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2022 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 2023

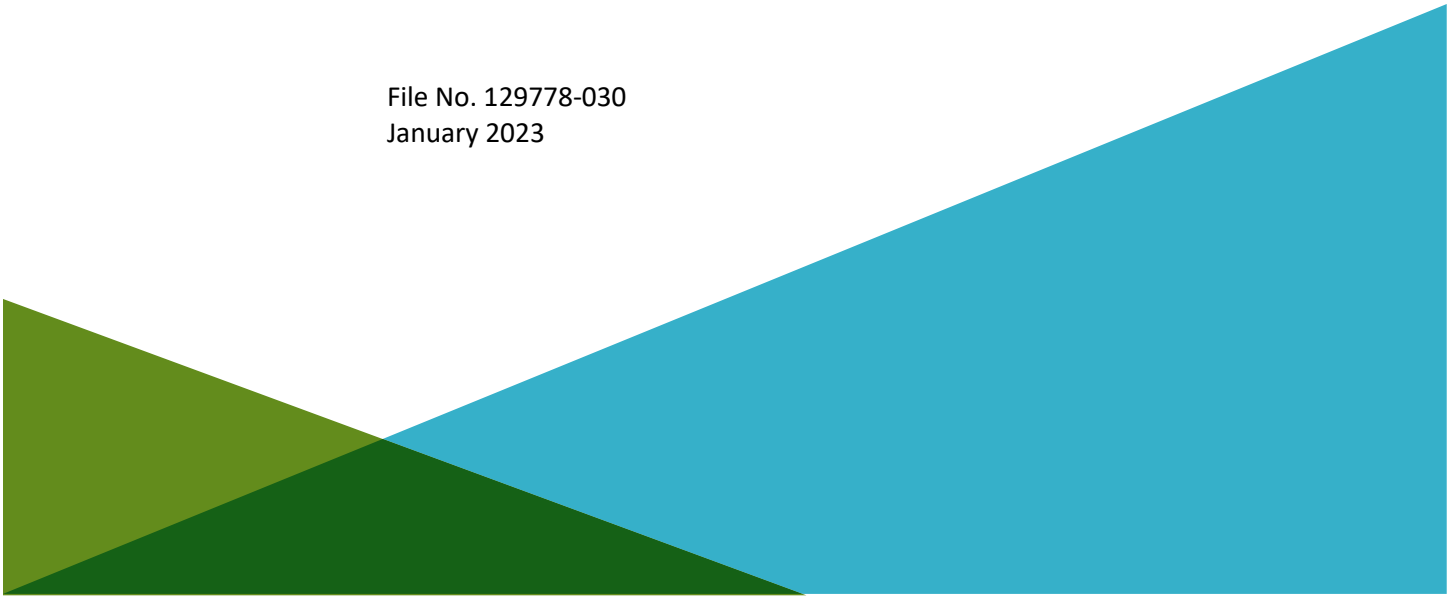


Table of Contents

Revision No.	Date	Notes

List of Tables

List of Figures

List of Attachments

Attachment 1 – Statistical Analyses

Attachment 2 – Laboratory Analytical Reports

This Annual Groundwater Monitoring and Corrective Action Report documents the groundwater monitoring program for the 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 (2022) and documents compliance with the U.S. Environmental Protection Agency Coal Combustion Residual Rule. I certify that the 2022 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:	Technical Expert 2
Company:	Haley & Aldrich, Inc.

1. Introduction

This 2022 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 Code of Federal Regulations Title 40 (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 (2022) 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, 2022), 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, 2022), 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 2022.

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 2022.

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 2022 for the FAL. The statistical evaluation reports for semi-annual assessment monitoring sampling events from September 2021 and March 2022 were completed in January 2022 and July 2022, 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 2022 for this unit. The FAL remained in assessment monitoring during 2022.

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 2022; 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 2022 for this unit. The FAL remained in assessment monitoring during 2022.

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 2022.

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 2022.

2.2.1 Status of the Groundwater Monitoring Program

The FAL remained in the assessment monitoring program during 2022.

2.2.2 Key Actions Completed

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

A semi-annual assessment monitoring sampling event was completed in March 2022 for detected appendix IV constituents identified from the June 2021 annual assessment monitoring sampling event. Statistical evaluation was completed in July 2022 on analytical data from the March 2022 semi-annual assessment monitoring sampling event.

An annual assessment monitoring sampling event was completed on June 13, 2022 to identify detected appendix IV constituents for subsequent semi-annual sampling events in September 2022 and planned for March 2023. Semi-annual assessment monitoring sampling was completed in September 2022 for detected appendix IV constituents identified during the June 2022 annual monitoring event. Statistical evaluation of the results from the September 2022 semi-annual assessment monitoring sampling event are due to be completed in January 2023 and will be reported in the next annual report.

2.2.3 Problems Encountered

No noteworthy problems (i.e., problems could include damaged wells, issues with sample collection or lack of sampling, and problems with analytical analysis) were encountered at the FAL in 2022.

2.2.4 Actions to Resolve Problems

No problems were encountered at the FAL in 2022, therefore, no actions to resolve problems were required.

2.2.5 Project Key Activities for Upcoming Year

Key activities planned for 2023 include the completion of the 2022 Annual Groundwater Monitoring and Corrective Action Report, statistical evaluation of semi-annual assessment monitoring analytical data collected in September 2022, 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 2022.

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 2022. 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 2022 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 2022.

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 2022.

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 2022. 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 2022 for September 2021 and March 2022 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 2022. The FAL remained in assessment monitoring during 2022.

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 2022; therefore, no demonstration or certification is applicable for this unit.

TABLES

TABLE I
SUMMARY OF ANALYTICAL RESULTS - 2022 ANNUAL ASSESSMENT MONITORING
EVERGY KANSAS CENTRAL, INC.
JEFFREY ENERGY CENTER, FLY ASH LANDFILL
ST. MARYS, KANSAS

Location	Upgradient			Downgradient											
	MW-FAA-5			MW-FAA-3			MW-FAA-4			MW-FAA-6					
Measure Point (TOC)	1250.80			1165.66			1213.81			1162.76					
Sample Name	MW-FAA-5-030922	FAA-5-06/13/22	MW-FAA-5-090822	FAA-3-030922	FAA-3-06/13/22	MW-FAA-3-090822	FAA-4-030922	FAA-4-06/13/22	MW-FAA-4-090822	FAA-6-030922	DUP-FAA-030922	FAA-6-06/13/22	DUP-FAA-06/13/22	MW-FAA-6-090822	DUP-FAA-090822
Sample Date	3/9/2022	06/13/2022	9/8/2022	3/9/2022	06/13/2022	9/8/2022	3/9/2022	06/13/2022	9/8/2022	3/9/2022	3/9/2022	06/13/2022	06/13/2022	9/8/2022	9/8/2022
Final Lab Report Date	3/31/2022[1]	6/29/2022	9/23/2022	3/25/2022	6/29/2022	9/23/2022	3/25/2022	6/29/2022	9/23/2022	3/25/2022	3/25/2022	6/29/2022	6/29/2022	9/23/2022	9/23/2022
Final Lab Report Revision Date	3/31/2022	7/20/2022	10/14/2022	4/27/2022	7/20/2022	10/14/2022	4/27/2022	7/20/2022	10/14/2022	4/27/2022	4/27/2022	7/20/2022	7/20/2022	10/14/2022	10/14/2022
Final Radiation Lab Report Revision Date	3/31/2022	8/1/2022	10/4/2022	4/27/2022	8/1/2022	10/13/2022	4/27/2022	8/1/2022	10/13/2022	4/27/2022	4/27/2022	8/1/2022	8/1/2022	10/13/2022	10/13/2022
Lab Data Reviewed and Accepted	4/27/2022	7/29/2022	11/7/2022	4/27/2022	7/29/2022	11/7/2022	4/27/2022	7/29/2022	11/7/2022	4/27/2022	4/27/2022	7/29/2022	7/29/2022	11/7/2022	11/7/2022
Depth to Water (ft btoc)	87.15	87.08	87.01	15.31	13.17	15.58	58.76	55.75	57.52	17.58	-	15.65	-	19.28	-
Temperature (Deg C)	13.02	19.82	18.95	13.27	18.30	22.28	12.07	19.83	20.65	13.75	-	21.43	-	18.35	-
Conductivity (µS/cm)	3530	3600	3490	1500	1570	1620	1670	1570	1570	2130	-	1448	-	2030	-
Turbidity (NTU)	0.9	0.0	5.0	1.6	0.0	0.0	0.0	0.0	0.0	2.7	-	0.0	-	0.0	-
pH, Field (su)	6.79	6.60	6.85	6.96	6.92	6.94	7.04	6.93	7.11	7.38	-	6.93	-	7.17	-
Boron, Total (mg/L)	**1.7**	-	**1.6**	**0.54**	-	**0.52**	**0.73**	-	**0.80**	**2.6**	**2.7**	-	-	**2.0**	**2.0**
Calcium, Total (mg/L)	**560**	-	**471**	**193**	-	**182**	**200**	-	**164**	**115**	**111**	-	-	**132**	**128**
Chloride (mg/L)	**87.7**	-	**83.1**	**77.2**	-	**95.5**	**86.6**	-	**96.2**	**75.4**	**75.1**	-	-	**65.8**	**65.6**
Fluoride (mg/L)	**0.46**	**0.58**	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	**0.5**	**0.24**	**0.56**	**0.57**	**0.58**	**0.58**	**0.35**	**0.36**
Sulfate (mg/L)	**1130**	-	**2160**	**445**	-	**483**	**530**	-	**533**	**894**	**864**	-	-	**1170**	**1090**
pH (su)	**6.9**	-	**7.2**	**7.2**	-	**7.4**	**7.2**	-	**7.1**	**7.5**	**7.6**	-	-	**7.4**	**7.5**
TDS (mg/L)	**2570**	-	**3780**	**1540**	-	**1220**	**1190**	-	**1250**	**1500**	**1520**	-	-	**1820**	**1910**
Antimony, Total (mg/L)	< 0.0010	< 0.0010	< 0.0010	-	< 0.0010	-	-	< 0.0010	-	-	-	< 0.0010	< 0.0010	-	-
Arsenic (mg/L)	**0.0011**	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	**0.010**	**0.011**	**0.0049**	**0.0055**	**0.0053**	**0.0053**
Barium, Total (mg/L)	< 0.0050	< 0.0050	< 0.0050	**0.032**	**0.030**	**0.030**	**0.049**	**0.044**	**0.051**	**0.028**	**0.027**	**0.034**	**0.033**	**0.040**	**0.039**
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)	< 0.0050	< 0.0050	< 0.0050	-	< 0.0050	-	-	< 0.0050	-	-	-	< 0.0050	< 0.0050	-	-
Cobalt, Total (mg/L)	**0.0011**	**0.0012**	**0.0033**	< 0.0010	< 0.0010	< 0.0010	**0.0014**	**0.0016**	**0.0018**	**0.0013**	**0.0013**	**0.0019**	**0.0017**	**0.0019**	**0.0019**
Lead, Total (mg/L)	< 0.010	< 0.010	< 0.010	-	< 0.010	-	-	< 0.010	-	-	-	< 0.010	< 0.010	-	-
Lithium, Total (mg/L)	**0.11**	**0.12**	**0.160**	< 0.030	**0.015**	**0.016**	< 0.030	**0.024**	**0.023**	< 0.030	< 0.030	**0.016**	**0.016**	**0.015**	**0.013**
Molybdenum, Total (mg/L)	**0.018**	**0.020**	**0.026**	**0.0078**	**0.0079**	**0.0082**	**0.0078**	**0.0098**	**0.011**	**0.20**	**0.21**	**0.17**	**0.20**	**0.34**	**0.36**
Selenium, Total (mg/L)	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	**0.0018**	**0.0016**	**0.0021**	**0.0021**
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	-	-
Fluoride (mg/L)	**0.46**	**0.58**	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	**0.50**	**0.24**	**0.56**	**0.57**	**0.58**	**0.58**	**0.35**	**0.36**
Radium-226 & 228 Combined (pCi/L)	0.374 ± 0.763 (1.58)	0.418 ± 0.564 (1.04)	**1.34 ± 0.897 (1.18)**	0.600 ± 0.710 (1.34)	**1.27 ± 0.703 (0.890)**	0.246 ± 0.643 (0.986)	0.802 ± 0.796 (1.37)	0.429 ± 0.636 (1.30)	0.00551 ± 0.556 (0.924)	0.0939 ± 0.787 (1.68)	0.416 ± 0.848 (1.74)	0.355 ± 0.543 (0.864)	0.560 ± 0.593 (1.11)	0.543 ± 0.750 (1.15)	0.535 ± 0.548 (0.834)

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 program; therefore, those constituents are not provided in this table.*
µS/cm = micro Siemens per centimeter
Deg C = degrees Celsius
ft btoc = feet below top of casing
mg/L = milligrams per liter
N/A = Not Applicable
NTU = Nephelometric Turbidity Unit
pCi/L = picoCuries per liter
su = standard unit
TDS = total dissolved solids
TOC = top of casing

TABLE II
ASSESSMENT GROUNDWATER MONITORING - DETECTED APPENDIX IV GWPS
SEPTEMBER 2021 AND MARCH 2022 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)	0.0035	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)	0.00498	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)	1.363	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)	0.170	NA
MW-FAA-3		0.170
MW-FAA-4		0.170
MW-FAA-6		0.170
CCR Appendix-IV Molybdenum, Total (mg/L)		
MW-FAA-5 (upgradient)	0.0597	NA
MW-FAA-3		0.100
MW-FAA-4		0.100
MW-FAA-6	0.901[2]	0.901
CCR Appendix-IV Radium-226 & 228 Combined (pCi/L)		
MW-FAA-5 (upgradient)	2.191	NA
MW-FAA-3		5
MW-FAA-4		5
MW-FAA-6		5
CCR Appendix-IV Selenium, Total (mg/L)		
MW-FAA-5 (upgradient)	0.0039	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 06/09/2021, unless otherwise noted.

[2] Intrawell background data collected from 08/19/2016 through 09/14/2020.

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

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
4. AERIAL IMAGERY SOURCE: ESRI, SEPTEMBER 3, 2019

N

0 400 800

SCALE IN FEET

HALEY ALDRICH

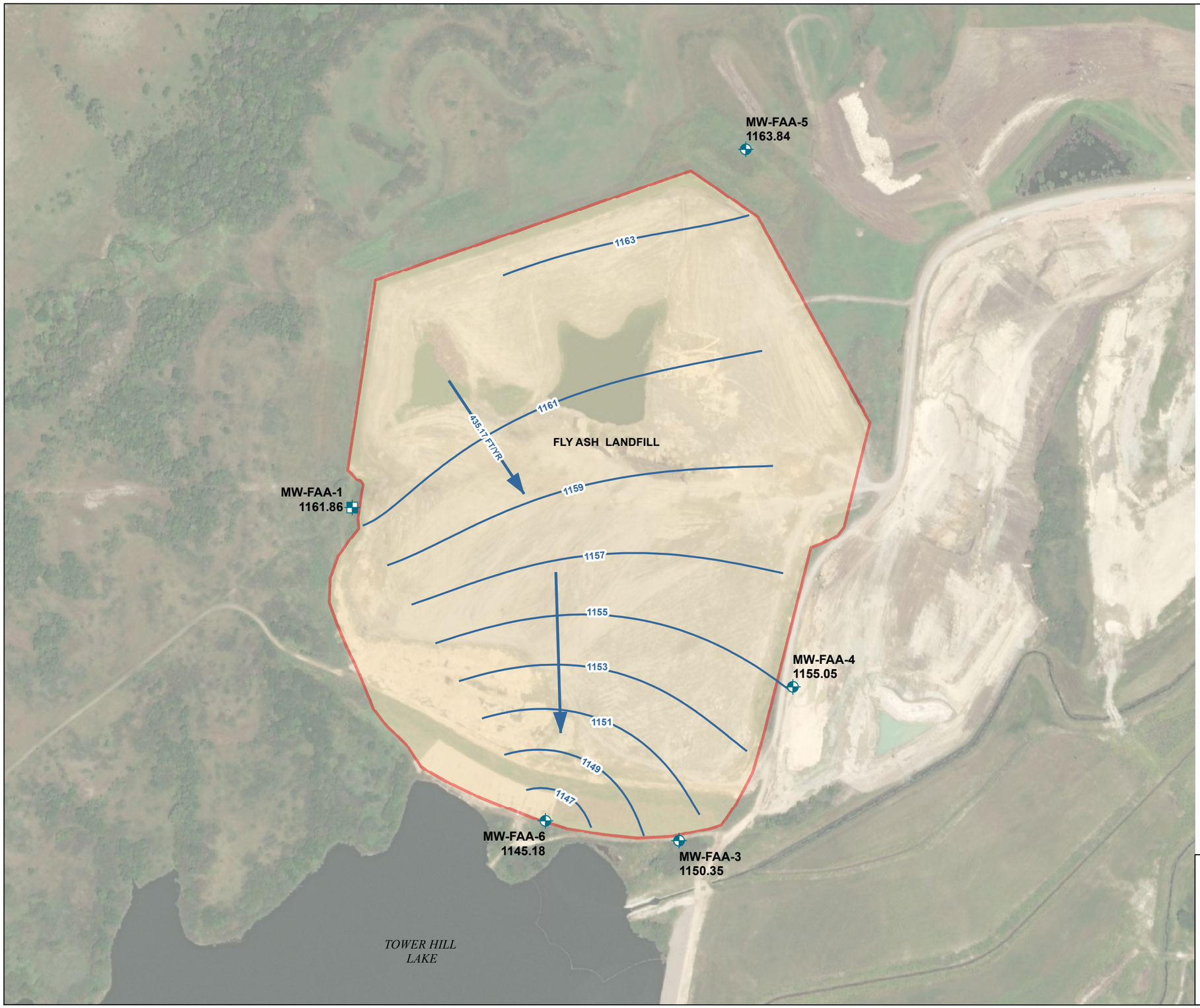
EVERGY KANSAS CENTRAL, INC.
JEFFREY ENERGY CENTER
ST. MARYS, KANSAS

FLY ASH LANDFILL
MONITORING WELL LOCATION MAP

evergy

JANUARY 2023

FIGURE 1



LEGEND

MW-FAA-4 1167.47	WELL NAME AND GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL (AMSL), MARCH 2022
	PIEZOMETER OBSERVATION ONLY
	MONITORING WELL
	ESTIMATED GROUNDWATER POTENTIOMETRIC OBSERVATION ELEVATION CONTOUR, 2-FT INTERVAL (AMSL)
	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 09 MARCH 2022.

3. THE GROUNDWATER FLOW RATE WAS APPROXIMATED USING THE HYDRAULIC GRADIENT CALCULATED FROM GROUNDWATER POTENTIOMETRIC ELEVATIONS MEASURED 09 MARCH 2022 AND THE CONDUCTIVITY VALUES AND EFFECTIVE POROSITY VALUES OBTAINED FROM SLUG TESTS COMPLETED APRIL 2016.

4. AERIAL IMAGERY SOURCE: ESRI, 3 SEPTEMBER 2019

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 09, 2022

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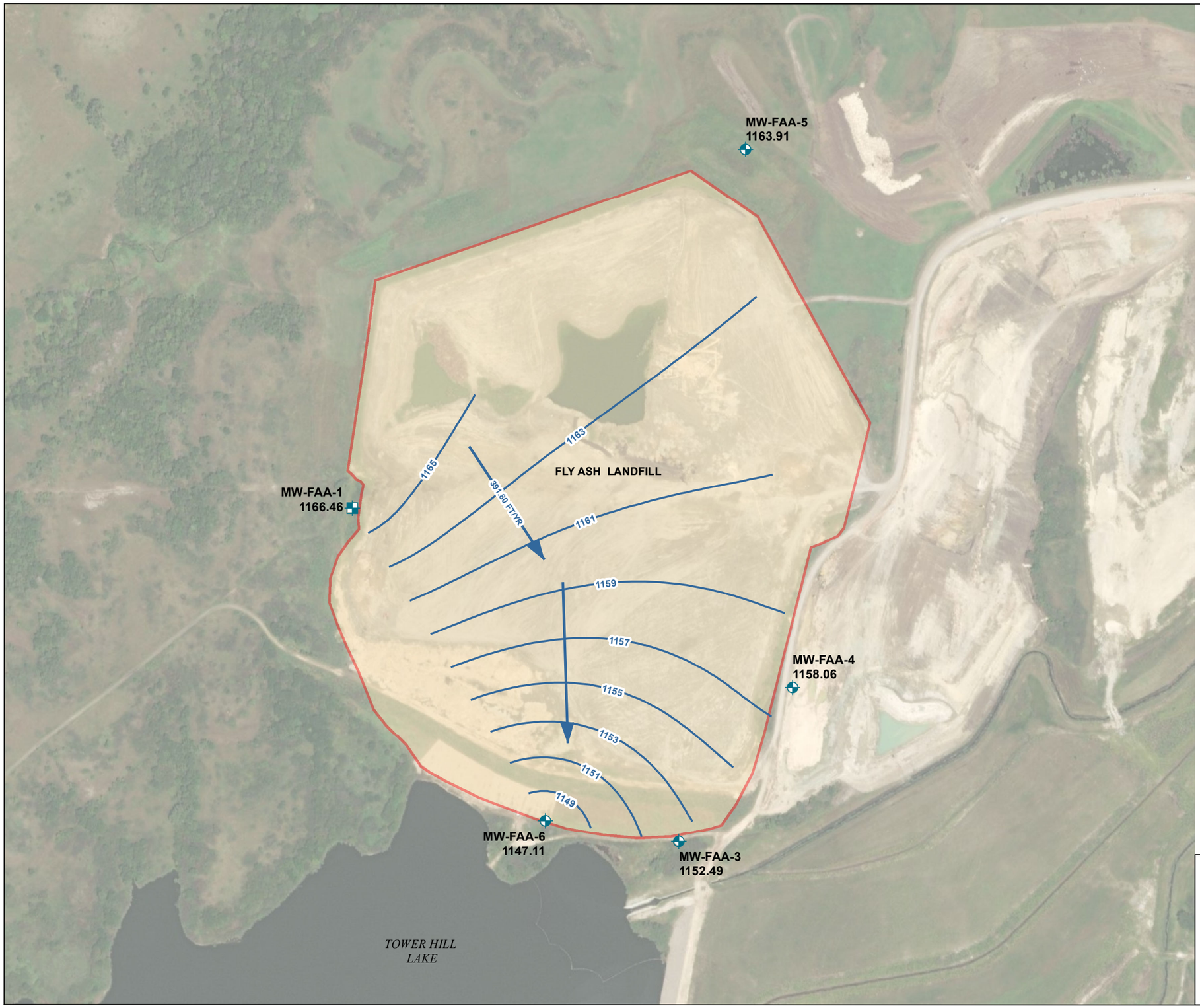
JANUARY 2023

FIGURE 2



LEGEND

MW_FAA-4 1167.47	WELL NAME AND GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL (AMSL), JUNE 2022
	PIEZOMETER OBSERVATION ONLY
	MONITORING WELL
	ESTIMATED GROUNDWATER POTENTIOMETRIC OBSERVATION ELEVATION CONTOUR, 2-FT INTERVAL (AMSL)
	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 13 JUNE 2022.

3. THE GROUNDWATER FLOW RATE WAS APPROXIMATED USING THE HYDRAULIC GRADIENT CALCULATED FROM GROUNDWATER POTENTIOMETRIC ELEVATIONS MEASURED 13 JUNE 2022 AND THE CONDUCTIVITY VALUES AND EFFECTIVE POROSITY VALUES OBTAINED FROM SLUG TESTS COMPLETED APRIL 2016.

4. AERIAL IMAGERY SOURCE: ESRI, 3 SEPTEMBER 2019

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 JUNE 13, 2022

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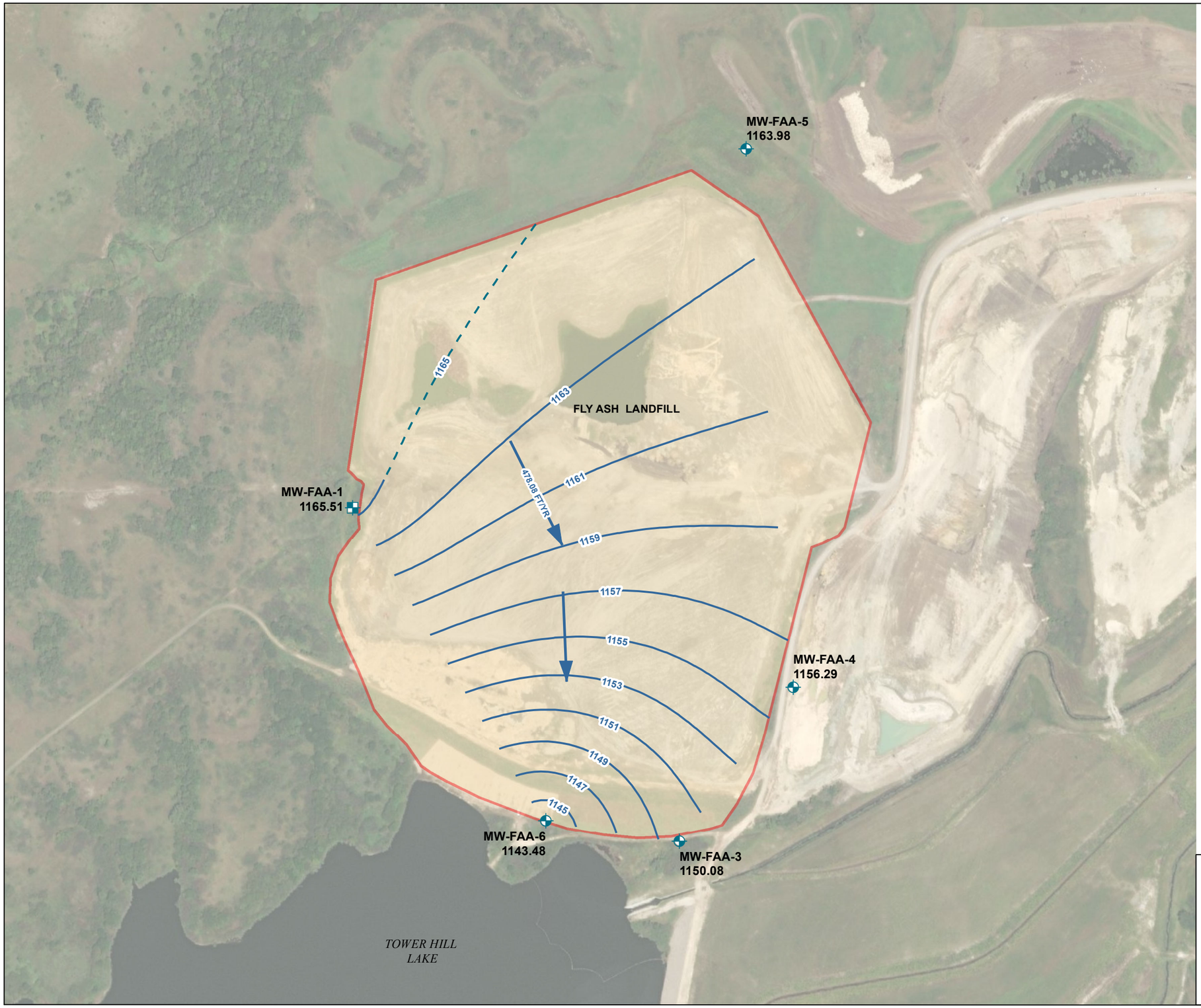
JANUARY 2023

FIGURE 3



LEGEND

MW-FAA-4
1167.47 WELL NAME AND GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL (AMSL), SEPTEMBER 2022

PIEZOMETER OBSERVATION ONLY

MONITORING WELL

ESTIMATED GROUNDWATER POTENTIOMETRIC OBSERVATION ELEVATION CONTOUR, 2-FT INTERVAL (AMSL), DASHED WHERE INFERRED

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 08 SEPTEMBER 2022.

