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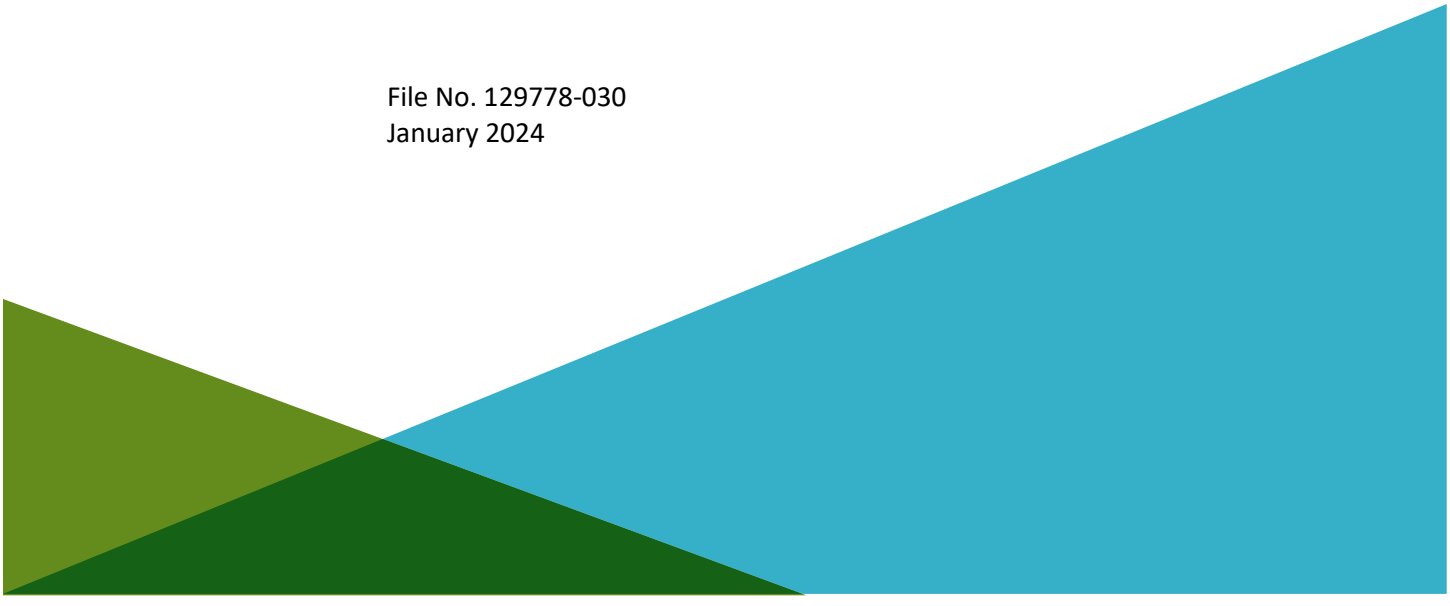
2023 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
FLY ASH LANDFILL
JEFFREY ENERGY CENTER
ST. MARYS, KANSAS

by
Haley & Aldrich, Inc.
Cleveland, Ohio

for
Evergy Kansas Central, Inc.
Topeka, Kansas

File No. 129778-030
January 2024



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This Annual Groundwater Monitoring and Corrective Action Report documents the groundwater monitoring program for the Jeffrey Energy Center Fly Ash Landfill (FAL) consistent with applicable sections of 257.90 through 257.98, and describes activities conducted in the prior calendar year (2023) and documents compliance with the U.S. Environmental Protection Agency Coal Combustion Residual Rule. I certify that the 2023 Annual Groundwater Monitoring and Corrective Action Report for the JEC FAL 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:	Principal Consultant
Company:	Haley & Aldrich, Inc.

1. Introduction

This 2023 Annual Groundwater Monitoring and Corrective Action Report (Annual Report) addresses the Fly Ash Landfill (FAL) at the Jeffrey Energy Center (JEC), operated by Evergy Kansas Central, Inc. (Evergy). This Annual Report was developed in accordance with the U.S. Environmental Protection Agency Coal Combustion Residual (CCR) Rule (Rule) effective October 19, 2015, including subsequent revisions, specifically Title 40 Code of Federal Regulations (40 CFR), subsection 257.90(e). The Annual Report documents the groundwater monitoring system for the FAL consistent with applicable sections of 257.90 through 257.98, and describes activities conducted in the prior calendar year (2023) and document compliance with the Rule. The specific requirements for the Annual Report listed in § 257.90(e)(1)-(5) of the Rule are provided in Sections 1 and 2 of this Annual Report and are in bold italic font, followed by a short narrative describing how each Rule requirement has been met.

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 (January 1, 2023), the FAL was operating under an assessment monitoring program in compliance with 40 CFR § 257.95.

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 (December 31, 2023), the FAL was operating under an assessment monitoring program in compliance with 40 CFR § 257.95.

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) – Statistically Significant Increase Constituents

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

The FAL is operating under an assessment monitoring program; therefore, no statistical evaluations were completed on Appendix III constituents in 2023.

1.1.3.2 40 CFR § 257.90(e)(6)(iii)(b) – Initiation of Assessment Monitoring

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

An assessment monitoring program was initiated on July 17, 2018 for the FAL with a notification establishing assessment monitoring provided on August 15, 2018 to meet the requirements of 40 CFR § 257.95. The FAL remained in assessment monitoring in 2023.

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;

No statistically significant levels were identified above the groundwater protection standard for those constituents listed in Appendix IV to this part in 2023 for the FAL. The statistical evaluation reports for semi-annual assessment monitoring sampling events from September 2022 and March 2023 were completed in February 2023 and July 2023, respectively, and are included in 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;

No assessment of corrective measures was required to be initiated in 2023 for this unit. The FAL remained in assessment monitoring during 2023.

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

An assessment of corrective measures was not required for the FAL in 2023; therefore, a public meeting was not held.

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.

No assessment of corrective measures was required to be initiated in 2023 for this unit. The FAL remained in assessment monitoring during 2023.

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

The FAL remains in assessment monitoring, and no remedy was required to be selected.

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 were required in 2023.

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 257.99, except as provided in paragraph (g) [Suspension of groundwater monitoring requirements] of this section.

Evergy has installed and certified a groundwater monitoring system at the JEC FAL. The FAL is 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 JEC FAL as required by the Rule. Groundwater sampling and analysis was conducted in accordance with 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 in the calendar year 2023.

2.2.1 Status of the Groundwater Monitoring Program

The FAL remained in the assessment monitoring program during 2023.

2.2.2 Key Actions Completed

The 2022 Annual Groundwater Monitoring and Corrective Action Report was completed in January 2023. Statistical evaluation was completed in February 2023 on analytical data from the September 2021 semi-annual assessment monitoring sampling event.

A semi-annual assessment monitoring sampling event was completed in March 2023 for detected Appendix IV constituents identified from the June 2022 annual assessment monitoring sampling event. An additional sample from monitoring well MW-FAA-6 was collected in April 2023 to confirm analyte concentrations collected in March 2023. Statistical evaluation was completed in July 2023 on analytical data from the March 2023 semi-annual assessment monitoring sampling event.

An annual assessment monitoring sampling event was completed in June 2023 to identify detected Appendix IV constituents for subsequent semi-annual sampling events in September 2023 and planned for March 2024. Semi-annual assessment monitoring sampling was completed in September 2023 for detected Appendix IV constituents identified during the June 2023 annual monitoring event. Statistical evaluation of the results from the September 2023 semi-annual assessment monitoring sampling event are due to be completed in January 2024 and will be reported in the next annual report.

2.2.3 Problems Encountered

One problem encountered during groundwater monitoring activities in 2023 consisted of a laboratory analytical error during the March 2023 semi-annual detection monitoring sampling event that required a verification sample to be collected from monitoring well MW-FAA-6 in April 2023. This was the only issue that needed to be addressed at the FAL in 2023.

2.2.4 Actions to Resolve Problems

The resolution to problems encountered in 2023 included collection of a confirmation groundwater sample from MW-FAA-6, as described above. The analytical results for this sampling event were revised accordingly. No other problems were encountered at the FAL in 2023; therefore, no additional actions to resolve problems were required.

2.2.5 Project Key Activities for Upcoming Year

Key activities planned for 2024 include the completion of the 2023 Annual Groundwater Monitoring and Corrective Action Report, statistical evaluation of semi-annual assessment monitoring analytical data collected in September 2023, semi-annual assessment monitoring and subsequent statistical evaluations, and annual assessment monitoring.

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)

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 FAL is included in this report as Figure 1.

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 during 2023.

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 in 2023. A summary including sample names, dates of sample collection, field parameters, and monitoring data obtained for the groundwater monitoring program for the FAL is presented in Table I 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 in 2023 are provided in Figures 2 through 4.

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 July 17, 2018 with a notification establishing assessment monitoring provided on August 15, 2018 to meet the requirements of 40 CFR § 257.95. The FAL remained in assessment monitoring during 2023.

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 §§ 257.90 through 257.95 of the Rule. It is understood that there are supplemental references in §§ 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 in calendar year 2023.

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 alternative 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 July 17, 2018. Three rounds of assessment monitoring sampling were completed in 2023. Analytical results for both downgradient and upgradient wells are provided in Table I. The background concentrations (upper tolerance limits) and groundwater protection standards established for detected Appendix IV constituents for the FAL are included in Table II. The background concentrations and groundwater protection standards provided in Table II were utilized for the statistical evaluations completed in 2023 for September 2022 and March 2023 semi-annual 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.

No assessment monitoring alternative source demonstration or certification was required in 2023. The FAL remained in assessment monitoring during 2023.

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.

No assessment of corrective measures was required to be initiated in 2023; therefore, no demonstration or certification is applicable for this unit.

TABLES

TABLE I
SUMMARY OF ANALYTICAL RESULTS - 2023 ANNUAL ASSESSMENT MONITORING
EVERGY KANSAS CENTRAL, INC.
JEFFREY ENERGY CENTER, FLY ASH LANDFILL
ST. MARYS, KANSAS

Location	Upgradient			Downgradient													
	MW-FAA-5[1]			MW-FAA-3					MW-FAA-4				MW-FAA-6				
Measure Point (TOC)	1250.80			1165.66					1213.81				1162.76				
Sample Name	MW-FAA-5-031423	MW FAA-5-060623	FAA-5-090623	MW-FAA-3-031423	MW FAA-3-060623	DUP JEC FAA-060623	FAA-3-090623	DUP-FAA-090623	MW-FAA-4-031423	DUP JEC FAA-031423	MW FAA-4-060623	FAA-4-090623	MW-FAA-6-031423	MW FAA-6-042723	MW FAA-6-060623	FAA-6-090623	
Sample Date	03/14/2023	06/06/2023	09/06/2023	03/14/2023	06/06/2023	06/06/2023	09/06/2023	09/06/2023	03/14/2023	03/14/2023	06/06/2023	09/06/2023	03/14/2023	04/27/2023	06/06/2023	09/06/2023	
Final Lab Report Date	3/28/2023	06/16/2023	9/22/2023	3/23/2023	06/16/2023	06/16/2023	9/22/2023	9/22/2023	3/23/2023	3/23/2023	06/16/2023	9/22/2023	3/23/2023	5/3/2023	06/16/2023	9/22/2023	
Final Lab Report Revision Date	4/10/2023	N/A	N/A	5/9/2023	N/A	N/A	10/4/2023	10/4/2023	5/9/2023	5/9/2023	N/A	10/4/2023	5/9/2023	N/A	N/A	10/4/2023	
Final Radiation Lab Report Date	3/30/2023	07/11/2023	10/6/2023	3/30/2023	07/11/2023	07/11/2023	10/6/2023	10/6/2023	3/30/2023	3/30/2023	07/11/2023	10/6/2023	3/30/2023	5/22/2023	07/11/2023	10/6/2023	
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	6/13/2023	N/A	N/A	
Lab Data Reviewed and Accepted	6/9/2023	08/02/2023	12/14/2023	6/9/2023	08/02/2023	08/02/2023	12/14/2023	12/14/2023	6/9/2023	6/9/2023	08/02/2023	12/14/2023	6/9/2023	6/9/2023	08/02/2023	12/14/2023	
Depth to Water (ft btoc)	87.19	86.85	87.07	13.99	13.11	-	15.24	15.24	56.93	-	57.68	58.84	16.12	15.26	14.24	17.39	
Temperature (Deg C)	7.81	17.71	15.94	14.43	20.91	-	18.57	-	13.19	-	20.96	20.44	14.93	17.21	22.91	18.71	
Conductivity (µS/cm)	338	3,540	3,740	1,650	1550	-	1270	-	1,650	-	1,490	748	2,370	2,070	2,330	1,380	
Turbidity (NTU)	7.6	19.2	0.0	3.0	3.8	-	0.9	-	1.0	-	0.0	0.0	2.3	0.0	0.5	2.1	
Dissolved Oxygen, Field (mg/L)	0.00	0.00	0.00	0.67	2.99	-	0.00	-	1.36	-	0.00	0.22	2.22	1.34	0.11	0.00	
ORP, Field (mV)	163	147	159	-17	-11	-	88	-	32	-	62	-36	-51	92	-12	-53	
pH, Field (su)	7.65	6.70	6.61	7.28	6.95	-	6.99	-	7.36	-	7.07	7.16	7.41	7.17	7.51	7.43	
Boron, Total (mg/L)	**1.7**	-	**1.7**	**0.46**	-	-	**0.50**	**0.49**	**0.71**	**0.70**	-	**0.59**	**2.8**	**2.7**	-	**2.7**	
Calcium, Total (mg/L)	**523**	-	**542**	**205**	-	-	**232**	**228**	**178**	**178**	-	**198**	**107**	**104**	-	**117**	
Chloride (mg/L)	**77.4**	-	**115**	**119**	-	-	**128**	**126**	**92.9**	**94.4**	-	**105**	**79.2**	**77.6**	-	**67.4**	
Fluoride (mg/L)	< 0.20	-	**0.25**	< 0.20	-	-	< 0.20	< 0.20	< 0.20	< 0.20	-	< 0.20	**0.49**	**0.55**	-	< 0.20	
Sulfate (mg/L)	**2,080**	-	**2,120**	**478**	-	-	**532**	**537**	**473**	**467**	-	**454**	**1,220**	**985**	-	**731**	
pH (su)	**6.7**	-	**6.7**	**7.0**	-	-	**6.9**	**7.0**	**7.1**	**7.0**	-	**7.1**	**7.2**	**7.6**	-	**7.3**	
TDS (mg/L)	**3,270**	-	**3,270**	**1,210**	-	-	**1,330**	**1,320**	**1,610**	**1,380**	-	**1,270**	**1,930**	**1,700**	-	**2,080**	
Antimony, Total (mg/L)	< 0.0010	< 0.0010	< 0.0010	-	< 0.0010	< 0.0010	-	-	-	-	< 0.0010	-	-	-	< 0.0010	-	
Arsenic (mg/L)	**0.0054**	**0.0013**	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	**0.0076**	**0.0084**	**0.0099**	**0.0085**	
Barium, Total (mg/L)	**0.011**	< 0.0050	< 0.0050	**0.031**	**0.035**	**0.031**	**0.033**	**0.033**	**0.045**	**0.045**	**0.050**	**0.051**	**0.028**	**0.040**	**0.021**	**0.027**	
Beryllium, Total (mg/L)	< 0.0010	< 0.0010	<0.0010	-	< 0.0010	< 0.0010	-	-	-	-	< 0.0010	-	-	-	< 0.0010	-	
Cadmium, Total (mg/L)	< 0.00050	< 0.00050	<0.00050	-	< 0.00050	< 0.00050	-	-	-	-	< 0.00050	-	-	-	< 0.00050	-	
Chromium, Total (mg/L)	**0.022**	< 0.0050	<0.0050	-	< 0.0050	< 0.0050	-	-	-	-	< 0.0050	-	-	-	< 0.0050	-	
Cobalt, Total (mg/L)	**0.0036**	**0.0031**	**0.0017**	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	**0.0014**	**0.0014**	< 0.0010	< 0.0010	**0.0018**	**0.0017**	**0.0014**	**0.0012**	
Lead, Total (mg/L)	< 0.010	< 0.010	<0.010	-	< 0.010	< 0.010	-	-	-	-	< 0.010	-	-	-	< 0.010	-	
Fluoride (mg/L)	< 0.20	< 0.20	**0.25**	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	**0.49**	**0.55**	< 0.20	< 0.20	
Lithium, Total (mg/L)	**0.15**	**0.16**	**0.14**	**0.014**	**0.017**	**0.018**	**0.014**	**0.014**	**0.022**	**0.018**	**0.021**	**0.020**	**0.016**	**0.016**	**0.011**	**0.010**	
Molybdenum, Total (mg/L)	**0.022**	**0.022**	**0.019**	**0.0061**	**0.0057**	**0.0056**	**0.0064**	**0.0065**	**0.0093**	**0.0090**	**0.0071**	**0.0072**	**0.30**	**0.26**	**0.26**	**0.29**	
Selenium, Total (mg/L)	< 0.0010	< 0.0010	<0.0010	< 0.0010	< 0.0010	< 0.0010	-	-	< 0.0010	< 0.0010	< 0.0010	-	**0.0011**	**0.0010**	< 0.0010	**-**	
Thallium, Total (mg/L)	< 0.0010	< 0.0010	<0.0010	-	< 0.0010	< 0.0010	-	-	-	-	< 0.0010	-	-	-	< 0.0010	-	
Mercury, Total (mg/L)	< 0.00020	< 0.00020	< 0.00020	-	< 0.00020	< 0.00020	< 0.00020	< 0.00020	-	-	**0.0003**	**0.00046**	-	-	< 0.00020	< 0.00020	
Radium-226 & 228 Combined (pCi/L)	**1.88 ± 0.970 (1.30)**	**1.80 ± 0.913 (1.27)**	1.29 ± 1.09 (1.58)	0.669 ± 0.951 (2.03)	0.316 ± 0.724 (1.54)	0.668 ± 0.685 (1.44)	1.27 ± 0.999 (1.62)	0.445 ± 1.00 (1.97)	0.933 ± 0.843 (1.46)	0.496 ± 0.828 (1.60)	1.07 ± 0.740 (1.27)	0.701 ± 1.18 (2.37)	0.969 ± 0.850 (1.48)	0.000 ± 0.736 (2.00)	**1.37 ± 0.837 (1.37)**	0.0705 ± 0.896 (1.94)	

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.

[1] *= Additional constituents provided in the laboratory report were utilized for analysis at other units and are not applicable to the current FAL groundwater monitoring progran*

µS/cm = micro Siemens per centimeter

Deg C = degrees Celsius

ft btoc = feet below top of casing

mg/L = milligrams per liter

mV = millivolt

N/A = Not Applicable

NTU = Nephelometric Turbidity Unit

ORP = oxidation reduction potential

pCi/L = picoCuries per liter

su = standard unit

TDS = total dissolved solids

TOC = top of casing

TABLE II
ASSESSMENT GROUNDWATER MONITORING - DETECTED APPENDIX IV GWPS
SEPTEMBER 2022 AND MARCH 2023 SAMPLING EVENTS
JEFFREY ENERGY CENTER FLY ASH LANDFILL
ST. MARYS, KANSAS

Well Number	Background Value[1]	GWPS
CCR Appendix-IV Arsenic, Total (mg/L)		
MW-FAA-5 (upgradient)	0.005	NA
MW-FAA-3		0.010
MW-FAA-4		0.010
MW-FAA-6		0.010
CCR Appendix-IV Barium, Total (mg/L)		
MW-FAA-5 (upgradient)	0.013	NA
MW-FAA-3		2
MW-FAA-4		2
MW-FAA-6		2
CCR Appendix-IV Cobalt, Total (mg/L)		
MW-FAA-5 (upgradient)	0.005	NA
MW-FAA-3		0.006
MW-FAA-4		0.006
MW-FAA-6		0.006
CCR Appendix-IV Fluoride, Total (mg/L)		
MW-FAA-5 (upgradient)	1.309	NA
MW-FAA-3		4.0
MW-FAA-4		4.0
MW-FAA-6		4.0
CCR Appendix-IV Lithium, Total (mg/L)		
MW-FAA-5 (upgradient)	0.171	NA
MW-FAA-3		0.171
MW-FAA-4		0.171
MW-FAA-6		0.171
CCR Appendix-IV Molybdenum, Total (mg/L)		
MW-FAA-5 (upgradient)	0.056	NA
MW-FAA-3		0.100
MW-FAA-4		0.100
MW-FAA-6	0.871[2]	0.901
CCR Appendix-IV Radium-226 & 228 Combined (pCi/L)		
MW-FAA-5 (upgradient)	2.187	NA
MW-FAA-3		5
MW-FAA-4		5
MW-FAA-6		5
CCR Appendix-IV Selenium, Total (mg/L)		
MW-FAA-5 (upgradient)	0.005	NA
MW-FAA-3		0.05
MW-FAA-4		0.05
MW-FAA-6		0.05

Notes:

[1] Interwell background data collected from 08/19/2016 through 09/08/2022, unless otherwise noted.

[2] Intrawell background data collected from 08/19/2016 through 03/09/2022.

CCR = coal combustion residuals

GWPS = groundwater protection standard

MCL = maximum contaminant level

mg/L = milligrams per liter

NA = Not Applicable

pCi/L = picoCuries per liter

FIGURES

LEGEND

- MONITORING WELL
- PIEZOMETER OBSERVATION ONLY
- FLY ASH LANDFILL BOUNDARY

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. AERIAL IMAGERY SOURCE: ESRI, 20 OCTOBER 2022

N

0 400 800
SCALE IN FEET

HALEY ALDRICH

EVERGY KANSAS CENTRAL, INC.
JEFFREY ENERGY CENTER
ST. MARYS, KANSAS

FLY ASH LANDFILL
MONITORING WELL LOCATION MAP

evergy

JANUARY 2024

FIGURE 1

GIS: \\haleyaldrich.com\share\phx_common\Projects\Westar\GIS\Jeffrey Energy Center\Maps\2024 01\129778 054 0001 FAL MONITORING WELL LOCATION MAP.mxd - khensen - 1/11/2024 9:11:07 AM

LEGEND

- PIEZOMETER OBSERVATION ONLY
- MONITORING WELL
- ESTIMATED GROUNDWATER POTENTIOMETRIC OBSERVATION ELEVATION CONTOUR, IN FEET
- GROUNDWATER FLOW DIRECTION AND APPROXIMATE GROUNDWATER FLOW RATE (FEET/YEAR)
- FLY ASH LANDFILL BOUNDARY

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.

2. GROUNDWATER POTENTIOMETRIC ELEVATIONS WERE MEASURED 14 MARCH 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 14 MARCH 2023 AND THE CONDUCTIVITY VALUES AND EFFECTIVE POROSITY VALUES OBTAINED FROM SLUG TESTS COMPLETED APRIL 2016.

5. AERIAL IMAGERY SOURCE: ESRI, 20 OCTOBER 2022

N

0 400 800
SCALE IN FEET

HALEY ALDRICH

EVERGY KANSAS CENTRAL, INC.
JEFFREY ENERGY CENTER
ST. MARY'S, KANSAS

FLY ASH LANDFILL GROUNDWATER POTENTIOMETRIC ELEVATION CONTOUR MAP MARCH 14, 2023

evergy

JANUARY 2024

FIGURE 2

DRAFT

LEGEND

- MONITORING WELL
- PIEZOMETER OBSERVATION ONLY
- ESTIMATED GROUNDWATER POTENTIOMETRIC OBSERVATION ELEVATION CONTOUR IN FEET
- GROUNDWATER FLOW DIRECTION AND APPROXIMATE GROUNDWATER FLOW RATE (FEET/YEAR)
- FLY ASH LANDFILL

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.

2. GROUNDWATER POTENTIOMETRIC ELEVATIONS WERE MEASURED 6 JUNE 2023.

3. THE GROUNDWATER FLOW RATE WAS APPROXIMATED USING THE HYDRAULIC GRADIENT CALCULATED FROM GROUNDWATER POTENTIOMETRIC ELEVATIONS MEASURED 6 JUNE 2023 AND THE CONDUCTIVITY VALUES AND EFFECTIVE POROSITY VALUES OBTAINED FROM SLUG TESTS COMPLETED APRIL 2016.

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

5. AERIAL IMAGERY SOURCE: ESRI, 20 OCTOBER 2022

N

0 400 800
SCALE IN FEET

HALEY ALDRICH

EVERGY KANSAS CENTRAL, INC.
JEFFREY ENERGY CENTER
ST. MARYS, KANSAS

FLY ASH LANDFILL GROUNDWATER POTENTIOMETRIC ELEVATION CONTOUR MAP JUNE 6, 2023

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JANUARY 2024

FIGURE 3

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LEGEND

- MONITORING WELL
- PIEZOMETER OBSERVATION ONLY
- ESTIMATED GROUNDWATER POTENTIOMETRIC OBSERVATION ELEVATION CONTOUR IN FEET
- GROUNDWATER FLOW DIRECTION AND APPROXIMATE GROUNDWATER FLOW RATE (FEET/YEAR)
- FLY ASH LANDFILL BOUNDARY

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.

2. GROUNDWATER POTENTIOMETRIC ELEVATIONS WERE MEASURED 6 SEPTEMBER 2023.

3. THE GROUNDWATER FLOW RATE WAS APPROXIMATED USING THE HYDRAULIC GRADIENT CALCULATED FROM GROUNDWATER POTENTIOMETRIC ELEVATIONS MEASURED 6 SEPTEMBER 2023 AND THE CONDUCTIVITY VALUES AND EFFECTIVE POROSITY VALUES OBTAINED FROM SLUG TESTS COMPLETED APRIL 2016.

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

5. AERIAL IMAGERY SOURCE: ESRI, 20 OCTOBER 2022

N

0 400 800
SCALE IN FEET

HALEY ALDRICH

EVERGY KANSAS CENTRAL, INC.
JEFFREY ENERGY CENTER
ST. MARYS, KANSAS

FLY ASH LANDFILL GROUNDWATER POTENTIOMETRIC ELEVATION CONTOUR MAP SEPTEMBER 6, 2023

evergy

JANUARY 2024

FIGURE 4

GIS: \\haleyaldrich.com\share\phx_common\Projects\Westar\GIS\Jeffrey Energy Center\Maps\2024 01\129778 054 0001 FAL GDWTR CONTOUR MAP SEPTEMBER 2023.mxd - khensen - 1/11/2024 8:22:33 AM

ATTACHMENT 1
Statistical Analyses

ATTACHMENT 1-1
September 2022 Semi-Annual Groundwater Assessment Monitoring Data Statistical Evaluation

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

TECHNICAL MEMORANDUM

January 31, 2024
File No. 129778-050

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 2022 Semi-Annual Groundwater Assessment Monitoring Data Statistical Evaluation
Completed February 1, 2023
Jeffrey Energy Center
Fly Ash Landfill

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 2022** semi-annual assessment monitoring groundwater sampling event for the Jeffrey Energy Center (JEC) Fly Ash Landfill (FAL). This semi-annual assessment monitoring groundwater sampling event was completed on **September 8, 2022**. All laboratory results were received and validated on **November 7, 2022**.

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 a statistically significant level (SSL) above the groundwater protection standard (GWPS) consistent with the requirements of the Rule. GWPSs 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 January 14, 2019. 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 (UTL), 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 a 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) semi-annual 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 2022** 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-FAA-5 (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 2022** for **interwell evaluation**. Background concentrations were updated through **March 2022** for **intrawell evaluation**.

