 | ug/L | 5.0 | 1.8 | 1 | 11/18/17 12:30 | 11/25/17 14:42 | 7439-96-5 | |
| Potassium | <52.3 | ug/L | 500 | 52.3 | 1 | 11/18/17 12:30 | 11/25/17 14:42 | 7440-09-7 | |
| Sodium | <28.4 | ug/L | 500 | 28.4 | 1 | 11/18/17 12:30 | 11/25/17 14:42 | 7440-23-5 | |
| 2320B Alkalinity | | Analytical Method: SM 2320B | | | | | | | |
| Alkalinity, Total as CaCO ₃ | 13.1J | mg/L | 20.0 | 4.9 | 1 | | 11/16/17 14:15 | | |
| 2540C Total Dissolved Solids | | Analytical Method: SM 2540C | | | | | | | |
| Total Dissolved Solids | <5.0 | mg/L | 5.0 | 5.0 | 1 | | 11/15/17 22:16 | | |
| 300.0 IC Anions 28 Days | | Analytical Method: EPA 300.0 | | | | | | | |
| Chloride | <0.50 | mg/L | 1.0 | 0.50 | 1 | | 11/26/17 04:03 | 16887-00-6 | |
| Fluoride | <0.10 | mg/L | 0.20 | 0.10 | 1 | | 11/26/17 04:03 | 16984-48-8 | |
| Sulfate | <0.50 | mg/L | 1.0 | 0.50 | 1 | | 11/26/17 04:03 | 14808-79-8 | |

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY
Pace Project No.: 60257955

QC Batch: 503851 Analysis Method: EPA 200.7
QC Batch Method: EPA 200.7 Analysis Description: 200.7 Metals, Total
Associated Lab Samples: 60257955001, 60257955002, 60257955003, 60257955004, 60257955005, 60257955006, 60257955007, 60257955008, 60257955009, 60257955010, 60257955011, 60257955012

METHOD BLANK: 2063351 Matrix: Water
Associated Lab Samples: 60257955001, 60257955002, 60257955003, 60257955004, 60257955005, 60257955006, 60257955007, 60257955008, 60257955009, 60257955010, 60257955011, 60257955012

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|------|----------------|------------|
| Boron | ug/L | <3.5 | 100 | 3.5 | 11/25/17 14:02 | |
| Calcium | ug/L | <36.0 | 100 | 36.0 | 11/25/17 14:02 | |
| Iron | ug/L | <12.4 | 50.0 | 12.4 | 11/25/17 14:02 | |
| Magnesium | ug/L | <15.4 | 50.0 | 15.4 | 11/25/17 14:02 | |
| Manganese | ug/L | <1.8 | 5.0 | 1.8 | 11/25/17 14:02 | |
| Potassium | ug/L | <52.3 | 500 | 52.3 | 11/25/17 14:02 | |
| Sodium | ug/L | 46.0J | 500 | 28.4 | 11/25/17 14:02 | |

LABORATORY CONTROL SAMPLE: 2063352

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Boron | ug/L | 1000 | 1020 | 102 | 85-115 | |
| Calcium | ug/L | 10000 | 10200 | 102 | 85-115 | |
| Iron | ug/L | 10000 | 10400 | 104 | 85-115 | |
| Magnesium | ug/L | 10000 | 10200 | 102 | 85-115 | |
| Manganese | ug/L | 1000 | 1030 | 103 | 85-115 | |
| Potassium | ug/L | 10000 | 9980 | 100 | 85-115 | |
| Sodium | ug/L | 10000 | 9800 | 98 | 85-115 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2063353 2063354

| Parameter | Units | MS | | MSD | | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|--------------------|-------------|-------------|-----------|----------|-----------|--------------|--------|---------|------|
| | | 60257955002 Result | Spike Conc. | Spike Conc. | MS Result | | | | | | |
| Boron | ug/L | 6350 | 1000 | 1000 | 7540 | 7590 | 119 | 124 | 70-130 | 1 | 20 |
| Calcium | ug/L | 62200 | 10000 | 10000 | 73200 | 72400 | 110 | 102 | 70-130 | 1 | 20 |
| Iron | ug/L | <12.4 | 10000 | 10000 | 10000 | 10200 | 100 | 102 | 70-130 | 2 | 20 |
| Magnesium | ug/L | 143 | 10000 | 10000 | 9810 | 10100 | 97 | 100 | 70-130 | 3 | 20 |
| Manganese | ug/L | 2.1J | 1000 | 1000 | 993 | 1020 | 99 | 102 | 70-130 | 3 | 20 |
| Potassium | ug/L | 8620 | 10000 | 10000 | 18600 | 18900 | 100 | 103 | 70-130 | 2 | 20 |
| Sodium | ug/L | 62000 | 10000 | 10000 | 72800 | 72500 | 107 | 105 | 70-130 | 0 | 20 |

MATRIX SPIKE SAMPLE: 2063355

| Parameter | Units | 60257955003 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|--------------------|-------------|-----------|----------|--------------|------------|
| Boron | ug/L | 5350 | 1000 | 6310 | 96 | 70-130 | |

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60257955

| MATRIX SPIKE SAMPLE: | | 2063355 | | | | | |
|----------------------|-------|-----------------------|----------------|--------------|-------------|-----------------|------------|
| Parameter | Units | 60257955003 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
| Calcium | ug/L | 74100 | 10000 | 83900 | 98 | 70-130 | |
| Iron | ug/L | 5180 | 10000 | 15200 | 100 | 70-130 | |
| Magnesium | ug/L | 7860 | 10000 | 17600 | 98 | 70-130 | |
| Manganese | ug/L | 533 | 1000 | 1550 | 102 | 70-130 | |
| Potassium | ug/L | 7120 | 10000 | 17200 | 101 | 70-130 | |
| Sodium | ug/L | 115000 | 10000 | 124000 | 93 | 70-130 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY
Pace Project No.: 60257955

QC Batch: 505584 Analysis Method: EPA 200.7
QC Batch Method: EPA 200.7 Analysis Description: 200.7 Metals, Total
Associated Lab Samples: 60257955010

METHOD BLANK: 2070869 Matrix: Water
Associated Lab Samples: 60257955010

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|------|----------------|------------|
| Boron | ug/L | <3.5 | 100 | 3.5 | 12/04/17 11:40 | |
| Calcium | ug/L | <36.0 | 100 | 36.0 | 12/04/17 11:40 | |
| Iron | ug/L | <12.4 | 50.0 | 12.4 | 12/04/17 11:40 | |
| Magnesium | ug/L | <15.4 | 50.0 | 15.4 | 12/04/17 11:40 | |
| Manganese | ug/L | <1.8 | 5.0 | 1.8 | 12/04/17 11:40 | |
| Potassium | ug/L | <52.3 | 500 | 52.3 | 12/04/17 11:40 | |
| Sodium | ug/L | <28.4 | 500 | 28.4 | 12/04/17 11:40 | |

LABORATORY CONTROL SAMPLE: 2070870

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Boron | ug/L | 1000 | 976 | 98 | 85-115 | |
| Calcium | ug/L | 10000 | 9990 | 100 | 85-115 | |
| Iron | ug/L | 10000 | 10200 | 102 | 85-115 | |
| Magnesium | ug/L | 10000 | 9970 | 100 | 85-115 | |
| Manganese | ug/L | 1000 | 1010 | 101 | 85-115 | |
| Potassium | ug/L | 10000 | 9790 | 98 | 85-115 | |
| Sodium | ug/L | 10000 | 9690 | 97 | 85-115 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2070871 2070872

| Parameter | Units | 60257955010 | | 2070872 | | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
| | | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | | | | | | |
| Boron | ug/L | 46.3J | 1000 | 1030 | 1040 | 98 | 99 | 70-130 | 0 | 20 | |
| Calcium | ug/L | 120000 | 10000 | 128000 | 128000 | 74 | 79 | 70-130 | 0 | 20 | |
| Iron | ug/L | <12.4 | 10000 | 9910 | 9930 | 99 | 99 | 70-130 | 0 | 20 | |
| Magnesium | ug/L | 17800 | 10000 | 27000 | 27200 | 93 | 94 | 70-130 | 0 | 20 | |
| Manganese | ug/L | <1.8 | 1000 | 987 | 988 | 99 | 99 | 70-130 | 0 | 20 | |
| Potassium | ug/L | 5780 | 10000 | 15500 | 15600 | 97 | 98 | 70-130 | 0 | 20 | |
| Sodium | ug/L | 5540 | 10000 | 15200 | 15300 | 97 | 97 | 70-130 | 0 | 20 | |

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60257955

QC Batch: 503330 Analysis Method: SM 2320B

QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity

Associated Lab Samples: 60257955002, 60257955009, 60257955010

METHOD BLANK: 2060588 Matrix: Water

Associated Lab Samples: 60257955002, 60257955009, 60257955010

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|--|-------|--------------|-----------------|-----|----------------|------------|
| Alkalinity, Total as CaCO ₃ | mg/L | <4.9 | 20.0 | 4.9 | 11/15/17 12:42 | |

LABORATORY CONTROL SAMPLE: 2060589

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|--|-------|-------------|------------|-----------|--------------|------------|
| Alkalinity, Total as CaCO ₃ | mg/L | 500 | 497 | 99 | 90-110 | |

SAMPLE DUPLICATE: 2060591

| Parameter | Units | 60257955002 Result | Dup Result | RPD | Max RPD | Qualifiers |
|--|-------|--------------------|------------|-----|---------|------------|
| Alkalinity, Total as CaCO ₃ | mg/L | 34.0 | 33.7 | 1 | 10 | |

SAMPLE DUPLICATE: 2060592

| Parameter | Units | 60257954005 Result | Dup Result | RPD | Max RPD | Qualifiers |
|--|-------|--------------------|------------|-----|---------|------------|
| Alkalinity, Total as CaCO ₃ | mg/L | 71.1 | 60.7 | 16 | 10 | D6 |

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60257955

QC Batch: 503536 Analysis Method: SM 2320B
 QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity
 Associated Lab Samples: 60257955001, 60257955003, 60257955004, 60257955005, 60257955006, 60257955007, 60257955008, 60257955011, 60257955012

METHOD BLANK: 2061447 Matrix: Water
 Associated Lab Samples: 60257955001, 60257955003, 60257955004, 60257955005, 60257955006, 60257955007, 60257955008, 60257955011, 60257955012

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|----------------------------|-------|--------------|-----------------|-----|----------------|------------|
| Alkalinity, Total as CaCO3 | mg/L | <4.9 | 20.0 | 4.9 | 11/16/17 12:55 | |

LABORATORY CONTROL SAMPLE: 2061448

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|----------------------------|-------|-------------|------------|-----------|--------------|------------|
| Alkalinity, Total as CaCO3 | mg/L | 500 | 504 | 101 | 90-110 | |

SAMPLE DUPLICATE: 2061449

| Parameter | Units | 60257954015 Result | Dup Result | RPD | Max RPD | Qualifiers |
|----------------------------|-------|--------------------|------------|-----|---------|------------|
| Alkalinity, Total as CaCO3 | mg/L | <4.9 | <4.9 | | 10 | |

SAMPLE DUPLICATE: 2061451

| Parameter | Units | 60257950006 Result | Dup Result | RPD | Max RPD | Qualifiers |
|----------------------------|-------|--------------------|------------|-----|---------|------------|
| Alkalinity, Total as CaCO3 | mg/L | 275 | 271 | 2 | 10 | |

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60257955

QC Batch: 503088

Analysis Method: SM 2540C

QC Batch Method: SM 2540C

Analysis Description: 2540C Total Dissolved Solids

Associated Lab Samples: 60257955002, 60257955009, 60257955010

METHOD BLANK: 2059699

Matrix: Water

Associated Lab Samples: 60257955002, 60257955009, 60257955010

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|------------------------|-------|--------------|-----------------|-----|----------------|------------|
| Total Dissolved Solids | mg/L | <5.0 | 5.0 | 5.0 | 11/14/17 18:20 | |

LABORATORY CONTROL SAMPLE: 2059700

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

SAMPLE DUPLICATE: 2059701

| Parameter | Units | 60257854017 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L | 587 | 552 | 6 | 10 | |

SAMPLE DUPLICATE: 2059999

| Parameter | Units | 60257954005 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L | 404 | 439 | 8 | 10 | |

SAMPLE DUPLICATE: 2060000

| Parameter | Units | 60257955002 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L | 428 | 728 | 52 | 10 D6 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60257955

QC Batch: 503359

Analysis Method: SM 2540C

QC Batch Method: SM 2540C

Analysis Description: 2540C Total Dissolved Solids

Associated Lab Samples: 60257955001, 60257955003, 60257955004, 60257955005, 60257955006, 60257955007, 60257955008, 60257955011, 60257955012

METHOD BLANK: 2060712

Matrix: Water

Associated Lab Samples: 60257955001, 60257955003, 60257955004, 60257955005, 60257955006, 60257955007, 60257955008, 60257955011, 60257955012

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|------------------------|-------|--------------|-----------------|-----|----------------|------------|
| Total Dissolved Solids | mg/L | <5.0 | 5.0 | 5.0 | 11/15/17 22:11 | |

LABORATORY CONTROL SAMPLE: 2060713

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------------------|-------|-------------|------------|-----------|--------------|------------|
| Total Dissolved Solids | mg/L | 1000 | 987 | 99 | 80-120 | |

SAMPLE DUPLICATE: 2060714

| Parameter | Units | 60255793017 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L | 1200 | 1200 | 0 | 10 | H1 |

SAMPLE DUPLICATE: 2060715

| Parameter | Units | 60257860001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------------|-------|--------------------|------------|-----|---------|------------|
| Total Dissolved Solids | mg/L | 1110 | 1130 | 2 | 10 | |

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60257955

| | | | |
|-------------------------|--|-----------------------|-----------------|
| QC Batch: | 504550 | Analysis Method: | EPA 300.0 |
| QC Batch Method: | EPA 300.0 | Analysis Description: | 300.0 IC Anions |
| Associated Lab Samples: | 60257955001, 60257955002, 60257955003, 60257955004, 60257955005, 60257955006, 60257955007, 60257955008, 60257955009, 60257955010, 60257955011, 60257955012 | | |

| | | | |
|-------------------------|--|---------|-------|
| METHOD BLANK: | 2067032 | Matrix: | Water |
| Associated Lab Samples: | 60257955001, 60257955002, 60257955003, 60257955004, 60257955005, 60257955006, 60257955007, 60257955008, 60257955009, 60257955010, 60257955011, 60257955012 | | |

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|------|----------------|------------|
| Chloride | mg/L | <0.50 | 1.0 | 0.50 | 11/25/17 23:30 | |
| Fluoride | mg/L | <0.10 | 0.20 | 0.10 | 11/25/17 23:30 | |
| Sulfate | mg/L | <0.50 | 1.0 | 0.50 | 11/25/17 23:30 | |

LABORATORY CONTROL SAMPLE: 2067033

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Chloride | mg/L | 5 | 4.6 | 92 | 90-110 | |
| Fluoride | mg/L | 2.5 | 2.3 | 94 | 90-110 | |
| Sulfate | mg/L | 5 | 4.8 | 96 | 90-110 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2067034 2067035

| Parameter | Units | MS | | MSD | | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | Max RPD | Qual |
|-----------|-------|-------------|--------|-------------|--------|-----------|------------|----------|-----------|--------------|---------|------|
| | | Spike Conc. | Result | Spike Conc. | Result | | | | | | | |
| Chloride | mg/L | <0.50 | 5 | 5 | 4.9 | 5.1 | 98 | 101 | 80-120 | 3 | 15 | |
| Fluoride | mg/L | <0.10 | 2.5 | 2.5 | 2.5 | 2.6 | 101 | 105 | 80-120 | 4 | 15 | |
| Sulfate | mg/L | <0.50 | 5 | 5 | 5.2 | 5.2 | 104 | 104 | 80-120 | 0 | 15 | |

MATRIX SPIKE SAMPLE: 2067036

| Parameter | Units | 60257955002 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|--------------------|-------------|-----------|----------|--------------|------------|
| Fluoride | mg/L | 0.18J | 2.5 | 2.6 | 97 | 80-120 | |

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60257955

| | | | |
|-------------------------|--|-----------------------|-----------------|
| QC Batch: | 504565 | Analysis Method: | EPA 300.0 |
| QC Batch Method: | EPA 300.0 | Analysis Description: | 300.0 IC Anions |
| Associated Lab Samples: | 60257955001, 60257955002, 60257955003, 60257955004, 60257955006, 60257955007, 60257955008, 60257955009, 60257955010, 60257955011 | | |

METHOD BLANK: 2067311 Matrix: Water
Associated Lab Samples: 60257955001, 60257955002, 60257955003, 60257955004, 60257955006, 60257955007, 60257955008, 60257955009, 60257955010, 60257955011

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|------|----------------|------------|
| Chloride | mg/L | <0.50 | 1.0 | 0.50 | 11/26/17 18:16 | |
| Sulfate | mg/L | <0.50 | 1.0 | 0.50 | 11/26/17 18:16 | |

LABORATORY CONTROL SAMPLE: 2067312

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Chloride | mg/L | 5 | 4.6 | 92 | 90-110 | |
| Sulfate | mg/L | 5 | 4.9 | 97 | 90-110 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2067313 2067314

| Parameter | Units | 60257954005 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
| Sulfate | mg/L | 236 | 100 | 100 | 333 | 328 | 98 | 92 | 80-120 | 2 | 15 | |

MATRIX SPIKE SAMPLE: 2067315

| Parameter | Units | 60257955002 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|--------------------|-------------|-----------|----------|--------------|------------|
| Chloride | mg/L | 21.0 | 10 | 31.6 | 106 | 80-120 | |
| Sulfate | mg/L | 232 | 100 | 325 | 93 | 80-120 | |

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60257955

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.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

LABORATORIES

PASI-K Pace Analytical Services - Kansas City

ANALYTE QUALIFIERS

D6 The precision between the sample and sample duplicate exceeded laboratory control limits.