3. THE GROUNDWATER FLOW RATE WAS APPROXIMATED USING THE HYDRAULIC GRADIENT CALCULATED FROM GROUNDWATER POTENTIOMETRIC ELEVATIONS MEASURED 08 SEPTEMBER 2022 AND THE CONDUCTIVITY VALUES AND EFFECTIVE POROSITY VALUES OBTAINED FROM SLUG TESTS COMPLETED APRIL 2016.

4. AERIAL IMAGERY SOURCE: ESRI, 3 SEPTEMBER 2019

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 SEPTEMBER 08, 2022

evergy

JANUARY 2023

FIGURE 4

ATTACHMENT 1
Statistical Analyses

ATTACHMENT 1-1
September 2021 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, 2023
File No. 129778-035

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 2021 Semi-Annual Groundwater Assessment Monitoring Data Statistical Evaluation
Completed January 18, 2022
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 2021** 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 14, 2021**. All laboratory results were received and validated on **December 10, 2021**.

The statistical evaluation discussed in this memorandum was conducted to determine if Appendix IV groundwater monitoring constituents have been detected in downgradient wells at concentrations that represent a statistically significant increase (SSI) above background values and if one or more of the constituents have been detected at statistically significant levels (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 residuals (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 2021** 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 **June 2021** for **interwell evaluation**. Background concentrations were updated through **September 2020** for **intrawell evaluation**.

RESULTS OF APPENDIX IV DOWNGRADIENT STATISTICAL COMPARISONS

The sample concentrations from the downgradient wells for each of the detected Appendix IV constituents from the **September 2021** 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 on groundwater sampling data collected in September 2021, no SSLs above GWPS occurred at the JEC FAL.**

Tables:

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

TABLE

TABLE I
SUMMARY OF SEMI-ANNUAL ASSESSMENT GROUNDWATER MONITORING STATISTICAL EVALUATION
SEPTEMBER 2021 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	September 2021 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	10/19	47%	0.001-0.005	0.0035	1.351E-06	0.001162	0.7331	0.01	mg/L	0	0	No	No	Stable	Non-parametric	< 0.0050	0.0035				0.010	
MW-FAA-3	3/19	84%	0.001-0.001	0.0011	1.027E-09	0.00003205	0.03207	0.01	mg/L	0	0	Yes	No	NT	Non-parametric	< 0.0010		No				No
MW-FAA-4	0/19	100%	0.0005-0.001		1.316E-08	0.0001147	0.1178	0.01	mg/L	0	0	NA	NA	NA	NA	< 0.0010		No				No
MW-FAA-6	19/19	0%	-	0.0086	1.917E-06	0.001385	0.2438	0.01	mg/L	0	0	No	No	Stable	Non-parametric	0.0052		Yes				No
CCR Appendix-IV: Barium, Total (mg/L)																						
MW-FAA-5	4/19	79%	0.005-0.01	0.013	6.531E-06	0.002555	0.3928	2	mg/L	0	0	No	No	NT	Non-parametric	< 0.0050	0.013				2	
MW-FAA-3	19/19	0%	-	0.047	0.00002777	0.005269	0.1652	2	mg/L	0	0	Yes	No	Decreasing	Normal	0.032		Yes				No
MW-FAA-4	19/19	0%	-	0.053	6.263E-06	0.002503	0.05053	2	mg/L	0	0	No	No	Stable	Normal	0.046		Yes				No
MW-FAA-6	19/19	0%	-	0.067	0.0003124	0.01767	0.3914	2	mg/L	0	0	No	No	Decreasing	Non-parametric	0.033		Yes				No
CCR Appendix-IV: Cobalt, Total (mg/L)																						
MW-FAA-5	14/19	26%	0.001-0.005	0.0056	2.364E-06	0.001537	0.6114	0.006	mg/L	0	0	No	No	Increase	Normal	< 0.0050	0.00498				0.006	
MW-FAA-3	2/19	89%	0.001-0.001	0.00058	2.023E-08	0.0001422	0.1493	0.006	mg/L	0	0	No	No	NT	Non-parametric	< 0.0010		No				No
MW-FAA-4	6/19	68%	0.0005-0.001	0.0027	2.904E-07	0.0005388	0.4284	0.006	mg/L	0	0	Yes	No	Increase	NA	0.0022		No				No
MW-FAA-6	18/19	5%	0.001-0.001	0.0021	1.039E-07	0.0003224	0.2291	0.006	mg/L	0	0	No	No	Stable	Normal	0.0017		No				No
CCR Appendix-IV: Fluoride (mg/L)																						
MW-FAA-5	19/20	5%	0.2-0.2	1.6	0.09524	0.3086	0.3877	4	mg/L	0	0	Yes	No	Stable	Normal	0.71	1.363				4.0	
MW-FAA-3	18/20	10%	0.2-0.2	0.44	0.004098	0.06401	0.1949	4	mg/L	0	0	No	No	Increase	Normal	0.35		No				No
MW-FAA-4	17/20	15%	0.2-0.2	0.45	0.005573	0.07465	0.2222	4	mg/L	0	0	Yes	No	Increase	Normal	0.38		No				No
MW-FAA-6	20/20	0%	-	1.2	0.0343	0.1852	0.2253	4	mg/L	0	0	No	No	Stable	Normal	0.67		No				No
CCR Appendix-IV: Lithium, Total (mg/L)																						
MW-FAA-5	19/19	0%	-	0.16	0.0007929	0.02816	0.2319	0.04	mg/L	19	0	No	No	Stable	Normal	0.15	0.170				0.170	
MW-FAA-3	16/19	16%	0.01-0.02	0.023	0.00001267	0.00356	0.2324	0.04	mg/L	0	0	No	No	Stable	Normal	0.012		No				No
MW-FAA-4	17/19	11%	0.01-0.02	0.021	0.00001004	0.003168	0.1929	0.04	mg/L	0	0	No	No	Stable	Normal	0.017		No				No
MW-FAA-6	13/19	32%	0.01-0.02	0.016	6.433E-06	0.002536	0.2095	0.04	mg/L	0	0	Yes	No	Stable	Non-parametric	0.012		No				No
CCR Appendix-IV: Molybdenum, Total (mg/L)																						
MW-FAA-5	19/19	0%	-	0.067	0.0002184	0.01478	0.4573	0.1	mg/L	0	0	No	No	Stable	Normal	0.023	0.0597				0.100	
MW-FAA-3	19/19	0%	-	0.014	6.647E-06	0.002578	0.2683	0.1	mg/L	0	0	No	No	Stable	Normal	0.0090		No				No
MW-FAA-4	19/19	0%	-	0.0094	4.919E-06	0.002218	0.4576	0.1	mg/L	0	0	No	No	Increase	Increasing	0.0084		No				No
MW-FAA-6	19/19	0%	-	0.59	0.01665	0.129	0.3043	0.1	mg/L	19	0	No	No	Stable	Normal	0.26		Yes	0.901	No	0.901	No
CCR Appendix-IV: Radium-226 & 228 (pCi/L)																						
MW-FAA-5	17/19	11%	0.587-1.26	2.43	0.2406	0.4905	0.3669	5	pCi/L	0	0	No	No	Stable	Normal	1.79	2.191				5	
MW-FAA-3	14/19	26%	0.344-0.857	1.792	0.196	0.4427	0.7033	5	pCi/L	0	0	Yes	No	Stable	Normal	0.000		No				No
MW-FAA-4	14/19	26%	0.22-0.929	1.54	0.1566	0.3957	0.5544	5	pCi/L	0	0	No	No	Stable	Normal	0.731		No				No
MW-FAA-6	13/19	32%	0.0926-0.58	1.43	0.1472	0.3837	0.64	5	pCi/L	0	0	No	No	Stable	Normal	0.570		No				No
CCR Appendix-IV: Selenium, Total (mg/L)																						
MW-FAA-5	7/19	63%	0.0005-0.005	0.0039	0.00000154	0.001241	0.7082	0.05	mg/L	0	0	No	No	NT	Normal	< 0.0050	0.0039				0.05	
MW-FAA-3	0/19	100%	8.6E-05-0.001		5.445E-08	0.0002334	0.2521	0.05	mg/L	0	0	NA	NA	NA	NA	< 0.0010		No				No
MW-FAA-4	7/19	63%	0.001-0.001	0.0019	6.029E-08	0.0002455	0.2201	0.05	mg/L	0	0	Yes	No	Stable	Non-parametric	< 0.0010		No				No
MW-FAA-6	7/19	63%	0.0005-0.001	0.014	0.00000898	0.002997	1.622	0.05	mg/L	0	0	Yes	No	Stable	Non-parametric	< 0.0010		No				No

Notes and Abbreviations:

[1] Based on background data collected from 08/19/2016 through 06/09/2021, unless otherwise notec
[2] Based on background data collected from 08/19/2016 through 09/14/202(
** Values obtained from U.S. Environmental Protection Agency Federal CCR Rule Title 40 Code of Federal Regulations (CFR) § 257.95(h)*
CCR = coal combustion residuals
GWPS = Groundwater Protection Standarc
MCL = maximum contaminant leve
mg/L = milligrams per Liter
NA = not analyzec
pCi/L = picoCuries per Liter
SSI = statistically significant increase
SSL = statistically significant leve
UTL = upper tolerance limits

ATTACHMENT 1-2
March 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, 2023
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 2022 Semi-Annual Groundwater Assessment Monitoring Data
Statistical Evaluation
Completed July 18, 2022
Jeffrey Energy Center
Fly Ash Landfill

Pursuant to Code of Federal Regulations Title 40 (40 CFR) §§ 257.93 and 257.95 (Rule), this memorandum summarizes the statistical evaluation of the analytical results for the **March 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 **March 9, 2022**. All laboratory results were received and validated on **April 27, 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 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 (UTLs), and a minimum 95 percent confidence coefficient and 95 percent coverage. The most recent groundwater sampling event from each compliance well was compared to the corresponding background UTL to determine if 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 2022** sampling event was above the GWPS, the lower confidence limit (LCL) for the downgradient well constituent will be used to evaluate if an SSI is present. The LCL is the lower end of the confidence interval range, which is an estimated concentration range intended to contain the true mean or median of the population from which the sample is drawn. The confidence interval range is designed to locate the true population mean or median with a high degree of statistical confidence, or conversely, with a low probability of error.

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

BACKGROUND DISTRIBUTIONS

The groundwater analytical results for each sampling event from the background sample location MW-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 **June 2021** for **interwell evaluation**. Background concentrations were updated through **September 2020** 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 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 March 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
MARCH 2022 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 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	11/20	45%	0.001-0.005	0.0035	1.291E-06	0.001136	0.728	0.01	mg/L	0	0	No	No	Stable	Non-parametric	0.0011	0.0035				0.010	
MW-FAA-3	3/20	85%	0.001-0.001	0.0011	9.734E-10	0.0000312	0.03122	0.01	mg/L	0	0	Yes	No	NT	Non-parametric	< 0.0010		No				No
MW-FAA-4	0/20	100%	0.0005-0.001		1.25E-08	0.0001118	0.1147	0.01	mg/L	0	0	NA	NA	NA	NA	< 0.0010		No				No
MW-FAA-6	20/20	0%	-	0.01	0.00000275	0.001658	0.2813	0.01	mg/L	0	0	No	No	Stable	Non-parametric	0.010		Yes				No
	CCR Appendix-IV: Barium, Total (mg/L)																					
MW-FAA-5	4/20	80%	0.005-0.01	0.013	0.0000063	0.00251	0.3904	2	mg/L	0	0	No	No	NT	Non-parametric	< 0.0050	0.013				2	
MW-FAA-3	20/20	0%	-	0.047	0.00002631	0.005129	0.1608	2	mg/L	0	0	Yes	No	Decreasing	Normal	0.032		Yes				No
MW-FAA-4	20/20	0%	-	0.053	5.947E-06	0.002439	0.04927	2	mg/L	0	0	No	No	Stable	Normal	0.049		Yes				No
MW-FAA-6	20/20	0%	-	0.067	0.0003106	0.01763	0.3979	2	mg/L	0	0	No	No	Decreasing	Non-parametric	0.028		Yes				No
	CCR Appendix-IV: Cobalt, Total (mg/L)																					
MW-FAA-5	15/20	25%	0.001-0.005	0.0056	2.339E-06	0.001529	0.6258	0.006	mg/L	0	0	No	No	Increase	Normal	0.0011	0.00498				0.006	
MW-FAA-3	2/20	90%	0.001-0.001	0.00058	1.928E-08	0.0001388	0.1454	0.006	mg/L	0	0	No	No	NT	Non-parametric	< 0.0010		No				No
MW-FAA-4	7/20	65%	0.0005-0.001	0.0027	2.761E-07	0.0005254	0.4154	0.006	mg/L	0	0	Yes	No	Increase	NA	0.0014		No				No
MW-FAA-6	19/20	5%	0.001-0.001	0.0021	9.903E-08	0.0003147	0.2245	0.006	mg/L	0	0	No	No	Stable	Normal	0.0013		No				No
	CCR Appendix-IV: Fluoride (mg/L)																					
MW-FAA-5	20/21	5%	0.2-0.2	1.6	0.09585	0.3096	0.3969	4	mg/L	0	0	Yes	No	Stable	Normal	0.46	1.363				4.0	
MW-FAA-3	18/21	14%	0.2-0.2	0.44	0.004679	0.0684	0.2122	4	mg/L	0	0	No	No	Increase	Normal	< 0.20		No				No
MW-FAA-4	17/21	19%	0.2-0.2	0.45	0.006175	0.07858	0.2385	4	mg/L	0	0	Yes	No	Increase	Normal	< 0.20		No				No
MW-FAA-6	21/21	0%	-	1.2	0.03585	0.1894	0.2339	4	mg/L	0	0	No	No	Stable	Normal	0.56		No				No
	CCR Appendix-IV: Lithium, Total (mg/L)																					
MW-FAA-5	20/20	0%	-	0.16	0.0007577	0.02753	0.2278	0.04	mg/L	20	0	No	No	Stable	Normal	0.11	0.170				0.170	
MW-FAA-3	16/20	20%	0.01-0.03	0.023	0.00002279	0.004774	0.2974	0.04	mg/L	0	0	No	No	Stable	Normal	< 0.030		No				No
MW-FAA-4	17/20	15%	0.01-0.03	0.021	0.00001873	0.004327	0.2531	0.04	mg/L	0	0	No	No	Stable	Normal	< 0.030		No				No
MW-FAA-6	13/20	35%	0.01-0.03	0.016	0.00002211	0.004702	0.3617	0.04	mg/L	0	0	Yes	No	Stable	Non-parametric	< 0.030		No				No
	CCR Appendix-IV: Molybdenum, Total (mg/L)																					
MW-FAA-5	20/20	0%	-	0.067	0.0002172	0.01474	0.4663	0.1	mg/L	0	0	No	No	Stable	Normal	0.018	0.0597				0.100	
MW-FAA-3	20/20	0%	-	0.014	6.461E-06	0.002542	0.267	0.1	mg/L	0	0	No	No	Stable	Normal	0.0078		No				No
MW-FAA-4	20/20	0%	-	0.0094	5.096E-06	0.002257	0.452	0.1	mg/L	0	0	No	No	Increase	Increasing	0.0078		No				No
MW-FAA-6	20/20	0%	-	0.59	0.01828	0.1352	0.3276	0.1	mg/L	20	0	No	No	Stable	Normal	0.20		Yes	0.901	No	0.901	No
	CCR Appendix-IV: Radium-226 & 228 (pCi/L)																					
MW-FAA-5	18/20	10%	0.587-1.26	2.43	0.2743	0.5237	0.4064	5	pCi/L	0	0	No	No	Stable	Normal	< 0.374	2.191				5	
MW-FAA-3	15/20	25%	0.344-0.857	1.792	0.1858	0.431	0.6863	5	pCi/L	0	0	Yes	No	Stable	Normal	0.600		No				No
MW-FAA-4	14/20	30%	0.22-0.929	1.54	0.1488	0.3857	0.537	5	pCi/L	0	0	No	No	Stable	Normal	0.802		No				No
MW-FAA-6	13/20	35%	0.0926-0.58	1.43	0.1522	0.3902	0.6795	5	pCi/L	0	0	No	No	Stable	Normal	0.0939		No				No
	CCR Appendix-IV: Selenium, Total (mg/L)																					
MW-FAA-5	7/20	65%	0.0005-0.005	0.0039	1.488E-06	0.00122	0.7112	0.05	mg/L	0	0	No	No	NT	Normal	< 0.0010	0.0039				0.05	
MW-FAA-3	0/20	100%	8.6E-05-0.001		5.186E-08	0.0002277	0.2451	0.05	mg/L	0	0	NA	NA	NA	NA	< 0.0010		No				No
MW-FAA-4	7/20	65%	0.001-0.001	0.0019	5.779E-08	0.0002404	0.2166	0.05	mg/L	0	0	Yes	No	Stable	Non-parametric	< 0.0010		No				No
MW-FAA-6	7/20	65%	0.0005-0.001	0.014	8.544E-06	0.002923	1.619	0.05	mg/L	0	0	Yes	No	Stable	Non-parametric	< 0.0010		No				No

Notes and Abbreviations:

[1] Based on background data collected from 08/19/2016 through 06/09/2021, unless otherwise notec
[2] Based on background data collected from 08/19/2016 through 09/14/202(
** 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 Standarc
MCL = maximum contaminant leve
mg/L = milligrams per Liter
NA = not analyzec
pCi/L = picoCuries per Liter
SSI = statistically significant increase
SSL = statistically significant leve
UTL = upper tolerance limits

ATTACHMENT 2
Laboratory Analytical Reports

ATTACHMENT 2-1
March 2022 Semi-Annual Sampling Event
Laboratory Analytical Report

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

March 31, 2022

Melissa Michels
Evergy, Inc.
818 Kansas Avenue
Topeka, KS 66612

RE: Project: MW-FAA-5
Pace Project No.: 60394832

Dear Melissa Michels:

Enclosed are the analytical results for sample(s) received by the laboratory on March 11, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Kansas City
- Pace Analytical Services - Greensburg

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

Sincerely,

Alice Spiller

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

Enclosures

cc: Laura Hines, Evergy, Inc.
Jake Humphrey, Evergy, Inc.
Samantha Kaney, Haley & Aldrich
Jared Morrison, Evergy, Inc.
Danielle Oberbroeckling, Haley & Aldrich
Melanie Satanek, Haley & Aldrich, Inc.
JD Schlegel, Evergy, Inc.
Jacob Will, Evergy Kansas Central, Jeffrey Energy Center

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

CERTIFICATIONS

Project: MW-FAA-5
Pace Project No.: 60394832

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 Kansas
9608 Loiret Boulevard, Lenexa, KS 66219
Missouri Inorganic Drinking Water Certification #: 10090
Arkansas Drinking Water
Arkansas Certification #: 20-020-0
Arkansas Drinking Water
Illinois Certification #: 2000302021-3
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Nevada Certification #: KS000212020-2
Oklahoma Certification #: 9205/9935
Florida: Cert E871149 SEKS WET
Texas Certification #: T104704407-19-12
Utah Certification #: KS000212019-9
Illinois Certification #: 004592
Kansas Field Laboratory Accreditation: # E-92587
Missouri SEKS Micro Certification: 10070

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

SAMPLE SUMMARY

Project: MW-FAA-5
Pace Project No.: 60394832

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60394832001	**MW-FAA-5-030922**	Water	03/09/22 13:35	03/11/22 14:21

REPORT OF LABORATORY ANALYSIS

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

SAMPLE ANALYTE COUNT

Project: MW-FAA-5
Pace Project No.: 60394832

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60394832001	**MW-FAA-5-030922**	EPA 200.7	JLH	6	PASI-K
		EPA 6010	JLH	1	PASI-K
		EPA 200.8	JGP	7	PASI-K
		EPA 245.1	MRV	1	PASI-K
		EPA 903.1	RPS	1	PASI-PA
		EPA 904.0	JSM	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C	JDS	1	PASI-K
		SM 4500-H+B	KB	1	PASI-K
		EPA 300.0	CRN2, KB	3	PASI-K

PASI-K = Pace Analytical Services - Kansas City
PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

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

PROJECT NARRATIVE

Project: MW-FAA-5
Pace Project No.: 60394832

Method: **EPA 200.7**
Description: 200.7 Metals, Total
Client: Evergy Kansas Central, Inc.
Date: March 31, 2022

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.

QC Batch: 775828

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60394834001,60394852001

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

- MS (Lab ID: 3096624)
  - Calcium
- MS (Lab ID: 3096626)
  - Calcium
- MSD (Lab ID: 3096625)
  - Calcium

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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

PROJECT NARRATIVE

Project: MW-FAA-5
Pace Project No.: 60394832

Method: **EPA 6010**
Description: 6010 MET ICP
Client: Evergy Kansas Central, Inc.
Date: March 31, 2022

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:

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

PROJECT NARRATIVE

Project: MW-FAA-5
Pace Project No.: 60394832

Method: **EPA 200.8**
Description: 200.8 MET ICPMS
Client: Evergy Kansas Central, Inc.
Date: March 31, 2022

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:

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

PROJECT NARRATIVE

Project: MW-FAA-5
Pace Project No.: 60394832

Method: **EPA 245.1**
Description: 245.1 Mercury
Client: Evergy Kansas Central, Inc.
Date: March 31, 2022

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:

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

PROJECT NARRATIVE

Project: MW-FAA-5
Pace Project No.: 60394832

Method: **EPA 903.1**
Description: 903.1 Radium 226
Client: Evergy Kansas Central, Inc.
Date: March 31, 2022

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.: 60394832

Method: **EPA 904.0**
Description: 904.0 Radium 228
Client: Evergy Kansas Central, Inc.
Date: March 31, 2022

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.: 60394832

Method: **Total Radium Calculation**
Description: Total Radium 228+226
Client: Evergy Kansas Central, Inc.
Date: March 31, 2022

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:

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

PROJECT NARRATIVE

Project: MW-FAA-5
Pace Project No.: 60394832

Method: **SM 2540C**
Description: 2540C Total Dissolved Solids
Client: Evergy Kansas Central, Inc.
Date: March 31, 2022

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:

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

PROJECT NARRATIVE

Project: MW-FAA-5
Pace Project No.: 60394832

Method: **SM 4500-H+B**
Description: 4500H+ pH, Electrometric
Client: Evergy Kansas Central, Inc.
Date: March 31, 2022

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-5-030922 (Lab ID: 60394832001)

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.: 60394832

Method: **EPA 300.0**
Description: 300.0 IC Anions 28 Days
Client: Evergy Kansas Central, Inc.
Date: March 31, 2022

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: 776040

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60394775001,60394995003

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

- MS (Lab ID: 3097312)
  - Chloride
  - Sulfate
- MSD (Lab ID: 3097313)
  - Chloride
  - Fluoride

Duplicate Sample:
All duplicate sample results were within method 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: MW-FAA-5
Pace Project No.: 60394832

Sample: MW-FAA-5-030922 **Lab ID: 60394832001** Collected: 03/09/22 13:35 Received: 03/11/22 14:21 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	03/16/22 14:38	03/18/22 21:11	7440-39-3	
Beryllium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	03/16/22 14:38	03/18/22 21:11	7440-41-7	
Boron, Total Recoverable	**1.7**	mg/L	0.10	1	03/16/22 14:38	03/18/22 21:11	7440-42-8	
Calcium, Total Recoverable	**560**	mg/L	2.0	10	03/16/22 14:38	03/18/22 20:13	7440-70-2	
Chromium, Total Recoverable	**<0.0050**	mg/L	0.0050	1	03/16/22 14:38	03/18/22 21:11	7440-47-3	
Lead, Total Recoverable	**<0.010**	mg/L	0.010	1	03/16/22 14:38	03/18/22 21:11	7439-92-1	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**0.11**	mg/L	0.10	10	03/23/22 10:09	03/24/22 18:45	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	03/17/22 09:40	03/19/22 12:39	7440-36-0	
Arsenic, Total Recoverable	**0.0011**	mg/L	0.0010	1	03/17/22 09:40	03/19/22 12:39	7440-38-2	
Cadmium, Total Recoverable	**<0.00050**	mg/L	0.00050	1	03/17/22 09:40	03/19/22 12:39	7440-43-9	
Cobalt, Total Recoverable	**0.0011**	mg/L	0.0010	1	03/17/22 09:40	03/19/22 12:39	7440-48-4	
Molybdenum, Total Recoverable	**0.018**	mg/L	0.0010	1	03/17/22 09:40	03/19/22 12:39	7439-98-7	
Selenium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	03/17/22 09:40	03/19/22 12:39	7782-49-2	
Thallium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	03/17/22 09:40	03/19/22 12:39	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	03/18/22 17:04	03/21/22 11:48	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City							
Total Dissolved Solids	**2570**	mg/L	66.7	1		03/16/22 15:13		
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		03/17/22 09:34		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Chloride	**87.7**	mg/L	20.0	20		03/19/22 17:46	16887-00-6	
Fluoride	**0.46**	mg/L	0.20	1		03/19/22 17:32	16984-48-8	
Sulfate	**1130**	mg/L	200	200		03/22/22 06:01	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: MW-FAA-5
Pace Project No.: 60394832

QC Batch: 776474
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: 60394832001

METHOD BLANK: 3098663 Matrix: Water
Associated Lab Samples: 60394832001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/L	<0.00020	0.00020	03/21/22 11:09	

LABORATORY CONTROL SAMPLE: 3098664

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.005	0.0047	95	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3098665 3098666

Parameter	Units	60394834001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/L	<0.00020	0.005	0.005	0.0040	0.0039	79	79	70-130	0	20	

MATRIX SPIKE SAMPLE: 3098667

Parameter	Units	60394832001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	<0.00020	0.005	0.0045	89	70-130	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: MW-FAA-5
Pace Project No.: 60394832

QC Batch: 775828
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: 60394832001

METHOD BLANK: 3096622 Matrix: Water
Associated Lab Samples: 60394832001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Barium	mg/L	<0.0050	0.0050	03/18/22 19:14	
Beryllium	mg/L	<0.0010	0.0010	03/18/22 19:14	
Boron	mg/L	<0.10	0.10	03/21/22 12:42	
Calcium	mg/L	<0.20	0.20	03/18/22 19:14	
Chromium	mg/L	<0.0050	0.0050	03/18/22 19:14	
Lead	mg/L	<0.010	0.010	03/18/22 19:14	

LABORATORY CONTROL SAMPLE: 3096623

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	mg/L	1	1.0	103	85-115	
Beryllium	mg/L	1	1.0	101	85-115	
Boron	mg/L	1	0.97	97	85-115	
Calcium	mg/L	10	10.4	104	85-115	
Chromium	mg/L	1	0.99	99	85-115	
Lead	mg/L	1	1.0	105	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3096624 3096625

Parameter	Units	60394852001 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	1.0	102	101	70-130	2	20	
Beryllium	mg/L	<0.0010	1	1	1.0	1.0	103	102	70-130	1	20	
Boron	mg/L	0.38	1	1	1.4	1.4	98	98	70-130	1	20	
Calcium	mg/L	318	10	10	323	320	56	25	70-130	1	20	M1
Chromium	mg/L	0.0058	1	1	0.99	0.99	99	99	70-130	0	20	
Lead	mg/L	<0.010	1	1	1.0	1.0	101	101	70-130	0	20	

MATRIX SPIKE SAMPLE: 3096626

Parameter	Units	60394834001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Barium	mg/L	0.036	1	1.1	105	70-130	
Beryllium	mg/L	<0.0010	1	1.0	101	70-130	
Boron	mg/L	0.40	1	1.4	101	70-130	
Calcium	mg/L	207	10	220	132	70-130	M1
Chromium	mg/L	<0.0050	1	0.99	98	70-130	

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QUALITY CONTROL DATA

Project: MW-FAA-5
Pace Project No.: 60394832

MATRIX SPIKE SAMPLE: 3096626

Parameter	Units	60394834001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Lead	mg/L	<0.010	1	1.1	105	70-130	

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QUALITY CONTROL DATA

Project: MW-FAA-5
Pace Project No.: 60394832

QC Batch: 775918
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: 60394832001

