HALEY ALDRICH

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2023 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

BOTTOM ASH SETTLING AREA
TECUMSEH ENERGY CENTER
TECUMSEH, KANSAS

by
Haley & Aldrich, Inc.
Cleveland, Ohio

for
Evergy Kansas Central, Inc.
Topeka, Kansas

File No. 129778
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This Annual Groundwater Monitoring and Corrective Action Report documents the groundwater monitoring program for the Tecumseh Energy Center (TEC) Bottom Ash Settling Area (BASA) consistent with applicable sections of Code of Federal Regulations Title 40 §§ 257.90 through 257.98, describes activities conducted in the prior calendar year (2023), and documents compliance with the U.S. Environmental Protection Agency Coal Combustion Residual Rule. I certify that the 2023 Annual Groundwater Monitoring and Corrective Action Report for the TEC BASA is, to the best of my knowledge, accurate and complete.

Signed: _____

Professional Geologist

Print Name:	Mark Nicholls
Kansas License No.:	Professional Geologist No. 881
Title:	Principal Consultant
Company:	Haley & Aldrich, Inc.

1. Introduction

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

1.1 40 CFR § 257.90(e)(6) SUMMARY

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

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

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

At the start of the current annual reporting period (January 1, 2023), the BASA was operating under an assessment monitoring program in compliance with 40 CFR § 257.95 for all constituents except arsenic and cobalt. An Corrective Measures Assessment (CMA) was initiated on March 13, 2023 in accordance with 40 CFR § 257.96 for arsenic and cobalt, which continue to be monitored under an assessment monitoring program in accordance with 40 CFR § 257.96(b). The CMA will be completed in accordance with the USEPA-approved compliance timeline included in the TEC BASA Nature and Extent Investigation Well Placement/Development Plan (N&E Development Plan).

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

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

At the end of the current annual reporting period (December 31, 2023), the BASA was under an assessment monitoring program in compliance with 40 CFR § 257.95 for all constituents except arsenic and cobalt. A CMA has been initiated in accordance with 40 CFR § 257.96 for arsenic and cobalt, which continue to be monitored under an assessment monitoring program in accordance with 40 CFR § 257.96(b).

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

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

1.1.3.1 40 CFR § 257.90(e)(6)(iii)(a) – 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 BASA was operating under an assessment monitoring program; therefore, no statistical evaluations were completed on Appendix III constituents in 2023.

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

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

An assessment monitoring program was initiated on July 17, 2018 for the BASA with a notification establishing assessment monitoring provided on August 15, 2018 to meet the requirements of 40 CFR § 257.95. The TEC BASA surface impoundment was closed on August 11, 2020 in accordance with the requirements of § 257.102(c).

Pursuant to the Consent Agreement and Final Order In the Matter of Evergy Kansas Central, Inc.: Docket No. RCRA-07-2023-0001 dated November 7, 2022 (CAFO), the TEC BASA surface impoundment was reopened for further assessment monitoring, and the assessment monitoring program was re-established to meet the requirements of 40 CFR § 257.95 on December 12, 2022.

The BASA remained in assessment monitoring in 2023, with a corrective measures program implemented for arsenic and cobalt in accordance with 40 CFR § 257.96.

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

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

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

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

No statistically significant levels were identified above the groundwater protection standard for those constituents listed in Appendix IV to this part in 2023 for the BASA. The statistical evaluation report for the semi-annual assessment monitoring sampling event from March 2023 was completed in July 2023 and is 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;

A CMA was initiated on March 13, 2023 for arsenic and cobalt at the BASA in accordance with 40 CFR § 257.96.

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

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

A public meeting was not held in 2023. A public meeting to discuss the results of the CMA will be held at least 30 days prior to the selection of remedy in accordance with § 257.96(e).

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

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

A CMA was not completed in 2023 at the BASA. The CMA will be completed in accordance with the USEPA-approved compliance timeline included in the TEC BASA N&E Development Plan. This plan was approved as a component of the CAFO by the USEPA on July 21, 2023.

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

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

A remedy was not selected in 2023 for arsenic and cobalt at the BASA.

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 initiated in 2023; therefore, no demonstration or certification is applicable for this unit.

2. 40 CFR § 257.90 Applicability

2.1 40 CFR § 257.90(a)

All CCR landfills, CCR surface impoundments, and lateral expansions of CCR units are subject to the groundwater monitoring and corrective action requirements under §§ 257.90 through 257.99, 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 TEC BASA. The BASA 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 TEC BASA as required by the Rule. Groundwater sampling and analysis was conducted per the requirements described in § 257.93, and the status of the groundwater monitoring program described in § 257.94 and § 257.95 is also provided in this report. This Annual Report documents the applicable groundwater-related activities completed in calendar year 2023.

2.2.1 Status of the Groundwater Monitoring Program

In accordance with paragraph 10.c of the CAFO, statistical evaluations were completed in 2022 for assessment monitoring groundwater data collected after January 1, 2018 at the BASA using interwell comparison methods to establish background levels and identify Appendix IV statistically significant levels (SSL) and to determine groundwater protection standard (GWPS) in accordance with 40 CFR § 257.95(h) and (i). The statistical evaluations indicated Appendix IV SSLs above the GWPS for arsenic and cobalt.

A CMA was initiated on March 13, 2023 for arsenic and cobalt in accordance with 40 CFR § 257.96. Evergy is currently conducting an assessment monitoring program that includes all other Appendix IV

constituents. The CMA will be completed in accordance with the USEPA-approved compliance timeline included in the TEC BASA N&E Development Plan.

2.2.2 Key Actions Completed

The 2022 Annual Groundwater Monitoring and Corrective Action Report was completed in January 2023. An annual assessment monitoring sampling event was completed in January 2023 at the certified groundwater monitoring network to identify detected Appendix IV constituents for subsequent semi-annual sampling events in March and September 2023.

Semi-annual assessment monitoring sampling events were completed in March 2023 and September 2023 at the certified groundwater monitoring network for detected Appendix IV constituents identified from the January 2023 annual assessment monitoring sampling event. Statistical evaluation was completed in July 2023 on analytical data from the March 2023 semi-annual assessment monitoring sampling event. Statistical evaluation of the results from the September 2023 semi-annual assessment monitoring sampling event are due to be completed in January 2024 and will be reported in the next annual report.

In November 2023, Evergy completed the installation of four additional monitoring wells in accordance with the Well Placement/Development Plan for the Installation of Additional Monitoring Wells at the Bottom Ash Settling Area Surface Impoundment (Development Plan) approved by the USEPA on July 21, 2023. The monitoring wells supplement the existing certified groundwater monitoring network. The initial baseline groundwater monitoring samples were collected in December 2023 from the newly installed monitoring wells.

The determination of the nature and extent of Appendix IV SSLs has been initiated pursuant to § 257.95(g). Nine additional groundwater monitoring wells were installed in October and November 2023 to collect groundwater quality data that will define the nature and extent of constituent migration (if any) in accordance with the N&E Development Plan approved by the USEPA on July 21, 2023. The initial groundwater samples were collected in December 2023 from the newly installed monitoring wells, in support of the nature and extent investigation.

An annual assessment monitoring sampling event was completed in December 2023 to identify detectable Appendix IV constituents to be monitored in subsequent semi-annual sampling events planned for March 2024 and September 2024.

Analytical results from all groundwater samples collected in the December 2023, for the annual assessment monitoring sampling event, initial baseline sampling event at newly installed monitoring wells, and newly installed nature and extent monitoring wells are due to be received and validated in January 2024 and will be reported in the next annual report.

2.2.3 Problems Encountered

Noteworthy problems encountered during groundwater monitoring events at the BASA in 2023 included monitoring wells that did not contain sufficient water volume to successfully provide samples. These instances are summarized below.

- January 2023:
  - Downgradient monitoring wells MW-8 and MW-9 did not contain sufficient water volume to support successful sampling.
  - Monitoring well MW-10 did not contain sufficient water volume to support successful sampling for fluoride and Radium 226 and 228 combined. However, all other Appendix IV constituents were analyzed from the limited sample volume obtained from monitoring well MW-10.
- March 2023:
  - Downgradient monitoring well MW-9 did not contain sufficient water volume to support successful sampling.
  - Monitoring wells MW-8 and MW-10 did not contain sufficient water volume to support successful sampling for all requested analyses. However, select analyses were completed from the limited sample volume.
- September 2023:
  - Downgradient monitoring wells MW-8, MW-9, and MW-10 did not contain sufficient water volume to support successful sampling.
- December 2023:
  - Downgradient monitoring well MW-9 did not contain sufficient water volume to support successful sampling.
  - Monitoring wells MW-8 and MW-10 did not contain sufficient water volume to support successful sampling for all requested analyses. However, select analyses were completed from the limited sample volume.

2.2.4 Actions to Resolve Problems

Actions taken to resolve the problems encountered at the BASA in 2023 included the installation of additional monitoring wells as described in Sections 2.2.2 and 2.3.2.

2.2.5 Project Key Activities for Upcoming Year

Key activities planned for 2024 include the 2023 Annual Groundwater Monitoring and Corrective Action Report, statistical evaluation of semi-annual assessment monitoring analytical data collected in September 2023, semi-annual assessment monitoring and subsequent statistical evaluations, and annual assessment monitoring. Baseline sampling will continue at newly installed compliance wells.

The continuation of the nature and extent investigation will continue into the next calendar year (2024).

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 TEC BASA is included in this report as Figure 1. As described in Sections 2.2.2 and 2.3.2, monitoring wells were installed to supplement the certified groundwater monitoring network and additional monitoring wells were installed to assist with the nature and extent at the BASA. These new well locations are shown on Figure 2.

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

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

Four monitoring wells were installed in October to November 2023 in accordance with the Development Plan approved by the USEPA on July 21, 2023. The new monitoring wells supplement the certified groundwater monitoring network and are shown on Figure 2.

Nine monitoring wells were installed in October to November 2023 to support evaluation of the nature and extent of migration (if any) of Appendix IV constituents from the BASA. The newly installed nature and extent monitoring well locations are shown on Figure 2.

No monitoring wells were decommissioned in 2023.

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

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

In accordance with § 257.95(b) and § 257.95(d)(1), four independent assessment monitoring samples were attempted from the background and downgradient monitoring wells in 2023. Many of the downgradient monitoring wells did not contain sufficient water volume to support successful sampling as detailed in Section 2.2.3, and groundwater samples were not collected. A summary including sample names, dates of sample collection, field parameters, and monitoring data obtained for the groundwater monitoring program for the BASA is presented in Table I of this report. Groundwater potentiometric

elevation contour maps associated with each compliance groundwater monitoring sampling event in 2023 are provided in Figures 3 through 6.

The initial groundwater sampling event was completed in December 2023 for the baseline samples at the newly installed downgradient monitoring wells and the nature and extent monitoring program.

Analytical results from all groundwater sampling collected in the December 2023 for the annual assessment monitoring sampling event, initial baseline sampling event at newly installed monitoring wells, and newly installed nature and extent monitoring wells are due to be received and validated in January 2024 and will be reported in the next annual report.

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. Upon documentation of CCR waste material removal from the unit on September 5, 2019, two consecutive sampling events (October 2019 and December 2019) were used to document that detected Appendix IV constituents did not exceed the GWPS for the BASA pursuant to § 257.95(h). The TEC BASA surface impoundment was closed on August 11, 2020 in accordance with the requirements of § 257.102(c).

Pursuant to the CAFO, the TEC BASA surface impoundment was reopened for further assessment monitoring on December 12, 2022, and the assessment monitoring program has been re-established to meet the requirements of 40 CFR § 257.95. A CMA was initiated on March 13, 2023 in accordance with 40 CFR § 257.96. The TEC BASA remains in assessment monitoring for all other constituents. Arsenic and cobalt continue to be monitored under the assessment monitoring program in accordance with 40 CFR § 257.96(b).

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

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

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

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

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

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

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

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

This unit is in assessment monitoring; therefore, no detection monitoring alternate source demonstration (ASD) 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 December 12, 2022. Four rounds of assessment monitoring sampling were completed in 2023. Analytical results for both downgradient and upgradient wells are provided in Table I. The background concentrations (upper tolerance limits) and GWPSs established for detected Appendix IV constituents for the BASA are included in Table II. The background concentrations and GWPS values provided in Table II were utilized for the statistical evaluations completed for the March 2023 semi-annual assessment monitoring sampling event.

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 ASD was prepared or certified in 2023.

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

Within 90 days of finding that any constituent listed in appendix IV to this part has been detected at a statistically significant level exceeding the groundwater protection standard defined under § 257.95(h), or immediately upon detection of a release from a CCR unit, the owner or operator must initiate an assessment of corrective measures to prevent further releases, to remediate any releases and to restore affected area to original conditions. The assessment of corrective measures must be completed within 90 days, unless the owner or operator demonstrates the need for additional time to

complete the assessment of corrective measures due to site-specific conditions or circumstances. The owner or operator must obtain a certification from a qualified professional engineer or approval from the Participating State Director or approval from EPA where EPA is the permitting authority attesting that the demonstration is accurate. The 90-day deadline to complete the assessment of corrective measures may be extended for no longer than 60 days. The owner or operator must also include the demonstration in the annual groundwater monitoring and corrective action report required by § 257.90(e), in addition to the certification by a qualified professional engineer or the approval from the Participating State Director or approval from EPA where EPA is the permitting authority.

Evergy initiated a CMA for the BASA on March 13, 2023 within 90 days of identification of SSLs listed in Table I in accordance with 40 CFR § 257.96. A demonstration of the need for additional time beyond the regulatory timeline was not required. The CMA will be completed in accordance with the USEPA-approved compliance timeline included in the TEC BASA N&E Development Plan.

TABLES

TABLE I
SUMMARY OF ANALYTICAL RESULTS - 2023 GROUNDWATER MONITORING
EVERGY KANSAS CENTRAL, INC.
TECUMSEH ENERGY CENTER, BOTTOM ASH SETTLING AREA
TECUMSEH, KANSAS

Location	Upgradient						Downgradient		
	MW-7						MW-8	MW-10	
Measure Point (TOC)	878.19						869.84	869.11	
Sample Name	MW-7-010523	TEC-BASA-DUP-0105221	MW-7-030623	DUP-TECBASA-030623	MW-7-090523	TECBASA-DUP-090523	MW-8-030623[1]	MW-10-010523[1]	MW-10-030623[1]
Sample Date	01/05/2023	01/05/2023	3/6/2023	3/6/2023	9/5/2023	9/5/2023	3/6/2023	01/05/2023	3/6/2023
Final Lab Report Date	1/13/2023	1/13/2023	3/16/2023	3/16/2023	9/15/2023	9/15/2023	3/16/2023	1/13/2023	3/16/2023
Final Lab Report Revision Date	N/A	N/A	3/21/2023	3/21/2023	N/A	N/A	3/21/2023	N/A	3/21/2023
Final Radiation Lab Report Date	1/26/2023	1/26/2023	3/29/2023	3/29/2023	9/25/2023	9/25/2023	N/A	1/26/2023	N/A
Lab Data Reviewed and Accepted	2/8/2023	2/8/2023	6/12/2023	6/12/2023	12/18/2023	12/18/2023	6/12/2023	2/8/2023	6/12/2023
Depth to Water (ft btoc)	26.90	-	26.3	-	28.06	28.06	22.25[2]	20.49	20.80[2]
Temperature (Deg C)	9.21	-	15.09	-	19.38	-	16.28	7.55	14.61
Conductivity (µS/cm)	1540	-	1,520	-	1,570	-	1,580	2060	1,950
Turbidity (NTU)	5.9	-	0.0	-	21.4	-	99.1	21.4	42.6
Dissolved Oxygen, Field (mg/L)	1.64	-	0.59	-	0.00	-	2.62	6.28	0.00
ORP, Field (mV)	61	-	186	-	209	-	111	7	-26
pH, Field (su)	6.31	-	6.82	-	6.67	-	7.96	6.04	7.82
Boron, Total (mg/L)	-	-	**0.58**	**0.59**	**0.59**	**0.55**	-	-	**0.28**
Calcium, Total (mg/L)	-	-	**90.3**	**92.6**	**101**	**92.0**	-	-	**163**
Chloride (mg/L)	-	-	**237**	**218**	**147**	**149**	**245**	-	**311**
Fluoride (mg/L)	-	-	< 0.20	< 0.20	**0.32**	**0.25**	< 0.20	-	**0.26**
Sulfate (mg/L)	-	-	**253**	**257**	**207**	**205**	**526**	-	< 1.0
pH (su)	-	-	**7.2**	**7.2**	**7.2**	**7.2**	**6.8**	-	**8.1**
TDS (mg/L)	-	-	**1,210**	**1,250**	**949**	**963**	**1,390**	-	-
Antimony, Total (mg/L)	< 0.0010	< 0.0010	-	-	-	-	-	< 0.0010	-
Arsenic (mg/L)	**0.0016**	**0.0013**	**0.0020**	**0.0020**	**0.0017**	**0.0017**	**0.0013**	**0.026**	**0.0065**
Barium, Total (mg/L)	**0.067**	**0.059**	**0.061**	**0.063**	**0.053**	**0.051**	-	**0.21**	**0.19**
Beryllium, Total (mg/L)	< 0.0010	< 0.0010	-	-	-	-	-	< 0.0010	-
Cadmium, Total (mg/L)	< 0.00050	< 0.00050	-	-	-	-	-	< 0.00050	-
Chromium, Total (mg/L)	< 0.0050	< 0.0050	-	-	-	-	-	< 0.0050	-
Cobalt, Total (mg/L)	**0.0035**	**0.0017**	**0.0027**	**0.0027**	**0.0012**	**0.0012**	< 0.0010	**0.0018**	**0.0038**
Lead, Total (mg/L)	< 0.010	< 0.010	-	-	-	-	-	< 0.010	-
Lithium, Total (mg/L)	**0.033**	**0.034**	**0.028**	**0.027**	**0.031**	**0.030**	**0.019**	**0.014**	< 0.010
Molybdenum, Total (mg/L)	**0.011**	**0.012**	**0.016**	**0.015**	**0.020**	**0.019**	**0.049**	**0.0044**	**0.0048**
Selenium, Total (mg/L)	< 0.0010	< 0.0010	-	-	-	-	-	< 0.0010	-
Thallium, Total (mg/L)	< 0.0010	< 0.0010	-	-	-	-	-	< 0.0010	-
Mercury, Total (mg/L)	< 0.00020	< 0.00020	-	-	-	-	-	< 0.00020	-
Fluoride (mg/L)	< 0.20	< 0.20	< 0.20	< 0.20	**0.32**	**0.25**	< 0.20	-	**0.26**
Radium-226 & 228 Combined (pCi/L)	**1.47 ± 0.857 (1.16)**	0.462 ± 0.760 (1.55)	0.427 ± 0.806 (1.57)	0.324 ± 0.709 (1.57)	0.288 ± 0.787 (1.59)	1.46 ± 1.11 (1.85)	-	-	-

Notes:

Bold value: *Detection above laboratory reporting limit.*

[1] *Select constituents were not analyzed due to insufficient sample volume.*

[2] *Depth to water below top of pump. Recorded value reflects the depth to water with the pump removed.*

Radiological results are presented as activity plus or minus uncertainty with MDC.

