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2022 – 2023 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



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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 2022 through June 2023 and documents compliance with the U.S. Environmental Protection Agency Coal Combustion Residual Rule. I certify that the 2022 – 2023 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: Kansas License No.: Title: Company:

Mark Nicholls Professional Geologist No. 881 Technical Expert 2 Haley & Aldrich, Inc.



1. Introduction

This 2022 – 2023 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 2022 through June 2023), and documents compliance with the Rule. The specific requirements for the Annual Report listed in § 257.90(e) of the Rule are provided in Sections 1 and 2 of this Annual Report and are in **bold italic font**, followed by a 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, 2022), 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, 2023), 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 2022 through June 2023.

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 2022 through June 2023.

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

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

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

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

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

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

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

No assessment of corrective measures was required to be initiated from July 2022 through June 2023 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 2022 through June 2023; therefore, a public meeting was not held.

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

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

No assessment of corrective measures was required to be initiated from July 2022 through June 2023 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 2022 through June 2023.



2. 40 CFR § 257.90 Applicability

2.1 40 CFR § 257.90(a)

All CCR landfills, CCR surface impoundments, and lateral expansions of CCR units are subject to the groundwater monitoring and corrective action requirements under §§ 257.90 through 257.99, except as provided in paragraph (g) 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 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 2022 through June 2023.

2.2.1 Status of the Groundwater Monitoring Program

The BAP remained in the assessment monitoring program through June 2023.

2.2.2 Key Actions Completed

The 2021 – 2022 Annual Groundwater Monitoring and Corrective Action Report was completed in July 2022 for the time period July 2021 through June 2022. Statistical evaluation was completed in July 2022 on analytical data from the March 2022 assessment monitoring sampling event.



A semi-annual assessment monitoring sampling event was completed in September 2022 for detected Appendix IV constituents identified from the December 2021 annual assessment monitoring sampling event. Statistical evaluation was completed in January 2023 on analytical data from the September 2022 semi-annual assessment monitoring sampling event.

An annual assessment monitoring sampling event was completed on December 9, 2022 to identify detected Appendix IV constituents for subsequent semi-annual sampling events planned for March 2023 and September 2023. Semi-annual assessment monitoring sampling was completed in March 2023 for detected Appendix IV constituents identified during the December 2022 annual monitoring event. Statistical evaluation of the results from the March 2023 semi-annual assessment monitoring sampling event are due to be completed in July 2023 and will be reported in the next annual report.

2.2.3 Problems Encountered

No noteworthy problems (i.e., problems could include damaged wells, issues with sample collection or lack of sampling, or problems with analytical analysis) were encountered at the BAP from July 2022 through June 2023.

2.2.4 Actions to Resolve Problems

No problems were encountered at the BAP from July 2022 through June 2023; therefore, no actions to resolve the problems were required.

2.2.5 Project Key Activities for Upcoming Year

Key activities planned for July 2023 through June 2024 include the 2022 – 2023 Annual Groundwater Monitoring and Corrective Action Report, statistical analysis of assessment monitoring analytical data collected in March 2023, semi-annual assessment monitoring and subsequent statistical evaluations, and annual assessment monitoring.

2.3 40 CFR § 257.90(e) – INFORMATION

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

2.3.1 40 CFR § 257.90(e)(1) – 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 2022 to June 2023.

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

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

In accordance with § 257.95(b), three independent assessment monitoring samples from each background and downgradient monitoring well were collected from July 2022 through June 2023. 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 2022 through June 2023 are provided in Figures 2 through 4.

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

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

The assessment monitoring program was initiated on 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 2022 through June 2023.

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

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

This Annual Report documents activities conducted to comply with §§ 257.90 through 257.95 of the Rule. It is understood that there are supplemental references in §§ 257.90 through 257.98 that must be placed in the Annual Report. The following requirements include relevant and required information in the Annual Report for activities completed from July 2022 through June 2023.



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

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

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

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

The owner or operator may demonstrate that a source other than the CCR unit caused the statistically significant increase over background levels for a constituent or that the statistically significant increase resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. The owner or operator must complete the written demonstration within 90 days of detecting a statistically significant increase over background levels to include obtaining a certification from a qualified professional engineer or approval from the Participating State Director or approval from EPA where EPA is the permitting authority verifying the accuracy of the information in the report. If a successful demonstration is completed within the 90-day period, the owner or operator of the CCR unit may continue with a detection monitoring program under this section. If a successful demonstration is not completed within the 90-day period, the owner or operator of the CCR unit 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 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 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 2022 through June 2023. Analytical results for both downgradient and upgradient wells are provided in Table I. The background concentrations (upper tolerance limits) and groundwater protection standards established for detected Appendix IV constituents for the 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 2022 through June 2023 for the March 2022 and September 2022 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 is the permitting authority.

No assessment monitoring alternative source demonstration or certification was required from July 2022 through June 2023. 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 2022 through June 2023; therefore, no demonstration or certification is applicable for this unit.



TABLES

TABLE ISUMMARY OF ANALYTICAL RESULTS - ASSESSMENT MONITORINGEVERGY KANSAS CENTRAL, INC.JEFFREY ENERGY CENTER

BOTTOM ASH POND (INACTIVE) ST. MARYS, KANSAS

Location		Upgradient		Downgradient													
Location		IBA-4			IBA-1				IBA-2					BA-3			
Measure Point (TOC)		1201.86			1171.65				1171.66		1164.95						
Sample Name	IBA-4-090822	IBA-4-120922	MW IBA-4-031423	IBA-1-090822	IBA-1-120922	MW IBA-1-031423	IBA-2-090822	DUP-IBA-090822	IBA-2-120922	MW IBA-2-031423	DUP JEC IBA-031423	IBA-3-090822	IBA-3-120922	DUP-IBA-120922	MW IBA-3-031423		
Sample Date	9/8/2022	12/09/2022	3/14/2023	9/8/2022	12/09/2022	3/14/2023	9/8/2022	9/8/2022	12/09/2022	3/14/2023	3/14/2023	9/8/2022	12/09/2022	12/09/2022	3/14/2023		
Final Lab Report Date	9/23/2022	12/21/2022	3/29/2023	9/23/2022	12/21/2022	3/29/2023	9/23/2022	9/23/2022	12/21/2022	3/29/2023	3/29/2023	9/23/2022	12/21/2022	12/21/2022	3/29/2023		
Final Lab Report Revision Date	10/19/2022	N/A	N/A	10/19/2022	N/A	N/A	10/19/2022	10/19/2022	N/A	N/A	N/A	10/19/2022	N/A	N/A	N/A		
Final Radiation Lab Report Date	N/A	1/12/2023	N/A	N/A	1/12/2023	N/A	N/A	N/A	1/12/2023	N/A	N/A	N/A	1/12/2023	1/12/2023	N/A		
Final Radiation Lab Report Revision Date	N/A	2/2/2023	N/A	N/A	2/2/2023	N/A	N/A	N/A	2/2/2023	N/A	N/A	N/A	2/2/2023	2/2/2023	N/A		
Lab Data Reviewed and Accepted	11/4/2022	2/6/2023	6/8/2023	11/4/2022	2/6/2023	6/8/2023	11/4/2022	11/4/2022	2/6/2023	6/8/2023	6/8/2023	11/4/2022	2/6/2023	2/6/2023	6/8/2023		
Depth to Water (ft btoc)	54.60	55.71	55.52	29.70	29.03	27.00	30.48	-	29.30	28.42	-	33.03	33.36	-	31.59		
Temperature (Deg C)	19.06	12.98	12.96	17.91	9.71	12.04	17.94	-	11.40	12.23	-	18.13	11.95	-	13.76		
Conductivity (μS/cm)	1010	966	948	2050	2050	2,060	1790	-	1770	1,780	-	2040	1970	-	1,960		
Turbidity (NTU)	7.5	19.6	17.2	2.8	5.0	15.3	0.0	-	2.8	1.8	-	0.0	2.0	-	0.9		
Boron, Total (mg/L)	0.21	-	0.24	0.35	-	0.39	0.20	0.19	-	0.22	0.22	0.27	-	-	0.29		
Calcium, Total (mg/L)	96.4	-	108	265	-	287	206	204	-	230	230	237	-	-	251		
Chloride (mg/L)	17.8	-	18.7	112	-	159	110	110	-	115	112	120	-	-	123		
Fluoride (mg/L)	0.24	-	0.42	< 0.20	-	< 0.20	< 0.20	< 0.20	-	< 0.20	< 0.20	< 0.20	-	-	< 0.20		
Sulfate (mg/L)	174	-	163	803	-	757	605	593	-	696	608	750	-	-	712		
pH (su)	7.8	-	7.1	7.5	-	6.9	7.4	7.4	-	7.0	7.2	7.2	-	-	7.0		
TDS (mg/L)	659	-	639	1610	-	1,570	1400	1390	-	1,250	1,320	1700	-	-	1,530		
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)	0.018	0.019	0.019	0.028	0.031	0.031	0.025	0.025	0.026	0.026	0.028	0.018	0.018	0.017	0.017		
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	0.0016	0.0017	0.0017	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	0.0014	0.0013	0.0013	0.0013		
Lead, Total (mg/L)	-	< 0.010	-	-	< 0.010	-	-	-	< 0.010	-	-	-	< 0.010	< 0.010	-		
Lithium, Total (mg/L)	0.035	0.035	0.037	0.017	0.019	0.019	0.022	0.022	0.023	0.025	0.024	0.022	0.022	0.021	0.023		
Molybdenum, Total (mg/L)	0.0019	0.0018	0.0019	0.0086	0.0085	0.0086	0.0022	0.0023	0.0024	0.0024	0.0024	0.0024	0.0023	0.0023	0.0023		
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)	0.24	0.34	0.42	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20		
Radium-226 & 228 Combined (pCi/L)	-	0.638 ± 0.756 (1.39)	-	-	0.188 ± 0.585 (1.27)	-	-	-	0.112 ± 0.611 (1.32)	-	-	-	0.0734 ± 0.604 (1.39)	0.562 ± 0.628 (0.953)	-		

Notes:

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 IIASSESSMENT GROUNDWATER MONITORING - DETECTED APPENDIX IV GWPSMARCH AND SEPTEMBER 2022 SAMPLING EVENTSJEFFREY ENERGY CENTERBOTTOM ASH POND (INACTIVE)

Well Number	Background Value ¹	GWPS
	CCR Appendix-IV Barium, Total (mg	/L)
MW-IBA-4 (upgradient)	0.0224	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)	0.636 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)	0.0397	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:

¹ Interwell background value based on background data collected through March 2022.

² Interwell background value based on background data collected through December 2021.

CCR = Coal Combustion Residuals

GWPS = *Groundwater Protection Standard*

mg/L = milligrams per Liter

NA = Not Applicable







MONITORING WELL

PIEZOMETER OBSERVATION ONLY

BOTTOM ASH POND (INACTIVE) BOUNDARY

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.

2. AERIAL IMAGERY SOURCE: ESRI, 20 OCTOBER 2022



600

300 SCALE IN FEET

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

BOTTOM ASH POND (INACTIVE) LOCATION MAP

⇒evergy _{JULY 2023}





MONITORING WELL

PIEZOMETER OBSERVATION ONLY

ESTIMATED GROUNDWATER POTENTIOMETRIC OBSERVATION ELEVATION CONTOUR, IN FEET, DASHED WHERE INFERRED





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

BOTTOM ASH POND (INACTIVE) BOUNDARY

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.

2. GROUNDWATER POTENTIOMETRIC ELEVATIONS WERE MEASURED 8 SEPTEMBER 2022.

3. THE GROUNDWATER FLOW RATE WAS APPROXIMATED USING THE HYDRAULIC GRADIENT CALCULATED FROM GROUNDWATER POTENTIOMETIRIC ELEVATIONS MEASURED 8 SEPTEMBER 2022 AND THE CONDUCTIVITY VALUES AND EFFECTIVE POROSITY VALUES OBTAINED FROM SLUG TESTS COMPLETED APRIL 2016.

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

5. AERIAL IMAGERY SOURCE: ESRI, 20 OCTOBER 2022



600

300 SCALE IN FEET

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

> BOTTOM ASH POND (INACTIVE) GROUNDWATER POTENTIOMETRIC ELEVATION CONTOUR MAP SEPTEMBER 8, 2022

severgy JULY 2023





MONITORING WELL

PIEZOMETER OBSERVATION ONLY

ESTIMATED GROUNDWATER POTENTIOMETRIC OBSERVATION ELEVATION CONTOUR, IN FEET, DASHED WHERE INFERRED





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

BOTTOM ASH POND (INACTIVE) BOUNDARY

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.

2. GROUNDWATER POTENTIOMETRIC ELEVATIONS WERE MEASURED 9 DECEMBER 2022.

3. THE GROUNDWATER FLOW RATE WAS APPROXIMATED USING THE HYDRAULIC GRADIENT CALCULATED FROM GROUNDWATER POTENTIOMETIRIC ELEVATIONS MEASURED 9 DECEMBER 2022 AND THE CONDUCTIVITY VALUES AND EFFECTIVE POROSITY VALUES OBTAINED FROM SLUG TESTS COMPLETED APRIL 2016.

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

5. AERIAL IMAGERY SOURCE: ESRI, 20 OCTOBER 2022



600

300 SCALE IN FEET

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

> BOTTOM ASH POND (INACTIVE) GROUNDWATER POTENTIOMETRIC ELEVATION CONTOUR MAP DECEMBER 9, 2022







MONITORING WELL

PIEZOMETER OBSERVATION ONLY

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



ESTIMATED GROUNDWATER POTENTIOMETRIC OBSERVATION ELEVATION CONTOUR, IN FEET, DASHED WHERE INFERRED

BOTTOM ASH POND (INACTIVE) BOUNDARY

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.

2. GROUNDWATER POTENTIOMETRIC ELEVATIONS WERE MEASURED 14 MARCH 2023.

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

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

5. AERIAL IMAGERY SOURCE: ESRI, 20 OCTOBER 2022



600

300 SCALE IN FEET

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



BOTTOM ASH POND (INACTIVE) GROUNDWATER POTENTIOMETRIC ELEVATION CONTOUR MAP MARCH 14, 2023

>> evergy

ATTACHMENT 1 Statistical Analyses

Attachment 1-1

March 2022 Semi-Annual Groundwater Assessment Monitoring Data Statistical Evaluation



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

TECHNICAL MEMORANDUM

July 31, 2023 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 2022 Semi-Annual Groundwater Assessment Monitoring Data Statistical Evaluation Completed July 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 **March 2022** 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 9, 2022**, with laboratory results received and validated on **April 27, 2022**.

The statistical evaluation discussed in this memorandum was conducted to determine if Appendix IV groundwater monitoring constituents have been detected in downgradient wells at concentrations that represent a statistically significant increase (SSI) above background values and if one or more of the constituents have been detected at statistically significant 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

Evergy Kansas Central, Inc. July 31, 2023 Page 2

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 2022** sampling event was above the GWPS, the lower confidence limit (LCL) for the downgradient well constituent will be used to evaluate if an SSI is present. The LCL is the lower end of the confidence interval range, which is an estimated concentration range intended to contain the true mean or median of the population from which the sample is drawn. The confidence interval range is designed to locate the true population mean or median with a high degree of statistical confidence, or conversely, with a low probability of error.

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

BACKGROUND DISTRIBUTIONS

The groundwater analytical results for each sampling event from the background sample location 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



Evergy Kansas Central, Inc. July 31, 2023 Page 3

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 **March 2022** for all constituents except fluoride, which was updated through **December 2021.**

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 2022** semi-annual assessment monitoring event were compared to their respective background UTLs and GWPSs (Table I). A sample concentration greater than the background UTL is considered to represent 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 2022, no SSLs above GWPS occurred at the JEC BAP (inactive).**

Enclosure:

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



TABLE

TABLE ISUMMARY OF SEMI-ANNUAL ASSESSMENT GROUNDWATER MONITORING STATISTICAL EVALUATIONMARCH 2022 SAMPLING EVENTJEFFREY ENERGY CENTERBOTTOM ASH POND (INACTIVE)

										MCL Co	omparison]					Interw	vell Analysis	Groundwater Protec	tion Standard
Location Id	Frequency of Detection	Percent Non-Detects	Range of Non-Detect	Maximum Detect	Variance	Standard Deviation	Coefficient of Variance	CCR MCL or CFR § 257.95(h)(2)*	Report Result Unit	Number of Detection Exceedances	Number of Non-Detection Exceedances	Outlier Presence	Outlier Removed	Trend	Distribution Well	March 2022 Concentratio n (mg/L)	Background Limits ¹ (UTL) mg/L	SSI	GWPS (Higher of MCL/ 40 CFR § 257.95(h)(2) or UTL)	SSL
				•			•			CCR Appendix	k-IV: Barium, Tot	al (mg/L)		•			•	-		
MW-IBA-4	16/16	0%	-	0.022	2.663E-06	0.001632	0.08395	2	mg/L	0	0	No	No	Stable	Normal	0.021	0.0224		2	
MW-IBA-1	16/16	0%	-	0.039	0.00001065	0.003263	0.1	2	mg/L	0	0	No	No	Decreasing	Normal	0.033		Yes		No
MW-IBA-2	16/16	0%	-	0.036	0.0000785	0.002802	0.09378	2	mg/L	0	0	No	No	Decreasing	Normal	0.027		Yes		No
MW-IBA-3	16/16	0%	-	0.021	1.229E-06	0.001109	0.05893	2	mg/L	0	0	No	No	Decreasing	Normal	0.019		No		No
	CCR Appendix-IV: Cobalt, Total (mg/L)																			
MW-IBA-4	0/16	100%	0.001-0.001		0	0	0	0.006	mg/L	0	0	NA	NA	NA	Non-parametric	0.0010	0.001		0.006	
MW-IBA-1	16/16	0%	-	0.0027	0.0000012	0.0003464	0.1616	0.006	mg/L	0	0	No	No	Stable	Normal	0.0015		Yes		No
MW-IBA-2	13/16	19%	0.001-0.001	0.0013	7.292E-09	0.00008539	0.07807	0.006	mg/L	0	0	Yes	No	Stable	Normal	0.0010		No		No
MW-IBA-3	16/16	0%	-	0.0021	1.063E-07	0.000326	0.1883	0.006	mg/L	0	0	Yes	No	Stable	Non-parametric	0.0012		Yes		No
										CCR Appen	dix-IV: Fluoride (mg/L)								
MW-IBA-4	17/17	0%	-	0.64	0.00365	0.06042	0.1119	4.0	mg/L	0	0	No	No	Stable	Non-parametric	0.64	0.636 ²		4.0	
MW-IBA-1	12/17	29%	0.2-0.2	0.63	0.01299	0.114	0.3844	4.0	mg/L	0	0	Yes	No	Stable	Normal	0.23		No		No
MW-IBA-2	12/17	29%	0.2-0.2	0.4	0.005365	0.07325	0.26	4.0	mg/L	0	0	No	No	Stable	Normal	0.30		No		No
MW-IBA-3	12/17	29%	0.2-0.2	0.37	0.004012	0.06334	0.2403	4.0	mg/L	0	0	No	No	Stable	Normal	0.22		No		No
										CCR Appendix	-IV: Lithium, Tot	al (mg/L)								
MW-IBA-4	16/16	0%	-	0.04	0.00000705	0.002655	0.07613	0.040	mg/L	0	0	No	No	Stable	Non-parametric	0.033	0.0397		0.040	
MW-IBA-1	15/16	6%	0.03-0.03	0.026	0.00002126	0.004611	0.2571	0.040	mg/L	0	0	Yes	No	Stable	Non-parametric	< 0.030		No		No
MW-IBA-2	15/16	6%	0.03-0.03	0.028	0.00001413	0.003759	0.1749	0.040	mg/L	0	0	Yes	No	Stable	Normal	< 0.030		No		No
MW-IBA-3	15/16	6%	0.03-0.03	0.028	0.00001252	0.003538	0.1636	0.040	mg/L	0	0	Yes	No	Stable	Normal	< 0.030		No		No
									CC	R Appendix-IV	: Molybdenum,	Total (mg/L)								
MW-IBA-4	16/16	0%	-	0.0024	2.329E-08	0.0001526	0.08059	0.100	mg/L	0	0	Yes	No	Stable	Non-parametric	0.0018	0.0024		0.100	
MW-IBA-1	16/16	0%	-	0.0083	1.783E-07	0.0004222	0.05682	0.100	mg/L	0	0	No	No	Stable	Normal	0.0075		Yes		No
MW-IBA-2	16/16	0%	-	0.0024	1.029E-08	0.0001014	0.04547	0.100	mg/L	0	0	No	No	Stable	Normal	0.0020		No		No
MW-IBA-3	16/16	0%	-	0.0025	1.583E-08	0.0001258	0.05887	0.100	mg/L	0	0	Yes	No	Stable	Non-parametric	0.0020		No		No

Notes:

¹ Based on background data collected from 03/13/2018 through 3/09/2022, unless otherwise noted.