RESULTS OF APPENDIX IV DOWNGRADIENT STATISTICAL COMPARISONS

Sample concentrations from the downgradient wells for each of the detected Appendix IV constituents from the **September 2022** semi-annual 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 a SSI. A sample concentration greater than the GWPS is considered to represent a SSL. Based on previous compliance sampling events, statistical evaluations, and associated alternative source demonstrations, an intrawell comparison is utilized for FAA-6 for molybdenum 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 of groundwater sampling data collected in September 2022, no SSLs above GWPS occurred at the JEC FAL.**

Attachments:

Table I – Summary of Semi-Annual Assessment Groundwater Monitoring Statistical Evaluation

TABLE

TABLE I
SUMMARY OF SEMI-ANNUAL ASSESSMENT GROUNDWATER MONITORING STATISTICAL EVALUATION
SEPTEMBER 2022 SAMPLING EVENT
JEFFREY ENERGY CENTER
FLY ASH LANDFILL

																	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 2022 Concentration (mg/L)	Background Limits[1] (UTL) mg/L	SSI	Background Limits[2] (UTL) mg/L	SSI	GWPS (Higher of MCL/ 40 CFR § 257.95(h)(2) or UTL)	SSL
CCR Appendix-IV: Arsenic, Total (mg/L)																						
MW-FAA-5 (upgradient)	11/22	50%	0.001-0.005	0.0035	1.196E-06	0.001093	0.7241	0.01	mg/L	0	0	No	No	Stable	Non-parametric	< 0.0010	0.005				0.010	
MW-FAA-3	3/22	86%	0.001-0.001	0.0011	8.807E-10	0.00002968	0.02969	0.01	mg/L	0	0	Yes	No	NT	Non-parametric	< 0.0010		No				No
MW-FAA-4	0/22	100%	0.0005-0.001		1.136E-08	0.0001066	0.1091	0.01	mg/L	0	0	NA	NA	NA	NA	< 0.0010		No				No
MW-FAA-6	22/22	0%	-	0.01	2.547E-06	0.001596	0.2741	0.01	mg/L	0	0	No	No	Stable	Non-parametric	0.005		No				No
CCR Appendix-IV: Barium, Total (mg/L)																						
MW-FAA-5 (upgradient)	4/22	82%	0.005-0.01	0.013	5.877E-06	0.002424	0.3848	2	mg/L	0	0	No	No	NT	Non-parametric	< 0.0050	0.013				2	
MW-FAA-3	22/22	0%	-	0.047	0.00002411	0.00491	0.1548	2	mg/L	0	0	Yes	No	Decrease	Normal	0.030		Yes				No
MW-FAA-4	22/22	0%	-	0.053	6.894E-06	0.002626	0.05324	2	mg/L	0	0	No	No	Stable	Normal	0.051		Yes				No
MW-FAA-6	22/22	0%	-	0.067	0.0002865	0.01693	0.3879	2	mg/L	0	0	No	No	Decrease	Non-parametric	0.040		Yes				No
CCR Appendix-IV: Cobalt, Total (mg/L)																						
MW-FAA-5 (upgradient)	17/22	23%	0.001-0.005	0.0056	2.225E-06	0.001492	0.6147	0.006	mg/L	0	0	No	No	Increase	Normal	0.0033	0.0051				0.006	
MW-FAA-3	2/22	91%	0.001-0.001	0.00058	1.762E-08	0.0001327	0.1384	0.006	mg/L	0	0	No	No	NT	Non-parametric	< 0.0010		No				No
MW-FAA-4	9/22	59%	0.0005-0.001	0.0027	2.671E-07	0.0005168	0.3962	0.006	mg/L	0	0	No	No	Increase	NA	0.0018		No				No
MW-FAA-6	21/22	5%	0.001-0.001	0.0021	1.111E-07	0.0003333	0.2303	0.006	mg/L	0	0	No	No	Increase	Normal	0.0019		No				No
CCR Appendix-IV: Fluoride (mg/L)																						
MW-FAA-5 (upgradient)	21/23	9%	0.2-0.2	1.6	0.103	0.321	0.4302	4	mg/L	0	0	Yes	No	Stable	Normal	< 0.20	1.31				4.0	
MW-FAA-3	18/23	22%	0.2-0.2	0.44	0.005497	0.07414	0.2378	4	mg/L	0	0	No	No	Stable	Normal	< 0.20		No				No
MW-FAA-4	19/23	17%	0.2-0.2	0.5	0.007286	0.08536	0.2563	4	mg/L	0	0	Yes	No	Stable	Normal	0.24		No				No
MW-FAA-6	23/23	0%	-	1.2	0.04365	0.2089	0.268	4	mg/L	0	0	No	No	Stable	Normal	0.35		No				No
CCR Appendix-IV: Lithium, Total (mg/L)																						
MW-FAA-5 (upgradient)	22/22	0%	-	0.16	0.0007554	0.02748	0.2242	0.04	mg/L	22	0	No	No	Stable	Normal	0.160	0.171				0.171	
MW-FAA-3	18/22	18%	0.01-0.03	0.023	0.00002067	0.004546	0.2841	0.04	mg/L	0	0	Yes	No	Stable	Normal	0.016		No				No
MW-FAA-4	19/22	14%	0.01-0.03	0.024	0.00002051	0.004529	0.2561	0.04	mg/L	0	0	No	No	Increase	Normal	0.023		No				No
MW-FAA-6	15/22	32%	0.01-0.03	0.016	0.00002056	0.004535	0.3428	0.04	mg/L	0	0	Yes	No	Stable	Non-parametric	0.015		No				No
CCR Appendix-IV: Molybdenum, Total (mg/L)																						
MW-FAA-5 (upgradient)	22/22	0%	-	0.067	0.0002037	0.01427	0.4632	0.1	mg/L	0	0	No	No	Stable	Normal	0.026	0.056				0.100	
MW-FAA-3	22/22	0%	-	0.014	6.035E-06	0.002457	0.2617	0.1	mg/L	0	0	No	No	Decrease	Normal	0.0082		No				No
MW-FAA-4	22/22	0%	-	0.011	7.175E-06	0.002679	0.4882	0.1	mg/L	0	0	No	No	Increase	Increasing	0.0110		No				No
MW-FAA-6	22/22	0%	-	0.59	0.01939	0.1392	0.3494	0.1	mg/L	22	0	No	No	Decrease	Normal	0.34		Yes	0.871	No	0.871	No
CCR Appendix-IV: Radium-226 & 228 (pCi/L)																						
MW-FAA-5 (upgradient)	19/22	14%	0.374-1.26	2.43	0.283	0.5319	0.425	5	pCi/L	0	0	No	No	Stable	Normal	1.34	2.187				5	
MW-FAA-3	15/22	32%	0.246-0.857	1.792	0.1945	0.441	0.6892	5	pCi/L	0	0	Yes	No	Stable	Normal	0.246		No				No
MW-FAA-4	14/22	36%	0.00551-0.929	1.54	0.1606	0.4007	0.5957	5	pCi/L	0	0	No	No	Stable	Normal	0.00551		No				No
MW-FAA-6	13/22	41%	0.0926-0.58	1.43	0.1399	0.3741	0.6647	5	pCi/L	0	0	No	No	Stable	Normal	0.543		No				No
CCR Appendix-IV: Selenium, Total (mg/L)																						
MW-FAA-5 (upgradient)	7/22	68%	0.0005-0.005	0.0039	0.00000139	0.001179	0.7146	0.05	mg/L	0	0	No	No	NT	Normal	< 0.0010	0.005				0.050	
MW-FAA-3	0/22	100%	8.6E-05-0.001		4.736E-08	0.0002176	0.2326	0.05	mg/L	0	0	NA	NA	NA	NA	< 0.0010		No				No
MW-FAA-4	7/22	68%	0.001-0.001	0.0019	5.333E-08	0.0002309	0.2099	0.05	mg/L	0	0	Yes	No	Stable	Non-parametric	< 0.0010		No				No
MW-FAA-6	9/22	59%	0.0005-0.001	0.014	7.734E-06	0.002781	1.53	0.05	mg/L	0	0	Yes	No	Increase	Non-parametric	0.0021		No				No

Notes and Abbreviations:

[1] Interwell background data collected from 08/19/2016 through 09/08/2022, unless otherwise noted.

[2] Intrawell background data collected from 08/19/2016 through 03/09/2022.

** 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
SSI = statistically significant increase
SSL = statistically significant level
UTL = upper tolerance limits

ATTACHMENT 1-2
March 2023 Semi-Annual Groundwater Assessment Monitoring Data Statistical Evaluation

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

TECHNICAL MEMORANDUM

January 31, 2024
File No. 129778-050

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 Semi-Annual Groundwater Assessment Monitoring Data
Statistical Evaluation
Completed July 21, 2023
Jeffrey Energy Center
Fly Ash Landfill

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** semi-annual assessment monitoring groundwater sampling event for the Jeffrey Energy Center (JEC) Fly Ash Landfill (FAL). This semi-annual assessment monitoring groundwater sampling event was completed on **March 14, 2023**. Well MW-FAA-6 was resampled on April 27, 2023, to confirm the analytical concentration collected on March 14, 2023; the results were revised. All laboratory results were received and validated on **June 9, 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 a statistically significant level (SSL) above the groundwater protection standard (GWPS) consistent with the requirements of the Rule. GWPSs 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 January 14, 2019. 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 (UTL), 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 a 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) semi-annual 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 **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-FAA-5 (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 2022** for **interwell evaluation**. Background concentrations were updated through **March 2022** for **intrawell evaluation**.

RESULTS OF APPENDIX IV DOWNGRADIENT STATISTICAL COMPARISONS

Sample concentrations from the downgradient wells for each of the detected Appendix IV constituents from the **March 2023** semi-annual 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 a SSI. A sample concentration greater than the GWPS is considered to represent a SSL. Based on previous compliance sampling events, statistical evaluations, and associated alternative source demonstrations, an intrawell comparison is utilized for FAA-6 for molybdenum 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 of groundwater sampling data collected in March 2023, no SSLs above GWPS occurred at the JEC FAL.**

Attachments:

Table I – Summary of Semi-Annual Assessment Groundwater Monitoring Statistical Evaluation

TABLE

TABLE I

SUMMARY OF SEMI-ANNUAL ASSESSMENT GROUNDWATER MONITORING STATISTICAL EVALUATION

MARCH 2023 SAMPLING EVENT

JEFFREY ENERGY CENTER FLY ASH LANDFILL

ST. MARYS, KANSAS

										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	March 2023 Concentration (mg/L)	Background Limits[1] (UTL) mg/L	SSI	Background Limits[2] (UTL) mg/L	SSI	GWPS (Higher of MCL/ 40 CFR § 257.95(h)(2) or UTL)	SSL
CCR Appendix-IV: Arsenic, Total (mg/L)																						
MW-FAA-5 (upgradient)	12/23	48%	0.001-0.005	0.0054	0.000001799	0.001341	0.7988	0.01	mg/L	0	0	No	No	Stable	Non-parametric	0.0054	0.005				0.010	
MW-FAA-3	3/23	87%	0.001-0.001	0.0011	8.407E-10	0.000029	0.02901	0.01	mg/L	0	0	Yes	No	NT	Non-parametric	< 0.0010		No				No
MW-FAA-4	0/23	100%	0.0005-0.001		1.087E-08	0.0001043	0.1066	0.01	mg/L	0	0	NA	NA	NA	NA	< 0.0010		No				No
MW-FAA-6	23/23	0%	-	0.01	0.00000272	0.001649	0.2779	0.01	mg/L	0	0	No	No	Stable	Non-parametric	0.0084		Yes				No
CCR Appendix-IV: Barium, Total (mg/L)																						
MW-FAA-5 (upgradient)	5/23	78%	0.005-0.01	0.013	0.00000657	0.002563	0.3941	2	mg/L	0	0	No	No	NT	Non-parametric	0.011	0.013				2	
MW-FAA-3	23/23	0%	-	0.047	0.00002304	0.0048	0.1514	2	mg/L	0	0	Yes	No	Decrease	Normal	0.031		Yes				No
MW-FAA-4	23/23	0%	-	0.053	0.000007391	0.002719	0.05534	2	mg/L	0	0	No	No	Stable	Normal	0.045		Yes				No
MW-FAA-6	23/23	0%	-	0.067	0.0002741	0.01656	0.3808	2	mg/L	0	0	No	No	Decrease	Non-parametric	0.040		Yes				No
CCR Appendix-IV: Cobalt, Total (mg/L)																						
MW-FAA-5 (upgradient)	18/23	22%	0.001-0.005	0.0056	0.000002184	0.001478	0.5965	0.006	mg/L	0	0	No	No	Increase	Normal	0.0036	0.005				0.006	
MW-FAA-3	2/23	91%	0.001-0.001	0.00058	1.689E-08	0.00013	0.1353	0.006	mg/L	0	0	No	No	NT	Non-parametric	< 0.0010		No				No
MW-FAA-4	10/23	57%	0.0005-0.001	0.0027	2.554E-07	0.0005053	0.3861	0.006	mg/L	0	0	No	No	Increase	NA	0.0014		No				No
MW-FAA-6	22/23	4%	0.001-0.001	0.0021	1.088E-07	0.0003298	0.2262	0.006	mg/L	0	0	No	No	Increase	Normal	0.0017		No				No
CCR Appendix-IV: Fluoride (mg/L)																						
MW-FAA-5 (upgradient)	21/24	12%	0.2-0.2	1.6	0.111	0.3331	0.4606	4	mg/L	0	0	Yes	No	Stable	Normal	< 0.20	1.309				4.0	
MW-FAA-3	18/24	25%	0.2-0.2	0.44	0.005778	0.07601	0.2475	4	mg/L	0	0	No	No	Stable	Normal	< 0.20		No				No
MW-FAA-4	19/24	21%	0.2-0.2	0.5	0.007707	0.08779	0.2681	4	mg/L	0	0	Yes	No	Stable	Normal	< 0.20		No				No
MW-FAA-6	24/24	0%	-	1.2	0.04395	0.2096	0.2723	4	mg/L	0	0	No	No	Stable	Normal	0.55		No				No
CCR Appendix-IV: Lithium, Total (mg/L)																						
MW-FAA-5 (upgradient)	23/23	0%	-	0.16	0.0007537	0.02745	0.2218	0.04	mg/L	23	0	No	No	Stable	Normal	0.15	0.171				0.171	
MW-FAA-3	19/23	17%	0.01-0.03	0.023	0.0000199	0.004461	0.2803	0.04	mg/L	0	0	Yes	No	Stable	Normal	0.014		No				No
MW-FAA-4	20/23	13%	0.01-0.03	0.024	0.00002039	0.004516	0.2527	0.04	mg/L	0	0	No	No	Increase	Normal	0.022		No				No
MW-FAA-6	16/23	30%	0.01-0.03	0.016	0.00001996	0.004468	0.3347	0.04	mg/L	0	0	Yes	No	Stable	Non-parametric	0.016		No				No
CCR Appendix-IV: Molybdenum, Total (mg/L)																						
MW-FAA-5 (upgradient)	23/23	0%	-	0.067	0.0001979	0.01407	0.4622	0.1	mg/L	0	0	No	No	Stable	Normal	0.022	0.056				0.100	
MW-FAA-3	23/23	0%	-	0.014	0.00000623	0.002496	0.27	0.1	mg/L	0	0	No	No	Decrease	Normal	0.0061		No				No
MW-FAA-4	23/23	0%	-	0.011	0.000007481	0.002735	0.4839	0.1	mg/L	0	0	No	No	Increase	Increasing	0.0093		No				No
MW-FAA-6	23/23	0%	-	0.59	0.01934	0.1391	0.3544	0.1	mg/L	23	0	No	No	Decrease	Normal	0.26		Yes	0.871	Yes	0.871	No
CCR Appendix-IV: Radium-226 & 228 (pCi/L)																						
MW-FAA-5 (upgradient)	20/23	13%	0.374-1.26	2.43	0.2873	0.536	0.4191	5	pCi/L	0	0	No	No	Stable	Normal	1.88	2.187				5	
MW-FAA-3	16/23	30%	0.246-0.857	1.792	0.1857	0.4309	0.6721	5	pCi/L	0	0	Yes	No	Stable	Normal	0.669		No				No
MW-FAA-4	15/23	35%	0.00551-0.929	1.54	0.1562	0.3953	0.5779	5	pCi/L	0	0	No	No	Stable	Normal	0.933		No				No
MW-FAA-6	14/23	39%	0.0926-0.58	1.43	0.1474	0.3839	0.713	5	pCi/L	0	0	No	No	Stable	Normal	0.000		No				No
CCR Appendix-IV: Selenium, Total (mg/L)																						
MW-FAA-5 (upgradient)	7/23	70%	0.0005-0.005	0.0039	0.000001345	0.00116	0.7152	0.05	mg/L	0	0	No	No	NT	Normal	< 0.0010	0.005				0.05	
MW-FAA-3	0/23	100%	8.6E-05-0.001		4.538E-08	0.000213	0.227	0.05	mg/L	0	0	NA	NA	NA	NA	< 0.0010		No				No
MW-FAA-4	7/23	70%	0.001-0.001	0.0019	5.134E-08	0.0002266	0.2068	0.05	mg/L	0	0	Yes	No	Stable	Non-parametric	< 0.0010		No				No
MW-FAA-6	10/23	57%	0.0005-0.001	0.014	0.000007412	0.002722	1.527	0.05	mg/L	0	0	Yes	No	Increase	Non-parametric	0.0010		No				No

Notes and Abbreviations:

[1] Based on background data collected from 08/19/2016 through 09/08/2022, unless otherwise noted.

[2] Based on background data collected from 08/19/2016 through 03/09/2022.

** 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

SSI = statistically significant increase

SSL = statistically significant level

UTL = upper tolerance limits

ATTACHMENT 2
Laboratory Analytical Reports

ATTACHMENT 2-1
March 2023 Semi-Annual Sampling Event
Laboratory Analytical Report

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

March 30, 2023

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

RE: Project: JEC FAL CCR RADCHEM
Pace Project No.: 60423974

Dear Jake Humphrey:

Enclosed are the analytical results for sample(s) received by the laboratory on March 15, 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
Adriana Sosa, Haley & Aldrich, Inc.
Andrew Watson, Haley & Aldrich

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

CERTIFICATIONS

Project: JEC FAL CCR RADCHEM
Pace Project No.: 60423974

Pace Analytical Services Pennsylvania
1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
Delaware Certification
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Florida: Cert E871149 SEKS WET
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA180012
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: 2017020
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572018-1
New Hampshire/TNI Certification #: 297617
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-010
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: 02867
Texas/TNI Certification #: T104704188-17-3
Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad
Wyoming Certification #: 8TMS-L

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

SAMPLE SUMMARY

Project: JEC FAL CCR RADCHEM
Pace Project No.: 60423974

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60423974001	**MW-FAA-3-031423**	Water	03/14/23 14:55	03/15/23 12:40
60423974002	**MW-FAA-4-031423**	Water	03/14/23 16:56	03/15/23 12:40
60423974003	**MW-FAA-6-031424**	Water	03/14/23 15:35	03/15/23 12:40
60423974004	**DUP JEC FAA-031423**	Water	03/14/23 16:56	03/15/23 12:40

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SAMPLE ANALYTE COUNT

Project: JEC FAL CCR RADCHEM
Pace Project No.: 60423974

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60423974001	**MW-FAA-3-031423**	EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
60423974002	**MW-FAA-4-031423**	EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
60423974003	**MW-FAA-6-031424**	EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
60423974004	**DUP JEC FAA-031423**	EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

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PROJECT NARRATIVE

Project: JEC FAL CCR RADCHEM
Pace Project No.: 60423974

Method: **EPA 903.1**
Description: 903.1 Radium 226
Client: Evergy Kansas Central, Inc.
Date: March 30, 2023

General Information:
4 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
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

PROJECT NARRATIVE

Project: JEC FAL CCR RADCHEM
Pace Project No.: 60423974

Method: **EPA 904.0**
Description: 904.0 Radium 228
Client: Evergy Kansas Central, Inc.
Date: March 30, 2023

General Information:
4 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
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

PROJECT NARRATIVE

Project: JEC FAL CCR RADCHEM
Pace Project No.: 60423974

Method: **Total Radium Calculation**
Description: Total Radium 228+226
Client: Evergy Kansas Central, Inc.
Date: March 30, 2023

General Information:
4 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: JEC FAL CCR RADCHEM
Pace Project No.: 60423974

Sample: MW-FAA-3-031423 **Lab ID: 60423974001** Collected: 03/14/23 14:55 Received: 03/15/23 12:40 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	**-0.221 ± 0.480 (1.11) C:NA T:91%**	pCi/L	03/28/23 17:12	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.669 ± 0.471 (0.917) C:73% T:81%**	pCi/L	03/28/23 17:17	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.669 ± 0.951 (2.03)**	pCi/L	03/30/23 13:39	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: JEC FAL CCR RADCHEM
Pace Project No.: 60423974

Sample: MW-FAA-4-031423 **Lab ID: 60423974002** Collected: 03/14/23 16:56 Received: 03/15/23 12:40 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	**0.421 ± 0.438 (0.652) C:NA T:92%**	pCi/L	03/28/23 17:12	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.512 ± 0.405 (0.811) C:87% T:85%**	pCi/L	03/28/23 17:17	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.933 ± 0.843 (1.46)**	pCi/L	03/30/23 13:39	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: JEC FAL CCR RADCHEM
Pace Project No.: 60423974

Sample: MW-FAA-6-031424 **Lab ID: 60423974003** Collected: 03/14/23 15:35 Received: 03/15/23 12:40 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	**0.406 ± 0.422 (0.628) C:NA T:93%**	pCi/L	03/28/23 17:12	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.563 ± 0.428 (0.853) C:86% T:87%**	pCi/L	03/28/23 17:17	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.969 ± 0.850 (1.48)**	pCi/L	03/30/23 13:39	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(913)599-5665

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: JEC FAL CCR RADCHEM
Pace Project No.: 60423974

Sample: DUP JEC FAA-031423 **Lab ID: 60423974004** Collected: 03/14/23 16:56 Received: 03/15/23 12:40 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	**0.226 ± 0.533 (0.987) C:NA T:96%**	pCi/L	03/28/23 17:12	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.270 ± 0.295 (0.612) C:84% T:94%**	pCi/L	03/28/23 17:17	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.496 ± 0.828 (1.60)**	pCi/L	03/30/23 13:39	7440-14-4	

Pace Analytical Services, LLC
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QUALITY CONTROL - RADIOCHEMISTRY

Project: JEC FAL CCR RADCHEM
Pace Project No.: 60423974

QC Batch: 575092
QC Batch Method: EPA 903.1
Analysis Method: EPA 903.1
Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 60423974001, 60423974002, 60423974003, 60423974004

METHOD BLANK: 2792344 Matrix: Water
Associated Lab Samples: 60423974001, 60423974002, 60423974003, 60423974004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	-0.0560 ± 0.256 (0.520) C:NA T:92%	pCi/L	03/28/23 16:17	

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: JEC FAL CCR RADCHEM
Pace Project No.: 60423974

QC Batch: 575093
QC Batch Method: EPA 904.0
Analysis Method: EPA 904.0
Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 60423974001, 60423974002, 60423974003, 60423974004

METHOD BLANK: 2792345 Matrix: Water
Associated Lab Samples: 60423974001, 60423974002, 60423974003, 60423974004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.327 ± 0.270 (0.533) C:89% T:92%	pCi/L	03/28/23 17:14	

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: JEC FAL CCR RADCHEM
Pace Project No.: 60423974

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: JEC FAL CCR RADCHEM
Pace Project No.: 60423974

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60423974001	**MW-FAA-3-031423**	EPA 903.1	575092		
60423974002	**MW-FAA-4-031423**	EPA 903.1	575092		
60423974003	**MW-FAA-6-031424**	EPA 903.1	575092		
60423974004	**DUP JEC FAA-031423**	EPA 903.1	575092		
60423974001	**MW-FAA-3-031423**	EPA 904.0	575093		
60423974002	**MW-FAA-4-031423**	EPA 904.0	575093		
60423974003	**MW-FAA-6-031424**	EPA 904.0	575093		
60423974004	**DUP JEC FAA-031423**	EPA 904.0	575093		
60423974001	**MW-FAA-3-031423**	Total Radium Calculation	577471		
60423974002	**MW-FAA-4-031423**	Total Radium Calculation	577471		
60423974003	**MW-FAA-6-031424**	Total Radium Calculation	577471		
60423974004	**DUP JEC FAA-031423**	Total Radium Calculation	577471		

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-LENE-0009_	WO#: 60423974
	Revision: 2	Effective Date: 01/

Client Name: ENERGY

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-294 **Type of Ice:** ~~Wet~~ Blue None

Cooler Temperature (°C): **As-read** 15.7 **Corr. Factor** -0.1 **Corrected** 15.6

Date and initials of person examining contents: VF 3/15

Temperature should be above freezing to 6°C

Chain of Custody present:	☒Yes ☐No ☐N/A	
Chain of Custody relinquished:	☒Yes ☐No ☐N/A	
Samples arrived within holding time:	☒Yes ☐No ☐N/A	
Short Hold Time analyses (<72hr):	☐Yes ☒No ☐N/A	TIMES ON CONTAINERS A FEW MINUTES OFF
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: _____

Qualtrax Document ID: 30468

CHAIN-OF-CUSTODY / Analytical Request Document

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

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at https://info.pacelabs.com/hubfs/pas-standard-terms.pdf.

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: Evergy Kansas Central, Inc.	Report To: Jake Humphrey	Attention: ACCOUNTS PAYABLE
Address: 400 E Van Buren St	Copy To: Laura Hines, Samantha Kaney, Melissa Michels	Company Name: EVERGY KANSAS CENTRAL
Suite 545, Phoenix, AZ 85004		Address: SAME AS A
Email: skaney@haleyaldrich.com	Purchase Order #:	Pace Quote:
Phone: 507-251-2232 Fax:	Project Name: JEC FAL CCR RADCHEM	Pace Project Manager: alice.spiller@pacelabs.com,
Requested Due Date:	Project #:	Pace Profile #: 9657, line 7

Regulatory Agency	State / Location
	KS

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 One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Requested Analysis Filtered (Y/N): Y/N	Analyses Test	Radium 226/228 combined	QC Sheets	Residual Chlorine (Y/N)	60423974
																		Y/N		N			
1	MW FAA-3-031423	WT	G	NA	NA	3/14/23	1455		2			2								X	X		
2	MW FAA-4-031423	WT	G	NA	NA	3/14/23	1656		2			2								X	X		
3	MW FAA-6-031423	WT	G	NA	NA	3/14/23	1535		2			2								X	X		
4	Dup JEC FAA-031423	WT	G	NA	NA	3/14/23	1656		2			2								X	X		
5																							
6																							
7																							
8																							
9																							
10																							
11																							
12																							

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Matt VanderPutten / SCS	3/15/2023	1000		3/15	1240	TEMP in C: 15.6	Received on Ice (Y/N): Y	Custody Sealed Cooler (Y/N): N	Samples Intact (Y/N): Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Matt VanderPutten

SIGNATURE of SAMPLER: Matt VanderPutten **DATE Signed:** 3/15/2023

Client: EVERGY

Profile # 9657-7

Site: JEC FAL CCR RADCHEM

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																						2										
2																						2										
3																						2										
4																						2										
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: 60423974

Internal Transfer Chain of Custody

Pace Analytical®
www.pacelabs.com

☐ Samples Pre-Logged into eCOC.

