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2023 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
322 LANDFILL
TECUMSEH ENERGY CENTER
TECUMSEH, KANSAS

by
Haley & Aldrich, Inc.
Cleveland, Ohio

for
Evergy Kansas Central, Inc.
Topeka, Kansas

File No. 129778-041
January 2024

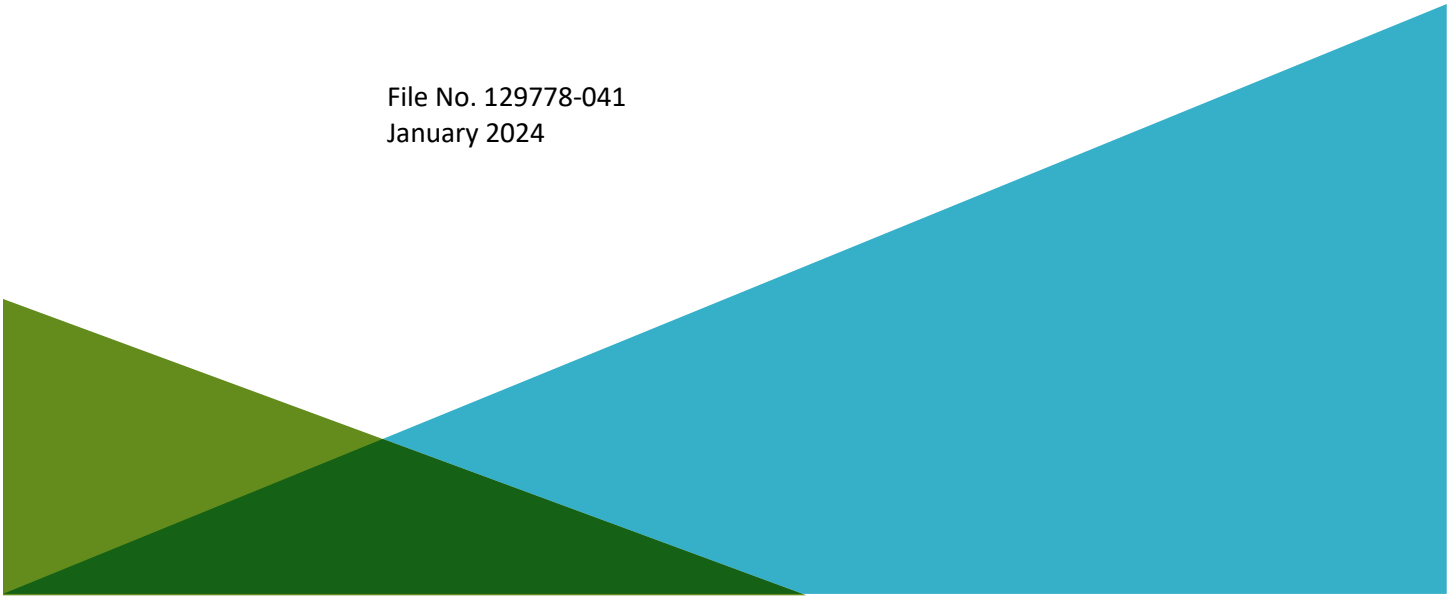


Table of Contents

Revision No.	Date	Notes

List of Tables

List of Figures

List of Attachments

This Annual Groundwater Monitoring and Corrective Action Report documents the groundwater monitoring program for the Tecumseh Energy Center (TEC) 322 Landfill consistent with applicable sections of 257.90 through 257.98, and describes activities conducted in the prior calendar year (2023) and documents compliance with the U.S. Environmental Protection Agency Coal Combustion Residual Rule. I certify that the 2023 Annual Groundwater Monitoring and Corrective Action Report for the TEC 322 Landfill 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 322 Landfill 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 Coal Combustion Residual (CCR) Rule (Rule) effective October 19, 2015, including subsequent revisions, specifically Title 40 Code of Federal Regulations (40 CFR), subsection 257.90(e). The Annual Report documents the groundwater monitoring system for the TEC 322 Landfill consistent with applicable sections of 257.90 through 257.98, and describes activities conducted in the prior calendar year (2023) and documents compliance with the 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 322 Landfill was operating under an assessment monitoring program in compliance with 40 CFR § 257.95.

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

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

At the end of the current annual reporting period (December 31, 2023), the 322 Landfill was operating under an assessment monitoring program in compliance with 40 CFR § 257.95.

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

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

1.1.3.1 40 CFR § 257.90(e)(6)(iii)(a) – Statistically Significant Increase Constituents

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

The 322 Landfill is operating under an assessment monitoring program; therefore, no statistical evaluations were completed on Appendix III constituents in 2023.

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

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

An assessment monitoring program was initiated on July 17, 2018 for the 322 Landfill with a notification establishing assessment monitoring provided on August 15, 2018 to meet the requirements of 40 CFR § 257.95. The 322 Landfill remained in assessment monitoring in 2023.

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

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

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

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

No statistically significant levels were identified above the groundwater protection standard for those constituents listed in Appendix IV to this part in 2023 for the 322 Landfill. The statistical evaluation reports for semi-annual assessment monitoring sampling events from September 2022 and March 2023 were completed in February 2023 and July 2023, respectively, and are included in Attachment 1.

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

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

No assessment of corrective measures was required to be initiated in 2023 for this unit. The 322 Landfill remained in assessment monitoring during 2023.

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

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

An assessment of corrective measures was not required for the 322 Landfill in 2023; therefore, a public meeting was not held.

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

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

No assessment of corrective measures was required to be initiated in 2023 for this unit. The 322 Landfill remained in assessment monitoring during 2023.

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

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

The 322 Landfill remains in assessment monitoring, and no remedy was required to be selected.

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

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

No remedial activities were required in 2023.

2. 40 CFR § 257.90 Applicability

2.1 40 CFR § 257.90(a)

All CCR landfills, CCR surface impoundments, and lateral expansions of CCR units are subject to the groundwater monitoring and corrective action requirements under §§ 257.90 through 257.99, except as provided in paragraph (g) [Suspension of groundwater monitoring requirements] of this section.

Evergy has installed and certified a groundwater monitoring system at the TEC 322 Landfill. The 322 Landfill 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 in accordance with § 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 322 Landfill as required by the Rule. Groundwater sampling and analysis was conducted in accordance with requirements described in § 257.93, and the status of the groundwater monitoring program described in § 257.94 and § 257.95 is also provided in this report. This Annual Report documents the applicable groundwater-related activities completed in the calendar year 2023.

2.2.1 Status of the Groundwater Monitoring Program

The 322 Landfill remained in the assessment monitoring program during 2023.

2.2.2 Key Actions Completed

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

A semi-annual assessment monitoring sampling event was completed in March 2023 for detected Appendix IV constituents identified from the June 2022 annual assessment monitoring sampling event. Statistical evaluation was completed in July 2023 on analytical data from the March 2023 semi-annual assessment monitoring sampling event.

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

2.2.3 Problems Encountered

Problems encountered during groundwater monitoring activities in 2023 consisted of:

- A sampling error during the March 2023 semi-annual detection monitoring sampling event required a verification sample to be collected from monitoring well MW-6 in April 2023.
- Laboratory analytical errors required the laboratory to reanalyze the total dissolved solids for MW-4 for the September 2023 semi-annual detection monitoring sampling event.

2.2.4 Actions to Resolve Problems

The resolution to problems encountered in 2023 included collecting a verification groundwater sample from MW-6 and additional laboratory analyses, as described above. The analytical results were revised accordingly. No other problems were encountered at the 322 Landfill in 2023; therefore, no additional actions to resolve problems were required.

2.2.5 Project Key Activities for Upcoming Year

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

2.3 40 CFR § 257.90(e) – INFORMATION

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

2.3.1 40 CFR § 257.90(e)(1)

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

As required by § 257.90(e)(1), a map showing the locations of the CCR unit and associated upgradient and downgradient monitoring wells for the 322 Landfill is included in this report as Figure 1.

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

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

No monitoring wells were installed or decommissioned during 2023.

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

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

In accordance with § 257.95(b) and § 257.95(d)(1), three independent assessment monitoring samples from each background and downgradient monitoring well were collected in 2023. A summary including sample names, dates of sample collection, field parameters, and monitoring data obtained for the groundwater monitoring program for the 322 Landfill is presented in Table I of this report, with corresponding laboratory analytical reports provided in Attachment 2. Groundwater potentiometric elevation contour maps, along with calculated groundwater flow rates and directions, associated with each groundwater monitoring sampling event in 2023 are provided in Figures 2 through 4.

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

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

The assessment monitoring program was initiated on July 17, 2018 with a notification establishing assessment monitoring provided on August 15, 2018 to meet the requirements of 40 CFR § 257.95. The 322 Landfill remained in assessment monitoring during 2023.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

An assessment monitoring program has been implemented at the CCR unit since July 17, 2018. Three rounds of assessment monitoring sampling were completed in 2023. Analytical results for both downgradient and upgradient wells are provided in Table I. The background concentrations (upper tolerance limits) and groundwater protection standards established for detected Appendix IV constituents for the 322 Landfill are included in Table II. The background concentrations and groundwater protection standards provided in Table II were utilized for both statistical evaluations completed in 2023 for September 2022 and March 2023 semi-annual assessment monitoring sampling events.

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 alternate source demonstration or certification was required in 2023. The 322 Landfill remained in assessment monitoring during 2023.

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

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

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

TABLES

TABLE I
SUMMARY OF ANALYTICAL RESULTS - 2023 ASSESSMENT MONITORING
EVERGY KANSAS CENTRAL, INC.
TECUMSEH ENERGY CENTER, 322 LANDFILL
TECUMSEH, KANSAS

Location	Upgradient			Downgradient					
	MW-4			MW-1					
Measure Point (TOC)	936.48			904.65					
Sample Name	MW-4-030623	MW-4-060523	MW-4-090523	MW-1-030623	DUP-322F-030623	MW-1-060523	DUP-322LF-060523	MW-1-090523	TEC322LF-DUP-090523
Sample Date	03/06/2023	06/05/2023	09/05/2023	03/06/2023	03/06/2023	06/05/2023	06/05/2023	09/05/2023	09/05/2023
Final Lab Report Date	3/17/2023	07/11/2023	9/18/2023	3/17/2023	3/17/2023	07/11/2023	07/11/2023	9/18/2023	9/18/2023
Final Lab Report Revision Date	4/11/2023	N/A	11/8/2023	4/11/2023	4/11/2023	N/A	N/A	11/8/2023	11/8/2023
Final Radiation Lab Report Date	N/A	07/03/2023	N/A	N/A	N/A	07/03/2023	07/03/2023	N/A	N/A
Lab Data Reviewed and Accepted	5/30/2023	08/02/2023	12/18/2023	5/30/2023	5/30/2023	08/02/2023	08/02/2023	12/18/2023	12/18/2023
Depth to Water (ft btoc)	4.27	5.10	7.93	4.42	-	4.84	-	7.18	7.18
Temperature (Deg C)	10.00	16.74	23	11.19	-	18.45	-	16.74	-
Conductivity (µS/cm)	1,720	1,670	743	1,300	-	1,280	-	1,220	-
Turbidity (NTU)	4.9	0.0	40.5	0.0	-	0.0	-	0.0	-
Dissolved Oxygen (mg/L)	1.56	1.28	1.70	0.84	-	0.00	-	0.15	-
ORP (mV)	193	150	165	97	-	128	-	24	-
pH, Field (su)	6.84	6.90	7.22	6.78	-	6.73	-	7.13	-
Boron, Total (mg/L)	< 0.10	-	< 0.10	< 0.10	< 0.10	-	-	< 0.10	< 0.10
Calcium, Total (mg/L)	**193**	-	**169**	**168**	**163**	-	-	**159**	**159**
Chloride (mg/L)	**272**	-	**228**	**58.0**	**47.3**	-	-	**48.3**	**48.4**
Fluoride (mg/L)	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Sulfate (mg/L)	**190**	-	**164**	**346**	**355**	-	-	**372**	**350**
pH (su)	**7.5**	-	**6.9**	**7.2**	**7.2**	-	-	**6.9**	**6.9**
TDS (mg/L)	**1,000**	-	**1,210**	**896**	**948**	-	-	**950**	**921**
Antimony, Total (mg/L)	-	< 0.0010	-	-	-	< 0.0010	< 0.0010	-	-
Arsenic (mg/L)	-	< 0.0010	-	-	-	< 0.0010	< 0.0010	-	-
Barium, Total (mg/L)	**0.087**	**0.099**	**0.11**	**0.053**	**0.050**	**0.050**	**0.050**	**0.051**	**0.051**
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)	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Lead, Total (mg/L)	-	< 0.010	-	-	-	< 0.010	< 0.010	-	-
Lithium, Total (mg/L)	< 0.010	< 0.010	< 0.010	**0.011**	**0.011**	< 0.010	< 0.010	**0.011**	**0.011**
Molybdenum, Total (mg/L)	-	< 0.0010	-	-	-	< 0.0010	< 0.0010	-	-
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	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Radium-226 & 228 Combined (pCi/L)	-	0.846 ± 0.834 (1.56)	-	-	-	1.04 ± 0.809 (1.40)	0.242 ± 0.763 (1.59)	-	-

TABLE I
SUMMARY OF ANALYTICAL RESULTS - 2023 ASSESSMENT MONITORING
EVERGY KANSAS CENTRAL, INC.
TECUMSEH ENERGY CENTER, 322 LANDFILL
TECUMSEH, KANSAS

Location	Downgradient						
	MW-5			MW-6			
Measure Point (TOC)	916.18			911.28			
Sample Name	MW-5-030623	MW-5-060523	MW-5-090523	MW-6-030623	MW-6-042723	MW-6-060523	MW-6-090523
Sample Date	03/06/2023	06/05/2023	09/05/2023	03/06/2023	04/27/2023	06/05/2023	09/05/2023
Final Lab Report Date	3/17/2023	07/11/2023	9/18/2023	3/17/2023	5/3/2023	07/11/2023	9/18/2023
Final Lab Report Revision Date	4/11/2023	N/A	11/8/2023	4/11/2023	N/A	N/A	11/8/2023
Final Radiation Lab Report Date	N/A	07/03/2023	N/A	N/A	N/A	07/03/2023	N/A
Lab Data Reviewed and Accepted	5/30/2023	08/02/2023	12/18/2023	5/30/2023	5/30/2023	08/02/2023	12/18/2023
Depth to Water (ft btoc)	6.55	6.84	8.60	9.00	7.15	9.75	10.97
Temperature (Deg C)	10.67	15.70	20.19	10.79	12.33	17.06	19.12
Conductivity (µS/cm)	2,130	1,930	1,010	2,410	2,380	2,330	2,190
Turbidity (NTU)	0.0	0.0	1.5	15.1	18.7	0.0	0.0
Dissolved Oxygen (mg/L)	1.65	0.00	0.10	1.56	1.15	0.00	0.67
ORP (mV)	186	144	147	171	126	143	130
pH, Field (su)	6.67	6.75	7.09	6.70	6.65	6.85	6.97
Boron, Total (mg/L)	**0.64**	-	**0.31**	**0.61**	**0.47**	-	**0.49**
Calcium, Total (mg/L)	**330**	-	**209**	**485**	**377**	-	**355**
Chloride (mg/L)	**31.3**	-	**46.0**	**62.7**	**68.7**	-	**50.8**
Fluoride (mg/L)	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	**0.32**	**0.40**
Sulfate (mg/L)	**1,060**	-	**536**	**1,120**	**1,030**	-	**987**
pH (su)	**8.0**	-	**6.9**	**7.3**	**6.9**	-	**7.0**
TDS (mg/L)	**1,730**	-	**1,300**	**1,990**	**2,040**	-	**2,090**
Antimony, Total (mg/L)	-	< 0.0010	-	-	-	< 0.0010	-
Arsenic (mg/L)	-	< 0.0010	-	-	-	< 0.0010	-
Barium, Total (mg/L)	**0.023**	**0.024**	**0.027**	**0.089**	**0.019**	**0.016**	**0.016**
Beryllium, Total (mg/L)	-	< 0.0010	-	-	-	< 0.0010	-
Cadmium, Total (mg/L)	-	< 0.00050	-	-	-	< 0.00050	-
Chromium, Total (mg/L)	-	< 0.0050	-	-	-	< 0.0050	-
Cobalt, Total (mg/L)	< 0.0010	< 0.0010	< 0.0010	**0.011**	**0.0024**	**0.0020**	**0.0022**
Lead, Total (mg/L)	-	< 0.010	-	-	-	< 0.010	-
Lithium, Total (mg/L)	**0.018**	**0.017**	**0.024**	**0.032**	**0.020**	**0.014**	**0.020**
Molybdenum, Total (mg/L)	-	< 0.0010	-	-	-	< 0.0010	-
Selenium, Total (mg/L)	-	< 0.0010	-	-	-	< 0.0010	-
Thallium, Total (mg/L)	-	< 0.0010	-	-	-	< 0.0010	-
Mercury, Total (mg/L)	-	< 0.00020	-	-	-	< 0.00020	-
Fluoride (mg/L)	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	**0.32**	**0.40**
Radium-226 & 228 Combined (pCi/L)	-	0.508 ± 0.705 (1.41)	-	-	-	0.534 ± 0.635 (1.22)	-