² Based on background data collected from 03/13/2018 through 12/06/2021.

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

CCR = coal combustion residuals

GWPS = Groundwater Protection Standard

MCL = maximum contaminant level

mg/L = milligrams per Liter

NA = not analyzed

pCi/L = picoCuries per Liter

SSI = statistically significant increase

SSL = statistically significant level

UTL = upper tolerance limits

Attachment 1-2 September 2022 Semi-Annual Groundwater Assessment Monitoring Data Statistical Evaluation



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

TECHNICAL MEMORANDUM

July 31, 2023 File No. 129778-035

TO:	Evergy Kansas Central, Inc. Jared Morrison – Director, Water and Waste Programs
FROM:	Haley & Aldrich, Inc. Steven F. Putrich, P.E., Principal Consultant – Engineering Principal Mark Nicholls, P.G., Senior Associate – Senior Hydrogeologist
SUBJECT:	September 2022 Semi-Annual Groundwater Assessment Monitoring Data Statistical Evaluation Completed February 1, 2023 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 2022** 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 8, 2022**, with laboratory results received and validated on **November 4, 2022**.

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

Statistical Evaluation of Appendix IV Constituents

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

Evergy Kansas Central, Inc. July 31, 2023 Page 2

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 2022** sampling event was above the GWPS, the lower confidence limit (LCL) for the downgradient well constituent will be used to evaluate if an SSI is present. The LCL is the lower end of the confidence interval range, which is an estimated concentration range intended to contain the true mean or median of the population from which the sample is drawn. The confidence interval range is designed to locate the true population mean or median with a high degree of statistical confidence, or conversely, with a low probability of error.

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

BACKGROUND DISTRIBUTIONS

The groundwater analytical results for each sampling event from the background sample location 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,*



Evergy Kansas Central, Inc. July 31, 2023 Page 3

March 2009, background concentrations were updated based on statistical evaluation of analytical results collected through **March 2022** for all constituents except fluoride, which was updated through **December 2021.**

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 2022** semi-annual assessment monitoring event were compared to their respective background UTLs and GWPSs (Table I). A sample concentration greater than the background UTL is considered to represent 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 2022, 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 2022 SAMPLING EVENT

JEFFREY ENERGY CENTER

BOTTOM ASH POND (INACTIVE)

										MCL Co	omparison	Ī					Interwell /	Analysis	Groundwater Protect	tion Standard
Location Id	Frequency of Detection	Percent Non-Detects	Range of Non-Detect	Maximum Detect	Variance	Standard Deviation	Coefficient of Variance	CCR MCL or CFR § 257.95(h)(2)*	Report Result Unit	Number of Detection Exceedances	Number of Non-Detection Exceedances	Outlier Presence	Outlier Removed	Trend	Distribution Well	September 2022 Concentration (mg/L)	Background Limits ¹ (UTL) mg/L	SSI	GWPS (Higher of MCL/ 40 CFR § 257.95(h)(2) or UTL)	SSL
									(CR Appendix-I	V: Barium, Total	(mg/L)			•					
MW-IBA-4	17/17	0%	-	0.022	2.618E-06	0.001618	0.0836	2	mg/L	0	0	No	No	Stable	Normal	0.018	0.0224		2	
MW-IBA-1	17/17	0%	-	0.039	0.00001124	0.003353	0.1036	2	mg/L	0	0	No	No	Decreasing	Normal	0.028		Yes		No
MW-IBA-2	17/17	0%	-	0.036	8.757E-06	0.002959	0.1	2	mg/L	0	0	No	No	Decreasing	Normal	0.025		Yes		No
MW-IBA-3	17/17	0%	-	0.021	1.191E-06	0.001091	0.05816	2	mg/L	0	0	No	No	Stable	Normal	0.018		No		No
										CCR Appendix-	V: Cobalt, Total	(mg/L)								
MW-IBA-4	0/17	100%	0.001-0.001		0	0	0	0.006	mg/L	0	0	NA	NA	NA	Non-parametric	< 0.0010	0.001		0.006	
MW-IBA-1	17/17	0%	-	0.0027	1.299E-07	0.0003604	0.1706	0.006	mg/L	0	0	No	No	Decreasing	Normal	0.0016		Yes		No
MW-IBA-2	13/17	24%	0.001-0.001	0.0013	7.353E-09	0.00008575	0.0788	0.006	mg/L	0	0	No	No	Decreasing	Normal	< 0.0010		No		No
MW-IBA-3	17/17	0%	-	0.0021	1.061E-07	0.0003257	0.1903	0.006	mg/L	0	0	No	No	Decreasing	Non-parametric	0.0014		Yes		No
				•						CCR Appendi	x-IV: Fluoride (m	g/L)								
MW-IBA-4	18/18	0%	-	0.64	0.008435	0.09184	0.1755	4.0	mg/L	0	0	No	No	Stable	Normal	0.24	0.636 ²		4.0	
MW-IBA-1	12/18	33%	0.2-0.2	0.63	0.01274	0.1129	0.3877	4.0	mg/L	0	0	Yes	No	Stable	Normal	< 0.20		No		No
MW-IBA-2	12/18	33%	0.2-0.2	0.4	0.005421	0.07363	0.2656	4.0	mg/L	0	0	No	No	Stable	Normal	< 0.20		No		No
MW-IBA-3	12/18	33%	0.2-0.2	0.37	0.004	0.06325	0.2433	4.0	mg/L	0	0	No	No	Stable	Normal	< 0.20		No		No
									C	CR Appendix-I	V: Lithium, Total	(mg/L)								
MW-IBA-4	17/17	0%	-	0.04	0.00000661	0.002571	0.07371	0.040	mg/L	0	0	No	No	Stable	Normal	0.035	0.0397		0.040	
MW-IBA-1	16/17	6%	0.03-0.03	0.026	0.00001999	0.00447	0.25	0.040	mg/L	0	0	Yes	No	Stable	Non-parametric	0.017		No		No
MW-IBA-2	16/17	6%	0.03-0.03	0.028	0.00001326	0.003642	0.1692	0.040	mg/L	0	0	Yes	No	Stable	Normal	0.022		No		No
MW-IBA-3	16/17	6%	0.03-0.03	0.028	0.00001174	0.003427	0.1583	0.040	mg/L	0	0	Yes	No	Increasing	Normal	0.022		No		No
									CCR	Appendix-IV: I	Molybdenum, To	tal (mg/L)								
MW-IBA-4	17/17	0%	-	0.0024	2.184E-08	0.0001478	0.07802	0.100	mg/L	0	0	No	No	Stable	Non-parametric	0.0019	0.0024		0.100	
MW-IBA-1	17/17	0%	-	0.0086	2.475E-07	0.0004975	0.06633	0.100	mg/L	0	0	No	No	Increasing	Normal	0.0086		Yes		No
MW-IBA-2	17/17	0%	-	0.0024	9.706E-09	0.00009852	0.04419	0.100	mg/L	0	0	No	No	Stable	Normal	0.0022		No		No
MW-IBA-3	17/17	0%	-	0.0025	1.89E-08	0.0001375	0.06385	0.100	mg/L	0	0	Yes	No	Stable	Non-parametric	0.0024		No		No

Notes:

 1 Based on background data collected from 03/13/2018 through 3/09/2022, unless otherwise noted.

² Based on background data collected from 03/13/2018 through 12/06/2021.

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

CCR = coal combustion residuals

GWPS = Groundwater Protection Standard

MCL = maximum contaminant level mg/L = milligrams per Liter

NA = not analyzed

pCi/L = picoCuries per Liter

SSI = statistically significant increase

SSL = statistically significant level

UTL = upper tolerance limits

ATTACHMENT 2 Laboratory Analytical Reports Attachment 2-1 September 2022 Semi-Annual Sampling Event Laboratory Analytical Report



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

October 19, 2022

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

RE: Project: JEC INACTIVE ASH PONDS CCR Pace Project No.: 60410031

Dear Jake Humphrey:

Enclosed are the analytical results for sample(s) received by the laboratory on September 09, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

REVISED 10/14/22

REVISED 10/19/22 repackaged

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

Sincerely,

Alice Spiller

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

Enclosures

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





CERTIFICATIONS

Project: JEC INACTIVE ASH PONDS CCR

Pace Project No.: 60410031

Pace Analytical Services Kansas

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



SAMPLE SUMMARY

Project: JEC INACTIVE ASH PONDS CCR

Pace Project No.: 60410031

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60410031001	IBA-1-090822	Water	09/08/22 09:45	09/09/22 17:00
60410031002	IBA-2-090822	Water	09/08/22 10:35	09/09/22 17:00
60410031003	IBA-3-090822	Water	09/08/22 11:35	09/09/22 17:00
60410031004	IBA-4-090822	Water	09/08/22 17:00	09/09/22 17:00
60410031005	DUP-IBA-090822	Water	09/08/22 10:40	09/09/22 17:00



SAMPLE ANALYTE COUNT

Project: JEC INACTIVE ASH PONDS CCR

Pace Project No.: 60410031

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60410031001	IBA-1-090822	EPA 200.7	MRV	3	PASI-K
		EPA 6010	MRV	1	PASI-K
		EPA 200.8	JGP	2	PASI-K
		SM 2540C	TML	1	PASI-K
		SM 4500-H+B	ET	1	PASI-K
		EPA 300.0	CRN2, RKA	3	PASI-K
0410031002	IBA-2-090822	EPA 200.7	MRV	3	PASI-K
		EPA 6010	MRV	1	PASI-K
		EPA 200.8	JGP	2	PASI-K
		SM 2540C	TML	1	PASI-K
		SM 4500-H+B	ET	1	PASI-K
		EPA 300.0	CRN2, RKA	3	PASI-K
0410031003	IBA-3-090822	EPA 200.7	MRV	3	PASI-K
		EPA 6010	MRV	1	PASI-K
		EPA 200.8	JGP	2	PASI-K
		SM 2540C	TML	1	PASI-K
		SM 4500-H+B	ET	1	PASI-K
		EPA 300.0	CRN2, RKA	3	PASI-K
0410031004	IBA-4-090822	EPA 200.7	MRV	3	PASI-K
		EPA 6010	MRV	1	PASI-K
		EPA 200.8	JGP	2	PASI-K
		SM 2540C	TML	1	PASI-K
		SM 4500-H+B	ET	1	PASI-K
		EPA 300.0	CRN2, RKA	3	PASI-K
0410031005	DUP-IBA-090822	EPA 200.7	MRV	3	PASI-K
		EPA 6010	MRV	1	PASI-K
		EPA 200.8	JGP	2	PASI-K
		SM 2540C	TML	1	PASI-K
		SM 4500-H+B	ET	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K

PASI-K = Pace Analytical Services - Kansas City



Project: JEC INACTIVE ASH PONDS CCR

Pace Project No.: 60410031

Date: October 19, 2022

Amended report to report only requested metals and the data from review/reanalysis of fluoride due to intereferences on original run, new data reported.



Project: JEC INACTIVE ASH PONDS CCR

Pace Project No.: 60410031

Method: EPA 200.7

Description:200.7 Metals, TotalClient:Evergy Kansas Central, Inc.Date:October 19, 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: 807550

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60410031001

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

- MSD (Lab ID: 3212548)
 - Calcium

Additional Comments:



Project: JEC INACTIVE ASH PONDS CCR

Pace Project No.: 60410031

Method: EPA 6010

Description:6010 MET ICPClient:Evergy Kansas Central, Inc.Date:October 19, 2022

General Information:

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

Hold Time:

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

Sample Preparation:

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

Initial Calibrations (including MS Tune as applicable):

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

Continuing Calibration:

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

Method Blank:

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

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

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

Additional Comments:



Project: JEC INACTIVE ASH PONDS CCR

Pace Project No.: 60410031

Method: EPA 200.8

Description:200.8 MET ICPMSClient:Evergy Kansas Central, Inc.Date:October 19, 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:



Project: JEC INACTIVE ASH PONDS CCR

Pace Project No.: 60410031

Method: SM 2540C

Description:2540C Total Dissolved SolidsClient:Evergy Kansas Central, Inc.Date:October 19, 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.

QC Batch: 807820

D6: The precision between the sample and sample duplicate exceeded laboratory control limits.

- DUP (Lab ID: 3213732)
 - Total Dissolved Solids

Additional Comments:



Project: JEC INACTIVE ASH PONDS CCR

Pace Project No.: 60410031

M - (1,)	~**	4500 11 0
Method:	SIVI	4500-H+B

Description:4500H+ pH, ElectrometricClient:Evergy Kansas Central, Inc.Date:October 19, 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-090822 (Lab ID: 60410031005)
- IBA-1-090822 (Lab ID: 60410031001)
- IBA-2-090822 (Lab ID: 60410031002)
- IBA-3-090822 (Lab ID: 60410031003)
- IBA-4-090822 (Lab ID: 60410031004)

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:



Project: JEC INACTIVE ASH PONDS CCR

Pace Project No.: 60410031

Method: EPA 300.0

Description:300.0 IC Anions 28 DaysClient:Evergy Kansas Central, Inc.Date:October 19, 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: 808515

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60410000004,60410030004

- M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
 - MS (Lab ID: 3216066)
 - Chloride
 - MSD (Lab ID: 3216067)
 - Chloride

Additional Comments:

Analyte Comments:

QC Batch: 808515

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

- MS (Lab ID: 3216066)
 - Chloride
- MS (Lab ID: 3216068)
 - Sulfate
- MSD (Lab ID: 3216067)
 - Chloride

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



Project: JEC INACTIVE ASH PONDS CCR

Pace Project No.: 60410031

Sample: IBA-1-090822	Lab ID: 604	10031001	Collected: 09/08/2	2 09:45	Received: 09	0/09/22 17:00 N	latrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qua
200.7 Metals, Total	Analytical Meth	nod: EPA 20	0.7 Preparation Met	hod: EF	PA 200.7			
	Pace Analytica	l Services -	Kansas City					
Barium, Total Recoverable	0.028	mg/L	0.0050	1	09/14/22 09:42	09/19/22 12:36	7440-39-3	
Boron, Total Recoverable	0.35	mg/L	0.10	1	09/14/22 09:42	09/19/22 12:36	7440-42-8	
Calcium, Total Recoverable	265	mg/L	0.20	1	09/14/22 09:42	09/19/22 12:36	7440-70-2	M1
6010 MET ICP	Analytical Meth	nod: EPA 60	010 Preparation Meth	nod: EP	A 3010			
	Pace Analytica	l Services -	Kansas City					
Lithium, Total Recoverable	0.017	mg/L	0.010	1	09/14/22 09:42	09/19/22 13:00	7439-93-2	
200.8 MET ICPMS	Analytical Meth	nod: EPA 20	0.8 Preparation Met	hod: EF	PA 200.8			
	Pace Analytica	l Services -	Kansas City					
Cobalt, Total Recoverable	0.0016	mg/L	0.0010	1	09/14/22 09:42	09/22/22 21:40	7440-48-4	
Molybdenum, Total Recoverable	0.0086	mg/L	0.0010	1	09/14/22 09:42	09/22/22 21:40	7439-98-7	
2540C Total Dissolved Solids	Analytical Meth	nod: SM 254	40C					
	Pace Analytica							
Total Dissolved Solids	1610	mg/L	66.7	1		09/15/22 11:22		
4500H+ pH, Electrometric	Analytical Meth	nod: SM 450	00-H+B					
	Pace Analytica	l Services -	Kansas City					
pH at 25 Degrees C	7.5	Std. Units	0.10	1		09/16/22 11:53		H6
300.0 IC Anions 28 Days	Analytical Meth	nod: EPA 30	0.0					
-	Pace Analytica	l Services -	Kansas City					
Chloride	112	mg/L	10.0	10		09/20/22 23:14	16887-00-6	
Fluoride	<0.20	mg/L	0.20	1		10/05/22 20:42	16984-48-8	
Sulfate	803	mg/L	50.0	50		09/20/22 23:26	14808-79-8	