Data presented in this table were verified against the laboratory and validation reports.

µS/cm = micro Siemens per centimeter

Deg C = degrees Celsius

ft btoc = feet below top of casing

mg/L = milligrams per liter

mV = millivolt

NA = Not Applicable

NTU = Nephelometric Turbidity Unit

ORP = oxidation reduction potential

pCi/L = picoCuries per liter

su = standard unit

TDS = total dissolved solids

TOC = top of casing

TABLE II
ASSESSMENT GROUNDWATER MONITORING - DETECTED APPENDIX IV GWPS
MARCH 2023 SAMPLING EVENT
TECUMSEH ENERGY CENTER
BOTTOM ASH SETTLING AREA
TECUMSEH, KANSAS

Well #	Background Value[1]	GWPS
CCR Appendix-IV Arsenic, Total (mg/L)		
MW-4 (upgradient)	0.0021	NA
MW-1		0.010
MW-5		0.010
MW-6		0.010
CCR Appendix-IV Barium, Total (mg/L)		
MW-4 (upgradient)	0.0937	NA
MW-1		2
MW-5		2
MW-6		2
CCR Appendix-IV Cobalt, Total (mg/L)		
MW-4 (upgradient)	0.0035	NA
MW-1		0.006
MW-5		0.006
MW-6		0.006
CCR Appendix-IV Lithium, Total (mg/L)		
MW-4 (upgradient)	0.0319	NA
MW-1		0.040
MW-5		0.040
MW-6		0.040
CCR Appendix-IV Molybdenum, Total (mg/L)		
MW-4 (upgradient)	0.0139	NA
MW-1		0.100
MW-5		0.100
MW-6		0.100
CCR Appendix-IV Radium-226 & 228 Combined (pCi/L)		
MW-4 (upgradient)	5.88	NA
MW-1		5.88
MW-5		5.88
MW-6		5.88

Notes:

[1] Based on background data collected from 08/30/2016 through 01/05/2023, unless otherwise noted.

CCR = coal combustion residuals

GWPS = groundwater protection standard

mg/L = milligrams per Liter

NA = not applicable

pCi/L = picoCuries per Liter

FIGURES

LEGEND

- COMPLIANCE MONITORING WELL
- PIEZOMETER OBSERVATION ONLY
- BOTTOM ASH SETTLING AREA BOUNDARY

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. AERIAL IMAGERY SOURCE: HEXAGON IMAGERY PROGRAM, 2023

N

0 60 120

SCALE IN FEET

HALEY ALDRICH

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

BOTTOM ASH SETTLING AREA MONITORING WELL LOCATION MAP

evergy

JANUARY 2024

FIGURE 1

LEGEND

- PIEZOMETER OBSERVATION ONLY
- COMPLIANCE MONITORING WELL
- SHALLOW NATURE AND EXTENT MONITORING WELL
- DEEP NATURE AND EXTENT MONITORING WELL
- BOTTOM ASH SETTLING AREA (BASA) UNIT BOUNDARY/APPROXIMATE EDGE OF FORMER WASTE BOUNDARY
- EVERGY KANSAS CENTRAL INC. PROPERTY

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. AERIAL IMAGERY SOURCE: HEXAGON IMAGERY PROGRAM, 2023

N

0 80 160

SCALE IN FEET

HALEY ALDRICH

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

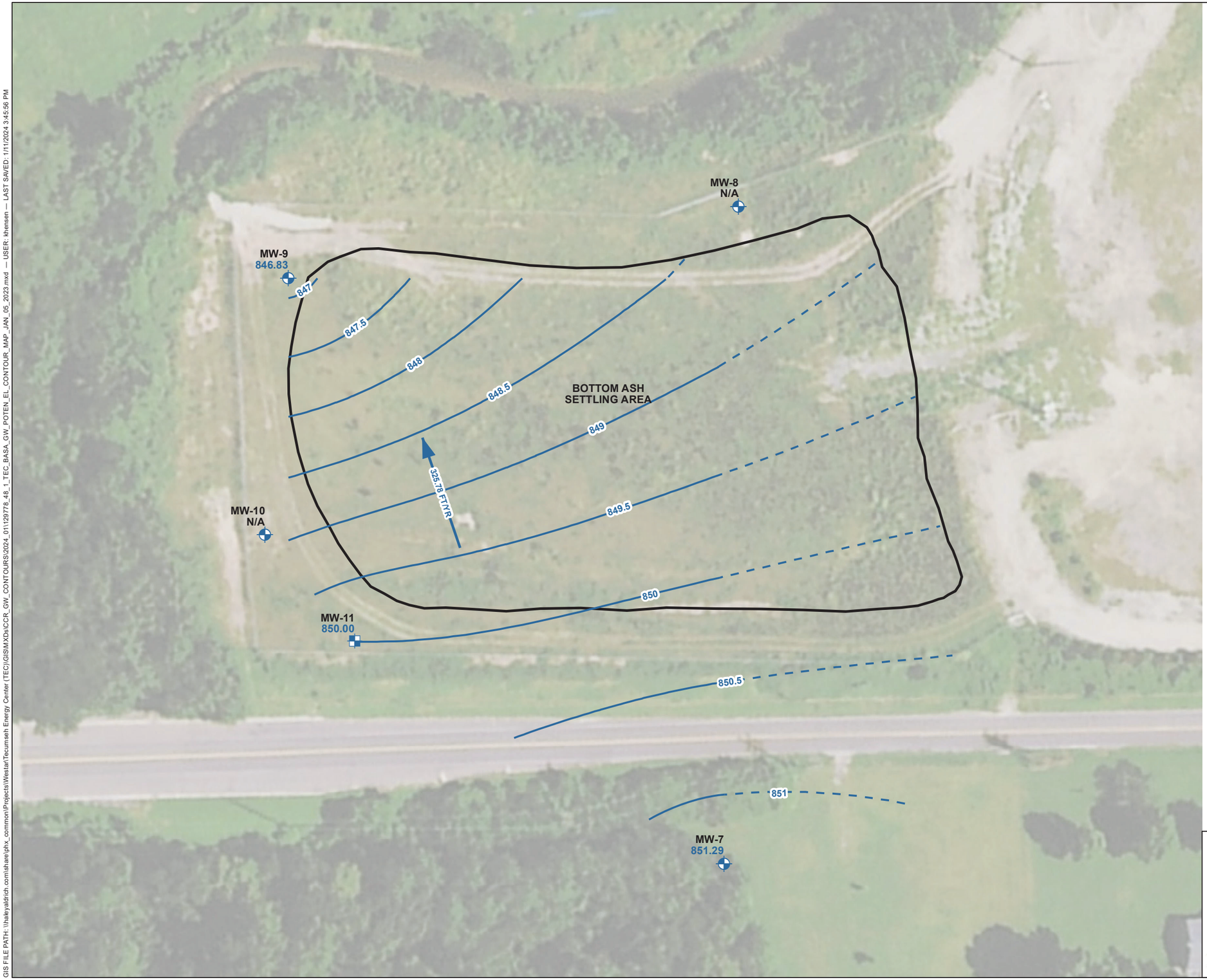
BOTTOM ASH SETTLING AREA NATURE AND EXTENT MONITORING WELL LOCATION MAP

evergy

JANUARY 2024

FIGURE 2

GIS FILE PATH: \\haleyaldrich.com\share\phx_common\Projects\Westar\GIS\Tecumseh_Energy_Center\Maps\2024_01\129778_057_0001_TEC_BASA_NE_MONITORING_WELLS.mxd — USER: khensen — LAST SAVED: 1/11/2024 12:07:23 PM



LEGEND

- MONITORING WELL
- PIEZOMETER OBSERVATION ONLY
- ESTIMATED GROUNDWATER POTENTIOMETRIC OBSERVATION ELEVATION CONTOUR, IN FEET, DASHED WHERE INFERRED
- GROUNDWATER FLOW DIRECTION AND APPROXIMATE GROUNDWATER FLOW RATE (FEET/YEAR)
- BOTTOM ASH SETTLING AREA BOUNDARY

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.

2. GROUNDWATER POTENTIOMETRIC ELEVATIONS WERE MEASURED 05 JANUARY 2023.

3. N/A = DATA NOT AVAILABLE DUE TO THE WATER BEING BELOW THE PUMP.

4. THE GROUNDWATER FLOW RATE WAS APPROXIMATED USING THE HYDRAULIC GRADIENT CALCULATED FROM GROUNDWATER POTENTIOMETRIC ELEVATIONS MEASURED 05 JANUARY 2023 AND THE CONDUCTIVITY VALUES AND EFFECTIVE POROSITY VALUES OBTAINED FROM SLUG TESTS COMPLETED APRIL 2016.

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

6. AERIAL IMAGERY SOURCE: HEXAGON IMAGERY PROGRAM, 2023

N

0 60 120

SCALE IN FEET

HALEY ALDRICH

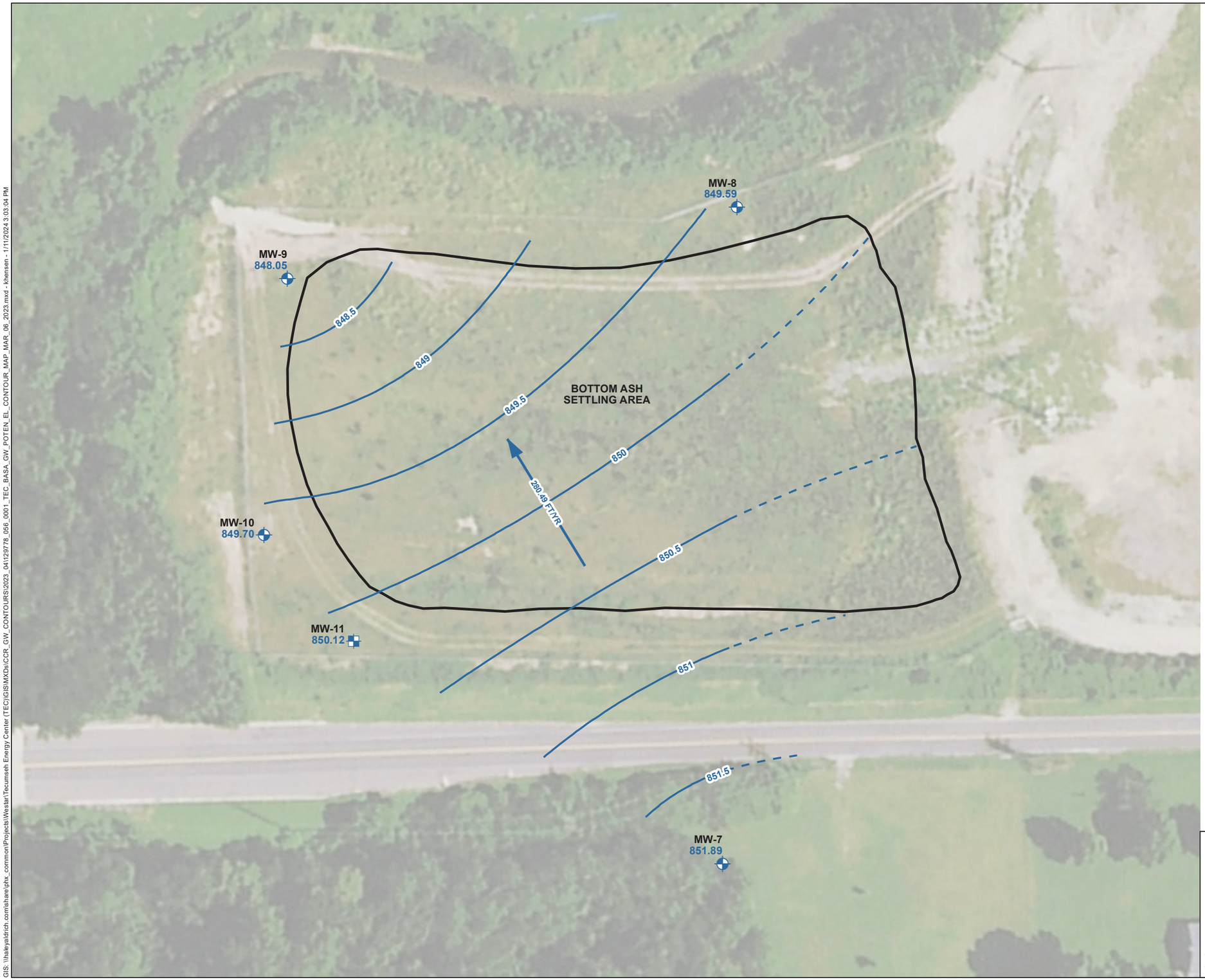
EVERGY KANSAS CENTRAL, INC.
TECUMSEH ENERGY CENTER
TECUMSEH, KANSAS

BOTTOM ASH SETTLING AREA GROUNDWATER POTENTIOMETRIC ELEVATION CONTOUR MAP JANUARY 5, 2023

evergy

JANUARY 2024

FIGURE 3



LEGEND

- MONITORING WELL
- PIEZOMETER OBSERVATION ONLY
- ESTIMATED GROUNDWATER POTENTIOMETRIC OBSERVATION ELEVATION CONTOUR, IN FEET, DASHED WHERE INFERRED
- GROUNDWATER FLOW DIRECTION AND APPROXIMATE GROUNDWATER FLOW RATE (FEET/YEAR)
- BOTTOM ASH SETTLING AREA BOUNDARY

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.

2. GROUNDWATER POTENTIOMETRIC ELEVATIONS WERE MEASURED 6 MARCH 2023.

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

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

5. AERIAL IMAGERY SOURCE: HEXAGON IMAGERY PROGRAM, 2023

N

0 60 120
SCALE IN FEET

HALEY ALDRICH

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

BOTTOM ASH SETTLING AREA GROUNDWATER POTENTIOMETRIC ELEVATION CONTOUR MAP MARCH 6, 2023

evergy

JANUARY 2024

FIGURE 4

GIS: \\haleyaldrich.com\share\phx_common\Projects\Westar\Tecumseh Energy Center (TEC)\GIS\MXDs\CCR_GW_CONTOURS\2023_04129778_056_0001_TEC_BASA_GW_POTEN_EL_CONTOUR_MAP_MAR_06_2023.mxd - khensen - 1/11/2024 3:03:04 PM

LEGEND

- MONITORING WELL
- PIEZOMETER OBSERVATION ONLY
- ESTIMATED GROUNDWATER POTENTIOMETRIC OBSERVATION ELEVATION CONTOUR, IN FEET, DASHED WHERE INFERRED
- GROUNDWATER FLOW DIRECTION AND APPROXIMATE GROUNDWATER FLOW RATE (FEET/YEAR)
- BOTTOM ASH SETTLING AREA BOUNDARY

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.

2. GROUNDWATER POTENTIOMETRIC ELEVATIONS WERE MEASURED 5 SEPTEMBER 2023.

3. THE GROUNDWATER FLOW RATE WAS APPROXIMATED USING THE HYDRAULIC GRADIENT CALCULATED FROM GROUNDWATER POTENTIOMETIRIC ELEVATIONS MEASURED 5 SEPTEMBER 2023 AND THE CONDUCTIVITY VALUES AND EFFECTIVE POROSITY VALUES OBTAINED FROM SLUG TESTS COMPLETED APRIL 2016.