Notes:

Bold value: *Detection above laboratory reporting limit or minimum detectable concentration (MDC).*
Radiological results are presented as activity plus or minus uncertainty with MDC.
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
SEPTEMBER 2022 AND MARCH 2023 SAMPLING EVENTS
TECUMSEH ENERGY CENTER
322 LANDFILL
TECUMSEH, KANSAS

Well #	Background Value[1,2]	GWPS
CCR Appendix-IV Barium, Total (mg/L)		
MW-4 (upgradient)	0.132	NA
MW-1		2
MW-5		2
MW-6		2
CCR Appendix-IV Cobalt, Total (mg/L)		
MW-4 (upgradient)	0.001	NA
MW-1		0.006
MW-5		0.006
MW-6		0.006
CCR Appendix-IV Fluoride, Total (mg/L)		
MW-4 (upgradient)	0.35	NA
MW-1		4.0
MW-5		4.0
MW-6		4.0
CCR Appendix-IV Lithium, Total (mg/L)		
MW-4 (upgradient)	0.010[2]	NA
MW-1		5
MW-5		5
MW-6		5

Notes:

[1] *Based on background data collected from 08/17/2016 through 09/09/2022, unless otherwise noted.*

[2] *Based on background data collected from 08/17/2016 through 06/07/2021.*

CCR = coal combustion residuals

GWPS = groundwater protection standard

mg/L = milligrams per Liter

NA = not applicable

pCi/L = picoCuries per Liter

FIGURES

LEGEND

- MONITORING WELL
- PIEZOMETER OBSERVATION ONLY
- 322 LANDFILL

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
4. AERIAL IMAGERY SOURCE: ESRI, NOVEMBER 7, 2019

N

0 300 600

SCALE IN FEET

HALEY ALDRICH

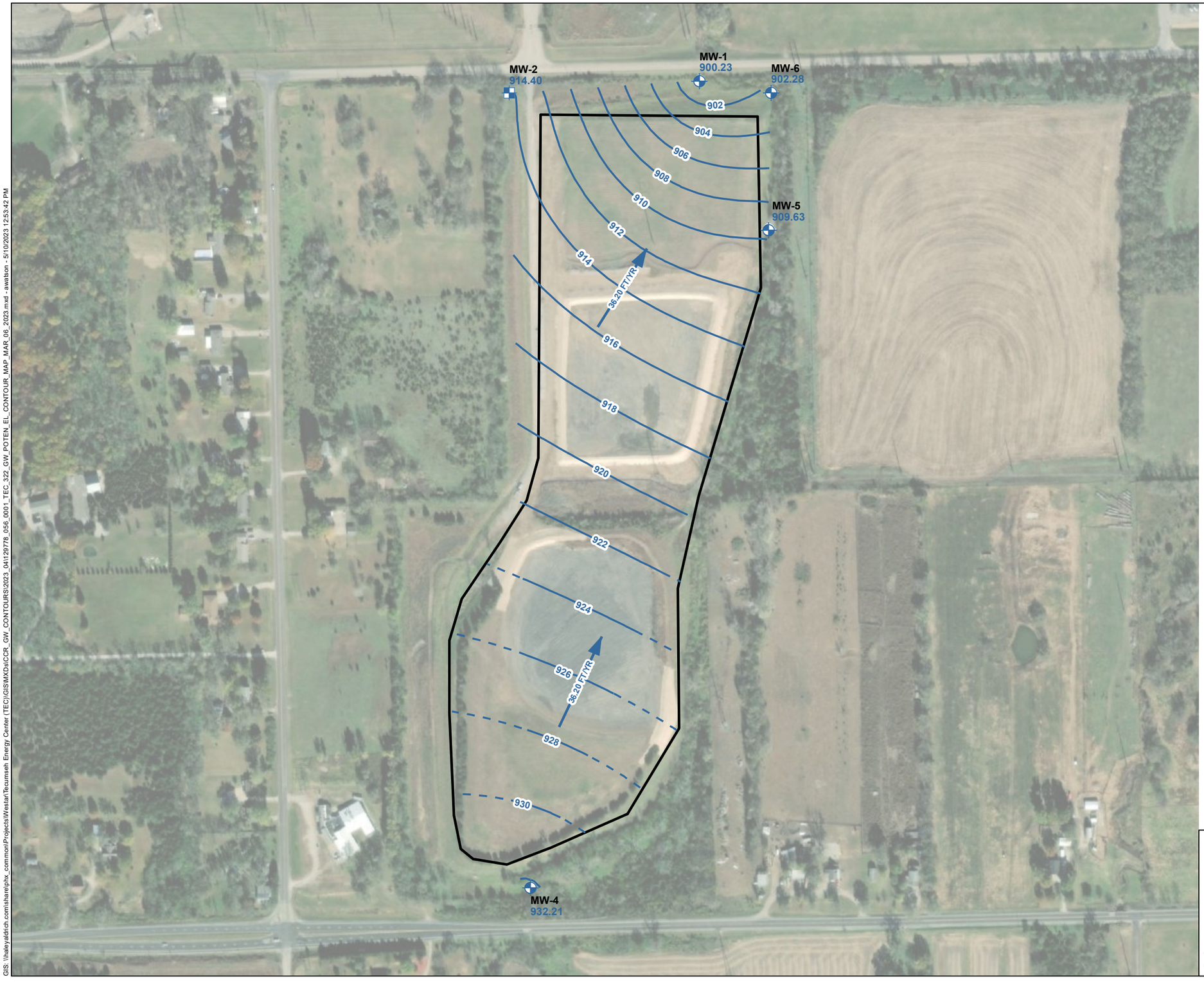
EVERGY KANSAS CENTRAL, INC.
TECUMSEH ENERGY CENTER
TECUMSEH, KANSAS

322 LANDFILL MONITORING WELL LOCATION MAP

evergy

JANUARY 2024

FIGURE 1



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)
- 322 LANDFILL 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: ESRI, 07 NOVEMBER 2019

N

0 300 600
SCALE IN FEET

HALEY ALDRICH

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

322 LANDFILL GROUNDWATER POTENTIOMETRIC ELEVATION CONTOUR MAP MARCH 6, 2023

evergy

JANUARY 2024

FIGURE 2

GIS: \\haleyaldrich.com\share\phx_common\Projects\Westar\Tecumseh Energy Center (TEC)\GIS\MXDs\CCR_GW_CONTOURS\2023_04\129778_056_0001_TEC_322_GW_POTEN_EL_CONTOUR_MAP_MAR_06_2023.mxd - awatson - 5/10/2023 12:53:42 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)
- 322 LANDFILL BOUNDARY

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.

2. GROUNDWATER POTENTIOMETRIC ELEVATIONS WERE MEASURED 5 JUNE 2023.

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

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

5. AERIAL IMAGERY SOURCE: ESRI, 17 NOVEMBER 2019

N

0 270 540
SCALE IN FEET

HALEY ALDRICH

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

322 LANDFILL GROUNDWATER POTENTIOMETRIC ELEVATION CONTOUR MAP JUNE 5, 2023

evergy

JANUARY 2024

FIGURE 3

GIS: \\haleyaldrich.com\share\phx_common\Projects\Westar\GIS\Tecumseh Energy Center\Maps\2023 08\129778 056 0001 322_GDWTR_CONTOUR_MAP_JUNE_2023.mxd - awatson - 8/17/2023 3:43:24 PM

LEGEND

- MONITORING WELL
- PIEZOMETER OBSERVATION ONLY
- ESTIMATED GROUNDWATER POTENTIOMETRIC OBSERVATION ELEVATION CONTOUR, IN FEET
- GROUNDWATER FLOW DIRECTION AND APPROXIMATE GROUNDWATER FLOW RATE (FEET/YEAR)
- 322 LANDFILL 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: ESRI, 17 NOVEMBER 2019

N

0 280 560
SCALE IN FEET

HALEY ALDRICH

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

322 LANDFILL GROUNDWATER POTENTIOMETRIC ELEVATION CONTOUR MAP SEPTEMBER 5, 2023

evergy

JANUARY 2024

FIGURE 4

GIS: G:\Projects\WestarGIS\Tecumseh Energy Center\Maps\2023_12\129778 056 0001 322 GDWTR CONTOUR MAP SEPTEMBER 2023.mxd - awatson - 12/18/2023 3:39:05 PM

ATTACHMENT 1
Statistical Analyses

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

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

TECHNICAL MEMORANDUM

January 31, 2024
File No. 129778-048

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: September 2022 Semi-Annual Groundwater Assessment Monitoring Data Statistical Evaluation
Completed February 1, 2023
Tecumseh Energy Center
322 Landfill

Pursuant to Title 40 Code of Federal Regulations (40 CFR) §§ 257.93 and 257.95 (Rule), this memorandum summarizes the statistical evaluation of the analytical results for the **September 2022** semi-annual assessment monitoring groundwater sampling event for the Tecumseh Energy Center (TEC) 322 Landfill. This semi-annual assessment monitoring groundwater sampling event was completed on **September 9, 2022**, with laboratory results received and validated on **November 4, 2022**.

The statistical evaluation discussed in this memorandum was conducted to determine if Appendix IV groundwater monitoring constituents have been detected in downgradient wells at concentrations that represent a statistically significant increase (SSI) above background values and if one or more of the constituents have been detected at statistically significant 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 **September 2022** sampling event was above the GWPS, the lower confidence limit (LCL) for the downgradient well constituent will be used to evaluate if a SSI is present. The LCL is the lower end of the confidence interval range, which is an estimated concentration range intended to contain the true mean or median of the population from which the sample is drawn. The confidence interval range is designed to locate the true population mean or median with a high degree of statistical confidence, or conversely, with a low probability of error.

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

BACKGROUND DISTRIBUTIONS

The groundwater analytical results for each sampling event from the background sample location MW-4 were combined to calculate the UTL for each detected Appendix IV constituent. The variability and distribution of the pooled dataset were evaluated to determine the method for UTL calculation. Per the document, *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance, March 2009,* background concentrations were updated based on statistical evaluation of analytical results collected through **September 2022** for all constituents except lithium, which was updated through **June 2021.**

RESULTS OF APPENDIX IV DOWNGRADIENT STATISTICAL COMPARISONS

Sample concentrations from the downgradient wells for each of the detected Appendix IV constituents from the **September 2022** semi-annual assessment monitoring event were compared to their respective background UTLs and GWPSs (Table I). A sample concentration greater than the background UTL is considered to represent a SSI. A sample concentration greater than the GWPS is considered to represent a SSL. The results of the groundwater assessment monitoring statistical evaluation are provided in Table I. **Based on this statistical evaluation of groundwater sampling data collected in September 2022, no SSLs above GWPS occurred at the TEC 322 Landfill.**

Attachments:

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

TABLE

TABLE I
SUMMARY OF SEMI-ANNUAL ASSESSMENT GROUNDWATER MONITORING STATISTICAL EVALUATION
SEPTEMBER SAMPLING EVENT
TECUMSEH ENERGY CENTER
322 LANDFILL

									MCL Comparison						Inter-well Analysis		Groundwater Protection Standard	
Location Id	**Frequency of Detection**	**Percent Non-Detects**	**Maximum Detect**	**Variance**	**Standard Deviation**	**Coefficient of Variance**	**CCR MCL or CFR § 257.95(h)(2)***	**Report Result Unit**	**Number of Detection Exceedances**	**Number of Non-Detection Exceedances**	**Outlier Presence**	**Outlier Removed**	**Trend**	**September 2022 Concentration (mg/L)**	**Background Limits[1] (UTL) mg/L**	**SSI**	**GWPS (Higher of MCL/ 40 CFR § 257.95(h)(2) or UTL)**	**SSL**
	CCR Appendix-IV: Barium, Total (mg/L)																	
MW-4 (upgradient)	22/22	0%	0.14	0.0001788	0.01337	0.1234	2	mg/L	0	0	Yes	No	Decreasing		0.132		2	
MW-1	22/22	0%	0.2	0.00284	0.05329	0.4732	2	mg/L	0	0	No	No	Decreasing	0.062		No		No
MW-5	22/22	0%	0.04	0.00003825	0.006185	0.2597	2	mg/L	0	0	No	No	Decreasing	0.027		No		No
MW-6	22/22	0%	0.041	0.00004472	0.006687	0.313	2	mg/L	0	0	Yes	No	Decreasing	0.019		No		No
	CCR Appendix-IV: Cobalt, Total (mg/L)																	
MW-4 (upgradient)	0/22	100%		0	0	0	0.006	mg/L	0	0	NA	NA	NA		0.001		0.006	
MW-1	14/22	36%	0.0086	0.000003296	0.001815	0.9056	0.006	mg/L	1	0	Yes	No	Stable	<0.0010		No		No
MW-5	21/22	5%	0.0021	1.352E-07	0.0003677	0.2192	0.006	mg/L	0	0	No	No	Decreasing	<0.0010		No		No
MW-6	22/22	0%	0.0033	2.511E-07	0.0005011	0.2124	0.006	mg/L	0	0	No	No	Stable	0.0022		Yes		No
	CCR Appendix-IV: Fluoride (mg/L)																	
MW-4 (upgradient)	14/23	39%	0.35	0.001332	0.03649	0.1584	4.0000	mg/L	0	0	Yes	No	Stable		0.350		4.0	
MW-1	17/23	26%	0.46	0.007117	0.08436	0.2594	4.0000	mg/L	0	0	No	No	Decreasing	<0.20		No		No
MW-5	16/23	30%	0.46	0.005898	0.0768	0.2705	4.0000	mg/L	0	0	No	No	Stable	<0.20		No		No
MW-6	19/23	17%	0.56	0.00947	0.09732	0.2914	4.0000	mg/L	0	0	No	No	Stable	<0.20		No		No
	CCR Appendix-IV: Lithium, Total (mg/L)																	
MW-4 (upgradient)	0/20	100%		0	0	0	0.040	mg/L	0	0	NA	NA	NA		0.010[2]		0.040	
MW-1	2/20	90%	0.011	0.00000005	0.0002236	0.02225	0.040	mg/L	0	0	No	No	NA	0.011		Yes		No
MW-5	15/20	25%	0.024	0.00002289	0.004785	0.32	0.040	mg/L	0	0	No	No	Stable	0.021		Yes		No
MW-6	14/20	30%	0.022	0.00001651	0.004064	0.2955	0.040	mg/L	0	0	No	No	Stable	0.017		Yes		No

Notes:

[1] Based on background data collected from 08/17/2016 through 09/09/2022, unless otherwise noted.

[2] Based on background data collected from 08/17/2016 through 06/07/2021.

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

CCR = coal combustion residuals

GWPS = Groundwater Protection Standard

MCL = maximum contaminant level

mg/L = milligrams per Liter

NA = not analyzed

pCi/L = picoCuries per Liter

SSI = statistically significant increase

SSL = statistically significant level

UTL = upper tolerance limits

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

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

TECHNICAL MEMORANDUM

January 31, 2024
File No. 129778-048

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
322 Landfill

Pursuant to Title 40 Code of Federal Regulations (40 CFR) §§ 257.93 and 257.95 (Rule), this memorandum summarizes the statistical evaluation of the analytical results for the **March 2023** semi-annual assessment monitoring groundwater sampling event for the Tecumseh Energy Center (TEC) 322 Landfill. This semi-annual assessment monitoring groundwater sampling event was completed on **March 6, 2023.** Well MW-6 was resampled on April 27, 2023, to confirm the analytical concentration collected on March 6, 2023; the results were revised. All laboratory results were received and validated on **May 30, 2023**.