Project: JEC INACTIVE ASH PONDS CCR

Pace Project No.:

lo.:	60410031	

Sample: IBA-2-090822	Lab ID: 604	10031002	Collected: 09/08/2	2 10:35	5 Received: 09)/09/22 17:00 N	Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Met	hod: EPA 20	0.7 Preparation Met	hod: EF	PA 200.7			
	Pace Analytica	al Services -	Kansas City					
Barium, Total Recoverable	0.025	mg/L	0.0050	1	09/14/22 09:42	09/19/22 12:42	7440-39-3	
Boron, Total Recoverable	0.20	mg/L	0.10	1	09/14/22 09:42	09/19/22 12:42	7440-42-8	
Calcium, Total Recoverable	206	mg/L	0.20	1	09/14/22 09:42	09/19/22 12:42	7440-70-2	
6010 MET ICP	Analytical Met	hod: EPA 60	10 Preparation Meth	nod: EP	A 3010			
	Pace Analytica	al Services -	Kansas City					
Lithium, Total Recoverable	0.022	mg/L	0.010	1	09/14/22 09:42	09/19/22 13:06	7439-93-2	
200.8 MET ICPMS	Analytical Met	hod: EPA 20	0.8 Preparation Met	hod: EF	PA 200.8			
	Pace Analytica	al Services -	Kansas City					
Cobalt, Total Recoverable	<0.0010	mg/L	0.0010	1	09/14/22 09:42	09/22/22 21:23	7440-48-4	
Molybdenum, Total Recoverable	0.0022	mg/L	0.0010	1	09/14/22 09:42	09/22/22 21:23	7439-98-7	
2540C Total Dissolved Solids	Analytical Met	hod: SM 254	10C					
	Pace Analytica	al Services -	Kansas City					
Total Dissolved Solids	1400	mg/L	40.0	1		09/15/22 11:23		
4500H+ pH, Electrometric	Analytical Met	hod: SM 450)0-H+B					
	Pace Analytica	al Services -	Kansas City					
pH at 25 Degrees C	7.4	Std. Units	0.10	1		09/16/22 11:53		H6
300.0 IC Anions 28 Days	Analytical Met	hod: EPA 30	0.0					
•	Pace Analytica	al Services -	Kansas City					
Chloride	110	mg/L	10.0	10		09/20/22 23:52	16887-00-6	
Fluoride	<0.20	mg/L	0.20	1		10/05/22 21:33	16984-48-8	
Sulfate	605	mg/L	50.0	50		09/21/22 00:04	14808-79-8	



Project: JEC INACTIVE ASH PONDS CCR

Pace Project No.: 60410031

Sample: IBA-3-090822	Lab ID: 604	10031003	Collected: 09/08/2	22 11:35	Received: 09	0/09/22 17:00 N	latrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Met	hod: EPA 20	0.7 Preparation Met	hod: EF	PA 200.7			
	Pace Analytica	al Services -	Kansas City					
Barium, Total Recoverable	0.018	mg/L	0.0050	1	09/14/22 09:42	09/19/22 12:44	7440-39-3	
Boron, Total Recoverable	0.27	mg/L	0.10	1	09/14/22 09:42	09/19/22 12:44	7440-42-8	
Calcium, Total Recoverable	237	mg/L	0.20	1	09/14/22 09:42	09/19/22 12:44	7440-70-2	
6010 MET ICP	Analytical Met	hod: EPA 60	10 Preparation Met	nod: EP	A 3010			
	Pace Analytica	al Services -	Kansas City					
Lithium, Total Recoverable	0.022	mg/L	0.010	1	09/14/22 09:42	09/19/22 13:08	7439-93-2	
200.8 MET ICPMS	Analytical Met	hod: EPA 20	0.8 Preparation Met	hod: EF	PA 200.8			
	Pace Analytica	al Services -	Kansas City					
Cobalt, Total Recoverable	0.0014	mg/L	0.0010	1	09/14/22 09:42	09/22/22 21:45	7440-48-4	
Molybdenum, Total Recoverable	0.0024	mg/L	0.0010	1	09/14/22 09:42	09/22/22 21:45	7439-98-7	
2540C Total Dissolved Solids	Analytical Met	hod: SM 254	40C					
	Pace Analytica	al Services -	Kansas City					
Total Dissolved Solids	1700	mg/L	40.0	1		09/15/22 11:23		
4500H+ pH, Electrometric	Analytical Met	hod: SM 450	00-H+B					
•	Pace Analytica	al Services -	Kansas City					
pH at 25 Degrees C	7.2	Std. Units	0.10	1		09/16/22 11:53		H6
300.0 IC Anions 28 Days	Analytical Met	hod: EPA 30	0.0					
-	Pace Analytica	al Services -	Kansas City					
Chloride	120	mg/L	10.0	10		09/21/22 00:30	16887-00-6	
Fluoride	<0.20	mg/L	0.20	1		10/05/22 21:46	16984-48-8	
Sulfate	750	mg/L	50.0	50		09/21/22 00:42	14808-79-8	



Project: JEC INACTIVE ASH PONDS CCR

Pace Project No .:

60410031	

Sample: IBA-4-090822	Lab ID: 60	410031004	Collected:	09/08/2	2 17:00	Received: 09	/09/22 17:00 N	latrix: Water	
Parameters	Results	Units	Report	Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Me	thod: EPA 20	0.7 Preparat	ion Meth	nod: EP	A 200.7			
	Pace Analytic	cal Services -	Kansas City						
Barium, Total Recoverable	0.018	mg/L	0	0.0050	1	09/14/22 09:42	09/19/22 12:52	7440-39-3	
Boron, Total Recoverable	0.21	mg/L		0.10	1	09/14/22 09:42	09/19/22 12:52	7440-42-8	
Calcium, Total Recoverable	96.4	mg/L		0.20	1	09/14/22 09:42	09/19/22 12:52	7440-70-2	
6010 MET ICP	Analytical Me	ethod: EPA 60	010 Preparation	on Meth	od: EP/	A 3010			
	Pace Analytic	cal Services -	Kansas City						
Lithium, Total Recoverable	0.035	mg/L		0.010	1	09/14/22 09:42	09/19/22 13:16	7439-93-2	
200.8 MET ICPMS	Analytical Me	ethod: EPA 20	0.8 Preparat	ion Meth	nod: EP	A 200.8			
	Pace Analytic								
Cobalt, Total Recoverable	<0.0010	mg/L	0	0.0010	1	09/14/22 09:42	09/22/22 21:49	7440-48-4	
Molybdenum, Total Recoverable	0.0019	mg/L	0	0.0010	1	09/14/22 09:42	09/22/22 21:49	7439-98-7	
2540C Total Dissolved Solids	Analytical Me	ethod: SM 254	40C						
	Pace Analytic	cal Services -	Kansas City						
Total Dissolved Solids	659	mg/L		10.0	1		09/15/22 11:23		
4500H+ pH, Electrometric	Analytical Me	thod: SM 450	00-H+B						
•	Pace Analytic	cal Services -	Kansas City						
pH at 25 Degrees C	7.8	Std. Units	i	0.10	1		09/16/22 11:53		H6
300.0 IC Anions 28 Days	Analytical Me	ethod: EPA 30	0.0						
-	Pace Analytic	cal Services -	Kansas City						
Chloride	17.8	mg/L		1.0	1		09/21/22 00:55	16887-00-6	
Fluoride	0.24	mg/L		0.20	1		10/05/22 21:58	16984-48-8	
Sulfate	174	mg/L		10.0	10		09/21/22 18:33	14808-79-8	



Project: JEC INACTIVE ASH PONDS CCR

Pace Project No .: 60410031

Sample: DUP-IBA-090822	Lab ID: 604	10031005	Collected: 09/08/2	22 10:4	0 Received: 09)/09/22 17:00 N	Aatrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Met	hod: EPA 20	00.7 Preparation Met	hod: El	PA 200.7			
	Pace Analytic	al Services -	Kansas City					
Barium, Total Recoverable	0.025	mg/L	0.0050	1	09/14/22 09:42	09/19/22 12:54	7440-39-3	
Boron, Total Recoverable	0.19	mg/L	0.10	1	09/14/22 09:42	09/19/22 12:54	7440-42-8	
Calcium, Total Recoverable	204	mg/L	0.20	1	09/14/22 09:42	09/19/22 12:54	7440-70-2	
6010 MET ICP	Analytical Met	hod: EPA 60	010 Preparation Met	nod: EF	PA 3010			
	Pace Analytic	al Services -	Kansas City					
Lithium, Total Recoverable	0.022	mg/L	0.010	1	09/14/22 09:42	09/19/22 13:19	7439-93-2	
200.8 MET ICPMS	Analytical Met	hod: EPA 20	0.8 Preparation Met	hod: El	PA 200.8			
	Pace Analytic	al Services -	Kansas City					
Cobalt, Total Recoverable	<0.0010	mg/L	0.0010	1	09/14/22 09:42	09/22/22 21:53	7440-48-4	
Molybdenum, Total Recoverable	0.0023	mg/L	0.0010	1	09/14/22 09:42	09/22/22 21:53	7439-98-7	
2540C Total Dissolved Solids	Analytical Met	hod: SM 254	40C					
	Pace Analytic	al Services -	Kansas City					
Total Dissolved Solids	1390	mg/L	13.3	1		09/15/22 11:23		
4500H+ pH, Electrometric	Analytical Met	hod: SM 450	00-H+B					
•	Pace Analytic	al Services -	Kansas City					
pH at 25 Degrees C	7.4	Std. Units	0.10	1		09/16/22 11:53		H6
300.0 IC Anions 28 Days	Analytical Met	hod: EPA 30	0.0					
-	Pace Analytic	al Services -	Kansas City					
Chloride	110	mg/L	10.0	10		09/21/22 19:11	16887-00-6	
Fluoride	<0.20	mg/L	0.20	1		10/05/22 22:11	16984-48-8	
Sulfate	593	mg/L	50.0	50		09/21/22 19:24	14808-79-8	



Project:	JEC INACTIVE A	SH PONDS CCR										
Pace Project No.:	60410031											
QC Batch:	807550		Analy	sis Metho	d: E	PA 200.7						
QC Batch Method:	EPA 200.7		Analy	sis Descri	ption: 2	00.7 Metal	s, Total					
			Labor	ratory:	Р	ace Analyt	ical Servic	es - Kansa	s City			
Associated Lab Sar	mples: 6041003	1001, 6041003100	02, 6041003	1003, 604	10031004, 6	04100310	05					
METHOD BLANK:	3212545			Matrix: W	/ater							
Associated Lab Sar	mples: 6041003	1001, 6041003100	2, 6041003	1003, 604	10031004, 6	04100310	05					
			Blan	ık	Reporting							
Parar	neter	Units	Resu	ult	Limit	Analy	/zed	Qualifier	S			
Barium		mg/L	<0	0.0050	0.0050	09/19/22	2 12:33					
Boron		mg/L		<0.10	0.10	09/19/22	2 12:33					
DOIOII												
Calcium		mg/L		<0.20	0.20	09/19/22	2 12:33					
Calcium		mg/L		<0.20	0.20	09/19/22	2 12:33					
	NTROL SAMPLE:	0										
Calcium		mg/L	Spike Conc.	<0.20 LC Res	S	09/19/22 LCS % Rec	2 12:33 		Qualifiers			
Calcium		3212546 Units	Spike Conc.	LC	S	LCS	% R Limi		Qualifiers	_		
Calcium LABORATORY CO Parar		mg/L 3212546	Spike Conc.	LC Res	CS sult	LCS % Rec	% R 0	its (Qualifiers			
Calcium LABORATORY CO Parar Barium		3212546 - Units - mg/L	Spike Conc.	LC Res 1 1	CS sult	LCS % Rec 100	% R 3	its (85-115	Qualifiers	_		
Calcium LABORATORY CO Parar Barium Boron Calcium	neter	mg/L 3212546 Units mg/L mg/L mg/L	Spike Conc.	LC Res 1 1	2S sult 1.0 0.93 9.6	LCS % Rec 100 93	% R 3	its (85-115 85-115	Qualifiers	_		
Calcium LABORATORY CO Parar Barium Boron	neter	mg/L 3212546 Units mg/L mg/L mg/L	Spike Conc. 10 547	LC Res 1 1 0	CS sult 1.0 0.93	LCS % Rec 100 93	% R 3	its (85-115 85-115	Qualifiers	_		
Calcium LABORATORY CO Parar Barium Boron Calcium	neter	mg/L 3212546 Units mg/L mg/L mg/L	Spike Conc. 10 547 MS	LC Res 1 1 0 MSD	2S sult 1.0 0.93 9.6	LCS % Rec 100 93	% R 3	its (85-115 85-115	Qualifiers	_	Мах	
Calcium LABORATORY CO Parar Barium Boron Calcium	neter /ATRIX SPIKE DU	mg/L 3212546 Units mg/L mg/L mg/L PLICATE: 3212 60410031001	Spike Conc. 10 547	LC Res 1 1 0	2S sult 1.0 0.93 9.6 3212548	LCS % Rec 100 90	% R 	its (85-115 85-115 85-115 85-115			Max RPD	Qual
Calcium LABORATORY CO Parar Barium Boron Calcium MATRIX SPIKE & M	neter /ATRIX SPIKE DU	mg/L 3212546 Units mg/L mg/L mg/L PLICATE: 3212 60410031001 s Result	Spike Conc. 10 547 MS Spike	LC Res 1 1 0 MSD Spike	2S sult 1.0 0.93 9.6 3212548 MS	LCS % Rec 10(93 96 MSD	% R Limi 3 3 6 3 MS	its (85-115 85-115 85-115 85-115 MSD	% Rec Limits	 RPD3		Qual
Calcium LABORATORY CO Parar Barium Boron Calcium MATRIX SPIKE & M Paramete	neter /ATRIX SPIKE DU rUnit	mg/L 3212546 Units mg/L mg/L mg/L PLICATE: 3212 60410031001 s Result L 0.028	Spike Conc. 10 547 MS Spike Conc.	LC Res 1 1 0 MSD Spike Conc.	2S sult 1.0 0.93 9.6 3212548 MS Result	LCS % Rec 100 90 90 MSD Result	MS % Rec	MSD % Rec	% Rec Limits		RPD	Qual

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.



Project:	JEC INACTIVE AS	SH PONDS CCR										
Pace Project No.:	60410031											
QC Batch:	807551		Analy	sis Method	d:	EPA 200.8						
QC Batch Method:	EPA 200.8		Analy	sis Descrip	ption:	200.8 MET						
			Labor	ratory:	I	Pace Analyti	cal Service	es - Kansas	s City			
Associated Lab Sam	nples: 60410031	001, 6041003100	2, 6041003	1003, 604 ⁻	10031004,	6041003100)5					
METHOD BLANK:	3212550			Matrix: Wa	/ater							
Associated Lab Sam	nples: 60410031	001, 6041003100	2, 6041003	1003, 604 [,]	10031004,	6041003100)5					
			Blan	ık l	Reporting							
Param	neter	Units	Resu	ult	Limit	Analy	zed	Qualifiers	S			
		mg/L	<0	0.0010	0.001	0 09/22/22	21:17					
Cobalt												
Cobalt Molybdenum		mg/L	<0	0.0010	0.001	0 09/22/22	21:17					
Molybdenum LABORATORY CON Param		-	Spike Conc.	LC Res	CS sult	0 09/22/22 LCS % Rec	% Re Limit	ts (Qualifiers			
Molybdenum LABORATORY CON Param Cobalt		mg/L 3212551 Units mg/L	Spike Conc.	LC Res 4	S sult 0.040	LCS % Rec 99	% Re Limit	ts (35-115	Qualifiers			
Molybdenum LABORATORY CON Param		mg/L 3212551 Units	Spike Conc.	LC Res 4	CS sult	LCS % Rec	% Re Limit	ts (Qualifiers			
Molybdenum LABORATORY CON Param Cobalt	neter	mg/L 3212551 Units mg/L mg/L	Spike Conc. 0.04 0.04 552	LC Res 4 4	S sult 0.040	LCS % Rec 99 104	% Re Limit	ts (35-115	Qualifiers	_		
Molybdenum LABORATORY CON Param Cobalt Molybdenum	neter	mg/L 3212551 Units mg/L mg/L PLICATE: 3212	Spike Conc. 0.0- 0.0- 552 MS	LC Res 4 4 MSD	2S sult 0.040 0.042 3212553	LCS % Rec 99 104	% Re & E	ts (35-115 35-115		_		
Molybdenum LABORATORY CON Param Cobalt Molybdenum MATRIX SPIKE & M	NATRIX SPIKE DUF	mg/L 3212551 Units mg/L mg/L PLICATE: 3212 60410031002	Spike Conc. 0.0 0.0 552 MS Spike	LC Res 4 4 MSD Spike	2S sult 0.040 0.042 3212553 MS	LCS % Rec 99 104	% Re Limit & & & & & & & & & & & & & & & & & & &	ts (35-115 35-115 MSD	% Rec		Max	
Molybdenum LABORATORY CON Param Cobalt Molybdenum MATRIX SPIKE & M Parameter	NATRIX SPIKE DUF	mg/L 3212551 Units mg/L mg/L PLICATE: 3212 60410031002	Spike Conc. 0.0- 0.0- 552 MS	LC Res 4 4 MSD	2S sult 0.040 0.042 3212553	LCS % Rec 99 104	% Re & E	ts (35-115 35-115		RPD	RPD	Qual
Molybdenum LABORATORY CON Param Cobalt Molybdenum MATRIX SPIKE & M	NATRIX SPIKE DUF	mg/L 3212551 Units mg/L mg/L PLICATE: 3212 60410031002 60410000 604100000 604100000 604100000 6041000000 6041000000 6041000000 60410000000 60410000000 60410000000 604100000000000000000000000000000000000	Spike Conc. 0.0 0.0 552 MS Spike	LC Res 4 4 MSD Spike	2S sult 0.040 0.042 3212553 MS	LCS % Rec 99 104	% Re Limit & & & & & & & & & & & & & & & & & & &	ts (35-115 35-115 MSD	% Rec		RPD 20	Qual

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.



