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2023 – 2024 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

AREA 2 POND, AREA 3 POND, AND AREA 4 POND
LAWRENCE ENERGY CENTER
LAWRENCE, KANSAS

by Haley & Aldrich, Inc.
Cleveland, Ohio

for Evergy Kansas Central, Inc.
Topeka, Kansas

File No. 0210309-000
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Table of Contents

Revision No.	Date	Notes

List of Tables

List of Figures

List of Attachments

Attachment 1 – Statistical Analyses

Attachment 2 – Laboratory Analytical Reports

This Annual Groundwater Monitoring and Corrective Action Report documents the groundwater monitoring program for the Lawrence Energy Center Area 2 Pond (inactive), Area 3 Pond (inactive), and Area 4 Pond (inactive; collectively, inactive Ash Ponds) consistent with applicable sections of Title 40 Code of Federal Regulations §§ 257.90 through 257.98, and describes activities conducted from July 2023 through June 2024 and documents compliance with the U.S. Environmental Protection Agency Coal Combustion Residual Rule. I certify that the 2023 – 2024 Annual Groundwater Monitoring and Corrective Action Report for the LEC inactive Ash Ponds is, to the best of my knowledge, accurate and complete.

Signed: 

Professional Geologist

Print Name:	Mark Nicholls
Kansas License No.:	Professional Geologist No. 881
Title:	Technical Expert 2
Company:	Haley & Aldrich, Inc.

1. Introduction

This *2023 – 2024 Annual Groundwater Monitoring and Corrective Action Report* (Annual Report) addresses the Area 2 Pond (inactive), Area 3 Pond (inactive), and Area 4 Pond (inactive; collectively, inactive Ash Ponds) at the Lawrence Energy Center (LEC), monitored by Evergy Kansas Central, Inc. (Evergy). This Annual Report was developed in accordance with the U.S. Environmental Protection Agency (USEPA) Coal Combustion Residuals (CCR) Rule (Rule) effective October 19, 2015, including subsequent revisions, specifically Title 40 Code of Federal Regulations (40 CFR) § 257.90(e). This Annual Report documents the groundwater monitoring system for the inactive Ash Ponds consistent with applicable sections of § 257.90 through § 257.98, and describes activities conducted in the prior calendar year (July 2022 through June 2023) and documents compliance with the Rule. The specific requirements for the Annual Report listed in § 257.90(e) of the Rule are provided in Sections 1 and 2 of this Annual Report and are in ***bold italic font***, followed by a narrative description of how each Rule requirement has been met.

Evergy prepared and placed in the facility's operating record a notification of intent to initiate closure of the inactive Ash Ponds by December 17, 2015. Due to the USEPA Extension of Compliance Deadlines for Certain Inactive Surface Impoundments, Response to Partial Vacatur effective October 4, 2016, in accordance with the requirement under § 257.100(e)(1), the alternative reporting time frames specified in § 257.100(e)(2) through (6) are applicable for the inactive Ash Ponds.

1.1 40 CFR § 257.90(e)(6) SUMMARY

A section at the beginning of the annual report that provides an overview of the current status of groundwater monitoring and corrective action programs for the CCR unit. At a minimum, the summary must specify all of the following:

1.1.1 40 CFR § 257.90(e)(6)(i) – Initial Monitoring Program

At the start of the current annual reporting period, whether the CCR unit was operating under the detection monitoring program in § 257.94 or the assessment monitoring program in § 257.95;

At the start of the current annual reporting period (July 1, 2023), the inactive Ash Ponds were operating under an assessment monitoring program in compliance with 40 CFR § 257.95 for all constituents, except arsenic, lithium, and molybdenum. An corrective measures assessment (CMA) was conducted in accordance with 40 CFR § 257.96 for arsenic, lithium, and molybdenum, which continue to be monitored under an assessment monitoring program in accordance with 40 CFR § 257.96(b).

1.1.2 40 CFR § 257.90(e)(6)(ii) – Final Monitoring Program

At the end of the current annual reporting period, whether the CCR unit was operating under the detection monitoring program in § 257.94 or the assessment monitoring program in § 257.95;

At the end of the current annual reporting period (June 30, 2024), the inactive Ash Ponds were operating under an assessment monitoring program in compliance with 40 CFR § 257.95 for all constituents, except arsenic, lithium, and molybdenum. A CMA was conducted in accordance with 40 CFR § 257.96 for arsenic, lithium, and molybdenum, which continue to be monitored under an assessment monitoring program in accordance with 40 CFR § 257.96(b).

1.1.3 40 CFR § 257.90(e)(6)(iii) – Statistically Significant Increases

If it was determined that there was a statistically significant increase over background for one or more constituents listed in appendix III to this part pursuant to § 257.94(e):

1.1.3.1 40 CFR § 257.90(e)(6)(iii)(a)

Identify those constituents listed in appendix III to this part and the names of the monitoring wells associated with such an increase; and

The inactive Ash Ponds are operating under an assessment monitoring program; therefore, no statistical evaluations were completed on Appendix III constituents from July 2023 through June 2024.

1.1.3.2 40 CFR § 257.90(e)(6)(iii)(b)

Provide the date when the assessment monitoring program was initiated for the CCR unit.

An assessment monitoring program was initiated on January 13, 2020 for the inactive Ash Ponds with a notification establishing assessment monitoring provided on February 12, 2020 to meet the requirements of 40 CFR § 257.95. The inactive Ash Ponds remained in assessment monitoring from July 2023 through June 2024, with a corrective measures program implemented for arsenic, lithium, and molybdenum in accordance with 40 CFR § 257.96.

1.1.4 40 CFR § 257.90(e)(6)(iv) – Statistically Significant Levels

If it was determined that there was a statistically significant level above the groundwater protection standard for one or more constituents listed in appendix IV to this part pursuant to § 257.95(g) include all of the following:

1.1.4.1 40 CFR § 257.90(e)(6)(iv)(A) – Statistically Significant Level Constituents

Identify those constituents listed in appendix IV to this part and the names of the monitoring wells associated with such an increase;

Statistically significant levels (SSL) above the groundwater protection standards (GWPS) identified from July 2023 through June 2024 for the March 2023 and September 2023 semiannual assessment monitoring sampling events are listed in Table I. The statistical evaluation reports for semiannual assessment monitoring sampling events from March 2023 and September 2023 were completed in July 2023 and February 2024, respectively, and are included as Attachment 1.

1.1.4.2 40 CFR § 257.90(e)(6)(iv)(B) – Initiation of the Assessment of Corrective Measures

Provide the date when the assessment of corrective measures was initiated for the CCR unit;

A CMA was initiated on October 12, 2020 for arsenic, lithium, and molybdenum at the inactive Ash Ponds.

1.1.4.3 40 CFR § 257.90(e)(6)(iv)(C) – Assessment of Corrective Measures Public Meeting

Provide the date when the public meeting was held for the assessment of corrective measures for the CCR unit; and

A public meeting was held on March 12, 2024 to discuss the results of the CMA with interested and affected parties of the public. Evergy notified the public of the public meeting via public notice and in local newspapers beginning on February 5, 2024. The public meeting was held at the Douglas County Fairgrounds located at 2120 Harper Street in Lawrence, Kansas between 6 p.m. and 9 p.m.

The public meeting was held at least 30 days prior to the selection of remedy in accordance with § 257.96(e).

1.1.4.4 40 CFR § 257.90(e)(6)(iv)(D) – Completion of the Assessment of Corrective Measures

Provide the date when the assessment of corrective measures was completed for the CCR unit.

The CMA was completed on March 11, 2021 for the inactive Ash Ponds.

1.1.5 40 CFR § 257.90(e)(6)(v) – Selection of Remedy

Whether a remedy was selected pursuant to § 257.97 during the current annual reporting period, and if so, the date of remedy selection; and

A remedy was not selected during the July 2023 through June 2024 reporting period for arsenic, lithium, and molybdenum at the inactive Ash Ponds.

1.1.6 40 CFR § 257.90(e)(6)(vi) – Remedial Activities

Whether remedial activities were initiated or are ongoing pursuant to § 257.98 during the current annual reporting period.

No remedial activities have been initiated from July 2023 through June 2024; therefore, no demonstration or certification is applicable for this unit.

2. 40 CFR § 257.90 Applicability

2.1 40 CFR § 257.90(a)

All CCR landfills, CCR surface impoundments, and lateral expansions of CCR units are subject to the groundwater monitoring and corrective action requirements under §§ 257.90 through 257.98, except as provided in paragraph (g) of this section.

Evergy has installed and certified a multi-unit groundwater monitoring system at the LEC inactive Ash Ponds. The inactive Ash Ponds are subject to the groundwater monitoring and corrective action requirements described under 40 CFR §§ 257.90 through 257.98. This document addresses the requirement for the Owner/Operator to prepare an Annual Report per § 257.90(e).

2.2 40 CFR § 257.90(e) – SUMMARY

Annual groundwater monitoring and corrective action report. For existing CCR landfills and existing CCR surface impoundments, no later than January 31, 2018, and annually thereafter, the owner or operator must prepare an annual groundwater monitoring and corrective action report. For new CCR landfills, new CCR surface impoundments, and all lateral expansions of CCR units, the owner or operator must prepare the initial annual groundwater monitoring and corrective action report no later than January 31 of the year following the calendar year a groundwater monitoring system has been established for such CCR unit as required by this subpart, and annually thereafter. For the preceding calendar year, the annual report must document the status of the groundwater monitoring and corrective action program for the CCR unit, summarize key actions completed, describe any problems encountered, discuss actions to resolve the problems, and project key activities for the upcoming year. For purposes of this section, the owner or operator has prepared the annual report when the report is placed in the facility's operating record as required by § 257.105(h)(1).

This Annual Report describes monitoring completed and actions taken for the groundwater monitoring system at the LEC inactive Ash Ponds as required by the Rule. Groundwater sampling and analysis was conducted per the requirements described in § 257.93, and the status of the groundwater monitoring program described in § 257.94 and § 257.95 is also provided in this report. This Annual Report documents the applicable groundwater-related activities completed from July 2023 through June 2024.

2.2.1 Status of the Groundwater Monitoring Program

Appendix IV SSLs were detected above the GWPS for arsenic, lithium, and molybdenum during the March 2020 and September 2020 semiannual assessment monitoring sampling events. Therefore, a CMA was initiated. The selection of remedy required under § 257.97 was ongoing from July 2023 through June 2024. Evergy is currently implementing an assessment monitoring program for all other constituents.

2.2.2 Key Actions Completed

The 2022 – 2023 Annual Groundwater Monitoring and Corrective Action Report was completed in July 2023 for the period from July 2022 through June 2023. Statistical evaluation was completed in July 2023 on analytical data from the March 2023 semiannual assessment monitoring sampling event. The statistical evaluation indicated Appendix IV SSLs above the GWPS for arsenic, lithium, and molybdenum at select downgradient monitoring wells, consistent with previous statistical evaluations.

A semiannual assessment monitoring sampling event was completed in September 2023 for detected Appendix IV constituents identified from the December 2022 annual assessment monitoring sampling event. Statistical evaluation was completed in February 2024 on analytical data from the September 2023 semiannual assessment monitoring sampling event.

Pursuant to §257.95(g), groundwater characterization samples were collected in September 2023 and March 2024 to assist in the determination of the nature and extent of Appendix IV SSLs in groundwater wells. Semiannual status reports for the CMA were completed in September 2023 and March 2024 pursuant to §257.97(a).

An annual assessment monitoring sampling event was completed on December 11, 2023 to identify detected Appendix IV constituents for subsequent semiannual sampling events in March 2024 and planned for September 2024. Semiannual assessment monitoring sampling was completed in March 2024 for detected Appendix IV constituents identified during the December 2023 annual monitoring event. Statistical evaluation of the results from the March 2024 semiannual assessment monitoring sampling event are due to be completed in July 2024 and will be reported in the next annual report.

2.2.3 Problems Encountered

One problem encountered during groundwater monitoring activities from July 2023 through June 2024 consisted of a laboratory analytical error the provided elevated reporting limits for cobalt during the March 2024 semiannual detection monitoring sampling event. Verification samples were collected from monitoring wells MW-39, MW-40, and MW-L for analysis of cobalt in May 2024. This was the only issue that needed to be addressed from July 2023 through June 2024.

2.2.4 Actions to Resolve Problems

The resolution to problems encountered from July 2023 through June 2024 included collection of a verification groundwater sample from MW-39, MW-40, and MW-L, as described above. The analytical results for this sampling event were revised accordingly. No other problems were encountered at the inactive Ash Ponds from July 2023 through June 2024; therefore, no actions to resolve the problems were required.

2.2.5 Project Key Activities for Upcoming Year

Key activities planned for July 2024 through June 2025 include this Annual Report, statistical evaluation of semiannual assessment monitoring analytical data collected in March 2024, semiannual assessment

monitoring and subsequent statistical evaluations, and annual assessment monitoring. The nature and extent investigation will continue into the next calendar year (July 2024 through June 2025). The next semiannual status report for the CMA is due to be completed in September 2024. Evergy is also continuing to complete additional steps to characterize the nature and extent of arsenic, lithium, and molybdenum in groundwater at the inactive Ash Ponds and is working toward the selection of remedy in the next calendar year (July 2024 through June 2025).

2.3 40 CFR § 257.90(e) – INFORMATION

At a minimum, the annual groundwater monitoring and corrective action report must contain the following information, to the extent available:

2.3.1 40 CFR § 257.90(e)(1) – CCR Unit and Monitoring Well Network

A map, aerial image, or diagram showing the CCR unit and all background (or upgradient) and downgradient monitoring wells, to include the well identification numbers, that are part of the groundwater monitoring program for the CCR unit;

As required by § 257.90(e)(1), a map showing the locations of the CCR unit and associated upgradient and downgradient monitoring wells for the LEC inactive Ash Ponds is included in this report as Figure 1. A map showing monitoring wells utilized for the nature and extent of the inactive Ash Ponds is presented in Figure 2.

2.3.2 40 CFR § 257.90(e)(2) – Monitoring System Changes

Identification of any monitoring wells that were installed or decommissioned during the preceding year, along with a narrative description of why those actions were taken;

No monitoring wells were installed or decommissioned from July 2023 through June 2024.

2.3.3 40 CFR § 257.90(e)(3) – Summary of Sampling Events

In addition to all the monitoring data obtained under § 257.90 through § 257.98, a summary including the number of groundwater samples that were collected for analysis for each background and downgradient well, the dates the samples were collected, and whether the sample was required by the detection monitoring or assessment monitoring programs;

In accordance with § 257.95(b) and § 257.95(d)(1), three independent assessment monitoring samples from each background and downgradient monitoring well were collected from July 2023 through June 2024. A summary, including sample names, dates of sample collection, field parameters, and monitoring data obtained for the groundwater monitoring program for the inactive Ash Ponds, is presented in Table II of this report with corresponding laboratory analytical reports provided in Attachment 2. Groundwater potentiometric elevation contour maps, along with calculated groundwater flow rates and directions, associated with each groundwater monitoring sampling event from July 2023 through June 2024 are provided in Figures 3 through 5.

A summary including sample names, dates of sample collection, field parameters, and validated groundwater monitoring data obtained for the nature and extent investigation for the inactive Ash Ponds is provided in Table III of this report, with corresponding laboratory analytical reports provided in Attachment 2.

2.3.4 40 CFR § 257.90(e)(4) – Monitoring Transition Narrative

A narrative discussion of any transition between monitoring programs (e.g., the date and circumstances for transitioning from detection monitoring to assessment monitoring in addition to identifying the constituent(s) detected at a statistically significant increase over background levels); and

The assessment monitoring program was initiated on January 13, 2020 with a notification establishing assessment monitoring provided on February 12, 2020 to meet the requirements of 40 CFR § 257.95. A CMA was implemented on October 12, 2020 for arsenic, lithium, and molybdenum in accordance with 40 CFR § 257.96. The inactive Ash Ponds remained in assessment monitoring from July 2023 through June 2024 for all other constituents. Arsenic, lithium, and molybdenum continue to be monitored under the assessment monitoring program in accordance with 40 CFR § 257.96(b).

2.3.5 40 CFR § 257.90(e)(5) – Other Requirements

Other information required to be included in the annual report as specified in § 257.90 through § 257.98.

This Annual Report documents activities conducted to comply with 40 CFR §§ 257.90 through 257.95 of the Rule. It is understood that there are supplemental references in 40 CFR §§ 257.90 through 257.98 that must be placed in the Annual Report. The following requirements include relevant and required information in the Annual Report for activities completed from July 2023 through June 2024.

2.3.5.1 40 CFR § 257.94(d)(3) – Demonstration for Alternative Detection Monitoring Frequency

The owner or operator must obtain a certification from a qualified professional engineer or approval from the Participating State Director or approval from EPA where EPA is the permitting authority stating that the demonstration for an alternative groundwater sampling and analysis frequency meets the requirements of this section. The owner or operator must include the demonstration providing the basis for the alternative monitoring frequency and the certification by a qualified professional engineer or the approval from the Participating State Director or approval from EPA where EPA is the permitting authority in the annual groundwater monitoring and corrective action report required by § 257.90(e).

An alternative groundwater detection monitoring sampling and analysis frequency has not been established for this CCR unit; therefore, no demonstration or certification is applicable.

2.3.5.2 40 CFR § 257.94(e)(2) – Detection Monitoring Alternate Source Demonstration

The owner or operator may demonstrate that a source other than the CCR unit caused the statistically significant increase over background levels for a constituent or that the statistically significant increase resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. The owner or operator must complete the written demonstration within 90 days of detecting a statistically significant increase over background levels to include obtaining a certification from a qualified professional engineer or approval from the Participating State Director or approval from EPA where EPA is the permitting authority verifying the accuracy of the information in the report. If a successful demonstration is completed within the 90-day period, the owner or operator of the CCR unit may continue with a detection monitoring program under this section. If a successful demonstration is not completed within the 90-day period, the owner or operator of the CCR unit must initiate an assessment monitoring program as required under § 257.95. The owner or operator must also include the demonstration in the annual groundwater monitoring and corrective action report required by § 257.90(e), in addition to the certification by a qualified professional engineer or approval from the Participating State Director or approval from EPA where EPA is the permitting authority.

This unit is in assessment monitoring; therefore, no detection monitoring alternate source demonstration or certification is applicable.

2.3.5.3 40 CFR § 257.95(c)(3) – Demonstration for Alternative Assessment Monitoring Frequency

The owner or operator must obtain a certification from a qualified professional engineer or approval from the Participating State Director or approval from EPA where EPA is the permitting authority stating that the demonstration for an alternative groundwater sampling and analysis frequency meets the requirements of this section. The owner or operator must include the demonstration providing the basis for the alternative monitoring frequency and the certification by a qualified professional engineer or the approval from the Participating State Director or approval from EPA where EPA is the permitting authority in the annual groundwater monitoring and corrective action report required by § 257.90(e).

An alternative groundwater assessment monitoring sampling and analysis frequency has not been established for this CCR unit; therefore, no demonstration or certification is applicable.

2.3.5.4 40 CFR § 257.95(d)(3) – Assessment Monitoring Concentrations and Groundwater Protection Standards

Include the recorded concentrations required by paragraph (d)(1) of this section, identify the background concentrations established under § 257.94(b), and identify the groundwater protection standards established under paragraph (d)(2) of this section in the annual groundwater monitoring and corrective action report required by § 257.90(e).

An assessment monitoring program has been implemented at the CCR unit since January 13, 2020. Three rounds of assessment monitoring sampling were completed between July 2023 and June 2024. Analytical results for both downgradient and upgradient wells are provided in Table II. The background concentrations (upper tolerance limits) and GWPSs established for detected Appendix IV constituents

for the inactive Ash Ponds are included in Tables IV and V. The background concentrations and GWPSs provided in Tables IV and V were utilized for the statistical evaluations completed from July 2023 through June 2024 for the March 2023 and September 2023 semiannual assessment monitoring sampling events, respectively.

2.3.5.5 40 CFR § 257.95(g)(3)(ii) – Assessment Monitoring Alternate Source Demonstration

Demonstrate that a source other than the CCR unit caused the contamination, or that the statistically significant increase resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. Any such demonstration must be supported by a report that includes the factual or evidentiary basis for any conclusions and must be certified to be accurate by a qualified professional engineer or approval from the Participating State Director or approval from EPA where EPA is the permitting authority. If a successful demonstration is made, the owner or operator must continue monitoring in accordance with the assessment monitoring program pursuant to this section, and may return to detection monitoring if the constituents in appendices III and IV to this part are at or below background as specified in paragraph (e) of this section. The owner or operator must also include the demonstration in the annual groundwater monitoring and corrective action report required by § 257.90(e), in addition to the certification by a qualified professional engineer or the approval from the Participating State Director or approval from EPA where EPA is the permitting authority.

The inactive Ash Ponds remained in assessment monitoring during July 2023 through June 2024 for all constituents, other than arsenic, lithium, and molybdenum, which continue to be monitored under an assessment monitoring program in accordance with 40 CFR § 257.96(b).

2.3.5.6 40 CFR § 257.96(a) – Demonstration for Additional Time for Assessment of Corrective Measures

Within 90 days of finding that any constituent listed in appendix IV to this part has been detected at a statistically significant level exceeding the groundwater protection standard defined under § 257.95(h), or immediately upon detection of a release from a CCR unit, the owner or operator must initiate an assessment of corrective measures to prevent further releases, to remediate any releases and to restore affected area to original conditions. The assessment of corrective measures must be completed within 90 days, unless the owner or operator demonstrates the need for additional time to complete the assessment of corrective measures due to site-specific conditions or circumstances. The owner or operator must obtain a certification from a qualified professional engineer or approval from the Participating State Director or approval from EPA where EPA is the permitting authority attesting that the demonstration is accurate. The 90-day deadline to complete the assessment of corrective measures may be extended for no longer than 60 days. The owner or operator must also include the demonstration in the annual groundwater monitoring and corrective action report required by § 257.90(e), in addition to the certification by a qualified professional engineer or the approval from the Participating State Director or approval from EPA where EPA is the permitting authority.

On January 10, 2021, Evergy demonstrated the need for additional time beyond the regulatory timeline period of 90 days to complete the CMA. The Demonstration and Certification of Need for 60-Day Extension was provided in Attachment 2 of the 2020 – 2021 Annual Groundwater Monitoring and Corrective Actions report for the LEC inactive Ash Ponds.

TABLES

TABLE I
STATISTICALLY SIGNIFICANT LEVELS OF APPENDIX IV CONSTITUENTS
MARCH AND SEPTEMBER 2023 SAMPLING EVENTS
EVERGY KANSAS CENTRAL, INC.
LAWRENCE ENERGY CENTER
LAWRENCE, KANSAS

Constituent	Sampling Event	Well ID	Groundwater Protection Standard (mg/L)
Arsenic	March 2023	MW-38	0.010
		MW-40	
		MW-K	
		MW-L	
	September 2023	MW-38	
		MW-39	
		MW-40	
		MW-K	
		MW-L	
Lithium	March 2023	MW-38	0.040
		MW-40	
		MW-K	
		MW-L	
	September 2023	MW-38	
		MW-40	
		MW-K	
		MW-L	
Molybdenum	March 2023	MW-39	0.152
	September 2023	MW-39	0.153

Notes:
mg/L = milligrams per liter

TABLE II
SUMMARY OF ANALYTICAL RESULTS - ASSESSMENT MONITORING
EVERGY KANSAS CENTRAL, INC.
LAWRENCE ENERGY CENTER
LAWRENCE, KANSAS

Location	Upgradient			Downgradient										
	MW-37			MW-38			MW-39				MW-40			
Measure Point (TOC)	833.290			832.626			830.615				831.358			
Sample Name	MW-37-090723	MW-37-121123	MW-37-030424	MW-38-090723	MW-38-121123	MW-38-030524	MW-39-090723	MW-39-121123	MW-39-030524	MW-39-051324	MW-40-090723	MW-40-121123	MW-40-030524	MW-40-051324
Sample Date	09/07/2023	12/11/2023	03/04/2024	09/07/2023	12/11/2023	03/05/2024	09/07/2023	12/11/2023	03/05/2024	05/13/2024	09/07/2023	12/11/2023	03/05/2024	05/13/2024
Final Lab Report Date	9/25/2023	12/27/2023	3/19/2024	9/25/2023	12/27/2023	3/19/2024	9/25/2023	12/27/2023	3/19/2024	5/15/2024	9/25/2023	12/27/2023	3/19/2024	5/15/2024
Final Lab Report Revision Date	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Final Radiation Lab Report Date	9/29/2023	1/2/2024	3/24/2024	9/29/2023	1/2/2024	3/24/2024	9/29/2023	1/2/2024	3/24/2024	N/A	9/29/2023	1/2/2024	3/24/2024	N/A
Final Radiation Lab Report Revision Date	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Lab Data Reviewed and Accepted	12/19/2023	3/5/2024	7/10/2024	12/19/2023	3/5/2024	7/10/2024	12/19/2023	3/5/2024	7/10/2024	7/10/2024	12/19/2023	3/5/2024	7/10/2024	7/10/2024
Depth to Water (ft btoc)	15.40	12.94	11.66	17.68	17.51	17.18	16.39	16.06	16.05	14.94	16.92	16.58	16.50	15.49
Temperature (Deg C)	15.7	12.74	15.60	22.03	13.53	13.05	20.19	14.06	13.62	18.25	19.94	14.64	14.69	19.07
Conductivity (µS/cm)	1610	1460	1480	1820	1710	1600	1350	3520	3360	3170	1590	3120	3060	3040
Turbidity (NTU)	1.1	2.3	81.1	51.5	3.0	23.6	0.1	0.8	0.0	0.0	22.0	1.8	0.0	0.0
pH , Field (su)	6.81	6.80	6.88	7.44	7.37	7.45	7.24	7.24	7.28	7.13	7.04	7.29	7.28	7.17
Dissolved Oxygen, Field (mg/L)	1.92	0.05	0.00	0.00	0.00	0.93	0.03	0.00	0.00	0.00	0.03	0.00	0.00	0.10
ORP, Field (mV)	-116	-118	-114	-157	-155	-140	-48	-60	-59	-73	-128	-140	-136	-144
Boron, Total (mg/L)	**1.8**	-	**1.6**	**4.6**	-	**3.5**	**4.6**	-	**4.5**	**-**	**3.3**	-	**2.9**	**-**
Calcium, Total (mg/L)	**232**	-	**239**	**201**	-	**166**	**547**	-	**474**	**-**	**473**	-	**440**	**-**
Chloride (mg/L)	**56.4**	-	**57.7**	**111**	-	**99.3**	**321**	-	**350**	**-**	**13.0**	-	**284**	**-**
Fluoride (mg/L)	< 0.20	-	< 0.20	**3.7**	-	**2.8**	**1.3**	-	**1.8**	**-**	< 0.20	-	**1.6**	**-**
Sulfate (mg/L)	**280**	-	**60.5**	**668**	-	**168**	< 1.0	-	**1590**	**-**	< 1.0	-	**1260**	**-**
pH (su)	**6.9**	-	**7.0**	**7.6**	-	**7.6**	**7.3**	-	**7.1**	**-**	**7.1**	-	**7.2**	**-**
TDS (mg/L)	**1080**	-	**1010**	**1580**	-	**1060**	**3410**	-	**1970**	**-**	**2670**	-	**1850**	**-**
Antimony, Total (mg/L)	-	< 0.0010	**-**	-	< 0.0010	**-**	-	< 0.0010	**-**	**-**	-	< 0.0010	-	**-**
Arsenic (mg/L)	**0.0045**	**0.0046**	**0.0076**	**0.026**	**0.018**	**0.018**	**0.011**	**0.010**	**0.011**	**-**	**0.015**	**0.015**	**0.014**	**-**
Barium, Total (mg/L)	**0.077**	**0.073**	**0.090**	**0.049**	**0.042**	**0.053**	**0.029**	**0.029**	**0.029**	**-**	**0.035**	**0.035**	**0.034**	**-**
Beryllium, Total (mg/L)	-	< 0.00050	-	-	< 0.00050	-	-	< 0.00050	-	-	-	< 0.00050	-	-
Cadmium, Total (mg/L)	-	< 0.00050	-	-	< 0.00050	-	-	< 0.00050	-	-	-	< 0.00050	-	-
Chromium, Total (mg/L)	-	< 0.0010	-	-	< 0.0010	-	-	< 0.0010	-	-	-	< 0.0010	-	-
Cobalt, Total (mg/L)	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	**0.0011**	< 0.0050	**0.0011**	< 0.0010	< 0.0010	< 0.0020	< 0.0010
Lead, Total (mg/L)	-	< 0.0010	-	-	< 0.0010	-	-	< 0.0010	-	-	-	< 0.0010	-	-
Lithium, Total (mg/L)	**0.023**	**0.019**	**0.030**	**0.052**	**0.041**	**0.052**	**0.037**	**0.036**	**0.048**	**-**	**0.043**	**0.039**	**0.051**	**-**
Molybdenum, Total (mg/L)	**0.076**	**0.071**	**0.070**	**0.085**	**0.078**	**0.065**	**0.18**	**0.16**	**0.15**	**-**	**0.059**	**0.056**	**0.056**	**-**
Selenium, Total (mg/L)	**-**	< 0.0010	-	-	< 0.0010	-	-	< 0.0010	-	-	-	< 0.0010	-	-
Thallium, Total (mg/L)	**-**	< 0.0010	-	-	< 0.0010	-	-	< 0.0010	-	-	-	< 0.0010	-	-
Mercury, Total (mg/L)	**-**	< 0.00020	-	-	< 0.00020	-	-	< 0.00020	-	-	-	< 0.00020	-	-
Fluoride (mg/L)	< 0.20	**0.46**	< 0.20	**3.7**	**3.7**	**2.8**	**1.3**	**1.7**	**1.8**	**-**	< 0.20	**1.3**	**1.6**	**-**
Radium-226 & 228 Combined (pCi/L)	0.984 ± 0.900 (1.64)	0.884 ± 1.00 (1.91)	0.994 ± 1.09 (2.06)	1.37 ± 1.11 (1.87)	1.31 ± 1.17 (1.99)	0.958 ± 1.30 (2.44)	0.872 ± 1.04 (2.03)	1.18 ± 1.00 (1.79)	1.07 ± 1.16 (2.13)	-	1.35 ± 1.06 (1.75)	**1.62 ± 1.01 (1.56)**	0.907 ± 1.16 (2.16)	-

Notes:

Radiological results are presented as activity plus or minus uncertainty with minimum detectable concentration (MDC).
Bold value: *Detection above laboratory reporting limit or MDC.*
µS/cm = micro Siemens per centimeter
Deg C = degrees Celsius
ft btoc = feet below top of casing
mg/L = milligrams per liter
N/A = Not Applicable
NTU = Nephelometric Turbidity Unit
pCi/L = picoCuries per liter
su = standard unit
TDS = total dissolved solids
TOC = top of casing

TABLE II
SUMMARY OF ANALYTICAL RESULTS - ASSESSMENT MONITORING
EVERGY KANSAS CENTRAL, INC.
LAWRENCE ENERGY CENTER
LAWRENCE, KANSAS

Location	Downgradient (continued)									
	MW-K					MW-L				
Measure Point (TOC)	842.6					843.05				
Sample Name	MW-K-090723	MW-K-121123	LEC IAP-DUP-121123	MW-K-030524	LEC IAP-DUP-030524	MW-L-090723	LEC IAP-DUP-090723	MW-L-121123	MW-L-030524	MW-L-051324
Sample Date	09/07/2023	12/11/2023	12/11/2023	03/05/2024	03/05/2024	09/07/2023	09/07/2023	12/11/2023	03/05/2024	05/13/2024
Final Lab Report Date	9/25/2023	12/27/2023	12/27/2023	3/19/2024	3/19/2024	9/25/2023	9/25/2023	12/27/2023	3/19/2024	5/15/2024
Final Lab Report Revision Date	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Final Radiation Lab Report Date	9/29/2023	1/2/2024	1/2/2024	3/24/2024	3/24/2024	9/29/2023	9/29/2023	1/2/2024	3/24/2024	N/A
Final Radiation Lab Report Revision Date	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Lab Data Reviewed and Accepted	12/19/2023	3/5/2024	3/5/2024	7/10/2024	7/10/2024	12/19/2023	12/19/2023	3/5/2024	7/10/2024	7/10/2024
Depth to Water (ft btoc)	12.74	12.69	12.69	12.48	12.48	17.90	-	17.83	17.76	16.66
Temperature (Deg C)	18.13	15.15	-	14.22	-	16.82	-	14.71	14.47	17.45
Conductivity (µS/cm)	1620	1890	-	1770	-	4380	-	4570	4290	4000
Turbidity (NTU)	24.4	4.90	-	48.5	-	12.1	-	7.30	2.0	0
pH , Field (su)	7.70	7.52	-	7.57	-	7.29	-	7.26	7.36	7.22
Dissolved Oxygen, Field (mg/L)	0.30	0.00	-	0.48	-	0.80	-	0.00	0.00	0
ORP, Field (mV)	-182	-177	-	-171	-	-165	-	-137	-135	-157
Boron, Total (mg/L)	**1.9**	-	-	**1.8**	**1.8**	**2.4**	**2.4**	-	**2.4**	-
Calcium, Total (mg/L)	**207**	-	-	**192**	**199**	**485**	**481**	-	**429**	-
Chloride (mg/L)	**108**	-	-	**117**	**147**	**762**	**775**	-	**452**	-
Fluoride (mg/L)	**2.6**	-	-	**2.7**	**2.7**	**2.5**	**2.5**	-	**2.6**	-
Sulfate (mg/L)	**444**	-	-	**157**	**173**	**1860**	**2430**	-	**1490**	-
pH (su)	**7.7**	-	-	**7.7**	**7.7**	**7.2**	**7.2**	-	**7.3**	-
TDS (mg/L)	**1400**	-	-	**1250**	**1240**	**4340**	**6720**	-	**1770**	-
Antimony, Total (mg/L)	-	< 0.0010	< 0.0010	-	-	-	-	< 0.0010	-	-
Arsenic (mg/L)	**0.083**	**0.056**	**0.056**	**0.073**	**0.071**	**0.027**	**0.027**	**0.026**	**0.029**	-
Barium, Total (mg/L)	**0.048**	**0.043**	**0.044**	**0.046**	**0.047**	**0.035**	**0.035**	**0.032**	**0.029**	-
Beryllium, Total (mg/L)	-	< 0.00050	< 0.00050	-	-	-	-	< 0.00050	-	-
Cadmium, Total (mg/L)	-	< 0.00050	< 0.00050	-	-	-	-	< 0.00050	-	-
Chromium, Total (mg/L)	-	< 0.0010	< 0.0010	-	-	-	-	< 0.0010	-	-
Cobalt, Total (mg/L)	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0020	< 0.0010	< 0.0010	< 0.0010	< 0.0030	< 0.0010
Lead, Total (mg/L)	-	< 0.0010	< 0.0010	-	-	-	-	< 0.0010	-	-
Lithium, Total (mg/L)	**0.048**	**0.040**	**0.042**	**0.050**	**0.050**	**0.090**	**0.086**	**0.076**	**0.089**	-
Molybdenum, Total (mg/L)	**0.021**	**0.021**	**0.022**	**0.022**	**0.020**	**0.047**	**0.048**	**0.044**	**0.048**	-
Selenium, Total (mg/L)	-	< 0.0010	< 0.0010	-	-	-	-	< 0.0010	-	-
Thallium, Total (mg/L)	-	< 0.0010	< 0.0010	-	-	-	-	< 0.0010	-	-
Mercury, Total (mg/L)	-	< 0.00020	< 0.00020	-	-	-	-	< 0.00020	-	-
Fluoride (mg/L)	**2.6**	**3.5**	**3.5**	**2.7**	**2.7**	**2.5**	**2.5**	**3.2**	**2.6**	-
Radium-226 & 228 Combined (pCi/L)	1.23 ± 0.835 (1.59)	1.26 ± 0.885 (1.49)	0.864 ± 0.742 (1.23)	0.644 ± 1.04 (2.06)	0.651 ± 0.876 (1.71)	1.27 ± 0.955 (1.63)	0.716 ± 0.822 (1.57)	**1.73 ± 0.835 (1.45)**	1.13 ± 1.05 (1.13)	-

Notes:

Radiological results are presented as activity plus or minus uncertainty with minimum detectable concentration (MDC).
Bold value: *Detection above laboratory reporting limit or MDC.*
µS/cm = micro Siemens per centimeter
Deg C = degrees Celsius
ft btoc = feet below top of casing
mg/L = milligrams per liter
N/A = Not Applicable
NTU = Nephelometric Turbidity Unit
pCi/L = picoCuries per liter
su = standard unit
TDS = total dissolved solids
TOC = top of casing

TABLE III
SUMMARY OF ANALYTICAL RESULTS: 2023 - 2024 NATURE AND EXTENT MONITORING
EVERGY KANSAS CENTRAL, INC.
LAWRENCE ENERGY CENTER
INACTIVE ASH PONDS
LAWRENCE, KANSAS

Location	Upgradient				Downgradient							
	MW-37		MW-106		MW-38		MW-39			MW-40		
Measure Point (TOC)	833.29		877.81		832.63		830.62			831.36		
Sample Name	MW-37-090723	MW-37-030424	MW-106-091123	MW-106-030624	MW-38-090723	MW-38-030524	MW-39-090723	MW-39-030524	MW-39-051324	MW-40-090723	MW-40-030524	MW-40-051324
Sample Date	09/07/2023	03/04/2024	09/11/2023	03/06/2024	09/07/2023	03/05/2024	09/07/2023	03/05/2024	05/13/2024	09/07/2023	03/05/2024	05/13/2024
Final Lab Report Date	9/25/2023	3/21/2024	9/29/2023	3/25/2024	9/25/2023	3/21/2024	9/25/2023	3/21/2024	5/15/2024	9/25/2023	3/21/2024	5/15/2024
Final Lab Report Revision Date	N/A	N/A	11/16/2023	5/1/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Final Radiation Lab Report Date	9/29/2023	3/24/2024	10/5/2023	4/3/2024	9/29/2023	3/24/2024	9/29/2023	3/24/2024	N/A	9/29/2023	3/24/2024	N/A
Final Radiation Lab Report Revision Date	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Lab Data Reviewed and Accepted	12/19/2023	7/10/2024	12/19/2023	7/15/2024	12/19/2023	7/10/2024	12/19/2023	7/10/2024	7/10/2024	12/19/2023	7/10/2024	7/10/2024
Depth to Water (ft btoc)	15.40	11.66	39.35	37.74	17.68	17.18	16.39	16.05	-	16.92	16.50	-
Temperature (Deg C)	15.70	15.60	20.32	16.21	22.03	13.05	20.19	13.62	18.25	19.94	14.69	19.07
Conductivity (µS/cm)	1610	1480	202	401	1820	1600	1350	3360	3170	1590	3060	3040
Turbidity (NTU)	1.1	81.1	169	32.3	51.5	23.6	0.1	0.0	0.0	22.0	0.0	0.0
pH , Field (su)	6.81	6.88	7.89	7.23	7.44	7.45	7.24	7.28	7.13	7.04	7.28	7.17
Dissolved Oxygen, Field (mg/L)	1.92	0.00	3.95	3.56	0.00	0.93	0.03	0.00	0.00	0.03	0.00	0.10
Oxygen Reduction Potential, Field (mv)	-116	-114	173	276	-157	-140	-48	-59	-73	-128	-136	-144
Ferrous Iron, Field (mg/L)	-	0.73	0.43	0.04	1.35	0.30	0.60	0.21	-	2.39	0.49	-
Boron, Total (mg/L)	**1.8**	**1.6**	< 0.10	< 0.10	**4.6**	**3.5**	**4.6**	**4.5**	-	**3.3**	**2.9**	-
Calcium, Total (mg/L)	**232**	**239**	**46.6**	**39.6**	**201**	**166**	**547**	**474**	-	**473**	**440**	-
Chloride (mg/L)	**56.4**	**57.7**	**1.8**	**2.0**	**111**	**99.3**	**321**	**350**	-	**13.0**	**284**	-
Fluoride (mg/L)	< 0.20	< 0.20	**0.21**	< 0.20	**3.7**	**2.8**	**1.3**	**1.8**	-	< 0.20	**1.6**	-
Sulfate (mg/L)	**280**	**60.5**	**4.0**	**5.3**	**668**	**168**	<1.0	**1590**	-	<1.0	**1260**	-
pH (su)	**6.9**	**7.0**	**7.1**	**6.9**	**7.6**	**7.6**	**7.3**	**7.1**	-	**7.1**	**7.2**	-
TDS (mg/L)	**1080**	**1010**	**301**	**266**	**1580**	**1060**	**3410**	**1970**	-	**2670**	**1850**	-
Arsenic (mg/L)	**0.0045**	**0.0076**	**0.0075**	< 0.0010	**0.026**	**0.018**	**0.011**	**0.011**	-	**0.015**	**0.014**	-
Barium, Total (mg/L)	**0.077**	**0.090**	**0.51**	**0.18**	**0.049**	**0.053**	**0.029**	**0.029**	-	**0.035**	**0.034**	-
Cobalt, Total (mg/L)	< 0.0010	< 0.0010	**0.023**	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0050	**0.0011**	< 0.0010	< 0.0020	< 0.0010
Lithium, Total (mg/L)	**0.023**	**0.030**	**0.0267**	**0.019**	**0.052**	**0.052**	**0.037**	**0.048**	-	**0.043**	**0.051**	-
Molybdenum, Total (mg/L)	**0.076**	**0.070**	**0.0011**	< 0.0010	**0.085**	**0.065**	**0.18**	**0.15**	-	**0.059**	**0.056**	-
Fluoride (mg/L)	< 0.20	< 0.20	**0.21**	< 0.20	**3.7**	**2.8**	**1.3**	**1.8**	-	< 0.20	**1.6**	-
Radium-226 & 228 Combined (pCi/L)	0.984 ± 0.900 (1.64)	0.994 ± 1.09 (2.06)	**5.38 ± 1.62 (1.29)**	0.0963 ± 0.898 (1.88)	1.37 ± 1.11 (1.87)	0.958 ± 1.30 (2.44)	0.872 ± 1.04 (2.03)	1.07 ± 1.16 (2.13)	-	1.35 ± 1.06 (1.75)	0.907 ± 1.16 (2.16)	-
Arsenic, Dissolved (mg/L)	**0.0044**	**0.0042**	< 0.0010	< 0.0010	**0.017**	**0.017**	**0.011**	**0.010**	-	**0.014**	**0.013**	-
Iron, Dissolved (mg/L)	**3.6**	**3.5**	< 0.050	< 0.050	**1.5**	**1.6**	**0.62**	**0.45**	-	**6.7**	**6.4**	-
Lithium, Dissolved (mg/L)	**0.020**	**0.030**	**0.014**	**0.019**	**0.052**	**0.053**	**0.034**	**0.050**	-	**0.044**	**0.055**	-
Manganese, Dissolved (mg/L)	**1.3**	**1.4**	< 0.0050	< 0.0050	**0.40**	**0.39**	**2.4**	**2.5**	-	**2.7**	**2.7**	-
Molybdenum, Dissolved (mg/L)	**0.076**	**0.068**	< 0.0010	< 0.0010	**0.077**	**0.075**	**0.18**	**0.16**	-	**0.061**	**0.057**	-
Ferrous Iron (mg/L)	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	-	< 0.20	< 0.20	-
Iron, Total (mg/L)	**3.9**	**5.7**	**36.6**	**1.5**	**2.7**	**1.8**	**0.61**	**0.50**	-	**8.2**	**6.4**	-
Magnesium, Total (mg/L)	**22.8**	**23.4**	**9.8**	**5.9**	**67.3**	**59.3**	**45.5**	**51.5**	-	**41.6**	**39.2**	-
Manganese, Total (mg/L)	**1.3**	**1.4**	**1.2**	**0.053**	**0.40**	**0.41**	**2.4**	**2.4**	-	**2.7**	**2.5**	-
Potassium, Total (mg/L)	**8.8**	**9.2**	**4.7**	**2.4**	**22.6**	**21.9**	**25.2**	**24.6**	-	**24.5**	**24.8**	-
Sodium, Total (mg/L)	**79.9**	**80.4**	**40.4**	**38.4**	**161**	**153**	**317**	**284**	-	**254**	**239**	-
Alkalinity, Bicarbonate (mg/L)	**518**	**522**	**222**	**218**	**383**	**388**	**159**	**152**	-	**208**	**201**	-
Alkalinity, Carbonate (mg/L)	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0	-	< 20.0	< 20.0	-
Dissolved Organic Carbon (DOC) (mg/L)	**7.8**	**4.1**	< 1.0	< 1.0	**6.2**	**1.9**	**1.6**	**1.7**	-	**1.5**	**1.4**	-
Sulfide (mg/L)	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	-	< 0.050	< 0.050	-
Total Organic Carbon (TOC) (mg/L)	**16.2**	**3.5**	< 1.0	< 1.0	**9.9**	**1.5**	**4.2**	**1.0**	-	**4.6**	< 1.0	-
Hardness, Total (mg/L)	**684**	**703**	**40.4**	**24.4**	**774**	**709**	**1540**	**1390**	-	**1330**	**1280**	-