The statistical evaluation discussed in this memorandum was conducted to determine if Appendix IV groundwater monitoring constituents have been detected in downgradient wells at concentrations that represent a statistically significant increase (SSI) above background values, and if one or more of the constituents 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-4 were combined to calculate the UTL for each detected Appendix IV constituent. The variability and distribution of the pooled dataset were evaluated to determine the method for UTL calculation. Per the document, *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance, March 2009,* background concentrations were updated based on statistical evaluation of analytical results collected through **September 2022** for all constituents except lithium, which was updated through **June 2021.**

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 322 Landfill.**

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 322 LANDFILL
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: Barium, Total (mg/L)																				
MW-4 (upgradient)	23/23	0%	-	0.14	0.0001906	0.01381	0.1285	2	mg/L	0	0	Yes	No	Decreasing	Normal	0.087	0.132		2	
MW-1	23/23	0%	-	0.2	0.002866	0.05353	0.4865	2	mg/L	0	0	No	No	Decreasing		0.053		No		No
MW-5	23/23	0%	-	0.04	0.00003654	0.006045	0.2542	2	mg/L	0	0	No	No	Decreasing		0.023		No		No
MW-6	23/23	0%	-	0.041	0.00004293	0.006552	0.3082	2	mg/L	0	0	Yes	No	Decreasing		0.019		No		No
CCR Appendix-IV: Cobalt, Total (mg/L)																				
MW-4 (upgradient)	0/23	100%	0.001-0.001		0	0	0	0.006	mg/L	0	0	NA	NA	NA	NA	< 0.0010	0.001		0.006	
MW-1	14/23	39%	0.001-0.001	0.0086	0.00000319	0.001786	0.9108	0.006	mg/L	1	0	Yes	No	Stable		< 0.0010		No		No
MW-5	21/23	9%	0.001-0.001	0.0021	0.000000149	0.000386	0.2342	0.006	mg/L	0	0	No	No	Decreasing		< 0.0010		No		No
MW-6	23/23	0%	-	0.0033	2.398E-07	0.0004897	0.2074	0.006	mg/L	0	0	No	No	Stable		0.0024		Yes		No
CCR Appendix-IV: Fluoride (mg/L)																				
MW-4 (upgradient)	14/24	42%	0.2-0.2	0.35	0.001312	0.03623	0.1581	4.0	mg/L	0	0	Yes	No	Stable	Non-parametric	< 0.20	0.350		4.0	
MW-1	17/24	29%	0.2-0.2	0.46	0.007461	0.08638	0.2699	4.0	mg/L	0	0	No	No	Decreasing		< 0.20		No		No
MW-5	16/24	33%	0.2-0.2	0.46	0.005935	0.07704	0.2747	4.0	mg/L	0	0	No	No	Stable		< 0.20		No		No
MW-6	19/24	21%	0.2-0.2	0.56	0.009806	0.09902	0.3016	4.0	mg/L	0	0	No	No	Stable		< 0.20		No		No
CCR Appendix-IV: Lithium, Total (mg/L)																				
MW-4 (upgradient)	0/21	100%	0.01-0.01		0	0	0	0.040	mg/L	0	0	NA	NA	NA	NA	< 0.010	0.010[2]		0.040	
MW-1	3/21	86%	0.01-0.01	0.011	9.048E-08	0.0003008	0.0298	0.040	mg/L	0	0	No	No	NA		0.011		Yes		No
MW-5	16/21	24%	0.01-0.01	0.024	0.00002219	0.004711	0.3121	0.040	mg/L	0	0	No	No	Stable		0.018		Yes		No
MW-6	15/21	29%	0.01-0.01	0.022	0.00001755	0.004189	0.2982	0.040	mg/L	0	0	No	No	Stable		0.020		Yes		No

Notes:

[1] Based on background data collected from 08/17/2016 through 09/09/2022, unless otherwise noted.

[2] Based on background data collected from 08/17/2016 through 06/07/2021.

** 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

RSL = Regional Screening Level

SSI = statistically significant increase

SSL = statistically significant level

UTL = upper tolerance limits

ATTACHMENT 2
Laboratory Analytical Reports

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

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

April 11, 2023

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

RE: Project: TEC 322 LANDFILL CCR
Pace Project No.: 60423225

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

REVISION_1 3/21/23

REVISION_2 4/11/23

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.
Lenexa, KS 66219
(913)599-5665

CERTIFICATIONS

Project: TEC 322 LANDFILL CCR
Pace Project No.: 60423225

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

SAMPLE SUMMARY

Project: TEC 322 LANDFILL CCR
Pace Project No.: 60423225

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60423225001	**MW-1-030623**	Water	03/06/23 10:25	03/06/23 16:50
60423225002	**MW-4-030623**	Water	03/06/23 12:45	03/06/23 16:50
60423225003	**MW-5-030623**	Water	03/06/23 11:30	03/06/23 16:50
60423225004	**MW-6-030623**	Water	03/06/23 10:50	03/06/23 16:50
60423225005	**DUP-322F-030623**	Water	03/06/23 10:25	03/06/23 16:50

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SAMPLE ANALYTE COUNT

Project: TEC 322 LANDFILL CCR
Pace Project No.: 60423225

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60423225001	**MW-1-030623**	EPA 200.7	ALH	3	PASI-K
		EPA 6010	ALH	1	PASI-K
		EPA 200.8	JGP	1	PASI-K
		SM 2540C	MLD	1	PASI-K
		SM 4500-H+B	RB	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
60423225002	**MW-4-030623**	EPA 200.7	ALH	3	PASI-K
		EPA 6010	ALH	1	PASI-K
		EPA 200.8	JGP	1	PASI-K
		SM 2540C	MLD	1	PASI-K
		SM 4500-H+B	RB	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
60423225003	**MW-5-030623**	EPA 200.7	ALH	3	PASI-K
		EPA 6010	ALH	1	PASI-K
		EPA 200.8	JGP	1	PASI-K
		SM 2540C	MLD	1	PASI-K
		SM 4500-H+B	RB	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
60423225004	**MW-6-030623**	EPA 200.7	ALH	3	PASI-K
		EPA 6010	ALH	1	PASI-K
		EPA 200.8	JGP, MA1	1	PASI-K
		SM 2540C	MLD	1	PASI-K
		SM 4500-H+B	RB	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
60423225005	**DUP-322F-030623**	EPA 200.7	ALH	3	PASI-K
		EPA 6010	ALH	1	PASI-K
		EPA 200.8	JGP	1	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 322 LANDFILL CCR
Pace Project No.: 60423225

Date: April 11, 2023

Amended to report uniform reporting units per client request.
4/11/23 Amended to report data from reanalysis of MW-6 per client request.

Pace Analytical Services, LLC
9608 Loiret Blvd.
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PROJECT NARRATIVE

Project: TEC 322 LANDFILL CCR
Pace Project No.: 60423225

Method: **EPA 200.7**
Description: 200.7 Metals, Total
Client: Evergy Kansas Central, Inc.
Date: April 11, 2023

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

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

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

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

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

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

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

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

QC Batch: 835263

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60423225001

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

- MSD (Lab ID: 3313434)
  - Calcium

QC Batch: 837840

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

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

- MS (Lab ID: 3322092)
  - Calcium
- MSD (Lab ID: 3322093)
  - Calcium

Additional Comments:

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Lenexa, KS 66219
(913)599-5665

PROJECT NARRATIVE

Project: TEC 322 LANDFILL CCR
Pace Project No.: 60423225

Method: **EPA 6010**
Description: 6010 MET ICP
Client: Evergy Kansas Central, Inc.
Date: April 11, 2023

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

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

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

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

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

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

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

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

Additional Comments:

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

PROJECT NARRATIVE

Project: TEC 322 LANDFILL CCR
Pace Project No.: 60423225

Method: **EPA 200.8**
Description: 200.8 MET ICPMS
Client: Evergy Kansas Central, Inc.
Date: April 11, 2023

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

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

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

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

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

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

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

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

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

Additional Comments:

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Lenexa, KS 66219
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PROJECT NARRATIVE

Project: TEC 322 LANDFILL CCR
Pace Project No.: 60423225

Method: **SM 2540C**
Description: 2540C Total Dissolved Solids
Client: Evergy Kansas Central, Inc.
Date: April 11, 2023

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

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

H1: Analysis conducted outside the EPA method holding time.
- MW-6-030623 (Lab ID: 60423225004)

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

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

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

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

QC Batch: 837626

D6: The precision between the sample and sample duplicate exceeded laboratory control limits.
- DUP (Lab ID: 3321473)
  - Total Dissolved Solids

Additional Comments:

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Lenexa, KS 66219
(913)599-5665

PROJECT NARRATIVE

Project: TEC 322 LANDFILL CCR
Pace Project No.: 60423225

Method: **SM 4500-H+B**
Description: 4500H+ pH, Electrometric
Client: Evergy Kansas Central, Inc.
Date: April 11, 2023

General Information:
5 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-322F-030623 (Lab ID: 60423225005)
- MW-1-030623 (Lab ID: 60423225001)
- MW-4-030623 (Lab ID: 60423225002)
- MW-5-030623 (Lab ID: 60423225003)
- MW-6-030623 (Lab ID: 60423225004)

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 322 LANDFILL CCR
Pace Project No.: 60423225

Method: **EPA 300.0**
Description: 300.0 IC Anions 28 Days
Client: Evergy Kansas Central, Inc.
Date: April 11, 2023

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

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

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

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

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

QC Batch: 836219

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60423115001

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

- MS (Lab ID: 3317049)
  - Chloride
  - Sulfate
- MSD (Lab ID: 3317050)
  - Sulfate

QC Batch: 837826

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

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

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

Additional Comments:

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

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Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: TEC 322 LANDFILL CCR
Pace Project No.: 60423225

Sample: MW-1-030623 **Lab ID: 60423225001** Collected: 03/06/23 10:25 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	**0.053**	mg/L	0.0050	1	03/07/23 14:38	03/13/23 17:17	7440-39-3	
Boron, Total Recoverable	**<0.10**	mg/L	0.10	1	03/07/23 14:38	03/13/23 17:17	7440-42-8	
Calcium, Total Recoverable	**168**	mg/L	0.20	1	03/07/23 14:38	03/13/23 17:17	7440-70-2	M1
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**0.011**	mg/L	0.010	1	03/07/23 14:38	03/13/23 16:51	7439-93-2	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City							
Cobalt, Total Recoverable	**<0.0010**	mg/L	0.0010	1	03/07/23 14:38	03/16/23 17:21	7440-48-4	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City							
Total Dissolved Solids	**896**	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 12:19		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Chloride	**58.0**	mg/L	10.0	10		03/15/23 19:01	16887-00-6	
Fluoride	**<0.20**	mg/L	0.20	1		03/14/23 18:58	16984-48-8	
Sulfate	**346**	mg/L	100	100		03/15/23 19:14	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: TEC 322 LANDFILL CCR
Pace Project No.: 60423225

Sample: MW-4-030623 **Lab ID: 60423225002** Collected: 03/06/23 12:45 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	**0.087**	mg/L	0.0050	1	03/07/23 14:38	03/13/23 17:23	7440-39-3	
Boron, Total Recoverable	**<0.10**	mg/L	0.10	1	03/07/23 14:38	03/13/23 17:23	7440-42-8	
Calcium, Total Recoverable	**193**	mg/L	0.20	1	03/07/23 14:38	03/13/23 17:23	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	03/07/23 14:38	03/13/23 16:57	7439-93-2	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City							
Cobalt, Total Recoverable	**<0.0010**	mg/L	0.0010	1	03/07/23 14:38	03/16/23 17:08	7440-48-4	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City							
Total Dissolved Solids	**1000**	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	**7.5**	Std. Units	0.10	1		03/09/23 11:25		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Chloride	**272**	mg/L	50.0	50		03/15/23 19:54	16887-00-6	
Fluoride	**<0.20**	mg/L	0.20	1		03/14/23 19:11	16984-48-8	
Sulfate	**190**	mg/L	50.0	50		03/15/23 19:54	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: TEC 322 LANDFILL CCR
Pace Project No.: 60423225

Sample: MW-5-030623 **Lab ID: 60423225003** Collected: 03/06/23 11:30 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	**0.023**	mg/L	0.0050	1	03/07/23 14:38	03/13/23 17:26	7440-39-3	
Boron, Total Recoverable	**0.64**	mg/L	0.10	1	03/07/23 14:38	03/13/23 17:26	7440-42-8	
Calcium, Total Recoverable	**330**	mg/L	0.20	1	03/07/23 14:38	03/13/23 17:26	7440-70-2	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**0.018**	mg/L	0.010	1	03/07/23 14:38	03/13/23 16:59	7439-93-2	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City							
Cobalt, Total Recoverable	**<0.0010**	mg/L	0.0010	1	03/07/23 14:38	03/16/23 17:24	7440-48-4	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City							
Total Dissolved Solids	**1730**	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	**8.0**	Std. Units	0.10	1		03/09/23 11:20		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Chloride	**31.3**	mg/L	5.0	5		03/15/23 20:07	16887-00-6	
Fluoride	**<0.20**	mg/L	0.20	1		03/14/23 19:25	16984-48-8	
Sulfate	**1060**	mg/L	500	500		03/15/23 20:21	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: TEC 322 LANDFILL CCR
Pace Project No.: 60423225

Sample: MW-6-030623 **Lab ID: 60423225004** Collected: 03/06/23 10:50 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	**0.053**	mg/L	0.0050	1	03/07/23 14:38	03/13/23 17:28	7440-39-3	
Barium, Total Recoverable	**0.089**	mg/L	0.025	5	03/22/23 11:30	03/24/23 12:31	7440-39-3	
Boron, Total Recoverable	**0.49**	mg/L	0.10	1	03/07/23 14:38	03/13/23 17:28	7440-42-8	
Boron, Total Recoverable	**0.61**	mg/L	0.50	5	03/22/23 11:30	03/24/23 12:31	7440-42-8	
Calcium, Total Recoverable	**380**	mg/L	0.20	1	03/07/23 14:38	03/13/23 17:28	7440-70-2	
Calcium, Total Recoverable	**485**	mg/L	1.0	5	03/22/23 11:30	03/24/23 12:31	7440-70-2	M1
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**0.026**	mg/L	0.010	1	03/07/23 14:38	03/13/23 17:01	7439-93-2	
Lithium, Total Recoverable	**0.032**	mg/L	0.010	1	03/22/23 11:30	03/23/23 13:42	7439-93-2	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City							
Cobalt, Total Recoverable	**0.012**	mg/L	0.0010	1	03/07/23 14:38	03/16/23 17:27	7440-48-4	
Cobalt, Total Recoverable	**0.011**	mg/L	0.0010	1	03/22/23 11:30	03/23/23 10:05	7440-48-4	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City							
Total Dissolved Solids	**1990**	mg/L	20.0	1		03/08/23 09:01		
Total Dissolved Solids	**1990**	mg/L	13.3	1		03/21/23 16:42		H1
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Kansas City							
pH at 25 Degrees C	**7.9**	Std. Units	0.10	1		03/09/23 11:15		H6
pH at 25 Degrees C	**7.3**	Std. Units	0.10	1		03/23/23 13:12		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Chloride	**50.0**	mg/L	10.0	10		03/15/23 20:34	16887-00-6	
Chloride	**62.7**	mg/L	10.0	10		03/22/23 16:38	16887-00-6	M1
Fluoride	**<0.20**	mg/L	0.20	1		03/14/23 19:38	16984-48-8	
Fluoride	**<0.20**	mg/L	0.20	1		03/22/23 17:44	16984-48-8	
Sulfate	**1360**	mg/L	500	500		03/15/23 20:48	14808-79-8	
Sulfate	**1120**	mg/L	200	200		03/22/23 18:24	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: TEC 322 LANDFILL CCR
Pace Project No.: 60423225

Sample: DUP-322F-030623 **Lab ID: 60423225005** Collected: 03/06/23 10:25 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	**0.050**	mg/L	0.0050	1	03/07/23 14:38	03/13/23 17:30	7440-39-3	
Boron, Total Recoverable	**<0.10**	mg/L	0.10	1	03/07/23 14:38	03/13/23 17:30	7440-42-8	
Calcium, Total Recoverable	**163**	mg/L	0.20	1	03/07/23 14:38	03/13/23 17:30	7440-70-2	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**0.011**	mg/L	0.010	1	03/07/23 14:38	03/13/23 17:04	7439-93-2	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City							
Cobalt, Total Recoverable	**<0.0010**	mg/L	0.0010	1	03/07/23 14:38	03/16/23 17:31	7440-48-4	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City							
Total Dissolved Solids	**948**	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 12:23		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Chloride	**47.3**	mg/L	10.0	10		03/15/23 21:01	16887-00-6	
Fluoride	**<0.20**	mg/L	0.20	1		03/14/23 19:51	16984-48-8	
Sulfate	**355**	mg/L	100	100		03/15/23 21:14	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: TEC 322 LANDFILL CCR
Pace Project No.: 60423225

QC Batch: 835263 | Analysis Method: EPA 200.7
QC Batch Method: EPA 200.7 | Analysis Description: 200.7 Metals, Total
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60423225001, 60423225002, 60423225003, 60423225004, 60423225005

METHOD BLANK: 3313431 Matrix: Water
Associated Lab Samples: 60423225001, 60423225002, 60423225003, 60423225004, 60423225005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Barium	mg/L	<0.0050	0.0050	03/13/23 17:12	
Boron	mg/L	<0.10	0.10	03/13/23 17:12	
Calcium	mg/L	<0.20	0.20	03/13/23 17:12	

LABORATORY CONTROL SAMPLE: 3313432

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	mg/L	1	0.95	95	85-115	
Boron	mg/L	1	0.93	93	85-115	
Calcium	mg/L	10	10.2	102	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3313433 3313434

Parameter	Units	60423225001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	mg/L	0.053	1	1	1.0	0.99	95	93	70-130	2	20	
Boron	mg/L	<0.10	1	1	1.0	0.99	95	94	70-130	1	20	
Calcium	mg/L	168	10	10	180	169	119	14	70-130	6	20	M1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: TEC 322 LANDFILL CCR
Pace Project No.: 60423225

QC Batch: 837840
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: 60423225004

METHOD BLANK: 3322090 Matrix: Water
Associated Lab Samples: 60423225004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Barium	mg/L	<0.0050	0.0050	03/24/23 11:54	
Boron	mg/L	<0.10	0.10	03/24/23 11:54	
Calcium	mg/L	<0.20	0.20	03/24/23 11:54	

LABORATORY CONTROL SAMPLE: 3322091

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	mg/L	1	0.96	96	85-115	
Boron	mg/L	1	0.94	94	85-115	
Calcium	mg/L	10	10	100	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3322092 3322093

Parameter	Units	60423225004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	mg/L	0.089	2	2	2.3	2.3	111	110	70-130	1	20	
Boron	mg/L	0.61	2	2	2.7	2.7	106	105	70-130	1	20	
Calcium	mg/L	485	20	20	470	456	-77	-144	70-130	3	20	M1