Project: JI	EC INACTIVE AS	H PONDS CCR										
Pace Project No.: 60	0410031											
QC Batch:	807552		Analy	ysis Meth	od:	EPA 6010						
QC Batch Method:	EPA 3010		Analy	ysis Desc	ription:	6010 MET						
			Labo	oratory:		Pace Analyt	ical Servic	es - Kansa	s City			
Associated Lab Sampl	es: 604100310	001, 6041003100	2, 6041003	31003, 60	410031004,	604100310	05					
METHOD BLANK: 32	212555			Matrix: \	Vater							
Associated Lab Sampl	es: 604100310	001, 6041003100	2, 6041003	31003, 60	410031004,	604100310	05					
			Blai	nk	Reporting							
Paramet	er	Units	Res	ult	Limit	Analy	/zed	Qualifier	s			
Lithium		mg/L		<0.010	0.0	10 09/19/22	2 12:58					
LABORATORY CONT	ROL SAMPLE:	3212556										
			Spike	L	CS	LCS	% R	ec				
Paramet	er	Units	Conc.	Re	esult	% Rec	Limi	ts	Qualifiers			
Lithium		mg/L		1	1.0	10	3 0	30-120		_		
MATRIX SPIKE & MAT		LICATE: 3212	557		321255	0						
WATKIA SFIKE & WAT	KIX SFIRE DUP	LICATE. 5212	MS	MSD	321233	0						
		60410031001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Lithium		0.017		1	1.1	1.1	107	108	75-125		20	

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



Project:	JEC INACTIVE A	SH PONDS CCR						
Pace Project No.:	60410031							
QC Batch:	807819		Analysis M	ethod:	SM 2540C			
QC Batch Method:	SM 2540C		Analysis De	escription:	2540C Total Di	ssolved Solids		
			Laboratory	:	Pace Analytica	l Services - Kai	nsas City	/
Associated Lab San	nples: 60410031	001						
METHOD BLANK:	3213723		Matrix	x: Water				
Associated Lab San	nples: 60410031	001						
			Blank	Reporting				
Paran	neter	Units	Result	Limit	Analyze	d Quali	fiers	
Total Dissolved Solid	ds	mg/L	<5.0	5.	0 09/15/22 1	1:19		
LABORATORY CON	NTROL SAMPLE:	3213724	Colleo	LCS	LCS	% Rec		
Paran	neter	Units	Spike Conc.	Result	% Rec	Limits	Quali	fiers
Total Dissolved Solid	ds	mg/L	1000	1040	104	80-120		
SAMPLE DUPLICA	TE: 3213725							
			60409826001	Dup		Max		
Paran	neter	Units	Result	Result	RPD	RPD		Qualifiers
Total Dissolved Solid	ds	mg/L	571	l 55	2	3	10	
	FE 0040700							
SAMPLE DUPLICAT	TE: 3213726		60410000001	Dup		Max		
Paran	neter	Units	Result	Dup Result	RPD	Max RPD		Qualifiers
Total Dissolved Solid	ds	mg/L	1170	120	0	3	10	

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



Project:	JEC INACTIVE AS	SH PONDS CCR					
Pace Project No.:	60410031						
QC Batch:	807820		Analysis Me	ethod:	SM 2540C		
QC Batch Method:	SM 2540C		Analysis De	escription:	2540C Total Di	ssolved Solids	
			Laboratory		Pace Analytica	I Services - Ka	nsas City
Associated Lab Sar	nples: 60410031	002, 60410031003	8, 60410031004,	60410031005			
METHOD BLANK:	3213729		Matrix	: Water			
Associated Lab Sar	nples: 60410031	002, 60410031003	8, 60410031004,	60410031005			
			Blank	Reporting			
Paran	neter	Units	Result	Limit	Analyze	ed Quali	fiers
Total Dissolved Soli	ds	mg/L	<5.0	5	.0 09/15/22 1	1:22	
LABORATORY CO	NTROL SAMPLE:	3213730					
_			Spike	LCS	LCS	% Rec	
Parar		Units	Conc.	Result	% Rec	Limits	Qualifiers
Total Dissolved Soli	ds	mg/L	1000	1040	104	80-120	
SAMPLE DUPLICA	TE: 3213731			_			
Paran	notor	Linita	60410031002	Dup	RPD	Max RPD	Qualifiers
		Units	Result	Result			
Total Dissolved Soli	ds	mg/L	1400) 142	20	2	10
SAMPLE DUPLICA	TE: 3213732			_		• •	
Paran	notor	Units	60409977002	Dup	RPD	Max RPD	Qualifiers
			Result	Result			
Total Dissolved Soli	ds	mg/L	1380) 115	50	18	10 D6

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.



Project: Pace Project No.:	JEC INACTIVE AS 60410031	H PONDS CCR						
QC Batch:	807931		Analysis Meth	od:	SM 4500-H+B			
QC Batch Method:	SM 4500-H+B		Analysis Desc	ription:	4500H+B pH			
			Laboratory:		Pace Analytical	Services - Kar	nsas City	
Associated Lab Sar	nples: 604100310	001, 6041003100	2, 60410031003, 60	410031004,	, 60410031005			
SAMPLE DUPLICA	TE: 3214114			_				
			60410030003	Dup		Max		
Paran	neter	Units	Result	Result	RPD	RPD	Qualifiers	
pH at 25 Degrees C		Std. Units	7.3	7	<u>.</u>	3	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.



QC Batch: 80851	5		Analı	veic Mothor	4-	=	PA 300.0						
QC Batch Method: EPA 3				/sis Methoo /sis Descrip			0.0 IC An	ione					
QC Balch Methou. LFA 3	00.0			ratory:	JUON.				ices - Kansa	as Citv			
Associated Lab Samples:	604100310	001, 6041003100		,	1003100								
METHOD BLANK: 321606	4			Matrix: Wa	ater								
Associated Lab Samples:	604100310	01,6041003100	2, 6041003	31003, 604 ⁻	1003100	4, 60	4100310	05					
			Blar	nk I	Reporting	g							
Parameter		Units	Res	ult	Limit		Analy	/zed	Qualifie	rs			
Chloride		mg/L		<1.0		1.0	09/20/22	2 09:08					
Sulfate		mg/L		<1.0		1.0	09/20/22	2 09:08					
METHOD BLANK: 321808	8			Matrix: Wa	ater								
		01, 6041003100	2.6041003			4, 60	4100310	05					
· · · · · · · · · · · · · · · · · · ·	001100010		Blar		Reporting		1100010						
Parameter		Units	Res		Limit	0	Analy	/zed	Qualifie	rs			
Chloride	·	mg/L		<1.0		1.0	09/21/22	2 08:57					
Sulfate		mg/L		<1.0		1.0	09/21/22	2 08:57					
LABORATORY CONTROL S	AMPLE:	3216065											
			Spike	LC	S		LCS	%	Rec				
Parameter		Units	Conc.	Res	ult	%	% Rec	Lir	nits	Qualifiers			
Chloride		mg/L		5	4.7		94	4	90-110				
Sulfate		mg/L		5	4.9		97	7	90-110				
LABORATORY CONTROL S	AMPLE:	3218089											
			Spike	LC	S		LCS	%	Rec				
Parameter		Units	Conc.	Res	ult	9	% Rec	Lir	nits	Qualifiers			
Chloride		mg/L		5	4.7		94	4	90-110				
Sulfate		mg/L		5	4.8		90	5	90-110				
MATRIX SPIKE & MATRIX S		_ICATE: 3216	066		32160	67							
-	-		MS	MSD									
		60410000004	Spike	Spike	MS		MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	l	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Chloride	mg/L		50	50	22	27	207	17	9 140	80-120	9	15	E,M1

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REPORT OF LABORATORY ANALYSIS

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Project: JEC INACTIVE ASH PONDS CCR

Pace Project No.: 60410031

MATRIX SPIKE SAMPLE:	3216068						
		60410030004	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
Chloride	mg/L	248	250	484	94	80-120	
Sulfate	mg/L	1600	500	2070	93	80-120 E	E

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REPORT OF LABORATORY ANALYSIS

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Project: Pace Project No.:	JEC INACTIVE A 60410031	SH PONDS CCR										
QC Batch:	811018		Analy	sis Method	4.	EPA 300.0						
QC Batch Method:	EPA 300.0			/sis Descrip		300.0 IC Ani	ions					
QO Daton Method.	217(000.0			ratory:		Pace Analyt		es - Kansas	s City			
Associated Lab Sam	nples: 6041003	1001, 6041003100		•		,			, only			
METHOD BLANK:	3225338			Matrix: Wa	ater							
Associated Lab Sam	nples: 6041003	1001, 6041003100	2, 6041003	1003, 604 [,]	10031004,	604100310	05					
			Blar	nk I	Reporting							
Param	neter	Units	Res	ult	Limit	Analy	zed	Qualifiers	6			
Fluoride		mg/L		<0.20	0.2	0 10/05/22	2 17:33					
LABORATORY COM	NTROL SAMPLE:	3225339	Spike	LC	S	LCS	% R	ec				
Param	neter	Units	Conc.	Res	ult	% Rec	Limi	ts C	Qualifiers			
Fluoride		mg/L	2.	.5	2.6	102	2 9	90-110		_		
MATRIX SPIKE & M	IATRIX SPIKE DU	PLICATE: 3225			3225341							
			MS	MSD								
Parameter	. Unit	60410001003 s Result	Spike Conc.	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Fluoride	mg/	L 0.35	2.5	2.5	2.9	2.9	101	103	80-120	2	15	
MATRIX SPIKE SAM	MPLE:	3225342										
-				031001	Spike	MS		MS	% Rec		• • • •	
Param	neter	Units	Re	sult	Conc.	Result	%	6 Rec	Limits		Qualif	iers
Fluoride		mg/L		<0.20	2.5		2.5	94	80	-120		

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QUALIFIERS

Project: JEC INACTIVE ASH PONDS CCR

Pace Project No.: 60410031

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

- D6 The precision between the sample and sample duplicate exceeded laboratory control limits.
- E Analyte concentration exceeded the calibration range. The reported result is estimated.
- H6 Analysis initiated outside of the 15 minute EPA required holding time.
- M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.



QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: JEC INACTIVE ASH PONDS CCR

Pace Project No.: 60410031

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60410031001	IBA-1-090822	EPA 200.7	807550	EPA 200.7	807609
60410031002	IBA-2-090822	EPA 200.7	807550	EPA 200.7	807609
60410031003	IBA-3-090822	EPA 200.7	807550	EPA 200.7	807609
60410031004	IBA-4-090822	EPA 200.7	807550	EPA 200.7	807609
60410031005	DUP-IBA-090822	EPA 200.7	807550	EPA 200.7	807609
60410031001	IBA-1-090822	EPA 3010	807552	EPA 6010	807611
60410031002	IBA-2-090822	EPA 3010	807552	EPA 6010	807611
60410031003	IBA-3-090822	EPA 3010	807552	EPA 6010	807611
60410031004	IBA-4-090822	EPA 3010	807552	EPA 6010	807611
60410031005	DUP-IBA-090822	EPA 3010	807552	EPA 6010	807611
60410031001	IBA-1-090822	EPA 200.8	807551	EPA 200.8	807610
60410031002	IBA-2-090822	EPA 200.8	807551	EPA 200.8	807610
60410031003	IBA-3-090822	EPA 200.8	807551	EPA 200.8	807610
60410031004	IBA-4-090822	EPA 200.8	807551	EPA 200.8	807610
60410031005	DUP-IBA-090822	EPA 200.8	807551	EPA 200.8	807610
60410031001	IBA-1-090822	SM 2540C	807819		
60410031002	IBA-2-090822	SM 2540C	807820		
60410031003	IBA-3-090822	SM 2540C	807820		
60410031004	IBA-4-090822	SM 2540C	807820		
60410031005	DUP-IBA-090822	SM 2540C	807820		
60410031001	IBA-1-090822	SM 4500-H+B	807931		
60410031002	IBA-2-090822	SM 4500-H+B	807931		
60410031003	IBA-3-090822	SM 4500-H+B	807931		
60410031004	IBA-4-090822	SM 4500-H+B	807931		
60410031005	DUP-IBA-090822	SM 4500-H+B	807931		
60410031001	IBA-1-090822	EPA 300.0	808515		
60410031001	IBA-1-090822	EPA 300.0	811018		
60410031002	IBA-2-090822	EPA 300.0	808515		
60410031002	IBA-2-090822	EPA 300.0	811018		
60410031003	IBA-3-090822	EPA 300.0	808515		
60410031003	IBA-3-090822	EPA 300.0	811018		
60410031004	IBA-4-090822	EPA 300.0	808515		
60410031004	IBA-4-090822	EPA 300.0	811018		
60410031005	DUP-IBA-090822	EPA 300.0	808515		
60410031005	DUP-IBA-090822	EPA 300.0	811018		

			W0#:60410031
Pace	DC#_Title: ENV-F	RM-LENE-0009_Sampl	
ANALYTICAL SERVICES	Revision: 2	Effective Date: 01/12/202	22 60410031
Client Name: 4	Evergy		
Courier: FedEx 🗆 UPS	🗆 VIA 🗆 Clay 🗆		Pace 🗆 Xroads 🗆 Client 🗹 Other 🗆
Tracking #:		Pace Shipping Label Used	? Yes 🗆 No 💋
Custody Seal on Cooler/Box	Present: Yes Z No	□ Seals intact: Yes	-
0	e Wrap □ Bubble E		None D Other Z C / C
Thermometer Used: Ta		ype of Ice Wet Blue Non	
Cooler Temperature (°C):		. Factor 0.0 Correcte	ad 0.5 Date and initials of person examining contents 09-12-200
Temperature should be above free:	zing to 6°C		4.
Chain of Custody present:			
Chain of Custody relinquished:		Yes 🗆 No 🗆 N/A	
Samples arrived within holding	time:	Yes 🗆 No 🗇 N/A	
Short Hold Time analyses (<7	72hr):	□Yes INO □N/A	
Rush Turn Around Time requ		□Yes 🗖No □N/A	
Sufficient volume:			
Correct containers used:			
Pace containers used:			
Containers intact:			
Unpreserved 5035A / TX1005/1	1006 soils frozen in 48hrs	(
Filtered volume received for dis	solved tests?		
Sample labels match COC: Dat	te / time / ID / analyses		
Samples contain multiple phase	es? Matrix:		
Containers requiring pH preserv			ist sample IDs, volumes, lot #'s of preservative and the date/time added.
(HNO ₃ , H ₂ SO ₄ , HCl<2; NaOH>9 Su (Exceptions: VOA, Micro, O&G, KS		LOT#: 55192	acerune audeu.
Cyanide water sample checks:		LOIM. 33112	
Lead acetate strip turns dark? (□Yes □No	
Potassium iodide test strip turns	s blue/purple? (Preserve) 🛛 Yes 🗍 No	
Trip Blank present:			
Headspace in VOA vials (>6mr	m):	□Yes □No □/¶/A	
Samples from USDA Regulated	Area: State:	□Yes □No ØN/A	
Additional labels attached to 50	35A / TX1005 vials in the	e field? 🗆 Yes 🗆 No 💋 N/A	
Client Notification/ Resolution		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 Required	Client Information:	Section B Required Proje	_						Invoid	tion C ce Info	ormati	_								_						Pa	age:	1	of	1
Company	EVERGY KANSAS CENTRAL, INC.	Report To: Me	elissa	Michels, S	Samantha	a Kaney, D	Danielle	Zinsr	Atten	ition:	P	Αссοι		-																
Address:	Jeffrey Energy Center (JEC)	Сору То: Ја	red Mo	orrison, Ja	ake Hump	ohrey, Lau	ira Hines	6	Comp	pany N	lame	: E\	/ERC	GY M	ANS	SAS	CEN	ITR/	AL, I	INC	REG	ULAT	ORY	AG	ENCY	Y				
	818 Kansas Ave, Topeka, KS 66612								Addre	ess:	5	SEE \$	SEC	rior	A٨						Γ	NPDE	s í	~ (GROU	JND V	NATE	R 🗆	DRINKING	WATER
Email To:	melissa.michels@evergy.com	Purchase Orde	r No,:	10JEC-0	0000477	47		Î	Pace (Refere	Quote ence:											٢	UST	[F	RCRA			F	OTHER	
Phone:	785-575-8113 Fax:	Project Name:	JEC	Inactive	Bottom A	sh Pond	CCR		Pace I Manag	Project ger:	t A	Alice	Spill	er, 9	13-5	63-1	403				Site	Locat	ion		ĸs					
Requeste	ed Due Date/TAT: 7 day	Project Numbe	r:						Pace	Profile	#: g	9657,	2									STA	TE:			, 	-			
																	_	lequ	Jest	ed A	naly	sis Fi	ltere	d (Y	/N)					
	Section D Valid Matrix C	odes 🚆	(dV		0011						D	rese	- coti			t N /	N	N	N	N	N									
	WATER WASTE WATER PRODUCT SOLUSOLID OIL WIPE (A-Z, 0-9 / ,-) OTHER	odes General Content CODE DW DW September 20 DW September 20 WW P SOL SOL WP AR OT LD	(G=GRAB	COMPO	DSITE	ECTED COMPOS END/GR	NTE AB	AP AT COLLECTION	AINERS	p				100		Test 4	Ĺ	:			Metals***						Residual Chlorine (Y/N)	60	410)][
ITEM #	Sample IDs MUST BE UNIQUE TISSUE	MATRIX CODF	SAMPLE TYPE	DATE	TIME	DATE	TIME	SAMPLE TEMP	# OF CONTAINERS	Unpreserve	H ₂ SO₄	HCI HCI	NaOH	Na ₂ S ₂ O ₃	Other	J Analysis	200.7 Total Metals	200.8 Tota	300.0 CI, F,	TDS / pH	6010 Total						Residual C	Pace	Project N	o./ Lab I.D.
1	IBA-1-090822	N	тG	×		09/08/22	9:45	-	4	3		1					×	x	X	х	x	_			_		\square			
2	IBA-2-090822	W	T G		14	09/08/22	10:35	-	4	3		1					×	x	x	x	x		\square	_			\square			
3	IBA-3-090822	N	T G		1	09/08/22	11:35		4	3		1		4			X	X	x	x	x	_		_	-					
4	IBA-4-090822	N	T G			09/08/22	17:00	×	4	3		1		_			X	X	X	X	×	-	\square				Н			_
5	DUP-IBA-090822	N	тG		- ×	09/08/22	10:40	12	4	3		1		_	_	4	×	X	X	X	×	_	\square	-	_	+-	\square		_	
6			_					-		+	\rightarrow	_	+	_	_		⊢	-			-	-	\vdash	+	+	+	\vdash	_		
7			_					-	_	+		-	+	-			⊢	-	-		-+-	-		-	+	+-	\vdash			
8								-	┢	+	\vdash	+		-	_	-	⊢	-			+	+	$\left \right $	+	+	+	\mathbb{H}			
9								+-	┝	+	\vdash	+	-	-	-	-	F	-			+	-	\vdash	-	-	+	Н			
10								+	┢	+	\vdash	+			+		⊢	-	\vdash		+	-	\vdash	+	+	1	H	- 102		
11			-					+	┢─		\vdash	+			-	1	F	┢	\vdash	\vdash				-	+	1	Η			
12	ADDITIONAL COMMENTS			ISHED BY	/ AFFILIAT	10N	DAT	E	-	TIME	H		1	ACC	EPTE	D B	(/ AF	FILI	ATIO	N		DAT	E	Т	IME	\uparrow		SAM	LE CONDIT	IONS
200.7 To	tal Metals*: B, Ba, Ca		_					-	+			A	N	n	-0	\sim	7	_				9/9	27	17e	ob	0.	3.	Y	Y	V
	tal Metals**: Co, Mo		Jas	on R. Fran	ks / SCS		9/9/2	/2	1	17:00	-	.01	3				U				+		-		-	1	2			1
6010 To	tal Metals***: Li (1 metal)													_												1				
		_							1					_																
Pag					SAMPL	ER NAME /	AND SIGN	ATU	RE																		ပ့	uo p	dy ooler	Intact
Page 29 of 31						PRINT Nam SIGNATUR			-	son R	R. Fr	anks	2	/	2				Sigr			9	9/9/2	2		- 23	Temp In °C	Received on Ice (Y/N)	Cuslody Sealed Cooler (Y/N)	Samples Intact (Y/N)

DC#_Title: ENV-FRM-LENE-0001_Sample Container Count Revision: 3 | Effective Date: | Issued by: Lenexa

			Client:	-				_										. F	Profile #												
			Site																Notes												
COC	NG9H	DG9H	DG9Q	VG9U	DG9U	DG9M	DG9B	BG1U	AG1H	AG1U	AG2U	AG3S	AG4U	AG5U	JGFU	WGKU	wgbu	BP1U	BP2U	BP3U	BP1N	BP3N	BP3F	BP3S	BP3C	BP3Z	WPDU	ZPLC	Other		
1 W)	٢	_																1		2		1									
2	-	-																1		Q											
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11	-	_									_					-						-		7	-					$ \rightarrow $	
12	1						1				_				_		-														

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

BP4N

BP4S

WPDU

125mL HNO3 plastic

125mL H2SO4 plastic

16oz unpresserved plstic

Work Order Number:

60410031

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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.