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

5. AERIAL IMAGERY SOURCE: HEXAGON IMAGERY PROGRAM, 2023

N

0 60 120

SCALE IN FEET

HALEY ALDRICH

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

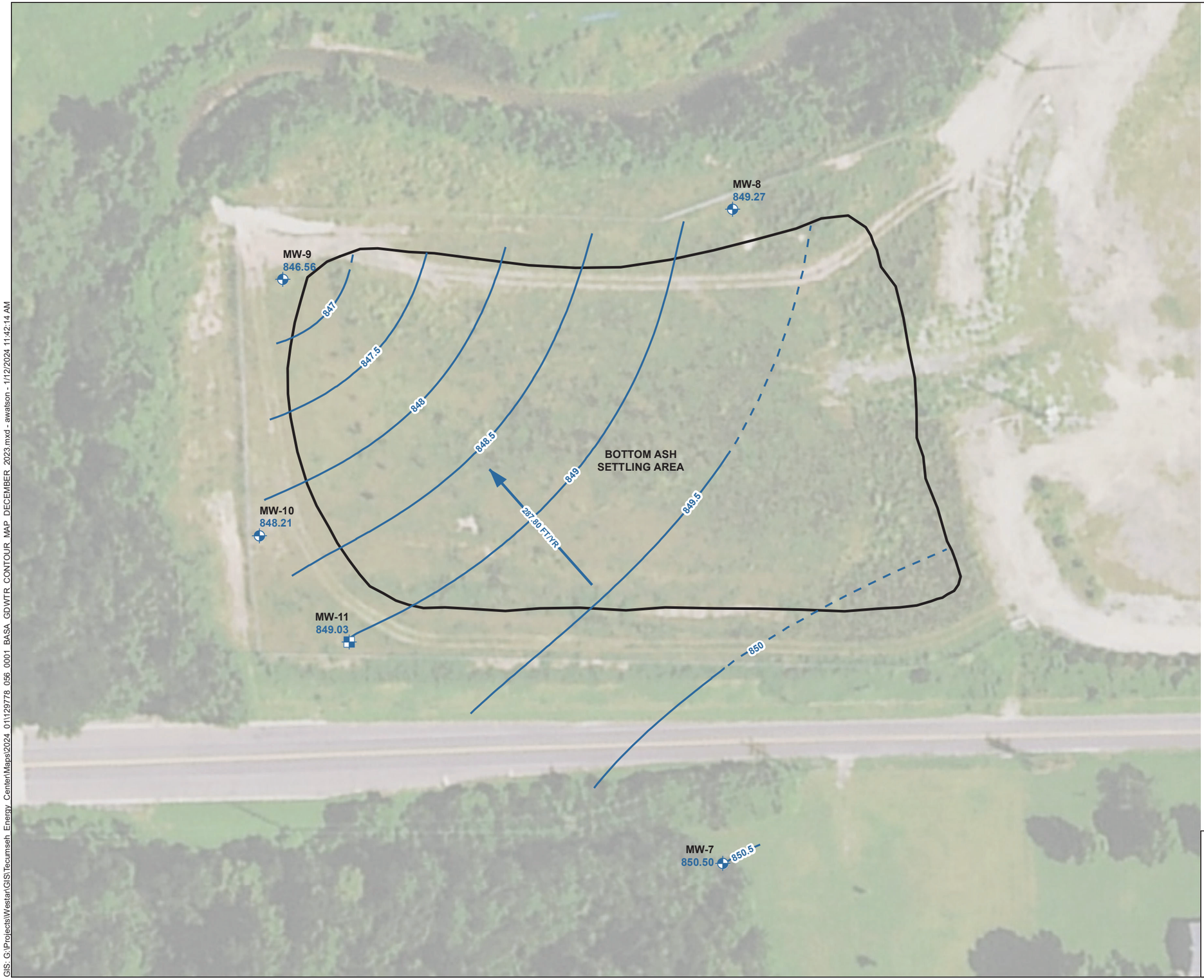
BOTTOM ASH SETTLING AREA GROUNDWATER POTENTIOMETRIC ELEVATION CONTOUR MAP SEPTEMBER 5, 2023

evergy

JANUARY 2024

FIGURE 5

GIS: \\haleyaldrich.com\share\phx_common\Projects\Westar\GIS\Tecumseh_Energy_Center\Maps\2024_011129778_056_0001_BASA_GDWTR_CONTOUR_MAP_SEPTEMBER_2023.mxd - khensen - 1/11/2024 3:45:37 PM



LEGEND

- MONITORING WELL
- PIEZOMETER OBSERVATION ONLY
- ESTIMATED GROUNDWATER POTENTIOMETRIC OBSERVATION ELEVATION CONTOUR, IN FEET, DASHED WHERE INFERRED
- GROUNDWATER FLOW DIRECTION AND APPROXIMATE GROUNDWATER FLOW RATE (FEET/YEAR)
- BOTTOM ASH SETTLING AREA BOUNDARY

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.

2. GROUNDWATER POTENTIOMETRIC ELEVATIONS WERE MEASURED 13 - 14 DECEMBER 2023.

3. THE GROUNDWATER FLOW RATE WAS APPROXIMATED USING THE HYDRAULIC GRADIENT CALCULATED FROM GROUNDWATER POTENTIOMETIRIC ELEVATIONS MEASURED 13 - 14 DECEMBER 2023 AND THE CONDUCTIVITY VALUES AND EFFECTIVE POROSITY VALUES OBTAINED FROM SLUG TESTS COMPLETED APRIL 2016.

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

5. AERIAL IMAGERY SOURCE: HEXAGON IMAGERY PROGRAM, 2023

N

0 60 120
SCALE IN FEET

HALEY ALDRICH

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

BOTTOM ASH SETTLING AREA GROUNDWATER POTENTIOMETRIC ELEVATION CONTOUR MAP DECEMBER 13 - 14, 2023

evergy

JANUARY 2024

FIGURE 6

GIS: G:\Projects\Westar\GIS\Tecumseh Energy Center\Maps\2024_01\129778 056 0001 BASA_GDWTR_CONTOUR_MAP_DECEMBER_2023.mxd - awatson - 1/12/2024 11:42:14 AM

ATTACHMENT 1
Statistical Analyses

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

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

TECHNICAL MEMORANDUM

January 31, 2024
File No. 129778-048

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

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

SUBJECT: March 2023 Semi-Annual Groundwater Assessment Monitoring Data
Statistical Evaluation
Completed July 21, 2023
Tecumseh Energy Center
Bottom Ash Settling Area

Pursuant to Title 40 Code of Federal Regulations (40 CFR) §§ 257.93 and 257.95 (Rule), this memorandum summarizes the statistical evaluation of the analytical results for the **March 2023** semi-annual assessment monitoring groundwater sampling event for the Tecumseh Energy Center (TEC) Bottom Ash Settling Area (BASA). This semi-annual assessment monitoring groundwater sampling event was completed on **March 6, 2023**, with laboratory results received and validated on **June 12, 2023**. During the sampling event, downgradient monitoring well MW-9 did not contain sufficient water volume to successfully collect samples. Monitoring wells MW-8 and MW-10 did not contain sufficient water volume to collect samples for all requested analyses; however, select analyses were completed.

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 residual (CCR) unit (40 CFR § 257.93(f)(1-4)). The statistical method used for these evaluations (tolerance limit [TL]) was certified by Haley & Aldrich, Inc. on January 14, 2019. The

TL method, as determined applicable for this sampling event, was used to evaluate potential SSLs above background. Background levels for each constituent listed in Appendix IV were computed as upper tolerance limits (UTL), and a minimum 95 percent confidence coefficient and 95 percent coverage. The most recent groundwater sampling event from each compliance well was compared to the corresponding background UTL to determine if a SSI existed.

STATISTICAL EVALUATION

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

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

BACKGROUND DISTRIBUTIONS

The groundwater analytical results for each sampling event from the background sample location MW-7 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 **January 2023.**

RESULTS OF APPENDIX IV DOWNGRADIENT STATISTICAL COMPARISONS

Sample concentrations from the downgradient wells for each of the detected Appendix IV constituents from the **March 2023** semi-annual assessment monitoring event were compared to their respective background UTLs and GWPSs (Table I). A sample concentration greater than the background UTL is considered to represent a SSI. A sample concentration greater than the GWPS is considered to represent a SSL. The results of the groundwater assessment monitoring statistical evaluation are provided in Table I. **Based on this statistical evaluation of groundwater sampling data collected in March 2023, no SSLs above GWPS occurred at the TEC BASA.**

Attachments:

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

TABLE

TABLE I
SUMMARY OF SEMI-ANNUAL ASSESSMENT GROUNDWATER MONITORING STATISTICAL EVALUATION
MARCH 2023 SAMPLING EVENT
TECUMSEH ENERGY CENTER BOTTOM ASH SETTLING AREA
TECUMSEH, KANSAS

										MCL Comparison							Interwell 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/RSL §257.95(h)(2)*	Report Result Unit	Number of Detection Exceedances	Number of Non-Detection Exceedances	Outlier Presence	Outlier Removed	Trend	Distribution Well	March 2023 Concentration (mg/L)	Background Limits[1] (UTL) mg/L	SSI	GWPS (Higher of MCL/RSL or UTL) mg/L	SSL
CCR Appendix-IV: Arsenic, Total (mg/L)																				
MW-7	19/19	0%	-	0.0021	4.135E-08	0.0002033	0.1301	0.01	mg/L	0	0	Yes	No	Stable	Non-parametric	0.0020	0.0021		0.010	
MW-10	20/20	0%	-	0.077	0.0004189	0.02047	0.4546	0.01	mg/L	19	0	No	No	Decreasing		0.0065		Yes		No
MW-8	18/18	0%	-	0.0041	7.474E-07	0.0008645	0.3732	0.01	mg/L	0	0	No	No	Stable		0.0013		No		No
MW-9	15/15	0%	-	0.25	0.003018	0.05494	0.4723	0.01	mg/L	15	0	No	No	Decreasing		NS		NA		NA
CCR Appendix-IV: Barium, Total (mg/L)																				
MW-7	16/16	0%	-	0.1	0.0001368	0.0117	0.1633	2	mg/L	0	0	Yes	No	Decreasing	Normal	0.061	0.0937		2	
MW-10	16/16	0%	-	0.36	0.00223	0.04722	0.1618	2	mg/L	0	0	No	No	Stable		0.19		Yes		No
MW-8	14/14	0%	-	0.077	0.00003504	0.005919	0.09948	2	mg/L	0	0	Yes	No	Stable		NS		NA		NA
MW-9	13/13	0%	-	0.91	0.02334	0.1528	0.2052	2	mg/L	0	0	Yes	No	Stable		NS		NA		NA
CCR Appendix-IV: Cobalt, Total (mg/L)																				
MW-7	16/19	16%	0.001-0.001	0.0035	4.154E-07	0.0006445	0.3963	0.006	mg/L	0	0	Yes	No	Stable	Non-parametric	0.0027	0.0035		0.006	
MW-10	18/20	10%	0.001-0.001	0.0091	0.000004382	0.002093	0.5688	0.006	mg/L	3	0	No	No	Stable		0.0038		Yes		Yes
MW-8	13/18	28%	0.001-0.001	0.0025	2.158E-07	0.0004646	0.3332	0.006	mg/L	0	0	No	No	Stable		< 0.0010		No		No
MW-9	15/15	0%	-	0.048	0.0001173	0.01083	0.5546	0.006	mg/L	15	0	No	No	Stable		NS		NA		NA
CCR Appendix-IV: Lithium, Total (mg/L)																				
MW-7	16/16	0%	-	0.033	0.00001593	0.003992	0.1613	0.04	mg/L	0	0	Yes	No	Stable	Normal	0.028	0.0319		0.040	
MW-10	4/16	75%	0.01-0.01	0.014	0.000001029	0.001014	0.09837	0.04	mg/L	0	0	No	No	Stable		< 0.010		No		No
MW-8	15/15	0%	-	0.024	0.0000117	0.00342	0.1787	0.04	mg/L	0	0	No	No	Stable		0.019		No		No
MW-9	10/13	23%	0.01-0.01	0.021	0.00001431	0.003783	0.2732	0.04	mg/L	0	0	No	No	Stable		NS		NA		NA
CCR Appendix-IV: Molybdenum, Total (mg/L)																				
MW-7	16/16	0%	-	0.016	0.000006581	0.002565	0.2482	0.1	mg/L	0	0	No	No	Stable	Normal	0.016	0.0139		0.100	
MW-10	16/16	0%	-	0.0053	8.353E-07	0.0009139	0.2409	0.1	mg/L	0	0	No	No	Stable		0.0048		No		No
MW-8	15/15	0%	-	0.049	0.00003703	0.006085	0.1568	0.1	mg/L	0	0	No	No	Stable		0.049		Yes		No
MW-9	12/13	8%	0.001-0.001	0.0085	0.000005898	0.002429	0.5719	0.1	mg/L	0	0	No	No	Stable		NS		NA		NA
CCR Appendix-IV: Radium-226 & 228 (pCi/L)																				
MW-7	15/16	6%	0.403-0.403	5.88	1.808	1.345	1.249	5	pCi/L	1	0	Yes	No	Stable	Non-parametric	0.427	5.88		5.88	
MW-10	14/14	0%	-	3.58	0.3465	0.5887	0.2735	5	pCi/L	0	0	No	No	Stable		NS		NA		NA
MW-8	13/14	7%	0.721-0.721	1.59	0.1722	0.415	0.4585	5	pCi/L	0	0	No	No	Stable		NS		NA		NA
MW-9	13/13	0%	-	3.36	0.6575	0.8109	0.4392	5	pCi/L	0	0	No	No	Stable		NS		NA		NA

Notes:

[1] Based on background data collected from 08/30/2016 through 01/05/2023, unless otherwise noted.
** Values obtained from U.S. Environmental Protection Agency Federal CCR Rule Title 40 Code of Federal Regulations (CFR) § 257.95(h)(2)*
CCR = coal combustion residuals
GWPS = Groundwater Protection Standard
MCL = maximum contaminant level
mg/L = milligrams per Liter
NA = not analyzed
NS = not sampled
pCi/L = picoCuries per Liter
RSL = Regional Screening Level
SSI = statistically significant increase
SSL = statistically significant level
UTL = upper tolerance limits

ATTACHMENT 2
Laboratory Analytical Reports

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

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

February 01, 2023

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

RE: Project: TEC BASA CCR
Pace Project No.: 60419291

Dear Jake Humphrey:

Enclosed are the analytical results for sample(s) received by the laboratory on January 05, 2023. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

REVISED 2/1/23 repackaged with radchem QC sheets. No changes were made to data.

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

Sincerely,

Alice Spiller

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

Enclosures

cc: Shelly Gomez, Evergy
Laura Hines, Evergy, Inc.
Samantha Kaney, Haley & Aldrich
Danielle Oberbroeckling, Haley & Aldrich

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

CERTIFICATIONS

Project: TEC BASA CCR
Pace Project No.: 60419291

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: TEC BASA CCR
Pace Project No.: 60419291

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60419291001	**MW-7-091321**	Water	01/05/23 11:05	01/05/23 14:30
60419291002	**TEC-BASA-DUP-0105221**	Water	01/05/23 11:05	01/05/23 14:30

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SAMPLE ANALYTE COUNT

Project: TEC BASA CCR
Pace Project No.: 60419291

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60419291001	**MW-7-091321**	EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	GDH	1	PASI-PA
60419291002	**TEC-BASA-DUP-0105221**	EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	GDH	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

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(913)599-5665

PROJECT NARRATIVE

Project: TEC BASA CCR
Pace Project No.: 60419291

Method: **EPA 903.1**
Description: 903.1 Radium 226
Client: Evergy Kansas Central, Inc.
Date: February 01, 2023

General Information:
2 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: TEC BASA CCR
Pace Project No.: 60419291

Method: **EPA 904.0**
Description: 904.0 Radium 228
Client: Evergy Kansas Central, Inc.
Date: February 01, 2023

General Information:
2 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: TEC BASA CCR
Pace Project No.: 60419291

Method: **Total Radium Calculation**
Description: Total Radium 228+226
Client: Evergy Kansas Central, Inc.
Date: February 01, 2023

General Information:
2 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: TEC BASA CCR
Pace Project No.: 60419291

Sample: MW-7-091321 **Lab ID: 60419291001** Collected: 01/05/23 11:05 Received: 01/05/23 14:30 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	**0.576 ± 0.488 (0.605) C:NA T:92%**	pCi/L	01/17/23 15:36	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.891 ± 0.369 (0.557) C:81% T:93%**	pCi/L	01/17/23 16:12	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.47 ± 0.857 (1.16)**	pCi/L	01/19/23 16:20	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: TEC BASA CCR
Pace Project No.: 60419291

Sample: TEC-BASA-DUP-0105221 **Lab ID: 60419291002** Collected: 01/05/23 11:05 Received: 01/05/23 14:30 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	**0.0918 ± 0.419 (0.852) C:NA T:90%**	pCi/L	01/17/23 15:36	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.370 ± 0.341 (0.693) C:83% T:88%**	pCi/L	01/17/23 16:13	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.462 ± 0.760 (1.55)**	pCi/L	01/19/23 16:20	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: TEC BASA CCR
Pace Project No.: 60419291

QC Batch: 559398
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: 60419291001, 60419291002

METHOD BLANK: 2717138 Matrix: Water
Associated Lab Samples: 60419291001, 60419291002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	-0.0542 ± 0.247 (0.583) C:NA T:102%	pCi/L	01/17/23 14:58	

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: TEC BASA CCR
Pace Project No.: 60419291

QC Batch: 559399
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: 60419291001, 60419291002

METHOD BLANK: 2717142 Matrix: Water
Associated Lab Samples: 60419291001, 60419291002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.443 ± 0.289 (0.535) C:80% T:96%	pCi/L	01/17/23 16:08	

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: TEC BASA CCR
Pace Project No.: 60419291

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: TEC BASA CCR
Pace Project No.: 60419291

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60419291001	**MW-7-091321**	EPA 903.1	559398		
60419291002	**TEC-BASA-DUP-0105221**	EPA 903.1	559398		
60419291001	**MW-7-091321**	EPA 904.0	559399		
60419291002	**TEC-BASA-DUP-0105221**	EPA 904.0	559399		
60419291001	**MW-7-091321**	Total Radium Calculation	561268		
60419291002	**TEC-BASA-DUP-0105221**	Total Radium Calculation	561268		

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-LENE-0009_Sa	WO# : 60419291
	Revision: 2	Effective Date: 01/12

60419291

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 ☑ Zip CC

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

Cooler Temperature (°C): **As-read** 5.3 **Corr. Factor** -0.1 **Corrected** 5.2

Date and initials of person examining contents: 1/5/23 JA

Temperature should be above freezing to 6°C

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

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

Qualtrax Document ID: 30468

Page 1 of 1

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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.

Page: of

Section A Required Client Information:

Company:	EVERGY KANSAS CENTRAL, INC.
Address:	Jeffrey Energy Center (JEC)
	818 Kansas Ave, Topeka, KS 66612
Email To:	doberbroeckling@haleyadrich.com
Phone: 507-251-2232	Fax:
Requested Due Date/TAT:	

Section B Required Project Information:

Report To:	Jake Humphrey
Copy To:	Laura Hines, Samantha Kaney, Melissa Michels
	Danielle Oberroeckling
Purchase Order No.:	
Project Name:	TEC BASA 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, 2

REGULATORY AGENCY

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

Site Location STATE: KS

Section D Required Client Information

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

Valid Matrix Codes

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

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	200.7 Ba,Be, Cr, Pb	200.8 Sb,As,Cd,Co	200.8 Mo,Se,Tl	300.0 Fluoride	6010 Lithium	245.1 Mercury		Radium 226	Radium 228	Ra combined		Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
	Requested Analysis Filtered (Y/N)																	N	N	N	N	N	N		N	N	N			6041929
1	MW-7-091321			—	—	01/05/23	1105		3			2													X	X	X			
2	~~MW-8-091321~~					~~01/05/23~~			3			2													X	X	X			
3	~~MW10-091321~~					01/05/23			3			2													X	X	X			
4	TEC-BASA-DUP-0105221			—	—	01/05/23	1105		3			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)
	Matt VanderPutten SLS	1/3/23	1430	[signature]	1.5.23	1430	5.2	Y	N	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Matt VanderPutten

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 1/5/23

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

Client: Evergy Kansas Central, Inc. Profile # 9657, 2

Site: TEC BASA 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	WT																					2										
5																																
6																																
7																																
8																																
9																																
10																																
11																																
12																																

Container Codes

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

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

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

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

Work Order Number: 6041929.1

Internal Transfer Chain of Custody

Pace Analytical®
www.pacelabs.com

☐ Samples Pre-Logged into eCOC.