METHOD BLANK: 3096897 Matrix: Water
Associated Lab Samples: 60394832001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	mg/L	<0.0010	0.0010	03/19/22 11:26	
Arsenic	mg/L	<0.0010	0.0010	03/19/22 11:26	
Cadmium	mg/L	<0.00050	0.00050	03/19/22 11:26	
Cobalt	mg/L	<0.0010	0.0010	03/19/22 11:26	
Molybdenum	mg/L	<0.0010	0.0010	03/19/22 11:26	
Selenium	mg/L	<0.0010	0.0010	03/19/22 11:26	
Thallium	mg/L	<0.0010	0.0010	03/19/22 11:26	

LABORATORY CONTROL SAMPLE: 3096898

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.04	0.040	101	85-115	
Arsenic	mg/L	0.04	0.040	101	85-115	
Cadmium	mg/L	0.04	0.042	104	85-115	
Cobalt	mg/L	0.04	0.041	103	85-115	
Molybdenum	mg/L	0.04	0.041	103	85-115	
Selenium	mg/L	0.04	0.040	101	85-115	
Thallium	mg/L	0.04	0.038	95	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3096899 3096900

Parameter	Units	60394479004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/L	ND	0.04	0.04	0.035	0.035	86	88	70-130	2	20	
Arsenic	mg/L	ND	0.04	0.04	0.042	0.042	104	105	70-130	1	20	
Cadmium	mg/L	ND	0.04	0.04	0.035	0.036	88	89	70-130	2	20	
Cobalt	mg/L	2.4 ug/L	0.04	0.04	0.039	0.040	91	93	70-130	3	20	
Molybdenum	mg/L	ND	0.04	0.04	0.042	0.043	103	105	70-130	2	20	
Selenium	mg/L	ND	0.04	0.04	0.040	0.041	98	99	70-130	1	20	
Thallium	mg/L	ND	0.04	0.04	0.039	0.040	98	99	70-130	1	20	

MATRIX SPIKE SAMPLE: 3096901

Parameter	Units	60394835001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	<0.0010	0.04	0.041	103	70-130	
Arsenic	mg/L	<0.0010	0.04	0.039	97	70-130	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: MW-FAA-5
Pace Project No.: 60394832

MATRIX SPIKE SAMPLE: 3096901

Parameter	Units	60394835001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Cadmium	mg/L	<0.00050	0.04	0.034	85	70-130	
Cobalt	mg/L	<0.0010	0.04	0.034	84	70-130	
Molybdenum	mg/L	0.0078	0.04	0.047	97	70-130	
Selenium	mg/L	<0.0010	0.04	0.039	97	70-130	
Thallium	mg/L	<0.0010	0.04	0.041	101	70-130	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: MW-FAA-5
Pace Project No.: 60394832

QC Batch: 777222
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60394832001

METHOD BLANK: 3101209 Matrix: Water
Associated Lab Samples: 60394832001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lithium	mg/L	<0.010	0.010	03/24/22 18:01	

LABORATORY CONTROL SAMPLE: 3101210

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lithium	mg/L	1	0.82	82	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3101211 3101212

Parameter	Units	60394712002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lithium	mg/L	ND	1	1	0.85	0.84	85	84	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.: 60394832

QC Batch: 775867
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60394832001

METHOD BLANK: 3096792 Matrix: Water
Associated Lab Samples: 60394832001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	03/16/22 15:12	

LABORATORY CONTROL SAMPLE: 3096793

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

SAMPLE DUPLICATE: 3096794

Parameter	Units	60394821003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1040	1050	0	10	

SAMPLE DUPLICATE: 3096795

Parameter	Units	60394850001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	545	532	2	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: MW-FAA-5
Pace Project No.: 60394832

QC Batch: 775990
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: 60394832001

SAMPLE DUPLICATE: 3097134

Parameter	Units	60394768001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.1	7.3	3	5	H6

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: MW-FAA-5
Pace Project No.: 60394832

QC Batch: 776040
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: 60394832001

METHOD BLANK: 3100183 Matrix: Water
Associated Lab Samples: 60394832001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<1.0	1.0	03/21/22 07:11	
Fluoride	mg/L	<0.20	0.20	03/21/22 07:11	
Sulfate	mg/L	<1.0	1.0	03/21/22 07:11	

METHOD BLANK: 3100356 Matrix: Water
Associated Lab Samples: 60394832001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<1.0	1.0	03/22/22 01:24	
Fluoride	mg/L	<0.20	0.20	03/22/22 01:24	
Sulfate	mg/L	<1.0	1.0	03/22/22 01:24	

METHOD BLANK: 3100388 Matrix: Water
Associated Lab Samples: 60394832001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<1.0	1.0	03/19/22 13:48	
Fluoride	mg/L	<0.20	0.20	03/19/22 13:48	
Sulfate	mg/L	<1.0	1.0	03/19/22 13:48	

LABORATORY CONTROL SAMPLE: 3100184

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.5	91	90-110	
Fluoride	mg/L	2.5	2.4	96	90-110	
Sulfate	mg/L	5	4.9	97	90-110	

LABORATORY CONTROL SAMPLE: 3100357

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.9	99	90-110	
Fluoride	mg/L	2.5	2.5	100	90-110	
Sulfate	mg/L	5	5.1	101	90-110	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: MW-FAA-5
Pace Project No.: 60394832

LABORATORY CONTROL SAMPLE: 3100389

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	2.3	92	90-110	
Sulfate	mg/L	5	5.2	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3097312 3097313

Parameter	Units	60394775001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	182	5	5	185	185	65	66	80-120	0	15	M1
Fluoride	mg/L	ND	2.5	2.5	3.0	3.1	118	122	80-120	3	15	M1
Sulfate	mg/L	6.3	5	5	12.3	12.3	121	120	80-120	0	15	M1

MATRIX SPIKE SAMPLE: 3097314

Parameter	Units	60394995003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	134	250	347	86	80-120	
Fluoride	mg/L	ND	2.5	2.1	86	80-120	
Sulfate	mg/L	2490	2000	4670	109	80-120	

SAMPLE DUPLICATE: 3097311

Parameter	Units	60394775001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chloride	mg/L	182	182	0	15	
Fluoride	mg/L	ND	<0.20		15	
Sulfate	mg/L	6.3	6.7	7	15	

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REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: MW-FAA-5
Pace Project No.: 60394832

Sample: MW-FAA-5-030922 **Lab ID: 60394832001** Collected: 03/09/22 13:35 Received: 03/11/22 14:21 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	**-0.0543 ± 0.416 (0.875) C:NA T:91%**	pCi/L	03/31/22 13:31	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.374 ± 0.347 (0.708) C:67% T:92%**	pCi/L	03/30/22 11:43	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.374 ± 0.763 (1.58)**	pCi/L	03/31/22 17:10	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL - RADIOCHEMISTRY

Project: MW-FAA-5
Pace Project No.: 60394832

QC Batch: 490875
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: 60394832001

METHOD BLANK: 2374606 Matrix: Water
Associated Lab Samples: 60394832001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.104 ± 0.398 (0.733) C:NA T:95%	pCi/L	03/31/22 12:49	

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: MW-FAA-5
Pace Project No.: 60394832

QC Batch: 490877
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: 60394832001

METHOD BLANK: 2374610 Matrix: Water
Associated Lab Samples: 60394832001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.365 ± 0.256 (0.481) C:75% T:91%	pCi/L	03/30/22 11:38	

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

REPORT OF LABORATORY ANALYSIS

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

QUALIFIERS

Project: MW-FAA-5
Pace Project No.: 60394832

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

Act - Activity

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

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

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.: 60394832

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60394832001	**MW-FAA-5-030922**	EPA 200.7	775828	EPA 200.7	776011
60394832001	**MW-FAA-5-030922**	EPA 3010	777222	EPA 6010	777267
60394832001	**MW-FAA-5-030922**	EPA 200.8	775918	EPA 200.8	776167
60394832001	**MW-FAA-5-030922**	EPA 245.1	776474	EPA 245.1	776520
60394832001	**MW-FAA-5-030922**	EPA 903.1	490875		
60394832001	**MW-FAA-5-030922**	EPA 904.0	490877		
60394832001	**MW-FAA-5-030922**	Total Radium Calculation	494356		
60394832001	**MW-FAA-5-030922**	SM 2540C	775867		
60394832001	**MW-FAA-5-030922**	SM 4500-H+B	775990		
60394832001	**MW-FAA-5-030922**	EPA 300.0	776040		

WO#: 60394832

60394832

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

Client Name: Evergy KS Central

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

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

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

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

Thermometer Used: T299 **Type of Ice:** (Wet) Blue None

Cooler Temperature (°C): **As-read** 4.2 **Corr. Factor** -0.2 **Corrected** 4.0

Date and initials of person examining contents: AN 3/11/22

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#:** 65192	☑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

SAMPLE ID
One Character per box.
(A-Z, 0-9 / , -)
Sample Ids must be unique

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 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 / 200.8/ 245.1/6010*	300.0 Anions Cl,F,S	Total Dissolved Solids (TDS)	pH	Radium 226	Radium 228	Total Radium	Residual Chlorine (Y/N)	
										Requested Analysis Filtered (Y/N)									N	N	N	N	N	N	N		600394832
1	MW-FAA-5-030922	WT	G	-	-	3/9/22	13:35	-	7	3		4							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: TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
200.7/200.8 Be,B,Ca,Sb,As,Ba,Cd,Cr,Co,Pb,Mo,Se,Tl, Hg	Jason R. Franks / SCS	3/10/2022	15:00		3/10	1500	4.0	Y	~~Y~~ N	Y
6010 Li										

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Jason R. Franks

SIGNATURE of SAMPLER: Jason R. Franks DATE Signed: 3/10/2022

Client: Evergy KS Central

Profile # 9657 -1

Site:

Notes SI-38RAD and SI-38RAD02 on BP1N

COC Line Item	Matrix	VG9H	DG9H	DG9Q	VG9U	DG9U	DG9M	DG9B	BG1U	AG1H	AG1U	AG2U	AG3S	AG4U	AG5U	JGFU	WGKU	WGDU	BP1U	BP2U	BP3U	BP1N	BP3N	BP3F	BP3S	BP3C	BP3Z	WPDU	ZPLC	Other		
1																			1		2	2	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: 60394832

Internal Transfer Chain of Custody

Pace Analytical®
www.pacelabs.com

☐ Samples Pre-Logged into eCOC.

State Of Origin: KS
Cert. Needed: [x] Yes ☐ No

Workorder: 60394832 **Workorder Name:** MW-FAA-5 **Owner Received Date:** 3/11/2022 **Results Requested By:** 3/25/2022

Report To	Subcontract To
Alice Spiller Pace Analytical Kansas 9608 Loiret Blvd. Lenexa, KS 66219 Phone (913)599-5665	Pace Analytical Pittsburgh 1638 Roseytown Road Suites 2,3, & 4 Greensburg, PA 15601 Phone (724)850-5600

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: HNO3						Requested Analysis: Radium 226	Radium 228										LAB USE ONLY
1	MW-FAA-5-030922	PS	3/9/2022 13:35	60394832001	Water	2						X	X										001
2																							
3																							
4																							
5																							

Transfers	Released By	Date/Time	Received By	Date/Time
1	[signature] Pace	3/10/22 1500	[signature]	3/15/22 1015
2				
3				

Comments: **INCLUDE QC SHEETS**

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# : 30472836

30472836

Pittsburgh Lab Sample Condition Upon Receipt

Pace Analytical

Client Name: Pace KS Project # 30472836

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

Label JBH
LIMS Login VP

Tracking #: 5333 8760 3538

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

Thermometer Used NA 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	N/A	pH paper Lot# 10D2811 / Date and initials of person examining contents: JBH 3.15.22
Chain of Custody Present:	✓			1.
Chain of Custody Filled Out:	✓			2.
Chain of Custody Relinquished:	✓			3.
Sampler Name & Signature on COC:		✓		4.
Sample Labels match COC: -Includes date/time/ID Matrix: WT	✓			5.
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 sample field filtered			✓	13.
Organic Samples checked for dechlorination:			✓	14.
Filtered volume received for Dissolved tests			✓	15.
All containers have been 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 JBH / Date/time of preservation / Lot # of added preservative
Headspace in VOA Vials (>6mm):			✓	17.
Trip Blank Present:			✓	18.
Trip Blank Custody Seals Present			✓	
Rad Samples Screened < 0.5 mrem/hr	✓			Initial when completed: JBH Date: 3.15.22 Survey Meter SN: 1563

Client Notification/ Resolution:

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

Comments/ Resolution: _____

☐ **A check in this box indicates that additional information has been stored in ereports.**

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

***PM review** is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

Pace Analytical®

Pace Greensburg Lab -Sample Container Count

Client _____ Profile Number 7746

Site 10394832 / Evergy Kansas Central, Inc Notes _____

Sample Line Item	Matrix	AG1H	AG1S	AG1T	AG2U	AG3S	AG3U	AG5U	AG5T	BG1U	BG2U	BP1N	BP1U	BP2S	BP2U	BP3C	BP3N	BP3S	BP3U	DG9S	GCUB	VG9H	VG9T	VG9U	VOAK	WGFU	WGKU	ZPLC
1	WT											2																
2																												
3																												
4																												
5																												
6																												
7																												
8																												
9																												
10																												
11																												
12																												

WO#: 30472836

PM: CF1 Due Date: 03/25/22

CLIENT: PACE_60_LEKS

Container Codes

Glass

GJN	1 Gallon Jug with HNO3	DG9S	40mL amber VOA vial H2SO4
AG5U	100mL amber glass unprserved	VG9U	40mL clear VOA vial
AG5T	100mL amber glass Na Thiosulfate	VG9T	40mL clear VOA vial Na Thiosul
GJN	1 Gallon Jug	VG9H	40mL clear VOA vial HCl
AG1S	1L amber glass H2SO4	JGFU	4oz amber wide jar
AG1H	1L amber glass HCl	WGFU	4oz wide jar unpreserved
AG1T	1L amber glass Na Thiosulfate	BG2U	500mL clear glass unpreserved
BG1U	1L clear glass unpreserved	AG2U	500mL amber glass unpreserve
AG3S	250mL amber glass H2SO4	WGKU	8oz wide jar unpreserved
AG3U	250mL amber glass unpreserved		

Plastic / Misc.

GCUB	1 Gallon Cubitainer
12GN	1/2 Gallon Cubitainer
SP5T	120mL Coliform Na Thiosulfate
BP1N	1L plastic HNO3
BP1U	1L plastic unpreserved
BP3S	250mL plastic H2SO4
BP3N	250mL plastic HNO3
BP3U	250mL plastic unpreserved
BP3C	250ml plastic NAOH
BP2S	500mL plastic H2SO4
BP2U	500mL plastic unpreserved

EZI	5g Encore
VOAK	Kit for Volatile Solid
I	Wipe/Swab
ZPLC	Ziploc Bag

WT	Water
SL	Solid
OL	Non-aqueous liquid
WP	Wipe

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-226
Analyst:	RPS
Date:	3/25/2022
Batch ID:	65631
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2374606
MB concentration:	0.104
M/B Counting Uncertainty:	0.397
MB MDC:	0.733
MB Numerical Performance Indicator:	0.51
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS65631	LCSD65631
Count Date:	3/31/2022	3/31/2022
Spike I.D.:	21-040	21-040
Spike Concentration (pCi/mL):	32.433	32.433
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.651	0.660
Target Conc. (pCi/L, g, F):	4.980	4.917
Uncertainty (Calculated):	0.234	0.231
Result (pCi/L, g, F):	4.630	3.632
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.036	0.868
Numerical Performance Indicator:	-0.65	-2.80
Percent Recovery:	92.98%	73.87%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	135%	135%
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.:	LCS65631	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD65631	
Sample Result (pCi/L, g, F):	4.630	
Sample Result Counting Uncertainty (pCi/L, g, F):	1.036	
Sample Duplicate Result (pCi/L, g, F):	3.632	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.868	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	1.447	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	22.91%	
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:

SLC 3/31/2022

04/31/22

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test: Ra-228
Analyst: JSM
Date: 3/26/2022
Worklist: 65632
Matrix: WI

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2374610
MB concentration:	0.365
M/B 2 Sigma CSU:	0.256
MB MDC:	0.481
MB Numerical Performance Indicator:	2.80
MB Status vs Numerical Indicator:	Warning
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS65632	LCSD65632
Count Date:	3/30/2022	3/30/2022
Spike I.D.:	22-016	22-016
Decay Corrected Spike Concentration (pCi/mL):	36.290	36.290
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.815	0.807
Target Conc. (pCi/L, g, F):	4.452	4.496
Uncertainty (Calculated):	0.218	0.220
Result (pCi/L, g, F):	5.033	4.692
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	1.088	1.023
Numerical Performance Indicator:	1.03	0.37
Percent Recovery:	113.05%	104.37%
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.:	LCS65632	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD65632	
Sample Result (pCi/L, g, F):	5.033	
Sample Result 2 Sigma CSU (pCi/L, g, F):	1.088	
Sample Duplicate Result (pCi/L, g, F):	4.692	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.023	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	0.448	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	7.99%	
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:

3/31/22

4/5/22

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

April 27, 2022

Melissa Michels
Evergy, Inc.
818 Kansas Avenue
Topeka, KS 66612

RE: Project: JEC FAL CCR
Pace Project No.: 60394835

Dear Melissa Michels:

Enclosed are the analytical results for sample(s) received by the laboratory on March 10, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Kansas City
- Pace Analytical Services - Greensburg

REVISED 4/27/22 to include radchem QC sheets.

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: Laura Hines, Evergy, Inc.
Jake Humphrey, Evergy, Inc.
Samantha Kaney, Haley & Aldrich
Jared Morrison, Evergy, Inc.
Danielle Oberbroeckling, Haley & Aldrich
Melanie Satanek, Haley & Aldrich, Inc.
JD Schlegel, Evergy, Inc.
Jacob Will, Evergy Kansas Central, Jeffrey Energy Center

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CERTIFICATIONS

Project: JEC FAL CCR
Pace Project No.: 60394835

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 Kansas

9608 Loiret Boulevard, Lenexa, KS 66219
Missouri Inorganic Drinking Water Certification #: 10090
Arkansas Drinking Water
Arkansas Certification #: 20-020-0
Arkansas Drinking Water
Illinois Certification #: 2000302021-3
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Nevada Certification #: KS000212020-2
Oklahoma Certification #: 9205/9935
Florida: Cert E871149 SEKS WET
Texas Certification #: T104704407-21-15
Utah Certification #: KS000212019-9
Illinois Certification #: 004592
Kansas Field Laboratory Accreditation: # E-92587
Missouri SEKS Micro Certification: 10070

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

SAMPLE SUMMARY

Project: JEC FAL CCR
Pace Project No.: 60394835

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60394835001	**FAA-3-030922**	Water	03/09/22 15:20	03/10/22 15:00
60394835002	**FAA-4-030922**	Water	03/09/22 14:25	03/10/22 15:00
60394835003	**FAA-6-030922**	Water	03/09/22 16:15	03/10/22 15:00
60394835004	**DUP-FAA-030922**	Water	03/09/22 16:15	03/10/22 15:00

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SAMPLE ANALYTE COUNT

Project: JEC FAL CCR
Pace Project No.: 60394835

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60394835001	**FAA-3-030922**	EPA 200.7	JLH	3	PASI-K
		EPA 6010	JLH	1	PASI-K
		EPA 200.8	JGP	4	PASI-K
		EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C	JDS	1	PASI-K
		SM 4500-H+B	KB	1	PASI-K
		EPA 300.0	CRN2, KB	3	PASI-K
60394835002	**FAA-4-030922**	EPA 200.7	JLH	3	PASI-K
		EPA 6010	JLH	1	PASI-K
		EPA 200.8	JGP	4	PASI-K
		EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C	JDS	1	PASI-K
		SM 4500-H+B	KB	1	PASI-K
		EPA 300.0	CRN2, KB	3	PASI-K
60394835003	**FAA-6-030922**	EPA 200.7	JLH	3	PASI-K
		EPA 6010	JLH	1	PASI-K
		EPA 200.8	JGP	4	PASI-K
		EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C	JDS	1	PASI-K
		SM 4500-H+B	KB	1	PASI-K
		EPA 300.0	CRN2, KB	3	PASI-K
60394835004	**DUP-FAA-030922**	EPA 200.7	JLH	3	PASI-K
		EPA 6010	JLH	1	PASI-K
		EPA 200.8	JGP	4	PASI-K
		EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C	JDS	1	PASI-K
		SM 4500-H+B	SK	1	PASI-K
		EPA 300.0	CRN2, KB	3	PASI-K

REPORT OF LABORATORY ANALYSIS

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

SAMPLE ANALYTE COUNT

Project: JEC FAL CCR
Pace Project No.: 60394835

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory

PASI-K = Pace Analytical Services - Kansas City
PASI-PA = Pace Analytical Services - Greensburg

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PROJECT NARRATIVE

Project: JEC FAL CCR
Pace Project No.: 60394835

Method: **EPA 200.7**
Description: 200.7 Metals, Total
Client: Evergy Kansas Central, Inc.
Date: April 27, 2022

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: 775829

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60394835001,60394850006

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

- MSD (Lab ID: 3096632)
  - Calcium

Additional Comments:

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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PROJECT NARRATIVE

Project: JEC FAL CCR
Pace Project No.: 60394835

Method: **EPA 6010**
Description: 6010 MET ICP
Client: Evergy Kansas Central, Inc.
Date: April 27, 2022

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
Pace Project No.: 60394835

Method: **EPA 200.8**
Description: 200.8 MET ICPMS
Client: Evergy Kansas Central, Inc.
Date: April 27, 2022

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
Pace Project No.: 60394835

Method: **EPA 903.1**
Description: 903.1 Radium 226
Client: Evergy Kansas Central, Inc.
Date: April 27, 2022

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.: 60394835

Method: **EPA 904.0**
Description: 904.0 Radium 228
Client: Evergy Kansas Central, Inc.
Date: April 27, 2022

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.: 60394835

Method: **Total Radium Calculation**
Description: Total Radium 228+226
Client: Evergy Kansas Central, Inc.
Date: April 27, 2022

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:

Pace Analytical Services, LLC
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PROJECT NARRATIVE

Project: JEC FAL CCR
Pace Project No.: 60394835

Method: **SM 2540C**
Description: 2540C Total Dissolved Solids
Client: Evergy Kansas Central, Inc.
Date: April 27, 2022

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
Pace Project No.: 60394835

Method: **SM 4500-H+B**
Description: 4500H+ pH, Electrometric
Client: Evergy Kansas Central, Inc.
Date: April 27, 2022

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-030922 (Lab ID: 60394835004)
- FAA-3-030922 (Lab ID: 60394835001)
- FAA-4-030922 (Lab ID: 60394835002)
- FAA-6-030922 (Lab ID: 60394835003)

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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(913)599-5665

PROJECT NARRATIVE

Project: JEC FAL CCR
Pace Project No.: 60394835

Method: **EPA 300.0**
Description: 300.0 IC Anions 28 Days
Client: Evergy Kansas Central, Inc.
Date: April 27, 2022

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.

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

Additional Comments:

Analyte Comments:

QC Batch: 776038

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

- DUP (Lab ID: 3097299)
  - Chloride
- MS (Lab ID: 3097300)
  - Chloride
- MSD (Lab ID: 3097301)
  - Chloride

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

Project: JEC FAL CCR
Pace Project No.: 60394835

Sample: FAA-3-030922 **Lab ID: 60394835001** Collected: 03/09/22 15:20 Received: 03/10/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City							
Barium, Total Recoverable	**0.032**	mg/L	0.0050	1	03/16/22 14:38	03/22/22 19:38	7440-39-3	
Boron, Total Recoverable	**0.54**	mg/L	0.10	1	03/16/22 14:38	03/22/22 19:38	7440-42-8	
Calcium, Total Recoverable	**193**	mg/L	0.40	2	03/16/22 14:38	03/23/22 15:01	7440-70-2	M1
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**<0.030**	mg/L	0.030	3	03/23/22 09:00	03/24/22 17:52	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	03/17/22 09:40	03/19/22 12:20	7440-38-2	
Cobalt, Total Recoverable	**<0.0010**	mg/L	0.0010	1	03/17/22 09:40	03/19/22 12:20	7440-48-4	
Molybdenum, Total Recoverable	**0.0078**	mg/L	0.0010	1	03/17/22 09:40	03/19/22 12:20	7439-98-7	
Selenium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	03/17/22 09:40	03/19/22 12:20	7782-49-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City							
Total Dissolved Solids	**1540**	mg/L	13.3	1		03/16/22 15:15		
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		03/17/22 12:31		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Chloride	**77.2**	mg/L	10.0	10		03/22/22 23:38	16887-00-6	
Fluoride	**<0.20**	mg/L	0.20	1		03/21/22 18:01	16984-48-8	
Sulfate	**445**	mg/L	200	200		03/21/22 18:15	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
Pace Project No.: 60394835

Sample: FAA-4-030922 **Lab ID: 60394835002** Collected: 03/09/22 14:25 Received: 03/10/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City							
Barium, Total Recoverable	**0.049**	mg/L	0.0050	1	03/16/22 14:38	03/22/22 19:45	7440-39-3	
Boron, Total Recoverable	**0.73**	mg/L	0.10	1	03/16/22 14:38	03/22/22 19:45	7440-42-8	
Calcium, Total Recoverable	**200**	mg/L	0.60	3	03/16/22 14:38	03/23/22 15:17	7440-70-2	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**<0.030**	mg/L	0.030	3	03/23/22 09:00	03/24/22 17:55	7439-93-2	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City							
Arsenic, Total Recoverable	**<0.0010**	mg/L	0.0010	1	03/17/22 09:40	03/19/22 12:30	7440-38-2	
Cobalt, Total Recoverable	**0.0014**	mg/L	0.0010	1	03/17/22 09:40	03/19/22 12:30	7440-48-4	
Molybdenum, Total Recoverable	**0.0078**	mg/L	0.0010	1	03/17/22 09:40	03/19/22 12:30	7439-98-7	
Selenium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	03/17/22 09:40	03/19/22 12:30	7782-49-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City							
Total Dissolved Solids	**1190**	mg/L	13.3	1		03/16/22 15:15		
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		03/17/22 12:26		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Chloride	**86.6**	mg/L	10.0	10		03/22/22 23:52	16887-00-6	
Fluoride	**<0.20**	mg/L	0.20	1		03/21/22 18:29	16984-48-8	
Sulfate	**530**	mg/L	200	200		03/21/22 18:43	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: JEC FAL CCR
Pace Project No.: 60394835

Sample: FAA-6-030922 **Lab ID: 60394835003** Collected: 03/09/22 16:15 Received: 03/10/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City							
Barium, Total Recoverable	**0.028**	mg/L	0.0050	1	03/16/22 14:38	03/22/22 19:54	7440-39-3	
Boron, Total Recoverable	**2.6**	mg/L	0.10	1	03/16/22 14:38	03/22/22 19:54	7440-42-8	
Calcium, Total Recoverable	**115**	mg/L	0.40	2	03/16/22 14:38	03/23/22 15:19	7440-70-2	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**<0.030**	mg/L	0.030	3	03/23/22 09:00	03/24/22 17:57	7439-93-2	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City							
Arsenic, Total Recoverable	**0.010**	mg/L	0.0010	1	03/17/22 09:40	03/19/22 12:33	7440-38-2	
Cobalt, Total Recoverable	**0.0013**	mg/L	0.0010	1	03/17/22 09:40	03/19/22 12:33	7440-48-4	
Molybdenum, Total Recoverable	**0.20**	mg/L	0.0010	1	03/17/22 09:40	03/19/22 12:33	7439-98-7	
Selenium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	03/17/22 09:40	03/19/22 12:33	7782-49-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City							
Total Dissolved Solids	**1500**	mg/L	20.0	1		03/16/22 15:15		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Kansas City							
pH at 25 Degrees C	**7.5**	Std. Units	0.10	1		03/17/22 12:35		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Chloride	**75.4**	mg/L	10.0	10		03/23/22 00:06	16887-00-6	
Fluoride	**0.56**	mg/L	0.20	1		03/21/22 18:57	16984-48-8	
Sulfate	**894**	mg/L	200	200		03/21/22 19:11	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: JEC FAL CCR
Pace Project No.: 60394835