State Of Origin: KS
Cert. Needed: ☐ Yes ☐ No
Owner Received Date: 3/15/2023 Results Requested By: 4/12/2023

Workorder: 60423974 **Workorder Name:** JEC FAL CCR RADCHEM

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

WO#: 30571051
30571051

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: HNO3						Requested Analysis: Combined radium	Radium 226	Radium 228									LAB USE ONLY
1	MW-FAA-3-031423	PS	3/14/2023 14:55	60423974001	Water	2						X	X	X									001
2	MW-FAA-4-031423	PS	3/14/2023 16:56	60423974002	Water	2						X	X	X									002
3	MW-FAA-6-031424	PS	3/14/2023 15:35	60423974003	Water	2						X	X	X									003
4	DUP JEC FAA-031423	PS	3/14/2023 16:56	60423974004	Water	2						X	X	X									004
5																							

Transfers	Released By	Date/Time	Received By	Date/Time
1	[signature]	3/16/23 1700		
2				
3			[signature]	3/17/23 10:30

Comments: QC SHEETS NEEDED

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.*

DC#_Title: ENV-FRM-GBUR-0088 v04_S
Pittsburgh
Effective Date: 02/03/2023

WO# : 30571051

PM: MAR Due Date: 04/07/23
CLIENT: PACE_60_LEKS

Client Name: Pace Kansas

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

Tracking Number: 6091 0797 7095

Examined By	JA
Labeled By	JA
Temped By	ATA

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# 10D3124 / 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 JA / 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 <0.5 mrem/hr.	✓			Initial when completed JA / Date: 3-18-23 / Survey Meter SN: 1503

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: 3/22/2023
Batch ID: 72092
Matrix: DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2792344
MB concentration:	-0.056
M/B Counting Uncertainty:	0.190
MB MDC:	0.520
MB Numerical Performance Indicator:	-0.58
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS72092	LCSD72092
Count Date:	3/28/2023	3/28/2023
Spike I.D.:	21-040	21-040
Spike Concentration (pCi/mL):	32.419	32.419
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.655	0.658
Target Conc. (pCi/L, g, F):	4.947	4.930
Uncertainty (Calculated):	0.233	0.232
Result (pCi/L, g, F):	3.730	4.302
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.919	0.952
Numerical Performance Indicator:	-2.52	-1.26
Percent Recovery:	75.39%	87.25%
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.:	LCS72092	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD72092	
Sample Result (pCi/L, g, F):	3.730	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.919	
Sample Duplicate Result (pCi/L, g, F):	4.302	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.952	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	-0.847	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	14.58%	
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 3/28/23

EB 3/31 HDG

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-228
Analyst:	JJS1
Date:	3/23/2023
Worklist:	72093
Matrix:	WT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2792345
MB concentration:	0.327
M/B 2 Sigma CSU:	0.270
MB MDC:	0.533
MB Numerical Performance Indicator:	2.37
MB Status vs Numerical Indicator:	Warning
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS72093	LCSD72093
Count Date:	3/28/2023	3/28/2023
Spike I.D.:	22-040	22-040
Decay Corrected Spike Concentration (pCi/mL):	33.091	33.091
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.802	0.804
Target Conc. (pCi/L, g, F):	4.126	4.115
Uncertainty (Calculated):	0.202	0.202
Result (pCi/L, g, F):	3.701	3.147
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	0.879	0.782
Numerical Performance Indicator:	-0.92	-2.35
Percent Recovery:	89.72%	76.49%
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.:	LCS72093	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD72093	
Sample Result (pCi/L, g, F):	3.701	
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.879	
Sample Duplicate Result (pCi/L, g, F):	3.147	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	0.782	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	0.924	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	15.92%	
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:

VAL
3/30/23

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

March 30, 2023

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

RE: Project: MW-FAA-5 Radchem
Pace Project No.: 60423978

Dear Jake Humphrey:

Enclosed are the analytical results for sample(s) received by the laboratory on March 15, 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
Adriana Sosa, Haley & Aldrich, Inc.
Andrew Watson, Haley & Aldrich

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CERTIFICATIONS

Project: MW-FAA-5 Radchem
Pace Project No.: 60423978

Pace Analytical Services Pennsylvania
1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
Delaware Certification
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Florida: Cert E871149 SEKS WET
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA180012
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: 2017020
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572018-1
New Hampshire/TNI Certification #: 297617
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-010
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: 02867
Texas/TNI Certification #: T104704188-17-3
Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad
Wyoming Certification #: 8TMS-L

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SAMPLE SUMMARY

Project: MW-FAA-5 Radchem
Pace Project No.: 60423978

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60423978001	**MW FAA-5-031423**	Water	03/14/23 09:55	03/15/23 12:40

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SAMPLE ANALYTE COUNT

Project: MW-FAA-5 Radchem
Pace Project No.: 60423978

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60423978001	**MW FAA-5-031423**	EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

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PROJECT NARRATIVE

Project: MW-FAA-5 Radchem
Pace Project No.: 60423978

Method: **EPA 903.1**
Description: 903.1 Radium 226
Client: Evergy Kansas Central, Inc.
Date: March 30, 2023

General Information:
1 sample was 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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Lenexa, KS 66219
(913)599-5665

PROJECT NARRATIVE

Project: MW-FAA-5 Radchem
Pace Project No.: 60423978

Method: **EPA 904.0**
Description: 904.0 Radium 228
Client: Evergy Kansas Central, Inc.
Date: March 30, 2023

General Information:
1 sample was 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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(913)599-5665

PROJECT NARRATIVE

Project: MW-FAA-5 Radchem
Pace Project No.: 60423978

Method: **Total Radium Calculation**
Description: Total Radium 228+226
Client: Evergy Kansas Central, Inc.
Date: March 30, 2023

General Information:
1 sample was 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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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: MW-FAA-5 Radchem
Pace Project No.: 60423978

Sample: MW FAA-5-031423 **Lab ID: 60423978001** Collected: 03/14/23 09:55 Received: 03/15/23 12:40 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	**0.785 ± 0.489 (0.482) C:NA T:97%**	pCi/L	03/28/23 17:12	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.09 ± 0.481 (0.818) C:84% T:89%**	pCi/L	03/28/23 17:17	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.88 ± 0.970 (1.30)**	pCi/L	03/30/23 13:39	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: MW-FAA-5 Radchem
Pace Project No.: 60423978

QC Batch: 575092
QC Batch Method: EPA 903.1
Analysis Method: EPA 903.1
Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 60423978001

METHOD BLANK: 2792344 Matrix: Water
Associated Lab Samples: 60423978001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	-0.0560 ± 0.256 (0.520) C:NA T:92%	pCi/L	03/28/23 16:17	

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: MW-FAA-5 Radchem
Pace Project No.: 60423978

QC Batch: 575093
QC Batch Method: EPA 904.0
Analysis Method: EPA 904.0
Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 60423978001

METHOD BLANK: 2792345 Matrix: Water
Associated Lab Samples: 60423978001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.327 ± 0.270 (0.533) C:89% T:92%	pCi/L	03/28/23 17:14	

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: MW-FAA-5 Radchem
Pace Project No.: 60423978

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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(913)599-5665

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: MW-FAA-5 Radchem
Pace Project No.: 60423978

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60423978001	**MW FAA-5-031423**	EPA 903.1	575092		
60423978001	**MW FAA-5-031423**	EPA 904.0	575093		
60423978001	**MW FAA-5-031423**	Total Radium Calculation	577471		

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-LENE-0009_Sampl	WO# : 60423978
	Revision: 2	Effective Date: 01/12/202

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: T206 **Type of Ice:** ~~Wet~~ Blue None

Cooler Temperature (°C): **As-read** 11.6 **Corr. Factor** -0.1 **Corrected** 11.5

Date and initials of person examining contents: AF 3/15

Temperature should be above freezing to 6°C

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

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

CHAIN-OF-CUSTODY / Analytical Request Document

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

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at https://info.pacelabs.com/hubfs/pas-standard-terms.pdf.

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Evergy Kansas Central, Inc.	Report To:	Jake Humphrey	Attention:	Accounts Payable
Address:	400 E Van Buren St	Copy To:	Laura Hines, Samantha Kaney,Melissa Michels	Company Name:	EVERGY KANSAS CENTRAL
	Suite 545, Phoenix, AZ 85004			Address:	SAME AS A
Email:	skaney@haleyaldrich.com	Purchase Order #:		Pace Quote:	
Phone:	507-251-2232 Fax:	Project Name:	MW-FAA-5	Pace Project Manager:	alice.spiller@pacelabs.com,
Requested Due Date:		Project #:		Pace Profile #:	9657, 10

Regulatory Agency:

State / Location: KS

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	Radium 226	Radium 228	Total Radium	QC Sheets	Residual Chlorine (Y/N)	60423978
	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																	Requested Analysis Filtered (Y/N)						
1	MW FAA-5-031423	WT	G	NA	NA	3/14/23 ########	9:55		5	3		2							X	X	X	X		
2																								
3																								
4																								
5																								
6																								
7																								
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	3/15/2023	1000		3/15	1240	11.5	Y	N	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Matt VanderPutten

SIGNATURE of SAMPLER: [signature] DATE Signed: 3/15/2023

Client: Evergy Kansas

Profile # 9697-10

Site: MW-FAH-S

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				Plastic		Misc.	
DG9B	40mL bisulfate clear vial	WGKU	8oz clear soil jar	BP1C	1L NAOH plastic	I	Wipe/Swab
DG9H	40mL HCl amber voa vial	WGFU	4oz clear soil jar	BP1N	1L HNO3 plastic	SP5T	120mL Coliform Na Thiosulfate
DG9M	40mL MeOH clear vial	WG2U	2oz clear soil jar	BP1S	1L H2SO4 plastic	ZPLC	Ziploc Bag
DG9Q	40mL TSP amber vial	JGFU	4oz unpreserved amber wide	BP1U	1L unpreserved plastic	AF	Air Filter
DG9S	40mL H2SO4 amber vial	AG0U	100mL unores amber glass	BP1Z	1L NaOH, Zn Acetate	C	Air Cassettes
DG9T	40mL Na Thio amber vial	AG1H	1L HCl amber glass	BP2C	500mL NAOH plastic	R	Terracore Kit
DG9U	40mL amber unpreserved	AG1S	1L H2SO4 amber glass	BP2N	500mL HNO3 plastic	U	Summa Can
VG9H	40mL HCl clear vial	AG1T	1L Na Thiosulfate clear/amber glass	BP2S	500mL H2SO4 plastic		
VG9T	40mL Na Thio. clear vial	AG1U	1liter unpres amber glass	BP2U	500mL unpreserved plastic		
VG9U	40mL unpreserved clear vial	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Acetate	**Matrix**	
BG1S	1liter H2SO4 clear glass	AG2S	500mL H2SO4 amber glass	BP3C	250mL NaOH plastic		
BG1U	1liter unpres glass	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic - field filtered	WT	Water
BG3H	250mL HCL Clear glass	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic	SL	Solid
BG3U	250mL Unpres Clear glass	AG3U	250mL unpres amber glass	BP3U	250mL unpreserved plastic	NAL	Non-aqueous Liquid
WGDU	16oz clear soil jar	AG4U	125mL unpres amber glass	BP3S	250mL H2SO4 plastic	OL	OIL
		AG5U	100mL unpres amber glass	BP3Z	250mL NaOH, Zn Acetate	WP	Wipe
				BP4U	125mL unpreserved plastic	DW	Drinking Water
				BP4N	125mL HNO3 plastic		
				BP4S	125mL H2SO4 plastic		
				WPDU	16oz unpresserved plstic		

Work Order Number: 60423978

Internal Transfer Chain of Custody

Pace Analytical®
www.pacelabs.com

☐ Samples Pre-Logged into eCOC.

State Of Origin: KS
Cert. Needed: ☐ Yes ☐ No
Owner Received Date: 3/15/2023 Results Requested By: 4/12/2023

Workorder: 60423978 **Workorder Name:** MW-FAA-5

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

WO# : 30571049
30571049

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: HNO3	Requested Analysis: Combined Radium + QC SHEETS	Radium 226	Radium 228	LAB USE ONLY
1	MW FAA-5-031423	PS	3/14/2023 09:55	60423978001	Water	2	X	X	X	001
2										
3										
4										
5										

Transfers	Released By	Date/Time	Received By	Date/Time
1	[signature]	3/16/23 1700		
2				
3			[signature]	3/17/23 1030

Comments

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

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

DC#_Title: ENV-FRM-GBUR-0088 v04_ Pittsburgh

Effective Date: 02/03/2023

WO# : 30571049

PM: MAR Due Date: 04/07/23

CLIENT: PACE_60_LEKS

Client Name: Pace Kansas

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

Tracking Number: 6091 0797 7095

Examined By	JA
Labeled By	JA
Temped By	n/a

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
Chain of Custody Present	✓		
Chain of Custody Filled Out:	✓		
-Were client corrections present on COC		✓	
Chain of Custody Relinquished	✓		
Sampler Name & Signature on COC:		✓	
Sample Labels match COC:	✓		
-Includes date/time/ID			
Matrix:	WT		
Samples Arrived within Hold Time:	✓		
Short Hold Time Analysis (<72hr remaining):		✓	
Rush Turn Around Time Requested:		✓	
Sufficient Volume:	✓		
Correct Containers Used:	✓		
-Pace Containers Used	✓		
Containers Intact:	✓		
Orthophosphate field filtered:			✓
Hex Cr Aqueous samples field filtered:			✓
Organic Samples checked for dechlorination			✓
Filtered volume received for dissolved tests:			✓
All containers checked for preservation: exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, non-aqueous matrix	✓		
All containers meet method preservation requirements:	✓		
8260C/D: Headspace in VOA Vials (> 6mm)			✓
624.1: Headspace in VOA Vials (0mm)			✓
Trip Blank Present:			✓
Rad Samples Screened <0.5 mrem/hr.	✓		

pH paper Lot# 10131-21 **D.P.D. Residual Chlorine Lot #**

1.
2.
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5.
6.
7.
8.
9.
10.
11.
12.
13.
14:
15:
16.

pH <2

Initial when completed JA Date/Time of Preservation

Lot# of added Preservative

17.
18.

Trip blank custody seal present? YES or NO

Initial when completed JA Date: 3-18-23 Survey Meter SN: 1503

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: 3/22/2023
Batch ID: 72092
Matrix: DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2792344
MB concentration:	-0.056
M/B Counting Uncertainty:	0.190
MB MDC:	0.520
MB Numerical Performance Indicator:	-0.58
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS72092	LCSD72092
Count Date:	3/28/2023	3/28/2023
Spike I.D.:	21-040	21-040
Spike Concentration (pCi/mL):	32.419	32.419
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.655	0.658
Target Conc. (pCi/L, g, F):	4.947	4.930
Uncertainty (Calculated):	0.233	0.232
Result (pCi/L, g, F):	3.730	4.302
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.919	0.952
Numerical Performance Indicator:	-2.52	-1.26
Percent Recovery:	75.39%	87.25%
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.:	LCS72092	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD72092	
Sample Result (pCi/L, g, F):	3.730	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.919	
Sample Duplicate Result (pCi/L, g, F):	4.302	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.952	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	-0.847	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	14.58%	
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 3/28/23

EB 3/31 HDG

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-228
Analyst:	JJS1
Date:	3/23/2023
Worklist:	72093
Matrix:	WT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2792345
MB concentration:	0.327
M/B 2 Sigma CSU:	0.270
MB MDC:	0.533
MB Numerical Performance Indicator:	2.37
MB Status vs Numerical Indicator:	Warning
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS72093	LCSD72093
Count Date:	3/28/2023	3/28/2023
Spike I.D.:	22-040	22-040
Decay Corrected Spike Concentration (pCi/mL):	33.091	33.091
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.802	0.804
Target Conc. (pCi/L, g, F):	4.126	4.115
Uncertainty (Calculated):	0.202	0.202
Result (pCi/L, g, F):	3.701	3.147
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	0.879	0.782
Numerical Performance Indicator:	-0.92	-2.35
Percent Recovery:	89.72%	76.49%
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.:	LCS72093	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD72093	
Sample Result (pCi/L, g, F):	3.701	
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.879	
Sample Duplicate Result (pCi/L, g, F):	3.147	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	0.782	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	0.924	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	15.92%	
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:

VAL
3/30/23

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

May 09, 2023

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

RE: Project: JEC FAL CCR-Revised Report
Pace Project No.: 60423980

Dear Jake Humphrey:

Enclosed are the analytical results for sample(s) received by the laboratory on March 15, 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

Revised report_rev1

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

Sincerely,

Angie Brown
angie.brown@pacelabs.com
1(913)563-1402
Project Manager

Enclosures

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

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CERTIFICATIONS

Project: JEC FAL CCR-Revised Report
Pace Project No.: 60423980

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: JEC FAL CCR-Revised Report
Pace Project No.: 60423980

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60423980001	**MW FAA-3-031423**	Water	03/14/23 14:55	03/15/23 12:40
60423980002	**MW FAA-4-031423**	Water	03/14/23 16:56	03/15/23 12:40
60423980003	**MW FAA-6-031423**	Water	03/14/23 15:35	03/15/23 12:40
60423980004	**DUP JEC FAA-031423**	Water	03/14/23 16:56	03/15/23 12:40

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SAMPLE ANALYTE COUNT

Project: JEC FAL CCR-Revised Report
Pace Project No.: 60423980

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60423980001	**MW FAA-3-031423**	EPA 200.7	MRV	3	PASI-K
		EPA 6010	MRV	1	PASI-K
		EPA 200.8	MA1	4	PASI-K
		SM 2540C	MLD	1	PASI-K
		SM 4500-H+B	CRN2	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
60423980002	**MW FAA-4-031423**	EPA 200.7	MA1, MRV	3	PASI-K
		EPA 6010	MA1	1	PASI-K
		EPA 200.8	JGP, MA1	4	PASI-K
		SM 2540C	MLD	1	PASI-K
		SM 4500-H+B	RB	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
60423980003	**MW FAA-6-031423**	EPA 200.7	MA1, MRV	3	PASI-K
		EPA 6010	MA1, MRV	1	PASI-K
		EPA 200.8	JGP, MA1	4	PASI-K
		SM 2540C	MLD	1	PASI-K
		SM 4500-H+B	BLA, CRN2	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
60423980004	**DUP JEC FAA-031423**	EPA 200.7	MRV	3	PASI-K
		EPA 6010	MRV	1	PASI-K
		EPA 200.8	MA1	4	PASI-K
		SM 2540C	MLD	1	PASI-K
		SM 4500-H+B	RB	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K

PASI-K = Pace Analytical Services - Kansas City

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PROJECT NARRATIVE

Project: JEC FAL CCR-Revised Report
Pace Project No.: 60423980

Date: May 09, 2023

Amended report revised for the following to include a secondary analysis per client request:

MW-6 all requested analyses

MW-4 Total Dissolved Solids, Calcium, Arsenic and Molydenum

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PROJECT NARRATIVE

Project: JEC FAL CCR-Revised Report
Pace Project No.: 60423980

Method: **EPA 200.7**
Description: 200.7 Metals, Total
Client: Evergy Kansas Central, Inc.
Date: May 09, 2023

General Information:
4 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: 836895

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60423980001

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

- MS (Lab ID: 3319071)
  - Calcium
- MSD (Lab ID: 3319072)
  - Calcium

QC Batch: 844499

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60423980002

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

- MS (Lab ID: 3347005)
  - Calcium
- MSD (Lab ID: 3347006)
  - Calcium

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: JEC FAL CCR-Revised Report
Pace Project No.: 60423980

Method: **EPA 6010**
Description: 6010 MET ICP
Client: Evergy Kansas Central, Inc.
Date: May 09, 2023

General Information:
4 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: JEC FAL CCR-Revised Report
Pace Project No.: 60423980

Method: **EPA 200.8**
Description: 200.8 MET ICPMS
Client: Evergy Kansas Central, Inc.
Date: May 09, 2023

General Information:
4 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: JEC FAL CCR-Revised Report
Pace Project No.: 60423980

Method: **SM 2540C**
Description: 2540C Total Dissolved Solids
Client: Evergy Kansas Central, Inc.
Date: May 09, 2023

General Information:
4 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.

H1: Analysis conducted outside the EPA method holding time.
- MW FAA-4-031423 (Lab ID: 60423980002)
- MW FAA-6-031423 (Lab ID: 60423980003)

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: JEC FAL CCR-Revised Report
Pace Project No.: 60423980

Method: **SM 4500-H+B**
Description: 4500H+ pH, Electrometric
Client: Evergy Kansas Central, Inc.
Date: May 09, 2023

General Information:
4 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.
- DUP JEC FAA-031423 (Lab ID: 60423980004)
- MW FAA-3-031423 (Lab ID: 60423980001)
- MW FAA-4-031423 (Lab ID: 60423980002)
- MW FAA-6-031423 (Lab ID: 60423980003)

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: 843535

D6: The precision between the sample and sample duplicate exceeded laboratory control limits.
- DUP (Lab ID: 3343256)
  - pH at 25 Degrees C

Additional Comments:

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PROJECT NARRATIVE

Project: JEC FAL CCR-Revised Report
Pace Project No.: 60423980

Method: **EPA 300.0**
Description: 300.0 IC Anions 28 Days
Client: Evergy Kansas Central, Inc.
Date: May 09, 2023

General Information:
4 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.

H1: Analysis conducted outside the EPA method holding time.
- MW FAA-6-031423 (Lab ID: 60423980003)

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: 836993

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60424061001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
- MS (Lab ID: 3319521)
  - Fluoride
- MSD (Lab ID: 3319522)
  - Fluoride

QC Batch: 843527

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60427090003

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
- MS (Lab ID: 3343252)
  - Chloride
  - Fluoride
  - Sulfate
- MSD (Lab ID: 3343251)
  - Chloride
  - Fluoride
  - Sulfate

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.
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(913)599-5665

PROJECT NARRATIVE

Project: JEC FAL CCR-Revised Report
Pace Project No.: 60423980

Method: **EPA 300.0**
Description: 300.0 IC Anions 28 Days
Client: Evergy Kansas Central, Inc.
Date: May 09, 2023

Analyte Comments:

QC Batch: 843527

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

- MS (Lab ID: 3343252)
  - Chloride
- MSD (Lab ID: 3343251)
  - Chloride

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

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: JEC FAL CCR-Revised Report
Pace Project No.: 60423980

Sample: MW FAA-3-031423 **Lab ID: 60423980001** Collected: 03/14/23 14:55 Received: 03/15/23 12:40 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	**0.031**	mg/L	0.0050	1	03/16/23 09:10	03/22/23 10:41	7440-39-3	
Boron, Total Recoverable	**0.46**	mg/L	0.10	1	03/16/23 09:10	03/22/23 10:41	7440-42-8	
Calcium, Total Recoverable	**205**	mg/L	0.20	1	03/16/23 09:10	03/22/23 10:41	7440-70-2	M1
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**0.014**	mg/L	0.010	1	03/16/23 09:10	03/22/23 11:04	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	**<0.0010**	mg/L	0.0010	1	03/16/23 09:10	03/21/23 15:36	7440-38-2	
Cobalt, Total Recoverable	**<0.0010**	mg/L	0.0010	1	03/16/23 09:10	03/21/23 15:36	7440-48-4	
Molybdenum, Total Recoverable	**0.0061**	mg/L	0.0010	1	03/16/23 09:10	03/21/23 15:36	7439-98-7	
Selenium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	03/16/23 09:10	03/21/23 15:36	7782-49-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City							
Total Dissolved Solids	**1210**	mg/L	13.3	1		03/16/23 09:39		
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		03/16/23 10:38		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Chloride	**119**	mg/L	10.0	10		03/17/23 18:24	16887-00-6	
Fluoride	**<0.20**	mg/L	0.20	1		03/17/23 18:10	16984-48-8	
Sulfate	**478**	mg/L	100	100		03/21/23 19:52	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: JEC FAL CCR-Revised Report
Pace Project No.: 60423980

Sample: MW FAA-4-031423 **Lab ID: 60423980002** Collected: 03/14/23 16:56 Received: 03/15/23 12:40 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	**0.045**	mg/L	0.0050	1	05/01/23 14:17	05/02/23 09:15	7440-39-3	
Boron, Total Recoverable	**0.71**	mg/L	0.10	1	05/01/23 14:17	05/02/23 09:15	7440-42-8	
Calcium, Total Recoverable	**240**	mg/L	0.20	1	03/16/23 09:10	03/22/23 10:47	7440-70-2	
Calcium, Total Recoverable	**178**	mg/L	0.20	1	05/01/23 14:17	05/02/23 09:15	7440-70-2	M1
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**0.022**	mg/L	0.010	1	05/01/23 14:17	05/02/23 09:35	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	**0.0011**	mg/L	0.0010	1	03/16/23 09:10	03/21/23 15:39	7440-38-2	
Arsenic, Total Recoverable	**<0.0010**	mg/L	0.0010	1	05/01/23 14:17	05/02/23 11:18	7440-38-2	
Cobalt, Total Recoverable	**0.0014**	mg/L	0.0010	1	05/01/23 14:17	05/02/23 11:18	7440-48-4	
Molybdenum, Total Recoverable	**0.0018**	mg/L	0.0010	1	03/16/23 09:10	03/21/23 15:39	7439-98-7	
Molybdenum, Total Recoverable	**0.0093**	mg/L	0.0010	1	05/01/23 14:17	05/02/23 11:18	7439-98-7	
Selenium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	05/01/23 14:17	05/02/23 11:18	7782-49-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City							
Total Dissolved Solids	**1310**	mg/L	13.3	1		03/16/23 09:39		
Total Dissolved Solids	**1610**	mg/L	20.0	1		04/26/23 08:52		H1
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		03/20/23 15:23		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Chloride	**92.9**	mg/L	10.0	10		03/17/23 18:50	16887-00-6	
Fluoride	**<0.20**	mg/L	0.20	1		03/17/23 18:37	16984-48-8	
Sulfate	**473**	mg/L	100	100		03/21/23 20:05	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: JEC FAL CCR-Revised Report
Pace Project No.: 60423980

Sample: MW FAA-6-031423 **Lab ID: 60423980003** Collected: 03/14/23 15:35 Received: 03/15/23 12:40 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	03/16/23 09:10	03/22/23 10:50	7440-39-3	
Barium, Total Recoverable	**0.028**	mg/L	0.0050	1	05/01/23 14:17	05/02/23 09:22	7440-39-3	
Boron, Total Recoverable	**0.37**	mg/L	0.10	1	03/16/23 09:10	03/22/23 10:50	7440-42-8	
Boron, Total Recoverable	**2.8**	mg/L	0.10	1	05/01/23 14:17	05/02/23 09:22	7440-42-8	
Calcium, Total Recoverable	**229**	mg/L	0.20	1	03/16/23 09:10	03/22/23 10:50	7440-70-2	
Calcium, Total Recoverable	**107**	mg/L	0.20	1	05/01/23 14:17	05/02/23 09:22	7440-70-2	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
	Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**0.012**	mg/L	0.010	1	03/16/23 09:10	03/22/23 11:13	7439-93-2	
Lithium, Total Recoverable	**0.016**	mg/L	0.010	1	05/01/23 14:17	05/02/23 09:41	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	**<0.0010**	mg/L	0.0010	1	03/16/23 09:10	03/21/23 15:50	7440-38-2	
Arsenic, Total Recoverable	**0.0076**	mg/L	0.0010	1	05/01/23 14:17	05/02/23 11:21	7440-38-2	
Cobalt, Total Recoverable	**<0.0010**	mg/L	0.0010	1	03/16/23 09:10	03/21/23 15:50	7440-48-4	
Cobalt, Total Recoverable	**0.0018**	mg/L	0.0010	1	05/01/23 14:17	05/02/23 11:21	7440-48-4	
Molybdenum, Total Recoverable	**<0.0010**	mg/L	0.0010	1	03/16/23 09:10	03/21/23 15:50	7439-98-7	
Molybdenum, Total Recoverable	**0.30**	mg/L	0.0010	1	05/01/23 14:17	05/02/23 11:21	7439-98-7	
Selenium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	03/16/23 09:10	03/21/23 15:50	7782-49-2	
Selenium, Total Recoverable	**0.0011**	mg/L	0.0010	1	05/01/23 14:17	05/02/23 11:21	7782-49-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
	Pace Analytical Services - Kansas City							
Total Dissolved Solids	**2030**	mg/L	20.0	1		03/16/23 09:39		
Total Dissolved Solids	**1930**	mg/L	66.7	1		04/26/23 08:52		H1
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		03/16/23 10:38		H6
pH at 25 Degrees C	**7.2**	Std. Units	0.10	1		04/28/23 12:34		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
	Pace Analytical Services - Kansas City							
Chloride	**71.6**	mg/L	10.0	10		03/17/23 19:44	16887-00-6	
Chloride	**79.2**	mg/L	10.0	10		04/26/23 22:28	16887-00-6	H1
Fluoride	**0.45**	mg/L	0.20	1		03/17/23 19:04	16984-48-8	
Fluoride	**0.49**	mg/L	0.20	1		04/26/23 22:16	16984-48-8	H1
Sulfate	**1010**	mg/L	100	100		03/21/23 20:18	14808-79-8	
Sulfate	**1220**	mg/L	100	100		04/26/23 22:41	14808-79-8	H1

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: JEC FAL CCR-Revised Report
Pace Project No.: 60423980

Sample: DUP JEC FAA-031423 **Lab ID: 60423980004** Collected: 03/14/23 16:56 Received: 03/15/23 12:40 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	**0.045**	mg/L	0.0050	1	03/16/23 09:10	03/22/23 10:52	7440-39-3	
Boron, Total Recoverable	**0.70**	mg/L	0.10	1	03/16/23 09:10	03/22/23 10:52	7440-42-8	
Calcium, Total Recoverable	**178**	mg/L	0.20	1	03/16/23 09:10	03/22/23 10:52	7440-70-2	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**0.018**	mg/L	0.010	1	03/16/23 09:10	03/22/23 11:15	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	**<0.0010**	mg/L	0.0010	1	03/16/23 09:10	03/21/23 15:53	7440-38-2	
Cobalt, Total Recoverable	**0.0014**	mg/L	0.0010	1	03/16/23 09:10	03/21/23 15:53	7440-48-4	
Molybdenum, Total Recoverable	**0.0090**	mg/L	0.0010	1	03/16/23 09:10	03/21/23 15:53	7439-98-7	
Selenium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	03/16/23 09:10	03/21/23 15:53	7782-49-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City							
Total Dissolved Solids	**1380**	mg/L	13.3	1		03/16/23 09:40		
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		03/20/23 15:25		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Chloride	**94.4**	mg/L	10.0	10		03/17/23 20:11	16887-00-6	
Fluoride	**<0.20**	mg/L	0.20	1		03/17/23 19:57	16984-48-8	
Sulfate	**467**	mg/L	100	100		03/21/23 20:32	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: JEC FAL CCR-Revised Report
Pace Project No.: 60423980

QC Batch: 836895
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: 60423980001, 60423980002, 60423980003, 60423980004

METHOD BLANK: 3319069 Matrix: Water
Associated Lab Samples: 60423980001, 60423980002, 60423980003, 60423980004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Barium	mg/L	<0.0050	0.0050	03/22/23 10:37	
Boron	mg/L	<0.10	0.10	03/22/23 10:37	
Calcium	mg/L	<0.20	0.20	03/22/23 10:37	

LABORATORY CONTROL SAMPLE: 3319070

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	mg/L	1	0.98	98	85-115	
Boron	mg/L	1	0.96	96	85-115	
Calcium	mg/L	10	9.9	99	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3319071 3319072

Parameter	Units	60423980001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	mg/L	0.031	1	1	1.0	1.0	101	100	70-130	1	20	
Boron	mg/L	0.46	1	1	1.5	1.5	103	102	70-130	0	20	
Calcium	mg/L	205	10	10	226	227	206	218	70-130	1	20	M1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: JEC FAL CCR-Revised Report
Pace Project No.: 60423980

QC Batch: 844499
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: 60423980002, 60423980003

METHOD BLANK: 3347003 Matrix: Water
Associated Lab Samples: 60423980002, 60423980003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Barium	mg/L	<0.0050	0.0050	05/02/23 09:11	
Boron	mg/L	<0.10	0.10	05/02/23 09:11	
Calcium	mg/L	<0.20	0.20	05/02/23 09:11	

LABORATORY CONTROL SAMPLE: 3347004

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	mg/L	1	0.93	93	85-115	
Boron	mg/L	1	0.93	93	85-115	
Calcium	mg/L	10	9.6	96	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3347005 3347006

Parameter	Units	60423980002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	mg/L	0.045	1	1	0.96	0.94	91	90	70-130	2	20	
Boron	mg/L	0.71	1	1	1.6	1.6	90	89	70-130	1	20	
Calcium	mg/L	178	10	10	181	180	30	18	70-130	1	20	M1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: JEC FAL CCR-Revised Report
Pace Project No.: 60423980