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

Workorder: 60419291 **Workorder Name:** TEC BASA CCR

Owner Received Date: 1/5/2023 Results Requested By: 1/25/2023

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

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers HNO3	Requested Analysis: Radium 226 + QC Sheets	Radium 228 + QC Sheets	Total Radium Calculation	LAB USE ONLY
1	MW-7-091321	PS	1/5/2023 11:05	60419291001	Water	2	X	X	X	001
2	TEC-BASA-DUP-0105221	PS	1/5/2023 11:05	60419291002	Water	2	X	X	X	002
3										
4										
5										

Transfers	Released By	Date/Time	Received By	Date/Time
1		01/10 1700		
2				
3				1/11/23

Comments: 9:35

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# : 30553029

30553029

DC#_Title: ENV-FRM-GBUR-0088 v02_Sample Condition Upon Receipt-Pittsburgh

Effective Date: 10/03/2022

WO# : 30553029

PM: MAR Due Date: 02/01/23

CLIENT: PACE_60_LEKS

Client Name: Pace Kansas

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

Tracking Number: 609107946924

Examined By TH

Labeled By TH

Temped By —

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

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

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

Temp should be above freezing to 6°C

Comments:	Yes	No	NA	pH paper Lot# 10D1721 / D.P.D. Residual Chlorine Lot # —
Chain of Custody Present	J			1.
Chain of Custody Filled Out:	J			2.
-Were client corrections present on COC		J		
Chain of Custody Relinquished	J			3.
Sampler Name & Signature on COC:		J		4.
Sample Labels match COC:	J			5.
-Includes date/time/ID Matrix:	WT			
Samples Arrived within Hold Time:	J			6.
Short Hold Time Analysis (<72hr remaining):		J		7.
Rush Turn Around Time Requested:		J		8.
Sufficient Volume:	J			9.
Correct Containers Used:	J			10.
-Pace Containers Used	J			
Containers Intact:	J			11.
Orthophosphate field filtered:			J	12.
Hex Cr Aqueous samples field filtered:			J	13.
Organic Samples checked for dechlorination			J	14:
Filtered volume received for dissolved tests:			J	15:
All containers checked for preservation: exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, non-aqueous matrix	J			16. pH<2
All containers meet method preservation requirements:	J			Initial when completed TH / Date/Time of Preservation / Lot# of added Preservative
Headspace in VOA Vials (>6mm):			J	17.
Trip Blank Present:			J	18.
Trip Blank Custody Seals Present			J	
Rad Samples Screened <0.5 mrem/hr.	J			Initial when completed TH / Date: 1/11/23 / Survey Meter SN: 1563

Comments:

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

Qualtrax ID: 55680

Quality Control Sample Performance Assessment

Pace Analytical
www.pacelabs.com

Test: Ra-226
Analyst: CLM
Date: 1/12/2023
Batch ID: 70932
Matrix: DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2717138
MB concentration:	-0.054
M/B Counting Uncertainty:	0.237
MB MDC:	0.583
MB Numerical Performance Indicator:	-0.45
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS70932	LCSD70932
Count Date:	1/17/2023	1/17/2023
Spike I.D.:	21-040	21-040
Spike Concentration (pCi/mL):	32.421	32.421
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.652	0.657
Target Conc. (pCi/L, g, F):	4.975	4.937
Uncertainty (Calculated):	0.234	0.232
Result (pCi/L, g, F):	5.478	4.335
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.207	1.042
Numerical Performance Indicator:	0.80	-1.11
Percent Recovery:	110.11%	87.80%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	133%	133%
Lower % Recovery Limits:	73%	73%

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

Duplicate Sample Assessment		
Sample I.D.:	LCS70932	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD70932	
Sample Result (pCi/L, g, F):	5.478	
Sample Result Counting Uncertainty (pCi/L, g, F):	1.207	
Sample Duplicate Result (pCi/L, g, F):	4.335	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	1.042	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	1.405	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	22.55%	
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 1/17/23

CLM 1/17/23

Quality Control Sample Performance Assessment

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Test:	Ra-228
Analyst:	JJS1
Date:	1/13/2023
Worklist:	70933
Matrix:	WT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2717142
MB concentration:	0.443
M/B 2 Sigma CSU:	0.289
MB MDC:	0.535
MB Numerical Performance Indicator:	3.00
MB Status vs Numerical Indicator:	Warning
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS70933	LCSD70933
Count Date:	1/17/2023	1/17/2023
Spike I.D.:	22-040	22-040
Decay Corrected Spike Concentration (pCi/mL):	33.865	33.865
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.805	0.802
Target Conc. (pCi/L, g, F):	4.206	4.223
Uncertainty (Calculated):	0.206	0.207
Result (pCi/L, g, F):	3.029	3.001
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	0.780	0.749
Numerical Performance Indicator:	-2.86	-3.08
Percent Recovery:	72.02%	71.07%
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.:	LCS70933	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD70933	
Sample Result (pCi/L, g, F):	3.029	
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.780	
Sample Duplicate Result (pCi/L, g, F):	3.001	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	0.749	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	0.051	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	1.34%	
Duplicate Status vs Numerical Indicator:	Pass	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	36%	

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

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

Comments:

VAL
1/18/23

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

January 13, 2023

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

RE: Project: TEC BASA CCR
Pace Project No.: 60419294

Dear Jake Humphrey:

Enclosed are the analytical results for sample(s) received by the laboratory on January 05, 2023. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Kansas City

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

Sincerely,

Alice Spiller

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

Enclosures

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

Pace Analytical Services, LLC
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CERTIFICATIONS

Project: TEC BASA CCR
Pace Project No.: 60419294

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

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SAMPLE SUMMARY

Project: TEC BASA CCR
Pace Project No.: 60419294

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60419294001	**MW-7-091321**	Water	01/05/23 11:05	01/05/23 14:30
60419294002	**MW-10-091321**	Water	01/05/23 10:00	01/05/23 14:30
60419294003	**TEC-BASA-DUP-0105221**	Water	01/05/23 11:05	01/05/23 14:30

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SAMPLE ANALYTE COUNT

Project: TEC BASA CCR
Pace Project No.: 60419294

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60419294001	**MW-7-091321**	EPA 200.7	ALH	4	PASI-K
		EPA 6010	MA1	1	PASI-K
		EPA 200.8	MRV	7	PASI-K
		EPA 245.1	JXD	1	PASI-K
		EPA 300.0	RKA	1	PASI-K
60419294002	**MW-10-091321**	EPA 200.7	ALH	4	PASI-K
		EPA 6010	MA1	1	PASI-K
		EPA 200.8	MRV	7	PASI-K
		EPA 245.1	JXD	1	PASI-K
60419294003	**TEC-BASA-DUP-0105221**	EPA 200.7	ALH	4	PASI-K
		EPA 6010	MA1	1	PASI-K
		EPA 200.8	MRV	7	PASI-K
		EPA 245.1	JXD	1	PASI-K
		EPA 300.0	RKA	1	PASI-K

PASI-K = Pace Analytical Services - Kansas City

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PROJECT NARRATIVE

Project: TEC BASA CCR
Pace Project No.: 60419294

Method: **EPA 200.7**
Description: 200.7 Metals, Total
Client: Evergy Kansas Central, Inc.
Date: January 13, 2023

General Information:
3 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:

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(913)599-5665

PROJECT NARRATIVE

Project: TEC BASA CCR
Pace Project No.: 60419294

Method: **EPA 6010**
Description: 6010 MET ICP
Client: Evergy Kansas Central, Inc.
Date: January 13, 2023

General Information:
3 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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PROJECT NARRATIVE

Project: TEC BASA CCR
Pace Project No.: 60419294

Method: **EPA 200.8**
Description: 200.8 MET ICPMS
Client: Evergy Kansas Central, Inc.
Date: January 13, 2023

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

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

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

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

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

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

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

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

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

Additional Comments:

Pace Analytical Services, LLC
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(913)599-5665

PROJECT NARRATIVE

Project: TEC BASA CCR
Pace Project No.: 60419294

Method: **EPA 245.1**
Description: 245.1 Mercury
Client: Evergy Kansas Central, Inc.
Date: January 13, 2023

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

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

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

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

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

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

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

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

Additional Comments:

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PROJECT NARRATIVE

Project: TEC BASA CCR
Pace Project No.: 60419294

Method: **EPA 300.0**
Description: 300.0 IC Anions 28 Days
Client: Evergy Kansas Central, Inc.
Date: January 13, 2023

General Information:
2 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: 826283

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60419181005,60419294001

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

- MS (Lab ID: 3282386)
  - Fluoride
- MS (Lab ID: 3282388)
  - Fluoride
- MSD (Lab ID: 3282387)
  - 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: TEC BASA CCR
Pace Project No.: 60419294

Sample: MW-7-091321 **Lab ID: 60419294001** Collected: 01/05/23 11:05 Received: 01/05/23 14:30 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	**0.067**	mg/L	0.0050	1	01/06/23 07:40	01/12/23 09:34	7440-39-3	
Beryllium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	01/06/23 07:40	01/12/23 09:34	7440-41-7	
Chromium, Total Recoverable	**<0.0050**	mg/L	0.0050	1	01/06/23 07:40	01/12/23 09:34	7440-47-3	
Lead, Total Recoverable	**<0.010**	mg/L	0.010	1	01/06/23 07:40	01/12/23 09:34	7439-92-1	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**0.033**	mg/L	0.010	1	01/06/23 06:59	01/11/23 10:34	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	01/06/23 07:40	01/09/23 14:34	7440-36-0	
Arsenic, Total Recoverable	**0.0016**	mg/L	0.0010	1	01/06/23 07:40	01/09/23 14:34	7440-38-2	
Cadmium, Total Recoverable	**<0.00050**	mg/L	0.00050	1	01/06/23 07:40	01/09/23 14:34	7440-43-9	
Cobalt, Total Recoverable	**0.0035**	mg/L	0.0010	1	01/06/23 07:40	01/09/23 14:34	7440-48-4	
Molybdenum, Total Recoverable	**0.011**	mg/L	0.0010	1	01/06/23 07:40	01/09/23 14:34	7439-98-7	
Selenium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	01/06/23 07:40	01/09/23 14:34	7782-49-2	
Thallium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	01/06/23 07:40	01/09/23 14:34	7440-28-0	
245.1 Mercury	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1 Pace Analytical Services - Kansas City							
Mercury	**<0.20**	ug/L	0.20	1	01/06/23 07:01	01/06/23 11:56	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Fluoride	**<0.20**	mg/L	0.20	1		01/09/23 10:39	16984-48-8	M1

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: TEC BASA CCR
Pace Project No.: 60419294

Sample: MW-10-091321 **Lab ID: 60419294002** Collected: 01/05/23 10:00 Received: 01/05/23 14:30 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	**0.21**	mg/L	0.0050	1	01/06/23 07:40	01/12/23 09:40	7440-39-3	
Beryllium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	01/06/23 07:40	01/12/23 09:40	7440-41-7	
Chromium, Total Recoverable	**<0.0050**	mg/L	0.0050	1	01/06/23 07:40	01/12/23 09:40	7440-47-3	
Lead, Total Recoverable	**<0.010**	mg/L	0.010	1	01/06/23 07:40	01/12/23 09:40	7439-92-1	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**0.014**	mg/L	0.010	1	01/06/23 06:59	01/11/23 10:36	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	01/06/23 07:40	01/09/23 14:37	7440-36-0	
Arsenic, Total Recoverable	**0.026**	mg/L	0.0010	1	01/06/23 07:40	01/09/23 14:37	7440-38-2	
Cadmium, Total Recoverable	**<0.00050**	mg/L	0.00050	1	01/06/23 07:40	01/09/23 14:37	7440-43-9	
Cobalt, Total Recoverable	**0.0018**	mg/L	0.0010	1	01/06/23 07:40	01/09/23 14:37	7440-48-4	
Molybdenum, Total Recoverable	**0.0044**	mg/L	0.0010	1	01/06/23 07:40	01/09/23 14:37	7439-98-7	
Selenium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	01/06/23 07:40	01/09/23 14:37	7782-49-2	
Thallium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	01/06/23 07:40	01/09/23 14:37	7440-28-0	
245.1 Mercury	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1 Pace Analytical Services - Kansas City							
Mercury	**<0.20**	ug/L	0.20	1	01/06/23 07:01	01/06/23 12:00	7439-97-6	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: TEC BASA CCR
Pace Project No.: 60419294

Sample: TEC-BASA-DUP-0105221 **Lab ID: 60419294003** Collected: 01/05/23 11:05 Received: 01/05/23 14:30 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	**0.059**	mg/L	0.0050	1	01/06/23 07:40	01/12/23 09:42	7440-39-3	
Beryllium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	01/06/23 07:40	01/12/23 09:42	7440-41-7	
Chromium, Total Recoverable	**<0.0050**	mg/L	0.0050	1	01/06/23 07:40	01/12/23 09:42	7440-47-3	
Lead, Total Recoverable	**<0.010**	mg/L	0.010	1	01/06/23 07:40	01/12/23 09:42	7439-92-1	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**0.034**	mg/L	0.010	1	01/06/23 06:59	01/11/23 10:38	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	01/06/23 07:40	01/09/23 14:40	7440-36-0	
Arsenic, Total Recoverable	**0.0013**	mg/L	0.0010	1	01/06/23 07:40	01/09/23 14:40	7440-38-2	
Cadmium, Total Recoverable	**<0.00050**	mg/L	0.00050	1	01/06/23 07:40	01/09/23 14:40	7440-43-9	
Cobalt, Total Recoverable	**0.0017**	mg/L	0.0010	1	01/06/23 07:40	01/09/23 14:40	7440-48-4	
Molybdenum, Total Recoverable	**0.012**	mg/L	0.0010	1	01/06/23 07:40	01/09/23 14:40	7439-98-7	
Selenium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	01/06/23 07:40	01/09/23 14:40	7782-49-2	
Thallium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	01/06/23 07:40	01/09/23 14:40	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	01/06/23 07:01	01/06/23 12:03	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		01/09/23 11:18	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: TEC BASA CCR
Pace Project No.: 60419294

QC Batch: 826153
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: 60419294001, 60419294002, 60419294003

METHOD BLANK: 3282015 Matrix: Water
Associated Lab Samples: 60419294001, 60419294002, 60419294003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	<0.20	0.20	01/06/23 11:21	

LABORATORY CONTROL SAMPLE: 3282016

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: 3282017 3282018

Parameter	Units	60419031001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	5	5	4.7	4.7	93	94	70-130	0	20	

MATRIX SPIKE SAMPLE: 3282019

Parameter	Units	60419104001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	<0.20	5	4.0	80	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

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

QUALITY CONTROL DATA

Project: TEC BASA CCR
Pace Project No.: 60419294

QC Batch: 826150
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: 60419294001, 60419294002, 60419294003

METHOD BLANK: 3282003 Matrix: Water
Associated Lab Samples: 60419294001, 60419294002, 60419294003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Barium	mg/L	<0.0050	0.0050	01/12/23 09:29	
Beryllium	mg/L	<0.0010	0.0010	01/12/23 09:29	
Chromium	mg/L	<0.0050	0.0050	01/12/23 09:29	
Lead	mg/L	<0.010	0.010	01/12/23 09:29	

LABORATORY CONTROL SAMPLE: 3282004

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	mg/L	1	1.0	101	85-115	
Beryllium	mg/L	1	1.0	103	85-115	
Chromium	mg/L	1	1.0	101	85-115	
Lead	mg/L	1	1.0	104	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3282005 3282006

Parameter	Units	60419294001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	mg/L	0.067	1	1	1.0	1.0	93	93	70-130	0	20	
Beryllium	mg/L	<0.0010	1	1	0.99	0.98	99	98	70-130	1	20	
Chromium	mg/L	<0.0050	1	1	0.93	0.93	93	93	70-130	1	20	
Lead	mg/L	<0.010	1	1	0.94	0.94	94	94	70-130	0	20	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: TEC BASA CCR
Pace Project No.: 60419294

QC Batch: 826151
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: 60419294001, 60419294002, 60419294003

METHOD BLANK: 3282007 Matrix: Water
Associated Lab Samples: 60419294001, 60419294002, 60419294003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	mg/L	<0.0010	0.0010	01/09/23 14:18	
Arsenic	mg/L	<0.0010	0.0010	01/09/23 14:18	
Cadmium	mg/L	<0.00050	0.00050	01/09/23 14:18	
Cobalt	mg/L	<0.0010	0.0010	01/09/23 14:18	
Molybdenum	mg/L	<0.0010	0.0010	01/09/23 14:18	
Selenium	mg/L	<0.0010	0.0010	01/09/23 14:18	
Thallium	mg/L	<0.0010	0.0010	01/09/23 14:18	

LABORATORY CONTROL SAMPLE: 3282008

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.04	0.039	98	85-115	
Arsenic	mg/L	0.04	0.039	98	85-115	
Cadmium	mg/L	0.04	0.039	99	85-115	
Cobalt	mg/L	0.04	0.040	101	85-115	
Molybdenum	mg/L	0.04	0.038	96	85-115	
Selenium	mg/L	0.04	0.039	98	85-115	
Thallium	mg/L	0.04	0.038	96	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3282009 3282010

Parameter	Units	60419111001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/L	<5.0 ug/L	0.04	0.04	0.040	0.039	98	98	70-130	1	20	
Arsenic	mg/L	<5.0 ug/L	0.04	0.04	0.038	0.039	91	93	70-130	2	20	
Cadmium	mg/L	<2.5 ug/L	0.04	0.04	0.036	0.036	90	89	70-130	1	20	
Cobalt	mg/L	9.0 ug/L	0.04	0.04	0.045	0.046	91	92	70-130	1	20	
Molybdenum	mg/L	12.1 ug/L	0.04	0.04	0.048	0.047	90	88	70-130	2	20	
Selenium	mg/L	53.2 ug/L	0.04	0.04	0.092	0.094	96	102	70-130	2	20	
Thallium	mg/L	<5.0 ug/L	0.04	0.04	0.042	0.042	103	104	70-130	0	20	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: TEC BASA CCR
Pace Project No.: 60419294

QC Batch: 826145
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60419294001, 60419294002, 60419294003

