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2021 – 2022 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

BOTTOM ASH POND
JEFFREY ENERGY CENTER
ST. MARYS, KANSAS

by Haley & Aldrich, Inc.
Cleveland, Ohio

for Evergy Kansas Central, Inc.
Topeka, Kansas

File No. 0129778-045
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This Annual Groundwater Monitoring and Corrective Action Report documents the groundwater monitoring program for the Jeffrey Energy Center (JEC) inactive Bottom Ash Pond (BAP) consistent with applicable sections of Code of Federal Regulations Title 40 §§ 257.90 through 257.98, and describes activities conducted from July 2021 through June 2022 and documents compliance with the U.S. Environmental Protection Agency Coal Combustion Residual Rule. I certify that the 2021 – 2022 Annual Groundwater Monitoring and Corrective Action Report for the JEC BAP is, to the best of my knowledge, accurate and complete.

Signed: 

Professional Geologist

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

1. Introduction

This 2021 – 2022 Annual Groundwater Monitoring and Corrective Action Report (Annual Report) addresses the inactive Bottom Ash Pond (BAP) at the Jeffrey Energy Center (JEC), operated by Evergy Kansas Central, Inc. (Evergy). This Annual Report was developed in accordance with the U.S. Environmental Protection Agency (USEPA) Coal Combustion Residual (CCR) Rule (Rule) effective October 19, 2015, including subsequent revisions, specifically Code of Federal Regulations Title 40 (40 CFR), subsection 257.90(e). The Annual Report documents the groundwater monitoring system for the BAP consistent with applicable sections of § 257.90 through § 257.98, describes activities conducted in the prior calendar year (July 2021 through June 2022), and documents compliance with the Rule. The specific requirements for the Annual Report listed in § 257.90(e) of the Rule are provided in Sections 1 and 2 of this Annual Report and are in ***bold italic font***, followed by a narrative describing how each Rule requirement has been met.

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

1.1 40 CFR § 257.90(e)(6) SUMMARY

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

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

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

At the start of the current annual reporting period (July 1, 2021), the BAP 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 (June 30, 2022), the BAP 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)

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

- The BAP is operating under an assessment monitoring program; therefore, no statistical evaluations were completed on Appendix III constituents from July 2021 through June 2022.

1.1.3.2 40 CFR § 257.90(e)(6)(iii)(b)

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

An assessment monitoring program was initiated on January 13, 2020 for the BAP with a notification establishing assessment monitoring provided February 12, 2020 to meet the requirements of 40 CFR § 257.95. The BAP remained in assessment monitoring from July 2021 through June 2022.

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

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

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

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

No statistically significant levels were identified above the groundwater protection standard for those constituents listed in Appendix IV to this part from July 2021 through June 2022 for the BAP. The statistical evaluation reports for semi-annual assessment monitoring sampling events from March 2021 and September 2021 were completed in July 2021 and January 2021, 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 from July 2021 through June 2022 for this unit. The BAP remained in assessment monitoring during this annual period.

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 BAP from July 2021 through June 2022; therefore, a public meeting was not held.

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

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

No assessment of corrective measures was required to be initiated from July 2021 through June 2022 for this unit. The BAP remained in assessment monitoring during this annual period.

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 BAP remains in assessment monitoring; 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 from July 2021 through June 2022.

2. 40 CFR § 257.90 Applicability

2.1 40 CFR § 257.90(a)

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

Evergy has installed and certified a groundwater monitoring system at the JEC BAP. The BAP is subject to the groundwater monitoring and corrective action requirements described under 40 CFR §§ 257.90 through 257.98. This document addresses the requirement for the Owner/Operator to prepare an Annual Report per § 257.90(e).

2.2 40 CFR § 257.90(e) – SUMMARY

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

This Annual Report describes monitoring completed and actions taken for the groundwater monitoring system at the JEC BAP as required by the Rule. Groundwater sampling and analysis was conducted in accordance with the requirements described in § 257.93, and the status of the groundwater monitoring program described in § 257.94 and § 257.95 is also provided in this report. This Annual Report documents the applicable groundwater-related activities completed in the calendar year from July 2021 through June 2022.

2.2.1 Status of the Groundwater Monitoring Program

The BAP remained in the assessment monitoring program through June 2022.

2.2.2 Key Actions Completed

The 2020 – 2021 Annual Groundwater Monitoring and Corrective Action Report was completed in July 2021 for the time period July 2020 through June 2021. Statistical evaluation was completed in July 2021 on analytical data from the March 2021 assessment monitoring sampling event.

A semi-annual assessment monitoring sampling event was completed in September 2021 for detected Appendix IV constituents identified from the December 2020 annual assessment monitoring sampling event. Statistical evaluation was completed in January 2022 on analytical data from the September 2021 semi-annual assessment monitoring sampling event.

An annual assessment monitoring sampling event was completed on December 6, 2021 to identify detected Appendix IV constituents for subsequent semi-annual sampling events planned for March 2022 and September 2022. Semi-annual assessment monitoring sampling was completed in March 2022 for detected Appendix IV constituents identified during the December 2021 annual monitoring event. Statistical evaluation of the results from the March 2022 semi-annual assessment monitoring sampling event are due to be completed in July 2022 and will be reported in the next annual report.

2.2.3 Problems Encountered

No noteworthy problems (i.e., problems could include damaged wells, issues with sample collection or lack of sampling, or problems with analytical analysis) were encountered at the BAP from July 2021 through June 2022.

2.2.4 Actions to Resolve Problems

No problems were encountered at the BAP from July 2021 through June 2022; therefore, no actions to resolve the problems were required.

2.2.5 Project Key Activities for Upcoming Year

Key activities planned for July 2022 through June 2023 include the 2022 – 2023 Annual Groundwater Monitoring and Corrective Action Report, statistical analysis of assessment monitoring analytical data collected in March 2022, semi-annual assessment monitoring and subsequent statistical evaluations, and annual assessment monitoring.

2.3 40 CFR § 257.90(e) – INFORMATION

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

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

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

As required by § 257.90(e)(1), a map showing the locations of the CCR unit and associated upgradient and downgradient monitoring wells for the JEC BAP 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 from July 2021 to June 2022.

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

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

In accordance with § 257.95(b), three independent assessment monitoring samples from each background and downgradient monitoring well were collected from July 2021 through June 2022. A summary including sample names, dates of sample collection, field parameters, and monitoring data obtained for the groundwater monitoring program for the BAP 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 July 2021 through June 2022 are provided in Figures 2 through 4.

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

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

The assessment monitoring program was initiated on January 13, 2020 with a notification establishing assessment monitoring provided on February 12, 2020 to meet the requirements of 40 CFR § 257.95. The BAP remained in assessment monitoring from July 2021 through June 2022.

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

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

This Annual Report documents activities conducted to comply with §§ 257.90 through 257.95 of the Rule. It is understood that there are supplemental references in §§ 257.90 through 257.98 that must be placed in the Annual Report. The following requirements include relevant and required information in the Annual Report for activities completed from July 2021 through June 2022.

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

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

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

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

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

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

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

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

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

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

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

An assessment monitoring program has been implemented at the CCR unit since January 13, 2020. Three rounds of assessment monitoring sampling were completed from July 2021 through June 2022. Analytical results for both downgradient and upgradient wells are provided in Table I. The background concentrations (upper tolerance limits) and groundwater protection standards established for detected Appendix IV constituents for the BAP are included in Table II. The background concentrations and groundwater protection standards provided in Table II were utilized for the statistical evaluations completed from July 2021 through June 2022 for the March 2021 and September 2021 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 alternative source demonstration or certification was required from July 2021 through June 2022. The BAP remained in assessment monitoring during this annual period.

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

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

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

No assessment of corrective measures was required to be initiated from July 2021 through June 2022; therefore, no demonstration or certification is applicable for this unit.

TABLES

TABLE I
SUMMARY OF ANALYTICAL RESULTS - ASSESSMENT MONITORING
EVERGY KANSAS CENTRAL, INC.
JEFFREY ENERGY CENTER
BOTTOM ASH POND (INACTIVE)
ST. MARYS, KANSAS

Location	Upgradient			Downgradient											
	IBA-4			IBA-1			IBA-2					IBA-3			
Measure Point (TOC)	1201.86			1171.65			1171.66					1164.95			
Sample Name	IBA-4-091421	IBA-4-120621	IBA-4-030922	IBA-1-091421	IBA-1-120621	IBA-1-030922	IBA-2-091421	IBA-2-120621	JEC-IBA-DUP-120621	IBA-2-030922	DUP-IBA-030922	IBA-3-091421	JEC-IBA-DUP-091421	IBA-3-120621	IBA-3-030922
Sample Date	9/14/2021	12/6/2021	3/9/2022	9/14/2021	12/6/2021	3/9/2022	9/14/2021	12/6/2021	12/6/2021	3/9/2022	3/9/2022	9/14/2021	9/14/2021	12/6/2021	3/9/2022
Final Lab Report Date	10/12/2021	2/1/2022	3/25/2022	10/12/2021	2/1/2022	3/25/2022	10/12/2021	2/1/2022	2/1/2022	3/25/2022	3/25/2022	10/12/2021	10/12/2021	2/1/2022	3/25/2022
Final Lab Report Revision Date	N/A	2/17/2022	3/29/2022	N/A	2/17/2022	3/29/2022	N/A	2/17/2022	2/17/2022	3/29/2022	3/29/2022	N/A	N/A	2/17/2022	3/29/2022
Final Radiation Lab Report Date	N/A	2/2/2022	N/A	N/A	2/2/2022	N/A	N/A	2/2/2022	2/2/2022	N/A	N/A	N/A	N/A	2/2/2022	N/A
Final Radiation Lab Report Revision Date	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Lab Data Reviewed and Accepted	12/10/2021	2/21/2022	4/27/2022	12/10/2021	2/21/2022	4/27/2022	12/10/2021	2/21/2022	2/21/2022	4/27/2022	4/27/2022	12/10/2021	12/10/2021	2/21/2022	4/27/2022
Depth to Water (ft btoc)	54.75	56.00	55.91	28.60	28.98	28.27	29.85	30.00	-	29.88	-	32.79	-	33.90	33.18
Temperature (Deg C)	17.76	13.34	11.14	17.56	12.21	11.55	17.37	12.08	-	12.75	-	16.90	-	12.74	12.00
Conductivity (µS/cm)	511	984	965	2260	2110	2120	1731	1790	-	2100	-	2140	-	1990	2390
Turbidity (NTU)	4.3	31.4	9.6	0.0	30.6	8.6	0.0	14.0	-	19.6	-	0.0	-	0.0	16.2
Boron, Total (mg/L)	**0.24**	-	**0.23**	**0.37**	-	**0.38**	**0.20**	-	-	**0.21**	**0.21**	**0.30**	**0.29**	-	**0.28**
Calcium, Total (mg/L)	**112**	-	**107**	**298**	-	**318**	**216**	-	-	**232**	**234**	**270**	**274**	-	**269**
Chloride (mg/L)	**18.5**	-	**18.2**	**122**	-	**128**	**114**	-	-	**110**	**106**	**122**	**121**	-	**115**
Fluoride (mg/L)	**0.55**	-	**0.64**	**0.31**	-	**0.23**	**0.32**	-	-	**0.30**	**0.31**	**0.29**	**0.29**	-	**0.22**
Sulfate (mg/L)	**163**	-	**159**	**766**	-	**950**	**527**	-	-	**577**	**537**	**672**	**671**	-	**709**
pH (su)	**7.4**	-	**7.3**	**7.1**	-	**7.2**	**7.4**	-	-	**7.3**	**7.3**	**7.4**	**7.3**	-	**7.3**
TDS (mg/L)	**634**	-	**623**	**1680**	-	**1460**	**1340**	-	-	**1240**	**1510**	**1570**	**1590**	-	**1410**
Antimony, Total (mg/L)	-	<0.0010	-	-	<0.0010	-	-	<0.0010	<0.0010	-	-	-	-	<0.0010	-
Arsenic (mg/L)	-	<0.0010	-	-	<0.0010	-	-	<0.0010	<0.0010	-	-	-	-	<0.0010	-
Barium, Total (mg/L)	**0.022**	**0.020**	**0.021**	**0.030**	**0.033**	**0.033**	**0.026**	**0.027**	**0.029**	**0.027**	**0.028**	**0.019**	**0.019**	**0.019**	**0.019**
Beryllium, Total (mg/L)	-	<0.0010	-	-	<0.0010	-	-	<0.0010	<0.0010	-	-	-	-	<0.0010	-
Cadmium, Total (mg/L)	-	<0.00050	-	-	<0.00050	-	-	<0.00050	<0.00050	-	-	-	-	<0.00050	-
Chromium, Total (mg/L)	-	<0.0050	-	-	<0.0050	-	-	<0.0050	<0.0050	-	-	-	-	<0.0050	-
Cobalt, Total (mg/L)	< 0.0010	<0.0010	< 0.0010	**0.0018**	**0.0018**	**0.0015**	**0.0010**	<0.0010	<0.0010	< 0.0010	< 0.0010	**0.0015**	**0.0015**	**0.0014**	**0.0012**
Lead, Total (mg/L)	-	<0.010	-	-	<0.010	-	-	<0.010	<0.010	-	-	-	-	<0.010	-
Lithium, Total (mg/L)	**0.034**	**0.038**	**0.033**	**0.014**	**0.019**	< 0.030	**0.020**	**0.023**	**0.027**	< 0.030	< 0.030	**0.021**	**0.018**	**0.023**	< 0.030
Molybdenum, Total (mg/L)	**0.0018**	**0.0018**	**0.0018**	**0.0081**	**0.0083**	**0.0075**	**0.0023**	**0.0022**	**0.0023**	**0.0020**	**0.0020**	**0.0022**	**0.0022**	**0.0022**	**0.0020**
Selenium, Total (mg/L)	-	<0.0010	-	-	<0.0010	-	-	<0.0010	<0.0010	-	-	-	-	<0.0010	-
Thallium, Total (mg/L)	-	<0.0010	-	-	<0.0010	-	-	<0.0010	<0.0010	-	-	-	-	<0.0010	-
Mercury, Total (mg/L)	-	<0.00020	-	-	<0.00020	-	-	<0.00020	<0.00020	-	-	-	-	<0.00020	-
Fluoride (mg/L)	**0.55**	**0.49**	**0.64**	**0.31**	<0.20	**0.23**	**0.32**	<0.20	**0.26**	**0.30**	**0.31**	**0.29**	**0.29**	<0.20	**0.22**
Radium-226 & 228 Combined (pCi/L)	-	1.87 ± 1.30 (2.09)	-	-	1.66 ± 1.19 (2.00)	-	-	0.749 ± 0.860 (1.70)	1.22 ± 0.898 (1.50)	-	-	-	-	0.000 ± 0.855 (1.99)	-

Notes & Abbreviations:

Radiological results are presented as activity plus or minus uncertainty with minimum detectable concentration (MDC).

Bold value: *Detection above laboratory reporting limit or MDC.*

µS/cm = micro Siemens per centimeter

Deg C = degrees Celsius

ft btoc = feet below top of casing

mg/L = milligrams per liter

N/A = Not Applicable

NTU = Nephelometric Turbidity Unit

pCi/L = picoCuries per liter

su = standard unit

TDS = total dissolved solids

TOC = top of casing

TABLE II
ASSESSMENT GROUNDWATER MONITORING - DETECTED APPENDIX IV GWPS
MARCH AND SEPTEMBER 2021 SAMPLING EVENTS
JEFFREY ENERGY CENTER
BOTTOM ASH POND (INACTIVE)

Well Number	Background Value[1]	GWPS
CCR Appendix-IV Barium, Total (mg/L)		
MW-IBA-4 (upgradient)	0.0221	NA
MW-IBA-1		2
MW-IBA-2		2
MW-IBA-3		2
CCR Appendix-IV Cobalt, Total (mg/L)		
MW-IBA-4 (upgradient)	0.001	NA
MW-IBA-1		0.006
MW-IBA-2		0.006
MW-IBA-3		0.006
CCR Appendix-IV Fluoride, Total (mg/L)		
MW-IBA-4 (upgradient)	0.632[2]	NA
MW-IBA-1		4.0
MW-IBA-2		4.0
MW-IBA-3		4.0
CCR Appendix-IV Lithium, Total (mg/L)		
MW-IBA-4 (upgradient)	0.0402	NA
MW-IBA-1		0.040
MW-IBA-2		0.040
MW-IBA-3		0.040
CCR Appendix-IV Molybdenum, Total (mg/L)		
MW-IBA-4 (upgradient)	0.0024	NA
MW-IBA-1		0.100
MW-IBA-2		0.100
MW-IBA-3		0.100

Notes and Abbreviations:

[1] Interwell background value based on background data collected through November 2020.

[2] Interwell background value based on background data collected through September 2020.