H1 Analysis conducted outside the EPA method holding time.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60257955

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|-------------|-------------|-----------------|----------|-------------------|------------------|
| 60257955001 | L-LMW-1S | EPA 200.7 | 503851 | EPA 200.7 | 503862 |
| 60257955002 | L-LMW-2S | EPA 200.7 | 503851 | EPA 200.7 | 503862 |
| 60257955003 | L-LMW-3S | EPA 200.7 | 503851 | EPA 200.7 | 503862 |
| 60257955004 | L-LMW-4S | EPA 200.7 | 503851 | EPA 200.7 | 503862 |
| 60257955005 | L-LMW-5S | EPA 200.7 | 503851 | EPA 200.7 | 503862 |
| 60257955006 | L-LMW-6S | EPA 200.7 | 503851 | EPA 200.7 | 503862 |
| 60257955007 | L-LMW-7S | EPA 200.7 | 503851 | EPA 200.7 | 503862 |
| 60257955008 | L-LMW-8S | EPA 200.7 | 503851 | EPA 200.7 | 503862 |
| 60257955009 | L-BMW-1S | EPA 200.7 | 503851 | EPA 200.7 | 503862 |
| 60257955010 | L-BMW-2S | EPA 200.7 | 503851 | EPA 200.7 | 503862 |
| 60257955010 | L-BMW-2S | EPA 200.7 | 505584 | EPA 200.7 | 505740 |
| 60257955011 | L-LMW-DUP-1 | EPA 200.7 | 503851 | EPA 200.7 | 503862 |
| 60257955012 | L-LMW-FB-1 | EPA 200.7 | 503851 | EPA 200.7 | 503862 |
| 60257955001 | L-LMW-1S | SM 2320B | 503536 | | |
| 60257955002 | L-LMW-2S | SM 2320B | 503330 | | |
| 60257955003 | L-LMW-3S | SM 2320B | 503536 | | |
| 60257955004 | L-LMW-4S | SM 2320B | 503536 | | |
| 60257955005 | L-LMW-5S | SM 2320B | 503536 | | |
| 60257955006 | L-LMW-6S | SM 2320B | 503536 | | |
| 60257955007 | L-LMW-7S | SM 2320B | 503536 | | |
| 60257955008 | L-LMW-8S | SM 2320B | 503536 | | |
| 60257955009 | L-BMW-1S | SM 2320B | 503330 | | |
| 60257955010 | L-BMW-2S | SM 2320B | 503330 | | |
| 60257955011 | L-LMW-DUP-1 | SM 2320B | 503536 | | |
| 60257955012 | L-LMW-FB-1 | SM 2320B | 503536 | | |
| 60257955001 | L-LMW-1S | SM 2540C | 503359 | | |
| 60257955002 | L-LMW-2S | SM 2540C | 503088 | | |
| 60257955003 | L-LMW-3S | SM 2540C | 503359 | | |
| 60257955004 | L-LMW-4S | SM 2540C | 503359 | | |
| 60257955005 | L-LMW-5S | SM 2540C | 503359 | | |
| 60257955006 | L-LMW-6S | SM 2540C | 503359 | | |
| 60257955007 | L-LMW-7S | SM 2540C | 503359 | | |
| 60257955008 | L-LMW-8S | SM 2540C | 503359 | | |
| 60257955009 | L-BMW-1S | SM 2540C | 503088 | | |
| 60257955010 | L-BMW-2S | SM 2540C | 503088 | | |
| 60257955011 | L-LMW-DUP-1 | SM 2540C | 503359 | | |
| 60257955012 | L-LMW-FB-1 | SM 2540C | 503359 | | |
| 60257955001 | L-LMW-1S | EPA 300.0 | 504550 | | |
| 60257955001 | L-LMW-1S | EPA 300.0 | 504565 | | |
| 60257955002 | L-LMW-2S | EPA 300.0 | 504550 | | |
| 60257955002 | L-LMW-2S | EPA 300.0 | 504565 | | |

REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AMEREN LABADIE ENERGY CTR-FLY

Pace Project No.: 60257955

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|-------------|-------------|-----------------|----------|-------------------|------------------|
| 60257955003 | L-LMW-3S | EPA 300.0 | 504550 | | |
| 60257955003 | L-LMW-3S | EPA 300.0 | 504565 | | |
| 60257955004 | L-LMW-4S | EPA 300.0 | 504550 | | |
| 60257955004 | L-LMW-4S | EPA 300.0 | 504565 | | |
| 60257955005 | L-LMW-5S | EPA 300.0 | 504550 | | |
| 60257955006 | L-LMW-6S | EPA 300.0 | 504550 | | |
| 60257955006 | L-LMW-6S | EPA 300.0 | 504565 | | |
| 60257955007 | L-LMW-7S | EPA 300.0 | 504550 | | |
| 60257955007 | L-LMW-7S | EPA 300.0 | 504565 | | |
| 60257955008 | L-LMW-8S | EPA 300.0 | 504550 | | |
| 60257955008 | L-LMW-8S | EPA 300.0 | 504565 | | |
| 60257955009 | L-BMW-1S | EPA 300.0 | 504550 | | |
| 60257955009 | L-BMW-1S | EPA 300.0 | 504565 | | |
| 60257955010 | L-BMW-2S | EPA 300.0 | 504550 | | |
| 60257955010 | L-BMW-2S | EPA 300.0 | 504565 | | |
| 60257955011 | L-LMW-DUP-1 | EPA 300.0 | 504550 | | |
| 60257955011 | L-LMW-DUP-1 | EPA 300.0 | 504565 | | |
| 60257955012 | L-LMW-FB-1 | EPA 300.0 | 504550 | | |

REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, LLC.



Sample Condition Upon Receipt

WO#: 60257955



Client Name: Colder Associates

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

Tracking #: _____ Pace Shipping Label Used? Yes No

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

Packing Material: Bubble Wrap Bubble Bags Foam None Other

Thermometer Used: T-266 / T-239 Type of Ice: Wet Blue None

Cooler Temperature (°C): As-read 0.7/0.9/1.0 / 1.5/1.2 Corr. Factor CF 0.0 / CF +0.2 Corrected 0.7/0.9/1.0/1.5/1.2

Date and initials of person examining contents: RM 11-10-17

Temperature should be above freezing to 6°C

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

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: Jami Chok _____ Date: 11/14/17



CHAIN-OF-CUSTODY / Analytical Request Document

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

| | | | | | |
|--|----------------------------------|---|--|--|--------------|
| Section A Required Client Information: | | Section B Required Project Information: | | Section C Invoice Information: | |
| Company: | Golder Associates | Report To: | Mark Haddock (mhaddock@golder.com) | Attention: | |
| Address: | 820 South Main Street, Suite 100 | Copy To: | Jeffrey Ingram | Company Name: | |
| | St Charles, MO 63301 | | | Address: | |
| Email To: | mhaddock@golder.com | Purchase Order No.: | | Pace Quote Reference: | |
| Phone: | 636-724-9191 | Project Name: | Ameren Labadie Energy Center - Fly Ash | Pace Project Manager: | Jamie Church |
| Requested Due Date/TAT: | Standard | Project Number: | 153-1406.0001E | Pace Profile #: | 9285 |

REGULATORY AGENCY

NPDES GROUND WATER DRINKING WATER

UST RCRA OTHER

Site Location: MO STATE: MO

| ITEM # | Section D Required Client Information | Valid Matrix Codes MATRIX CODE DRINKING WATER DW WASTE WATER WW WASTE WATER PRODUCT P SOLID/SOLID OIL | COLLECTED | | SAMPLE TYPE (G=GRAB G=COMP) | MATRIX CODE (see valid codes to left) | # OF CONTAINERS | PRESERVATIVES | ANALYSIS TEST | Requested Analysis Filtered (Y/N) | Residual Chlorine (Y/N) | Pace Project No./ Lab I.D. |
|--------|--|---|-----------------|--------------------|-----------------------------|---------------------------------------|-----------------|---|---------------|-----------------------------------|-------------------------|----------------------------|
| | | | COMPOSITE START | COMPOSITE END/GRAB | | | | | | | | |
| 1 | L-LMW-1S | | | 11/08/17 | 1138 | WT G | 1 | H ₂ SO ₄ | 1 | N | | BP11A, BP3N |
| 2 | L-LMW-2S | | | 11/08/17 | 1128 | WT G | 3 | HNO ₃ | 3 | N | | 3 (BP11A) 3 (BP3N) |
| 3 | L-LMW-3S | | | 11/08/17 | 1200 | WT G | 1 | HCl | 1 | N | | BP11A, BP3N |
| 4 | L-LMW-4S | | | 1310 | | WT G | 1 | NaOH | 1 | N | | |
| 5 | L-LMW-5S | | | 1400 | | WT G | 1 | Na ₂ S ₂ O ₃ | 1 | N | | |
| 6 | L-LMW-6S | | | 1445 | | WT G | 1 | Other | 1 | N | | |
| 7 | L-LMW-7S | | | 1350 | | WT G | 1 | Methanol | 1 | N | | |
| 8 | L-LMW-8S | | | 1260 | | WT G | 1 | Unpreserved | 1 | N | | |
| 9 | L-BMW-1S | | | 11/07/17 | 1026 | WT G | 1 | | 1 | N | | |
| 10 | L-BMW-2S | | | 1128 | | WT G | 1 | | 1 | N | | |
| 11 | L-LMW-DUP-1 | | | 11/08/17 | | WT G | 1 | | 1 | N | | |
| 12 | L-LMW-FB-1 | | | 1146 | | WT G | 1 | | 1 | N | | |

| ADDITIONAL COMMENTS | RELINQUISHED BY / AFFILIATION | DATE | TIME | ACCEPTED BY / AFFILIATION | DATE | TIME | SAMPLE CONDITIONS |
|--------------------------------|-------------------------------|---------|------|---------------------------|----------|-------|---|
| *EPA 200.7: B,Ce,Mg,K,Na,Fe,Mn | Jeff Ingram / Golder | 11-9-17 | 940 | Andrew Ingram | 11/08/17 | 10:18 | Received on Ice (Y/N) <input type="checkbox"/> Cooled Sealed (Y/N) <input type="checkbox"/> Samples Intact (Y/N) <input type="checkbox"/> |
| | Andrew Ingram | 11/9/17 | 1700 | Andrew Ingram | 11/08/17 | 0320 | Received on Ice (Y/N) <input type="checkbox"/> Cooled Sealed (Y/N) <input type="checkbox"/> Samples Intact (Y/N) <input type="checkbox"/> |

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: *Byi Worths*

SIGNATURE of SAMPLER: *[Signature]*

DATE Signed (MM/DD/YYYY): 11/08/17



MEMORANDUM

Date: May 30, 2017
To: Project File
From: Tommy Goodwin
cc: Amanda Derhake, Jeff Ingram
RE: DATA VALIDATION SUMMARY, LABADIE ENERGY CENTER – E.1

Project No.: 1531406
Project: Ameren
Email:

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

- Analysis of pH for all samples was initiated outside of the 15 minute EPA required holding time. Field measurements of pH were taken at the time of sample collection.
- Calcium exceeded the recovery criteria for MS. Data was not qualified on MS/MSD data alone.
- Reported results with high levels of non-target analytes or other matrix interference were analyzed at dilution and qualified as dilution (D).
- When a compound was detected in a blank (i.e. method, field, rinsate), and the sample results were greater than the MDL and less than the PQL the results were recorded at the PQL value and qualified as non-detects (U).

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

Company Name: Golder Associates
 Project Name: Ameren-Labadie Fly-LMW- E1
 Reviewer: T Goodwin

Project Manager: J Ingram
 Project Number: 1531406.0001B
 Validation Date: 5/30/17

Laboratory: Pace Analytical

SDG #: 60215629

Analytical Method (type and no.): Metals 200.7&200.8, Hg 7470, TDS 2540C, pH 4500H+, Anions 300.0, Rads 903.1&904.0

Matrix: Air Soil/Sed. Water Waste

Sample Names L-LMW1S, L-LMW2S, L-LMW3S, L-LMW4S, L-LMW5S, L-LMW6S, L-LMW7S, L-LMW8S, L-BMW1S, L-BMW2S, S-LMW-DUP-1, S-LMW-FB-1, S-LMW-) MS, S-LMW- \ MSD

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

| Field Information | YES | NO | NA | COMMENTS |
|--|-------------------------------------|-------------------------------------|-------------------------------------|--|
| a) Sampling dates noted? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| b) Sampling team indicated? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| c) Sample location noted? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| d) Sample depth indicated (Soils)? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| e) Sample type indicated (grab/composite)? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Grab |
| f) Field QC noted? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| g) Field parameters collected (note types)? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | pH, Cond, Turb, Temp, DO, ORP, Flow, DTW |
| h) Field Calibration within control limits? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| i) Notations of unacceptable field conditions/performances from field logs or field notes? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| j) Does the laboratory narrative indicate deficiencies? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Note Deficiencies: _____ | | | | |

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

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

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

| Blanks | YES | NO | NA | COMMENTS |
|--|-------------------------------------|--------------------------|-------------------------------------|---|
| a) Were analytes detected in the method blank(s)? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | (0.061) (0.56) (1.12) (0.10) (0.52) Hg, Ba, Ca, Mo, Cd |
| b) Were analytes detected in the field blank(s)? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Ca, Cd, Cr, Hg (50.7) (0.044) (0.45) (0.060) |
| c) Were analytes detected in the equipment blank(s)? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| d) Were analytes detected in the trip blank(s)? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |

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

| Duplicates | YES | NO | NA | COMMENTS |
|--|-------------------------------------|-------------------------------------|--------------------------|-------------------------------|
| a) Were field duplicates collected (note original and duplicate sample names)? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Dup-1@ LMW-35 FB-1@ LMW-55 |
| b) Were field dup. precision criteria met (note RPD)? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Cd (DUP 10.4), Hg (39.5) |
| c) Were lab duplicates analyzed (note original and duplicate samples)? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | TDS, pH |
| d) Were lab dup. precision criteria met (note RPD)? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | TDS (1) |

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

| Matrix Spike/Matrix Spike Duplicate (MS/MSD) | YES | NO | NA | COMMENTS |
|--|-------------------------------------|-------------------------------------|-------------------------------------|----------|
| a) Was MS accuracy criteria met? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Ca (68) |
| Recovery could not be calculated since sample contained high concentration of analyte? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| b) Was MSD accuracy criteria met? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Recovery could not be calculated since sample contained high concentration of analyte? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| c) Were MS/MSD precision criteria met? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |

Comments/Notes:

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

Data Qualification:

| Sample Name | Constituent(s) | Result | Qualifier | Reason |
|------------------------------|-----------------|------------------------|-----------|---|
| All Samples | Mercury (Hg) | 0.20 | U | Detected in Method Blank (MB), PQL > Result > MDL |
| All Except (LMW-2S + LMW-3S) | Cadmium (Cd) | 0.50 | U | |
| L-LMW-1S | Molybdenum (Mo) | 20.0 | U | |
| " | Sulfate | 76.7 | D | Result at a dilution factor (DF) of 10 |
| L-LMW-2S | Sulfate | 295 | D | 50 |
| L-LMW-3S | Sulfate | 254 | D | 20 |
| " | Chloride | 20.9 | D | 2 |
| L-LMW-4S | Chloride | 25.4 | D | 2 |
| " | Sulfate | 231 | D | 20 |
| L-LMW-5S | Mo | 20.0 | U | Detected in MB, PQL > Result > MDL |
| L-LMW-6S | Mo | 20.0 5.0 | U | " |
| " | Sulfate | 81.3 | D | Result at a DF of 10 |
| L-LMW-5S | Chromium (Cr) | 1.0 | U | Detected in Field Blank, PQL > Result > MDL |
| L-LMW-7S | Sulfate | 142 | D | Result at a DF of 20 |
| L-LMW-8S | Sulfate | 287 | D | 50 |
| L-BMW-1S | Sulfate | 50.1 | D | 5 |
| " | Mo | 20.0 | U | Detected in MB, PQL > Result > MDL |
| L-BMW-2S | Mo | 20.0 | U | " |
| " | Sulfate | 20.5 | D | Result at a DF of 2 |
| L-LMW-DUP-1 | Chloride | 20.9 | D | 2 |
| " | Sulfate | 259 | D | 50 |
| L-LMW-FB-1 | Calcium (Ca) | 100 | U | Detected in MB, PQL > Result > MDL |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Signature: _____

Tommy [Signature]

Date: _____

5/30/17



MEMORANDUM

Date: May 30, 2017
To: Project File
From: Tommy Goodwin
cc: Amanda Derhake, Jeff Ingram
Project No.: 1531406
Project: Ameren
Email:
RE: DATA VALIDATION SUMMARY, LABADIE ENERGY CENTER – E.2

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

- Analysis of pH for all samples was initiated outside of the 15 minute EPA required holding time. Field measurements of pH were taken at the time of sample collection.
- Calcium exceeded the recovery criteria for MS and MSD. Mercury exceeded the recovery criteria for MS. Mercury exceeded the RPD for MS/MSD. Data was not qualified on MS/MSD data alone.
- Reported results with high levels of non-target analytes or other matrix interference were analyzed at dilution and qualified as dilution (D).
- When a compound was detected in a blank (i.e. method, field, rinsate), and the sample results were greater than the MDL and less than the PQL the results were recorded at the PQL value and qualified as non-detects (U). If the sample results were greater than the PQL, but less than 5 times the blank detection result, the detections were recorded at the result value and qualified as non-detects (U).
- When a duplicate (i.e. field, sample) RPD was not met, associated samples were qualified as estimates (J). If the results were less than the method detection limit or detected in a blank the results were qualified as non-detects and estimates (UJ).