METHOD BLANK: 3281982 Matrix: Water
Associated Lab Samples: 60419294001, 60419294002, 60419294003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lithium	mg/L	<0.010	0.010	01/11/23 10:04	

LABORATORY CONTROL SAMPLE: 3281983

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: 3281984 3281985

Parameter	Units	60419073001 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	1.0	1.0	102	103	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: TEC BASA CCR
Pace Project No.: 60419294

QC Batch: 826283
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: 60419294001, 60419294003

METHOD BLANK: 3282384 Matrix: Water
Associated Lab Samples: 60419294001, 60419294003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Fluoride	mg/L	<0.20	0.20	01/09/23 09:29	

METHOD BLANK: 3284286 Matrix: Water
Associated Lab Samples: 60419294001, 60419294003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Fluoride	mg/L	<0.20	0.20	01/10/23 08:51	

LABORATORY CONTROL SAMPLE: 3282385

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

LABORATORY CONTROL SAMPLE: 3284287

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	2.5	2.5	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3282386 3282387

Parameter	Units	60419294001 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	1.7	1.7	68	67	80-120	1	15	M1

MATRIX SPIKE SAMPLE: 3282388

Parameter	Units	60419181005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	ND	50	73.7	147	80-120	M1

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REPORT OF LABORATORY ANALYSIS

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

QUALIFIERS

Project: TEC BASA CCR
Pace Project No.: 60419294

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

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

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: TEC BASA CCR
Pace Project No.: 60419294

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60419294001	**MW-7-091321**	EPA 200.7	826150	EPA 200.7	826171
60419294002	**MW-10-091321**	EPA 200.7	826150	EPA 200.7	826171
60419294003	**TEC-BASA-DUP-0105221**	EPA 200.7	826150	EPA 200.7	826171
60419294001	**MW-7-091321**	EPA 3010	826145	EPA 6010	826177
60419294002	**MW-10-091321**	EPA 3010	826145	EPA 6010	826177
60419294003	**TEC-BASA-DUP-0105221**	EPA 3010	826145	EPA 6010	826177
60419294001	**MW-7-091321**	EPA 200.8	826151	EPA 200.8	826172
60419294002	**MW-10-091321**	EPA 200.8	826151	EPA 200.8	826172
60419294003	**TEC-BASA-DUP-0105221**	EPA 200.8	826151	EPA 200.8	826172
60419294001	**MW-7-091321**	EPA 245.1	826153	EPA 245.1	826160
60419294002	**MW-10-091321**	EPA 245.1	826153	EPA 245.1	826160
60419294003	**TEC-BASA-DUP-0105221**	EPA 245.1	826153	EPA 245.1	826160
60419294001	**MW-7-091321**	EPA 300.0	826283		
60419294003	**TEC-BASA-DUP-0105221**	EPA 300.0	826283		

WO# : 60419294

60419294

DC#_Title: ENV-FRM-LENE-0009_Sam		
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: T296 **Type of Ice:** (Wet) Blue None

Cooler Temperature (°C): **As-read** 5.3 **Corr. Factor** -0.1 **Corrected** 5.2

Date and initials of person examining contents: 1/5/23 JA

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	Did not Recieve BP3V for Sample mw1b
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$_2$SO$_4$, HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO) LOT#: 6187	☑Yes ☐No ☐N/A	List sample IDs, volumes, lot #'s of preservative and the date/time added.
Cyanide water sample checks: Lead acetate strip turns dark? (Record only)	☐Yes ☐No	
Potassium iodide test strip turns blue/purple? (Preserve)	☐Yes ☐No	
Trip Blank present:	☐Yes ☐No ☑N/A	
Headspace in VOA vials (>6mm):	☐Yes ☐No ☑N/A	
Samples from USDA Regulated Area: State:	☐Yes ☐No ☑N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	☐Yes ☐No ☑N/A	

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

Qualtrax Document ID: 30468

Page 1 of 1

Pace Analytical
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: of

Section A Required Client Information:

Company:	EVERGY KANSAS CENTRAL, INC.
Address:	Jeffrey Energy Center (JEC)
	818 Kansas Ave, Topeka, KS 66612
Email To:	doberbroeckling@haleyadrich.com
Phone: 507-251-2232	Fax:
Requested Due Date/TAT:	

Section B Required Project Information:

Report To:	Jake Humphrey
Copy To:	Laura Hines, Samantha Kaney, Melissa Michels
	Danielle Oberroeckling
Purchase Order No.:	
Project Name:	TEC BASA 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, 2

REGULATORY AGENCY

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

Site Location STATE: KS

Section D Required Client Information

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

Valid Matrix Codes

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

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	200.7 Ba,Be, Cr, Pb	200.8 Sb,As,Cd,Co	200.8 Mo,Se,Tl	300.0 Fluoride	6010 Lithium	245.1 Mercury			Radium 226	Radium 228	Ra combined	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
	Requested Analysis Filtered (Y/N)																	N	N	N	N	N	N						60419294
1	MW-7-091321			—	—	01/05/23	1105		3	1		2						X	X	X	X	X	X						
2	~~MW-8-091321~~			~~—~~	~~—~~	~~01/05/23~~			~~3~~	~~1~~		~~2~~						~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~						
3	MW10-091321			—	—	01/05/23	1000		3	1		2						X	X	X	X	X	X						
4	TEC-BASA-DUP-0105221			—	—	01/05/23	1105		3	1		2						X	X	X	X	X	X						
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
MW-10 not full kit	Matt VanderPutten SCS	1/5/23	1430	[signature]	1.5.23	1430	5.2	Y	N	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Matt VanderPutten

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 1/5/23

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

Client: Evergy Kansas Central, Inc. Profile # 9657, 2

Site: TEC BASA CCR Notes

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

Container Codes

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

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

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

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

Work Order Number: 60419294

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

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

March 21, 2023

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

RE: Project: TEC BASA CCR
Pace Project No.: 60423226

Dear Jake Humphrey:

Enclosed are the analytical results for sample(s) received by the laboratory on March 06, 2023. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

REVISED 3/21/23

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

Sincerely,

Alice Spiller

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

Enclosures

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

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

CERTIFICATIONS

Project: TEC BASA CCR
Pace Project No.: 60423226

Pace Analytical Services Kansas

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

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

SAMPLE SUMMARY

Project: TEC BASA CCR
Pace Project No.: 60423226

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60423226001	**MW-7-030623**	Water	03/06/23 01:55	03/06/23 16:50
60423226002	**MW-8-030623**	Water	03/06/23 01:00	03/06/23 16:50
60423226003	**MW-10-030623**	Water	03/06/23 11:25	03/06/23 16:50
60423226004	**DUP-TECBASA-030623**	Water	03/06/23 02:00	03/06/23 16:50

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SAMPLE ANALYTE COUNT

Project: TEC BASA CCR
Pace Project No.: 60423226

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60423226001	**MW-7-030623**	EPA 200.7	ALH	3	PASI-K
		EPA 6010	ALH	1	PASI-K
		EPA 200.8	JGP	3	PASI-K
		SM 2540C	MLD	1	PASI-K
		SM 4500-H+B	RB	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
60423226002	**MW-8-030623**	EPA 6010	ALH	1	PASI-K
		EPA 200.8	JGP	3	PASI-K
		SM 2540C	MLD	1	PASI-K
		SM 4500-H+B	RB	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
60423226003	**MW-10-030623**	EPA 200.7	ALH	3	PASI-K
		EPA 6010	ALH	1	PASI-K
		EPA 200.8	JGP	3	PASI-K
		SM 4500-H+B	RB	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
60423226004	**DUP-TECBASA-030623**	EPA 200.7	ALH	3	PASI-K
		EPA 6010	ALH	1	PASI-K
		EPA 200.8	JGP	3	PASI-K
		SM 2540C	MLD	1	PASI-K
		SM 4500-H+B	RB	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K

PASI-K = Pace Analytical Services - Kansas City

Pace Analytical Services, LLC
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PROJECT NARRATIVE

Project: TEC BASA CCR
Pace Project No.: 60423226

Date: March 21, 2023

Amended to report uniform reporting units per client request.

Pace Analytical Services, LLC
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Lenexa, KS 66219
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PROJECT NARRATIVE

Project: TEC BASA CCR
Pace Project No.: 60423226

Method: **EPA 200.7**
Description: 200.7 Metals, Total
Client: Evergy Kansas Central, Inc.
Date: March 21, 2023

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

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

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

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

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

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

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

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

Additional Comments:

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

PROJECT NARRATIVE

Project: TEC BASA CCR
Pace Project No.: 60423226

Method: **EPA 6010**
Description: 6010 MET ICP
Client: Evergy Kansas Central, Inc.
Date: March 21, 2023

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

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

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

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

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

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

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

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

Additional Comments:

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PROJECT NARRATIVE

Project: TEC BASA CCR
Pace Project No.: 60423226

Method: **EPA 200.8**
Description: 200.8 MET ICPMS
Client: Evergy Kansas Central, Inc.
Date: March 21, 2023

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

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

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

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

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

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

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

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

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

Additional Comments:

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

PROJECT NARRATIVE

Project: TEC BASA CCR
Pace Project No.: 60423226

Method: **SM 2540C**
Description: 2540C Total Dissolved Solids
Client: Evergy Kansas Central, Inc.
Date: March 21, 2023

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

PROJECT NARRATIVE

Project: TEC BASA CCR
Pace Project No.: 60423226

Method: **SM 4500-H+B**
Description: 4500H+ pH, Electrometric
Client: Evergy Kansas Central, Inc.
Date: March 21, 2023

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

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

H6: Analysis initiated outside of the 15 minute EPA required holding time.
- DUP-TECBASA-030623 (Lab ID: 60423226004)
- MW-10-030623 (Lab ID: 60423226003)
- MW-7-030623 (Lab ID: 60423226001)
- MW-8-030623 (Lab ID: 60423226002)

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: TEC BASA CCR
Pace Project No.: 60423226

Method: **EPA 300.0**
Description: 300.0 IC Anions 28 Days
Client: Evergy Kansas Central, Inc.
Date: March 21, 2023

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

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

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

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

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

Additional Comments:

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

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

ANALYTICAL RESULTS

Project: TEC BASA CCR
Pace Project No.: 60423226

Sample: MW-7-030623 **Lab ID: 60423226001** Collected: 03/06/23 01:55 Received: 03/06/23 16:50 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	**0.061**	mg/L	0.0050	1	03/09/23 10:04	03/10/23 12:46	7440-39-3	
Boron, Total Recoverable	**0.58**	mg/L	0.10	1	03/09/23 10:04	03/10/23 12:46	7440-42-8	
Calcium, Total Recoverable	**90.3**	mg/L	0.20	1	03/09/23 10:04	03/10/23 12:46	7440-70-2	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**0.028**	mg/L	0.010	1	03/09/23 10:04	03/10/23 13:06	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	**0.0020**	mg/L	0.0010	1	03/09/23 10:04	03/14/23 11:38	7440-38-2	
Cobalt, Total Recoverable	**0.0027**	mg/L	0.0010	1	03/09/23 10:04	03/14/23 11:38	7440-48-4	
Molybdenum, Total Recoverable	**0.016**	mg/L	0.0010	1	03/09/23 10:04	03/14/23 11:38	7439-98-7	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City							
Total Dissolved Solids	**1210**	mg/L	13.3	1		03/08/23 09:01		
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		03/07/23 12:14		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Chloride	**237**	mg/L	200	200		03/13/23 17:27	16887-00-6	
Fluoride	**<0.20**	mg/L	0.20	1		03/13/23 16:48	16984-48-8	
Sulfate	**253**	mg/L	200	200		03/13/23 17:27	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: TEC BASA CCR
Pace Project No.: 60423226

Sample: MW-8-030623 **Lab ID: 60423226002** Collected: 03/06/23 01:00 Received: 03/06/23 16:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**0.019**	mg/L	0.010	1	03/09/23 10:04	03/10/23 13:12	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	**0.0013**	mg/L	0.0010	1	03/09/23 10:04	03/14/23 11:24	7440-38-2	
Cobalt, Total Recoverable	**<0.0010**	mg/L	0.0010	1	03/09/23 10:04	03/14/23 11:24	7440-48-4	
Molybdenum, Total Recoverable	**0.049**	mg/L	0.0010	1	03/09/23 10:04	03/14/23 11:24	7439-98-7	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City							
Total Dissolved Solids	**1390**	mg/L	13.3	1		03/08/23 09:01		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Kansas City							
pH at 25 Degrees C	**6.8**	Std. Units	0.10	1		03/07/23 12:12		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Chloride	**245**	mg/L	200	200		03/13/23 18:20	16887-00-6	
Fluoride	**<0.20**	mg/L	0.20	1		03/13/23 18:07	16984-48-8	
Sulfate	**526**	mg/L	200	200		03/13/23 18:20	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: TEC BASA CCR
Pace Project No.: 60423226

Sample: MW-10-030623 **Lab ID: 60423226003** Collected: 03/06/23 11:25 Received: 03/06/23 16:50 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	**0.19**	mg/L	0.0050	1	03/09/23 10:04	03/10/23 12:52	7440-39-3	
Boron, Total Recoverable	**0.28**	mg/L	0.10	1	03/09/23 10:04	03/10/23 12:52	7440-42-8	
Calcium, Total Recoverable	**163**	mg/L	0.20	1	03/09/23 10:04	03/10/23 12:52	7440-70-2	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**<0.010**	mg/L	0.010	1	03/09/23 10:04	03/10/23 13:14	7439-93-2	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City							
Arsenic, Total Recoverable	**0.0065**	mg/L	0.0010	1	03/09/23 10:04	03/14/23 11:41	7440-38-2	
Cobalt, Total Recoverable	**0.0038**	mg/L	0.0010	1	03/09/23 10:04	03/14/23 11:41	7440-48-4	
Molybdenum, Total Recoverable	**0.0048**	mg/L	0.0010	1	03/09/23 10:04	03/14/23 11:41	7439-98-7	
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Kansas City							
pH at 25 Degrees C	**8.1**	Std. Units	0.10	1		03/09/23 11:18		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Chloride	**311**	mg/L	200	200		03/13/23 19:14	16887-00-6	
Fluoride	**0.26**	mg/L	0.20	1		03/13/23 19:01	16984-48-8	
Sulfate	**<1.0**	mg/L	1.0	1		03/13/23 19:01	14808-79-8	

Pace Analytical Services, LLC
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(913)599-5665

ANALYTICAL RESULTS

Project: TEC BASA CCR
Pace Project No.: 60423226

Sample: DUP-TECBASA-030623 **Lab ID: 60423226004** Collected: 03/06/23 02:00 Received: 03/06/23 16:50 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	**0.063**	mg/L	0.0050	1	03/09/23 10:04	03/10/23 12:54	7440-39-3	
Boron, Total Recoverable	**0.59**	mg/L	0.10	1	03/09/23 10:04	03/10/23 12:54	7440-42-8	
Calcium, Total Recoverable	**92.6**	mg/L	0.20	1	03/09/23 10:04	03/10/23 12:54	7440-70-2	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**0.027**	mg/L	0.010	1	03/09/23 10:04	03/10/23 13:16	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	**0.0020**	mg/L	0.0010	1	03/09/23 10:04	03/14/23 11:45	7440-38-2	
Cobalt, Total Recoverable	**0.0027**	mg/L	0.0010	1	03/09/23 10:04	03/14/23 11:45	7440-48-4	
Molybdenum, Total Recoverable	**0.015**	mg/L	0.0010	1	03/09/23 10:04	03/14/23 11:45	7439-98-7	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City							
Total Dissolved Solids	**1250**	mg/L	13.3	1		03/08/23 09:02		
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		03/07/23 12:15		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Chloride	**218**	mg/L	200	200		03/13/23 19:41	16887-00-6	
Fluoride	**<0.20**	mg/L	0.20	1		03/13/23 19:27	16984-48-8	
Sulfate	**257**	mg/L	200	200		03/13/23 19:41	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: TEC BASA CCR
Pace Project No.: 60423226

QC Batch: 835505
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: 60423226001, 60423226003, 60423226004

METHOD BLANK: 3314320 Matrix: Water
Associated Lab Samples: 60423226001, 60423226003, 60423226004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Barium	mg/L	<0.0050	0.0050	03/10/23 12:42	
Boron	mg/L	<0.10	0.10	03/10/23 12:42	
Calcium	mg/L	<0.20	0.20	03/10/23 12:42	

LABORATORY CONTROL SAMPLE: 3314321

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	mg/L	1	0.95	95	85-115	
Boron	mg/L	1	0.94	94	85-115	
Calcium	mg/L	10	10	100	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3314322 3314323

Parameter	Units	60423226001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	mg/L	0.061	1	1	0.97	0.99	91	92	70-130	1	20	
Boron	mg/L	0.58	1	1	1.5	1.5	91	94	70-130	2	20	
Calcium	mg/L	90.3	10	10	99.4	102	91	113	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

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

QUALITY CONTROL DATA

Project: TEC BASA CCR
Pace Project No.: 60423226

QC Batch: 835507
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: 60423226001, 60423226002, 60423226003, 60423226004

METHOD BLANK: 3314328 Matrix: Water
Associated Lab Samples: 60423226001, 60423226002, 60423226003, 60423226004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/L	<0.0010	0.0010	03/14/23 11:19	
Cobalt	mg/L	<0.0010	0.0010	03/14/23 11:19	
Molybdenum	mg/L	<0.0010	0.0010	03/14/23 11:19	

LABORATORY CONTROL SAMPLE: 3314329

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/L	0.04	0.039	96	85-115	
Cobalt	mg/L	0.04	0.038	95	85-115	
Molybdenum	mg/L	0.04	0.040	99	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3314330 3314331

Parameter	Units	60423226002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/L	0.0013	0.04	0.04	0.041	0.041	99	100	70-130	1	20	
Cobalt	mg/L	<0.0010	0.04	0.04	0.040	0.041	97	99	70-130	2	20	
Molybdenum	mg/L	0.049	0.04	0.04	0.088	0.088	99	98	70-130	0	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: TEC BASA CCR
Pace Project No.: 60423226

QC Batch: 835506 | Analysis Method: EPA 6010
QC Batch Method: EPA 3010 | Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60423226001, 60423226002, 60423226003, 60423226004

METHOD BLANK: 3314324 Matrix: Water
Associated Lab Samples: 60423226001, 60423226002, 60423226003, 60423226004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lithium	mg/L	<0.010	0.010	03/10/23 13:02	