Sample: DUP-FAA-030922 **Lab ID: 60394835004** Collected: 03/09/22 16:15 Received: 03/10/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City							
Barium, Total Recoverable	**0.027**	mg/L	0.0050	1	03/16/22 14:38	03/22/22 19:56	7440-39-3	
Boron, Total Recoverable	**2.7**	mg/L	0.10	1	03/16/22 14:38	03/22/22 19:56	7440-42-8	
Calcium, Total Recoverable	**111**	mg/L	0.40	2	03/16/22 14:38	03/23/22 15:21	7440-70-2	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**<0.030**	mg/L	0.030	3	03/23/22 09:00	03/24/22 17:59	7439-93-2	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City							
Arsenic, Total Recoverable	**0.011**	mg/L	0.0010	1	03/17/22 09:40	03/19/22 12:36	7440-38-2	
Cobalt, Total Recoverable	**0.0013**	mg/L	0.0010	1	03/17/22 09:40	03/19/22 12:36	7440-48-4	
Molybdenum, Total Recoverable	**0.21**	mg/L	0.0010	1	03/17/22 09:40	03/19/22 12:36	7439-98-7	
Selenium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	03/17/22 09:40	03/19/22 12:36	7782-49-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City							
Total Dissolved Solids	**1520**	mg/L	20.0	1		03/16/22 15:15		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Kansas City							
pH at 25 Degrees C	**7.6**	Std. Units	0.10	1		03/18/22 15:32		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Chloride	**75.1**	mg/L	10.0	10		03/23/22 00:20	16887-00-6	
Fluoride	**0.57**	mg/L	0.20	1		03/21/22 19:24	16984-48-8	
Sulfate	**864**	mg/L	200	200		03/21/22 19:38	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: JEC FAL CCR
Pace Project No.: 60394835

QC Batch: 775829
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: 60394835001, 60394835002, 60394835003, 60394835004

METHOD BLANK: 3096629 Matrix: Water
Associated Lab Samples: 60394835001, 60394835002, 60394835003, 60394835004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Barium	mg/L	<0.0050	0.0050	03/22/22 19:33	
Boron	mg/L	<0.10	0.10	03/22/22 19:33	
Calcium	mg/L	<0.20	0.20	03/22/22 19:33	

LABORATORY CONTROL SAMPLE: 3096630

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	mg/L	1	1.1	108	85-115	
Boron	mg/L	1	0.99	99	85-115	
Calcium	mg/L	10	10.4	104	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3096631 3096632

Parameter	Units	60394835001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	mg/L	0.032	1	1	1.1	1.1	105	104	70-130	1	20	
Boron	mg/L	0.54	1	1	1.6	1.5	102	100	70-130	1	20	
Calcium	mg/L	193	10	10	203	197	94	42	70-130	3	20	M1

MATRIX SPIKE SAMPLE: 3096633

Parameter	Units	60394850006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Barium	mg/L	0.073	1	1.1	105	70-130	
Boron	mg/L	0.55	1	1.6	101	70-130	
Calcium	mg/L	133	10	145	115	70-130	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: JEC FAL CCR
Pace Project No.: 60394835

QC Batch: 775918
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: 60394835001, 60394835002, 60394835003, 60394835004

METHOD BLANK: 3096897 Matrix: Water
Associated Lab Samples: 60394835001, 60394835002, 60394835003, 60394835004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/L	<0.0010	0.0010	03/19/22 11:26	
Cobalt	mg/L	<0.0010	0.0010	03/19/22 11:26	
Molybdenum	mg/L	<0.0010	0.0010	03/19/22 11:26	
Selenium	mg/L	<0.0010	0.0010	03/19/22 11:26	

LABORATORY CONTROL SAMPLE: 3096898

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	103	85-115	
Molybdenum	mg/L	0.04	0.041	103	85-115	
Selenium	mg/L	0.04	0.040	101	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3096899 3096900

Parameter	Units	60394479004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/L	ND	0.04	0.04	0.042	0.042	104	105	70-130	1	20	
Cobalt	mg/L	2.4 ug/L	0.04	0.04	0.039	0.040	91	93	70-130	3	20	
Molybdenum	mg/L	ND	0.04	0.04	0.042	0.043	103	105	70-130	2	20	
Selenium	mg/L	ND	0.04	0.04	0.040	0.041	98	99	70-130	1	20	

MATRIX SPIKE SAMPLE: 3096901

Parameter	Units	60394835001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/L	<0.0010	0.04	0.039	97	70-130	
Cobalt	mg/L	<0.0010	0.04	0.034	84	70-130	
Molybdenum	mg/L	0.0078	0.04	0.047	97	70-130	
Selenium	mg/L	<0.0010	0.04	0.039	97	70-130	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: JEC FAL CCR
Pace Project No.: 60394835

QC Batch: 777158
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60394835001, 60394835002, 60394835003, 60394835004

METHOD BLANK: 3101066 Matrix: Water
Associated Lab Samples: 60394835001, 60394835002, 60394835003, 60394835004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lithium	mg/L	<0.010	0.010	03/24/22 14:33	

LABORATORY CONTROL SAMPLE: 3101067

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lithium	mg/L	1	0.89	89	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3101068 3101069

Parameter	Units	60394834002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lithium	mg/L	<0.030	1	1	1.0	1.0	101	101	75-125	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: JEC FAL CCR
Pace Project No.: 60394835

QC Batch: 775867 | Analysis Method: SM 2540C
QC Batch Method: SM 2540C | Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60394835001, 60394835002, 60394835003, 60394835004

METHOD BLANK: 3096792 Matrix: Water
Associated Lab Samples: 60394835001, 60394835002, 60394835003, 60394835004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	03/16/22 15:12	

LABORATORY CONTROL SAMPLE: 3096793

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

SAMPLE DUPLICATE: 3096794

Parameter	Units	60394821003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1040	1050	0	10	

SAMPLE DUPLICATE: 3096795

Parameter	Units	60394850001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	545	532	2	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: JEC FAL CCR
Pace Project No.: 60394835

QC Batch: 776035
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: 60394835001, 60394835002, 60394835003

SAMPLE DUPLICATE: 3097276

Parameter	Units	60394853005 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.6	7.6	1	5	H6

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: JEC FAL CCR
Pace Project No.: 60394835

QC Batch: 776255
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: 60394835004

SAMPLE DUPLICATE: 3097993

Parameter	Units	60394734002 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.2	7.3	0	5	H6

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QUALITY CONTROL DATA

Project: JEC FAL CCR
Pace Project No.: 60394835

QC Batch: 776038
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: 60394835001, 60394835002, 60394835003, 60394835004

METHOD BLANK: 3097297 Matrix: Water
Associated Lab Samples: 60394835001, 60394835002, 60394835003, 60394835004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<1.0	1.0	03/18/22 08:21	
Fluoride	mg/L	<0.20	0.20	03/18/22 08:21	
Sulfate	mg/L	<1.0	1.0	03/18/22 08:21	

METHOD BLANK: 3100176 Matrix: Water
Associated Lab Samples: 60394835001, 60394835002, 60394835003, 60394835004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<1.0	1.0	03/21/22 07:11	
Fluoride	mg/L	<0.20	0.20	03/21/22 07:11	
Sulfate	mg/L	<1.0	1.0	03/21/22 07:11	

METHOD BLANK: 3101330 Matrix: Water
Associated Lab Samples: 60394835001, 60394835002, 60394835003, 60394835004

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

LABORATORY CONTROL SAMPLE: 3097298

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.8	96	90-110	
Fluoride	mg/L	2.5	2.7	108	90-110	
Sulfate	mg/L	5	5.1	102	90-110	

LABORATORY CONTROL SAMPLE: 3100177

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.5	91	90-110	
Fluoride	mg/L	2.5	2.4	96	90-110	
Sulfate	mg/L	5	4.9	97	90-110	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: JEC FAL CCR
Pace Project No.: 60394835

LABORATORY CONTROL SAMPLE: 3101331

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	98	90-110	
Sulfate	mg/L	5	5.1	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3097300 3097301

Parameter	Units	60394782002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	268	50	50	311	308	85	80	80-120	1	15	E
Fluoride	mg/L	ND	25	25	28.6	27.8	114	111	80-120	3	15	
Sulfate	mg/L	74.7	50	50	123	122	97	94	80-120	1	15	

SAMPLE DUPLICATE: 3097299

Parameter	Units	60394782002 Result	Dup Result	RPD	Max RPD	Qualifiers
Chloride	mg/L	268	262	2	15	E
Fluoride	mg/L	ND	<2.0		15	
Sulfate	mg/L	74.7	73.7	1	15	

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REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: JEC FAL CCR
Pace Project No.: 60394835

Sample: FAA-3-030922 **Lab ID: 60394835001** Collected: 03/09/22 15:20 Received: 03/10/22 15:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.197 ± 0.388 (0.709) C:NA T:97%**	pCi/L	03/24/22 12:11	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.403 ± 0.322 (0.630) C:69% T:90%**	pCi/L	03/24/22 11:22	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.600 ± 0.710 (1.34)**	pCi/L	03/25/22 10:37	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: JEC FAL CCR
Pace Project No.: 60394835

Sample: FAA-4-030922 **Lab ID: 60394835002** Collected: 03/09/22 14:25 Received: 03/10/22 15:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.456 ± 0.498 (0.783) C:NA T:100%**	pCi/L	03/24/22 12:27	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.346 ± 0.298 (0.591) C:71% T:91%**	pCi/L	03/24/22 11:22	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.802 ± 0.796 (1.37)**	pCi/L	03/25/22 10:37	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: JEC FAL CCR
Pace Project No.: 60394835

Sample: FAA-6-030922 **Lab ID: 60394835003** Collected: 03/09/22 16:15 Received: 03/10/22 15:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.0745 ± 0.484 (0.977) C:NA T:97%**	pCi/L	03/24/22 12:27	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.0194 ± 0.303 (0.705) C:69% T:89%**	pCi/L	03/24/22 11:22	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.0939 ± 0.787 (1.68)**	pCi/L	03/25/22 10:37	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: JEC FAL CCR
Pace Project No.: 60394835

Sample: DUP-FAA-030922 **Lab ID: 60394835004** Collected: 03/09/22 16:15 Received: 03/10/22 15:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.000 ± 0.500 (1.04) C:NA T:94%**	pCi/L	03/24/22 12:27	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.416 ± 0.348 (0.696) C:73% T:90%**	pCi/L	03/24/22 11:22	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.416 ± 0.848 (1.74)**	pCi/L	03/25/22 10:37	7440-14-4	

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: JEC FAL CCR
Pace Project No.: 60394835

QC Batch: 490868
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: 60394835001, 60394835002, 60394835003, 60394835004

METHOD BLANK: 2374591 Matrix: Water
Associated Lab Samples: 60394835001, 60394835002, 60394835003, 60394835004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	-0.0998 ± 0.277 (0.654) C:NA T:105%	pCi/L	03/24/22 11:50	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: JEC FAL CCR
Pace Project No.: 60394835

QC Batch: 490870
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: 60394835001, 60394835002, 60394835003, 60394835004

METHOD BLANK: 2374594 Matrix: Water
Associated Lab Samples: 60394835001, 60394835002, 60394835003, 60394835004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.144 ± 0.285 (0.629) C:75% T:93%	pCi/L	03/24/22 11:20	

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

REPORT OF LABORATORY ANALYSIS

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

QUALIFIERS

Project: JEC FAL CCR
Pace Project No.: 60394835

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

Act - Activity

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

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

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.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: JEC FAL CCR
Pace Project No.: 60394835

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60394835001	**FAA-3-030922**	EPA 200.7	775829	EPA 200.7	776012
60394835002	**FAA-4-030922**	EPA 200.7	775829	EPA 200.7	776012
60394835003	**FAA-6-030922**	EPA 200.7	775829	EPA 200.7	776012
60394835004	**DUP-FAA-030922**	EPA 200.7	775829	EPA 200.7	776012
60394835001	**FAA-3-030922**	EPA 3010	777158	EPA 6010	777253
60394835002	**FAA-4-030922**	EPA 3010	777158	EPA 6010	777253
60394835003	**FAA-6-030922**	EPA 3010	777158	EPA 6010	777253
60394835004	**DUP-FAA-030922**	EPA 3010	777158	EPA 6010	777253
60394835001	**FAA-3-030922**	EPA 200.8	775918	EPA 200.8	776167
60394835002	**FAA-4-030922**	EPA 200.8	775918	EPA 200.8	776167
60394835003	**FAA-6-030922**	EPA 200.8	775918	EPA 200.8	776167
60394835004	**DUP-FAA-030922**	EPA 200.8	775918	EPA 200.8	776167
60394835001	**FAA-3-030922**	EPA 903.1	490868		
60394835002	**FAA-4-030922**	EPA 903.1	490868		
60394835003	**FAA-6-030922**	EPA 903.1	490868		
60394835004	**DUP-FAA-030922**	EPA 903.1	490868		
60394835001	**FAA-3-030922**	EPA 904.0	490870		
60394835002	**FAA-4-030922**	EPA 904.0	490870		
60394835003	**FAA-6-030922**	EPA 904.0	490870		
60394835004	**DUP-FAA-030922**	EPA 904.0	490870		
60394835001	**FAA-3-030922**	Total Radium Calculation	492886		
60394835002	**FAA-4-030922**	Total Radium Calculation	492886		
60394835003	**FAA-6-030922**	Total Radium Calculation	492886		
60394835004	**DUP-FAA-030922**	Total Radium Calculation	492886		
60394835001	**FAA-3-030922**	SM 2540C	775867		
60394835002	**FAA-4-030922**	SM 2540C	775867		
60394835003	**FAA-6-030922**	SM 2540C	775867		
60394835004	**DUP-FAA-030922**	SM 2540C	775867		
60394835001	**FAA-3-030922**	SM 4500-H+B	776035		
60394835002	**FAA-4-030922**	SM 4500-H+B	776035		
60394835003	**FAA-6-030922**	SM 4500-H+B	776035		
60394835004	**DUP-FAA-030922**	SM 4500-H+B	776255		
60394835001	**FAA-3-030922**	EPA 300.0	776038		
60394835002	**FAA-4-030922**	EPA 300.0	776038		
60394835003	**FAA-6-030922**	EPA 300.0	776038		
60394835004	**DUP-FAA-030922**	EPA 300.0	776038		

WO# : 60394835

60394835

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

Client Name: Evergy KS Central

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

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

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

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

Thermometer Used: T499 **Type of Ice:** (Wet) Blue None

Cooler Temperature (°C): **As-read** 4.4 **Corr. Factor** -0.2 **Corrected** 4.2

Date and initials of person examining contents: PW 3/11/22

Temperature should be above freezing to 6°C

Chain of Custody present:	☑Yes ☐No ☐N/A	
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	
Samples arrived within holding time:	☑Yes ☐No ☐N/A	
Short Hold Time analyses (<72hr):	☐Yes ☑No ☐N/A	
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	
Sufficient volume:	☑Yes ☐No ☐N/A	
Correct containers used:	☑Yes ☐No ☐N/A	
Pace containers used:	☑Yes ☐No ☐N/A	
Containers intact:	☑Yes ☐No ☐N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	☐Yes ☐No ☑N/A	
Filtered volume received for dissolved tests?	☐Yes ☐No ☑N/A	
Sample labels match COC: Date / time / ID / analyses	☑Yes ☐No ☐N/A	
Samples contain multiple phases? Matrix: WT	☐Yes ☑No ☐N/A	
Containers requiring pH preservation in compliance? ☑Yes ☐No ☐N/A (HNO_3, H_2SO_4, HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO) **LOT#:** 55192		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:	melissa.michels@evergy.com
Phone: 785-575-8113	Fax:
Requested Due Date/TAT:	7 day

Section B Required Project Information:

Report To:	Melissa Michels, Samantha Kaney, Danielle Ober
Copy To:	Jared Morrison, 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, 1

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

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	200.7 Total Metals*	200.8 Total Metals**	4500 H+B pH	300: Cl, F, SO4	2540C TDS	6010 Total Li***	Rad 226/ 228	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																		Y/N	N	N	N	N	N	N	N		60394835
1	FAA-3-030922	WT	G	-	-	03/09/22	15:20	-	7	3		4							X	X	X	X	X	X	X		
2	FAA-4-030922	WT	G	-	-	03/09/22	14:25	-	7	3		4							X	X	X	X	X	X	X		
3	FAA-6-030922	WT	G	-	-	03/09/22	16:15	-	7	3		4							X	X	X	X	X	X	X		
4	DUP-FAA-030922	WT	G	-	-	03/09/22	16:15	-	7	3		4							X	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	3/10/22	15:00		3/10	1500	4.2	Y	N	Y
200.8 Total Metals**: As, Co, Mo, Se,										
6010 Total Metals***: Li										

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

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Jason R. Franks

SIGNATURE of SAMPLER: Jason R. Franks DATE Signed (MM/DD/YY): 3/10/22

*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 KS Central

Profile #: 9657 - 1

Site:

Notes: BP1N 169 SI-RAD/SI-RADO2

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																		pr3/11	1		2	2	2									
2																			1		1	1	1									
3																			1		1	1	1									
4																			1		1	1	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: 60394835

Internal Transfer Chain of Custody

Pace Analytical®
www.pacelabs.com

☐ Samples Pre-Logged into eCOC.

State Of Origin: KS
Cert. Needed: [x] Yes ☐ No

Workorder: 60394835 **Workorder Name:** JEC FAL CCR
Owner Received Date: 3/10/2022 **Results Requested By:** 3/24/2022

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	Radium 226/228 total	LAB USE ONLY
1	FAA-3-030922	PS	3/9/2022 15:20	60394835001	Water	1	X	001
2	FAA-4-030922	PS	3/9/2022 14:25	60394835002	Water	1	X	002
3	FAA-6-030922	PS	3/9/2022 16:15	60394835003	Water	1	X	003
4	DUP-FAA-030922	PS	3/9/2022 16:15	60394835004	Water	1	X	004
5								

Transfers	Released By	Date/Time	Received By	Date/Time
1	[signature]	3/14/22 1500	[signature]	3/15/22 1015
2				
3				

Comments: **INCLUDE QC SHEETS**

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# : 30472877
30472877

Pittsburgh Lab Sample Condition Upon Receipt

Pace Analytical

Client Name: Pace KS Project # 30472877

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

Label JBH
LIMS Login VP

Tracking #: 5333 8760 3549

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

Thermometer Used NA 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	N/A	pH paper Lot# 10D2811 / Date and Initials of person examining contents: JBH 3-15-22
Chain of Custody Present:	✓			1.
Chain of Custody Filled Out:	✓			2.
Chain of Custody Relinquished:	✓			3.
Sampler Name & Signature on COC:		✓		4.
Sample Labels match COC: -Includes date/time/ID Matrix: WT	✓			5.
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 sample field filtered			✓	13.
Organic Samples checked for dechlorination:			✓	14.
Filtered volume received for Dissolved tests			✓	15.
All containers have been 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 JBH / Date/time of preservation / Lot # of added preservative
Headspace in VOA Vials (>6mm):			✓	17.
Trip Blank Present:			✓	18.
Trip Blank Custody Seals Present			✓	
Rad Samples Screened < 0.5 mrem/hr	✓			Initial when completed: JBH / Date: 3-15-22 / Survey Meter SN: 1573

Client Notification/ Resolution:

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

Comments/ Resolution: _____

☐ **A check in this box indicates that additional information has been stored in ereports.**

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

***PM review** is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

Pace Analytical®

Pace Greensburg Lab -Sample Container Count

Client _____

Site 60394835 / Evergy Kansas Central, Inc

Profile Number 7746

Notes 2 containers for each line

Sample Line Item	Matrix	AG1H	AG1S	AG1T	AG2U	AG3S	AG3U	AG5U	AG5T	BG1U	BG2U	BP1N	BP1U	BP2S	BP2U	BP3C	BP3N	BP3S	BP3U	DG9S	GCUB	VG9H	VG9T	VG9U	VOAK	WGFU	WGKU	ZPLC	
1	WT											2																	
2												2																	
3												2																	
4	WT											2																	
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													

WO#: 30472877

PM: CF1 Due Date: 03/24/22

CLIENT: PACE_60_LEKS

Container Codes

Glass

GJN	1 Gallon Jug with HNO3	DG9S	40mL amber VOA vial H2SO4
AG5U	100mL amber glass unprserved	VG9U	40mL clear VOA vial
AG5T	100mL amber glass Na Thiosulfate	VG9T	40mL clear VOA vial Na Thiosul
GJN	1 Gallon Jug	VG9H	40mL clear VOA vial HCl
AG1S	1L amber glass H2SO4	JGFU	4oz amber wide jar
AG1H	1L amber glass HCl	WGFU	4oz wide jar unpreserved
AG1T	1L amber glass Na Thiosulfate	BG2U	500mL clear glass unpreserved
BG1U	1L clear glass unpreserved	AG2U	500mL amber glass unpreserve
AG3S	250mL amber glass H2SO4	WGKU	8oz wide jar unpreserved
AG3U	250mL amber glass unpreserved		

Plastic / Misc.

GCUB	1 Gallon Cubitainer
12GN	1/2 Gallon Cubitainer
SP5T	120mL Coliform Na Thiosulfate
BP1N	1L plastic HNO3
BP1U	1L plastic unpreserved
BP3S	250mL plastic H2SO4
BP3N	250mL plastic HNO3
BP3U	250mL plastic unpreserved
BP3C	250ml plastic NAOH
BP2S	500mL plastic H2SO4
BP2U	500mL plastic unpreserved

EZI	5g Encore
VOAK	Kit for Volatile Solid
I	Wipe/Swab
ZPLC	Ziploc Bag

WT	Water
SL	Solid
OL	Non-aqueous liquid
WP	Wipe

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-228
Analyst:	VAL
Date:	3/21/2022
Worklist:	65628
Matrix:	W I

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2374594
MB concentration:	0.144
M/B 2 Sigma CSU:	0.285
MB MDC:	0.629
MB Numerical Performance Indicator:	0.99
MB Status vs Numerical Indicator:	Pass
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS65628	LCSD65628
Count Date:	3/24/2022	3/24/2022
Spike I.D.:	22-016	22-016
Decay Corrected Spike Concentration (pCi/mL):	36.362	36.362
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.814	0.808
Target Conc. (pCi/L, g, F):	4.468	4.499
Uncertainty (Calculated):	0.219	0.220
Result (pCi/L, g, F):	3.222	3.368
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	0.771	0.813
Numerical Performance Indicator:	-3.05	-2.63
Percent Recovery:	72.11%	74.85%
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.:	LCS65628	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD65628	
Sample Result (pCi/L, g, F):	3.222	
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.771	
Sample Duplicate Result (pCi/L, g, F):	3.368	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	0.813	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	-0.255	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	3.72%	
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:

MH 3/25/22

CMH 3/25/22

Quality Control Sample Performance Assessment

Test: Ra-226
Analyst: SLC
Date: 3/17/2022
Batch ID: 65627
Matrix: DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2374591
MB concentration:	-0.100
M/B Counting Uncertainty:	0.277
MB MDC:	0.654
MB Numerical Performance Indicator:	-0.71
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS65627	LCSD65627
Count Date:	3/24/2022	3/24/2022
Spike I.D.:	21-040	21-040
Spike Concentration (pCi/mL):	32.433	32.433
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.656	0.652
Target Conc. (pCi/L, g, F):	4.942	4.975
Uncertainty (Calculated):	0.232	0.234
Result (pCi/L, g, F):	5.406	4.139
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.063	0.929
Numerical Performance Indicator:	0.83	-1.71
Percent Recovery:	109.38%	83.21%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	135%	135%
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.:	LCS65627	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD65627	
Sample Result (pCi/L, g, F):	5.406	
Sample Result Counting Uncertainty (pCi/L, g, F):	1.063	
Sample Duplicate Result (pCi/L, g, F):	4.139	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.929	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	1.758	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	27.18%	
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:

SLC 3/25/2022

ATTACHMENT 2-2
June 2022 Annual Assessment Sampling Event
Laboratory Analytical Report

Pace Analytical Services, LLC
225 Industrial Park RD
Beaver, WV 25813
(800)999-0105

August 01, 2022

LAURA HINES
EVERGY
818 Kansas Ave.
Topeka, KS 66612

RE: Project: JEC FAL CCR Annual Radchem
Pace Project No.: 30497424

Dear LAURA HINES:

Enclosed are the analytical results for sample(s) received by the laboratory on June 14, 2022. 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

(Greensburg, PA) - Revision 1 - This report replaces the 7/18/22 report. This project was revised on 7/20/22 to include quality sheets per client request.

(Greensburg, PA) - Revision 2 - This report replaces the 7/20/22 report. This project was revised on 8/1/22 to remove an incorrect comment.

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

Sincerely,

Skyler C. Richmond
skyler.richmond@pacelabs.com
(724)850-5600
Project Manager

Enclosures

cc: DANIELLE OBERBROECKLING, HALEY & ALDRICH INC.
EVERGY ACCOUNTS PAYABLE, EVERGY

Pace Analytical Services, LLC
225 Industrial Park RD
Beaver, WV 25813
(800)999-0105

CERTIFICATIONS

Project: JEC FAL CCR Annual Radchem
Pace Project No.: 30497424

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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Beaver, WV 25813
(800)999-0105

SAMPLE SUMMARY

Project: JEC FAL CCR Annual Radchem
Pace Project No.: 30497424

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30497424001	**FAA-5-06/13/22**	Water	06/13/22 15:35	06/14/22 09:35
30497424002	**FAA-3-06/13/22**	Water	06/13/22 13:05	06/14/22 09:35
30497424003	**FAA-4-06/13/22**	Water	06/13/22 12:15	06/14/22 09:35
30497424004	**FAA-6-06/13/22**	Water	06/13/22 14:00	06/14/22 09:35
30497424005	**DUP-FAA_-06/13/22**	Water	06/13/22 14:00	06/14/22 09:35

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SAMPLE ANALYTE COUNT

Project: JEC FAL CCR Annual Radchem
Pace Project No.: 30497424

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
30497424001	**FAA-5-06/13/22**	EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30497424002	**FAA-3-06/13/22**	EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30497424003	**FAA-4-06/13/22**	EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30497424004	**FAA-6-06/13/22**	EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30497424005	**DUP-FAA_-06/13/22**	EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

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Beaver, WV 25813
(800)999-0105

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: JEC FAL CCR Annual Radchem
Pace Project No.: 30497424

Sample: FAA-5-06/13/22 **Lab ID: 30497424001** Collected: 06/13/22 15:35 Received: 06/14/22 09:35 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.238 ± 0.248 (0.350) C:NA T:95%**	pCi/L	07/12/22 16:49	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.180 ± 0.316 (0.691) C:81% T:95%**	pCi/L	07/06/22 13:44	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.418 ± 0.564 (1.04)**	pCi/L	07/13/22 18:39	7440-14-4	

Sample: FAA-3-06/13/22 **Lab ID: 30497424002** Collected: 06/13/22 13:05 Received: 06/14/22 09:35 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.217 ± 0.249 (0.147) C:NA T:85%**	pCi/L	07/12/22 16:49	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.05 ± 0.454 (0.743) C:78% T:85%**	pCi/L	07/06/22 13:15	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.27 ± 0.703 (0.890)**	pCi/L	07/13/22 18:39	7440-14-4	

Sample: FAA-4-06/13/22 **Lab ID: 30497424003** Collected: 06/13/22 12:15 Received: 06/14/22 09:35 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.106 ± 0.254 (0.491) C:NA T:91%**	pCi/L	07/12/22 16:49	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.323 ± 0.382 (0.806) C:73% T:91%**	pCi/L	07/06/22 13:44	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.429 ± 0.636 (1.30)**	pCi/L	07/13/22 18:39	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Beaver, WV 25813
(800)999-0105

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: JEC FAL CCR Annual Radchem
Pace Project No.: 30497424

Sample: FAA-6-06/13/22 **Lab ID: 30497424004** Collected: 06/13/22 14:00 Received: 06/14/22 09:35 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.177 ± 0.204 (0.120) C:NA T:95%**	pCi/L	07/12/22 16:49	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.178 ± 0.339 (0.744) C:75% T:95%**	pCi/L	07/06/22 13:44	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.355 ± 0.543 (0.864)**	pCi/L	07/13/22 18:39	7440-14-4	

Sample: DUP-FAA_-06/13/22 **Lab ID: 30497424005** Collected: 06/13/22 14:00 Received: 06/14/22 09:35 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.145 ± 0.221 (0.356) C:NA T:92%**	pCi/L	07/12/22 16:49	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.415 ± 0.372 (0.755) C:71% T:92%**	pCi/L	07/06/22 13:14	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.560 ± 0.593 (1.11)**	pCi/L	07/13/22 18:39	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
225 Industrial Park RD
Beaver, WV 25813
(800)999-0105

QUALITY CONTROL - RADIOCHEMISTRY

Project: JEC FAL CCR Annual Radchem
Pace Project No.: 30497424

QC Batch: 511737
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: 30497424001, 30497424002, 30497424003, 30497424004, 30497424005

METHOD BLANK: 2480199 Matrix: Water
Associated Lab Samples: 30497424001, 30497424002, 30497424003, 30497424004, 30497424005

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.000 ± 0.214 (0.435) C:NA T:97%	pCi/L	07/12/22 16:09	

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
225 Industrial Park RD
Beaver, WV 25813
(800)999-0105

QUALITY CONTROL - RADIOCHEMISTRY

Project: JEC FAL CCR Annual Radchem
Pace Project No.: 30497424

QC Batch: 511738
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: 30497424001, 30497424002, 30497424003, 30497424004, 30497424005

METHOD BLANK: 2480200 Matrix: Water
Associated Lab Samples: 30497424001, 30497424002, 30497424003, 30497424004, 30497424005

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.230 ± 0.287 (0.609) C:77% T:97%	pCi/L	07/06/22 13:19	

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
225 Industrial Park RD
Beaver, WV 25813
(800)999-0105

QUALIFIERS

Project: JEC FAL CCR Annual Radchem
Pace Project No.: 30497424

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: For Safe Drinking Water Act (SDWA) analyses, the reported Unc. Is the calculated Count Uncertainty (95% confidence interval) using a coverage factor of 1.96. For all other matrices (non-SDWA), the reported Unc. is the calculated Expanded Uncertainty (aka Combined Standard Uncertainty, CSU), reported at the 95% confidence interval using a coverage factor of 1.96.