Notes:
Bold value: *Detection above laboratory reporting limit or minimum detectable concentration (MDC).*
Radiological results are presented as activity plus or minus uncertainty with MDC.
µS/cm = micro Siemens per centimeter
Deg C = degrees Celsius
ft btoc = feet below top of casing
mg/L = milligrams per liter
N/A = Not Applicable
NTU = Nephelometric Turbidity Unit
pCi/L = picoCuries per liter
su = standard unit
TDS = total dissolved solids
TOC = top of casing

TABLE III
SUMMARY OF ANALYTICAL RESULTS: 2023 - 2024 NATURE AND EXTENT MONITORING
EVERGY KANSAS CENTRAL, INC.
LAWRENCE ENERGY CENTER
INACTIVE ASH PONDS
LAWRENCE, KANSAS

Location	Downgradient										
	MW-K			MW-L				MW-101			
Measure Point (TOC)	827.49			832.31				828.65			
Sample Name	MW-K-090723	MW-K-030524	LEC IAP-DUP-030524	MW-L-090723	LEC IAP-DUP-090723	MW-L-030524	MW-L-051324	MW-101-090823	LEC-IAPPW-DUP2-090823	MW-101-030524	LEC-IAP PW-DUP2-030524
Sample Date	09/07/2023	03/05/2024	03/05/2024	09/07/2023	09/07/2023	03/05/2024	05/13/2024	09/08/2023	09/08/2023	03/05/2024	03/05/2024
Final Lab Report Date	9/25/2023	3/21/2024	3/21/2024	9/25/2023	9/25/2023	3/21/2024	5/15/2024	9/29/2023	9/29/2023	3/25/2024	3/25/2024
Final Lab Report Revision Date	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11/16/2023	11/16/2023	5/1/2024	5/1/2024
Final Radiation Lab Report Date	9/29/2023	3/24/2024	3/24/2024	9/29/2023	9/29/2023	3/24/2024	N/A	10/5/2023	10/5/2023	4/3/2024	4/3/2024
Final Radiation Lab Report Revision Date	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Lab Data Reviewed and Accepted	12/19/2023	7/10/2024	7/10/2024	12/19/2023	12/19/2023	7/10/2024	7/10/2024	12/19/2023	12/19/2023	7/15/2024	7/15/2024
Depth to Water (ft btoc)	12.74	12.48	-	17.90	-	17.76	-	14.08	-	13.83	-
Temperature (Deg C)	18.13	14.22	-	16.82	-	14.47	17.45	26.82	-	13.36	-
Conductivity (µS/cm)	1620	1770	-	4380	-	4290	4000	522	-	777	-
Turbidity (NTU)	24.4	48.5	-	12.1	-	2.0	0.0	48.3	-	12.6	-
pH , Field (su)	7.70	7.57	-	7.29	-	7.36	7.22	7.64	-	7.86	-
Dissolved Oxygen, Field (mg/L)	0.30	0.48	-	0.80	-	0.00	0.00	0.00	-	2.55	-
Oxygen Reduction Potential, Field (mv)	-182	-171	-	-165	-	-135	-157	82	-	-49	-
Ferrous Iron, Field (mg/L)	1.33	0.49	-	2.84	-	0.38	-	2.49	-	0.17	-
Boron, Total (mg/L)	**1.9**	**1.8**	**1.8**	**2.4**	**2.4**	**2.4**	-	**0.23**	**0.22**	**0.13**	**0.13**
Calcium, Total (mg/L)	**207**	**192**	**199**	**485**	**481**	**429**	-	**119**	**111**	**115**	**111**
Chloride (mg/L)	**108**	**117**	**147**	**762**	**775**	**452**	-	**47.3**	**49.3**	**37.6**	**38.6**
Fluoride (mg/L)	**2.6**	**2.7**	**2.7**	**2.5**	**2.5**	**2.6**	-	**0.85**	**0.74**	**0.81**	**0.78**
Sulfate (mg/L)	**444**	**157**	**173**	**1860**	**2430**	**1490**	-	**35.7**	**36.5**	**31.6**	**33.2**
pH (su)	**7.7**	**7.7**	**7.7**	**7.2**	**7.2**	**7.3**	-	**7.6**	**7.5**	**7.3**	**7.3**
TDS (mg/L)	**1400**	**1250**	**1240**	**4340**	**6720**	**1770**	-	**484**	**178**	**466**	**524**
Arsenic (mg/L)	**0.083**	**0.073**	**0.071**	**0.027**	**0.027**	**0.029**	-	**0.0042**	**0.0043**	**0.0047**	**0.0045**
Barium, Total (mg/L)	**0.048**	**0.046**	**0.047**	**0.035**	**0.035**	**0.029**	-	**0.20**	**0.22**	**0.19**	**0.18**
Cobalt, Total (mg/L)	< 0.0010	< 0.0010	< 0.0020	< 0.0010	< 0.0010	< 0.0030	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Lithium, Total (mg/L)	**0.048**	**0.050**	**0.050**	**0.090**	**0.086**	**0.089**	-	**0.022**	**0.024**	**0.025**	**0.022**
Molybdenum, Total (mg/L)	**0.021**	**0.022**	**0.020**	**0.047**	**0.048**	**0.048**	-	**0.024**	**0.023**	**0.023**	**0.022**
Fluoride (mg/L)	**2.6**	**2.7**	**2.7**	**2.5**	**2.5**	**2.6**	-	**0.85**	**0.74**	**0.81**	**0.78**
Radium-226 & 228 Combined (pCi/L)	1.23 ± 0.835 (1.59)	0.644 ± 1.04 (2.06)	0.651 ± 0.876 (1.71)	1.27 ± 0.955 (1.63)	0.716 ± 0.822 (1.57)	1.13 ± 1.05 (1.92)	-	0.443 ± 0.866 (1.70)	1.32 ± 1.05 (1.87)	0.994 ± 0.968 (1.80)	1.34 ± 1.04 (1.80)
Arsenic, Dissolved (mg/L)	**0.051**	**0.050**	**0.052**	**0.024**	**0.026**	**0.027**	-	**0.0031**	**0.0030**	**0.0043**	**0.0045**
Iron, Dissolved (mg/L)	**1.8**	**1.8**	**1.9**	**6.2**	**6.1**	**5.5**	-	**2.1**	**2.1**	**2.6**	**2.5**
Lithium, Dissolved (mg/L)	**0.047**	**0.051**	**0.048**	**0.089**	**0.087**	**0.095**	-	**0.023**	**0.020**	**0.024**	**0.022**
Manganese, Dissolved (mg/L)	**1.1**	**1.1**	**1.1**	**3.4**	**3.5**	**3.2**	-	**0.43**	**0.43**	**0.48**	**0.47**
Molybdenum, Dissolved (mg/L)	**0.023**	**0.020**	**0.020**	**0.046**	**0.048**	**0.046**	-	**0.022**	**0.023**	**0.023**	**0.022**
Ferrous Iron (mg/L)	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	-	< 0.20	**0.32**	**0.21**	< 0.20
Iron, Total (mg/L)	**2.9**	**4.1**	**3.7**	**7.3**	**7.3**	**5.8**	-	**3.8**	**4.3**	**3.0**	**2.8**
Magnesium, Total (mg/L)	**64.9**	**63.1**	**62.2**	**154**	**153**	**138**	-	**24.8**	**21.7**	**21.3**	**20.4**
Manganese, Total (mg/L)	**1.0**	**1.1**	**1.1**	**3.6**	**3.6**	**3.0**	-	**0.48**	**0.52**	**0.50**	**0.47**
Potassium, Total (mg/L)	**27.8**	**28.7**	**27.6**	**33.3**	**33.0**	**33.5**	-	**7.4**	**7.2**	**6.9**	**6.6**
Sodium, Total (mg/L)	**108**	**112**	**107**	**459**	**455**	**397**	-	**17.3**	**17.2**	**14.4**	**13.8**
Alkalinity, Bicarbonate (mg/L)	**453**	**445**	**451**	**277**	**277**	**265**	-	**338**	**334**	**336**	**334**
Alkalinity, Carbonate (mg/L)	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0	-	< 20.0	< 20.0	< 20.0	< 20.0
Dissolved Organic Carbon (DOC) (mg/L)	**2.7**	**2.8**	**3.1**	**2.0**	**2.2**	**2.2**	-	**1.8**	**16.0**	**2.3**	**2.3**
Sulfide (mg/L)	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	-	< 0.050	**0.051**	< 0.050	< 0.050
Total Organic Carbon (TOC) (mg/L)	**10.2**	**2.4**	**2.3**	**7.3**	**6.4**	**1.3**	-	**2.4**	**33.9**	**3.1**	**1.5**
Hardness, Total (mg/L)	**763**	**747**	**733**	**1840**	**1820**	**1670**	-	**102**	**89.4**	**87.7**	**84.1**

Notes:
Bold value: *Detection above laboratory reporting limit or minimum detectable concentration (MDC).*
Radiological results are presented as activity plus or minus uncertainty with MDC.
µS/cm = micro Siemens per centimeter
Deg C = degrees Celsius
ft btoc = feet below top of casing
mg/L = milligrams per liter
N/A = Not Applicable
NTU = Nephelometric Turbidity Unit
pCi/L = picoCuries per liter
su = standard unit
TDS = total dissolved solids
TOC = top of casing

TABLE III
SUMMARY OF ANALYTICAL RESULTS: 2023 - 2024 NATURE AND EXTENT MONITORING
EVERGY KANSAS CENTRAL, INC.
LAWRENCE ENERGY CENTER
INACTIVE ASH PONDS
LAWRENCE, KANSAS

Location	Downgradient											
	MW-102		MW-103		MW-104		MW-107				MW-108	
Measure Point (TOC)	829.55		829.15		824.81		831.10				830.08	
Sample Name	MW-102-090823	MW-102-030524	MW-103-091123	MW-103-030624	MW-104-091123	MW-104-030624	MW-107-090723	LEC-IAPPW-DUP1-090723	MW-107-030524	LEC-IAP PW-DUP1-030524	MW-108-090723	MW-108-030524
Sample Date	09/08/2023	03/05/2024	09/11/2023	03/06/2024	09/11/2023	03/06/2024	09/07/2023	09/07/2023	03/05/2024	03/05/2024	09/07/2023	03/05/2024
Final Lab Report Date	9/29/2023	3/25/2024	9/29/2023	3/25/2024	9/29/2023	3/25/2024	9/29/2023	9/29/2023	3/25/2024	3/25/2024	9/29/2023	3/25/2024
Final Lab Report Revision Date	11/16/2023	5/1/2024	11/16/2023	5/1/2024	11/16/2023	5/1/2024	11/16/2023	11/16/2023	5/1/2024	5/1/2024	11/16/2023	5/1/2024
Final Radiation Lab Report Date	10/5/2023	4/3/2024	10/5/2023	4/3/2024	10/5/2023	4/3/2024	10/5/2023	10/5/2023	4/3/2024	4/3/2024	10/5/2023	4/3/2024
Final Radiation Lab Report Revision Date	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Lab Data Reviewed and Accepted	12/19/2023	7/15/2024	12/19/2023	7/15/2024	12/19/2023	7/15/2024	12/19/2023	12/19/2023	7/15/2024	7/15/2024	12/19/2023	7/15/2024
Depth to Water (ft btoc)	15.47	15.31	15.14	15.11	10.76	10.69	16.11	-	15.88	-	14.63	14.33
Temperature (Deg C)	17.72	13.10	16.63	12.57	19.43	14.47	21.67	-	8.01	-	23.32	15.44
Conductivity (µS/cm)	1060	888	2490	3240	1300	2430	912	-	955	-	771	814
Turbidity (NTU)	17.2	7.5	111	87.1	9.7	516	12.1	-	21.8	-	0.0	8.4
pH , Field (su)	6.78	7.75	7.18	7.53	7.67	7.32	6.93	-	7.05	-	7.33	7.69
Dissolved Oxygen, Field (mg/L)	0.60	3.72	0.00	0.00	0.47	0.00	0.00	-	1.21	-	0.34	3.61
Oxygen Reduction Potential, Field (mv)	-98	-58	-49	-159	136	-138	-93	-	187	-	-165	20
Ferrous Iron, Field (mg/L)	1.55	0.26	2.39	0.83	1.30	0.75	1.04	-	0.23	-	1.82	0.00
Boron, Total (mg/L)	**0.82**	**0.42**	**3.8**	**3.8**	**1.9**	**1.6**	**0.17**	**0.16**	**0.13**	**0.13**	**0.18**	**0.16**
Calcium, Total (mg/L)	**132**	**120**	**359**	**433**	**345**	**351**	**124**	**116**	**121**	**118**	**114**	**106**
Chloride (mg/L)	**24.7**	**14.9**	**227**	**369**	**209**	**257**	**25.9**	**24.0**	**19.6**	**18.6**	**58.6**	**134**
Fluoride (mg/L)	**3.1**	**1.8**	**2.1**	**2.7**	< 0.20	**0.53**	**1.5**	**1.4**	**1.2**	**1.3**	**1.3**	**1.3**
Sulfate (mg/L)	**66.9**	**60.3**	**1120**	**1750**	**936**	**633**	**45.5**	**43.2**	**43.8**	**41.6**	**26.4**	**19.5**
pH (su)	**7.2**	**7.7**	**7.3**	**7.5**	**7.6**	**7.4**	**7.0**	**7.0**	**7.1**	**7.2**	**7.2**	**7.5**
TDS (mg/L)	**595**	**556**	**1850**	**2490**	**2000**	**1810**	**497**	**530**	**497**	**519**	**506**	**459**
Arsenic (mg/L)	**0.0084**	**0.010**	**0.010**	**0.012**	**0.0035**	**0.0067**	**0.013**	**0.013**	**0.0086**	**0.0084**	**0.0061**	**0.0023**
Barium, Total (mg/L)	**0.13**	**0.12**	**0.050**	**0.052**	**0.050**	**0.085**	**0.15**	**0.16**	**0.14**	**0.14**	**0.23**	**0.20**
Cobalt, Total (mg/L)	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0030	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Lithium, Total (mg/L)	**0.038**	**0.031**	**0.042**	**0.054**	**0.060**	**0.071**	**0.025**	**0.029**	**0.026**	**0.025**	**0.016**	**0.020**
Molybdenum, Total (mg/L)	**0.055**	**0.036**	**0.18**	**0.15**	**0.047**	**0.035**	**0.029**	**0.028**	**0.024**	**0.023**	**0.029**	**0.025**
Fluoride (mg/L)	**3.1**	**1.8**	**2.1**	**2.7**	< 0.20	**0.53**	**1.5**	**1.4**	**1.2**	**1.3**	**1.3**	**1.3**
Radium-226 & 228 Combined (pCi/L)	0.821 ± 0.910 (1.66)	**1.53 ± 0.906 (1.47)**	0.443 ± 0.816 (1.72)	1.08 ± 0.908 (1.62)	1.31 ± 1.11 (1.86)	1.50 ± 1.10 (2.02)	1.07 ± 0.954 (1.69)	0.809 ± 0.703 (1.15)	0.947 ± 1.14 (2.11)	1.78 ± 1.27 (2.05)	0.876 ± 1.08 (1.98)	0.994 ± 1.29 (2.38)
Arsenic, Dissolved (mg/L)	**0.0077**	**0.010**	**0.0044**	**0.0082**	**0.0038**	**0.0037**	**0.0090**	**0.0087**	**0.0043**	**0.0043**	**0.0058**	**0.0011**
Iron, Dissolved (mg/L)	**1.9**	**0.93**	**3.2**	**5.5**	**4.4**	**5.5**	**1.6**	**1.6**	**0.33**	**0.33**	**2.7**	< 0.050
Lithium, Dissolved (mg/L)	**0.040**	**0.028**	**0.046**	**0.064**	**0.065**	**0.070**	**0.026**	**0.025**	**0.027**	**0.023**	**0.020**	**0.020**
Manganese, Dissolved (mg/L)	**0.48**	**0.10**	**1.2**	**2.2**	**1.5**	**1.8**	**0.48**	**0.50**	**0.30**	**0.29**	**0.52**	< 0.0050
Molybdenum, Dissolved (mg/L)	**0.053**	**0.037**	**0.16**	**0.15**	**0.044**	**0.035**	**0.026**	**0.025**	**0.022**	**0.022**	**0.029**	**0.025**
Ferrous Iron (mg/L)	< 0.20	< 0.20	< 0.2	**0.34**	**0.21**	**0.70**	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Iron, Total (mg/L)	**2.2**	**0.86**	**7.7**	**7.0**	**4.6**	**8.5**	**2.9**	**2.7**	**1.6**	**1.6**	**3.0**	**0.65**
Magnesium, Total (mg/L)	**39.5**	**30.4**	**58.5**	**81.6**	**34.9**	**32.5**	**37.4**	**32.0**	**30.5**	**29.6**	**20.8**	**18.8**
Manganese, Total (mg/L)	**0.50**	**0.083**	**1.9**	**2.2**	**1.5**	**1.8**	**0.53**	**0.55**	**0.39**	**0.39**	**0.55**	**0.042**
Potassium, Total (mg/L)	**9.6**	**9.2**	**24.6**	**26.8**	**41.5**	**43.6**	**8.8**	**8.5**	**8.2**	**8.2**	**8.3**	**7.7**
Sodium, Total (mg/L)	**22.1**	**12.6**	**228**	**275**	**188**	**166**	**7.5**	**6.8**	**6.4**	**5.8**	**25.3**	**25.2**
Alkalinity, Bicarbonate (mg/L)	**435**	**397**	**294**	**283**	**401**	**404**	**389**	**392**	**391**	**396**	**319**	**313**
Alkalinity, Carbonate (mg/L)	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0
Dissolved Organic Carbon (DOC) (mg/L)	**1.6**	**1.7**	**3.1**	**1.7**	**3.4**	**1.6**	**1.3**	**1.7**	**1.3**	**2.0**	**4.4**	**2.1**
Sulfide (mg/L)	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Total Organic Carbon (TOC) (mg/L)	**1.4**	**2.2**	**2.3**	**3.0**	**2.2**	**4.3**	**1.2**	**57.1**	**2.2**	**1.3**	**2.2**	**7.8**
Hardness, Total (mg/L)	**163**	**125**	**241**	**336**	**144**	**134**	**154**	**132**	**126**	**122**	**85.7**	**77.5**

Notes:
Bold value: *Detection above laboratory reporting limit or minimum detectable concentration (MDC).*
Radiological results are presented as activity plus or minus uncertainty with MDC.
µS/cm = micro Siemens per centimeter
Deg C = degrees Celsius
ft btoc = feet below top of casing
mg/L = milligrams per liter
N/A = Not Applicable
NTU = Nephelometric Turbidity Unit
pCi/L = picoCuries per liter
su = standard unit
TDS = total dissolved solids
TOC = top of casing

TABLE III
SUMMARY OF ANALYTICAL RESULTS: 2023 - 2024 NATURE AND EXTENT MONITORING
EVERGY KANSAS CENTRAL, INC.
LAWRENCE ENERGY CENTER
INACTIVE ASH PONDS
LAWRENCE, KANSAS

Location	Downgradient											
	MW-109		MW-110		MW-112		MW-113		MW-A		MW-B	
Measure Point (TOC)	829.78		830.54		833.16		831.32		830.52		830.11	
Sample Name	MW-109-090823	MW-109-030524	MW-110-090723	MW-110-030524	MW-112-090723	MW-112-030524	MW-113-090723	MW-113-030524	MW-A-090823	MW-A-030624	MW-B-090823	MW-B-030524
Sample Date	09/08/2023	03/05/2024	09/07/2023	03/05/2024	09/07/2023	03/05/2024	09/07/2023	03/05/2024	09/08/2023	03/06/2024	09/08/2023	03/05/2024
Final Lab Report Date	9/29/2023	3/25/2024	9/29/2023	3/25/2024	9/29/2023	3/25/2024	9/29/2023	3/25/2024	10/19/2023	3/25/2024	9/29/2023	3/25/2024
Final Lab Report Revision Date	11/16/2023	5/1/2024	11/16/2023	5/1/2024	11/16/2023	5/1/2024	11/16/2023	5/1/2024	N/A	5/1/2024	11/16/2023	5/1/2024
Final Radiation Lab Report Date	10/5/2023	4/3/2024	10/5/2023	4/3/2024	10/5/2023	4/3/2024	10/5/2023	4/3/2024	11/10/2023	4/3/2024	10/5/2023	4/3/2024
Final Radiation Lab Report Revision Date	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Lab Data Reviewed and Accepted	12/19/2023	7/15/2024	12/19/2023	7/15/2024	12/19/2023	7/15/2024	12/19/2023	7/15/2024	12/19/2023	7/15/2024	12/19/2023	7/15/2024
Depth to Water (ft btoc)	15.16	15.01	16.18	16.12	18.69	18.58	16.92	16.76	15.56	15.00	15.11	14.85
Temperature (Deg C)	17.35	14.18	19.61	14.51	26.57	8.90	22.14	10.70	14.13	17.31	16.43	16.11
Conductivity (µS/cm)	4450	4550	4550	4750	803	919	1400	1380	1080	986	1050	877
Turbidity (NTU)	49.2	33.5	83.0	52.5	14.3	43.1	40.8	10.2	39.0	69.0	1.1	24.2
pH , Field (su)	7.25	6.84	7.25	6.82	7.11	7.05	7.42	7.24	6.81	7.24	6.57	7.53
Dissolved Oxygen, Field (mg/L)	0.00	2.02	0.00	0.57	0.00	0.75	4.45	1.58	0.00	0.00	0.00	1.90
Oxygen Reduction Potential, Field (mv)	-148	36	-160	-109	13	-148	-178	-164	-112	-60	130	190
Ferrous Iron, Field (mg/L)	2.44	0.00	3.15	2.24	0.20	>3.00	2.16	2.39	3.20	0.66	0.05	0.25
Boron, Total (mg/L)	**4.7**	**4.4**	**4.2**	**3.9**	< 0.10	< 0.10	**3.8**	**3.3**	**0.40**	**0.64**	< 0.10	< 0.10
Calcium, Total (mg/L)	**518**	**473**	**507**	**487**	**122**	**116**	**127**	**121**	**159**	**140**	**159**	**148**
Chloride (mg/L)	**533**	**475**	**597**	**457**	**49.5**	**40.6**	**73.9**	**135**	**43.7**	**36.1**	**29.4**	**20.5**
Fluoride (mg/L)	**2.6**	**3.2**	**3.1**	**4.5**	**0.23**	**0.24**	**5.7**	**5.9**	**0.26**	**0.22**	**0.58**	**0.47**
Sulfate (mg/L)	< 1.0	**1490**	< 1.0	**1620**	**39.3**	**25.4**	**296**	**108**	**127**	**88.2**	**51.3**	**28.1**
pH (su)	**7.1**	**7.4**	**7.2**	**7.2**	**7.0**	**7.2**	**7.5**	**7.6**	**7.0**	**7.1**	**7.1**	**7.3**
TDS (mg/L)	**3790**	**3030**	**3690**	**3090**	**774**	**475**	**993**	**927**	**667**	**597**	**594**	**565**
Arsenic (mg/L)	**0.012**	**0.0078**	**0.0040**	< 0.0040	**0.0019**	**0.0021**	**0.0031**	**0.0026**	**0.0022**	**0.0056**	**0.0050**	**0.0048**
Barium, Total (mg/L)	**0.034**	**0.028**	**0.035**	**0.034**	**0.24**	**0.24**	**0.060**	**0.048**	**0.080**	**0.12**	**0.19**	**0.22**
Cobalt, Total (mg/L)	< 0.0010	< 0.0030	< 0.0010	< 0.0040	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	**0.0051**	**0.0082**
Lithium, Total (mg/L)	**0.062**	**0.069**	**0.084**	**0.088**	**0.015**	**0.016**	**0.053**	**0.053**	**0.014**	**0.017**	**0.020**	**0.019**
Molybdenum, Total (mg/L)	**0.11**	**0.097**	**0.11**	**0.10**	**0.0091**	**0.0083**	**0.17**	**0.16**	**0.019**	**0.018**	**0.014**	**0.012**
Fluoride (mg/L)	**2.6**	**3.2**	**3.1**	**4.5**	**0.23**	**0.24**	**5.7**	**5.9**	**0.26**	**0.22**	**0.58**	**0.47**
Radium-226 & 228 Combined (pCi/L)	0.341 ± 0.732 (1.58)	0.849 ± 0.788 (1.66)	0.962 ± 0.78 (1.43)	1.03 ± 0.815 (1.58)	0.137 ± 0.567 (1.11)	1.06 ± 0.820 (1.39)	0.442 ± 0.693 (1.49)	0.493 ± 0.868 (1.70)	0.898 ± 0.921 (1.69)	1.03 ± 0.751 (1.27)	1.61 ± 1.05 (1.70)	**4.35 ± 1.44 (1.45)**
Arsenic, Dissolved (mg/L)	**0.0068**	**0.0055**	**0.0033**	< 0.0040	<0.0016	**0.0020**	**0.0026**	**0.0025**	**0.0022**	< 0.0010	**0.0045**	**0.0042**
Iron, Dissolved (mg/L)	**4.6**	**3.4**	**6.9**	**6.5**	**6.9**	**7.4**	**2.4**	**2.5**	**4.7**	**1.3**	< 0.050	< 0.050
Lithium, Dissolved (mg/L)	**0.066**	**0.073**	**0.089**	**0.090**	**0.016**	**0.017**	**0.055**	**0.054**	**0.013**	**0.013**	**0.022**	**0.020**
Manganese, Dissolved (mg/L)	**2.9**	**2.3**	**1.6**	**1.9**	**0.96**	**1.0**	**0.41**	**0.43**	**0.94**	**0.70**	**0.45**	**0.18**
Molybdenum, Dissolved (mg/L)	**0.11**	**0.095**	**0.10**	**0.097**	**0.0089**	**0.0083**	**0.17**	**0.15**	**0.019**	**0.016**	**0.013**	**0.010**
Ferrous Iron (mg/L)	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	**0.37**	**0.27**	< 0.20	**0.20**	**0.28**	< 0.20	< 0.20
Iron, Total (mg/L)	**7.5**	**4.9**	**9.1**	**8.4**	**7.8**	**8.3**	**3.7**	**2.6**	**5.8**	**9.8**	**0.078**	**0.14**
Magnesium, Total (mg/L)	**133**	**116**	**157**	**147**	**14.9**	**14.4**	**48.6**	**45.9**	**26.1**	**20.5**	**17.7**	**14.5**
Manganese, Total (mg/L)	**3.0**	**2.6**	**1.7**	**2.0**	**1.0**	**1.1**	**0.47**	**0.44**	**0.98**	**0.99**	**1.0**	**1.2**
Potassium, Total (mg/L)	**28.2**	**25.2**	**32.9**	**32.4**	**5.9**	**5.7**	**13.7**	**12.7**	**5.7**	**5.5**	**7.4**	**6.3**
Sodium, Total (mg/L)	**358**	**312**	**378**	**341**	**14.7**	**14.1**	**103**	**92.2**	**35.9**	**37.2**	**6.5**	**6.1**
Alkalinity, Bicarbonate (mg/L)	**176**	**158**	**232**	**232**	**318**	**317**	**348**	**338**	**396**	**405**	**398**	**389**
Alkalinity, Carbonate (mg/L)	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0
Dissolved Organic Carbon (DOC) (mg/L)	**2.6**	**1.5**	**2.7**	**1.9**	**7.3**	**3.3**	**4.5**	**1.9**	**3.0**	**2.7**	**1.4**	**1.4**
Sulfide (mg/L)	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Total Organic Carbon (TOC) (mg/L)	**1.7**	**1.6**	**2.5**	**3.0**	**2.1**	**2.2**	**2.2**	**6.0**	**1.5**	**1.6**	**1.2**	**1.7**
Hardness, Total (mg/L)	**546**	**478**	**648**	**607**	**61.5**	**59.2**	**200**	**189**	**107**	**84.2**	**73.0**	**59.8**

Notes:
Bold value: *Detection above laboratory reporting limit or minimum detectable concentration (MDC).*
Radiological results are presented as activity plus or minus uncertainty with MDC.
µS/cm = micro Siemens per centimeter
Deg C = degrees Celsius
ft btoc = feet below top of casing
mg/L = milligrams per liter
N/A = Not Applicable
NTU = Nephelometric Turbidity Unit
pCi/L = picoCuries per liter
su = standard unit
TDS = total dissolved solids
TOC = top of casing

TABLE III
SUMMARY OF ANALYTICAL RESULTS: 2023 - 2024 NATURE AND EXTENT MONITORING
EVERGY KANSAS CENTRAL, INC.
LAWRENCE ENERGY CENTER
INACTIVE ASH PONDS
LAWRENCE, KANSAS

Location	Downgradient											
	MW-C		MW-D		MW-G	MW-M		MW-N		MW-O		MW-P	
Measure Point (TOC)	827.63		829.43		843.21	828.93		826.81		830.32		829.63	
Sample Name	MW-C-090823	MW-C-030624	MW-D-090823	MW-D-030624	MW-G-091123	MW-M-091123	MW-M-030624	MW-N-090823	MW-N-030524	MW-O-090823	MW-O-030524	MW-P-091123	MW-P-030624
Sample Date	09/08/2023	03/06/2024	09/08/2023	03/06/2024	09/11/2023	09/11/2023	03/06/2024	09/08/2023	03/05/2024	09/08/2023	03/05/2024	09/11/2023	03/06/2024
Final Lab Report Date	9/29/2023	3/25/2024	9/29/2023	3/25/2024	9/29/2023	9/29/2023	3/25/2024	9/29/2023	3/25/2024	9/29/2023	3/25/2024	9/29/2023	3/25/2024
Final Lab Report Revision Date	11/16/2023	5/1/2024	11/16/2023	5/1/2024	11/16/2023	11/16/2023	5/1/2024	11/16/2023	5/1/2024	11/16/2023	5/1/2024	11/16/2023	5/1/2024
Final Radiation Lab Report Date	10/5/2023	4/3/2024	10/5/2023	4/3/2024	10/5/2023	10/5/2023	4/3/2024	10/5/2023	4/3/2024	10/5/2023	4/3/2024	10/5/2023	4/3/2024
Final Radiation Lab Report Revision Date	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Lab Data Reviewed and Accepted	12/19/2023	7/15/2024	12/19/2023	7/15/2024	12/19/2023	12/19/2023	7/15/2024	12/19/2023	7/15/2024	12/19/2023	7/15/2024	12/19/2023	7/15/2024
Depth to Water (ft btoc)	13.04	12.62	14.43	14.19	27.22	14.72	14.52	12.21	11.92	15.98	15.86	15.72	15.55
Temperature (Deg C)	24.61	14.82	28.05	15.50	18.25	19.00	16.17	20.53	13.98	18.62	14.20	16.04	12.81
Conductivity (µS/cm)	896	944	544	1920	1530	1610	1410	695	953	5100	4630	1650	1380
Turbidity (NTU)	402	69.7	95.2	1000	20	1000	128	700	450	10.9	28.6	23.9	46.6
pH , Field (su)	7.01	7.24	7.80	6.92	6.91	7.50	7.08	7.40	7.75	7.15	7.46	6.80	7.33
Dissolved Oxygen, Field (mg/L)	0.00	0.44	0.00	0.00	0.00	0.02	1.05	0.15	0.00	2.56	0.00	0.00	0.15
Oxygen Reduction Potential, Field (mv)	155	214	-314	-102	-119	121	61	-146	-29	-159	-162	99	192
Ferrous Iron, Field (mg/L)	0.22	0.90	3.19	1.08	3.26	0.49	0.36	1.11	1.25	2.77	1.71	0.00	0.07
Boron, Total (mg/L)	**0.20**	**0.20**	**0.44**	**0.42**	**1.6**	**2.7**	**0.85**	**0.80**	**0.69**	**2.7**	**2.7**	**1.0**	**0.95**
Calcium, Total (mg/L)	**138**	**146**	**373**	**375**	**206**	**315**	**203**	**114**	**102**	**524**	**524**	**225**	**207**
Chloride (mg/L)	**14.9**	**15.4**	**76.4**	**58.0**	**24.5**	**199**	**125**	**33.6**	**38.1**	**705**	**718**	**62.9**	**102**
Fluoride (mg/L)	**0.37**	**0.30**	< 0.20	< 0.20	< 0.20	**3.0**	**0.59**	**3.3**	**3.0**	**2.9**	**3.8**	**1.3**	**1.0**
Sulfate (mg/L)	**89.2**	**109**	**654**	**662**	**473**	**963**	**402**	**62.1**	**67.9**	**1850**	**1910**	**342**	**371**
pH (su)	**7.1**	**7.2**	**7.3**	**6.9**	**7.1**	**7.3**	**7.1**	**7.6**	**7.6**	**7.1**	**7.6**	**7.0**	**7.2**
TDS (mg/L)	**568**	**572**	**1670**	**1610**	**1050**	**2050**	**1080**	**634**	**549**	**4400**	**3550**	**1140**	**1030**
Arsenic (mg/L)	**0.0042**	**0.0035**	**0.0022**	**0.030**	**0.033**	**0.014**	**0.0055**	**0.031**	**0.045**	**0.014**	**0.014**	**0.0043**	**0.0067**
Barium, Total (mg/L)	**0.094**	**0.10**	**0.18**	**0.86**	**0.042**	**0.66**	**0.23**	**0.23**	**0.21**	**0.043**	**0.043**	**0.082**	**0.098**
Cobalt, Total (mg/L)	**0.0010**	< 0.0010	< 0.0010	**0.0029**	**0.0020**	**0.020**	**0.0022**	**0.0021**	< 0.0010	< 0.0010	< 0.0030	**0.0034**	**0.0044**
Lithium, Total (mg/L)	**0.015**	**0.020**	< 0.010	**0.019**	< 0.010	**0.050**	**0.034**	**0.049**	**0.050**	**0.091**	**0.11**	**0.030**	**0.034**
Molybdenum, Total (mg/L)	**0.015**	**0.012**	< 0.0010	**0.0024**	**0.0047**	**0.063**	**0.015**	**0.033**	**0.028**	**0.059**	**0.057**	**0.035**	**0.032**
Fluoride (mg/L)	**0.37**	**0.30**	< 0.20	< 0.20	< 0.20	**3.0**	**0.59**	**3.3**	**3.0**	**2.9**	**3.8**	**1.3**	**1.0**
Radium-226 & 228 Combined (pCi/L)	0.527 ± 0.86 (1.71)	0.647 ± 0.896 (1.78)	1.77 ± 1.20 (1.83)	**2.44 ± 1.33 (1.97)**	0.620 ± 0.675 (1.30)	0.281 ± 0.885 (1.94)	0.607 ± 0.768 (1.58)	**1.86 ± 1.13 (1.79)**	**2.57 ± 1.11 (1.50)**	1.07 ± 0.778 (1.33)	1.33 ± 1.09 (1.83)	**1.81 ± 0.979 (1.48)**	**2.68 ± 1.40 (2.02)**
Arsenic, Dissolved (mg/L)	**0.0037**	**0.0029**	**0.0027**	**0.0017**	**0.032**	**0.0058**	**0.0043**	**0.011**	**0.0057**	**0.012**	**0.012**	**0.0016**	**0.0017**
Iron, Dissolved (mg/L)	< 0.050	< 0.050	**13.0**	**15.2**	**6.3**	< 0.050	< 0.050	**1.3**	**0.38**	**8.9**	**9.3**	**0.13**	**0.053**
Lithium, Dissolved (mg/L)	**0.017**	**0.020**	**0.010**	< 0.010	< 0.010	**0.046**	**0.025**	**0.044**	**0.042**	**0.093**	**0.091**	**0.031**	**0.030**
Manganese, Dissolved (mg/L)	**0.072**	**0.015**	**4.8**	**4.9**	**0.82**	**1.7**	**0.16**	**0.34**	**0.33**	**2.0**	**2.4**	**2.4**	**1.2**
Molybdenum, Dissolved (mg/L)	**0.015**	**0.012**	< 0.0010	**0.0016**	**0.0048**	**0.031**	**0.011**	**0.032**	**0.029**	**0.060**	**0.049**	**0.030**	**0.027**
Ferrous Iron (mg/L)	< 0.20	< 0.20	**0.23**	**2.7**	< 0.20	< 0.20	< 0.20	< 0.20	**0.50**	< 0.20	**0.38**	< 0.20	< 0.20
Iron, Total (mg/L)	**0.83**	**0.53**	**12.3**	**67.0**	**6.3**	**10.7**	**1.8**	**12.7**	**10.9**	**9.4**	**9.9**	**1.8**	**2.8**
Magnesium, Total (mg/L)	**14.2**	**16.7**	**60.4**	**59.9**	**29.5**	**83.8**	**33.1**	**46.5**	**40.7**	**168**	**157**	**44.1**	**37.4**
Manganese, Total (mg/L)	**0.15**	**0.11**	**5.2**	**7.2**	**0.84**	**13.3**	**1.7**	**0.42**	**0.39**	**2.1**	**2.5**	**4.2**	**3.9**
Potassium, Total (mg/L)	**6.2**	**5.6**	**9.5**	**10.6**	**7.1**	**17.7**	**9.2**	**18.2**	**15.7**	**31.8**	**30.9**	**15.2**	**12.9**
Sodium, Total (mg/L)	**17.7**	**22.6**	**33.8**	**32.7**	**77.5**	**204**	**62.4**	**29.8**	**26.9**	**451**	**390**	**52.3**	**49.4**
Alkalinity, Bicarbonate (mg/L)	**320**	**396**	**439**	**513**	**330**	**377**	**383**	**436**	**404**	**252**	**276**	**421**	**409**
Alkalinity, Carbonate (mg/L)	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0
Dissolved Organic Carbon (DOC) (mg/L)	**1.1**	**1.2**	**4.4**	**8.1**	**3.1**	**2.4**	**3.3**	**2.2**	**7.5**	**2.4**	**2.3**	**2.4**	**2.2**
Sulfide (mg/L)	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	**0.24**	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Total Organic Carbon (TOC) (mg/L)	**1.3**	**5.7**	**4.1**	**13.1**	**2.5**	**2.3**	**2.1**	**1.9**	**2.3**	**2.6**	**2.0**	**2.1**	**2.5**
Hardness, Total (mg/L)	**58.3**	**68.7**	**249**	**246**	**122**	**345**	**136**	**191**	**167**	**692**	**647**	**182**	**154**

Notes:
Bold value: *Detection above laboratory reporting limit or minimum detectable concentration (MDC).*
Radiological results are presented as activity plus or minus uncertainty with MDC.
µS/cm = micro Siemens per centimeter
Deg C = degrees Celsius
ft btoc = feet below top of casing
mg/L = milligrams per liter
N/A = Not Applicable
NTU = Nephelometric Turbidity Unit
pCi/L = picoCuries per liter
su = standard unit
TDS = total dissolved solids
TOC = top of casing

TABLE IV
ASSESSMENT GROUNDWATER MONITORING - DETECTED APPENDIX IV GWPS
MARCH 2023 SAMPLING EVENT
EVERGY KANSAS CENTRAL, INC.
LAWRENCE ENERGY CENTER
LAWRENCE, KANSAS

Well Number	Background Value[1,2]	GWPS
CCR Appendix-IV Arsenic, Total (mg/L)		
MW-37 (upgradient)	0.00881	NA
MW-38		0.010
MW-39		0.010
MW-40		0.010
MW-K		0.010
MW-L		0.010
CCR Appendix-IV Barium, Total (mg/L)		
MW-37 (upgradient)	0.0804	NA
MW-38		2
MW-39		2
MW-40		2
MW-K		2
MW-L		2
CCR Appendix-IV Cobalt, Total (mg/L)		
MW-37 (upgradient)	0.001[3]	NA
MW-38		0.006
MW-39		0.006
MW-40		0.006
MW-K		0.006
MW-L		0.006
CCR Appendix-IV Fluoride, Total (mg/L)		
MW-37 (upgradient)	0.449	NA
MW-38	5.500	5.5
MW-39		4.0
MW-40		4.0
MW-K		4.0
MW-L		4.0
CCR Appendix-IV Lead, Total (mg/L)		
MW-37 (upgradient)	0.010	NA
MW-38		0.015
MW-39		0.015
MW-40		0.015
MW-K		0.015
MW-L		0.015
CCR Appendix-IV Lithium, Total (mg/L)		
MW-37 (upgradient)	0.0269	NA
MW-38		0.040
MW-39		0.040
MW-40		0.040
MW-K		0.040
MW-L		0.040
CCR Appendix-IV Molybdenum, Total (mg/L)		
MW-37 (upgradient)	0.152	NA
MW-38		0.152
MW-39		0.152
MW-40		0.152
MW-K		0.152
MW-L		0.152
CCR Appendix-IV: Radium-226 & 228 (pCi/L)		
MW-37 (upgradient)	1.91	NA
MW-38		5
MW-39		5
MW-40		5
MW-K		5
MW-L		5

Notes:

[1] Interwell background data collected from 03/07/2018 through 03/15/2022, unless otherwise noted.