QC Batch: 836897
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: 60423980001, 60423980002, 60423980003, 60423980004

METHOD BLANK: 3319077 Matrix: Water
Associated Lab Samples: 60423980001, 60423980002, 60423980003, 60423980004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/L	<0.0010	0.0010	03/21/23 15:31	
Cobalt	mg/L	<0.0010	0.0010	03/21/23 15:31	
Molybdenum	mg/L	<0.0010	0.0010	03/21/23 15:31	
Selenium	mg/L	<0.0010	0.0010	03/21/23 15:31	

LABORATORY CONTROL SAMPLE: 3319078

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/L	0.04	0.039	97	85-115	
Cobalt	mg/L	0.04	0.039	98	85-115	
Molybdenum	mg/L	0.04	0.041	102	85-115	
Selenium	mg/L	0.04	0.040	100	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3319079 3319080

Parameter	Units	60423980002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/L	<0.0010	0.04	0.04	0.039	0.039	96	96	70-130	0	20	
Cobalt	mg/L	0.0014			0.038	0.037				2	20	
Molybdenum	mg/L	0.0093	0.04	0.04	0.042	0.042	101	101	70-130	0	20	
Selenium	mg/L	<0.0010			0.038	0.038				1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: JEC FAL CCR-Revised Report
Pace Project No.: 60423980

QC Batch: 844501
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: 60423980002, 60423980003

METHOD BLANK: 3347011 Matrix: Water
Associated Lab Samples: 60423980002, 60423980003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/L	<0.0010	0.0010	05/02/23 11:12	
Cobalt	mg/L	<0.0010	0.0010	05/02/23 11:12	
Molybdenum	mg/L	<0.0010	0.0010	05/02/23 11:12	
Selenium	mg/L	<0.0010	0.0010	05/02/23 11:12	

LABORATORY CONTROL SAMPLE: 3347012

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/L	0.04	0.039	98	85-115	
Cobalt	mg/L	0.04	0.038	96	85-115	
Molybdenum	mg/L	0.04	0.039	96	85-115	
Selenium	mg/L	0.04	0.041	103	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3347013 3347014

Parameter	Units	60423980003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/L	0.0076	0.04	0.04	0.046	0.046	96	95	70-130	1	20	
Cobalt	mg/L	0.0018	0.04	0.04	0.040	0.039	95	93	70-130	2	20	
Molybdenum	mg/L	0.30	0.04	0.04	0.35	0.34	119	106	70-130	2	20	
Selenium	mg/L	0.0011	0.04	0.04	0.040	0.040	98	97	70-130	2	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: JEC FAL CCR-Revised Report
Pace Project No.: 60423980

QC Batch: 836896
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60423980001, 60423980003, 60423980004

METHOD BLANK: 3319073 Matrix: Water
Associated Lab Samples: 60423980001, 60423980003, 60423980004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lithium	mg/L	<0.010	0.010	03/22/23 11:00	

LABORATORY CONTROL SAMPLE: 3319074

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lithium	mg/L	1	1.0	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3319075 3319076

Parameter	Units	60423980001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lithium	mg/L	0.014	1	1	1.0	1.0	101	102	75-125	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: JEC FAL CCR-Revised Report
Pace Project No.: 60423980

QC Batch: 844500
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60423980002, 60423980003

METHOD BLANK: 3347007 Matrix: Water
Associated Lab Samples: 60423980002, 60423980003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lithium	mg/L	<0.010	0.010	05/02/23 09:30	

LABORATORY CONTROL SAMPLE: 3347008

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lithium	mg/L	1	0.92	92	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3347009 3347010

Parameter	Units	60423980002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lithium	mg/L	0.022	1	1	0.95	0.94	93	92	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: JEC FAL CCR-Revised Report
Pace Project No.: 60423980

QC Batch: 836930 | Analysis Method: SM 2540C
QC Batch Method: SM 2540C | Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60423980001, 60423980002, 60423980003, 60423980004

METHOD BLANK: 3319188 Matrix: Water
Associated Lab Samples: 60423980001, 60423980002, 60423980003, 60423980004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	03/16/23 09:38	

LABORATORY CONTROL SAMPLE: 3319189

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

SAMPLE DUPLICATE: 3319190

Parameter	Units	60423873001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	533	558	5	10	

SAMPLE DUPLICATE: 3319191

Parameter	Units	60423977003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1530	1460	5	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: JEC FAL CCR-Revised Report
Pace Project No.: 60423980

QC Batch: 843668
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60423980002, 60423980003

METHOD BLANK: 3343549 Matrix: Water
Associated Lab Samples: 60423980002, 60423980003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	04/26/23 08:51	

LABORATORY CONTROL SAMPLE: 3343550

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

SAMPLE DUPLICATE: 3343551

Parameter	Units	60423973001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	77000	80500	4	10	H1

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: JEC FAL CCR-Revised Report
Pace Project No.: 60423980

QC Batch: 836964
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: 60423980001, 60423980003

SAMPLE DUPLICATE: 3319334

Parameter	Units	60423985001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	6.7	6.7	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

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

QUALITY CONTROL DATA

Project: JEC FAL CCR-Revised Report
Pace Project No.: 60423980

QC Batch: 837514
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: 60423980002, 60423980004

SAMPLE DUPLICATE: 3321224

Parameter	Units	60423972006 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.1	7.2	2	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

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

QUALITY CONTROL DATA

Project: JEC FAL CCR-Revised Report
Pace Project No.: 60423980

QC Batch: 843535
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: 60423980003

SAMPLE DUPLICATE: 3343256

Parameter	Units	60423980003 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.2	7.8	7	5	D6,H6

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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: JEC FAL CCR-Revised Report
Pace Project No.: 60423980

QC Batch: 836993
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: 60423980001, 60423980002, 60423980003, 60423980004

METHOD BLANK: 3319519 Matrix: Water
Associated Lab Samples: 60423980001, 60423980002, 60423980003, 60423980004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<1.0	1.0	03/17/23 10:02	
Fluoride	mg/L	<0.20	0.20	03/17/23 10:02	
Sulfate	mg/L	<1.0	1.0	03/17/23 10:02	

METHOD BLANK: 3322662 Matrix: Water
Associated Lab Samples: 60423980001, 60423980002, 60423980003, 60423980004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<1.0	1.0	03/21/23 12:58	
Fluoride	mg/L	<0.20	0.20	03/21/23 12:58	
Sulfate	mg/L	<1.0	1.0	03/21/23 12:58	

LABORATORY CONTROL SAMPLE: 3319520

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.8	95	90-110	
Fluoride	mg/L	2.5	2.7	109	90-110	
Sulfate	mg/L	5	4.9	99	90-110	

LABORATORY CONTROL SAMPLE: 3322663

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.9	98	90-110	
Fluoride	mg/L	2.5	2.4	98	90-110	
Sulfate	mg/L	5	4.8	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3319521 3319522

Parameter	Units	60424061001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	1080	1000	1000	2210	2220	112	114	80-120	1	15	
Fluoride	mg/L	ND	500	500	622	615	124	123	80-120	1	15	M1
Sulfate	mg/L	261	1000	1000	1440	1400	118	114	80-120	3	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

QUALITY CONTROL DATA

Project: JEC FAL CCR-Revised Report
Pace Project No.: 60423980

QC Batch: 843527
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: 60423980003

METHOD BLANK: 3343249 Matrix: Water
Associated Lab Samples: 60423980003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<1.0	1.0	04/26/23 21:25	
Fluoride	mg/L	<0.20	0.20	04/26/23 21:25	
Sulfate	mg/L	<1.0	1.0	04/26/23 21:25	

METHOD BLANK: 3345680 Matrix: Water
Associated Lab Samples: 60423980003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<1.0	1.0	04/28/23 07:38	
Fluoride	mg/L	<0.20	0.20	04/28/23 07:38	
Sulfate	mg/L	<1.0	1.0	04/28/23 07:38	

LABORATORY CONTROL SAMPLE: 3343250

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.9	97	90-110	
Fluoride	mg/L	2.5	2.7	109	90-110	
Sulfate	mg/L	5	5.1	102	90-110	

LABORATORY CONTROL SAMPLE: 3345681

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.9	97	90-110	
Fluoride	mg/L	2.5	2.5	99	90-110	
Sulfate	mg/L	5	5.0	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3343252 3343251

Parameter	Units	60427090003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	1640	50	50	1700	1720	127	162	80-120	1	15	E,M1
Fluoride	mg/L	ND	25	25	12.3	12.3	49	49	80-120	1	15	M1
Sulfate	mg/L	28.1	50	50	53.2	55.3	50	54	80-120	4	15	M1

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: JEC FAL CCR-Revised Report
Pace Project No.: 60423980

SAMPLE DUPLICATE: 3343253

Parameter	Units	60427090003 Result	Dup Result	RPD	Max RPD	Qualifiers
Chloride	mg/L	1640	1700	3	15	
Fluoride	mg/L	ND	<1.0		15	
Sulfate	mg/L	28.1	27.8	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: JEC FAL CCR-Revised Report
Pace Project No.: 60423980

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.
H1	Analysis conducted outside the EPA method holding time.
H6	Analysis initiated outside of the 15 minute EPA required holding time.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: JEC FAL CCR-Revised Report
Pace Project No.: 60423980

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60423980001	MW FAA-3-031423	EPA 200.7	836895	EPA 200.7	836978
60423980002	MW FAA-4-031423	EPA 200.7	836895	EPA 200.7	836978
60423980002	MW FAA-4-031423	EPA 200.7	844499	EPA 200.7	844626
60423980003	MW FAA-6-031423	EPA 200.7	836895	EPA 200.7	836978
60423980003	MW FAA-6-031423	EPA 200.7	844499	EPA 200.7	844626
60423980004	DUP JEC FAA-031423	EPA 200.7	836895	EPA 200.7	836978
60423980001	MW FAA-3-031423	EPA 3010	836896	EPA 6010	836979
60423980002	MW FAA-4-031423	EPA 3010	844500	EPA 6010	844627
60423980003	MW FAA-6-031423	EPA 3010	836896	EPA 6010	836979
60423980003	MW FAA-6-031423	EPA 3010	844500	EPA 6010	844627
60423980004	DUP JEC FAA-031423	EPA 3010	836896	EPA 6010	836979
60423980001	MW FAA-3-031423	EPA 200.8	836897	EPA 200.8	836980
60423980002	MW FAA-4-031423	EPA 200.8	836897	EPA 200.8	836980
60423980002	MW FAA-4-031423	EPA 200.8	844501	EPA 200.8	844628
60423980003	MW FAA-6-031423	EPA 200.8	836897	EPA 200.8	836980
60423980003	MW FAA-6-031423	EPA 200.8	844501	EPA 200.8	844628
60423980004	DUP JEC FAA-031423	EPA 200.8	836897	EPA 200.8	836980
60423980001	MW FAA-3-031423	SM 2540C	836930		
60423980002	MW FAA-4-031423	SM 2540C	836930		
60423980002	MW FAA-4-031423	SM 2540C	843668		
60423980003	MW FAA-6-031423	SM 2540C	836930		
60423980003	MW FAA-6-031423	SM 2540C	843668		
60423980004	DUP JEC FAA-031423	SM 2540C	836930		
60423980001	MW FAA-3-031423	SM 4500-H+B	836964		
60423980002	MW FAA-4-031423	SM 4500-H+B	837514		
60423980003	MW FAA-6-031423	SM 4500-H+B	836964		
60423980003	MW FAA-6-031423	SM 4500-H+B	843535		
60423980004	DUP JEC FAA-031423	SM 4500-H+B	837514		
60423980001	MW FAA-3-031423	EPA 300.0	836993		
60423980002	MW FAA-4-031423	EPA 300.0	836993		
60423980003	MW FAA-6-031423	EPA 300.0	836993		
60423980003	MW FAA-6-031423	EPA 300.0	843527		
60423980004	DUP JEC FAA-031423	EPA 300.0	836993		

REPORT OF LABORATORY ANALYSIS

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

WO# : 60423980

60423980

Client Name: Evergy

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 ☑ Ziplc

Thermometer Used: T296 **Type of Ice:** (Wet) Blue None

Cooler Temperature (°C): **As-read** 1.9 **Corr. Factor** -0.1 **Corrected** 1.8

Date and initials of person examining contents: 03-15-2023 AR

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.

Page: of

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	EVERGY KANSAS CENTRAL, INC.	Report To:	Jake Humphrey	Attention:	Accounts Payable
Address:	400 E Van Buren St	Copy To:	Laura Hines, Samantha Kaney, Melissa Michels	Company Name:	EVERGY KANSAS CENTRAL, INC
	Suite 545, Phoenix, AZ 85004			Address:	See Section A
Email To:	skaney@haleyaldrich.com	Purchase Order No.:		Pace Quote Reference:	
Phone:	507-251-2232 Fax:	Project Name:	JEC FAL CCR	Pace Project Manager:	Alice Spiller 913-563-1403
Requested Due Date/TAT:	7 day	Project Number:		Pace Profile #:	9657, 6

REGULATORY AGENCY

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

Site Location STATE: KS

Requested Analysis Filtered (Y/N)

ITEM #	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	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 Total Metals*	200.8 Total Metals**	4500 H+B pH	300: Cl, F, SO4	2540C TDS	6010 Total Li***	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																				Y/N	N	N	N	N	N	N		60423980
1	MW FAA-3-031423		WT	G	NA	NA	3/14/2023	1455		5	3		2								X	X	X	X	X	X		
2	MW FAA-4-031423		WT	G	NA	NA	3/15/2023	1656		5	3		2								X	X	X	X	X	X		
3	MW FAA-6-031423		WT	G	NA	NA	3/16/2023	1535		5	3		2								X	X	X	X	X	X		
4	Dup JEC FAA-031423		WT	G	NA	NA	3/17/2023	1656		5	3		2								X	X	X	X	X	X		
5																												
6																												
7																												
8																												
9																												
10																												
11																												
12																												

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
200.7 Total Metals*: B, Ca, Ba,	Matt VanderPutten / SCS	3/15/23	10:00		3/15	1240	1.8	Y	N	1
200.8 Total Metals**: As, Co, Mo, Se,										
6010 Total Metals***: Li										

SAMPLER NAME AND SIGNATURE			
PRINT Name of SAMPLER:	Matt VanderPutten		
SIGNATURE of SAMPLER:		DATE Signed (MM/DD/YY):	3/15/23

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

Profile #

Site: JEC FAL 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		2		2									
2	WT																		1		2		2									
3	WT																		1		2		2									
4	WT																		1		2		2									
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: 6042 3980

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

April 10, 2023

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

RE: Project: MW-FAA-5
Pace Project No.: 60423985

Dear Jake Humphrey:

Enclosed are the analytical results for sample(s) received by the laboratory on March 15, 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

REVISED 4/10/23

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
Adriana Sosa, Haley & Aldrich, Inc.
Andrew Watson, Haley & Aldrich

Pace Analytical Services, LLC
9608 Loiret Blvd.
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CERTIFICATIONS

Project: MW-FAA-5
Pace Project No.: 60423985

Pace Analytical Services Kansas

9608 Loiret Boulevard, Lenexa, KS 66219
Missouri Inorganic Drinking Water Certification #: 10090
Arkansas Drinking Water
Arkansas Certification #: 22-031-0
Illinois Certification #: 2000302021-3
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Nevada Certification #: KS000212023-1
Oklahoma Certification #: 2022-057
Florida: Cert E871149 SEKS WET
Texas Certification #: T104704407-21-15
Utah Certification #: KS000212022-12
Illinois Certification #: 004592
Kansas Field Laboratory Accreditation: # E-92587
Missouri SEKS Micro Certification: 10070

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SAMPLE SUMMARY

Project: MW-FAA-5
Pace Project No.: 60423985

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60423985001	**MW-FAA-5-031423**	Water	03/14/23 09:55	03/15/23 12:40

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SAMPLE ANALYTE COUNT

Project: MW-FAA-5
Pace Project No.: 60423985

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60423985001	**MW-FAA-5-031423**	EPA 200.7	ALH	6	PASI-K
		EPA 6010	ALH	1	PASI-K
		EPA 200.8	JGP	7	PASI-K
		EPA 245.1	JXD	1	PASI-K
		SM 2540C	MLD	1	PASI-K
		SM 4500-H+B	CRN2	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K

PASI-K = Pace Analytical Services - Kansas City

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PROJECT NARRATIVE

Project: MW-FAA-5
Pace Project No.: 60423985

Date: April 10, 2023

Amended to report data from reanalysis of 245.1 mercury per client request.

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PROJECT NARRATIVE

Project: MW-FAA-5
Pace Project No.: 60423985

Method: **EPA 200.7**
Description: 200.7 Metals, Total
Client: Evergy Kansas Central, Inc.
Date: April 10, 2023

General Information:
1 sample was 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.

Additional Comments:

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PROJECT NARRATIVE

Project: MW-FAA-5
Pace Project No.: 60423985

Method: **EPA 6010**
Description: 6010 MET ICP
Client: Evergy Kansas Central, Inc.
Date: April 10, 2023

General Information:
1 sample was 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: MW-FAA-5
Pace Project No.: 60423985

Method: **EPA 200.8**
Description: 200.8 MET ICPMS
Client: Evergy Kansas Central, Inc.
Date: April 10, 2023

General Information:
1 sample was 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: MW-FAA-5
Pace Project No.: 60423985

Method: **EPA 245.1**
Description: 245.1 Mercury
Client: Evergy Kansas Central, Inc.
Date: April 10, 2023

General Information:
1 sample was 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.

Additional Comments:

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PROJECT NARRATIVE

Project: MW-FAA-5
Pace Project No.: 60423985

Method: **SM 2540C**
Description: 2540C Total Dissolved Solids
Client: Evergy Kansas Central, Inc.
Date: April 10, 2023

General Information:
1 sample was 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.

Additional Comments:

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PROJECT NARRATIVE

Project: MW-FAA-5
Pace Project No.: 60423985

Method: **SM 4500-H+B**
Description: 4500H+ pH, Electrometric
Client: Evergy Kansas Central, Inc.
Date: April 10, 2023

General Information:
1 sample was 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.
- MW-FAA-5-031423 (Lab ID: 60423985001)

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: MW-FAA-5
Pace Project No.: 60423985

Method: **EPA 300.0**
Description: 300.0 IC Anions 28 Days
Client: Evergy Kansas Central, Inc.
Date: April 10, 2023

General Information:
1 sample was 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: 837826

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60423225004

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

- MS (Lab ID: 3322027)
  - Chloride
- MSD (Lab ID: 3322028)
  - Chloride

Additional Comments:

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

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ANALYTICAL RESULTS

Project: MW-FAA-5
Pace Project No.: 60423985

Sample: MW-FAA-5-031423 **Lab ID: 60423985001** Collected: 03/14/23 09:55 Received: 03/15/23 12:40 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	**0.011**	mg/L	0.0050	1	03/20/23 12:43	03/27/23 18:32	7440-39-3	
Beryllium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	03/20/23 12:43	03/27/23 18:32	7440-41-7	
Boron, Total Recoverable	**1.7**	mg/L	0.10	1	03/20/23 12:43	03/27/23 18:32	7440-42-8	
Calcium, Total Recoverable	**523**	mg/L	0.20	1	03/20/23 12:43	03/27/23 18:32	7440-70-2	
Chromium, Total Recoverable	**0.022**	mg/L	0.0050	1	03/20/23 12:43	03/27/23 18:32	7440-47-3	
Lead, Total Recoverable	**<0.010**	mg/L	0.010	1	03/20/23 12:43	03/27/23 18:32	7439-92-1	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**0.15**	mg/L	0.010	1	03/20/23 12:43	03/27/23 19:06	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	03/20/23 12:43	03/22/23 17:05	7440-36-0	
Arsenic, Total Recoverable	**0.0054**	mg/L	0.0010	1	03/20/23 12:43	03/22/23 17:05	7440-38-2	
Cadmium, Total Recoverable	**<0.00050**	mg/L	0.00050	1	03/20/23 12:43	03/22/23 17:05	7440-43-9	
Cobalt, Total Recoverable	**0.0036**	mg/L	0.0010	1	03/20/23 12:43	03/22/23 17:05	7440-48-4	
Molybdenum, Total Recoverable	**0.022**	mg/L	0.0010	1	03/20/23 12:43	03/22/23 17:05	7439-98-7	
Selenium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	03/20/23 12:43	03/22/23 17:05	7782-49-2	
Thallium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	03/20/23 12:43	03/22/23 17:05	7440-28-0	
245.1 Mercury	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1 Pace Analytical Services - Kansas City							
Mercury	**<0.00020**	mg/L	0.00020	1	04/06/23 12:02	04/07/23 08:42	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City							
Total Dissolved Solids	**3270**	mg/L	66.7	1		03/21/23 10:44		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Kansas City							
pH at 25 Degrees C	**6.7**	Std. Units	0.10	1		03/16/23 10:38		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Chloride	**77.4**	mg/L	20.0	20		03/22/23 23:05	16887-00-6	
Fluoride	**<0.20**	mg/L	0.20	1		03/22/23 22:52	16984-48-8	
Sulfate	**2080**	mg/L	200	200		03/23/23 16:04	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: MW-FAA-5
Pace Project No.: 60423985

QC Batch: 840346
QC Batch Method: EPA 245.1
Analysis Method: EPA 245.1
Analysis Description: 245.1 Mercury
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60423985001

METHOD BLANK: 3331213 Matrix: Water
Associated Lab Samples: 60423985001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/L	<0.00020	0.00020	04/07/23 08:37	

LABORATORY CONTROL SAMPLE: 3331214

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.005	0.0047	94	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3331215 3331216

Parameter	Units	60425223001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/L	<0.20 ug/L	0.005	0.005	0.0042	0.0040	84	80	70-130	5	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: MW-FAA-5
Pace Project No.: 60423985

QC Batch: 837358
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: 60423985001

METHOD BLANK: 3320870 Matrix: Water
Associated Lab Samples: 60423985001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Barium	mg/L	<0.0050	0.0050	03/27/23 18:19	
Beryllium	mg/L	<0.0010	0.0010	03/27/23 18:19	
Boron	mg/L	<0.10	0.10	03/27/23 18:19	
Calcium	mg/L	<0.20	0.20	03/27/23 18:19	
Chromium	mg/L	<0.0050	0.0050	03/27/23 18:19	
Lead	mg/L	<0.010	0.010	03/27/23 18:19	

LABORATORY CONTROL SAMPLE: 3320871

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	mg/L	1	1.0	100	85-115	
Beryllium	mg/L	1	1.0	104	85-115	
Boron	mg/L	1	0.98	98	85-115	
Calcium	mg/L	10	10.3	103	85-115	
Chromium	mg/L	1	1.0	102	85-115	
Lead	mg/L	1	1.1	105	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3320872 3320873

Parameter	Units	60423984001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	mg/L	0.040	1	1	1.0	1.0	100	100	70-130	0	20	
Beryllium	mg/L	<0.0010	1	1	1.0	1.0	102	100	70-130	2	20	
Boron	mg/L	0.41	1	1	1.4	1.4	97	98	70-130	0	20	
Calcium	mg/L	204	10	10	212	211	79	73	70-130	0	20	
Chromium	mg/L	<0.0050	1	1	1.0	0.99	100	99	70-130	2	20	
Lead	mg/L	<0.010	1	1	1.0	1.0	100	100	70-130	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: MW-FAA-5
Pace Project No.: 60423985

QC Batch: 837360
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: 60423985001

METHOD BLANK: 3320878 Matrix: Water
Associated Lab Samples: 60423985001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	mg/L	<0.0010	0.0010	03/22/23 16:40	
Arsenic	mg/L	<0.0010	0.0010	03/22/23 16:40	
Cadmium	mg/L	<0.00050	0.00050	03/22/23 16:40	
Cobalt	mg/L	<0.0010	0.0010	03/22/23 16:40	
Molybdenum	mg/L	<0.0010	0.0010	03/22/23 16:40	
Selenium	mg/L	<0.0010	0.0010	03/22/23 16:40	
Thallium	mg/L	<0.0010	0.0010	03/22/23 16:40	

LABORATORY CONTROL SAMPLE: 3320879

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.04	0.041	103	85-115	
Arsenic	mg/L	0.04	0.040	100	85-115	
Cadmium	mg/L	0.04	0.041	102	85-115	
Cobalt	mg/L	0.04	0.040	100	85-115	
Molybdenum	mg/L	0.04	0.040	101	85-115	
Selenium	mg/L	0.04	0.043	108	85-115	
Thallium	mg/L	0.04	0.041	102	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3320880 3320881

Parameter	Units	60423984002 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	0.040	0.040	99	99	70-130	0	20	
Arsenic	mg/L	0.0013	0.04	0.04	0.041	0.041	100	99	70-130	1	20	
Cadmium	mg/L	<0.00050	0.04	0.04	0.038	0.038	94	94	70-130	0	20	
Cobalt	mg/L	0.0010	0.04	0.04	0.040	0.040	97	97	70-130	0	20	
Molybdenum	mg/L	0.0022	0.04	0.04	0.044	0.044	106	105	70-130	0	20	
Selenium	mg/L	<0.0010	0.04	0.04	0.040	0.040	100	99	70-130	1	20	
Thallium	mg/L	<0.0010	0.04	0.04	0.038	0.038	95	95	70-130	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: MW-FAA-5
Pace Project No.: 60423985

QC Batch: 837359
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60423985001

METHOD BLANK: 3320874 Matrix: Water
Associated Lab Samples: 60423985001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lithium	mg/L	<0.010	0.010	03/27/23 18:54	

LABORATORY CONTROL SAMPLE: 3320875

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lithium	mg/L	1	1.0	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3320876 3320877

Parameter	Units	60423984001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lithium	mg/L	0.017	1	1	1.0	1.0	99	101	75-125	2	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: MW-FAA-5
Pace Project No.: 60423985

QC Batch: 837624
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60423985001

METHOD BLANK: 3321463 Matrix: Water
Associated Lab Samples: 60423985001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	03/21/23 10:43	

LABORATORY CONTROL SAMPLE: 3321464

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	998	100	80-120	

SAMPLE DUPLICATE: 3321465

Parameter	Units	60423972001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	515	523	2	10	

SAMPLE DUPLICATE: 3321466

Parameter	Units	60423984003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1130	1230	8	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: MW-FAA-5
Pace Project No.: 60423985

QC Batch: 836964
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: 60423985001

SAMPLE DUPLICATE: 3319334

Parameter	Units	60423985001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	6.7	6.7	1	5	H6

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: MW-FAA-5
Pace Project No.: 60423985

QC Batch: 837826
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: 60423985001

METHOD BLANK: 3322025 Matrix: Water
Associated Lab Samples: 60423985001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<1.0	1.0	03/22/23 13:36	
Fluoride	mg/L	<0.20	0.20	03/22/23 13:36	
Sulfate	mg/L	<1.0	1.0	03/22/23 13:36	

METHOD BLANK: 3324423 Matrix: Water
Associated Lab Samples: 60423985001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<1.0	1.0	03/23/23 17:24	
Fluoride	mg/L	<0.20	0.20	03/23/23 17:24	
Sulfate	mg/L	<1.0	1.0	03/23/23 17:24	

LABORATORY CONTROL SAMPLE: 3322026

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	2.6	102	90-110	
Sulfate	mg/L	5	5.1	102	90-110	

LABORATORY CONTROL SAMPLE: 3324424

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	5.2	103	90-110	
Fluoride	mg/L	2.5	2.7	107	90-110	
Sulfate	mg/L	5	5.3	106	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3322027 3322028

Parameter	Units	60423225004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	62.7	50	50	101	98.5	77	72	80-120	3	15	M1
Fluoride	mg/L	<0.20	2.5	2.5	2.6	2.5	103	100	80-120	3	15	
Sulfate	mg/L	1120	1000	1000	2100	2140	97	102	80-120	2	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: MW-FAA-5
Pace Project No.: 60423985

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

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: MW-FAA-5
Pace Project No.: 60423985

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60423985001	**MW-FAA-5-031423**	EPA 200.7	837358	EPA 200.7	837527
60423985001	**MW-FAA-5-031423**	EPA 3010	837359	EPA 6010	837528
60423985001	**MW-FAA-5-031423**	EPA 200.8	837360	EPA 200.8	837529
60423985001	**MW-FAA-5-031423**	EPA 245.1	840346	EPA 245.1	840564
60423985001	**MW-FAA-5-031423**	SM 2540C	837624		
60423985001	**MW-FAA-5-031423**	SM 4500-H+B	836964		
60423985001	**MW-FAA-5-031423**	EPA 300.0	837826		

WO#: 60423985

60423985

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-LENE-0009_Sample		
	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** 1.3 **Corr. Factor** -0.1 **Corrected** 1.2

Date and initials of person examining contents: AF 3/15

Temperature should be above freezing to 6°C

Chain of Custody present:	☑Yes ☐No ☐N/A	
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	
Samples arrived within holding time:	☑Yes ☐No ☐N/A	
Short Hold Time analyses (<72hr):	☐Yes ☑No ☐N/A	
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	
Sufficient volume:	☑Yes ☐No ☐N/A	
Correct containers used:	☑Yes ☐No ☐N/A	
Pace containers used:	☑Yes ☐No ☐N/A	
Containers intact:	☑Yes ☐No ☐N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	☐Yes ☐No ☑N/A	
Filtered volume received for dissolved tests?	☐Yes ☐No ☑N/A	
Sample labels match COC: Date / time / ID / analyses	☑Yes ☐No ☐N/A	
Samples contain multiple phases? Matrix: WT	☐Yes ☑No ☐N/A	
Containers requiring pH preservation in compliance? (HNO3, H2SO4, HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO) LOT#: 6204001	☑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: _____

CHAIN-OF-CUSTODY / Analytical Request Document

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

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at https://info.pacelabs.com/hubfs/pas-standard-terms.pdf.