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

Company Name: Golder Associates
 Project Name: Ameren-Labadie Fly-LMW- E2
 Reviewer: T Goodwin

Project Manager: J Ingram
 Project Number: 1531406.0001B
 Validation Date: 5/30/17

Laboratory: Pace Analytical SDG #: 60218627
 Analytical Method (type and no.): Metals 200.7&200.8, Hg 7470, TDS 2540C, pH 4500H+, Anions 300.0, Rads 903.1&904.0
 Matrix: Air Soil/Sed. Water Waste
 Sample Names L-LMW1S, L-LMW-2S, L-LMW-3S, L-LMW-4S, L-LMW-5S, L-LMW-6S, L-LMW-7S, L-LMW-8S, L-BMW-1S, L-BMW-2S
~~S-UMW-DUP-1, S-UMW-FB-1, S-UMW-1S-MS, S-UMW-1S-MSD~~

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

| Field Information | YES | NO | NA | COMMENTS |
|--|-------------------------------------|-------------------------------------|-------------------------------------|--|
| a) Sampling dates noted? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| b) Sampling team indicated? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| c) Sample location noted? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| d) Sample depth indicated (Soils)? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| e) Sample type indicated (grab/composite)? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Grab |
| f) Field QC noted? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| g) Field parameters collected (note types)? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | pH, Cond, Turb, Temp, DO, ORP, Flow, DTW |
| h) Field Calibration within control limits? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| i) Notations of unacceptable field conditions/performances from field logs or field notes? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| j) Does the laboratory narrative indicate deficiencies? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Note Deficiencies: _____ | | | | |

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

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

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

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

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

| Duplicates | YES | NO | NA | COMMENTS |
|--|-------------------------------------|-------------------------------------|--------------------------|-----------------------------------|
| a) Were field duplicates collected (note original and duplicate sample names)? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <u>Dup-1@ LMW-8S</u> |
| | | | | <u>FB-1@ LMW-2S</u> |
| b) Were field dup. precision criteria met (note RPD)? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <u>Pb (DUP 1 only), Cr (29.9)</u> |
| c) Were lab duplicates analyzed (note original and duplicate samples)? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <u>TDS, pH</u> |
| d) Were lab dup. precision criteria met (note RPD)? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <u>TDS (13)</u> |

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

| Matrix Spike/Matrix Spike Duplicate (MS/MSD) | YES | NO | NA | COMMENTS |
|--|--------------------------|-------------------------------------|-------------------------------------|-------------------------|
| a) Was MS accuracy criteria met? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <u>Hg (13), Ca (55)</u> |
| Recovery could not be calculated since sample contained high concentration of analyte? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | _____ |
| b) Was MSD accuracy criteria met? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <u>Ca (34)</u> |
| Recovery could not be calculated since sample contained high concentration of analyte? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | _____ |
| c) Were MS/MSD precision criteria met? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <u>Hg (28)</u> |

Comments/Notes:

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

Data Qualification:

| Sample Name | Constituent(s) | Result | Qualifier | Reason |
|-------------|----------------|--------|-----------|---|
| L-LMW-2S | Chromium | 1.0 | U | Detected in Field Blank, PQL > Result > MDL |
| " | Sulfate | 312 | D | Result had a dilution factor (DF) of 20 |
| L-LMW-1S | Sulfate | 71.6 | | 5 |
| L-LMW-3S | Sulfate | 286 | | 20 |
| " | Chloride | 21.3 | | 2 |
| L-LMW-4S | Chloride | 26.0 | | 2 |
| " | Sulfate | 266 | | 20 |
| L-LMW-6S | Sulfate | 124 | | 10 |
| L-LMW-7S | Sulfate | 144 | | 10 |
| L-LMW-8S | Chloride | 19.5 | | 2 |
| " | Sulfate | 522 | | 50 |
| L-BMW-2S | Sulfate | 23.5 | | 2 |
| L-LMW-DUP-1 | Lead (Pb) | 3.1 | J | RPD was not met, PQL ^{MDL} Result > MDL |
| " | Sulfate | 495 | D | Result had a DF of 50 |
| L-BMW-1S | Sulfate | 65.3 | J | Result outside calibration range |
| L-LMW-8S | Pb | 2.5 | UJ | RPD was not met, Result < MDL |
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Signature: Tommy Woodruff

Date: 5/30/17



MEMORANDUM

Date: May 30, 2017
To: Project File
From: Tommy Goodwin
cc: Amanda Derhake, Jeff Ingram
RE: DATA VALIDATION SUMMARY, LABADIE ENERGY CENTER – E.3

Project No.: 1531406
Project: Ameren
Email:

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

- Analysis of pH for all samples was initiated outside of the 15 minute EPA required holding time. Field measurements of pH were taken at the time of sample collection.
- Calcium exceeded the recovery criteria for MS. Data was not qualified on MS/MSD data alone.
- Reported results with high levels of non-target analytes or other matrix interference were analyzed at dilution and qualified as dilution (D).
- When a compound was detected in a blank (i.e. method, field, rinsate), and the sample results were greater than the MDL and less than the PQL the results were recorded at the PQL value and qualified as non-detects (U).
- When a duplicate (i.e. field, sample) RPD was not met, associated samples were qualified as estimates (J). If the results were less than the method detection limit or detected in a blank the results were qualified as non-detects and estimates (UJ).

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

Company Name: Golder Associates
 Project Name: Ameren-Labadie Fly-LMW- E3
 Reviewer: T Goodwin

Project Manager: J Ingram
 Project Number: 1531406.0001B
 Validation Date: 5/30/17

Laboratory: Pace Analytical

SDG #: 60223486

Analytical Method (type and no.): Metals 200.7&200.8, Hg 7470, TDS 2540C, pH 4500H+, Anions 300.0, Rads 903.1&904.0

Matrix: Air Soil/Sed. Water Waste

Sample Names L-LMW1S, L-LMW-2S, L-LMW-3S, L-LMW-4S, L-LMW-5S, L-LMW-6S, L-LMW-7S, L-LMW-8S, L-BMW-1S, L-BMW-2S
~~S-LMW-DUP-1, S-LMW-FB-1, S-LMW-1S MS, S-LMW-5S MSD~~

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

| Field Information | YES | NO | NA | COMMENTS |
|--|-------------------------------------|-------------------------------------|-------------------------------------|--|
| a) Sampling dates noted? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| b) Sampling team indicated? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| c) Sample location noted? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| d) Sample depth indicated (Soils)? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| e) Sample type indicated (grab/composite)? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Grab |
| f) Field QC noted? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| g) Field parameters collected (note types)? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | pH, Cond, Turb, Temp, DO, ORP, Flow, DTW |
| h) Field Calibration within control limits? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| i) Notations of unacceptable field conditions/performances from field logs or field notes? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| j) Does the laboratory narrative indicate deficiencies? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Note Deficiencies: _____ | | | | |

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

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

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

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

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

| Duplicates | YES | NO | NA | COMMENTS |
|--|-------------------------------------|-------------------------------------|--------------------------|-------------------------|
| a) Were field duplicates collected (note original and duplicate sample names)? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <u>Dup-1@ LMW-15</u> |
| | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <u>FB-1@ LMW-35</u> |
| b) Were field dup. precision criteria met (note RPD)? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <u>Ca (Sample Only)</u> |
| c) Were lab duplicates analyzed (note original and duplicate samples)? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <u>TDS, pH</u> |
| d) Were lab dup. precision criteria met (note RPD)? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <u>TDS (3)</u> |

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

| Matrix Spike/Matrix Spike Duplicate (MS/MSD) | YES | NO | NA | COMMENTS |
|--|-------------------------------------|-------------------------------------|-------------------------------------|-----------------|
| a) Was MS accuracy criteria met? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <u>Ca (131)</u> |
| Recovery could not be calculated since sample contained high concentration of analyte? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | _____ |
| b) Was MSD accuracy criteria met? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | _____ |
| Recovery could not be calculated since sample contained high concentration of analyte? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | _____ |
| c) Were MS/MSD precision criteria met? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | _____ |

Comments/Notes:

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

Data Qualification:

| Sample Name | Constituent(s) | Result | Qualifier | Reason |
|-------------|----------------|--------|-----------|---------------------------------------|
| L-LMW-1S | Sulfate | 52.7 | D | Result at a dilution factor (DF) of 5 |
| L-LMW-2S | Sulfate | 365 | D | |
| L-LMW-3S | Chloride | 20.8 | D | |
| " | Sulfate | 256 | D | |
| L-LMW-4S | Chloride | 23.9 | D | |
| " | Sulfate | 247 | D | |
| L-LMW-6S | Sulfate | 107 | D | |
| L-LMW-7S | Sulfate | 191 | D | |
| L-LMW-8S | Chloride | 18.4 | D | |
| " | Sulfate | 338 | D | |
| L-BMW-1S | Sulfate | 57.9 | D | |
| L-BMW-2S | Sulfate | 24.8 | D | |
| L-LMW-DUP-1 | Sulfate | 49.0 | D | |
| " | Cobalt | 0.72 | UJ | |
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Signature: *Tommy J. [Signature]*

Date: 05/30/17



MEMORANDUM

Date: May 30, 2017
To: Project File
From: Tommy Goodwin
cc: Amanda Derhake, Jeff Ingram
Project No.: 1531406
Project: Ameren
Email:
RE: DATA VALIDATION SUMMARY, LABADIE ENERGY CENTER – E.4

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

- Analysis of pH for all samples was initiated outside of the 15 minute EPA required holding time. Field measurements of pH were taken at the time of sample collection.
- Mercury recovery was outside the criteria for MS and MSD. Calcium exceeded the recovery criteria for MSD. Radon exceeded the recovery criteria for MS. Mercury exceeded the RPD for MS/MSD. Data was not qualified on MS/MSD data alone.
- Reported results with high levels of non-target analytes or other matrix interference were analyzed at dilution and qualified as dilution (D).
- When a compound was detected in a blank (i.e. method, field, rinsate), and the sample results were greater than the MDL and less than the PQL the results were recorded at the PQL value and qualified as non-detects (U).
- When a duplicate (i.e. field, sample) RPD was not met, associated samples were qualified as estimates (J). If the results were less than the method detection limit or detected in a blank the results were qualified as non-detects and estimates (UJ).

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

Company Name: Golder Associates
 Project Name: Ameren-Labadie Fly-LMW- EY
 Reviewer: T Goodwin

Project Manager: J Ingram
 Project Number: 1531406.0001B
 Validation Date: 5/30/17

Laboratory: Pace Analytical SDG #: 60227402
 Analytical Method (type and no.): Metals 200.7&200.8, Hg 7470, TDS 2540C, pH 4500H+, Anions 300.0, Rads 903.1&904.0
 Matrix: Air Soil/Sed. Water Waste
 Sample Names L-LMW-1S, L-LMW-2S, L-LMW-3S, L-LMW-4S, L-LMW-5S, L-LMW-6S, L-LMW-7S, L-LMW-8S, L-BMW-1S, L-BMW-2S
~~S-LMW-DUP-1, S-LMW-FB-1, S-LMW-2S MS, S-LMW-2S MSD~~

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

| Field Information | YES | NO | NA | COMMENTS |
|--|-------------------------------------|-------------------------------------|-------------------------------------|--|
| a) Sampling dates noted? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| b) Sampling team indicated? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| c) Sample location noted? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| d) Sample depth indicated (Soils)? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| e) Sample type indicated (grab/composite)? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Grab |
| f) Field QC noted? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| g) Field parameters collected (note types)? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | pH, Cond, Turb, Temp, DO, ORP, Flow, DTW |
| h) Field Calibration within control limits? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| i) Notations of unacceptable field conditions/performances from field logs or field notes? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| j) Does the laboratory narrative indicate deficiencies? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Note Deficiencies: _____ | | | | |

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

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

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

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

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

| Duplicates | YES | NO | NA | COMMENTS |
|--|-------------------------------------|-------------------------------------|--------------------------|-------------------------------------|
| a) Were field duplicates collected (note original and duplicate sample names)? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <u>Dup-1@ LMW-8S</u> |
| | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <u>FB-1@ LMW-1S</u> |
| b) Were field dup. precision criteria met (note RPD)? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <u>Cl (DUP only), Cr (DUP only)</u> |
| c) Were lab duplicates analyzed (note original and duplicate samples)? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <u>TDS, pH</u> |
| d) Were lab dup. precision criteria met (note RPD)? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <u>TDS (2)</u> |

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

| Matrix Spike/Matrix Spike Duplicate (MS/MSD) | YES | NO | NA | COMMENTS |
|--|--------------------------|-------------------------------------|-------------------------------------|---------------------------|
| a) Was MS accuracy criteria met? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <u>Hg (129), Ra (140)</u> |
| Recovery could not be calculated since sample contained high concentration of analyte? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | _____ |
| b) Was MSD accuracy criteria met? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <u>Hg (70), Ca (55)</u> |
| Recovery could not be calculated since sample contained high concentration of analyte? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | _____ |
| c) Were MS/MSD precision criteria met? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <u>Hg (22)</u> |

Comments/Notes:



MEMORANDUM

Date: May 31, 2017
To: Project File
From: Tommy Goodwin
cc: Amanda Derhake, Jeff Ingram
Project No.: 1531406
Project: Ameren
Email:
RE: DATA VALIDATION SUMMARY, LABADIE ENERGY CENTER – E.5

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

- Analysis of pH for all samples was initiated outside of the 15 minute EPA required holding time. Field measurements of pH were taken at the time of sample collection.
- Radium and Boron recovery was outside the criteria for MS and MSD. Calcium, Chloride, and Sulfate recovery was outside the criteria for MS. Data was not qualified on MS/MSD data alone.
- Reported results with high levels of non-target analytes or other matrix interference were analyzed at dilution and qualified as dilution (D).
- When a compound was detected in a blank (i.e. method, field, rinsate), and the sample results were greater than the MDL and less than the PQL the results were recorded at the PQL value and qualified as non-detects (U).
- When a duplicate (i.e. field, sample) RPD was not met, associated samples were qualified as estimates (J). If the results were less than the method detection limit or detected in a blank the results were qualified as non-detects and estimates (UJ).

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

Company Name: Golder Associates
 Project Name: Ameren-Labadie Fly-LMW- ES
 Reviewer: T Goodwin

Project Manager: J Ingram
 Project Number: 1531406.0001B
 Validation Date: 5/31/17

Laboratory: Pace Analytical SDG #: 60232172
 Analytical Method (type and no.): Metals 200.7&200.8, Hg 7470, TDS 2540C, pH 4500H+, Anions 300.0, Rads 903.1&904.0
 Matrix: Air Soil/Sed. Water Waste
 Sample Names L-LMW1S, L-LMW-2S, L-LMW-3S, L-LMW-4S, L-LMW-5S, L-LMW-6S, L-LMW-7S, L-LMW-8S, L-BMW-1S, L-BMW-2S
~~S-UMW-DUP-1, S-UMW-FB-1, S-UMW-13 MS, S-UMW-15 MSD~~

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

| Field Information | YES | NO | NA | COMMENTS |
|--|-------------------------------------|-------------------------------------|-------------------------------------|--|
| a) Sampling dates noted? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| b) Sampling team indicated? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| c) Sample location noted? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| d) Sample depth indicated (Soils)? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| e) Sample type indicated (grab/composite)? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Grab |
| f) Field QC noted? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| g) Field parameters collected (note types)? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | pH, Cond, Turb, Temp, DO, ORP, Flow, DTW |
| h) Field Calibration within control limits? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| i) Notations of unacceptable field conditions/performances from field logs or field notes? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| j) Does the laboratory narrative indicate deficiencies? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Note Deficiencies: _____ | | | | |

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

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

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

| Blanks | YES | NO | NA | COMMENTS |
|--|-------------------------------------|-------------------------------------|-------------------------------------|---|
| a) Were analytes detected in the method blank(s)? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <u>Ba, Be, Ca, Mo, Sb, As, Cd</u> |
| b) Were analytes detected in the field blank(s)? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <u>Ca, Sb, As, Cd</u> |
| c) Were analytes detected in the equipment blank(s)? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | _____ |
| d) Were analytes detected in the trip blank(s)? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | _____ |
| | | | | |
| Laboratory Control Sample (LCS) | YES | NO | NA | COMMENTS |
| a) Was a LCS analyzed once per SDG? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | _____ |
| b) Were the proper analytes included in the LCS? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | _____ |
| c) Was the LCS accuracy criteria met? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | _____ |
| | | | | |
| Duplicates | YES | NO | NA | COMMENTS |
| a) Were field duplicates collected (note original and duplicate sample names)? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <u>Dup-1@ LMW-YS</u> |
| | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <u>FB-1@ LMW-SS</u> |
| b) Were field dup. precision criteria met (note RPD)? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <u>Pb (Sample Only), Sb (Dup Only)</u> |
| c) Were lab duplicates analyzed (note original and duplicate samples)? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <u>TDS, pH</u> |
| d) Were lab dup. precision criteria met (note RPD)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <u>TDS (18)</u> |
| | | | | |
| Blind Standards | YES | NO | NA | COMMENTS |
| a) Was a blind standard used (indicate name, analytes included and concentrations)? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | _____ |
| b) Was the %D within control limits? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | _____ |
| | | | | |
| Matrix Spike/Matrix Spike Duplicate (MS/MSD) | YES | NO | NA | COMMENTS |
| a) Was MS accuracy criteria met? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <u>Rad (61.71), B (65), Ca (34), Cu (136), Chloride (121)</u> |
| Recovery could not be calculated since sample contained high concentration of analyte? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <u>Sulfate (124)2</u> |
| b) Was MSD accuracy criteria met? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <u>Ra (70.26), B (58)</u> |
| Recovery could not be calculated since sample contained high concentration of analyte? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | _____ |
| c) Were MS/MSD precision criteria met? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | _____ |