LABORATORY CONTROL SAMPLE: 3314325

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lithium	mg/L	1	0.96	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3314326 3314327

Parameter	Units	60423226001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lithium	mg/L	0.028	1	1	1.0	1.0	98	98	75-125	1	20	

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

REPORT OF LABORATORY ANALYSIS

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(913)599-5665

QUALITY CONTROL DATA

Project: TEC BASA CCR
Pace Project No.: 60423226

QC Batch: 835379
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60423226001, 60423226002, 60423226004

METHOD BLANK: 3313761 Matrix: Water
Associated Lab Samples: 60423226001, 60423226002, 60423226004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	03/08/23 09:00	

LABORATORY CONTROL SAMPLE: 3313762

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

SAMPLE DUPLICATE: 3313763

Parameter	Units	60422746002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	458	480	5	10	

SAMPLE DUPLICATE: 3313764

Parameter	Units	60423245001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	7450	7520	1	10	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: TEC BASA CCR
Pace Project No.: 60423226

QC Batch: 835122
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: 60423226001, 60423226002, 60423226004

SAMPLE DUPLICATE: 3312967

Parameter	Units	60423115001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	6.6	6.5	0	5	H6

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: TEC BASA CCR
Pace Project No.: 60423226

QC Batch: 835568
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: 60423226003

SAMPLE DUPLICATE: 3314408

Parameter	Units	60423240001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	8.5	8.6	1	5	H6

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: TEC BASA CCR
Pace Project No.: 60423226

QC Batch: 835314
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: 60423226001, 60423226002, 60423226003, 60423226004

METHOD BLANK: 3313576 Matrix: Water
Associated Lab Samples: 60423226001, 60423226002, 60423226003, 60423226004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<1.0	1.0	03/13/23 10:27	
Fluoride	mg/L	<0.20	0.20	03/13/23 10:27	
Sulfate	mg/L	<1.0	1.0	03/13/23 10:27	

METHOD BLANK: 3319716 Matrix: Water
Associated Lab Samples: 60423226001, 60423226002, 60423226003, 60423226004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<1.0	1.0	03/16/23 10:29	
Fluoride	mg/L	<0.20	0.20	03/16/23 10:29	
Sulfate	mg/L	<1.0	1.0	03/16/23 10:29	

LABORATORY CONTROL SAMPLE: 3313577

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.7	95	90-110	
Fluoride	mg/L	2.5	2.5	99	90-110	
Sulfate	mg/L	5	5.1	101	90-110	

LABORATORY CONTROL SAMPLE: 3319717

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.7	94	90-110	
Fluoride	mg/L	2.5	2.6	103	90-110	
Sulfate	mg/L	5	4.7	94	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3313578 3313579

Parameter	Units	60423226001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	237	1000	1000	1120	1160	88	92	80-120	3	15	
Fluoride	mg/L	<0.20	2.5	2.5	2.6	2.5	95	91	80-120	4	15	
Sulfate	mg/L	253	1000	1000	1240	1290	98	104	80-120	5	15	

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

REPORT OF LABORATORY ANALYSIS

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Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: TEC BASA CCR
Pace Project No.: 60423226

MATRIX SPIKE SAMPLE: 3313580

Parameter	Units	60423069004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	2.5	5	7.4	99	80-120	
Fluoride	mg/L	0.30	2.5	2.6	94	80-120	
Sulfate	mg/L	5.5	5	11.1	111	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: TEC BASA CCR
Pace Project No.: 60423226

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.

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: TEC BASA CCR
Pace Project No.: 60423226

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60423226001	**MW-7-030623**	EPA 200.7	835505	EPA 200.7	835723
60423226003	**MW-10-030623**	EPA 200.7	835505	EPA 200.7	835723
60423226004	**DUP-TECBASA-030623**	EPA 200.7	835505	EPA 200.7	835723
60423226001	**MW-7-030623**	EPA 3010	835506	EPA 6010	835724
60423226002	**MW-8-030623**	EPA 3010	835506	EPA 6010	835724
60423226003	**MW-10-030623**	EPA 3010	835506	EPA 6010	835724
60423226004	**DUP-TECBASA-030623**	EPA 3010	835506	EPA 6010	835724
60423226001	**MW-7-030623**	EPA 200.8	835507	EPA 200.8	835725
60423226002	**MW-8-030623**	EPA 200.8	835507	EPA 200.8	835725
60423226003	**MW-10-030623**	EPA 200.8	835507	EPA 200.8	835725
60423226004	**DUP-TECBASA-030623**	EPA 200.8	835507	EPA 200.8	835725
60423226001	**MW-7-030623**	SM 2540C	835379		
60423226002	**MW-8-030623**	SM 2540C	835379		
60423226004	**DUP-TECBASA-030623**	SM 2540C	835379		
60423226001	**MW-7-030623**	SM 4500-H+B	835122		
60423226002	**MW-8-030623**	SM 4500-H+B	835122		
60423226003	**MW-10-030623**	SM 4500-H+B	835568		
60423226004	**DUP-TECBASA-030623**	SM 4500-H+B	835122		
60423226001	**MW-7-030623**	EPA 300.0	835314		
60423226002	**MW-8-030623**	EPA 300.0	835314		
60423226003	**MW-10-030623**	EPA 300.0	835314		
60423226004	**DUP-TECBASA-030623**	EPA 300.0	835314		

WO# : 60423226

60423226

Pace Analytical Services	DC#_Title: ENV-FRM-LENE-0009_Sample C	
	Revision: 2	Effective Date: 01/12/2022

Client Name: Evergy Kansas Central

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

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

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

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

Thermometer Used: T246 **Type of Ice:** (Wet) Blue None

Cooler Temperature (°C): **As-read** 5.7 **Corr. Factor** -0.1 **Corrected** 5.6

Date and initials of person examining contents: AF 3/6

Temperature should be above freezing to 6°C

Chain of Custody present:	☑Yes ☐No ☐N/A	
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	
Samples arrived within holding time:	☑Yes ☐No ☐N/A	
Short Hold Time analyses (<72hr):	☐Yes ☑No ☐N/A	
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	
Sufficient volume:	☑Yes ☐No ☐N/A	
Correct containers used:	☑Yes ☐No ☐N/A	
Pace containers used:	☑Yes ☐No ☐N/A	
Containers intact:	☑Yes ☐No ☐N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	☐Yes ☐No ☑N/A	
Filtered volume received for dissolved tests?	☐Yes ☐No ☑N/A	
Sample labels match COC: Date / time / ID / analyses	☑Yes ☐No ☐N/A	
Samples contain multiple phases? Matrix: WT	☐Yes ☑No ☐N/A	
Containers requiring pH preservation in compliance? (HNO_3, H_2SO_4, HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO) LOT#: 620001	☑Yes ☐No ☐N/A	List sample IDs, volumes, lot #'s of preservative and the date/time added.
Cyanide water sample checks: Lead acetate strip turns dark? (Record only)	☐Yes ☐No	
Potassium iodide test strip turns blue/purple? (Preserve)	☐Yes ☐No	
Trip Blank present:	☐Yes ☐No ☑N/A	
Headspace in VOA vials (>6mm):	☐Yes ☐No ☑N/A	
Samples from USDA Regulated Area: State:	☐Yes ☐No ☑N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	☐Yes ☐No ☑N/A	

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

Qualtrax Document ID: 30468

Page 1 of 1

Pace 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:	skaney@haleyaldrich.com
Phone: 785-575-8113	Fax:
Requested Due Date/TAT:	7 day

Section B — **Required** Project Information:

Report To:	Melissa Michels, Samantha Kaney,
Copy To:	Jared Morrison, Jake Humphrey, Laura Hines
Purchase Order No.:	
Project Name:	TEC BASA 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, 12

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 #	Section D Required Client Information	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Y/N	Analysis Test: 200.7 Total B,Ba, Ca	200.8 As,Co, Mo	6010Total Lithium	300.0 Cl,F,S	Total Dissolved Solids	pH	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																		N	N	N	N	N	N			
1	MW-7-030623	WT	G	-	-	03/06/23	1:55		5	3		2						X	X	X	X	X	X		60423226
2	MW-8-030623	WT	G	-	-	03/06/23	1:00		5	3		2						X	X	X	X	X	X		
3	MW-10-030623	WT	G	-	-	03/06/23	11:25		5	3		2						X	X	X	X	X	X		
4	DUP-TECBASA-030623	WT	G	-	-	03/06/23	2:00		5	3		2						X	X	X	X	X	X		
5																									
6																									
7																									
8																									
9																									
10																									
11																									
12																									

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	Matt VanderPutten / SCS				3/6	1650	5.6	Y	Y	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Matt VanderPutten

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.

Client: Evergy Kansas Central

Profile # 9657-12

Site: TEC Basa CCR

Notes

COC Line Item	Matrix	VG9H	DG9H	DG9Q	VG9U	DG9U	DG9M	DG9B	BG1U	AG1H	AG1U	AG2U	AG3S	AG4U	AG5U	JGFU	WGKU	WGDU	BP1U	BP2U	BP3U	BP1N	BP3N	BP3F	BP3S	BP3C	BP3Z	WPDU	ZPLC	Other		
1	WT																		1		2		3									
2																			1		2		2									
3																					2		2									
4																			1		2		3									
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: 60423226

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

March 29, 2023

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

RE: Project: TEC BASA CCR
Pace Project No.: 60423227

Dear Jake Humphrey:

Enclosed are the analytical results for sample(s) received by the laboratory on March 06, 2023. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Greensburg

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

Sincerely,

Alice Spiller

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

Enclosures

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

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

CERTIFICATIONS

Project: TEC BASA CCR
Pace Project No.: 60423227

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: TEC BASA CCR
Pace Project No.: 60423227

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60423227001	**MW-7-030623**	Water	03/06/23 01:55	03/06/23 16:50
60423227002	**DUP-TECBASA-030623**	Water	03/06/23 02:00	03/06/23 16:50

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SAMPLE ANALYTE COUNT

Project: TEC BASA CCR
Pace Project No.: 60423227

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60423227001	**MW-7-030623**	EPA 903.1	GDH	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
60423227002	**DUP-TECBASA-030623**	EPA 903.1	GDH	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

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PROJECT NARRATIVE

Project: TEC BASA CCR
Pace Project No.: 60423227

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

General Information:
2 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: TEC BASA CCR
Pace Project No.: 60423227

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

General Information:
2 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: TEC BASA CCR
Pace Project No.: 60423227

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

General Information:
2 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: TEC BASA CCR
Pace Project No.: 60423227

Sample: MW-7-030623 **Lab ID: 60423227001** Collected: 03/06/23 01:55 Received: 03/06/23 16:50 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	**0.314 ± 0.437 (0.730) C:NA T:89%**	pCi/L	03/19/23 16:54	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.113 ± 0.369 (0.836) C:63% T:88%**	pCi/L	03/20/23 17:20	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.427 ± 0.806 (1.57)**	pCi/L	03/23/23 15:10	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: TEC BASA CCR
Pace Project No.: 60423227

Sample: DUP-TECBASA-030623 **Lab ID: 60423227002** Collected: 03/06/23 02:00 Received: 03/06/23 16:50 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	**-0.0752 ± 0.343 (0.809) C:NA T:90%**	pCi/L	03/19/23 16:54	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.324 ± 0.366 (0.763) C:71% T:83%**	pCi/L	03/20/23 17:20	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.324 ± 0.709 (1.57)**	pCi/L	03/23/23 15:10	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: TEC BASA CCR
Pace Project No.: 60423227

QC Batch: 572944
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: 60423227001, 60423227002

METHOD BLANK: 2782795 Matrix: Water
Associated Lab Samples: 60423227001, 60423227002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	-0.639 ± 0.418 (1.12) C:56% T:79%	pCi/L	03/20/23 17:17	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: TEC BASA CCR
Pace Project No.: 60423227

QC Batch: 572943
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: 60423227001, 60423227002

METHOD BLANK: 2782787 Matrix: Water
Associated Lab Samples: 60423227001, 60423227002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0626 ± 0.286 (0.461) C:NA T:95%	pCi/L	03/19/23 16:29	

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: TEC BASA CCR
Pace Project No.: 60423227

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: TEC BASA CCR
Pace Project No.: 60423227

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60423227001	**MW-7-030623**	EPA 903.1	572943		
60423227002	**DUP-TECBASA-030623**	EPA 903.1	572943		
60423227001	**MW-7-030623**	EPA 904.0	572944		
60423227002	**DUP-TECBASA-030623**	EPA 904.0	572944		
60423227001	**MW-7-030623**	Total Radium Calculation	576042		
60423227002	**DUP-TECBASA-030623**	Total Radium Calculation	576042		

WO# : 60423227

60423227

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

Client Name: Evergy Kansas Central

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

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

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

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

Thermometer Used: T216 **Type of Ice:** (Wet) Blue None

Cooler Temperature (°C): **As-read** 16.1 **Corr. Factor** -0.1 **Corrected** 16.0

Date and initials of person examining contents: AF 3/6

Temperature should be above freezing to 6°C

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

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

Qualtrax Document ID: 30468

Page 1 of 1

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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:	skaney@haleyaldrich.com
Phone: 785-575-8113	Fax:
Requested Due Date/TAT:	7 day

Section B — **Required** Project Information:

Report To:	Melissa Michels, Samantha Kaney,
Copy To:	Jared Morrison, Jake Humphrey, Laura Hines
Purchase Order No.:	
Project Name:	TEC BASA 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, 12

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 #	Section D Required Client Information / 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 B,Ba, Ca	200.8 As,Co, Mo	6010Total Lithium	300.0 Cl,F,S	Total Dissolved Solids	pH	Radium 226	Radium 228	Ra combined	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
				DATE	TIME	DATE	TIME											Y/N	N	N	N	N	N	N						60423227
1	MW-7-030623	WT	G	-	-	03/06/23	1:55		2			X													X	X			
2				-	-																								
3				-	-																								
4	DUP-TECBASA-030623	WT	G	-	-	03/06/23	2:00		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
	Matt VanderPutten / SCS				3/6	1650	16.0

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Matt VanderPutten

SIGNATURE of SAMPLER:

DATE Signed (MM/DD/YY):

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 # 9657-12

Site: TEC Bosa 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																						2										
5																																
6																																
7																																
8																																
9																																
10																																
11																																
12																																

Container Codes

Glass				Plastic		Misc.	
DG9B	40mL bisulfate clear vial	WGKU	8oz clear soil jar	BP1C	1L NAOH plastic	I	Wipe/Swab
DG9H	40mL HCl amber voa vial	WGFU	4oz clear soil jar	BP1N	1L HNO3 plastic	SP5T	120mL Coliform Na Thiosulfate
DG9M	40mL MeOH clear vial	WG2U	2oz clear soil jar	BP1S	1L H2SO4 plastic	ZPLC	Ziploc Bag
DG9Q	40mL TSP amber vial	JGFU	4oz unpreserved amber wide	BP1U	1L unpreserved plastic	AF	Air Filter
DG9S	40mL H2SO4 amber vial	AG0U	100mL unores amber glass	BP1Z	1L NaOH, Zn Acetate	C	Air Cassettes
DG9T	40mL Na Thio amber vial	AG1H	1L HCl amber glass	BP2C	500mL NAOH plastic	R	Terracore Kit
DG9U	40mL amber unpreserved	AG1S	1L H2SO4 amber glass	BP2N	500mL HNO3 plastic	U	Summa Can
VG9H	40mL HCl clear vial	AG1T	1L Na Thiosulfate clear/amber glass	BP2S	500mL H2SO4 plastic		
VG9T	40mL Na Thio. clear vial	AG1U	1liter unpres amber glass	BP2U	500mL unpreserved plastic		
VG9U	40mL unpreserved clear vial	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Acetate	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: 60423227

Internal Transfer Chain of Custody

Pace Analytical
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☐ Samples Pre-Logged into eCOC.