[2] Intrawell background data collected from 03/07/2018 through 03/15/2022.

[3] Interwell background data collected from 03/07/2018 through 12/16/2022.

CCR = Coal Combustion Residuals

GWPS = Groundwater Protection Standard

mg/L = milligrams per liter

NA = Not Applicable

TABLE V
ASSESSMENT GROUNDWATER MONITORING - DETECTED APPENDIX IV GWPS
SEPTEMBER 2023 SAMPLING EVENT
EVERGY KANSAS CENTRAL, INC.
LAWRENCE ENERGY CENTER
LAWRENCE, KANSAS

Well Number	Background Value[1,2]	GWPS
CCR Appendix-IV Arsenic, Total (mg/L)		
MW-37 (upgradient)	0.00890	NA
MW-38		0.010
MW-39		0.010
MW-40		0.010
MW-K		0.010
MW-L		0.010
CCR Appendix-IV Barium, Total (mg/L)		
MW-37 (upgradient)	0.0852	NA
MW-38		2
MW-39		2
MW-40		2
MW-K		2
MW-L		2
CCR Appendix-IV Cobalt, Total (mg/L)		
MW-37 (upgradient)	0.001[3]	NA
MW-38		0.006
MW-39		0.006
MW-40		0.006
MW-K		0.006
MW-L		0.006
CCR Appendix-IV Fluoride, Total (mg/L)		
MW-37 (upgradient)	0.440	NA
MW-38	5.500	5.5
MW-39		4.0
MW-40		4.0
MW-K		4.0
MW-L		4.0
CCR Appendix-IV Lithium, Total (mg/L)		
MW-37 (upgradient)	0.0274	NA
MW-38		0.040
MW-39		0.040
MW-40		0.040
MW-K		0.040
MW-L		0.040
CCR Appendix-IV Molybdenum, Total (mg/L)		
MW-37 (upgradient)	0.153	NA
MW-38		0.152
MW-39		0.152
MW-40		0.152
MW-K		0.152
MW-L		0.152
CCR Appendix-IV: Radium-226 & 228 (pCi/L)		
MW-37 (upgradient)	1.91[3]	NA
MW-38		5
MW-39		5
MW-40		5
MW-K		5
MW-L		5

Notes:

[1] Interwell background data collected from 03/07/2018 through 09/07/2023, unless otherwise noted.

[2] Intrawell background data collected from 03/07/2018 through 03/15/2022.

[3] Interwell background data collected from 03/07/2018 through 12/16/2022.

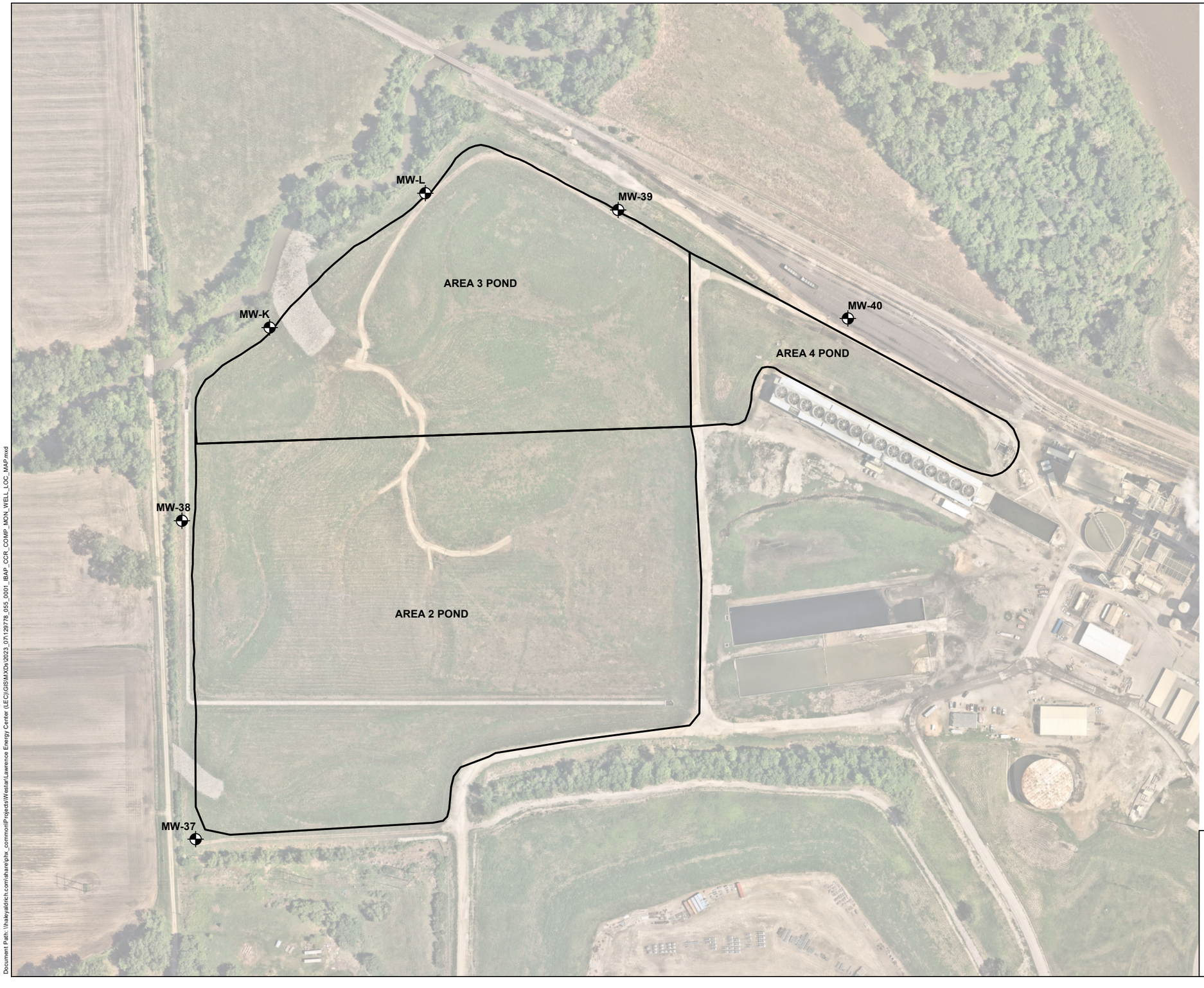
CCR = Coal Combustion Residuals

GWPS = Groundwater Protection Standard

mg/L = milligrams per liter

NA = Not Applicable

FIGURES



LEGEND

COAL COMBUSTION RESIDUAL (CCR) MONITORING WELL

ASH POND (INACTIVE)

NOTES:

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. BASE MAP SOURCE: NEARMAP, 18 MAY 2023

N

0 250 500

SCALE IN FEET

HALEY ALDRICH

EVERGY KANSAS CENTRAL, INC.
LAWRENCE ENERGY CENTER
LAWRENCE, KANSAS

ASH PONDS (INACTIVE) CCR COMPLIANCE MONITORING WELL LOCATION MAP

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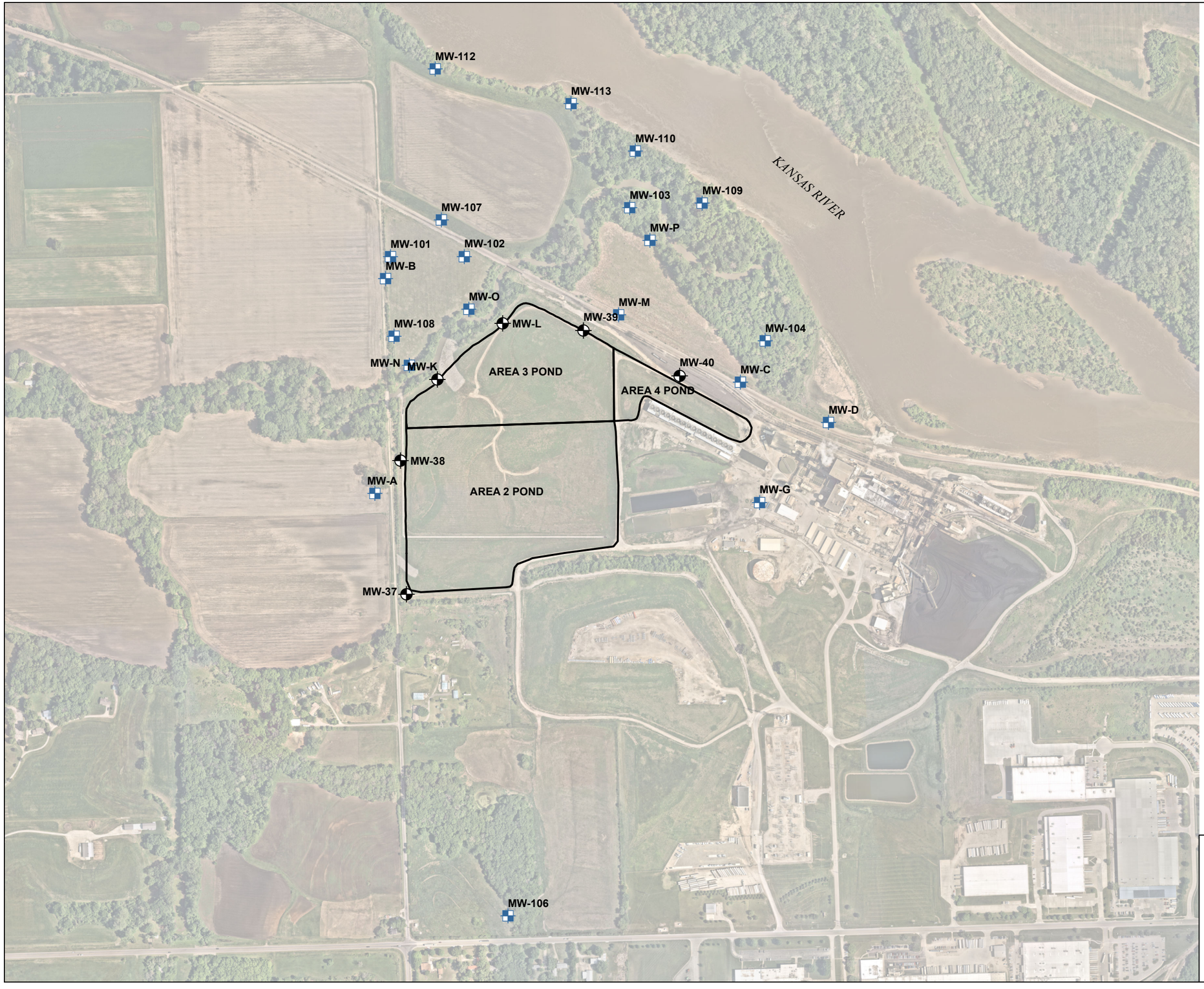
JULY 2024

FIGURE 1

Document Path: \\haleyaldrich.com\share\phx_common\Projects\Westar\Lawrence Energy Center (LEC)\GIS\MXDs\2023_07\129778_055_0001_IBAP_CCR_COMP_MON_WELL_LOC_MAP.mxd



LEGEND

- COAL COMBUSTION RESIDUAL (CCR) MONITORING WELL
- NATURE & EXTENT MONITORING WELL
- ASH POND (INACTIVE)

NOTES:

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. BASE MAP SOURCE: NEARMAP, 18 MAY 2023

N

0 600 1,200

SCALE IN FEET

HALEY ALDRICH

EVERGY KANSAS CENTRAL, INC.
LAWRENCE ENERGY CENTER
LAWRENCE, KANSAS

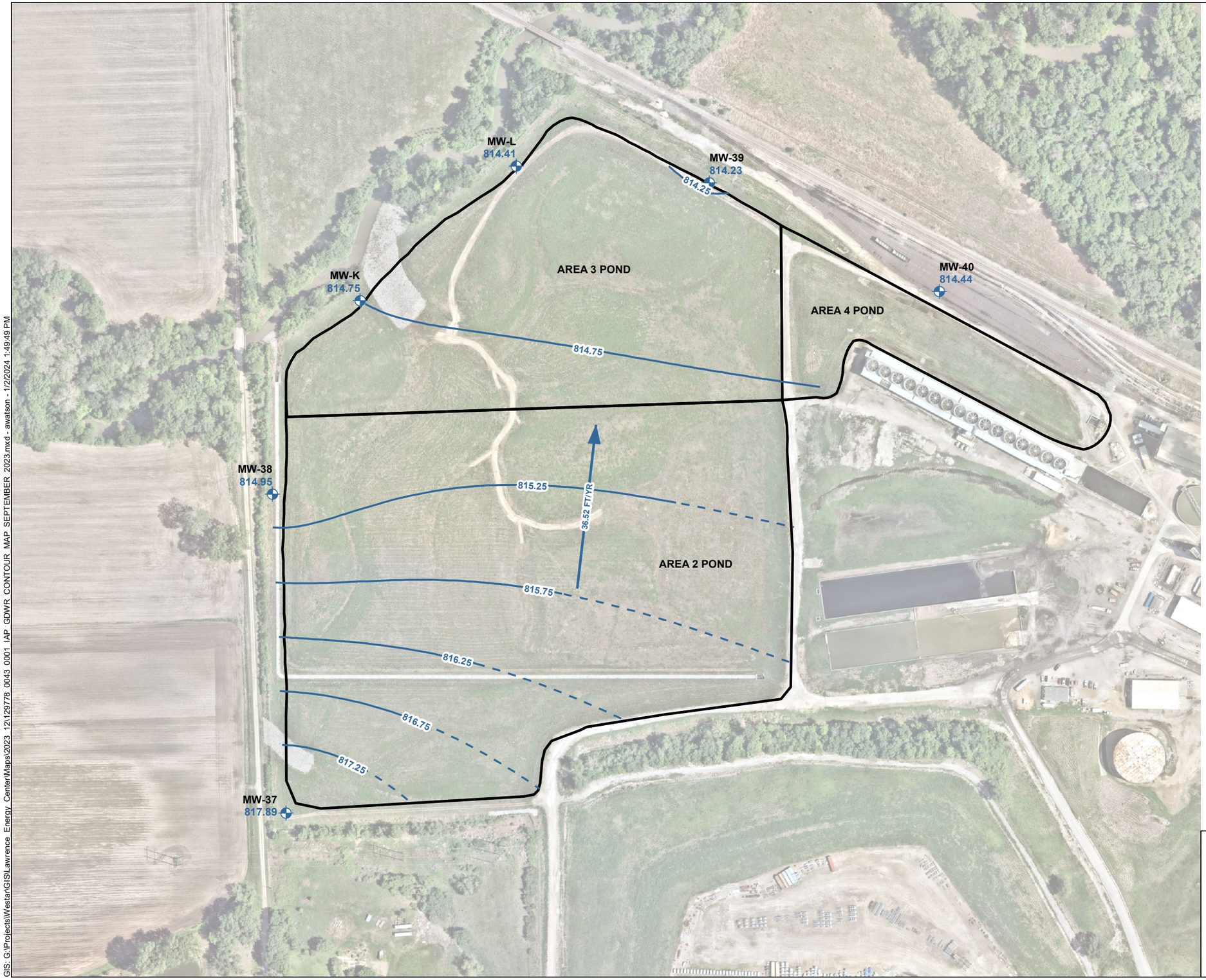
ASH PONDS (INACTIVE) NATURE AND EXTENT MONITORING WELL LOCATION MAP

evergy

JULY 2024

FIGURE 2

Document Path: \\haleyaldrich.com\share\phx_common\Projects\Westar\Lawrence Energy Center (LEC)\GIS\MXDs\2023_07\129778_055_0002_IBAP_NATURE_AND_EXTENT_MON_WELL_LOC_MAP.mxd



LEGEND

- MONITORING WELL
- ESTIMATED GROUNDWATER POTENTIOMETRIC OBSERVATION ELEVATION CONTOUR, IN FEET, DASHED WHERE INFERRED
- GROUNDWATER FLOW DIRECTION AND APPROXIMATE GROUNDWATER FLOW RATE (FEET/YEAR)
- ASH PONDS (INACTIVE)

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.

2. GROUNDWATER POTENTIOMETRIC ELEVATIONS WERE MEASURED 7 SEPTEMBER 2023.

3. GROUNDWATER ELEVATION IN **BOLD BLUE TEXT** AND IN FEET ABOVE MEAN SEA LEVEL (AMSL).

4. THE GROUNDWATER FLOW RATE WAS APPROXIMATED USING THE HYDRAULIC GRADIENT CALCULATED FROM GROUNDWATER POTENTIOMETRIC ELEVATIONS MEASURED 7 SEPTEMBER 2023 AND THE CONDUCTIVITY VALUES OBTAINED FROM PUBLISHED SOURCES AND GROUNDWATER ELEVATION DATA MEASURED BETWEEN MARCH 2018 AND JANUARY 2019.

5. AERIAL IMAGERY SOURCE: NEARMAP, 18 MAY 2023

N

0 250 500

SCALE IN FEET

HALEY ALDRICH

EVERGY KANSAS CENTRAL, INC.
LAWRENCE ENERGY CENTER
LAWRENCE, KANSAS

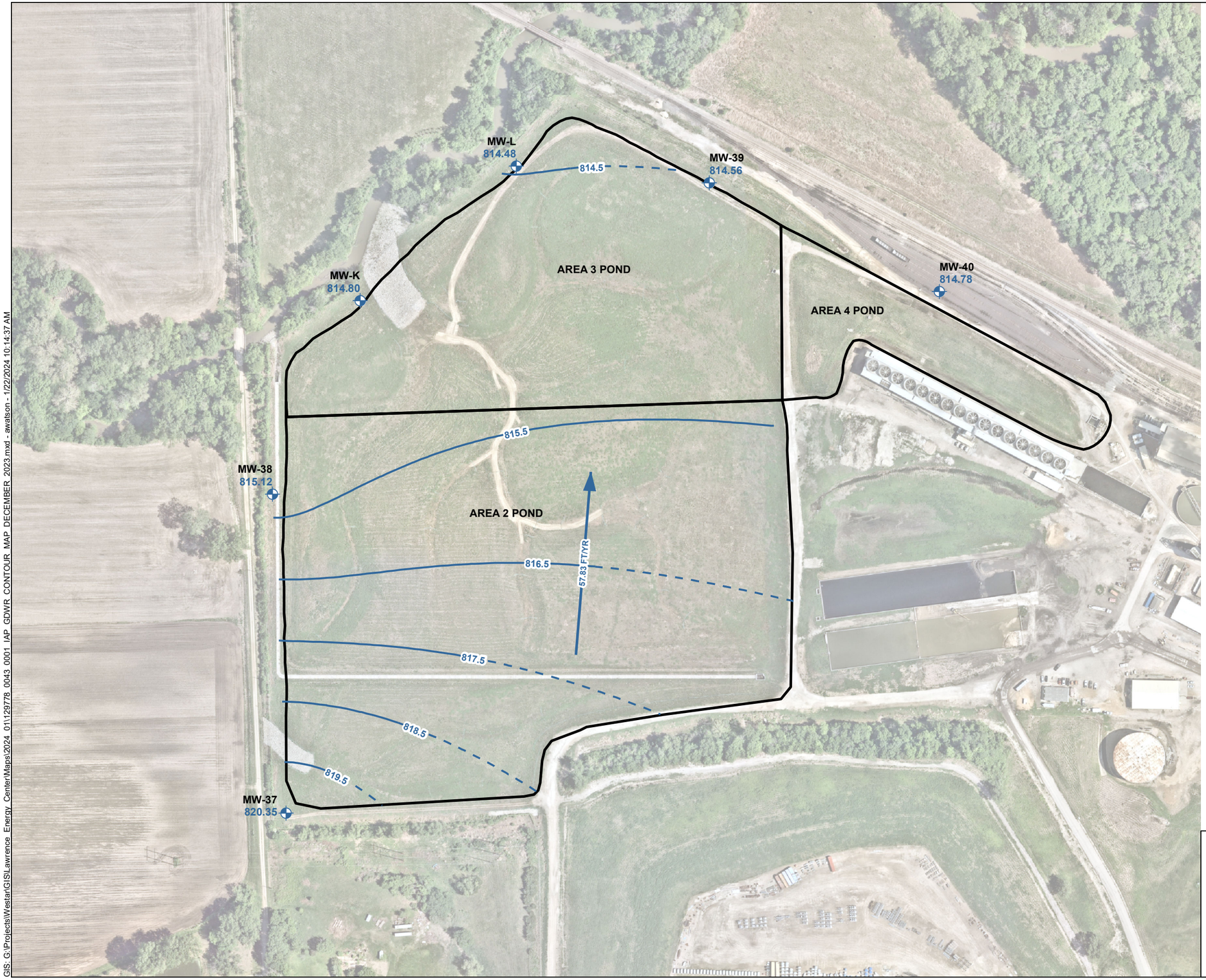
ASH PONDS (INACTIVE) GROUNDWATER POTENTIOMETRIC ELEVATION CONTOUR MAP SEPTEMBER 7, 2023

evergy

JULY 2024

FIGURE 1

GIS: G:\Projects\Westar\GIS\Lawrence Energy Center\Maps\2023 121129778 0043 0001 IAP GDWR CONTOUR MAP SEPTEMBER 2023.mxd - awatson - 1/2/2024 1:49:49 PM



LEGEND

- MONITORING WELL
- ESTIMATED GROUNDWATER POTENTIOMETRIC OBSERVATION ELEVATION CONTOUR, IN FEET, DASHED WHERE INFERRED
- GROUNDWATER FLOW DIRECTION AND APPROXIMATE GROUNDWATER FLOW RATE (FEET/YEAR)
- ASH PONDS (INACTIVE)

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. GROUNDWATER POTENTIOMETRIC ELEVATIONS WERE MEASURED 11 DECEMBER 2023.
3. GROUNDWATER ELEVATION IN **BOLD BLUE TEXT** AND IN FEET ABOVE MEAN SEA LEVEL (AMSL).
4. THE GROUNDWATER FLOW RATE WAS APPROXIMATED USING THE HYDRAULIC GRADIENT CALCULATED FROM GROUNDWATER POTENTIOMETRIC ELEVATIONS MEASURED 11 DECEMBER 2023 AND THE CONDUCTIVITY VALUES OBTAINED FROM PUBLISHED SOURCES AND GROUNDWATER ELEVATION DATA MEASURED BETWEEN MARCH 2018 AND JANUARY 2019.
5. AERIAL IMAGERY SOURCE: NEARMAP, 18 MAY 2023

N

0 250 500
SCALE IN FEET

HALEY ALDRICH

EVERGY KANSAS CENTRAL, INC.
LAWRENCE ENERGY CENTER
LAWRENCE, KANSAS

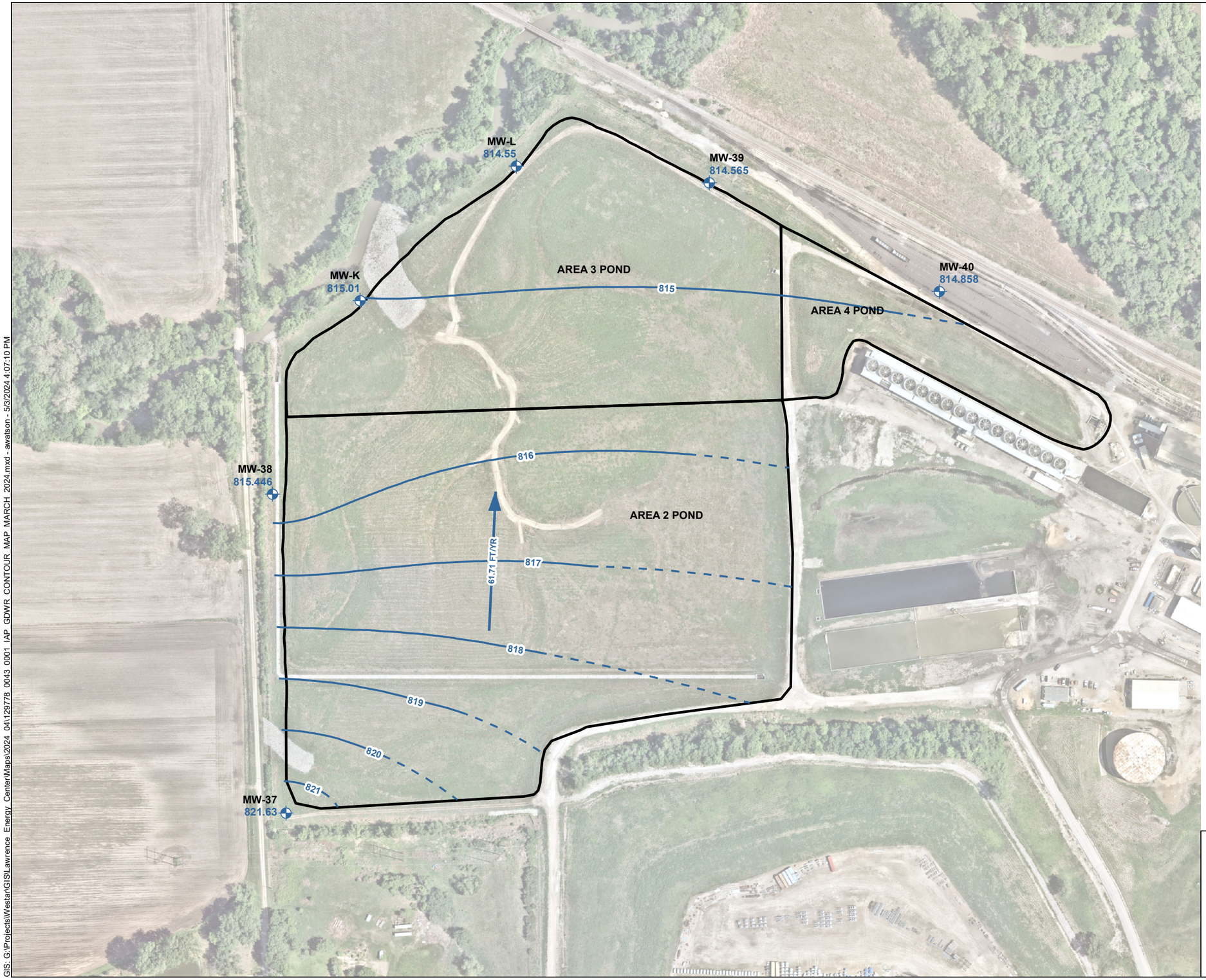
ASH PONDS (INACTIVE) GROUNDWATER POTENTIOMETRIC ELEVATION CONTOUR MAP DECEMBER 11, 2023

evergy

JULY 2024

FIGURE 1

GIS: G:\Projects\Westar\GIS\Lawrence Energy Center\Maps\2024 01\129778 0043 0001 IAP GDWR CONTOUR MAP DECEMBER 2023.mxd - awatson - 1/22/2024 10:14:37 AM



LEGEND

- MONITORING WELL
- ESTIMATED GROUNDWATER POTENTIOMETRIC OBSERVATION ELEVATION CONTOUR, IN FEET, DASHED WHERE INFERRED
- GROUNDWATER FLOW DIRECTION AND APPROXIMATE GROUNDWATER FLOW RATE (FEET/YEAR)
- ASH PONDS (INACTIVE)

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. GROUNDWATER POTENTIOMETRIC ELEVATIONS WERE MEASURED 5 MARCH 2024.
3. GROUNDWATER ELEVATION IN **BOLD BLUE TEXT** AND IN FEET ABOVE MEAN SEA LEVEL (AMSL).
4. THE GROUNDWATER FLOW RATE WAS APPROXIMATED USING THE HYDRAULIC GRADIENT CALCULATED FROM GROUNDWATER POTENTIOMETRIC ELEVATIONS MEASURED 5 MARCH 2024 AND THE CONDUCTIVITY VALUES OBTAINED FROM PUBLISHED SOURCES AND GROUNDWATER ELEVATION DATA MEASURED BETWEEN MARCH 2018 AND JANUARY 2019.
5. AERIAL IMAGERY SOURCE: NEARMAP, 18 MAY 2023

N

0 250 500
SCALE IN FEET

HALEY ALDRICH

EVERGY KANSAS CENTRAL, INC.
LAWRENCE ENERGY CENTER
LAWRENCE, KANSAS

ASH PONDS (INACTIVE) GROUNDWATER POTENTIOMETRIC ELEVATION CONTOUR MAP MARCH 5, 2024

evergy

JULY 2024

FIGURE 1

GIS: G:\Projects\Westar\GIS\Lawrence Energy Center\Maps\2024 041129778 0043 0001 IAP GDWR CONTOUR MAP MARCH 2024.mxd - awatson - 5/3/2024 4:07:10 PM

ATTACHMENT 1
Statistical Analyses

ATTACHMENT 1-1
March 2023 Semiannual Groundwater Assessment Monitoring Data Statistical Evaluation

HALEY & ALDRICH, INC.
6500 Rockside Road
Suite 200
Cleveland, OH 44131
216.739.0555

TECHNICAL MEMORANDUM

July 21, 2023
File No. 0210209-000

TO: Evergy Kansas Central, Inc.
Jared Morrison – Director, Water and Waste Programs

FROM: Haley & Aldrich, Inc.
Steven F. Putrich, P.E., Principal Consultant – Engineering Principal
Mark Nicholls, P.G., Senior Associate – Senior Hydrogeologist

SUBJECT: March 2023 Semiannual Groundwater Assessment Monitoring Data
Statistical Evaluation
Completed July 21, 2023
Lawrence Energy Center
Area 2 Pond, Area 3 Pond, and Area 4 Pond (inactive)

Pursuant to Title 40 Code of Federal Regulations (40 CFR) §§ 257.93 and 257.95 (Rule), this memorandum summarizes the statistical evaluation of the analytical results for the **March 2023** semiannual assessment monitoring groundwater sampling event for the Lawrence Energy Center (LEC) Area 2 Pond (inactive), Area 3 Pond (inactive), and Area 4 Pond (inactive; collectively, inactive Ash Ponds). This semiannual assessment monitoring groundwater sampling event was completed on **March 10, 2023**, with laboratory results received and validated on **May 30, 2023**.

The statistical evaluation discussed in this memorandum was conducted to determine if Appendix IV groundwater monitoring constituents have been detected in downgradient wells at concentrations that represent a statistically significant increase (SSI) above background values and if one or more of the constituents has been detected at statistically significant levels (SSLs) above the groundwater protection standard (GWPS), consistent with the requirements of the Rule. GWPS for each of the Appendix IV constituents have been set equal to the highest value of the maximum contaminant level, levels provided in 40 CFR § 257.95(h)(2) (from regional screening levels), or background concentrations.

Statistical Evaluation of Appendix IV Constituents

The Rule provides four specific options for statistical evaluation of groundwater quality data collected at a coal combustion residual (CCR) unit (40 CFR § 257.93(f)(1-4)). The statistical method used for these evaluations (tolerance limit [TL]), was certified by Haley & Aldrich, Inc. on July 14, 2020. The TL method, as determined applicable for this sampling event, was used to evaluate potential SSLs above

background. Background levels for each constituent listed in Appendix IV were computed as upper tolerance limits (UTLs), and a minimum 95 percent confidence coefficient and 95 percent coverage. The most recent groundwater sampling event from each compliance well was compared to the corresponding background UTL to determine if an SSL existed.

STATISTICAL EVALUATION

Either an interwell or intrawell evaluation was used to determine SSIs. Interwell evaluation compares the most recent values from downgradient compliance wells against a background dataset composed of upgradient well data, and the intrawell evaluation compares the most recent values from each compliance well against a background dataset composed of its own historical data. Because the CCR unit has transitioned into assessment monitoring, no statistical evaluations were conducted on Appendix III (detection monitoring) semiannual assessment monitoring data.

The parametric TL methods were used to complete statistical evaluations of the referenced dataset. The TL procedure is one in which a concentration limit for each constituent is established from the distribution of the background data, with a minimum 95 percent confidence level. The upper endpoint of a tolerance interval is called the UTL. Depending on the data distribution, parametric or non-parametric TL procedures are used to evaluate groundwater monitoring data using this method. Parametric TLs utilize normally distributed data or normalized data via a transformation of the sample background data used to construct the limit. If the data are non-normal and a transformation is not indicated, non-parametric procedures (order statistics or bootstrap methods) are used to calculate the TL. If all the background data are non-detect, a maximum reporting limit may serve as an appropriate UTL.

These statistical evaluations were conducted using a background dataset for all Appendix IV constituents that were detected in the annual assessment monitoring sample event using parametric TLs. If an Appendix IV constituent concentration from the **March 2023** sampling event was above the GWPS, the lower confidence limit (LCL) for the downgradient well constituent will be used to evaluate if a SSI is present. The LCL is the lower end of the confidence interval range, which is an estimated concentration range intended to contain the true mean or median of the population from which the sample is drawn. The confidence interval range is designed to locate the true population mean or median with a high degree of statistical confidence, or conversely, with a low probability of error.

The UTLs were calculated from the background well dataset using Chemstat software after testing for outlier sample results that would warrant removal from the dataset based on likely error in sampling or measurement. Both visual and statistical outlier tests for the background data were performed using Chemstat and U.S. Environmental Protection Agency's ProUCL 5.1 software, and a visual inspection of the data was performed using box plots and distribution plots for the downgradient sample data. No sample data were identified as outliers that warranted removal from the dataset.

BACKGROUND DISTRIBUTIONS

The groundwater analytical results for each sampling event from the background sample location MW-37 (for interwell evaluation) were combined to calculate the UTL for each detected Appendix IV constituent. The variability and distribution of the pooled dataset were evaluated to determine the method for UTL calculation. Per the document, *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance,* March 2009*,* background concentrations were updated based on statistical evaluation of analytical results collected through **March 2022** (interwell evaluation), except for cobalt, which was updated through **December 2022.** Background concentrations were updated through **March 2022** for intrawell evaluation**.**

RESULTS OF APPENDIX IV DOWNGRADIENT STATISTICAL COMPARISONS

The sample concentrations from the downgradient wells for each of the detected Appendix IV constituents from the **March 2023** semiannual assessment monitoring event were compared to their respective background UTLs and GWPSs (Table I). A sample concentration greater than the background UTL is considered to represent an SSI. A sample concentration greater than the GWPS is considered to represent an SSL. Based on previous compliance sampling events, statistical evaluations, and associated alternative source demonstrations, an intrawell comparison is utilized for MW-38 for fluoride statistical evaluations. Interwell comparisons are being utilized for all other well and constituent evaluations. The results of the groundwater assessment monitoring statistical evaluation are provided in Table I. **Based on this statistical evaluation on groundwater sampling data collected in March 2023, the SSLs above GWPS for the LEC inactive Ash Ponds are listed in Table II.** All detected SSLs are consistent with previously identified SSLs at the LEC inactive Ash Ponds, with the addition of lithium at MW-39.