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QUALITY CONTROL DATA

Project: TEC 322 LANDFILL CCR
Pace Project No.: 60423225

QC Batch: 835265 Analysis Method: EPA 200.8
QC Batch Method: EPA 200.8 Analysis Description: 200.8 MET
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60423225001, 60423225002, 60423225003, 60423225004, 60423225005

METHOD BLANK: 3313441 Matrix: Water
Associated Lab Samples: 60423225001, 60423225002, 60423225003, 60423225004, 60423225005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cobalt	mg/L	<0.0010	0.0010	03/16/23 17:03	

LABORATORY CONTROL SAMPLE: 3313442

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cobalt	mg/L	0.04	0.039	98	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3313443 3313444

Parameter	Units	60423225002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Cobalt	mg/L	<0.0010	0.04	0.04	0.041	0.040	102	99	70-130	4	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: TEC 322 LANDFILL CCR
Pace Project No.: 60423225

QC Batch: 837842
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: 60423225004

METHOD BLANK: 3322098 Matrix: Water
Associated Lab Samples: 60423225004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cobalt	mg/L	<0.0010	0.0010	03/23/23 10:01	

LABORATORY CONTROL SAMPLE: 3322099

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cobalt	mg/L	0.04	0.035	88	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3322100 3322101

Parameter	Units	60423225004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Cobalt	mg/L	0.011	0.08	0.08	0.081	0.080	87	85	70-130	2	20	

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QUALITY CONTROL DATA

Project: TEC 322 LANDFILL CCR
Pace Project No.: 60423225

QC Batch: 835264 | Analysis Method: EPA 6010
QC Batch Method: EPA 3010 | Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60423225001, 60423225002, 60423225003, 60423225004, 60423225005

METHOD BLANK: 3313437 Matrix: Water
Associated Lab Samples: 60423225001, 60423225002, 60423225003, 60423225004, 60423225005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lithium	mg/L	<0.010	0.010	03/13/23 16:46	

LABORATORY CONTROL SAMPLE: 3313438

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3313439 3313440

Parameter	Units	60423225001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lithium	mg/L	0.011	1	1	0.97	0.98	96	96	75-125	0	20	

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QUALITY CONTROL DATA

Project: TEC 322 LANDFILL CCR
Pace Project No.: 60423225

QC Batch: 837841
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60423225004

METHOD BLANK: 3322094 Matrix: Water
Associated Lab Samples: 60423225004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lithium	mg/L	<0.010	0.010	03/23/23 13:38	

LABORATORY CONTROL SAMPLE: 3322095

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: 3322096 3322097

Parameter	Units	60423225004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lithium	mg/L	0.032	2	2	2.1	2.0	103	99	75-125	4	20	

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QUALITY CONTROL DATA

Project: TEC 322 LANDFILL CCR
Pace Project No.: 60423225

QC Batch: 835379 | Analysis Method: SM 2540C
QC Batch Method: SM 2540C | Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60423225001, 60423225002, 60423225003, 60423225004, 60423225005

METHOD BLANK: 3313761 Matrix: Water
Associated Lab Samples: 60423225001, 60423225002, 60423225003, 60423225004, 60423225005

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	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: TEC 322 LANDFILL CCR
Pace Project No.: 60423225

QC Batch: 837626
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60423225004

METHOD BLANK: 3321471 Matrix: Water
Associated Lab Samples: 60423225004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	03/21/23 10:47	

LABORATORY CONTROL SAMPLE: 3321472

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	1030	103	80-120	

SAMPLE DUPLICATE: 3321473

Parameter	Units	60424198005 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	10400	5700	58	10	D6

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: TEC 322 LANDFILL CCR
Pace Project No.: 60423225

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: 60423225001, 60423225005

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

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: TEC 322 LANDFILL CCR
Pace Project No.: 60423225

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: 60423225002, 60423225003, 60423225004

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

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: TEC 322 LANDFILL CCR
Pace Project No.: 60423225

QC Batch: 838096
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: 60423225004

SAMPLE DUPLICATE: 3322982

Parameter	Units	60423225004 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.3	7.5	2	5	H6

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: TEC 322 LANDFILL CCR
Pace Project No.: 60423225

QC Batch: 836219
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: 60423225001, 60423225002, 60423225003, 60423225004, 60423225005

METHOD BLANK: 3317047 Matrix: Water
Associated Lab Samples: 60423225001, 60423225002, 60423225003, 60423225004, 60423225005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<1.0	1.0	03/14/23 10:02	
Fluoride	mg/L	<0.20	0.20	03/14/23 10:02	
Sulfate	mg/L	<1.0	1.0	03/14/23 10:02	

METHOD BLANK: 3319714 Matrix: Water
Associated Lab Samples: 60423225001, 60423225002, 60423225003, 60423225004, 60423225005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<1.0	1.0	03/15/23 10:59	
Fluoride	mg/L	<0.20	0.20	03/15/23 10:59	
Sulfate	mg/L	<1.0	1.0	03/15/23 10:59	

LABORATORY CONTROL SAMPLE: 3317048

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.7	94	90-110	
Fluoride	mg/L	2.5	2.5	101	90-110	
Sulfate	mg/L	5	4.6	92	90-110	

LABORATORY CONTROL SAMPLE: 3319715

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.9	98	90-110	
Fluoride	mg/L	2.5	2.5	99	90-110	
Sulfate	mg/L	5	5.1	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3317049 3317050

Parameter	Units	60423115001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	190	100	100	264	276	74	86	80-120	4	15	M1
Fluoride	mg/L	ND	50	50	45.2	47.7	90	95	80-120	5	15	
Sulfate	mg/L	2560	2000	2000	5060	5030	125	123	80-120	1	15	M1

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QUALITY CONTROL DATA

Project: TEC 322 LANDFILL CCR
Pace Project No.: 60423225

QC Batch: 837826
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60423225004

METHOD BLANK: 3322025 Matrix: Water

Associated Lab Samples: 60423225004

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

METHOD BLANK: 3324423 Matrix: Water

Associated Lab Samples: 60423225004

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

LABORATORY CONTROL SAMPLE: 3322026

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.8	96	90-110	
Fluoride	mg/L	2.5	2.6	102	90-110	
Sulfate	mg/L	5	5.1	102	90-110	

LABORATORY CONTROL SAMPLE: 3324424

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3322027 3322028

Parameter	Units	60423225004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	62.7	50	50	101	98.5	77	72	80-120	3	15	M1
Fluoride	mg/L	<0.20	2.5	2.5	2.6	2.5	103	100	80-120	3	15	
Sulfate	mg/L	1120	1000	1000	2100	2140	97	102	80-120	2	15	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: TEC 322 LANDFILL CCR
Pace Project No.: 60423225

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

D6	The precision between the sample and sample duplicate exceeded laboratory control limits.
H1	Analysis conducted outside the EPA method holding time.
H6	Analysis initiated outside of the 15 minute EPA required holding time.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: TEC 322 LANDFILL CCR
Pace Project No.: 60423225

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60423225001	MW-1-030623	EPA 200.7	835263	EPA 200.7	835327
60423225002	MW-4-030623	EPA 200.7	835263	EPA 200.7	835327
60423225003	MW-5-030623	EPA 200.7	835263	EPA 200.7	835327
60423225004	MW-6-030623	EPA 200.7	835263	EPA 200.7	835327
60423225004	MW-6-030623	EPA 200.7	837840	EPA 200.7	837979
60423225005	DUP-322F-030623	EPA 200.7	835263	EPA 200.7	835327
60423225001	MW-1-030623	EPA 3010	835264	EPA 6010	835328
60423225002	MW-4-030623	EPA 3010	835264	EPA 6010	835328
60423225003	MW-5-030623	EPA 3010	835264	EPA 6010	835328
60423225004	MW-6-030623	EPA 3010	835264	EPA 6010	835328
60423225004	MW-6-030623	EPA 3010	837841	EPA 6010	837980
60423225005	DUP-322F-030623	EPA 3010	835264	EPA 6010	835328
60423225001	MW-1-030623	EPA 200.8	835265	EPA 200.8	835329
60423225002	MW-4-030623	EPA 200.8	835265	EPA 200.8	835329
60423225003	MW-5-030623	EPA 200.8	835265	EPA 200.8	835329
60423225004	MW-6-030623	EPA 200.8	835265	EPA 200.8	835329
60423225004	MW-6-030623	EPA 200.8	837842	EPA 200.8	837981
60423225005	DUP-322F-030623	EPA 200.8	835265	EPA 200.8	835329
60423225001	MW-1-030623	SM 2540C	835379		
60423225002	MW-4-030623	SM 2540C	835379		
60423225003	MW-5-030623	SM 2540C	835379		
60423225004	MW-6-030623	SM 2540C	835379		
60423225004	MW-6-030623	SM 2540C	837626		
60423225005	DUP-322F-030623	SM 2540C	835379		
60423225001	MW-1-030623	SM 4500-H+B	835122		
60423225002	MW-4-030623	SM 4500-H+B	835568		
60423225003	MW-5-030623	SM 4500-H+B	835568		
60423225004	MW-6-030623	SM 4500-H+B	835568		
60423225004	MW-6-030623	SM 4500-H+B	838096		
60423225005	DUP-322F-030623	SM 4500-H+B	835122		
60423225001	MW-1-030623	EPA 300.0	836219		
60423225002	MW-4-030623	EPA 300.0	836219		
60423225003	MW-5-030623	EPA 300.0	836219		
60423225004	MW-6-030623	EPA 300.0	836219		
60423225004	MW-6-030623	EPA 300.0	837826		
60423225005	DUP-322F-030623	EPA 300.0	836219		

WO# : 60423225

60423225

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

Client Name: Evergy Kansas Central

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

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

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

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

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

Cooler Temperature (°C): **As-read** 5.6 **Corr. Factor** -0.1 **Corrected** 5.5

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#:** 6204001	☑Yes ☐No ☐N/A	List sample IDs, volumes, lot #'s of preservative and the date/time added.
Cyanide water sample checks: Lead acetate strip turns dark? (Record only)	☐Yes ☐No	
Potassium iodide test strip turns blue/purple? (Preserve)	☐Yes ☐No	
Trip Blank present:	☐Yes ☐No ☑N/A	
Headspace in VOA vials (>6mm):	☐Yes ☐No ☑N/A	
Samples from USDA Regulated Area: State:	☐Yes ☐No ☑N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	☐Yes ☐No ☑N/A	

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

Qualtrax Document ID: 30468

Pace Analytical
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A — **Required** Client Information:

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

Section B — **Required** Project Information:

Report To:	Jake Humphrey
Copy To:	Laura Hines, Samantha Kaney,Melissa Michels
Purchase Order No.:	
Project Name:	TEC 322 Landfill 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, 11

REGULATORY AGENCY

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

Site Location **STATE:** KS

Section D — **Required** Client Information

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

Valid Matrix Codes

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

ITEM #	Section D Required Client Information (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,Ca,Ba	200.8 Total Co	4500 H+B pH	300: Cl, F, SO4	2540C TDS	6010 Lithium	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																		Y/N	N	N	N	N	N	N		
1	MW-1-030623	WT	G	-	-	03/06/23	10:25		3	2		1						X	X	X	X	X	X		
2	MW-4-030623	WT	G	-	-	03/06/23	12:45		3	2		1						X	X	X	X	X	X		
3	MW-5-030623	WT	G	-	-	03/06/23	11:30		3	2		1						X	X	X	X	X	X		
4	MW-6-030623	WT	G	-	-	03/06/23	10:50		3	2		1						X	X	X	X	X	X		
5	DUP-322LF-030623	WT	G	-	-	03/06/23	10:25		3	2		1						X	X	X	X	X	X		
6																										
7																										
8																										
9																										
10																										
11																										
12																										

Requested Analysis Filtered (Y/N)

6042322S

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Matt VanderPutten / SCS	3/6/23	1200		3/6	1650	5.5 Y Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Matt VanderPutten

SIGNATURE of SAMPLER: [signature] 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 # 9657-11

Site: TEC 322 Landfill 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																			1		1		1									
3																			1		1		1									
4																			1		1		1									
5																			1		1		1									
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: 60423225

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

May 03, 2023

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

RE: Project: TEC 322 LANDFILL CCR
Pace Project No.: 60427375

Dear Jake Humphrey:

Enclosed are the analytical results for sample(s) received by the laboratory on April 27, 2023. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Kansas City

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

Sincerely,

Alice Spiller

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

Enclosures

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

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

CERTIFICATIONS

Project: TEC 322 LANDFILL CCR
Pace Project No.: 60427375

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

SAMPLE SUMMARY

Project: TEC 322 LANDFILL CCR
Pace Project No.: 60427375

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60427375001	**MW-6-042723**	Water	04/27/23 10:00	04/27/23 17:15

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(913)599-5665

SAMPLE ANALYTE COUNT

Project: TEC 322 LANDFILL CCR
Pace Project No.: 60427375

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60427375001	**MW-6-042723**	EPA 200.7	MA1	3	PASI-K
		EPA 6010	MA1	1	PASI-K
		EPA 200.8	JGP	1	PASI-K
		SM 2540C	CRN2	1	PASI-K
		SM 4500-H+B	MLD	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K

PASI-K = Pace Analytical Services - Kansas City

REPORT OF LABORATORY ANALYSIS

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

PROJECT NARRATIVE

Project: TEC 322 LANDFILL CCR
Pace Project No.: 60427375

Method: **EPA 200.7**
Description: 200.7 Metals, Total
Client: Evergy Kansas Central, Inc.
Date: May 03, 2023

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

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

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

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

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

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

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

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

QC Batch: 844414

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60427373001

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

- MS (Lab ID: 3346727)
  - Calcium
- MSD (Lab ID: 3346728)
  - Calcium

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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

PROJECT NARRATIVE

Project: TEC 322 LANDFILL CCR
Pace Project No.: 60427375

Method: **EPA 6010**
Description: 6010 MET ICP
Client: Evergy Kansas Central, Inc.
Date: May 03, 2023

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

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

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

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

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

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

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

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

QC Batch: 844415

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60427375001

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

- MS (Lab ID: 3346731)
  - Lithium
- MSD (Lab ID: 3346732)
  - Lithium

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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

PROJECT NARRATIVE

Project: TEC 322 LANDFILL CCR
Pace Project No.: 60427375

Method: **EPA 200.8**
Description: 200.8 MET ICPMS
Client: Evergy Kansas Central, Inc.
Date: May 03, 2023

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

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

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

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

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

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

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

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

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

Additional Comments:

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

PROJECT NARRATIVE

Project: TEC 322 LANDFILL CCR
Pace Project No.: 60427375

Method: **SM 2540C**
Description: 2540C Total Dissolved Solids
Client: Evergy Kansas Central, Inc.
Date: May 03, 2023

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

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

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

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

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

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

Additional Comments:

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

PROJECT NARRATIVE

Project: TEC 322 LANDFILL CCR
Pace Project No.: 60427375

Method: **SM 4500-H+B**
Description: 4500H+ pH, Electrometric
Client: Evergy Kansas Central, Inc.
Date: May 03, 2023

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

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

H6: Analysis initiated outside of the 15 minute EPA required holding time.
- MW-6-042723 (Lab ID: 60427375001)

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 322 LANDFILL CCR
Pace Project No.: 60427375

Method: **EPA 300.0**
Description: 300.0 IC Anions 28 Days
Client: Evergy Kansas Central, Inc.
Date: May 03, 2023

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

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

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

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

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

QC Batch: 844319

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60426605003

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

- MS (Lab ID: 3346276)
  - Sulfate
- MSD (Lab ID: 3346277)
  - Chloride

R1: RPD value was outside control limits.