Gamma Spec: The Unc. reported for all gamma-spectroscopy analyses (EPA 901.1), is the calculated Expanded Uncertainty (CSU) at the 95.4% confidence interval, using a coverage factor of 2.0.

(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.

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:	Melissa Michels, Danielle Oberbroeckling, Skaney	Attention:	Accounts Payable
Address:	Jeffrey Energy Center (JEC)	Copy To:	Jared Morrison, Jake Humphrey, Laura Hines	Company Name:	EVERGY KANSAS CENTRAL, INC.
818 Kansas Ave, Topeka, KS 66612				Address:	See Section A
Email:	melissa.michels@evergy.com	Purchase Order #:		Pace Quote:	
Phone:	602-760-2463 (DO) Fax:	Project Name:	JEC FAL CCR Annual Radchem	Pace Project Manager:	skyler.richmond@pacelabs.com,
Requested Due Date:	STD 2 WEEKS	Project #:		Pace Profile #:	9657, line 2

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 + total Radium	Radium 228	QAQC Sheets	Residual Chlorine (Y/N)
	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- 06/13/22	WT	G	-	-	6/13/22	1535		4	4			X						X	X	X	
2	FAA-3- 06/13/22	WT	G	-	-		1303		4	4			X						X	X	X	
3	FAA-4- 06/13/22	WT	G	-	-		1215		4	4			X						X	X	X	
4	FAA-6 06/13/22	WT	G	-	-		1400		4	4			X						X	X	X	
5	DUP-FAA- 06/13/22	WT	G	-	-		1400		4	4			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			
DIRECT RADCHEM WORK	Matt VanderPutten S/S	06/13/22	1630	[signature]	6/14/22	0935	—	N	N	Y

WO# : 30497424

30497424

SAMPLER NAME AND SIGNATURE			
PRINT Name of SAMPLER:	Matt VanderPutten		
SIGNATURE of SAMPLER:	[signature]	DATE Signed:	06/13/22

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

Pittsburgh Lab Sample Condition Upon Receipt

Pace Analytical

BSM 6-17-22

Client Name: JBC Energy Project # 30497424

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

Label BSM

LIMS Login UP

Tracking #: Missing tracking

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

pH paper Lot# 10229811 Date and Initials of person examining contents: BSM 6-17-22

Comments:	Yes	No	N/A	
Chain of Custody Present:	✓			1.
Chain of Custody Filled Out:	✓			2.
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 sample field filtered			✓	13.
Organic Samples checked for dechlorination:			✓	14.
Filtered volume received for Dissolved tests			✓	15.
All containers have been checked for preservation. exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, Non-aqueous matrix	✓			16. 27
All containers meet method preservation requirements.	✓			Initial when completed BSM Date/time of preservation Lot # of added preservative
Headspace in VOA Vials (>6mm):			✓	17.
Trip Blank Present:			✓	18.
Trip Blank Custody Seals Present			✓	
Rad Samples Screened < 0.5 mrem/hr				Initial when completed: Date: Survey Meter SN:

Client Notification/ Resolution:

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

Comments/ Resolution: _____

☐ **A check in this box indicates that additional information has been stored in ereports.**

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

*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

30497484

Pace Analytical®

Pace Greensburg Lab -Sample Container Count

Client

Profile Number 18457

Site JEC FAL CCR Annual Radchem

Notes

Sample Line Item	Matrix	AG1H	AG1S	AG1T	AG2U	AG3S	AG3U	AG5U	AG5T	BG1U	BG2U	BP1N	BP1U	BP2S	BP2U	BP3C	BP3N	BP3S	BP3U	DG9S	GCUB	VG9H	VG9T	VG9U	VOAK	WGFU	WGKU	ZPLC	
1	WT											2																	
2																													
3																													
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													

Container Codes

Glass

GJN	1 Gallon Jug with HNO3	DG9S	40mL amber VOA vial H2SO4
AG5U	100mL amber glass unprserved	VG9U	40mL clear VOA vial
AG5T	100mL amber glass Na Thiosulfate	VG9T	40mL clear VOA vial Na Thiosul
GJN	1 Gallon Jug	VG9H	40mL clear VOA vial HCl
AG1S	1L amber glass H2SO4	JGFU	4oz amber wide jar
AG1H	1L amber glass HCl	WGFU	4oz wide jar unpreserved
AG1T	1L amber glass Na Thiosulfate	BG2U	500mL clear glass unpreserved
BG1U	1L clear glass unpreserved	AG2U	500mL amber glass unpreserve
AG3S	250mL amber glass H2SO4	WGKU	8oz wide jar unpreserved
AG3U	250mL amber glass unpreserved		

Plastic / Misc.

GCUB	1 Gallon Cubitainer
12GN	1/2 Gallon Cubitainer
SP5T	120mL Coliform Na Thiosulfate
BP1N	1L plastic HNO3
BP1U	1L plastic unpreserved
BP3S	250mL plastic H2SO4
BP3N	250mL plastic HNO3
BP3U	250mL plastic unpreserved
BP3C	250ml plastic NAOH
BP2S	500mL plastic H2SO4
BP2U	500mL plastic unpreserved

EZI	5g Encore
VOAK	Kit for Volatile Solid
I	Wipe/Swab
ZPLC	Ziploc Bag

WT	Water
SL	Solid
OL	Non-aqueous liquid
WP	Wipe

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-226
Analyst:	SLC
Date:	6/29/2022
Batch ID:	67275
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2480199
MB concentration:	0.000
M/B Counting Uncertainty:	0.184
MB MDC:	0.435
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)?	N
	LCS67275	LCSD67275
Count Date:	7/12/2022	
Spike I.D.:	21-031	
Spike Concentration (pCi/mL):	39.889	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.811	
Target Conc. (pCi/L, g, F):	4.919	
Uncertainty (Calculated):	0.231	
Result (pCi/L, g, F):	5.089	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.057	
Numerical Performance Indicator:	0.31	
Percent Recovery:	103.46%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	
Upper % Recovery Limits:	135%	
Lower % Recovery Limits:	73%	

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date:	6/7/2022	
Sample I.D.	50318387002	
Sample MS I.D.	50318387003	
Sample MSD I.D.	50318387004	
Spike I.D.:	21-031	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	39.891	
Spike Volume Used in MS (mL):	0.20	
Spike Volume Used in MSD (mL):	0.20	
MS Aliquot (L, g, F):	0.800	
MS Target Conc.(pCi/L, g, F):	9.969	
MSD Aliquot (L, g, F):	0.801	
MSD Target Conc. (pCi/L, g, F):	9.957	
MS Spike Uncertainty (calculated):	0.469	
MSD Spike Uncertainty (calculated):	0.468	
Sample Result:	0.366	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.340	
Sample Matrix Spike Result:	9.738	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	1.370	
Sample Matrix Spike Duplicate Result:	10.306	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	1.465	
MS Numerical Performance Indicator:	-0.787	
MSD Numerical Performance Indicator:	-0.021	
MS Percent Recovery:	94.01%	
MSD Percent Recovery:	99.83%	
MS Status vs Numerical Indicator:	N/A	
MSD Status vs Numerical Indicator:	N/A	
MS Status vs Recovery:	Pass	
MSD Status vs Recovery:	Pass	
MS/MSD Upper % Recovery Limits:	136%	
MS/MSD Lower % Recovery Limits:	71%	

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

Matrix Spike/Matrix Spike Duplicate Sample Assessment		
Sample I.D.	50318387002	
Sample MS I.D.	50318387003	
Sample MSD I.D.	50318387004	
Sample Matrix Spike Result:	9.738	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	1.370	
Sample Matrix Spike Duplicate Result:	10.306	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	1.465	
Duplicate Numerical Performance Indicator:	-0.556	
(Based on the Percent Recoveries) MS/ MSD Duplicate RPD:	6.00%	
MS/ MSD Duplicate Status vs Numerical Indicator:	N/A	
MS/ MSD Duplicate Status vs RPD:	Pass	
% RPD Limit:	32%	

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

Comments:

OK 7/13/22

GDH 7/13/22

Quality Control Sample Performance Assessment

Pace Analytical
www.pacelabs.com

Test:	Ra-228
Analyst:	VAL
Date:	6/30/2022
Worklist:	67276
Matrix:	WT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2480200
MB concentration:	0.230
M/B 2 Sigma CSU:	0.287
MB MDC:	0.609
MB Numerical Performance Indicator:	1.57
MB Status vs Numerical Indicator:	Pass
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS67276	LCSD67276
Count Date:	7/6/2022	
Spike I.D.:	22-016	
Decay Corrected Spike Concentration (pCi/mL):	35.135	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.811	
Target Conc. (pCi/L, g, F):	4.332	
Uncertainty (Calculated):	0.212	
Result (pCi/L, g, F):	4.581	
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	1.033	
Numerical Performance Indicator:	0.46	
Percent Recovery:	105.73%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	
Upper % Recovery Limits:	135%	
Lower % Recovery Limits:	60%	

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date:	6/7/2022	
Sample I.D.	50318387002	
Sample MS I.D.	50318387003	
Sample MSD I.D.	50318387004	
Spike I.D.:	22-016	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	35.473	
Spike Volume Used in MS (mL):	0.20	
Spike Volume Used in MSD (mL):	0.20	
MS Aliquot (L, g, F):	0.800	
MS Target Conc.(pCi/L, g, F):	8.865	
MSD Aliquot (L, g, F):	0.801	
MSD Target Conc. (pCi/L, g, F):	8.854	
MS Spike Uncertainty (calculated):	0.434	
MSD Spike Uncertainty (calculated):	0.434	
Sample Result:	0.719	
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.379	
Sample Matrix Spike Result:	6.797	
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	1.409	
Sample Matrix Spike Duplicate Result:	7.135	
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.478	
MS Numerical Performance Indicator:	-3.589	
MSD Numerical Performance Indicator:	-3.014	
MS Percent Recovery:	68.56%	
MSD Percent Recovery:	72.46%	
MS Status vs Numerical Indicator:	Fail****	
MSD Status vs Numerical Indicator:	Fail****	
MS Status vs Recovery:	Pass	
MSD Status vs Recovery:	Pass	
MS/MSD Upper % Recovery Limits:	135%	
MS/MSD Lower % Recovery Limits:	60%	

Duplicate Sample Assessment		
Sample I.D.:		Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.		
Sample Result (pCi/L, g, F):		
Sample Result 2 Sigma CSU (pCi/L, g, F):		
Sample Duplicate Result (pCi/L, g, F):		
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):		
Are sample and/or duplicate results below RL?	See Below ##	
Duplicate Numerical Performance Indicator:		
Duplicate RPD:		
Duplicate Status vs Numerical Indicator:		
Duplicate Status vs RPD:		
% RPD Limit:		

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.	50318387002
Sample MS I.D.	50318387003
Sample MSD I.D.	50318387004
Sample Matrix Spike Result:	6.797
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	1.409
Sample Matrix Spike Duplicate Result:	7.135
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.478
Duplicate Numerical Performance Indicator:	-0.325
(Based on the Percent Recoveries) MS/ MSD Duplicate RPD:	5.53%
MS/ MSD Duplicate Status vs Numerical Indicator:	Pass
MS/ MSD Duplicate Status vs RPD:	Pass
% RPD Limit:	36%

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

Comments:

JK 7/7/22 MS|MSD passes % recovery

****If all other QC criteria pass, this batch is acceptable. The matrix spike duplicate result indicates a possible bias for this sample only and may not be applicable to any other samples in this analytical batch.

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

June 29, 2022

Melissa Michels
Evergy, Inc.
818 Kansas Avenue
Topeka, KS 66612

RE: Project: JEC FAL CCR ANNUAL
Pace Project No.: 60403356

Dear Melissa Michels:

Enclosed are the analytical results for sample(s) received by the laboratory on June 14, 2022. 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: Laura Hines, Evergy, Inc.
Jake Humphrey, Evergy, Inc.
Samantha Kaney, Haley & Aldrich
Jared Morrison, Evergy, Inc.
Danielle Oberbroeckling, Haley & Aldrich
Melanie Satanek, Haley & Aldrich, Inc.
JD Schlegel, Evergy, Inc.
Jacob Will, Evergy Kansas Central, Jeffrey Energy Center

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CERTIFICATIONS

Project: JEC FAL CCR ANNUAL
Pace Project No.: 60403356

Pace Analytical Services Kansas
9608 Loiret Boulevard, Lenexa, KS 66219
Missouri Inorganic Drinking Water Certification #: 10090
Arkansas Drinking Water
Arkansas Certification #: 20-020-0
Arkansas Drinking Water
Illinois Certification #: 2000302021-3
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Nevada Certification #: KS000212020-2
Oklahoma Certification #: 9205/9935
Florida: Cert E871149 SEKS WET
Texas Certification #: T104704407-21-15
Utah Certification #: KS000212019-9
Illinois Certification #: 004592
Kansas Field Laboratory Accreditation: # E-92587
Missouri SEKS Micro Certification: 10070

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(913)599-5665

SAMPLE SUMMARY

Project: JEC FAL CCR ANNUAL
Pace Project No.: 60403356

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60403356001	**FAA-5-06/13/22**	Water	06/13/22 13:35	06/14/22 08:00
60403356002	**FAA-3-06/13/22**	Water	06/13/22 13:05	06/14/22 08:00
60403356003	**FAA-4-06/13/22**	Water	06/13/22 12:15	06/14/22 08:00
60403356004	**FAA-6-06/13/22**	Water	06/13/22 14:00	06/14/22 08:00
60403356005	**DUP-FAA-06/13/22**	Water	06/13/22 14:00	06/14/22 08:00

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SAMPLE ANALYTE COUNT

Project: JEC FAL CCR ANNUAL
Pace Project No.: 60403356

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60403356001	**FAA-5-06/13/22**	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	KB	1	PASI-K
60403356002	**FAA-3-06/13/22**	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	KB	1	PASI-K
60403356003	**FAA-4-06/13/22**	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	KB	1	PASI-K
60403356004	**FAA-6-06/13/22**	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	KB	1	PASI-K
60403356005	**DUP-FAA-06/13/22**	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	KB	1	PASI-K

PASI-K = Pace Analytical Services - Kansas City

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Lenexa, KS 66219
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PROJECT NARRATIVE

Project: JEC FAL CCR ANNUAL
Pace Project No.: 60403356

Method: **EPA 200.7**
Description: 200.7 Metals, Total
Client: Evergy Kansas Central, Inc.
Date: June 29, 2022

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
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Lenexa, KS 66219
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PROJECT NARRATIVE

Project: JEC FAL CCR ANNUAL
Pace Project No.: 60403356

Method: **EPA 6010**
Description: 6010 MET ICP
Client: Evergy Kansas Central, Inc.
Date: June 29, 2022

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
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Lenexa, KS 66219
(913)599-5665

PROJECT NARRATIVE

Project: JEC FAL CCR ANNUAL
Pace Project No.: 60403356

Method: **EPA 200.8**
Description: 200.8 MET ICPMS
Client: Evergy Kansas Central, Inc.
Date: June 29, 2022

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:

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

PROJECT NARRATIVE

Project: JEC FAL CCR ANNUAL
Pace Project No.: 60403356

Method: **EPA 245.1**
Description: 245.1 Mercury
Client: Evergy Kansas Central, Inc.
Date: June 29, 2022

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:

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

PROJECT NARRATIVE

Project: JEC FAL CCR ANNUAL
Pace Project No.: 60403356

Method: **EPA 300.0**
Description: 300.0 IC Anions 28 Days
Client: Evergy Kansas Central, Inc.
Date: June 29, 2022

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.

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

ANALYTICAL RESULTS

Project: JEC FAL CCR ANNUAL
Pace Project No.: 60403356

Sample: FAA-5-06/13/22 **Lab ID: 60403356001** Collected: 06/13/22 13:35 Received: 06/14/22 08:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City							
Barium, Total Recoverable	**<0.0050**	mg/L	0.0050	1	06/21/22 15:48	06/24/22 15:07	7440-39-3	
Beryllium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/21/22 15:48	06/24/22 15:07	7440-41-7	
Chromium, Total Recoverable	**<0.0050**	mg/L	0.0050	1	06/21/22 15:48	06/24/22 15:07	7440-47-3	
Lead, Total Recoverable	**<0.010**	mg/L	0.010	1	06/21/22 15:48	06/24/22 15:07	7439-92-1	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**0.12**	mg/L	0.010	1	06/22/22 07:45	06/24/22 15:36	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	06/21/22 15:48	06/25/22 14:54	7440-36-0	
Arsenic, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/21/22 15:48	06/25/22 14:54	7440-38-2	
Cadmium, Total Recoverable	**<0.00050**	mg/L	0.00050	1	06/21/22 15:48	06/25/22 14:54	7440-43-9	
Cobalt, Total Recoverable	**0.0012**	mg/L	0.0010	1	06/21/22 15:48	06/25/22 14:54	7440-48-4	
Molybdenum, Total Recoverable	**0.020**	mg/L	0.0010	1	06/21/22 15:48	06/25/22 14:54	7439-98-7	
Selenium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/21/22 15:48	06/25/22 14:54	7782-49-2	
Thallium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/21/22 15:48	06/25/22 14:54	7440-28-0	
245.1 Mercury	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1 Pace Analytical Services - Kansas City							
Mercury	**<0.20**	ug/L	0.20	1	06/28/22 07:35	06/28/22 12:53	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Fluoride	**0.58**	mg/L	0.20	1		06/22/22 15:00	16984-48-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(913)599-5665

ANALYTICAL RESULTS

Project: JEC FAL CCR ANNUAL
Pace Project No.: 60403356

Sample: FAA-3-06/13/22 **Lab ID: 60403356002** Collected: 06/13/22 13:05 Received: 06/14/22 08:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City							
Barium, Total Recoverable	**0.030**	mg/L	0.0050	1	06/21/22 15:48	06/24/22 15:13	7440-39-3	
Beryllium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/21/22 15:48	06/24/22 15:13	7440-41-7	
Chromium, Total Recoverable	**<0.0050**	mg/L	0.0050	1	06/21/22 15:48	06/24/22 15:13	7440-47-3	
Lead, Total Recoverable	**<0.010**	mg/L	0.010	1	06/21/22 15:48	06/24/22 15:13	7439-92-1	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**0.015**	mg/L	0.010	1	06/22/22 07:45	06/24/22 15:48	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	06/21/22 15:48	06/25/22 15:06	7440-36-0	
Arsenic, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/21/22 15:48	06/25/22 15:06	7440-38-2	
Cadmium, Total Recoverable	**<0.00050**	mg/L	0.00050	1	06/21/22 15:48	06/25/22 15:06	7440-43-9	
Cobalt, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/21/22 15:48	06/25/22 15:06	7440-48-4	
Molybdenum, Total Recoverable	**0.0079**	mg/L	0.0010	1	06/21/22 15:48	06/25/22 15:06	7439-98-7	
Selenium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/21/22 15:48	06/25/22 15:06	7782-49-2	
Thallium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/21/22 15:48	06/25/22 15:06	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	06/24/22 12:49	06/27/22 10:19	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		06/22/22 15:14	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: JEC FAL CCR ANNUAL
Pace Project No.: 60403356

Sample: FAA-4-06/13/22 **Lab ID: 60403356003** Collected: 06/13/22 12:15 Received: 06/14/22 08:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City							
Barium, Total Recoverable	**0.044**	mg/L	0.0050	1	06/21/22 15:48	06/24/22 15:21	7440-39-3	
Beryllium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/21/22 15:48	06/24/22 15:21	7440-41-7	
Chromium, Total Recoverable	**<0.0050**	mg/L	0.0050	1	06/21/22 15:48	06/24/22 15:21	7440-47-3	
Lead, Total Recoverable	**<0.010**	mg/L	0.010	1	06/21/22 15:48	06/24/22 15:21	7439-92-1	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**0.024**	mg/L	0.010	1	06/22/22 07:45	06/24/22 15:50	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	06/21/22 15:48	06/25/22 15:09	7440-36-0	
Arsenic, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/21/22 15:48	06/25/22 15:09	7440-38-2	
Cadmium, Total Recoverable	**<0.00050**	mg/L	0.00050	1	06/21/22 15:48	06/25/22 15:09	7440-43-9	
Cobalt, Total Recoverable	**0.0016**	mg/L	0.0010	1	06/21/22 15:48	06/25/22 15:09	7440-48-4	
Molybdenum, Total Recoverable	**0.0098**	mg/L	0.0010	1	06/21/22 15:48	06/25/22 15:09	7439-98-7	
Selenium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/21/22 15:48	06/25/22 15:09	7782-49-2	
Thallium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/21/22 15:48	06/25/22 15:09	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	06/24/22 12:49	06/27/22 10:22	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Fluoride	**0.50**	mg/L	0.20	1		06/22/22 15:28	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: JEC FAL CCR ANNUAL
Pace Project No.: 60403356

Sample: FAA-6-06/13/22 **Lab ID: 60403356004** Collected: 06/13/22 14:00 Received: 06/14/22 08:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City							
Barium, Total Recoverable	**0.034**	mg/L	0.0050	1	06/21/22 15:48	06/24/22 15:23	7440-39-3	
Beryllium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/21/22 15:48	06/24/22 15:23	7440-41-7	
Chromium, Total Recoverable	**<0.0050**	mg/L	0.0050	1	06/21/22 15:48	06/24/22 15:23	7440-47-3	
Lead, Total Recoverable	**<0.010**	mg/L	0.010	1	06/21/22 15:48	06/24/22 15:23	7439-92-1	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**0.016**	mg/L	0.010	1	06/22/22 07:45	06/24/22 15:52	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	06/21/22 15:48	06/25/22 15:12	7440-36-0	
Arsenic, Total Recoverable	**0.0049**	mg/L	0.0010	1	06/21/22 15:48	06/25/22 15:12	7440-38-2	
Cadmium, Total Recoverable	**<0.00050**	mg/L	0.00050	1	06/21/22 15:48	06/25/22 15:12	7440-43-9	
Cobalt, Total Recoverable	**0.0019**	mg/L	0.0010	1	06/21/22 15:48	06/25/22 15:12	7440-48-4	
Molybdenum, Total Recoverable	**0.17**	mg/L	0.0010	1	06/21/22 15:48	06/25/22 15:12	7439-98-7	
Selenium, Total Recoverable	**0.0018**	mg/L	0.0010	1	06/21/22 15:48	06/25/22 15:12	7782-49-2	
Thallium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/21/22 15:48	06/25/22 15:12	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	06/24/22 12:49	06/27/22 10:28	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Fluoride	**0.58**	mg/L	0.20	1		06/22/22 15:42	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: JEC FAL CCR ANNUAL
Pace Project No.: 60403356

Sample: DUP-FAA-06/13/22 **Lab ID: 60403356005** Collected: 06/13/22 14:00 Received: 06/14/22 08:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City							
Barium, Total Recoverable	**0.033**	mg/L	0.0050	1	06/21/22 15:48	06/24/22 15:26	7440-39-3	
Beryllium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/21/22 15:48	06/24/22 15:26	7440-41-7	
Chromium, Total Recoverable	**<0.0050**	mg/L	0.0050	1	06/21/22 15:48	06/24/22 15:26	7440-47-3	
Lead, Total Recoverable	**<0.010**	mg/L	0.010	1	06/21/22 15:48	06/24/22 15:26	7439-92-1	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**0.016**	mg/L	0.010	1	06/22/22 07:45	06/24/22 15:54	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	06/21/22 15:48	06/25/22 15:15	7440-36-0	
Arsenic, Total Recoverable	**0.0055**	mg/L	0.0010	1	06/21/22 15:48	06/25/22 15:15	7440-38-2	
Cadmium, Total Recoverable	**<0.00050**	mg/L	0.00050	1	06/21/22 15:48	06/25/22 15:15	7440-43-9	
Cobalt, Total Recoverable	**0.0017**	mg/L	0.0010	1	06/21/22 15:48	06/25/22 15:15	7440-48-4	
Molybdenum, Total Recoverable	**0.20**	mg/L	0.0010	1	06/21/22 15:48	06/25/22 15:15	7439-98-7	
Selenium, Total Recoverable	**0.0016**	mg/L	0.0010	1	06/21/22 15:48	06/25/22 15:15	7782-49-2	
Thallium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/21/22 15:48	06/25/22 15:15	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	06/24/22 12:49	06/27/22 10:35	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Fluoride	**0.58**	mg/L	0.20	1		06/27/22 12:51	16984-48-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: JEC FAL CCR ANNUAL
Pace Project No.: 60403356

QC Batch: 794213
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: 60403356002, 60403356003, 60403356004, 60403356005

METHOD BLANK: 3163947 Matrix: Water
Associated Lab Samples: 60403356002, 60403356003, 60403356004, 60403356005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	<0.20	0.20	06/27/22 10:08	

LABORATORY CONTROL SAMPLE: 3163948

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.7	93	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3163949 3163950

Parameter	Units	60403356003 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	4.5	4.6	89	92	70-130	3	20	

MATRIX SPIKE SAMPLE: 3163951

Parameter	Units	60403246005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	<0.20	5	4.1	81	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 ANNUAL
Pace Project No.: 60403356

QC Batch: 794791
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: 60403356001

METHOD BLANK: 3166275 Matrix: Water
Associated Lab Samples: 60403356001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	<0.20	0.20	06/28/22 12:48	

LABORATORY CONTROL SAMPLE: 3166276

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.8	95	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3166277 3166278