Required Client Information:		Section B Required Project Information:						Section C Invoice Information:										_						Page: of						
Company: EVERGY KANSAS CENTRAL, INC. Report To: Jake Hurr			-					Attention: Accounts Payable																						
			antha Kaney, Melissa Michels Company Name: EVERGY KANSAS CENTR							RAL	_, IN																			
Suite 545 Phoenix, AZ 85004 Danielle Oberbroeck			eckling					Address: SEE SECTION A											NPDES GROUND WATER DRINKING WATER											
Email To: doberbroeckling@haleyaldrich.com Purchase Order No.: 10JEC		10JEC-0	0000047747				Pace Quote Reference:										🗖 UST 🔲 RCRA					OTHER								
Phone: 507-251-2232 Fax: Project Name: JEC Inactive B		Bottom Ash Pond CCR				Pace Project Alice Spiller, 913-563-1403 Manager:								s	Site Location				140											
Requested Due Date/TAT: Project Number:			Pace Profile #: 9657, 9							1_	STATE: KS					<u> </u>														
	Section D Valid Matrix	Cordoo														→	Re	eque	estec	d Ana	alysi	s Filt	ered	(Y/N	N)	—				
	Required Client Information MATRIX		codes (1) CODE code DW code WT code WW code WW code Code code <			COLLECTED				Preservatives			↑ N /	\square																
ITEM #	AIR (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE DRINNING WATER WASTE WATER PRODUCT SOIL/SOLID OIL WIPE AIR OTHER TISSUE	P SL OL WP AR OT TS	MATRIX CODE (see valid codes SAMPLE TYPE (G=GRAB C=CC	COMPOSI	TE START	COMPO END/G	ISITE RAB	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	2SO4	HNO ₃ HCI	NaOH	Na ₂ S ₂ O ₃	Methanol Other	4 Analysis Test 4	200.7 Total Metals*	200.8 Total Metals**	6010 Lithium"" Total discolved solids		-						Residual Chlorine (Y/N)			
E				DATE	TIME	DATE	TIME	SA	#	5	ΞĒ	ĪĬ	Ž	ž	ΣÖ	<u>→</u>	20	50		2 8	Чd		_	_			Å	Pace	Project N	lo./ Lab I.D.
1			NТ 					\vdash		+	+	+	+		+	-	⊢	+	+	-	$\left \right $	+	+	+			-			
2			NT NT					\vdash		++	╉	+	+	\vdash	+		⊢	+	+	+	$\left \right $	+	╋	+			+			
3			NT NT					\vdash		┼┼	+	+	+	\vdash	+		┣┼	+	+	+-	$\left \right $	+	╋	╉			-			
4			NT NT					┝		+	+	+			+		⊢	+		+			+	+						
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12																														
		RELINQUISHED BY / AFFILIATION DATE				TIME ACCEPTED BY / AFFILIATION							DATE TIME			E		SAMPLE CONDITIONS			IONS									
200.7 Total Metals*: B, Ba, Ca																														
200.8 Total Metals**: Co, Mo																														
6010 Total Metals***: Li (1 metal)																				╈										
											╡																		·	
						SAMPLER NAME AND SIGNATURE																ů	,	uo (t	Cooler (Y/N)	Itact				
						PRINT Name of SAMPLER:															Temp in		Received on Ice (Y/N)	dy S∈ Ier (Ƴ	oles Ir (Y/N)					
														ATE Signed MM/DD/YY):								Ten		Rec Ict	Custo Coo	Samples Intact (Y/N)				

Attachment 2-2 December 2022 Annual Assessment Sampling Event Laboratory Analytical Report



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

December 21, 2022

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

RE: Project: JEC INACTIVE BOTTOM ASH POND C Pace Project No.: 60417700

Dear Jake Humphrey:

Enclosed are the analytical results for sample(s) received by the laboratory on December 12, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

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

Sincerely,

Alice Spiller

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

Enclosures

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





CERTIFICATIONS

Project: JEC INACTIVE BOTTOM ASH POND C

Pace Project No.: 60417700

Pace Analytical Services Kansas

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



SAMPLE SUMMARY

Project: JEC INACTIVE BOTTOM ASH POND C

Pace Project No.: 60417700

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60417700001	IBA-1-120922	Water	12/09/22 12:00	12/12/22 08:00
60417700002	IBA-2-120922	Water	12/09/22 13:00	12/12/22 08:00
60417700003	IBA-3-120922	Water	12/09/22 10:55	12/12/22 08:00
60417700004	IBA-4-120922	Water	12/09/22 14:20	12/12/22 08:00
60417700005	DUP-IBA-120922	Water	12/09/22 10:55	12/12/22 08:00



SAMPLE ANALYTE COUNT

Project: JEC INACTIVE BOTTOM ASH POND C

Pace Project No.: 60417700

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60417700001		EPA 200.7	MA1	4	PASI-K
		EPA 6010	MA1	1	PASI-K
		EPA 200.8	JGP	7	PASI-K
		EPA 245.1	JXD	1	PASI-K
		EPA 300.0	CRN2	1	PASI-K
60417700002	IBA-2-120922	EPA 200.7	MA1	4	PASI-K
		EPA 6010	MA1	1	PASI-K
		EPA 200.8	JGP	7	PASI-K
		EPA 245.1	JXD	1	PASI-K
		EPA 300.0	CRN2	1	PASI-K
60417700003	IBA-3-120922	EPA 200.7	MA1	4	PASI-K
		EPA 6010	MA1	1	PASI-K
		EPA 200.8	JGP	7	PASI-K
		EPA 245.1	JXD	1	PASI-K
		EPA 300.0	CRN2	1	PASI-K
60417700004	IBA-4-120922	EPA 200.7	MA1	4	PASI-K
		EPA 6010	MA1	1	PASI-K
		EPA 200.8	JGP	7	PASI-K
		EPA 245.1	JXD	1	PASI-K
		EPA 300.0	CRN2	1	PASI-K
60417700005	DUP-IBA-120922	EPA 200.7	MA1	4	PASI-K
		EPA 6010	MA1	1	PASI-K
		EPA 200.8	JGP	7	PASI-K
		EPA 245.1	JXD	1	PASI-K
		EPA 300.0	CRN2	1	PASI-K

PASI-K = Pace Analytical Services - Kansas City



Project: JEC INACTIVE BOTTOM ASH POND C

Pace Project No.: 60417700

Method: EPA 200.7

Description:200.7 Metals, TotalClient:Evergy Kansas Central, Inc.Date:December 21, 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:



Project: JEC INACTIVE BOTTOM ASH POND C

Pace Project No.: 60417700

Method: EPA 6010

Description:6010 MET ICPClient:Evergy Kansas Central, Inc.Date:December 21, 2022

General Information:

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

Hold Time:

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

Sample Preparation:

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

Initial Calibrations (including MS Tune as applicable):

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

Continuing Calibration:

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

Method Blank:

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

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

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

Additional Comments:



Project: JEC INACTIVE BOTTOM ASH POND C

Pace Project No.: 60417700

Method: EPA 200.8

Description:200.8 MET ICPMSClient:Evergy Kansas Central, Inc.Date:December 21, 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:



Project: JEC INACTIVE BOTTOM ASH POND C

Pace Project No.: 60417700

Method: EPA 245.1

Description:245.1 MercuryClient:Evergy Kansas Central, Inc.Date:December 21, 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:



Project: JEC INACTIVE BOTTOM ASH POND C

Pace Project No.: 60417700

Method: EPA 300.0

Description:300.0 IC Anions 28 DaysClient:Evergy Kansas Central, Inc.Date:December 21, 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: 823412

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 20263624010

- M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
 - MS (Lab ID: 3272892)
 - Fluoride
 - MSD (Lab ID: 3272893)
 - Fluoride

Additional Comments:

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



Project: JEC INACTIVE BOTTOM ASH POND C

Pace Project No.: 60417700

Sample: IBA-1-120922	Lab ID: 6041	7700001	Collected: 12/09/2	22 12:00	Received: 12	2/12/22 08:00 N	latrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual		
200.7 Metals, Total	Analytical Meth	od: EPA 20	0.7 Preparation Me	thod: EF	PA 200.7					
	Pace Analytical	Services -	Kansas City							
Barium, Total Recoverable	0.031	mg/L	0.0050	1	12/14/22 04:14	12/15/22 10:32	7440-39-3			
Beryllium, Total Recoverable	<0.0010	mg/L	0.0010	1	12/14/22 04:14	12/15/22 10:32	7440-41-7			
Chromium, Total Recoverable	<0.0050	mg/L	0.0050	1	12/14/22 04:14	12/15/22 10:32	7440-47-3			
Lead, Total Recoverable	<0.010	mg/L	0.010	1	12/14/22 04:14	12/15/22 10:32	7439-92-1			
6010 MET ICP	Analytical Meth	od: EPA 60	10 Preparation Met	hod: EP	A 3010					
	Pace Analytical	Services -	Kansas City							
Lithium, Total Recoverable	0.019	mg/L	0.010	1	12/14/22 04:14	12/15/22 10:07	7439-93-2			
200.8 MET ICPMS	Analytical Meth	od: EPA 20	0.8 Preparation Me	thod: EF	PA 200.8					
	Pace Analytical	Services -	Kansas City							
Antimony, Total Recoverable	<0.0010	mg/L	0.0010	1	12/14/22 04:14	12/20/22 09:10	7440-36-0			
Arsenic, Total Recoverable	<0.0010	mg/L	0.0010	1	12/14/22 04:14	12/20/22 09:10	7440-38-2			
Cadmium, Total Recoverable	<0.00050	mg/L	0.00050	1	12/14/22 04:14	12/20/22 09:10	7440-43-9			
Cobalt, Total Recoverable	0.0017	mg/L	0.0010	1	12/14/22 04:14	12/20/22 09:10	7440-48-4			
Molybdenum, Total Recoverable	0.0085	mg/L	0.0010	1	12/14/22 04:14	12/20/22 09:10	7439-98-7			
Selenium, Total Recoverable	<0.0010	mg/L	0.0010	1	12/14/22 04:14	12/20/22 09:10	7782-49-2			
Thallium, Total Recoverable	<0.0010	mg/L	0.0010	1	12/14/22 04:14	12/20/22 09:10	7440-28-0			
245.1 Mercury	Analytical Meth	od: EPA 24	5.1 Preparation Me	thod: EF	PA 245.1					
-	Pace Analytical	Services -	Kansas City							
Mercury	<0.20	ug/L	0.20	1	12/14/22 13:15	12/15/22 08:58	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		12/16/22 17:37	16984-48-8			



Project: JEC INACTIVE BOTTOM ASH POND C

Pace Project No.: 60417700

Sample: IBA-2-120922	Lab ID: 6041	7700002	Collected: 12/09/	22 13:00	Received: 12	/12/22 08:00 N	Aatrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Meth	od: EPA 20	0.7 Preparation Me	thod: EF	PA 200.7			
	Pace Analytical	Services -	Kansas City					
Barium, Total Recoverable	0.026	mg/L	0.0050	1	12/14/22 04:14	12/15/22 10:44	7440-39-3	
Beryllium, Total Recoverable	<0.0010	mg/L	0.0010	1	12/14/22 04:14	12/15/22 10:44	7440-41-7	
Chromium, Total Recoverable	<0.0050	mg/L	0.0050	1	12/14/22 04:14	12/15/22 10:44	7440-47-3	
Lead, Total Recoverable	<0.010	mg/L	0.010	1	12/14/22 04:14	12/15/22 10:44	7439-92-1	
6010 MET ICP	Analytical Meth	od: EPA 60	10 Preparation Met	hod: EP	A 3010			
	Pace Analytica	Services -	Kansas City					
Lithium, Total Recoverable	0.023	mg/L	0.010	1	12/14/22 04:14	12/15/22 10:20	7439-93-2	
200.8 MET ICPMS	Analytical Meth	od: EPA 20	0.8 Preparation Me	thod: EF	PA 200.8			
	Pace Analytica	Services -	Kansas City					
Antimony, Total Recoverable	<0.0010	mg/L	0.0010	1	12/14/22 04:14	12/20/22 08:58	7440-36-0	
Arsenic, Total Recoverable	<0.0010	mg/L	0.0010	1	12/14/22 04:14	12/20/22 08:58	7440-38-2	
Cadmium, Total Recoverable	<0.00050	mg/L	0.00050	1	12/14/22 04:14	12/20/22 08:58	7440-43-9	
Cobalt, Total Recoverable	<0.0010	mg/L	0.0010	1	12/14/22 04:14	12/20/22 08:58	7440-48-4	
Molybdenum, Total Recoverable	0.0024	mg/L	0.0010	1	12/14/22 04:14	12/20/22 08:58	7439-98-7	
Selenium, Total Recoverable	<0.0010	mg/L	0.0010	1	12/14/22 04:14	12/20/22 08:58	7782-49-2	
Thallium, Total Recoverable	<0.0010	mg/L	0.0010	1	12/14/22 04:14	12/20/22 08:58	7440-28-0	
245.1 Mercury	Analytical Meth	od: EPA 24	5.1 Preparation Me	thod: EF	PA 245.1			
	Pace Analytical	Services -	Kansas City					
Mercury	<0.20	ug/L	0.20	1	12/14/22 13:15	12/15/22 09:05	7439-97-6	
300.0 IC Anions 28 Days	Analytical Meth	od: EPA 30	0.0					
	Pace Analytica							
Fluoride	<0.20	mg/L	0.20	1		12/16/22 17:51	16984-48-8	



Project: JEC INACTIVE BOTTOM ASH POND C

Pace Project No.: 60417700

Sample: IBA-3-120922	Lab ID: 6041	7700003	Collected: 12/09/	22 10:55	6 Received: 12	2/12/22 08:00 N	latrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Meth	od: EPA 20	0.7 Preparation Me	ethod: EF	PA 200.7			
	Pace Analytical	Services -	Kansas City					
Barium, Total Recoverable	0.018	mg/L	0.0050	1	12/14/22 04:14	12/15/22 10:46	7440-39-3	
Beryllium, Total Recoverable	<0.0010	mg/L	0.0010	1	12/14/22 04:14	12/15/22 10:46	7440-41-7	
Chromium, Total Recoverable	<0.0050	mg/L	0.0050	1	12/14/22 04:14	12/15/22 10:46	7440-47-3	
Lead, Total Recoverable	<0.010	mg/L	0.010	1	12/14/22 04:14	12/15/22 10:46	7439-92-1	
6010 MET ICP	Analytical Meth	od: EPA 60	10 Preparation Me	thod: EP	A 3010			
	Pace Analytical	Services -	Kansas City					
Lithium, Total Recoverable	0.022	mg/L	0.010	1	12/14/22 04:14	12/15/22 10:22	7439-93-2	
200.8 MET ICPMS	Analytical Meth	od: EPA 20	0.8 Preparation Me	thod: EF	PA 200.8			
	Pace Analytical	Services -	Kansas City					
Antimony, Total Recoverable	<0.0010	mg/L	0.0010	1	12/14/22 04:14	12/20/22 09:12	7440-36-0	
Arsenic, Total Recoverable	<0.0010	mg/L	0.0010	1	12/14/22 04:14	12/20/22 09:12	7440-38-2	
Cadmium, Total Recoverable	<0.00050	mg/L	0.00050	1	12/14/22 04:14	12/20/22 09:12	7440-43-9	
Cobalt, Total Recoverable	0.0013	mg/L	0.0010	1	12/14/22 04:14	12/20/22 09:12	7440-48-4	
Molybdenum, Total Recoverable	0.0023	mg/L	0.0010	1	12/14/22 04:14	12/20/22 09:12	7439-98-7	
Selenium, Total Recoverable	<0.0010	mg/L	0.0010	1	12/14/22 04:14	12/20/22 09:12	7782-49-2	
Thallium, Total Recoverable	<0.0010	mg/L	0.0010	1	12/14/22 04:14	12/20/22 09:12	7440-28-0	
245.1 Mercury	Analytical Meth	od: EPA 24	5.1 Preparation Me	thod: EF	PA 245.1			
-	Pace Analytical	Services -	Kansas City					
Mercury	<0.20	ug/L	0.20	1	12/14/22 13:15	12/15/22 09:07	7439-97-6	
300.0 IC Anions 28 Days	Analytical Meth	od: EPA 30	0.0					
-	Pace Analytical	Services -	Kansas City					
Fluoride	<0.20	mg/L	0.20	1		12/16/22 10:19	16984-48-8	



Project: JEC INACTIVE BOTTOM ASH POND C

Pace Project No.: 60417700

Sample: IBA-4-120922	Lab ID: 6041	7700004	Collected:	12/09/2	2 14:20	Received: 12	/12/22 08:00 N	Aatrix: Water	
Parameters	Results	Units	Report	Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Meth	od: EPA 20	0.7 Preparat	tion Met	nod: EP	A 200.7			
	Pace Analytical	Services -	Kansas City						
Barium, Total Recoverable	0.019	mg/L	(0.0050	1	12/14/22 04:14	12/15/22 10:48	7440-39-3	
Beryllium, Total Recoverable	<0.0010	mg/L	C	0.0010	1	12/14/22 04:14	12/15/22 10:48	7440-41-7	
Chromium, Total Recoverable	<0.0050	mg/L	C	0.0050	1	12/14/22 04:14	12/15/22 10:48	7440-47-3	
Lead, Total Recoverable	<0.010	mg/L		0.010	1	12/14/22 04:14	12/15/22 10:48	7439-92-1	
6010 MET ICP	Analytical Meth	od: EPA 60	10 Preparati	ion Meth	od: EP/	A 3010			
	Pace Analytical	Services -	Kansas City						
Lithium, Total Recoverable	0.035	mg/L		0.010	1	12/14/22 04:14	12/15/22 10:24	7439-93-2	
200.8 MET ICPMS	Analytical Meth	od: EPA 20	0.8 Preparat	tion Met	nod: EP	A 200.8			
	Pace Analytical	Services -	Kansas City						
Antimony, Total Recoverable	<0.0010	mg/L	C	0.0010	1	12/14/22 04:14	12/20/22 09:14	7440-36-0	
Arsenic, Total Recoverable	<0.0010	mg/L	(0.0010	1	12/14/22 04:14	12/20/22 09:14	7440-38-2	
Cadmium, Total Recoverable	<0.00050	mg/L	0.	00050	1	12/14/22 04:14	12/20/22 09:14	7440-43-9	
Cobalt, Total Recoverable	<0.0010	mg/L	C	0.0010	1	12/14/22 04:14	12/20/22 09:14	7440-48-4	
Molybdenum, Total Recoverable	0.0018	mg/L	C	0.0010	1	12/14/22 04:14	12/20/22 09:14	7439-98-7	
Selenium, Total Recoverable	<0.0010	mg/L	C	0.0010	1	12/14/22 04:14	12/20/22 09:14	7782-49-2	
Thallium, Total Recoverable	<0.0010	mg/L	C	0.0010	1	12/14/22 04:14	12/20/22 09:14	7440-28-0	
245.1 Mercury	Analytical Meth	od: EPA 24	5.1 Preparat	tion Met	nod: EP	A 245.1			
-	Pace Analytical	Services -	Kansas City						
Mercury	<0.20	ug/L		0.20	1	12/14/22 13:15	12/15/22 09:09	7439-97-6	
300.0 IC Anions 28 Days	Analytical Meth	od: EPA 30	0.0						
-	Pace Analytical	Services -	Kansas City						
Fluoride	0.34	mg/L		0.20	1		12/16/22 10:59	16984-48-8	