- MSD (Lab ID: 3346277)
  - Chloride
  - Sulfate

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

Additional Comments:

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

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

ANALYTICAL RESULTS

Project: TEC 322 LANDFILL CCR
Pace Project No.: 60427375

Sample: MW-6-042723 **Lab ID: 60427375001** Collected: 04/27/23 10:00 Received: 04/27/23 17:15 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	**0.019**	mg/L	0.0050	1	05/01/23 08:41	05/02/23 07:56	7440-39-3	
Boron, Total Recoverable	**0.47**	mg/L	0.10	1	05/01/23 08:41	05/02/23 07:56	7440-42-8	
Calcium, Total Recoverable	**377**	mg/L	0.20	1	05/01/23 08:41	05/02/23 07:56	7440-70-2	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**0.020**	mg/L	0.010	1	05/01/23 08:41	05/02/23 08:10	7439-93-2	M1
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City							
Cobalt, Total Recoverable	**0.0024**	mg/L	0.0010	1	05/01/23 08:41	05/02/23 11:00	7440-48-4	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City							
Total Dissolved Solids	**2040**	mg/L	20.0	1		05/02/23 11:12		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Kansas City							
pH at 25 Degrees C	**6.9**	Std. Units	0.10	1		05/02/23 10:39		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Chloride	**68.7**	mg/L	10.0	10		05/01/23 21:06	16887-00-6	
Fluoride	**<0.20**	mg/L	0.20	1		05/01/23 20:54	16984-48-8	
Sulfate	**1030**	mg/L	200	200		05/02/23 14:43	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 322 LANDFILL CCR
Pace Project No.: 60427375

QC Batch: 844414
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: 60427375001

METHOD BLANK: 3346725 Matrix: Water
Associated Lab Samples: 60427375001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Barium	mg/L	<0.0050	0.0050	05/02/23 07:44	
Boron	mg/L	<0.10	0.10	05/02/23 07:44	
Calcium	mg/L	<0.20	0.20	05/02/23 07:44	

LABORATORY CONTROL SAMPLE: 3346726

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	mg/L	1	0.97	97	85-115	
Boron	mg/L	1	0.97	97	85-115	
Calcium	mg/L	10	10.0	100	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3346727 3346728

Parameter	Units	60427373001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	mg/L	5.8 ug/L	1	1	0.99	0.98	98	98	70-130	1	20	
Boron	mg/L	2.3	1	1	3.3	3.3	93	94	70-130	0	20	
Calcium	mg/L	523	10	10	515	520	-80	-24	70-130	1	20	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 322 LANDFILL CCR
Pace Project No.: 60427375

QC Batch: 844416
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: 60427375001

METHOD BLANK: 3346733 Matrix: Water
Associated Lab Samples: 60427375001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cobalt	mg/L	<0.0010	0.0010	05/02/23 10:56	

LABORATORY CONTROL SAMPLE: 3346734

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cobalt	mg/L	0.08	0.080	100	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3346735 3346736

Parameter	Units	60427375001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Cobalt	mg/L	0.0024	0.04	0.04	0.041	0.041	97	97	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 322 LANDFILL CCR
Pace Project No.: 60427375

QC Batch: 844415
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60427375001

METHOD BLANK: 3346729 Matrix: Water
Associated Lab Samples: 60427375001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lithium	mg/L	<0.010	0.010	05/02/23 08:05	

LABORATORY CONTROL SAMPLE: 3346730

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: 3346731 3346732

Parameter	Units	60427375001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lithium	mg/L	0.020	2	2	0.99	0.98	49	48	75-125	1	20	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 322 LANDFILL CCR
Pace Project No.: 60427375

QC Batch: 844779
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60427375001

METHOD BLANK: 3347747 Matrix: Water
Associated Lab Samples: 60427375001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	05/02/23 11:11	

LABORATORY CONTROL SAMPLE: 3347748

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

SAMPLE DUPLICATE: 3347749

Parameter	Units	60427521001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	328	327	0	10	

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: TEC 322 LANDFILL CCR
Pace Project No.: 60427375

QC Batch: 844726
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: 60427375001

SAMPLE DUPLICATE: 3347575

Parameter	Units	60427375001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	6.9	7.1	4	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 322 LANDFILL CCR
Pace Project No.: 60427375

QC Batch: 844319
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: 60427375001

METHOD BLANK: 3346274 Matrix: Water
Associated Lab Samples: 60427375001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<1.0	1.0	05/01/23 18:48	
Fluoride	mg/L	<0.20	0.20	05/01/23 18:48	
Sulfate	mg/L	<1.0	1.0	05/01/23 18:48	

LABORATORY CONTROL SAMPLE: 3346275

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.6	93	90-110	
Fluoride	mg/L	2.5	2.7	107	90-110	
Sulfate	mg/L	5	5.2	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3346276 3346277

Parameter	Units	60426605003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	26.7	25	25	52.3	61.2	102	138	80-120	16	15	M1,R1
Fluoride	mg/L	<0.12	2.5	2.5	2.2	2.2	89	88	80-120	2	15	
Sulfate	mg/L	155	100	100	329	256	175	101	80-120	25	15	M1,R1

SAMPLE DUPLICATE: 3346278

Parameter	Units	60426605003 Result	Dup Result	RPD	Max RPD	Qualifiers
Chloride	mg/L	26.7	26.3	1	15	
Fluoride	mg/L	<0.12	<0.20		15	
Sulfate	mg/L	155	168	8	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 322 LANDFILL CCR
Pace Project No.: 60427375

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.
R1	RPD value was outside control limits.

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: TEC 322 LANDFILL CCR
Pace Project No.: 60427375

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60427375001	**MW-6-042723**	EPA 200.7	844414	EPA 200.7	844552
60427375001	**MW-6-042723**	EPA 3010	844415	EPA 6010	844556
60427375001	**MW-6-042723**	EPA 200.8	844416	EPA 200.8	844557
60427375001	**MW-6-042723**	SM 2540C	844779		
60427375001	**MW-6-042723**	SM 4500-H+B	844726		
60427375001	**MW-6-042723**	EPA 300.0	844319		

WO# : 60427375

60427375

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

Client Name: Evergy Kansas Central, Inc.

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

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

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

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

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

Cooler Temperature (°C): **As-read** 0-0 **Corr. Factor** +0.2 **Corrected** 0.2

Date and initials of person examining contents: JA 4/27/23

Temperature should be above freezing to 6°C

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

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

Pace Analytical
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A — **Required** Client Information:

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

Section B — **Required** Project Information:

Report To:	Jake Humphrey
Copy To:	Laura Hines, Samantha Kaney,Melissa Michels
Purchase Order No.:	
Project Name:	TEC 322 Landfill 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, 11

REGULATORY AGENCY

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

Site Location **STATE:** KS

Section D — **Required** Client Information

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

Valid Matrix Codes

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

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	200.7 Total: B,Ca,Ba	200.8 Total Co	4500 H+B pH	300: Cl, F, SO4	2540C TDS	6010 Lithium	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
				DATE	TIME	DATE	TIME											Y/N	N	N	N	N	N	N		
1	MW-6-042723	WT	G	-	-	04/27/23	10:00		3	2		1							X	X	X	X	X	X		60427375
2																										
3																										
4																										
5																										
6																										
7																										
8																										
9																										
10																										
11																										
12																										

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Matt VanderPutten / SCS	4/27/23	17:00		4/27	1715	0.2	Y	Y	Y

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, Inc. Profile # 9657, 11

Site: TEC 322 Landfill 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																																
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: 60427375

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

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

July 03, 2023

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

RE: Project: TEC 322 LF CCR RADCHEM
Pace Project No.: 60430215

Dear Jake Humphrey:

Enclosed are the analytical results for sample(s) received by the laboratory on June 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
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 322 LF CCR RADCHEM
Pace Project No.: 60430215

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 322 LF CCR RADCHEM
Pace Project No.: 60430215

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60430215001	**MW-1-060523**	Water	06/05/23 10:20	06/05/23 16:00
60430215002	**MW-4-060523**	Water	06/05/23 12:45	06/05/23 16:00
60430215003	**MW-5-060523**	Water	06/05/23 11:55	06/05/23 16:00
60430215004	**MW-6-060523**	Water	06/05/23 11:00	06/05/23 16:00
60430215005	**DUP-322LF-060523**	Water	06/05/23 10:20	06/05/23 16:00

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SAMPLE ANALYTE COUNT

Project: TEC 322 LF CCR RADCHEM
Pace Project No.: 60430215

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60430215001	**MW-1-060523**	EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	LAL	1	PASI-PA
60430215002	**MW-4-060523**	EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	LAL	1	PASI-PA
60430215003	**MW-5-060523**	EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	LAL	1	PASI-PA
60430215004	**MW-6-060523**	EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	LAL	1	PASI-PA
60430215005	**DUP-322LF-060523**	EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	LAL	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

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PROJECT NARRATIVE

Project: TEC 322 LF CCR RADCHEM
Pace Project No.: 60430215

Method: **EPA 903.1**
Description: 903.1 Radium 226
Client: Evergy Kansas Central, Inc.
Date: July 03, 2023

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

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

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

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

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

Additional Comments:

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PROJECT NARRATIVE

Project: TEC 322 LF CCR RADCHEM
Pace Project No.: 60430215

Method: **EPA 904.0**
Description: 904.0 Radium 228
Client: Evergy Kansas Central, Inc.
Date: July 03, 2023

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

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

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

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

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

Additional Comments:

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PROJECT NARRATIVE

Project: TEC 322 LF CCR RADCHEM
Pace Project No.: 60430215

Method: **Total Radium Calculation**
Description: Total Radium 228+226
Client: Evergy Kansas Central, Inc.
Date: July 03, 2023

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

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

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

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

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

Additional Comments:

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

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: TEC 322 LF CCR RADCHEM
Pace Project No.: 60430215

Sample: MW-1-060523 **Lab ID: 60430215001** Collected: 06/05/23 10:20 Received: 06/05/23 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	**0.319 ± 0.333 (0.469) C:NA T:98%**	pCi/L	06/26/23 16:41	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.725 ± 0.476 (0.926) C:86% T:83%**	pCi/L	06/19/23 17:15	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.04 ± 0.809 (1.40)**	pCi/L	06/27/23 16:48	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(913)599-5665

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: TEC 322 LF CCR RADCHEM
Pace Project No.: 60430215

Sample: MW-4-060523 **Lab ID: 60430215002** Collected: 06/05/23 12:45 Received: 06/05/23 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	**0.0589 ± 0.447 (0.884) C:NA T:95%**	pCi/L	06/26/23 16:41	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.787 ± 0.387 (0.674) C:90% T:86%**	pCi/L	06/19/23 17:15	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.846 ± 0.834 (1.56)**	pCi/L	06/27/23 16:48	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: TEC 322 LF CCR RADCHEM
Pace Project No.: 60430215

Sample: MW-5-060523 **Lab ID: 60430215003** Collected: 06/05/23 11:55 Received: 06/05/23 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	**0.0628 ± 0.369 (0.754) C:NA T:94%**	pCi/L	06/26/23 16:57	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.445 ± 0.336 (0.653) C:90% T:78%**	pCi/L	06/19/23 17:16	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.508 ± 0.705 (1.41)**	pCi/L	06/27/23 16:48	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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(913)599-5665

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: TEC 322 LF CCR RADCHEM
Pace Project No.: 60430215

Sample: MW-6-060523 **Lab ID: 60430215004** Collected: 06/05/23 11:00 Received: 06/05/23 16:00 Matrix: Water
PWS: Site ID: Sample Type:

Comments: • Upon receipt at the laboratory, 2.5 mls of nitric acid were added to one bottle of the sample to meet the sample preservation requirement of pH <2 for radiochemistry analysis. The samples were preserved <2 within the required 5 days of collection.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.121 ± 0.336 (0.652) C:NA T:92%**	pCi/L	06/26/23 16:57	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.413 ± 0.299 (0.570) C:86% T:87%**	pCi/L	06/19/23 17:16	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.534 ± 0.635 (1.22)**	pCi/L	06/27/23 16:48	7440-14-4	

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(913)599-5665

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: TEC 322 LF CCR RADCHEM
Pace Project No.: 60430215

Sample: DUP-322LF-060523 **Lab ID: 60430215005** Collected: 06/05/23 10:20 Received: 06/05/23 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	**0.000 ± 0.443 (0.906) C:NA T:96%**	pCi/L	06/26/23 16:57	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.242 ± 0.320 (0.682) C:88% T:86%**	pCi/L	06/19/23 17:16	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.242 ± 0.763 (1.59)**	pCi/L	06/27/23 16:48	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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(913)599-5665

QUALITY CONTROL - RADIOCHEMISTRY

Project: TEC 322 LF CCR RADCHEM
Pace Project No.: 60430215

QC Batch: 594346
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: 60430215001, 60430215002, 60430215003, 60430215004, 60430215005

METHOD BLANK: 2888857 Matrix: Water
Associated Lab Samples: 60430215001, 60430215002, 60430215003, 60430215004, 60430215005

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.390 ± 0.298 (0.580) C:90% T:87%	pCi/L	06/19/23 17:15	

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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QUALITY CONTROL - RADIOCHEMISTRY

Project: TEC 322 LF CCR RADCHEM
Pace Project No.: 60430215

QC Batch: 594344
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: 60430215001, 60430215002, 60430215003, 60430215004, 60430215005

METHOD BLANK: 2888852 Matrix: Water
Associated Lab Samples: 60430215001, 60430215002, 60430215003, 60430215004, 60430215005

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.251 ± 0.262 (0.369) C:NA T:89%	pCi/L	06/26/23 16:41	

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 322 LF CCR RADCHEM
Pace Project No.: 60430215

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 322 LF CCR RADCHEM
Pace Project No.: 60430215

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60430215001	**MW-1-060523**	EPA 903.1	594344		
60430215002	**MW-4-060523**	EPA 903.1	594344		
60430215003	**MW-5-060523**	EPA 903.1	594344		
60430215004	**MW-6-060523**	EPA 903.1	594344		
60430215005	**DUP-322LF-060523**	EPA 903.1	594344		
60430215001	**MW-1-060523**	EPA 904.0	594346		
60430215002	**MW-4-060523**	EPA 904.0	594346		
60430215003	**MW-5-060523**	EPA 904.0	594346		
60430215004	**MW-6-060523**	EPA 904.0	594346		
60430215005	**DUP-322LF-060523**	EPA 904.0	594346		
60430215001	**MW-1-060523**	Total Radium Calculation	597944		
60430215002	**MW-4-060523**	Total Radium Calculation	597944		
60430215003	**MW-5-060523**	Total Radium Calculation	597944		
60430215004	**MW-6-060523**	Total Radium Calculation	597944		
60430215005	**DUP-322LF-060523**	Total Radium Calculation	597944		

WO# : 60430215

60430215

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

Client Name: Evergy Kansas Central, Inc.

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

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

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

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

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

Cooler Temperature (°C): **As-read** 21.0 **Corr. Factor** +0.2 **Corrected** 21.2

Date and initials of person examining contents: JT 6/6/23

Temperature should be above freezing to 6°C

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

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

CHAIN-OF-CUSTODY / Analytical Request Document

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

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

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Evergy Kansas Central, Inc.	Report To:	Jake Humphrey	Attention:	
Address:	400 E Van Buren St	Copy To:	Laura Hines, Samantha Kaney, Melissa Michels	Company Name:	
Suite 545, Phoenix, AZ 85004				Address:	
Email:	skaney@haleyaldrich.com	Purchase Order #:		Pace Quote:	
Phone:	507-251-2232 Fax:	Project Name:	TEC 322 LF CCR RADCHEM	Pace Project Manager:	alice.spiller@pacelabs.com,
Requested Due Date:		Project #:		Pace Profile #:	9657, line 7

Regulatory Agency	
State / Location	KS

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9 / , -) Sample ids must be unique MATRIX / CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	Analyses Test: Radium 226/228 combined	Analyses Test: QC Sheets	Residual Chlorine (Y/N)	6043021S
																		Requested Analysis Filtered (Y/N)	Y	N	N		
1	MW-1-060523	WT	G	-	-	6/5/23	1020	-	2			2							X	X			
2	MW-4-060523	WT	G	-	-	6/5/23	1245	-	2			2							X	X			
3	MW-5-060523	WT	G	-	-	6/5/23	1155	-	2			2							X	X			
4	MW-6-060523	WT	G	-	-	6/5/23	1100	-	2			2							X	X			
5	DUP-322LF-060523	WT	G	-	-	6/5/23	1020	-	2			2							X	X			
6																							
7																							
8																							
9																							
10																							
11																							
12																							

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	Matt VanderPutten / SCS				6-5-23	1600	21.2	Y/N	N	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Matt VanderPutten

SIGNATURE of SAMPLER: [signature] DATE Signed: 06/05/23

Internal Transfer Chain of Custody

☐ Samples Pre-Logged into eCOC.