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

Workorder: 60423227 Workorder Name: TEC BASA CCR

Owner Received Date: 3/6/2023 Results Requested By: 3/16/2023

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

WO# : 30568926

30568926

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers HNO3						Radium 226	Radium 228 + combined	QC Sheets										LAB USE ONLY
1	MW-7-030623	PS	3/6/2023 01:55	60423227001	Water	2						X	X	X										001
2	DUP-TECBASA-030623	PS	3/6/2023 02:00	60423227002	Water	2						X	X	X										002
3																								
4																								
5																								

Comments

Transfers	Released By	Date/Time	Received By	Date/Time
1	[signature]	3/6/1800		
2				
3			[signature]	3/9/23 9:15

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

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

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

Effective Date: 02/03/2023

WO# : 30568926

PM: MAR Due Date: 03/30/23

CLIENT: PACE_60_LEKS

Client Name: Pace Kansas

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

Tracking Number: 6091 0791 2406

Examined By	JA
Labeled By	JA
Temped By	n/a

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

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

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

Temp should be above freezing to 6°C

Comments:	Yes	No	NA	pH paper Lot# 10D222 / D.P.D. Residual Chlorine Lot #
Chain of Custody Present	✓			1.
Chain of Custody Filled Out:	✓			2.
-Were client corrections present on COC		✓		
Chain of Custody Relinquished	✓			3.
Sampler Name & Signature on COC:		✓		4.
Sample Labels match COC:	✓			5.
-Includes date/time/ID				
Matrix:	WT			
Samples Arrived within Hold Time:	✓			6.
Short Hold Time Analysis (<72hr remaining):		✓		7.
Rush Turn Around Time Requested:		✓		8.
Sufficient Volume:	✓			9.
Correct Containers Used:	✓			10.
-Pace Containers Used	✓			
Containers Intact:	✓			11.
Orthophosphate field filtered:			✓	12.
Hex Cr Aqueous samples field filtered:			✓	13.
Organic Samples checked for dechlorination			✓	14:
Filtered volume received for dissolved tests:			✓	15:
All containers checked for preservation:	✓			16.
exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, non-aqueous matrix				pH<2
All containers meet method preservation requirements:	✓			Initial when completed JA / Date/Time of Preservation / Lot# of added Preservative
8260C/D: Headspace in VOA Vials (> 6mm)			✓	17.
624.1: Headspace in VOA Vials (0mm)			✓	18.
Trip Blank Present:			✓	Trip blank custody seal present? YES or NO
Rad Samples Screened <0.5 mrem/hr.	✓			Initial when completed JA / Date: 3-9-23 / Survey Meter SN: 1563

Comments:

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

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-228
Analyst:	JJS1
Date:	3/15/2023
Worklist:	71942
Matrix:	WT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2782795
MB concentration:	-0.639
M/B 2 Sigma CSU:	0.418
MB MDC:	1.118
MB Numerical Performance Indicator:	-3.00
MB Status vs Numerical Indicator:	Warning
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS71942	LCSD71942
Count Date:	3/20/2023	3/20/2023
Spike I.D.:	22-040	22-040
Decay Corrected Spike Concentration (pCi/mL):	33.178	33.178
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.804	0.801
Target Conc. (pCi/L, g, F):	4.126	4.144
Uncertainty (Calculated):	0.202	0.203
Result (pCi/L, g, F):	4.512	5.257
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	1.093	1.255
Numerical Performance Indicator:	0.68	1.72
Percent Recovery:	109.36%	126.86%
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.:	LCS71942	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD71942	
Sample Result (pCi/L, g, F):	4.512	
Sample Result 2 Sigma CSU (pCi/L, g, F):	1.093	
Sample Duplicate Result (pCi/L, g, F):	5.257	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.255	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	-0.877	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	14.82%	
Duplicate Status vs Numerical Indicator:	Pass	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	36%	

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

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

Comments:

VAL
3/21/23

Quality Control Sample Performance Assessment

Pace Analytical
www.pacelabs.com

Test:	Ra-226
Analyst:	GDH
Date:	3/14/2023
Batch ID:	71941
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2782787
MB concentration:	0.063
M/B Counting Uncertainty:	0.213
MB MDC:	0.461
MB Numerical Performance Indicator:	0.58
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS71941	LCSD71941
Count Date:	3/19/2023	3/19/2023
Spike I.D.:	21-040	21-040
Spike Concentration (pCi/mL):	32.419	32.419
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.655	0.651
Target Conc. (pCi/L, g, F):	4.952	4.981
Uncertainty (Calculated):	0.233	0.234
Result (pCi/L, g, F):	4.179	5.706
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.972	1.225
Numerical Performance Indicator:	-1.52	1.14
Percent Recovery:	84.39%	114.54%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	133%	133%
Lower % Recovery Limits:	73%	73%

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

Duplicate Sample Assessment		
Sample I.D.:	LCS71941	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD71941	
Sample Result (pCi/L, g, F):	4.179	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.972	
Sample Duplicate Result (pCi/L, g, F):	5.706	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	1.225	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	-1.914	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	30.31%	
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	32%	

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

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

Comments:

CLM 3/19/23 GDH 3/14/23

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

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

September 15, 2023

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

RE: Project: TEC BASA CCR
Pace Project No.: 60436731

Dear Jake Humphrey:

Enclosed are the analytical results for sample(s) received by the laboratory on September 05, 2023. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Kansas City

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

Sincerely,

Alice Spiller

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

Enclosures

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

REPORT OF LABORATORY ANALYSIS

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

CERTIFICATIONS

Project: TEC BASA CCR
Pace Project No.: 60436731

Pace Analytical Services Kansas

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

Pace Analytical Services, LLC
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SAMPLE SUMMARY

Project: TEC BASA CCR
Pace Project No.: 60436731

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60436731001	**MW-7-090523**	Water	09/05/23 11:55	09/05/23 16:00
60436731002	**TECBASA-DUP-090523**	Water	09/05/23 11:55	09/05/23 16:00

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SAMPLE ANALYTE COUNT

Project: TEC BASA CCR
Pace Project No.: 60436731

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60436731001	**MW-7-090523**	EPA 200.7	JXD	3	PASI-K
		EPA 6010	JXD	1	PASI-K
		EPA 200.8	JGP	3	PASI-K
		SM 2540C	BDH1	1	PASI-K
		SM 4500-H+B	RKA	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
60436731002	**TECBASA-DUP-090523**	EPA 200.7	JXD	3	PASI-K
		EPA 6010	JXD	1	PASI-K
		EPA 200.8	JGP	3	PASI-K
		SM 2540C	BDH1	1	PASI-K
		SM 4500-H+B	RKA	1	PASI-K
		EPA 300.0	CRN2, MLD	3	PASI-K

PASI-K = Pace Analytical Services - Kansas City

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PROJECT NARRATIVE

Project: TEC BASA CCR
Pace Project No.: 60436731

Method: **EPA 200.7**
Description: 200.7 Metals, Total
Client: Evergy Kansas Central, Inc.
Date: September 15, 2023

General Information:
2 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: 863731

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60436560004,60436565001

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

- MS (Lab ID: 3420036)
  - Calcium
- MS (Lab ID: 3420038)
  - Calcium
- MSD (Lab ID: 3420037)
  - Calcium

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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

PROJECT NARRATIVE

Project: TEC BASA CCR
Pace Project No.: 60436731

Method: **EPA 6010**
Description: 6010 MET ICP
Client: Evergy Kansas Central, Inc.
Date: September 15, 2023

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

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

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

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

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

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

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

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

Additional Comments:

Pace Analytical Services, LLC
9608 Loiret Blvd.
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PROJECT NARRATIVE

Project: TEC BASA CCR
Pace Project No.: 60436731

Method: **EPA 200.8**
Description: 200.8 MET ICPMS
Client: Evergy Kansas Central, Inc.
Date: September 15, 2023

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

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

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

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

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

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

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

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

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

Additional Comments:

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

PROJECT NARRATIVE

Project: TEC BASA CCR
Pace Project No.: 60436731

Method: **SM 2540C**
Description: 2540C Total Dissolved Solids
Client: Evergy Kansas Central, Inc.
Date: September 15, 2023

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

PROJECT NARRATIVE

Project: TEC BASA CCR
Pace Project No.: 60436731

Method: **SM 4500-H+B**
Description: 4500H+ pH, Electrometric
Client: Evergy Kansas Central, Inc.
Date: September 15, 2023

General Information:
2 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.
- MW-7-090523 (Lab ID: 60436731001)
- TECBASA-DUP-090523 (Lab ID: 60436731002)

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: TEC BASA CCR
Pace Project No.: 60436731

Method: **EPA 300.0**
Description: 300.0 IC Anions 28 Days
Client: Evergy Kansas Central, Inc.
Date: September 15, 2023

General Information:
2 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
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Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: TEC BASA CCR
Pace Project No.: 60436731

Sample: MW-7-090523 **Lab ID: 60436731001** Collected: 09/05/23 11:55 Received: 09/05/23 16:00 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	**0.053**	mg/L	0.0050	1	09/08/23 12:02	09/11/23 17:16	7440-39-3	
Boron, Total Recoverable	**0.59**	mg/L	0.10	1	09/08/23 12:02	09/11/23 17:16	7440-42-8	
Calcium, Total Recoverable	**101**	mg/L	0.20	1	09/08/23 12:02	09/11/23 17:16	7440-70-2	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**0.031**	mg/L	0.010	1	09/08/23 12:02	09/11/23 16:48	7439-93-2	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City							
Arsenic, Total Recoverable	**0.0017**	mg/L	0.0010	1	09/08/23 10:30	09/11/23 12:58	7440-38-2	
Cobalt, Total Recoverable	**0.0012**	mg/L	0.0010	1	09/08/23 10:30	09/11/23 12:58	7440-48-4	
Molybdenum, Total Recoverable	**0.020**	mg/L	0.0010	1	09/08/23 10:30	09/11/23 12:58	7439-98-7	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City							
Total Dissolved Solids	**949**	mg/L	13.3	1		09/08/23 08:51		
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		09/07/23 10:42		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Chloride	**147**	mg/L	20.0	20		09/08/23 15:06	16887-00-6	
Fluoride	**0.32**	mg/L	0.20	1		09/08/23 14:26	16984-48-8	
Sulfate	**207**	mg/L	20.0	20		09/08/23 15:06	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: TEC BASA CCR
Pace Project No.: 60436731

Sample: TECBASA-DUP-090523 **Lab ID: 60436731002** Collected: 09/05/23 11:55 Received: 09/05/23 16:00 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	09/08/23 12:02	09/11/23 17:24	7440-39-3	
Boron, Total Recoverable	**0.55**	mg/L	0.10	1	09/08/23 12:02	09/11/23 17:24	7440-42-8	
Calcium, Total Recoverable	**92.0**	mg/L	0.20	1	09/08/23 12:02	09/11/23 17:24	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	0.010	1	09/08/23 12:02	09/11/23 16:50	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	**0.0017**	mg/L	0.0010	1	09/08/23 10:30	09/11/23 13:01	7440-38-2	
Cobalt, Total Recoverable	**0.0012**	mg/L	0.0010	1	09/08/23 10:30	09/11/23 13:01	7440-48-4	
Molybdenum, Total Recoverable	**0.019**	mg/L	0.0010	1	09/08/23 10:30	09/11/23 13:01	7439-98-7	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City							
Total Dissolved Solids	**963**	mg/L	13.3	1		09/08/23 08:51		
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		09/07/23 10:44		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Chloride	**149**	mg/L	20.0	20		09/13/23 16:15	16887-00-6	
Fluoride	**0.25**	mg/L	0.20	1		09/08/23 15:46	16984-48-8	
Sulfate	**205**	mg/L	20.0	20		09/13/23 16:15	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: TEC BASA CCR
Pace Project No.: 60436731

QC Batch: 863731
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: 60436731001, 60436731002

METHOD BLANK: 3420034 Matrix: Water
Associated Lab Samples: 60436731001, 60436731002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Barium	mg/L	<0.0050	0.0050	09/11/23 16:59	
Boron	mg/L	<0.10	0.10	09/11/23 16:59	
Calcium	mg/L	<0.20	0.20	09/11/23 16:59	

LABORATORY CONTROL SAMPLE: 3420035

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	mg/L	1	0.99	99	85-115	
Boron	mg/L	1	0.97	97	85-115	
Calcium	mg/L	10	10.2	102	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3420036 3420037

Parameter	Units	60436560004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	mg/L	17.1 ug/L	1	1	0.99	1.0	97	101	70-130	4	20	
Boron	mg/L	353 ug/L	1	1	1.3	1.3	92	96	70-130	3	20	
Calcium	mg/L	770000 ug/L	10	10	715	747	-553	-238	70-130	4	20	M1

MATRIX SPIKE SAMPLE: 3420038

Parameter	Units	60436565001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Barium	mg/L	107 ug/L	1	1.1	100	70-130	
Boron	mg/L	175 ug/L	1	0.99	82	70-130	
Calcium	mg/L	53000 ug/L	10	68.9	159	70-130	M1

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: TEC BASA CCR
Pace Project No.: 60436731

QC Batch: 863705
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: 60436731001, 60436731002

METHOD BLANK: 3419915 Matrix: Water
Associated Lab Samples: 60436731001, 60436731002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/L	<0.0010	0.0010	09/11/23 12:29	
Cobalt	mg/L	<0.0010	0.0010	09/11/23 12:29	
Molybdenum	mg/L	<0.0010	0.0010	09/11/23 12:29	

LABORATORY CONTROL SAMPLE: 3419916

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	0.041	103	85-115	
Molybdenum	mg/L	0.04	0.041	104	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3419917 3419918

Parameter	Units	60436446007 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	0.041	0.040	101	99	70-130	2	20	
Cobalt	mg/L	ND	0.04	0.04	0.039	0.038	97	94	70-130	3	20	
Molybdenum	mg/L	1.3 ug/L	0.04	0.04	0.044	0.043	107	105	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

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

QUALITY CONTROL DATA

Project: TEC BASA CCR
Pace Project No.: 60436731

QC Batch: 863730
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60436731001, 60436731002

METHOD BLANK: 3420030 Matrix: Water
Associated Lab Samples: 60436731001, 60436731002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lithium	mg/L	<0.010	0.010	09/11/23 15:43	

LABORATORY CONTROL SAMPLE: 3420031

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3420032 3420033

Parameter	Units	60436407001 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	1.0	1.0	103	103	75-125	0	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(913)599-5665

QUALITY CONTROL DATA

Project: TEC BASA CCR
Pace Project No.: 60436731

QC Batch: 863483
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60436731001, 60436731002

METHOD BLANK: 3419026 Matrix: Water
Associated Lab Samples: 60436731001, 60436731002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	09/08/23 08:50	

LABORATORY CONTROL SAMPLE: 3419027

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

SAMPLE DUPLICATE: 3419028

Parameter	Units	60436642003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	240	245	2	10	

SAMPLE DUPLICATE: 3419029

Parameter	Units	60436735003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1300	1330	2	10	

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: TEC BASA CCR
Pace Project No.: 60436731

QC Batch: 863493
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: 60436731001, 60436731002

SAMPLE DUPLICATE: 3419040

Parameter	Units	60436560003 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.2	7.3	0	5	H6

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: TEC BASA CCR
Pace Project No.: 60436731

QC Batch: 863630
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: 60436731001, 60436731002

METHOD BLANK: 3419590 Matrix: Water
Associated Lab Samples: 60436731001, 60436731002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<1.0	1.0	09/08/23 09:11	
Fluoride	mg/L	<0.20	0.20	09/08/23 09:11	
Sulfate	mg/L	<1.0	1.0	09/08/23 09:11	

METHOD BLANK: 3423290 Matrix: Water
Associated Lab Samples: 60436731001, 60436731002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<1.0	1.0	09/13/23 13:22	
Fluoride	mg/L	<0.20	0.20	09/13/23 13:22	
Sulfate	mg/L	<1.0	1.0	09/13/23 13:22	

LABORATORY CONTROL SAMPLE: 3419591

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	10	9.6	96	90-110	
Fluoride	mg/L	5	5.0	101	90-110	
Sulfate	mg/L	10	10	100	90-110	

LABORATORY CONTROL SAMPLE: 3423291

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.6	92	90-110	
Fluoride	mg/L	2.5	2.6	103	90-110	
Sulfate	mg/L	5	4.8	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3419592 3419593

Parameter	Units	60436731001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	147	100	100	245	253	97	106	80-120	3	15	
Fluoride	mg/L	0.32	2.5	2.5	3.1	3.0	111	107	80-120	3	15	
Sulfate	mg/L	207	100	100	307	318	100	111	80-120	3	15	

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

REPORT OF LABORATORY ANALYSIS

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

QUALIFIERS

Project: TEC BASA CCR
Pace Project No.: 60436731

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

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

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: TEC BASA CCR
Pace Project No.: 60436731

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60436731001	**MW-7-090523**	EPA 200.7	863731	EPA 200.7	863777
60436731002	**TECBASA-DUP-090523**	EPA 200.7	863731	EPA 200.7	863777
60436731001	**MW-7-090523**	EPA 3010	863730	EPA 6010	863779
60436731002	**TECBASA-DUP-090523**	EPA 3010	863730	EPA 6010	863779
60436731001	**MW-7-090523**	EPA 200.8	863705	EPA 200.8	863756
60436731002	**TECBASA-DUP-090523**	EPA 200.8	863705	EPA 200.8	863756
60436731001	**MW-7-090523**	SM 2540C	863483		
60436731002	**TECBASA-DUP-090523**	SM 2540C	863483		
60436731001	**MW-7-090523**	SM 4500-H+B	863493		
60436731002	**TECBASA-DUP-090523**	SM 4500-H+B	863493		
60436731001	**MW-7-090523**	EPA 300.0	863630		
60436731002	**TECBASA-DUP-090523**	EPA 300.0	863630		

WO# : 60436731

60436731

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

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 ☑ Zplc

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

Cooler Temperature (°C): **As-read** 14.9 **Corr. Factor** -0.3 **Corrected** 14.6 / 15.0

Temperature should be above freezing to 6°C 15.3

Date and initials of person examining contents: 09-06-2022 JM

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

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

Pace Analytical
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A — **Required** Client Information:

Company:	EVERGY KANSAS CENTRAL, INC.
Address:	Jeffrey Energy Center (JEC)
	818 Kansas Ave, Topeka, KS 66612
Email To:	skaney@haleyaldrich.com
Phone: 785-575-8113	Fax:
Requested Due Date/TAT:	7 day

Section B — **Required** Project Information:

Report To:	Melissa Michels, Samantha Kaney,
Copy To:	Jared Morrison, Jake Humphrey, Laura Hines
Purchase Order No.:	
Project Name:	TEC BASA 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, 12

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 B,Ba, Ca	200.8 As,Co, Mo	6010Total Lithium	300.0 Cl,F,S	Total Dissolved Solids	pH	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																		Y/N	N	N	N	N	N	N		60436731
1	MW-7-090523	WT	G	-	-	09/05/23	11:55		3	2		1							X	X	X	X	X	X		
2	TECBASA-DUP-090523	WT	G	-	-	09/05/23	11:55		3	2		1							X	X	X	X	X	X		
3																										
4																										
5																										
6																										
7																										
8																										
9																										
10																										
11																										
12																										

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	Matt VanderPutten / SCS	9/5/23	16:00	E Brackett Pace	9/5/23	1600	15.0	Y	Y	Y
							14.6	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Matt VanderPutten

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 9/5/23

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

Client: Evergy

Profile #

Site: TEC BASA CCR

Notes

COC Line Item	Matrix	VG9H	DG9H	DG9Q	VG9U	DG9U	DG9M	DG9B	BG1U	AG1H	AG1U	AG2U	AG3S	AG4U	AG5U	JGFU	WGKU	WGDU	BP1U	BP2U	BP3U	BP1N	BP3N	BP3F	BP3S	BP3C	BP3Z	WPDU	ZPLC	Other		
1	WT																		1		1		1									
2	WT																		1		1		1									
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: 60436771

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

September 25, 2023

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

RE: Project: TEC BASA CCR
Pace Project No.: 60436734

Dear Jake Humphrey:

Enclosed are the analytical results for sample(s) received by the laboratory on September 05, 2023. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Greensburg

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

Sincerely,

Alice Spiller

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

Enclosures

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

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

CERTIFICATIONS

Project: TEC BASA CCR
Pace Project No.: 60436734

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

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

SAMPLE SUMMARY

Project: TEC BASA CCR
Pace Project No.: 60436734

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60436734001	**MW-7-090523**	Water	09/05/23 11:55	09/05/23 16:00
60436734002	**DUP-TECBASA-090523**	Water	09/05/23 11:55	09/05/23 16:00