Project: JEC INACTIVE BOTTOM ASH POND C

Pace Project No .: 60417700

Sample: DUP-IBA-120922	Lab ID: 604	17700005	Collected: 12/09/2	2 10:55	Received: 12	2/12/22 08:00 N	Aatrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	-		0.7 Preparation Met	nod: EP	A 200.7			
	Pace Analytic	al Services -	Kansas City					
Barium, Total Recoverable	0.017	mg/L	0.0050	1	12/14/22 04:14	12/15/22 10:50	7440-39-3	
Beryllium, Total Recoverable	<0.0010	mg/L	0.0010	1	12/14/22 04:14	12/15/22 10:50	7440-41-7	
Chromium, Total Recoverable	<0.0050	mg/L	0.0050	1	12/14/22 04:14	12/15/22 10:50	7440-47-3	
Lead, Total Recoverable	<0.010	mg/L	0.010	1	12/14/22 04:14	12/15/22 10:50	7439-92-1	
6010 MET ICP	Analytical Met	hod: EPA 60	010 Preparation Meth	od: EP/	A 3010			
	Pace Analytic	al Services -	Kansas City					
Lithium, Total Recoverable	0.021	mg/L	0.010	1	12/14/22 04:14	12/15/22 10:26	7439-93-2	
200.8 MET ICPMS	Analytical Met	hod: EPA 20	0.8 Preparation Met	nod: EP	A 200.8			
	Pace Analytic	al Services -	Kansas City					
Antimony, Total Recoverable	<0.0010	mg/L	0.0010	1	12/14/22 04:14	12/20/22 09:17	7440-36-0	
Arsenic, Total Recoverable	<0.0010	mg/L	0.0010	1	12/14/22 04:14	12/20/22 09:17	7440-38-2	
Cadmium, Total Recoverable	<0.00050	mg/L	0.00050	1	12/14/22 04:14	12/20/22 09:17	7440-43-9	
Cobalt, Total Recoverable	0.0013	mg/L	0.0010	1	12/14/22 04:14	12/20/22 09:17	7440-48-4	
Molybdenum, Total Recoverable	0.0023	mg/L	0.0010	1	12/14/22 04:14	12/20/22 09:17	7439-98-7	
Selenium, Total Recoverable	<0.0010	mg/L	0.0010	1		12/20/22 09:17		
Thallium, Total Recoverable	<0.0010	mg/L	0.0010	1	12/14/22 04:14	12/20/22 09:17	7440-28-0	
245.1 Mercury	Analytical Met	hod: EPA 24	5.1 Preparation Met	nod: EP	A 245.1			
-	Pace Analytic	al Services -	Kansas City					
Mercury	<0.20	ug/L	0.20	1	12/14/22 13:15	12/15/22 09:12	7439-97-6	
300.0 IC Anions 28 Days	Analytical Met	hod: EPA 30	0.0					
-	Pace Analytic	al Services -	Kansas City					
Fluoride	<0.20	mg/L	0.20	1		12/16/22 11:12	16984-48-8	



Project:	JEC INACTIVE BC	TTOM ASH PON	ID C									
Pace Project No.:	60417700											
QC Batch:	823135		Ana	lysis Meth	iod:	EPA 245.1						
QC Batch Method:	EPA 245.1		Ana	lysis Desc	cription:	245.1 Merc	ury					
			Lab	oratory:		Pace Analy	ical Servic	es - Kansa	s City			
Associated Lab San	nples: 604177000	001, 6041770000	2, 604177	00003, 60	417700004	, 604177000	05					
METHOD BLANK:	3271959			Matrix:	Water							
Associated Lab San	nples: 604177000	001, 6041770000	2, 604177	00003, 60	417700004	, 604177000	05					
			Bla	ank	Reporting							
Paran	neter	Units	Re	sult	Limit	Anal	yzed	Qualifier	s			
Mercury		ug/L		<0.20	0.	20 12/15/2	2 08:53					
LABORATORY COM	NTROL SAMPLE:	3271960										
			Spike	e L	CS	LCS	% R	lec				
Paran	neter	Units	Conc	. R	esult	% Rec	Lim	its	Qualifiers			
Mercury		ug/L		5	4.8	9	7	85-115		_		
MATRIX SPIKE & M		LICATE: 3271	064		327196	<u>``</u>						
WATRIA SPIRE & IV	IATRIA SPIKE DUP	LICATE: 3271	MS	MSD	327 190)2						
		60417700001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	· Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Mercury	ug/L		5		5 3.7	3.7	74	74	70-130	0	20	

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



QC Batch: 823	3146		Anal	ysis Me	thod:	EP	PA 200.7						
QC Batch Method: EP	A 200.7		Anal	ysis Des	scription:	200	0.7 Metals	, Total					
			Labo	oratory:		Pa	ce Analytic	cal Servic	es - Kansa	as City			
Associated Lab Samples:	604177000	001, 6041770000	2, 6041770	00003, 6	60417700004	, 60	41770000	5					
METHOD BLANK: 3271	985			Matrix:	Water								
Associated Lab Samples:	604177000	01, 6041770000	2, 6041770	00003, 6	60417700004	, 60	41770000	5					
			Bla	nk	Reporting								
Parameter		Units	Res	ult	Limit		Analyz	zed	Qualifie	rs			
Barium		mg/L	<	0.0050	0.00	50	12/15/22	10:30					
Beryllium		mg/L	<	0.0010	0.00	10	12/15/22						
Chromium		mg/L		0.0050	0.00		12/15/22						
Lead		mg/L		<0.010	0.0	10	12/15/22	10:30					
LABORATORY CONTRO	L SAMPLE:	3271986											
			Spike		LCS		LCS	% R					
Parameter		Units	Conc.	I	Result	%	% Rec	Lim	its	Qualifiers	_		
Barium		mg/L		1	1.0		101		85-115				
Beryllium		mg/L		1	1.0		100		85-115				
Chromium		mg/L		1	0.98		98		85-115				
Lead		mg/L		1	0.98		98		85-115				
MATRIX SPIKE & MATRI		_ICATE: 3271	987		327198	38							
			MS	MSD									
		60417700001	Spike	Spike	MS		MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	F	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Barium	mg/L	0.031	1		1 1.0	ר	1.0	100	97	7 70-130	3	20	
Dallulli	mg/∟	0.001				,	1.0	100	01	10 100	0	20	

0.95

0.96

0.97

0.92

0.94

0.96

1

1

1

95

96

97

92

94

96

70-130

70-130

70-130

<0.0010

<0.0050

<0.010

mg/L

mg/L

mg/L

1

1

1

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

Beryllium

Lead

Chromium

3 20

2 20

1 20



EPA 200.8

200.8 MET

Pace Analytical Services - Kansas City

-	
Proiect:	JEC INACTIVE BOTTOM ASH POND C

EPA 200.8

Pace Project No.:	60417700
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QC Batch Method:

QC Batch:	823147

Analysis Methou.
Analysis Description:

Laboratory:

Matrix: Water

Applycic Mothod:

Associated Lab Samples: 60417700001, 60417700002, 60417700003, 60417700004, 60417700005

METHOD BLANK: 3271993

Associated Lab Samples:	60417700001, 60417700002	, 60417700003,	, 60417700004, 60417700005

		Blank	Reporting		
Parameter	Units	Result	Limit	Analyzed	Qualifiers
Antimony	mg/L	<0.0010	0.0010	12/20/22 08:51	
Arsenic	mg/L	<0.0010	0.0010	12/20/22 08:51	
Cadmium	mg/L	<0.00050	0.00050	12/20/22 08:51	
Cobalt	mg/L	<0.0010	0.0010	12/20/22 08:51	
Molybdenum	mg/L	<0.0010	0.0010	12/20/22 08:51	
Selenium	mg/L	<0.0010	0.0010	12/20/22 08:51	
Thallium	mg/L	<0.0010	0.0010	12/20/22 08:51	

LABORATORY CONTROL SAMPLE: 3271994

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.04	0.038	96	85-115	
Arsenic	mg/L	0.04	0.038	95	85-115	
Cadmium	mg/L	0.04	0.040	100	85-115	
Cobalt	mg/L	0.04	0.038	95	85-115	
Molybdenum	mg/L	0.04	0.039	98	85-115	
Selenium	mg/L	0.04	0.041	102	85-115	
Thallium	mg/L	0.04	0.038	96	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3271995

		60417700002	MS Spike	MSD Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Antimony	mg/L	<0.0010	0.04	0.04	0.037	0.037	92	92	70-130	1	20	
Arsenic	mg/L	<0.0010	0.04	0.04	0.038	0.038	93	93	70-130	1	20	
Cadmium	mg/L	<0.00050	0.04	0.04	0.037	0.037	93	93	70-130	0	20	
Cobalt	mg/L	<0.0010	0.04	0.04	0.037	0.036	89	89	70-130	0	20	
Molybdenum	mg/L	0.0024	0.04	0.04	0.043	0.043	101	102	70-130	1	20	
Selenium	mg/L	<0.0010	0.04	0.04	0.037	0.037	93	92	70-130	1	20	
Thallium	mg/L	<0.0010	0.04	0.04	0.040	0.040	100	100	70-130	1	20	

3271996

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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Project:	JEC INACTIVE BC	TTOM ASH PON	ID C									
Pace Project No.:	60417700											
QC Batch:	823149		Anal	ysis Meth	od:	EPA 6010						
QC Batch Method:	EPA 3010		Anal	ysis Desc	ription:	6010 MET						
			Labo	oratory:		Pace Analy	tical Servic	es - Kansa	s City			
Associated Lab San	nples: 604177000	001, 6041770000	2, 604177	00003, 60	417700004,	604177000	05					
METHOD BLANK:	3272012			Matrix: N	Vater							
Associated Lab San	nples: 60417700	001, 6041770000	2, 604177	00003, 60	417700004,	604177000	05					
			Bla	ink	Reporting							
Paran	neter	Units	Res	sult	Limit	Anal	yzed	Qualifier	S			
Lithium		mg/L		<0.010	0.01	10 12/15/2	2 10:05					
LABORATORY COM	NTROL SAMPLE:	3272013										
			Spike	L	CS	LCS	% R	ec				
Paran	neter	Units	Conc.	Re	esult	% Rec	Lim	its	Qualifiers	_		
Lithium		mg/L		1	0.96	9	6	80-120				
MATRIX SPIKE & M		LICATE: 3272	014		327201	F						
WATKIN SFIRE & W	ATRIX SPIRE DUP	LICATE. 3272	MS	MSD	327201	5						
		60417700001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Lithium	mg/L	0.019	1	1	1.0	1.0	101	98	75-125	3	20	

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



Project: JEC INACTIVE B Pace Project No.: 60417700	OTTOM ASH POND	С					
QC Batch: 823412		Analysis I			300.0		
QC Batch Method: EPA 300.0		-	Description:		0 IC Anions		
Associated Lab Samples: 60417700	0001, 60417700002	Laborator	y:	Pac	e Analytical	Services - Kan	isas City
METHOD BLANK: 3272890		Mat	rix: Water				
Associated Lab Samples: 60417700	0001, 60417700002						
Parameter	Units	Blank Result	Reporting Limit	g	Analyzed	I Qualif	ïers
Fluoride	mg/L	<0.2	20 (0.20	12/16/22 10	:21	
METHOD BLANK: 3275581		Mat	rix: Water				
Associated Lab Samples: 60417700	0001, 60417700002						
Doromotor	L Inita	Blank	Reporting Limit	g	Ancher	l Qualif	ioro
Parameter	Units	Result			Analyzed		
Fluoride	mg/L	<0.2	20 (0.20	12/19/22 16	:59	
METHOD BLANK: 3275615		Mat	rix: Water				
Associated Lab Samples: 60417700	0001, 60417700002						
Parameter	Units	Blank Result	Reporting Limit	g	Analyzed	l Qualif	lions
Fluoride	mg/L	<0.2		0.20	12/20/22 09		
LABORATORY CONTROL SAMPLE:	3272891						
		Spike	LCS		CS	% Rec	
Parameter	Units	Conc.	Result	%	Rec	Limits	Qualifiers
Fluoride	mg/L	2.5	2.3		92	90-110	
LABORATORY CONTROL SAMPLE:	3275582						
Parameter	Units	Spike Conc.	LCS Result		CS Rec	% Rec Limits	Qualifiers
Fluoride	mg/L	2.5	2.6	70	102	90-110	
	mg/∟	2.0	2.0		102	30-110	
LABORATORY CONTROL SAMPLE:	3275616						
Parameter	Units	Spike Conc.	LCS Result		CS Rec	% Rec Limits	Qualifiers
Fluoride			2.7	/0			
FIUUIIUE	mg/L	2.5	2.7		109	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.



Project: JEC INACTIVE BOTTOM ASH POND C

Pace Project No.: 60417700

MATRIX SPIKE & MATRIX SI	PIKE DUPLI	CATE: 3272	892		3272893							
			MS	MSD								
	2	20263624010	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Fluoride	mg/L	ND	5	5	3.7	3.8	74	77	80-120	4	15	M1

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REPORT OF LABORATORY ANALYSIS

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	OTTOM ASH POND	Ũ				
Pace Project No.: 60417700						
QC Batch: 823413		Analysis M	ethod:	EPA 300.0		
QC Batch Method: EPA 300.0		Analysis D	escription:	300.0 IC Anion	S	
		Laboratory	:	Pace Analytical	l Services - Kan	sas City
Associated Lab Samples: 60417700	0003, 60417700004,	60417700005				
METHOD BLANK: 3272895		Matri	x: Water			
Associated Lab Samples: 60417700	0003, 60417700004,	60417700005				
_		Blank	Reporting			
Parameter	Units	Result	Limit	Analyze	d Qualif	iers
Fluoride	mg/L	<0.20	0.2	0 12/16/22 09	9:43	
METHOD BLANK: 3275857		Matri	x: Water			
Associated Lab Samples: 60417700	0003, 60417700004,					
• • • • • • • • • • • • • • • • • • • •	,,	Blank	Reporting			
Parameter	Units	Result	Limit	Analyze	d Qualif	iers
Fluoride	mg/L	<0.20	0.2	0 12/19/22 09	9:25	
	0					
METHOD BLANK: 3276613		Matri	x: Water			
	0003, 60417700004,		x: Water			
	0003, 60417700004,		x: Water Reporting			
	0003, 60417700004, Units	60417700005		Analyze	d Qualif	iers
Associated Lab Samples: 60417700 Parameter		60417700005 Blank	Reporting Limit			iers
Associated Lab Samples: 60417700 Parameter	Units	60417700005 Blank Result	Reporting Limit			iers
Associated Lab Samples: 60417700 Parameter Fluoride	 mg/L	60417700005 Blank Result	Reporting Limit			iers
Associated Lab Samples: 60417700 Parameter Fluoride	Units	60417700005 Blank Result	Reporting Limit			iers
	 mg/L	60417700005 Blank Result <0.20	Reporting Limit 0 0.2	0 12/21/22 12	2:12	iers Qualifiers
Associated Lab Samples: 60417700 Parameter Fluoride LABORATORY CONTROL SAMPLE: Parameter	Units mg/L 3272896 Units	60417700005 Blank Result <0.20 Spike	LCS	0 12/21/22 12	2:12 % Rec	
Associated Lab Samples: 60417700 Parameter Fluoride LABORATORY CONTROL SAMPLE:	Units mg/L 3272896	60417700005 Blank Result <0.20 Spike Conc.	LCS Result	0 12/21/22 12 LCS % Rec	2:12 % Rec Limits	
Associated Lab Samples: 60417700 Parameter Fluoride LABORATORY CONTROL SAMPLE: Parameter Fluoride	Units mg/L 3272896 Units mg/L	60417700005 Blank Result <0.20 Spike Conc.	LCS Result	0 12/21/22 12 LCS % Rec	2:12 % Rec Limits	
Associated Lab Samples: 60417700 Parameter Fluoride LABORATORY CONTROL SAMPLE: Parameter	Units mg/L 3272896 Units	60417700005 Blank Result <0.20 Spike Conc. 2.5	LCS Result	0 12/21/22 12 LCS % Rec	2:12 % Rec Limits	
Associated Lab Samples: 60417700 Parameter Fluoride LABORATORY CONTROL SAMPLE: Parameter Fluoride	Units mg/L 3272896 Units mg/L	60417700005 Blank Result <0.20 Spike Conc.	LCS Result 2.5	0 12/21/22 12 LCS % Rec 98	2:12 % Rec Limits 90-110	
Associated Lab Samples: 60417700 Parameter Fluoride LABORATORY CONTROL SAMPLE: Parameter Fluoride LABORATORY CONTROL SAMPLE:	Units mg/L 3272896 Units mg/L 3275858	60417700005 Blank Result <0.20 Spike Conc. 2.5 Spike	LCS LCS LCS LCS	0 12/21/22 12 LCS % Rec 98 LCS	2:12 % Rec Limits 90-110 % Rec	Qualifiers
Associated Lab Samples: 60417700 Parameter Fluoride LABORATORY CONTROL SAMPLE: Parameter Fluoride LABORATORY CONTROL SAMPLE: Parameter	Units mg/L 3272896 Units mg/L 3275858 Units	60417700005 Blank Result <0.20 Spike Conc. 2.5 Spike Conc.	LCS Result LCS Result	0 12/21/22 12 LCS % Rec 98 LCS % Rec	2:12 % Rec Limits 90-110 % Rec Limits	Qualifiers
Associated Lab Samples: 60417700 Parameter Fluoride LABORATORY CONTROL SAMPLE: Parameter Fluoride LABORATORY CONTROL SAMPLE: Parameter Fluoride Fluoride	Units mg/L 3272896 Units mg/L 3275858 Units	60417700005 Blank Result <0.20 Spike Conc. 2.5 Spike Conc.	LCS Result LCS Result	0 12/21/22 12 LCS % Rec 98 LCS % Rec	2:12 % Rec Limits 90-110 % Rec Limits	Qualifiers
Associated Lab Samples: 60417700 Parameter Fluoride LABORATORY CONTROL SAMPLE: Parameter Fluoride LABORATORY CONTROL SAMPLE: Fluoride LABORATORY CONTROL SAMPLE:	Units mg/L 3272896 Units mg/L 3275858 Units mg/L 3276614	60417700005 Blank Result <0.20 Spike Conc. 2.5 Spike Conc. 2.5 Spike	LCS Result 2.5 LCS Result 2.5 LCS Result 2.8	0 12/21/22 12 LCS % Rec 98 LCS % Rec 110 LCS	2:12 % Rec Limits 90-110 % Rec Limits 90-110 % Rec	Qualifiers
Associated Lab Samples: 60417700 Parameter Fluoride LABORATORY CONTROL SAMPLE: Parameter Fluoride LABORATORY CONTROL SAMPLE: Parameter Fluoride Fluoride	Units mg/L 3272896 Units mg/L 3275858 Units mg/L	60417700005 Blank Result <0.20 Spike Conc. 2.5 Spike Conc. 2.5	Reporting Limit 0 LCS Result 2.5	0 12/21/22 12 LCS % Rec 98 LCS % Rec 110	2:12 % Rec Limits 90-110 % Rec Limits 90-110	Qualifiers

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.