State Of Origin: KS
Cert. Needed: ☐ Yes ☐ No
Owner Received Date: 6/5/2023 Results Requested By: 7/5/2023

Pace Analytical®
www.pacelabs.com

Workorder: 60430215 **Workorder Name:** TEC 322 LF CCR RADCHEM

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

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers HNO3	Requested Analysis: Combined + QC Sheets	Radium 226	Radium 228	LAB USE ONLY
1	MW-1-060523	PS	6/5/2023 10:20	60430215001	Water	2	X	X	X	001
2	MW-4-060523	PS	6/5/2023 12:45	60430215002	Water	2	X	X	X	002
3	MW-5-060523	PS	6/5/2023 11:55	60430215003	Water	2	X	X	X	003
4	MW-6-060523	PS	6/5/2023 11:00	60430215004	Water	2	X	X	X	004
5	DUP-322LF-060523	PS	6/5/2023 10:20	60430215005	Water	2	X	X	X	005

Transfers	Released By	Date/Time	Received By	Date/Time
1	[illegible] Rue	6/6 1700	Lucy Alexander	6-7-23 10:15
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# : 30593676

30593676

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-GBUR-0088 v04_Sample Condition Upon Receipt-Pittsburgh
	Effective Date: 02/03/2023

Client Name: Pace Kansas **Project #:**

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

Tracking Number: 6342 1387 7177

Examined By	JWL
Labeled By	JWL
Temped By	JWL 6/7/23

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# 10123121 / D.P.D. Residual Chlorine Lot # —
Chain of Custody Present	✓			1.
Chain of Custody Filled Out:	✓			2.
-Were client corrections present on COC	✓	✓		JWL 6/7/23
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				All bottle's ~~but~~ ph<2 except sample # 4 bottle # 2.
All containers meet method preservation requirements:	✓			Initial when completed JWL / Date/Time of Preservation 6/7/23 1400 / Lot# of added Preservative DL 23
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 JWL / Date: 6/7/23 / Survey Meter SN: 1563

WO#: 30593676

PM: MAR **Due Date: 06/28/23**

CLIENT: PACE_60_LEKS

Comments:

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

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-226
Analyst:	CLM
Date:	6/13/2023
Batch ID:	73746
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2888852
MB concentration:	0.251
M/B Counting Uncertainty:	0.260
MB MDC:	0.369
MB Numerical Performance Indicator:	1.89
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS73746	LCSD73746
Count Date:	6/26/2023	
Spike I.D.:	23-013	
Spike Concentration (pCi/mL):	32.285	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.651	
Target Conc. (pCi/L, g, F):	4.958	
Uncertainty (Calculated):	0.233	
Result (pCi/L, g, F):	5.048	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.959	
Numerical Performance Indicator:	0.18	
Percent Recovery:	101.83%	
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:	6/5/2023	
Sample I.D.	50346458001	
Sample MS I.D.	50346458002	
Sample MSD I.D.	50346458003	
Spike I.D.:	23-013	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	32.286	
Spike Volume Used in MS (mL):	0.20	
Spike Volume Used in MSD (mL):	0.20	
MS Aliquot (L, g, F):	0.654	
MS Target Conc.(pCi/L, g, F):	9.873	
MSD Aliquot (L, g, F):	0.656	
MSD Target Conc. (pCi/L, g, F):	9.837	
MS Spike Uncertainty (calculated):	0.464	
MSD Spike Uncertainty (calculated):	0.462	
Sample Result:	1.914	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.722	
Sample Matrix Spike Result:	10.965	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	1.389	
Sample Matrix Spike Duplicate Result:	9.860	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	1.404	
MS Numerical Performance Indicator:	-0.986	
MSD Numerical Performance Indicator:	-2.253	
MS Percent Recovery:	91.68%	
MSD Percent Recovery:	80.78%	
MS Status vs Numerical Indicator:	N/A	
MSD Status vs Numerical Indicator:	N/A	
MS Status vs Recovery:	Pass	
MSD Status vs Recovery:	Pass	
MS/MSD Upper % Recovery Limits:	136%	
MS/MSD Lower % Recovery Limits:	71%	

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

Matrix Spike/Matrix Spike Duplicate Sample Assessment		
Sample I.D.	50346458001	
Sample MS I.D.	50346458002	
Sample MSD I.D.	50346458003	
Sample Matrix Spike Result:	10.965	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	1.389	
Sample Matrix Spike Duplicate Result:	9.860	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	1.404	
Duplicate Numerical Performance Indicator:	1.097	
(Based on the Percent Recoveries) MS/ MSD Duplicate RPD:	12.64%	
MS/ MSD Duplicate Status vs Numerical Indicator:	N/A	
MS/ MSD Duplicate Status vs RPD:	Pass	
% RPD Limit:	32%	

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

Comments:

CLM 6/27/23

Page 21 of 23
CLM 6/27/2023

Quality Control Sample Performance Assessment

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Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test:	Ra-228
Analyst:	VAL
Date:	6/14/2023
Worklist:	73747
Matrix:	WT

Method Blank Assessment	
MB Sample ID	2888857
MB concentration:	0.390
M/B 2 Sigma CSU:	0.298
MB MDC:	0.580
MB Numerical Performance Indicator:	2.57
MB Status vs Numerical Indicator:	Warning
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCS73747	LCSD73747
Count Date:	6/19/2023	
Spike I.D.:	23-040	
Decay Corrected Spike Concentration (pCi/mL):	39.506	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.806	
Target Conc. (pCi/L, g, F):	4.904	
Uncertainty (Calculated):	0.240	
Result (pCi/L, g, F):	4.088	
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	0.911	
Numerical Performance Indicator:	-1.70	
Percent Recovery:	83.35%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	
Upper % Recovery Limits:	135%	
Lower % Recovery Limits:	60%	

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date:	6/5/2023	
Sample I.D.	50346458001	
Sample MS I.D.	50346458002	
Sample MSD I.D.	50346458003	
Spike I.D.:	23-040	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	39.691	
Spike Volume Used in MS (mL):	0.20	
Spike Volume Used in MSD (mL):	0.20	
MS Aliquot (L, g, F):	0.804	
MS Target Conc.(pCi/L, g, F):	9.870	
MSD Aliquot (L, g, F):	0.802	
MSD Target Conc. (pCi/L, g, F):	9.897	
MS Spike Uncertainty (calculated):	0.484	
MSD Spike Uncertainty (calculated):	0.485	
Sample Result:	1.412	
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.525	
Sample Matrix Spike Result:	7.751	
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	1.611	
Sample Matrix Spike Duplicate Result:	8.055	
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.648	
MS Numerical Performance Indicator:	-3.928	
MSD Numerical Performance Indicator:	-3.549	
MS Percent Recovery:	64.22%	
MSD Percent Recovery:	67.12%	
MS Status vs Numerical Indicator:	Fail****	
MSD Status vs Numerical Indicator:	Fail****	
MS Status vs Recovery:	Pass	
MSD Status vs Recovery:	Pass	
MS/MSD Upper % Recovery Limits:	135%	
MS/MSD Lower % Recovery Limits:	60%	

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

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.	50346458001
Sample MS I.D.	50346458002
Sample MSD I.D.	50346458003
Sample Matrix Spike Result:	7.751
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	1.611
Sample Matrix Spike Duplicate Result:	8.055
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.648
Duplicate Numerical Performance Indicator:	-0.259
(Based on the Percent Recoveries) MS/ MSD Duplicate RPD:	4.42%
MS/ MSD Duplicate Status vs Numerical Indicator:	Pass
MS/ MSD Duplicate Status vs RPD:	Pass
% RPD Limit:	36%

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

Comments: MS/MSD passes % recovery criteria

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

6-20-23 JJS

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

June 16, 2023

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

RE: Project: TEC 322 LANDFILL CCR (APP IV)
Pace Project No.: 60430235

Dear Jake Humphrey:

Enclosed are the analytical results for sample(s) received by the laboratory on June 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
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 322 LANDFILL CCR (APP IV)
Pace Project No.: 60430235

Pace Analytical Services Kansas

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

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Lenexa, KS 66219
(913)599-5665

SAMPLE SUMMARY

Project: TEC 322 LANDFILL CCR (APP IV)
Pace Project No.: 60430235

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60430235001	**MW-1-060523**	Water	06/05/23 10:20	06/05/23 16:00
60430235002	**MW-4-060523**	Water	06/05/23 12:45	06/05/23 16:00
60430235003	**MW-5-060523**	Water	06/05/23 11:55	06/05/23 16:00
60430235004	**MW-6-060523**	Water	06/05/23 11:00	06/05/23 16:00
60430235005	**DUP-322LF-060523**	Water	06/05/23 10:20	06/05/23 16:00

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SAMPLE ANALYTE COUNT

Project: TEC 322 LANDFILL CCR (APP IV)
Pace Project No.: 60430235

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60430235001	**MW-1-060523**	EPA 200.7	JXD	4	PASI-K
		EPA 6010	JXD	1	PASI-K
		EPA 200.8	JGP	7	PASI-K
		EPA 245.1	ALH	1	PASI-K
		EPA 300.0	CRN2	1	PASI-K
60430235002	**MW-4-060523**	EPA 200.7	JXD	4	PASI-K
		EPA 6010	JXD	1	PASI-K
		EPA 200.8	JGP	7	PASI-K
		EPA 245.1	ALH	1	PASI-K
		EPA 300.0	CRN2	1	PASI-K
60430235003	**MW-5-060523**	EPA 200.7	JXD	4	PASI-K
		EPA 6010	JXD	1	PASI-K
		EPA 200.8	JGP	7	PASI-K
		EPA 245.1	ALH	1	PASI-K
		EPA 300.0	CRN2	1	PASI-K
60430235004	**MW-6-060523**	EPA 200.7	JXD	4	PASI-K
		EPA 6010	JXD	1	PASI-K
		EPA 200.8	JGP	7	PASI-K
		EPA 245.1	ALH	1	PASI-K
		EPA 300.0	CRN2	1	PASI-K
60430235005	**DUP-322LF-060523**	EPA 200.7	JXD	4	PASI-K
		EPA 6010	JXD	1	PASI-K
		EPA 200.8	JGP	7	PASI-K
		EPA 245.1	ALH	1	PASI-K
		EPA 300.0	CRN2	1	PASI-K

PASI-K = Pace Analytical Services - Kansas City

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PROJECT NARRATIVE

Project: TEC 322 LANDFILL CCR (APP IV)
Pace Project No.: 60430235

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

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

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

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

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

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

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

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

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

Additional Comments:

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PROJECT NARRATIVE

Project: TEC 322 LANDFILL CCR (APP IV)
Pace Project No.: 60430235

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

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

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

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

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

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

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

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

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

Additional Comments:

Pace Analytical Services, LLC
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(913)599-5665

PROJECT NARRATIVE

Project: TEC 322 LANDFILL CCR (APP IV)
Pace Project No.: 60430235

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

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

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

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

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

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

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

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

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

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

Additional Comments:

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PROJECT NARRATIVE

Project: TEC 322 LANDFILL CCR (APP IV)
Pace Project No.: 60430235

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

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

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

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

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

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

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

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

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

Additional Comments:

Pace Analytical Services, LLC
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PROJECT NARRATIVE

Project: TEC 322 LANDFILL CCR (APP IV)
Pace Project No.: 60430235

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

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

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

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

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

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

Additional Comments:

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

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ANALYTICAL RESULTS

Project: TEC 322 LANDFILL CCR (APP IV)
Pace Project No.: 60430235

Sample: MW-1-060523 **Lab ID: 60430235001** Collected: 06/05/23 10:20 Received: 06/05/23 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	**0.050**	mg/L	0.0050	1	06/07/23 14:13	06/13/23 16:17	7440-39-3	
Beryllium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/07/23 14:13	06/13/23 16:17	7440-41-7	
Chromium, Total Recoverable	**<0.0050**	mg/L	0.0050	1	06/07/23 14:13	06/13/23 16:17	7440-47-3	
Lead, Total Recoverable	**<0.010**	mg/L	0.010	1	06/07/23 14:13	06/13/23 16:17	7439-92-1	
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	06/07/23 14:13	06/13/23 16:42	7439-93-2	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City							
Antimony, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/07/23 14:13	06/09/23 11:53	7440-36-0	
Arsenic, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/07/23 14:13	06/09/23 11:53	7440-38-2	
Cadmium, Total Recoverable	**<0.00050**	mg/L	0.00050	1	06/07/23 14:13	06/09/23 11:53	7440-43-9	
Cobalt, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/07/23 14:13	06/09/23 11:53	7440-48-4	
Molybdenum, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/07/23 14:13	06/09/23 11:53	7439-98-7	
Selenium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/07/23 14:13	06/09/23 11:53	7782-49-2	
Thallium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/07/23 14:13	06/09/23 11:53	7440-28-0	
245.1 Mercury	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1 Pace Analytical Services - Kansas City							
Mercury	**<0.20**	ug/L	0.20	1	06/12/23 14:34	06/13/23 13:01	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Fluoride	**<0.20**	mg/L	0.20	1		06/14/23 00:11	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: TEC 322 LANDFILL CCR (APP IV)
Pace Project No.: 60430235

Sample: MW-4-060523 **Lab ID: 60430235002** Collected: 06/05/23 12:45 Received: 06/05/23 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	**0.099**	mg/L	0.0050	1	06/07/23 14:13	06/13/23 16:24	7440-39-3	
Beryllium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/07/23 14:13	06/13/23 16:24	7440-41-7	
Chromium, Total Recoverable	**<0.0050**	mg/L	0.0050	1	06/07/23 14:13	06/13/23 16:24	7440-47-3	
Lead, Total Recoverable	**<0.010**	mg/L	0.010	1	06/07/23 14:13	06/13/23 16:24	7439-92-1	
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	06/07/23 14:13	06/13/23 16:48	7439-93-2	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City							
Antimony, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/07/23 14:13	06/09/23 11:56	7440-36-0	
Arsenic, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/07/23 14:13	06/09/23 11:56	7440-38-2	
Cadmium, Total Recoverable	**<0.00050**	mg/L	0.00050	1	06/07/23 14:13	06/09/23 11:56	7440-43-9	
Cobalt, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/07/23 14:13	06/09/23 11:56	7440-48-4	
Molybdenum, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/07/23 14:13	06/09/23 11:56	7439-98-7	
Selenium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/07/23 14:13	06/09/23 11:56	7782-49-2	
Thallium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/07/23 14:13	06/09/23 11:56	7440-28-0	
245.1 Mercury	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1 Pace Analytical Services - Kansas City							
Mercury	**<0.20**	ug/L	0.20	1	06/12/23 14:34	06/13/23 13:08	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Fluoride	**<0.20**	mg/L	0.20	1		06/14/23 00:24	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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(913)599-5665

ANALYTICAL RESULTS

Project: TEC 322 LANDFILL CCR (APP IV)
Pace Project No.: 60430235

Sample: MW-5-060523 **Lab ID: 60430235003** Collected: 06/05/23 11:55 Received: 06/05/23 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	**0.024**	mg/L	0.0050	1	06/07/23 14:13	06/13/23 16:26	7440-39-3	
Beryllium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/07/23 14:13	06/13/23 16:26	7440-41-7	
Chromium, Total Recoverable	**<0.0050**	mg/L	0.0050	1	06/07/23 14:13	06/13/23 16:26	7440-47-3	
Lead, Total Recoverable	**<0.010**	mg/L	0.010	1	06/07/23 14:13	06/13/23 16:26	7439-92-1	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**0.017**	mg/L	0.010	1	06/07/23 14:13	06/13/23 16:50	7439-93-2	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City							
Antimony, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/07/23 14:13	06/09/23 11:58	7440-36-0	
Arsenic, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/07/23 14:13	06/09/23 11:58	7440-38-2	
Cadmium, Total Recoverable	**<0.00050**	mg/L	0.00050	1	06/07/23 14:13	06/09/23 11:58	7440-43-9	
Cobalt, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/07/23 14:13	06/09/23 11:58	7440-48-4	
Molybdenum, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/07/23 14:13	06/09/23 11:58	7439-98-7	
Selenium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/07/23 14:13	06/09/23 11:58	7782-49-2	
Thallium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/07/23 14:13	06/09/23 11:58	7440-28-0	
245.1 Mercury	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1 Pace Analytical Services - Kansas City							
Mercury	**<0.20**	ug/L	0.20	1	06/12/23 14:34	06/13/23 13:10	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Fluoride	**<0.20**	mg/L	0.20	1		06/14/23 00:38	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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(913)599-5665

ANALYTICAL RESULTS

Project: TEC 322 LANDFILL CCR (APP IV)
Pace Project No.: 60430235

Sample: MW-6-060523 **Lab ID: 60430235004** Collected: 06/05/23 11:00 Received: 06/05/23 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	**0.016**	mg/L	0.0050	1	06/07/23 14:13	06/13/23 16:28	7440-39-3	
Beryllium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/07/23 14:13	06/13/23 16:28	7440-41-7	
Chromium, Total Recoverable	**<0.0050**	mg/L	0.0050	1	06/07/23 14:13	06/13/23 16:28	7440-47-3	
Lead, Total Recoverable	**<0.010**	mg/L	0.010	1	06/07/23 14:13	06/13/23 16:28	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	06/07/23 14:13	06/13/23 16:52	7439-93-2	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City							
Antimony, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/07/23 14:13	06/09/23 12:01	7440-36-0	
Arsenic, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/07/23 14:13	06/09/23 12:01	7440-38-2	
Cadmium, Total Recoverable	**<0.00050**	mg/L	0.00050	1	06/07/23 14:13	06/09/23 12:01	7440-43-9	
Cobalt, Total Recoverable	**0.0020**	mg/L	0.0010	1	06/07/23 14:13	06/09/23 12:01	7440-48-4	
Molybdenum, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/07/23 14:13	06/09/23 12:01	7439-98-7	
Selenium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/07/23 14:13	06/09/23 12:01	7782-49-2	
Thallium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/07/23 14:13	06/09/23 12:01	7440-28-0	
245.1 Mercury	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1 Pace Analytical Services - Kansas City							
Mercury	**<0.20**	ug/L	0.20	1	06/12/23 14:34	06/13/23 13:12	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Fluoride	**0.32**	mg/L	0.20	1		06/14/23 00:51	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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(913)599-5665

ANALYTICAL RESULTS

Project: TEC 322 LANDFILL CCR (APP IV)
Pace Project No.: 60430235

Sample: DUP-322LF-060523 **Lab ID: 60430235005** Collected: 06/05/23 10:20 Received: 06/05/23 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	**0.050**	mg/L	0.0050	1	06/07/23 14:13	06/13/23 16:30	7440-39-3	
Beryllium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/07/23 14:13	06/13/23 16:30	7440-41-7	
Chromium, Total Recoverable	**<0.0050**	mg/L	0.0050	1	06/07/23 14:13	06/13/23 16:30	7440-47-3	
Lead, Total Recoverable	**<0.010**	mg/L	0.010	1	06/07/23 14:13	06/13/23 16:30	7439-92-1	
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	06/07/23 14:13	06/13/23 16:54	7439-93-2	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City							
Antimony, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/07/23 14:13	06/09/23 12:07	7440-36-0	
Arsenic, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/07/23 14:13	06/09/23 12:07	7440-38-2	
Cadmium, Total Recoverable	**<0.00050**	mg/L	0.00050	1	06/07/23 14:13	06/09/23 12:07	7440-43-9	
Cobalt, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/07/23 14:13	06/09/23 12:07	7440-48-4	
Molybdenum, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/07/23 14:13	06/09/23 12:07	7439-98-7	
Selenium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/07/23 14:13	06/09/23 12:07	7782-49-2	
Thallium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	06/07/23 14:13	06/09/23 12:07	7440-28-0	
245.1 Mercury	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1 Pace Analytical Services - Kansas City							
Mercury	**<0.20**	ug/L	0.20	1	06/12/23 14:34	06/13/23 13:17	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Fluoride	**<0.20**	mg/L	0.20	1		06/14/23 01:05	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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(913)599-5665