CCR = Coal Combustion Residuals

GWPS = Groundwater Protection Standard

mg/L = milligrams per Liter

NA = Not Applicable

FIGURES

LEGEND

- MONITORING WELL
- PIEZOMETER OBSERVATION ONLY
- BOTTOM ASH POND (INACTIVE)

NOTES

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

N

0 330 660

SCALE IN FEET

HALEY ALDRICH

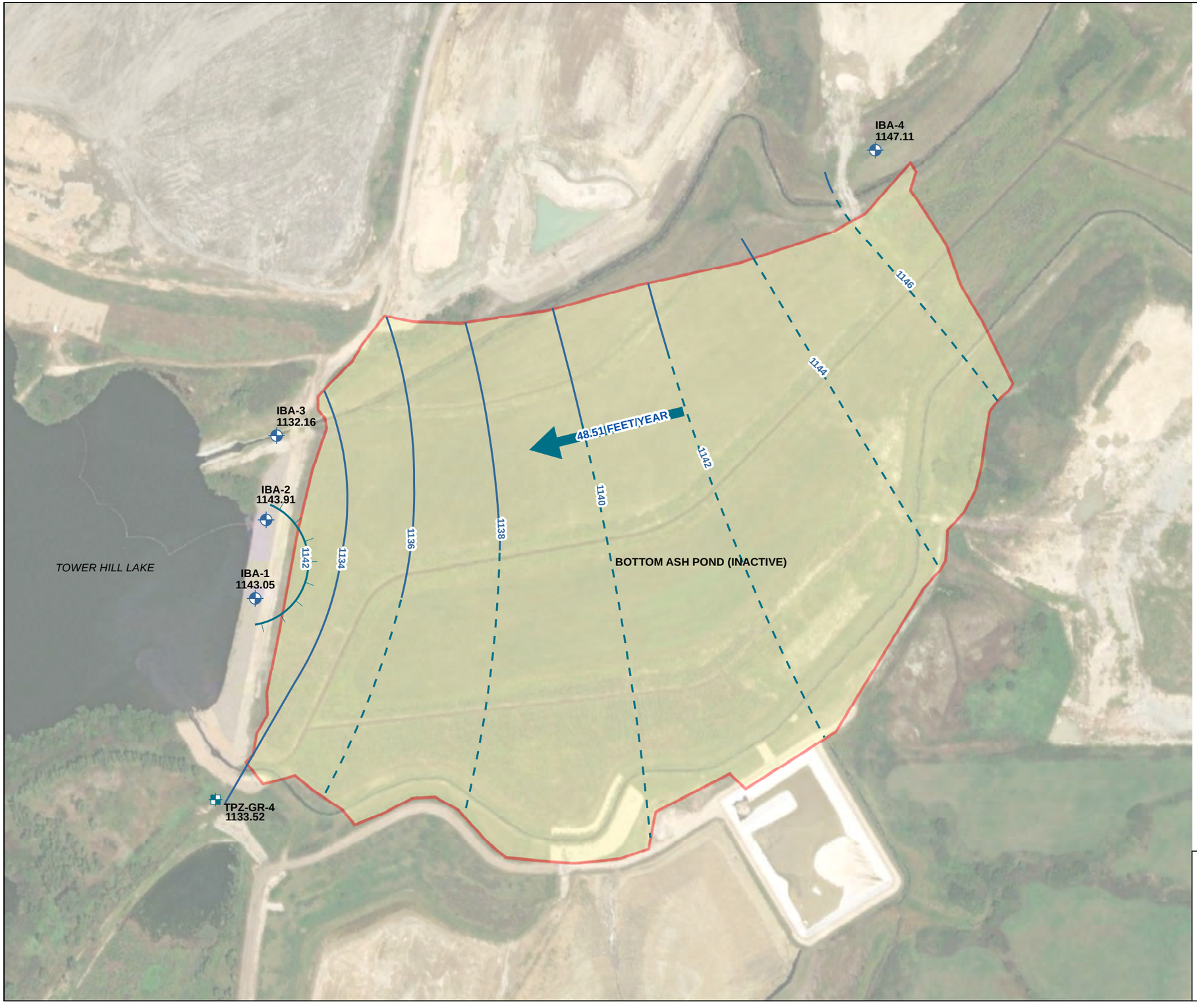
EVERGY KANSAS CENTRAL, INC.
JEFFREY ENERGY CENTER
ST. MARY'S, KANSAS

BOTTOM ASH POND (INACTIVE) LOCATION MAP

evergy

JULY 2022

FIGURE 1



LEGEND

- **IBA-3 1132.75** WELL NAME AND GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL (AMSL), SEPTEMBER 2021
- MONITORING WELL
- PIEZOMETER OBSERVATION ONLY
- ESTIMATED GROUNDWATER POTENTIOMETRIC OBSERVATION ELEVATION CONTOUR, 2-FT INTERVAL (AMSL), DASHED WHERE INFERRED
- GROUNDWATER FLOW DIRECTION AND APPROXIMATE GROUNDWATER FLOW RATE (FEET/YEAR)
- BOTTOM ASH POND

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.

2. GROUNDWATER POTENTIOMETRIC ELEVATIONS WERE MEASURED 14 SEPTEMBER 2021.

3. THE GROUNDWATER FLOW RATE WAS APPROXIMATED USING THE HYDRAULIC GRADIENT CALCULATED FROM GROUNDWATER POTENTIOMETIRIC ELEVATIONS MEASURED 14 SEPTEMBER 2021 AND THE CONDUCTIVITY VALUES AND EFFECTIVE POROSITY VALUES OBTAINED FROM SLUG TESTS COMPLETED APRIL 2016.

4. AERIAL IMAGERY SOURCE: ESRI, 3 SEPTEMBER 2019

N

0 300 600
SCALE IN FEET

HALEY ALDRICH

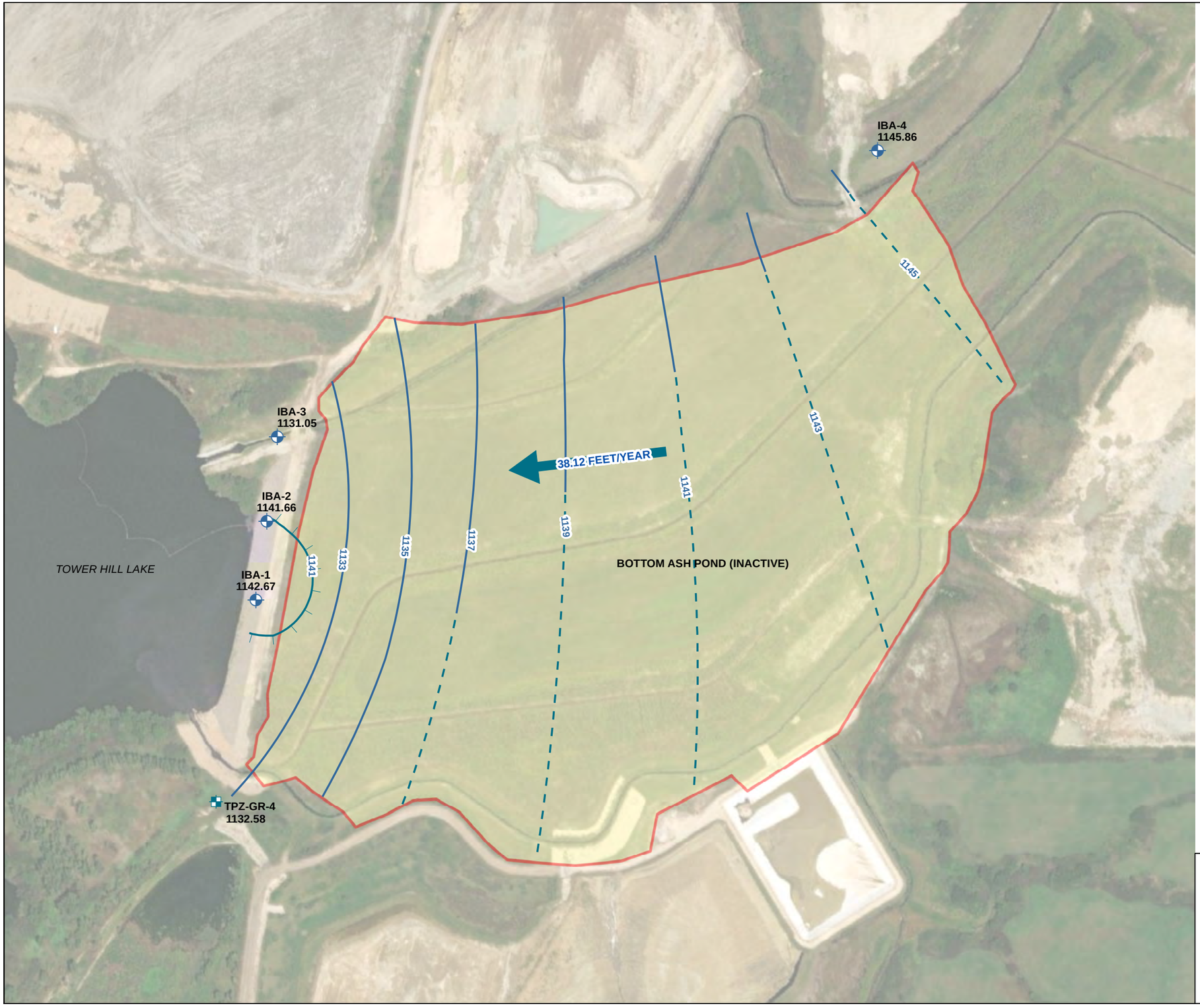
EVERGY KANSAS CENTRAL, INC.
JEFFREY ENERGY CENTER
ST. MARY'S, KANSAS

BOTTOM ASH POND (INACTIVE) GROUNDWATER POTENTIOMETRIC ELEVATION CONTOUR MAP SEPTEMBER 14, 2021

evergy

JULY 2022

FIGURE 2



LEGEND

IBA-3
1132.75 WELL NAME AND GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL (AMSL), DECEMBER 2021

MONITORING WELL

PIEZOMETER OBSERVATION ONLY

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

GROUNDWATER FLOW DIRECTION AND APPROXIMATE GROUNDWATER FLOW RATE (FEET/YEAR)

BOTTOM ASH POND

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.

2. GROUNDWATER POTENTIOMETRIC ELEVATIONS WERE MEASURED 06 DECEMBER 2021.

3. THE GROUNDWATER FLOW RATE WAS APPROXIMATED USING THE HYDRAULIC GRADIENT CALCULATED FROM GROUNDWATER POTENTIOMETIRIC ELEVATIONS MEASURED 06 DECEMBER 2021 AND THE CONDUCTIVITY VALUES AND EFFECTIVE POROSITY VALUES OBTAINED FROM SLUG TESTS COMPLETED APRIL 2016.

4. AERIAL IMAGERY SOURCE: ESRI, 3 SEPTEMBER 2019

N

0 300 600
SCALE IN FEET

HALEY ALDRICH

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

BOTTOM ASH POND (INACTIVE) GROUNDWATER POTENTIOMETRIC ELEVATION CONTOUR MAP DECEMBER 06, 2021

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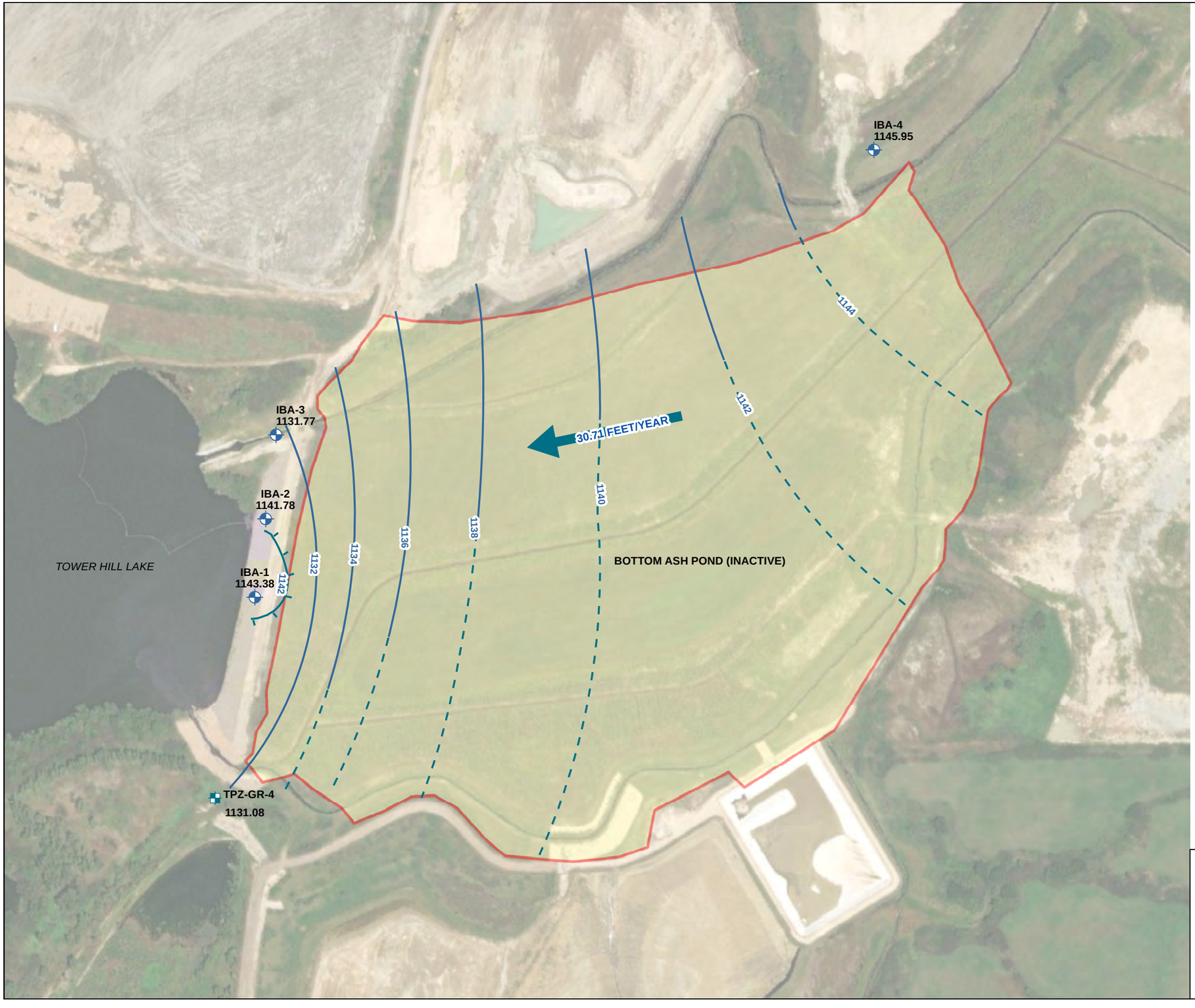
JULY 2022

FIGURE 3



LEGEND

IBA-3 1132.75 — WELL NAME AND GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL (AMSL), MARCH 2022

MONITORING WELL

PIEZOMETER OBSERVATION ONLY

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

GROUNDWATER FLOW DIRECTION AND APPROXIMATE GROUNDWATER FLOW RATE (FEET/YEAR)

BOTTOM ASH POND

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.

2. GROUNDWATER POTENTIOMETRIC ELEVATIONS WERE MEASURED 09 MARCH 2022.

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

4. AERIAL IMAGERY SOURCE: ESRI, 3 SEPTEMBER 2019

N

0 300 600
SCALE IN FEET

HALEY ALDRICH

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

BOTTOM ASH POND (INACTIVE) GROUNDWATER POTENTIOMETRIC ELEVATION CONTOUR MAP MARCH 09, 2022

evergy

JULY 2022

FIGURE 4

ATTACHMENT 1
Statistical Analyses

Attachment 1-1

March 2021 Semi-Annual Groundwater Assessment Monitoring Data Statistical Evaluation

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

TECHNICAL MEMORANDUM

July 31, 2022
File No. 129778-045

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 2021 Semi-Annual Groundwater Assessment Monitoring Data Statistical Evaluation
Completed July 15, 2021
Jeffrey Energy Center
Bottom Ash Pond (inactive)

Pursuant to Code of Federal Regulations Title 40 (40 CFR) §§ 257.93 and 257.95 (Rule), this memorandum summarizes the statistical evaluation of the analytical results for the **March 2021** semi-annual assessment monitoring groundwater sampling event for the Jeffrey Energy Center (JEC) Bottom Ash Pond (BAP; inactive). This semi-annual assessment monitoring groundwater sampling event was completed on **March 4, 2021**, with laboratory results received and validated on **April 16, 2021**.

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

Statistical Evaluation of Appendix IV Constituents

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

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

STATISTICAL EVALUATION

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

These statistical evaluations were conducted using a background dataset for all Appendix IV constituents that were detected in the annual assessment monitoring sample event using parametric TLs. If an Appendix IV constituent concentration from the **March 2021** sampling event was above the GWPS, the lower confidence limit (LCL) for the downgradient well constituent will be used to evaluate if an SSI is present. The LCL is the lower end of the confidence interval range, which is an estimated concentration range intended to contain the true mean or median of the population from which the sample is drawn. The confidence interval range is designed to locate the true population mean or median with a high degree of statistical confidence, or conversely, with a low probability of error.