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Evergy Kansas Central, Inc.	Report To:	Jake Humphrey	Attention:	Accounts Payable
Address:	400 E Van Buren St	Copy To:	Laura Hines,Samantha Kaney,Melissa Michels	Company Name:	Evergy Kansas Central
	Suite 545, Phoenix, AZ 85004			Address:	Same As A
Email:	skaney@haleyaldrich.com	Purchase Order #:		Pace Quote:	
Phone:	507-251-2232 Fax:	Project Name:	MW-FAA-5	Pace Project Manager:	alice.spiller@pacelabs.com,
Requested Due Date:		Project #:		Pace Profile #:	9657, 10

Regulatory Agency
State / Location
KS

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 (One Character per box. (A-Z, 0-9 / , -) Sample ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	200.7 Ba,Be,B,Ca,Cr,Pb	200.8 Sb,As,Cd,Co,Mo,Se,Tl	6010 Lithium	245.1 Mercury	300.0 Anions Cl,F,S	Total Dissolved Solids (TDS)	pH	Residual Chlorine (Y/N)	6042398 9
																		Requested Analysis Filtered (Y/N)	N	N	N	N	N	N	N		
1	MW FAA-5-031423	WT	G	NA	NA	3/14/23	9:55		4	3		1							X	X	X	X	X	X	X		
2																												
3																												
4																												
5																												
6																												
7																												
8																												
9																												
10																												
11																												
12																												

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Matt VanderPutten / SCS	3/15/2023	1100		3/15	1240	1.2	Y	V	

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:	Matt VanderPutten				
SIGNATURE of SAMPLER:	DATE Signed: 3/15/2023				

Client: Evergy Kansas Central Profile # 9697-10

Site: MW-FAH-S 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		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: 60423985

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

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

July 11, 2023

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

RE: Project: JEC FAL CCR RADCHEM
Pace Project No.: 60430286

Dear Jake Humphrey:

Enclosed are the analytical results for sample(s) received by the laboratory on June 06, 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
Adriana Sosa, Haley & Aldrich, Inc.
Andrew Watson, Haley & Aldrich

Pace Analytical Services, LLC
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CERTIFICATIONS

Project: JEC FAL CCR RADCHEM
Pace Project No.: 60430286

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: JEC FAL CCR RADCHEM
Pace Project No.: 60430286

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60430286001	**MW FAA-3-060623**	Water	06/06/23 11:05	06/06/23 15:23
60430286002	**MW FAA-4-060623**	Water	06/06/23 12:40	06/06/23 15:23
60430286003	**MW FAA-5-060623**	Water	06/06/23 09:45	06/06/23 15:23
60430286004	**MW FAA-6-060623**	Water	06/06/23 11:55	06/06/23 15:23
60430286005	**DUP JEC FAA-060623**	Water	06/06/23 11:05	06/06/23 15:23

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SAMPLE ANALYTE COUNT

Project: JEC FAL CCR RADCHEM
Pace Project No.: 60430286

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60430286001	**MW FAA-3-060623**	EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
60430286002	**MW FAA-4-060623**	EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
60430286003	**MW FAA-5-060623**	EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
60430286004	**MW FAA-6-060623**	EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
60430286005	**DUP JEC FAA-060623**	EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

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PROJECT NARRATIVE

Project: JEC FAL CCR RADCHEM
Pace Project No.: 60430286

Method: **EPA 903.1**
Description: 903.1 Radium 226
Client: Evergy Kansas Central, Inc.
Date: July 11, 2023

General Information:
5 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
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

PROJECT NARRATIVE

Project: JEC FAL CCR RADCHEM
Pace Project No.: 60430286

Method: **EPA 904.0**
Description: 904.0 Radium 228
Client: Evergy Kansas Central, Inc.
Date: July 11, 2023

General Information:
5 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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Lenexa, KS 66219
(913)599-5665

PROJECT NARRATIVE

Project: JEC FAL CCR RADCHEM
Pace Project No.: 60430286

Method: **Total Radium Calculation**
Description: Total Radium 228+226
Client: Evergy Kansas Central, Inc.
Date: July 11, 2023

General Information:
5 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.
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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: JEC FAL CCR RADCHEM
Pace Project No.: 60430286

Sample: MW FAA-3-060623 **Lab ID: 60430286001** Collected: 06/06/23 11:05 Received: 06/06/23 15:23 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.0589 ± 0.383 (0.831) C:NA T:94%**	pCi/L	06/30/23 12:20	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.316 ± 0.341 (0.708) C:82% T:81%**	pCi/L	06/23/23 11:54	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.316 ± 0.724 (1.54)**	pCi/L	06/30/23 14:22	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: JEC FAL CCR RADCHEM
Pace Project No.: 60430286

Sample: MW FAA-4-060623 **Lab ID: 60430286002** Collected: 06/06/23 12:40 Received: 06/06/23 15:23 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.185 ± 0.321 (0.573) C:NA T:94%**	pCi/L	06/30/23 12:20	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.889 ± 0.419 (0.695) C:81% T:82%**	pCi/L	06/23/23 11:54	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.07 ± 0.740 (1.27)**	pCi/L	06/30/23 14:22	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: JEC FAL CCR RADCHEM
Pace Project No.: 60430286

Sample: MW FAA-5-060623 **Lab ID: 60430286003** Collected: 06/06/23 09:45 Received: 06/06/23 15:23 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.686 ± 0.434 (0.490) C:NA T:97%**	pCi/L	06/30/23 12:20	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.11 ± 0.479 (0.782) C:78% T:86%**	pCi/L	06/23/23 11:54	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.80 ± 0.913 (1.27)**	pCi/L	06/30/23 14:22	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: JEC FAL CCR RADCHEM
Pace Project No.: 60430286

Sample: MW FAA-6-060623 **Lab ID: 60430286004** Collected: 06/06/23 11:55 Received: 06/06/23 15:23 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.166 ± 0.391 (0.724) C:NA T:94%**	pCi/L	06/30/23 12:20	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.20 ± 0.446 (0.643) C:81% T:87%**	pCi/L	06/23/23 11:54	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.37 ± 0.837 (1.37)**	pCi/L	06/30/23 14:22	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: JEC FAL CCR RADCHEM
Pace Project No.: 60430286

Sample: DUP JEC FAA-060623 **Lab ID: 60430286005** Collected: 06/06/23 11:05 Received: 06/06/23 15:23 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.193 ± 0.334 (0.841) C:NA T:94%**	pCi/L	06/30/23 12:20	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.668 ± 0.351 (0.600) C:78% T:88%**	pCi/L	06/23/23 11:54	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.668 ± 0.685 (1.44)**	pCi/L	06/30/23 14:22	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: JEC FAL CCR RADCHEM
Pace Project No.: 60430286

QC Batch: 594392
QC Batch Method: EPA 903.1
Analysis Method: EPA 903.1
Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 60430286001, 60430286002, 60430286003, 60430286004, 60430286005

METHOD BLANK: 2888911 Matrix: Water
Associated Lab Samples: 60430286001, 60430286002, 60430286003, 60430286004, 60430286005

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.000 ± 0.212 (0.431) C:NA T:93%	pCi/L	06/30/23 12:20	

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 - RADIOCHEMISTRY

Project: JEC FAL CCR RADCHEM
Pace Project No.: 60430286

QC Batch: 594395
QC Batch Method: EPA 904.0
Analysis Method: EPA 904.0
Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 60430286001, 60430286002, 60430286003, 60430286004, 60430286005

METHOD BLANK: 2888915 Matrix: Water
Associated Lab Samples: 60430286001, 60430286002, 60430286003, 60430286004, 60430286005

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.752 ± 0.391 (0.680) C:78% T:88%	pCi/L	06/23/23 11:53	

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

QUALIFIERS

Project: JEC FAL CCR RADCHEM
Pace Project No.: 60430286

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: JEC FAL CCR RADCHEM
Pace Project No.: 60430286

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60430286001	**MW FAA-3-060623**	EPA 903.1	594392		
60430286002	**MW FAA-4-060623**	EPA 903.1	594392		
60430286003	**MW FAA-5-060623**	EPA 903.1	594392		
60430286004	**MW FAA-6-060623**	EPA 903.1	594392		
60430286005	**DUP JEC FAA-060623**	EPA 903.1	594392		
60430286001	**MW FAA-3-060623**	EPA 904.0	594395		
60430286002	**MW FAA-4-060623**	EPA 904.0	594395		
60430286003	**MW FAA-5-060623**	EPA 904.0	594395		
60430286004	**MW FAA-6-060623**	EPA 904.0	594395		
60430286005	**DUP JEC FAA-060623**	EPA 904.0	594395		
60430286001	**MW FAA-3-060623**	Total Radium Calculation	598804		
60430286002	**MW FAA-4-060623**	Total Radium Calculation	598804		
60430286003	**MW FAA-5-060623**	Total Radium Calculation	598804		
60430286004	**MW FAA-6-060623**	Total Radium Calculation	598804		
60430286005	**DUP JEC FAA-060623**	Total Radium Calculation	598804		

WO#: 60430286

60430286

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

Client Name: Evergy

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

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

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

Packing Material: Bubble Wrap ☐ Bubble Bags ☐ Foam ☐ None ☐ Other ☑ Zip'd

Thermometer Used: T099 **Type of Ice:** Wet Blue (None)

Cooler Temperature (°C): **As-read** 22.7 **Corr. Factor** +0.2 **Corrected** 22.9

Date and initials of person examining contents: 06-06-2023 4

Temperature should be above freezing to 6°C

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

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

Qualtrax Document ID: 30468

Page 1 of 1

CHAIN-OF-CUSTODY / Analytical Request Document

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

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at https://info.pacelabs.com/hubfs/pas-standard-terms.pdf.

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Evergy Kansas Central, Inc.	Report To:	Jake Humphrey	Attention:	
Address:	400 E Van Buren St	Copy To:	Laura Hines, Samantha Kaney, Melissa Michels	Company Name:	
	Suite 545, Phoenix, AZ 85004			Address:	
Email:	skaney@haleyaldrich.com	Purchase Order #:		Pace Quote:	
Phone:	507-251-2232 Fax:	Project Name:	JEC FAL CCR RADCHEM	Pace Project Manager:	alice.spiller@pacelabs.com,
Requested Due Date:		Project #:		Pace Profile #:	9657, line 7

Regulatory Agency	
State / Location	
KS	

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	Radium 226/228 combined	QC Sheets	Residual Chlorine (Y/N)	6043 B286
	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																	Requested Analysis Filtered (Y/N)	N	N		
1	MW FAA-3-060623	WT	G	-	-	6/6/23	1105	-	2			2							X	X		
2	MW FAA-4-060623	WT	G	-	-	6/6/23	1240	-	2			2							X	X		
3	MW FAA-5-060623	WT	G	-	-	6/6/23	945	-	2			2							X	X		
4	MW FAA-6-060623	WT	G	-	-	6/6/23	1155	-	2			2							X	X		
5	Dup JEC FAA-060623	WT	G	-	-	6/6/23	1105	-	2			2							X	X		
6																						
7																						
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	6/6/23	1430		6/6	1523	3.4 / 22.9	N	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Matt VanderPutten

SIGNATURE of SAMPLER: Matt VanderPutt DATE Signed: 06/06/23

Client: Evergy Profile #

Site: JEC FAL CCR Radchem 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	↓																					2										
3																						2										
4																						2										
5																						2										
6																																
7																																
8																																
9																																
10																																
11																																
12																																

Container Codes

Glass				Plastic		Misc.	
DG9B	40mL bisulfate clear vial	WGKU	8oz clear soil jar	BP1C	1L NAOH plastic	I	Wipe/Swab
DG9H	40mL HCl amber voa vial	WGFU	4oz clear soil jar	BP1N	1L HNO3 plastic	SP5T	120mL Coliform Na Thiosulfate
DG9M	40mL MeOH clear vial	WG2U	2oz clear soil jar	BP1S	1L H2SO4 plastic	ZPLC	Ziploc Bag
DG9Q	40mL TSP amber vial	JGFU	4oz unpreserved amber wide	BP1U	1L unpreserved plastic	AF	Air Filter
DG9S	40mL H2SO4 amber vial	AG0U	100mL unores amber glass	BP1Z	1L NaOH, Zn Acetate	C	Air Cassettes
DG9T	40mL Na Thio amber vial	AG1H	1L HCl amber glass	BP2C	500mL NAOH plastic	R	Terracore Kit
DG9U	40mL amber unpreserved	AG1S	1L H2SO4 amber glass	BP2N	500mL HNO3 plastic	U	Summa Can
VG9H	40mL HCl clear vial	AG1T	1L Na Thiosulfate clear/amber glass	BP2S	500mL H2SO4 plastic		
VG9T	40mL Na Thio. clear vial	AG1U	1liter unpres amber glass	BP2U	500mL unpreserved plastic		
VG9U	40mL unpreserved clear vial	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Acetate	Matrix	
BG1S	1liter H2SO4 clear glass	AG2S	500mL H2SO4 amber glass	BP3C	250mL NaOH plastic		
BG1U	1liter unpres glass	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic - field filtered	WT	Water
BG3H	250mL HCL Clear glass	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic	SL	Solid
BG3U	250mL Unpres Clear glass	AG3U	250mL unpres amber glass	BP3U	250mL unpreserved plastic	NAL	Non-aqueous Liquid
WGDU	16oz clear soil jar	AG4U	125mL unpres amber glass	BP3S	250mL H2SO4 plastic	OL	OIL
		AG5U	100mL unpres amber glass	BP3Z	250mL NaOH, Zn Acetate	WP	Wipe
				BP4U	125mL unpreserved plastic	DW	Drinking Water
				BP4N	125mL HNO3 plastic		
				BP4S	125mL H2SO4 plastic		
				WPDU	16oz unpresserved plstic		

Work Order Number: 60430286

Client: Evergy Profile #

Site: JEC FAL CCR Radchem 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	↓																					2										
3																						2										
4																						2										
5																						2										
6																																
7																																
8																																
9																																
10																																
11																																
12																																

Container Codes

Glass				Plastic		Misc.	
DG9B	40mL bisulfate clear vial	WGKU	8oz clear soil jar	BP1C	1L NAOH plastic	I	Wipe/Swab
DG9H	40mL HCl amber voa vial	WGFU	4oz clear soil jar	BP1N	1L HNO3 plastic	SP5T	120mL Coliform Na Thiosulfate
DG9M	40mL MeOH clear vial	WG2U	2oz clear soil jar	BP1S	1L H2SO4 plastic	ZPLC	Ziploc Bag
DG9Q	40mL TSP amber vial	JGFU	4oz unpreserved amber wide	BP1U	1L unpreserved plastic	AF	Air Filter
DG9S	40mL H2SO4 amber vial	AG0U	100mL unores amber glass	BP1Z	1L NaOH, Zn Acetate	C	Air Cassettes
DG9T	40mL Na Thio amber vial	AG1H	1L HCl amber glass	BP2C	500mL NAOH plastic	R	Terracore Kit
DG9U	40mL amber unpreserved	AG1S	1L H2SO4 amber glass	BP2N	500mL HNO3 plastic	U	Summa Can
VG9H	40mL HCl clear vial	AG1T	1L Na Thiosulfate clear/amber glass	BP2S	500mL H2SO4 plastic		
VG9T	40mL Na Thio. clear vial	AG1U	1liter unpres amber glass	BP2U	500mL unpreserved plastic		
VG9U	40mL unpreserved clear vial	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Acetate	Matrix	
BG1S	1liter H2SO4 clear glass	AG2S	500mL H2SO4 amber glass	BP3C	250mL NaOH plastic		
BG1U	1liter unpres glass	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic - field filtered	WT	Water
BG3H	250mL HCL Clear glass	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic	SL	Solid
BG3U	250mL Unpres Clear glass	AG3U	250mL unpres amber glass	BP3U	250mL unpreserved plastic	NAL	Non-aqueous Liquid
WGDU	16oz clear soil jar	AG4U	125mL unpres amber glass	BP3S	250mL H2SO4 plastic	OL	OIL
		AG5U	100mL unpres amber glass	BP3Z	250mL NaOH, Zn Acetate	WP	Wipe
				BP4U	125mL unpreserved plastic	DW	Drinking Water
				BP4N	125mL HNO3 plastic		
				BP4S	125mL H2SO4 plastic		
				WPDU	16oz unpresserved plstic		

Work Order Number: 60430286

Internal Transfer Chain of Custody

Pace Analytical®
www.pacelabs.com

☐ Samples Pre-Logged into eCOC.

State Of Origin: KS
Cert. Needed: ☐ Yes ☐ No
Owner Received Date: 6/6/2023 Results Requested By: 7/6/2023

Workorder: 60430286 **Workorder Name:** JEC FAL CCR RADCHEM

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: Combined + QC Sheets	Radium 226	Radium 228	LAB USE ONLY
1	MW FAA-3-060623	PS	6/6/2023 11:05	60430286001	Water	2	X	X	X	001
2	MW FAA-4-060623	PS	6/6/2023 12:40	60430286002	Water	2	X	X	X	002
3	MW FAA-5-060623	PS	6/6/2023 09:45	60430286003	Water	2	X	X	X	003
4	MW FAA-6-060623	PS	6/6/2023 11:55	60430286004	Water	2	X	X	X	004
5	DUP JEC FAA-060623	PS	6/6/2023 11:05	60430286005	Water	2	X	X	X	005

Transfers	Released By	Date/Time	Received By	Date/Time
1	[illegible]	6/7 1700	[illegible]	6/8/23 9:55
2				
3				

Comments

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

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

WO# : 30594233

30594233

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-228
Analyst:	JJS1
Date:	6/20/2023
Worklist:	73780
Matrix:	WT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2888915
MB concentration:	0.752
M/B 2 Sigma CSU:	0.391
MB MDC:	0.680
MB Numerical Performance Indicator:	3.77
MB Status vs Numerical Indicator:	Fail*
MB Status vs. MDC:	See Comment*

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS73780	LCSD73780
Count Date:	6/23/2023	6/23/2023
Spike I.D.:	23-040	23-040
Decay Corrected Spike Concentration (pCi/mL):	39.455	39.455
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.805	0.804
Target Conc. (pCi/L, g, F):	4.902	4.908
Uncertainty (Calculated):	0.240	0.241
Result (pCi/L, g, F):	4.791	3.914
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	1.066	0.910
Numerical Performance Indicator:	-0.20	-2.07
Percent Recovery:	97.74%	79.74%
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.:	LCS73780	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD73780	
Sample Result (pCi/L, g, F):	4.791	
Sample Result 2 Sigma CSU (pCi/L, g, F):	1.066	
Sample Duplicate Result (pCi/L, g, F):	3.914	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	0.910	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	1.228	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	20.29%	
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:
*The method blank result is below the reporting limit for this analysis and is acceptable.

SLC 6/27/23

VAL
6/26/23

Quality Control Sample Performance Assessment

Pace Analytical
www.pacelabs.com

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test:	Ra-226
Analyst:	CLM
Date:	6/19/2023
Batch ID:	73778
Matrix:	DW

Method Blank Assessment	
MB Sample ID	2888911
MB concentration:	0.000
M/B Counting Uncertainty:	0.182
MB MDC:	0.431
MB Numerical Performance Indicator:	0.00
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS73778	LCSD73778
Count Date:	6/30/2023	6/30/2023
Spike I.D.:	23-013	23-013
Spike Concentration (pCi/mL):	32.285	32.285
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.653	0.654
Target Conc. (pCi/L, g, F):	4.946	4.937
Uncertainty (Calculated):	0.232	0.232
Result (pCi/L, g, F):	5.315	3.747
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.983	0.846
Numerical Performance Indicator:	0.72	-2.66
Percent Recovery:	107.46%	75.88%
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.:	LCS73778	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD73778	
Sample Result (pCi/L, g, F):	5.315	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.983	
Sample Duplicate Result (pCi/L, g, F):	3.747	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.846	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	2.370	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	34.45%	
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:

~~***Batch must be re-prepped due to unacceptable precision.~~ SLC 6/30/23 RPD Numerical indicator is with -3 - 3 sigma for WT

CLM 6/30/23
SLC 6/30/23

Internal Transfer Chain of Custody

Pace Analytical®
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☐ Samples Pre-Logged into eCOC.

State Of Origin: KS
Cert. Needed: ☐ Yes ☐ No
Owner Received Date: 6/6/2023 Results Requested By: 7/6/2023

Workorder: 60430286 **Workorder Name:** JEC FAL CCR RADCHEM

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: Combined + QC Sheets	Radium 226	Radium 228	LAB USE ONLY
1	MW FAA-3-060623	PS	6/6/2023 11:05	60430286001	Water	2	X	X	X	001
2	MW FAA-4-060623	PS	6/6/2023 12:40	60430286002	Water	2	X	X	X	002
3	MW FAA-5-060623	PS	6/6/2023 09:45	60430286003	Water	2	X	X	X	003
4	MW FAA-6-060623	PS	6/6/2023 11:55	60430286004	Water	2	X	X	X	004
5	DUP JEC FAA-060623	PS	6/6/2023 11:05	60430286005	Water	2	X	X	X	005

Transfers	Released By	Date/Time	Received By	Date/Time
1	[illegible]	6/7 1700	[illegible]	6/8/23 9:55
2				
3				

Comments

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

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

WO# : 30594233

30594233

Pace ANALYTICAL SERVICES

DC#_Title: ENV-FRM-GBUR-0088 v04_Sample Condition Upon Receipt-Pittsburgh

Effective Date: 02/03/2023

WO# : 30594233

PM: MAR **Due Date: 06/29/23**

CLIENT: PACE_60_LEKS

Client Name: Pace KS

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

Tracking Number: 6432 1387 8232

Examined By	JS
Labeled By	JS
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# 10D312L / 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: exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, non-aqueous matrix	✓			16. PH<2
All containers meet method preservation requirements:	✓			Initial when completed: JS 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 <0.5 mrem/hr.	✓			Initial when completed: JS Date: 6/8/23 Survey Meter SN: 1503

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-228
Analyst:	JJS1
Date:	6/20/2023
Worklist:	73780
Matrix:	WT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2888915
MB concentration:	0.752
M/B 2 Sigma CSU:	0.391
MB MDC:	0.680
MB Numerical Performance Indicator:	3.77
MB Status vs Numerical Indicator:	Fail*
MB Status vs. MDC:	See Comment*

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS73780	LCSD73780
Count Date:	6/23/2023	6/23/2023
Spike I.D.:	23-040	23-040
Decay Corrected Spike Concentration (pCi/mL):	39.455	39.455
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.805	0.804
Target Conc. (pCi/L, g, F):	4.902	4.908
Uncertainty (Calculated):	0.240	0.241
Result (pCi/L, g, F):	4.791	3.914
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	1.066	0.910
Numerical Performance Indicator:	-0.20	-2.07
Percent Recovery:	97.74%	79.74%
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.:	LCS73780	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD73780	
Sample Result (pCi/L, g, F):	4.791	
Sample Result 2 Sigma CSU (pCi/L, g, F):	1.066	
Sample Duplicate Result (pCi/L, g, F):	3.914	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	0.910	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	1.228	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	20.29%	
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:
*The method blank result is below the reporting limit for this analysis and is acceptable.

SLC 6/27/23

VAL
6/26/23

Quality Control Sample Performance Assessment

Pace Analytical
www.pacelabs.com

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test:	Ra-226
Analyst:	CLM
Date:	6/19/2023
Batch ID:	73778
Matrix:	DW

Method Blank Assessment	
MB Sample ID	2888911
MB concentration:	0.000
M/B Counting Uncertainty:	0.182
MB MDC:	0.431
MB Numerical Performance Indicator:	0.00
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS73778	LCSD73778
Count Date:	6/30/2023	6/30/2023
Spike I.D.:	23-013	23-013
Spike Concentration (pCi/mL):	32.285	32.285
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.653	0.654
Target Conc. (pCi/L, g, F):	4.946	4.937
Uncertainty (Calculated):	0.232	0.232
Result (pCi/L, g, F):	5.315	3.747
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.983	0.846
Numerical Performance Indicator:	0.72	-2.66
Percent Recovery:	107.46%	75.88%
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.:	LCS73778	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD73778	
Sample Result (pCi/L, g, F):	5.315	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.983	
Sample Duplicate Result (pCi/L, g, F):	3.747	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.846	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	2.370	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	34.45%	
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:

~~***Batch must be re-prepped due to unacceptable precision.~~ SLC 6/30/23 RPD Numerical indicator is with -3 - 3 sigma for WT

CLM 6/30/23
SLC 6/30/23

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

June 16, 2023

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

RE: Project: JEC FAL CCR (APP IV)
Pace Project No.: 60430287

Dear Jake Humphrey:

Enclosed are the analytical results for sample(s) received by the laboratory on June 06, 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
Adriana Sosa, Haley & Aldrich, Inc.
Andrew Watson, Haley & Aldrich

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

CERTIFICATIONS

Project: JEC FAL CCR (APP IV)
Pace Project No.: 60430287

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

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

SAMPLE SUMMARY

Project: JEC FAL CCR (APP IV)
Pace Project No.: 60430287

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60430287001	**MW FAA-3-060623**	Water	06/06/23 11:05	06/06/23 15:23
60430287002	**MW FAA-4-060623**	Water	06/06/23 12:40	06/06/23 15:23
60430287003	**MW FAA-5-060623**	Water	06/06/23 09:45	06/06/23 15:23
60430287004	**MW FAA-6-060623**	Water	06/06/23 11:55	06/06/23 15:23
60430287005	**DUP JEC FAA-060623**	Water	06/06/23 11:05	06/06/23 15:23

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SAMPLE ANALYTE COUNT

Project: JEC FAL CCR (APP IV)
Pace Project No.: 60430287

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60430287001	**MW FAA-3-060623**	EPA 200.7	MA1	4	PASI-K
		EPA 6010	MA1	1	PASI-K
		EPA 200.8	JGP	7	PASI-K
		EPA 245.1	ALH	1	PASI-K
		EPA 300.0	CRN2	1	PASI-K
60430287002	**MW FAA-4-060623**	EPA 200.7	MA1	4	PASI-K
		EPA 6010	MA1	1	PASI-K
		EPA 200.8	JGP	7	PASI-K
		EPA 245.1	ALH	1	PASI-K
		EPA 300.0	CRN2	1	PASI-K
60430287003	**MW FAA-5-060623**	EPA 200.7	MA1	4	PASI-K
		EPA 6010	MA1	1	PASI-K
		EPA 200.8	JGP	7	PASI-K
		EPA 245.1	ALH	1	PASI-K
		EPA 300.0	CRN2	1	PASI-K
60430287004	**MW FAA-6-060623**	EPA 200.7	MA1	4	PASI-K
		EPA 6010	MA1	1	PASI-K
		EPA 200.8	JGP	7	PASI-K
		EPA 245.1	ALH	1	PASI-K
		EPA 300.0	CRN2	1	PASI-K
60430287005	**DUP JEC FAA-060623**	EPA 200.7	MA1	4	PASI-K
		EPA 6010	MA1	1	PASI-K
		EPA 200.8	JGP	7	PASI-K
		EPA 245.1	ALH	1	PASI-K
		EPA 300.0	CRN2	1	PASI-K

PASI-K = Pace Analytical Services - Kansas City

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

PROJECT NARRATIVE

Project: JEC FAL CCR (APP IV)
Pace Project No.: 60430287

Method: **EPA 200.7**
Description: 200.7 Metals, Total
Client: Evergy Kansas Central, Inc.
Date: June 16, 2023

General Information:
5 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.

Additional Comments:

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

PROJECT NARRATIVE

Project: JEC FAL CCR (APP IV)
Pace Project No.: 60430287

Method: **EPA 6010**
Description: 6010 MET ICP
Client: Evergy Kansas Central, Inc.
Date: June 16, 2023

General Information:
5 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
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

PROJECT NARRATIVE

Project: JEC FAL CCR (APP IV)
Pace Project No.: 60430287

Method: **EPA 200.8**
Description: 200.8 MET ICPMS
Client: Evergy Kansas Central, Inc.
Date: June 16, 2023

General Information:
5 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: JEC FAL CCR (APP IV)
Pace Project No.: 60430287

Method: **EPA 245.1**
Description: 245.1 Mercury
Client: Evergy Kansas Central, Inc.
Date: June 16, 2023

General Information:
5 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.

Additional Comments:

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PROJECT NARRATIVE

Project: JEC FAL CCR (APP IV)
Pace Project No.: 60430287

Method: **EPA 300.0**
Description: 300.0 IC Anions 28 Days
Client: Evergy Kansas Central, Inc.
Date: June 16, 2023

General Information:
5 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.