Enclosures:

Table I – Summary of Semiannual Assessment Groundwater Monitoring Statistical Evaluation
Table II – Statistically Significant Levels of Appendix IV Constituents – March 2023 Sampling Event

TABLES

TABLE I
SUMMARY OF SEMIANNUAL ASSESSMENT GROUNDWATER MONITORING STATISTICAL EVALUATION
MARCH 2023 SAMPLING EVENT
LAWRENCE ENERGY CENTER
ASH PONDS (INACTIVE)

												MCL Comparison						Interwell Analysis		Intrawell Analysis		Groundwater Protection Standard	
Location Id	Frequency of Detection	Percent Non-Detects	Range of Non-Detect	Mean	Maximum Detect	Variance	Standard Deviation	Coefficient of Variance	CCR MCL or CFR § 257.95(h)(2)*	Report Result Unit	Number of Detection Exceedances	Number of Non-Detection Exceedances	Outlier Presence	Outlier Removed	Trend	Distribution Well	March 2023 Concentration (mg/L)	Upper Tolerance Limit (UTL) (mg/L)[1]	SSI (exceedance above Background at Individual Well)	Background Limit (Upper Prediction Limit)[2]	SSI (exceedance above Background at Individual Well)	GWPS (Higher of MCL/ 40 CFR § 257.95(h)(2) or UTL) (mg/L)	SSL
CCR Appendix-IV: Arsenic, Total (mg/L)																							
MW-37	19/19	0%	-	0.00601	0.0089	2.008E-06	0.001417	0.236	0.01	mg/L	0	0	No	No	Stable	Normal		0.00881				0.010	
MW-38	19/19	0%	-	0.0188	0.037	0.00004562	0.006754	0.3595	0.01	mg/L	19	0	Yes	No	Increasing	Non-parametric	0.030		Yes				Yes
MW-39	19/19	0%	-	0.0118	0.014	1.751E-06	0.001323	0.1123	0.01	mg/L	16	0	No	No	Stable	Normal	0.0099		Yes				No
MW-40	19/19	0%	-	0.0148	0.027	9.064E-06	0.003011	0.2036	0.01	mg/L	19	0	Yes	No	Stable	Non-parametric	0.013		Yes				Yes
MW-K	19/19	0%	-	0.0768	0.16	0.0004756	0.02181	0.284	0.01	mg/L	19	0	Yes	No	Stable	Non-parametric	0.066		Yes				Yes
MW-L	19/19	0%	-	0.0244	0.029	4.912E-06	0.002216	0.09095	0.01	mg/L	19	0	No	No	Increasing	Normal	0.026		Yes				Yes
CCR Appendix-IV: Barium, Total (mg/L)																							
MW-37	19/19	0%	-	0.0631	0.081	0.0001448	0.01203	0.1909	2	mg/L	0	0	No	No	Increasing	Normal		0.0804				2	
MW-38	19/19	0%	-	0.0374	0.051	0.00003548	0.005956	0.1592	2	mg/L	0	0	No	No	Stable	Normal	0.051		No				No
MW-39	19/19	0%	-	0.0317	0.034	1.871E-06	0.001368	0.0431	2	mg/L	0	0	No	No	Stable	Normal	0.031		No				No
MW-40	19/19	0%	-	0.0343	0.039	0.00000376	0.001939	0.0566	2	mg/L	0	0	No	No	Increasing	Normal	0.034		No				No
MW-K	19/19	0%	-	0.0426	0.058	0.00003002	0.005479	0.1285	2	mg/L	0	0	Yes	No	Decreasing	Normal	0.047		No				No
MW-L	19/19	0%	-	0.0472	0.094	0.0002561	0.016	0.339	2	mg/L	0	0	Yes	No	Decreasing	Normal	0.042		No				No
CCR Appendix-IV: Cobalt, Total (mg/L)																							
MW-37	0/17	100%	0.001-0.001	0.001		0	0	0	0.006	mg/L	0	0	NA	NA	NA	NA		0.001[3]				0.006	
MW-38	0/17	100%	0.001-0.001	0.001		0	0	0	0.006	mg/L	0	0	NA	NA	NA	NA	< 0.0010		No				No
MW-39	12/17	29%	0.001-0.003	0.00132	0.0016	2.59E-07	0.000509	0.3863	0.006	mg/L	0	0	Yes	No	Stable	Normal	0.0010		No				No
MW-40	0/17	100%	0.001-0.002	0.00106		5.882E-08	0.0002425	0.2291	0.006	mg/L	0	0	NA	NA	NA	NA	< 0.0010		No				No
MW-K	6/17	65%	0.001-0.002	0.00129	0.0028	2.411E-07	0.000491	0.3812	0.006	mg/L	0	0	No	No	Decreasing	Normal	< 0.0010		No				No
MW-L	0/17	100%	0.001-0.003	0.00118		2.794E-07	0.0005286	0.4493	0.006	mg/L	0	0	NA	NA	NA	NA	< 0.0010		No				No
CCR Appendix-IV: Fluoride (mg/L)																							
MW-37	14/20	30%	0.2-0.2	0.293	0.44	0.006675	0.0817	0.2788	4	mg/L	0	0	No	No	Decreasing	Normal		0.449				4.0	
MW-38	20/20	0%	-	4.3	5.5	0.8331	0.9128	0.212	4	mg/L	12	0	Yes	No	Decreasing	Non-parametric	3.3		Yes	5.500	No	5.5	No
MW-39	19/20	5%	0.2-0.2	2	3.5	1.035	1.017	0.5091	4	mg/L	0	0	Yes	No	Decreasing	Normal	0.50		Yes				No
MW-40	18/20	10%	0.2-0.2	1.26	2.1	0.3335	0.5775	0.4583	4	mg/L	0	0	No	No	Decreasing	Normal	1.1		Yes				No
MW-K	20/20	0%	-	3.14	3.8	0.4683	0.6844	0.2177	4	mg/L	0	0	Yes	No	Stable	Non-parametric	3.0		Yes				No
MW-L	18/20	10%	0.2-0.2	1.83	3	0.4506	0.6713	0.3668	4	mg/L	0	0	No	No	Stable	Non-parametric	1.8		Yes				No
CCR Appendix-IV: Lithium, Total (mg/L)																							
MW-37	18/19	5%	0.03-0.03	0.0184	0.026	0.00002491	0.004991	0.2717	0.04	mg/L	0	0	No	No	Increasing	Normal		0.0269				0.040	
MW-38	20/20	0%	-	0.0689	0.084	0.0001237	0.01112	0.1614	0.04	mg/L	20	0	No	No	Decreasing	Non-parametric	0.054		Yes				Yes
MW-39	20/20	0%	-	0.0422	0.062	0.00005266	0.007257	0.1722	0.04	mg/L	10	0	Yes	No	Decreasing	Normal	0.039		Yes				No
MW-40	19/19	0%	-	0.0454	0.056	0.00002447	0.004946	0.109	0.04	mg/L	17	0	No	No	Decreasing	Normal	0.045		Yes				Yes
MW-K	19/19	0%	-	0.0666	0.089	0.0002012	0.01419	0.2129	0.04	mg/L	19	0	No	No	Stable	Normal	0.048		Yes				Yes
MW-L	19/19	0%	-	0.0611	0.095	0.0002979	0.01726	0.2827	0.04	mg/L	18	0	No	No	Increasing	Normal	0.085		Yes				Yes
CCR Appendix-IV: Molybdenum, Total (mg/L)																							
MW-37	19/19	0%	-	0.115	0.14	0.0004731	0.02175	0.1895	0.1	mg/L	13	0	No	No	Decreasing	Normal		0.152				0.152	
MW-38	19/19	0%	-	0.0808	0.1	0.000174	0.01319	0.1632	0.1	mg/L	1	0	No	No	Decreasing	Normal	0.074		No				No
MW-39	20/20	0%	-	0.175	0.27	0.003104	0.05571	0.3191	0.1	mg/L	18	0	No	No	Increasing	Normal	0.23		Yes				Yes
MW-40	19/19	0%	-	0.105	0.19	0.001893	0.04351	0.4146	0.1	mg/L	8	0	No	No	Decreasing	Normal	0.061		No				No
MW-K	19/19	0%	-	0.0255	0.04	0.00007929	0.008905	0.3491	0.1	mg/L	0	0	No	No	Stable	Normal	0.029		No				No
MW-L	19/19	0%	-	0.0448	0.055	0.0000267	0.005167	0.1152	0.1	mg/L	0	0	No	No	Stable	Normal	0.047		No				No
CCR Appendix-IV: Radium-226 & 228 (pCi/L)																							
MW-37	14/17	18%	0.0836-0.455	0.785	2.56	0.3581	0.5985	0.7624	5	pCi/L	0	0	Yes	No	Stable	Normal		1.91				5	
MW-38	13/17	24%	0.245-0.958	0.972	1.88	0.3269	0.5717	0.5885	5	pCi/L	0	0	No	No	Stable	Normal	1.18		No				No
MW-39	13/17	24%	0.484-0.926	0.95	1.62	0.1182	0.3438	0.362	5	pCi/L	0	0	No	No	Stable	Normal	1.16		No				No
MW-40	14/17	18%	0.553-1.37	0.918	1.61	0.1993	0.4465	0.4865	5	pCi/L	0	0	No	No	Stable	Normal	1.55		No				No
MW-K	16/17	6%	0.91-0.91	1.17	2.73	0.3331	0.5772	0.4925	5	pCi/L	0	0	Yes	No	NA	Normal	0.763		No				No
MW-L	14/17	18%	0.834-1.1	0.981	2.08	0.2378	0.4876	0.4971	5	pCi/L	0	0	No	No	NA	Normal	0.575		No				No

Notes:

[1] Interwell background data collected from 03/07/2018 through 03/15/2022, unless otherwise noted.

[2] Intrawell background data collected from 03/07/2018 through 03/15/2022.

[3] Interwell background data collected from 03/07/2018 through 12/16/2022.

** Values obtained from U.S. Environmental Protection Agency Federal CCR Rule Title 40 Code of Federal Regulations (CFR) § 257.95(h)(2).*

CCR = coal combustion residuals
GWPS = groundwater protection standard
MCL = maximum contaminant level
mg/L = milligrams per liter
NA = not analyzed
pCi/L = picoCuries per Liter
RSL = regional screening level
SSI = statistically significant increase

TABLE II
STATISTICALLY SIGNIFICANT LEVELS OF APPENDIX IV CONSTITUENTS
MARCH 2023 SAMPLING EVENT
LAWRENCE ENERGY CENTER
INACTIVE ASH PONDS

Constituent	Well ID	Groundwater Protection Standard (mg/L)
Arsenic	MW-38	0.010
	MW-40	
	MW-K	
	MW-L	
Lithium	MW-38	0.040
	MW-40	
	MW-K	
	MW-L	
Molybdenum	MW-39	0.152

Notes:

mg/L = milligrams per liter

ATTACHMENT 1-2
September 2023 Semiannual Groundwater Assessment Monitoring Data Statistical Evaluation

HALEY & ALDRICH, INC.
6500 Rockside Road
Suite 200
Cleveland, OH 44131
216.739.0555

TECHNICAL MEMORANDUM

February 6, 2024
File No. 0210309-000

TO: Evergy Kansas Central, Inc.
Jared Morrison – Director, Water and Waste Programs

FROM: Haley & Aldrich, Inc.
Steven F. Putrich, P.E., Principal Consultant – Engineering Principal
Mark Nicholls, P.G., Senior Associate – Senior Hydrogeologist

SUBJECT: September 2023 Semiannual Groundwater Assessment Monitoring Data Statistical Evaluation
Completed February 6, 2024
Lawrence Energy Center
Area 2 Pond, Area 3 Pond, and Area 4 Pond (inactive)

Pursuant to Title 40 Code of Federal Regulations (40 CFR) §§ 257.93 and 257.95 (Rule), this memorandum summarizes the statistical evaluation of the analytical results for the **September 2023** semiannual assessment monitoring groundwater sampling event for the Lawrence Energy Center (LEC) Area 2 Pond (inactive), Area 3 Pond (inactive), and Area 4 Pond (inactive; collectively, inactive Ash Ponds). This semiannual assessment monitoring groundwater sampling event was completed on **September 7, 2023**, with laboratory results received and validated on **December 19, 2023**.

The statistical evaluation discussed in this memorandum was conducted to determine if Appendix IV groundwater monitoring constituents have been detected in downgradient wells at concentrations that represent a statistically significant increase (SSI) above background values and if one or more of the constituents have been detected at statistically significant levels (SSLs) above the groundwater protection standard (GWPS) consistent with the requirements of the Rule. GWPS for each of the Appendix IV constituents have been set equal to the highest value of the maximum contaminant level, levels provided in 40 CFR § 257.95(h)(2) (from regional screening levels), or background concentrations.

Statistical Evaluation of Appendix IV Constituents

The Rule provides four specific options for statistical evaluation of groundwater quality data collected at a coal combustion residual (CCR) unit (40 CFR § 257.93(f) (1-4)). The statistical method used for these evaluations (tolerance limit [TL]) was certified by Haley & Aldrich, Inc. on July 14, 2020. The TL method, as determined applicable for this sampling event, was used to evaluate potential SSLs above

background. Background levels for each constituent listed in Appendix IV were computed as upper tolerance limits (UTLs), and a minimum 95 percent confidence coefficient and 95 percent coverage. The most recent groundwater sampling event from each compliance well was compared to the corresponding background UTL to determine if an SSL existed.

STATISTICAL EVALUATION

Either an interwell or intrawell evaluation was used to determine SSIs. Interwell evaluation compares the most recent values from downgradient compliance wells against a background dataset composed of upgradient well data, and the intrawell evaluation compares the most recent values from each compliance well against a background dataset composed of its own historical data. Because the CCR unit has transitioned into assessment monitoring, no statistical evaluations were conducted on Appendix III (detection monitoring) semiannual assessment monitoring data.

The TL method was used to complete statistical evaluations of the referenced dataset. The TL procedure is one in which a concentration limit for each constituent is established from the distribution of the background data, with a minimum 95 percent confidence level. The upper endpoint of a tolerance interval is called the UTL. Depending on the data distribution, parametric or non-parametric TL procedures are used to evaluate groundwater monitoring data using this method. Parametric TLs utilize normally distributed data or normalized data via a transformation of the sample background data used to construct the limit. If the data are non-normal and a transformation is not indicated, non-parametric procedures (order statistics or bootstrap methods) are used to calculate the TL. If all the background data are non-detect, a maximum reporting limit may serve as an appropriate UTL.

These statistical evaluations were conducted using a background dataset for all Appendix IV constituents that were detected in the annual assessment monitoring sample event using parametric TLs. If an Appendix IV constituent concentration from the **September 2023** sampling event was above the GWPS, the lower confidence limit (LCL) for the downgradient well constituent will be used to evaluate if an SSI is present. The LCL is the lower end of the confidence interval range, which is an estimated concentration range intended to contain the true mean or median of the population from which the sample is drawn. The confidence interval range is designed to locate the true population mean or median with a high degree of statistical confidence, or conversely, with a low probability of error.

The UTLs were calculated from the background well dataset using Chemstat software after testing for outlier sample results that would warrant removal from the dataset based on likely error in sampling or measurement. Both visual and statistical outlier tests for the background data were performed using Chemstat and U.S. Environmental Protection Agency's ProUCL 5.1 software, and a visual inspection of the data was performed using box plots and distribution plots for the downgradient sample data. No sample data were identified as outliers that warranted removal from the dataset.

BACKGROUND DISTRIBUTIONS

The groundwater analytical results for each sampling event from the background sample location MW-37 (for interwell evaluation) were combined to calculate the UTL for each detected Appendix IV constituent. The variability and distribution of the pooled dataset were evaluated to determine the method for UTL calculation. Per the document, *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance,* March 2009*,* background concentrations were updated based on statistical evaluation of analytical results collected through **September 2023** (interwell evaluation), except for cobalt and combined radium, which was updated through **December 2022.** Background concentrations were updated through **March 2022** for intrawell evaluation**.**

RESULTS OF APPENDIX IV DOWNGRADIENT STATISTICAL COMPARISONS

The sample concentrations from the downgradient wells for each of the detected Appendix IV constituents from the **September 2023** semiannual assessment monitoring event were compared to their respective background UTLs and GWPSs (Table I). A sample concentration greater than the background UTL is considered to represent an SSI. A sample concentration greater than the GWPS is considered to represent an SSL. Based on previous compliance sampling events, statistical evaluations, and associated alternative source demonstrations, an intrawell comparison is utilized for MW-38 for fluoride statistical evaluations. Interwell comparisons are being utilized for all other well and constituent evaluations. The results of the groundwater assessment monitoring statistical evaluation are provided in Table I. **Based on this statistical evaluation on groundwater sampling data collected in September 2023, the SSLs above GWPS for the LEC inactive Ash Ponds are listed in Table II.** All detected SSLs are consistent with previously identified SSLs at the LEC inactive Ash Ponds.

Enclosures:

Table I – Summary of Semiannual Assessment Groundwater Monitoring Statistical Evaluation
Table II – Statistically Significant Levels of Appendix IV Constituents – September 2023 Sampling Event

TABLES

TABLE I

SUMMARY OF SEMIANNUAL ASSESSMENT GROUNDWATER MONITORING STATISTICAL EVALUATION

SEPTEMBER 2023 SAMPLING EVENT

LAWRENCE ENERGY CENTER

ASH PONDS (INACTIVE)

										MCL Comparison							Interwell Analysis		Intrawell Analysis		Groundwater Protection Standard	
Location Id	Frequency of Detection	Percent Non-Detects	Range of Non-Detect	Maximum Detect	Variance	Standard Deviation	Coefficient of Variance	CCR MCL or CFR § 257.95(h)(2)*	Report Result Unit	Number of Detection Exceedances	Number of Non-Detection Exceedances	Outlier Presence	Outlier Removed	Trend	Distribution Well	September 2023 Concentration (mg/L)	Upper Tolerance Limit (UTL) (mg/L)[1]	SSI (Exceedance above Background at Individual Well)	Background Limit (Upper Prediction Limit)[2]	SSI (Exceedance above Background at Individual Well)	GWPS (Higher of MCL/ 40 CFR § 257.95(h)(2) or UTL) (mg/L)	SSL
CCR Appendix-IV: Arsenic, Total (mg/L)																						
MW-37 (ugradient)	20/20	0%	-	0.0089	2.016E-06	0.00142	0.2394	0.01	mg/L	0	0	No	No	Stable	Non-parametric	0.0045	0.00890				0.010	
MW-38	20/20	0%	-	0.037	0.00004582	0.006769	0.3535	0.01	mg/L	20	0	No	No	Increasing	Non-parametric	0.026		Yes				Yes
MW-39	20/20	0%	-	0.014	0.00000169	0.0013	0.1107	0.01	mg/L	17	0	No	No	Decreasing	Normal	0.011		Yes				Yes
MW-40	20/20	0%	-	0.027	8.589E-06	0.002931	0.198	0.01	mg/L	20	0	Yes	No	Stable	Non-parametric	0.015		Yes				Yes
MW-K	20/20	0%	-	0.16	0.0004525	0.02127	0.2759	0.01	mg/L	20	0	Yes	No	Stable	Non-parametric	0.083		Yes				Yes
MW-L	20/20	0%	-	0.029	0.000005	0.002236	0.09127	0.01	mg/L	20	0	No	No	Increasing	Normal	0.027		Yes				Yes
CCR Appendix-IV: Barium, Total (mg/L)																						
MW-37 (ugradient)	20/20	0%	-	0.081	0.0001469	0.01212	0.1901	2	mg/L	0	0	No	No	Increasing	Normal	0.077	0.0852				2.000	
MW-38	20/20	0%	-	0.051	0.00004032	0.006349	0.1671	2	mg/L	0	0	No	No	Increasing	Normal	0.049		No				No
MW-39	20/20	0%	-	0.034	2.147E-06	0.001465	0.04637	2	mg/L	0	0	No	No	Stable	Normal	0.029		No				No
MW-40	20/20	0%	-	0.039	3.589E-06	0.001895	0.05524	2	mg/L	0	0	No	No	Stable	Normal	0.035		No				No
MW-K	20/20	0%	-	0.058	0.00002988	0.005467	0.1274	2	mg/L	0	0	Yes	No	Stable	Normal	0.048		No				No
MW-L	20/20	0%	-	0.094	0.00025	0.01581	0.3393	2	mg/L	0	0	Yes	No	Decreasing	Normal	0.035		No				No
CCR Appendix-IV: Cobalt, Total (mg/L)																						
MW-37 (ugradient)	0/18	100%	0.001-0.001		0	0	0	0.006	mg/L	0	0	NA	NA	NA	NA	<0.0010	0.001[3]				0.006	
MW-38	0/18	100%	0.001-0.001		0	0	0	0.006	mg/L	0	0	NA	NA	NA	NA	<0.0010		No				No
MW-39	12/18	33%	0.001-0.003	0.0016	2.494E-07	0.0004994	0.3842	0.006	mg/L	0	0	Yes	No	Stable	Normal	<0.0010		No				No
MW-40	0/18	100%	0.001-0.002		5.556E-08	0.0002357	0.2233	0.006	mg/L	0	0	NA	NA	NA	NA	<0.0010		No				No
MW-K	6/18	67%	0.001-0.002	0.0028	2.315E-07	0.0004812	0.3782	0.006	mg/L	0	0	No	No	Decreasing	Normal	<0.0010		No				No
MW-L	0/18	100%	0.001-0.003		2.647E-07	0.0005145	0.441	0.006	mg/L	0	0	NA	NA	NA	NA	<0.0010		No				No
CCR Appendix-IV: Fluoride (mg/L)																						
MW-37 (ugradient)	14/21	33%	0.2-0.2	0.44	0.006753	0.08218	0.2848	4	mg/L	0	0	No	No	Decreasing	Non-parametric	<0.20	0.440				4.0	
MW-38	21/21	0%	-	5.5	0.8089	0.8994	0.2103	4	mg/L	12	0	No	No	Decreasing	Non-parametric	3.7		Yes	5.500	No	5.5	No
MW-39	20/21	5%	0.2-0.2	3.5	1.007	1.003	0.5106	4	mg/L	0	0	No	No	Decreasing	Normal	1.3		Yes				No
MW-40	18/21	14%	0.2-0.2	2.1	0.3703	0.6085	0.5031	4	mg/L	0	0	No	No	Decreasing	Normal	<0.20		No				No
MW-K	21/21	0%	-	3.8	0.459	0.6775	0.2173	4	mg/L	0	0	Yes	No	Stable	Non-parametric	2.6		Yes				No
MW-L	19/21	10%	0.2-0.2	3	0.4495	0.6704	0.3601	4	mg/L	0	0	No	No	Stable	Non-parametric	2.5		Yes				No
CCR Appendix-IV: Lithium, Total (mg/L)																						
MW-37 (ugradient)	19/20	5%	0.03-0.03	0.026	0.00002467	0.004967	0.2671	0.04	mg/L	0	0	No	No	Increasing	Normal	0.023	0.0274				0.040	
MW-38	20/20	0%	-	0.084	0.000138	0.01175	0.1725	0.04	mg/L	20	0	No	No	Decreasing	Non-parametric	0.052		Yes				Yes
MW-39	20/20	0%	-	0.062	0.00004961	0.007043	0.1663	0.04	mg/L	10	0	Yes	No	Decreasing	Normal	0.037		Yes				No
MW-40	20/20	0%	-	0.056	0.00002346	0.004844	0.107	0.04	mg/L	18	0	No	No	Decreasing	Normal	0.043		Yes				Yes
MW-K	20/20	0%	-	0.089	0.000208	0.01442	0.2195	0.04	mg/L	20	0	No	No	Stable	Normal	0.048		Yes				Yes
MW-L	20/20	0%	-	0.095	0.0003242	0.018	0.2881	0.04	mg/L	19	0	No	No	Increasing	Normal	0.090		Yes				Yes
CCR Appendix-IV: Molybdenum, Total (mg/L)																						
MW-37 (ugradient)	20/20	0%	-	0.14	0.0005234	0.02288	0.2027	0.1	mg/L	13	0	No	No	Decreasing	Normal	0.076	0.153				0.153	
MW-38	20/20	0%	-	0.1	0.0001657	0.01287	0.1588	0.1	mg/L	1	0	No	No	Decreasing	Normal	0.085		No				No
MW-39	20/20	0%	-	0.27	0.002937	0.05419	0.3149	0.1	mg/L	18	0	No	No	Increasing	Normal	0.18		Yes				Yes
MW-40	20/20	0%	-	0.19	0.001899	0.04358	0.4245	0.1	mg/L	8	0	No	No	Decreasing	Normal	0.059		No				No
MW-K	20/20	0%	-	0.04	0.00007614	0.008726	0.3452	0.1	mg/L	0	0	No	No	Stable	Normal	0.021		No				No
MW-L	20/20	0%	-	0.055	0.00002552	0.005052	0.1124	0.1	mg/L	0	0	No	No	Stable	Normal	0.047		No				No
CCR Appendix-IV: Radium-226 & 228 (pCi/L)																						
MW-37 (ugradient)	14/18	22%	0.0836-0.579	2.56	0.3393	0.5825	0.7317	5	pCi/L	0	0	Yes	No	Stable	Normal	0.984	1.91[3]				5	
MW-38	13/18	28%	0.245-1.18	1.88	0.3164	0.5625	0.5661	5	pCi/L	0	0	No	No	Stable	Normal	1.37		No				No
MW-39	13/18	28%	0.484-1.16	1.62	0.1116	0.334	0.3534	5	pCi/L	0	0	No	No	Stable	Normal	0.872		No				No
MW-40	15/18	17%	0.553-1.37	1.61	0.198	0.445	0.4725	5	pCi/L	0	0	No	No	Increasing	Normal	1.35		No				No
MW-K	16/18	11%	0.763-0.91	2.73	0.3137	0.5601	0.4766	5	pCi/L	0	0	Yes	No	Stable	Normal	1.23		No				No
MW-L	14/18	22%	0.575-1.1	2.08	0.2285	0.478	0.4794	5	pCi/L	0	0	Yes	No	Stable	Normal	1.27		No				No

Notes:

[1] Interwell background data collected from 03/07/2018 through 09/07/2023, unless otherwise noted.

[2] Intrawell background data collected from 03/07/2018 through 03/15/2022.

[3] Interwell background data collected from 03/07/2018 through 12/16/2022.

** Values obtained from U.S. Environmental Protection Agency Federal CCR Rule Title 40 Code of Federal Regulations (CFR) § 257.95(h)(2).*

CCR = coal combustion residuals

GWPS = groundwater protection standard

MCL = maximum contaminant level

mg/L = milligrams per liter

NA = not analyzed

pCi/L = picoCuries per Liter

RSL = regional screening level

SSI = statistically significant increase

SSL = statistically significant level

TABLE II
STATISTICALLY SIGNIFICANT LEVELS OF APPENDIX IV CONSTITUENTS
SEPTEMBER 2023 SAMPLING EVENT
LAWRENCE ENERGY CENTER
INACTIVE ASH PONDS

Constituent	Well ID	Groundwater Protection Standard (mg/L)
Arsenic	MW-38	0.010
	MW-39	
	MW-40	
	MW-K	
	MW-L	
Lithium	MW-38	0.040
	MW-40	
	MW-K	
	MW-L	
Molybdenum	MW-39	0.153

Notes:

mg/L = milligrams per liter

ATTACHMENT 2
Laboratory Analytical Reports

ATTACHMENT 2-1
September 2023 Semiannual Sampling Event
Laboratory Analytical Reports

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

September 29, 2023

Jake Humphrey
Evergy, Inc.
818 S Kansas Avenue
Topeka, KS 66612

RE: Project: LEC INACTIVE ASH POND WELLS CC
Pace Project No.: 60437135

Dear Jake Humphrey:

Enclosed are the analytical results for sample(s) received by the laboratory on September 08, 2023. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Greensburg

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

Sincerely,

Alice Spiller

Alice Spiller
alice.spiller@pacelabs.com
(913)599-5665
PM Lab Management

Enclosures

cc: Shelly Gomez, Evergy
Laura Hines, Evergy, Inc.
Shannon Hughes, Evergy
Adam Irvin, Evergy
Samantha Kaney, Haley & Aldrich
Danielle Oberbroeckling, Haley & Aldrich
Danielle Oberbroekling, Haley Aldrich
Adriana Sosa, Haley & Aldrich, Inc.
Andrew Watson, Haley & Aldrich

REPORT OF LABORATORY ANALYSIS

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

CERTIFICATIONS

Project: LEC INACTIVE ASH POND WELLS CC
Pace Project No.: 60437135

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

Pace Analytical Services, LLC
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SAMPLE SUMMARY

Project: LEC INACTIVE ASH POND WELLS CC
Pace Project No.: 60437135

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60437135001	**MW-37-090723**	Water	09/07/23 11:25	09/08/23 15:00
60437135002	**MW-38-090723**	Water	09/07/23 09:35	09/08/23 15:00
60437135003	**MW-39-090723**	Water	09/07/23 10:30	09/08/23 15:00
60437135004	**MW-40-090723**	Water	09/07/23 11:20	09/08/23 15:00
60437135005	**MW-K-090723**	Water	09/07/23 12:05	09/08/23 15:00
60437135006	**MW-L-090723**	Water	09/07/23 11:25	09/08/23 15:00
60437135007	**LEC IAP-DUP-090723**	Water	09/07/23 15:10	09/08/23 15:00

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SAMPLE ANALYTE COUNT

Project: LEC INACTIVE ASH POND WELLS CC
Pace Project No.: 60437135

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60437135001	**MW-37-090723**	EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
60437135002	**MW-38-090723**	EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
60437135003	**MW-39-090723**	EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
60437135004	**MW-40-090723**	EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
60437135005	**MW-K-090723**	EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
60437135006	**MW-L-090723**	EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
60437135007	**LEC IAP-DUP-090723**	EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

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

PROJECT NARRATIVE

Project: LEC INACTIVE ASH POND WELLS CC
Pace Project No.: 60437135

Method: **EPA 903.1**
Description: 903.1 Radium 226
Client: Evergy Kansas Central, Inc.
Date: September 29, 2023

General Information:
7 samples were analyzed for EPA 903.1 by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Pace Analytical Services, LLC
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PROJECT NARRATIVE

Project: LEC INACTIVE ASH POND WELLS CC
Pace Project No.: 60437135

Method: **EPA 904.0**
Description: 904.0 Radium 228
Client: Evergy Kansas Central, Inc.
Date: September 29, 2023

General Information:
7 samples were analyzed for EPA 904.0 by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: LEC INACTIVE ASH POND WELLS CC
Pace Project No.: 60437135

Method: **Total Radium Calculation**
Description: Total Radium 228+226
Client: Evergy Kansas Central, Inc.
Date: September 29, 2023

General Information:
7 samples were analyzed for Total Radium Calculation by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: LEC INACTIVE ASH POND WELLS CC
Pace Project No.: 60437135

Sample: MW-37-090723 **Lab ID: 60437135001** Collected: 09/07/23 11:25 Received: 09/08/23 15:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.266 ± 0.453 (0.799) C:NA T:89%**	pCi/L	09/25/23 12:36	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.718 ± 0.447 (0.838) C:81% T:84%**	pCi/L	09/25/23 15:53	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.984 ± 0.900 (1.64)**	pCi/L	09/29/23 11:52	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: LEC INACTIVE ASH POND WELLS CC
Pace Project No.: 60437135

Sample: MW-38-090723 **Lab ID: 60437135002** Collected: 09/07/23 09:35 Received: 09/08/23 15:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.500 ± 0.644 (1.07) C:NA T:92%**	pCi/L	09/25/23 12:36	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.869 ± 0.463 (0.803) C:75% T:83%**	pCi/L	09/25/23 16:27	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.37 ± 1.11 (1.87)**	pCi/L	09/29/23 11:52	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: LEC INACTIVE ASH POND WELLS CC
Pace Project No.: 60437135

Sample: MW-39-090723 **Lab ID: 60437135003** Collected: 09/07/23 10:30 Received: 09/08/23 15:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.142 ± 0.556 (1.18) C:NA T:92%**	pCi/L	09/25/23 12:36	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.872 ± 0.480 (0.851) C:73% T:85%**	pCi/L	09/25/23 15:54	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.872 ± 1.04 (2.03)**	pCi/L	09/29/23 11:52	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: LEC INACTIVE ASH POND WELLS CC
Pace Project No.: 60437135

Sample: MW-40-090723 **Lab ID: 60437135004** Collected: 09/07/23 11:20 Received: 09/08/23 15:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.691 ± 0.611 (0.906) C:NA T:95%**	pCi/L	09/25/23 12:36	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.663 ± 0.444 (0.841) C:72% T:86%**	pCi/L	09/25/23 15:54	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.35 ± 1.06 (1.75)**	pCi/L	09/29/23 11:52	7440-14-4	

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: LEC INACTIVE ASH POND WELLS CC
Pace Project No.: 60437135

Sample: MW-K-090723 **Lab ID: 60437135005** Collected: 09/07/23 12:05 Received: 09/08/23 15:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.144 ± 0.347 (0.866) C:NA T:91%**	pCi/L	09/25/23 12:53	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.23 ± 0.488 (0.722) C:80% T:80%**	pCi/L	09/25/23 15:54	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.23 ± 0.835 (1.59)**	pCi/L	09/29/23 11:52	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: LEC INACTIVE ASH POND WELLS CC
Pace Project No.: 60437135

Sample: MW-L-090723 **Lab ID: 60437135006** Collected: 09/07/23 11:25 Received: 09/08/23 15:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.293 ± 0.476 (0.828) C:NA T:98%**	pCi/L	09/25/23 12:53	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.977 ± 0.479 (0.806) C:76% T:80%**	pCi/L	09/25/23 15:54	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.27 ± 0.955 (1.63)**	pCi/L	09/29/23 11:52	7440-14-4	

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: LEC INACTIVE ASH POND WELLS CC
Pace Project No.: 60437135

Sample: LEC IAP-DUP-090723 **Lab ID: 60437135007** Collected: 09/07/23 15:10 Received: 09/08/23 15:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.206 ± 0.405 (0.739) C:NA T:90%**	pCi/L	09/25/23 12:53	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.510 ± 0.417 (0.829) C:76% T:84%**	pCi/L	09/25/23 15:54	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.716 ± 0.822 (1.57)**	pCi/L	09/29/23 11:52	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: LEC INACTIVE ASH POND WELLS CC
Pace Project No.: 60437135

QC Batch: 615747 Analysis Method: EPA 904.0
QC Batch Method: EPA 904.0 Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 60437135001, 60437135002, 60437135003, 60437135004, 60437135005, 60437135006, 60437135007

METHOD BLANK: 2998700 Matrix: Water
Associated Lab Samples: 60437135001, 60437135002, 60437135003, 60437135004, 60437135005, 60437135006, 60437135007

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.0270 ± 0.296 (0.689) C:80% T:90%	pCi/L	09/25/23 15:53	

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: LEC INACTIVE ASH POND WELLS CC
Pace Project No.: 60437135

QC Batch: 615746 Analysis Method: EPA 903.1
QC Batch Method: EPA 903.1 Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 60437135001, 60437135002, 60437135003, 60437135004, 60437135005, 60437135006, 60437135007

METHOD BLANK: 2998699 Matrix: Water
Associated Lab Samples: 60437135001, 60437135002, 60437135003, 60437135004, 60437135005, 60437135006, 60437135007

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.155 ± 0.305 (0.558) C:NA T:99%	pCi/L	09/25/23 12:23	

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

REPORT OF LABORATORY ANALYSIS

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

QUALIFIERS

Project: LEC INACTIVE ASH POND WELLS CC
Pace Project No.: 60437135

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

Act - Activity

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

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: LEC INACTIVE ASH POND WELLS CC
Pace Project No.: 60437135

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60437135001	**MW-37-090723**	EPA 903.1	615746		
60437135002	**MW-38-090723**	EPA 903.1	615746		
60437135003	**MW-39-090723**	EPA 903.1	615746		
60437135004	**MW-40-090723**	EPA 903.1	615746		
60437135005	**MW-K-090723**	EPA 903.1	615746		
60437135006	**MW-L-090723**	EPA 903.1	615746		
60437135007	**LEC IAP-DUP-090723**	EPA 903.1	615746		
60437135001	**MW-37-090723**	EPA 904.0	615747		
60437135002	**MW-38-090723**	EPA 904.0	615747		
60437135003	**MW-39-090723**	EPA 904.0	615747		
60437135004	**MW-40-090723**	EPA 904.0	615747		
60437135005	**MW-K-090723**	EPA 904.0	615747		
60437135006	**MW-L-090723**	EPA 904.0	615747		
60437135007	**LEC IAP-DUP-090723**	EPA 904.0	615747		
60437135001	**MW-37-090723**	Total Radium Calculation	619014		
60437135002	**MW-38-090723**	Total Radium Calculation	619014		
60437135003	**MW-39-090723**	Total Radium Calculation	619014		
60437135004	**MW-40-090723**	Total Radium Calculation	619014		
60437135005	**MW-K-090723**	Total Radium Calculation	619014		
60437135006	**MW-L-090723**	Total Radium Calculation	619014		
60437135007	**LEC IAP-DUP-090723**	Total Radium Calculation	619014		

WO# : 60437135

60437135

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

Client Name: Evergy KS Central

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

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

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

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

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

Cooler Temperature (°C): **As-read** 25.4 **Corr. Factor** -0.3 **Corrected** 25.1

Date and initials of person examining contents: 09/8h3

Temperature should be above freezing to 6°C

Chain of Custody present:	☑Yes ☐No ☐N/A	
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	
Samples arrived within holding time:	☑Yes ☐No ☐N/A	
Short Hold Time analyses (<72hr):	☐Yes ☑No ☐N/A	
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	
Sufficient volume:	☑Yes ☐No ☐N/A	
Correct containers used:	☑Yes ☐No ☐N/A	
Pace containers used:	☑Yes ☐No ☐N/A	
Containers intact:	☑Yes ☐No ☐N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	☐Yes ☐No ☑N/A	
Filtered volume received for dissolved tests?	☐Yes ☐No ☑N/A	
Sample labels match COC: Date / time / ID / analyses	☑Yes ☐No ☐N/A	
Samples contain multiple phases? Matrix: WT	☐Yes ☑No ☐N/A	
Containers requiring pH preservation in compliance? (HNO_3, H_2SO_4, HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO) LOT#: 67181	☑Yes ☐No ☐N/A	List sample IDs, volumes, lot #'s of preservative and the date/time added.
Cyanide water sample checks:		
Lead acetate strip turns dark? (Record only)	☐Yes ☐No	
Potassium iodide test strip turns blue/purple? (Preserve)	☐Yes ☐No	
Trip Blank present:	☐Yes ☐No ☑N/A	
Headspace in VOA vials (>6mm):	☐Yes ☐No ☑N/A	
Samples from USDA Regulated Area: State:	☐Yes ☐No ☑N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	☐Yes ☐No ☑N/A	

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

Pace Analytical
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Required Client Information:

Company:	EVERGY KANSAS CENTRAL, INC.
Address:	400 E Van Buren St
	Suite 545 Phoenix, AZ 85004
Email To:	skaney@haleyaldrich.com
Phone: 507-251-2232	Fax:
Requested Due Date/TAT:	

Section B Required Project Information:

Report To:	Jake Humphrey
Copy To:	Laura Hines, Samantha Kaney
Purchase Order No.:	
Project Name:	LEC Inactive Ash Pond Wells CCR
Project Number:	

Section C Invoice Information:

Attention:	Accounts Payable
Company Name:	EVERGY KANSAS CENTRAL, INC
Address:	SAME AS A
Pace Quote Reference:	
Pace Project Manager:	Alice Spiller 913-563-1403
Pace Profile #:	9655, 8

REGULATORY AGENCY

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

Site Location STATE: KS

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
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

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

ITEM #	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	Radium 226	Radium 228	Radium 226/228 Combined	QC Sheets	Residual Chlorine (Y/N)
																	N	N	N		
1	MW-37-090723	WT	G	NA	NA	09/07/23	11:25	NA	2			2					X	X	X	X	
2	MW-38-090723	WT	G	NA	NA	09/07/23	9:35	NA	2			2					X	X	X	X	
3	MW-39-090723	WT	G	NA	NA	09/07/23	10:30	NA	2			2					X	X	X	X	
4	MW-40-090723	WT	G	NA	NA	09/07/23	11:20	NA	2			2					X	X	X	X	
5	MW-K-090723	WT	G	NA	NA	09/07/23	12:05	NA	2			2					X	X	X	X	
6	MW-L-090723	WT	G	NA	NA	09/07/23	11:25	NA	2			2					X	X	X	X	
7	LEC IAP-DUP-090723	WT	G	NA	NA	09/07/23	15:10	NA	2			2					X	X	X	X	
8																					
9																					
10																					
11																					
12																					

Requested Analysis Filtered (Y/N)

Pace Project No./ Lab I.D.: 60437135

2BPIN

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Jason R. Franks / SCS	9/8/23	15:00	JA PACE	9/8/23	1500	25.1	N	Y	X

SAMPLER NAME AND SIGNATURE			Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:	Jason R. Franks					
SIGNATURE of SAMPLER:	Jason R. Franks	DATE Signed (MM/DD/YY): 9/8/23				

*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.

Internal Transfer Chain of Custody

☐ Samples Pre-Logged into eCOC.

State Of Origin: KS

Cert. Needed: [X] Yes ☐ No

Workorder: 60437135 **Workorder Name:** LEC INACTIVE ASH POND WELLS CC **Owner Received Date:** 9/8/2023 **Results Requested By:** 9/25/2023

Report To	Subcontract To
Alice Spiller 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

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: HNO3						Requested Analysis: Combinded Radium Calc & QC Sheets	Radium 226	Radium 228										LAB USE ONLY
1	MW-37-090723	PS	9/7/2023 11:25	60437135001	Water	2						X	X	X										001
2	MW-38-090723	PS	9/7/2023 09:35	60437135002	Water	2						X	X	X										002
3	MW-39-090723	PS	9/7/2023 10:30	60437135003	Water	2						X	X	X										003
4	MW-40-090723	PS	9/7/2023 11:20	60437135004	Water	2						X	X	X										004
5	MW-K-090723	PS	9/7/2023 12:05	60437135005	Water	2						X	X	X										005
6	MW-L-090723	PS	9/7/2023 11:25	60437135006	Water	2						X	X	X										006
7	LEC IAP-DUP-090723	PS	9/7/2023 15:10	60437135007	Water	2						X	X	X										007

Comments

Transfers	Released By	Date/Time	Received By	Date/Time
1	[illegible]	9.11.23 1700	[illegible]	9/11/23 1700
2				
3				

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

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

WO# : 30620991

30620991

DC#_Title: ENV-FRM-GBUR-0088 v05_Sample Condition Upon Receipt-Pittsburgh

Effective Date: 07/06/2023

WO# : 30620991

PM: MAR **Due Date: 10/03/23**

CLIENT: PACE_60_LEKS

Client Name: Pace Kansas

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

Tracking Number: 6432 1391 9383

Initial / Date

Examined By: TH 9/12/23

Labeled By: TH 9/12/23

Temped By: —

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

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

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

Temp should be above freezing to 6°C

Comments:	Yes	No	NA	pH paper Lot# 10D083	D.P.D. Residual Chlorine Lot # —
Chain of Custody Present	J			1.	
Chain of Custody Filled Out:	J			2.	
-Were client corrections present on COC		J			
Chain of Custody Relinquished	J			3.	
Sampler Name & Signature on COC:		J		4.	
Sample Labels match COC:	J			5.	
-Includes date/time/ID Matrix:	WT				
Samples Arrived within Hold Time:	J			6.	
Short Hold Time Analysis (<72hr remaining):		J		7.	
Rush Turn Around Time Requested:		J		8.	
Sufficient Volume:	J			9.	
Correct Containers Used:	J			10.	
-Pace Containers Used	J				
Containers Intact:	J			11.	
Orthophosphate field filtered:			J	12.	
Hex Cr Aqueous samples field filtered:			J	13.	
Organic Samples checked for dechlorination			J	14:	
Filtered volume received for dissolved tests:			J	15:	
All containers checked for preservation:	J			16.	
exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, non-aqueous matrix				PH<2	
All containers meet method preservation requirements:	J			Initial when completed TH	Date/Time of Preservation
				Lot# of added Preservative	
8260C/D: Headspace in VOA Vials (> 6mm)			J	17.	
624.1: Headspace in VOA Vials (0mm)			J	18.	
Trip Blank Present:			J	Trip blank custody seal present? YES or NO	
Rad Samples Screened <0.5 mrem/hr.	✓			Initial when completed JS	Date: 9/12/23 Survey Meter SN: 153

Comments:

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

Qualtrax ID: 55680

Quality Control Sample Performance Assessment

Pace Analytical™
www.pacelabs.com

Test: Ra-226
Analyst: LL1
Date: 9/15/2023
Batch ID: 75323
Matrix: DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2998699
MB concentration:	0.155
M/B Counting Uncertainty:	0.305
MB MDC:	0.558
MB Numerical Performance Indicator:	1.00
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS75323	LCSD75323
Count Date:	9/25/2023	
Spike I.D.:	23-013	
Spike Concentration (pCi/mL):	32.282	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.652	
Target Conc. (pCi/L, g, F):	4.952	
Uncertainty (Calculated):	0.233	
Result (pCi/L, g, F):	4.861	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.003	
Numerical Performance Indicator:	-0.17	
Percent Recovery:	98.17%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	
Upper % Recovery Limits:	133%	
Lower % Recovery Limits:	73%	

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date:	9/6/2023	
Sample I.D.	92686731002	
Sample MS I.D.	92686731002MS	
Sample MSD I.D.		
Spike I.D.:	23-013	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	32.283	
Spike Volume Used in MS (mL):	0.20	
Spike Volume Used in MSD (mL):		
MS Aliquot (L, g, F):	0.651	
MS Target Conc.(pCi/L, g, F):	9.914	
MSD Aliquot (L, g, F):		
MSD Target Conc. (pCi/L, g, F):		
MS Spike Uncertainty (calculated):	0.466	
MSD Spike Uncertainty (calculated):		
Sample Result:	0.190	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.322	
Sample Matrix Spike Result:	10.951	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	1.504	
Sample Matrix Spike Duplicate Result:		
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):		
MS Numerical Performance Indicator:	1.033	
MSD Numerical Performance Indicator:		
MS Percent Recovery:	108.55%	
MSD Percent Recovery:		
MS Status vs Numerical Indicator:	N/A	
MSD Status vs Numerical Indicator:		
MS Status vs Recovery:	Pass	
MSD Status vs Recovery:		
MS/MSD Upper % Recovery Limits:	136%	
MS/MSD Lower % Recovery Limits:	71%	

Duplicate Sample Assessment		
Sample I.D.:	92686731001	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	92686731001DUP	
Sample Result (pCi/L, g, F):	0.492	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.496	
Sample Duplicate Result (pCi/L, g, F):	0.212	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.415	
Are sample and/or duplicate results below RL?	See Below ##	
Duplicate Numerical Performance Indicator:	0.848	92686731001
Duplicate RPD:	79.61%	92686731001DUP
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Fail***	
% RPD Limit:	32%	

Matrix Spike/Matrix Spike Duplicate Sample Assessment		
Sample I.D.		
Sample MS I.D.		
Sample MSD I.D.		
Sample Matrix Spike Result:		
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):		
Sample Matrix Spike Duplicate Result:		
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):		
Duplicate Numerical Performance Indicator:		
(Based on the Percent Recoveries) MS/ MSD Duplicate RPD:		
MS/ MSD Duplicate Status vs Numerical Indicator:		
MS/ MSD Duplicate Status vs RPD:		
% RPD Limit:		

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the RL.