QUALITY CONTROL DATA

Project: TEC 322 LANDFILL CCR (APP IV)
Pace Project No.: 60430235

QC Batch: 851869 Analysis Method: EPA 245.1
QC Batch Method: EPA 245.1 Analysis Description: 245.1 Mercury
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60430235001, 60430235002, 60430235003, 60430235004, 60430235005

METHOD BLANK: 3373974 Matrix: Water
Associated Lab Samples: 60430235001, 60430235002, 60430235003, 60430235004, 60430235005

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

LABORATORY CONTROL SAMPLE: 3373975

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3373976 3373977

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

MATRIX SPIKE SAMPLE: 3373978

Parameter	Units	60430235004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	<0.20	5	4.3	85	70-130	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: TEC 322 LANDFILL CCR (APP IV)
Pace Project No.: 60430235

QC Batch: 851075 | Analysis Method: EPA 200.7
QC Batch Method: EPA 200.7 | Analysis Description: 200.7 Metals, Total
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60430235001, 60430235002, 60430235003, 60430235004, 60430235005

METHOD BLANK: 3370809 Matrix: Water
Associated Lab Samples: 60430235001, 60430235002, 60430235003, 60430235004, 60430235005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Barium	mg/L	<0.0050	0.0050	06/13/23 16:13	
Beryllium	mg/L	<0.0010	0.0010	06/13/23 16:13	
Chromium	mg/L	<0.0050	0.0050	06/13/23 16:13	
Lead	mg/L	<0.010	0.010	06/13/23 16:13	

LABORATORY CONTROL SAMPLE: 3370810

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	mg/L	1	0.99	99	85-115	
Beryllium	mg/L	1	1.0	102	85-115	
Chromium	mg/L	1	1.0	100	85-115	
Lead	mg/L	1	1.0	104	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3370811 3370812

Parameter	Units	60430235001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	mg/L	0.050	1	1	1.0	1.1	97	101	70-130	3	20	
Beryllium	mg/L	<0.0010	1	1	0.98	1.0	98	100	70-130	2	20	
Chromium	mg/L	<0.0050	1	1	1.0	1.0	101	102	70-130	2	20	
Lead	mg/L	<0.010	1	1	0.98	1.0	98	101	70-130	3	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: TEC 322 LANDFILL CCR (APP IV)
Pace Project No.: 60430235

QC Batch: 851079
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: 60430235001, 60430235002, 60430235003, 60430235004, 60430235005

METHOD BLANK: 3370820 Matrix: Water
Associated Lab Samples: 60430235001, 60430235002, 60430235003, 60430235004, 60430235005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	mg/L	<0.0010	0.0010	06/09/23 11:47	
Arsenic	mg/L	<0.0010	0.0010	06/09/23 11:47	
Cadmium	mg/L	<0.00050	0.00050	06/09/23 11:47	
Cobalt	mg/L	<0.0010	0.0010	06/09/23 11:47	
Molybdenum	mg/L	<0.0010	0.0010	06/09/23 11:47	
Selenium	mg/L	<0.0010	0.0010	06/09/23 11:47	
Thallium	mg/L	<0.0010	0.0010	06/09/23 11:47	

LABORATORY CONTROL SAMPLE: 3370821

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	0.038	96	85-115	
Cadmium	mg/L	0.04	0.040	99	85-115	
Cobalt	mg/L	0.04	0.040	100	85-115	
Molybdenum	mg/L	0.04	0.040	99	85-115	
Selenium	mg/L	0.04	0.039	99	85-115	
Thallium	mg/L	0.04	0.039	98	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3370822 3370823

Parameter	Units	60430235005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/L	<0.0010	0.04	0.04	0.040	0.039	99	97	70-130	3	20	
Arsenic	mg/L	<0.0010	0.04	0.04	0.040	0.040	100	98	70-130	2	20	
Cadmium	mg/L	<0.00050	0.04	0.04	0.039	0.038	97	95	70-130	2	20	
Cobalt	mg/L	<0.0010	0.04	0.04	0.040	0.039	99	97	70-130	2	20	
Molybdenum	mg/L	<0.0010	0.04	0.04	0.043	0.042	107	104	70-130	2	20	
Selenium	mg/L	<0.0010	0.04	0.04	0.039	0.038	97	94	70-130	3	20	
Thallium	mg/L	<0.0010	0.04	0.04	0.043	0.042	106	104	70-130	2	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: TEC 322 LANDFILL CCR (APP IV)
Pace Project No.: 60430235

QC Batch: 851077 | Analysis Method: EPA 6010
QC Batch Method: EPA 3010 | Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60430235001, 60430235002, 60430235003, 60430235004, 60430235005

METHOD BLANK: 3370815 Matrix: Water
Associated Lab Samples: 60430235001, 60430235002, 60430235003, 60430235004, 60430235005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lithium	mg/L	<0.010	0.010	06/13/23 16:38	

LABORATORY CONTROL SAMPLE: 3370816

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3370817 3370818

Parameter	Units	60430235001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lithium	mg/L	<0.010	1	1	0.99	1.0	98	102	75-125	4	20	

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REPORT OF LABORATORY ANALYSIS

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(913)599-5665

QUALITY CONTROL DATA

Project: TEC 322 LANDFILL CCR (APP IV)
Pace Project No.: 60430235

QC Batch: 851545 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60430235001, 60430235002, 60430235003, 60430235004, 60430235005

METHOD BLANK: 3372733 Matrix: Water
Associated Lab Samples: 60430235001, 60430235002, 60430235003, 60430235004, 60430235005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Fluoride	mg/L	<0.20	0.20	06/13/23 18:23	

LABORATORY CONTROL SAMPLE: 3372734

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	2.5	2.4	95	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3372735 3372736

Parameter	Units	60430373004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Fluoride	mg/L	1.1	2.5	2.5	3.8	3.9	107	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

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QUALIFIERS

Project: TEC 322 LANDFILL CCR (APP IV)
Pace Project No.: 60430235

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

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

TNI - The NELAC Institute.

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Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: TEC 322 LANDFILL CCR (APP IV)
Pace Project No.: 60430235

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60430235001	**MW-1-060523**	EPA 200.7	851075	EPA 200.7	851202
60430235002	**MW-4-060523**	EPA 200.7	851075	EPA 200.7	851202
60430235003	**MW-5-060523**	EPA 200.7	851075	EPA 200.7	851202
60430235004	**MW-6-060523**	EPA 200.7	851075	EPA 200.7	851202
60430235005	**DUP-322LF-060523**	EPA 200.7	851075	EPA 200.7	851202
60430235001	**MW-1-060523**	EPA 3010	851077	EPA 6010	851203
60430235002	**MW-4-060523**	EPA 3010	851077	EPA 6010	851203
60430235003	**MW-5-060523**	EPA 3010	851077	EPA 6010	851203
60430235004	**MW-6-060523**	EPA 3010	851077	EPA 6010	851203
60430235005	**DUP-322LF-060523**	EPA 3010	851077	EPA 6010	851203
60430235001	**MW-1-060523**	EPA 200.8	851079	EPA 200.8	851204
60430235002	**MW-4-060523**	EPA 200.8	851079	EPA 200.8	851204
60430235003	**MW-5-060523**	EPA 200.8	851079	EPA 200.8	851204
60430235004	**MW-6-060523**	EPA 200.8	851079	EPA 200.8	851204
60430235005	**DUP-322LF-060523**	EPA 200.8	851079	EPA 200.8	851204
60430235001	**MW-1-060523**	EPA 245.1	851869	EPA 245.1	852023
60430235002	**MW-4-060523**	EPA 245.1	851869	EPA 245.1	852023
60430235003	**MW-5-060523**	EPA 245.1	851869	EPA 245.1	852023
60430235004	**MW-6-060523**	EPA 245.1	851869	EPA 245.1	852023
60430235005	**DUP-322LF-060523**	EPA 245.1	851869	EPA 245.1	852023
60430235001	**MW-1-060523**	EPA 300.0	851545		
60430235002	**MW-4-060523**	EPA 300.0	851545		
60430235003	**MW-5-060523**	EPA 300.0	851545		
60430235004	**MW-6-060523**	EPA 300.0	851545		
60430235005	**DUP-322LF-060523**	EPA 300.0	851545		

WO# : 60430235

60430235

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

Client Name: Evergy Kansas Central, Inc.

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

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

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

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

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

Cooler Temperature (°C): **As-read** 3.9 **Corr. Factor** +0.2 **Corrected** 4.1

Date and initials of person examining contents: 6/6/23 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#:** 6787	☑Yes ☐No ☐N/A	List sample IDs, volumes, lot #'s of preservative and the date/time added.
Cyanide water sample checks: Lead acetate strip turns dark? (Record only)	☐Yes ☐No	
Potassium iodide test strip turns blue/purple? (Preserve)	☐Yes ☐No	
Trip Blank present:	☐Yes ☐No ☑N/A	
Headspace in VOA vials (>6mm):	☐Yes ☐No ☑N/A	
Samples from USDA Regulated Area: State:	☐Yes ☐No ☑N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	☐Yes ☐No ☑N/A	

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

Pace Analytical
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Required Client Information:

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

Section B Required Project Information:

Report To:	Jake Humphrey
Copy To:	Laura Hines, Samantha Kaney, Melissa Michels
Purchase Order No.:	
Project Name:	TEC 322 Landfill CCR (App IV)
Project Number:	

Section C Invoice Information:

Attention:	Accounts Payable
Company Name:	EVERGY KANSAS CENTRAL, INC
Address:	See Section A
Pace Quote Reference:	
Pace Project Manager:	Alice Spiller 913-563-1403
Pace Profile #:	9657, 6

REGULATORY AGENCY

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

Site Location STATE: KS

Section D Required Client Information

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

Valid Matrix Codes

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

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	Y/N	Analysis Test: 200.7 Total Metals*	200.8 Total Metals **	6010 Lithium	245.1 Mecury	300.0 Fluoride	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-1-060523	WT	G	-	-	06/05/23	1020	-	2	1		1							N	X	X	X	X	X		6043023S
2	MW-4-060523	WT	G	-	-	06/05/23	1245	-	2	1		1							N	X	X	X	X	X		
3	MW-5-060523	WT	G	-	-	06/05/23	1155	-	2	1		1							N	X	X	X	X	X		
4	MW-6-060523	WT	G	-	-	06/05/23	1100	-	2	1		1							N	X	X	X	X	X		
5	DUP-322LF-060523	WT	G	-	-	06/05/23	1020	-	2	1		1							N	X	X	X	X	X		
6																										
7																										
8																										
9																										
10																										
11																										
12																										

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
200.7 Ba,Be,Cr,Pb	Matt VanderPutten / SCS			Shawn Almer	6/5/23	1600	4.1	Y	Y	Y
200.8 Sb,As,Cd,Co,Mo,Se,Tl										

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Matt VanderPutten

SIGNATURE of SAMPLER: Matt VanderPutten DATE Signed (MM/DD/YY): 06/05/23

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

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

Client: Evergy Kansas Central, Inc. Profile # 9657, 6

Site: TEC 322 Land fill CCR (App IV) Notes

COC Line Item	Matrix	VG9H	DG9H	DG9Q	VG9U	DG9U	DG9M	DG9B	BG1U	AG1H	AG1U	AG2U	AG3S	AG4U	AG5U	JGFU	WGKU	WGDU	BP1U	BP2U	BP3U	BP1N	BP3N	BP3F	BP3S	BP3C	BP3Z	WPDU	ZPLC	Other		
1	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: 60430235

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

November 08, 2023

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

RE: Project: TEC 322 LANDFILL CCR-Revised Report
Pace Project No.: 60436735

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

REVISED to include reanalysis of TDS on sample 60436735002 per client request.

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 322 LANDFILL CCR-Revised Report
Pace Project No.: 60436735

Pace Analytical Services Kansas

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

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

SAMPLE SUMMARY

Project: TEC 322 LANDFILL CCR-Revised Report
Pace Project No.: 60436735

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60436735001	**MW-1-090523**	Water	09/05/23 11:10	09/05/23 16:00
60436735002	**MW-4-090523**	Water	09/05/23 12:10	09/05/23 16:00
60436735003	**MW-5-090523**	Water	09/05/23 11:20	09/05/23 16:00
60436735004	**MW-6-090523**	Water	09/05/23 11:45	09/05/23 16:00
60436735005	**TEC322LF-DUP-090523**	Water	09/05/23 11:10	09/05/23 16:00

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

SAMPLE ANALYTE COUNT

Project: TEC 322 LANDFILL CCR-Revised Report
Pace Project No.: 60436735

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60436735001	**MW-1-090523**	EPA 200.7	JXD	3	PASI-K
		EPA 6010	JXD	1	PASI-K
		EPA 200.8	JGP	1	PASI-K
		SM 2540C	BDH1	1	PASI-K
		SM 4500-H+B	RKA	1	PASI-K
		EPA 300.0	MLD	3	PASI-K
60436735002	**MW-4-090523**	EPA 200.7	JXD	3	PASI-K
		EPA 6010	JXD	1	PASI-K
		EPA 200.8	JGP	1	PASI-K
		SM 2540C	ZVF	1	PASI-K
		SM 4500-H+B	RKA	1	PASI-K
		EPA 300.0	MLD	3	PASI-K
60436735003	**MW-5-090523**	EPA 200.7	JXD	3	PASI-K
		EPA 6010	JXD	1	PASI-K
		EPA 200.8	JGP	1	PASI-K
		SM 2540C	BDH1	1	PASI-K
		SM 4500-H+B	RKA	1	PASI-K
		EPA 300.0	MLD	3	PASI-K
60436735004	**MW-6-090523**	EPA 200.7	JXD	3	PASI-K
		EPA 6010	JXD	1	PASI-K
		EPA 200.8	JGP	1	PASI-K
		SM 2540C	BDH1	1	PASI-K
		SM 4500-H+B	RKA	1	PASI-K
		EPA 300.0	MLD	3	PASI-K
60436735005	**TEC322LF-DUP-090523**	EPA 200.7	JXD	3	PASI-K
		EPA 6010	JXD	1	PASI-K
		EPA 200.8	JGP	1	PASI-K
		SM 2540C	BDH1	1	PASI-K
		SM 4500-H+B	RKA	1	PASI-K
		EPA 300.0	MLD	3	PASI-K

PASI-K = Pace Analytical Services - Kansas City

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

PROJECT NARRATIVE

Project: TEC 322 LANDFILL CCR-Revised Report
Pace Project No.: 60436735

Method: **EPA 200.7**
Description: 200.7 Metals, Total
Client: Evergy Kansas Central, Inc.
Date: November 08, 2023

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

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

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

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

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

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

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

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

QC Batch: 863434

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60436419001,60436735001

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

- MS (Lab ID: 3418902)
  - Calcium

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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

PROJECT NARRATIVE

Project: TEC 322 LANDFILL CCR-Revised Report
Pace Project No.: 60436735

Method: **EPA 6010**
Description: 6010 MET ICP
Client: Evergy Kansas Central, Inc.
Date: November 08, 2023

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

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

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

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

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

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

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

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

Additional Comments:

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

PROJECT NARRATIVE

Project: TEC 322 LANDFILL CCR-Revised Report
Pace Project No.: 60436735

Method: **EPA 200.8**
Description: 200.8 MET ICPMS
Client: Evergy Kansas Central, Inc.
Date: November 08, 2023

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

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

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

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

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

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

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

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

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

Additional Comments:

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

PROJECT NARRATIVE

Project: TEC 322 LANDFILL CCR-Revised Report
Pace Project No.: 60436735

Method: **SM 2540C**
Description: 2540C Total Dissolved Solids
Client: Evergy Kansas Central, Inc.
Date: November 08, 2023

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

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

H1: Analysis conducted outside the EPA method holding time.
- MW-4-090523 (Lab ID: 60436735002)

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 322 LANDFILL CCR-Revised Report
Pace Project No.: 60436735

Method: **SM 4500-H+B**
Description: 4500H+ pH, Electrometric
Client: Evergy Kansas Central, Inc.
Date: November 08, 2023

General Information:
5 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-1-090523 (Lab ID: 60436735001)
- MW-4-090523 (Lab ID: 60436735002)
- MW-5-090523 (Lab ID: 60436735003)
- MW-6-090523 (Lab ID: 60436735004)
- TEC322LF-DUP-090523 (Lab ID: 60436735005)

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 322 LANDFILL CCR-Revised Report
Pace Project No.: 60436735

Method: **EPA 300.0**
Description: 300.0 IC Anions 28 Days
Client: Evergy Kansas Central, Inc.
Date: November 08, 2023