Additional Comments:

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

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ANALYTICAL RESULTS

Project: JEC FAL CCR (APP IV)
Pace Project No.: 60430287

Sample: MW FAA-3-060623 **Lab ID: 60430287001** Collected: 06/06/23 11:05 Received: 06/06/23 15:23 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	06/12/23 11:48	06/13/23 13:11	7440-39-3	
Beryllium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/12/23 11:48	06/13/23 13:11	7440-41-7	
Chromium, Total Recoverable	**<0.0050**	mg/L	0.0050	1	06/12/23 11:48	06/13/23 13:11	7440-47-3	
Lead, Total Recoverable	**<0.010**	mg/L	0.010	1	06/12/23 11:48	06/13/23 13:11	7439-92-1	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**0.017**	mg/L	0.010	1	06/12/23 11:48	06/13/23 12:46	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	06/12/23 11:48	06/13/23 11:22	7440-36-0	
Arsenic, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/12/23 11:48	06/13/23 11:22	7440-38-2	
Cadmium, Total Recoverable	**<0.00050**	mg/L	0.00050	1	06/12/23 11:48	06/13/23 11:22	7440-43-9	
Cobalt, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/12/23 11:48	06/13/23 15:00	7440-48-4	
Molybdenum, Total Recoverable	**0.0057**	mg/L	0.0010	1	06/12/23 11:48	06/13/23 11:22	7439-98-7	
Selenium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/12/23 11:48	06/13/23 11:22	7782-49-2	
Thallium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/12/23 11:48	06/13/23 11:22	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	06/12/23 14:34	06/13/23 12:45	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Fluoride	**<0.20**	mg/L	0.20	1		06/13/23 10:22	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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(913)599-5665

ANALYTICAL RESULTS

Project: JEC FAL CCR (APP IV)
Pace Project No.: 60430287

Sample: MW FAA-4-060623 **Lab ID: 60430287002** Collected: 06/06/23 12:40 Received: 06/06/23 15:23 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	**0.050**	mg/L	0.0050	1	06/12/23 11:48	06/13/23 13:18	7440-39-3	
Beryllium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/12/23 11:48	06/13/23 13:18	7440-41-7	
Chromium, Total Recoverable	**<0.0050**	mg/L	0.0050	1	06/12/23 11:48	06/13/23 13:18	7440-47-3	
Lead, Total Recoverable	**<0.010**	mg/L	0.010	1	06/12/23 11:48	06/13/23 13:18	7439-92-1	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**0.021**	mg/L	0.010	1	06/12/23 11:48	06/13/23 12:52	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	06/12/23 11:48	06/13/23 11:25	7440-36-0	
Arsenic, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/12/23 11:48	06/13/23 11:25	7440-38-2	
Cadmium, Total Recoverable	**<0.00050**	mg/L	0.00050	1	06/12/23 11:48	06/13/23 11:25	7440-43-9	
Cobalt, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/12/23 11:48	06/13/23 15:02	7440-48-4	
Molybdenum, Total Recoverable	**0.0071**	mg/L	0.0010	1	06/12/23 11:48	06/13/23 11:25	7439-98-7	
Selenium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/12/23 11:48	06/13/23 11:25	7782-49-2	
Thallium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/12/23 11:48	06/13/23 11:25	7440-28-0	
245.1 Mercury	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1 Pace Analytical Services - Kansas City							
Mercury	**0.30**	ug/L	0.20	1	06/12/23 14:34	06/13/23 12:52	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Fluoride	**<0.20**	mg/L	0.20	1		06/13/23 11:01	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: JEC FAL CCR (APP IV)
Pace Project No.: 60430287

Sample: MW FAA-5-060623 **Lab ID: 60430287003** Collected: 06/06/23 09:45 Received: 06/06/23 15:23 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	**<0.0050**	mg/L	0.0050	1	06/12/23 11:48	06/13/23 13:20	7440-39-3	
Beryllium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/12/23 11:48	06/13/23 13:20	7440-41-7	
Chromium, Total Recoverable	**<0.0050**	mg/L	0.0050	1	06/12/23 11:48	06/13/23 13:20	7440-47-3	
Lead, Total Recoverable	**<0.010**	mg/L	0.010	1	06/12/23 11:48	06/13/23 13:20	7439-92-1	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**0.16**	mg/L	0.010	1	06/12/23 11:48	06/13/23 12:54	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	06/12/23 11:48	06/13/23 11:28	7440-36-0	
Arsenic, Total Recoverable	**0.0013**	mg/L	0.0010	1	06/12/23 11:48	06/13/23 11:28	7440-38-2	
Cadmium, Total Recoverable	**<0.00050**	mg/L	0.00050	1	06/12/23 11:48	06/13/23 11:28	7440-43-9	
Cobalt, Total Recoverable	**0.0031**	mg/L	0.0010	1	06/12/23 11:48	06/13/23 15:04	7440-48-4	
Molybdenum, Total Recoverable	**0.022**	mg/L	0.0010	1	06/12/23 11:48	06/13/23 11:28	7439-98-7	
Selenium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/12/23 11:48	06/13/23 11:28	7782-49-2	
Thallium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/12/23 11:48	06/13/23 11:28	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	06/12/23 14:34	06/13/23 12:54	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Fluoride	**<0.20**	mg/L	0.20	1		06/13/23 11:15	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: JEC FAL CCR (APP IV)
Pace Project No.: 60430287

Sample: MW FAA-6-060623 **Lab ID: 60430287004** Collected: 06/06/23 11:55 Received: 06/06/23 15:23 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	**0.021**	mg/L	0.0050	1	06/12/23 11:48	06/13/23 13:22	7440-39-3	
Beryllium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/12/23 11:48	06/13/23 13:22	7440-41-7	
Chromium, Total Recoverable	**<0.0050**	mg/L	0.0050	1	06/12/23 11:48	06/13/23 13:22	7440-47-3	
Lead, Total Recoverable	**<0.010**	mg/L	0.010	1	06/12/23 11:48	06/13/23 13:22	7439-92-1	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**0.011**	mg/L	0.010	1	06/12/23 11:48	06/13/23 12:56	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	06/12/23 11:48	06/13/23 11:34	7440-36-0	
Arsenic, Total Recoverable	**0.0099**	mg/L	0.0010	1	06/12/23 11:48	06/13/23 11:34	7440-38-2	
Cadmium, Total Recoverable	**<0.00050**	mg/L	0.00050	1	06/12/23 11:48	06/13/23 11:34	7440-43-9	
Cobalt, Total Recoverable	**0.0014**	mg/L	0.0010	1	06/12/23 11:48	06/13/23 15:09	7440-48-4	
Molybdenum, Total Recoverable	**0.26**	mg/L	0.0010	1	06/12/23 11:48	06/13/23 11:34	7439-98-7	
Selenium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/12/23 11:48	06/13/23 11:34	7782-49-2	
Thallium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/12/23 11:48	06/13/23 11:34	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	06/12/23 14:34	06/13/23 12:56	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Fluoride	**<0.20**	mg/L	0.20	1		06/13/23 11:28	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: JEC FAL CCR (APP IV)
Pace Project No.: 60430287

Sample: DUP JEC FAA-060623 **Lab ID: 60430287005** Collected: 06/06/23 11:05 Received: 06/06/23 15:23 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	**0.031**	mg/L	0.0050	1	06/12/23 11:48	06/13/23 13:24	7440-39-3	
Beryllium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/12/23 11:48	06/13/23 13:24	7440-41-7	
Chromium, Total Recoverable	**<0.0050**	mg/L	0.0050	1	06/12/23 11:48	06/13/23 13:24	7440-47-3	
Lead, Total Recoverable	**<0.010**	mg/L	0.010	1	06/12/23 11:48	06/13/23 13:24	7439-92-1	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**0.018**	mg/L	0.010	1	06/12/23 11:48	06/13/23 12:59	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	06/12/23 11:48	06/13/23 11:37	7440-36-0	
Arsenic, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/12/23 11:48	06/13/23 11:37	7440-38-2	
Cadmium, Total Recoverable	**<0.00050**	mg/L	0.00050	1	06/12/23 11:48	06/13/23 11:37	7440-43-9	
Cobalt, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/12/23 11:48	06/13/23 15:11	7440-48-4	
Molybdenum, Total Recoverable	**0.0056**	mg/L	0.0010	1	06/12/23 11:48	06/13/23 11:37	7439-98-7	
Selenium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/12/23 11:48	06/13/23 11:37	7782-49-2	
Thallium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/12/23 11:48	06/13/23 11:37	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	06/12/23 14:34	06/13/23 12:59	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Fluoride	**<0.20**	mg/L	0.20	1		06/13/23 11:41	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: JEC FAL CCR (APP IV)
Pace Project No.: 60430287

QC Batch: 851869 | 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: 60430287001, 60430287002, 60430287003, 60430287004, 60430287005

METHOD BLANK: 3373974 Matrix: Water
Associated Lab Samples: 60430287001, 60430287002, 60430287003, 60430287004, 60430287005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	<0.20	0.20	06/13/23 12:40	

LABORATORY CONTROL SAMPLE: 3373975

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.9	99	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3373976 3373977

Parameter	Units	60430287002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	0.30	5	5	4.2	4.2	78	78	70-130	1	20	

MATRIX SPIKE SAMPLE: 3373978

Parameter	Units	60430235004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	<0.20	5	4.3	85	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: JEC FAL CCR (APP IV)
Pace Project No.: 60430287

QC Batch: 851810 | Analysis Method: EPA 200.7
QC Batch Method: EPA 200.7 | Analysis Description: 200.7 Metals, Total
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60430287001, 60430287002, 60430287003, 60430287004, 60430287005

METHOD BLANK: 3373805 Matrix: Water
Associated Lab Samples: 60430287001, 60430287002, 60430287003, 60430287004, 60430287005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Barium	mg/L	<0.0050	0.0050	06/13/23 13:07	
Beryllium	mg/L	<0.0010	0.0010	06/13/23 13:07	
Chromium	mg/L	<0.0050	0.0050	06/13/23 13:07	
Lead	mg/L	<0.010	0.010	06/13/23 13:07	

LABORATORY CONTROL SAMPLE: 3373806

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	mg/L	1	0.98	98	85-115	
Beryllium	mg/L	1	0.99	99	85-115	
Chromium	mg/L	1	0.95	95	85-115	
Lead	mg/L	1	1.0	100	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3373807 3373808

Parameter	Units	60430287001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	mg/L	0.035	1	1	1.0	1.0	101	100	70-130	1	20	
Beryllium	mg/L	<0.0010	1	1	1.0	0.98	102	98	70-130	4	20	
Chromium	mg/L	<0.0050	1	1	0.98	0.94	98	94	70-130	3	20	
Lead	mg/L	<0.010	1	1	0.99	0.96	99	96	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

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QUALITY CONTROL DATA

Project: JEC FAL CCR (APP IV)
Pace Project No.: 60430287

QC Batch: 851812
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: 60430287001, 60430287002, 60430287003, 60430287004, 60430287005

METHOD BLANK: 3373809 Matrix: Water
Associated Lab Samples: 60430287001, 60430287002, 60430287003, 60430287004, 60430287005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	mg/L	<0.0010	0.0010	06/13/23 11:18	
Arsenic	mg/L	<0.0010	0.0010	06/13/23 11:18	
Cadmium	mg/L	<0.00050	0.00050	06/13/23 11:18	
Cobalt	mg/L	<0.0010	0.0010	06/13/23 14:57	
Molybdenum	mg/L	<0.0010	0.0010	06/13/23 11:18	
Selenium	mg/L	<0.0010	0.0010	06/13/23 11:18	
Thallium	mg/L	<0.0010	0.0010	06/13/23 11:18	

LABORATORY CONTROL SAMPLE: 3373810

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.04	0.038	96	85-115	
Arsenic	mg/L	0.04	0.039	97	85-115	
Cadmium	mg/L	0.04	0.039	98	85-115	
Cobalt	mg/L	0.04	0.041	101	85-115	
Molybdenum	mg/L	0.04	0.039	99	85-115	
Selenium	mg/L	0.04	0.039	96	85-115	
Thallium	mg/L	0.04	0.039	97	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3373811 3373812

Parameter	Units	60430287005 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	0.036	0.039	89	98	70-130	10	20	
Arsenic	mg/L	<0.0010	0.04	0.04	0.038	0.042	94	103	70-130	9	20	
Cadmium	mg/L	<0.00050	0.04	0.04	0.034	0.038	86	94	70-130	9	20	
Cobalt	mg/L	<0.0010	0.04	0.04	0.040	0.045	100	111	70-130	11	20	
Molybdenum	mg/L	0.0056	0.04	0.04	0.044	0.049	97	108	70-130	10	20	
Selenium	mg/L	<0.0010	0.04	0.04	0.036	0.039	89	98	70-130	10	20	
Thallium	mg/L	<0.0010	0.04	0.04	0.038	0.043	96	106	70-130	10	20	

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: JEC FAL CCR (APP IV)
Pace Project No.: 60430287

QC Batch: 851814
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60430287001, 60430287002, 60430287003, 60430287004, 60430287005

METHOD BLANK: 3373814 Matrix: Water
Associated Lab Samples: 60430287001, 60430287002, 60430287003, 60430287004, 60430287005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lithium	mg/L	<0.010	0.010	06/13/23 12:41	

LABORATORY CONTROL SAMPLE: 3373815

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lithium	mg/L	1	0.98	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3373816 3373817

Parameter	Units	60430287001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lithium	mg/L	0.017	1	1	1.1	1.1	104	105	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: JEC FAL CCR (APP IV)
Pace Project No.: 60430287

QC Batch: 851544 | 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: 60430287001, 60430287002, 60430287003, 60430287004, 60430287005

METHOD BLANK: 3372729 Matrix: Water
Associated Lab Samples: 60430287001, 60430287002, 60430287003, 60430287004, 60430287005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Fluoride	mg/L	<0.20	0.20	06/13/23 09:55	

LABORATORY CONTROL SAMPLE: 3372730

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3372731 3372732

Parameter	Units	60430287001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Fluoride	mg/L	<0.20	2.5	2.5	2.8	2.6	107	103	80-120	4	15	

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

REPORT OF LABORATORY ANALYSIS

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

QUALIFIERS

Project: JEC FAL CCR (APP IV)
Pace Project No.: 60430287

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.

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: JEC FAL CCR (APP IV)
Pace Project No.: 60430287

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60430287001	**MW FAA-3-060623**	EPA 200.7	851810	EPA 200.7	851852
60430287002	**MW FAA-4-060623**	EPA 200.7	851810	EPA 200.7	851852
60430287003	**MW FAA-5-060623**	EPA 200.7	851810	EPA 200.7	851852
60430287004	**MW FAA-6-060623**	EPA 200.7	851810	EPA 200.7	851852
60430287005	**DUP JEC FAA-060623**	EPA 200.7	851810	EPA 200.7	851852
60430287001	**MW FAA-3-060623**	EPA 3010	851814	EPA 6010	851853
60430287002	**MW FAA-4-060623**	EPA 3010	851814	EPA 6010	851853
60430287003	**MW FAA-5-060623**	EPA 3010	851814	EPA 6010	851853
60430287004	**MW FAA-6-060623**	EPA 3010	851814	EPA 6010	851853
60430287005	**DUP JEC FAA-060623**	EPA 3010	851814	EPA 6010	851853
60430287001	**MW FAA-3-060623**	EPA 200.8	851812	EPA 200.8	851851
60430287002	**MW FAA-4-060623**	EPA 200.8	851812	EPA 200.8	851851
60430287003	**MW FAA-5-060623**	EPA 200.8	851812	EPA 200.8	851851
60430287004	**MW FAA-6-060623**	EPA 200.8	851812	EPA 200.8	851851
60430287005	**DUP JEC FAA-060623**	EPA 200.8	851812	EPA 200.8	851851
60430287001	**MW FAA-3-060623**	EPA 245.1	851869	EPA 245.1	852023
60430287002	**MW FAA-4-060623**	EPA 245.1	851869	EPA 245.1	852023
60430287003	**MW FAA-5-060623**	EPA 245.1	851869	EPA 245.1	852023
60430287004	**MW FAA-6-060623**	EPA 245.1	851869	EPA 245.1	852023
60430287005	**DUP JEC FAA-060623**	EPA 245.1	851869	EPA 245.1	852023
60430287001	**MW FAA-3-060623**	EPA 300.0	851544		
60430287002	**MW FAA-4-060623**	EPA 300.0	851544		
60430287003	**MW FAA-5-060623**	EPA 300.0	851544		
60430287004	**MW FAA-6-060623**	EPA 300.0	851544		
60430287005	**DUP JEC FAA-060623**	EPA 300.0	851544		

WO#: 60430287

60430287

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

Client Name: Evergy

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

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

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

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

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

Cooler Temperature (°C): **As-read** 3.2 **Corr. Factor** +0.2 **Corrected** 3.4

Date and initials of person examining contents: KF 6/6

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#:** L07187	☑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:	7 day

Section B Required Project Information:

Report To:	Jake Humphrey
Copy To:	Laura Hines, Samantha Kaney, Melissa Michels
Purchase Order No.:	
Project Name:	JEC FAL CCR (App IV)
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, 6

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 #	Section D Required Client Information	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	200.7 Total Metals*	200.8 Total Metals**	6010 Total Lithium	245.1 Mercury	300.0 Fluoride	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																		Y/N	N	N	N	N	N		
1	MW FAA-3-060623	WT	G	-	-	06/06/23	1165	-	2	1		1							x	x	x	x	x		
2	MW FAA-4-060623	WT	G	-	-	06/06/23	1240	-	2	1		1							x	x	x	x	x		
3	MW FAA-5-060623	WT	G	-	-	06/06/23	945	-	2	1		1							x	x	x	x	x		
4	MW FAA-6-060623	WT	G	-	-	06/06/23	1155	-	2	1		1							x	x	x	x	x		
5	Dup JEC FAA-060623	WT	G	-	-	06/06/23	1105	-	2	1		1							x	x	x	x	x		
6																									
7																									
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)
200.7 Total Metals*:Ba,Be,Cr,Pb	Matt VanderPutten / SCS	6/6/23	1430		6/6	1523	3.4	Y	Y	Y
200.8 Total Metals**: Sb,As,Cd,Co,Mo,Se,Tl										

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Matt VanderPutten

SIGNATURE of SAMPLER: Matt VanderPutten DATE Signed (MM/DD/YY): 06/06/23

*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

Profile # 9657 Line 6

Site: JEC FAL CCR (App IV)

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																																
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: 620430287

ATTACHMENT 2-3
September 2023 Semi-Annual Sampling Event
Laboratory Analytical Report

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

October 06, 2023

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

RE: Project: MW-FAA-5
Pace Project No.: 60437014

Dear Jake Humphrey:

Enclosed are the analytical results for sample(s) received by the laboratory on September 07, 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
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: MW-FAA-5
Pace Project No.: 60437014

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
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

SAMPLE SUMMARY

Project: MW-FAA-5
Pace Project No.: 60437014

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60437014001	**FAA-5-090623**	Water	09/06/23 09:50	09/07/23 16:30

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

SAMPLE ANALYTE COUNT

Project: MW-FAA-5
Pace Project No.: 60437014

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60437014001	**FAA-5-090623**	EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	LAL	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

Pace Analytical Services, LLC
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(913)599-5665

PROJECT NARRATIVE

Project: MW-FAA-5
Pace Project No.: 60437014

Method: **EPA 903.1**
Description: 903.1 Radium 226
Client: Evergy Kansas Central, Inc.
Date: October 06, 2023

General Information:
1 sample was 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
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

PROJECT NARRATIVE

Project: MW-FAA-5
Pace Project No.: 60437014

Method: **EPA 904.0**
Description: 904.0 Radium 228
Client: Evergy Kansas Central, Inc.
Date: October 06, 2023

General Information:
1 sample was 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
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

PROJECT NARRATIVE

Project: MW-FAA-5
Pace Project No.: 60437014

Method: **Total Radium Calculation**
Description: Total Radium 228+226
Client: Evergy Kansas Central, Inc.
Date: October 06, 2023

General Information:
1 sample was 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: MW-FAA-5
Pace Project No.: 60437014

Sample: FAA-5-090623 **Lab ID: 60437014001** Collected: 09/06/23 09:50 Received: 09/07/23 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	**1.08 ± 0.703 (0.721) C:NA T:91%**	pCi/L	09/22/23 14:30	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.209 ± 0.390 (0.854) C:87% T:86%**	pCi/L	09/26/23 15:50	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.29 ± 1.09 (1.58)**	pCi/L	09/27/23 15:14	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: MW-FAA-5
Pace Project No.: 60437014

QC Batch: 615736
QC Batch Method: EPA 903.1
Analysis Method: EPA 903.1
Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 60437014001

METHOD BLANK: 2998672 Matrix: Water
Associated Lab Samples: 60437014001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.136 ± 0.326 (0.630) C:NA T:100%	pCi/L	09/22/23 14:30	

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: MW-FAA-5
Pace Project No.: 60437014

QC Batch: 615737
QC Batch Method: EPA 904.0
Analysis Method: EPA 904.0
Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 60437014001

METHOD BLANK: 2998673 Matrix: Water
Associated Lab Samples: 60437014001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.390 ± 0.254 (0.451) C:82% T:87%	pCi/L	09/26/23 15:52	

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: MW-FAA-5
Pace Project No.: 60437014

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: MW-FAA-5
Pace Project No.: 60437014

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60437014001	**FAA-5-090623**	EPA 903.1	615736		
60437014001	**FAA-5-090623**	EPA 904.0	615737		
60437014001	**FAA-5-090623**	Total Radium Calculation	618468		

WO# : 60437014

60437014

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-LENE-0009_Sample		
	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** 23.5 **Corr. Factor** -0.3 **Corrected** 23.2

Date and initials of person examining contents: AF 9/7

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#: 6208001	☑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: _____

CHAIN-OF-CUSTODY / Analytical Request Document

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

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at https://info.pacelabs.com/hubfs/pas-standard-terms.pdf.

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Evergy Kansas Central, Inc.	Report To:	Samantha Kaney, Danielle Oberbroeckling	Attention:	Accounts Payable
Address:	400 E Van Buren St	Copy To:	Melissa Michaels, Laura Hines, Jake Humphrey	Company Name:	Evergy Kansas Central, Inc.
Suite 545, Phoenix, AZ 85004				Address:	See Section A
Email:	skaney@haleyaldrich.com	Purchase Order #:		Pace Quote:	
Phone:	(602)760-2441 Fax:	Project Name:	MW-FAA-5	Pace Project Manager:	alice.spiller@pacelabs.com,
Requested Due Date:		Project #:		Pace Profile #:	9657

Regulatory Agency
Groundwater
State / Location
KS

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Requested Analysis Filtered (Y/N) Y/N	Analyses Test: Radium 226	Radium 228	Radium 226/228 Combined	QC Sheets	Residual Chlorine (Y/N)	60437014
	MATRIX: Drinking Water DW, Water WT, Waste Water WW, Product P, Soil/Solid SL, Oil OL, Wipe WP, Air AR, Other OT, Tissue TS																	N	N	N	N			
1	FAA-5-090623	WT	G	-	-	9/6/23	9:50	-	2			2							X	X	X	X			
2																								
3																								
4																								
5																								
6																								
7																								
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	9/7/2023	16:00	SA PACE	9/7/23	1630	23.2	N	Y	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Jason R. Franks

SIGNATURE of SAMPLER: 

DATE Signed: 9/7/2023

Client: Evergy / Kansas Central

Profile # 9657

Site: MW-FAA-5

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: 60437014

Internal Transfer Chain of Custody

☐ Samples Pre-Logged into eCOC.

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

Pace

Workorder: 60437014 Workorder Name: MW-FAA-5 Owner Received Date: 9/7/2023 Results Requested By: 10/6/2023

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: QC Sheets	Radium 226	Radium 228 and combined	LAB USE ONLY
1	FAA-5-090623	PS	9/6/2023 09:50	60437014001	Water	2						X	X	X	001
2															
3															
4															
5															

Transfers	Released By	Date/Time	Received By	Date/Time
1	[signature]	9.11.23 1700	[signature]	9/12/23 1020
2				
3				

Comments:

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

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

WO#: 30620967

30620967

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

Effective Date: 07/06/2023

WO# : 30620967

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

CLIENT: PACE_60_LEKS

Client Name: Pace-KS

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

Tracking Number: 6432 8391 9372

Initial / Date

Examined By: LA 9-12-23

Labeled By: LA 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# 10D0831 / D.P.D. Residual Chlorine Lot #
Chain of Custody Present	X			1.
Chain of Custody Filled Out:	X			2.
-Were client corrections present on COC		X		
Chain of Custody Relinquished	X			3.
Sampler Name & Signature on COC:		X		4.
Sample Labels match COC: -Includes date/time/ID Matrix: WT	X			5.
Samples Arrived within Hold Time:	X			6.
Short Hold Time Analysis (<72hr remaining):		X		7.
Rush Turn Around Time Requested:		X		8.
Sufficient Volume:	X			9.
Correct Containers Used:	X			10.
-Pace Containers Used	X			
Containers Intact:	X			11.
Orthophosphate field filtered:			X	12.
Hex Cr Aqueous samples field filtered:			X	13.
Organic Samples checked for dechlorination			X	14:
Filtered volume received for dissolved tests:			X	15:
All containers checked for preservation:	X			16.
exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, non-aqueous matrix				pH<2
All containers meet method preservation requirements:	X			Initial when completed: LA / Date/Time of Preservation: / Lot# of added Preservative:
8260C/D: Headspace in VOA Vials (> 6mm)			X	17.
624.1: Headspace in VOA Vials (0mm)			X	18.
Trip Blank Present:			X	Trip blank custody seal present? YES or NO
Rad Samples Screened <0.5 mrem/hr.	✓			Initial when completed: JJ / Date: 9/12/23 / Survey Meter SN: 1563

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:	CLM
Date:	9/15/2023
Batch ID:	75321
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2998672
MB concentration:	0.136
M/B Counting Uncertainty:	0.326
MB MDC:	0.630
MB Numerical Performance Indicator:	0.82
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS75321	LCSD75321
Count Date:	9/22/2023	9/22/2023
Spike I.D.:	23-013	23-013
Spike Concentration (pCi/mL):	32.282	32.282
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.651	0.651
Target Conc. (pCi/L, g, F):	4.957	4.962
Uncertainty (Calculated):	0.233	0.233
Result (pCi/L, g, F):	5.487	5.775
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.233	1.312
Numerical Performance Indicator:	0.83	1.20
Percent Recovery:	110.69%	116.40%
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.:	LCS75321	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD75321	
Sample Result (pCi/L, g, F):	5.487	
Sample Result Counting Uncertainty (pCi/L, g, F):	1.233	
Sample Duplicate Result (pCi/L, g, F):	5.775	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	1.312	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	-0.314	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	5.03%	
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 9/13/23

MP 9/25/23

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test: Ra-228
Analyst: VAL
Date: 9/19/2023
Worklist: 75322
Matrix: WT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2998673
MB concentration:	0.390
M/B 2 Sigma CSU:	0.254
MB MDC:	0.451
MB Numerical Performance Indicator:	3.01
MB Status vs Numerical Indicator:	Fail*
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS75322	LCSD75322
Count Date:	9/26/2023	9/26/2023
Spike I.D.:	23-043	23-043
Decay Corrected Spike Concentration (pCi/mL):	39.668	39.668
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.815	0.817
Target Conc. (pCi/L, g, F):	4.865	4.856
Uncertainty (Calculated):	0.238	0.238
Result (pCi/L, g, F):	4.398	3.640
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	0.975	0.836
Numerical Performance Indicator:	-0.91	-2.74
Percent Recovery:	90.40%	74.96%
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.:	LCS75322	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD75322	
Sample Result (pCi/L, g, F):	4.398	
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.975	
Sample Duplicate Result (pCi/L, g, F):	3.640	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	0.836	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	1.157	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	18.67%	
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. #Below RL

VAL
9/27/23

VAM 9/27/23

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

October 06, 2023

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

RE: Project: JEC FAL CCR
Pace Project No.: 60437015

Dear Jake Humphrey:

Enclosed are the analytical results for sample(s) received by the laboratory on September 07, 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
Melanie Satanek, Haley Aldrich
Adriana Sosa, Haley & Aldrich, Inc.
Andrew Watson, Haley & Aldrich

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CERTIFICATIONS

Project: JEC FAL CCR
Pace Project No.: 60437015

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: JEC FAL CCR
Pace Project No.: 60437015

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60437015001	**FAA-3-090623**	Water	09/06/23 14:10	09/07/23 16:30
60437015002	**FAA-4-090623**	Water	09/06/23 15:15	09/07/23 16:30
60437015003	**FAA-6-090623**	Water	09/06/23 13:25	09/07/23 16:30
60437015004	**DUP-FAA-090623**	Water	09/06/23 14:10	09/07/23 16:30

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SAMPLE ANALYTE COUNT

Project: JEC FAL CCR
Pace Project No.: 60437015

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60437015001	**FAA-3-090623**	EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	LAL	1	PASI-PA
60437015002	**FAA-4-090623**	EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	LAL	1	PASI-PA
60437015003	**FAA-6-090623**	EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	LAL	1	PASI-PA
60437015004	**DUP-FAA-090623**	EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	LAL	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