Project: JEC INACTIVE BOTTOM ASH POND C

Pace Project No.: 60417700

MATRIX SPIKE & MATRIX SP		CATE: 3272	897		3272898							
			MS	MSD								
	6	60417700003	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Fluoride	mg/L	<0.20	5	5	4.9	5.0	98	100	80-120	3	15	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: JEC INACTIVE BOTTOM ASH POND C

Pace Project No.: 60417700

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

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



QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: JEC INACTIVE BOTTOM ASH POND C

Pace Project No.: 60417700

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60417700001	IBA-1-120922	EPA 200.7	823146	EPA 200.7	823177
60417700002	IBA-2-120922	EPA 200.7	823146	EPA 200.7	823177
60417700003	IBA-3-120922	EPA 200.7	823146	EPA 200.7	823177
60417700004	IBA-4-120922	EPA 200.7	823146	EPA 200.7	823177
60417700005	DUP-IBA-120922	EPA 200.7	823146	EPA 200.7	823177
60417700001	IBA-1-120922	EPA 3010	823149	EPA 6010	823180
60417700002	IBA-2-120922	EPA 3010	823149	EPA 6010	823180
60417700003	IBA-3-120922	EPA 3010	823149	EPA 6010	823180
60417700004	IBA-4-120922	EPA 3010	823149	EPA 6010	823180
60417700005	DUP-IBA-120922	EPA 3010	823149	EPA 6010	823180
60417700001	IBA-1-120922	EPA 200.8	823147	EPA 200.8	823179
60417700002	IBA-2-120922	EPA 200.8	823147	EPA 200.8	823179
60417700003	IBA-3-120922	EPA 200.8	823147	EPA 200.8	823179
60417700004	IBA-4-120922	EPA 200.8	823147	EPA 200.8	823179
60417700005	DUP-IBA-120922	EPA 200.8	823147	EPA 200.8	823179
60417700001	IBA-1-120922	EPA 245.1	823135	EPA 245.1	823161
60417700002	IBA-2-120922	EPA 245.1	823135	EPA 245.1	823161
60417700003	IBA-3-120922	EPA 245.1	823135	EPA 245.1	823161
60417700004	IBA-4-120922	EPA 245.1	823135	EPA 245.1	823161
60417700005	DUP-IBA-120922	EPA 245.1	823135	EPA 245.1	823161
60417700001	IBA-1-120922	EPA 300.0	823412		
60417700002	IBA-2-120922	EPA 300.0	823412		
60417700003	IBA-3-120922	EPA 300.0	823413		
60417700004	IBA-4-120922	EPA 300.0	823413		
60417700005	DUP-IBA-120922	EPA 300.0	823413		

			WO	#:6041	7700
Pace	DC#_Title: ENV-F	RM-LENE-0009_Sam	ple (1111 50417	 	aun (
ANALYTICAL SERVICES	Revision: 2	Effective Date: 01/12/2	2022	2.1.01902	Ĩ.
Client Name: Even	rgy Ks centr	a/			
Courier: FedEx D UPS		/	Pace 🗆 🛛 Xro	ads 🗆 Cliept 🗆	Other 🗆
Tracking #:		Pace Shipping Label Us	ed? Yes 🗆 N		
Custody Seal on Cooler/Box	Present: Yes 🗆 No	Seals intact: Yes			
	e Wrap □ Bubble L99 T	Bags □	None	Other 🗆	
Cooler Temperature (°C): A	s-read <u>2 · /</u> Corr	. Factor 0.0 Corre	cted <u>2 · 1</u>		nitials of person contents:
Temperature should be above freez	zing to 6°C			p	12/13/22
Chain of Custody present:		Yes No N/A		•	
Chain of Custody relinquished:					
Samples arrived within holding	time:				
Short Hold Time analyses (<7	'2hr):				
Rush Turn Around Time requ	141	□Yes INo □N/A			
Sufficient volume:					
Correct containers used:					
Pace containers used:					
Containers intact:					
Unpreserved 5035A / TX1005/1	006 coile frozon in 48hr				
Filtered volume received for dis		1	-		
Sample labels match COC: Dat			-		
Samples contain multiple phase		Yes □No □N/A		volumes lot #'s of	preservative and the
Containers requiring pH preserv (HNO₃, H₂SO₄, HCl<2; NaOH>9 Sul			date/time added		
(Exceptions: VOA, Micro, O&G, KS Cyanide water sample checks:	TPH, OK-DRO)	LOT#: 67187			
Lead acetate strip turns dark? (I	Record only)	□Yes □No			
Potassium iodide test strip turns	s blue/purple? (Preserve) 🛛 Yes 🖓 No			
Trip Blank present:		□Yes □No ØN/A			
Headspace in VOA vials (>6mr	n):				
Samples from USDA Regulated	Area: State:				
Additional labels attached to 503	35A / TX1005 vials in th				
Client Notification/ Resolution	а: Сору	COC to Client? Y / N	Field Data F	Required? Y / N	N
Person Contacted:		Date/Time:			
Comments/ Resolution:					

Project Manager Review:

Date: _____



CHAIN-OF-CUSTODY / Analytical Request Document

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

Sectio		Section B							Sec	tion (C															ſ	_	_		_	_		_
Compar	ed Client Information: EVERGY KANSAS CENTRAL, INC.	Required Pr					-		_	ice Info		_		_												1	Pa	age:	1	of	1		
Address		Report To:								ntion;					able																		-
Address		Сору То:	Laura	Hines, Sar	nantha K	aney, Mel	issa Mich	els	Com	ipany N	Name	: E/	VER	GY	KAN	ISAS	CE	NTR	RAL,	INC	REG	SULA	TOP	RY A	GEN	NCY					-		
	Suite 545 Phoenix,AZ 85004			e Oberbro	11111111111111111111111111111111111111				Addr			SEE								1	_	NPD	_	_	_	_	_	NATE	RГ	DRINKI	NG WA	TER	-
Email T	doberbroeckling@haleyaldrich.com	Purchase Or	der No.	10JEC-	0000047	747				Quote rence:											Г	UST			RC				Г	OTHER	_		
Phone:	507-251-2232 Fax:	Project Nam	e: JE	C Inactive	Bottom	Ash Pond	CCR			Project	1 4	lice	Spil	ler, 9	913-	563-	140	3		-†	Site	e Loc	atio					E					7777
Reques	ted Due Date/TAT:	Project Num	ber:							Profile	#: g	657	2		_	_				-		ST			_	KS							
									_							T		Rea	uest	ed A	hal	ysis	_	_	(Y/N	0	T						
	Section D Valid Matrix C	odes	(i)					Г	Γ	1						╞	_			T	T		Т	T	1	ŕΤ	-						
	Required Client Information MATRIX DRINKING WATER	CODE DW	codes to left)		COLL	ECTED					P	rese	rvati	ves		N N	N	N	N	N	N	N											
	WATER	WT WW			POSITE	COMP	SITE	Į į																			T						
	PRODUCT SOIL/SOLID	P SL	(see valid	ST	ART	COMPO END/G	RAB	COLLECTION									la											<u></u>					
		OL WP	(see						RS									Ĭğ	_									Chlorine (Y/N)					
	(A-Z, 0-9 / ,-) AIR OTHER	AR OT	111 I					P AT	CONTAINERS							ĕ	Be	U S S	Se, TI		E	g						lo i					
	Sample IDs MUST BE UNIQUE TISSUE	TS						N N	LT I	2				_	_	Sis.	Ba	Å	0	5	Ľ.	Fluoride							,				
# ⊻		- 1	Ř H					FE	8	l sel	ہ اہ	5	Ŧ	020	and r				N S	1 Hg	Ĭ			1				dua	Ino	417	100	כ	
ITEM			MATRIX (DATE	TIME	DATE	TIME	SAMPLE TEMP	HO#	<u>اح</u> ا	H ₂ SO₄	[] 달	NaO	Na ₂	Methanol	L Analvsis Test L	200.7	200.8 Sb,As,Cd,Co	200.8 Mo,	245.1	6010 Lithium	300.0						Residual		Project			
1	IBA-1-120922		WT G		-	12/09/22	1200	2	2			1			1	1		X	X	_		X		t	\square		+	1	1 400	TTOJECT	NO.7 L	au 1.D.	-
2	IBA-2-120922		WT G		1	12/09/22	1300		2		1	1				1	T _x	1	x			x		1	\square		+	+				_	_
3	IBA-3-120922		WT G			12/09/22	1055		2	1		1					T _x	X	X		-	x	╈	1	\square		+	T					_
4	IBA-4-120922		WT G		45	12/09/22	1420	2	2	1		1				1	Tx	-	x			x						\top					_
5	DUP-IBA-120922		WT G		12	12/09/22	1055		2	1		1				1	X	×	x	_		x		1	\square		1	T					_
6																											1						
7																								1									
8																											Т	Т					
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	ADDITIONAL COMMENTS	F	_	UISHED BY		ION	DATE			TIME			/	ACC	EPTE	D B	r / AF	FILIA		4		DA	TE		TIME				SAMP	LE CONDI	TIONS		
		Mart-	+ la	id the	15. 5	25	12/12/	22	8	90		6	U	1	n	n	1	7S	T	-		2/1	2/2	11	SA	~	2.	.1	\checkmark	N	ſΥ	/	
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لے R					SAMPL		ND SIGNA	TUR	L								_					_		1		-	0	+	c	e	+	act	-
Page 26						PRINT Nam	e of SAMP	LER:	Ma	++	Va	de	· 7	2+	ter	1	-	-		-	-		-	-	-	-	Temp in °C		ved o (Y/N)	N)		s Inti N)	
26 of						PRINT Nam SIGNATUR	E of SAMP	LER	MA	tt	2	in	4	Y	10			ATE : MM/D		ed):	12	10	9]	2	ς		Temp		Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)		Samples Intact (Y/N)	

DC#_Title: ENV-FRM-LENE-0001_Sample Container Count Revision: 3 | Effective Date: 12/22/2021 | Issued by: Lenexa

Evergy KS Central Client:

9657-2

Profile #

				Site:															đ	Notes						_			_		
COC Line Item	Matrix	H6DV	H6DD	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	21	t															_				4		1								
2	1																				1		1							-	
3																				1			1								
4		-																													
5	Y																				J		V								
6																															
<u>7</u>																															
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12																															

Container Codes

DG9B		Glass			Plastic		Misc.
	40mL bisulfate clear vial	WGKU	8oz clear soil jar	BP1C	1L NAOH plastic	1	Wipe/Swab
DG9H	40mL HCI amber voa vial	WGFU	4oz clear soil jar	BP1N	1L HNO3 plastic	SP5T	120mL Coliform Na Thiosulfate
DG9M	40mL MeOH clear vial	WG2U	2oz clear soil jar	BP1S	1L H2SO4 plastic	ZPLC	Ziploc Bag
DG9Q	40mL TSP amber vial	JGFU	4oz unpreserved amber wide	BP1U	1L unpreserved plastic	AF	Air Filter
DG9S	40mL H2SO4 amber vial	AG0U	100mL unores amber glass	BP1Z	1L NaOH, Zn Acetate	С	Air Cassettes
DG9T	40mL Na Thio amber vial	AG1H	1L HCI amber glass	BP2C	500mL NAOH plastic	R	Terracore Kit
DG9U	40mL amber unpreserved	AG1S	1L H2SO4 amber glass	BP2N	500mL HNO3 plastic	U	Summa Can
/G9H	40mL HCI clear vial	AG1T	1L Na Thiosulfate clear/amber glass	BP2S	500mL H2SO4 plastic		W
/G9T	40mL Na Thio. clear vial	AG1U	1liter unpres amber glass	BP2U	500mL unpreserved plastic		
/G9U	40mL unpreserved clear vial	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Acetate		Matrix
3G1S	1liter H2SO4 clear glass	AG2S	500mL H2SO4 amber glass	BP3C	250mL NaOH plastic		Watrix
3G1U	1liter unpres glass	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic - field filtered	WT	Water
3G3H	250mL HCL Clear glass	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic	SL	Solid
3G3U	250mL Unpres Clear glass	AG3U	250mL unpres amber glass	BP3U	250mL unpreserved plastic	NAL	Non-aqueous Liquid
NGDU	16oz clear soil jar	AG4U	125mL unpres amber glass	BP3S	250mL H2SO4 plastic	OL	OIL
		AG5U	100mL unpres amber glass	BP3Z	250mL NaOH, Zn Acetate	WP	Wipe
				BP4U	125mL unpreserved plastic	DW	Drinking Water

BP4N

BP4S

WPDU

125mL HNO3 plastic

125mL H2SO4 plastic

16oz unpresserved plstic

60417700



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

February 02, 2023

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

RE: Project: JEC INACTIVE BOTTOM ASH POND C Pace Project No.: 60417701

Dear Jake Humphrey:

Enclosed are the analytical results for sample(s) received by the laboratory on December 12, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

REVISED 2/2/23 re-packaged to include radchem QC sheets. No data was changed.

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

Sincerely,

Alice Spiller

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

Enclosures

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





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

CERTIFICATIONS

Project: JEC INACTIVE BOTTOM ASH POND C

Pace Project No.: 60417701

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



SAMPLE SUMMARY

Project: JEC INACTIVE BOTTOM ASH POND C

Pace Project No.: 60417701

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60417701001	IBA-1-120922	Water	12/09/22 12:00	12/12/22 08:00
60417701002	IBA-2-120922	Water	12/09/22 13:00	12/12/22 08:00
60417701003	IBA-3-120922	Water	12/09/22 10:55	12/12/22 08:00
60417701004	IBA-4-120922	Water	12/09/22 14:20	12/12/22 08:00
60417701005	DUP-IBA-120922	Water	12/09/22 10:55	12/12/22 08:00



SAMPLE ANALYTE COUNT

Project: JEC INACTIVE BOTTOM ASH POND C

Pace Project No.: 60417701

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60417701001	BA-1-120922	EPA 903.1	JDZ	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
60417701002	IBA-2-120922	EPA 903.1	JDZ	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
60417701003	IBA-3-120922	EPA 903.1	JDZ	1	PASI-PA
		EPA 904.0 Total Radium Calculation EPA 903.1 EPA 904.0 Total Radium Calculation	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
60417701004	IBA-4-120922	EPA 903.1	JDZ	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
60417701005	DUP-IBA-120922	EPA 903.1	JDZ	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg



Project: JEC INACTIVE BOTTOM ASH POND C

Pace Project No.: 60417701

Method: EPA 903.1

Description:903.1 Radium 226Client:Evergy Kansas Central, Inc.Date:February 02, 2023

General Information:

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

Hold Time:

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

Method Blank:

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

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

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

Additional Comments:



Project: JEC INACTIVE BOTTOM ASH POND C

Pace Project No.: 60417701

Method: EPA 904.0

Description:904.0 Radium 228Client:Evergy Kansas Central, Inc.Date:February 02, 2023

General Information:

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

Hold Time:

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

Method Blank:

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

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

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

Additional Comments:



Project: JEC INACTIVE BOTTOM ASH POND C

Pace Project No.: 60417701

Method: Total Radium Calculation

Description:Total Radium 228+226Client:Evergy Kansas Central, Inc.Date:February 02, 2023

General Information:

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

Hold Time:

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

Method Blank:

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

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

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

Additional Comments:

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



Project: JEC INACTIVE BOTTOM ASH POND C

Pace Project No.: 60417701

Sample: IBA-1-120922 PWS:	Lab ID: 6041 Site ID:	7701001 Collected: 12/09/22 12:00 Sample Type:	Received:	12/12/22 08:00	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical	Services - Greensburg				
Radium-226	EPA 903.1	0.0466 ± 0.242 (0.502) C:NA T:101%	pCi/L	01/05/23 14:05	5 13982-63-3	
	Pace Analytical	Services - Greensburg				
Radium-228	EPA 904.0	0.141 ± 0.343 (0.764) C:77% T:86%	pCi/L	12/29/22 14:59	9 15262-20-1	
	Pace Analytical	Services - Greensburg				
Total Radium	Total Radium Calculation	0.188 ± 0.585 (1.27)	pCi/L	01/10/23 10:42	2 7440-14-4	



Project: JEC INACTIVE BOTTOM ASH POND C

Pace Project No.: 60417701

Sample: IBA-2-120922 PWS:	Lab ID: 6041 Site ID:	7701002 Collected: 12/09/22 13:00 Sample Type:	Received:	12/12/22 08:00	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical	Services - Greensburg				
Radium-226	EPA 903.1	0.0933 ± 0.224 (0.433) C:NA T:98%	pCi/L	01/05/23 14:0	5 13982-63-3	
	Pace Analytical	Services - Greensburg				
Radium-228	EPA 904.0	0.0185 ± 0.387 (0.889) C:74% T:89%	pCi/L	12/29/22 14:5	9 15262-20-1	
	Pace Analytical	Services - Greensburg				
Total Radium	Total Radium Calculation	0.112 ± 0.611 (1.32)	pCi/L	01/10/23 10:4	2 7440-14-4	