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

BACKGROUND DISTRIBUTIONS

The groundwater analytical results for each sampling event from the background sample location IBA-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 **November 2020** for all constituents except fluoride, which was updated through **September 2020.**

RESULTS OF APPENDIX IV DOWNGRADIENT STATISTICAL COMPARISONS

The sample concentrations from the downgradient wells for each of the detected Appendix IV constituents from the **March 2021** semi-annual assessment monitoring event were compared to their respective background UTLs and GWPSs (Table I). A sample concentration greater than the background UTL is considered to represent an SSI. A sample concentration greater than the GWPS is considered to represent an SSL. The results of the groundwater assessment monitoring statistical evaluation are provided in Table I. **Based on this statistical evaluation on groundwater sampling data collected in March 2021, no SSLs above GWPS occurred at the JEC BAP (inactive).**

Enclosure:

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

TABLE

TABLE I
SUMMARY OF SEMI-ANNUAL ASSESSMENT GROUNDWATER MONITORING STATISTICAL EVALUATION
MARCH 2021 SAMPLING EVENT
JEFFREY ENERGY CENTER
BOTTOM ASH POND (INACTIVE)

										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	Detection Exceedances (Y/N)	Number of Detection Exceedances	Number of Non-Detection Exceedances	Outlier Presence	Outlier Removed	Trend	Distribution Well	March 2021 Concentration (mg/L)	Detect?	Upper Tolerance Limit (UTL) (mg/L)[1]	SSI (exceedance above Background at Individual Well)	GWPS (Higher of MCL/ 40 CFR § 257.95(h)(2) or UTL) mg/L	Exceedance above GWPS at Individual Well	SSL
CCR Appendix-IV: Barium, Total (mg/L)																						
MW-IBA-4	13/13	0%	0.022	0.00000241	0.001553	0.08138	2	mg/L	N	0	0	No	No	Stable	Normal	0.019	Y	0.0221		2		
MW-IBA-1	13/13	0%	0.039	0.00001269	0.003563	0.10870	2	mg/L	N	0	0	No	No	Decreasing	Normal	0.030	Y		Y		N	No
MW-IBA-2	13/13	0%	0.036	0.00000659	0.002567	0.08385	2	mg/L	N	0	0	No	No	Decreasing	Normal	0.028	Y		Y		N	No
MW-IBA-3	13/13	0%	0.021	0.00000153	0.001235	0.06581	2	mg/L	N	0	0	No	No	Decreasing	Normal	0.019	Y		N		N	No
CCR Appendix-IV: Cobalt, Total (mg/L)																						
MW-IBA-4	0/13	100%	-	0	0	0	0.006	mg/L	N	0	0	NA	NA	NA	NA	<0.0010	N	0.001		0.006		
MW-IBA-1	13/13	0%	0.0027	8.436E-08	0.0002904	0.1293	0.006	mg/L	N	0	0	No	No	Stable	Normal	0.0020	Y		Y		N	No
MW-IBA-2	12/13	8%	0.0013	6.41E-09	0.00008006	0.0718	0.006	mg/L	N	0	0	Yes	No	Stable	Normal	0.0011	Y		Y		N	No
MW-IBA-3	13/13	0%	0.0021	8.808E-08	0.0002968	0.1635	0.006	mg/L	N	0	0	Yes	No	Stable	Non-parametric	0.0017	Y		Y		N	No
CCR Appendix-IV: Fluoride (mg/L)																						
MW-IBA-4	14/14	0%	0.64	0.003503	0.05919	0.1105	4.0	mg/L	N	0	0	No	No	Stable	Normal	0.52	Y	0.632[2]		4.0		
MW-IBA-1	10/14	29%	0.63	0.014790	0.12160	0.3960	4.0	mg/L	N	0	0	Yes	No	Stable	Normal	<0.20	N		N		N	No
MW-IBA-2	10/14	29%	0.40	0.005948	0.07712	0.2720	4.0	mg/L	N	0	0	No	No	Stable	Normal	<0.20	N		N		N	No
MW-IBA-3	10/14	29%	0.37	0.004392	0.06627	0.2461	4.0	mg/L	N	0	0	No	No	Stable	Normal	<0.20	N		N		N	No
CCR Appendix-IV: Lithium, Total (mg/L)																						
MW-IBA-4	13/13	0%	0.040	0.000007641	0.002764	0.0793	0.040	mg/L	N	0	0	No	No	Stable	Normal	0.035	Y	0.0402		0.040		
MW-IBA-1	13/13	0%	0.026	0.000012530	0.003539	0.2054	0.040	mg/L	N	0	0	Yes	No	Stable	Non-parametric	0.015	Y		N		N	No
MW-IBA-2	13/13	0%	0.028	0.000010810	0.003288	0.1577	0.040	mg/L	N	0	0	Yes	No	Stable	Normal	0.019	Y		N		N	No
MW-IBA-3	13/13	0%	0.028	0.000009077	0.003013	0.1440	0.040	mg/L	N	0	0	Yes	No	Stable	Normal	0.021	Y		N		N	No
CCR Appendix-IV: Molybdenum, Total (mg/L)																						
MW-IBA-4	13/13	0%	0.0024	2.641E-08	0.0001625	0.08485	0.100	mg/L	N	0	0	Yes	No	Stable	Non-parametric	0.0018	Y	0.0024		0.100		
MW-IBA-1	13/13	0%	0.0081	1.058E-07	0.0003252	0.04450	0.100	mg/L	N	0	0	No	No	Stable	Normal	0.0073	Y		Y		N	No
MW-IBA-2	13/13	0%	0.0024	7.692E-09	0.00008771	0.03905	0.100	mg/L	N	0	0	No	No	Stable	Normal	0.0023	Y		N		N	No
MW-IBA-3	13/13	0%	0.0025	1.756E-08	0.0001325	0.06197	0.100	mg/L	N	0	0	Yes	No	Stable	Non-parametric	0.0022	Y		N		N	No

Notes and Abbreviations:

[1] Based on background data collected from 03/13/2018 through 11/30/2020, unless otherwise noted.

[2] Based on background data collected from 03/13/2018 through 09/14/2020.

** 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

Attachment 1-2

September 2021 Semi-Annual Groundwater Assessment Monitoring Data Statistical Evaluation

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

TECHNICAL MEMORANDUM

July 31, 2022
File No. 129778-035

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

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

SUBJECT: September 2021 Semi-Annual Groundwater Assessment Monitoring Data Statistical Evaluation
Completed January 18, 2022
Jeffrey Energy Center
Bottom Ash Pond (inactive)

Pursuant to Code of Federal Regulations Title 40 (40 CFR) §§ 257.93 and 257.95 (Rule), this memorandum summarizes the statistical evaluation of the analytical results for the **September 2021** semi-annual assessment monitoring groundwater sampling event for the Jeffrey Energy Center (JEC) Bottom Ash Pond (BAP; inactive). This semi-annual assessment monitoring groundwater sampling event was completed on **September 14, 2021**, with laboratory results received and validated on **December 10, 2021**.

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

Statistical Evaluation of Appendix IV Constituents

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

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

STATISTICAL EVALUATION

An interwell evaluation was used to determine the 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 a background dataset for all Appendix IV constituents that were detected in the annual assessment monitoring sample event using parametric TLs. If an Appendix IV constituent concentration from the **September 2021** sampling event was above the GWPS, the lower confidence limit (LCL) for the downgradient well constituent will be used to evaluate if an SSI is present. The LCL is the lower end of the confidence interval range, which is an estimated concentration range intended to contain the true mean or median of the population from which the sample is drawn. The confidence interval range is designed to locate the true population mean or median with a high degree of statistical confidence, or conversely, with a low probability of error.

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

BACKGROUND DISTRIBUTIONS

The groundwater analytical results for each sampling event from the background sample location IBA-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 **November 2020** for all constituents except fluoride, which was updated through **September 2020.**

RESULTS OF APPENDIX IV DOWNGRADIENT STATISTICAL COMPARISONS

The sample concentrations from the downgradient wells for each of the detected Appendix IV constituents from the **September 2021** semi-annual assessment monitoring event were compared to their respective background UTLs and GWPSs (Table I). A sample concentration greater than the background UTL is considered to represent an SSI. A sample concentration greater than the GWPS is considered to represent an SSL. The results of the groundwater assessment monitoring statistical evaluation are provided in Table I. **Based on this statistical evaluation on groundwater sampling data collected in September 2021, no SSLs above GWPS occurred at the JEC BAP (inactive).**

Enclosure:

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

TABLE

TABLE I
SUMMARY OF SEMI-ANNUAL ASSESSMENT GROUNDWATER MONITORING STATISTICAL EVALUATION
SEPTEMBER 2021 SAMPLING EVENT
JEFFREY ENERGY CENTER
BOTTOM ASH POND (INACTIVE)

										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	Detection Exceedances (Y/N)	Number of Detection Exceedances	Number of Non-Detection Exceedances	Outlier Presence	Outlier Removed	Trend	Distribution Well	September 2021 Concentration (mg/L)	Detect?	Upper Tolerance Limit (mg/L)[1]	SSI (exceedance above Background at Individual Well)	GWPS (Higher of MCL/ 40 CFR § 257.95(h)(2) or UTL) mg/L	Exceedance above GWPS at Individual Well	SSL
CCR Appendix-IV: Barium, Total (mg/L)																						
MW-IBA-4	14/14	0%	0.022	0.000002835	0.001684	0.08731	2	mg/L	N	0	0	No	No	Stable	Normal	0.022	Y	0.0221		2		
MW-IBA-1	14/14	0%	0.039	0.000012260	0.003502	0.10750	2	mg/L	N	0	0	No	No	Decreasing	Normal	0.030	Y		Y		N	No
MW-IBA-2	14/14	0%	0.036	0.000007604	0.002758	0.09105	2	mg/L	N	0	0	No	No	Decreasing	Normal	0.026	Y		Y		N	No
MW-IBA-3	14/14	0%	0.021	0.00001412	0.001188	0.06326	2	mg/L	N	0	0	No	No	Decreasing	Normal	0.019	Y		N		N	No
CCR Appendix-IV: Cobalt, Total (mg/L)																						
MW-IBA-4	0/14	100%	-	0	0	0	0.006	mg/L	N	0	0	NA	NA	NA	NA	<0.0010	N	0.001		0.006		
MW-IBA-1	14/14	0%	0.0027	9.209E-08	0.0003035	0.1370	0.006	mg/L	N	0	0	No	No	Stable	Normal	0.0018	Y		Y		N	No
MW-IBA-2	13/14	7%	0.0013	6.868E-09	0.0000829	0.0749	0.006	mg/L	N	0	0	Yes	No	Stable	Normal	0.0010	Y		N		N	No
MW-IBA-3	14/14	0%	0.0021	8.841E-08	0.0002973	0.1658	0.006	mg/L	N	0	0	Yes	No	Stable	Non-parametric	0.0015	Y		Y		N	No
CCR Appendix-IV: Fluoride (mg/L)																						
MW-IBA-4	15/15	0%	0.64	0.003267	0.05715	0.1065	4.0	mg/L	N	0	0	No	No	Stable	Normal	0.55	Y	0.632[2]		4.0		
MW-IBA-1	11/15	27%	0.63	0.013740	0.11720	0.3813	4.0	mg/L	N	0	0	Yes	No	Stable	Normal	0.31	Y		N		N	No
MW-IBA-2	11/15	27%	0.40	0.005611	0.07491	0.2619	4.0	mg/L	N	0	0	No	No	Stable	Normal	0.32	Y		N		N	No
MW-IBA-3	11/15	27%	0.37	0.004107	0.06408	0.2368	4.0	mg/L	N	0	0	No	No	Stable	Normal	0.29	Y		N		N	No
CCR Appendix-IV: Lithium, Total (mg/L)																						
MW-IBA-4	14/14	0%	0.040	0.000007104	0.002665	0.0766	0.040	mg/L	N	0	0	No	No	Stable	Normal	0.034	Y	0.0402		0.040		
MW-IBA-1	14/14	0%	0.026	0.000012310	0.003508	0.2064	0.040	mg/L	N	0	0	Yes	No	Stable	Non-parametric	0.014	Y		N		N	No
MW-IBA-2	14/14	0%	0.028	0.000010030	0.003167	0.1523	0.040	mg/L	N	0	0	Yes	No	Stable	Normal	0.020	Y		N		N	No
MW-IBA-3	14/14	0%	0.028	0.000008379	0.002895	0.1383	0.040	mg/L	N	0	0	Yes	No	Stable	Normal	0.021	Y		N		N	No
CCR Appendix-IV: Molybdenum, Total (mg/L)																						
MW-IBA-4	14/14	0%	0.0024	2.533E-08	0.0001592	0.08345	0.100	mg/L	N	0	0	Yes	No	Stable	Non-parametric	0.0018	Y	0.0024		0.100		
MW-IBA-1	14/14	0%	0.0081	1.425E-07	0.0003775	0.05125	0.100	mg/L	N	0	0	No	No	Stable	Normal	0.0081	Y		Y		N	No
MW-IBA-2	14/14	0%	0.0024	7.308E-09	0.0000855	0.03799	0.100	mg/L	N	0	0	No	No	Stable	Normal	0.0023	Y		N		N	No
MW-IBA-3	14/14	0%	0.0025	1.648E-08	0.0001284	0.05991	0.100	mg/L	N	0	0	Yes	No	Stable	Non-parametric	0.0022	Y		N		N	No

Notes and Abbreviations:

[1] Based on background data collected from 03/13/2018 through 11/30/2020, unless otherwise noted.

[2] Based on background data collected from 03/13/2018 through 09/14/2020.

** 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

ATTACHMENT 2
Laboratory Analytical Reports

Attachment 2-1

September 2021 Semi-Annual Sampling Event
Laboratory Analytical Report

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

October 12, 2021

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

RE: Project: JEC Inactive Bottom Ash CCR
Pace Project No.: 60380625

Dear Melissa Michels:

Enclosed are the analytical results for sample(s) received by the laboratory on September 17, 2021. 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,

Hank Kapka
hank.kapka@pacelabs.com
(913)599-5665
PM Lab Management

Enclosures

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

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

CERTIFICATIONS

Project: JEC Inactive Bottom Ash CCR
Pace Project No.: 60380625

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

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

SAMPLE SUMMARY

Project: JEC Inactive Bottom Ash CCR
Pace Project No.: 60380625

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60380625001	**IBA-1-091421**	Water	09/14/21 14:40	09/17/21 00:00
60380625002	**IBA-2-091421**	Water	09/14/21 14:50	09/17/21 00:00
60380625003	**IBA-3-091421**	Water	09/14/21 15:30	09/17/21 00:00
60380625004	**IBA-4-091421**	Water	09/14/21 16:50	09/17/21 00:00
60380625005	**JEC-IBA-DUP-091421**	Water	09/14/21 15:30	09/17/21 00:00

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Lenexa, KS 66219
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SAMPLE ANALYTE COUNT

Project: JEC Inactive Bottom Ash CCR
Pace Project No.: 60380625

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60380625001	**IBA-1-091421**	EPA 200.7	MRV	3	PASI-K
		EPA 6010	JLH	1	PASI-K
		EPA 200.8	JGP	2	PASI-K
		SM 2540C	BLA	1	PASI-K
		SM 4500-H+B	KB	1	PASI-K
		EPA 300.0	ALH, LDB	3	PASI-K
60380625002	**IBA-2-091421**	EPA 200.7	MRV	3	PASI-K
		EPA 6010	JLH	1	PASI-K
		EPA 200.8	JGP	2	PASI-K
		SM 2540C	BLA	1	PASI-K
		SM 4500-H+B	KB	1	PASI-K
		EPA 300.0	ALH	3	PASI-K
60380625003	**IBA-3-091421**	EPA 200.7	JLH	3	PASI-K
		EPA 6010	JLH	1	PASI-K
		EPA 200.8	JGP	2	PASI-K
		SM 2540C	BLA	1	PASI-K
		SM 4500-H+B	KB	1	PASI-K
		EPA 300.0	ALH, LDB	3	PASI-K
60380625004	**IBA-4-091421**	EPA 200.7	JLH	3	PASI-K
		EPA 6010	JLH	1	PASI-K
		EPA 200.8	JGP	2	PASI-K
		SM 2540C	BLA	1	PASI-K
		SM 4500-H+B	KB	1	PASI-K
		EPA 300.0	ALH	3	PASI-K
60380625005	**JEC-IBA-DUP-091421**	EPA 200.7	JLH	3	PASI-K
		EPA 6010	JLH	1	PASI-K
		EPA 200.8	JGP	2	PASI-K
		SM 2540C	BLA	1	PASI-K
		SM 4500-H+B	KB	1	PASI-K
		EPA 300.0	ALH, LDB	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: JEC Inactive Bottom Ash CCR
Pace Project No.: 60380625

Date: October 12, 2021

REV. 1

Report revised to include Ba, B, and Ca by 200.7

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

PROJECT NARRATIVE

Project: JEC Inactive Bottom Ash CCR
Pace Project No.: 60380625

Method: **EPA 200.7**
Description: 200.7 Metals, Total
Client: Evergy Kansas Central, Inc.
Date: October 12, 2021

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: 745486

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60380536001,60380625003

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

- MS (Lab ID: 2986093)
  - Calcium

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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

PROJECT NARRATIVE

Project: JEC Inactive Bottom Ash CCR
Pace Project No.: 60380625

Method: **EPA 6010**
Description: 6010 MET ICP
Client: Evergy Kansas Central, Inc.
Date: October 12, 2021

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

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

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

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

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

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

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

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

Additional Comments:

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

PROJECT NARRATIVE

Project: JEC Inactive Bottom Ash CCR
Pace Project No.: 60380625

Method: **EPA 200.8**
Description: 200.8 MET ICPMS
Client: Evergy Kansas Central, Inc.
Date: October 12, 2021

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

PROJECT NARRATIVE

Project: JEC Inactive Bottom Ash CCR
Pace Project No.: 60380625

Method: **SM 2540C**
Description: 2540C Total Dissolved Solids
Client: Evergy Kansas Central, Inc.
Date: October 12, 2021

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.

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: JEC Inactive Bottom Ash CCR
Pace Project No.: 60380625

Method: **SM 4500-H+B**
Description: 4500H+ pH, Electrometric
Client: Evergy Kansas Central, Inc.
Date: October 12, 2021

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.
- IBA-1-091421 (Lab ID: 60380625001)
- IBA-2-091421 (Lab ID: 60380625002)
- IBA-3-091421 (Lab ID: 60380625003)
- IBA-4-091421 (Lab ID: 60380625004)
- JEC-IBA-DUP-091421 (Lab ID: 60380625005)

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: JEC Inactive Bottom Ash CCR
Pace Project No.: 60380625

Method: **EPA 300.0**
Description: 300.0 IC Anions 28 Days
Client: Evergy Kansas Central, Inc.
Date: October 12, 2021

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: 744818

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60380084003,60380536003

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

- MS (Lab ID: 2983692)
  - Chloride
  - Fluoride
- MSD (Lab ID: 2983693)
  - 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: JEC Inactive Bottom Ash CCR
Pace Project No.: 60380625

Sample: IBA-1-091421 **Lab ID: 60380625001** Collected: 09/14/21 14:40 Received: 09/17/21 00:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City							
Barium, Total Recoverable	**0.030**	mg/L	0.0050	1	09/24/21 16:00	10/07/21 13:54	7440-39-3	
Boron, Total Recoverable	**0.37**	mg/L	0.10	1	09/24/21 16:00	10/07/21 13:54	7440-42-8	
Calcium, Total Recoverable	**298**	mg/L	0.20	1	09/24/21 16:00	10/07/21 13:54	7440-70-2	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**0.014**	mg/L	0.010	1	09/24/21 16:00	09/28/21 00:23	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	**0.0018**	mg/L	0.0010	1	09/24/21 16:00	09/28/21 16:56	7440-48-4	
Molybdenum, Total Recoverable	**0.0081**	mg/L	0.0010	1	09/24/21 16:00	09/28/21 16:56	7439-98-7	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City							
Total Dissolved Solids	**1680**	mg/L	13.3	1		09/21/21 13:51		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Kansas City							
pH at 25 Degrees C	**7.1**	Std. Units	0.10	1		09/20/21 12:03		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Chloride	**122**	mg/L	20.0	20		09/23/21 02:00	16887-00-6	
Fluoride	**0.31**	mg/L	0.20	1		09/23/21 01:41	16984-48-8	
Sulfate	**766**	mg/L	100	100		09/23/21 18:23	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: JEC Inactive Bottom Ash CCR
Pace Project No.: 60380625