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PROJECT NARRATIVE

Project: JEC FAL CCR
Pace Project No.: 60437015

Method: **EPA 903.1**
Description: 903.1 Radium 226
Client: Evergy Kansas Central, Inc.
Date: October 06, 2023

General Information:
4 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: JEC FAL CCR
Pace Project No.: 60437015

Method: **EPA 904.0**
Description: 904.0 Radium 228
Client: Evergy Kansas Central, Inc.
Date: October 06, 2023

General Information:
4 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: JEC FAL CCR
Pace Project No.: 60437015

Method: **Total Radium Calculation**
Description: Total Radium 228+226
Client: Evergy Kansas Central, Inc.
Date: October 06, 2023

General Information:
4 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: JEC FAL CCR
Pace Project No.: 60437015

Sample: FAA-3-090623 **Lab ID: 60437015001** Collected: 09/06/23 14:10 Received: 09/07/23 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	**0.559 ± 0.521 (0.686) C:NA T:92%**	pCi/L	09/22/23 14:45	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.710 ± 0.478 (0.930) C:81% T:81%**	pCi/L	09/26/23 15:50	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.27 ± 0.999 (1.62)**	pCi/L	09/27/23 15:14	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: JEC FAL CCR
Pace Project No.: 60437015

Sample: FAA-4-090623 **Lab ID: 60437015002** Collected: 09/06/23 15:15 Received: 09/07/23 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	**-0.257 ± 0.771 (1.61) C:NA T:95%**	pCi/L	09/22/23 14:45	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.701 ± 0.413 (0.759) C:80% T:83%**	pCi/L	09/26/23 15:50	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.701 ± 1.18 (2.37)**	pCi/L	09/27/23 15:14	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(913)599-5665

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: JEC FAL CCR
Pace Project No.: 60437015

Sample: FAA-6-090623 **Lab ID: 60437015003** Collected: 09/06/23 13:25 Received: 09/07/23 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	**0.000 ± 0.593 (1.25) C:NA T:92%**	pCi/L	09/22/23 14:56	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.0705 ± 0.303 (0.692) C:81% T:86%**	pCi/L	09/26/23 15:51	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.0705 ± 0.896 (1.94)**	pCi/L	09/27/23 15:14	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: JEC FAL CCR
Pace Project No.: 60437015

Sample: DUP-FAA-090623 **Lab ID: 60437015004** Collected: 09/06/23 14:10 Received: 09/07/23 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	**0.178 ± 0.698 (1.34) C:NA T:93%**	pCi/L	09/22/23 14:45	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.267 ± 0.304 (0.634) C:82% T:83%**	pCi/L	09/26/23 15:51	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.445 ± 1.00 (1.97)**	pCi/L	09/27/23 15:14	7440-14-4	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: JEC FAL CCR
Pace Project No.: 60437015

QC Batch: 615736
QC Batch Method: EPA 903.1
Analysis Method: EPA 903.1
Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 60437015001, 60437015002, 60437015003, 60437015004

METHOD BLANK: 2998672 Matrix: Water
Associated Lab Samples: 60437015001, 60437015002, 60437015003, 60437015004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.136 ± 0.326 (0.630) C:NA T:100%	pCi/L	09/22/23 14:30	

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL - RADIOCHEMISTRY

Project: JEC FAL CCR
Pace Project No.: 60437015

QC Batch: 615737
QC Batch Method: EPA 904.0
Analysis Method: EPA 904.0
Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 60437015001, 60437015002, 60437015003, 60437015004

METHOD BLANK: 2998673 Matrix: Water
Associated Lab Samples: 60437015001, 60437015002, 60437015003, 60437015004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.390 ± 0.254 (0.451) C:82% T:87%	pCi/L	09/26/23 15:52	

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: JEC FAL CCR
Pace Project No.: 60437015

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: JEC FAL CCR
Pace Project No.: 60437015

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60437015001	**FAA-3-090623**	EPA 903.1	615736		
60437015002	**FAA-4-090623**	EPA 903.1	615736		
60437015003	**FAA-6-090623**	EPA 903.1	615736		
60437015004	**DUP-FAA-090623**	EPA 903.1	615736		
60437015001	**FAA-3-090623**	EPA 904.0	615737		
60437015002	**FAA-4-090623**	EPA 904.0	615737		
60437015003	**FAA-6-090623**	EPA 904.0	615737		
60437015004	**DUP-FAA-090623**	EPA 904.0	615737		
60437015001	**FAA-3-090623**	Total Radium Calculation	618468		
60437015002	**FAA-4-090623**	Total Radium Calculation	618468		
60437015003	**FAA-6-090623**	Total Radium Calculation	618468		
60437015004	**DUP-FAA-090623**	Total Radium Calculation	618468		

WO#: 60437015

60437015

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-LENE-0009_Sampl		
	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** 21.2 **Corr. Factor** -0.3 **Corrected** 20.9

Date and initials of person examining contents: AF 9/17

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#:** 6204001	☑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:	Jeffrey Energy Center (JEC)
	818 Kansas Ave, Topeka, KS 66612
Email To:	skaney@haleyaldrich.com
Phone: 507-251-2232	Fax:
Requested Due Date/TAT:	

Section B Required Project Information:

Report To:	Samantha Kaney
Copy To:	Jake Humphrey, Laura Hines
Purchase Order No.:	
Project Name:	JEC FAL 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, line 7

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

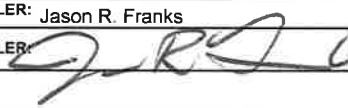
Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	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 Combine	QC Sheets	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																	Y/N	N	N	N			60437019
1	FAA-3-090623	WT	G	-	-	09/06/23	14:10	-	2			2						X	X	X	X		
2	FAA-4-090623	WT	G	-	-	09/06/23	15:15	-	2			2						X	X	X	X		
3	FAA-6-090623	WT	G	-	-	09/06/23	13:25	-	2			2						X	X	X	X		
4	DUP-FAA-090623	WT	G	-	-	09/06/23	14:10	-	2			2						X	X	X	X		
5																							
6																							
7																							
8																							
9																							
10																							
11																							
12																							

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Jason R. Franks / SCS	9/7/23	16:00	SA PACE	9/7/23	1630	20.9 N Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Jason R. Franks

SIGNATURE of SAMPLER: 

DATE Signed (MM/DD/YY): 9/7/23

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

Profile # 9657-7

Site: JEC FAL 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																						2										
3																						2										
4																						2										
5																																
6																																
7																																
8																																
9																																
10																																
11																																
12																																

Container Codes

Glass				Plastic		Misc.	
DG9B	40mL bisulfate clear vial	WGKU	8oz clear soil jar	BP1C	1L NAOH plastic	I	Wipe/Swab
DG9H	40mL HCl amber voa vial	WGFU	4oz clear soil jar	BP1N	1L HNO3 plastic	SP5T	120mL Coliform Na Thiosulfate
DG9M	40mL MeOH clear vial	WG2U	2oz clear soil jar	BP1S	1L H2SO4 plastic	ZPLC	Ziploc Bag
DG9Q	40mL TSP amber vial	JGFU	4oz unpreserved amber wide	BP1U	1L unpreserved plastic	AF	Air Filter
DG9S	40mL H2SO4 amber vial	AG0U	100mL unores amber glass	BP1Z	1L NaOH, Zn Acetate	C	Air Cassettes
DG9T	40mL Na Thio amber vial	AG1H	1L HCl amber glass	BP2C	500mL NAOH plastic	R	Terracore Kit
DG9U	40mL amber unpreserved	AG1S	1L H2SO4 amber glass	BP2N	500mL HNO3 plastic	U	Summa Can
VG9H	40mL HCl clear vial	AG1T	1L Na Thiosulfate clear/amber glass	BP2S	500mL H2SO4 plastic		
VG9T	40mL Na Thio. clear vial	AG1U	1liter unpres amber glass	BP2U	500mL unpreserved plastic		
VG9U	40mL unpreserved clear vial	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Acetate		
BG1S	1liter H2SO4 clear glass	AG2S	500mL H2SO4 amber glass	BP3C	250mL NaOH plastic		
BG1U	1liter unpres glass	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic - field filtered	Matrix	
BG3H	250mL HCL Clear glass	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic	WT	Water
BG3U	250mL Unpres Clear glass	AG3U	250mL unpres amber glass	BP3U	250mL unpreserved plastic	SL	Solid
WGDU	16oz clear soil jar	AG4U	125mL unpres amber glass	BP3S	250mL H2SO4 plastic	NAL	Non-aqueous Liquid
		AG5U	100mL unpres amber glass	BP3Z	250mL NaOH, Zn Acetate	OL	OIL
				BP4U	125mL unpreserved plastic	WP	Wipe
				BP4N	125mL HNO3 plastic	DW	Drinking Water
				BP4S	125mL H2SO4 plastic		
				WPDU	16oz unpresserved plstic		

Work Order Number: 60137015

Internal Transfer Chain of Custody

☐ Samples Pre-Logged into eCOC.

State Of Origin: KS
Cert. Needed: ☐ Yes ☐ No
Owner Received Date: 9/7/2023 Results Requested By: 10/6/2023

Workorder: 60437015 **Workorder Name:** JEC FAL CCR

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 QC Sheets	Radium 226	Radium 228, and combined										LAB USE ONLY
1	FAA-3-090623	PS	9/6/2023 14:10	60437015001	Water	2						X	X	X										001
2	FAA-4-090623	PS	9/6/2023 15:15	60437015002	Water	2						X	X	X										002
3	FAA-6-090623	PS	9/6/2023 13:25	60437015003	Water	2						X	X	X										003
4	DUP-FAA-090623	PS	9/6/2023 14:10	60437015004	Water	2						X	X	X										004
5																								

Transfers	Released By	Date/Time	Received By	Date/Time
1	[illegible]	9.11.23 17:00	Jessie Smith-Pace	9/12/23 1000
2				
3				

Comments

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

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

WO# : 30620971

30620971

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

Effective Date: 07/06/2023

WO# : 30620971

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

CLIENT: PACE_60_LEKS

Client Name: Pace-KS

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

Tracking Number: 6732 1341 9372

Initial / Date

Examined By: LA 9-13-23

Labeled By: LA 9-13-23

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# 100831 / D.P.D. Residual Chlorine Lot #
Chain of Custody Present	X			1.
Chain of Custody Filled Out:	X			2.
-Were client corrections present on COC		X		
Chain of Custody Relinquished	X			3.
Sampler Name & Signature on COC:		X		4.
Sample Labels match COC:	X			5.
-Includes date/time/ID Matrix: WT				
Samples Arrived within Hold Time:	X			6.
Short Hold Time Analysis (<72hr remaining):		X		7.
Rush Turn Around Time Requested:		X		8.
Sufficient Volume:	X			9.
Correct Containers Used:	X			10.
-Pace Containers Used	X			
Containers Intact:	X			11.
Orthophosphate field filtered:			X	12.
Hex Cr Aqueous samples field filtered:			X	13.
Organic Samples checked for dechlorination			X	14:
Filtered volume received for dissolved tests:			X	15:
All containers checked for preservation:	X			16.
exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, non-aqueous matrix				pH<2
All containers meet method preservation requirements:	X			Initial when completed: LA / Date/Time of Preservation / Lot# of added Preservative
8260C/D: Headspace in VOA Vials (> 6mm)			X	17.
624.1: Headspace in VOA Vials (0mm)			X	18.
Trip Blank Present:			X	Trip blank custody seal present? YES or NO
Rad Samples Screened <0.5 mrem/hr.	✓			Initial when completed: JJ / Date: 9/12/23 / Survey Meter SN: 1563

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:	9/15/2023
Batch ID:	75321
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2998672
MB concentration:	0.136
M/B Counting Uncertainty:	0.326
MB MDC:	0.630
MB Numerical Performance Indicator:	0.82
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS75321	LCSD75321
Count Date:	9/22/2023	9/22/2023
Spike I.D.:	23-013	23-013
Spike Concentration (pCi/mL):	32.282	32.282
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.651	0.651
Target Conc. (pCi/L, g, F):	4.957	4.962
Uncertainty (Calculated):	0.233	0.233
Result (pCi/L, g, F):	5.487	5.775
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.233	1.312
Numerical Performance Indicator:	0.83	1.20
Percent Recovery:	110.69%	116.40%
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.:	LCS75321	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD75321	
Sample Result (pCi/L, g, F):	5.487	
Sample Result Counting Uncertainty (pCi/L, g, F):	1.233	
Sample Duplicate Result (pCi/L, g, F):	5.775	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	1.312	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	-0.314	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	5.03%	
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 9/13/23

MP 9/25/23

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test: Ra-228
Analyst: VAL
Date: 9/19/2023
Worklist: 75322
Matrix: WT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2998673
MB concentration:	0.390
M/B 2 Sigma CSU:	0.254
MB MDC:	0.451
MB Numerical Performance Indicator:	3.01
MB Status vs Numerical Indicator:	Fail*
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS75322	LCSD75322
Count Date:	9/26/2023	9/26/2023
Spike I.D.:	23-043	23-043
Decay Corrected Spike Concentration (pCi/mL):	39.668	39.668
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.815	0.817
Target Conc. (pCi/L, g, F):	4.865	4.856
Uncertainty (Calculated):	0.238	0.238
Result (pCi/L, g, F):	4.398	3.640
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	0.975	0.836
Numerical Performance Indicator:	-0.91	-2.74
Percent Recovery:	90.40%	74.96%
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.:	LCS75322	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD75322	
Sample Result (pCi/L, g, F):	4.398	
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.975	
Sample Duplicate Result (pCi/L, g, F):	3.640	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	0.836	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	1.157	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	18.67%	
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. #Below RL

VAL
9/27/23

VAM 9/27/23

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

October 04, 2023

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

RE: Project: JEC FAL CCR-Revised Report
Pace Project No.: 60437056

Dear Jake Humphrey:

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

REVISED to include chloride, sulfate and the addition of mercury.

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: JEC FAL CCR-Revised Report
Pace Project No.: 60437056

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

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

SAMPLE SUMMARY

Project: JEC FAL CCR-Revised Report
Pace Project No.: 60437056

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60437056001	**FAA-3-090623**	Water	09/06/23 14:10	09/07/23 16:30
60437056002	**FAA-4-090623**	Water	09/06/23 15:15	09/07/23 16:30
60437056003	**FAA-6-090623**	Water	09/06/23 13:25	09/07/23 16:30
60437056004	**DUP-FAA-090623**	Water	09/06/23 14:10	09/07/23 16:30

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

SAMPLE ANALYTE COUNT

Project: JEC FAL CCR-Revised Report
Pace Project No.: 60437056

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60437056001	**FAA-3-090623**	EPA 200.7	JXD	3	PASI-K
		EPA 6010	JXD	1	PASI-K
		EPA 200.8	JGP	3	PASI-K
		EPA 245.1	ALH	1	PASI-K
		SM 2540C	BDH1	1	PASI-K
		SM 4500-H+B	RKA	1	PASI-K
		EPA 300.0	MLD	3	PASI-K
60437056002	**FAA-4-090623**	EPA 200.7	JXD	3	PASI-K
		EPA 6010	JXD	1	PASI-K
		EPA 200.8	JGP	3	PASI-K
		EPA 245.1	ALH	1	PASI-K
		SM 2540C	BDH1	1	PASI-K
		SM 4500-H+B	RKA	1	PASI-K
		EPA 300.0	MLD	3	PASI-K
60437056003	**FAA-6-090623**	EPA 200.7	JXD	3	PASI-K
		EPA 6010	JXD	1	PASI-K
		EPA 200.8	JGP	3	PASI-K
		EPA 245.1	ALH	1	PASI-K
		SM 2540C	BDH1	1	PASI-K
		SM 4500-H+B	RKA	1	PASI-K
		EPA 300.0	MLD	3	PASI-K
60437056004	**DUP-FAA-090623**	EPA 200.7	JXD	3	PASI-K
		EPA 6010	JXD	1	PASI-K
		EPA 200.8	JGP	3	PASI-K
		EPA 245.1	ALH	1	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

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

PROJECT NARRATIVE

Project: JEC FAL CCR-Revised Report
Pace Project No.: 60437056

Method: **EPA 200.7**
Description: 200.7 Metals, Total
Client: Evergy Kansas Central, Inc.
Date: October 04, 2023

General Information:
4 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.

Additional Comments:

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

PROJECT NARRATIVE

Project: JEC FAL CCR-Revised Report
Pace Project No.: 60437056

Method: **EPA 6010**
Description: 6010 MET ICP
Client: Evergy Kansas Central, Inc.
Date: October 04, 2023

General Information:
4 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
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

PROJECT NARRATIVE

Project: JEC FAL CCR-Revised Report
Pace Project No.: 60437056

Method: **EPA 200.8**
Description: 200.8 MET ICPMS
Client: Evergy Kansas Central, Inc.
Date: October 04, 2023

General Information:
4 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: JEC FAL CCR-Revised Report
Pace Project No.: 60437056

Method: **EPA 245.1**
Description: 245.1 Mercury
Client: Evergy Kansas Central, Inc.
Date: October 04, 2023

General Information:
4 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.

Additional Comments:

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

PROJECT NARRATIVE

Project: JEC FAL CCR-Revised Report
Pace Project No.: 60437056

Method: **SM 2540C**
Description: 2540C Total Dissolved Solids
Client: Evergy Kansas Central, Inc.
Date: October 04, 2023

General Information:
4 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.

Additional Comments:

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PROJECT NARRATIVE

Project: JEC FAL CCR-Revised Report
Pace Project No.: 60437056

Method: **SM 4500-H+B**
Description: 4500H+ pH, Electrometric
Client: Evergy Kansas Central, Inc.
Date: October 04, 2023

General Information:
4 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.
- DUP-FAA-090623 (Lab ID: 60437056004)
- FAA-3-090623 (Lab ID: 60437056001)
- FAA-4-090623 (Lab ID: 60437056002)
- FAA-6-090623 (Lab ID: 60437056003)

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: JEC FAL CCR-Revised Report
Pace Project No.: 60437056

Method: **EPA 300.0**
Description: 300.0 IC Anions 28 Days
Client: Evergy Kansas Central, Inc.
Date: October 04, 2023

General Information:
4 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: 865021

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60437054003,60437056002

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

- MS (Lab ID: 3425432)
  - 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: JEC FAL CCR-Revised Report
Pace Project No.: 60437056

Sample: FAA-3-090623 **Lab ID: 60437056001** Collected: 09/06/23 14:10 Received: 09/07/23 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	**0.033**	mg/L	0.0050	1	09/14/23 12:10	09/18/23 13:07	7440-39-3	
Boron, Total Recoverable	**0.50**	mg/L	0.10	1	09/14/23 12:10	09/18/23 13:07	7440-42-8	
Calcium, Total Recoverable	**232**	mg/L	0.20	1	09/14/23 12:10	09/18/23 13:07	7440-70-2	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**0.014**	mg/L	0.010	1	09/14/23 12:10	09/18/23 14:14	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	**<0.0010**	mg/L	0.0010	1	09/14/23 12:10	09/18/23 12:10	7440-38-2	
Cobalt, Total Recoverable	**<0.0010**	mg/L	0.0010	1	09/14/23 12:10	09/18/23 12:10	7440-48-4	
Molybdenum, Total Recoverable	**0.0064**	mg/L	0.0010	1	09/14/23 12:10	09/18/23 12:10	7439-98-7	
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	09/29/23 10:45	10/02/23 10:48	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City							
Total Dissolved Solids	**1330**	mg/L	13.3	1		09/12/23 09:03		
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 14:56		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Chloride	**128**	mg/L	10.0	10		09/29/23 14:35	16887-00-6	
Fluoride	**<0.20**	mg/L	0.20	1		09/21/23 00:05	16984-48-8	
Sulfate	**532**	mg/L	50.0	50		09/29/23 15:13	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: JEC FAL CCR-Revised Report
Pace Project No.: 60437056

Sample: FAA-4-090623 **Lab ID: 60437056002** Collected: 09/06/23 15:15 Received: 09/07/23 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	**0.051**	mg/L	0.0050	1	09/14/23 12:10	09/18/23 13:13	7440-39-3	
Boron, Total Recoverable	**0.59**	mg/L	0.10	1	09/14/23 12:10	09/18/23 13:13	7440-42-8	
Calcium, Total Recoverable	**198**	mg/L	0.20	1	09/14/23 12:10	09/18/23 13:13	7440-70-2	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**0.020**	mg/L	0.010	1	09/14/23 12:10	09/18/23 14:21	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	**<0.0010**	mg/L	0.0010	1	09/14/23 12:10	09/18/23 12:12	7440-38-2	
Cobalt, Total Recoverable	**<0.0010**	mg/L	0.0010	1	09/14/23 12:10	09/18/23 12:12	7440-48-4	
Molybdenum, Total Recoverable	**0.0072**	mg/L	0.0010	1	09/14/23 12:10	09/18/23 12:12	7439-98-7	
245.1 Mercury	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1 Pace Analytical Services - Kansas City							
Mercury	**0.46**	ug/L	0.20	1	09/29/23 10:45	10/02/23 10:55	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City							
Total Dissolved Solids	**1270**	mg/L	13.3	1		09/12/23 09:03		
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 15:06		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Chloride	**105**	mg/L	10.0	10		09/29/23 15:26	16887-00-6	
Fluoride	**<0.20**	mg/L	0.20	1		09/21/23 00:17	16984-48-8	M1
Sulfate	**454**	mg/L	50.0	50		09/29/23 15:38	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: JEC FAL CCR-Revised Report
Pace Project No.: 60437056

Sample: FAA-6-090623 **Lab ID: 60437056003** Collected: 09/06/23 13:25 Received: 09/07/23 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	**0.027**	mg/L	0.0050	1	09/14/23 12:10	09/18/23 13:15	7440-39-3	
Boron, Total Recoverable	**2.7**	mg/L	0.10	1	09/14/23 12:10	09/18/23 13:15	7440-42-8	
Calcium, Total Recoverable	**117**	mg/L	0.20	1	09/14/23 12:10	09/18/23 13:15	7440-70-2	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**0.010**	mg/L	0.010	1	09/14/23 12:10	09/18/23 14:23	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	**0.0085**	mg/L	0.0010	1	09/14/23 12:10	09/18/23 12:23	7440-38-2	
Cobalt, Total Recoverable	**0.0012**	mg/L	0.0010	1	09/14/23 12:10	09/18/23 12:23	7440-48-4	
Molybdenum, Total Recoverable	**0.29**	mg/L	0.0010	1	09/14/23 12:10	09/18/23 12:23	7439-98-7	
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	09/29/23 10:45	10/02/23 10:58	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City							
Total Dissolved Solids	**2080**	mg/L	40.0	1		09/12/23 09:04		
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		09/09/23 13:46		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Chloride	**67.4**	mg/L	10.0	10		09/29/23 15:51	16887-00-6	
Fluoride	**<0.20**	mg/L	0.20	1		09/21/23 00:43	16984-48-8	
Sulfate	**731**	mg/L	100	100		10/04/23 11:33	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: JEC FAL CCR-Revised Report
Pace Project No.: 60437056

Sample: DUP-FAA-090623 **Lab ID: 60437056004** Collected: 09/06/23 14:10 Received: 09/07/23 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	**0.033**	mg/L	0.0050	1	09/14/23 12:10	09/18/23 13:17	7440-39-3	
Boron, Total Recoverable	**0.49**	mg/L	0.10	1	09/14/23 12:10	09/18/23 13:17	7440-42-8	
Calcium, Total Recoverable	**228**	mg/L	0.20	1	09/14/23 12:10	09/18/23 13:17	7440-70-2	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**0.014**	mg/L	0.010	1	09/14/23 12:10	09/18/23 14:25	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	**<0.0010**	mg/L	0.0010	1	09/14/23 12:10	09/18/23 12:26	7440-38-2	
Cobalt, Total Recoverable	**<0.0010**	mg/L	0.0010	1	09/14/23 12:10	09/18/23 12:26	7440-48-4	
Molybdenum, Total Recoverable	**0.0065**	mg/L	0.0010	1	09/14/23 12:10	09/18/23 12:26	7439-98-7	
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	09/29/23 10:45	10/02/23 11:00	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City							
Total Dissolved Solids	**1320**	mg/L	13.3	1		09/13/23 10:33		
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		09/12/23 15:00		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Chloride	**126**	mg/L	10.0	10		09/29/23 16:16	16887-00-6	
Fluoride	**<0.20**	mg/L	0.20	1		09/20/23 18:11	16984-48-8	
Sulfate	**537**	mg/L	50.0	50		09/29/23 16:28	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: JEC FAL CCR-Revised Report
Pace Project No.: 60437056

QC Batch: 866779
QC Batch Method: EPA 245.1
Analysis Method: EPA 245.1
Analysis Description: 245.1 Mercury
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60437056001, 60437056002, 60437056003, 60437056004

METHOD BLANK: 3432454 Matrix: Water
Associated Lab Samples: 60437056001, 60437056002, 60437056003, 60437056004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	<0.20	0.20	10/02/23 10:44	

LABORATORY CONTROL SAMPLE: 3432455

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: 3432456 3432457

Parameter	Units	60437056001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	<0.20	5	5	3.6	3.6	71	72	70-130	1	20	

MATRIX SPIKE SAMPLE: 3432458

Parameter	Units	60438105001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	ND	5	5.1	102	70-130	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: JEC FAL CCR-Revised Report
Pace Project No.: 60437056

QC Batch: 864481
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: 60437056001, 60437056002, 60437056003, 60437056004

METHOD BLANK: 3422951 Matrix: Water
Associated Lab Samples: 60437056001, 60437056002, 60437056003, 60437056004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Barium	mg/L	<0.0050	0.0050	09/18/23 13:03	
Boron	mg/L	<0.10	0.10	09/18/23 13:03	
Calcium	mg/L	<0.20	0.20	09/18/23 13:03	

LABORATORY CONTROL SAMPLE: 3422952

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	mg/L	1	1.0	104	85-115	
Boron	mg/L	1	0.95	95	85-115	
Calcium	mg/L	10	10.4	104	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3422953 3422954

Parameter	Units	60437056001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	mg/L	0.033	1	1	1.1	1.1	105	103	70-130	1	20	
Boron	mg/L	0.50	1	1	1.5	1.5	97	97	70-130	0	20	
Calcium	mg/L	232	10	10	242	242	102	102	70-130	0	20	

MATRIX SPIKE SAMPLE: 3422955

Parameter	Units	60437062001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Barium	mg/L	312 ug/L	1	1.3	103	70-130	
Boron	mg/L	<0.10	1	1.0	95	70-130	
Calcium	mg/L	101	10	111	97	70-130	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: JEC FAL CCR-Revised Report
Pace Project No.: 60437056

QC Batch: 864485
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: 60437056001, 60437056002, 60437056003, 60437056004

METHOD BLANK: 3422970 Matrix: Water
Associated Lab Samples: 60437056001, 60437056002, 60437056003, 60437056004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/L	<0.0010	0.0010	09/18/23 12:04	
Cobalt	mg/L	<0.0010	0.0010	09/18/23 12:04	
Molybdenum	mg/L	<0.0010	0.0010	09/18/23 12:04	

LABORATORY CONTROL SAMPLE: 3422971

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/L	0.04	0.040	101	85-115	
Cobalt	mg/L	0.04	0.041	102	85-115	
Molybdenum	mg/L	0.04	0.041	103	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3422972 3422973

Parameter	Units	60437056002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/L	<0.0010	0.04	0.04	0.042	0.041	103	102	70-130	1	20	
Cobalt	mg/L	<0.0010	0.04	0.04	0.040	0.040	98	98	70-130	0	20	
Molybdenum	mg/L	0.0072	0.04	0.04	0.049	0.049	105	104	70-130	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: JEC FAL CCR-Revised Report
Pace Project No.: 60437056

QC Batch: 864487
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60437056001, 60437056002, 60437056003, 60437056004

METHOD BLANK: 3422984 Matrix: Water
Associated Lab Samples: 60437056001, 60437056002, 60437056003, 60437056004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lithium	mg/L	<0.010	0.010	09/18/23 14:10	

LABORATORY CONTROL SAMPLE: 3422985

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lithium	mg/L	1	0.97	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3422986 3422987

Parameter	Units	60437056001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lithium	mg/L	0.014	1	1	1.0	1.0	99	99	75-125	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: JEC FAL CCR-Revised Report
Pace Project No.: 60437056

QC Batch: 864073
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60437056001, 60437056002, 60437056003

METHOD BLANK: 3421464 Matrix: Water
Associated Lab Samples: 60437056001, 60437056002, 60437056003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	09/12/23 08:59	

LABORATORY CONTROL SAMPLE: 3421465

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

SAMPLE DUPLICATE: 3421466

Parameter	Units	60436977001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	5230	4810	8	10	

SAMPLE DUPLICATE: 3421467

Parameter	Units	60437054004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	638	659	3	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: JEC FAL CCR-Revised Report
Pace Project No.: 60437056

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: 60437056004

METHOD BLANK: 3421941 Matrix: Water
Associated Lab Samples: 60437056004

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	

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: JEC FAL CCR-Revised Report
Pace Project No.: 60437056

QC Batch: 863862
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: 60437056003

SAMPLE DUPLICATE: 3420733

Parameter	Units	60437058001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	6.7	6.8	0	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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(913)599-5665

QUALITY CONTROL DATA

Project: JEC FAL CCR-Revised Report
Pace Project No.: 60437056

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: 60437056001, 60437056002, 60437056004

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: JEC FAL CCR-Revised Report
Pace Project No.: 60437056

QC Batch: 865021 — 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: 60437056001, 60437056002, 60437056003, 60437056004

METHOD BLANK: 3425428 — Matrix: Water
Associated Lab Samples: 60437056001, 60437056002, 60437056003, 60437056004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Fluoride	mg/L	<0.20	0.20	09/19/23 20:42	

METHOD BLANK: 3427934 — Matrix: Water
Associated Lab Samples: 60437056001, 60437056002, 60437056003, 60437056004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Fluoride	mg/L	<0.20	0.20	09/21/23 09:49	

METHOD BLANK: 3428539 — Matrix: Water
Associated Lab Samples: 60437056001, 60437056002, 60437056003, 60437056004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Fluoride	mg/L	<0.20	0.20	09/20/23 16:38	

METHOD BLANK: 3428677 — Matrix: Water
Associated Lab Samples: 60437056001, 60437056002, 60437056003, 60437056004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Fluoride	mg/L	<0.20	0.20	09/19/23 20:42	

LABORATORY CONTROL SAMPLE: 3425429

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

LABORATORY CONTROL SAMPLE: 3427935

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	2.5	2.5	99	90-110	

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

REPORT OF LABORATORY ANALYSIS

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9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: JEC FAL CCR-Revised Report
Pace Project No.: 60437056

LABORATORY CONTROL SAMPLE: 3428540

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

LABORATORY CONTROL SAMPLE: 3428678

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: 3425430 3425431

Parameter	Units	60437054003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Fluoride	mg/L	<0.20	2.5	2.5	2.5	2.5	101	99	80-120	2	15	

MATRIX SPIKE SAMPLE: 3425432

Parameter	Units	60437056002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	<0.20	2.5	1.8	70	80-120	M1

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REPORT OF LABORATORY ANALYSIS

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Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: JEC FAL CCR-Revised Report
Pace Project No.: 60437056

QC Batch: 866679
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: 60437056001, 60437056002, 60437056003, 60437056004

METHOD BLANK: 3432189 Matrix: Water
Associated Lab Samples: 60437056001, 60437056002, 60437056003, 60437056004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<1.0	1.0	09/29/23 10:07	
Sulfate	mg/L	<1.0	1.0	09/29/23 10:07	

METHOD BLANK: 3435487 Matrix: Water
Associated Lab Samples: 60437056001, 60437056002, 60437056003, 60437056004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<1.0	1.0	10/04/23 10:00	
Sulfate	mg/L	<1.0	1.0	10/04/23 10:00	

LABORATORY CONTROL SAMPLE: 3432190

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.7	95	90-110	
Sulfate	mg/L	5	5.0	99	90-110	

LABORATORY CONTROL SAMPLE: 3435488

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.9	98	90-110	
Sulfate	mg/L	5	5.0	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3432191 3432192

Parameter	Units	60437743001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	65800	50000	50000	109000	115000	87	98	80-120	5	15	
Sulfate	mg/L	ND	50000	50000	51400	53600	90	95	80-120	4	15	

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QUALITY CONTROL DATA

Project: JEC FAL CCR-Revised Report
Pace Project No.: 60437056

MATRIX SPIKE SAMPLE: 3432193

Parameter	Units	60437745006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	<0.53	5	4.8	89	80-120	
Sulfate	mg/L	<0.55	5	5.1	101	80-120	

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REPORT OF LABORATORY ANALYSIS

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(913)599-5665

QUALIFIERS

Project: JEC FAL CCR-Revised Report
Pace Project No.: 60437056

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

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.