Comments/Notes:

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

Data Qualification:

| Sample Name | Constituent(s) | Result | Qualifier | Reason |
|-------------|-----------------|--------|---|--|
| L-BMW-1S | Sulfate | 43.1 | D | Result at a dilution factor (DF) of 5 |
| L-BMW-2S | Molybdenum (Mo) | 20.0 | U | Detected in Method Blank, ^(MB) PQL > Result > MDL |
| L-LMW-1S | Mo | 20.0 | U | |
| | Antimony (Sb) | 1.0 | U | |
| | Cadmium (Cd) | 0.50 | U | |
| | Sulfate | 224 | D | |
| L-LMW-2S | Sulfate | 275 | D | " 20 |
| | Sb | 1.0 | U | |
| | Cd | 0.50 | U | |
| L-LMW-3S | Sb | 1.0 | U | |
| | Chloride | 20.7 | D | |
| | Sulfate | 260 | D | 20 |
| L-LMW-4S | Chloride | 23.3 | D | 2 |
| | Sulfate | 208 | D | 20 |
| | Sb | 1.0 | U ^U U _(P) | |
| | Cd | 0.50 | U | |
| L-LMW-5S | Mo | 20.0 | U | |
| | Sb | 1.0 | U | |
| | Arsenic (As) | 1.0 | U | |
| | Cd | 0.50 | U | |
| L-LMW-6S | As | 1.0 | U | |
| | Cd | 0.50 | U | |
| | Sb | 1.0 | U | |
| | Sulfate | 53.5 | D | Result at a DF of 5 |
| L-LMW-7S | Sulfate | 46.1 | D | " 5 |
| " | Sb | 1.0 | U | Detected in MB, PQL > Result > MDL |

Signature: Tommy Gooden

Date: 5/31/17

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

Data Qualification:

| Sample Name | Constituent(s) | Result | Qualifier | Reason | |
|---|---|--------|-----------|------------------------------------|--|
| L-LMW-7S | Cd | 0.50 | U | Detected in MB, PQL > Result > MDL | |
| | L-LMW-8S | Sb | 1.0 | U | |
| | As | 1.0 | U | | |
| | Cd | 0.50 | U | | |
| | Sulfate | 127 | D | Result had ~ DF of 10 | |
| L-LMW- FB-1 ^{DUP-1} (B) (T) | Chloride | 24.1 | D | | |
| | Sulfate | 220 | D | | |
| | Lead (Pb) | 2.5 | UJ | RPD not met, Result < MDL | |
| | Sb | 1.0 | U | | |
| | Cd | 0.50 | U | | |
| L-LMW-FB-1 | Calcium (Ca) Barium (B) (T) | 100 | U | | |
| | Sb | 1.0 | U | | |
| | As | 1.0 | U | | |
| | Cd | 0.50 | U | | |
| (TW) | | | | | |

Signature: *Tommy J. Goodrich*

Date: 5/31/17



MEMORANDUM

Date: May 31, 2017 **Project No.:** 1531406
To: Project File **Project:** Ameren
From: Tommy Goodwin
cc: Amanda Derhake, Jeff Ingram **Email:**
RE: DATA VALIDATION SUMMARY, LABADIE ENERGY CENTER – E.6

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

- Analysis of pH for all samples was initiated outside of the 15 minute EPA required holding time. Field measurements of pH were taken at the time of sample collection.
- Radium-228 recovery was outside the criteria for MS. Calcium recovery was outside the criteria for MSD. Data was not qualified on MS/MSD data alone.
- Reported results with high levels of non-target analytes or other matrix interference were analyzed at dilution and qualified as dilution (D).
- When a compound was detected in a blank (i.e. method, field, rinsate), and the sample results were greater than the MDL and less than the PQL the results were recorded at the PQL value and qualified as non-detects (U). If the sample results were greater than the PQL, but less than 5 times the blank detection result, the detections were recorded at the result value and qualified as non-detects (U).
- When a duplicate (i.e. field, sample) RPD was not met, associated samples were qualified as estimates (J). If the results were less than the method detection limit or detected in a blank the results were qualified as non-detects and estimates (UJ).

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

Company Name: Golder Associates
 Project Name: Ameren-Labadie Fly-LMW- E6
 Reviewer: T Goodwin

Project Manager: J Ingram
 Project Number: 1531406.0001B
 Validation Date: 5/31/17

Laboratory: Pace Analytical SDG #: 60236164
 Analytical Method (type and no.): Metals 200.7&200.8, Hg 7470, TDS 2540C, pH 4500H+, Anions 300.0, Rads 903.1&904.0
 Matrix: Air Soil/Sed. Water Waste
 Sample Names L-LMW-1S, L-LMW-2S, L-LMW-3S, L-LMW-4S, L-LMW-5S, L-LMW-6S, L-LMW-7S, L-LMW-8S, L-BMW-1S, L-BMW-2S
~~S-LMW-DUP-1, S-LMW-FB-1, S-LMW-2SMS, S-LMW-2SMSD~~

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

| Field Information | YES | NO | NA | COMMENTS |
|--|-------------------------------------|-------------------------------------|-------------------------------------|--|
| a) Sampling dates noted? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| b) Sampling team indicated? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| c) Sample location noted? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| d) Sample depth indicated (Soils)? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| e) Sample type indicated (grab/composite)? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Grab |
| f) Field QC noted? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| g) Field parameters collected (note types)? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | pH, Cond, Turb, Temp, DO, ORP, Flow, DTW |
| h) Field Calibration within control limits? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| i) Notations of unacceptable field conditions/performances from field logs or field notes? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| j) Does the laboratory narrative indicate deficiencies? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Note Deficiencies: _____ | | | | |

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

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

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

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

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

| Duplicates | YES | NO | NA | COMMENTS |
|--|-------------------------------------|-------------------------------------|--------------------------|----------------------|
| a) Were field duplicates collected (note original and duplicate sample names)? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <u>Dup-1@ LMW-3S</u> |
| | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <u>FB-1@ LMW-5S</u> |
| b) Were field dup. precision criteria met (note RPD)? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <u>Cd(200)</u> |
| c) Were lab duplicates analyzed (note original and duplicate samples)? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <u>TDS, pH</u> |
| d) Were lab dup. precision criteria met (note RPD)? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <u>TDS (4)</u> |

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

| Matrix Spike/Matrix Spike Duplicate (MS/MSD) | YES | NO | NA | COMMENTS |
|--|-------------------------------------|-------------------------------------|-------------------------------------|---------------------|
| a) Was MS accuracy criteria met? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <u>Ra (136)</u> |
| Recovery could not be calculated since sample contained high concentration of analyte? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | _____ |
| b) Was MSD accuracy criteria met? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <u>Ca (67, 156)</u> |
| Recovery could not be calculated since sample contained high concentration of analyte? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | _____ |
| c) Were MS/MSD precision criteria met? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | _____ |

Comments/Notes:

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

Data Qualification:

• MB = Method Blank

| Sample Name | Constituent(s) | Result | Qualifier | Reason |
|-------------|-----------------|--------|-----------|---------------------------------------|
| L-LMW-2S | Sulfate | 285 | D | Result had dilution factor (DF) of 20 |
| " | Chromium (Cr) | 1.0 | U | Detected in MB, PQL > Result > MDL |
| L-LMW-7S | Sulfate | 34.0 | D | Result had DF of 5 |
| L-LMW-8S | Cr | 1.0 | U | Detected in MB, PQL > Result > MDL |
| L-BMW-1S | Cr | 1.0 | U | " " |
| " | Sulfate | 42.9 | D | Result had a DF of 5 |
| L-BMW-2S | Cr | 1.0 | U | Detected in MB, PQL > Result > MDL |
| L-LMW-3S | Cr | 1.0 | U | " " |
| I | Chloride | 21.6 | D | Result had a DF of 2 |
| I | Sulfate | 257 | D | " 20 |
| L-LMW-DUP-1 | Cadmium (Cd) | 0.029 | UJ | RPD not met, Result < MDL |
| I | Cr | 1.0 | U | Detected in MB, PQL > Result > MDL |
| I | Chloride | 20.7 | D | Result had a DF of 2 |
| I | Sulfate | 266 | D | I 20 |
| L-LMW-1S | Sulfate | 90.8 | D | I 10 |
| " | Molybdenum (Mo) | 20.0 | U | Detected in MB, PQL > Result > MDL |
| L-LMW-4S | Cr | 1.0 | U | Detected in MB, PQL > Result > MDL |
| I | Chloride | 23.1 | D | Result had a DF of 2 |
| I | Sulfate | 231 | D | " 20 |
| L-LMW-5S | Mo | 20.0 | U | Detected in MB, PQL > Result > MDL |
| " | Cr | 1.0 | U | I I |
| L-LMW-6S | Mo | 20.0 | U | I I |
| I | Cr | 1.0 | U | I I |
| I | Sulfate | 49.4 | D | Result had a DF of 5 |
| L-LMW-FB-1 | Cr | 1.0 | U | Detected in MB, PQL > Result > MDL |

Signature: Tommy J. [Signature]

Date: 5/31/17



MEMORANDUM

Date: May 31, 2017
To: Project File
From: Tommy Goodwin
cc: Amanda Derhake, Jeff Ingram
RE: DATA VALIDATION SUMMARY, LABADIE ENERGY CENTER – E.7

Project No.: 1531406
Project: Ameren
Email:

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

- Analysis of pH for all samples was initiated outside of the 15 minute EPA required holding time. Field measurements of pH were taken at the time of sample collection.
- Calcium recovery was outside the criteria for MS and MSD. Data was not qualified on MS/MSD data alone.
- Reported results with high levels of non-target analytes or other matrix interference were analyzed at dilution and qualified as dilution (D).
- When a compound was detected in a blank (i.e. method, field, rinsate), and the sample results were greater than the MDL and less than the PQL the results were recorded at the PQL value and qualified as non-detects (U). If the sample results were greater than the PQL, but less than 5 times the blank detection result, the detections were recorded at the result value and qualified as non-detects (U).
- When a duplicate (i.e. field, sample) RPD was not met, associated samples were qualified as estimates (J). If the results were less than the method detection limit or detected in a blank the results were qualified as non-detects and estimates (UJ).

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

Company Name: Golder Associates
 Project Name: Ameren-Labadie Fly-LMW- E7
 Reviewer: T Goodwin

Project Manager: J Ingram
 Project Number: 1531406.0001B
 Validation Date: 5/31/17

Laboratory: Pace Analytical

SDG #: 60239001

Analytical Method (type and no.): Metals 200.7&200.8, Hg 7470, TDS 2540C, pH 4500H+, Anions 300.0, Rads 903.1&904.0

Matrix: Air Soil/Sed. Water Waste

Sample Names L-LMW1S, L-LMW-2S, L-LMW-3S, L-LMW-4S, L-LMW-5S, L-LMW-6S, L-LMW-7S, L-LMW-8S, L-BMW-1S, L-BMW-2S
~~S-LMW-DUP-1, S-LMW-FB-1, S-LMW-1SMS, S-LMW-1S MSD~~

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

| Field Information | YES | NO | NA | COMMENTS |
|--|-------------------------------------|-------------------------------------|-------------------------------------|--|
| a) Sampling dates noted? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| b) Sampling team indicated? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| c) Sample location noted? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| d) Sample depth indicated (Soils)? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| e) Sample type indicated (grab/composite)? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Grab |
| f) Field QC noted? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| g) Field parameters collected (note types)? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | pH, Cond, Turb, Temp, DO, ORP, Flow, DTW |
| h) Field Calibration within control limits? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| i) Notations of unacceptable field conditions/performances from field logs or field notes? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| j) Does the laboratory narrative indicate deficiencies? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Note Deficiencies: _____ | | | | |
| _____ | | | | |
| _____ | | | | |

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

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

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

| Blanks | YES | NO | NA | COMMENTS |
|--|-------------------------------------|--------------------------|-------------------------------------|--|
| a) Were analytes detected in the method blank(s)? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <u>Cr(0.012)</u> |
| b) Were analytes detected in the field blank(s)? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <u>Be(0.31), Cu(38.9), As(0.068), Cr(M8)</u> |
| c) Were analytes detected in the equipment blank(s)? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | _____ |
| d) Were analytes detected in the trip blank(s)? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | _____ |

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

| Duplicates | YES | NO | NA | COMMENTS |
|--|-------------------------------------|-------------------------------------|--------------------------|---|
| a) Were field duplicates collected (note original and duplicate sample names)? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <u>Dup-1@ LMW-53</u> |
| | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <u>FB-1@ LMW-35</u> |
| b) Were field dup. precision criteria met (note RPD)? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <u>Sb(73.2), Cd(34.5), Cr(51.1), Se(20), Tl(200), &</u> |
| c) Were lab duplicates analyzed (note original and duplicate samples)? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <u>TDS, pH</u> |
| d) Were lab dup. precision criteria met (note RPD)? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <u>TDS(2)</u> |

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

| Matrix Spike/Matrix Spike Duplicate (MS/MSD) | YES | NO | NA | COMMENTS |
|--|-------------------------------------|-------------------------------------|-------------------------------------|--------------------|
| a) Was MS accuracy criteria met? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <u>Cu (27, 26)</u> |
| Recovery could not be calculated since sample contained high concentration of analyte? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | _____ |
| b) Was MSD accuracy criteria met? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <u>Cu (26)</u> |
| Recovery could not be calculated since sample contained high concentration of analyte? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | _____ |
| c) Were MS/MSD precision criteria met? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | _____ |

Comments/Notes:

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

Data Qualification:

| Sample Name | Constituent(s) | Result | Qualifier | Reason |
|-------------|----------------|--------|-----------|---|
| L-LMW-1S | Chromium (Cr) | 1.0 | U | Detected in Method Blank (MB), PQL > Result > MDL |
| " | Sulfate | 57.6 | D | Result at a dilution factor (DF) of 5 |
| L-LMW-2S | Sulfate | 293 | D | " 20 |
| " | Cr | 1.0 | U | Detected in MB, PQL > Result > MDL |
| L-LMW-3S | Cr | 1.0 | U | L L |
| L | Beryllium (Be) | 1.0 | U | Detected in Field Blank (FB), PQL > Result > MDL |
| L | Chloride | 20.2 | D | Result at a DF of 2 |
| L | Sulfate | 239 | D | " 20 |
| L-LMW-4S | Chloride | 23.2 | D | L 2 |
| L | Sulfate | 233 | D | L 20 |
| L | Cr | 1.0 | U | Detected in MB, PQL > Result > MDL |
| L-LMW-5S | Cr | 1.4 | J | RPD was not met, Result > PQL |
| L-LMW-6S | Cr | 1.0 | U | Detected in MB, PQL > Result > MDL |
| " | Sulfate | 43.7 | D | Result at a DF of 5 |
| L-LMW-7S | Sulfate | 31.0 | D | L 2 |
| L-LMW-8S | Sulfate | 81.8 | D | L 5 |
| " | Cr | 1.0 | U | Detected in MB, PQL > Result > MDL |
| L-BMW-1S | Sulfate | 53.3 | D | Result at a DF of 5 |
| L-BMW-2S | Cr | 1.0 | U | Detected in MB, PQL > Result > MDL |
| L-LMW-DUP-1 | Cr | 1.0 | U | Detected in MB, PQL > Result > MDL |
| " | Thallium (Tl) | 0.036 | UJ | RPD not met, Result < MDL |
| L-LMW-FB-1 | Cr | 1.0 | U | Detected in MB, PQL > Result > MDL |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Signature: Tommy J. North Jr.

Date: 5/31/17



MEMORANDUM

Date: July 6, 2017
To: Project File
From: Tommy Goodwin
cc: Amanda Derhake, Jeff Ingram
Project No.: 1531406
Project: Ameren
Email:
RE: DATA VALIDATION SUMMARY, LABADIE ENERGY CENTER – E.8

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

- Analysis of pH for all samples was initiated outside of the 15 minute EPA required holding time. Field measurements of pH were taken at the time of sample collection.
- Mercury recovery was outside the criteria for MS and MSD. Data was not qualified on MS/MSD data alone.
- Reported results with high levels of non-target analytes or other matrix interference were analyzed at dilution and qualified as dilution (D).
- When a compound was detected in a blank (i.e. method, field, rinsate), and the sample results were greater than the MDL and less than the PQL the results were recorded at the PQL value and qualified as non-detects (U). If the sample results were greater than the PQL, but less than 10 times the blank detection result, the detections were recorded at the result value and qualified as non-detects (U).
- When a duplicate (i.e. field, sample) RPD was not met, associated samples were qualified as estimates (J). If the results were less than the method detection limit or detected in a blank the results were qualified as non-detects and estimates (UJ).