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

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

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

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

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

QC Batch: 864098

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60436735004,60437171040

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

- MS (Lab ID: 3421571)
  - Chloride
  - Fluoride
- MS (Lab ID: 3421573)
  - Sulfate
- MSD (Lab ID: 3421572)
  - Chloride
  - Fluoride

Additional Comments:

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

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

ANALYTICAL RESULTS

Project: TEC 322 LANDFILL CCR-Revised Report
Pace Project No.: 60436735

Sample: MW-1-090523 **Lab ID: 60436735001** Collected: 09/05/23 11:10 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	09/06/23 15:07	09/08/23 09:19	7440-39-3	
Boron, Total Recoverable	**<0.10**	mg/L	0.10	1	09/06/23 15:07	09/08/23 09:19	7440-42-8	
Calcium, Total Recoverable	**159**	mg/L	0.20	1	09/06/23 15:07	09/08/23 09:19	7440-70-2	M1
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**0.011**	mg/L	0.010	1	09/12/23 09:40	09/13/23 09:28	7439-93-2	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City							
Cobalt, Total Recoverable	**<0.0010**	mg/L	0.0010	1	09/13/23 13:50	09/14/23 12:11	7440-48-4	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City							
Total Dissolved Solids	**950**	mg/L	10.0	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	**6.9**	Std. Units	0.10	1		09/07/23 10:34		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Chloride	**48.3**	mg/L	20.0	20		09/13/23 18:31	16887-00-6	
Fluoride	**<0.20**	mg/L	0.20	1		09/13/23 18:18	16984-48-8	
Sulfate	**372**	mg/L	20.0	20		09/13/23 18:31	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: TEC 322 LANDFILL CCR-Revised Report
Pace Project No.: 60436735

Sample: MW-4-090523 **Lab ID: 60436735002** Collected: 09/05/23 12:10 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	**0.11**	mg/L	0.0050	1	09/06/23 15:07	09/08/23 09:23	7440-39-3	
Boron, Total Recoverable	**<0.10**	mg/L	0.10	1	09/06/23 15:07	09/08/23 09:23	7440-42-8	
Calcium, Total Recoverable	**169**	mg/L	0.20	1	09/06/23 15:07	09/08/23 09:23	7440-70-2	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**<0.010**	mg/L	0.010	1	09/12/23 09:40	09/13/23 09:30	7439-93-2	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City							
Cobalt, Total Recoverable	**<0.0010**	mg/L	0.0010	1	09/13/23 13:50	09/14/23 12:13	7440-48-4	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City							
Total Dissolved Solids	**1210**	mg/L	13.3	1		10/02/23 11:14		H1
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Kansas City							
pH at 25 Degrees C	**6.9**	Std. Units	0.10	1		09/07/23 10:45		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Chloride	**228**	mg/L	20.0	20		09/13/23 18:58	16887-00-6	
Fluoride	**<0.20**	mg/L	0.20	1		09/13/23 18:45	16984-48-8	
Sulfate	**164**	mg/L	20.0	20		09/13/23 18:58	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: TEC 322 LANDFILL CCR-Revised Report
Pace Project No.: 60436735

Sample: MW-5-090523 **Lab ID: 60436735003** Collected: 09/05/23 11:20 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	**0.027**	mg/L	0.0050	1	09/06/23 15:07	09/08/23 09:26	7440-39-3	
Boron, Total Recoverable	**0.31**	mg/L	0.10	1	09/06/23 15:07	09/08/23 09:26	7440-42-8	
Calcium, Total Recoverable	**209**	mg/L	0.20	1	09/06/23 15:07	09/08/23 09:26	7440-70-2	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**0.024**	mg/L	0.010	1	09/12/23 09:40	09/13/23 09:32	7439-93-2	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City							
Cobalt, Total Recoverable	**<0.0010**	mg/L	0.0010	1	09/13/23 13:50	09/14/23 12:04	7440-48-4	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City							
Total Dissolved Solids	**1300**	mg/L	13.3	1		09/08/23 08:52		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Kansas City							
pH at 25 Degrees C	**6.9**	Std. Units	0.10	1		09/07/23 10:37		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Chloride	**46.0**	mg/L	20.0	20		09/13/23 19:52	16887-00-6	
Fluoride	**<0.20**	mg/L	0.20	1		09/13/23 19:12	16984-48-8	
Sulfate	**536**	mg/L	50.0	50		09/18/23 13:31	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: TEC 322 LANDFILL CCR-Revised Report
Pace Project No.: 60436735

Sample: MW-6-090523 **Lab ID: 60436735004** Collected: 09/05/23 11:45 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	**0.016**	mg/L	0.0050	1	09/06/23 15:07	09/08/23 09:28	7440-39-3	
Boron, Total Recoverable	**0.49**	mg/L	0.10	1	09/06/23 15:07	09/08/23 09:28	7440-42-8	
Calcium, Total Recoverable	**355**	mg/L	0.20	1	09/06/23 15:07	09/08/23 09:28	7440-70-2	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**0.020**	mg/L	0.010	1	09/12/23 09:40	09/13/23 09:35	7439-93-2	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City							
Cobalt, Total Recoverable	**0.0022**	mg/L	0.0010	1	09/13/23 13:50	09/14/23 12:15	7440-48-4	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City							
Total Dissolved Solids	**2090**	mg/L	20.0	1		09/08/23 08:52		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Kansas City							
pH at 25 Degrees C	**7.0**	Std. Units	0.10	1		09/07/23 10:40		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Chloride	**50.8**	mg/L	20.0	20		09/13/23 20:32	16887-00-6	
Fluoride	**0.40**	mg/L	0.20	1		09/13/23 20:05	16984-48-8	
Sulfate	**987**	mg/L	200	200		09/18/23 13:44	14808-79-8	M1

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: TEC 322 LANDFILL CCR-Revised Report
Pace Project No.: 60436735

Sample: TEC322LF-DUP-090523 **Lab ID: 60436735005** Collected: 09/05/23 11:10 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	09/06/23 15:07	09/08/23 09:43	7440-39-3	
Boron, Total Recoverable	**<0.10**	mg/L	0.10	1	09/06/23 15:07	09/08/23 09:43	7440-42-8	
Calcium, Total Recoverable	**159**	mg/L	0.20	1	09/06/23 15:07	09/08/23 09:43	7440-70-2	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**0.011**	mg/L	0.010	1	09/12/23 09:40	09/13/23 09:37	7439-93-2	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City							
Cobalt, Total Recoverable	**<0.0010**	mg/L	0.0010	1	09/13/23 13:50	09/14/23 12:16	7440-48-4	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City							
Total Dissolved Solids	**921**	mg/L	13.3	1		09/08/23 08:52		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Kansas City							
pH at 25 Degrees C	**6.9**	Std. Units	0.10	1		09/07/23 10:36		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Chloride	**48.4**	mg/L	20.0	20		09/13/23 21:12	16887-00-6	
Fluoride	**<0.20**	mg/L	0.20	1		09/13/23 20:59	16984-48-8	
Sulfate	**350**	mg/L	20.0	20		09/13/23 21:12	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: TEC 322 LANDFILL CCR-Revised Report
Pace Project No.: 60436735

QC Batch: 863434
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: 60436735001, 60436735002, 60436735003, 60436735004, 60436735005

METHOD BLANK: 3418898 Matrix: Water
Associated Lab Samples: 60436735001, 60436735002, 60436735003, 60436735004, 60436735005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Barium	mg/L	<0.0050	0.0050	09/08/23 08:40	
Boron	mg/L	<0.10	0.10	09/08/23 08:40	
Calcium	mg/L	<0.20	0.20	09/08/23 08:40	

LABORATORY CONTROL SAMPLE: 3418899

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	mg/L	1	0.97	97	85-115	
Boron	mg/L	1	0.94	94	85-115	
Calcium	mg/L	10	9.8	98	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3418900 3418901

Parameter	Units	60436419001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	mg/L	0.041	1	1	0.99	0.99	95	95	70-130	0	20	
Boron	mg/L	ND	1	1	0.93	0.94	91	92	70-130	1	20	
Calcium	mg/L	24.3	10	10	33.7	34.4	93	101	70-130	2	20	

MATRIX SPIKE SAMPLE: 3418902

Parameter	Units	60436735001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Barium	mg/L	0.051	1	1.1	101	70-130	
Boron	mg/L	<0.10	1	1.0	98	70-130	
Calcium	mg/L	159	10	173	138	70-130	M1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: TEC 322 LANDFILL CCR-Revised Report
Pace Project No.: 60436735

QC Batch: 864333
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: 60436735001, 60436735002, 60436735003, 60436735004, 60436735005

METHOD BLANK: 3422443 Matrix: Water
Associated Lab Samples: 60436735001, 60436735002, 60436735003, 60436735004, 60436735005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cobalt	mg/L	<0.0010	0.0010	09/14/23 12:01	

LABORATORY CONTROL SAMPLE: 3422444

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cobalt	mg/L	0.04	0.042	105	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3422445 3422446

Parameter	Units	60436735003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Cobalt	mg/L	<0.0010	0.04	0.04	0.040	0.040	98	99	70-130	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: TEC 322 LANDFILL CCR-Revised Report
Pace Project No.: 60436735

QC Batch: 864083
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60436735001, 60436735002, 60436735003, 60436735004, 60436735005

METHOD BLANK: 3421504 Matrix: Water
Associated Lab Samples: 60436735001, 60436735002, 60436735003, 60436735004, 60436735005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lithium	mg/L	<0.010	0.010	09/13/23 08:55	

LABORATORY CONTROL SAMPLE: 3421505

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lithium	mg/L	1	1.0	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3421506 3421507

Parameter	Units	60436497001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lithium	mg/L	29.3 ug/L	1	1	1.1	1.1	102	104	75-125	2	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: TEC 322 LANDFILL CCR-Revised Report
Pace Project No.: 60436735

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: 60436735001, 60436735003, 60436735004, 60436735005

METHOD BLANK: 3419026 Matrix: Water
Associated Lab Samples: 60436735001, 60436735003, 60436735004, 60436735005

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	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: TEC 322 LANDFILL CCR-Revised Report
Pace Project No.: 60436735

QC Batch: 866941
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60436735002

METHOD BLANK: 3433157 Matrix: Water
Associated Lab Samples: 60436735002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	10/02/23 11:11	

LABORATORY CONTROL SAMPLE: 3433158

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	1070	107	80-120	

SAMPLE DUPLICATE: 3433159

Parameter	Units	60436735002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1210	1180	3	10	H1

SAMPLE DUPLICATE: 3433160

Parameter	Units	60438710001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	2640	2650	0	10	

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QUALITY CONTROL DATA

Project: TEC 322 LANDFILL CCR-Revised Report
Pace Project No.: 60436735

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: 60436735001, 60436735002, 60436735003, 60436735004, 60436735005

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

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: TEC 322 LANDFILL CCR-Revised Report
Pace Project No.: 60436735

QC Batch: 864098
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: 60436735001, 60436735002, 60436735003, 60436735004, 60436735005

METHOD BLANK: 3421569 Matrix: Water
Associated Lab Samples: 60436735001, 60436735002, 60436735003, 60436735004, 60436735005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<1.0	1.0	09/13/23 14:06	
Fluoride	mg/L	<0.20	0.20	09/13/23 14:06	
Sulfate	mg/L	<1.0	1.0	09/13/23 14:06	

METHOD BLANK: 3425406 Matrix: Water
Associated Lab Samples: 60436735001, 60436735002, 60436735003, 60436735004, 60436735005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<1.0	1.0	09/18/23 09:31	
Fluoride	mg/L	<0.20	0.20	09/18/23 09:31	
Sulfate	mg/L	<1.0	1.0	09/18/23 09:31	

LABORATORY CONTROL SAMPLE: 3421570

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	2.4	97	90-110	
Sulfate	mg/L	5	4.9	98	90-110	

LABORATORY CONTROL SAMPLE: 3425407

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.6	91	90-110	
Fluoride	mg/L	2.5	2.7	107	90-110	
Sulfate	mg/L	5	4.9	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3421571 3421572

Parameter	Units	60437171040 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	134	100	100	214	202	79	67	80-120	6	15	M1
Fluoride	mg/L	ND	50	50	65.3	60.3	131	121	80-120	8	15	M1
Sulfate	mg/L	42.3	100	100	161	154	118	112	80-120	4	15	

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QUALITY CONTROL DATA

Project: TEC 322 LANDFILL CCR-Revised Report
Pace Project No.: 60436735

MATRIX SPIKE SAMPLE: 3421573

Parameter	Units	60436735004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50.8	100	156	105	80-120	
Fluoride	mg/L	0.40	2.5	3.1	107	80-120	
Sulfate	mg/L	987	1000	2520	153	80-120	M1

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(913)599-5665

QUALIFIERS

Project: TEC 322 LANDFILL CCR-Revised Report
Pace Project No.: 60436735

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

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

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: TEC 322 LANDFILL CCR-Revised Report
Pace Project No.: 60436735

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60436735001	**MW-1-090523**	EPA 200.7	863434	EPA 200.7	863460
60436735002	**MW-4-090523**	EPA 200.7	863434	EPA 200.7	863460
60436735003	**MW-5-090523**	EPA 200.7	863434	EPA 200.7	863460
60436735004	**MW-6-090523**	EPA 200.7	863434	EPA 200.7	863460
60436735005	**TEC322LF-DUP-090523**	EPA 200.7	863434	EPA 200.7	863460
60436735001	**MW-1-090523**	EPA 3010	864083	EPA 6010	864104
60436735002	**MW-4-090523**	EPA 3010	864083	EPA 6010	864104
60436735003	**MW-5-090523**	EPA 3010	864083	EPA 6010	864104
60436735004	**MW-6-090523**	EPA 3010	864083	EPA 6010	864104
60436735005	**TEC322LF-DUP-090523**	EPA 3010	864083	EPA 6010	864104
60436735001	**MW-1-090523**	EPA 200.8	864333	EPA 200.8	864378
60436735002	**MW-4-090523**	EPA 200.8	864333	EPA 200.8	864378
60436735003	**MW-5-090523**	EPA 200.8	864333	EPA 200.8	864378
60436735004	**MW-6-090523**	EPA 200.8	864333	EPA 200.8	864378
60436735005	**TEC322LF-DUP-090523**	EPA 200.8	864333	EPA 200.8	864378
60436735001	**MW-1-090523**	SM 2540C	863483		
60436735002	**MW-4-090523**	SM 2540C	866941		
60436735003	**MW-5-090523**	SM 2540C	863483		
60436735004	**MW-6-090523**	SM 2540C	863483		
60436735005	**TEC322LF-DUP-090523**	SM 2540C	863483		
60436735001	**MW-1-090523**	SM 4500-H+B	863493		
60436735002	**MW-4-090523**	SM 4500-H+B	863493		
60436735003	**MW-5-090523**	SM 4500-H+B	863493		
60436735004	**MW-6-090523**	SM 4500-H+B	863493		
60436735005	**TEC322LF-DUP-090523**	SM 4500-H+B	863493		
60436735001	**MW-1-090523**	EPA 300.0	864098		
60436735002	**MW-4-090523**	EPA 300.0	864098		
60436735003	**MW-5-090523**	EPA 300.0	864098		
60436735004	**MW-6-090523**	EPA 300.0	864098		
60436735005	**TEC322LF-DUP-090523**	EPA 300.0	864098		

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-LENE-0009_Sample C	WO# : 60436735
	Revision: 2	Effective Date: 01/12/2022

60436735

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** 14.9 **Corr. Factor** -0.3 **Corrected** 14.6 / 15.0

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

Temperature should be above freezing to 6°C 15.3

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: _____

Qualtrax Document ID: 30468

Pace Analytical
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A — **Required** Client Information:

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

Section B — **Required** Project Information:

Report To:	Jake Humphrey
Copy To:	Laura Hines, Samantha Kaney
Purchase Order No.:	
Project Name:	TEC 322 Landfill 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, 11

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,Ca,Ba	200.8 Total Co	4500 H+B pH	300: Cl, F, SO4	2540C TDS	6010 Lithium	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-1-090523	WT	G	-	-	09/05/23	11:10		4	3		1							X	X	X	X	X	X		60436735
2	MW-4-090523	WT	G	-	-	09/05/23	12:10		4	3		1							X	X	X	X	X	X		
3	MW-5-090523	WT	G	-	-	09/05/23	11:20		4	3		1							X	X	X	X	X	X		
4	MW-6-090523	WT	G	-	-	09/05/23	11:45		4	3		1							X	X	X	X	X	X		
5	TEC322LF-DUP-090523	WT	G	-	-	09/05/23	11:10		4	3		1							X	X	X	X	X	X		
6																										
7																										
8																										
9																										
10																										
11																										
12																										

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

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Matt VanderPutten

SIGNATURE of SAMPLER: _____ **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 322 Landfill CCR Notes

COC Line Item	Matrix	VG9H	DG9H	DG9Q	VG9U	DG9U	DG9M	DG9B	BG1U	AG1H	AG1U	AG2U	AG3S	AG4U	AG5U	JGFU	WGKU	WGDU	BP1U	BP2U	BP3U	BP1N	BP3N	BP3F	BP3S	BP3C	BP3Z	WPDU	ZPLC	Other		
1	WT																		1		2		1									
2	↓																		1		2		1									
3																			1		2		1									
4																			1		2		1									
5																			1		2		1									
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: 60473675