Comments: DUP NI<2

***Batch must be re-prepped due to unacceptable precision. results < 5x MDC, NI < 2 acceptable

CLM 9/25/23

MK 9/25/23

Quality Control Sample Performance Assessment

Pace Analytical
www.pacelabs.com

Test: Ra-228
Analyst: ZPC
Date: 9/20/2023
Worklist: 75324
Matrix: WT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2998700
MB concentration:	0.027
M/B 2 Sigma CSU:	0.296
MB MDC:	0.689
MB Numerical Performance Indicator:	0.18
MB Status vs Numerical Indicator:	Pass
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS75324	LCSD75324
Count Date:	9/25/2023	
Spike I.D.:	23-043	
Decay Corrected Spike Concentration (pCi/mL):	39.681	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.816	
Target Conc. (pCi/L, g, F):	4.865	
Uncertainty (Calculated):	0.238	
Result (pCi/L, g, F):	2.855	
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	0.753	
Numerical Performance Indicator:	-4.99	RI
Percent Recovery:	58.68%	
Status vs Numerical Indicator:	Fail**	
Status vs Recovery:	Fail Low**	
Upper % Recovery Limits:	135%	
Lower % Recovery Limits:	60%	

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date:	9/6/2023	
Sample I.D.	92686731001	
Sample MS I.D.	92686731001MS	
Sample MSD I.D.		
Spike I.D.:	23-043	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	39.933	
Spike Volume Used in MS (mL):	0.20	
Spike Volume Used in MSD (mL):		
MS Aliquot (L, g, F):	0.804	
MS Target Conc.(pCi/L, g, F):	9.929	
MSD Aliquot (L, g, F):		
MSD Target Conc. (pCi/L, g, F):		
MS Spike Uncertainty (calculated):	0.487	
MSD Spike Uncertainty (calculated):		
Sample Result:	0.148	
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.322	
Sample Matrix Spike Result:	9.107	
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	1.860	
Sample Matrix Spike Duplicate Result:		
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):		
MS Numerical Performance Indicator:	-0.974	
MSD Numerical Performance Indicator:		
MS Percent Recovery:	90.24%	
MSD Percent Recovery:		
MS Status vs Numerical Indicator:	Pass	
MSD Status vs Numerical Indicator:		
MS Status vs Recovery:	Pass	
MSD Status vs Recovery:		
MS/MSD Upper % Recovery Limits:	135%	
MS/MSD Lower % Recovery Limits:	60%	

Duplicate Sample Assessment		
Sample I.D.:	92686731002	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	92686731002DUP	
Sample Result (pCi/L, g, F):	0.265	
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.354	
Sample Duplicate Result (pCi/L, g, F):	0.661	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	0.404	
Are sample and/or duplicate results below RL?	See Below ##	
Duplicate Numerical Performance Indicator:	-1.445	92686731002
Duplicate RPD:	85.47%	92686731002DUP
Duplicate Status vs Numerical Indicator:	Pass	
Duplicate Status vs RPD:	Fail***	
% RPD Limit:	36%	

Matrix Spike/Matrix Spike Duplicate Sample Assessment		
Sample I.D.		
Sample MS I.D.		
Sample MSD I.D.		
Sample Matrix Spike Result:		
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):		
Sample Matrix Spike Duplicate Result:		
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):		
Duplicate Numerical Performance Indicator:		
(Based on the Percent Recoveries) MS/ MSD Duplicate RPD:		
MS/ MSD Duplicate Status vs Numerical Indicator:		
MS/ MSD Duplicate Status vs RPD:		
% RPD Limit:		

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

X **Batch must be re-prepped due to LCS failure.

VAL
9/26/23

LL
092923

Quality Control Sample Performance Assessment

Pace Analytical
www.pacelabs.com

Test:	Ra-228
Analyst:	ZPC
Date:	9/26/2023
Worklist:	75324
Matrix:	

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	
MB concentration:	
MB MDC:	
MB Numerical Performance Indicator:	
MB Status vs Numerical Indicator:	
MB Status vs. MDC:	

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS75324	LCSD75324
Count Date:	9/28/2023	
Spike I.D.:	23-043	
Decay Corrected Spike Concentration (pCi/mL):	39.642	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.816	
Target Conc. (pCi/L, g, F):	4.861	
Uncertainty (Calculated):	0.238	
Result (pCi/L, g, F):	4.668	
	1.056	
Numerical Performance Indicator:	-0.35	
Percent Recovery:	96.04%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	
Upper % Recovery Limits:	135%	
Lower % Recovery Limits:	60%	

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date:		
Sample I.D.		
Sample MS I.D.		
Sample MSD I.D.		
Spike I.D.:		
MS/MSD Decay Corrected Spike Concentration (pCi/mL):		
Spike Volume Used in MS (mL):		
Spike Volume Used in MSD (mL):		
MS Aliquot (L, g, F):		
MS Target Conc.(pCi/L, g, F):		
MSD Aliquot (L, g, F):		
MSD Target Conc. (pCi/L, g, F):		
MS Spike Uncertainty (calculated):		
MSD Spike Uncertainty (calculated):		
Sample Result:		
Sample Matrix Spike Result:		
Sample Matrix Spike Duplicate Result:		
MS Numerical Performance Indicator:		
MSD Numerical Performance Indicator:		
MS Percent Recovery:		
MSD Percent Recovery:		
MS Status vs Numerical Indicator:		
MSD Status vs Numerical Indicator:		
MS Status vs Recovery:		
MSD Status vs Recovery:		
MS/MSD Upper % Recovery Limits:		
MS/MSD Lower % Recovery Limits:		

Duplicate Sample Assessment		
Sample I.D.:		Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.		
Sample Result (pCi/L, g, F):		
Sample Duplicate Result (pCi/L, g, F):		
Are sample and/or duplicate results below RL?	See Below ##	
Duplicate Numerical Performance Indicator:		
Duplicate RPD:		
Duplicate Status vs Numerical Indicator:		
Duplicate Status vs RPD:		
% RPD Limit:		

Matrix Spike/Matrix Spike Duplicate Sample Assessment		
Sample I.D.		
Sample MS I.D.		
Sample MSD I.D.		
Sample Matrix Spike Result:		
Sample Matrix Spike Duplicate Result:		
Duplicate Numerical Performance Indicator:		
(Based on the Percent Recoveries) MS/ MSD Duplicate RPD:		
MS/ MSD Duplicate Status vs Numerical Indicator:		
MS/ MSD Duplicate Status vs RPD:		
% RPD Limit:		

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

VAL
9/29/23

LL
09 29 23

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

September 25, 2023

Jake Humphrey
Evergy, Inc.
818 S Kansas Avenue
Topeka, KS 66612

RE: Project: LEC INACTIVE ASH POND
Pace Project No.: 60437138

Dear Jake Humphrey:

Enclosed are the analytical results for sample(s) received by the laboratory on September 08, 2023. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Kansas City

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

Sincerely,

Alice Spiller

Alice Spiller
alice.spiller@pacelabs.com
(913)599-5665
PM Lab Management

Enclosures

cc: Shelly Gomez, Evergy
Laura Hines, Evergy, Inc.
Shannon Hughes, Evergy
Adam Irvin, Evergy
Samantha Kaney, Haley & Aldrich
Melanie Satanek, Haley Aldrich
Adriana Sosa, Haley & Aldrich, Inc.
Andrew Watson, Haley & Aldrich

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
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CERTIFICATIONS

Project: LEC INACTIVE ASH POND
Pace Project No.: 60437138

Pace Analytical Services Kansas

9608 Loiret Boulevard, Lenexa, KS 66219
Missouri Inorganic Drinking Water Certification #: 10090
Arkansas Drinking Water
Arkansas Certification #: 88-00679
Illinois Certification #: 2000302023-5
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Nevada Certification #: KS000212023-1
Oklahoma Certification #: 2022-057
Florida: Cert E871149 SEKS WET
Texas Certification #: T104704407-22-16
Utah Certification #: KS000212022-12
Illinois Certification #: 004592
Kansas Field Laboratory Accreditation: # E-92587
Missouri SEKS Micro Certification: 10070

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SAMPLE SUMMARY

Project: LEC INACTIVE ASH POND
Pace Project No.: 60437138

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60437138001	**MW-37-090723**	Water	09/07/23 11:25	09/08/23 15:00
60437138002	**MW-38-090723**	Water	09/07/23 09:35	09/08/23 15:00
60437138003	**MW-39-090723**	Water	09/07/23 10:30	09/08/23 15:00
60437138004	**MW-40-090723**	Water	09/07/23 11:20	09/08/23 15:00
60437138005	**MW-K-090723**	Water	09/07/23 12:05	09/08/23 15:00
60437138006	**MW-L-090723**	Water	09/07/23 11:25	09/08/23 15:00
60437138007	**LEC IAP-DUP-090723**	Water	09/07/23 15:10	09/08/23 15:00

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SAMPLE ANALYTE COUNT

Project: LEC INACTIVE ASH POND
Pace Project No.: 60437138

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60437138001	**MW-37-090723**	EPA 200.7	JXD	3	PASI-K
		EPA 6010	JXD	1	PASI-K
		EPA 200.8	JGP	3	PASI-K
		SM 2540C	BDH1	1	PASI-K
		SM 4500-H+B	RKA	1	PASI-K
		EPA 300.0	MLD	3	PASI-K
60437138002	**MW-38-090723**	EPA 200.7	JXD	3	PASI-K
		EPA 6010	JXD	1	PASI-K
		EPA 200.8	JGP	3	PASI-K
		SM 2540C	BDH1	1	PASI-K
		SM 4500-H+B	RKA	1	PASI-K
		EPA 300.0	MLD	3	PASI-K
60437138003	**MW-39-090723**	EPA 200.7	JXD	3	PASI-K
		EPA 6010	JXD	1	PASI-K
		EPA 200.8	JGP	3	PASI-K
		SM 2540C	BDH1	1	PASI-K
		SM 4500-H+B	RKA	1	PASI-K
		EPA 300.0	MLD	3	PASI-K
60437138004	**MW-40-090723**	EPA 200.7	JXD	3	PASI-K
		EPA 6010	JXD	1	PASI-K
		EPA 200.8	JGP	3	PASI-K
		SM 2540C	BDH1	1	PASI-K
		SM 4500-H+B	RKA	1	PASI-K
		EPA 300.0	MLD	3	PASI-K
60437138005	**MW-K-090723**	EPA 200.7	JXD	3	PASI-K
		EPA 6010	JXD	1	PASI-K
		EPA 200.8	JGP	3	PASI-K
		SM 2540C	BDH1	1	PASI-K
		SM 4500-H+B	RKA	1	PASI-K
		EPA 300.0	MLD	3	PASI-K
60437138006	**MW-L-090723**	EPA 200.7	JXD	3	PASI-K
		EPA 6010	JXD	1	PASI-K
		EPA 200.8	JGP	3	PASI-K
		SM 2540C	BDH1	1	PASI-K
		SM 4500-H+B	RKA	1	PASI-K
		EPA 300.0	MLD	3	PASI-K
60437138007	**LEC IAP-DUP-090723**	EPA 200.7	JXD	3	PASI-K

REPORT OF LABORATORY ANALYSIS

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

SAMPLE ANALYTE COUNT

Project: LEC INACTIVE ASH POND
Pace Project No.: 60437138

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 6010	JXD	1	PASI-K
		EPA 200.8	JGP	3	PASI-K
		SM 2540C	BDH1	1	PASI-K
		SM 4500-H+B	RKA	1	PASI-K
		EPA 300.0	MLD	3	PASI-K

PASI-K = Pace Analytical Services - Kansas City

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PROJECT NARRATIVE

Project: LEC INACTIVE ASH POND
Pace Project No.: 60437138

Method: **EPA 200.7**
Description: 200.7 Metals, Total
Client: Evergy Kansas Central, Inc.
Date: September 25, 2023

General Information:
7 samples were analyzed for EPA 200.7 by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 200.7 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 864489

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60437138001,60437141001

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

- MS (Lab ID: 3423001)
  - Calcium
- MSD (Lab ID: 3423002)
  - Calcium

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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

PROJECT NARRATIVE

Project: LEC INACTIVE ASH POND
Pace Project No.: 60437138

Method: **EPA 6010**
Description: 6010 MET ICP
Client: Evergy Kansas Central, Inc.
Date: September 25, 2023

General Information:
7 samples were analyzed for EPA 6010 by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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

PROJECT NARRATIVE

Project: LEC INACTIVE ASH POND
Pace Project No.: 60437138

Method: **EPA 200.8**
Description: 200.8 MET ICPMS
Client: Evergy Kansas Central, Inc.
Date: September 25, 2023

General Information:
7 samples were analyzed for EPA 200.8 by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 200.8 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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

PROJECT NARRATIVE

Project: LEC INACTIVE ASH POND
Pace Project No.: 60437138

Method: **SM 2540C**
Description: 2540C Total Dissolved Solids
Client: Evergy Kansas Central, Inc.
Date: September 25, 2023

General Information:
7 samples were analyzed for SM 2540C by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

QC Batch: 864473

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

- DUP (Lab ID: 3422919)
  - Total Dissolved Solids

Additional Comments:

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

PROJECT NARRATIVE

Project: LEC INACTIVE ASH POND
Pace Project No.: 60437138

Method: **SM 4500-H+B**
Description: 4500H+ pH, Electrometric
Client: Evergy Kansas Central, Inc.
Date: September 25, 2023

General Information:
7 samples were analyzed for SM 4500-H+B by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

H6: Analysis initiated outside of the 15 minute EPA required holding time.
- LEC IAP-DUP-090723 (Lab ID: 60437138007)
- MW-37-090723 (Lab ID: 60437138001)
- MW-38-090723 (Lab ID: 60437138002)
- MW-39-090723 (Lab ID: 60437138003)
- MW-40-090723 (Lab ID: 60437138004)
- MW-K-090723 (Lab ID: 60437138005)
- MW-L-090723 (Lab ID: 60437138006)

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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

PROJECT NARRATIVE

Project: LEC INACTIVE ASH POND
Pace Project No.: 60437138

Method: **EPA 300.0**
Description: 300.0 IC Anions 28 Days
Client: Evergy Kansas Central, Inc.
Date: September 25, 2023

General Information:
7 samples were analyzed for EPA 300.0 by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 865032

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60437134001,60437138004

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

- MS (Lab ID: 3425460)
  - Chloride
  - Fluoride
- MS (Lab ID: 3425462)
  - Chloride
  - Sulfate
- MSD (Lab ID: 3425461)
  - Chloride
  - Fluoride

R1: RPD value was outside control limits.

- MSD (Lab ID: 3425461)
  - Chloride

Additional Comments:

Analyte Comments:

QC Batch: 865032

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

- MS (Lab ID: 3425460)
  - Chloride

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: LEC INACTIVE ASH POND
Pace Project No.: 60437138

Sample: MW-37-090723 **Lab ID: 60437138001** Collected: 09/07/23 11:25 Received: 09/08/23 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City							
Barium, Total Recoverable	**0.077**	mg/L	0.0050	1	09/14/23 12:10	09/20/23 15:49	7440-39-3	
Boron, Total Recoverable	**1.8**	mg/L	0.10	1	09/14/23 12:10	09/20/23 15:49	7440-42-8	
Calcium, Total Recoverable	**232**	mg/L	0.20	1	09/14/23 12:10	09/20/23 15:49	7440-70-2	M1
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**0.023**	mg/L	0.010	1	09/14/23 12:10	09/20/23 16:48	7439-93-2	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City							
Arsenic, Total Recoverable	**0.0045**	mg/L	0.0010	1	09/14/23 12:10	09/19/23 10:31	7440-38-2	
Cobalt, Total Recoverable	**<0.0010**	mg/L	0.0010	1	09/14/23 12:10	09/19/23 10:31	7440-48-4	
Molybdenum, Total Recoverable	**0.076**	mg/L	0.0010	1	09/14/23 12:10	09/19/23 10:31	7439-98-7	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City							
Total Dissolved Solids	**1080**	mg/L	13.3	1		09/13/23 10:38		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Kansas City							
pH at 25 Degrees C	**6.9**	Std. Units	0.10	1		09/12/23 15:23		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Chloride	**56.4**	mg/L	20.0	20		09/20/23 18:50	16887-00-6	
Fluoride	**<0.20**	mg/L	0.20	1		09/20/23 18:37	16984-48-8	
Sulfate	**280**	mg/L	20.0	20		09/20/23 18:50	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: LEC INACTIVE ASH POND
Pace Project No.: 60437138

Sample: MW-38-090723 **Lab ID: 60437138002** Collected: 09/07/23 09:35 Received: 09/08/23 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City							
Barium, Total Recoverable	**0.049**	mg/L	0.0050	1	09/14/23 12:10	09/20/23 15:56	7440-39-3	
Boron, Total Recoverable	**4.6**	mg/L	0.10	1	09/14/23 12:10	09/20/23 15:56	7440-42-8	
Calcium, Total Recoverable	**201**	mg/L	0.20	1	09/14/23 12:10	09/20/23 15:56	7440-70-2	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**0.052**	mg/L	0.010	1	09/14/23 12:10	09/20/23 16:54	7439-93-2	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City							
Arsenic, Total Recoverable	**0.026**	mg/L	0.0010	1	09/14/23 12:10	09/19/23 10:33	7440-38-2	
Cobalt, Total Recoverable	**<0.0010**	mg/L	0.0010	1	09/14/23 12:10	09/19/23 10:33	7440-48-4	
Molybdenum, Total Recoverable	**0.085**	mg/L	0.0010	1	09/14/23 12:10	09/19/23 10:33	7439-98-7	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City							
Total Dissolved Solids	**1580**	mg/L	20.0	1		09/13/23 10:38		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Kansas City							
pH at 25 Degrees C	**7.6**	Std. Units	0.10	1		09/12/23 15:15		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Chloride	**111**	mg/L	20.0	20		09/20/23 19:44	16887-00-6	
Fluoride	**3.7**	mg/L	0.20	1		09/20/23 19:30	16984-48-8	
Sulfate	**668**	mg/L	50.0	50		09/21/23 20:42	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: LEC INACTIVE ASH POND
Pace Project No.: 60437138

Sample: MW-39-090723 **Lab ID: 60437138003** Collected: 09/07/23 10:30 Received: 09/08/23 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City							
Barium, Total Recoverable	**0.029**	mg/L	0.0050	1	09/14/23 12:10	09/20/23 15:58	7440-39-3	
Boron, Total Recoverable	**4.6**	mg/L	0.10	1	09/14/23 12:10	09/20/23 15:58	7440-42-8	
Calcium, Total Recoverable	**547**	mg/L	0.20	1	09/14/23 12:10	09/20/23 15:58	7440-70-2	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**0.037**	mg/L	0.010	1	09/14/23 12:10	09/20/23 16:56	7439-93-2	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City							
Arsenic, Total Recoverable	**0.011**	mg/L	0.0010	1	09/14/23 12:10	09/19/23 10:41	7440-38-2	
Cobalt, Total Recoverable	**<0.0010**	mg/L	0.0010	1	09/14/23 12:10	09/19/23 10:41	7440-48-4	
Molybdenum, Total Recoverable	**0.18**	mg/L	0.0010	1	09/14/23 12:10	09/19/23 10:41	7439-98-7	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City							
Total Dissolved Solids	**3410**	mg/L	66.7	1		09/13/23 10:38		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Kansas City							
pH at 25 Degrees C	**7.3**	Std. Units	0.10	1		09/12/23 15:18		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Chloride	**321**	mg/L	20.0	20		09/20/23 20:10	16887-00-6	
Fluoride	**1.3**	mg/L	0.20	1		09/20/23 19:57	16984-48-8	
Sulfate	**<1.0**	mg/L	1.0	1		09/20/23 19:57	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: LEC INACTIVE ASH POND
Pace Project No.: 60437138

Sample: MW-40-090723 **Lab ID: 60437138004** Collected: 09/07/23 11:20 Received: 09/08/23 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City							
Barium, Total Recoverable	**0.035**	mg/L	0.0050	1	09/14/23 12:10	09/20/23 16:00	7440-39-3	
Boron, Total Recoverable	**3.3**	mg/L	0.10	1	09/14/23 12:10	09/20/23 16:00	7440-42-8	
Calcium, Total Recoverable	**473**	mg/L	0.20	1	09/14/23 12:10	09/20/23 16:00	7440-70-2	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**0.043**	mg/L	0.010	1	09/14/23 12:10	09/20/23 16:58	7439-93-2	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City							
Arsenic, Total Recoverable	**0.015**	mg/L	0.0010	1	09/14/23 12:10	09/19/23 10:43	7440-38-2	
Cobalt, Total Recoverable	**<0.0010**	mg/L	0.0010	1	09/14/23 12:10	09/19/23 10:43	7440-48-4	
Molybdenum, Total Recoverable	**0.059**	mg/L	0.0010	1	09/14/23 12:10	09/19/23 10:43	7439-98-7	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City							
Total Dissolved Solids	**2670**	mg/L	40.0	1		09/14/23 10:52		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Kansas City							
pH at 25 Degrees C	**7.1**	Std. Units	0.10	1		09/12/23 15:22		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Chloride	**13.0**	mg/L	1.0	1		09/20/23 20:50	16887-00-6	M1
Fluoride	**<0.20**	mg/L	0.20	1		09/20/23 20:50	16984-48-8	
Sulfate	**<1.0**	mg/L	1.0	1		09/20/23 20:24	14808-79-8	M1

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: LEC INACTIVE ASH POND
Pace Project No.: 60437138

Sample: MW-K-090723 **Lab ID: 60437138005** Collected: 09/07/23 12:05 Received: 09/08/23 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City							
Barium, Total Recoverable	**0.048**	mg/L	0.0050	1	09/14/23 12:10	09/20/23 16:02	7440-39-3	
Boron, Total Recoverable	**1.9**	mg/L	0.10	1	09/14/23 12:10	09/20/23 16:02	7440-42-8	
Calcium, Total Recoverable	**207**	mg/L	0.20	1	09/14/23 12:10	09/20/23 16:02	7440-70-2	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**0.048**	mg/L	0.010	1	09/14/23 12:10	09/20/23 17:00	7439-93-2	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City							
Arsenic, Total Recoverable	**0.083**	mg/L	0.0010	1	09/14/23 12:10	09/19/23 10:45	7440-38-2	
Cobalt, Total Recoverable	**<0.0010**	mg/L	0.0010	1	09/14/23 12:10	09/19/23 10:45	7440-48-4	
Molybdenum, Total Recoverable	**0.021**	mg/L	0.0010	1	09/14/23 12:10	09/19/23 10:45	7439-98-7	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City							
Total Dissolved Solids	**1400**	mg/L	20.0	1		09/14/23 10:52		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Kansas City							
pH at 25 Degrees C	**7.7**	Std. Units	0.10	1		09/12/23 15:30		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Chloride	**108**	mg/L	20.0	20		09/20/23 21:31	16887-00-6	
Fluoride	**2.6**	mg/L	0.20	1		09/20/23 21:17	16984-48-8	
Sulfate	**444**	mg/L	50.0	50		09/21/23 22:02	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: LEC INACTIVE ASH POND
Pace Project No.: 60437138

Sample: MW-L-090723 **Lab ID: 60437138006** Collected: 09/07/23 11:25 Received: 09/08/23 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City							
Barium, Total Recoverable	**0.035**	mg/L	0.0050	1	09/14/23 12:10	09/20/23 16:10	7440-39-3	
Boron, Total Recoverable	**2.4**	mg/L	0.10	1	09/14/23 12:10	09/20/23 16:10	7440-42-8	
Calcium, Total Recoverable	**485**	mg/L	0.20	1	09/14/23 12:10	09/20/23 16:10	7440-70-2	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**0.090**	mg/L	0.010	1	09/14/23 12:10	09/20/23 17:09	7439-93-2	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City							
Arsenic, Total Recoverable	**0.027**	mg/L	0.0010	1	09/14/23 12:10	09/19/23 10:47	7440-38-2	
Cobalt, Total Recoverable	**<0.0010**	mg/L	0.0010	1	09/14/23 12:10	09/19/23 10:47	7440-48-4	
Molybdenum, Total Recoverable	**0.047**	mg/L	0.0010	1	09/14/23 12:10	09/19/23 10:47	7439-98-7	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City							
Total Dissolved Solids	**4340**	mg/L	100	1		09/14/23 10:52		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Kansas City							
pH at 25 Degrees C	**7.2**	Std. Units	0.10	1		09/12/23 15:24		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Chloride	**762**	mg/L	50.0	50		09/21/23 22:15	16887-00-6	
Fluoride	**2.5**	mg/L	0.20	1		09/20/23 22:11	16984-48-8	
Sulfate	**1860**	mg/L	200	200		09/21/23 22:27	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: LEC INACTIVE ASH POND
Pace Project No.: 60437138

Sample: LEC IAP-DUP-090723 **Lab ID: 60437138007** Collected: 09/07/23 15:10 Received: 09/08/23 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City							
Barium, Total Recoverable	**0.035**	mg/L	0.0050	1	09/14/23 12:10	09/20/23 16:12	7440-39-3	
Boron, Total Recoverable	**2.4**	mg/L	0.10	1	09/14/23 12:10	09/20/23 16:12	7440-42-8	
Calcium, Total Recoverable	**481**	mg/L	0.20	1	09/14/23 12:10	09/20/23 16:12	7440-70-2	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**0.086**	mg/L	0.010	1	09/14/23 12:10	09/20/23 17:11	7439-93-2	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City							
Arsenic, Total Recoverable	**0.027**	mg/L	0.0010	1	09/14/23 12:10	09/19/23 10:49	7440-38-2	
Cobalt, Total Recoverable	**<0.0010**	mg/L	0.0010	1	09/14/23 12:10	09/19/23 10:49	7440-48-4	
Molybdenum, Total Recoverable	**0.048**	mg/L	0.0010	1	09/14/23 12:10	09/19/23 10:49	7439-98-7	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City							
Total Dissolved Solids	**6720**	mg/L	100	1		09/14/23 10:53		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Kansas City							
pH at 25 Degrees C	**7.2**	Std. Units	0.10	1		09/12/23 15:57		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Chloride	**775**	mg/L	50.0	50		09/21/23 22:40	16887-00-6	
Fluoride	**2.5**	mg/L	0.20	1		09/20/23 22:37	16984-48-8	
Sulfate	**2430**	mg/L	200	200		09/21/23 22:53	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: LEC INACTIVE ASH POND
Pace Project No.: 60437138

QC Batch: 864489
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Total
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60437138001, 60437138002, 60437138003, 60437138004, 60437138005, 60437138006, 60437138007

METHOD BLANK: 3422999 Matrix: Water
Associated Lab Samples: 60437138001, 60437138002, 60437138003, 60437138004, 60437138005, 60437138006, 60437138007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Barium	mg/L	<0.0050	0.0050	09/20/23 15:45	
Boron	mg/L	<0.10	0.10	09/20/23 15:45	
Calcium	mg/L	<0.20	0.20	09/20/23 15:45	

LABORATORY CONTROL SAMPLE: 3423000

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	mg/L	1	1.0	101	85-115	
Boron	mg/L	1	0.96	96	85-115	
Calcium	mg/L	10	10.1	101	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3423001 3423002

Parameter	Units	60437138001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	mg/L	0.077	1	1	1.1	1.1	101	100	70-130	1	20	
Boron	mg/L	1.8	1	1	2.8	2.8	101	102	70-130	0	20	
Calcium	mg/L	232	10	10	247	249	147	167	70-130	1	20	M1

MATRIX SPIKE SAMPLE: 3423003

Parameter	Units	60437141001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Barium	mg/L	77.2 ug/L	1	1.1	102	70-130	
Boron	mg/L	1760 ug/L	1	2.8	101	70-130	
Calcium	mg/L	236	10	248	121	70-130	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: LEC INACTIVE ASH POND
Pace Project No.: 60437138

QC Batch: 864494
QC Batch Method: EPA 200.8
Analysis Method: EPA 200.8
Analysis Description: 200.8 MET
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60437138001, 60437138002, 60437138003, 60437138004, 60437138005, 60437138006, 60437138007

METHOD BLANK: 3423008 Matrix: Water
Associated Lab Samples: 60437138001, 60437138002, 60437138003, 60437138004, 60437138005, 60437138006, 60437138007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/L	<0.0010	0.0010	09/19/23 10:27	
Cobalt	mg/L	<0.0010	0.0010	09/19/23 10:27	
Molybdenum	mg/L	<0.0010	0.0010	09/19/23 10:27	

LABORATORY CONTROL SAMPLE: 3423009

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/L	0.04	0.039	99	85-115	
Cobalt	mg/L	0.04	0.040	100	85-115	
Molybdenum	mg/L	0.04	0.040	100	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3423010 3423011

Parameter	Units	60437138002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/L	0.026	0.04	0.04	0.068	0.065	104	98	70-130	4	20	
Cobalt	mg/L	<0.0010	0.04	0.04	0.040	0.038	99	95	70-130	4	20	
Molybdenum	mg/L	0.085	0.04	0.04	0.13	0.12	112	98	70-130	4	20	

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

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QUALITY CONTROL DATA

Project: LEC INACTIVE ASH POND
Pace Project No.: 60437138

QC Batch: 864495
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60437138001, 60437138002, 60437138003, 60437138004, 60437138005, 60437138006, 60437138007

METHOD BLANK: 3423020 Matrix: Water
Associated Lab Samples: 60437138001, 60437138002, 60437138003, 60437138004, 60437138005, 60437138006, 60437138007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lithium	mg/L	<0.010	0.010	09/20/23 16:44	

LABORATORY CONTROL SAMPLE: 3423021

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lithium	mg/L	1	0.99	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3423022 3423023

Parameter	Units	60437138001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lithium	mg/L	0.023	1	1	1.1	1.1	103	104	75-125	1	20	

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: LEC INACTIVE ASH POND
Pace Project No.: 60437138

QC Batch: 864208
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60437138001, 60437138002, 60437138003

METHOD BLANK: 3421941 Matrix: Water
Associated Lab Samples: 60437138001, 60437138002, 60437138003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	09/13/23 10:33	

LABORATORY CONTROL SAMPLE: 3421942

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	996	100	80-120	

SAMPLE DUPLICATE: 3421943

Parameter	Units	60437056004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1320	1370	4	10	

SAMPLE DUPLICATE: 3421944

Parameter	Units	60436986003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	24500	25000	2	10	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: LEC INACTIVE ASH POND
Pace Project No.: 60437138

QC Batch: 864473
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60437138004, 60437138005, 60437138006, 60437138007

METHOD BLANK: 3422916 Matrix: Water
Associated Lab Samples: 60437138004, 60437138005, 60437138006, 60437138007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	09/14/23 10:52	

LABORATORY CONTROL SAMPLE: 3422917

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

SAMPLE DUPLICATE: 3422918

Parameter	Units	60437138004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	2670	2820	5	10	

SAMPLE DUPLICATE: 3422919

Parameter	Units	60437117001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	8380	9340	11	10	D6

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: LEC INACTIVE ASH POND
Pace Project No.: 60437138

QC Batch: 863911
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60437138001, 60437138002, 60437138003, 60437138004, 60437138005, 60437138006

SAMPLE DUPLICATE: 3421007

Parameter	Units	60437056001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	6.9	7.0	1	5	H6

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: LEC INACTIVE ASH POND
Pace Project No.: 60437138

QC Batch: 864085
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60437138007

SAMPLE DUPLICATE: 3421508

Parameter	Units	60437134001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.0	7.1	1	5	H6

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: LEC INACTIVE ASH POND
Pace Project No.: 60437138

QC Batch: 865032 | Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 | Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60437138001, 60437138002, 60437138003, 60437138004, 60437138005, 60437138006, 60437138007

METHOD BLANK: 3425458 Matrix: Water
Associated Lab Samples: 60437138001, 60437138002, 60437138003, 60437138004, 60437138005, 60437138006, 60437138007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<1.0	1.0	09/20/23 13:11	
Fluoride	mg/L	<0.20	0.20	09/20/23 13:11	
Sulfate	mg/L	<1.0	1.0	09/20/23 13:11	

METHOD BLANK: 3429169 Matrix: Water
Associated Lab Samples: 60437138001, 60437138002, 60437138003, 60437138004, 60437138005, 60437138006, 60437138007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<1.0	1.0	09/21/23 17:59	
Fluoride	mg/L	<0.20	0.20	09/21/23 17:59	
Sulfate	mg/L	<1.0	1.0	09/21/23 17:59	

LABORATORY CONTROL SAMPLE: 3425459

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.8	95	90-110	
Fluoride	mg/L	2.5	2.5	99	90-110	
Sulfate	mg/L	5	4.9	98	90-110	

LABORATORY CONTROL SAMPLE: 3429170

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.8	96	90-110	
Fluoride	mg/L	2.5	2.5	101	90-110	
Sulfate	mg/L	5	5.0	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3425460 3425461

Parameter	Units	60437134001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	3150	1000	1000	4490	3450	134	30	80-120	26	15	E,M1, R1
Fluoride	mg/L	<0.20	2.5	2.5	1.1	1.1	45	44	80-120	0	15	M1
Sulfate	mg/L	119	100	100	202	202	83	83	80-120	0	15	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: LEC INACTIVE ASH POND
Pace Project No.: 60437138

MATRIX SPIKE SAMPLE: 3425462

Parameter	Units	60437138004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	13.0	100	360	347	80-120	M1
Fluoride	mg/L	<0.20	50	50.8	101	80-120	
Sulfate	mg/L	<1.0	100	<20.0	0	80-120	M1

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

REPORT OF LABORATORY ANALYSIS

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

QUALIFIERS

Project: LEC INACTIVE ASH POND
Pace Project No.: 60437138

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

D6	The precision between the sample and sample duplicate exceeded laboratory control limits.
E	Analyte concentration exceeded the calibration range. The reported result is estimated.
H6	Analysis initiated outside of the 15 minute EPA required holding time.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
R1	RPD value was outside control limits.

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: LEC INACTIVE ASH POND
Pace Project No.: 60437138

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60437138001	**MW-37-090723**	EPA 200.7	864489	EPA 200.7	864582
60437138002	**MW-38-090723**	EPA 200.7	864489	EPA 200.7	864582
60437138003	**MW-39-090723**	EPA 200.7	864489	EPA 200.7	864582
60437138004	**MW-40-090723**	EPA 200.7	864489	EPA 200.7	864582
60437138005	**MW-K-090723**	EPA 200.7	864489	EPA 200.7	864582
60437138006	**MW-L-090723**	EPA 200.7	864489	EPA 200.7	864582
60437138007	**LEC IAP-DUP-090723**	EPA 200.7	864489	EPA 200.7	864582
60437138001	**MW-37-090723**	EPA 3010	864495	EPA 6010	864583
60437138002	**MW-38-090723**	EPA 3010	864495	EPA 6010	864583
60437138003	**MW-39-090723**	EPA 3010	864495	EPA 6010	864583
60437138004	**MW-40-090723**	EPA 3010	864495	EPA 6010	864583
60437138005	**MW-K-090723**	EPA 3010	864495	EPA 6010	864583
60437138006	**MW-L-090723**	EPA 3010	864495	EPA 6010	864583
60437138007	**LEC IAP-DUP-090723**	EPA 3010	864495	EPA 6010	864583
60437138001	**MW-37-090723**	EPA 200.8	864494	EPA 200.8	864584
60437138002	**MW-38-090723**	EPA 200.8	864494	EPA 200.8	864584
60437138003	**MW-39-090723**	EPA 200.8	864494	EPA 200.8	864584
60437138004	**MW-40-090723**	EPA 200.8	864494	EPA 200.8	864584
60437138005	**MW-K-090723**	EPA 200.8	864494	EPA 200.8	864584
60437138006	**MW-L-090723**	EPA 200.8	864494	EPA 200.8	864584
60437138007	**LEC IAP-DUP-090723**	EPA 200.8	864494	EPA 200.8	864584
60437138001	**MW-37-090723**	SM 2540C	864208		
60437138002	**MW-38-090723**	SM 2540C	864208		
60437138003	**MW-39-090723**	SM 2540C	864208		
60437138004	**MW-40-090723**	SM 2540C	864473		
60437138005	**MW-K-090723**	SM 2540C	864473		
60437138006	**MW-L-090723**	SM 2540C	864473		
60437138007	**LEC IAP-DUP-090723**	SM 2540C	864473		
60437138001	**MW-37-090723**	SM 4500-H+B	863911		
60437138002	**MW-38-090723**	SM 4500-H+B	863911		
60437138003	**MW-39-090723**	SM 4500-H+B	863911		
60437138004	**MW-40-090723**	SM 4500-H+B	863911		
60437138005	**MW-K-090723**	SM 4500-H+B	863911		
60437138006	**MW-L-090723**	SM 4500-H+B	863911		
60437138007	**LEC IAP-DUP-090723**	SM 4500-H+B	864085		
60437138001	**MW-37-090723**	EPA 300.0	865032		
60437138002	**MW-38-090723**	EPA 300.0	865032		
60437138003	**MW-39-090723**	EPA 300.0	865032		
60437138004	**MW-40-090723**	EPA 300.0	865032		
60437138005	**MW-K-090723**	EPA 300.0	865032		
60437138006	**MW-L-090723**	EPA 300.0	865032		
60437138007	**LEC IAP-DUP-090723**	EPA 300.0	865032		

WO#: 60437138

60437138

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

Client Name: Eversy

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-298 **Type of Ice:** Wet Blue None

Cooler Temperature (°C): **As-read** 3.7 **Corr. Factor** 0.3 **Corrected** 3.4

Date and initials of person examining contents: VF 9/9

Temperature should be above freezing to 6°C

Chain of Custody present:	☒Yes ☐No ☐N/A	
Chain of Custody relinquished:	☒Yes ☐No ☐N/A	
Samples arrived within holding time:	☑Yes ☐No ☐N/A	
Short Hold Time analyses (<72hr):	☐Yes ☒No ☐N/A	
Rush Turn Around Time requested:	☐Yes ☒No ☐N/A	
Sufficient volume:	☒Yes ☐No ☐N/A	
Correct containers used:	☑Yes ☐No ☐N/A	
Pace containers used:	☒Yes ☐No ☐N/A	
Containers intact:	☒Yes ☐No ☐N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	☐Yes ☐No ☒N/A	
Filtered volume received for dissolved tests?	☐Yes ☐No ☒N/A	
Sample labels match COC: Date / time / ID / analyses	☒Yes ☐No ☐N/A	
Samples contain multiple phases? Matrix: WT	☐Yes ☒No ☐N/A	
Containers requiring pH preservation in compliance? (HNO_3, H_2SO_4, HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO) LOT#: 67187	☒Yes ☐No ☐N/A	List sample IDs, volumes, lot #'s of preservative and the date/time added.
Cyanide water sample checks: Lead acetate strip turns dark? (Record only)	☐Yes ☐No	
Potassium iodide test strip turns blue/purple? (Preserve)	☐Yes ☐No	
Trip Blank present:	☐Yes ☐No ☒N/A	
Headspace in VOA vials (>6mm):	☐Yes ☐No ☒N/A	
Samples from USDA Regulated Area: State:	☐Yes ☐No ☒N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	☐Yes ☐No ☒N/A	

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

Pace Analytical
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A — **Required** Client Information:

Company:	EVERGY KANSAS CENTRAL, INC.
Address:	400 E Van Buren St
	Suite 545 Phoenix, AZ 85004
Email To:	skaney@haleyaldrdich.com
Phone: 507-251-2232	Fax:
Requested Due Date/TAT:	

Section B — **Required** Project Information:

Report To:	Jake Humphrey
Copy To:	Laura Hines, Samantha Kaney
Purchase Order No.:	10JEC-0000047747
Project Name:	LEC Inactive Ash Pond
Project Number:	

Section C — Invoice Information:

Attention:	Accounts Payable
Company Name:	EVERGY KANSAS CENTRAL, INC
Address:	SEE SECTION A
Pace Quote Reference:	
Pace Project Manager:	Alice Spiller, 913-563-1403
Pace Profile #:	9657, 9

REGULATORY AGENCY

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

Site Location **STATE:** KS

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
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

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

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED: COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	200.7 B,Ba,Ca	200.8 As, Co,Mo	6010 Lithium	Total dissolved solids	300.0 Cl, F, S	pH	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																		Y/N	N	N	N	N	N	N		
1	MW-37-090723	WT	G	NA	NA	9/7/23	11:25	-	4	3		1							X	X	X	X	X	X		
2	MW-38-090723	WT	G	NA	NA	09/07/23	9:35	-	4	3		1							X	X	X	X	X	X		
3	MW-39-090723	WT	G	NA	NA	09/07/23	10:30	-	4	3		1							X	X	X	X	X	X		
4	MW-40-090723	WT	G	NA	NA	09/07/23	11:20	-	4	3		1							X	X	X	X	X	X		
5	MW-K-090723	WT	G	NA	NA	09/07/23	12:05	-	4	3		1							X	X	X	X	X	X		
6	MW-L-090723	WT	G	NA	NA	09/07/23	11:25	-	4	3		1							X	X	X	X	X	X		
7	LEC IAP-DUP-090723	WT	G	NA	NA	09/07/23	15:10	-	4	3		1							X	X	X	X	X	X		
8																										
9																										
10																										
11																										
12																										

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	Jason R. Franks / SCS	9/8/23	15:00	JA Pace	9/8/23	1500	3-4	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Jason R. JASON R. FRANKS

SIGNATURE of SAMPLER: Jason R. Franks DATE Signed (MM/DD/YY): 9/8/23

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

Client: Eversy

Profile # 9657 Line 9

Site: LEC Inactive Ash Pond

Notes

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

Container Codes

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

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

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

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

Work Order Number: 60443718

ATTACHMENT 2-2
December 2023 Annual Assessment Sampling Event
Laboratory Analytical Report

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

January 02, 2024

Jake Humphrey
Evergy, Inc.
818 S Kansas Avenue
Topeka, KS 66612

RE: Project: LEC INACTIVE ASH POND CCR-Revised Report
Pace Project No.: 60443805

Dear Jake Humphrey:

Enclosed are the analytical results for sample(s) received by the laboratory on December 11, 2023. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Greensburg

REVISED to include QC Sheets in final report package. No data was changed.