Sample: IBA-2-091421 **Lab ID: 60380625002** Collected: 09/14/21 14:50 Received: 09/17/21 00:00 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	**0.026**	mg/L	0.0050	1	09/24/21 16:00	10/07/21 13:56	7440-39-3	
Boron, Total Recoverable	**0.20**	mg/L	0.10	1	09/24/21 16:00	10/07/21 13:56	7440-42-8	
Calcium, Total Recoverable	**216**	mg/L	0.20	1	09/24/21 16:00	10/07/21 13:56	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	09/24/21 16:00	09/28/21 00:25	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	09/24/21 16:00	09/28/21 17:03	7440-48-4	
Molybdenum, Total Recoverable	**0.0023**	mg/L	0.0010	1	09/24/21 16:00	09/28/21 17:03	7439-98-7	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City							
Total Dissolved Solids	**1340**	mg/L	13.3	1		09/21/21 13:51		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Kansas City							
pH at 25 Degrees C	**7.4**	Std. Units	0.10	1		09/20/21 12:06		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Chloride	**114**	mg/L	20.0	20		09/23/21 03:13	16887-00-6	
Fluoride	**0.32**	mg/L	0.20	1		09/23/21 02:55	16984-48-8	
Sulfate	**527**	mg/L	100	100		09/27/21 13:49	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: JEC Inactive Bottom Ash CCR
Pace Project No.: 60380625

Sample: IBA-3-091421 **Lab ID: 60380625003** Collected: 09/14/21 15:30 Received: 09/17/21 00:00 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	**0.019**	mg/L	0.0050	1	09/24/21 16:00	09/28/21 12:55	7440-39-3	
Boron, Total Recoverable	**0.30**	mg/L	0.10	1	09/24/21 16:00	09/28/21 12:55	7440-42-8	
Calcium, Total Recoverable	**270**	mg/L	0.20	1	09/24/21 16:00	09/28/21 12:55	7440-70-2	M1
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**0.021**	mg/L	0.010	1	09/24/21 16:00	09/28/21 00:28	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	**0.0015**	mg/L	0.0010	1	09/24/21 16:00	09/28/21 17:06	7440-48-4	
Molybdenum, Total Recoverable	**0.0022**	mg/L	0.0010	1	09/24/21 16:00	09/28/21 17:06	7439-98-7	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City							
Total Dissolved Solids	**1570**	mg/L	20.0	1		09/21/21 13:52		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Kansas City							
pH at 25 Degrees C	**7.4**	Std. Units	0.10	1		09/20/21 12:11		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Chloride	**122**	mg/L	20.0	20		09/23/21 03:50	16887-00-6	
Fluoride	**0.29**	mg/L	0.20	1		09/23/21 03:32	16984-48-8	
Sulfate	**672**	mg/L	100	100		09/23/21 18:47	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: JEC Inactive Bottom Ash CCR
Pace Project No.: 60380625

Sample: IBA-4-091421 **Lab ID: 60380625004** Collected: 09/14/21 16:50 Received: 09/17/21 00:00 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	**0.022**	mg/L	0.0050	1	09/24/21 16:00	09/28/21 13:00	7440-39-3	
Boron, Total Recoverable	**0.24**	mg/L	0.10	1	09/24/21 16:00	09/28/21 13:00	7440-42-8	
Calcium, Total Recoverable	**112**	mg/L	0.20	1	09/24/21 16:00	09/28/21 13:00	7440-70-2	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**0.034**	mg/L	0.010	1	09/24/21 16:00	09/28/21 13:00	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	09/24/21 16:00	09/28/21 17:10	7440-48-4	
Molybdenum, Total Recoverable	**0.0018**	mg/L	0.0010	1	09/24/21 16:00	09/28/21 17:10	7439-98-7	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City							
Total Dissolved Solids	**634**	mg/L	10.0	1		09/21/21 13:52		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Kansas City							
pH at 25 Degrees C	**7.4**	Std. Units	0.10	1		09/20/21 13:21		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Chloride	**18.5**	mg/L	1.0	1		09/23/21 04:08	16887-00-6	
Fluoride	**0.55**	mg/L	0.20	1		09/23/21 04:08	16984-48-8	
Sulfate	**163**	mg/L	20.0	20		09/23/21 04:27	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: JEC Inactive Bottom Ash CCR
Pace Project No.: 60380625

Sample: JEC-IBA-DUP-091421 **Lab ID: 60380625005** Collected: 09/14/21 15:30 Received: 09/17/21 00:00 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	**0.019**	mg/L	0.0050	1	09/24/21 16:00	09/28/21 13:02	7440-39-3	
Boron, Total Recoverable	**0.29**	mg/L	0.10	1	09/24/21 16:00	09/28/21 13:02	7440-42-8	
Calcium, Total Recoverable	**274**	mg/L	0.20	1	09/24/21 16:00	09/28/21 13:02	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	09/24/21 16:00	09/28/21 13:02	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	**0.0015**	mg/L	0.0010	1	09/24/21 16:00	09/28/21 17:16	7440-48-4	
Molybdenum, Total Recoverable	**0.0022**	mg/L	0.0010	1	09/24/21 16:00	09/28/21 17:16	7439-98-7	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City							
Total Dissolved Solids	**1590**	mg/L	13.3	1		09/21/21 13:52		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Kansas City							
pH at 25 Degrees C	**7.3**	Std. Units	0.10	1		09/20/21 12:13		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Chloride	**121**	mg/L	20.0	20		09/23/21 05:03	16887-00-6	
Fluoride	**0.29**	mg/L	0.20	1		09/23/21 04:45	16984-48-8	
Sulfate	**671**	mg/L	100	100		09/23/21 18:59	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: JEC Inactive Bottom Ash CCR
Pace Project No.: 60380625

QC Batch: 745486
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: 60380625001, 60380625002, 60380625003, 60380625004, 60380625005

METHOD BLANK: 2986089 Matrix: Water
Associated Lab Samples: 60380625001, 60380625002, 60380625003, 60380625004, 60380625005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Barium	mg/L	<0.0050	0.0050	09/27/21 23:47	
Boron	mg/L	<0.10	0.10	09/27/21 23:47	
Calcium	mg/L	<0.20	0.20	09/27/21 23:47	

LABORATORY CONTROL SAMPLE: 2986090

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	mg/L	1	0.95	95	85-115	
Boron	mg/L	1	0.90	90	85-115	
Calcium	mg/L	10	9.6	96	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2986091 2986092

Parameter	Units	60380536001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	mg/L	0.15	1	1	1.1	1.1	98	99	70-130	1	20	
Boron	mg/L	0.27	1	1	1.2	1.2	93	88	70-130	4	20	
Calcium	mg/L	147	10	10	159	158	119	114	70-130	0	20	

MATRIX SPIKE SAMPLE: 2986093

Parameter	Units	60380625003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Barium	mg/L	0.019	1	0.96	95	70-130	
Boron	mg/L	0.30	1	1.3	96	70-130	
Calcium	mg/L	270	10	261	131	70-130	M1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: JEC Inactive Bottom Ash CCR
Pace Project No.: 60380625

QC Batch: 745483
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: 60380625001, 60380625002, 60380625003, 60380625004, 60380625005

METHOD BLANK: 2986071 Matrix: Water
Associated Lab Samples: 60380625001, 60380625002, 60380625003, 60380625004, 60380625005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cobalt	mg/L	<0.0010	0.0010	09/28/21 16:43	
Molybdenum	mg/L	<0.0010	0.0010	09/28/21 16:43	

LABORATORY CONTROL SAMPLE: 2986072

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cobalt	mg/L	0.04	0.041	103	85-115	
Molybdenum	mg/L	0.04	0.042	104	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2986073 2986074

Parameter	Units	60380536002 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	0.038	0.039	96	98	70-130	2	20	
Molybdenum	mg/L	<0.0010	0.04	0.04	0.043	0.044	107	109	70-130	2	20	

MATRIX SPIKE SAMPLE: 2986075

Parameter	Units	60380625004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Cobalt	mg/L	<0.0010	0.04	0.038	95	70-130	
Molybdenum	mg/L	0.0018	0.04	0.045	109	70-130	

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REPORT OF LABORATORY ANALYSIS

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(913)599-5665

QUALITY CONTROL DATA

Project: JEC Inactive Bottom Ash CCR
Pace Project No.: 60380625

QC Batch: 745480
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60380625001, 60380625002, 60380625003, 60380625004, 60380625005

METHOD BLANK: 2986054 Matrix: Water
Associated Lab Samples: 60380625001, 60380625002, 60380625003, 60380625004, 60380625005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lithium	mg/L	<0.010	0.010	09/27/21 23:47	

LABORATORY CONTROL SAMPLE: 2986055

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lithium	mg/L	1	0.95	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2986056 2986057

Parameter	Units	60380536001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lithium	mg/L	0.024	1	1	0.98	1.0	96	99	75-125	3	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: JEC Inactive Bottom Ash CCR
Pace Project No.: 60380625

QC Batch: 744455 | Analysis Method: SM 2540C
QC Batch Method: SM 2540C | Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60380625001, 60380625002, 60380625003, 60380625004, 60380625005

METHOD BLANK: 2982535 Matrix: Water
Associated Lab Samples: 60380625001, 60380625002, 60380625003, 60380625004, 60380625005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<5.0	5.0	09/21/21 13:50	

LABORATORY CONTROL SAMPLE: 2982536

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	968	97	80-120	

SAMPLE DUPLICATE: 2982537

Parameter	Units	60380469003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1040	1070	3	10	

SAMPLE DUPLICATE: 2982538

Parameter	Units	60380625002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1340	1340	0	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: JEC Inactive Bottom Ash CCR
Pace Project No.: 60380625

QC Batch: 744237
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: 60380625001, 60380625002, 60380625003, 60380625005

SAMPLE DUPLICATE: 2981913

Parameter	Units	60379873001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.8	8.0	2	5	H6

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: JEC Inactive Bottom Ash CCR
Pace Project No.: 60380625

QC Batch: 744326
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: 60380625004

SAMPLE DUPLICATE: 2982165

Parameter	Units	60380628001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.4	7.3	1	5	H6

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: JEC Inactive Bottom Ash CCR
Pace Project No.: 60380625

QC Batch: 744818
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: 60380625001, 60380625002, 60380625003, 60380625004, 60380625005

METHOD BLANK: 2983681 Matrix: Water
Associated Lab Samples: 60380625001, 60380625002, 60380625003, 60380625004, 60380625005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<1.0	1.0	09/22/21 08:22	
Fluoride	mg/L	<0.20	0.20	09/22/21 08:22	
Sulfate	mg/L	<1.0	1.0	09/22/21 08:22	

METHOD BLANK: 2985966 Matrix: Water
Associated Lab Samples: 60380625001, 60380625002, 60380625003, 60380625004, 60380625005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<1.0	1.0	09/23/21 08:02	
Fluoride	mg/L	<0.20	0.20	09/23/21 08:02	
Sulfate	mg/L	<1.0	1.0	09/23/21 08:02	

METHOD BLANK: 2988391 Matrix: Water
Associated Lab Samples: 60380625001, 60380625002, 60380625003, 60380625004, 60380625005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<1.0	1.0	09/27/21 09:57	
Fluoride	mg/L	<0.20	0.20	09/27/21 09:57	
Sulfate	mg/L	<1.0	1.0	09/27/21 09:57	

LABORATORY CONTROL SAMPLE: 2983682

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	5.2	104	90-110	
Fluoride	mg/L	2.5	2.5	98	90-110	
Sulfate	mg/L	5	5.3	107	90-110	

LABORATORY CONTROL SAMPLE: 2985967

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	106	90-110	
Sulfate	mg/L	5	4.9	98	90-110	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: JEC Inactive Bottom Ash CCR
Pace Project No.: 60380625

LABORATORY CONTROL SAMPLE: 2988392

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.7	95	90-110	
Fluoride	mg/L	2.5	2.6	103	90-110	
Sulfate	mg/L	5	4.8	97	90-110	

MATRIX SPIKE SAMPLE: 2983685

Parameter	Units	60380536003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	21.2	25	45.3	96	80-120	
Fluoride	mg/L	0.25	2.5	2.6	96	80-120	
Sulfate	mg/L	418	250	675	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2983692 2983693

Parameter	Units	60380084003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	22200	25000	25000	61800	54600	158	130	80-120	12	15	M1
Fluoride	mg/L	ND	1250	1250	1920	1700	154	136	80-120	12	15	M1
Sulfate	mg/L	3150	2500	2500	6150	5590	120	98	80-120	10	15	

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REPORT OF LABORATORY ANALYSIS

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(913)599-5665

QUALIFIERS

Project: JEC Inactive Bottom Ash CCR
Pace Project No.: 60380625

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.

WORKORDER QUALIFIERS

WO: 60380625

[1]	REV. 1
[2]	Report revised to include Ba, B, and Ca by 200.7

ANALYTE QUALIFIERS

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

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: JEC Inactive Bottom Ash CCR
Pace Project No.: 60380625

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60380625001	**IBA-1-091421**	EPA 200.7	745486	EPA 200.7	745595
60380625002	**IBA-2-091421**	EPA 200.7	745486	EPA 200.7	745595
60380625003	**IBA-3-091421**	EPA 200.7	745486	EPA 200.7	745595
60380625004	**IBA-4-091421**	EPA 200.7	745486	EPA 200.7	745595
60380625005	**JEC-IBA-DUP-091421**	EPA 200.7	745486	EPA 200.7	745595
60380625001	**IBA-1-091421**	EPA 3010	745480	EPA 6010	745596
60380625002	**IBA-2-091421**	EPA 3010	745480	EPA 6010	745596
60380625003	**IBA-3-091421**	EPA 3010	745480	EPA 6010	745596
60380625004	**IBA-4-091421**	EPA 3010	745480	EPA 6010	745596
60380625005	**JEC-IBA-DUP-091421**	EPA 3010	745480	EPA 6010	745596
60380625001	**IBA-1-091421**	EPA 200.8	745483	EPA 200.8	745597
60380625002	**IBA-2-091421**	EPA 200.8	745483	EPA 200.8	745597
60380625003	**IBA-3-091421**	EPA 200.8	745483	EPA 200.8	745597
60380625004	**IBA-4-091421**	EPA 200.8	745483	EPA 200.8	745597
60380625005	**JEC-IBA-DUP-091421**	EPA 200.8	745483	EPA 200.8	745597
60380625001	**IBA-1-091421**	SM 2540C	744455		
60380625002	**IBA-2-091421**	SM 2540C	744455		
60380625003	**IBA-3-091421**	SM 2540C	744455		
60380625004	**IBA-4-091421**	SM 2540C	744455		
60380625005	**JEC-IBA-DUP-091421**	SM 2540C	744455		
60380625001	**IBA-1-091421**	SM 4500-H+B	744237		
60380625002	**IBA-2-091421**	SM 4500-H+B	744237		
60380625003	**IBA-3-091421**	SM 4500-H+B	744237		
60380625004	**IBA-4-091421**	SM 4500-H+B	744326		
60380625005	**JEC-IBA-DUP-091421**	SM 4500-H+B	744237		
60380625001	**IBA-1-091421**	EPA 300.0	744818		
60380625002	**IBA-2-091421**	EPA 300.0	744818		
60380625003	**IBA-3-091421**	EPA 300.0	744818		
60380625004	**IBA-4-091421**	EPA 300.0	744818		
60380625005	**JEC-IBA-DUP-091421**	EPA 300.0	744818		

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Sample Condition Upon Receipt

WO# : 60380625

60380625

Client Name: Eversall

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: _____ **Type of Ice:** (Wet) Blue None

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

Date and initials of person examining contents: JO 9-18-21

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 N/A	
Potassium iodide test strip turns blue/purple? (Preserve)	☐Yes ☐No	
Trip Blank present:	☑Yes ☐No ☑N/A	
Headspace in VOA vials (>6mm):	☐Yes ☐No ☑N/A	
Samples from USDA Regulated Area: State:	☐Yes ☐No ☑N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	☐Yes ☐No ☑N/A	

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

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CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A — **Required** Client Information:

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

Section B — **Required** Project Information:

Report To:	Melissa Michels, Samantha Kaney, Danielle Ober
Copy To:	Jared Morrison, Jake Humphrey, Laura Hines
	JD Schlegel, Brandon Will, Sarah Hazelwood
Purchase Order No.:	
Project Name:	JEC Inactive Bottom Ash Pond CCR
Project Number:	

Section C — Invoice Information:

Attention:	Accounts Payable
Company Name:	EVERGY KANSAS CENTRAL, INC
Address:	SEE SECTION A
Pace Quote Reference:	
Pace Project Manager:	Hank Kapka, 913-563-1404
Pace Profile #:	9657, 1

REGULATORY AGENCY

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

Site Location *STATE:* KS

Section D — **Required** Client Information

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

Valid Matrix Codes

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

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**	300: Cl, F, SO4	2540C TDS	4500 H+B pH	6010 Total Metals***	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																		N		N	N	N	N	N	N	
1	IBA-1-091421	WT	G	-	-	09/14/21	14:40	-	5	3		2								X	X	X	X	X	X	
2	IBA-2-091421	WT	G	-	-	09/14/21	14:50	-	5	3		2								X	X	X	X	X	X	
3	IBA-3-091421	WT	G	-	-	09/14/21	15:30	-	5	3		2								X	X	X	X	X	X	
4	IBA-4-091421	WT	G	-	-	09/14/21	16:50	-	5	3		2								X	X	X	X	X	X	
5	JEC-IBA-DUP-091421	WT	G	-	-	09/14/21	15:30	-	5	3		2								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
200.7 Total Metals*: B, Ca, Ba	Jason R. Franks / SCS	9/16/21	15:00	[signature]	9-16-21		4.2
200.8 Total Metals**: Co, Mo							
6010 Total Metals***: Li							

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Jason R. Franks

SIGNATURE of SAMPLER: [signature] **DATE Signed (MM/DD/YY):** 9/16/21

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.

Attachment 2-2

December 2021 Annual Assessment Sampling Event Laboratory Analytical Report

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

February 17, 2022

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

RE: Project: JEC INACTIVE BOTTOM ASH POND C
Pace Project No.: 60387817

Dear Melissa Michels:

Enclosed are the analytical results for sample(s) received by the laboratory on December 07, 2021. 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 - Indianapolis
- Pace Analytical Services - Kansas City
- Pace Analytical Services - Greensburg

REV_2 remove duplicated Li result.