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

Company Name: Golder Associates
 Project Name: Ameren-Labadie Fly-LMW- 68
 Reviewer: T Goodwin

Project Manager: J Ingram
 Project Number: 1531406.0001B
 Validation Date: 7/6/2017

Laboratory: Pace Analytical

SDG #: 60245569

Analytical Method (type and no.): Metals 200.7&200.8, Hg 7470, TDS 2540C, pH 4500H+, Anions 300.0, Rads 903.1&904.0

Matrix: Air Soil/Sed. Water Waste

Sample Names L-LMW1S, L-LMW-2S, L-LMW-3S, L-LMW-4S, L-LMW-5S, L-LMW-6S, L-LMW-7S, L-LMW-8S, L-BMW-1S, L-BMW-2S, S-LMW-DUP-1, S-LMW-FB-1, S-LMW- 1s MS, S-LMW- 1s MSD

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

| Field Information | YES | NO | NA | COMMENTS |
|--|-------------------------------------|-------------------------------------|-------------------------------------|--|
| a) Sampling dates noted? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| b) Sampling team indicated? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| c) Sample location noted? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| d) Sample depth indicated (Soils)? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| e) Sample type indicated (grab/composite)? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Grab |
| f) Field QC noted? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| g) Field parameters collected (note types)? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | pH, Cond, Turb, Temp, DO, ORP, Flow, DTW |
| h) Field Calibration within control limits? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| i) Notations of unacceptable field conditions/performances from field logs or field notes? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| j) Does the laboratory narrative indicate deficiencies? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Note Deficiencies: _____ | | | | |
| _____ | | | | |
| _____ | | | | |

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

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

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

| Blanks | YES | NO | NA | COMMENTS |
|--|-------------------------------------|--------------------------|-------------------------------------|---|
| a) Were analytes detected in the method blank(s)? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <u>Hg(0.14), Ba(4.1), Ca(51.6), Cr(0.12),</u> |
| b) Were analytes detected in the field blank(s)? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <u>Ba(1.0), Cr(0.19), Hg(0.14)</u> |
| c) Were analytes detected in the equipment blank(s)? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | _____ |
| d) Were analytes detected in the trip blank(s)? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | _____ |

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

| Duplicates | YES | NO | NA | COMMENTS |
|--|-------------------------------------|-------------------------------------|--------------------------|--------------------------|
| a) Were field duplicates collected (note original and duplicate sample names)? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <u>Dup-1@ LMW-25</u> |
| b) Were field dup. precision criteria met (note RPD)? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <u>FB-1@ LMW-55</u> |
| c) Were lab duplicates analyzed (note original and duplicate samples)? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <u>Se(34.5), Tl(200)</u> |
| d) Were lab dup. precision criteria met (note RPD)? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <u>TDS(3)</u> |

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

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

Comments/Notes:



MEMORANDUM

Date: January 03, 2018
To: Project File
From: Tommy Goodwin
cc: Amanda Derhake, Jeff Ingram
Project No.: 1531406
Project: Ameren
Email:
RE: DATA VALIDATION SUMMARY, LABADIE ENERGY CENTER– D.M. NOV.2017

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

- Reported results with high levels of non-target analytes or other matrix interference were analyzed at dilution and qualified as dilution (D).
- When a compound was detected in a sample result between the MDL and the PQL the results were recorded at the detection value and qualified as estimates (J).
- When a duplicate (i.e. field, sample) RPD was not met, associated samples were qualified as estimates (J). Results that were also reported at a dilution were qualified dilutions and estimates (JD).

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

Company Name: Golder Associates
 Project Name: Ameren-Labadie-LMW-D.M. Nov 2017
 Reviewer: T Goodwin

Project Manager: J Ingram
 Project Number: 1531406.0001D
 Validation Date: 1/3/2018

Laboratory: Pace Analytical SDG #: 60257955
 Analytical Method (type and no.): Metals 200.7, 2320B Alkalinity, 2540C TDS, 300.0 IC Anions
 Matrix: Air Soil/Sed. Water Waste
 Sample Names L-LMW1S, L-LMW-2S, L-LMW-3S, L-LMW-4S, L-LMW-5S, L-LMW-6S, L-LMW-7S, L-LMW-8S, L-BMW-1S, L-BMW-2S
S-LMW-DUP-1, S-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? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| b) Sampling team indicated? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| c) Sample location noted? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| d) Sample depth indicated (Soils)? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| e) Sample type indicated (grab/composite)? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Grab |
| f) Field QC noted? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| g) Field parameters collected (note types)? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | pH, Cond, Turb, Temp, DO, ORP, Flow, DTW |
| h) Field Calibration within control limits? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| i) Notations of unacceptable field conditions/performances from field logs or field notes? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| j) Does the laboratory narrative indicate deficiencies? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Note Deficiencies: _____ | | | | |
| _____ | | | | |
| _____ | | | | |

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

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

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

| Blanks | YES | NO | NA | COMMENTS |
|--|-------------------------------------|--------------------------|-------------------------------------|-----------------------------|
| a) Were analytes detected in the method blank(s)? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <u>Na (46.0),</u> |
| b) Were analytes detected in the field blank(s)? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <u>B (30.4), Alk (13.1)</u> |
| c) Were analytes detected in the equipment blank(s)? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | _____ |
| d) Were analytes detected in the trip blank(s)? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | _____ |

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

| Duplicates | YES | NO | NA | COMMENTS |
|--|-------------------------------------|-------------------------------------|--------------------------|------------------------------------|
| a) Were field duplicates collected (note original and duplicate sample names)? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <u>Dup-1@ L-LMW-15</u> |
| | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <u>FB-1@ L-LMW-35</u> |
| b) Were field dup. precision criteria met (note RPD)? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <u>Alk (40.9), Sulfate (102.8)</u> |
| c) Were lab duplicates analyzed (note original and duplicate samples)? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | _____ |
| d) Were lab dup. precision criteria met (note RPD)? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <u>Alk (16), TDS (52)</u> |

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

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

Comments/Notes:

QA LEVEL II - INORGANIC DATA EVALUATION CHECKLIST

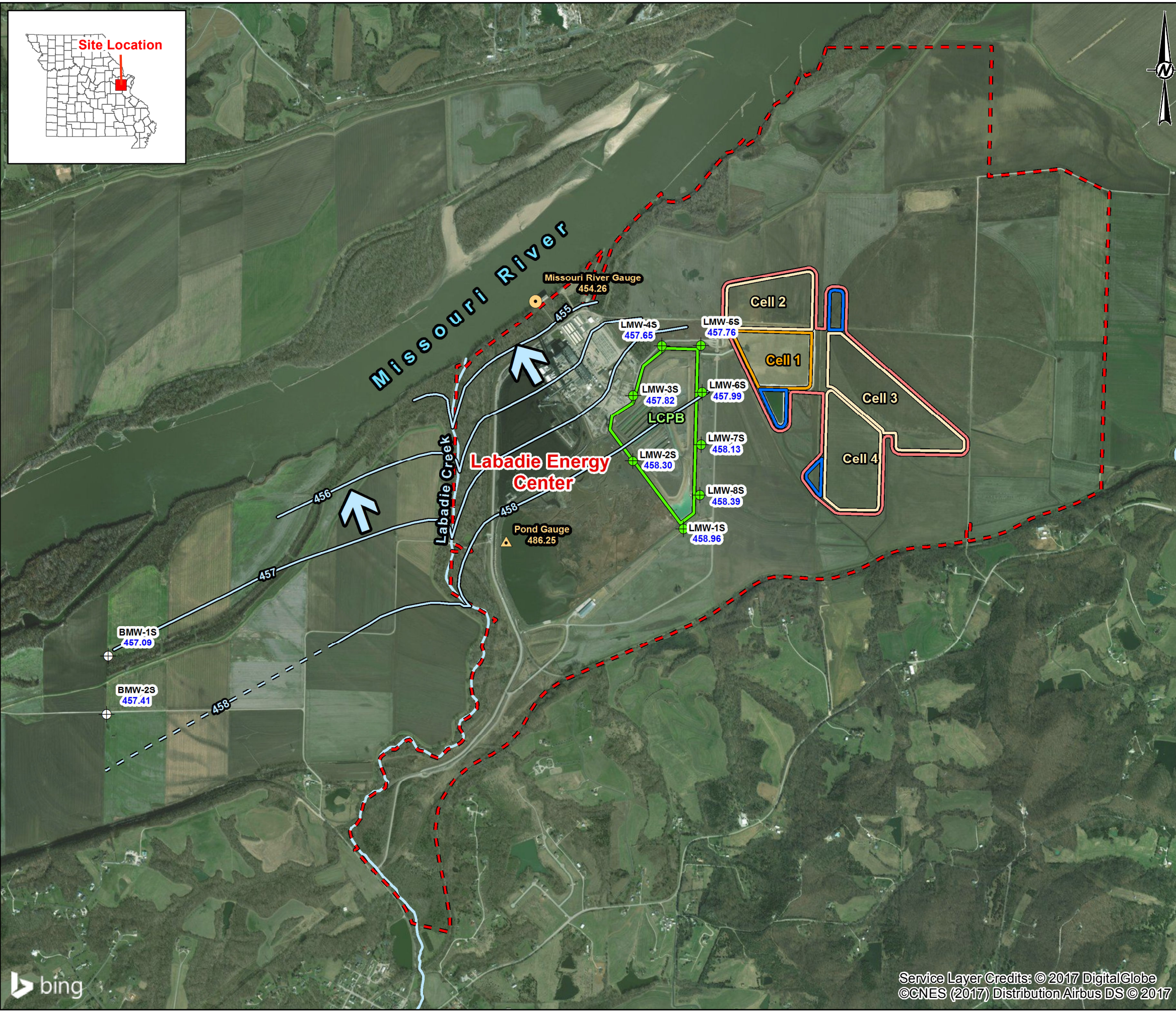
Data Qualification:

| Sample Name | Constituent(s) | Result | Qualifier | Reason | |
|---|---------------------------------|--------|-----------|---|--|
| L-LMW-1S | Alkalinity (CaCO ₃) | 633 | J | RPD exceeded limit; Result > MDL | |
| └ | Sulfate | 49.1 | JD | RPD exceeded limit; Result > MDL; DF of 5 | |
| L-LMW-2S | Chloride | 21.0 | D | Result had a dilution factor (DF) of 2 | |
| └ | Sulfate | 232 | D | <div style="display: flex; align-items: center; justify-content: center;"> <div style="border-left: 1px solid black; border-right: 1px solid black; height: 100%; width: 2px;"></div> <div style="margin: 0 5px;">20</div> </div> | |
| L-LMW-3S | Chloride | 20.3 | D | | |
| └ | Sulfate | 255 | D | | |
| L-LMW-4S | Chloride | 22.6 | D | | |
| └ | Sulfate | 250 | D | | |
| L-LMW-6S | Sulfate | 51.2 | D | | |
| L-LMW-7S | Sulfate | 139 | D | | |
| L-LMW-8S | Sulfate | 191 | D | | |
| L-BMW-1S | Sulfate | 157 | D | | |
| L-BMW-2S | Sulfate | 246 | D | | |
| └ | Chloride | 21.2 | D | | |
| L-LMW-DUP-1 | Alk, CaCO ₃ | 418 | J | | RPD exceeded limit; Result > MDL |
| └ | Sulfate | 153 | JD | | RPD exceeded limit; Result > MDL; DF of 10 |
| <div style="border: 1px solid black; border-radius: 50%; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center; margin: 0 auto;"> TA </div> | | | | | |

Signature: *Tommy Wood Jr*

Date: 1/3/2018

APPENDIX C – POTENTIOMETRIC SURFACE MAPS



LEGEND

- Labadie Energy Center Property Boundary
- Utility Waste Landfill (UWL)**
- Proposed Fence Perimeter
- Current Cell Under Construction
- Proposed Stormwater Pond
- Proposed Future Cell
- Surface Impoundment**
- LCPB - Fly Ash Surface Impoundment
- Groundwater Elevation Contours**
- Groundwater Elevation Contour (FT MSL)
- Inferred Groundwater Elevation Contour (FT MSL)
- Ground/Surface Water Measurement Locations**
- LCPB Fly Ash Surface Impoundment Monitoring Well
- Background Monitoring Well
- Missouri River Gauge
- LCPA Bottom Ash Surface Impoundment Gauge
- Groundwater Flow Direction

- NOTES**
1. ALL LOCATIONS AND BOUNDARIES ARE APPROXIMATE.
 2. GROUNDWATER ELEVATION MEASUREMENTS OBTAINED BY GOLDER.
 3. GROUNDWATER MONITORING WELLS SURVEYED BY ZAHNER AND ASSOCIATES, INC. ON JANUARY 13 AND FEBRUARY 11, 2016.
 4. GROUNDWATER ELEVATIONS DISPLAYED IN FT MSL (FEET ABOVE MEAN SEA LEVEL).
 5. MISSOURI RIVER LEVEL OBTAINED FROM USGS LABADIE GAUGE 06935550.
 6. POND GAUGE LEVEL OBTAINED ONSITE BY GOLDER.
 7. THE UWL BOUNDARIES AND DESIGNATIONS ARE BASED ON AMEREN LABADIE CONSTRUCTION PERMIT APPLICATION DRAWINGS.

- REFERENCES**
1. ZAHNER AND ASSOCIATES, INC. 2016. LOT CONSOLIDATION PLAT OF "LABADIE ENERGY CENTER" - PREPARED FOR AMEREN MISSOURI. REVISED JUNE 15, 2016.
 2. COORDINATE SYSTEM: NAD 1983 STATEPLANE MISSOURI EAST FIPS 2,401 FEET.
 3. USGS (UNITED STATES GEOLOGICAL SURVEY), NATIONAL WATER INFORMATION SYSTEM, USGS GAUGE 06935550 MISSOURI RIVER NEAR LABADIE, MO.
 4. REITZ & JENS, INC. 2014. ADDITIONAL GROUND WATER DETECTION MONITORING WELLS INSTALLATION REPORT.

| | | |
|---|----------------|---------------------|
| CLIENT | | |
| AMEREN MISSOURI LABADIE ENERGY CENTER | | |
| PROJECT CCR GROUNDWATER MONITORING PROGRAM | | |
| TITLE LCPB POTENTIOMETRIC SURFACE MAP BACKGROUND EVENT 1 - MARCH 22, 2016 | | |
| CONSULTANT | YYYY-MM-DD | 2016-05-31 |
| | PREPARED | JSI |
| | DESIGN | JSI |
| | REVIEW | JS |
| | APPROVED | MNH |
| PROJECT No. 153-1406 | PHASE 0001B | Rev. 0.0 |
| | | FIGURE P1 |

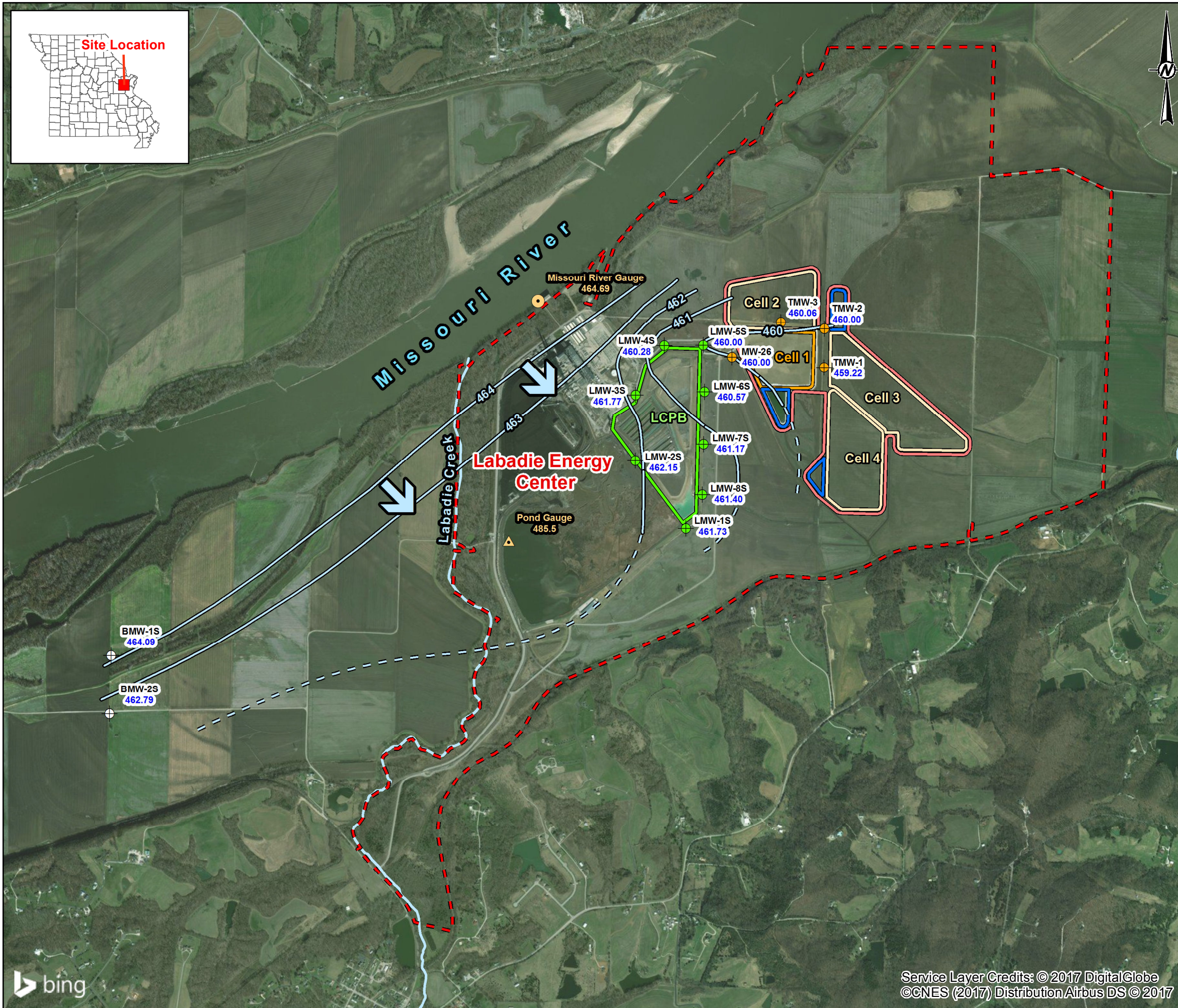


Path: G:\Projects\153-1406 - Ameren\GW Monitoring Program - MOC\Phase 0001 - Labadie Energy\800 - FIGURES\DRAWINGS\PRODUCTION\Map\Map\Updated For Maps\Shade\1 - LCPB.mxd



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



LEGEND

- Labadie Energy Center Property Boundary
- Utility Waste Landfill (UWL)**
 - Proposed Fence Perimeter
 - Cell LCL1
 - Proposed Stormwater Pond
 - Proposed Future Cell
- Surface Impoundment**
 - LCPB - Fly Ash Surface Impoundment
- Groundwater Elevation Contours**
 - Groundwater Elevation Contour (FT MSL)
 - Inferred Groundwater Elevation Contour (FT MSL)
- Ground/Surface Water Measurement Locations**
 - LCPB Fly Ash Surface Impoundment Monitoring Well
 - Background Monitoring Well
 - UWL Monitoring Well
 - Missouri River Gauge
 - LCPA Bottom Ash Surface Impoundment Gauge
 - Groundwater Flow Direction

NOTES

- ALL LOCATIONS AND BOUNDARIES ARE APPROXIMATE.
- GROUNDWATER ELEVATION MEASUREMENTS OBTAINED BY GOLDER.
- GROUNDWATER MONITORING WELLS (EXCEPT TMW-1 AND MW-26) SURVEYED BY ZAHNER AND ASSOCIATES, INC. ON JANUARY 13 AND FEBRUARY 11, 2016.
- GROUNDWATER MONITORING WELLS TMW-1 AND MW-26 INSTALLED BY RIETZ & JENS, INC. AND SURVEYED BY KDG INC.
- GROUNDWATER ELEVATIONS DISPLAYED IN FT MSL (FEET ABOVE MEAN SEA LEVEL).
- MISSOURI RIVER LEVEL OBTAINED FROM USGS LABADIE GAUGE 06935550.
- POND GAUGE LEVEL OBTAINED ONSITE BY GOLDER.
- THE UWL BOUNDARIES AND DESIGNATIONS ARE BASED ON AMEREN LABADIE CONSTRUCTION PERMIT APPLICATION DRAWINGS.