Parameter	Units	60403356001 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	4.8	4.6	96	91	70-130	5	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: JEC FAL CCR ANNUAL
Pace Project No.: 60403356

QC Batch: 793579
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: 60403356001, 60403356002, 60403356003, 60403356004, 60403356005

METHOD BLANK: 3161573 Matrix: Water
Associated Lab Samples: 60403356001, 60403356002, 60403356003, 60403356004, 60403356005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Barium	mg/L	<0.0050	0.0050	06/24/22 15:05	
Beryllium	mg/L	<0.0010	0.0010	06/24/22 15:05	
Chromium	mg/L	<0.0050	0.0050	06/24/22 15:05	
Lead	mg/L	<0.010	0.010	06/24/22 15:05	

LABORATORY CONTROL SAMPLE: 3161574

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	mg/L	1	0.99	99	85-115	
Beryllium	mg/L	1	1.0	103	85-115	
Chromium	mg/L	1	1.0	100	85-115	
Lead	mg/L	1	1.0	101	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3161575 3161576

Parameter	Units	60403356001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	mg/L	<0.0050	1	1	1.0	0.98	100	97	70-130	2	20	
Beryllium	mg/L	<0.0010	1	1	0.99	0.96	99	96	70-130	2	20	
Chromium	mg/L	<0.0050	1	1	0.98	0.96	98	96	70-130	2	20	
Lead	mg/L	<0.010	1	1	0.97	0.95	97	95	70-130	2	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 ANNUAL
Pace Project No.: 60403356

QC Batch: 793592
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: 60403356001, 60403356002, 60403356003, 60403356004, 60403356005

METHOD BLANK: 3161647 Matrix: Water
Associated Lab Samples: 60403356001, 60403356002, 60403356003, 60403356004, 60403356005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	mg/L	<0.0010	0.0010	06/25/22 14:50	
Arsenic	mg/L	<0.0010	0.0010	06/25/22 14:50	
Cadmium	mg/L	<0.00050	0.00050	06/25/22 14:50	
Cobalt	mg/L	<0.0010	0.0010	06/25/22 14:50	
Molybdenum	mg/L	<0.0010	0.0010	06/25/22 14:50	
Selenium	mg/L	<0.0010	0.0010	06/25/22 14:50	
Thallium	mg/L	<0.0010	0.0010	06/25/22 14:50	

LABORATORY CONTROL SAMPLE: 3161648

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.04	0.038	95	85-115	
Arsenic	mg/L	0.04	0.037	92	85-115	
Cadmium	mg/L	0.04	0.038	95	85-115	
Cobalt	mg/L	0.04	0.038	95	85-115	
Molybdenum	mg/L	0.04	0.039	97	85-115	
Selenium	mg/L	0.04	0.038	95	85-115	
Thallium	mg/L	0.04	0.037	93	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3161649 3161650

Parameter	Units	60403356001 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	0.037	0.036	91	90	70-130	1	20	
Arsenic	mg/L	<0.0010	0.04	0.04	0.036	0.036	89	88	70-130	2	20	
Cadmium	mg/L	<0.00050	0.04	0.04	0.034	0.033	84	83	70-130	1	20	
Cobalt	mg/L	0.0012	0.04	0.04	0.033	0.032	79	78	70-130	2	20	
Molybdenum	mg/L	0.020	0.04	0.04	0.059	0.058	99	96	70-130	2	20	
Selenium	mg/L	<0.0010	0.04	0.04	0.043	0.043	107	106	70-130	1	20	
Thallium	mg/L	<0.0010	0.04	0.04	0.039	0.039	98	97	70-130	1	20	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: JEC FAL CCR ANNUAL
Pace Project No.: 60403356

QC Batch: 793675
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60403356001, 60403356002, 60403356003, 60403356004, 60403356005

METHOD BLANK: 3161941 Matrix: Water
Associated Lab Samples: 60403356001, 60403356002, 60403356003, 60403356004, 60403356005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lithium	mg/L	<0.010	0.010	06/24/22 15:34	

LABORATORY CONTROL SAMPLE: 3161942

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: 3161943 3161944

Parameter	Units	60403356002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lithium	mg/L	0.015	1	1	0.98	1.0	97	98	75-125	2	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 ANNUAL
Pace Project No.: 60403356

QC Batch: 793624 — 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: 60403356001, 60403356002, 60403356003, 60403356004

METHOD BLANK: 3161785 — Matrix: Water
Associated Lab Samples: 60403356001, 60403356002, 60403356003, 60403356004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Fluoride	mg/L	<0.20	0.20	06/22/22 10:17	

METHOD BLANK: 3164319 — Matrix: Water
Associated Lab Samples: 60403356001, 60403356002, 60403356003, 60403356004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Fluoride	mg/L	<0.20	0.20	06/23/22 17:20	

LABORATORY CONTROL SAMPLE: 3161786

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	2.5	2.4	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3161787 3161788

Parameter	Units	60403403001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Fluoride	mg/L	ND	25	25	23.3	23.5	88	89	80-120	1	15	

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: JEC FAL CCR ANNUAL
Pace Project No.: 60403356

QC Batch: 794380
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: 60403356005

METHOD BLANK: 3164550 Matrix: Water
Associated Lab Samples: 60403356005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Fluoride	mg/L	<0.20	0.20	06/27/22 08:59	

METHOD BLANK: 3167602 Matrix: Water
Associated Lab Samples: 60403356005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Fluoride	mg/L	<0.20	0.20	06/28/22 08:54	

LABORATORY CONTROL SAMPLE: 3164551

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	2.5	2.5	100	90-110	

LABORATORY CONTROL SAMPLE: 3167603

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	2.5	2.5	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3164552 3164553

Parameter	Units	60403356005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Fluoride	mg/L	0.58	2.5	2.5	3.0	3.0	96	95	80-120	1	15	

MATRIX SPIKE SAMPLE: 3164554

Parameter	Units	60403257006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	ND	50	46.6	93	80-120	

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

REPORT OF LABORATORY ANALYSIS

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

QUALIFIERS

Project: JEC FAL CCR ANNUAL
Pace Project No.: 60403356

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 ANNUAL
Pace Project No.: 60403356

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60403356001	**FAA-5-06/13/22**	EPA 200.7	793579	EPA 200.7	793684
60403356002	**FAA-3-06/13/22**	EPA 200.7	793579	EPA 200.7	793684
60403356003	**FAA-4-06/13/22**	EPA 200.7	793579	EPA 200.7	793684
60403356004	**FAA-6-06/13/22**	EPA 200.7	793579	EPA 200.7	793684
60403356005	**DUP-FAA-06/13/22**	EPA 200.7	793579	EPA 200.7	793684
60403356001	**FAA-5-06/13/22**	EPA 3010	793675	EPA 6010	793749
60403356002	**FAA-3-06/13/22**	EPA 3010	793675	EPA 6010	793749
60403356003	**FAA-4-06/13/22**	EPA 3010	793675	EPA 6010	793749
60403356004	**FAA-6-06/13/22**	EPA 3010	793675	EPA 6010	793749
60403356005	**DUP-FAA-06/13/22**	EPA 3010	793675	EPA 6010	793749
60403356001	**FAA-5-06/13/22**	EPA 200.8	793592	EPA 200.8	793685
60403356002	**FAA-3-06/13/22**	EPA 200.8	793592	EPA 200.8	793685
60403356003	**FAA-4-06/13/22**	EPA 200.8	793592	EPA 200.8	793685
60403356004	**FAA-6-06/13/22**	EPA 200.8	793592	EPA 200.8	793685
60403356005	**DUP-FAA-06/13/22**	EPA 200.8	793592	EPA 200.8	793685
60403356001	**FAA-5-06/13/22**	EPA 245.1	794791	EPA 245.1	794873
60403356002	**FAA-3-06/13/22**	EPA 245.1	794213	EPA 245.1	794341
60403356003	**FAA-4-06/13/22**	EPA 245.1	794213	EPA 245.1	794341
60403356004	**FAA-6-06/13/22**	EPA 245.1	794213	EPA 245.1	794341
60403356005	**DUP-FAA-06/13/22**	EPA 245.1	794213	EPA 245.1	794341
60403356001	**FAA-5-06/13/22**	EPA 300.0	793624		
60403356002	**FAA-3-06/13/22**	EPA 300.0	793624		
60403356003	**FAA-4-06/13/22**	EPA 300.0	793624		
60403356004	**FAA-6-06/13/22**	EPA 300.0	793624		
60403356005	**DUP-FAA-06/13/22**	EPA 300.0	794380		

WO# : 60403356

60403356

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-LENE-000		
	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 ☒ Plc

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

Cooler Temperature (°C): **As-read** 3.1 **Corr. Factor** -1.0 **Corrected** 2.1

Date and initials of person examining contents: JW 6/20/22

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#:** 6106601	☒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.

Page : 1 Of 1

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:	
Company: Evergy Kansas Central, Inc.	Report To: Melissa Michels, Danielle Oberbroeckling, Skaney	Attention: Accounts Payable	
Address: Jeffrey Energy Center (JEC)	Copy To: Jared Morrison, Jake Humphrey, Laura Hines	Company Name: EVERGY KANSAS CENTRAL, INC.	
818 Kansas Ave, Topeka, KS 66612		Address: See Section A	Regulatory Agency
Email: melissa.michels@evergy.com	Purchase Order #:	Pace Quote:	
Phone: 602-760-2463 (DO) Fax:	Project Name: JEC FAL CCR Annual	Pace Project Manager: alice.spiller@pacelabs.com	State / Location
Requested Due Date: STD 2 WEEKS	Project #:	Pace Profile #: 9657, line 2	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	300.0 Anions Fluoride	245.1 Mercury	200.7 Ba,Be,Cr,Pb	200.8 Sb,As,Cd,Co,Mo,Se,Tl	6010 Lithium (RL <0.04 mg/L)	Residual Chlorine (Y/N)	60403356
	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		
1	FAA-5- 06/13/22	WT	G	-	-	6/13/22	1355		2	1		1							X	X	X	X	X		
2	FAA-3- 06/13/22	WT	G	-	-	6/13/22	1305		2	1		1							X	X	X	X	X		
3	FAA-4- 06/13/22	WT	G	-	-	6/13/22	1215		2	1		1							X	X	X	X	X		
4	FAA-6 06/13/22	WT	G	-	-	6/13/22	1400		2	1		1							X	X	X	X	X		
5	DUP-FAA-06/13/22	WT	G	-	-	6/13/22	1400		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			
Radchem work will be direct work/direct ship to Pace Pittsburg	Matt VanderPutten EKS	06/13/22	1630	[signature]	6/14	0800	2-1	Y	~	Y

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:	[signature]	DATE Signed: 06/13/22				

Client: Evergy

Profile # 9657, 2

Site: JEC FaL CCR ANNual

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																					/		/									
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		
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: 60403356

ATTACHMENT 2-3
September 2022 Semi-Annual Sampling Event
Laboratory Analytical Report

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

October 14, 2022

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

RE: Project: JEC MW-FAA-5
Pace Project No.: 60409975

Dear Jake Humphrey:

Enclosed are the analytical results for sample(s) received by the laboratory on September 09, 2022. 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 10/12/22 uniform reporting units

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: Laura Hines, Evergy, Inc.
Samantha Kaney, Haley & Aldrich
Melissa Michels, Evergy, Inc.
Danielle Oberbroeckling, Haley & Aldrich

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

CERTIFICATIONS

Project: JEC MW-FAA-5
Pace Project No.: 60409975

Pace Analytical Services Kansas
9608 Loiret Boulevard, Lenexa, KS 66219
Missouri Inorganic Drinking Water Certification #: 10090
Arkansas Drinking Water
Arkansas Certification #: 22-031-0
Arkansas Drinking Water
Illinois Certification #: 2000302021-3
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Nevada Certification #: KS000212020-2
Oklahoma Certification #: 9205/9935
Florida: Cert E871149 SEKS WET
Texas Certification #: T104704407-21-15
Utah Certification #: KS000212019-9
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 MW-FAA-5
Pace Project No.: 60409975

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60409975001	**MW-FAA-5-090822**	Water	09/08/22 10:55	09/09/22 16:30

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

SAMPLE ANALYTE COUNT

Project: JEC MW-FAA-5
Pace Project No.: 60409975

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60409975001	**MW-FAA-5-090822**	EPA 200.7	MA1	6	PASI-K
		EPA 6010	MRV	1	PASI-K
		EPA 200.8	JGP	7	PASI-K
		EPA 245.1	ALH	1	PASI-K
		SM 2540C	TML	1	PASI-K
		SM 4500-H+B	ET	1	PASI-K
		EPA 300.0	CRN2, RKA	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 MW-FAA-5
Pace Project No.: 60409975

Method: **EPA 200.7**
Description: 200.7 Metals, Total
Client: Evergy Kansas Central, Inc.
Date: October 14, 2022

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.

QC Batch: 807376

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60409977001,60409979005

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

- MS (Lab ID: 3211939)
  - Calcium
- MS (Lab ID: 3211941)
  - Calcium
- MSD (Lab ID: 3211940)
  - Calcium

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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

PROJECT NARRATIVE

Project: JEC MW-FAA-5
Pace Project No.: 60409975

Method: **EPA 6010**
Description: 6010 MET ICP
Client: Evergy Kansas Central, Inc.
Date: October 14, 2022

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:

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

PROJECT NARRATIVE

Project: JEC MW-FAA-5
Pace Project No.: 60409975

Method: **EPA 200.8**
Description: 200.8 MET ICPMS
Client: Evergy Kansas Central, Inc.
Date: October 14, 2022

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:

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

PROJECT NARRATIVE

Project: JEC MW-FAA-5
Pace Project No.: 60409975

Method: **EPA 245.1**
Description: 245.1 Mercury
Client: Evergy Kansas Central, Inc.
Date: October 14, 2022

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.

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 MW-FAA-5
Pace Project No.: 60409975

Method: **SM 2540C**
Description: 2540C Total Dissolved Solids
Client: Evergy Kansas Central, Inc.
Date: October 14, 2022

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: JEC MW-FAA-5
Pace Project No.: 60409975

Method: **SM 4500-H+B**
Description: 4500H+ pH, Electrometric
Client: Evergy Kansas Central, Inc.
Date: October 14, 2022

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-5-090822 (Lab ID: 60409975001)

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 MW-FAA-5
Pace Project No.: 60409975

Method: **EPA 300.0**
Description: 300.0 IC Anions 28 Days
Client: Evergy Kansas Central, Inc.
Date: October 14, 2022

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: 811017

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60409975001,60409979004

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

- MS (Lab ID: 3225334)
  - Fluoride
- MS (Lab ID: 3225336)
  - 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 MW-FAA-5
Pace Project No.: 60409975

Sample: MW-FAA-5-090822 **Lab ID: 60409975001** Collected: 09/08/22 10:55 Received: 09/09/22 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	09/13/22 12:55	09/14/22 11:23	7440-39-3	
Beryllium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	09/13/22 12:55	09/14/22 11:23	7440-41-7	
Boron, Total Recoverable	**1.6**	mg/L	0.10	1	09/13/22 12:55	09/14/22 11:23	7440-42-8	
Calcium, Total Recoverable	**471**	mg/L	0.20	1	09/13/22 12:55	09/14/22 11:23	7440-70-2	
Chromium, Total Recoverable	**<0.0050**	mg/L	0.0050	1	09/13/22 12:55	09/14/22 11:23	7440-47-3	
Lead, Total Recoverable	**<0.010**	mg/L	0.010	1	09/13/22 12:55	09/14/22 11:23	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	09/13/22 13:26	09/15/22 12:03	7439-93-2	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City							
Antimony, Total Recoverable	**<0.0010**	mg/L	0.0010	1	09/13/22 13:26	09/19/22 17:25	7440-36-0	
Arsenic, Total Recoverable	**<0.0010**	mg/L	0.0010	1	09/13/22 13:26	09/19/22 17:25	7440-38-2	
Cadmium, Total Recoverable	**<0.00050**	mg/L	0.00050	1	09/13/22 13:26	09/19/22 17:25	7440-43-9	
Cobalt, Total Recoverable	**0.0033**	mg/L	0.0010	1	09/13/22 13:26	09/19/22 17:25	7440-48-4	
Molybdenum, Total Recoverable	**0.026**	mg/L	0.0010	1	09/13/22 13:26	09/19/22 17:25	7439-98-7	
Selenium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	09/13/22 13:26	09/19/22 17:25	7782-49-2	
Thallium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	09/13/22 13:26	09/19/22 17:25	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	09/20/22 14:19	09/21/22 09:02	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City							
Total Dissolved Solids	**3780**	mg/L	100	1		09/15/22 11:20		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Kansas City							
pH at 25 Degrees C	**7.2**	Std. Units	0.10	1		09/12/22 11:28		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Chloride	**83.1**	mg/L	10.0	10		09/14/22 15:58	16887-00-6	
Fluoride	**<0.20**	mg/L	0.20	1		10/05/22 11:53	16984-48-8	M1
Sulfate	**2160**	mg/L	500	500		09/15/22 16:53	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: JEC MW-FAA-5
Pace Project No.: 60409975

QC Batch: 808530
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: 60409975001

METHOD BLANK: 3216171 Matrix: Water
Associated Lab Samples: 60409975001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/L	<0.00020	0.00020	09/21/22 08:48	

LABORATORY CONTROL SAMPLE: 3216172

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.005	0.0056	111	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3216173 3216174

Parameter	Units	60409921001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/L	0.37 ug/L	0.005	0.005	0.0057	0.0054	107	100	70-130	7	20	

SAMPLE DUPLICATE: 3217042

Parameter	Units	60410007001 Result	Dup Result	RPD	Max RPD	Qualifiers
Mercury	mg/L	ND	<0.00020		20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: JEC MW-FAA-5
Pace Project No.: 60409975

QC Batch: 807376
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: 60409975001

METHOD BLANK: 3211937 Matrix: Water
Associated Lab Samples: 60409975001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Barium	mg/L	<0.0050	0.0050	09/14/22 10:36	
Beryllium	mg/L	<0.0010	0.0010	09/14/22 10:36	
Boron	mg/L	<0.10	0.10	09/14/22 10:36	
Calcium	mg/L	<0.20	0.20	09/14/22 10:36	
Chromium	mg/L	<0.0050	0.0050	09/14/22 10:36	
Lead	mg/L	<0.010	0.010	09/14/22 10:36	

LABORATORY CONTROL SAMPLE: 3211938

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	mg/L	1	0.99	99	85-115	
Beryllium	mg/L	1	1.0	102	85-115	
Boron	mg/L	1	0.97	97	85-115	
Calcium	mg/L	10	9.9	99	85-115	
Chromium	mg/L	1	0.97	97	85-115	
Lead	mg/L	1	1.0	101	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3211939 3211940

Parameter	Units	60409977001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	mg/L	0.062	1	1	1.0	1.0	97	96	70-130	1	20	
Beryllium	mg/L	<0.0010	1	1	0.96	0.94	95	94	70-130	1	20	
Boron	mg/L	<0.10	1	1	1.0	1.0	95	95	70-130	0	20	
Calcium	mg/L	159	10	10	162	156	25	-33	70-130	4	20	M1
Chromium	mg/L	<0.0050	1	1	0.95	0.95	95	95	70-130	1	20	
Lead	mg/L	<0.010	1	1	0.99	0.98	98	98	70-130	0	20	

MATRIX SPIKE SAMPLE: 3211941

Parameter	Units	60409979005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Barium	mg/L	0.015	1	1.0	101	70-130	
Beryllium	mg/L	<0.0010	1	0.92	92	70-130	
Boron	mg/L	11.1	1	11.9	83	70-130	
Calcium	mg/L	584	10	586	25	70-130	M1
Chromium	mg/L	<0.0050	1	0.98	98	70-130	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: JEC MW-FAA-5
Pace Project No.: 60409975

MATRIX SPIKE SAMPLE: 3211941

Parameter	Units	60409979005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Lead	mg/L	<0.010	1	0.98	98	70-130	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: JEC MW-FAA-5
Pace Project No.: 60409975

QC Batch: 807378
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: 60409975001

METHOD BLANK: 3211946 Matrix: Water
Associated Lab Samples: 60409975001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	mg/L	<0.0010	0.0010	09/19/22 17:17	
Arsenic	mg/L	<0.0010	0.0010	09/19/22 17:17	
Cadmium	mg/L	<0.00050	0.00050	09/19/22 17:17	
Cobalt	mg/L	<0.0010	0.0010	09/19/22 17:17	
Molybdenum	mg/L	<0.0010	0.0010	09/19/22 17:17	
Selenium	mg/L	<0.0010	0.0010	09/19/22 17:17	
Thallium	mg/L	<0.0010	0.0010	09/19/22 17:17	

LABORATORY CONTROL SAMPLE: 3211947

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.04	0.040	101	85-115	
Arsenic	mg/L	0.04	0.040	99	85-115	
Cadmium	mg/L	0.04	0.042	105	85-115	
Cobalt	mg/L	0.04	0.039	98	85-115	
Molybdenum	mg/L	0.04	0.040	101	85-115	
Selenium	mg/L	0.04	0.042	106	85-115	
Thallium	mg/L	0.04	0.036	89	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3211948 3211949

Parameter	Units	60409975001 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	0.038	0.038	94	95	70-130	1	20	
Arsenic	mg/L	<0.0010	0.04	0.04	0.039	0.040	96	97	70-130	1	20	
Cadmium	mg/L	<0.00050	0.04	0.04	0.036	0.036	90	91	70-130	1	20	
Cobalt	mg/L	0.0033	0.04	0.04	0.044	0.044	101	101	70-130	0	20	
Molybdenum	mg/L	0.026	0.04	0.04	0.070	0.071	108	111	70-130	2	20	
Selenium	mg/L	<0.0010	0.04	0.04	0.040	0.040	98	99	70-130	1	20	
Thallium	mg/L	<0.0010	0.04	0.04	0.035	0.036	88	89	70-130	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: JEC MW-FAA-5
Pace Project No.: 60409975

QC Batch: 807381
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60409975001

METHOD BLANK: 3211956 Matrix: Water
Associated Lab Samples: 60409975001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lithium	mg/L	<0.010	0.010	09/15/22 11:46	

LABORATORY CONTROL SAMPLE: 3211957

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lithium	mg/L	1	0.94	94	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3211958 3211959

Parameter	Units	60410048005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lithium	mg/L	1730 ug/L	1	1	2.5	2.5	81	76	75-125	2	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: JEC MW-FAA-5
Pace Project No.: 60409975

QC Batch: 807819
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60409975001

METHOD BLANK: 3213723 Matrix: Water
Associated Lab Samples: 60409975001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	09/15/22 11:19	

LABORATORY CONTROL SAMPLE: 3213724

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

SAMPLE DUPLICATE: 3213725

Parameter	Units	60409826001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	571	552	3	10	

SAMPLE DUPLICATE: 3213726

Parameter	Units	60410000001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1170	1200	3	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: JEC MW-FAA-5
Pace Project No.: 60409975

QC Batch: 807086
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: 60409975001

SAMPLE DUPLICATE: 3210910

Parameter	Units	60409717001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	9.0	9.0	0	5	H6

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: JEC MW-FAA-5
Pace Project No.: 60409975

QC Batch: 807422
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: 60409975001

METHOD BLANK: 3212221 Matrix: Water
Associated Lab Samples: 60409975001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<1.0	1.0	09/13/22 10:15	
Sulfate	mg/L	<1.0	1.0	09/13/22 10:15	

METHOD BLANK: 3213161 Matrix: Water
Associated Lab Samples: 60409975001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<1.0	1.0	09/14/22 08:49	
Sulfate	mg/L	<1.0	1.0	09/14/22 08:49	

METHOD BLANK: 3214382 Matrix: Water
Associated Lab Samples: 60409975001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<1.0	1.0	09/15/22 08:54	
Sulfate	mg/L	<1.0	1.0	09/15/22 08:54	

LABORATORY CONTROL SAMPLE: 3212222

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

LABORATORY CONTROL SAMPLE: 3213162

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.9	97	90-110	
Sulfate	mg/L	5	5.1	103	90-110	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: JEC MW-FAA-5
Pace Project No.: 60409975

LABORATORY CONTROL SAMPLE: 3214383

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.8	95	90-110	
Sulfate	mg/L	5	4.8	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3212223 3212224

Parameter	Units	60409918001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	3.6J	25	25	24.2	25.4	82	87	80-120	5	15	
Sulfate	mg/L	27.5	25	25	49.2	51.2	87	95	80-120	4	15	

MATRIX SPIKE SAMPLE: 3212225

Parameter	Units	60409979002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	69.8	50	119	98	80-120	
Sulfate	mg/L	376	250	655	112	80-120	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: JEC MW-FAA-5
Pace Project No.: 60409975

QC Batch: 811017
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: 60409975001

METHOD BLANK: 3225332 Matrix: Water
Associated Lab Samples: 60409975001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Fluoride	mg/L	<0.20	0.20	10/05/22 11:28	

LABORATORY CONTROL SAMPLE: 3225333

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	2.5	2.5	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3225334 3225335

Parameter	Units	60409975001 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	2.1	2.2	77	81	80-120	5	15	M1

MATRIX SPIKE SAMPLE: 3225336

Parameter	Units	60409979004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	<0.20	2.5	1.0	37	80-120	M1

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

REPORT OF LABORATORY ANALYSIS

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

QUALIFIERS

Project: JEC MW-FAA-5
Pace Project No.: 60409975

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: JEC MW-FAA-5
Pace Project No.: 60409975

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60409975001	**MW-FAA-5-090822**	EPA 200.7	807376	EPA 200.7	807452
60409975001	**MW-FAA-5-090822**	EPA 3010	807381	EPA 6010	807426
60409975001	**MW-FAA-5-090822**	EPA 200.8	807378	EPA 200.8	807423
60409975001	**MW-FAA-5-090822**	EPA 245.1	808530	EPA 245.1	808691
60409975001	**MW-FAA-5-090822**	SM 2540C	807819		
60409975001	**MW-FAA-5-090822**	SM 4500-H+B	807086		
60409975001	**MW-FAA-5-090822**	EPA 300.0	807422		
60409975001	**MW-FAA-5-090822**	EPA 300.0	811017		

WO# : 60409975

60409975

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

Client Name: Evergy Kansas Central Inc

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

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

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

Packing Material: Bubble Wrap ☐ Bubble Bags ☐ Foam ☐ None ☐ Other ☑2PLC

Thermometer Used: 7299 **Type of Ice:** (Wet) Blue None

Cooler Temperature (°C): **As-read** 1.6 **Corr. Factor** 0.0 **Corrected** 1.6

Date and initials of person examining contents: LT 9/9/22

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#:** 55792	☑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	Analyses Test Y/N	200.7 / 200.8 / 245.1/6010*	300.0 Anions Cl,F,S	Total Dissolved Solids (TDS)	pH	Residual Chlorine (Y/N)	60409925
		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		
1	MW-FAA-5-090822	WT	G	-	-	9/8/22	10:55	-	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			
200.7/200.8 Be,B,Ca,Sb,As,Ba,Cd,Cr,Co,Pb,Mo,Se,Tl, Hg	Jason R. Franks / SCS	9/9/2022	14:00		9/9	1630	1.6	Y	Y	Y
6010 Li										

SAMPLER NAME AND SIGNATURE			TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:	Jason R. Franks					
SIGNATURE of SAMPLER:		DATE Signed: 9/9/2022				

60409975

Pace Container Order #986165

Addresses

Order By :		Ship To :		Return To:	
Company	Evergy Kansas Central, Inc.	Company	SCS Engineers	Company	Pace Analytical Kansas
Contact	Kaney, Samantha	Contact	Franks, Jason	Contact	Spiller, Alice
Email	skaney@haleyaldrich.com	Email	jfranks@scsengineers.com	Email	alice.spiller@pacelabs.com
Address	400 E Van Buren St	Address	8575 W 110th St	Address	9608 Loiret Blvd.
Address 2	Suite 545	Address 2	#100	Address 2	
City	Phoenix	City	Overland Park	City	Lenexa
State	AZ Zip 85004	State	KS Zip 66210	State	KS Zip 66219
Phone	(602)760-2441	Phone	(913) 749-0716	Phone	(913)599-5665

Info

Project Name MW-FAA-5 **Due Date** 09/02/2022 **Profile** 9657, 10 **Quote**

Project Manager Spiller, Alice **Return Date** **Carrier** Courier **Location** KS

Trip Blanks

- [ ] Include Trip Blanks

Bottle Labels

- [ ] Blank
- [X] Pre-Printed No Sample IDs
- [ ] Pre-Printed With Sample IDs

Bottles

- [ ] Boxed Cases
- [ ] Individually Wrapped
- [ ] Grouped By Sample ID/Matrix

Return Shipping Labels

- [ ] No Shipper
- [ ] With Shipper

COC Options

- [ ] Number of Blanks
- [X] Pre-Printed

Misc

- [ ] Sampling Instructions
- [X] Custody Seal
- [ ] Temp. Blanks
- [X] Coolers
- [ ] Syringes
- [ ] Extra Bubble Wrap
- [ ] Short Hold/Rush Stickers
- [ ] DI Water Liter(s)
- [ ] USDA Regulated Soils

# of Samples	Matrix	Test	Container	Total	# of	Lot #	Notes
1	WT	200.7 / 200.8 / 6010	250 mL nitric	2	0	071122-2EIZ	
1	WT	300.0 Anions	250mL plastic unpres	1	0	071122-2EJC	
1	WT	Total Dissolved Solids (TDS)	1-1L Plastic Unpreserved	1	0	072522-2EFB	
1	WT	pH	250 mL plastic	1	0	071122-2EJC	

Hazard Shipping Placard In Place : NO

*Sample receiving hours are Mon-Fri 7:00am-6:00pm and Sat 8:00am-2:00pm unless special arrangements are made with your project manager.