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

Sincerely,

Alice Spiller

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

Enclosures

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

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

CERTIFICATIONS

Project: JEC INACTIVE BOTTOM ASH POND C
Pace Project No.: 60387817

Pace Analytical Services Pennsylvania

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

Pace Analytical Services Indianapolis

7726 Moller Road, Indianapolis, IN 46268
Illinois Accreditation #: 200074
Indiana Drinking Water Laboratory #: C-49-06
Kansas/TNI Certification #: E-10177
Kentucky UST Agency Interest #: 80226
Kentucky WW Laboratory ID #: 98019
Michigan Drinking Water Laboratory #9050
Ohio VAP Certified Laboratory #: CL0065
Oklahoma Laboratory #: 9204
Texas Certification #: T104704355
Wisconsin Laboratory #: 999788130
USDA Soil Permit #: P330-19-00257

Pace Analytical Services Kansas

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

REPORT OF LABORATORY ANALYSIS

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

SAMPLE SUMMARY

Project: JEC INACTIVE BOTTOM ASH POND C
Pace Project No.: 60387817

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60387817001	**IBA-1-120621**	Water	12/06/21 13:50	12/07/21 08:20
60387817002	**IBA-2-120621**	Water	12/06/21 12:35	12/07/21 08:20
60387817003	**IBA-3-120621**	Water	12/06/21 11:30	12/07/21 08:20
60387817004	**IBA-4-120621**	Water	12/06/21 16:00	12/07/21 08:20
60387817005	**JEC-IBA-DUP-120621**	Water	12/06/21 12:35	12/07/21 08:20

Pace Analytical Services, LLC
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Lenexa, KS 66219
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SAMPLE ANALYTE COUNT

Project: JEC INACTIVE BOTTOM ASH POND C
Pace Project No.: 60387817

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60387817001	**IBA-1-120621**	EPA 200.7	MA1	4	PASI-K
		EPA 6010	JPK	1	PASI-I
		EPA 200.8	MRV	7	PASI-K
		EPA 245.1	CJH1	1	PASI-K
		EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 300.0	MAW	1	PASI-K
60387817002	**IBA-2-120621**	EPA 200.7	MA1	4	PASI-K
		EPA 6010	JPK	1	PASI-I
		EPA 200.8	MRV	7	PASI-K
		EPA 245.1	CJH1	1	PASI-K
		EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 300.0	MAW	1	PASI-K
60387817003	**IBA-3-120621**	EPA 200.7	MA1	4	PASI-K
		EPA 6010	JPK	1	PASI-I
		EPA 200.8	MRV	7	PASI-K
		EPA 245.1	CJH1	1	PASI-K
		EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 300.0	MAW	1	PASI-K
60387817004	**IBA-4-120621**	EPA 200.7	MA1	4	PASI-K
		EPA 6010	JPK	1	PASI-I
		EPA 200.8	MRV	7	PASI-K
		EPA 245.1	CJH1	1	PASI-K
		EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	JC2	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 300.0	MAW	1	PASI-K
60387817005	**JEC-IBA-DUP-120621**	EPA 200.7	MA1	4	PASI-K
		EPA 6010	JPK	1	PASI-I
		EPA 200.8	MRV	7	PASI-K
		EPA 245.1	CJH1	1	PASI-K
		EPA 903.1	SLC	1	PASI-PA

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

SAMPLE ANALYTE COUNT

Project: JEC INACTIVE BOTTOM ASH POND C
Pace Project No.: 60387817

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 904.0	JC2	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 300.0	MAW	1	PASI-K

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

Pace Analytical Services, LLC
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(913)599-5665

PROJECT NARRATIVE

Project: JEC INACTIVE BOTTOM ASH POND C
Pace Project No.: 60387817

Method: **EPA 200.7**
Description: 200.7 Metals, Total
Client: Evergy Kansas Central, Inc.
Date: February 17, 2022

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

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

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

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

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

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

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

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

Additional Comments:

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

PROJECT NARRATIVE

Project: JEC INACTIVE BOTTOM ASH POND C
Pace Project No.: 60387817

Method: **EPA 6010**
Description: 6010 MET ICP
Client: Evergy Kansas Central, Inc.
Date: February 17, 2022

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

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

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

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

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

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

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

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

Additional Comments:

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

PROJECT NARRATIVE

Project: JEC INACTIVE BOTTOM ASH POND C
Pace Project No.: 60387817

Method: **EPA 200.8**
Description: 200.8 MET ICPMS
Client: Evergy Kansas Central, Inc.
Date: February 17, 2022

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

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

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

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

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

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

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

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

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

Additional Comments:

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

PROJECT NARRATIVE

Project: JEC INACTIVE BOTTOM ASH POND C
Pace Project No.: 60387817

Method: **EPA 245.1**
Description: 245.1 Mercury
Client: Evergy Kansas Central, Inc.
Date: February 17, 2022

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

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

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

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

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

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

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

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

Additional Comments:

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

PROJECT NARRATIVE

Project: JEC INACTIVE BOTTOM ASH POND C
Pace Project No.: 60387817

Method: **EPA 903.1**
Description: 903.1 Radium 226
Client: Evergy Kansas Central, Inc.
Date: February 17, 2022

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

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

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

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

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

Additional Comments:

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

PROJECT NARRATIVE

Project: JEC INACTIVE BOTTOM ASH POND C
Pace Project No.: 60387817

Method: **EPA 904.0**
Description: 904.0 Radium 228
Client: Evergy Kansas Central, Inc.
Date: February 17, 2022

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

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

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

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

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

Additional Comments:

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

PROJECT NARRATIVE

Project: JEC INACTIVE BOTTOM ASH POND C
Pace Project No.: 60387817

Method: **Total Radium Calculation**
Description: Total Radium 228+226
Client: Evergy Kansas Central, Inc.
Date: February 17, 2022

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:

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

PROJECT NARRATIVE

Project: JEC INACTIVE BOTTOM ASH POND C
Pace Project No.: 60387817

Method: **EPA 300.0**
Description: 300.0 IC Anions 28 Days
Client: Evergy Kansas Central, Inc.
Date: February 17, 2022

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

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

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

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

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

QC Batch: 760324

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60387602004,60387817005

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

- MS (Lab ID: 3042110)
  - 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: JEC INACTIVE BOTTOM ASH POND C
Pace Project No.: 60387817

Sample: IBA-1-120621 **Lab ID: 60387817001** Collected: 12/06/21 13:50 Received: 12/07/21 08:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City							
Barium, Total Recoverable	**0.033**	mg/L	0.0050	1	12/13/21 14:50	12/17/21 17:25	7440-39-3	
Beryllium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	12/13/21 14:50	12/17/21 17:25	7440-41-7	
Chromium, Total Recoverable	**<0.0050**	mg/L	0.0050	1	12/13/21 14:50	12/17/21 17:25	7440-47-3	
Lead, Total Recoverable	**<0.010**	mg/L	0.010	1	12/13/21 14:50	12/17/21 17:25	7439-92-1	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis							
Lithium, Total Recoverable	**0.019**	mg/L	0.010	1	01/17/22 08:15	01/17/22 22:27	7439-93-2	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City							
Antimony, Total Recoverable	**<0.0010**	mg/L	0.0010	1	12/13/21 14:50	12/22/21 10:08	7440-36-0	
Arsenic, Total Recoverable	**<0.0010**	mg/L	0.0010	1	12/13/21 14:50	12/22/21 10:08	7440-38-2	
Cadmium, Total Recoverable	**<0.00050**	mg/L	0.00050	1	12/13/21 14:50	12/22/21 10:08	7440-43-9	
Cobalt, Total Recoverable	**0.0018**	mg/L	0.0010	1	12/13/21 14:50	12/22/21 10:08	7440-48-4	
Molybdenum, Total Recoverable	**0.0083**	mg/L	0.0010	1	12/13/21 14:50	12/22/21 10:08	7439-98-7	
Selenium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	12/13/21 14:50	12/22/21 10:08	7782-49-2	
Thallium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	12/13/21 14:50	12/22/21 10:08	7440-28-0	
245.1 Mercury	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1 Pace Analytical Services - Kansas City							
Mercury	**<0.00020**	mg/L	0.00020	1	12/14/21 16:08	12/15/21 12:37	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		12/08/21 14:33	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: JEC INACTIVE BOTTOM ASH POND C
Pace Project No.: 60387817

Sample: IBA-2-120621 **Lab ID: 60387817002** Collected: 12/06/21 12:35 Received: 12/07/21 08:20 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	12/13/21 14:50	12/17/21 17:31	7440-39-3	
Beryllium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	12/13/21 14:50	12/17/21 17:31	7440-41-7	
Chromium, Total Recoverable	**<0.0050**	mg/L	0.0050	1	12/13/21 14:50	12/17/21 17:31	7440-47-3	
Lead, Total Recoverable	**<0.010**	mg/L	0.010	1	12/13/21 14:50	12/17/21 17:31	7439-92-1	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis							
Lithium, Total Recoverable	**0.023**	mg/L	0.010	1	01/17/22 08:15	01/17/22 22:29	7439-93-2	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City							
Antimony, Total Recoverable	**<0.0010**	mg/L	0.0010	1	12/13/21 14:50	12/22/21 10:24	7440-36-0	
Arsenic, Total Recoverable	**<0.0010**	mg/L	0.0010	1	12/13/21 14:50	12/22/21 10:24	7440-38-2	
Cadmium, Total Recoverable	**<0.00050**	mg/L	0.00050	1	12/13/21 14:50	12/22/21 10:24	7440-43-9	
Cobalt, Total Recoverable	**<0.0010**	mg/L	0.0010	1	12/13/21 14:50	12/22/21 10:24	7440-48-4	
Molybdenum, Total Recoverable	**0.0022**	mg/L	0.0010	1	12/13/21 14:50	12/22/21 10:24	7439-98-7	
Selenium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	12/13/21 14:50	12/22/21 10:24	7782-49-2	
Thallium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	12/13/21 14:50	12/22/21 10:24	7440-28-0	
245.1 Mercury	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1 Pace Analytical Services - Kansas City							
Mercury	**<0.00020**	mg/L	0.00020	1	12/14/21 16:08	12/15/21 12:44	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		12/08/21 14:46	16984-48-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(913)599-5665

ANALYTICAL RESULTS

Project: JEC INACTIVE BOTTOM ASH POND C
Pace Project No.: 60387817

Sample: IBA-3-120621 **Lab ID: 60387817003** Collected: 12/06/21 11:30 Received: 12/07/21 08:20 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	12/13/21 14:50	12/17/21 17:33	7440-39-3	
Beryllium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	12/13/21 14:50	12/17/21 17:33	7440-41-7	
Chromium, Total Recoverable	**<0.0050**	mg/L	0.0050	1	12/13/21 14:50	12/17/21 17:33	7440-47-3	
Lead, Total Recoverable	**<0.010**	mg/L	0.010	1	12/13/21 14:50	12/17/21 17:33	7439-92-1	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis							
Lithium, Total Recoverable	**0.023**	mg/L	0.010	1	01/17/22 08:15	01/17/22 22:31	7439-93-2	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City							
Antimony, Total Recoverable	**<0.0010**	mg/L	0.0010	1	12/13/21 14:50	12/22/21 10:28	7440-36-0	
Arsenic, Total Recoverable	**<0.0010**	mg/L	0.0010	1	12/13/21 14:50	12/22/21 10:28	7440-38-2	
Cadmium, Total Recoverable	**<0.00050**	mg/L	0.00050	1	12/13/21 14:50	12/22/21 10:28	7440-43-9	
Cobalt, Total Recoverable	**0.0014**	mg/L	0.0010	1	12/13/21 14:50	12/22/21 10:28	7440-48-4	
Molybdenum, Total Recoverable	**0.0022**	mg/L	0.0010	1	12/13/21 14:50	12/22/21 10:28	7439-98-7	
Selenium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	12/13/21 14:50	12/22/21 10:28	7782-49-2	
Thallium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	12/13/21 14:50	12/22/21 10:28	7440-28-0	
245.1 Mercury	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1 Pace Analytical Services - Kansas City							
Mercury	**<0.00020**	mg/L	0.00020	1	12/14/21 16:08	12/15/21 12:46	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		12/08/21 14:59	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: JEC INACTIVE BOTTOM ASH POND C
Pace Project No.: 60387817

Sample: IBA-4-120621 **Lab ID: 60387817004** Collected: 12/06/21 16:00 Received: 12/07/21 08:20 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	**0.020**	mg/L	0.0050	1	12/13/21 14:50	12/17/21 17:36	7440-39-3	
Beryllium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	12/13/21 14:50	12/17/21 17:36	7440-41-7	
Chromium, Total Recoverable	**<0.0050**	mg/L	0.0050	1	12/13/21 14:50	12/17/21 17:36	7440-47-3	
Lead, Total Recoverable	**<0.010**	mg/L	0.010	1	12/13/21 14:50	12/17/21 17:36	7439-92-1	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis							
Lithium, Total Recoverable	**0.038**	mg/L	0.010	1	01/17/22 08:15	01/17/22 22:33	7439-93-2	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City							
Antimony, Total Recoverable	**<0.0010**	mg/L	0.0010	1	12/13/21 14:50	12/22/21 10:31	7440-36-0	
Arsenic, Total Recoverable	**<0.0010**	mg/L	0.0010	1	12/13/21 14:50	12/22/21 10:31	7440-38-2	
Cadmium, Total Recoverable	**<0.00050**	mg/L	0.00050	1	12/13/21 14:50	12/22/21 10:31	7440-43-9	
Cobalt, Total Recoverable	**<0.0010**	mg/L	0.0010	1	12/13/21 14:50	12/22/21 10:31	7440-48-4	
Molybdenum, Total Recoverable	**0.0018**	mg/L	0.0010	1	12/13/21 14:50	12/22/21 10:31	7439-98-7	
Selenium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	12/13/21 14:50	12/22/21 10:31	7782-49-2	
Thallium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	12/13/21 14:50	12/22/21 10:31	7440-28-0	
245.1 Mercury	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1 Pace Analytical Services - Kansas City							
Mercury	**<0.00020**	mg/L	0.00020	1	12/14/21 16:08	12/15/21 12:48	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Fluoride	**0.49**	mg/L	0.20	1		12/08/21 15:13	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: JEC INACTIVE BOTTOM ASH POND C
Pace Project No.: 60387817

Sample: JEC-IBA-DUP-120621 **Lab ID: 60387817005** Collected: 12/06/21 12:35 Received: 12/07/21 08:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City							
Barium, Total Recoverable	**0.029**	mg/L	0.0050	1	12/13/21 14:50	12/17/21 17:38	7440-39-3	
Beryllium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	12/13/21 14:50	12/17/21 17:38	7440-41-7	
Chromium, Total Recoverable	**<0.0050**	mg/L	0.0050	1	12/13/21 14:50	12/17/21 17:38	7440-47-3	
Lead, Total Recoverable	**<0.010**	mg/L	0.010	1	12/13/21 14:50	12/17/21 17:38	7439-92-1	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis							
Lithium, Total Recoverable	**0.027**	mg/L	0.010	1	01/17/22 08:15	01/17/22 22:36	7439-93-2	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City							
Antimony, Total Recoverable	**<0.0010**	mg/L	0.0010	1	12/13/21 14:50	12/22/21 10:35	7440-36-0	
Arsenic, Total Recoverable	**<0.0010**	mg/L	0.0010	1	12/13/21 14:50	12/22/21 10:35	7440-38-2	
Cadmium, Total Recoverable	**<0.00050**	mg/L	0.00050	1	12/13/21 14:50	12/22/21 10:35	7440-43-9	
Cobalt, Total Recoverable	**<0.0010**	mg/L	0.0010	1	12/13/21 14:50	12/22/21 10:35	7440-48-4	
Molybdenum, Total Recoverable	**0.0023**	mg/L	0.0010	1	12/13/21 14:50	12/22/21 10:35	7439-98-7	
Selenium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	12/13/21 14:50	12/22/21 10:35	7782-49-2	
Thallium, Total Recoverable	**<0.0010**	mg/L	0.0010	1	12/13/21 14:50	12/22/21 10:35	7440-28-0	
245.1 Mercury	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1 Pace Analytical Services - Kansas City							
Mercury	**<0.00020**	mg/L	0.00020	1	12/14/21 16:08	12/15/21 12:53	7439-97-6	
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Fluoride	**0.26**	mg/L	0.20	1		12/09/21 09:35	16984-48-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: JEC INACTIVE BOTTOM ASH POND C
Pace Project No.: 60387817

QC Batch: 761455 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: 60387817001, 60387817002, 60387817003, 60387817004, 60387817005

METHOD BLANK: 3046828 Matrix: Water
Associated Lab Samples: 60387817001, 60387817002, 60387817003, 60387817004, 60387817005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/L	<0.00020	0.00020	12/15/21 12:16	

LABORATORY CONTROL SAMPLE: 3046829

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3046830 3046831

Parameter	Units	60387245002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/L	<0.048 ug/L	0.005	0.005	0.0047	0.0047	94	94	70-130	0	20	

MATRIX SPIKE SAMPLE: 3046832

Parameter	Units	60387817004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	<0.00020	0.005	0.0047	94	70-130	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: JEC INACTIVE BOTTOM ASH POND C
Pace Project No.: 60387817

QC Batch: 761401
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: 60387817001, 60387817002, 60387817003, 60387817004, 60387817005

METHOD BLANK: 3046694 Matrix: Water
Associated Lab Samples: 60387817001, 60387817002, 60387817003, 60387817004, 60387817005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Barium	mg/L	<0.0050	0.0050	12/17/21 17:16	
Beryllium	mg/L	<0.0010	0.0010	12/17/21 17:16	
Chromium	mg/L	<0.0050	0.0050	12/17/21 17:16	
Lead	mg/L	<0.010	0.010	12/17/21 17:16	

LABORATORY CONTROL SAMPLE: 3046695

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	mg/L	1	1.0	100	85-115	
Beryllium	mg/L	1	1.0	104	85-115	
Chromium	mg/L	1	1.0	102	85-115	
Lead	mg/L	1	1.0	101	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3046696 3046697

Parameter	Units	60387817001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	mg/L	0.033	1	1	1.1	1.1	102	102	70-130	0	20	
Beryllium	mg/L	<0.0010	1	1	1.0	1.0	102	101	70-130	1	20	
Chromium	mg/L	<0.0050	1	1	1.0	1.0	101	100	70-130	1	20	
Lead	mg/L	<0.010	1	1	1.0	1.0	101	100	70-130	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: JEC INACTIVE BOTTOM ASH POND C
Pace Project No.: 60387817