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

Sincerely,

Alice Spiller

Alice Spiller
alice.spiller@pacelabs.com
(913)599-5665
PM Lab Management

Enclosures

cc: Shelly Gomez, Evergy
Laura Hines, Evergy, Inc.
Shannon Hughes, Evergy
Adam Irvin, Evergy
Samantha Kaney, Haley & Aldrich
Melanie Satanek, Haley Aldrich
Adriana Sosa, Haley & Aldrich, Inc.
Andrew Watson, Haley & Aldrich

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CERTIFICATIONS

Project: LEC INACTIVE ASH POND CCR-Revised Report
Pace Project No.: 60443805

Pace Analytical Services Pennsylvania

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

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SAMPLE SUMMARY

Project: LEC INACTIVE ASH POND CCR-Revised Report
Pace Project No.: 60443805

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60443805001	**MW-37-121123**	Water	12/11/23 10:25	12/11/23 16:45
60443805002	**MW-38-121123**	Water	12/11/23 11:15	12/11/23 16:45
60443805003	**MW-39-121123**	Water	12/11/23 13:05	12/11/23 16:45
60443805004	**MW-40-121123**	Water	12/11/23 13:45	12/11/23 16:45
60443805005	**MW-K-121123**	Water	12/11/23 11:50	12/11/23 16:45
60443805006	**MW-L-121123**	Water	12/11/23 12:35	12/11/23 16:45
60443805007	**LEC IAP-DUP-121123**	Water	12/11/23 11:50	12/11/23 16:45

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SAMPLE ANALYTE COUNT

Project: LEC INACTIVE ASH POND CCR-Revised Report
Pace Project No.: 60443805

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60443805001	**MW-37-121123**	EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
60443805002	**MW-38-121123**	EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
60443805003	**MW-39-121123**	EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
60443805004	**MW-40-121123**	EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
60443805005	**MW-K-121123**	EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
60443805006	**MW-L-121123**	EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
60443805007	**LEC IAP-DUP-121123**	EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

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PROJECT NARRATIVE

Project: LEC INACTIVE ASH POND CCR-Revised Report
Pace Project No.: 60443805

Method: **EPA 903.1**
Description: 903.1 Radium 226
Client: Evergy Kansas Central, Inc.
Date: January 02, 2024

General Information:
7 samples were analyzed for EPA 903.1 by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: LEC INACTIVE ASH POND CCR-Revised Report
Pace Project No.: 60443805

Method: **EPA 904.0**
Description: 904.0 Radium 228
Client: Evergy Kansas Central, Inc.
Date: January 02, 2024

General Information:
7 samples were analyzed for EPA 904.0 by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: LEC INACTIVE ASH POND CCR-Revised Report
Pace Project No.: 60443805

Method: **Total Radium Calculation**
Description: Total Radium 228+226
Client: Evergy Kansas Central, Inc.
Date: January 02, 2024

General Information:
7 samples were analyzed for Total Radium Calculation by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: LEC INACTIVE ASH POND CCR-Revised Report
Pace Project No.: 60443805

Sample: MW-37-121123 **Lab ID: 60443805001** Collected: 12/11/23 10:25 Received: 12/11/23 16:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.135 ± 0.593 (1.23) C:NA T:86%**	pCi/L	12/28/23 12:43	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.884 ± 0.411 (0.680) C:86% T:78%**	pCi/L	12/28/23 12:31	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.884 ± 1.00 (1.91)**	pCi/L	12/29/23 10:12	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: LEC INACTIVE ASH POND CCR-Revised Report
Pace Project No.: 60443805

Sample: MW-38-121123 **Lab ID: 60443805002** Collected: 12/11/23 11:15 Received: 12/11/23 16:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.466 ± 0.778 (1.35) C:NA T:80%**	pCi/L	12/28/23 12:43	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.843 ± 0.387 (0.642) C:86% T:83%**	pCi/L	12/28/23 12:31	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.31 ± 1.17 (1.99)**	pCi/L	12/29/23 10:12	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: LEC INACTIVE ASH POND CCR-Revised Report
Pace Project No.: 60443805

Sample: MW-39-121123 **Lab ID: 60443805003** Collected: 12/11/23 13:05 Received: 12/11/23 16:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.0701 ± 0.567 (1.17) C:NA T:90%**	pCi/L	12/28/23 12:43	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.18 ± 0.437 (0.618) C:82% T:81%**	pCi/L	12/28/23 12:31	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.18 ± 1.00 (1.79)**	pCi/L	12/29/23 10:12	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: LEC INACTIVE ASH POND CCR-Revised Report
Pace Project No.: 60443805

Sample: MW-40-121123 **Lab ID: 60443805004** Collected: 12/11/23 13:45 Received: 12/11/23 16:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.651 ± 0.603 (0.918) C:NA T:90%**	pCi/L	12/28/23 12:43	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.964 ± 0.409 (0.646) C:83% T:81%**	pCi/L	12/28/23 12:31	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.62 ± 1.01 (1.56)**	pCi/L	12/29/23 10:12	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: LEC INACTIVE ASH POND CCR-Revised Report
Pace Project No.: 60443805

Sample: MW-K-121123 **Lab ID: 60443805005** Collected: 12/11/23 11:50 Received: 12/11/23 16:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.272 ± 0.462 (0.815) C:NA T:85%**	pCi/L	12/28/23 12:43	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.990 ± 0.423 (0.678) C:86% T:79%**	pCi/L	12/28/23 12:31	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.26 ± 0.885 (1.49)**	pCi/L	12/29/23 10:12	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: LEC INACTIVE ASH POND CCR-Revised Report
Pace Project No.: 60443805

Sample: MW-L-121123 **Lab ID: 60443805006** Collected: 12/11/23 12:35 Received: 12/11/23 16:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.205 ± 0.312 (0.820) C:NA T:95%**	pCi/L	12/28/23 12:56	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.73 ± 0.523 (0.631) C:87% T:84%**	pCi/L	12/28/23 12:31	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.73 ± 0.835 (1.45)**	pCi/L	12/29/23 10:12	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: LEC INACTIVE ASH POND CCR-Revised Report
Pace Project No.: 60443805

Sample: LEC IAP-DUP-121123 **Lab ID: 60443805007** Collected: 12/11/23 11:50 Received: 12/11/23 16:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.000 ± 0.326 (0.525) C:NA T:86%**	pCi/L	12/28/23 12:56	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.864 ± 0.416 (0.707) C:84% T:81%**	pCi/L	12/28/23 12:31	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.864 ± 0.742 (1.23)**	pCi/L	12/29/23 10:12	7440-14-4	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: LEC INACTIVE ASH POND CCR-Revised Report
Pace Project No.: 60443805

QC Batch: 637317 Analysis Method: EPA 903.1
QC Batch Method: EPA 903.1 Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 60443805001, 60443805002, 60443805003, 60443805004, 60443805005, 60443805006, 60443805007

METHOD BLANK: 3108410 Matrix: Water
Associated Lab Samples: 60443805001, 60443805002, 60443805003, 60443805004, 60443805005, 60443805006, 60443805007

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.152 ± 0.233 (0.374) C:NA T:91%	pCi/L	12/28/23 12:43	

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: LEC INACTIVE ASH POND CCR-Revised Report
Pace Project No.: 60443805

QC Batch: 637318 Analysis Method: EPA 904.0
QC Batch Method: EPA 904.0 Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 60443805001, 60443805002, 60443805003, 60443805004, 60443805005, 60443805006, 60443805007

METHOD BLANK: 3108411 Matrix: Water
Associated Lab Samples: 60443805001, 60443805002, 60443805003, 60443805004, 60443805005, 60443805006, 60443805007

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.509 ± 0.311 (0.570) C:86% T:88%	pCi/L	12/28/23 12:30	

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

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: LEC INACTIVE ASH POND CCR-Revised Report
Pace Project No.: 60443805

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

Act - Activity

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

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: LEC INACTIVE ASH POND CCR-Revised Report
Pace Project No.: 60443805

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60443805001	**MW-37-121123**	EPA 903.1	637317		
60443805002	**MW-38-121123**	EPA 903.1	637317		
60443805003	**MW-39-121123**	EPA 903.1	637317		
60443805004	**MW-40-121123**	EPA 903.1	637317		
60443805005	**MW-K-121123**	EPA 903.1	637317		
60443805006	**MW-L-121123**	EPA 903.1	637317		
60443805007	**LEC IAP-DUP-121123**	EPA 903.1	637317		
60443805001	**MW-37-121123**	EPA 904.0	637318		
60443805002	**MW-38-121123**	EPA 904.0	637318		
60443805003	**MW-39-121123**	EPA 904.0	637318		
60443805004	**MW-40-121123**	EPA 904.0	637318		
60443805005	**MW-K-121123**	EPA 904.0	637318		
60443805006	**MW-L-121123**	EPA 904.0	637318		
60443805007	**LEC IAP-DUP-121123**	EPA 904.0	637318		
60443805001	**MW-37-121123**	Total Radium Calculation	639214		
60443805002	**MW-38-121123**	Total Radium Calculation	639214		
60443805003	**MW-39-121123**	Total Radium Calculation	639214		
60443805004	**MW-40-121123**	Total Radium Calculation	639214		
60443805005	**MW-K-121123**	Total Radium Calculation	639214		
60443805006	**MW-L-121123**	Total Radium Calculation	639214		
60443805007	**LEC IAP-DUP-121123**	Total Radium Calculation	639214		

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-LENE-0009_San	WO# : 60443805
	Revision: 2	Effective Date: 01/12/2022	Issued By: Lenexa

Client Name: Evergy Kansas Central, Inc.

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

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

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

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

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

Cooler Temperature (°C): **As-read** 2.7 **Corr. Factor** -0.3 **Corrected** 2.4 / 2.2

Date and initials of person examining contents: 12/13/23 JA

Temperature should be above freezing to 6°C 2-5

Chain of Custody present:	☑Yes ☐No ☐N/A	
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	
Samples arrived within holding time:	☑Yes ☐No ☐N/A	
Short Hold Time analyses (<72hr):	☐Yes ☑No ☐N/A	
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	
Sufficient volume:	☑Yes ☐No ☐N/A	
Correct containers used:	☑Yes ☐No ☐N/A	
Pace containers used:	☑Yes ☐No ☐N/A	
Containers intact:	☑Yes ☐No ☐N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	☐Yes ☐No ☑N/A	
Filtered volume received for dissolved tests?	☐Yes ☐No ☑N/A	
Sample labels match COC: Date / time / ID / analyses	☑Yes ☐No ☐N/A	
Samples contain multiple phases? Matrix: WT	☐Yes ☑No ☐N/A	
Containers requiring pH preservation in compliance? (HNO_3, H_2SO_4, HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO) LOT#: 6718	☑Yes ☐No ☐N/A	List sample IDs, volumes, lot #'s of preservative and the date/time added.
Cyanide water sample checks: Lead acetate strip turns dark? (Record only)	☐Yes ☐No	
Potassium iodide test strip turns blue/purple? (Preserve)	☐Yes ☐No	
Trip Blank present:	☐Yes ☐No ☑N/A	
Headspace in VOA vials (>6mm):	☐Yes ☐No ☑N/A	
Samples from USDA Regulated Area: State:	☐Yes ☐No ☑N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	☐Yes ☐No ☑N/A	

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

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www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: of

Section A Required Client Information:

Company:	EVERGY KANSAS CENTRAL, INC.
Address:	400 E. Van Buren St
	Suite 545 Phoenix, AZ 85004
Email To:	skaney@haleyaldrich.com
Phone: 507-251-2232	Fax:
Requested Due Date/TAT:	

Section B Required Project Information:

Report To:	Jake Humphrey
Copy To:	Laura Hines, Samantha Kaney, Melissa Michels
Purchase Order No.:	10JEC-0000047747
Project Name:	LEC Inactive Ash Pond CCR
Project Number:	

Section C Invoice Information:

Attention:	Accounts Payable
Company Name:	EVERGY KANSAS CENTRAL, INC
Address:	SEE SECTION A
Pace Quote Reference:	
Pace Project Manager:	Alice Spiller, 913-563-1403
Pace Profile #:	9657, 9

REGULATORY AGENCY

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

Site Location STATE: KS

Section D Required Client Information

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

Valid Matrix Codes

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

ITEM #	Sample ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	200.8 Sb,As,Ba,Be,Cd,Cr	Cr,Co,Pb,Mo,Se,Tl	6010 Lithium	245.1 Mercury	300.0 Fluoride		Radium 226/228+combine	Radium QC Sheets					Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-37-121123	WT				12/11/23	10:25		2			2													x	x					6-44380S
2	MW-38-121123	WT				12/11/23	11:15		2			2													x	x					
3	MW-39-121123	WT				12/11/23	13:05		2			2													x	x					
4	MW-40-121123	WT				12/11/23	13:45		2			2													x	x					
5	MW-K-121123	WT				12/11/23	11:50		2			2													x	x					
6	MW-L-121123	WT				12/11/23	12:35		2			2													x	x					
7	LEC IAP-DUP-121123	WT				12/11/23	11:50		2			2													x	x					
8																																
9																																
10																																
11																																
12																																

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	Matt VanderPutten SCS	12/11/23	16:00		12/11	1645	2.4	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Matt VanderPutten

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 12/11/23

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

Client: Evergy Kansas Central, Inc. Profile # 9657, 7

Site: LEC Inactive Ash Pond CCR Notes

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

Container Codes

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

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

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

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

Work Order Number: 60443805

Internal Transfer Chain of Custody

☐ Rush Multiplier____X
☐ Samples Pre-Logged into eCOC

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

Workorder: 60443805 **Workorder Name:** LEC INACTIVE ASH POND CCR

Owner Received Date: 12/11/2023 **Results Requested By:** 1/11/2024

Report To	Subcontract To
Alice Spiller 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

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers HNO3						Requested Analysis: Radium 226/228 combined + QC	Radium 226	Radium 228										LAB USE ONLY
1	MW-37-121123	PS	12/11/2023 10:25	60443805001	Water	2						X	X	X										001
2	MW-38-121123	PS	12/11/2023 11:15	60443805002	Water	2						X	X	X										002
3	MW-39-121123	PS	12/11/2023 13:05	60443805003	Water	2						X	X	X										003
4	MW-40-121123	PS	12/11/2023 13:45	60443805004	Water	2						X	X	X										004
5	MW-K-121123	PS	12/11/2023 11:50	60443805005	Water	2						X	X	X										005
6	MW-L-121123	PS	12/11/2023 12:35	60443805006	Water	2						X	X	X										006
7	LEC IAP-DUP-121123	PS	12/11/2023 11:50	60443805007	Water	2						X	X	X										007

Transfers	Released By	Date/Time	Received By	Date/Time
1	[signature]	12.13.23 1700	[signature]	12.14.23 0930
2				
3				

Comments: KS sample location: 60-R28-NATIO

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

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

WO# : 30647688
30647688

DC#_Title: ENV-FRM-GBUR-0088 v06_Sample Condition Upon Receipt-Pittsburgh

Effective Date: 09/20/2023

WO# : 30647688

PM: MAR **Due Date: 01/08/24**

CLIENT: PACE_60_LEKS

Client Name: Pace - KS

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

Tracking Number: 6432 1396 0851

Initial / Date

Examined By: PS 12/17/23

Labeled By: PS 12/18/23

Temped By: ____

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

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

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

Temp should be above freezing to 6°C

Comments:	Yes	No	NA	pH paper Lot# 1000134 / D.P.D. Residual Chlorine Lot #
Chain of Custody Present	✓			1.
Chain of Custody Filled Out:	✓			2.
-Were client corrections present on COC		✓		
Chain of Custody Relinquished	✓			3.
Sampler Name & Signature on COC:		✓		4.
Sample Labels match COC:	✓			5.
-Includes date/time/ID				
Matrix:	WT			
Samples Arrived within Hold Time:	✓			6.
Short Hold Time Analysis (<72hr remaining):	✓			7.
Rush Turn Around Time Requested:		✓		8.
Sufficient Volume:	✓			9.
Correct Containers Used:	✓			10.
-Pace Containers Used	✓			
Containers Intact:	✓			11.
Orthophosphate field filtered:			✓	12.
Hex Cr Aqueous samples field filtered:			✓	13.
Organic Samples checked for dechlorination			✓	14:
Filtered volume received for dissolved tests:			✓	15:
All containers checked for preservation:	✓			16.
exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, non-aqueous matrix				pH<2
All containers meet method preservation requirements:	✓			Initial when completed PS / Date/Time of Preservation / Lot# of added Preservative
8260C/D: Headspace in VOA Vials (> 6mm)			✓	17.
624.1: Headspace in VOA Vials (0mm)			✓	18.
Trip Blank Present:			✓	Trip blank custody seal present? YES or NO
Rad Samples Screened <.05 mrem/hr.	✓			Initial when completed ES / Date: 12-14-23 / Survey Meter SN: 25014380

Comments:

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

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-226
Analyst:	LL1
Date:	12/21/2023
Batch ID:	76935
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	3108410
MB concentration:	0.152
M/B Counting Uncertainty:	0.223
MB MDC:	0.374
MB Numerical Performance Indicator:	1.34
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS76935	LCSD76935
Count Date:	12/28/2023	12/28/2023
Spike I.D.:	23-013	23-013
Spike Concentration (pCi/mL):	32.278	32.278
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.651	0.653
Target Conc. (pCi/L, g, F):	4.958	4.946
Uncertainty (Calculated):	0.233	0.232
Result (pCi/L, g, F):	3.965	5.610
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.951	1.181
Numerical Performance Indicator:	-1.99	1.08
Percent Recovery:	79.96%	113.42%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	133%	133%
Lower % Recovery Limits:	73%	73%

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date:		
Sample I.D.		
Sample MS I.D.		
Sample MSD I.D.		
Spike I.D.:		
MS/MSD Decay Corrected Spike Concentration (pCi/mL):		
Spike Volume Used in MS (mL):		
Spike Volume Used in MSD (mL):		
MS Aliquot (L, g, F):		
MS Target Conc.(pCi/L, g, F):		
MSD Aliquot (L, g, F):		
MSD Target Conc. (pCi/L, g, F):		
MS Spike Uncertainty (calculated):		
MSD Spike Uncertainty (calculated):		
Sample Result:		
Sample Result Counting Uncertainty (pCi/L, g, F):		
Sample Matrix Spike Result:		
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):		
Sample Matrix Spike Duplicate Result:		
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):		
MS Numerical Performance Indicator:		
MSD Numerical Performance Indicator:		
MS Percent Recovery:		
MSD Percent Recovery:		
MS Status vs Numerical Indicator:		
MSD Status vs Numerical Indicator:		
MS Status vs Recovery:		
MSD Status vs Recovery:		
MS/MSD Upper % Recovery Limits:		
MS/MSD Lower % Recovery Limits:		

Duplicate Sample Assessment		
Sample I.D.:	LCS76935	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD76935	
Sample Result (pCi/L, g, F):	3.965	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.951	
Sample Duplicate Result (pCi/L, g, F):	5.610	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	1.181	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	-2.127	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	34.61%	
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Fail***	
% RPD Limit:	32%	

Matrix Spike/Matrix Spike Duplicate Sample Assessment		
Sample I.D.		
Sample MS I.D.		
Sample MSD I.D.		
Sample Matrix Spike Result:		
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):		
Sample Matrix Spike Duplicate Result:		
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):		
Duplicate Numerical Performance Indicator:		
(Based on the Percent Recoveries) MS/ MSD Duplicate RPD:		
MS/ MSD Duplicate Status vs Numerical Indicator:		
MS/ MSD Duplicate Status vs RPD:		
% RPD Limit:		

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the RL.

CLM 12/28/23

Comments:

DUP NI < 3 acceptable for NON DW samples

***Batch must be re-prepped due to unacceptable precision.

JLL 12/28/23

Quality Control Sample Performance Assessment

Pace Analytical™
www.pacelabs.com

Test:	Ra-228
Analyst:	VAL
Date:	12/26/2023
Worklist:	76936
Matrix:	WT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	3108411
MB concentration:	0.509
M/B 2 Sigma CSU:	0.311
MB MDC:	0.570
MB Numerical Performance Indicator:	3.21
MB Status vs Numerical Indicator:	Fail*
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS76936	LCSD76936
Count Date:	12/28/2023	12/28/2023
Spike I.D.:	23-043	23-043
Decay Corrected Spike Concentration (pCi/mL):	38.469	38.469
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.816	0.818
Target Conc. (pCi/L, g, F):	4.712	4.705
Uncertainty (Calculated):	0.231	0.231
Result (pCi/L, g, F):	4.263	4.321
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	0.961	0.980
Numerical Performance Indicator:	-0.89	-0.75
Percent Recovery:	90.47%	91.82%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	135%	135%
Lower % Recovery Limits:	60%	60%

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date:		
Sample I.D.		
Sample MS I.D.		
Sample MSD I.D.		
Spike I.D.:		
MS/MSD Decay Corrected Spike Concentration (pCi/mL):		
Spike Volume Used in MS (mL):		
Spike Volume Used in MSD (mL):		
MS Aliquot (L, g, F):		
MS Target Conc.(pCi/L, g, F):		
MSD Aliquot (L, g, F):		
MSD Target Conc. (pCi/L, g, F):		
MS Spike Uncertainty (calculated):		
MSD Spike Uncertainty (calculated):		
Sample Result:		
Sample Result 2 Sigma CSU (pCi/L, g, F):		
Sample Matrix Spike Result:		
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):		
Sample Matrix Spike Duplicate Result:		
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):		
MS Numerical Performance Indicator:		
MSD Numerical Performance Indicator:		
MS Percent Recovery:		
MSD Percent Recovery:		
MS Status vs Numerical Indicator:		
MSD Status vs Numerical Indicator:		
MS Status vs Recovery:		
MSD Status vs Recovery:		
MS/MSD Upper % Recovery Limits:		
MS/MSD Lower % Recovery Limits:		

Duplicate Sample Assessment		
Sample I.D.:	LCS76936	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD76936	
Sample Result (pCi/L, g, F):	4.263	
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.961	
Sample Duplicate Result (pCi/L, g, F):	4.321	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	0.980	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	-0.083	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	1.49%	
Duplicate Status vs Numerical Indicator:	Pass	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	36%	

Matrix Spike/Matrix Spike Duplicate Sample Assessment		
Sample I.D.		
Sample MS I.D.		
Sample MSD I.D.		
Sample Matrix Spike Result:		
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):		
Sample Matrix Spike Duplicate Result:		
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):		
Duplicate Numerical Performance Indicator:		
(Based on the Percent Recoveries) MS/ MSD Duplicate RPD:		
MS/ MSD Duplicate Status vs Numerical Indicator:		
MS/ MSD Duplicate Status vs RPD:		
% RPD Limit:		

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

*If ~~the lowest activity sample in this batch is greater than ten times the blank value, the blank is acceptable; otherwise this batch must be re-prepped.~~

MB activity < MDC, Pass

12/29/23

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

December 27, 2023

Jake Humphrey
Evergy, Inc.
818 S Kansas Avenue
Topeka, KS 66612

RE: Project: LEC INACTIVE ASH POND CCR
Pace Project No.: 60443807

Dear Jake Humphrey:

Enclosed are the analytical results for sample(s) received by the laboratory on December 11, 2023. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Kansas City
- Pace Analytical Services - Salina

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

Sincerely,

Alice Spiller

Alice Spiller
alice.spiller@pacelabs.com
(913)599-5665
PM Lab Management

Enclosures

cc: Shelly Gomez, Evergy
Laura Hines, Evergy, Inc.
Shannon Hughes, Evergy
Adam Irvin, Evergy
Samantha Kaney, Haley & Aldrich
Melanie Satanek, Haley Aldrich
Adriana Sosa, Haley & Aldrich, Inc.
Andrew Watson, Haley & Aldrich

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

CERTIFICATIONS

Project: LEC INACTIVE ASH POND CCR
Pace Project No.: 60443807

Pace Analytical Services Kansas

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

Pace Analytical Services Salina

528 N 9th Street, Salina, KS 67401
Texas NELAP: T104704246-22-14
Oklahoma: 2022-055
Kansas: Cert No. E-10146

REPORT OF LABORATORY ANALYSIS

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

SAMPLE SUMMARY

Project: LEC INACTIVE ASH POND CCR
Pace Project No.: 60443807

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60443807001	**MW-37-121123**	Water	12/11/23 10:25	12/11/23 16:45
60443807002	**MW-38-121123**	Water	12/11/23 11:15	12/11/23 16:45
60443807003	**MW-39-121123**	Water	12/11/23 13:05	12/11/23 16:45
60443807004	**MW-40-121123**	Water	12/11/23 13:45	12/11/23 16:45
60443807005	**MW-K-121123**	Water	12/11/23 11:50	12/11/23 16:45
60443807006	**MW-L-121123**	Water	12/11/23 12:35	12/11/23 16:45
60443807007	**LEC IAP-DUP-121123**	Water	12/11/23 11:50	12/11/23 16:45

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SAMPLE ANALYTE COUNT

Project: LEC INACTIVE ASH POND CCR
Pace Project No.: 60443807

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60443807001	**MW-37-121123**	EPA 6010	JXD	1	PASI-K
		EPA 200.8	JGP	11	PASI-K
		EPA 245.1	JXD	1	PASI-K
		EPA 300.0	MLL	1	PASI-SA
60443807002	**MW-38-121123**	EPA 6010	JXD	1	PASI-K
		EPA 200.8	JGP	11	PASI-K
		EPA 245.1	JXD	1	PASI-K
		EPA 300.0	MLL	1	PASI-SA
60443807003	**MW-39-121123**	EPA 6010	JXD	1	PASI-K
		EPA 200.8	JGP	11	PASI-K
		EPA 245.1	JXD	1	PASI-K
		EPA 300.0	MLL	1	PASI-SA
60443807004	**MW-40-121123**	EPA 6010	JXD	1	PASI-K
		EPA 200.8	JGP	11	PASI-K
		EPA 245.1	JXD	1	PASI-K
		EPA 300.0	MLL	1	PASI-SA
60443807005	**MW-K-121123**	EPA 6010	JXD	1	PASI-K
		EPA 200.8	JGP	11	PASI-K
		EPA 245.1	JXD	1	PASI-K
		EPA 300.0	MLL	1	PASI-SA
60443807006	**MW-L-121123**	EPA 6010	JXD	1	PASI-K
		EPA 200.8	JGP	11	PASI-K
		EPA 245.1	JXD	1	PASI-K
		EPA 300.0	MLL	1	PASI-SA
60443807007	**LEC IAP-DUP-121123**	EPA 6010	JXD	1	PASI-K
		EPA 200.8	JGP	11	PASI-K
		EPA 245.1	JXD	1	PASI-K
		EPA 300.0	MLL	1	PASI-SA

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

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PROJECT NARRATIVE

Project: LEC INACTIVE ASH POND CCR
Pace Project No.: 60443807

Method: **EPA 6010**
Description: 6010 MET ICP
Client: Evergy Kansas Central, Inc.
Date: December 27, 2023

General Information:
7 samples were analyzed for EPA 6010 by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: LEC INACTIVE ASH POND CCR
Pace Project No.: 60443807

Method: **EPA 200.8**
Description: 200.8 MET ICPMS
Client: Evergy Kansas Central, Inc.
Date: December 27, 2023

General Information:
7 samples were analyzed for EPA 200.8 by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 200.8 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: LEC INACTIVE ASH POND CCR
Pace Project No.: 60443807

Method: **EPA 245.1**
Description: 245.1 Mercury
Client: Evergy Kansas Central, Inc.
Date: December 27, 2023

General Information:
7 samples were analyzed for EPA 245.1 by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 245.1 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 878247

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60443657001,60444502001

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

- MS (Lab ID: 3478932)
  - Mercury

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: LEC INACTIVE ASH POND CCR
Pace Project No.: 60443807

Method: **EPA 300.0**
Description: 300.0 IC Anions 28 Days
Client: Evergy Kansas Central, Inc.
Date: December 27, 2023

General Information:
7 samples were analyzed for EPA 300.0 by Pace Analytical Services Salina. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 877737

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60443319001,60443807002

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

- MS (Lab ID: 3476689)
  - Fluoride

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: LEC INACTIVE ASH POND CCR
Pace Project No.: 60443807

Sample: MW-37-121123 **Lab ID: 60443807001** Collected: 12/11/23 10:25 Received: 12/11/23 16:45 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**0.019**	mg/L	0.010	1	12/15/23 07:41	12/20/23 15:01	7439-93-2	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City							
Antimony, Total Recoverable	**<0.0010**	mg/L	0.0010	1	12/15/23 07:41	12/18/23 14:34	7440-36-0	
Arsenic, Total Recoverable	**0.0046**	mg/L	0.0010	1	12/15/23 07:41	12/18/23 14:34	7440-38-2	
Barium, Total Recoverable	**0.073**	mg/L	0.0010	1	12/15/23 07:41	12/18/23 14:34	7440-39-3	
Beryllium, Total Recoverable	**<0.00050**	mg/L	0.00050	1	12/15/23 07:41	12/18/23 14:34	7440-41-7	
Cadmium, Total Recoverable	**<0.00050**	mg/L	0.00050	1	12/15/23 07:41	12/18/23 14:34	7440-43-9	
Chromium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	12/15/23 07:41	12/18/23 14:34	7440-47-3	
Cobalt, Total Recoverable	**<0.0010**	mg/L	0.0010	1	12/15/23 07:41	12/18/23 14:34	7440-48-4	
Lead, Total Recoverable	**<0.0010**	mg/L	0.0010	1	12/15/23 07:41	12/18/23 14:34	7439-92-1	
Molybdenum, Total Recoverable	**0.071**	mg/L	0.0010	1	12/15/23 07:41	12/18/23 14:34	7439-98-7	
Selenium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	12/15/23 07:41	12/18/23 14:34	7782-49-2	
Thallium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	12/15/23 07:41	12/18/23 14:34	7440-28-0	
245.1 Mercury	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1 Pace Analytical Services - Kansas City							
Mercury	**<0.20**	ug/L	0.20	1	12/26/23 09:09	12/27/23 08:12	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Salina							
Fluoride	**0.46**	mg/L	0.20	1		12/20/23 17:08	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: LEC INACTIVE ASH POND CCR
Pace Project No.: 60443807

Sample: MW-38-121123 **Lab ID: 60443807002** Collected: 12/11/23 11:15 Received: 12/11/23 16:45 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**0.041**	mg/L	0.010	1	12/15/23 07:41	12/20/23 15:03	7439-93-2	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City							
Antimony, Total Recoverable	**<0.0010**	mg/L	0.0010	1	12/15/23 07:41	12/18/23 14:38	7440-36-0	
Arsenic, Total Recoverable	**0.018**	mg/L	0.0010	1	12/15/23 07:41	12/18/23 14:38	7440-38-2	
Barium, Total Recoverable	**0.042**	mg/L	0.0010	1	12/15/23 07:41	12/18/23 14:38	7440-39-3	
Beryllium, Total Recoverable	**<0.00050**	mg/L	0.00050	1	12/15/23 07:41	12/18/23 14:38	7440-41-7	
Cadmium, Total Recoverable	**<0.00050**	mg/L	0.00050	1	12/15/23 07:41	12/18/23 14:38	7440-43-9	
Chromium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	12/15/23 07:41	12/18/23 14:38	7440-47-3	
Cobalt, Total Recoverable	**<0.0010**	mg/L	0.0010	1	12/15/23 07:41	12/18/23 14:38	7440-48-4	
Lead, Total Recoverable	**<0.0010**	mg/L	0.0010	1	12/15/23 07:41	12/18/23 14:38	7439-92-1	
Molybdenum, Total Recoverable	**0.078**	mg/L	0.0010	1	12/15/23 07:41	12/18/23 14:38	7439-98-7	
Selenium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	12/15/23 07:41	12/18/23 14:38	7782-49-2	
Thallium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	12/15/23 07:41	12/18/23 14:38	7440-28-0	
245.1 Mercury	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1 Pace Analytical Services - Kansas City							
Mercury	**<0.20**	ug/L	0.20	1	12/26/23 09:09	12/27/23 08:14	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Salina							
Fluoride	**3.7**	mg/L	0.20	1		12/20/23 17:22	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: LEC INACTIVE ASH POND CCR
Pace Project No.: 60443807

Sample: MW-39-121123 **Lab ID: 60443807003** Collected: 12/11/23 13:05 Received: 12/11/23 16:45 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**0.036**	mg/L	0.010	1	12/15/23 07:41	12/20/23 15:05	7439-93-2	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City							
Antimony, Total Recoverable	**<0.0010**	mg/L	0.0010	1	12/15/23 07:41	12/18/23 14:41	7440-36-0	
Arsenic, Total Recoverable	**0.010**	mg/L	0.0010	1	12/15/23 07:41	12/18/23 14:41	7440-38-2	
Barium, Total Recoverable	**0.029**	mg/L	0.0010	1	12/15/23 07:41	12/18/23 14:41	7440-39-3	
Beryllium, Total Recoverable	**<0.00050**	mg/L	0.00050	1	12/15/23 07:41	12/18/23 14:41	7440-41-7	
Cadmium, Total Recoverable	**<0.00050**	mg/L	0.00050	1	12/15/23 07:41	12/18/23 14:41	7440-43-9	
Chromium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	12/15/23 07:41	12/18/23 14:41	7440-47-3	
Cobalt, Total Recoverable	**0.0011**	mg/L	0.0010	1	12/15/23 07:41	12/18/23 14:41	7440-48-4	
Lead, Total Recoverable	**<0.0010**	mg/L	0.0010	1	12/15/23 07:41	12/18/23 14:41	7439-92-1	
Molybdenum, Total Recoverable	**0.16**	mg/L	0.0010	1	12/15/23 07:41	12/18/23 14:41	7439-98-7	
Selenium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	12/15/23 07:41	12/18/23 14:41	7782-49-2	
Thallium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	12/15/23 07:41	12/18/23 14:41	7440-28-0	
245.1 Mercury	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1 Pace Analytical Services - Kansas City							
Mercury	**<0.20**	ug/L	0.20	1	12/26/23 09:09	12/27/23 08:17	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Salina							
Fluoride	**1.7**	mg/L	0.20	1		12/20/23 18:06	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: LEC INACTIVE ASH POND CCR
Pace Project No.: 60443807

Sample: MW-40-121123 **Lab ID: 60443807004** Collected: 12/11/23 13:45 Received: 12/11/23 16:45 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**0.039**	mg/L	0.010	1	12/15/23 07:41	12/20/23 15:07	7439-93-2	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City							
Antimony, Total Recoverable	**<0.0010**	mg/L	0.0010	1	12/15/23 07:41	12/18/23 14:51	7440-36-0	
Arsenic, Total Recoverable	**0.015**	mg/L	0.0010	1	12/15/23 07:41	12/18/23 14:51	7440-38-2	
Barium, Total Recoverable	**0.035**	mg/L	0.0010	1	12/15/23 07:41	12/18/23 14:51	7440-39-3	
Beryllium, Total Recoverable	**<0.00050**	mg/L	0.00050	1	12/15/23 07:41	12/18/23 14:51	7440-41-7	
Cadmium, Total Recoverable	**<0.00050**	mg/L	0.00050	1	12/15/23 07:41	12/18/23 14:51	7440-43-9	
Chromium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	12/15/23 07:41	12/18/23 14:51	7440-47-3	
Cobalt, Total Recoverable	**<0.0010**	mg/L	0.0010	1	12/15/23 07:41	12/18/23 14:51	7440-48-4	
Lead, Total Recoverable	**<0.0010**	mg/L	0.0010	1	12/15/23 07:41	12/20/23 12:47	7439-92-1	
Molybdenum, Total Recoverable	**0.056**	mg/L	0.0010	1	12/15/23 07:41	12/18/23 14:51	7439-98-7	
Selenium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	12/15/23 07:41	12/18/23 14:51	7782-49-2	
Thallium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	12/15/23 07:41	12/20/23 12:47	7440-28-0	
245.1 Mercury	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1 Pace Analytical Services - Kansas City							
Mercury	**<0.20**	ug/L	0.20	1	12/26/23 09:09	12/27/23 08:19	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Salina							
Fluoride	**1.3**	mg/L	0.20	1		12/20/23 18:20	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: LEC INACTIVE ASH POND CCR
Pace Project No.: 60443807

Sample: MW-K-121123 **Lab ID: 60443807005** Collected: 12/11/23 11:50 Received: 12/11/23 16:45 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**0.040**	mg/L	0.010	1	12/15/23 07:41	12/20/23 15:09	7439-93-2	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City							
Antimony, Total Recoverable	**<0.0010**	mg/L	0.0010	1	12/15/23 07:41	12/18/23 14:54	7440-36-0	
Arsenic, Total Recoverable	**0.056**	mg/L	0.0010	1	12/15/23 07:41	12/18/23 14:54	7440-38-2	
Barium, Total Recoverable	**0.043**	mg/L	0.0010	1	12/15/23 07:41	12/18/23 14:54	7440-39-3	
Beryllium, Total Recoverable	**<0.00050**	mg/L	0.00050	1	12/15/23 07:41	12/18/23 14:54	7440-41-7	
Cadmium, Total Recoverable	**<0.00050**	mg/L	0.00050	1	12/15/23 07:41	12/18/23 14:54	7440-43-9	
Chromium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	12/15/23 07:41	12/18/23 14:54	7440-47-3	
Cobalt, Total Recoverable	**<0.0010**	mg/L	0.0010	1	12/15/23 07:41	12/18/23 14:54	7440-48-4	
Lead, Total Recoverable	**<0.0010**	mg/L	0.0010	1	12/15/23 07:41	12/18/23 14:54	7439-92-1	
Molybdenum, Total Recoverable	**0.021**	mg/L	0.0010	1	12/15/23 07:41	12/18/23 14:54	7439-98-7	
Selenium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	12/15/23 07:41	12/18/23 14:54	7782-49-2	
Thallium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	12/15/23 07:41	12/18/23 14:54	7440-28-0	
245.1 Mercury	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1 Pace Analytical Services - Kansas City							
Mercury	**<0.20**	ug/L	0.20	1	12/26/23 09:09	12/27/23 08:21	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Salina							
Fluoride	**3.5**	mg/L	0.20	1		12/20/23 18:34	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: LEC INACTIVE ASH POND CCR
Pace Project No.: 60443807

Sample: MW-L-121123 **Lab ID: 60443807006** Collected: 12/11/23 12:35 Received: 12/11/23 16:45 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**0.076**	mg/L	0.010	1	12/15/23 07:41	12/20/23 15:11	7439-93-2	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City							
Antimony, Total Recoverable	**<0.0010**	mg/L	0.0010	1	12/15/23 07:41	12/19/23 12:33	7440-36-0	
Arsenic, Total Recoverable	**0.026**	mg/L	0.0010	1	12/15/23 07:41	12/18/23 14:57	7440-38-2	
Barium, Total Recoverable	**0.032**	mg/L	0.0010	1	12/15/23 07:41	12/19/23 12:33	7440-39-3	
Beryllium, Total Recoverable	**<0.00050**	mg/L	0.00050	1	12/15/23 07:41	12/18/23 14:57	7440-41-7	
Cadmium, Total Recoverable	**<0.00050**	mg/L	0.00050	1	12/15/23 07:41	12/18/23 14:57	7440-43-9	
Chromium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	12/15/23 07:41	12/18/23 14:57	7440-47-3	
Cobalt, Total Recoverable	**<0.0010**	mg/L	0.0010	1	12/15/23 07:41	12/18/23 14:57	7440-48-4	
Lead, Total Recoverable	**<0.0010**	mg/L	0.0010	1	12/15/23 07:41	12/19/23 12:33	7439-92-1	
Molybdenum, Total Recoverable	**0.044**	mg/L	0.0010	1	12/15/23 07:41	12/18/23 14:57	7439-98-7	
Selenium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	12/15/23 07:41	12/18/23 14:57	7782-49-2	
Thallium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	12/15/23 07:41	12/19/23 12:33	7440-28-0	
245.1 Mercury	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1 Pace Analytical Services - Kansas City							
Mercury	**<0.20**	ug/L	0.20	1	12/26/23 09:09	12/27/23 08:28	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Salina							
Fluoride	**3.2**	mg/L	0.20	1		12/20/23 21:10	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: LEC INACTIVE ASH POND CCR
Pace Project No.: 60443807