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SAMPLE ANALYTE COUNT

Project: TEC BASA CCR
Pace Project No.: 60436734

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60436734001	**MW-7-090523**	EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
60436734002	**DUP-TECBASA-090523**	EPA 903.1	CLM	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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(913)599-5665

PROJECT NARRATIVE

Project: TEC BASA CCR
Pace Project No.: 60436734

Method: **EPA 903.1**
Description: 903.1 Radium 226
Client: Evergy Kansas Central, Inc.
Date: September 25, 2023

General Information:
2 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: TEC BASA CCR
Pace Project No.: 60436734

Method: **EPA 904.0**
Description: 904.0 Radium 228
Client: Evergy Kansas Central, Inc.
Date: September 25, 2023

General Information:
2 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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(913)599-5665

PROJECT NARRATIVE

Project: TEC BASA CCR
Pace Project No.: 60436734

Method: **Total Radium Calculation**
Description: Total Radium 228+226
Client: Evergy Kansas Central, Inc.
Date: September 25, 2023

General Information:
2 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: TEC BASA CCR
Pace Project No.: 60436734

Sample: MW-7-090523 **Lab ID: 60436734001** Collected: 09/05/23 11:55 Received: 09/05/23 16:00 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	**0.0609 ± 0.493 (0.967) C:NA T:88%**	pCi/L	09/20/23 13:57	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.227 ± 0.294 (0.625) C:82% T:84%**	pCi/L	09/21/23 12:21	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.288 ± 0.787 (1.59)**	pCi/L	09/22/23 12:38	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: TEC BASA CCR
Pace Project No.: 60436734

Sample: DUP-TECBASA-090523 **Lab ID: 60436734002** Collected: 09/05/23 11:55 Received: 09/05/23 16:00 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	**0.820 ± 0.695 (1.05) C:NA T:90%**	pCi/L	09/20/23 13:57	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.642 ± 0.419 (0.801) C:78% T:81%**	pCi/L	09/21/23 12:21	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.46 ± 1.11 (1.85)**	pCi/L	09/22/23 12:38	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: TEC BASA CCR
Pace Project No.: 60436734

QC Batch: 614478
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: 60436734001, 60436734002

METHOD BLANK: 2991786 Matrix: Water
Associated Lab Samples: 60436734001, 60436734002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0546 ± 0.249 (0.148) C:NA T:87%	pCi/L	09/20/23 14:38	

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: TEC BASA CCR
Pace Project No.: 60436734

QC Batch: 614479
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: 60436734001, 60436734002

METHOD BLANK: 2991787 Matrix: Water
Associated Lab Samples: 60436734001, 60436734002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.0871 ± 0.243 (0.548) C:82% T:89%	pCi/L	09/21/23 12:17	

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

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: TEC BASA CCR
Pace Project No.: 60436734

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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Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: TEC BASA CCR
Pace Project No.: 60436734

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60436734001	**MW-7-090523**	EPA 903.1	614478		
60436734002	**DUP-TECBASA-090523**	EPA 903.1	614478		
60436734001	**MW-7-090523**	EPA 904.0	614479		
60436734002	**DUP-TECBASA-090523**	EPA 904.0	614479		
60436734001	**MW-7-090523**	Total Radium Calculation	617483		
60436734002	**DUP-TECBASA-090523**	Total Radium Calculation	617483		

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-LENE-0009_Sampl	WO#: 60436734
	Revision: 2	Effective Date: 01/12/20

Client Name: Evergy

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

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

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

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

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

Cooler Temperature (°C): **As-read** 24.9 **Corr. Factor** -0.3 **Corrected** 24.6

Date and initials of person examining contents: 09-06-20 JJ

Temperature should be above freezing to 6°C

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

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

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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:	skaney@haleyaldrich.com
Phone: 785-575-8113	Fax:
Requested Due Date/TAT:	7 day

Section B
Required Project Information:

Report To:	Melissa Michels, Samantha Kaney,
Copy To:	Jared Morrison, Jake Humphrey, Laura Hines
Purchase Order No.:	
Project Name:	TEC BASA 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, 12

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	Ra combined	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
				DATE	TIME	DATE	TIME											Y/N	N	N	N		60413754
1	MW-7-090523	WT	G	-	-	09/05/23	11:55		2			2							X	X	X		
2	DUP-TECBASA-090523	WT	G	-	-	09/05/23	11:55		2			2							X	X	X		
3																							
4																							
5																							
6																							
7																							
8																							
9																							
10																							
11																							
12																							

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	Matt VanderPutten / SCS	9/5/23	16:00	EBrockett / Pace	9/5/23	1600	24.6	N	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Matt VanderPutten

SIGNATURE of SAMPLER: Matt VanderPutten DATE Signed (MM/DD/YY): 9/5/23

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

Pace Analytical
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A
Required Client Information:

Company:	EVERGY KANSAS CENTRAL, INC.
Address:	Jeffrey Energy Center (JEC)
	818 Kansas Ave, Topeka, KS 66612
Email To:	skaney@haleyaldrich.com
Phone: 785-575-8113	Fax:
Requested Due Date/TAT:	7 day

Section B
Required Project Information:

Report To:	Melissa Michels, Samantha Kaney,
Copy To:	Jared Morrison, Jake Humphrey, Laura Hines
Purchase Order No.:	
Project Name:	TEC BASA 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, 12

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	Ra combined	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
				DATE	TIME	DATE	TIME											Y/N	N	N	N		60413754
1	MW-7-090523	WT	G	-	-	09/05/23	11:55		2			2							X	X	X		
2	DUP-TECBASA-090523	WT	G	-	-	09/05/23	11:55		2			2							X	X	X		
3																							
4																							
5																							
6																							
7																							
8																							
9																							
10																							
11																							
12																							

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	Matt VanderPutten / SCS	9/5/23	16:00	EBrockett / Pace	9/5/23	1600	24.6	N	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Matt VanderPutten

SIGNATURE of SAMPLER: Matt VanderPutten DATE Signed (MM/DD/YY): 9/5/23

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

Client: Evergy

Profile # use Line 7

Site: TEC BASA CCR

Notes all codes in Line

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	WT																					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: 60436754

Internal Transfer Chain of Custody

☐ Samples Pre-Logged into eCOC.

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

Workorder: 60436734 **Workorder Name:** TEC BASA CCR

Owner Received Date: 9/5/2023 **Results Requested By:** 10/11/2023

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

						Preserved Containers						Requested Analysis												
Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	HNO3						QC Sheets	Radium 226	Radium 228, plus combined										LAB USE ONLY
1	MW-7-090523	PS	9/5/2023 11:55	60436734001	Water	2						X	X	X										001
2	DUP-TECBASA-090523	PS	9/5/2023 11:55	60436734002	Water	2						X	X	X										002
3																								
4																								
5																								

Transfers	Released By	Date/Time	Received By	Date/Time
1		9/6 1700		9/7/23 1027
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# : 30619777

30619777

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test:	Ra-226
Analyst:	CLM
Date:	9/12/2023
Batch ID:	75252
Matrix:	DW

Method Blank Assessment	
MB Sample ID	2991786
MB concentration:	0.055
M/B Counting Uncertainty:	0.107
MB MDC:	0.148
MB Numerical Performance Indicator:	1.00
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS75252	LCSD75252
Count Date:	9/20/2023	
Spike I.D.:	23-013	
Spike Concentration (pCi/mL):	32.282	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.652	
Target Conc. (pCi/L, g, F):	4.951	
Uncertainty (Calculated):	0.233	
Result (pCi/L, g, F):	5.503	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.112	
Numerical Performance Indicator:	0.95	
Percent Recovery:	111.14%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	
Upper % Recovery Limits:	133%	
Lower % Recovery Limits:	73%	

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date:	8/30/2023	
Sample I.D.	30619845001	
Sample MS I.D.	30619845001MS	
Sample MSD I.D.		
Spike I.D.:	23-013	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	32.283	
Spike Volume Used in MS (mL):	0.20	
Spike Volume Used in MSD (mL):		
MS Aliquot (L, g, F):	0.651	
MS Target Conc.(pCi/L, g, F):	9.912	
MSD Aliquot (L, g, F):		
MSD Target Conc. (pCi/L, g, F):		
MS Spike Uncertainty (calculated):	0.466	
MSD Spike Uncertainty (calculated):		
Sample Result:	0.104	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.321	
Sample Matrix Spike Result:	9.287	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	1.261	
Sample Matrix Spike Duplicate Result:		
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):		
MS Numerical Performance Indicator:	-1.033	
MSD Numerical Performance Indicator:		
MS Percent Recovery:	92.65%	
MSD Percent Recovery:		
MS Status vs Numerical Indicator:	N/A	
MSD Status vs Numerical Indicator:		
MS Status vs Recovery:	Pass	
MSD Status vs Recovery:		
MS/MSD Upper % Recovery Limits:	136%	
MS/MSD Lower % Recovery Limits:	71%	

Duplicate Sample Assessment		
Sample I.D.:	30619869001	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30619869001DUP	
Sample Result (pCi/L, g, F):	0.213	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.462	
Sample Duplicate Result (pCi/L, g, F):	0.000	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.316	
Are sample and/or duplicate results below RL?	See Below ##	
Duplicate Numerical Performance Indicator:	0.746	30619869001
Duplicate RPD:	200.00%	30619869001DUP
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Fail***	
% RPD Limit:	32%	

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

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

Comments:

***Batch must be re-prepped due to unacceptable precision. NA, results < MDC

LL 09 21 23

MP 9/21/23

QLL 9/22/23

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test: Ra-228
Analyst: VAL
Date: 9/14/2023
Worklist: 75253
Matrix: WT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2991787
MB concentration:	0.087
M/B 2 Sigma CSU:	0.243
MB MDC:	0.548
MB Numerical Performance Indicator:	0.70
MB Status vs Numerical Indicator:	Pass
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS75253	LCSD75253
Count Date:	9/21/2023	
Spike I.D.:	23-043	
Decay Corrected Spike Concentration (pCi/mL):	39.735	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.817	
Target Conc. (pCi/L, g, F):	4.866	
Uncertainty (Calculated):	0.238	
Result (pCi/L, g, F):	3.874	
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	0.881	
Numerical Performance Indicator:	-2.13	
Percent Recovery:	79.61%	
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:	8/29/2023	
Sample I.D.	30619907001	
Sample MS I.D.	30619907001MS	
Sample MSD I.D.		
Spike I.D.:	23-043	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	40.037	
Spike Volume Used in MS (mL):	0.20	
Spike Volume Used in MSD (mL):		
MS Aliquot (L, g, F):	0.808	
MS Target Conc.(pCi/L, g, F):	9.909	
MSD Aliquot (L, g, F):		
MSD Target Conc. (pCi/L, g, F):		
MS Spike Uncertainty (calculated):	0.486	
MSD Spike Uncertainty (calculated):		
Sample Result:	0.380	
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.304	
Sample Matrix Spike Result:	7.882	
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	1.590	
Sample Matrix Spike Duplicate Result:		
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):		
MS Numerical Performance Indicator:	-2.791	
MSD Numerical Performance Indicator:		
MS Percent Recovery:	75.71%	
MSD Percent Recovery:		
MS Status vs Numerical Indicator:	Warning	
MSD Status vs Numerical Indicator:		
MS Status vs Recovery:	Pass	
MSD Status vs Recovery:		
MS/MSD Upper % Recovery Limits:	135%	
MS/MSD Lower % Recovery Limits:	60%	

Duplicate Sample Assessment		
Sample I.D.:	30619926001	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30619926001DUP	
Sample Result (pCi/L, g, F):	0.273	
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.297	
Sample Duplicate Result (pCi/L, g, F):	0.394	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	0.300	
Are sample and/or duplicate results below RL?	See Below ##	
Duplicate Numerical Performance Indicator:	-0.560	30619926001
Duplicate RPD:	36.14%	30619926001DUP
Duplicate Status vs Numerical Indicator:	Pass	
Duplicate Status vs RPD:	Fail***	
% RPD Limit:	36%	

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

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

Comments:

VAL
9/22/23

Client: Evergy

Profile # use Line 7

Site: TEC BASA CCR

Notes all codes in Line

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	WT																					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: 60436754

Internal Transfer Chain of Custody

☐ Samples Pre-Logged into eCOC.

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

Workorder: 60436734 **Workorder Name:** TEC BASA CCR

Owner Received Date: 9/5/2023 **Results Requested By:** 10/11/2023

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

						Preserved Containers						Requested Analysis												
Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	HNO3						QC Sheets	Radium 226	Radium 228, plus combined										LAB USE ONLY
1	MW-7-090523	PS	9/5/2023 11:55	60436734001	Water	2						X	X	X										001
2	DUP-TECBASA-090523	PS	9/5/2023 11:55	60436734002	Water	2						X	X	X										002
3																								
4																								
5																								

Transfers	Released By	Date/Time	Received By	Date/Time
1		9/6 1700		9/7/23 1027
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# : 30619777

30619777

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

Effective Date: 07/06/2023

WO# : 30619777

PM: MAR Due Date: 09/28/23

CLIENT: PACE_GO_LEKS

Client Name: Pace Lenexa

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

Tracking Number: 6432 1391 7472

Initial / Date

Examined By: TH 9/7/23

Labeled By: TH 9/7/23

Temped By: —

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

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

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

Temp should be above freezing to 6°C

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

Comments:

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

Qualtrax ID: 55680

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test:	Ra-226
Analyst:	CLM
Date:	9/12/2023
Batch ID:	75252
Matrix:	DW

Method Blank Assessment	
MB Sample ID	2991786
MB concentration:	0.055
M/B Counting Uncertainty:	0.107
MB MDC:	0.148
MB Numerical Performance Indicator:	1.00
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS75252	LCSD75252
Count Date:	9/20/2023	
Spike I.D.:	23-013	
Spike Concentration (pCi/mL):	32.282	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.652	
Target Conc. (pCi/L, g, F):	4.951	
Uncertainty (Calculated):	0.233	
Result (pCi/L, g, F):	5.503	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	1.112	
Numerical Performance Indicator:	0.95	
Percent Recovery:	111.14%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	
Upper % Recovery Limits:	133%	
Lower % Recovery Limits:	73%	

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date:	8/30/2023	
Sample I.D.	30619845001	
Sample MS I.D.	30619845001MS	
Sample MSD I.D.		
Spike I.D.:	23-013	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	32.283	
Spike Volume Used in MS (mL):	0.20	
Spike Volume Used in MSD (mL):		
MS Aliquot (L, g, F):	0.651	
MS Target Conc.(pCi/L, g, F):	9.912	
MSD Aliquot (L, g, F):		
MSD Target Conc. (pCi/L, g, F):		
MS Spike Uncertainty (calculated):	0.466	
MSD Spike Uncertainty (calculated):		
Sample Result:	0.104	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.321	
Sample Matrix Spike Result:	9.287	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	1.261	
Sample Matrix Spike Duplicate Result:		
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):		
MS Numerical Performance Indicator:	-1.033	
MSD Numerical Performance Indicator:		
MS Percent Recovery:	92.65%	
MSD Percent Recovery:		
MS Status vs Numerical Indicator:	N/A	
MSD Status vs Numerical Indicator:		
MS Status vs Recovery:	Pass	
MSD Status vs Recovery:		
MS/MSD Upper % Recovery Limits:	136%	
MS/MSD Lower % Recovery Limits:	71%	

Duplicate Sample Assessment		
Sample I.D.:	30619869001	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30619869001DUP	
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Sample Duplicate Result (pCi/L, g, F):	0.000	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.316	
Are sample and/or duplicate results below RL?	See Below ##	
Duplicate Numerical Performance Indicator:	0.746	30619869001
Duplicate RPD:	200.00%	30619869001DUP
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Fail***	
% RPD Limit:	32%	

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

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

Comments:

***Batch must be re-prepped due to unacceptable precision. NA, results < MDC

LL 09 21 23

MP 9/21/23

QLL 9/22/23

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test: Ra-228
Analyst: VAL
Date: 9/14/2023
Worklist: 75253
Matrix: WT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2991787
MB concentration:	0.087
M/B 2 Sigma CSU:	0.243
MB MDC:	0.548
MB Numerical Performance Indicator:	0.70
MB Status vs Numerical Indicator:	Pass
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS75253	LCSD75253
Count Date:	9/21/2023	
Spike I.D.:	23-043	
Decay Corrected Spike Concentration (pCi/mL):	39.735	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.817	
Target Conc. (pCi/L, g, F):	4.866	
Uncertainty (Calculated):	0.238	
Result (pCi/L, g, F):	3.874	
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	0.881	
Numerical Performance Indicator:	-2.13	
Percent Recovery:	79.61%	
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:	8/29/2023	
Sample I.D.	30619907001	
Sample MS I.D.	30619907001MS	
Sample MSD I.D.		
Spike I.D.:	23-043	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	40.037	
Spike Volume Used in MS (mL):	0.20	
Spike Volume Used in MSD (mL):		
MS Aliquot (L, g, F):	0.808	
MS Target Conc.(pCi/L, g, F):	9.909	
MSD Aliquot (L, g, F):		
MSD Target Conc. (pCi/L, g, F):		
MS Spike Uncertainty (calculated):	0.486	
MSD Spike Uncertainty (calculated):		
Sample Result:	0.380	
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.304	
Sample Matrix Spike Result:	7.882	
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	1.590	
Sample Matrix Spike Duplicate Result:		
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):		
MS Numerical Performance Indicator:	-2.791	
MSD Numerical Performance Indicator:		
MS Percent Recovery:	75.71%	
MSD Percent Recovery:		
MS Status vs Numerical Indicator:	Warning	
MSD Status vs Numerical Indicator:		
MS Status vs Recovery:	Pass	
MSD Status vs Recovery:		
MS/MSD Upper % Recovery Limits:	135%	
MS/MSD Lower % Recovery Limits:	60%	

Duplicate Sample Assessment		
Sample I.D.:	30619926001	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	30619926001DUP	
Sample Result (pCi/L, g, F):	0.273	
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.297	
Sample Duplicate Result (pCi/L, g, F):	0.394	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	0.300	
Are sample and/or duplicate results below RL?	See Below ##	
Duplicate Numerical Performance Indicator:	-0.560	30619926001
Duplicate RPD:	36.14%	30619926001DUP
Duplicate Status vs Numerical Indicator:	Pass	
Duplicate Status vs RPD:	Fail***	
% RPD Limit:	36%	

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

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

Comments:

VAL
9/22/23