QC Batch: 761402
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: 60387817001, 60387817002, 60387817003, 60387817004, 60387817005

METHOD BLANK: 3046698 Matrix: Water
Associated Lab Samples: 60387817001, 60387817002, 60387817003, 60387817004, 60387817005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	mg/L	<0.0010	0.0010	12/22/21 10:02	
Arsenic	mg/L	<0.0010	0.0010	12/22/21 10:02	
Cadmium	mg/L	<0.00050	0.00050	12/22/21 10:02	
Cobalt	mg/L	<0.0010	0.0010	12/22/21 10:02	
Molybdenum	mg/L	<0.0010	0.0010	12/22/21 10:02	
Selenium	mg/L	<0.0010	0.0010	12/22/21 10:02	
Thallium	mg/L	<0.0010	0.0010	12/22/21 10:02	

LABORATORY CONTROL SAMPLE: 3046699

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.04	0.041	101	85-115	
Arsenic	mg/L	0.04	0.041	102	85-115	
Cadmium	mg/L	0.04	0.041	103	85-115	
Cobalt	mg/L	0.04	0.039	96	85-115	
Molybdenum	mg/L	0.04	0.041	102	85-115	
Selenium	mg/L	0.04	0.041	104	85-115	
Thallium	mg/L	0.04	0.038	95	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3046700 3046701

Parameter	Units	60387817001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/L	<0.0010	0.04	0.04	0.039	0.039	98	98	70-130	0	20	
Arsenic	mg/L	<0.0010	0.04	0.04	0.041	0.041	101	101	70-130	1	20	
Cadmium	mg/L	<0.00050	0.04	0.04	0.038	0.038	94	94	70-130	0	20	
Cobalt	mg/L	0.0018	0.04	0.04	0.038	0.038	92	91	70-130	1	20	
Molybdenum	mg/L	0.0083	0.04	0.04	0.051	0.050	106	105	70-130	1	20	
Selenium	mg/L	<0.0010	0.04	0.04	0.038	0.038	96	95	70-130	1	20	
Thallium	mg/L	<0.0010	0.04	0.04	0.040	0.040	100	100	70-130	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: JEC INACTIVE BOTTOM ASH POND C
Pace Project No.: 60387817

QC Batch: 658744 | Analysis Method: EPA 6010
QC Batch Method: EPA 3010 | Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 60387817001, 60387817002, 60387817003, 60387817004, 60387817005

METHOD BLANK: 3035292 Matrix: Water
Associated Lab Samples: 60387817001, 60387817002, 60387817003, 60387817004, 60387817005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lithium	mg/L	<0.010	0.010	01/17/22 21:55	

LABORATORY CONTROL SAMPLE: 3035293

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: 3035294 3035295

Parameter	Units	60387769003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lithium	mg/L	0.046	1	1	1.0	1.1	98	108	75-125	9	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: JEC INACTIVE BOTTOM ASH POND C
Pace Project No.: 60387817

QC Batch: 760323 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: 60387817001, 60387817002, 60387817003, 60387817004

METHOD BLANK: 3042101 Matrix: Water
Associated Lab Samples: 60387817001, 60387817002, 60387817003, 60387817004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Fluoride	mg/L	<0.20	0.20	12/08/21 08:37	

METHOD BLANK: 3044602 Matrix: Water
Associated Lab Samples: 60387817001, 60387817002, 60387817003, 60387817004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Fluoride	mg/L	<0.20	0.20	12/09/21 19:49	

LABORATORY CONTROL SAMPLE: 3042102

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	2.5	2.5	101	90-110	

LABORATORY CONTROL SAMPLE: 3044603

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	2.5	2.5	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3042103 3042104

Parameter	Units	60387774001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Fluoride	mg/L	ND	12.5	12.5	12.9	12.9	103	104	80-120	0	15	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: JEC INACTIVE BOTTOM ASH POND C
Pace Project No.: 60387817

QC Batch: 760324
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: 60387817005

METHOD BLANK: 3042106 Matrix: Water
Associated Lab Samples: 60387817005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Fluoride	mg/L	<0.20	0.20	12/08/21 08:46	

METHOD BLANK: 3044600 Matrix: Water
Associated Lab Samples: 60387817005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Fluoride	mg/L	<0.20	0.20	12/09/21 08:44	

LABORATORY CONTROL SAMPLE: 3044601

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3042108 3042109

Parameter	Units	60387817005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Fluoride	mg/L	0.26	2.5	2.5	2.6	2.7	95	97	80-120	2	15	

MATRIX SPIKE SAMPLE: 3042110

Parameter	Units	60387602004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	ND	2.5	1.6	64	80-120	M1

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REPORT OF LABORATORY ANALYSIS

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(913)599-5665

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: JEC INACTIVE BOTTOM ASH POND C
Pace Project No.: 60387817

Sample: IBA-1-120621 **Lab ID: 60387817001** Collected: 12/06/21 13:50 Received: 12/07/21 08:20 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	**0.514 ± 0.536 (0.801) C:NA T:96%**	pCi/L	01/22/22 12:52	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.15 ± 0.656 (1.20) C:60% T:90%**	pCi/L	01/19/22 14:32	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.66 ± 1.19 (2.00)**	pCi/L	01/24/22 11:12	7440-14-4	

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: JEC INACTIVE BOTTOM ASH POND C
Pace Project No.: 60387817

Sample: IBA-2-120621 **Lab ID: 60387817002** Collected: 12/06/21 12:35 Received: 12/07/21 08:20 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	**0.101 ± 0.324 (0.625) C:NA T:96%**	pCi/L	01/22/22 12:52	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.648 ± 0.536 (1.07) C:64% T:92%**	pCi/L	01/19/22 14:32	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.749 ± 0.860 (1.70)**	pCi/L	01/24/22 11:12	7440-14-4	

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(913)599-5665

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: JEC INACTIVE BOTTOM ASH POND C
Pace Project No.: 60387817

Sample: IBA-3-120621 **Lab ID: 60387817003** Collected: 12/06/21 11:30 Received: 12/07/21 08:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.179 ± 0.374 (0.842) C:NA T:101%**	pCi/L	01/22/22 12:52	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**-0.140 ± 0.481 (1.15) C:67% T:89%**	pCi/L	01/19/22 14:32	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.000 ± 0.855 (1.99)**	pCi/L	01/24/22 11:12	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: JEC INACTIVE BOTTOM ASH POND C
Pace Project No.: 60387817

Sample: IBA-4-120621 **Lab ID: 60387817004** Collected: 12/06/21 16:00 Received: 12/07/21 08:20 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	**0.870 ± 0.769 (1.12) C:NA T:89%**	pCi/L	01/22/22 12:52	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.999 ± 0.530 (0.972) C:67% T:89%**	pCi/L	01/19/22 14:30	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.87 ± 1.30 (2.09)**	pCi/L	01/24/22 11:12	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: JEC INACTIVE BOTTOM ASH POND C
Pace Project No.: 60387817

Sample: JEC-IBA-DUP-120621 **Lab ID: 60387817005** Collected: 12/06/21 12:35 Received: 12/07/21 08:20 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	**0.413 ± 0.369 (0.474) C:NA T:101%**	pCi/L	01/22/22 12:52	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.811 ± 0.529 (1.03) C:69% T:85%**	pCi/L	01/19/22 14:30	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.22 ± 0.898 (1.50)**	pCi/L	01/24/22 11:12	7440-14-4	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: JEC INACTIVE BOTTOM ASH POND C
Pace Project No.: 60387817

QC Batch: 478385
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: 60387817001, 60387817002, 60387817003, 60387817004, 60387817005

METHOD BLANK: 2312053 Matrix: Water
Associated Lab Samples: 60387817001, 60387817002, 60387817003, 60387817004, 60387817005

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.240 ± 0.282 (0.587) C:65% T:87%	pCi/L	01/19/22 11:27	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: JEC INACTIVE BOTTOM ASH POND C
Pace Project No.: 60387817

QC Batch: 478384
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: 60387817001, 60387817002, 60387817003, 60387817004, 60387817005

METHOD BLANK: 2312052 Matrix: Water
Associated Lab Samples: 60387817001, 60387817002, 60387817003, 60387817004, 60387817005

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.221 ± 0.347 (0.581) C:NA T:98%	pCi/L	01/22/22 12:52	

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALIFIERS

Project: JEC INACTIVE BOTTOM ASH POND C
Pace Project No.: 60387817

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

Act - Activity

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

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

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

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: JEC INACTIVE BOTTOM ASH POND C
Pace Project No.: 60387817

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60387817001	IBA-1-120621	EPA 200.7	761401	EPA 200.7	761543
60387817002	IBA-2-120621	EPA 200.7	761401	EPA 200.7	761543
60387817003	IBA-3-120621	EPA 200.7	761401	EPA 200.7	761543
60387817004	IBA-4-120621	EPA 200.7	761401	EPA 200.7	761543
60387817005	JEC-IBA-DUP-120621	EPA 200.7	761401	EPA 200.7	761543
60387817001	IBA-1-120621	EPA 3010	658744	EPA 6010	658883
60387817002	IBA-2-120621	EPA 3010	658744	EPA 6010	658883
60387817003	IBA-3-120621	EPA 3010	658744	EPA 6010	658883
60387817004	IBA-4-120621	EPA 3010	658744	EPA 6010	658883
60387817005	JEC-IBA-DUP-120621	EPA 3010	658744	EPA 6010	658883
60387817001	IBA-1-120621	EPA 200.8	761402	EPA 200.8	761544
60387817002	IBA-2-120621	EPA 200.8	761402	EPA 200.8	761544
60387817003	IBA-3-120621	EPA 200.8	761402	EPA 200.8	761544
60387817004	IBA-4-120621	EPA 200.8	761402	EPA 200.8	761544
60387817005	JEC-IBA-DUP-120621	EPA 200.8	761402	EPA 200.8	761544
60387817001	IBA-1-120621	EPA 245.1	761455	EPA 245.1	761833
60387817002	IBA-2-120621	EPA 245.1	761455	EPA 245.1	761833
60387817003	IBA-3-120621	EPA 245.1	761455	EPA 245.1	761833
60387817004	IBA-4-120621	EPA 245.1	761455	EPA 245.1	761833
60387817005	JEC-IBA-DUP-120621	EPA 245.1	761455	EPA 245.1	761833
60387817001	IBA-1-120621	EPA 903.1	478384		
60387817002	IBA-2-120621	EPA 903.1	478384		
60387817003	IBA-3-120621	EPA 903.1	478384		
60387817004	IBA-4-120621	EPA 903.1	478384		
60387817005	JEC-IBA-DUP-120621	EPA 903.1	478384		
60387817001	IBA-1-120621	EPA 904.0	478385		
60387817002	IBA-2-120621	EPA 904.0	478385		
60387817003	IBA-3-120621	EPA 904.0	478385		
60387817004	IBA-4-120621	EPA 904.0	478385		
60387817005	JEC-IBA-DUP-120621	EPA 904.0	478385		
60387817001	IBA-1-120621	Total Radium Calculation	480450		
60387817002	IBA-2-120621	Total Radium Calculation	480450		
60387817003	IBA-3-120621	Total Radium Calculation	480450		
60387817004	IBA-4-120621	Total Radium Calculation	480450		
60387817005	JEC-IBA-DUP-120621	Total Radium Calculation	480450		
60387817001	IBA-1-120621	EPA 300.0	760323		
60387817002	IBA-2-120621	EPA 300.0	760323		
60387817003	IBA-3-120621	EPA 300.0	760323		
60387817004	IBA-4-120621	EPA 300.0	760323		
60387817005	JEC-IBA-DUP-120621	EPA 300.0	760324		

REPORT OF LABORATORY ANALYSIS

Pace Analytical
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Sample Condition Upon Receipt

WO# : 60387817

60387817

Client Name: Evergy

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

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

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

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

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

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

Date and initials of person examining contents: Sm 12/7/21

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# 603173	☒Yes ☐No ☐N/A	List sample IDs, volumes, lot #'s of preservative and the date/time added.
Cyanide water sample checks: Lead acetate strip turns dark? (Record only)	☐Yes ☐No	
Potassium iodide test strip turns blue/purple? (Preserve)	☐Yes ☐No	
Trip Blank present:	☐Yes ☐No ☒N/A	
Headspace in VOA vials (>6mm):	☐Yes ☐No ☒N/A	
Samples from USDA Regulated Area: State:	☐Yes ☒No ☐N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	☐Yes ☒No ☐N/A	

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

Pace Analytical
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A
Required Client Information:

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

Section B
Required Project Information:

Report To:	Melissa Michels, Samantha Kaney, Danielle Zinsm
Copy To:	Jared Morrison, Jake Humphrey, Laura Hines
	JD Schlegel, Brandon Will, Sarah Hazelwood
Purchase Order No.:	10JEC-0000047747
Project Name:	JEC Inactive Bottom Ash Pond CCR
Project Number:	

Section C
Invoice Information:

Attention:	Accounts Payable
Company Name:	EVERGY KANSAS CENTRAL, INC
Address:	SEE SECTION A
Pace Quote Reference:	
Pace Project Manager:	Alice Spiller, 913-563-1403
Pace Profile #:	9657, 2

REGULATORY AGENCY

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

Site Location STATE: KS

Section D
Required Client Information

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

Valid Matrix Codes

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

ITEM #	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 Metals*	200.8 Total Metals**	300: F	245.1 Hg	6010 Total Metals***	Radium 226	Radium 228	Total Radium	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																		Y/N	N	N	N	N	N	N	N	N		6038581
1	IBA-1-120621	WT	G	12/6/21	1330	12/06/21	1350	-	4	1		3							X	X	X	X	X	X	X	X		
2	IBA-2-120621	WT	G	12/6/21	1220	12/06/21	1235	-	4	1		3							X	X	X	X	X	X	X	X		
3	IBA-3-120621	WT	G	12/6/21	1105	12/06/21	1130	-	4	1		3							X	X	X	X	X	X	X	X		
4	IBA-4-120621	WT	G	12/6/21	1535	12/06/21	1600	-	4	1		3							X	X	X	X	X	X	X	X		
5	JEC IBA-DUP-120621	WT	G	12/6/21	1220	12/06/21	1235	-	4	1		3							X	X	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			
200.7 Total Metals*: Ba, Be, Cr, Pb (4 metals)	Matt Vanderputten / SCS	12/6/21	820	Pace	12/7	820	4.0	Y	Y	Y
200.8 Total Metals**: Sb, As, Cd, Co, Mo, Se, Tl (7 metals)										
6010 Total Metals***: Li (1 metal)										
(2) 1L nitric preserved for all Radium analysis (Pace PM-see profile notes)										
							Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Matt Vanerputten

SIGNATURE of SAMPLER: Matt VanderPutten

DATE Signed (MM/DD/YY): 12/07/21 ~~12/6/21~~

*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.

COC PAGE 1 of 1

SBS
DI
MeOH (only)
BK
Kit

Client: Evergy

Site: JEC Inactive Bottom

Sample Container Count

Profile # 9657 Line 2

Notes 2BP1N- SI-38RAD, SI-38RAD02

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

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

Internal Transfer Chain of Custody

WO# : 30456499

30456499

☐ Samples Pre-Logged into eCOC.

State Of Origin: KS

Cert. Needed: ☐ Yes

Workorder: 60387817 Workorder Name: JEC INACTIVE BOTTOM ASH POND C Owner Received Date: 12/7/2021 Results Requested By: 12/21/2021

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

						Preserved Containers						Requested Analysis											
Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	HNO3						Radium 226	Total Radium	Radium 228									LAB USE ONLY
1	IBA-1-120621	PS	12/6/2021 13:50	60387817001	Water	2						X	X	X									001
2	IBA-2-120621	PS	12/6/2021 12:35	60387817002	Water	2						X	X	X									002
3	IBA-3-120621	PS	12/6/2021 11:30	60387817003	Water	2						X	X	X									003
4	IBA-4-120621	PS	12/6/2021 16:00	60387817004	Water	2						X	X	X									004
5	JEC-IBA-DUP-120621	PS	12/6/2021 12:35	60387817005	Water	2						X	X	X									005

Transfers	Released By	Date/Time	Received By	Date/Time
1	Lynn Pace	12/7/21 1500		12/8/21 1000
2				
3				

Comments

****PLEASE, INCLUDE QC SHEETS********

Profile 11795

Cooler Temperature on Receipt N/A °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.*

Pittsburgh Lab Sample Condition Upon Receipt

Pace Analytical

Client Name: Pace KS

Project # 30456499

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

Label #

Tracking #: 5333 8757 1138

LIMS Login

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

Thermometer Used N/A Type of Ice: Wet Blue (None)

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

Temp should be above freezing to 6°C

Comments:	Yes	No	N/A	pH paper Lot# 10D2811 / Date and Initials of person examining contents: ET 12-27-21
Chain of Custody Present:	✓			1.
Chain of Custody Filled Out:	✓			2.
Chain of Custody Relinquished:	✓			3.
Sampler Name & Signature on COC:		✓		4.
Sample Labels match COC:	✓			5.
-Includes date/time/ID Matrix: WT				
Samples Arrived within Hold Time:	✓			6.
Short Hold Time Analysis (<72hr remaining):		✓		7.
Rush Turn Around Time Requested:		✓		8.
Sufficient Volume:	✓			9.
Correct Containers Used:	✓			10.
-Pace Containers Used:	✓			
Containers Intact:	✓			11.
Orthophosphate field filtered			✓	12.
Hex Cr Aqueous sample field filtered			✓	13.
Organic Samples checked for dechlorination:			✓	14.
Filtered volume received for Dissolved tests			✓	15.
All containers have been checked for preservation. exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, Non-aqueous matrix	✓			16. pH22
All containers meet method preservation requirements.	✓			Initial when completed ET / Date/time of preservation / Lot # of added preservative
Headspace in VOA Vials (>6mm):			✓	17.
Trip Blank Present:		✓		18.
Trip Blank Custody Seals Present		✓		
Rad Samples Screened < 0.5 mrem/hr	✓			Initial when completed: ET / Date: 12-27-21 / Survey Meter SN: 1563

Client Notification/ Resolution:

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

Comments/ Resolution: _____

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

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

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

WO# : 50307146

50307146

Chain of Custody

profile 10200, line 1 6010 W

Pace Analytical®
www.pacelabs.com

☐ Samples Pre-Logged into eCOC.