*Pace Analytical reserves the right to return hazardous, toxic, or radioactive samples to you.

*Pace Analytical reserves the right to charge for unused bottles, as well as cost associated with sample storage/disposal.

*Payment term are net 30 days.

*Please include the proposal number on the chain of custody to insure proper billing.

LAB USE:

Ship Date :	09/01/22 ~~09/07~~
Prepared By:	CB
Verified By:	

Sample

CLIENT USE (Optional):

Date Rec'd:	
Received By:	
Verified By:	

Client: Evergy Kansas Central Inc Profile # 96057

Site: MWFAA5 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			
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: 60409975

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		Danielle Oberbroeckling		Address:	
Email:	doberbroeckling@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	Analyses Test: 200.7 / 200.8/ 245.1*	300.0 Anions Cl,F,S	Total Dissolved Solids (TDS)	pH	Residual Chlorine (Y/N)
1																								
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)
200.7/200.8 B,Ca,Sb,As,Ba,Cd,Cr.Co,Pb.Mo,Se,Tl, Hg										

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER:

SIGNATURE of SAMPLER: **DATE Signed:**

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

October 04, 2022

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

RE: Project: JEC MW-FAA-5 RadChem
Pace Project No.: 60409976

Dear Jake Humphrey:

Enclosed are the analytical results for sample(s) received by the laboratory on September 09, 2022. 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: Laura Hines, Evergy, Inc.
Samantha Kaney, Haley & Aldrich
Melissa Michels, Evergy, Inc.
Danielle Oberbroeckling, Haley & Aldrich

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

CERTIFICATIONS

Project: JEC MW-FAA-5 RadChem
Pace Project No.: 60409976

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

SAMPLE SUMMARY

Project: JEC MW-FAA-5 RadChem
Pace Project No.: 60409976

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60409976001	**MW-FAA-5-090822**	Water	09/08/22 10:55	09/09/22 16:30

REPORT OF LABORATORY ANALYSIS

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

SAMPLE ANALYTE COUNT

Project: JEC MW-FAA-5 RadChem
Pace Project No.: 60409976

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60409976001	**MW-FAA-5-090822**	EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

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

PROJECT NARRATIVE

Project: JEC MW-FAA-5 RadChem
Pace Project No.: 60409976

Method: **EPA 903.1**
Description: 903.1 Radium 226
Client: Evergy Kansas Central, Inc.
Date: October 04, 2022

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: JEC MW-FAA-5 RadChem
Pace Project No.: 60409976

Method: **EPA 904.0**
Description: 904.0 Radium 228
Client: Evergy Kansas Central, Inc.
Date: October 04, 2022

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: JEC MW-FAA-5 RadChem
Pace Project No.: 60409976

Method: **Total Radium Calculation**
Description: Total Radium 228+226
Client: Evergy Kansas Central, Inc.
Date: October 04, 2022

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: JEC MW-FAA-5 RadChem
Pace Project No.: 60409976

Sample: MW-FAA-5-090822 **Lab ID: 60409976001** Collected: 09/08/22 10:55 Received: 09/09/22 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	**0.812 ± 0.776 (1.18) C:NA T:91%**	pCi/L	09/23/22 16:41	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.526 ± 0.449 (0.901) C:77% T:96%**	pCi/L	09/29/22 18:59	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.34 ± 0.897 (1.18)**	pCi/L	10/03/22 10:29	7440-14-4	

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: JEC MW-FAA-5 RadChem
Pace Project No.: 60409976

QC Batch: 533074
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: 60409976001

METHOD BLANK: 2586469 Matrix: Water
Associated Lab Samples: 60409976001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0595 ± 0.272 (0.161) C:NA T:96%	pCi/L	09/23/22 15:59	

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 MW-FAA-5 RadChem
Pace Project No.: 60409976

QC Batch: 533075
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: 60409976001

METHOD BLANK: 2586473 Matrix: Water
Associated Lab Samples: 60409976001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.538 ± 0.318 (0.574) C:81% T:96%	pCi/L	09/29/22 16:25	

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

REPORT OF LABORATORY ANALYSIS

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

QUALIFIERS

Project: JEC MW-FAA-5 RadChem
Pace Project No.: 60409976

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 MW-FAA-5 RadChem
Pace Project No.: 60409976

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60409976001	**MW-FAA-5-090822**	EPA 903.1	533074		
60409976001	**MW-FAA-5-090822**	EPA 904.0	533075		
60409976001	**MW-FAA-5-090822**	Total Radium Calculation	536687		

WO# : 60409976

60409976

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

Client Name: Evergy Kansas Central Inc

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

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

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

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

Thermometer Used: T299 LJ419 **Type of Ice:** ~~Wet~~ Blue ~~None~~

Cooler Temperature (°C): **As-read** 23.1 **Corr. Factor** 0.0 **Corrected** 23.1

Date and initials of person examining contents: LJ 9/9/22

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#: 53192	☑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

SAMPLE ID
One Character per box.
(A-Z, 0-9 / , -)
Sample Ids must be unique

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 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	Analyses Test: Radium 226	Radium 228	Total Radium	Residual Chlorine (Y/N)	60409976
																		Y/N	N	N	N		
1	MW-FAA-5-090822	WT	G	-	-	9/8/22	10:55	-	2			2							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	9/8/2022	14:00		9/9	1630	23.1	N	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Jason R. Franks

SIGNATURE of SAMPLER: Jason R. Franks

DATE Signed: 9/9/2022

60409976

Pace Container Order #986173

Addresses

Order By :		Ship To :		Return To:	
Company	Evergy Kansas Central, Inc.	Company	SCS Engineers	Company	Pace Analytical Kansas
Contact	Kaney, Samantha	Contact	Franks, Jason	Contact	Spiller, Alice
Email	skaney@haleyaldrich.com	Email	jfranks@scsengineers.com	Email	alice.spiller@pacelabs.com
Address	400 E Van Buren St	Address	8575 W 110th St	Address	9608 Loiret Blvd.
Address 2	Suite 545	Address 2	#100	Address 2	
City	Phoenix	City	Overland Park	City	Lenexa
State	AZ Zip 85004	State	KS Zip 66210	State	KS Zip 66219
Phone	(602)760-2441	Phone	(913) 749-0716	Phone	(913)599-5665

Info

Project Name MW-FAA-5 RADCHEM **Due Date** 09/02/2022 **Profile** 9657, 7 **Quote**

Project Manager Spiller, Alice **Return Date** **Carrier** Courier **Location** KS

Trip Blanks

- [ ] Include Trip Blanks

Bottle Labels

- [ ] Blank
- [X] Pre-Printed No Sample IDs
- [ ] Pre-Printed With Sample IDs

Bottles

- [ ] Boxed Cases
- [ ] Individually Wrapped
- [ ] Grouped By Sample ID/Matrix

Return Shipping Labels

- [ ] No Shipper
- [ ] With Shipper

COC Options

- [ ] Number of Blanks
- [X] Pre-Printed

Misc

- [ ] Sampling Instructions
- [X] Custody Seal
- [ ] Temp. Blanks
- [X] Coolers
- [ ] Syringes
- [ ] Extra Bubble Wrap
- [ ] Short Hold/Rush Stickers
- [ ] DI Water Liter(s)
- [ ] USDA Regulated Soils

# of Samples	Matrix	Test	Container	Total	# of	Lot #	Notes
1	WT	Radium 226/228	1-1L Plastic w/ HNO3	2	0	071122-2EIZ	

Hazard Shipping Placard In Place : NO

*Sample receiving hours are Mon-Fri 7:00am-6:00pm and Sat 8:00am-2:00pm unless special arrangements are made with your project manager.

*Pace Analytical reserves the right to return hazardous, toxic, or radioactive samples to you.

*Pace Analytical reserves the right to charge for unused bottles, as well as cost associated with sample storage/disposal.

*Payment term are net 30 days.

*Please include the proposal number on the chain of custody to insure proper billing.

LAB USE:

Ship Date :	09/01/22
Prepared By:	CB
Verified By:	

Sample

CLIENT USE (Optional):

Date Rec'd:	
Received By:	
Verified By:	

Client: Evergy Kansas Central Inc Profile # 9657

Site: MWFAA5 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: 60409976

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		Danielle Oberbroeckling		Address:	
Email:	doberbroeckling@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

SAMPLE ID
One Character per box.
(A-Z, 0-9 / , -)
Sample Ids must be unique

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 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	Total Radium	Residual Chlorine (Y/N)
1																							
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			

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER:

SIGNATURE of SAMPLER:

DATE Signed:

TEMP in C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

Internal Transfer Chain of Custody

☐ Samples Pre-Logged into eCOC.

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

Pace Analytical® www.pacelabs.com

Workorder: 60409976 Workorder Name: MW-FAA-5 RadChem Owner Received Date: 9/9/2022 Results Requested By: 10/11/2022

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	Radium 226 + QC Sheets	Radium 228 + QC Sheets	Total Radium Calculation	LAB USE ONLY
1	MW-FAA-5-090822	PS	9/8/2022 10:55	60409976001	Water	2	X	X	X	
2										
3										
4										
5										

Transfers	Released By	Date/Time	Received By	Date/Time
1	Wrm	9-13-22 1700	[signature]	9/14/22 9:25
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#: 30521609

30521609

Pittsburgh Lab Sample Condition Upon Receipt

Pace Analytical

Client Name: Pace - KS Project #

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

Label PS
LIMS Login VP

Tracking #: 5645 8496 5816

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

pH paper Lot# 10004721 Date and Initials of person examining contents: PS 9/14/22

PS 9/14/22
9/14/22

Comments:	Yes	No	N/A	
Chain of Custody Present:	✓			1.
Chain of Custody Filled Out:	✓			2.
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 sample field filtered			✓	13.
Organic Samples checked for dechlorination:			✓	14.
Filtered volume received for Dissolved tests			✓	15.
All containers have been 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 PS Date/time of preservation Lot # of added preservative
Headspace in VOA Vials (>6mm):			✓	17.
Trip Blank Present:		✓		18.
Trip Blank Custody Seals Present		✓		PS 9/14/22
Rad Samples Screened < 0.5 mrem/hr	✓			Initial when completed: PS Date: 9/14/22 Survey Meter SN: 1563

WO#:30521609
PM: CF1 Due Date: 10/05/22
CLIENT: PACE_60_LEKS

Client Notification/ Resolution:

9/14/22

Person Contacted: Date/Time: Contacted By:

Comments/ Resolution:

☐ **A check in this box indicates that additional information has been stored in ereports.**

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

*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-228
Analyst:	VAL
Date:	9/20/2022
Worklist:	68877
Matrix:	WT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2586473
MB concentration:	0.538
M/B 2 Sigma CSU:	0.318
MB MDC:	0.574
MB Numerical Performance Indicator:	3.32
MB Status vs Numerical Indicator:	Fail*
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS68877	LCSD68877
Count Date:	9/29/2022	9/29/2022
Spike I.D.:	22-029	22-029
Decay Corrected Spike Concentration (pCi/mL):	19.905	19.905
Volume Used (mL):	0.20	0.20
Aliquot Volume (L, g, F):	0.804	0.807
Target Conc. (pCi/L, g, F):	4.951	4.932
Uncertainty (Calculated):	0.356	0.355
Result (pCi/L, g, F):	4.181	3.107
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	0.937	0.811
Numerical Performance Indicator:	-1.51	-4.04
Percent Recovery:	84.44%	62.99%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	135%	135%
Lower % Recovery Limits:	60%	60%

Duplicate Sample Assessment		
Sample I.D.:	LCS68877	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD68877	
Sample Result (pCi/L, g, F):	4.181	
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.937	
Sample Duplicate Result (pCi/L, g, F):	3.107	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	0.811	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	1.699	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	29.10%	
Duplicate Status vs Numerical Indicator:	Pass	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	36%	

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:		

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.~~

VAL 9/30/22

MB activity < MDC, Pass

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-226
Analyst:	SLC
Date:	9/16/2022
Batch ID:	68876
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2586469
MB concentration:	0.060
M/B Counting Uncertainty:	0.117
MB MDC:	0.161
MB Numerical Performance Indicator:	1.00
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS68876	LCSD68876
Count Date:	9/23/2022	9/23/2022
Spike I.D.:	21-040	21-040
Spike Concentration (pCi/mL):	32.426	32.426
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.657	0.657
Target Conc. (pCi/L, g, F):	4.933	4.933
Uncertainty (Calculated):	0.232	0.232
Result (pCi/L, g, F):	5.715	4.277
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.174	0.962
Numerical Performance Indicator:	1.28	-1.30
Percent Recovery:	115.85%	86.70%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	135%	135%
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.:	LCS68876	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD68876	
Sample Result (pCi/L, g, F):	5.715	
Sample Result Counting Uncertainty (pCi/L, g, F):	1.174	
Sample Duplicate Result (pCi/L, g, F):	4.277	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.962	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	1.858	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	28.78%	
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:

GDH 9/23/22

LLM 9/24/22

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

October 13, 2022

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

RE: Project: JEC FAL CCR RadChem
Pace Project No.: 60409980

Dear Jake Humphrey:

Enclosed are the analytical results for sample(s) received by the laboratory on September 09, 2022. 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: Laura Hines, Evergy, Inc.
Samantha Kaney, Haley & Aldrich
Melissa Michels, Evergy, Inc.
Danielle Oberbroeckling, Haley & Aldrich

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CERTIFICATIONS

Project: JEC FAL CCR RadChem
Pace Project No.: 60409980

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: JEC FAL CCR RadChem
Pace Project No.: 60409980

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60409980001	**FAA-3-090822**	Water	09/08/22 16:45	09/09/22 17:00
60409980002	**FAA-4-090822**	Water	09/08/22 17:45	09/09/22 17:00
60409980003	**FAA-6-090822**	Water	09/08/22 14:25	09/09/22 17:00
60409980004	**DUP-FAA-090822**	Water	09/08/22 14:30	09/09/22 17:00

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SAMPLE ANALYTE COUNT

Project: JEC FAL CCR RadChem
Pace Project No.: 60409980

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60409980001	**FAA-3-090822**	EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
60409980002	**FAA-4-090822**	EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
60409980003	**FAA-6-090822**	EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
60409980004	**DUP-FAA-090822**	EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

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PROJECT NARRATIVE

Project: JEC FAL CCR RadChem
Pace Project No.: 60409980

Method: **EPA 903.1**
Description: 903.1 Radium 226
Client: Evergy Kansas Central, Inc.
Date: October 13, 2022

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 RadChem
Pace Project No.: 60409980

Method: **EPA 904.0**
Description: 904.0 Radium 228
Client: Evergy Kansas Central, Inc.
Date: October 13, 2022

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 RadChem
Pace Project No.: 60409980

Method: **Total Radium Calculation**
Description: Total Radium 228+226
Client: Evergy Kansas Central, Inc.
Date: October 13, 2022

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 RadChem
Pace Project No.: 60409980

Sample: FAA-3-090822 **Lab ID: 60409980001** Collected: 09/08/22 16:45 Received: 09/09/22 17:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.246 ± 0.535 (0.986) C:NA T:97%**	pCi/L	09/23/22 16:15	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**-0.0789 ± 0.356 (0.856) C:79% T:90%**	pCi/L	09/29/22 18:21	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.246 ± 0.643 (0.986)**	pCi/L	10/03/22 10:29	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: JEC FAL CCR RadChem
Pace Project No.: 60409980

Sample: FAA-4-090822 **Lab ID: 60409980002** Collected: 09/08/22 17:45 Received: 09/09/22 17:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.000 ± 0.426 (0.924) C:NA T:94%**	pCi/L	09/23/22 16:15	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.00551 ± 0.358 (0.833) C:85% T:93%**	pCi/L	09/29/22 18:22	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.00551 ± 0.556 (0.924)**	pCi/L	10/03/22 10:29	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: JEC FAL CCR RadChem
Pace Project No.: 60409980

Sample: FAA-6-090822 **Lab ID: 60409980003** Collected: 09/08/22 14:25 Received: 09/09/22 17:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.488 ± 0.678 (1.15) C:NA T:95%**	pCi/L	09/23/22 16:15	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.0545 ± 0.320 (0.741) C:80% T:93%**	pCi/L	09/29/22 18:22	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.543 ± 0.750 (1.15)**	pCi/L	10/03/22 10:29	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: JEC FAL CCR RadChem
Pace Project No.: 60409980

Sample: DUP-FAA-090822 **Lab ID: 60409980004** Collected: 09/08/22 14:30 Received: 09/09/22 17:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.000 ± 0.372 (0.834) C:NA T:90%**	pCi/L	09/23/22 16:28	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.535 ± 0.403 (0.791) C:80% T:77%**	pCi/L	10/03/22 11:40	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.535 ± 0.548 (0.834)**	pCi/L	10/04/22 17:14	7440-14-4	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: JEC FAL CCR RadChem
Pace Project No.: 60409980

QC Batch: 533074
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: 60409980001, 60409980002, 60409980003, 60409980004

METHOD BLANK: 2586469 Matrix: Water
Associated Lab Samples: 60409980001, 60409980002, 60409980003, 60409980004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0595 ± 0.272 (0.161) C:NA T:96%	pCi/L	09/23/22 15:59	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: JEC FAL CCR RadChem
Pace Project No.: 60409980

QC Batch: 533075
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: 60409980001, 60409980002, 60409980003, 60409980004

METHOD BLANK: 2586473 Matrix: Water
Associated Lab Samples: 60409980001, 60409980002, 60409980003, 60409980004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.538 ± 0.318 (0.574) C:81% T:96%	pCi/L	09/29/22 16:25	

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

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: JEC FAL CCR RadChem
Pace Project No.: 60409980

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 RadChem
Pace Project No.: 60409980

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60409980001	**FAA-3-090822**	EPA 903.1	533074		
60409980002	**FAA-4-090822**	EPA 903.1	533074		
60409980003	**FAA-6-090822**	EPA 903.1	533074		
60409980004	**DUP-FAA-090822**	EPA 903.1	533074		
60409980001	**FAA-3-090822**	EPA 904.0	533075		
60409980002	**FAA-4-090822**	EPA 904.0	533075		
60409980003	**FAA-6-090822**	EPA 904.0	533075		
60409980004	**DUP-FAA-090822**	EPA 904.0	533075		
60409980001	**FAA-3-090822**	Total Radium Calculation	536687		
60409980002	**FAA-4-090822**	Total Radium Calculation	536687		
60409980003	**FAA-6-090822**	Total Radium Calculation	536687		
60409980004	**DUP-FAA-090822**	Total Radium Calculation	537402		

WO# : 60409980

60409980

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

Client Name: Evergy Kansas Central, Inc.

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

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

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

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

Thermometer Used: T299 **Type of Ice:** Wet Blue None

Cooler Temperature (°C): **As-read** 7.2 **Corr. Factor** 0.0 **Corrected** 7.2

Date and initials of person examining contents: 9/6/22 SA

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: Sample collection date on chain of custody in date column was entered incorrectly. Sample ID name was used to reference correct collection date.

Project Manager Review: _____ Date: _____

Pace Analytical
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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:	melissa.michels@evergy.com
Phone: 785-575-8113	Fax:
Requested Due Date/TAT:	7 day

Section B Required Project Information:

Report To:	Melissa Michels, Samantha Kaney, Danielle Ober
Copy To:	Jared Morrison, 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, 1

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

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	Total Radium	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
				DATE	TIME	DATE	TIME																
1	FAA-3-090822	WT	G	-	-	03/09/22	16:45	-	2			2							X	X	X		60409980
2	FAA-4-090822	WT	G	-	-	03/09/22	17:45	-	2			2							X	X	X		
3	FAA-6-090822	WT	G	-	-	03/09/22	14:25	-	2			2							X	X	X		
4	DUP-FAA-090822	WT	G	-	-	03/09/22	14:30	-	2			2							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: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	Jason R. Franks / SCS	9/9/22	17:00		9/9/22	1700	1.2	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Jason R. Franks

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 9/9/22

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

Client: Evergy Kansas Central, Inc. Profile # 9657, 1

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	↓																					↓										
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: 60409980

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	Danielle Oberbroeckling	Address:
Email: doberbroeckling@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	Residual Chlorine (Y/N)
1																					
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			

SAMPLER NAME AND SIGNATURE				
PRINT Name of SAMPLER:				
SIGNATURE of SAMPLER:	DATE Signed:	TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

Internal Transfer Chain of Custody

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☐ Samples Pre-Logged into eCOC.

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

Workorder: 60409980 **Workorder Name:** JEC FAL CCR RadChem

Owner Received Date: 9/9/2022 Results Requested By: 10/11/2022

Report To	Subcontract To
Alice Spiller Pace Analytical Kansas 9608 Loiret Blvd. Lenexa, KS 66219 Phone (913)599-5665	Pace Analytical Pittsburgh 1638 Roseytown Road Suites 2,3, & 4 Greensburg, PA 15601 Phone (724)850-5600

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers HNO3						Requested Analysis: Radium 226 + QC Sheets	Radium 228 + QC Sheets	Total Radium Calculation									LAB USE ONLY
1	FAA-3-090822	PS	9/8/2022 16:45	60409980001	Water	2						X	X	X									
2	FAA-4-090822	PS	9/8/2022 17:45	60409980002	Water	2						X	X	X									
3	FAA-6-090822	PS	9/8/2022 14:25	60409980003	Water	2						X	X	X									
4	DUP-FAA-090822	PS	9/8/2022 14:30	60409980004	Water	2						X	X	X									
5																							

Transfers	Released By	Date/Time	Received By	Date/Time
1	[illegible]	9/13/22 1700	[illegible]	9/14/22 9:25
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# : 30521605
30521605

Pittsburgh Lab Sample Condition Upon Receipt

Pace Analytical

Client Name: Pace - ICS Project #

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

Label: PS
LIMS Login: LP

Tracking #: 5645 8496 5871

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	N/A	pH paper Lot# 10D0421 / Date and Initials of person examining contents: PS 9/14/22
Chain of Custody Present:	✓			1.
Chain of Custody Filled Out:	✓			2.
Chain of Custody Relinquished:	✓			3.
Sampler Name & Signature on COC:		✓		4.
Sample Labels match COC: -Includes date/time/ID Matrix: WT	✓			5.
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: -Pace Containers Used:	✓ ✓			10.
Containers Intact:	✓			11.
Orthophosphate field filtered			✓	12.
Hex Cr Aqueous sample field filtered			✓	13.
Organic Samples checked for dechlorination:			✓	14.
Filtered volume received for Dissolved tests			✓	15.
All containers have been 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: PS Date/time of preservation: Lot # of added preservative:
Headspace in VOA Vials (>6mm):			✓	17.
Trip Blank Present:		✓		18.
Trip Blank Custody Seals Present		✓		
Rad Samples Screened < 0.5 mrem/hr	✓			Initial when completed: PS Date: 9/14/22 Survey Meter SN: 1563

WO#: 30521605
Due Date: 10/05/22
PM: CF1
CLIENT: PACE_60_LEKS

Client Notification/ Resolution:

Person Contacted: Date/Time: Contacted By:

Comments/ Resolution:

☐ **A check in this box indicates that additional information has been stored in ereports.**

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

***PM review** is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

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:	melissa.michels@evergy.com
Phone: 785-575-8113	Fax:
Requested Due Date/TAT:	7 day

Section B Required Project Information:

Report To:	Melissa Michels, Samantha Kaney, Danielle Ober
Copy To:	Jared Morrison, 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, 1

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

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	Total Radium	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
				DATE	TIME	DATE	TIME																
1	FAA-3-090822	WT	G	-	-	03/09/22	16:45	-	2			2							X	X	X		60409980
2	FAA-4-090822	WT	G	-	-	03/09/22	17:45	-	2			2							X	X	X		
3	FAA-6-090822	WT	G	-	-	03/09/22	14:25	-	2			2							X	X	X		
4	DUP-FAA-090822	WT	G	-	-	03/09/22	14:30	-	2			2							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: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	Jason R. Franks / SCS	9/9/22	17:00		9/9/22	1700	1.2	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Jason R. Franks

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 9/9/22

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

Client: Evergy Kansas Central, Inc. Profile # 9657, 1

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	↓																					↓										
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: 60409980

Internal Transfer Chain of Custody

Pace Analytical®
www.pacelabs.com

☐ Samples Pre-Logged into eCOC.