Sample: LEC IAP-DUP-121123 **Lab ID: 60443807007** Collected: 12/11/23 11:50 Received: 12/11/23 16:45 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**0.042**	mg/L	0.010	1	12/15/23 07:41	12/20/23 15:13	7439-93-2	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City							
Antimony, Total Recoverable	**<0.0010**	mg/L	0.0010	1	12/15/23 07:41	12/18/23 15:00	7440-36-0	
Arsenic, Total Recoverable	**0.056**	mg/L	0.0010	1	12/15/23 07:41	12/18/23 15:00	7440-38-2	
Barium, Total Recoverable	**0.044**	mg/L	0.0010	1	12/15/23 07:41	12/18/23 15:00	7440-39-3	
Beryllium, Total Recoverable	**<0.00050**	mg/L	0.00050	1	12/15/23 07:41	12/18/23 15:00	7440-41-7	
Cadmium, Total Recoverable	**<0.00050**	mg/L	0.00050	1	12/15/23 07:41	12/18/23 15:00	7440-43-9	
Chromium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	12/15/23 07:41	12/18/23 15:00	7440-47-3	
Cobalt, Total Recoverable	**<0.0010**	mg/L	0.0010	1	12/15/23 07:41	12/18/23 15:00	7440-48-4	
Lead, Total Recoverable	**<0.0010**	mg/L	0.0010	1	12/15/23 07:41	12/20/23 12:50	7439-92-1	
Molybdenum, Total Recoverable	**0.022**	mg/L	0.0010	1	12/15/23 07:41	12/18/23 15:00	7439-98-7	
Selenium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	12/15/23 07:41	12/18/23 15:00	7782-49-2	
Thallium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	12/15/23 07:41	12/20/23 12:50	7440-28-0	
245.1 Mercury	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1 Pace Analytical Services - Kansas City							
Mercury	**<0.20**	ug/L	0.20	1	12/26/23 09:09	12/27/23 08:30	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Salina							
Fluoride	**3.5**	mg/L	0.20	1		12/20/23 21:24	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: LEC INACTIVE ASH POND CCR
Pace Project No.: 60443807

QC Batch: 878247 Analysis Method: EPA 245.1
QC Batch Method: EPA 245.1 Analysis Description: 245.1 Mercury
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60443807001, 60443807002, 60443807003, 60443807004, 60443807005, 60443807006, 60443807007

METHOD BLANK: 3478928 Matrix: Water
Associated Lab Samples: 60443807001, 60443807002, 60443807003, 60443807004, 60443807005, 60443807006, 60443807007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	<0.20	0.20	12/27/23 08:01	

LABORATORY CONTROL SAMPLE: 3478929

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.0	99	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3478930 3478931

Parameter	Units	60443657001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	5	5	4.9	5.1	99	103	70-130	4	20	

MATRIX SPIKE SAMPLE: 3478932

Parameter	Units	60444502001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	ND	5	3.2	64	70-130	M1

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: LEC INACTIVE ASH POND CCR
Pace Project No.: 60443807

QC Batch: 877233
QC Batch Method: EPA 200.8
Analysis Method: EPA 200.8
Analysis Description: 200.8 MET
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60443807001, 60443807002, 60443807003, 60443807004, 60443807005, 60443807006, 60443807007

METHOD BLANK: 3474531 Matrix: Water
Associated Lab Samples: 60443807001, 60443807002, 60443807003, 60443807004, 60443807005, 60443807006, 60443807007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	mg/L	<0.0010	0.0010	12/18/23 13:59	
Arsenic	mg/L	<0.0010	0.0010	12/18/23 13:59	
Barium	mg/L	<0.0010	0.0010	12/18/23 13:59	
Beryllium	mg/L	<0.00050	0.00050	12/18/23 13:59	
Cadmium	mg/L	<0.00050	0.00050	12/18/23 13:59	
Chromium	mg/L	<0.0010	0.0010	12/18/23 13:59	
Cobalt	mg/L	<0.0010	0.0010	12/18/23 13:59	
Lead	mg/L	<0.0010	0.0010	12/18/23 13:59	
Molybdenum	mg/L	<0.0010	0.0010	12/18/23 13:59	
Selenium	mg/L	<0.0010	0.0010	12/18/23 13:59	
Thallium	mg/L	<0.0010	0.0010	12/18/23 13:59	

LABORATORY CONTROL SAMPLE: 3474532

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.04	0.040	99	85-115	
Arsenic	mg/L	0.04	0.041	102	85-115	
Barium	mg/L	0.04	0.040	100	85-115	
Beryllium	mg/L	0.04	0.040	99	85-115	
Cadmium	mg/L	0.04	0.041	103	85-115	
Chromium	mg/L	0.04	0.040	99	85-115	
Cobalt	mg/L	0.04	0.041	102	85-115	
Lead	mg/L	0.04	0.042	104	85-115	
Molybdenum	mg/L	0.04	0.039	98	85-115	
Selenium	mg/L	0.04	0.041	103	85-115	
Thallium	mg/L	0.04	0.040	100	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3474533 3474534

Parameter	Units	60443833002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/L	<0.0010	0.04	0.04	0.039	0.039	97	98	70-130	1	20	
Arsenic	mg/L	<0.0010	0.04	0.04	0.040	0.041	99	101	70-130	2	20	
Barium	mg/L	23.8 ug/L	0.04	0.04	0.065	0.065	103	103	70-130	0	20	
Beryllium	mg/L	<0.50 ug/L	0.04	0.04	0.033	0.034	83	85	70-130	3	20	
Cadmium	mg/L	<0.00050	0.04	0.04	0.037	0.038	93	94	70-130	1	20	
Chromium	mg/L	<1.0 ug/L	0.04	0.04	0.040	0.041	99	101	70-130	2	20	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: LEC INACTIVE ASH POND CCR
Pace Project No.: 60443807

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3474533 3474534

Parameter	Units	60443833002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Cobalt	mg/L	<0.0010	0.04	0.04	0.040	0.041	98	100	70-130	1	20	
Lead	mg/L	<1.0 ug/L	0.04	0.04	0.039	0.039	97	97	70-130	0	20	
Molybdenum	mg/L	0.0023	0.04	0.04	0.043	0.043	101	102	70-130	1	20	
Selenium	mg/L	<0.0010	0.04	0.04	0.039	0.039	98	99	70-130	0	20	
Thallium	mg/L	<0.0010	0.04	0.04	0.038	0.038	95	96	70-130	1	20	

MATRIX SPIKE SAMPLE: 3474535

Parameter	Units	60443807003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	<0.0010	0.04	0.038	94	70-130	
Arsenic	mg/L	0.010	0.04	0.051	102	70-130	
Barium	mg/L	0.029	0.04	0.070	103	70-130	
Beryllium	mg/L	<0.00050	0.04	0.031	76	70-130	
Cadmium	mg/L	<0.00050	0.04	0.035	87	70-130	
Chromium	mg/L	<0.0010	0.04	0.041	102	70-130	
Cobalt	mg/L	0.0011	0.04	0.041	101	70-130	
Lead	mg/L	<0.0010	0.04	0.038	95	70-130	
Molybdenum	mg/L	0.16	0.04	0.20	109	70-130	
Selenium	mg/L	<0.0010	0.04	0.041	103	70-130	
Thallium	mg/L	<0.0010	0.04	0.038	96	70-130	

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REPORT OF LABORATORY ANALYSIS

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Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: LEC INACTIVE ASH POND CCR
Pace Project No.: 60443807

QC Batch: 877231
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60443807001, 60443807002, 60443807003, 60443807004, 60443807005, 60443807006, 60443807007

METHOD BLANK: 3474523 Matrix: Water
Associated Lab Samples: 60443807001, 60443807002, 60443807003, 60443807004, 60443807005, 60443807006, 60443807007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lithium	mg/L	<0.010	0.010	12/20/23 14:33	

LABORATORY CONTROL SAMPLE: 3474524

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lithium	mg/L	1	1.0	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3474525 3474526

Parameter	Units	60443833001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lithium	mg/L	0.020	1	1	1.1	1.1	107	110	75-125	3	20	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: LEC INACTIVE ASH POND CCR
Pace Project No.: 60443807

QC Batch: 877737
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Salina
Associated Lab Samples: 60443807001, 60443807002, 60443807003, 60443807004, 60443807005, 60443807006, 60443807007

METHOD BLANK: 3476687 Matrix: Water
Associated Lab Samples: 60443807001, 60443807002, 60443807003, 60443807004, 60443807005, 60443807006, 60443807007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Fluoride	mg/L	ND	0.20	12/20/23 13:35	

LABORATORY CONTROL SAMPLE: 3476688

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	2.5	2.5	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3476689 3476690

Parameter	Units	60443319001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Fluoride	mg/L	0.72	2.5	2.5	2.7	2.7	78	80	80-120	2	15	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3476691 3476692

Parameter	Units	60443807002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Fluoride	mg/L	3.7	2.5	2.5	6.3	6.2	104	102	80-120	1	15	

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

REPORT OF LABORATORY ANALYSIS

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

QUALIFIERS

Project: LEC INACTIVE ASH POND CCR
Pace Project No.: 60443807

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

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

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: LEC INACTIVE ASH POND CCR
Pace Project No.: 60443807

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60443807001	**MW-37-121123**	EPA 3010	877231	EPA 6010	877246
60443807002	**MW-38-121123**	EPA 3010	877231	EPA 6010	877246
60443807003	**MW-39-121123**	EPA 3010	877231	EPA 6010	877246
60443807004	**MW-40-121123**	EPA 3010	877231	EPA 6010	877246
60443807005	**MW-K-121123**	EPA 3010	877231	EPA 6010	877246
60443807006	**MW-L-121123**	EPA 3010	877231	EPA 6010	877246
60443807007	**LEC IAP-DUP-121123**	EPA 3010	877231	EPA 6010	877246
60443807001	**MW-37-121123**	EPA 200.8	877233	EPA 200.8	877247
60443807002	**MW-38-121123**	EPA 200.8	877233	EPA 200.8	877247
60443807003	**MW-39-121123**	EPA 200.8	877233	EPA 200.8	877247
60443807004	**MW-40-121123**	EPA 200.8	877233	EPA 200.8	877247
60443807005	**MW-K-121123**	EPA 200.8	877233	EPA 200.8	877247
60443807006	**MW-L-121123**	EPA 200.8	877233	EPA 200.8	877247
60443807007	**LEC IAP-DUP-121123**	EPA 200.8	877233	EPA 200.8	877247
60443807001	**MW-37-121123**	EPA 245.1	878247	EPA 245.1	878380
60443807002	**MW-38-121123**	EPA 245.1	878247	EPA 245.1	878380
60443807003	**MW-39-121123**	EPA 245.1	878247	EPA 245.1	878380
60443807004	**MW-40-121123**	EPA 245.1	878247	EPA 245.1	878380
60443807005	**MW-K-121123**	EPA 245.1	878247	EPA 245.1	878380
60443807006	**MW-L-121123**	EPA 245.1	878247	EPA 245.1	878380
60443807007	**LEC IAP-DUP-121123**	EPA 245.1	878247	EPA 245.1	878380
60443807001	**MW-37-121123**	EPA 300.0	877737		
60443807002	**MW-38-121123**	EPA 300.0	877737		
60443807003	**MW-39-121123**	EPA 300.0	877737		
60443807004	**MW-40-121123**	EPA 300.0	877737		
60443807005	**MW-K-121123**	EPA 300.0	877737		
60443807006	**MW-L-121123**	EPA 300.0	877737		
60443807007	**LEC IAP-DUP-121123**	EPA 300.0	877737		

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-LENE-0009_San	WO# : 60443807
	Revision: 2	Effective Date: 01/12/

Client Name: Evergy Kansas Central, Inc.

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

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

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

Packing Material: Bubble Wrap ☐ Bubble Bags ☐ Foam ☐ None ☐ Other ☑ 2PLC

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

Cooler Temperature (°C): **As-read** 2.7 **Corr. Factor** -0.3 **Corrected** 2.4 / 2.2

Temperature should be above freezing to 6°C 2-5

Date and initials of person examining contents: 12/13/23 JA

Chain of Custody present:	☑Yes ☐No ☐N/A	
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	
Samples arrived within holding time:	☑Yes ☐No ☐N/A	
Short Hold Time analyses (<72hr):	☐Yes ☑No ☐N/A	
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	
Sufficient volume:	☑Yes ☐No ☐N/A	
Correct containers used:	☑Yes ☐No ☐N/A	
Pace containers used:	☑Yes ☐No ☐N/A	
Containers intact:	☑Yes ☐No ☐N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	☐Yes ☐No ☑N/A	
Filtered volume received for dissolved tests?	☐Yes ☐No ☑N/A	
Sample labels match COC: Date / time / ID / analyses	☑Yes ☐No ☐N/A	
Samples contain multiple phases? Matrix: WT	☐Yes ☑No ☐N/A	
Containers requiring pH preservation in compliance? (HNO_3, H_2SO_4, HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO) **LOT#:** 67687	☑Yes ☐No ☐N/A	List sample IDs, volumes, lot #'s of preservative and the date/time added.
Cyanide water sample checks: Lead acetate strip turns dark? (Record only)	☐Yes ☐No	
Potassium iodide test strip turns blue/purple? (Preserve)	☐Yes ☐No	
Trip Blank present:	☐Yes ☐No ☑N/A	
Headspace in VOA vials (>6mm):	☐Yes ☐No ☑N/A	
Samples from USDA Regulated Area: State:	☐Yes ☐No ☑N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	☐Yes ☐No ☑N/A	

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

Pace Analytical
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: of

Section A Required Client Information:

Company:	EVERGY KANSAS CENTRAL, INC.
Address:	400 E. Van Buren St
	Suite 545 Phoenix, AZ 85004
Email To:	skaney@haleyaldrich.com
Phone: 507-251-2232	Fax:
Requested Due Date/TAT:	

Section B Required Project Information:

Report To:	Jake Humphrey
Copy To:	Laura Hines, Samantha Kaney, Melissa Michels
Purchase Order No.:	10JEC-0000047747
Project Name:	LEC Inactive Ash Pond CCR
Project Number:	

Section C Invoice Information:

Attention:	Accounts Payable
Company Name:	EVERGY KANSAS CENTRAL, INC
Address:	SEE SECTION A
Pace Quote Reference:	
Pace Project Manager:	Alice Spiller, 913-563-1403
Pace Profile #:	9657, 9

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER

☐ UST ☐ RCRA ☐ OTHER _____

Site Location STATE: KS

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
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

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

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED: COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Y/N: Analysis Test: 200.8 Sb,As,Ba,Be,Cd,Cr	Cr,Co,Pb,Mo,Se,Tl	6010 Lithium	245.1 Mercury	300.0 Fluoride		Radium 226/228+combine	Radium QC Sheets					Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-37-121123	WT				12/11/23	10:25		2	1		1						X	X	X	X	X									6044380 7
2	MW-38-121123	WT				12/11/23	11:15		2	1		1						X	X	X	X	X									
3	MW-39-121123	WT				12/11/23	13:05		2	1		1						X	X	X	X	X									
4	MW-40-121123	WT				12/11/23	13:45		2	1		1						X	X	X	X	X									
5	MW-K-121123	WT				12/11/23	11:50		2	1		1						X	X	X	X	X									
6	MW-L-121123	WT				12/11/23	12:35		2	1		1						X	X	X	X	X									
7	LEC IAP-DUP-121123	WT				12/11/23	11:50		2	1		1						X	X	X	X	X									
8																															
9																															
10																															
11																															
12																															

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Matt VanderPutten SCS	12/11/23	16:00		12/11	1645	2, 4	4	4	4

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Matt VanderPutten

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 12/11/23

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

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

Client: Evergy Kansas Central, Inc. Profile # 96579

Site: LEC Inactive Ash Pond CCR Notes

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

Container Codes

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

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

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

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

Work Order Number: 6644380

ATTACHMENT 2-3
March 2024 Semiannual Sampling Event
Laboratory Analytical Reports

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

March 24, 2024

Jake Humphrey
Evergy, Inc.
818 S Kansas Avenue
Topeka, KS 66612

RE: Project: LEC INACTIVE ASH PONDS RADCHEM
Pace Project No.: 60448404

Dear Jake Humphrey:

Enclosed are the analytical results for sample(s) received by the laboratory on March 06, 2024. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Greensburg

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

Sincerely,

Alice Spiller

Alice Spiller
alice.spiller@pacelabs.com
(913)599-5665
PM Lab Management

Enclosures

cc: Shelly Gomez, Evergy
Laura Hines, Evergy, Inc.
Shannon Hughes, Evergy
Adam Irvin, Evergy
Samantha Kaney, Haley & Aldrich
Andrew Watson, Haley & Aldrich

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(913)599-5665

CERTIFICATIONS

Project: LEC INACTIVE ASH PONDS RADCHEM
Pace Project No.: 60448404

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

Pace Analytical Services, LLC
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SAMPLE SUMMARY

Project: LEC INACTIVE ASH PONDS RADCHEM
Pace Project No.: 60448404

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60448404001	**MW-37-030424**	Water	03/04/24 14:55	03/06/24 16:30
60448404002	**MW-38-030524**	Water	03/05/24 09:05	03/06/24 16:30
60448404003	**MW-39-030524**	Water	03/05/24 11:15	03/06/24 16:30
60448404004	**MW-40-030524**	Water	03/05/24 11:55	03/06/24 16:30
60448404005	**MW-K-030524**	Water	03/05/24 09:45	03/06/24 16:30
60448404006	**MW-L-030524**	Water	03/05/24 10:40	03/06/24 16:30
60448404007	**LEC IAP-DUP-030524**	Water	03/05/24 08:00	03/06/24 16:30

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SAMPLE ANALYTE COUNT

Project: LEC INACTIVE ASH PONDS RADCHEM
Pace Project No.: 60448404

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60448404001	**MW-37-030424**	EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
60448404002	**MW-38-030524**	EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
60448404003	**MW-39-030524**	EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
60448404004	**MW-40-030524**	EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
60448404005	**MW-K-030524**	EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
60448404006	**MW-L-030524**	EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
60448404007	**LEC IAP-DUP-030524**	EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

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PROJECT NARRATIVE

Project: LEC INACTIVE ASH PONDS RADCHEM
Pace Project No.: 60448404

Method: **EPA 903.1**
Description: 903.1 Radium 226
Client: Evergy Kansas Central, Inc.
Date: March 24, 2024

General Information:
7 samples were analyzed for EPA 903.1 by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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

PROJECT NARRATIVE

Project: LEC INACTIVE ASH PONDS RADCHEM
Pace Project No.: 60448404

Method: **EPA 904.0**
Description: 904.0 Radium 228
Client: Evergy Kansas Central, Inc.
Date: March 24, 2024

General Information:
7 samples were analyzed for EPA 904.0 by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Pace Analytical Services, LLC
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PROJECT NARRATIVE

Project: LEC INACTIVE ASH PONDS RADCHEM
Pace Project No.: 60448404

Method: **Total Radium Calculation**
Description: Total Radium 228+226
Client: Evergy Kansas Central, Inc.
Date: March 24, 2024

General Information:
7 samples were analyzed for Total Radium Calculation by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: LEC INACTIVE ASH PONDS RADCHEM
Pace Project No.: 60448404

Sample: MW-37-030424 **Lab ID: 60448404001** Collected: 03/04/24 14:55 Received: 03/06/24 16:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.120 ± 0.578 (1.09) C:NA T:87%**	pCi/L	03/20/24 13:59	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.874 ± 0.513 (0.971) C:82% T:78%**	pCi/L	03/20/24 12:18	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.994 ± 1.09 (2.06)**	pCi/L	03/21/24 15:17	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: LEC INACTIVE ASH PONDS RADCHEM
Pace Project No.: 60448404

Sample: MW-38-030524 **Lab ID: 60448404002** Collected: 03/05/24 09:05 Received: 03/06/24 16:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.179 ± 0.801 (1.46) C:NA T:87%**	pCi/L	03/20/24 13:59	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.779 ± 0.503 (0.976) C:76% T:82%**	pCi/L	03/20/24 12:18	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.958 ± 1.30 (2.44)**	pCi/L	03/21/24 15:17	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: LEC INACTIVE ASH PONDS RADCHEM
Pace Project No.: 60448404

Sample: MW-39-030524 **Lab ID: 60448404003** Collected: 03/05/24 11:15 Received: 03/06/24 16:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.198 ± 0.672 (1.24) C:NA T:89%**	pCi/L	03/20/24 13:59	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.876 ± 0.484 (0.893) C:79% T:81%**	pCi/L	03/20/24 12:18	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.07 ± 1.16 (2.13)**	pCi/L	03/21/24 15:17	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: LEC INACTIVE ASH PONDS RADCHEM
Pace Project No.: 60448404

Sample: MW-40-030524 **Lab ID: 60448404004** Collected: 03/05/24 11:55 Received: 03/06/24 16:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.412 ± 0.714 (1.25) C:NA T:88%**	pCi/L	03/20/24 14:12	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.495 ± 0.443 (0.906) C:77% T:83%**	pCi/L	03/20/24 12:18	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.907 ± 1.16 (2.16)**	pCi/L	03/21/24 15:17	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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(913)599-5665

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: LEC INACTIVE ASH PONDS RADCHEM
Pace Project No.: 60448404

Sample: MW-K-030524 **Lab ID: 60448404005** Collected: 03/05/24 09:45 Received: 03/06/24 16:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.0616 ± 0.554 (1.07) C:NA T:86%**	pCi/L	03/20/24 14:12	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.582 ± 0.487 (0.986) C:79% T:79%**	pCi/L	03/20/24 12:18	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.644 ± 1.04 (2.06)**	pCi/L	03/21/24 15:17	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: LEC INACTIVE ASH PONDS RADCHEM
Pace Project No.: 60448404

Sample: MW-L-030524 **Lab ID: 60448404006** Collected: 03/05/24 10:40 Received: 03/06/24 16:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.302 ± 0.568 (1.01) C:NA T:95%**	pCi/L	03/20/24 14:12	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.823 ± 0.485 (0.906) C:81% T:79%**	pCi/L	03/20/24 15:50	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.13 ± 1.05 (1.92)**	pCi/L	03/21/24 15:17	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: LEC INACTIVE ASH PONDS RADCHEM
Pace Project No.: 60448404

Sample: LEC IAP-DUP-030524 **Lab ID: 60448404007** Collected: 03/05/24 08:00 Received: 03/06/24 16:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.115 ± 0.452 (0.865) C:NA T:90%**	pCi/L	03/20/24 14:12	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.536 ± 0.424 (0.843) C:82% T:79%**	pCi/L	03/20/24 15:50	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.651 ± 0.876 (1.71)**	pCi/L	03/21/24 15:17	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: LEC INACTIVE ASH PONDS RADCHEM
Pace Project No.: 60448404

QC Batch: 653876 Analysis Method: EPA 903.1
QC Batch Method: EPA 903.1 Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 60448404001, 60448404002, 60448404003, 60448404004, 60448404005, 60448404006, 60448404007

METHOD BLANK: 3186143 Matrix: Water
Associated Lab Samples: 60448404001, 60448404002, 60448404003, 60448404004, 60448404005, 60448404006, 60448404007

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.315 ± 0.267 (0.332) C:NA T:93%	pCi/L	03/20/24 13:46	

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: LEC INACTIVE ASH PONDS RADCHEM
Pace Project No.: 60448404

QC Batch: 653878 Analysis Method: EPA 904.0
QC Batch Method: EPA 904.0 Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 60448404001, 60448404002, 60448404003, 60448404004, 60448404005, 60448404006, 60448404007

METHOD BLANK: 3186148 Matrix: Water
Associated Lab Samples: 60448404001, 60448404002, 60448404003, 60448404004, 60448404005, 60448404006, 60448404007

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.523 ± 0.331 (0.614) C:88% T:79%	pCi/L	03/20/24 11:16	

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

REPORT OF LABORATORY ANALYSIS

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

QUALIFIERS

Project: LEC INACTIVE ASH PONDS RADCHEM
Pace Project No.: 60448404

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

Act - Activity

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

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: LEC INACTIVE ASH PONDS RADCHEM
Pace Project No.: 60448404

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60448404001	**MW-37-030424**	EPA 903.1	653876		
60448404002	**MW-38-030524**	EPA 903.1	653876		
60448404003	**MW-39-030524**	EPA 903.1	653876		
60448404004	**MW-40-030524**	EPA 903.1	653876		
60448404005	**MW-K-030524**	EPA 903.1	653876		
60448404006	**MW-L-030524**	EPA 903.1	653876		
60448404007	**LEC IAP-DUP-030524**	EPA 903.1	653876		
60448404001	**MW-37-030424**	EPA 904.0	653878		
60448404002	**MW-38-030524**	EPA 904.0	653878		
60448404003	**MW-39-030524**	EPA 904.0	653878		
60448404004	**MW-40-030524**	EPA 904.0	653878		
60448404005	**MW-K-030524**	EPA 904.0	653878		
60448404006	**MW-L-030524**	EPA 904.0	653878		
60448404007	**LEC IAP-DUP-030524**	EPA 904.0	653878		
60448404001	**MW-37-030424**	Total Radium Calculation	656784		
60448404002	**MW-38-030524**	Total Radium Calculation	656784		
60448404003	**MW-39-030524**	Total Radium Calculation	656784		
60448404004	**MW-40-030524**	Total Radium Calculation	656784		
60448404005	**MW-K-030524**	Total Radium Calculation	656784		
60448404006	**MW-L-030524**	Total Radium Calculation	656784		
60448404007	**LEC IAP-DUP-030524**	Total Radium Calculation	656784		

WO# : 60448404

60448404

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

Client Name: Evergy/Kansas Central

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: T218 **Type of Ice:** (Wet) Blue None

Cooler Temperature (°C): **As-read** 13.4 **Corr. Factor** -0.3 **Corrected** 13.1

Date and initials of person examining contents: AF 3/6

Temperature should be above freezing to 6°C

Chain of Custody present:	☑Yes ☐No ☐N/A	
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	
Samples arrived within holding time:	☑Yes ☐No ☐N/A	
Short Hold Time analyses (<72hr):	☐Yes ☑No ☐N/A	
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	
Sufficient volume:	☑Yes ☐No ☐N/A	
Correct containers used:	☑Yes ☐No ☐N/A	
Pace containers used:	☑Yes ☐No ☐N/A	
Containers intact:	☑Yes ☐No ☐N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	☐Yes ☐No ☑N/A	
Filtered volume received for dissolved tests?	☐Yes ☐No ☑N/A	
Sample labels match COC: Date / time / ID / analyses	☑Yes ☐No ☐N/A	
Samples contain multiple phases? Matrix: WT	☐Yes ☑No ☐N/A	
Containers requiring pH preservation in compliance? (HNO_3, H_2SO_4, HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO) **LOT#:** 6200003	☑Yes ☐No ☐N/A	List sample IDs, volumes, lot #'s of preservative and the date/time added.
Cyanide water sample checks: Lead acetate strip turns dark? (Record only)	☐Yes ☐No	
Potassium iodide test strip turns blue/purple? (Preserve)	☐Yes ☐No	
Trip Blank present:	☐Yes ☐No ☑N/A	
Headspace in VOA vials (>6mm):	☐Yes ☐No ☑N/A	
Samples from USDA Regulated Area: State:	☐Yes ☐No ☑N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	☐Yes ☐No ☑N/A	

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

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

CHAIN-OF-CUSTODY Analytical Request Document

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

LAB USE ONLY- Affix Workorder/Login Label Here

Scan QR Code for instructions

Company Name:	Evergy Kansas Central, Inc.	Contact/Report To:	Jake Humphrey
Street Address:	818 S Kansas Avenue, Topeka, KS 66612	Phone #:	(913)634-0605
		E-Mail:	jake.humphrey@evergy.com
		Cc E-Mail:	skaney@haleyaldrich.com
Customer Project #:			
Project Name:	LEC INACTIVE ASH PONDS RADCHEM	Invoice To:	Lawrence Center
		Invoice E-Mail:	evergyap@onlinecapturecenter.com
Site Collection Info/Facility ID (as applicable):	Evergy Lawrence Energy Center	Purchase Order # (if applicable):	WSTR-2000095397
		Quote #:	

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

County / State origin of sample(s): Kansas

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

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

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

DW PWSID # or WW Permit # as applicable:

Date Results Requested:

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

Analysis:

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

Specify Container Size **: 1 1

Identify Container Preservative Type***: 2 2

Analysis Requested

Customer Sample ID	Matrix *	Comp / Grab	Composite Start Date	Composite Start Time	Collected or Composite End Date	Collected or Composite End Time	# Cont.	Res. Chlorine Results	Res. Chlorine Units	Radium 226	Radium 228, combined, QC SHEETS	Sample Comment
MW-37-030424	GW	Grab	-	-	3/4/2024	14:55	2	-	-	X	X	60445404
MW-38-030524	GW	Grab	-	-	3/5/2024	9:05	2	-	-	X	X	
MW-39-030524	GW	Grab	-	-	3/5/2024	11:15	2	-	-	X	X	
MW-40-030524	GW	Grab	-	-	3/5/2024	11:55	2	-	-	X	X	
MW-K-030524	GW	Grab	-	-	3/5/2024	9:45	2	-	-	X	X	
MW-L-030524	GW	Grab	-	-	3/5/2024	10:40	2	-	-	X	X	
LEC IAP-DUP-030524	GW	Grab	-	-	3/5/2024	-	2	-	-	X	X	

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

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

Lab Use Only

Proj. Mgr: Alice Spiller

AcctNum / Client ID:

Table #:

Profile / Template: 9655

Prelog / Bottle Ord. ID: EZ 3080047

Preservation non-conformance identified for sample.

Additional Instructions from Pace®:

Collected By: (Printed Name) Jason R. Franks

Signature:

Customer Remarks / Special Conditions / Possible Hazards:

# Coolers:	Thermometer ID:	Correction Factor (°C):	Obs. Temp. (°C)	Corrected Temp. (°C)	On Ice:
	T298	-0.3	13.4	13.1	

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Tracking Number:
/ SCS	03/06/2024 / 16:30	JA Pace	3/6/24 1630	
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Delivered by: [ ] In- Person [ ] Courier
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	[ ] FedEX [ ] UPS [ ] Other
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Page: 1 of 1

Page 20 of 24

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

ENV-FRM-CORQ-0019_v02_110123 ©

Internal Transfer Chain of Custody

☐ Rush Multiplier_____X
☒ Samples Pre-Logged into eCOC

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

Workorder: 60448404 **Workorder Name:** LEC INACTIVE ASH PONDS RADCHEM **Owner Received Date:** 3/6/2024 **Results Requested By:** 4/4/2024

Report To	Subcontract To
Alice Spiller 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

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: HNO3	Requested Analysis: Radium 226/228 combined +QC	Radium 226	Radium 228	LAB USE ONLY
1	MW-37-030424	PS	3/4/2024 14:55	60448404001	Water	2	X	X	X	001
2	MW-38-030524	PS	3/5/2024 09:05	60448404002	Water	2	X	X	X	002
3	MW-39-030524	PS	3/5/2024 11:15	60448404003	Water	2	X	X	X	003
4	MW-40-030524	PS	3/5/2024 11:55	60448404004	Water	2	X	X	X	004
5	MW-K-030524	PS	3/5/2024 09:45	60448404005	Water	2	X	X	X	005
6	MW-L-030524	PS	3/5/2024 10:40	60448404006	Water	2	X	X	X	006
7	LEC IAP-DUP-030524	PS	3/5/2024 08:00	60448404007	Water	2	X	X	X	007

Transfers	Released By	Date/Time	Received By	Date/Time
1	JA Page	3/7/24 1100	[signature]	3-8-24 0930
2				
3				

Comments
KS sample location: 60-R28-S3

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

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

WO# : 30667222

30667222

Page 21 of 24

ENV-FRM-GBUR-0088 v07_Sample Condition Upon Recei

Effective Date: 01/04/2024

WO# : 30667222

PM: MAR Due Date: 03/29/24

CLIENT: PACE_60_LEKS

Client Name: Pace Kansas

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

Tracking Number: 7146 2375 7858

Initial / Date

Examined By: EAL 3/9/24

Labeled By: EAL 3/8/24

Temped By: —

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

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

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

Temp should be above freezing to 6°C

Comments:	Yes	No	NA	pH paper Lot# 10D2931 / D.P.D. Residual Chlorine Lot # —
Chain of Custody Present	✓			1.
Chain of Custody Filled Out:	✓			2.
-Were client corrections present on COC		✓		
Chain of Custody Relinquished	✓			3.
Sampler Name & Signature on COC:		✓		4.
Sample Labels match COC:	✓			5.
-Includes date/time/ID Matrix: WT				
Samples Arrived within Hold Time:	✓			6.
Short Hold Time Analysis (<72hr remaining):		✓		7.
Rush Turn Around Time Requested:		✓		8.
Sufficient Volume:	✓			9.
Correct Containers Used:	✓			10.
-Pace Containers Used	✓			
Containers Intact:	✓			11.
Orthophosphate field filtered:			✓	12.
Hex Cr Aqueous samples field filtered:			✓	13.
Organic Samples checked for dechlorination			✓	14:
Filtered volume received for dissolved tests:			✓	15:
All containers checked for preservation:	✓			16.
exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, non-aqueous matrix				pH<2
All containers meet method preservation requirements:	✓			Initial when completed EAL / Date/Time of Preservation / Lot# of added Preservative
8260C/D: Headspace in VOA Vials (> 6mm)			✓	17.
624.1: Headspace in VOA Vials (0mm)			✓	18.
Radon: Headspace in RAD Vials (0mm)			✓	19.
Trip Blank Present:			✓	Trip blank custody seal present? YES or NO
Rad Samples Screened <.05 mrem/hr.	✓			Initial when completed BR / Date: 3-8-24 / Survey Meter SN: 25014380
Comments:				

Note: For NC compliance samples with discrepancies, a copy of this form must be sent to the DEHNR Certification office.

PM Review is documented electronically in LIMS through the SRF Review schedule in the Workorder Edit Screen.

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-226
Analyst:	CLM
Date:	3/12/2024
Batch ID:	78067
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	3186143
MB concentration:	0.315
M/B Counting Uncertainty:	0.265
MB MDC:	0.332
MB Numerical Performance Indicator:	2.33
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS78067	LCSD78067
Count Date:	3/20/2024	3/20/2024
Spike I.D.:	23-063	23-063
Spike Concentration (pCi/mL):	32.302	32.302
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.654	0.650
Target Conc. (pCi/L, g, F):	4.937	4.969
Uncertainty (Calculated):	0.232	0.234
Result (pCi/L, g, F):	5.979	4.615
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.081	1.001
Numerical Performance Indicator:	1.85	-0.67
Percent Recovery:	121.11%	92.88%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	133%	133%
Lower % Recovery Limits:	73%	73%

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date:		
Sample I.D.		
Sample MS I.D.		
Sample MSD I.D.		
Spike I.D.:		
MS/MSD Decay Corrected Spike Concentration (pCi/mL):		
Spike Volume Used in MS (mL):		
Spike Volume Used in MSD (mL):		
MS Aliquot (L, g, F):		
MS Target Conc.(pCi/L, g, F):		
MSD Aliquot (L, g, F):		
MSD Target Conc. (pCi/L, g, F):		
MS Spike Uncertainty (calculated):		
MSD Spike Uncertainty (calculated):		
Sample Result:		
Sample Result Counting Uncertainty (pCi/L, g, F):		
Sample Matrix Spike Result:		
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):		
Sample Matrix Spike Duplicate Result:		
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):		
MS Numerical Performance Indicator:		
MSD Numerical Performance Indicator:		
MS Percent Recovery:		
MSD Percent Recovery:		
MS Status vs Numerical Indicator:		
MSD Status vs Numerical Indicator:		
MS Status vs Recovery:		
MSD Status vs Recovery:		
MS/MSD Upper % Recovery Limits:		
MS/MSD Lower % Recovery Limits:		

Duplicate Sample Assessment		
Sample I.D.:	LCS78067	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD78067	
Sample Result (pCi/L, g, F):	5.979	
Sample Result Counting Uncertainty (pCi/L, g, F):	1.081	
Sample Duplicate Result (pCi/L, g, F):	4.615	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	1.001	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	1.814	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	26.38%	
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	32%	

Matrix Spike/Matrix Spike Duplicate Sample Assessment		
Sample I.D.		
Sample MS I.D.		
Sample MSD I.D.		
Sample Matrix Spike Result:		
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):		
Sample Matrix Spike Duplicate Result:		
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):		
Duplicate Numerical Performance Indicator:		
(Based on the Percent Recoveries) MS/ MSD Duplicate RPD:		
MS/ MSD Duplicate Status vs Numerical Indicator:		
MS/ MSD Duplicate Status vs RPD:		
% RPD Limit:		

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the RL.