State Of Origin: KS

Cert. Needed: [X] Yes ☐ No

Workorder: 60387817 **Workorder Name:** JEC INACTIVE BOTTOM ASH POND C **Owner Received Date:** 12/7/2021 **Results Requested By:** 1/21/2022

Report To	Subcontract To
Alice Spiller Pace Analytical Kansas 9608 Loiret Blvd. Lenexa, KS 66219 Phone (913)599-5665	Pace Analytical Indianapolis 7726 Moller Road Indianapolis, IN 46268 Phone (317)875-5894

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: HNO3						Requested Analysis: 6010 Li (<0.010mg/L)												LAB USE ONLY
1	IBA-1-120621	PS	12/6/2021 13:50	60387817001	Water	1						X												
2	IBA-2-120621	PS	12/6/2021 12:35	60387817002	Water	1						X												
3	IBA-3-120621	PS	12/6/2021 11:30	60387817003	Water	1						X												
4	IBA-4-120621	PS	12/6/2021 16:00	60387817004	Water	1						X												
5	JEC-IBA-DUP-120621	PS	12/6/2021 12:35	60387817005	Water	1						X												

Transfers	Released By	Date/Time	Received By	Date/Time
1	[signature] Pace	1/13/22 1800	FedEx	
2	FE		[signature]	1/14/22 835
3				

Comments

reporting limit <0.010mg/L

calcium is high in samples

Cooler Temperature on Receipt 0.0 °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.

F-IN-Q-290-rev.21, 02Feb2021

Pace Analytical®

SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: BC 1020 1/4/22

1. **Courier:** ☒ FED EX ☐ UPS ☐ CLIENT ☐ PACE ☐ USPS ☐ OTHER _____

2. **Custody Seal on Cooler/Box Present:** ☒ Yes ☐ No

(If yes)Seals Intact: ☒ Yes ☐ No **(leave blank if no seals were present)**

3. **Thermometer:** 1 2 3 4 5 6 A (B) C D E F

4. **Cooler Temperature:** 0.3/0.6
Temp should be above freezing to 6°C **(Initial/Corrected)**

5. **Packing Material:** ☐ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other _____

6. **Ice Type:** ☒ Wet ☐ Blue ☐ None

7. **If temp. is over 6°C or under 0°C, was the PM notified?:** ☐ Yes ☐ No

All discrepancies will be written out in the comments section below.

	Yes	No		Yes	No	N/A
USDA Regulated Soils? (HI, ID, NY, WA, OR,CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		✓	All containers needing acid/base pres. Have been CHECKED?: **exceptions: VOA, coliform, LLHg, O&G, and any container with a septum cap or preserved with HCl.** **Circle: HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9)** Any non-conformance to pH recommendations will be noted on the container count form	✓		
Short Hold Time Analysis (48 hours or less)? Analysis:		✓				
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:			Present	Absent	N/A
			Residual Chlorine Check (SVOC 625 Pest/PCB 608)			✓
Rush TAT Requested (4 days or less):		✓	Residual Chlorine Check (Total/Amenable/Free Cyanide)			✓
Custody Signatures Present?	✓		Headspace Wisconsin Sulfide?			✓
Containers Intact?:	✓		Headspace in VOA Vials (>6mm): See Containter Count form for details	Present	Absent	No VOA Vials Sent ✓
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	✓		Trip Blank Present?		✓	
Extra labels on Terracore Vials? (soils only)		✓	Trip Blank Custody Seals?:			✓

COMMENTS:

COC PAGE 1 **of** 1

Sample Container Count

** Place a RED dot on containers that are out of conformance **

COC Line Item	WGFU	SBS / DI / MeOH (only) / BK / Kit — R	DG9H VG9H	VOA VIAL HS (>6mm)	VG9U	DG9U	VG9T	AG0U	AG1H	AG1U	AG2U	AG3S	AG3SF	AG3C	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	Syringe Kit			Matrix	HNO3/ H2SO4 pH <2	NaOH/ ZNAc pH >9	NaOH pH>10
1																1												WT	✓		
2																↓												↓	↓		
3																↓												↓	↓		
4																↓												↓	↓		
5																↓												↓	↓		
6																															
7																															
8																															
9																															
10																															
11																															
12																															

Container Codes

Glass

DG9H	40mL HCl amber voa vial	BG1T	1L Na Thiosulfate clear glass
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass
DG9S	40mL H2SO4 amber vial	BG3H	250mL HCl Clear Glass
DG9T	40mL Na Thio amber vial	BG3U	250mL Unpres Clear Glass
DG9U	40mL unpreserved amber vial	AG0U	100mL unpres amber glass
VG9H	40mL HCl clear vial	AG1H	1L HCl amber glass
VG9T	40mL Na Thio. clear vial	AG1S	1L H2SO4 amber glass
VG9U	40mL unpreserved clear vial	AG1T	1L Na Thiosulfate amber glass
I	40mL w/hexane wipe vial	AG1U	1liter unpres amber glass
WGKU	8oz unpreserved clear jar	AG2N	500mL HNO3 amber glass
WGFU	4oz clear soil jar	AG2S	500mL H2SO4 amber glass
JGFU	4oz unpreserved amber wide	AG2U	500mL unpres amber glass
CG3H	250mL clear glass HCl	AG3S	250mL H2SO4 amber glass
BG1H	1L HCl clear glass	AG3SF	250mL H2SO4 amb glass -field filtered
BG1S	1L H2SO4 clear glass	AG3U	250mL unpres amber glass
GN	General	AG3C	250mL NaOH amber glass

Plastic / Misc.

BP1B	1L NaOH plastic
BP1N	1L HNO3 plastic
BP1S	1L H2SO4 plastic
BP1U	1L unpreserved plastic
BP1Z	1L NaOH, Zn, Ac
BP2N	500mL HNO3 plastic
BP2C	500mL NaOH plastic
BP2S	500mL H2SO4 plastic
BP2U	500mL unpreserved plastic
BP2Z	500mL NaOH, Zn Ac
BP3B	250mL NaOH plastic
BP3N	250mL HNO3 plastic
BP3F	250mL HNO3 plastic-field filtered
BP3U	250mL unpreserved plastic
BP3S	250mL H2SO4 plastic
BP3Z	250mL NaOH, ZnAc plastic

BP4U	125mL unpreserved plastic
BP4N	125mL HNO3 plastic
BP4S	125mL H2SO4 plastic

Syringe Kit	LL Cr+6 sampling kit

AF	Air Filter
C	Air Cassettes
R	Terracore kit
SP5T	120mL Coliform Na Thiosulfate
U	Summa Can
ZPLC	Ziploc Bag

WT		Water	
SL		Solid	
NAL	OL	Non-aqueous liquid	Oil
WP		Wipe	

Quality Control Sample Performance Assessment

Pace Analytical™ www.pacelabs.com

Test:	Ra-226
Analyst:	SLC
Date:	1/14/2022
Batch ID:	64424
Matrix:	DW

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2312052
MB concentration:	0.221
M/B Counting Uncertainty:	0.346
MB MDC:	0.581
MB Numerical Performance Indicator:	1.25
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS64424	LCSD64424
Count Date:	1/22/2022	1/22/2022
Spike I.D.:	21-040	21-040
Spike Concentration (pCi/mL):	32.435	32.435
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.662	0.665
Target Conc. (pCi/L, g, F):	4.896	4.880
Uncertainty (Calculated):	0.230	0.229
Result (pCi/L, g, F):	5.047	5.167
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.993	1.117
Numerical Performance Indicator:	0.29	0.49
Percent Recovery:	103.07%	105.89%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	135%	135%
Lower % Recovery Limits:	73%	73%

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

Duplicate Sample Assessment		
Sample I.D.:	LCS64424	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD64424	
Sample Result (pCi/L, g, F):	5.047	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.993	
Sample Duplicate Result (pCi/L, g, F):	5.167	
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	1.117	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	-0.158	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	2.70%	
Duplicate Status vs Numerical Indicator:	N/A	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	32%	

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

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

Comments:

SLC 1/22/22

Qa 1/24/22

Quality Control Sample Performance Assessment

Pace Analytical™
www.pacelabs.com

Test:	Ra-228
Analyst:	JC2
Date:	1/16/2022
Worklist:	64425
Matrix:	WT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment	
MB Sample ID	2312053
MB concentration:	0.240
M/B 2 Sigma CSU:	0.282
MB MDC:	0.587
MB Numerical Performance Indicator:	1.67
MB Status vs Numerical Indicator:	Pass
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	Y
	LCS64425	LCSD64425
Count Date:	1/19/2022	1/19/2022
Spike I.D.:	21-029	21-029
Decay Corrected Spike Concentration (pCi/mL):	36.656	36.656
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.815	0.810
Target Conc. (pCi/L, g, F):	4.499	4.523
Uncertainty (Calculated):	0.220	0.222
Result (pCi/L, g, F):	3.999	4.503
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	0.935	1.014
Numerical Performance Indicator:	-1.02	-0.04
Percent Recovery:	88.87%	99.56%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	135%	135%
Lower % Recovery Limits:	60%	60%

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

Duplicate Sample Assessment		
Sample I.D.:	LCS64425	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.	LCSD64425	
Sample Result (pCi/L, g, F):	3.999	
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.935	
Sample Duplicate Result (pCi/L, g, F):	4.503	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.014	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	-0.717	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	11.35%	
Duplicate Status vs Numerical Indicator:	Pass	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	36%	

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

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

Comments:

1/20/22 JC 1/20/22

Attachment 2-3

March 2022 Semi-Annual Sampling Event
Laboratory Analytical Report

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

May 17, 2022

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

RE: Project: JEC INACTIVE BOTTOM ASH POND C
Pace Project No.: 60394852

Dear Melissa Michels:

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

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

- Pace Analytical Services - Kansas City

REVISED 3/2/22 to include 200.7 metals requested.

REVISED_2

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

Sincerely,

Alice Spiller

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

Enclosures

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

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

CERTIFICATIONS

Project: JEC INACTIVE BOTTOM ASH POND C
Pace Project No.: 60394852

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

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

SAMPLE SUMMARY

Project: JEC INACTIVE BOTTOM ASH POND C
Pace Project No.: 60394852

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60394852001	**IBA-1-030922**	Water	03/09/22 18:20	03/10/22 15:00
60394852002	**IBA-2-030922**	Water	03/09/22 18:40	03/10/22 15:00
60394852003	**IBA-3-030922**	Water	03/09/22 17:45	03/10/22 15:00
60394852004	**IBA-4-030922**	Water	03/09/22 17:25	03/10/22 15:00
60394852005	**DUP-IBA-030922**	Water	03/09/22 18:40	03/10/22 15:00

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

SAMPLE ANALYTE COUNT

Project: JEC INACTIVE BOTTOM ASH POND C
Pace Project No.: 60394852

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60394852001	**IBA-1-030922**	EPA 200.7	JLH	3	PASI-K
		EPA 6010	JLH	1	PASI-K
		EPA 200.8	JGP	2	PASI-K
		SM 2540C	JDS	1	PASI-K
		SM 4500-H+B	SK	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
60394852002	**IBA-2-030922**	EPA 200.7	JLH	3	PASI-K
		EPA 6010	JLH	1	PASI-K
		EPA 200.8	JGP	2	PASI-K
		SM 2540C	JDS	1	PASI-K
		SM 4500-H+B	SK	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
60394852003	**IBA-3-030922**	EPA 200.7	JLH	3	PASI-K
		EPA 6010	JLH	1	PASI-K
		EPA 200.8	JGP	2	PASI-K
		SM 2540C	JDS	1	PASI-K
		SM 4500-H+B	SK	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
60394852004	**IBA-4-030922**	EPA 200.7	JLH	3	PASI-K
		EPA 6010	JLH	1	PASI-K
		EPA 200.8	JGP	3	PASI-K
		SM 2540C	JDS	1	PASI-K
		SM 4500-H+B	SK	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
60394852005	**DUP-IBA-030922**	EPA 200.7	JLH	3	PASI-K
		EPA 6010	JLH	1	PASI-K
		EPA 200.8	JGP	2	PASI-K
		SM 2540C	JDS	1	PASI-K
		SM 4500-H+B	SK	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K

PASI-K = Pace Analytical Services - Kansas City

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

PROJECT NARRATIVE

Project: JEC INACTIVE BOTTOM ASH POND C
Pace Project No.: 60394852

Date: May 17, 2022

5/17/22 Amended report to reflect DUP collection time of 18:40 to match chain of custody.

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

PROJECT NARRATIVE

Project: JEC INACTIVE BOTTOM ASH POND C
Pace Project No.: 60394852

Method: **EPA 200.7**
Description: 200.7 Metals, Total
Client: Evergy Kansas Central, Inc.
Date: May 17, 2022

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

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

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

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

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

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

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

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

QC Batch: 775828

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

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

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

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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

PROJECT NARRATIVE

Project: JEC INACTIVE BOTTOM ASH POND C
Pace Project No.: 60394852

Method: **EPA 6010**
Description: 6010 MET ICP
Client: Evergy Kansas Central, Inc.
Date: May 17, 2022

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

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

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

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

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

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

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

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

QC Batch: 776740

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60394852002

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

- MSD (Lab ID: 3099659)
  - Lithium

R1: RPD value was outside control limits.

- MSD (Lab ID: 3099659)
  - Lithium

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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9608 Loiret Blvd.
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(913)599-5665

PROJECT NARRATIVE

Project: JEC INACTIVE BOTTOM ASH POND C
Pace Project No.: 60394852

Method: **EPA 200.8**
Description: 200.8 MET ICPMS
Client: Evergy Kansas Central, Inc.
Date: May 17, 2022

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

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

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

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

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

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

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

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

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

Additional Comments:

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

PROJECT NARRATIVE

Project: JEC INACTIVE BOTTOM ASH POND C
Pace Project No.: 60394852

Method: **SM 2540C**
Description: 2540C Total Dissolved Solids
Client: Evergy Kansas Central, Inc.
Date: May 17, 2022

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.

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

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

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

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

Additional Comments:

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Lenexa, KS 66219
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PROJECT NARRATIVE

Project: JEC INACTIVE BOTTOM ASH POND C
Pace Project No.: 60394852

Method: **SM 4500-H+B**
Description: 4500H+ pH, Electrometric
Client: Evergy Kansas Central, Inc.
Date: May 17, 2022

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-IBA-030922 (Lab ID: 60394852005)
- IBA-1-030922 (Lab ID: 60394852001)
- IBA-2-030922 (Lab ID: 60394852002)
- IBA-3-030922 (Lab ID: 60394852003)
- IBA-4-030922 (Lab ID: 60394852004)

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

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

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

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

Additional Comments:

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Lenexa, KS 66219
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PROJECT NARRATIVE

Project: JEC INACTIVE BOTTOM ASH POND C
Pace Project No.: 60394852

Method: **EPA 300.0**
Description: 300.0 IC Anions 28 Days
Client: Evergy Kansas Central, Inc.
Date: May 17, 2022

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

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

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

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

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

Additional Comments:

Analyte Comments:

QC Batch: 775525

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

- MS (Lab ID: 3095467)
  - Chloride
- MSD (Lab ID: 3095468)
  - Chloride

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

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ANALYTICAL RESULTS

Project: JEC INACTIVE BOTTOM ASH POND C
Pace Project No.: 60394852

Sample: IBA-1-030922 **Lab ID: 60394852001** Collected: 03/09/22 18:20 Received: 03/10/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City							
Barium, Total Recoverable	**0.033**	mg/L	0.0050	1	03/16/22 14:38	03/18/22 20:16	7440-39-3	
Boron, Total Recoverable	**0.38**	mg/L	0.10	1	03/16/22 14:38	03/18/22 20:16	7440-42-8	
Calcium, Total Recoverable	**318**	mg/L	1.0	5	03/16/22 14:38	03/18/22 19:18	7440-70-2	M1
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**<0.030**	mg/L	0.030	3	03/22/22 08:02	03/24/22 17:19	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	**0.0015**	mg/L	0.0010	1	03/17/22 11:25	03/19/22 10:17	7440-48-4	
Molybdenum, Total Recoverable	**0.0075**	mg/L	0.0010	1	03/17/22 11:25	03/19/22 10:17	7439-98-7	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City							
Total Dissolved Solids	**1460**	mg/L	20.0	1		03/16/22 15:16		
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		03/18/22 15:42		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Chloride	**128**	mg/L	50.0	50		03/16/22 11:45	16887-00-6	
Fluoride	**0.23**	mg/L	0.20	1		03/15/22 19:00	16984-48-8	
Sulfate	**950**	mg/L	50.0	50		03/16/22 11:45	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: JEC INACTIVE BOTTOM ASH POND C
Pace Project No.: 60394852

Sample: IBA-2-030922 **Lab ID: 60394852002** Collected: 03/09/22 18:40 Received: 03/10/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City							
Barium, Total Recoverable	**0.027**	mg/L	0.0050	1	03/16/22 14:38	03/18/22 20:29	7440-39-3	
Boron, Total Recoverable	**0.21**	mg/L	0.10	1	03/16/22 14:38	03/18/22 20:29	7440-42-8	
Calcium, Total Recoverable	**232**	mg/L	0.60	3	03/16/22 14:38	03/18/22 19:32	7440-70-2	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**<0.030**	mg/L	0.030	3	03/22/22 08:02	03/24/22 17:26	7439-93-2	M1,R1
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	03/17/22 11:25	03/19/22 10:20	7440-48-4	
Molybdenum, Total Recoverable	**0.0020**	mg/L	0.0010	1	03/17/22 11:25	03/19/22 10:20	7439-98-7	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City							
Total Dissolved Solids	**1240**	mg/L	13.3	1		03/16/22 15:16		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Kansas City							
pH at 25 Degrees C	**7.3**	Std. Units	0.10	1		03/18/22 15:44		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Chloride	**110**	mg/L	50.0	50		03/16/22 11:58	16887-00-6	
Fluoride	**0.30**	mg/L	0.20	1		03/15/22 19:53	16984-48-8	
Sulfate	**577**	mg/L	50.0	50		03/16/22 11:58	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: JEC INACTIVE BOTTOM ASH POND C
Pace Project No.: 60394852