REFERENCES

- ZAHNER AND ASSOCIATES, INC. 2016. LOT CONSOLIDATION PLAT OF "LABADIE ENERGY CENTER" - PREPARED FOR AMEREN MISSOURI. REVISED JUNE 15, 2016.
- COORDINATE SYSTEM: NAD 1983 STATEPLANE MISSOURI EAST FIPS 2,401 FEET.
- USGS (UNITED STATES GEOLOGICAL SURVEY), NATIONAL WATER INFORMATION SYSTEM, USGS GAUGE 06935550 MISSOURI RIVER NEAR LABADIE, MO.
- REITZ & JENS, INC. 2014. ADDITIONAL GROUND WATER DETECTION MONITORING WELLS INSTALLATION REPORT.

0 5001,000 2,000 3,000 4,000 5,000 6,000 Feet

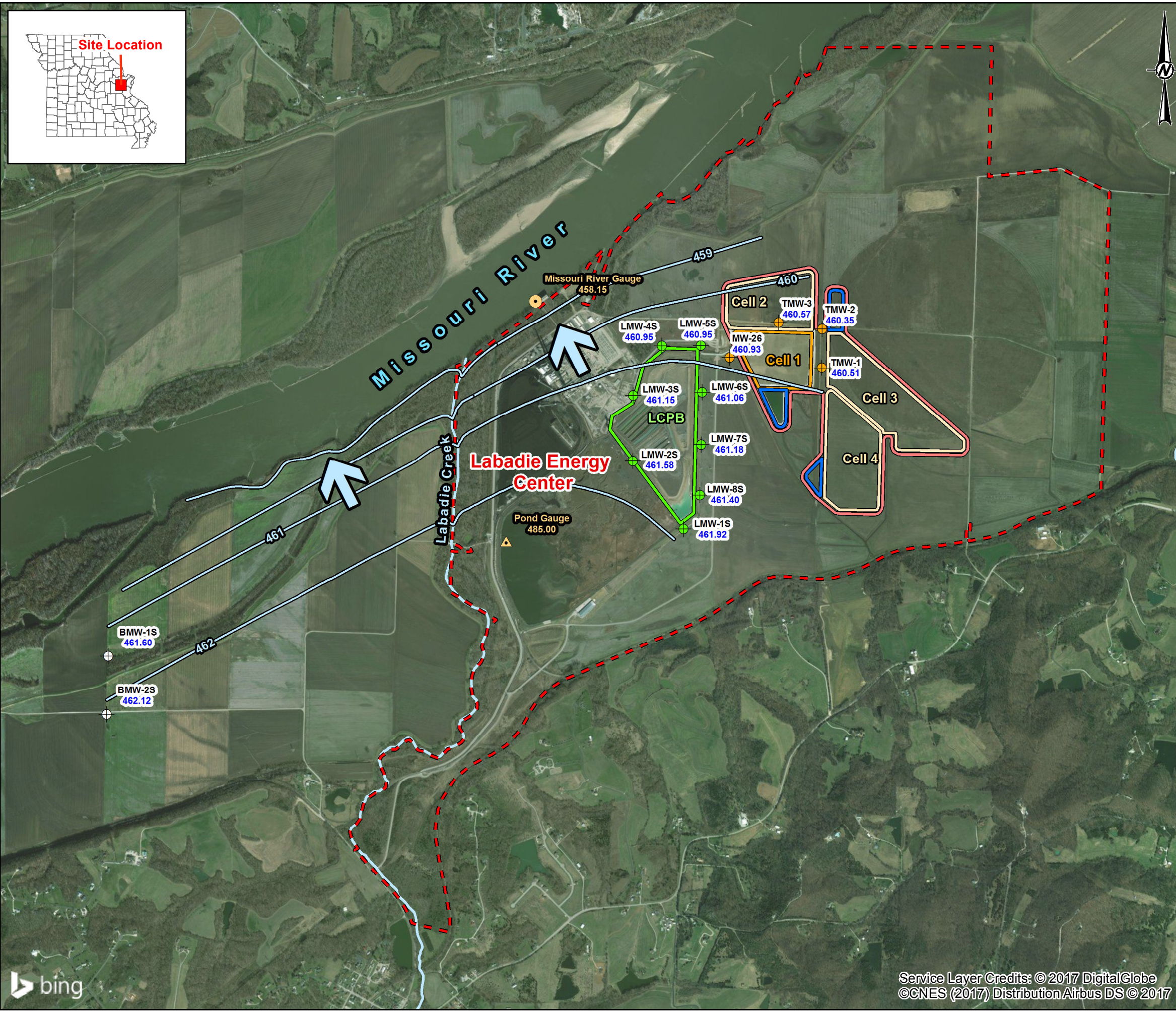
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|--|----------------|---------------------|
| CLIENT | | |
| AMEREN MISSOURI LABADIE ENERGY CENTER | | |
| PROJECT CCR GROUNDWATER MONITORING PROGRAM | | |
| TITLE LCPB POTENTIOMETRIC SURFACE MAP BACKGROUND EVENT 2 - MAY 3, 2016 | | |
| CONSULTANT | YYYY-MM-DD | 2016-05-31 |
| | PREPARED | JSI |
| | DESIGN | JSI |
| | REVIEW | JS |
| | APPROVED | MNH |
| PROJECT No. 153-1406 | PHASE 0001B | Rev. 0.0 |
| | | FIGURE P2 |

Path: G:\Projects\153-1406 - Ameren GW Monitoring Program - MOCPhase 0001 - Labadie Energy\800 - FIGURES\DRAWINGS\PRODUCTION\Map\MapUpdated For Maps\Share\153-1406 - LCL.mxd



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IF THIS MEASUREMENT DOES NOT MATCH WHAT'S SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: 11in



LEGEND

- Labadie Energy Center Property Boundary
- Utility Waste Landfill (UWL)**
- Proposed Fence Perimeter
- Cell LCL1
- Proposed Stormwater Pond
- Proposed Future Cell
- Surface Impoundment**
- LCPB - Fly Ash Surface Impoundment
- Groundwater Elevation Contours**
- Groundwater Elevation Contour (FT MSL)
- Inferred Groundwater Elevation Contour (FT MSL)
- Ground/Surface Water Measurement Locations**
- LCPB Fly Ash Surface Impoundment Monitoring Well
- Background Monitoring Well
- UWL Monitoring Well
- Missouri River Gauge
- LCPA Bottom Ash Surface Impoundment Gauge
- Groundwater Flow Direction

NOTES

1. ALL LOCATIONS AND BOUNDARIES ARE APPROXIMATE.
2. GROUNDWATER ELEVATION MEASUREMENTS OBTAINED BY GOLDER.
3. GROUNDWATER MONITORING WELLS (EXCEPT TMW-1 AND MW-26) SURVEYED BY ZAHNER AND ASSOCIATES, INC. ON JANUARY 13 AND FEBRUARY 11, 2016.
4. GROUNDWATER MONITORING WELLS TMW-1 AND MW-26 INSTALLED BY RIETZ & JENS, INC. AND SURVEYED BY KDG INC.
5. GROUNDWATER ELEVATIONS DISPLAYED IN FT MSL (FEET ABOVE MEAN SEA LEVEL).
6. MISSOURI RIVER LEVEL OBTAINED FROM USGS LABADIE GAUGE 06935550.
7. POND GAUGE LEVEL OBTAINED ONSITE BY GOLDER.
8. THE UWL BOUNDARIES AND DESIGNATIONS ARE BASED ON AMEREN LABADIE CONSTRUCTION PERMIT APPLICATION DRAWINGS.

REFERENCES

1. ZAHNER AND ASSOCIATES, INC. 2016. LOT CONSOLIDATION PLAT OF "LABADIE ENERGY CENTER" - PREPARED FOR AMEREN MISSOURI. REVISED JUNE 15, 2016.
2. COORDINATE SYSTEM: NAD 1983 STATEPLANE MISSOURI EAST FIPS 2,401 FEET.
3. USGS (UNITED STATES GEOLOGICAL SURVEY), NATIONAL WATER INFORMATION SYSTEM, USGS GAUGE 06935550 MISSOURI RIVER NEAR LABADIE, MO.
4. REITZ & JENS, INC. 2014. ADDITIONAL GROUND WATER DETECTION MONITORING WELLS INSTALLATION REPORT.

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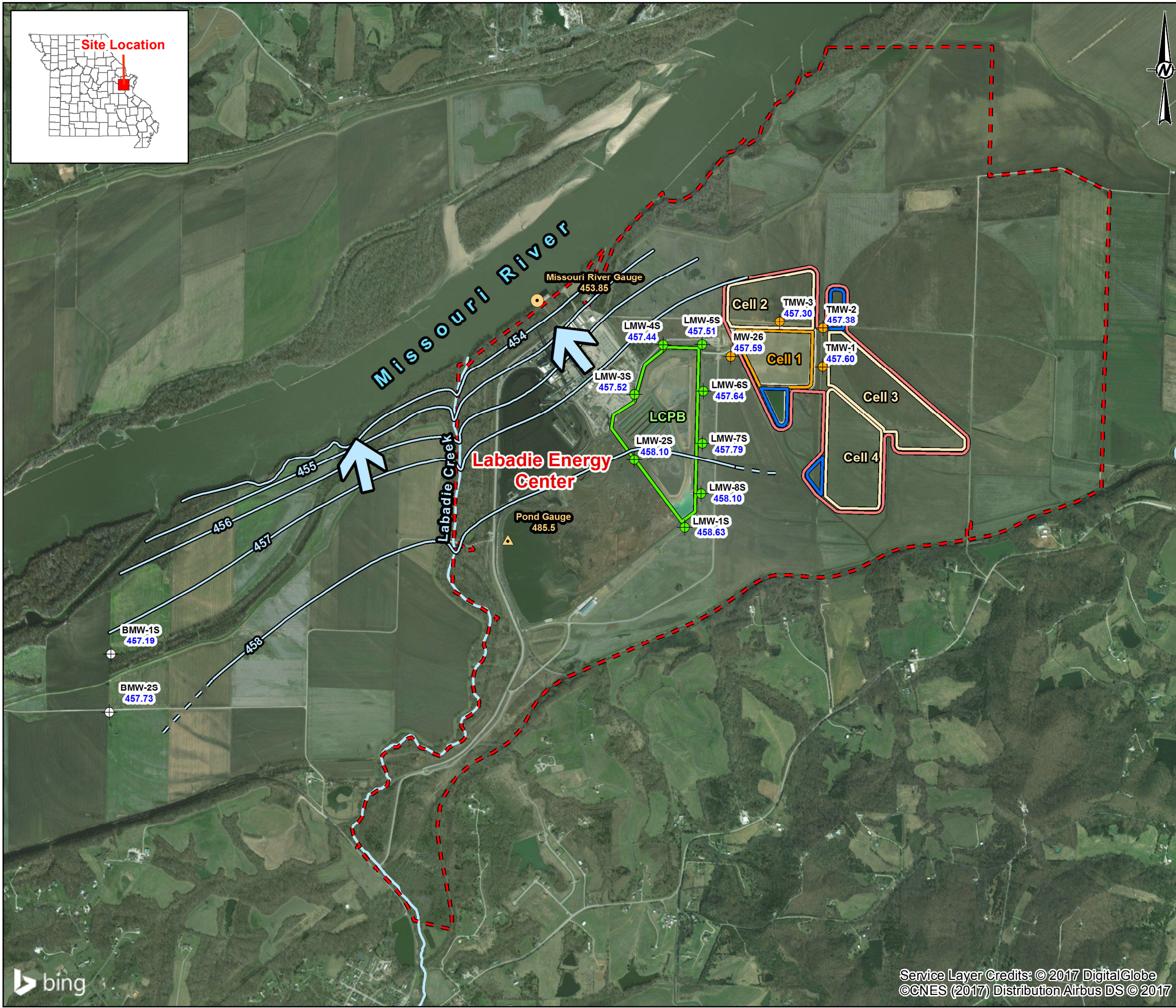
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| CLIENT | | |
| AMEREN MISSOURI LABADIE ENERGY CENTER | | |
| PROJECT CCR GROUNDWATER MONITORING PROGRAM | | |
| TITLE LCPB POTENTIOMETRIC SURFACE MAP BACKGROUND EVENT 3 - JULY 11, 2016 | | |
| CONSULTANT | YYYY-MM-DD | 2016-09-28 |
| | PREPARED | JS |
| | DESIGN | JSI |
| | REVIEW | RJF/JSI |
| | APPROVED | MNH |
| PROJECT No. 153-1406 | PHASE 0001B | Rev. 0.0 |
| | | FIGURE P3 |

Path: G:\Projects\153-1406 - Ameren GW Monitoring Program - MOCPhase 0001 - Labadie Energy\800 - FIGURES\DRAWINGS\PRODUCTION\Map\MapUpdated For Maps\Shawnee3 - LCL.mxd



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LEGEND

- Labadie Energy Center Property Boundary
- Utility Waste Landfill (UWL)**
 - Proposed Fence Perimeter
 - Cell LCL1
 - Proposed Stormwater Pond
 - Proposed Future Cell
- Surface Impoundment**
 - LCPB - Fly Ash Surface Impoundment
- Groundwater Elevation Contours**
 - Groundwater Elevation Contour (FT MSL)
 - Inferred Groundwater Elevation Contour (FT MSL)
- Ground/Surface Water Measurement Locations**
 - LCPB Fly Ash Surface Impoundment Monitoring Well
 - Background Monitoring Well
 - UWL Monitoring Well
 - Missouri River Gauge
 - LCPA Bottom Ash Surface Impoundment Gauge
 - Groundwater Flow Direction

NOTES

- ALL LOCATIONS AND BOUNDARIES ARE APPROXIMATE.
- GROUNDWATER ELEVATION MEASUREMENTS OBTAINED BY GOLDER.
- GROUNDWATER MONITORING WELLS (EXCEPT TMW-1 AND MW-26) SURVEYED BY ZAHNER AND ASSOCIATES, INC. ON JANUARY 13 AND FEBRUARY 11, 2016.
- GROUNDWATER MONITORING WELLS TMW-1 AND MW-26 INSTALLED BY RIETZ & JENS, INC. AND SURVEYED BY KDG INC.
- GROUNDWATER ELEVATIONS DISPLAYED IN FT MSL (FEET ABOVE MEAN SEA LEVEL).
- MISSOURI RIVER LEVEL OBTAINED FROM USGS LABADIE GAUGE 06935550.
- POND GAUGE LEVEL OBTAINED ONSITE BY GOLDER.
- THE UWL BOUNDARIES AND DESIGNATIONS ARE BASED ON AMEREN LABADIE CONSTRUCTION PERMIT APPLICATION DRAWINGS.

REFERENCES

- ZAHNER AND ASSOCIATES, INC. 2016. LOT CONSOLIDATION PLAT OF "LABADIE ENERGY CENTER" - PREPARED FOR AMEREN MISSOURI. REVISED JUNE 15, 2016.
- COORDINATE SYSTEM: NAD 1983 STATEPLANE MISSOURI EAST FIPS 2,401 FEET.
- USGS (UNITED STATES GEOLOGICAL SURVEY), NATIONAL WATER INFORMATION SYSTEM, USGS GAUGE 06935550 MISSOURI RIVER NEAR LABADIE, MO.
- REITZ & JENS, INC. 2014. ADDITIONAL GROUND WATER DETECTION MONITORING WELLS INSTALLATION REPORT.