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: JEC FAL CCR-Revised Report
Pace Project No.: 60437056

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60437056001	**FAA-3-090623**	EPA 200.7	864481	EPA 200.7	864587
60437056002	**FAA-4-090623**	EPA 200.7	864481	EPA 200.7	864587
60437056003	**FAA-6-090623**	EPA 200.7	864481	EPA 200.7	864587
60437056004	**DUP-FAA-090623**	EPA 200.7	864481	EPA 200.7	864587
60437056001	**FAA-3-090623**	EPA 3010	864487	EPA 6010	864590
60437056002	**FAA-4-090623**	EPA 3010	864487	EPA 6010	864590
60437056003	**FAA-6-090623**	EPA 3010	864487	EPA 6010	864590
60437056004	**DUP-FAA-090623**	EPA 3010	864487	EPA 6010	864590
60437056001	**FAA-3-090623**	EPA 200.8	864485	EPA 200.8	864589
60437056002	**FAA-4-090623**	EPA 200.8	864485	EPA 200.8	864589
60437056003	**FAA-6-090623**	EPA 200.8	864485	EPA 200.8	864589
60437056004	**DUP-FAA-090623**	EPA 200.8	864485	EPA 200.8	864589
60437056001	**FAA-3-090623**	EPA 245.1	866779	EPA 245.1	866818
60437056002	**FAA-4-090623**	EPA 245.1	866779	EPA 245.1	866818
60437056003	**FAA-6-090623**	EPA 245.1	866779	EPA 245.1	866818
60437056004	**DUP-FAA-090623**	EPA 245.1	866779	EPA 245.1	866818
60437056001	**FAA-3-090623**	SM 2540C	864073		
60437056002	**FAA-4-090623**	SM 2540C	864073		
60437056003	**FAA-6-090623**	SM 2540C	864073		
60437056004	**DUP-FAA-090623**	SM 2540C	864208		
60437056001	**FAA-3-090623**	SM 4500-H+B	863911		
60437056002	**FAA-4-090623**	SM 4500-H+B	863911		
60437056003	**FAA-6-090623**	SM 4500-H+B	863862		
60437056004	**DUP-FAA-090623**	SM 4500-H+B	863911		
60437056001	**FAA-3-090623**	EPA 300.0	865021		
60437056001	**FAA-3-090623**	EPA 300.0	866679		
60437056002	**FAA-4-090623**	EPA 300.0	865021		
60437056002	**FAA-4-090623**	EPA 300.0	866679		
60437056003	**FAA-6-090623**	EPA 300.0	865021		
60437056003	**FAA-6-090623**	EPA 300.0	866679		
60437056004	**DUP-FAA-090623**	EPA 300.0	865021		
60437056004	**DUP-FAA-090623**	EPA 300.0	866679		

WO# : 60437056

60437056

Pace	DC#_Title: ENV-FRM-LENE-0009_Sample C		
	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: T295 **Type of Ice:** Wet Blue None

Cooler Temperature (°C): **As-read** 3.1 **Corr. Factor** -0.3 **Corrected** 2.8

Date and initials of person examining contents: AF 9/8

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#:** 6204001	☑Yes ☐No ☐N/A	List sample IDs, volumes, lot #'s of preservative and the date/time added.
Cyanide water sample checks: Lead acetate strip turns dark? (Record only)	☐Yes ☐No	
Potassium iodide test strip turns blue/purple? (Preserve)	☐Yes ☐No	
Trip Blank present:	☐Yes ☐No ☑N/A	
Headspace in VOA vials (>6mm):	☐Yes ☐No ☑N/A	
Samples from USDA Regulated Area: State:	☐Yes ☐No ☑N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	☐Yes ☐No ☑N/A	

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

Qualtrax Document ID: 30468

Pace Analytical
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Required Client Information:

Company:	EVERGY KANSAS CENTRAL, INC.
Address:	Jeffrey Energy Center (JEC)
	818 Kansas Ave, Topeka, KS 66612
Email To:	skaney@haleyaldrich.com
Phone: 507-251-2232	Fax:
Requested Due Date/TAT:	

Section B Required Project Information:

Report To:	Samantha Kaney
Copy To:	Jake Humphrey, Laura Hines
Purchase Order No.:	
Project Name:	JEC FAL 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, 6

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	Preservatives: H_2SO_4	Preservatives: HNO_3	Preservatives: HCl	Preservatives: NaOH	Preservatives: $Na_2S_2O_3$	Preservatives: Methanol	Preservatives: Other	Analysis Test Y/N	Requested Analysis Filtered (Y/N): 200.7 Total Metals*	200.8 Total Metals**	4500 H+B pH	300: Cl, F, SO4	2540C TDS	6010 Total Li***	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																		N	N	N	N	N	N		60437056
1	FAA-3-090623	WT	G	-	-	09/06/23	14:10	-	4	3		1						X	X	X	X	X	X		
2	FAA-4-090623	WT	G	-	-	09/06/23	15:15	-	4	3		1						X	X	X	X	X	X		
3	FAA-6-090623	WT	G	-	-	09/06/23	13:25	-	4	3		1						X	X	X	X	X	X		
4	DUP-FAA-090623	WT	G	-	-	09/06/23	14:10	-	4	3		1						X	X	X	X	X	X		
5																									
6																									
7																									
8																									
9																									
10																									
11																									
12																									

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
200.7 Total Metals*: B, Ca, Ba,	Jason R. Franks / SCS	9/7/23	16:00	JA Pace	9/7/23	1630	2 8 Y T
200.8 Total Metals**: As, Co, Mo, Se							
6010 Total Metals***: Li							

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Jason R. Franks

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 9/7/23

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

Profile # 9697-6

Site: JEC FAL 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		2		1									
2																			1		2		1									
3																			1		2		1									
4																			1		2		1									
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: 60437056

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

September 22, 2023

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

RE: Project: MW-FAA-5
Pace Project No.: 60437058

Dear Jake Humphrey:

Enclosed are the analytical results for sample(s) received by the laboratory on September 07, 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.
Lenexa, KS 66219
(913)599-5665

CERTIFICATIONS

Project: MW-FAA-5
Pace Project No.: 60437058

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: MW-FAA-5
Pace Project No.: 60437058

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60437058001	**FAA-5-090623**	Water	09/06/23 09:50	09/07/23 16:30

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SAMPLE ANALYTE COUNT

Project: MW-FAA-5
Pace Project No.: 60437058

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60437058001	**FAA-5-090623**	EPA 200.7	JXD	6	PASI-K
		EPA 6010	JXD	1	PASI-K
		EPA 200.8	JGP	7	PASI-K
		EPA 245.1	ALH	1	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: MW-FAA-5
Pace Project No.: 60437058

Method: **EPA 200.7**
Description: 200.7 Metals, Total
Client: Evergy Kansas Central, Inc.
Date: September 22, 2023

General Information:
1 sample was 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.

Additional Comments:

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PROJECT NARRATIVE

Project: MW-FAA-5
Pace Project No.: 60437058

Method: **EPA 6010**
Description: 6010 MET ICP
Client: Evergy Kansas Central, Inc.
Date: September 22, 2023

General Information:
1 sample was 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: MW-FAA-5
Pace Project No.: 60437058

Method: **EPA 200.8**
Description: 200.8 MET ICPMS
Client: Evergy Kansas Central, Inc.
Date: September 22, 2023

General Information:
1 sample was 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: MW-FAA-5
Pace Project No.: 60437058

Method: **EPA 245.1**
Description: 245.1 Mercury
Client: Evergy Kansas Central, Inc.
Date: September 22, 2023

General Information:
1 sample was 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: 865259

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60437042001

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

- MS (Lab ID: 3426366)
  - Mercury
- MSD (Lab ID: 3426367)
  - Mercury

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: MW-FAA-5
Pace Project No.: 60437058

Method: **SM 2540C**
Description: 2540C Total Dissolved Solids
Client: Evergy Kansas Central, Inc.
Date: September 22, 2023

General Information:
1 sample was 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.

Additional Comments:

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PROJECT NARRATIVE

Project: MW-FAA-5
Pace Project No.: 60437058

Method: **SM 4500-H+B**
Description: 4500H+ pH, Electrometric
Client: Evergy Kansas Central, Inc.
Date: September 22, 2023

General Information:
1 sample was 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.
- FAA-5-090623 (Lab ID: 60437058001)

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: MW-FAA-5
Pace Project No.: 60437058

Method: **EPA 300.0**
Description: 300.0 IC Anions 28 Days
Client: Evergy Kansas Central, Inc.
Date: September 22, 2023

General Information:
1 sample was 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: 865021

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60437054003,60437056002

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

- MS (Lab ID: 3425432)
  - Chloride
  - Fluoride
  - Sulfate
- MSD (Lab ID: 3425431)
  - Sulfate

R1: RPD value was outside control limits.

- MSD (Lab ID: 3425431)
  - Sulfate

Additional Comments:

Analyte Comments:

QC Batch: 865021

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

- MS (Lab ID: 3425430)
  - Sulfate
- MS (Lab ID: 3425432)
  - Chloride
  - Sulfate
- MSD (Lab ID: 3425431)
  - Sulfate

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

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: MW-FAA-5
Pace Project No.: 60437058

Sample: FAA-5-090623 **Lab ID: 60437058001** Collected: 09/06/23 09:50 Received: 09/07/23 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	**<0.0050**	mg/L	0.0050	1	09/14/23 12:10	09/18/23 13:19	7440-39-3	
Beryllium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	09/14/23 12:10	09/18/23 13:19	7440-41-7	
Boron, Total Recoverable	**1.7**	mg/L	0.10	1	09/14/23 12:10	09/18/23 13:19	7440-42-8	
Calcium, Total Recoverable	**542**	mg/L	0.20	1	09/14/23 12:10	09/18/23 13:19	7440-70-2	
Chromium, Total Recoverable	**<0.0050**	mg/L	0.0050	1	09/14/23 12:10	09/18/23 13:19	7440-47-3	
Lead, Total Recoverable	**<0.010**	mg/L	0.010	1	09/14/23 12:10	09/18/23 13:19	7439-92-1	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**0.14**	mg/L	0.010	1	09/14/23 12:10	09/18/23 14:27	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	09/14/23 12:10	09/18/23 12:28	7440-36-0	
Arsenic, Total Recoverable	**<0.0010**	mg/L	0.0010	1	09/14/23 12:10	09/18/23 12:28	7440-38-2	
Cadmium, Total Recoverable	**<0.00050**	mg/L	0.00050	1	09/14/23 12:10	09/18/23 12:28	7440-43-9	
Cobalt, Total Recoverable	**0.0017**	mg/L	0.0010	1	09/14/23 12:10	09/18/23 12:28	7440-48-4	
Molybdenum, Total Recoverable	**0.019**	mg/L	0.0010	1	09/14/23 12:10	09/18/23 12:28	7439-98-7	
Selenium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	09/14/23 12:10	09/18/23 12:28	7782-49-2	
Thallium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	09/14/23 12:10	09/18/23 12:28	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	09/20/23 11:12	09/21/23 14:11	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City							
Total Dissolved Solids	**3270**	mg/L	66.7	1		09/13/23 10:33		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Kansas City							
pH at 25 Degrees C	**6.7**	Std. Units	0.10	1		09/09/23 13:13		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Chloride	**115**	mg/L	20.0	20		09/20/23 18:38	16887-00-6	
Fluoride	**0.25**	mg/L	0.20	1		09/20/23 18:25	16984-48-8	
Sulfate	**2120**	mg/L	400	400		09/20/23 18:51	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: MW-FAA-5
Pace Project No.: 60437058

QC Batch: 865259
QC Batch Method: EPA 245.1
Analysis Method: EPA 245.1
Analysis Description: 245.1 Mercury
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60437058001

METHOD BLANK: 3426364 Matrix: Water
Associated Lab Samples: 60437058001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	<0.20	0.20	09/21/23 13:44	

LABORATORY CONTROL SAMPLE: 3426365

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.1	101	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3426366 3426367

Parameter	Units	60437042001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	<0.000096 mg/L	5	5	1.2	1.2	24	24	70-130	2	20	M1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: MW-FAA-5
Pace Project No.: 60437058

QC Batch: 864481
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: 60437058001

METHOD BLANK: 3422951 Matrix: Water
Associated Lab Samples: 60437058001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Barium	mg/L	<0.0050	0.0050	09/18/23 13:03	
Beryllium	mg/L	<0.0010	0.0010	09/18/23 13:03	
Boron	mg/L	<0.10	0.10	09/18/23 13:03	
Calcium	mg/L	<0.20	0.20	09/18/23 13:03	
Chromium	mg/L	<0.0050	0.0050	09/18/23 13:03	
Lead	mg/L	<0.010	0.010	09/18/23 13:03	

LABORATORY CONTROL SAMPLE: 3422952

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	mg/L	1	1.0	104	85-115	
Beryllium	mg/L	1	1.0	103	85-115	
Boron	mg/L	1	0.95	95	85-115	
Calcium	mg/L	10	10.4	104	85-115	
Chromium	mg/L	1	1.0	103	85-115	
Lead	mg/L	1	1.1	106	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3422953 3422954

Parameter	Units	60437056001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	mg/L	0.033	1	1	1.1	1.1	105	103	70-130	1	20	
Beryllium	mg/L	<0.0010	1	1	1.0	1.0	103	102	70-130	1	20	
Boron	mg/L	0.50	1	1	1.5	1.5	97	97	70-130	0	20	
Calcium	mg/L	232	10	10	242	242	102	102	70-130	0	20	
Chromium	mg/L	<0.0050	1	1	1.0	1.0	102	101	70-130	1	20	
Lead	mg/L	<0.010	1	1	1.0	1.0	102	101	70-130	1	20	

MATRIX SPIKE SAMPLE: 3422955

Parameter	Units	60437062001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Barium	mg/L	312 ug/L	1	1.3	103	70-130	
Beryllium	mg/L	<1.0 ug/L	1	1.0	104	70-130	
Boron	mg/L	<0.10	1	1.0	95	70-130	
Calcium	mg/L	101	10	111	97	70-130	
Chromium	mg/L	<5.0 ug/L	1	1.0	102	70-130	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: MW-FAA-5
Pace Project No.: 60437058

MATRIX SPIKE SAMPLE: 3422955

Parameter	Units	60437062001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Lead	mg/L	<10.0 ug/L	1	1.0	103	70-130	

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QUALITY CONTROL DATA

Project: MW-FAA-5
Pace Project No.: 60437058

QC Batch: 864485
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: 60437058001

METHOD BLANK: 3422970 Matrix: Water
Associated Lab Samples: 60437058001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	mg/L	<0.0010	0.0010	09/18/23 12:04	
Arsenic	mg/L	<0.0010	0.0010	09/18/23 12:04	
Cadmium	mg/L	<0.00050	0.00050	09/18/23 12:04	
Cobalt	mg/L	<0.0010	0.0010	09/18/23 12:04	
Molybdenum	mg/L	<0.0010	0.0010	09/18/23 12:04	
Selenium	mg/L	<0.0010	0.0010	09/18/23 12:04	
Thallium	mg/L	<0.0010	0.0010	09/18/23 12:04	

LABORATORY CONTROL SAMPLE: 3422971

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.04	0.042	106	85-115	
Arsenic	mg/L	0.04	0.040	101	85-115	
Cadmium	mg/L	0.04	0.041	103	85-115	
Cobalt	mg/L	0.04	0.041	102	85-115	
Molybdenum	mg/L	0.04	0.041	103	85-115	
Selenium	mg/L	0.04	0.043	109	85-115	
Thallium	mg/L	0.04	0.042	106	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3422972 3422973

Parameter	Units	60437056002 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	0.042	0.041	104	103	70-130	1	20	
Arsenic	mg/L	<0.0010	0.04	0.04	0.042	0.041	103	102	70-130	1	20	
Cadmium	mg/L	<0.00050	0.04	0.04	0.038	0.037	94	93	70-130	1	20	
Cobalt	mg/L	<0.0010	0.04	0.04	0.040	0.040	98	98	70-130	0	20	
Molybdenum	mg/L	0.0072	0.04	0.04	0.049	0.049	105	104	70-130	0	20	
Selenium	mg/L	<0.0010	0.04	0.04	0.043	0.043	107	105	70-130	2	20	
Thallium	mg/L	<0.0010	0.04	0.04	0.039	0.039	97	98	70-130	1	20	

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QUALITY CONTROL DATA

Project: MW-FAA-5
Pace Project No.: 60437058

QC Batch: 864487
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60437058001

METHOD BLANK: 3422984 Matrix: Water
Associated Lab Samples: 60437058001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lithium	mg/L	<0.010	0.010	09/18/23 14:10	

LABORATORY CONTROL SAMPLE: 3422985

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lithium	mg/L	1	0.97	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3422986 3422987

Parameter	Units	60437056001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lithium	mg/L	0.014	1	1	1.0	1.0	99	99	75-125	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: MW-FAA-5
Pace Project No.: 60437058

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: 60437058001

METHOD BLANK: 3421941 Matrix: Water
Associated Lab Samples: 60437058001

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	

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: MW-FAA-5
Pace Project No.: 60437058

QC Batch: 863862
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: 60437058001

SAMPLE DUPLICATE: 3420733

Parameter	Units	60437058001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	6.7	6.8	0	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

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

QUALITY CONTROL DATA

Project: MW-FAA-5
Pace Project No.: 60437058

QC Batch: 865021
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: 60437058001

METHOD BLANK: 3425428 Matrix: Water
Associated Lab Samples: 60437058001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<1.0	1.0	09/19/23 20:42	
Fluoride	mg/L	<0.20	0.20	09/19/23 20:42	
Sulfate	mg/L	<1.0	1.0	09/19/23 20:42	

METHOD BLANK: 3427934 Matrix: Water
Associated Lab Samples: 60437058001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<1.0	1.0	09/21/23 09:49	
Fluoride	mg/L	<0.20	0.20	09/21/23 09:49	
Sulfate	mg/L	<1.0	1.0	09/21/23 09:49	

METHOD BLANK: 3428539 Matrix: Water
Associated Lab Samples: 60437058001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<1.0	1.0	09/20/23 16:38	
Fluoride	mg/L	<0.20	0.20	09/20/23 16:38	
Sulfate	mg/L	<1.0	1.0	09/20/23 16:38	

METHOD BLANK: 3428677 Matrix: Water
Associated Lab Samples: 60437058001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<1.0	1.0	09/19/23 20:42	
Fluoride	mg/L	<0.20	0.20	09/19/23 20:42	
Sulfate	mg/L	<1.0	1.0	09/19/23 20:42	

LABORATORY CONTROL SAMPLE: 3425429

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

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: MW-FAA-5
Pace Project No.: 60437058

LABORATORY CONTROL SAMPLE: 3425429

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	5	5.1	103	90-110	

LABORATORY CONTROL SAMPLE: 3427935

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.7	94	90-110	
Fluoride	mg/L	2.5	2.5	99	90-110	
Sulfate	mg/L	5	4.9	98	90-110	

LABORATORY CONTROL SAMPLE: 3428540

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.8	96	90-110	
Fluoride	mg/L	2.5	2.4	97	90-110	
Sulfate	mg/L	5	5.1	103	90-110	

LABORATORY CONTROL SAMPLE: 3428678

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.9	98	90-110	
Fluoride	mg/L	2.5	2.5	99	90-110	
Sulfate	mg/L	5	5.3	105	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3425430 3425431

Parameter	Units	60437054003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	109	100	100	203	206	94	97	80-120	2	15	
Fluoride	mg/L	<0.20	2.5	2.5	2.5	2.5	101	99	80-120	2	15	
Sulfate	mg/L	994	250	250	1290	1020	116	9	80-120	23	15	E,M1, R1

MATRIX SPIKE SAMPLE: 3425432

Parameter	Units	60437056002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	147	5	150	60	80-120	E,M1
Fluoride	mg/L	<0.20	2.5	1.8	70	80-120	M1
Sulfate	mg/L	686	5	681	-101	80-120	E,M1

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

REPORT OF LABORATORY ANALYSIS

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

QUALIFIERS

Project: MW-FAA-5
Pace Project No.: 60437058

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

E	Analyte concentration exceeded the calibration range. The reported result is estimated.
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
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Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: MW-FAA-5
Pace Project No.: 60437058

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60437058001	**FAA-5-090623**	EPA 200.7	864481	EPA 200.7	864587
60437058001	**FAA-5-090623**	EPA 3010	864487	EPA 6010	864590
60437058001	**FAA-5-090623**	EPA 200.8	864485	EPA 200.8	864589
60437058001	**FAA-5-090623**	EPA 245.1	865259	EPA 245.1	865321
60437058001	**FAA-5-090623**	SM 2540C	864208		
60437058001	**FAA-5-090623**	SM 4500-H+B	863862		
60437058001	**FAA-5-090623**	EPA 300.0	865021		

WO# : 60437058

60437058

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-LENE-0009_Sample (		
	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: T249 **Type of Ice:** Wet Blue None

Cooler Temperature (°C): **As-read** 3.8 **Corr. Factor** -0.3 **Corrected** 3.5

Date and initials of person examining contents: AF 9/8

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#:** 620401	☑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: _____

CHAIN-OF-CUSTODY / Analytical Request Document

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

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at https://info.pacelabs.com/hubfs/pas-standard-terms.pdf.

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Evergy Kansas Central, Inc.	Report To:	Samantha Kaney	Attention:	Accounts Payable
Address:	400 E Van Buren St	Copy To:	Laura Hines, Jake Humphrey	Company Name:	Evergy Kansas Central, Inc.
Suite 545, Phoenix, AZ 85004				Address:	See Section A
Email:	skaney@haleyaldrich.com	Purchase Order #:		Pace Quote:	
Phone:	(507) 251-2232 Fax:	Project Name:	MW-FAA-5	Pace Project Manager:	alice.spiller@pacelabs.com,
Requested Due Date:		Project #:		Pace Profile #:	9657, 10

Regulatory Agency
Groundwater
State / Location
KS

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	*200.7 - Total Metals	**200.8 - Total Metals	***6010 - Total Metals	245.1 - Mercury, Total	300.0 Anions Cl,F,S	Total Dissolved Solids (TDS	pH	Residual Chlorine (Y/N)	604737095
	MATRIX: Drinking Water DW, Water WT, Waste Water WW, Product P, Soil/Solid SL, Oil OL, Wipe WP, Air AR, Other OT, Tissue TS																	Requested Analysis Filtered (Y/N)	N	N	N	N	N	N	N		
1	FAA-5-090623	WT	G	-	-	9/6/23	9:50	-	5	3		2							X	X	X	X	X	X	X		
2																											
3																											
4																											
5																											
6																											
7																											
8																											
9																											
10																											
11																											
12																											

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
*200.7 - Ba, Be, B, Ca, Cr, Pb	Jason R. Franks / SCS	9/7/2023	16:00	JA Pace	9/7/23	1630	3.5	Y	Y	
**200.8 - Sb, As, Cd, Co, Mo, Se, Tl										
***6010 - Li										

SAMPLER NAME AND SIGNATURE				
PRINT Name of SAMPLER:	Jason R. Franks		TEMP in C	Received on Ice (Y/N)
SIGNATURE of SAMPLER:	DATE Signed: 9/7/2023		Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

Client: Evergy Kansas Central

Profile # 9657-10

Site: MW-FHA-5

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		2		2									
2																																
3																																
4																																
5																																
6																																
7																																
8																																
9																																
10																																
11																																
12																																

Container Codes

Glass				Plastic		Misc.	
DG9B	40mL bisulfate clear vial	WGKU	8oz clear soil jar	BP1C	1L NAOH plastic	I	Wipe/Swab
DG9H	40mL HCl amber voa vial	WGFU	4oz clear soil jar	BP1N	1L HNO3 plastic	SP5T	120mL Coliform Na Thiosulfate
DG9M	40mL MeOH clear vial	WG2U	2oz clear soil jar	BP1S	1L H2SO4 plastic	ZPLC	Ziploc Bag
DG9Q	40mL TSP amber vial	JGFU	4oz unpreserved amber wide	BP1U	1L unpreserved plastic	AF	Air Filter
DG9S	40mL H2SO4 amber vial	AG0U	100mL unores amber glass	BP1Z	1L NaOH, Zn Acetate	C	Air Cassettes
DG9T	40mL Na Thio amber vial	AG1H	1L HCl amber glass	BP2C	500mL NAOH plastic	R	Terracore Kit
DG9U	40mL amber unpreserved	AG1S	1L H2SO4 amber glass	BP2N	500mL HNO3 plastic	U	Summa Can
VG9H	40mL HCl clear vial	AG1T	1L Na Thiosulfate clear/amber glass	BP2S	500mL H2SO4 plastic		
VG9T	40mL Na Thio. clear vial	AG1U	1liter unpres amber glass	BP2U	500mL unpreserved plastic		
VG9U	40mL unpreserved clear vial	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Acetate	Matrix	
BG1S	1liter H2SO4 clear glass	AG2S	500mL H2SO4 amber glass	BP3C	250mL NaOH plastic		
BG1U	1liter unpres glass	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic - field filtered	WT	Water
BG3H	250mL HCL Clear glass	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic	SL	Solid
BG3U	250mL Unpres Clear glass	AG3U	250mL unpres amber glass	BP3U	250mL unpreserved plastic	NAL	Non-aqueous Liquid
WGDU	16oz clear soil jar	AG4U	125mL unpres amber glass	BP3S	250mL H2SO4 plastic	OL	OIL
		AG5U	100mL unpres amber glass	BP3Z	250mL NaOH, Zn Acetate	WP	Wipe
				BP4U	125mL unpreserved plastic	DW	Drinking Water
				BP4N	125mL HNO3 plastic		
				BP4S	125mL H2SO4 plastic		
				WPDU	16oz unpresserved plstic		

Work Order Number: 60437058