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

Workorder: 60409980 **Workorder Name:** JEC FAL CCR RadChem

Owner Received Date: 9/9/2022 Results Requested By: 10/11/2022

Report To	Subcontract To
Alice Spiller Pace Analytical Kansas 9608 Loiret Blvd. Lenexa, KS 66219 Phone (913)599-5665	Pace Analytical Pittsburgh 1638 Roseytown Road Suites 2,3, & 4 Greensburg, PA 15601 Phone (724)850-5600

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers HNO3						Requested Analysis: Radium 226 + QC Sheets	Radium 228 + QC Sheets	Total Radium Calculation									LAB USE ONLY
1	FAA-3-090822	PS	9/8/2022 16:45	60409980001	Water	2						X	X	X									
2	FAA-4-090822	PS	9/8/2022 17:45	60409980002	Water	2						X	X	X									
3	FAA-6-090822	PS	9/8/2022 14:25	60409980003	Water	2						X	X	X									
4	DUP-FAA-090822	PS	9/8/2022 14:30	60409980004	Water	2						X	X	X									
5																							

Transfers	Released By	Date/Time	Received By	Date/Time
1	[illegible]	9/13/22 1700	[illegible]	9/14/22 9:25
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# : 30521605
30521605

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test: Ra-228
Analyst: VAL
Date: 9/20/2022
Worklist: 68877
Matrix: WT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2586473
MB concentration:	0.538
M/B 2 Sigma CSU:	0.318
MB MDC:	0.574
MB Numerical Performance Indicator:	3.32
MB Status vs Numerical Indicator:	Fail*
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS68877	LCSD68877
Count Date:	9/29/2022	9/29/2022
Spike I.D.:	22-029	22-029
Decay Corrected Spike Concentration (pCi/mL):	19.905	19.905
Volume Used (mL):	0.20	0.20
Aliquot Volume (L, g, F):	0.804	0.807
Target Conc. (pCi/L, g, F):	4.951	4.932
Uncertainty (Calculated):	0.356	0.355
Result (pCi/L, g, F):	4.181	3.107
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	0.937	0.811
Numerical Performance Indicator:	-1.51	-4.04
Percent Recovery:	84.44%	62.99%
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.:	LCS68877	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD68877	
Sample Result (pCi/L, g, F):	4.181	
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.937	
Sample Duplicate Result (pCi/L, g, F):	3.107	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	0.811	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	1.699	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	29.10%	
Duplicate Status vs Numerical Indicator:	Pass	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	36%	

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

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

Comments:

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

MB 9/30/22

MB activity < MDC, Pass

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test: Ra-228
Analyst: VAL
Date: 9/20/2022
Worklist: 68877
Matrix: WT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2586473
MB concentration:	0.538
M/B 2 Sigma CSU:	0.318
MB MDC:	0.574
MB Numerical Performance Indicator:	3.32
MB Status vs Numerical Indicator:	Fail*
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS68877	LCSD68877
Count Date:	9/29/2022	9/29/2022
Spike I.D.:	22-029	22-029
Decay Corrected Spike Concentration (pCi/mL):	19.905	19.905
Volume Used (mL):	0.20	0.20
Aliquot Volume (L, g, F):	0.804	0.807
Target Conc. (pCi/L, g, F):	4.951	4.932
Uncertainty (Calculated):	0.356	0.355
Result (pCi/L, g, F):	4.181	3.107
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	0.937	0.811
Numerical Performance Indicator:	-1.51	-4.04
Percent Recovery:	84.44%	62.99%
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.:	LCS68877	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD68877	
Sample Result (pCi/L, g, F):	4.181	
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.937	
Sample Duplicate Result (pCi/L, g, F):	3.107	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	0.811	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	1.699	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	29.10%	
Duplicate Status vs Numerical Indicator:	Pass	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	36%	

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

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

Comments:

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

MB 9/30/22

MB activity < MDC, Pass

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-226
Analyst:	SLC
Date:	9/16/2022
Batch ID:	68876
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2586469
MB concentration:	0.060
M/B Counting Uncertainty:	0.117
MB MDC:	0.161
MB Numerical Performance Indicator:	1.00
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS68876	LCSD68876
Count Date:	9/23/2022	9/23/2022
Spike I.D.:	21-040	21-040
Spike Concentration (pCi/mL):	32.426	32.426
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.657	0.657
Target Conc. (pCi/L, g, F):	4.933	4.933
Uncertainty (Calculated):	0.232	0.232
Result (pCi/L, g, F):	5.715	4.277
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.174	0.962
Numerical Performance Indicator:	1.28	-1.30
Percent Recovery:	115.85%	86.70%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	135%	135%
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.:	LCS68876	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD68876	
Sample Result (pCi/L, g, F):	5.715	
Sample Result Counting Uncertainty (pCi/L, g, F):	1.174	
Sample Duplicate Result (pCi/L, g, F):	4.277	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.962	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	1.858	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	28.78%	
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:

GDH 9/23/22

LLM 9/24/22

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

October 14, 2022

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

RE: Project: JEC FAL CCR
Pace Project No.: 60410001

Dear Jake Humphrey:

Enclosed are the analytical results for sample(s) received by the laboratory on September 09, 2022. 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 10/14/22

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: Laura Hines, Evergy, Inc.
Samantha Kaney, Haley & Aldrich
Melissa Michels, Evergy, Inc.
Danielle Oberbroeckling, Haley & Aldrich

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

CERTIFICATIONS

Project: JEC FAL CCR
Pace Project No.: 60410001

Pace Analytical Services Kansas
9608 Loiret Boulevard, Lenexa, KS 66219
Missouri Inorganic Drinking Water Certification #: 10090
Arkansas Drinking Water
Arkansas Certification #: 22-031-0
Arkansas Drinking Water
Illinois Certification #: 2000302021-3
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Nevada Certification #: KS000212020-2
Oklahoma Certification #: 9205/9935
Florida: Cert E871149 SEKS WET
Texas Certification #: T104704407-21-15
Utah Certification #: KS000212019-9
Illinois Certification #: 004592
Kansas Field Laboratory Accreditation: # E-92587
Missouri SEKS Micro Certification: 10070

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SAMPLE SUMMARY

Project: JEC FAL CCR
Pace Project No.: 60410001

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60410001001	**FAA-3-090822**	Water	09/08/22 16:45	09/09/22 17:00
60410001002	**FAA-4-090822**	Water	09/08/22 17:45	09/09/22 17:00
60410001003	**FAA-6-090822**	Water	09/08/22 14:25	09/09/22 17:00
60410001004	**DUP-FAA-090822**	Water	09/08/22 14:30	09/09/22 17:00

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9608 Loiret Blvd.
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SAMPLE ANALYTE COUNT

Project: JEC FAL CCR
Pace Project No.: 60410001

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60410001001	**FAA-3-090822**	EPA 200.7	MRV	3	PASI-K
		EPA 6010	MRV	1	PASI-K
		EPA 200.8	JGP	4	PASI-K
		SM 2540C	TML	1	PASI-K
		SM 4500-H+B	ET	1	PASI-K
		EPA 300.0	CRN2, RKA	3	PASI-K
60410001002	**FAA-4-090822**	EPA 200.7	MRV	3	PASI-K
		EPA 6010	MRV	1	PASI-K
		EPA 200.8	JGP	4	PASI-K
		SM 2540C	TML	1	PASI-K
		SM 4500-H+B	ET	1	PASI-K
		EPA 300.0	CRN2, RKA	3	PASI-K
60410001003	**FAA-6-090822**	EPA 200.7	MRV	3	PASI-K
		EPA 6010	MRV	1	PASI-K
		EPA 200.8	JGP	4	PASI-K
		SM 2540C	TML	1	PASI-K
		SM 4500-H+B	ET	1	PASI-K
		EPA 300.0	CRN2, RKA	3	PASI-K
60410001004	**DUP-FAA-090822**	EPA 200.7	MRV	3	PASI-K
		EPA 6010	MRV	1	PASI-K
		EPA 200.8	JGP	4	PASI-K
		SM 2540C	TML	1	PASI-K
		SM 4500-H+B	ET	1	PASI-K
		EPA 300.0	CRN2, RKA	3	PASI-K

PASI-K = Pace Analytical Services - Kansas City

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PROJECT NARRATIVE

Project: JEC FAL CCR
Pace Project No.: 60410001

Date: October 14, 2022

Amended to report data from review/reanalysis of fluoride due to intereferences on original run, new data has been reported.

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PROJECT NARRATIVE

Project: JEC FAL CCR
Pace Project No.: 60410001

Method: **EPA 200.7**
Description: 200.7 Metals, Total
Client: Evergy Kansas Central, Inc.
Date: October 14, 2022

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: 807547

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60410000001,60410030001

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

- MS (Lab ID: 3212528)
  - Calcium
- MSD (Lab ID: 3212529)
  - Calcium

Additional Comments:

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PROJECT NARRATIVE

Project: JEC FAL CCR
Pace Project No.: 60410001

Method: **EPA 6010**
Description: 6010 MET ICP
Client: Evergy Kansas Central, Inc.
Date: October 14, 2022

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
Pace Project No.: 60410001

Method: **EPA 200.8**
Description: 200.8 MET ICPMS
Client: Evergy Kansas Central, Inc.
Date: October 14, 2022

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
Pace Project No.: 60410001

Method: **SM 2540C**
Description: 2540C Total Dissolved Solids
Client: Evergy Kansas Central, Inc.
Date: October 14, 2022

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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(913)599-5665

PROJECT NARRATIVE

Project: JEC FAL CCR
Pace Project No.: 60410001

Method: **SM 4500-H+B**
Description: 4500H+ pH, Electrometric
Client: Evergy Kansas Central, Inc.
Date: October 14, 2022

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-090822 (Lab ID: 60410001004)
- FAA-3-090822 (Lab ID: 60410001001)
- FAA-4-090822 (Lab ID: 60410001002)
- FAA-6-090822 (Lab ID: 60410001003)

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: 807176

D6: The precision between the sample and sample duplicate exceeded laboratory control limits.
- DUP (Lab ID: 3211222)
  - pH at 25 Degrees C

Additional Comments:

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PROJECT NARRATIVE

Project: JEC FAL CCR
Pace Project No.: 60410001

Method: **EPA 300.0**
Description: 300.0 IC Anions 28 Days
Client: Evergy Kansas Central, Inc.
Date: October 14, 2022

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: 808515

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60410000004,60410030004

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

- MS (Lab ID: 3216066)
  - Chloride
- MSD (Lab ID: 3216067)
  - Chloride

QC Batch: 811017

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60409975001,60409979004

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

- MS (Lab ID: 3225334)
  - Fluoride
- MS (Lab ID: 3225336)
  - Fluoride

Additional Comments:

Analyte Comments:

QC Batch: 808515

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

- MS (Lab ID: 3216066)
  - Chloride
- MS (Lab ID: 3216068)
  - Sulfate
- MSD (Lab ID: 3216067)
  - Chloride

REPORT OF LABORATORY ANALYSIS

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

PROJECT NARRATIVE

Project: JEC FAL CCR
Pace Project No.: 60410001

Method: **EPA 300.0**
Description: 300.0 IC Anions 28 Days
Client: Evergy Kansas Central, Inc.
Date: October 14, 2022

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
Pace Project No.: 60410001

Sample: FAA-3-090822 **Lab ID: 60410001001** Collected: 09/08/22 16:45 Received: 09/09/22 17:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City							
Barium, Total Recoverable	**0.030**	mg/L	0.0050	1	09/14/22 09:42	09/19/22 11:18	7440-39-3	
Boron, Total Recoverable	**0.52**	mg/L	0.10	1	09/14/22 09:42	09/19/22 11:18	7440-42-8	
Calcium, Total Recoverable	**182**	mg/L	0.20	1	09/14/22 09:42	09/19/22 11:18	7440-70-2	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**0.016**	mg/L	0.010	1	09/14/22 09:42	09/19/22 11:53	7439-93-2	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City							
Arsenic, Total Recoverable	**<0.0010**	mg/L	0.0010	1	09/14/22 09:42	09/22/22 19:35	7440-38-2	
Cobalt, Total Recoverable	**<0.0010**	mg/L	0.0010	1	09/14/22 09:42	09/22/22 19:35	7440-48-4	
Molybdenum, Total Recoverable	**0.0082**	mg/L	0.0010	1	09/14/22 09:42	09/22/22 19:35	7439-98-7	
Selenium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	09/14/22 09:42	09/22/22 19:35	7782-49-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City							
Total Dissolved Solids	**1220**	mg/L	20.0	1		09/15/22 11:22		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Kansas City							
pH at 25 Degrees C	**7.4**	Std. Units	0.10	1		09/12/22 16:10		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Chloride	**95.5**	mg/L	10.0	10		09/20/22 13:59	16887-00-6	
Fluoride	**<0.20**	mg/L	0.20	1		10/05/22 17:09	16984-48-8	
Sulfate	**483**	mg/L	50.0	50		09/20/22 14:12	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: JEC FAL CCR
Pace Project No.: 60410001

Sample: FAA-4-090822 **Lab ID: 60410001002** Collected: 09/08/22 17:45 Received: 09/09/22 17:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City							
Barium, Total Recoverable	**0.051**	mg/L	0.0050	1	09/14/22 09:42	09/19/22 11:20	7440-39-3	
Boron, Total Recoverable	**0.80**	mg/L	0.10	1	09/14/22 09:42	09/19/22 11:20	7440-42-8	
Calcium, Total Recoverable	**164**	mg/L	0.20	1	09/14/22 09:42	09/19/22 11:20	7440-70-2	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**0.023**	mg/L	0.010	1	09/14/22 09:42	09/19/22 11:55	7439-93-2	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City							
Arsenic, Total Recoverable	**<0.0010**	mg/L	0.0010	1	09/14/22 09:42	09/22/22 19:52	7440-38-2	
Cobalt, Total Recoverable	**0.0018**	mg/L	0.0010	1	09/14/22 09:42	09/22/22 19:52	7440-48-4	
Molybdenum, Total Recoverable	**0.011**	mg/L	0.0010	1	09/14/22 09:42	09/22/22 19:52	7439-98-7	
Selenium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	09/14/22 09:42	09/22/22 19:52	7782-49-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City							
Total Dissolved Solids	**1250**	mg/L	20.0	1		09/15/22 11:22		
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		09/12/22 16:10		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Chloride	**96.2**	mg/L	10.0	10		09/20/22 14:37	16887-00-6	
Fluoride	**0.24**	mg/L	0.20	1		10/05/22 17:21	16984-48-8	
Sulfate	**533**	mg/L	50.0	50		09/20/22 14:50	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: JEC FAL CCR
Pace Project No.: 60410001

Sample: FAA-6-090822 **Lab ID: 60410001003** Collected: 09/08/22 14:25 Received: 09/09/22 17:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City							
Barium, Total Recoverable	**0.040**	mg/L	0.0050	1	09/14/22 09:42	09/19/22 11:22	7440-39-3	
Boron, Total Recoverable	**2.0**	mg/L	0.10	1	09/14/22 09:42	09/19/22 11:22	7440-42-8	
Calcium, Total Recoverable	**132**	mg/L	0.20	1	09/14/22 09:42	09/19/22 11:22	7440-70-2	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**0.015**	mg/L	0.010	1	09/14/22 09:42	09/19/22 12:07	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	**0.0053**	mg/L	0.0010	1	09/14/22 09:42	09/22/22 20:01	7440-38-2	
Cobalt, Total Recoverable	**0.0019**	mg/L	0.0010	1	09/14/22 09:42	09/22/22 20:01	7440-48-4	
Molybdenum, Total Recoverable	**0.34**	mg/L	0.0010	1	09/14/22 09:42	09/22/22 20:01	7439-98-7	
Selenium, Total Recoverable	**0.0021**	mg/L	0.0010	1	09/14/22 09:42	09/22/22 20:01	7782-49-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City							
Total Dissolved Solids	**1820**	mg/L	66.7	1		09/15/22 11:22		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Kansas City							
pH at 25 Degrees C	**7.4**	Std. Units	0.10	1		09/12/22 16:10		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Chloride	**65.8**	mg/L	10.0	10		09/20/22 15:40	16887-00-6	
Fluoride	**0.35**	mg/L	0.20	1		10/05/22 17:58	16984-48-8	
Sulfate	**1170**	mg/L	100	100		09/21/22 16:03	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: JEC FAL CCR
Pace Project No.: 60410001

Sample: DUP-FAA-090822 **Lab ID: 60410001004** Collected: 09/08/22 14:30 Received: 09/09/22 17:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City							
Barium, Total Recoverable	**0.039**	mg/L	0.0050	1	09/14/22 09:42	09/19/22 11:24	7440-39-3	
Boron, Total Recoverable	**2.0**	mg/L	0.10	1	09/14/22 09:42	09/19/22 11:24	7440-42-8	
Calcium, Total Recoverable	**128**	mg/L	0.20	1	09/14/22 09:42	09/19/22 11:24	7440-70-2	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**0.013**	mg/L	0.010	1	09/14/22 09:42	09/19/22 12:09	7439-93-2	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City							
Arsenic, Total Recoverable	**0.0053**	mg/L	0.0010	1	09/14/22 09:42	09/22/22 20:09	7440-38-2	
Cobalt, Total Recoverable	**0.0019**	mg/L	0.0010	1	09/14/22 09:42	09/22/22 20:09	7440-48-4	
Molybdenum, Total Recoverable	**0.36**	mg/L	0.0010	1	09/14/22 09:42	09/22/22 20:09	7439-98-7	
Selenium, Total Recoverable	**0.0021**	mg/L	0.0010	1	09/14/22 09:42	09/22/22 20:09	7782-49-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City							
Total Dissolved Solids	**1910**	mg/L	66.7	1		09/15/22 11:22		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Kansas City							
pH at 25 Degrees C	**7.5**	Std. Units	0.10	1		09/12/22 16:10		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Chloride	**65.6**	mg/L	10.0	10		09/20/22 16:18	16887-00-6	
Fluoride	**0.36**	mg/L	0.20	1		10/05/22 19:02	16984-48-8	
Sulfate	**1090**	mg/L	100	100		09/21/22 17:06	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: JEC FAL CCR
Pace Project No.: 60410001

QC Batch: 807547
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: 60410001001, 60410001002, 60410001003, 60410001004

METHOD BLANK: 3212526 Matrix: Water
Associated Lab Samples: 60410001001, 60410001002, 60410001003, 60410001004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Barium	mg/L	<0.0050	0.0050	09/19/22 10:56	
Boron	mg/L	<0.10	0.10	09/19/22 10:56	
Calcium	mg/L	<0.20	0.20	09/19/22 10:56	

LABORATORY CONTROL SAMPLE: 3212527

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	mg/L	1	1.0	100	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: 3212528 3212529

Parameter	Units	60410000001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	mg/L	0.039	1	1	1.0	1.0	97	101	70-130	4	20	
Boron	mg/L	1.1	1	1	1.9	2.0	87	92	70-130	3	20	
Calcium	mg/L	170	10	10	169	175	-6	45	70-130	3	20	M1

MATRIX SPIKE SAMPLE: 3212530

Parameter	Units	60410030001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Barium	mg/L	0.078	1	1.1	101	70-130	
Boron	mg/L	1.7	1	2.6	93	70-130	
Calcium	mg/L	210	10	217	75	70-130	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: JEC FAL CCR
Pace Project No.: 60410001

QC Batch: 807548
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: 60410001001, 60410001002, 60410001003, 60410001004

METHOD BLANK: 3212534 Matrix: Water
Associated Lab Samples: 60410001001, 60410001002, 60410001003, 60410001004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/L	<0.0010	0.0010	09/22/22 19:29	
Cobalt	mg/L	<0.0010	0.0010	09/22/22 19:29	
Molybdenum	mg/L	<0.0010	0.0010	09/22/22 19:29	
Selenium	mg/L	<0.0010	0.0010	09/22/22 19:29	

LABORATORY CONTROL SAMPLE: 3212535

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/L	0.04	0.040	100	85-115	
Cobalt	mg/L	0.04	0.040	99	85-115	
Molybdenum	mg/L	0.04	0.040	100	85-115	
Selenium	mg/L	0.04	0.043	107	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3212536 3212537

Parameter	Units	60410001001 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	0.040	0.040	99	98	70-130	0	20	
Cobalt	mg/L	<0.0010	0.04	0.04	0.039	0.039	97	97	70-130	0	20	
Molybdenum	mg/L	0.0082	0.04	0.04	0.052	0.052	109	109	70-130	0	20	
Selenium	mg/L	<0.0010	0.04	0.04	0.039	0.039	98	96	70-130	2	20	

MATRIX SPIKE SAMPLE: 3212538

Parameter	Units	60410030007 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/L	0.11	0.04	0.15	88	70-130	
Cobalt	mg/L	<0.0010	0.04	0.038	94	70-130	
Molybdenum	mg/L	0.034	0.04	0.077	109	70-130	
Selenium	mg/L	<1.0 ug/L	0.04	0.037	93	70-130	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: JEC FAL CCR
Pace Project No.: 60410001

QC Batch: 807549 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60410001001, 60410001002, 60410001003, 60410001004

METHOD BLANK: 3212539 Matrix: Water
Associated Lab Samples: 60410001001, 60410001002, 60410001003, 60410001004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lithium	mg/L	<0.010	0.010	09/19/22 11:51	

LABORATORY CONTROL SAMPLE: 3212540

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: 3212541 3212542

Parameter	Units	60410001002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lithium	mg/L	0.023	1	1	1.1	1.1	105	104	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: JEC FAL CCR
Pace Project No.: 60410001

QC Batch: 807819 | Analysis Method: SM 2540C
QC Batch Method: SM 2540C | Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60410001001, 60410001002, 60410001003, 60410001004

METHOD BLANK: 3213723 Matrix: Water
Associated Lab Samples: 60410001001, 60410001002, 60410001003, 60410001004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	09/15/22 11:19	

LABORATORY CONTROL SAMPLE: 3213724

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

SAMPLE DUPLICATE: 3213725

Parameter	Units	60409826001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	571	552	3	10	

SAMPLE DUPLICATE: 3213726

Parameter	Units	60410000001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1170	1200	3	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: JEC FAL CCR
Pace Project No.: 60410001

QC Batch: 807176
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: 60410001001, 60410001002, 60410001003, 60410001004

SAMPLE DUPLICATE: 3211222

Parameter	Units	60409979006 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.1	7.5	6	5	D6,H6

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: JEC FAL CCR
Pace Project No.: 60410001

QC Batch: 808515 | 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: 60410001001, 60410001002, 60410001003, 60410001004

METHOD BLANK: 3216064 Matrix: Water
Associated Lab Samples: 60410001001, 60410001002, 60410001003, 60410001004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<1.0	1.0	09/20/22 09:08	
Sulfate	mg/L	<1.0	1.0	09/20/22 09:08	

METHOD BLANK: 3218088 Matrix: Water
Associated Lab Samples: 60410001001, 60410001002, 60410001003, 60410001004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<1.0	1.0	09/21/22 08:57	
Sulfate	mg/L	<1.0	1.0	09/21/22 08:57	

LABORATORY CONTROL SAMPLE: 3216065

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.7	94	90-110	
Sulfate	mg/L	5	4.9	97	90-110	

LABORATORY CONTROL SAMPLE: 3218089

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.7	94	90-110	
Sulfate	mg/L	5	4.8	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3216066 3216067

Parameter	Units	60410000004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	137	50	50	227	207	179	140	80-120	9	15	E,M1
Sulfate	mg/L	18.7	500	500	1500	1510	297	297	80-120	0	15	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: JEC FAL CCR
Pace Project No.: 60410001

MATRIX SPIKE SAMPLE: 3216068

Parameter	Units	60410030004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	248	250	484	94	80-120	
Sulfate	mg/L	1600	500	2070	93	80-120	E

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: JEC FAL CCR
Pace Project No.: 60410001

QC Batch: 811017
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: 60410001001, 60410001002

METHOD BLANK: 3225332 Matrix: Water
Associated Lab Samples: 60410001001, 60410001002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Fluoride	mg/L	<0.20	0.20	10/05/22 11:28	

LABORATORY CONTROL SAMPLE: 3225333

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	2.5	2.5	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3225334 3225335

Parameter	Units	60409975001 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	2.1	2.2	77	81	80-120	5	15	M1

MATRIX SPIKE SAMPLE: 3225336

Parameter	Units	60409979004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	<0.20	2.5	1.0	37	80-120	M1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: JEC FAL CCR
Pace Project No.: 60410001

QC Batch: 811018
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: 60410001003, 60410001004

METHOD BLANK: 3225338 Matrix: Water
Associated Lab Samples: 60410001003, 60410001004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Fluoride	mg/L	<0.20	0.20	10/05/22 17:33	

LABORATORY CONTROL SAMPLE: 3225339

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	2.5	2.6	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3225340 3225341

Parameter	Units	60410001003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Fluoride	mg/L	0.35	2.5	2.5	2.9	2.9	101	103	80-120	2	15	

MATRIX SPIKE SAMPLE: 3225342

Parameter	Units	60410031001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	<0.20	2.5	2.5	94	80-120	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: JEC FAL CCR
Pace Project No.: 60410001

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

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

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: JEC FAL CCR
Pace Project No.: 60410001

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60410001001	**FAA-3-090822**	EPA 200.7	807547	EPA 200.7	807606
60410001002	**FAA-4-090822**	EPA 200.7	807547	EPA 200.7	807606
60410001003	**FAA-6-090822**	EPA 200.7	807547	EPA 200.7	807606
60410001004	**DUP-FAA-090822**	EPA 200.7	807547	EPA 200.7	807606
60410001001	**FAA-3-090822**	EPA 3010	807549	EPA 6010	807608
60410001002	**FAA-4-090822**	EPA 3010	807549	EPA 6010	807608
60410001003	**FAA-6-090822**	EPA 3010	807549	EPA 6010	807608
60410001004	**DUP-FAA-090822**	EPA 3010	807549	EPA 6010	807608
60410001001	**FAA-3-090822**	EPA 200.8	807548	EPA 200.8	807607
60410001002	**FAA-4-090822**	EPA 200.8	807548	EPA 200.8	807607
60410001003	**FAA-6-090822**	EPA 200.8	807548	EPA 200.8	807607
60410001004	**DUP-FAA-090822**	EPA 200.8	807548	EPA 200.8	807607
60410001001	**FAA-3-090822**	SM 2540C	807819		
60410001002	**FAA-4-090822**	SM 2540C	807819		
60410001003	**FAA-6-090822**	SM 2540C	807819		
60410001004	**DUP-FAA-090822**	SM 2540C	807819		
60410001001	**FAA-3-090822**	SM 4500-H+B	807176		
60410001002	**FAA-4-090822**	SM 4500-H+B	807176		
60410001003	**FAA-6-090822**	SM 4500-H+B	807176		
60410001004	**DUP-FAA-090822**	SM 4500-H+B	807176		
60410001001	**FAA-3-090822**	EPA 300.0	808515		
60410001001	**FAA-3-090822**	EPA 300.0	811017		
60410001002	**FAA-4-090822**	EPA 300.0	808515		
60410001002	**FAA-4-090822**	EPA 300.0	811017		
60410001003	**FAA-6-090822**	EPA 300.0	808515		
60410001003	**FAA-6-090822**	EPA 300.0	811018		
60410001004	**DUP-FAA-090822**	EPA 300.0	808515		
60410001004	**DUP-FAA-090822**	EPA 300.0	811018		

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-LENE-0009_Sample C	WO# : 60410001
	Revision: 2	Effective Date: 01/12/2022

60410001

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: T-2nd **Type of Ice:** (Wet) Blue None

Cooler Temperature (°C): **As-read** 0.7 **Corr. Factor** 0 **Corrected** 0.7

Date and initials of person examining contents: BE 9/10

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#: 606053	☒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: Sample collection date entered on chain of custody date column incorrectly. COC Sect D Sample ID name was used to reference correct collection date.

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:	melissa.michels@evergy.com
Phone: 785-575-8113	Fax:
Requested Due Date/TAT:	7 day

Section B — **Required** Project Information:

Report To:	Melissa Michels, Samantha Kaney, Danielle Ober
Copy To:	Jared Morrison, 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, 1

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

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED: COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	200.7 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.
1	FAA-3-090822	WT	G	-	-	03/09/22	16:45	-	5	3		2							X	X	X	X	X	X		604001
2	FAA-4-090822	WT	G	-	-	03/09/22	17:45	-	5	3		2							X	X	X	X	X	X		604002
3	FAA-6-090822	WT	G	-	-	03/09/22	14:25	-	5	3		2							X	X	X	X	X	X		604003
4	DUP-FAA-090822	WT	G	-	-	03/09/22	14:30	-	5	3		2							X	X	X	X	X	X		604004
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	9/9/22	17:00		9/9/22	1700	0.7 Y N
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: _____ DATE Signed (MM/DD/YY): 9/9/22

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 # 9657,1

Site: JEC FAL CCR Notes

COC Line Item	Matrix	VG9H	DG9H	DG9Q	VG9U	DG9U	DG9M	DG9B	BG1U	AG1H	AG1U	AG2U	AC3G	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 ja
DG9H	40mL HCl amber voa vial	WGFU	4oz clear soil ja
DG9M	40mL MeOH clear vial	WG2U	2oz clear soil ja
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: 6041001

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: of

Section A
Required Client Information:

Company:	EVERGY KANSAS CENTRAL, INC.
Address:	400 E Van Buren St
	Suite 545, Phoenix, AZ 85004
Email To:	doberbroeckling@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
	Danielle Oberbroeckling
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

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 #	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	Y/N	Analysis Test: 200.7 Total Metals*	Analysis Test: 200.8 Total Metals**	Analysis Test: 4500 H+B pH	Analysis Test: 300: Cl, F, SO4	Analysis Test: 2540C TDS	Analysis Test: 6010 Total Li***	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1																									
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 Total Metals*: B, Ca, Ba,										
200.8 Total Metals**: As, Co, Mo, Se,										
6010 Total Metals***: Li										

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:					
SIGNATURE of SAMPLER:	DATE Signed (MM/DD/YY):				

*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.