0 5001,000 2,000 3,000 4,000 5,000 6,000 Feet

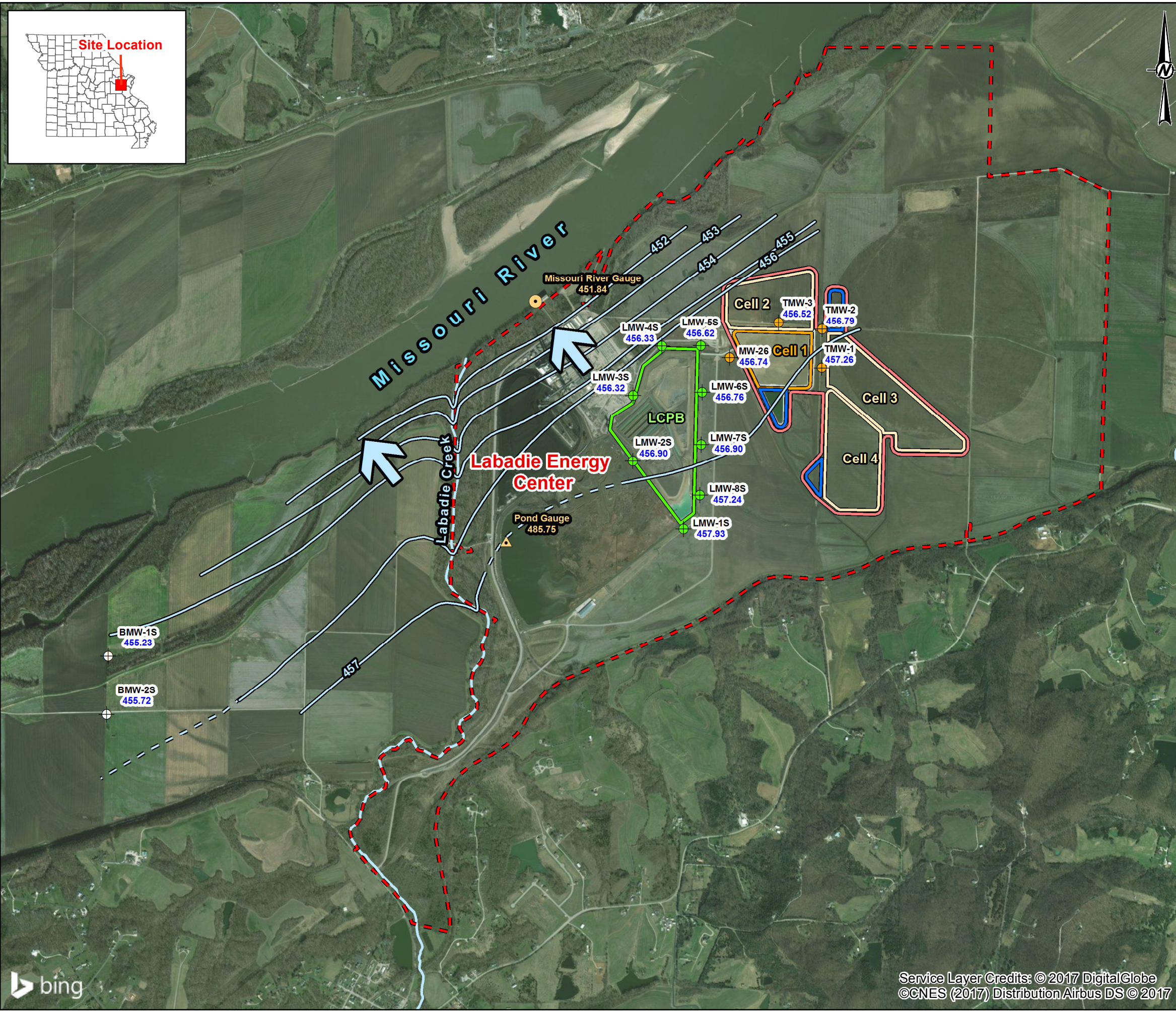
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| CLIENT | | |
| AMEREN MISSOURI LABADIE ENERGY CENTER | | |
| PROJECT CCR GROUNDWATER MONITORING PROGRAM | | |
| TITLE LCPB POTENTIOMETRIC SURFACE MAP BACKGROUND EVENT 4 - SEPTEMBER 8, 2016 | | |
| CONSULTANT | YYYY-MM-DD | 2016-09-28 |
| | PREPARED | JSI |
| | DESIGN | JSI |
| | REVIEW | JS |
| | APPROVED | MNH |
| PROJECT No. 153-1406 | PHASE 0001B | Rev. 0.0 |
| | | FIGURE P4 |

Path: G:\Projects\153-1406 - Ameren - CCR GW Monitoring Program - MOCPhase 0001 - Labadie Energy\800 - FIGURES\DRAWINGS\PRODUCTION\Map\MapUpdated For Map\Shawnee4 - LCL.mxd



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LEGEND

- Labadie Energy Center Property Boundary
- Utility Waste Landfill (UWL)**
 - Proposed Fence Perimeter
 - Cell LCL1
 - Proposed Stormwater Pond
 - Proposed Future Cell
- Surface Impoundment**
 - LCPB - Fly Ash Surface Impoundment
- Groundwater Elevation Contours**
 - Groundwater Elevation Contour (FT MSL)
 - Inferred Groundwater Elevation Contour (FT MSL)
- Ground/Surface Water Measurement Locations**
 - LCPB Fly Ash Surface Impoundment Monitoring Well
 - Background Monitoring Well
 - UWL Monitoring Well
 - Missouri River Gauge
 - LCPA Bottom Ash Surface Impoundment Gauge
 - Groundwater Flow Direction

- NOTES**
- ALL LOCATIONS AND BOUNDARIES ARE APPROXIMATE.
 - GROUNDWATER ELEVATION MEASUREMENTS OBTAINED BY GOLDER.
 - GROUNDWATER MONITORING WELLS (EXCEPT TMW-1 AND MW-26) SURVEYED BY ZAHNER AND ASSOCIATES, INC. ON JANUARY 13 AND FEBRUARY 11, 2016.
 - GROUNDWATER MONITORING WELLS TMW-1 AND MW-26 INSTALLED BY RIETZ & JENS, INC. AND SURVEYED BY KDG INC.
 - GROUNDWATER ELEVATIONS DISPLAYED IN FT MSL (FEET ABOVE MEAN SEA LEVEL).
 - MISSOURI RIVER LEVEL OBTAINED FROM USGS LABADIE GAUGE 06935550.
 - POND GAUGE LEVEL OBTAINED ONSITE BY GOLDER.
 - THE UWL BOUNDARIES AND DESIGNATIONS ARE BASED ON AMEREN LABADIE CONSTRUCTION PERMIT APPLICATION DRAWINGS.

- REFERENCES**
- ZAHNER AND ASSOCIATES, INC. 2016. LOT CONSOLIDATION PLAT OF "LABADIE ENERGY CENTER" - PREPARED FOR AMEREN MISSOURI. REVISED JUNE 15, 2016.
 - COORDINATE SYSTEM: NAD 1983 STATEPLANE MISSOURI EAST FIPS 2,401 FEET.
 - USGS (UNITED STATES GEOLOGICAL SURVEY), NATIONAL WATER INFORMATION SYSTEM, USGS GAUGE 06935550 MISSOURI RIVER NEAR LABADIE, MO.
 - REITZ & JENS, INC. 2014. ADDITIONAL GROUND WATER DETECTION MONITORING WELLS INSTALLATION REPORT.

CLIENT
AMEREN MISSOURI
LABADIE ENERGY CENTER

PROJECT
CCR GROUNDWATER MONITORING PROGRAM

TITLE
**LCPB POTENTIOMETRIC SURFACE MAP
BACKGROUND EVENT 5 - NOVEMBER 11, 2016**

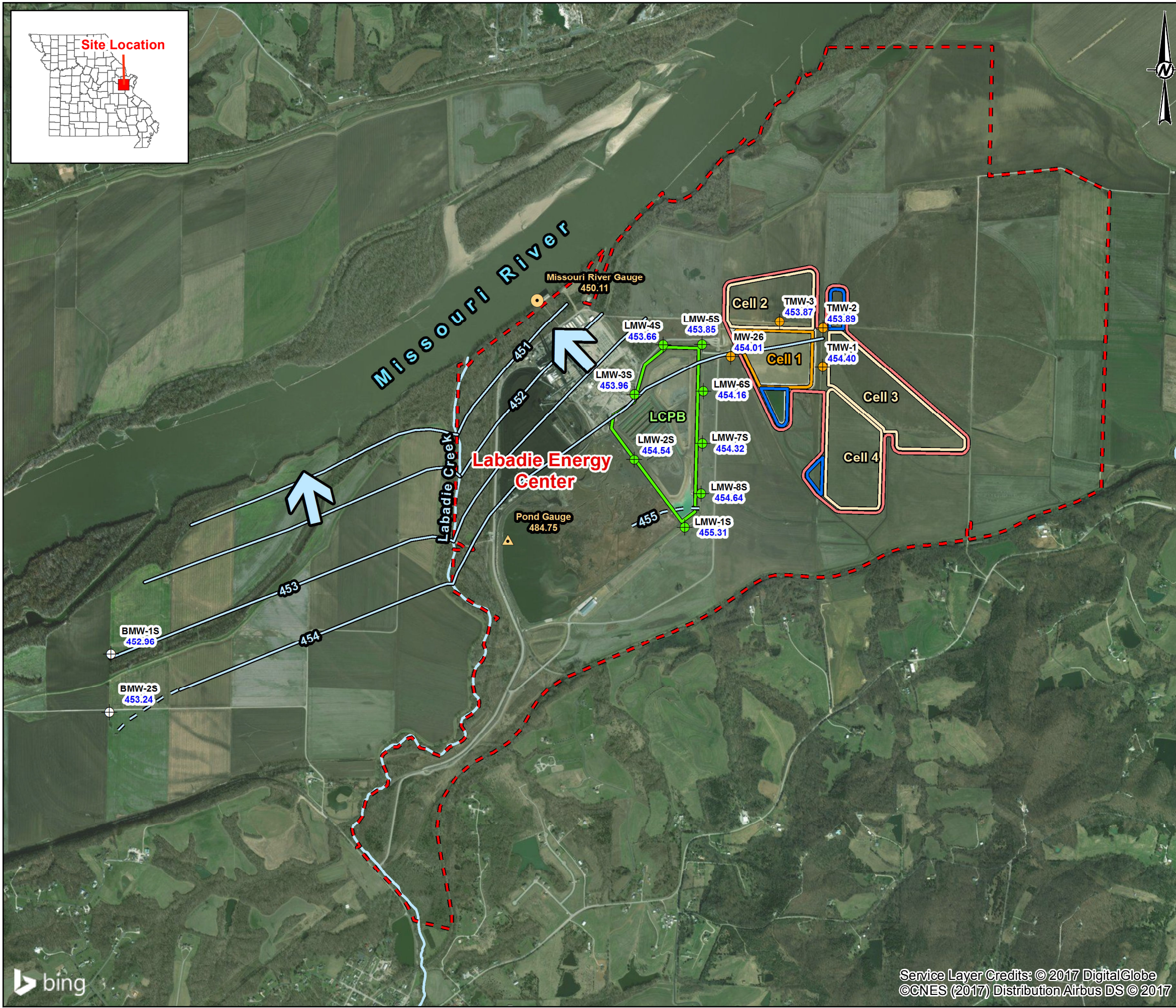
CONSULTANT
Golder Associates

| | |
|----------|------------|
| DATE | 2016-11-18 |
| PREPARED | JSI |
| DESIGN | JSI |
| REVIEW | MSG |
| APPROVED | MNH |

PROJECT No. 153-1406 PHASE 0001B Rev. 0.0 FIGURE P5

Path: G:\Projects\153-1406 - Ameren - CCR GW Monitoring Program - MOCPhase 0001 - Labadie Energy\800 - FIGURES\DRAWINGS\PRODUCTION\Map\MapUpdated For Maps\Shades\ES - LCL.mxd

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM 11in



LEGEND

- Labadie Energy Center Property Boundary
- Utility Waste Landfill (UWL)**
 - Proposed Fence Perimeter
 - Cell LCL1
 - Proposed Stormwater Pond
 - Proposed Future Cell
- Surface Impoundment**
 - LCPB - Fly Ash Surface Impoundment
- Groundwater Elevation Contours**
 - Groundwater Elevation Contour (FT MSL)
 - Inferred Groundwater Elevation Contour (FT MSL)
- Ground/Surface Water Measurement Locations**
 - LCPB Fly Ash Surface Impoundment Monitoring Well
 - Background Monitoring Well
 - UWL Monitoring Well
 - Missouri River Gauge
 - LCPA Bottom Ash Surface Impoundment Gauge
 - Groundwater Flow Direction

NOTES

- ALL LOCATIONS AND BOUNDARIES ARE APPROXIMATE.
- GROUNDWATER ELEVATION MEASUREMENTS OBTAINED BY GOLDER.
- GROUNDWATER MONITORING WELLS (EXCEPT TMW-1 AND MW-26) SURVEYED BY ZAHNER AND ASSOCIATES, INC. ON JANUARY 13 AND FEBRUARY 11, 2016.
- GROUNDWATER MONITORING WELLS TMW-1 AND MW-26 INSTALLED BY RIETZ & JENS, INC. AND SURVEYED BY KDG INC.
- GROUNDWATER ELEVATIONS DISPLAYED IN FT MSL (FEET ABOVE MEAN SEA LEVEL).
- MISSOURI RIVER LEVEL OBTAINED FROM USGS LABADIE GAUGE 06935550.
- POND GAUGE LEVEL OBTAINED ONSITE BY GOLDER.
- THE UWL BOUNDARIES AND DESIGNATIONS ARE BASED ON AMEREN LABADIE CONSTRUCTION PERMIT APPLICATION DRAWINGS.

REFERENCES

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- COORDINATE SYSTEM: NAD 1983 STATEPLANE MISSOURI EAST FIPS 2,401 FEET.
- USGS (UNITED STATES GEOLOGICAL SURVEY), NATIONAL WATER INFORMATION SYSTEM, USGS GAUGE 06935550 MISSOURI RIVER NEAR LABADIE, MO.
- REITZ & JENS, INC. 2014. ADDITIONAL GROUND WATER DETECTION MONITORING WELLS INSTALLATION REPORT.

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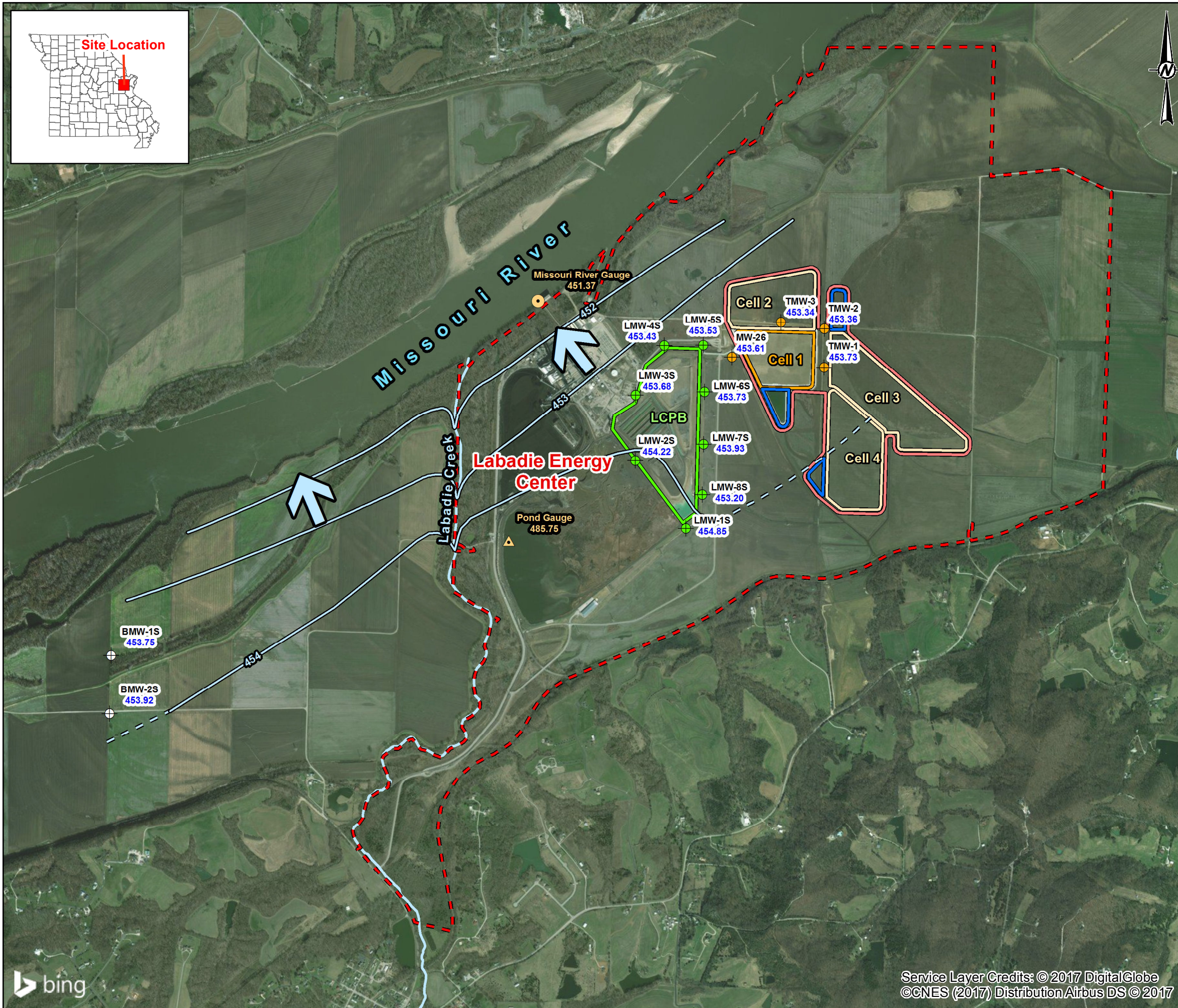
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|---|----------------|---------------------|
| CLIENT | | |
| AMEREN MISSOURI LABADIE ENERGY CENTER | | |
| PROJECT CCR GROUNDWATER MONITORING PROGRAM | | |
| TITLE LCPB POTENTIOMETRIC SURFACE MAP BACKGROUND EVENT 6 - JANUARY 16, 2017 | | |
| CONSULTANT | YYYY-MM-DD | 2017-01-20 |
| | PREPARED | JS |
| | DESIGN | JSI |
| | REVIEW | BEF |
| | APPROVED | MNH |
| PROJECT No. 153-1406 | PHASE 0001B | Rev. 0.0 |
| | | FIGURE P6 |

Path: G:\Projects\153-1406 - Ameren CCR Monitoring Program - MOCPhase 0001 - Labadie Energy\800 - FIGURES\DRAWINGS\PRODUCTION\Map\MapUpdated For Map\ShadedRel - LCL.mxd



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LEGEND

- Labadie Energy Center Property Boundary
- Utility Waste Landfill (UWL)**
 - Proposed Fence Perimeter
 - Cell LCL1
 - Proposed Stormwater Pond
 - Proposed Future Cell
- Surface Impoundment**
 - LCPB - Fly Ash Surface Impoundment
- Groundwater Elevation Contours**
 - Groundwater Elevation Contour (FT MSL)
 - Inferred Groundwater Elevation Contour (FT MSL)
- Ground/Surface Water Measurement Locations**
 - LCPB Fly Ash Surface Impoundment Monitoring Well
 - Background Monitoring Well
 - UWL Monitoring Well
 - Missouri River Gauge
 - LCPA Bottom Ash Surface Impoundment Gauge
 - Groundwater Flow Direction

- NOTES**
- ALL LOCATIONS AND BOUNDARIES ARE APPROXIMATE.
 - GROUNDWATER ELEVATION MEASUREMENTS OBTAINED BY GOLDER.
 - GROUNDWATER MONITORING WELLS (EXCEPT TMW-1 AND MW-26) SURVEYED BY ZAHNER AND ASSOCIATES, INC. ON JANUARY 13 AND FEBRUARY 11, 2016.
 - GROUNDWATER MONITORING WELLS TMW-1 AND MW-26 INSTALLED BY RIETZ & JENS, INC. AND SURVEYED BY KDG INC.
 - GROUNDWATER ELEVATIONS DISPLAYED IN FT MSL (FEET ABOVE MEAN SEA LEVEL).
 - MISSOURI RIVER LEVEL OBTAINED FROM USGS LABADIE GAUGE 06935550.
 - POND GAUGE LEVEL OBTAINED ONSITE BY GOLDER.
 - THE UWL BOUNDARIES AND DESIGNATIONS ARE BASED ON AMEREN LABADIE CONSTRUCTION PERMIT APPLICATION DRAWINGS.