Sample: IBA-3-030922 **Lab ID: 60394852003** Collected: 03/09/22 17:45 Received: 03/10/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City							
Barium, Total Recoverable	**0.019**	mg/L	0.0050	1	03/16/22 14:38	03/18/22 20:32	7440-39-3	
Boron, Total Recoverable	**0.28**	mg/L	0.10	1	03/16/22 14:38	03/18/22 20:32	7440-42-8	
Calcium, Total Recoverable	**269**	mg/L	0.60	3	03/16/22 14:38	03/18/22 19:35	7440-70-2	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**<0.030**	mg/L	0.030	3	03/22/22 08:02	03/24/22 17:28	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	**0.0012**	mg/L	0.0010	1	03/17/22 11:25	03/19/22 10:23	7440-48-4	
Molybdenum, Total Recoverable	**0.0020**	mg/L	0.0010	1	03/17/22 11:25	03/19/22 10:23	7439-98-7	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City							
Total Dissolved Solids	**1410**	mg/L	20.0	1		03/16/22 15:16		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Kansas City							
pH at 25 Degrees C	**7.3**	Std. Units	0.10	1		03/18/22 15:39		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Chloride	**115**	mg/L	50.0	50		03/16/22 12:12	16887-00-6	
Fluoride	**0.22**	mg/L	0.20	1		03/15/22 20:20	16984-48-8	
Sulfate	**709**	mg/L	50.0	50		03/16/22 12:12	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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Lenexa, KS 66219
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ANALYTICAL RESULTS

Project: JEC INACTIVE BOTTOM ASH POND C
Pace Project No.: 60394852

Sample: IBA-4-030922 **Lab ID: 60394852004** Collected: 03/09/22 17:25 Received: 03/10/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City							
Barium, Total Recoverable	**0.021**	mg/L	0.0050	1	03/16/22 14:38	03/18/22 20:34	7440-39-3	
Boron, Total Recoverable	**0.23**	mg/L	0.10	1	03/16/22 14:38	03/18/22 20:34	7440-42-8	
Calcium, Total Recoverable	**107**	mg/L	0.40	2	03/16/22 14:38	03/18/22 19:37	7440-70-2	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**0.033**	mg/L	0.010	1	03/22/22 08:02	03/24/22 14:22	7439-93-2	
200.8 MET ICPMS	Analytical Method: EPA 200.8 Preparation Method: EPA 200.8 Pace Analytical Services - Kansas City							
Chromium, Total Recoverable	**<1.0**	ug/L	1.0	1	03/17/22 11:25	03/19/22 10:29	7440-47-3	
Cobalt, Total Recoverable	**<0.0010**	mg/L	0.0010	1	03/17/22 11:25	03/19/22 10:29	7440-48-4	
Molybdenum, Total Recoverable	**0.0018**	mg/L	0.0010	1	03/17/22 11:25	03/19/22 10:29	7439-98-7	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City							
Total Dissolved Solids	**623**	mg/L	10.0	1		03/16/22 15:17		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Kansas City							
pH at 25 Degrees C	**7.3**	Std. Units	0.10	1		03/18/22 15:38		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Chloride	**18.2**	mg/L	1.0	1		03/15/22 20:47	16887-00-6	
Fluoride	**0.64**	mg/L	0.20	1		03/15/22 20:47	16984-48-8	
Sulfate	**159**	mg/L	20.0	20		03/16/22 12:26	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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9608 Loiret Blvd.
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(913)599-5665

ANALYTICAL RESULTS

Project: JEC INACTIVE BOTTOM ASH POND C
Pace Project No.: 60394852

Sample: DUP-IBA-030922 **Lab ID: 60394852005** Collected: 03/09/22 18:40 Received: 03/10/22 15:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7 Pace Analytical Services - Kansas City							
Barium, Total Recoverable	**0.028**	mg/L	0.0050	1	03/16/22 14:38	03/18/22 20:36	7440-39-3	
Boron, Total Recoverable	**0.21**	mg/L	0.10	1	03/16/22 14:38	03/18/22 20:36	7440-42-8	
Calcium, Total Recoverable	**234**	mg/L	0.60	3	03/16/22 14:38	03/18/22 19:39	7440-70-2	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Kansas City							
Lithium, Total Recoverable	**<0.030**	mg/L	0.030	3	03/22/22 08:02	03/24/22 17:30	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	03/17/22 11:25	03/19/22 10:39	7440-48-4	
Molybdenum, Total Recoverable	**0.0020**	mg/L	0.0010	1	03/17/22 11:25	03/19/22 10:39	7439-98-7	
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Kansas City							
Total Dissolved Solids	**1510**	mg/L	13.3	1		03/16/22 15:17		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B Pace Analytical Services - Kansas City							
pH at 25 Degrees C	**7.3**	Std. Units	0.10	1		03/18/22 15:34		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Chloride	**106**	mg/L	50.0	50		03/16/22 12:40	16887-00-6	
Fluoride	**0.31**	mg/L	0.20	1		03/15/22 21:13	16984-48-8	
Sulfate	**537**	mg/L	50.0	50		03/16/22 12:40	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: JEC INACTIVE BOTTOM ASH POND C
Pace Project No.: 60394852

QC Batch: 775828
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Total
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60394852001, 60394852002, 60394852003, 60394852004, 60394852005

METHOD BLANK: 3096622 Matrix: Water
Associated Lab Samples: 60394852001, 60394852002, 60394852003, 60394852004, 60394852005

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

LABORATORY CONTROL SAMPLE: 3096623

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3096624 3096625

Parameter	Units	60394852001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	mg/L	0.033	1	1	1.1	1.0	102	101	70-130	2	20	
Boron	mg/L	0.38	1	1	1.4	1.4	98	98	70-130	1	20	
Calcium	mg/L	318	10	10	323	320	56	25	70-130	1	20	M1

MATRIX SPIKE SAMPLE: 3096626

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

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: JEC INACTIVE BOTTOM ASH POND C
Pace Project No.: 60394852

QC Batch: 776076
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: 60394852001, 60394852002, 60394852003, 60394852004, 60394852005

METHOD BLANK: 3097414 Matrix: Water
Associated Lab Samples: 60394852001, 60394852002, 60394852003, 60394852004, 60394852005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chromium	ug/L	<1.0	1.0	03/19/22 10:12	
Cobalt	mg/L	<0.0010	0.0010	03/19/22 10:12	
Molybdenum	mg/L	<0.0010	0.0010	03/19/22 10:12	

LABORATORY CONTROL SAMPLE: 3097415

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chromium	ug/L	40	42.2	106	85-115	
Cobalt	mg/L	0.04	0.041	101	85-115	
Molybdenum	mg/L	0.04	0.042	104	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3097416 3097417

Parameter	Units	60394852004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chromium	ug/L	<1.0	40	40	39.8	39.7	99	99	70-130	0	20	
Cobalt	mg/L	<0.0010	0.04	0.04	0.035	0.035	88	89	70-130	1	20	
Molybdenum	mg/L	0.0018	0.04	0.04	0.042	0.042	101	100	70-130	0	20	

MATRIX SPIKE SAMPLE: 3097418

Parameter	Units	60394874001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chromium	ug/L	1.4	40	42.6	103	70-130	
Cobalt	mg/L	11.7 ug/L	0.04	0.050	95	70-130	
Molybdenum	mg/L	5.9 ug/L	0.04	0.048	106	70-130	

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: JEC INACTIVE BOTTOM ASH POND C
Pace Project No.: 60394852

QC Batch: 776740
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60394852001, 60394852002, 60394852003, 60394852004, 60394852005

METHOD BLANK: 3099656 Matrix: Water
Associated Lab Samples: 60394852001, 60394852002, 60394852003, 60394852004, 60394852005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lithium	mg/L	<0.010	0.010	03/24/22 14:06	

LABORATORY CONTROL SAMPLE: 3099657

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lithium	mg/L	1	0.86	86	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3099658 3099659

Parameter	Units	60394852002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lithium	mg/L	<0.030	2	2	2.1	0.17	105	7	75-125	171	20	M1,R1

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(913)599-5665

QUALITY CONTROL DATA

Project: JEC INACTIVE BOTTOM ASH POND C
Pace Project No.: 60394852

QC Batch: 775867
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60394852001

METHOD BLANK: 3096792 Matrix: Water
Associated Lab Samples: 60394852001

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

LABORATORY CONTROL SAMPLE: 3096793

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

SAMPLE DUPLICATE: 3096794

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

SAMPLE DUPLICATE: 3096795

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

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REPORT OF LABORATORY ANALYSIS

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(913)599-5665

QUALITY CONTROL DATA

Project: JEC INACTIVE BOTTOM ASH POND C
Pace Project No.: 60394852

QC Batch: 775868 | Analysis Method: SM 2540C
QC Batch Method: SM 2540C | Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60394852002, 60394852003, 60394852004, 60394852005

METHOD BLANK: 3096796 Matrix: Water
Associated Lab Samples: 60394852002, 60394852003, 60394852004, 60394852005

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

LABORATORY CONTROL SAMPLE: 3096797

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

SAMPLE DUPLICATE: 3096798

Parameter	Units	60394853005 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	3170	3000	6	10	

SAMPLE DUPLICATE: 3096799

Parameter	Units	60394939004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	17600	17600	0	10	

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REPORT OF LABORATORY ANALYSIS

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(913)599-5665

QUALITY CONTROL DATA

Project: JEC INACTIVE BOTTOM ASH POND C
Pace Project No.: 60394852

QC Batch: 776255
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60394852001, 60394852002, 60394852003, 60394852004, 60394852005

SAMPLE DUPLICATE: 3097993

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

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

REPORT OF LABORATORY ANALYSIS

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(913)599-5665

QUALITY CONTROL DATA

Project: JEC INACTIVE BOTTOM ASH POND C
Pace Project No.: 60394852

QC Batch: 775525
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: 60394852001, 60394852002, 60394852003, 60394852004, 60394852005

METHOD BLANK: 3095465 Matrix: Water
Associated Lab Samples: 60394852001, 60394852002, 60394852003, 60394852004, 60394852005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<1.0	1.0	03/15/22 17:13	
Fluoride	mg/L	<0.20	0.20	03/15/22 17:13	
Sulfate	mg/L	<1.0	1.0	03/15/22 17:13	

METHOD BLANK: 3097419 Matrix: Water
Associated Lab Samples: 60394852001, 60394852002, 60394852003, 60394852004, 60394852005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<1.0	1.0	03/16/22 08:52	
Fluoride	mg/L	<0.20	0.20	03/16/22 08:52	
Sulfate	mg/L	<1.0	1.0	03/16/22 08:52	

LABORATORY CONTROL SAMPLE: 3095466

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	5.2	105	90-110	
Fluoride	mg/L	2.5	2.4	97	90-110	
Sulfate	mg/L	5	5.1	103	90-110	

LABORATORY CONTROL SAMPLE: 3097420

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.7	95	90-110	
Fluoride	mg/L	2.5	2.7	108	90-110	
Sulfate	mg/L	5	5.1	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3095467 3095468

Parameter	Units	60390971001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	180	50	50	228	228	97	96	80-120	0	15	E,H1
Fluoride	mg/L	0.623	2.5	2.5	3.3	3.4	108	111	80-120	2	15	H1
Sulfate	mg/L	26.5	50	50	75.4	75.1	98	97	80-120	0	15	H1

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

REPORT OF LABORATORY ANALYSIS

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

QUALIFIERS

Project: JEC INACTIVE BOTTOM ASH POND C
Pace Project No.: 60394852

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

E	Analyte concentration exceeded the calibration range. The reported result is estimated.
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.
R1	RPD value was outside control limits.

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: JEC INACTIVE BOTTOM ASH POND C
Pace Project No.: 60394852

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60394852001	**IBA-1-030922**	EPA 200.7	775828	EPA 200.7	776011
60394852002	**IBA-2-030922**	EPA 200.7	775828	EPA 200.7	776011
60394852003	**IBA-3-030922**	EPA 200.7	775828	EPA 200.7	776011
60394852004	**IBA-4-030922**	EPA 200.7	775828	EPA 200.7	776011
60394852005	**DUP-IBA-030922**	EPA 200.7	775828	EPA 200.7	776011
60394852001	**IBA-1-030922**	EPA 3010	776740	EPA 6010	776977
60394852002	**IBA-2-030922**	EPA 3010	776740	EPA 6010	776977
60394852003	**IBA-3-030922**	EPA 3010	776740	EPA 6010	776977
60394852004	**IBA-4-030922**	EPA 3010	776740	EPA 6010	776977
60394852005	**DUP-IBA-030922**	EPA 3010	776740	EPA 6010	776977
60394852001	**IBA-1-030922**	EPA 200.8	776076	EPA 200.8	776191
60394852002	**IBA-2-030922**	EPA 200.8	776076	EPA 200.8	776191
60394852003	**IBA-3-030922**	EPA 200.8	776076	EPA 200.8	776191
60394852004	**IBA-4-030922**	EPA 200.8	776076	EPA 200.8	776191
60394852005	**DUP-IBA-030922**	EPA 200.8	776076	EPA 200.8	776191
60394852001	**IBA-1-030922**	SM 2540C	775867		
60394852002	**IBA-2-030922**	SM 2540C	775868		
60394852003	**IBA-3-030922**	SM 2540C	775868		
60394852004	**IBA-4-030922**	SM 2540C	775868		
60394852005	**DUP-IBA-030922**	SM 2540C	775868		
60394852001	**IBA-1-030922**	SM 4500-H+B	776255		
60394852002	**IBA-2-030922**	SM 4500-H+B	776255		
60394852003	**IBA-3-030922**	SM 4500-H+B	776255		
60394852004	**IBA-4-030922**	SM 4500-H+B	776255		
60394852005	**DUP-IBA-030922**	SM 4500-H+B	776255		
60394852001	**IBA-1-030922**	EPA 300.0	775525		
60394852002	**IBA-2-030922**	EPA 300.0	775525		
60394852003	**IBA-3-030922**	EPA 300.0	775525		
60394852004	**IBA-4-030922**	EPA 300.0	775525		
60394852005	**DUP-IBA-030922**	EPA 300.0	775525		

WO# : 60394852

60394852

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

Client Name: Evergy

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

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

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

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

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

Cooler Temperature (°C): As-read 4.0 Corr. Factor -0.2 Corrected 3.8

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

Temperature should be above freezing to 6°C

Chain of Custody present:	☑Yes ☐No ☐N/A	
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	
Samples arrived within holding time:	☑Yes ☐No ☐N/A	
Short Hold Time analyses (<72hr):	☐Yes ☑No ☐N/A	
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	
Sufficient volume:	☑Yes ☐No ☐N/A	
Correct containers used:	☑Yes ☐No ☐N/A	
Pace containers used:	☑Yes ☐No ☐N/A	
Containers intact:	☑Yes ☐No ☐N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	☐Yes ☐No ☑N/A	
Filtered volume received for dissolved tests?	☐Yes ☐No ☑N/A	
Sample labels match COC: Date / time / ID / analyses	☑Yes ☐No ☐N/A	
Samples contain multiple phases? Matrix: wt	☐Yes ☑No ☐N/A	
Containers requiring pH preservation in compliance? (HNO3, H2SO4, HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO) LOT#:	☐Yes ☐No ☑N/A	List sample IDs, volumes, lot #'s of preservative and the date/time added.
Cyanide water sample checks: Lead acetate strip turns dark? (Record only)	☐Yes ☐No	
Potassium iodide test strip turns blue/purple? (Preserve)	☐Yes ☐No	
Trip Blank present:	☐Yes ☑No ☐N/A	
Headspace in VOA vials (>6mm):	☐Yes ☐No ☑N/A	
Samples from USDA Regulated Area: State:	☐Yes ☐No ☑N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	☐Yes ☐No ☑N/A	

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

Qualtrax Document ID: 30468

Page 1 of 1

Pace Analytical
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CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Required Client Information:

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

Section B Required Project Information:

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

Section C Invoice Information:

Attention:	Accounts Payable
Company Name:	EVERGY KANSAS CENTRAL, INC
Address:	SEE SECTION A
Pace Quote Reference:	
Pace Project Manager:	Alice Spiller, 913-563-1403
Pace Profile #:	9657, 2

REGULATORY AGENCY

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

Site Location STATE: KS

Section D Required Client Information

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

Valid Matrix Codes

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

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**	300.0 Cl, F, S	TDS / pH	6010 Total Metals***	Radium 226	Radium 228	Total Radium	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	IBA-1-030922	WT	G	-	-	03/09/22	18:20	-	4	2		2						N	X	X	X	X	X	X	X		10394852
2	IBA-2-030922	WT	G	-	-	03/09/22	18:40	-	4	2		2						N	X	X	X	X	X	X	X		
3	IBA-3-030922	WT	G	-	-	03/09/22	17:45	-	4	2		2						N	X	X	X	X	X	X	X		
4	IBA-4-030922	WT	G	-	-	03/09/22	17:25	-	4	2		2						N	X	X	X	X	X	X	X		
5	DUP-IBA-030922	WT	G	-	-	03/09/22	18:40	-	4	2		2						N	X	X	X	X	X	X	X		
6																		N									
7																		N									
8																		N									
9																		N									
10																		N									
11																		N									
12																		N									

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
200.7 Total Metals*: B, Ba, Ca	Jason R. Franks / SCS	3/10/22	15:00	Victor B Pace	3/10/22	1500	3.6	Y	Y	Y
200.8 Total Metals**: Co, Mo										
6010 Total Metals***: Li (1 metal)										
(2) 1L nitric preserved for all Radium analysis (Pace PM-see profile notes)										

SAMPLER NAME AND SIGNATURE		Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:	Jason R. Franks				
SIGNATURE of SAMPLER: Jason R. Franks	DATE Signed (MM/DD/YY): 3/10/22				

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

Client: Evergy

Profile # 9057, 2

Site: Jec Inactive Bottom Ash Pond

Notes

COC Line Item	Matrix	VG9H	DG9H	DG9Q	VG9U	DG9U	DG9M	DG9B	BG1U	AG1H	AG1U	AG2U	AG3S	AG4U	AG5U	JGFU	WGKU	WGDU	BP1U	BP2U	BP3U	BP1N	BP3N	BP3F	BP3S	BP3C	BP3Z	WPDU	ZPLC	Other		
1	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 ~hiosulfate
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: 60394852