Comments:

CLM 3/20/24

SLC 3/21/24

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-228
Analyst:	ZPC
Date:	3/15/2024
Worklist:	78068
Matrix:	WT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	3186148
MB concentration:	0.523
M/B 2 Sigma CSU:	0.331
MB MDC:	0.614
MB Numerical Performance Indicator:	3.09
MB Status vs Numerical Indicator:	Fail*
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS78068	LCSD78068
Count Date:	3/20/2024	3/20/2024
Spike I.D.:	23-043	23-043
Decay Corrected Spike Concentration (pCi/mL):	37.429	37.429
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.816	0.819
Target Conc. (pCi/L, g, F):	4.588	4.570
Uncertainty (Calculated):	0.225	0.224
Result (pCi/L, g, F):	4.139	4.339
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	0.966	1.000
Numerical Performance Indicator:	-0.89	-0.44
Percent Recovery:	90.22%	94.96%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	135%	135%
Lower % Recovery Limits:	60%	60%

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date:		
Sample I.D.		
Sample MS I.D.		
Sample MSD I.D.		
Spike I.D.:		
MS/MSD Decay Corrected Spike Concentration (pCi/mL):		
Spike Volume Used in MS (mL):		
Spike Volume Used in MSD (mL):		
MS Aliquot (L, g, F):		
MS Target Conc.(pCi/L, g, F):		
MSD Aliquot (L, g, F):		
MSD Target Conc. (pCi/L, g, F):		
MS Spike Uncertainty (calculated):		
MSD Spike Uncertainty (calculated):		
Sample Result:		
Sample Result 2 Sigma CSU (pCi/L, g, F):		
Sample Matrix Spike Result:		
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):		
Sample Matrix Spike Duplicate Result:		
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):		
MS Numerical Performance Indicator:		
MSD Numerical Performance Indicator:		
MS Percent Recovery:		
MSD Percent Recovery:		
MS Status vs Numerical Indicator:		
MSD Status vs Numerical Indicator:		
MS Status vs Recovery:		
MSD Status vs Recovery:		
MS/MSD Upper % Recovery Limits:		
MS/MSD Lower % Recovery Limits:		

Duplicate Sample Assessment		
Sample I.D.:	LCS78068	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD78068	
Sample Result (pCi/L, g, F):	4.139	
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.966	
Sample Duplicate Result (pCi/L, g, F):	4.339	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.000	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	-0.283	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	5.12%	
Duplicate Status vs Numerical Indicator:	Pass	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	36%	

Matrix Spike/Matrix Spike Duplicate Sample Assessment		
Sample I.D.		
Sample MS I.D.		
Sample MSD I.D.		
Sample Matrix Spike Result:		
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):		
Sample Matrix Spike Duplicate Result:		
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):		
Duplicate Numerical Performance Indicator:		
(Based on the Percent Recoveries) MS/ MSD Duplicate RPD:		
MS/ MSD Duplicate Status vs Numerical Indicator:		
MS/ MSD Duplicate Status vs RPD:		
% RPD Limit:		

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

*~~If the lowest activity sample in this batch is greater than ten times the blank value, the blank is acceptable; otherwise this batch must be re-prepped.~~ MB < MDC, Pass

VAL 3/21/24

SLC 3/21/24

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

March 19, 2024

Jake Humphrey
Evergy, Inc.
818 S Kansas Avenue
Topeka, KS 66612

RE: Project: LEC INACTIVE ASH PONDS
Pace Project No.: 60448407

Dear Jake Humphrey:

Enclosed are the analytical results for sample(s) received by the laboratory on March 06, 2024. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Kansas City

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

Sincerely,

Alice Spiller

Alice Spiller
alice.spiller@pacelabs.com
(913)599-5665
PM Lab Management

Enclosures

cc: Shelly Gomez, Evergy
Laura Hines, Evergy, Inc.
Shannon Hughes, Evergy
Adam Irvin, Evergy
Samantha Kaney, Haley & Aldrich
Andrew Watson, Haley & Aldrich

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

CERTIFICATIONS

Project: LEC INACTIVE ASH PONDS
Pace Project No.: 60448407

Pace Analytical Services Kansas

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
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SAMPLE SUMMARY

Project: LEC INACTIVE ASH PONDS
Pace Project No.: 60448407

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60448407001	**MW-37-030424**	Water	03/04/24 14:55	03/06/24 16:30
60448407002	**MW-38-030524**	Water	03/05/24 09:05	03/06/24 16:30
60448407003	**MW-39-030524**	Water	03/05/24 11:15	03/06/24 16:30
60448407004	**MW-40-030524**	Water	03/05/24 11:55	03/06/24 16:30
60448407005	**MW-K-030524**	Water	03/05/24 09:45	03/06/24 16:30
60448407006	**MW-L-030524**	Water	03/05/24 10:40	03/06/24 16:30
60448407007	**LEC IAP-DUP-030524**	Water	03/05/24 08:00	03/06/24 16:30

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SAMPLE ANALYTE COUNT

Project: LEC INACTIVE ASH PONDS
Pace Project No.: 60448407

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60448407001	**MW-37-030424**	EPA 200.7	JXD	3	PASI-K
		EPA 6010	JXD	1	PASI-K
		EPA 200.8	JGP	3	PASI-K
		SM 2540C	KVI	1	PASI-K
		SM 4500-H+B	SR1	1	PASI-K
		EPA 300.0	PL	4	PASI-K
60448407002	**MW-38-030524**	EPA 200.7	JXD	3	PASI-K
		EPA 6010	JXD	1	PASI-K
		EPA 200.8	JGP	3	PASI-K
		SM 2540C	KVI	1	PASI-K
		SM 4500-H+B	SR1	1	PASI-K
		EPA 300.0	PL	4	PASI-K
60448407003	**MW-39-030524**	EPA 200.7	JXD	3	PASI-K
		EPA 6010	JXD	1	PASI-K
		EPA 200.8	JGP	3	PASI-K
		SM 2540C	KVI	1	PASI-K
		SM 4500-H+B	SR1	1	PASI-K
		EPA 300.0	PL	4	PASI-K
60448407004	**MW-40-030524**	EPA 200.7	JXD	3	PASI-K
		EPA 6010	JXD	1	PASI-K
		EPA 200.8	JGP	3	PASI-K
		SM 2540C	KVI	1	PASI-K
		SM 4500-H+B	SR1	1	PASI-K
		EPA 300.0	PL	4	PASI-K
60448407005	**MW-K-030524**	EPA 200.7	JXD	3	PASI-K
		EPA 6010	JXD	1	PASI-K
		EPA 200.8	JGP	3	PASI-K
		SM 2540C	KVI	1	PASI-K
		SM 4500-H+B	SR1	1	PASI-K
		EPA 300.0	PL	4	PASI-K
60448407006	**MW-L-030524**	EPA 200.7	JXD	3	PASI-K
		EPA 6010	JXD	1	PASI-K
		EPA 200.8	JGP	3	PASI-K
		SM 2540C	KVI	1	PASI-K
		SM 4500-H+B	SR1	1	PASI-K
		EPA 300.0	PL	4	PASI-K
60448407007	**LEC IAP-DUP-030524**	EPA 200.7	JXD	3	PASI-K

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: LEC INACTIVE ASH PONDS
Pace Project No.: 60448407

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 6010	JXD	1	PASI-K
		EPA 200.8	JGP	3	PASI-K
		SM 2540C	KVI	1	PASI-K
		SM 4500-H+B	SR1	1	PASI-K
		EPA 300.0	PL	4	PASI-K

PASI-K = Pace Analytical Services - Kansas City

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PROJECT NARRATIVE

Project: LEC INACTIVE ASH PONDS
Pace Project No.: 60448407

Method: **EPA 200.7**
Description: 200.7 Metals, Total
Client: Evergy Kansas Central, Inc.
Date: March 19, 2024

General Information:
7 samples were analyzed for EPA 200.7 by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 200.7 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 885867

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60448407001,60448408003

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

- MS (Lab ID: 3506497)
  - Calcium
- MS (Lab ID: 3506499)
  - Calcium
- MSD (Lab ID: 3506498)
  - Calcium

Additional Comments:

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PROJECT NARRATIVE

Project: LEC INACTIVE ASH PONDS
Pace Project No.: 60448407

Method: **EPA 6010**
Description: 6010 MET ICP
Client: Evergy Kansas Central, Inc.
Date: March 19, 2024

General Information:
7 samples were analyzed for EPA 6010 by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: LEC INACTIVE ASH PONDS
Pace Project No.: 60448407

Method: **EPA 200.8**
Description: 200.8 MET ICPMS
Client: Evergy Kansas Central, Inc.
Date: March 19, 2024

General Information:
7 samples were analyzed for EPA 200.8 by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 200.8 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: 886732

D3: Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

- LEC IAP-DUP-030524 (Lab ID: 60448407007)
  - Cobalt, Total Recoverable
- MW-39-030524 (Lab ID: 60448407003)
  - Cobalt, Total Recoverable
- MW-40-030524 (Lab ID: 60448407004)
  - Cobalt, Total Recoverable
- MW-L-030524 (Lab ID: 60448407006)
  - Cobalt, Total Recoverable

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PROJECT NARRATIVE

Project: LEC INACTIVE ASH PONDS
Pace Project No.: 60448407

Method: **SM 2540C**
Description: 2540C Total Dissolved Solids
Client: Evergy Kansas Central, Inc.
Date: March 19, 2024

General Information:
7 samples were analyzed for SM 2540C by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

QC Batch: 885906

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

- DUP (Lab ID: 3506648)
  - Total Dissolved Solids

Additional Comments:

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PROJECT NARRATIVE

Project: LEC INACTIVE ASH PONDS
Pace Project No.: 60448407

Method: **SM 4500-H+B**
Description: 4500H+ pH, Electrometric
Client: Evergy Kansas Central, Inc.
Date: March 19, 2024

General Information:
7 samples were analyzed for SM 4500-H+B by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

H6: Analysis initiated outside of the 15 minute EPA required holding time.
- LEC IAP-DUP-030524 (Lab ID: 60448407007)
- MW-37-030424 (Lab ID: 60448407001)
- MW-38-030524 (Lab ID: 60448407002)
- MW-39-030524 (Lab ID: 60448407003)
- MW-40-030524 (Lab ID: 60448407004)
- MW-K-030524 (Lab ID: 60448407005)
- MW-L-030524 (Lab ID: 60448407006)

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: LEC INACTIVE ASH PONDS
Pace Project No.: 60448407

Method: **EPA 300.0**
Description: 300.0 IC Anions 28 Days
Client: Evergy Kansas Central, Inc.
Date: March 19, 2024

General Information:
7 samples were analyzed for EPA 300.0 by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 886270

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60448345003,60448345004

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

- MS (Lab ID: 3508386)
  - Chloride
  - Sulfate
- MS (Lab ID: 3508388)
  - Chloride
  - Sulfate
- MSD (Lab ID: 3508387)
  - Chloride
  - Sulfate

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: LEC INACTIVE ASH PONDS
Pace Project No.: 60448407

Sample: MW-37-030424 **Lab ID: 60448407001** Collected: 03/04/24 14:55 Received: 03/06/24 16:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City							
Barium, Total Recoverable	**0.090**	mg/L	0.0050	1	03/08/24 10:15	03/18/24 12:14	7440-39-3	
Boron, Total Recoverable	**1.6**	mg/L	0.10	1	03/08/24 10:15	03/18/24 12:14	7440-42-8	
Calcium, Total Recoverable	**239**	mg/L	0.20	1	03/08/24 10:15	03/18/24 12:14	7440-70-2	M1
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**0.030**	mg/L	0.010	1	03/11/24 11:53	03/14/24 15:46	7439-93-2	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City							
Arsenic, Total Recoverable	**0.0076**	mg/L	0.0010	1	03/15/24 10:27	03/18/24 10:58	7440-38-2	
Cobalt, Total Recoverable	**<0.0010**	mg/L	0.0010	1	03/15/24 10:27	03/18/24 10:58	7440-48-4	
Molybdenum, Total Recoverable	**0.070**	mg/L	0.0010	1	03/15/24 10:27	03/18/24 10:58	7439-98-7	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City							
Total Dissolved Solids	**1010**	mg/L	13.3	1		03/08/24 14:55		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Kansas City							
pH at 25 Degrees C	**7.0**	Std. Units	0.10	1		03/08/24 10:40		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Bromide	**<1.0**	mg/L	1.0	1		03/13/24 12:36	24959-67-9	
Chloride	**57.7**	mg/L	10.0	10		03/15/24 14:50	16887-00-6	
Fluoride	**<0.20**	mg/L	0.20	1		03/13/24 12:36	16984-48-8	
Sulfate	**60.5**	mg/L	10.0	10		03/15/24 14:50	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: LEC INACTIVE ASH PONDS
Pace Project No.: 60448407

Sample: MW-38-030524 **Lab ID: 60448407002** Collected: 03/05/24 09:05 Received: 03/06/24 16:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City							
Barium, Total Recoverable	**0.053**	mg/L	0.0050	1	03/08/24 10:15	03/18/24 12:19	7440-39-3	
Boron, Total Recoverable	**3.5**	mg/L	0.10	1	03/08/24 10:15	03/18/24 12:19	7440-42-8	
Calcium, Total Recoverable	**166**	mg/L	0.20	1	03/08/24 10:15	03/18/24 12:19	7440-70-2	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**0.052**	mg/L	0.010	1	03/11/24 11:53	03/14/24 15:53	7439-93-2	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City							
Arsenic, Total Recoverable	**0.018**	mg/L	0.0010	1	03/15/24 10:27	03/18/24 11:06	7440-38-2	
Cobalt, Total Recoverable	**<0.0010**	mg/L	0.0010	1	03/15/24 10:27	03/18/24 11:06	7440-48-4	
Molybdenum, Total Recoverable	**0.065**	mg/L	0.0010	1	03/15/24 10:27	03/18/24 11:06	7439-98-7	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City							
Total Dissolved Solids	**1060**	mg/L	20.0	1		03/08/24 14:56		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Kansas City							
pH at 25 Degrees C	**7.6**	Std. Units	0.10	1		03/08/24 10:46		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Bromide	**<1.0**	mg/L	1.0	1		03/13/24 13:02	24959-67-9	
Chloride	**99.3**	mg/L	10.0	10		03/15/24 15:03	16887-00-6	
Fluoride	**2.8**	mg/L	0.20	1		03/13/24 13:02	16984-48-8	
Sulfate	**168**	mg/L	10.0	10		03/15/24 15:03	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: LEC INACTIVE ASH PONDS
Pace Project No.: 60448407

Sample: MW-39-030524 **Lab ID: 60448407003** Collected: 03/05/24 11:15 Received: 03/06/24 16:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City							
Barium, Total Recoverable	**0.029**	mg/L	0.0050	1	03/08/24 10:15	03/18/24 12:21	7440-39-3	
Boron, Total Recoverable	**4.5**	mg/L	0.10	1	03/08/24 10:15	03/18/24 12:21	7440-42-8	
Calcium, Total Recoverable	**474**	mg/L	0.20	1	03/08/24 10:15	03/18/24 12:21	7440-70-2	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**0.048**	mg/L	0.010	1	03/11/24 11:53	03/14/24 15:55	7439-93-2	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City							
Arsenic, Total Recoverable	**0.011**	mg/L	0.0050	5	03/15/24 10:27	03/18/24 11:08	7440-38-2	
Cobalt, Total Recoverable	**<0.0050**	mg/L	0.0050	5	03/15/24 10:27	03/18/24 11:08	7440-48-4	D3
Molybdenum, Total Recoverable	**0.15**	mg/L	0.0050	5	03/15/24 10:27	03/18/24 11:08	7439-98-7	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City							
Total Dissolved Solids	**1970**	mg/L	66.7	1		03/08/24 14:56		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Kansas City							
pH at 25 Degrees C	**7.1**	Std. Units	0.10	1		03/08/24 10:54		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Bromide	**1.7**	mg/L	1.0	1		03/13/24 13:27	24959-67-9	
Chloride	**350**	mg/L	200	200		03/13/24 13:40	16887-00-6	
Fluoride	**1.8**	mg/L	0.20	1		03/13/24 13:27	16984-48-8	
Sulfate	**1590**	mg/L	200	200		03/13/24 13:40	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: LEC INACTIVE ASH PONDS
Pace Project No.: 60448407

Sample: MW-40-030524 **Lab ID: 60448407004** Collected: 03/05/24 11:55 Received: 03/06/24 16:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City							
Barium, Total Recoverable	**0.034**	mg/L	0.0050	1	03/08/24 10:15	03/18/24 12:23	7440-39-3	
Boron, Total Recoverable	**2.9**	mg/L	0.10	1	03/08/24 10:15	03/18/24 12:23	7440-42-8	
Calcium, Total Recoverable	**440**	mg/L	0.20	1	03/08/24 10:15	03/18/24 12:23	7440-70-2	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**0.051**	mg/L	0.010	1	03/11/24 11:53	03/14/24 15:57	7439-93-2	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City							
Arsenic, Total Recoverable	**0.014**	mg/L	0.0020	2	03/15/24 10:27	03/18/24 11:10	7440-38-2	
Cobalt, Total Recoverable	**<0.0020**	mg/L	0.0020	2	03/15/24 10:27	03/18/24 11:10	7440-48-4	D3
Molybdenum, Total Recoverable	**0.056**	mg/L	0.0020	2	03/15/24 10:27	03/18/24 11:10	7439-98-7	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City							
Total Dissolved Solids	**1850**	mg/L	66.7	1		03/08/24 14:57		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Kansas City							
pH at 25 Degrees C	**7.2**	Std. Units	0.10	1		03/08/24 11:00		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Bromide	**1.6**	mg/L	1.0	1		03/13/24 13:53	24959-67-9	
Chloride	**284**	mg/L	200	200		03/13/24 14:32	16887-00-6	
Fluoride	**1.6**	mg/L	0.20	1		03/13/24 13:53	16984-48-8	
Sulfate	**1260**	mg/L	200	200		03/13/24 14:32	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: LEC INACTIVE ASH PONDS
Pace Project No.: 60448407

Sample: MW-K-030524 **Lab ID: 60448407005** Collected: 03/05/24 09:45 Received: 03/06/24 16:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City							
Barium, Total Recoverable	**0.046**	mg/L	0.0050	1	03/08/24 10:15	03/18/24 12:25	7440-39-3	
Boron, Total Recoverable	**1.8**	mg/L	0.10	1	03/08/24 10:15	03/18/24 12:25	7440-42-8	
Calcium, Total Recoverable	**192**	mg/L	0.20	1	03/08/24 10:15	03/18/24 12:25	7440-70-2	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**0.050**	mg/L	0.010	1	03/11/24 11:53	03/14/24 15:59	7439-93-2	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City							
Arsenic, Total Recoverable	**0.073**	mg/L	0.0010	1	03/15/24 10:27	03/18/24 11:14	7440-38-2	
Cobalt, Total Recoverable	**<0.0010**	mg/L	0.0010	1	03/15/24 10:27	03/18/24 11:14	7440-48-4	
Molybdenum, Total Recoverable	**0.022**	mg/L	0.0010	1	03/15/24 10:27	03/18/24 11:14	7439-98-7	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City							
Total Dissolved Solids	**1250**	mg/L	20.0	1		03/08/24 14:57		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Kansas City							
pH at 25 Degrees C	**7.7**	Std. Units	0.10	1		03/08/24 10:48		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Bromide	**<1.0**	mg/L	1.0	1		03/13/24 14:44	24959-67-9	
Chloride	**117**	mg/L	10.0	10		03/15/24 15:15	16887-00-6	
Fluoride	**2.7**	mg/L	0.20	1		03/13/24 14:44	16984-48-8	
Sulfate	**157**	mg/L	10.0	10		03/15/24 15:15	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: LEC INACTIVE ASH PONDS
Pace Project No.: 60448407

Sample: MW-L-030524 **Lab ID: 60448407006** Collected: 03/05/24 10:40 Received: 03/06/24 16:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City							
Barium, Total Recoverable	**0.029**	mg/L	0.0050	1	03/08/24 10:15	03/18/24 12:33	7440-39-3	
Boron, Total Recoverable	**2.4**	mg/L	0.10	1	03/08/24 10:15	03/18/24 12:33	7440-42-8	
Calcium, Total Recoverable	**429**	mg/L	0.20	1	03/08/24 10:15	03/18/24 12:33	7440-70-2	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**0.089**	mg/L	0.010	1	03/11/24 11:53	03/14/24 16:43	7439-93-2	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City							
Arsenic, Total Recoverable	**0.029**	mg/L	0.0030	3	03/15/24 10:27	03/18/24 11:16	7440-38-2	
Cobalt, Total Recoverable	**<0.0030**	mg/L	0.0030	3	03/15/24 10:27	03/18/24 11:16	7440-48-4	D3
Molybdenum, Total Recoverable	**0.048**	mg/L	0.0030	3	03/15/24 10:27	03/18/24 11:16	7439-98-7	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City							
Total Dissolved Solids	**1770**	mg/L	100	1		03/08/24 14:57		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Kansas City							
pH at 25 Degrees C	**7.3**	Std. Units	0.10	1		03/08/24 10:49		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Bromide	**2.0**	mg/L	1.0	1		03/13/24 15:10	24959-67-9	
Chloride	**452**	mg/L	200	200		03/13/24 15:23	16887-00-6	
Fluoride	**2.6**	mg/L	0.20	1		03/13/24 15:10	16984-48-8	
Sulfate	**1490**	mg/L	200	200		03/13/24 15:23	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: LEC INACTIVE ASH PONDS
Pace Project No.: 60448407

Sample: LEC IAP-DUP-030524 **Lab ID: 60448407007** Collected: 03/05/24 08:00 Received: 03/06/24 16:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City							
Barium, Total Recoverable	**0.047**	mg/L	0.0050	1	03/08/24 10:15	03/18/24 12:35	7440-39-3	
Boron, Total Recoverable	**1.8**	mg/L	0.10	1	03/08/24 10:15	03/18/24 12:35	7440-42-8	
Calcium, Total Recoverable	**199**	mg/L	0.20	1	03/08/24 10:15	03/18/24 12:35	7440-70-2	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**0.050**	mg/L	0.010	1	03/11/24 11:53	03/14/24 16:45	7439-93-2	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City							
Arsenic, Total Recoverable	**0.071**	mg/L	0.0020	2	03/15/24 10:27	03/18/24 11:18	7440-38-2	
Cobalt, Total Recoverable	**<0.0020**	mg/L	0.0020	2	03/15/24 10:27	03/18/24 11:18	7440-48-4	D3
Molybdenum, Total Recoverable	**0.020**	mg/L	0.0020	2	03/15/24 10:27	03/18/24 11:18	7439-98-7	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City							
Total Dissolved Solids	**1240**	mg/L	20.0	1		03/08/24 14:58		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Kansas City							
pH at 25 Degrees C	**7.7**	Std. Units	0.10	1		03/08/24 10:44		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Bromide	**<1.0**	mg/L	1.0	1		03/13/24 15:36	24959-67-9	
Chloride	**147**	mg/L	10.0	10		03/15/24 15:28	16887-00-6	
Fluoride	**2.7**	mg/L	0.20	1		03/13/24 15:36	16984-48-8	
Sulfate	**173**	mg/L	10.0	10		03/15/24 15:28	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: LEC INACTIVE ASH PONDS
Pace Project No.: 60448407

QC Batch: 885867
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Total
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60448407001, 60448407002, 60448407003, 60448407004, 60448407005, 60448407006, 60448407007

METHOD BLANK: 3506495 Matrix: Water
Associated Lab Samples: 60448407001, 60448407002, 60448407003, 60448407004, 60448407005, 60448407006, 60448407007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Barium	mg/L	<0.0050	0.0050	03/18/24 12:10	
Boron	mg/L	<0.10	0.10	03/18/24 12:10	
Calcium	mg/L	<0.20	0.20	03/18/24 12:10	

LABORATORY CONTROL SAMPLE: 3506496

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	mg/L	1	1.0	102	85-115	
Boron	mg/L	1	0.95	95	85-115	
Calcium	mg/L	10	10.1	101	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3506497 3506498

Parameter	Units	60448407001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	mg/L	0.090	1	1	1.1	1.1	104	103	70-130	0	20	
Boron	mg/L	1.6	1	1	2.7	2.7	104	104	70-130	0	20	
Calcium	mg/L	239	10	10	255	256	160	175	70-130	1	20	M1

MATRIX SPIKE SAMPLE: 3506499

Parameter	Units	60448408003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Barium	mg/L	27.6 ug/L	1	1.0	97	70-130	
Boron	mg/L	4350 ug/L	1	5.2	89	70-130	
Calcium	mg/L	472	10	469	-32	70-130	M1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: LEC INACTIVE ASH PONDS
Pace Project No.: 60448407

QC Batch: 886732
QC Batch Method: EPA 200.8
Analysis Method: EPA 200.8
Analysis Description: 200.8 MET
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60448407001, 60448407002, 60448407003, 60448407004, 60448407005, 60448407006, 60448407007

METHOD BLANK: 3510225 Matrix: Water
Associated Lab Samples: 60448407001, 60448407002, 60448407003, 60448407004, 60448407005, 60448407006, 60448407007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/L	<0.0010	0.0010	03/18/24 10:54	
Cobalt	mg/L	<0.0010	0.0010	03/18/24 10:54	
Molybdenum	mg/L	<0.0010	0.0010	03/18/24 10:54	

LABORATORY CONTROL SAMPLE: 3510226

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/L	0.04	0.040	99	85-115	
Cobalt	mg/L	0.04	0.040	99	85-115	
Molybdenum	mg/L	0.04	0.038	95	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3510227 3510228

Parameter	Units	60448407005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/L	0.073	0.04	0.04	0.11	0.11	101	96	70-130	2	20	
Cobalt	mg/L	<0.0010	0.04	0.04	0.039	0.039	98	97	70-130	1	20	
Molybdenum	mg/L	0.022	0.04	0.04	0.063	0.062	104	101	70-130	2	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: LEC INACTIVE ASH PONDS
Pace Project No.: 60448407

QC Batch: 886067
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60448407001, 60448407002, 60448407003, 60448407004, 60448407005, 60448407006, 60448407007

METHOD BLANK: 3507408 Matrix: Water
Associated Lab Samples: 60448407001, 60448407002, 60448407003, 60448407004, 60448407005, 60448407006, 60448407007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lithium	mg/L	<0.010	0.010	03/14/24 15:41	

LABORATORY CONTROL SAMPLE: 3507409

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lithium	mg/L	1	0.96	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3507410 3507411

Parameter	Units	60448407003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lithium	mg/L	0.048	1	1	1.1	1.1	105	101	75-125	4	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: LEC INACTIVE ASH PONDS
Pace Project No.: 60448407

QC Batch: 885906 | Analysis Method: SM 2540C
QC Batch Method: SM 2540C | Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60448407001, 60448407002, 60448407003, 60448407004, 60448407005, 60448407006, 60448407007

METHOD BLANK: 3506645 Matrix: Water
Associated Lab Samples: 60448407001, 60448407002, 60448407003, 60448407004, 60448407005, 60448407006, 60448407007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	03/08/24 14:55	

LABORATORY CONTROL SAMPLE: 3506646

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	977	98	80-120	

SAMPLE DUPLICATE: 3506647

Parameter	Units	60448407001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1010	1010	0	10	

SAMPLE DUPLICATE: 3506648

Parameter	Units	60448487001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	468	418	11	10	D6

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: LEC INACTIVE ASH PONDS
Pace Project No.: 60448407

QC Batch: 885884
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60448407001, 60448407002, 60448407003, 60448407004, 60448407005, 60448407006, 60448407007

SAMPLE DUPLICATE: 3506543

Parameter	Units	60448407001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.0	7.0	0	5	H6

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: LEC INACTIVE ASH PONDS
Pace Project No.: 60448407

QC Batch: 886270
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60448407001, 60448407002, 60448407003, 60448407004, 60448407005, 60448407006, 60448407007

METHOD BLANK: 3508384 Matrix: Water
Associated Lab Samples: 60448407001, 60448407002, 60448407003, 60448407004, 60448407005, 60448407006, 60448407007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Bromide	mg/L	<1.0	1.0	03/13/24 09:17	
Chloride	mg/L	<1.0	1.0	03/13/24 09:17	
Fluoride	mg/L	<0.20	0.20	03/13/24 09:17	
Sulfate	mg/L	<1.0	1.0	03/13/24 09:17	

LABORATORY CONTROL SAMPLE: 3508385

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromide	mg/L	5	4.9	97	90-110	
Chloride	mg/L	5	4.7	93	90-110	
Fluoride	mg/L	2.5	2.3	91	90-110	
Sulfate	mg/L	5	4.8	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3508386 3508387

Parameter	Units	60448345003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Bromide	mg/L	ND	100	100	97.1	97.7	89	90	80-120	1	15	
Chloride	mg/L	35.6	100	100	112	112	76	77	80-120	1	15	M1
Fluoride	mg/L	ND	50	50	46.6	47.6	93	95	80-120	2	15	
Sulfate	mg/L	180	100	100	190	188	10	8	80-120	1	15	M1

MATRIX SPIKE SAMPLE: 3508388

Parameter	Units	60448345004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Bromide	mg/L	ND	100	105	91	80-120	
Chloride	mg/L	1320	1000	2950	163	80-120	M1
Fluoride	mg/L	ND	50	46.0	86	80-120	
Sulfate	mg/L	238	100	399	161	80-120	M1

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: LEC INACTIVE ASH PONDS
Pace Project No.: 60448407

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
D6	The precision between the sample and sample duplicate exceeded laboratory control limits.
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: LEC INACTIVE ASH PONDS
Pace Project No.: 60448407

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60448407001	**MW-37-030424**	EPA 200.7	885867	EPA 200.7	885939
60448407002	**MW-38-030524**	EPA 200.7	885867	EPA 200.7	885939
60448407003	**MW-39-030524**	EPA 200.7	885867	EPA 200.7	885939
60448407004	**MW-40-030524**	EPA 200.7	885867	EPA 200.7	885939
60448407005	**MW-K-030524**	EPA 200.7	885867	EPA 200.7	885939
60448407006	**MW-L-030524**	EPA 200.7	885867	EPA 200.7	885939
60448407007	**LEC IAP-DUP-030524**	EPA 200.7	885867	EPA 200.7	885939
60448407001	**MW-37-030424**	EPA 3010	886067	EPA 6010	886142
60448407002	**MW-38-030524**	EPA 3010	886067	EPA 6010	886142
60448407003	**MW-39-030524**	EPA 3010	886067	EPA 6010	886142
60448407004	**MW-40-030524**	EPA 3010	886067	EPA 6010	886142
60448407005	**MW-K-030524**	EPA 3010	886067	EPA 6010	886142
60448407006	**MW-L-030524**	EPA 3010	886067	EPA 6010	886142
60448407007	**LEC IAP-DUP-030524**	EPA 3010	886067	EPA 6010	886142
60448407001	**MW-37-030424**	EPA 200.8	886732	EPA 200.8	886829
60448407002	**MW-38-030524**	EPA 200.8	886732	EPA 200.8	886829
60448407003	**MW-39-030524**	EPA 200.8	886732	EPA 200.8	886829
60448407004	**MW-40-030524**	EPA 200.8	886732	EPA 200.8	886829
60448407005	**MW-K-030524**	EPA 200.8	886732	EPA 200.8	886829
60448407006	**MW-L-030524**	EPA 200.8	886732	EPA 200.8	886829
60448407007	**LEC IAP-DUP-030524**	EPA 200.8	886732	EPA 200.8	886829
60448407001	**MW-37-030424**	SM 2540C	885906		
60448407002	**MW-38-030524**	SM 2540C	885906		
60448407003	**MW-39-030524**	SM 2540C	885906		
60448407004	**MW-40-030524**	SM 2540C	885906		
60448407005	**MW-K-030524**	SM 2540C	885906		
60448407006	**MW-L-030524**	SM 2540C	885906		
60448407007	**LEC IAP-DUP-030524**	SM 2540C	885906		
60448407001	**MW-37-030424**	SM 4500-H+B	885884		
60448407002	**MW-38-030524**	SM 4500-H+B	885884		
60448407003	**MW-39-030524**	SM 4500-H+B	885884		
60448407004	**MW-40-030524**	SM 4500-H+B	885884		
60448407005	**MW-K-030524**	SM 4500-H+B	885884		
60448407006	**MW-L-030524**	SM 4500-H+B	885884		
60448407007	**LEC IAP-DUP-030524**	SM 4500-H+B	885884		
60448407001	**MW-37-030424**	EPA 300.0	886270		
60448407002	**MW-38-030524**	EPA 300.0	886270		
60448407003	**MW-39-030524**	EPA 300.0	886270		
60448407004	**MW-40-030524**	EPA 300.0	886270		
60448407005	**MW-K-030524**	EPA 300.0	886270		
60448407006	**MW-L-030524**	EPA 300.0	886270		
60448407007	**LEC IAP-DUP-030524**	EPA 300.0	886270		

WO# : 60448407

60448407

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

Client Name: Evergy Kansas Central

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: T246 **Type of Ice:** Wet Blue None

Cooler Temperature (°C): As-read 2.6 Corr. Factor -0.3 Corrected 2.3

Date and initials of person examining contents: AF 3/7

Temperature should be above freezing to 6°C

Chain of Custody present:	☑Yes ☐No ☐N/A	
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	
Samples arrived within holding time:	☑Yes ☐No ☐N/A	
Short Hold Time analyses (<72hr):	☐Yes ☑No ☐N/A	
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	
Sufficient volume:	☑Yes ☐No ☐N/A	
Correct containers used:	☑Yes ☐No ☐N/A	
Pace containers used:	☑Yes ☐No ☐N/A	
Containers intact:	☑Yes ☐No ☐N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	☐Yes ☐No ☑N/A	
Filtered volume received for dissolved tests?	☐Yes ☐No ☑N/A	
Sample labels match COC: Date / time / ID / analyses	☑Yes ☐No ☐N/A	
Samples contain multiple phases? Matrix: WT	☐Yes ☑No ☐N/A	
Containers requiring pH preservation in compliance? (HNO_3, H_2SO_4, HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO) LOT#: 6206003	☑Yes ☐No ☐N/A	List sample IDs, volumes, lot #'s of preservative and the date/time added.
Cyanide water sample checks: Lead acetate strip turns dark? (Record only)	☐Yes ☐No	
Potassium iodide test strip turns blue/purple? (Preserve)	☐Yes ☐No	
Trip Blank present:	☐Yes ☐No ☑N/A	
Headspace in VOA vials (>6mm):	☐Yes ☐No ☑N/A	
Samples from USDA Regulated Area: State:	☐Yes ☐No ☑N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	☐Yes ☐No ☑N/A	

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

Qualtrax Document ID: 30468

Page 1 of 1

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

CHAIN-OF-CUSTODY Analytical Request Document

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

LAB USE ONLY- Affix Workorder/Login Label Here

Scan QR Code for instructions

Company Name:	Evergy Kansas Central, Inc.	Contact/Report To:	Jake Humphrey
Street Address:	818 S Kansas Avenue, Topeka, KS 66612	Phone #:	(913)634-0605
		E-Mail:	jake.humphrey@evergy.com
		Cc E-Mail:	skaney@haleyaldrich.com
Customer Project #:			
Project Name:	LEC INACTIVE ASH PONDS	Invoice To:	Lawrence Center
		Invoice E-Mail:	evergyap@onlinecapturecenter.com
Site Collection Info/Facility ID (as applicable):		Purchase Order # (if applicable):	WSTR-2000095397
	Evergy Lawrence Energy Center	Quote #:	

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

County / State origin of sample(s): Kansas

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

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

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

DW PWSID # or WW Permit # as applicable:

Date Results Requested:

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

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

Specify Container Size **: 3 2 3

Identify Container Preservative Type***: 2 1 1

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

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

Customer Sample ID	Matrix *	Comp / Grab	Composite Start Date	Composite Start Time	Collected or Composite End Date	Collected or Composite End Time	# Cont.	Res. Chlorine Results	Res. Chlorine Units	Analysis Requested: 200.7 B,Ca,Ba 200.8 As,Co,Mo 6010 Li	2540C Total Dissolved Solids	pH, 300.0 Cl,F,SO4
MW-37-030424	GW	Grab	-	-	3/4/2024	14:55	3	-	-	X	X	X
MW-38-030524	GW	Grab	-	-	3/5/2024	9:05	3	-	-	X	X	X
MW-39-030524	GW	Grab	-	-	3/5/2024	11:15	3	-	-	X	X	X
MW-40-030524	GW	Grab	-	-	3/5/2024	11:55	3	-	-	X	X	X
MW-K-030524	GW	Grab	-	-	3/5/2024	9:45	3	-	-	X	X	X
MW-L-030524	GW	Grab	-	-	3/5/2024	10:40	3	-	-	X	X	X
LEC IAP-DUP-030524	GW	Grab	-	-	3/5/2024	-	3	-	-	X	X	X

Lab Use Only
Proj. Mgr: Alice Spiller
AcctNum / Client ID:
Table #:
Profile / Template: 9655
Prelog / Bottle Ord. ID: EZ 3080046

Preservation non-conformance identified for sample.

Sample Comment: 60448407

Additional Instructions from Pace®:

Collected By:
(Printed Name): Jason R. Franks
Signature: Jason R. Franks

Customer Remarks / Special Conditions / Possible Hazards:

# Coolers:	Thermometer ID:	Correction Factor (°C):	Obs. Temp. (°C)	Corrected Temp. (°C)	On Ice:
	T298	-0.3	2.6	2.3	

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Tracking Number:
Jason R. Franks / SCS	03/06/2024 / 16:30	OA Pace	3/6/24 1630	
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Delivered by: [ ] In- Person [ ] Courier
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	[ ] FedEX [ ] UPS [ ] Other
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Page: 1 of 1

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

ENV-FRM-CORQ-0019_v02_110123 ©

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

May 15, 2024

Jake Humphrey
Evergy, Inc.
818 S Kansas Avenue
Topeka, KS 66612

RE: Project: LEC INACTIVE ASH PONDS
Pace Project No.: 60452788

Dear Jake Humphrey:

Enclosed are the analytical results for sample(s) received by the laboratory on May 13, 2024. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Kansas City

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

Sincerely,

Alice Spiller

Alice Spiller
alice.spiller@pacelabs.com
(913)599-5665
PM Lab Management

Enclosures

cc: Shelly Gomez, Evergy
Laura Hines, Evergy, Inc.
Shannon Hughes, Evergy
Adam Irvin, Evergy
Samantha Kaney, Haley & Aldrich
Andrew Watson, Haley & Aldrich

Pace Analytical Services, LLC
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CERTIFICATIONS

Project: LEC INACTIVE ASH PONDS
Pace Project No.: 60452788

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

REPORT OF LABORATORY ANALYSIS

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

SAMPLE SUMMARY

Project: LEC INACTIVE ASH PONDS
Pace Project No.: 60452788

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60452788001	**MW-39**	Water	05/13/24 11:30	05/13/24 16:50
60452788002	**MW-40**	Water	05/13/24 12:05	05/13/24 16:50
60452788003	**MW-L**	Water	05/13/24 10:55	05/13/24 16:50

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SAMPLE ANALYTE COUNT

Project: LEC INACTIVE ASH PONDS
Pace Project No.: 60452788

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60452788001	**MW-39**	EPA 200.8	JGP	1	PASI-K
60452788002	**MW-40**	EPA 200.8	JGP	1	PASI-K
60452788003	**MW-L**	EPA 200.8	JGP	1	PASI-K

PASI-K = Pace Analytical Services - Kansas City

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PROJECT NARRATIVE

Project: LEC INACTIVE ASH PONDS
Pace Project No.: 60452788

Method: **EPA 200.8**
Description: 200.8 MET ICPMS
Client: Evergy Kansas Central, Inc.
Date: May 15, 2024

General Information:
3 samples were analyzed for EPA 200.8 by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 200.8 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: LEC INACTIVE ASH PONDS
Pace Project No.: 60452788

Sample: MW-39 **Lab ID: 60452788001** Collected: 05/13/24 11:30 Received: 05/13/24 16:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City							
Cobalt, Total Recoverable	**0.0011**	mg/L	0.0010	1	05/14/24 15:10	05/15/24 09:24	7440-48-4	

REPORT OF LABORATORY ANALYSIS

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Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: LEC INACTIVE ASH PONDS
Pace Project No.: 60452788

Sample: MW-40 **Lab ID: 60452788002** Collected: 05/13/24 12:05 Received: 05/13/24 16:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City							
Cobalt, Total Recoverable	**<0.0010**	mg/L	0.0010	1	05/14/24 15:10	05/15/24 09:33	7440-48-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: LEC INACTIVE ASH PONDS
Pace Project No.: 60452788

Sample: MW-L **Lab ID: 60452788003** Collected: 05/13/24 10:55 Received: 05/13/24 16:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City							
Cobalt, Total Recoverable	**<0.0010**	mg/L	0.0010	1	05/14/24 15:10	05/15/24 09:35	7440-48-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: LEC INACTIVE ASH PONDS
Pace Project No.: 60452788

QC Batch: 894356
QC Batch Method: EPA 200.8
Analysis Method: EPA 200.8
Analysis Description: 200.8 MET
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60452788001, 60452788002, 60452788003

METHOD BLANK: 3539403 Matrix: Water
Associated Lab Samples: 60452788001, 60452788002, 60452788003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cobalt	mg/L	<0.0010	0.0010	05/15/24 09:21	

LABORATORY CONTROL SAMPLE: 3539404

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cobalt	mg/L	0.04	0.042	105	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3539405 3539406

Parameter	Units	60452788001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Cobalt	mg/L	0.0011	0.04	0.04	0.042	0.043	101	104	70-130	3	20	

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

REPORT OF LABORATORY ANALYSIS

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

QUALIFIERS

Project: LEC INACTIVE ASH PONDS
Pace Project No.: 60452788

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

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

TNI - The NELAC Institute.

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Lenexa, KS 66219
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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: LEC INACTIVE ASH PONDS
Pace Project No.: 60452788

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60452788001	**MW-39**	EPA 200.8	894356	EPA 200.8	894444
60452788002	**MW-40**	EPA 200.8	894356	EPA 200.8	894444
60452788003	**MW-L**	EPA 200.8	894356	EPA 200.8	894444

WO# : 60452788

60452788

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

Client Name: Evergy / Central

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#17 **Type of Ice:** Wet Blue None

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

Date and initials of person examining contents: AF 5/13

Temperature should be above freezing to 6°C

Chain of Custody present:	☑Yes ☐No ☐N/A	
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	
Samples arrived within holding time:	☑Yes ☐No ☐N/A	
Short Hold Time analyses (<72hr):	☐Yes ☑No ☐N/A	
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	
Sufficient volume:	☑Yes ☐No ☐N/A	
Correct containers used:	☑Yes ☐No ☐N/A	
Pace containers used:	☑Yes ☐No ☐N/A	
Containers intact:	☑Yes ☐No ☐N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	☐Yes ☐No ☑N/A	
Filtered volume received for dissolved tests?	☐Yes ☐No ☑N/A	
Sample labels match COC: Date / time / ID / analyses	☑Yes ☐No ☐N/A	
Samples contain multiple phases? Matrix: WT	☐Yes ☑No ☐N/A	
Containers requiring pH preservation in compliance? (HNO_3, H_2SO_4, HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO) **LOT#:** 630800	☑Yes ☐No ☐N/A	List sample IDs, volumes, lot #'s of preservative and the date/time added.
Cyanide water sample checks: Lead acetate strip turns dark? (Record only)	☐Yes ☐No	
Potassium iodide test strip turns blue/purple? (Preserve)	☐Yes ☐No	
Trip Blank present:	☐Yes ☐No ☑N/A	
Headspace in VOA vials (>6mm):	☐Yes ☐No ☑N/A	
Samples from USDA Regulated Area: State:	☐Yes ☐No ☑N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	☐Yes ☐No ☑N/A	

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

Qualtrax Document ID: 30468

Page 1 of 1

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

CHAIN-OF-CUSTODY Analytical Request Document

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

LAB USE ONLY- Affix Workorder/Login Label Here

Scan QR Code for instructions

Company Name:	Evergy Kansas Central, Inc.	Contact/Report To:	Jake Humphrey
Street Address:	818 S Kansas Avenue, Topeka, KS 66612	Phone #:	(913)634-0605
		E-Mail:	jake.humphrey@evergy.com
		Cc E-Mail:	
Customer Project #:			
Project Name:	LEC INACTIVE ASH PONDS	Invoice To:	Lawrence Center
		Invoice E-Mail:	evergyap@onlinecapturecenter.com
Site Collection Info/Facility ID (as applicable):		Purchase Order # (if applicable):	WSTR-2000095397
		Quote #:	

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

County / State origin of sample(s): Kansas

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

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

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

DW PWSID # or WW Permit # as applicable:

Date Results Requested:

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

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

Specify Container Size **: 3
Identify Container Preservative Type***: 2
Analysis Requested: 200.8 Co

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

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

Lab Use Only
Proj. Mgr: Alice Spiller
AcctNum / Client ID:
Table #:
Profile / Template: 9655
Prelog / Bottle Ord. ID: EZ 3107192

Preservation non-conformance identified for sample.

Customer Sample ID	Matrix *	Comp / Grab	Composite Start Date	Composite Start Time	Collected or Composite End Date	Collected or Composite End Time	# Cont.	Res. Chlorine Results	Res. Chlorine Units	200.8 Co	Sample Comment
MW-39	WT	Grab	-	-	5/13/24	1130	1	-	-	X	604527858
MW-40	WT	Grab	-	-	5/13/24	1205	1	-	-	X	
MW-L	WT	Grab	-	-	5/13/24	1055	1	-	-	X	

Additional Instructions from Pace®:

Collected By: (Printed Name) Matt VanderPutten
Signature:

Customer Remarks / Special Conditions / Possible Hazards:

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

Relinquished by/Company: (Signature) Matt VanderPutten / SCS	Date/Time: 5/13/24 1630	Received by/Company: (Signature)	Date/Time: 5/13 1650	Tracking Number:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Delivered by: [ ] In- Person [ ] Courier
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	[ ] FedEX [ ] UPS [ ] Other
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Page: 1 of 1

Page 13 of 13

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