- REFERENCES**
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 - COORDINATE SYSTEM: NAD 1983 STATEPLANE MISSOURI EAST FIPS 2,401 FEET.
 - USGS (UNITED STATES GEOLOGICAL SURVEY), NATIONAL WATER INFORMATION SYSTEM, USGS GAUGE 06935550 MISSOURI RIVER NEAR LABADIE, MO.
 - REITZ & JENS, INC. 2014. ADDITIONAL GROUND WATER DETECTION MONITORING WELLS INSTALLATION REPORT.

CLIENT
AMEREN MISSOURI
LABADIE ENERGY CENTER

PROJECT
CCR GROUNDWATER MONITORING PROGRAM

TITLE
**LCPB POTENTIOMETRIC SURFACE MAP
BACKGROUND EVENT 7 - MARCH 1, 2017**

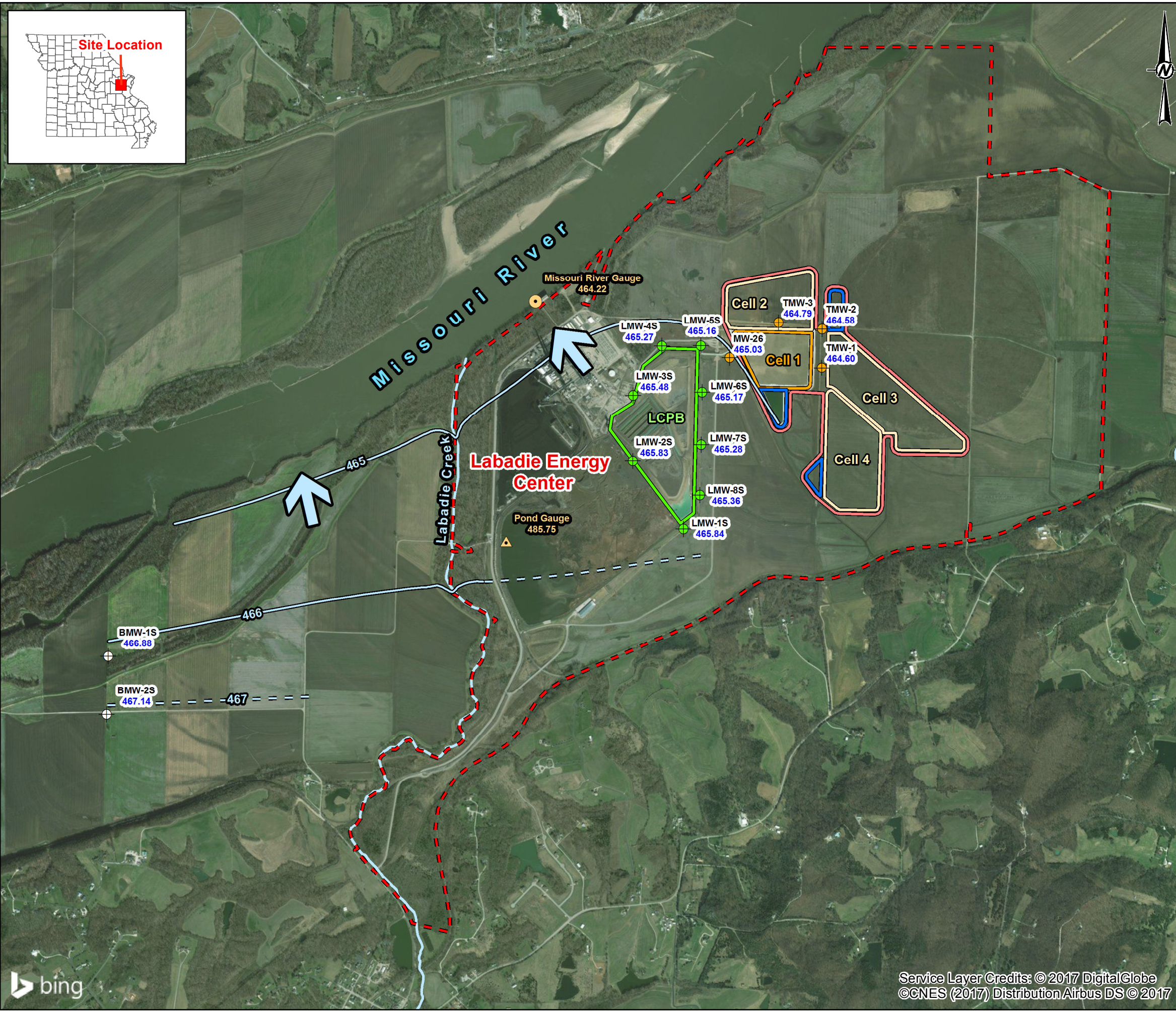
CONSULTANT
Golder Associates

| | |
|----------|------------|
| DATE | 2017-06-14 |
| PREPARED | JSI |
| DESIGN | JSI |
| REVIEW | JS |
| APPROVED | MNH |

PROJECT No. 153-1406 PHASE 0001B Rev. 0.0 FIGURE P7

Path: G:\Projects\153-1406 - Ameren CCR Monitoring Program - MOCPhase 0001 - Labadie Energy\800 - FIGURES\DRAWINGS\PRODUCTION\Map\MapUpdated For Map\ShadeMap7 - LCL.mxd

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: 11in



LEGEND

- Labadie Energy Center Property Boundary
- Utility Waste Landfill (UWL)**
 - Proposed Fence Perimeter
 - Cell LCL1
 - Proposed Stormwater Pond
 - Proposed Future Cell
- Surface Impoundment**
 - LCPB - Fly Ash Surface Impoundment
- Groundwater Elevation Contours**
 - Groundwater Elevation Contour (FT MSL)
 - Inferred Groundwater Elevation Contour (FT MSL)
- Ground/Surface Water Measurement Locations**
 - LCPB Fly Ash Surface Impoundment Monitoring Well
 - Background Monitoring Well
 - UWL Monitoring Well
 - Missouri River Gauge
 - LCPA Bottom Ash Surface Impoundment Gauge
 - Groundwater Flow Direction

- NOTES**
- ALL LOCATIONS AND BOUNDARIES ARE APPROXIMATE.
 - GROUNDWATER ELEVATION MEASUREMENTS OBTAINED BY GOLDER.
 - GROUNDWATER MONITORING WELLS (EXCEPT TMW-1 AND MW-26) SURVEYED BY ZAHNER AND ASSOCIATES, INC. ON JANUARY 13 AND FEBRUARY 11, 2016.
 - GROUNDWATER MONITORING WELLS TMW-1 AND MW-26 INSTALLED BY RIETZ & JENS, INC. AND SURVEYED BY KDG INC.
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 - MISSOURI RIVER LEVEL OBTAINED FROM USGS LABADIE GAUGE 06935550.
 - POND GAUGE LEVEL OBTAINED ONSITE BY GOLDER.
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 - USGS (UNITED STATES GEOLOGICAL SURVEY), NATIONAL WATER INFORMATION SYSTEM, USGS GAUGE 06935550 MISSOURI RIVER NEAR LABADIE, MO.
 - REITZ & JENS, INC. 2014. ADDITIONAL GROUND WATER DETECTION MONITORING WELLS INSTALLATION REPORT.
- 0 5001,000 2,000 3,000 4,000 5,000 6,000 Feet

CLIENT
AMEREN MISSOURI
LABADIE ENERGY CENTER

PROJECT
CCR GROUNDWATER MONITORING PROGRAM

TITLE
LCPB POTENTIOMETRIC SURFACE MAP
BACKGROUND EVENT 8 - MAY 31, 2017

CONSULTANT
Golder Associates

| | |
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| YYYY-MM-DD | 2017-06-14 |
| PREPARED | JS |
| DESIGN | JSI |
| REVIEW | RJF |
| APPROVED | MNH |

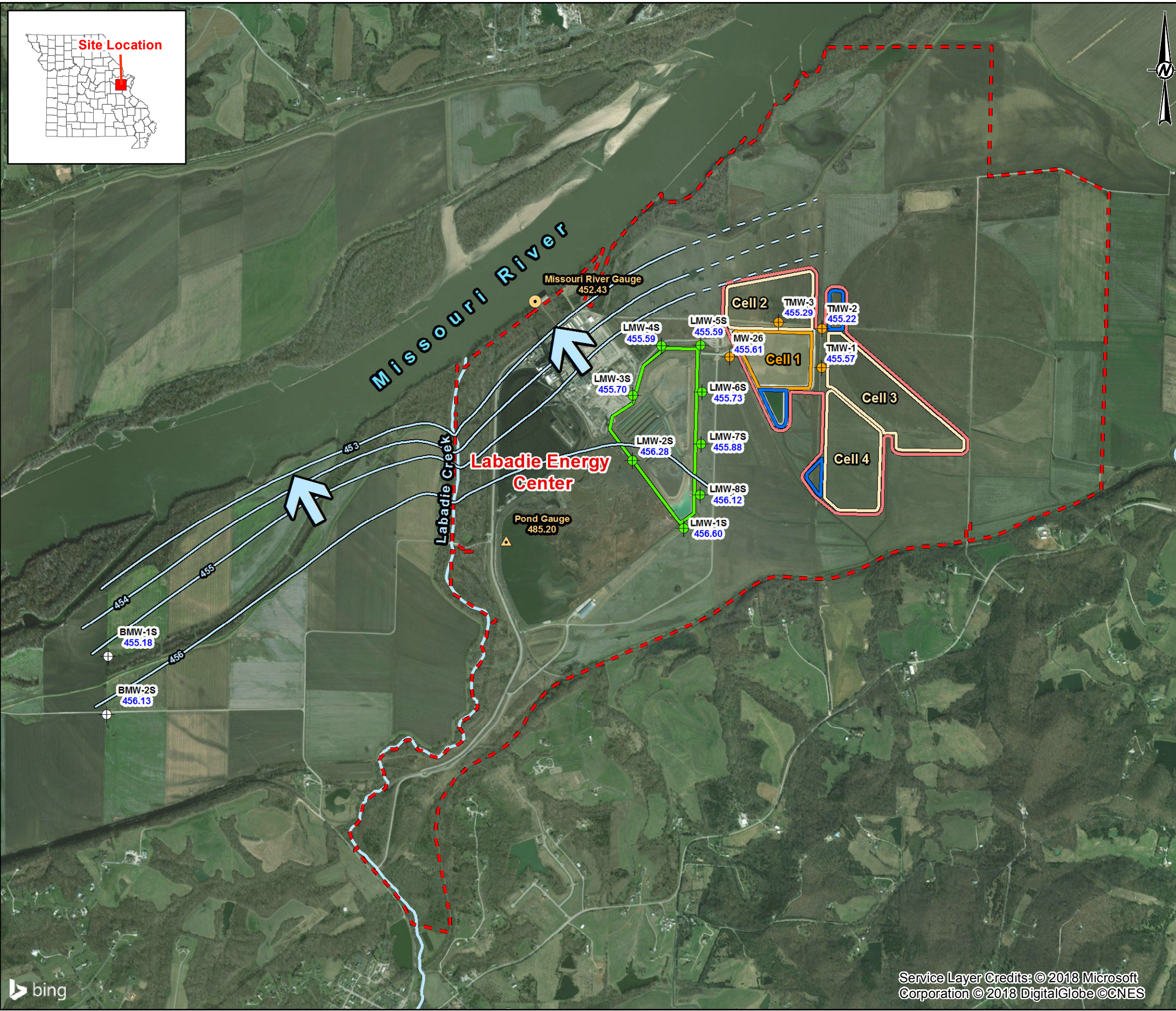
PROJECT No. 153-1406 PHASE 0001C Rev. 0.0 FIGURE P8

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LEGEND

- Labadie Energy Center Property Boundary
- Utility Waste Landfill (UWL)**
 - Proposed Fence Perimeter
 - Cell LCL1
 - Proposed Stormwater Pond
 - Proposed Future Cell
- Surface Impoundment**
 - LCPB - Fly Ash Surface Impoundment
- Groundwater Elevation Contours**
 - Groundwater Elevation Contour (FT MSL)
 - Inferred Groundwater Elevation Contour (FT MSL)
- Ground/Surface Water Measurement Locations**
 - LCPB Fly Ash Surface Impoundment Monitoring Well
 - Background Monitoring Well
 - UWL Monitoring Well
 - Missouri River Gauge
 - LCPA Bottom Ash Surface Impoundment Gauge
 - Groundwater Flow Direction

- NOTES**
- ALL LOCATIONS AND BOUNDARIES ARE APPROXIMATE.
 - GROUNDWATER ELEVATION MEASUREMENTS OBTAINED BY GOLDER.
 - GROUNDWATER MONITORING WELLS (EXCEPT TMW-1 AND MW-26) SURVEYED BY ZAHNER AND ASSOCIATES, INC. ON JANUARY 13 AND FEBRUARY 11, 2016.
 - GROUNDWATER MONITORING WELLS TMW-1 AND MW-26 INSTALLED BY RIETZ & JENS, INC. AND SURVEYED BY KDG INC.
 - GROUNDWATER ELEVATIONS DISPLAYED IN FT MSL (FEET ABOVE MEAN SEA LEVEL).
 - MISSOURI RIVER LEVEL OBTAINED FROM USGS LABADIE GAUGE 06935550.
 - POND GAUGE LEVEL OBTAINED ONSITE BY GOLDER.
 - THE UWL BOUNDARIES AND DESIGNATIONS ARE BASED ON AMEREN LABADIE CONSTRUCTION PERMIT APPLICATION DRAWINGS.

- REFERENCES**
- ZAHNER AND ASSOCIATES, INC. 2016. LOT CONSOLIDATION PLAT OF "LABADIE ENERGY CENTER" - PREPARED FOR AMEREN MISSOURI. REVISED JUNE 15, 2016.
 - COORDINATE SYSTEM: NAD 1983 STATEPLANE MISSOURI EAST FIPS 2,401 FEET.
 - USGS (UNITED STATES GEOLOGICAL SURVEY), NATIONAL WATER INFORMATION SYSTEM, USGS GAUGE 06935550 MISSOURI RIVER NEAR LABADIE, MO.
 - REITZ & JENS, INC. 2014. ADDITIONAL GROUND WATER DETECTION MONITORING WELLS INSTALLATION REPORT.
- 0 5001,000 2,000 3,000 4,000 5,000 6,000 Feet

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| CLIENT | | |
| AMEREN MISSOURI LABADIE ENERGY CENTER | | |
| PROJECT | | |
| CCR GROUNDWATER MONITORING PROGRAM | | |
| TITLE | | |
| LCPB POTENTIOMETRIC SURFACE MAP DETECTION MONITORING EVENT - NOVEMBER 7, 2017 | | |
| CONSULTANT | | YYYY-MM-DD 2017-11-17 |
| | | PREPARED RJF |
| | | DESIGN JSI |
| | | REVIEW JS/JSI |
| | | APPROVED MNH |
| PROJECT No. | PHASE | Rev. |
| 153-1406 | 0001B | 0.0 |
| | | FIGURE |
| | | P9 |

Path: C:\Projects\153\Projects\153-1406 - Ameren CCR Monitoring Program - LCPB Phase 0001 - Labadie Energy 800 - FIGURES DRAWINGS\PRODUCTION\Map\Labadie Pot Map\Labadie Pot Map_Sheet\001_P9.mxd



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