Project: JEC INACTIVE BOTTOM ASH POND C

Pace Project No.: 60417701

Sample: IBA-3-120922 PWS:	Lab ID: 6041 Site ID:	7701003 Collected: 12/09/22 10:55 Sample Type:	Received:	12/12/22 08:00	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical	Services - Greensburg				
Radium-226	EPA 903.1	-0.113 ± 0.259 (0.610) C:NA T:99%	pCi/L	01/05/23 14:05	5 13982-63-3	
	Pace Analytical	Services - Greensburg				
Radium-228	EPA 904.0	0.0734 ± 0.345 (0.782) C:73% T:94%	pCi/L	12/29/22 14:59	9 15262-20-1	
	Pace Analytical	Services - Greensburg				
Total Radium	Total Radium Calculation	0.0734 ± 0.604 (1.39)	pCi/L	01/10/23 10:42	2 7440-14-4	



Project: JEC INACTIVE BOTTOM ASH POND C

Pace Project No.: 60417701

Sample: IBA-4-120922 PWS:	Lab ID: 6041 Site ID:	7701004 Collected: 12/09/22 14:20 Sample Type:	Received:	12/12/22 08:00	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical	Services - Greensburg				
Radium-226	EPA 903.1	0.370 ± 0.404 (0.635) C:NA T:107%	pCi/L	01/05/23 14:05	5 13982-63-3	
	Pace Analytical	Services - Greensburg				
Radium-228	EPA 904.0	0.268 ± 0.352 (0.751) C:76% T:92%	pCi/L	12/29/22 14:59	9 15262-20-1	
	Pace Analytical	Services - Greensburg				
Total Radium	Total Radium Calculation	0.638 ± 0.756 (1.39)	pCi/L	01/10/23 10:42	2 7440-14-4	



Project: JEC INACTIVE BOTTOM ASH POND C

Pace Project No.: 60417701

Sample: DUP-IBA-120922 PWS:	Lab ID: 60417 Site ID:	7701005 Collected: 12/09/22 10:55 Sample Type:	Received:	12/12/22 08:00	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical	Services - Greensburg				
Radium-226	EPA 903.1	0.0470 ± 0.214 (0.127) C:NA T:99%	pCi/L	01/05/23 14:05	5 13982-63-3	
	Pace Analytical	Services - Greensburg				
Radium-228	EPA 904.0	0.515 ± 0.414 (0.826) C:69% T:93%	pCi/L	12/29/22 14:59	9 15262-20-1	
	Pace Analytical	Services - Greensburg				
Total Radium	Total Radium Calculation	0.562 ± 0.628 (0.953)	pCi/L	01/10/23 10:42	2 7440-14-4	



QUALITY CONTROL - RADIOCHEMISTRY

Project: Pace Project No.:	JEC INACTIVE B 60417701	OTTOM ASH POND C							
QC Batch:	554737	Analysis Method:	EPA 903.1						
QC Batch Method:	EPA 903.1	Analysis Description:	903.1 Radium-22	26					
		Laboratory:	Pace Analytical S	Services - Greensbur	g				
Associated Lab Sa	mples: 60417701	001, 60417701002, 60417701003, 604177010	004, 60417701005						
METHOD BLANK: 2695240		Matrix: Water				—			
Associated Lab Sa	Associated Lab Samples: 60417701001, 60417701002, 60417701003, 60417701004, 60417701005								
Para	meter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers				
Radium-226		0.000 ± 0.194 (0.312) C:NA T:98%	pCi/L	01/05/23 13:47					

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.



QUALITY CONTROL - RADIOCHEMISTRY

Project: Pace Project No.:	JEC INACTIVE B 60417701	OTTOM ASH PO	ND C				
QC Batch:	554745		Analysis Method:	EPA 904.0			
QC Batch Method:	EPA 904.0		Analysis Description:	904.0 Radium 22	28		
			Laboratory:	Pace Analytical	Services - Greensbur	g	
Associated Lab Sa	mples: 60417701	001, 604177010	02, 60417701003, 604177010	04, 60417701005			
METHOD BLANK:	2695245		Matrix: Water				
Associated Lab Sa	mples: 60417701	001, 604177010	02, 60417701003, 604177010	04, 60417701005			
Para	meter	Act ±	Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers	
Radium-228		0.0271 ± 0.236	(0.545) C:88% T:100%	pCi/L	12/29/22 11:57		

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.



QUALIFIERS

Project: JEC INACTIVE BOTTOM ASH POND C

Pace Project No.: 60417701

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.



QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: JEC INACTIVE BOTTOM ASH POND C

Pace Project No.: 60417701

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60417701001	IBA-1-120922	EPA 903.1	554737		
60417701002	IBA-2-120922	EPA 903.1	554737		
60417701003	IBA-3-120922	EPA 903.1	554737		
60417701004	IBA-4-120922	EPA 903.1	554737		
60417701005	DUP-IBA-120922	EPA 903.1	554737		
60417701001	IBA-1-120922	EPA 904.0	554745		
60417701002	IBA-2-120922	EPA 904.0	554745		
60417701003	IBA-3-120922	EPA 904.0	554745		
60417701004	IBA-4-120922	EPA 904.0	554745		
60417701005	DUP-IBA-120922	EPA 904.0	554745		
60417701001	IBA-1-120922	Total Radium Calculation	559009		
60417701002	IBA-2-120922	Total Radium Calculation	559009		
60417701003	IBA-3-120922	Total Radium Calculation	559009		
60417701004	IBA-4-120922	Total Radium Calculation	559009		
60417701005	DUP-IBA-120922	Total Radium Calculation	559009		

W0#:60417701
Pace DC#_Title: ENV-FRM-LENE-0009_Sample Cor 50417701
AWAITIGA SERVICES Revision: 2 Effective Date: 01/12/2022 Issued By: Lenexa
Client Name: Evergy KS central
Courier: FedEx 🗆 UPS 🗆 VIA 🗆 Clay 🗆 PEX 🗆 ECI 🗆 Pace 🗆 Xroads 🗆 Client 🗂 Other 🗆
Tracking #: Pace Shipping Label Used? Yes D No D
Custody Seal on Cooler/Box Present: Yes D No Seals intact: Yes D No
Packing Material: Bubble Wrap Bubble Bags Foam None Other Control Control Bubble Bags Foam Bubble Bags Foam Bubble Bags Bub
Thermometer Used: <u><u><u>149</u></u> Type of Ice: Blue None Date and initials of person</u>
Cooler Temperature (°C): As-read <u>L^1</u> Corr. Factor <u>C</u> Corrected <u>L-1</u> examining contents:
Chain of Custody present:
Chain of Custody relinquished:
Samples arrived within holding time:
Short Hold Time analyses (<72hr):
Rush Turn Around Time requested:
Sufficient volume:
Correct containers used:
Pace containers used:
Containers intact:
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?
Filtered volume received for dissolved tests?
Sample labels match COC: Date / time / ID / analyses
Samples contain multiple phases? Matrix: VT □Yes ØNo □N/A
Containers requiring pH preservation in compliance? $\forall Yes \square No \square N/A$ List sample IDs, volumes, lot #'s of preservative and the
(HNO ₃ , H ₂ SO ₄ , HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) date/time added.
(Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO) LOT#: 67/87 Cyanide water sample checks:
Lead acetate strip turns dark? (Record only)
Potassium iodide test strip turns blue/purple? (Preserve)
Trip Blank present:
Headspace in VOA vials (>6mm):
Samples from USDA Regulated Area: State: DYes DNo DN/A
Additional labels attached to 5035A / TX1005 vials in the field? Yes No N/A
Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N
Person Contacted: Date/Time:
Comments/ Resolution:
Project Manager Review: Date:



CHAIN-OF-CUSTODY / Analytical Request Document

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

-	d Client Information:	Section B Required P		nformatio	n:					cion C ce Info	matior	n:											Pa	age:	1	of	1	
Company		Report To:	Jake	Humphr	rey				Atten					yable				1										
Address		Сору То:	Laura	Hines,	Samantha k	(aney, Mei	issa Mich	els	Comp	oany N	ame:	EVE	RGY	KAN	SAS (ENT	RAL, IN	REG	ULAT	DRY	AGE	NCY						
	Suite 545 Phoenix,AZ 85004		Danie	lle Obe	rbroeckling				Addre	ess:	SE	E SE	CTIC	DN A				Г	NPDES		G	ROUI	ND W	VATER	۲ ۲	DRINKI	NG W/	ATER
Email To		Purchase O	rder No	⊳: 10JI	EC-0000047	747			Pace (Refere										UST	Γ	R	CRA				OTHER		
Phone:	507-251-2232 Fax:	Project Narr	1e: _	EC Inac	ctive Bottom	Ash Pond	CCR		Pace I Manag	Project per:	Ali	ce Sp	oiller,	913-5	563-14	-03		Site	Locati	on								
Reques	ted Due Date/TAT:	Project Num	iber:								#: 96	57, 2						1	STAT	E:	-	KS		- 0				
																Rec	uested	Analy	sis Fil	tered	(Y/	N)						
	Section D Valid Matrix Co Required Client Information MATRIX		left)	(H)	0			Γ			Dro		ativaa		TN X	T	П	Π		Τ	T	Π						
ITEM #	DRINKING WATER WASTE WATER WASTE WATER PRODUCT SOLUSOLID OIL OIL (A-Z, 0-9 / ,-) OTHER	CODE DW WT SL SL OL WP AR TS	CODE (see valid	AMPLE TYPE (G=GRAB	COMPOSITE START	LECTED COMPC END/G	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	HNO ₃		Nacra Na ₂ S ₂ O ₃	Methanol	Ilysis Test					Radium 226	Radium 228	Total Radium		Residual Chlorine (Y/N)		417 Project		
1	IBA-1-120922		wт	G	a	12/09/22	1200	2	2	\square	2				Ħ						_	+		\top				
2	IBA-2-120922		WT	G	s	12/09/22	1300		2	\square	2				11			\square			-	-						
3	IBA-3-120922		WT	G		12/09/22	1055		2		2				11						-	1						
4	IBA-4-120922		WT	G	2 22	12/09/22	1420		2		2				11					×	(x	x						
5	DUP-IBA-120922		WT	G		12/09/22	1055		2	Π	2				1 1					×	(x	x			-		-	
6															1 [
7															1 [
8															1 [
9													Τ		1 [
10															1 [
11																												
12																												
	ADDITIONAL COMMENTS		RELIN	QUISHED	BY / AFFILIA	TION	DAT		Т	IME			AS	ÉEPTE	D BY	AFFILI	ATION		DATE		тім	E			SAMP	LE COND	TIONS	5
		Math	F1	man	HA Y	5	12/12/	22	E	20		11	T	n	N	245	T		12/12	. 6	28	D	1	. 1	7	M	+	Y
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							/5.	-	1		-											1				10	1	
(2) 1L ni notes)	tric preserved for all Radium analysis (Pace PM-see prof	ile				1.1					-									-								
				H	SAMPI	ER NAME	AND SIGN	TUR	E									-		_			U	,	5	oler	-	tact
Page 18 of 24	1. 	ле.			-	PRINT Nam SIGNATUR	e of SAMP E of SAMP	LER:	Ma W/	H+ H	Va FJ	nd A	er i HØ	P2+1	24	DATE (MM/	Signed DD/YY):	12/	09/3	<i>,</i> ,			Temp In "C	11	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)		Samples Intact (Y/N)

DC#_Title: ENV-FRM-LENE-0001_Sample Container Count Revision: 3 | Effective Date: 12/22/2021 | Issued by: Lenexa

				Client:				Eu	erq	4	K	5	Cer	1+r	a/				, F	Profile #			9	65	7-	2					
				Site:															•	Notes	10	9	st-	65 38 k	AD/	/51	-38 A	2AD0	2		
COC	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	wr																-					2						-	14		
2	1																					2									
3																						2									
4										A												2						-			
5	V																					2									
6																					-										
7										1																					
8				-																-											
9				_							-																				
10								1													-						-		1		
11		1						-	-	-																					
12	:																									-					
	r Codes	-									() (<u>.</u>		1					-		3 ia	-	
Untaine									_				-	-		-					-	-									
									ass												stic							Mi	SC.		
	DG9B DG9H		40mL 40mL				ú		WGK			ear so ear so				_	BP1C BP1N			OH pla 103 pla					I SP5T		Wipe/		New Ma	Thiosu	linto
	DG9N		40mL	_					WG2	-	100	ear so					BP1S			SO4 p			_		ZPLC		Ziploc		JIIII Na	iniost	male
	DG9C		40mL						JGFU				rved a	mber w	/ide		BP1U			preser		stic			AF		Air Fil				
	DG9S		40mL						AGOL				es amb				BP1Z	_		OH, Z					C		Air Ca		s		
	DG9T		40mL	Na Th	io amb	er vial			AG1H				er glass				BP2C			L NAO			54.1		R			core Ki			
	DG9U	J	40mL	amber	unpre	served			AG1S	;	1L H2	SO4 a	mber g	lass			BP2N		500m	L HNO	3 plast	tic			U		Summ				

BP2S

BP2U

BP2Z

BP3C

BP3F

BP3N

BP3U

BP3S

BP3Z

BP4U

BP4N

BP4S

WPDU

500mL H2SO4 plastic

250mL NaOH plastic

250mL HNO3 plastic

250mL H2SO4 plastic

125mL HNO3 plastic

125mL H2SO4 plastic

16oz unpresserved plstic

500mL unpreserved plastic

500mL NaOH, Zn Acetate

250mL unpreserved plastic

250mL NaOH, Zn Acetate

125mL unpreserved plastic

250mL HNO3 plastic - field filtered

WT

SL

NAL

OL

WP

DW

1L Na Thiosulfate clear/amber glass

1liter unpres amber glass

500mL HNO3 amber glass

500mL H2SO4 amber glass

250mL H2SO4 amber glass

500mL unpres amber glass

250mL unpres amber glass

125mL unpres amber glass

100mL unpres amber glass

Work Order Number:

VG9H

VG9T

VG9U

BG1S

BG1U

BG3H

BG3U

WGDU

00417701

AG1T

AG1U

AG2N

AG2S

AG3S

AG2U

AG3U

AG4U

AG5U

40mL HCl clear vial

1liter unpres glass

16oz clear soil jar

40mL Na Thio, clear vial

1liter H2SO4 clear glass

250mL HCL Clear glass

250mL Unpres Clear glass

40mL unpreserved clear vial

Matrix

Non-aqueous Liquid

Drinking Water

Water

Solid

OIL

Wipe

Wo	rkorde	al Transfer Ch	order N	Samples	s Pre-Logged			DND	Cert.	of Or Neede er Rec	ed:		Yes	12/12/2				Pa	Ce Analytical www.pacelabs.com By: 1/11/2022
Rep	ort To			Subcontrac	t To									Reque	ested A	nalysis			
Pac 960 Len	8 Loiret exa, KS	tical Kansas	8	1638 I Suites Green	Analytical Pittsb Roseytown Roa 2,3, & 4 sburg, PA 1560 (724)850-5600	id 01	ĮF	² rese	rved Con	tainers	Radium 226	ium 228 and combined			na postal te 4-10-00 e 00% a 4-10 m a 10 m a 10 m a 1000 a 100				
Item	Sampl	e ID	Sample Type	Collect Date/Time	Lab ID	Matrix	HN03			a se a constante de la constant	and a second	Radium							LAB USE ONLY
1	IBA-1-12	20922	PS	12/9/2022 12:00	60417701001	Water	2	1			X	X							1001
2	IBA-2-12	20922	PS	12/9/2022 13:00	60417701002	Water	2	l			X	X							002
3	IBA-3-12	20922	PS	12/9/2022 10:55	60417701003	Water	2				X	X							003
4	IBA-4-12	20922	P\$	12/9/2022 14:20	60417701004	Water	2				X	X X							004
5	DUP-IB/	A-120922	PS	12/9/2022 10:55	60417701005	Water	2				<u> </u>	: X							1 003
Trar 1 2 3	Isfers	Released By		Date/Time	Received E	^{3y} Y Ad			<u></u>	Date/1	rime الآكرين		15:1	SINCL	UDE G	oo	omment	5	
Cod	oler Te	mperature on Receipt		°C Cus	stody Seal	Y or 🕻	D		Rec	eived	on Ic	e `	Y or	N)		S	ample	s 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.



Pages Effective Date: 10/03/2022 WO#: 30547408 Client Name: PULL-KS Due Date: 01/09/23 Courier: Fred Ex UPS □ USPS □ Client □ Commercial □ Pace □ Other Tracking Number: 6.091 6/94 80.594 Custody Seal on Cooler/Box Present: 1 Yes □ No Examined By PS Intermoneter Used: Type of fce: Wet Blue None Eandeld By PS Cooler Temperature: Observed TempC Correction Factor: C Final Temp:C Comments: Yes No NA 1. Chain of Custody Present 1. Chain of Custody Present 1. 1. Chain of Custody Relinquiked 3. Sampler Name & Signature on COC: 4. Sampler Name & Signature on COC: 4. Sampler Name & Signature on COC: 4. Sampler Name & Signature on COC: 5. -Includes date/time/D 5. Sampler Name & Signature on COC: 4. Sampler Name & Signature on COC: 4. 5. Sampler Name & Signature on COC: 5. -Includes date/time/D 10. 7. 7. Sampler Name & Signature on COC: 5. <t< th=""><th></th><th>GBUF</th><th>R-008</th><th>8 v0:</th><th>2_Sample Condition Upon Receipt-</th></t<>		GBUF	R-008	8 v0:	2_Sample Condition Upon Receipt-
Client Name: Pull Ph: MAR Due Date: 01/09/23 Client Name: Pull Ph: MAR Due Date: 01/09/23 Courier: Def Ex USPS Client Commercial Pace Other Tracking Number: Do 91 D/93 8054 Examined By P5 Custody Seal on Cooler/Box Present: Type of Les: Wet Blue None Tempade By Cooler Temperature: Observed Temp C Correction Factor: C Final Temp:	Pittsburgh				
Client Name: WW State of the state	Pace Effective Date: 10/03/2022	2			
Tracking Number: 609107938059 Examined By 5 Custody Seal on Cooler/Box Present: Type of Ice: Wet Blue None Temped By Thermometer Used: Type of Ice: Wet Blue None Temped By Seals Intact: Temped By Cooler Temperature: Observed Temp C Correction Factor: C Final Temp: C Conter Temperature: Ves No NA IO2222 D.P.D. Residual Chlorine Lot # Chain of Custody Present 1 1 C Chain of Custody Relinquished 3. Sample I Anne & Signature on COC: 4. Sample Labele Match Corrections present on COC: 4. Sample Labele Match Corrections present on COC: 4. Sample Labele Match Corrections present on COC: 5. -Includes date/time/ID WT Sample Labele Match Corrections present on COC: 5. Sample Labele Match Corrections present on COC: Sample Labele Match Corrections present on COC: 4. Sample Labele Match Corrections present on COC: 5. -Includes date/time/ID WT 5. Sample Labele Match Corrections present on COC: 10. Rush Tum Around Time Requested: 10. <td>Client Name: Pule-KS</td> <td></td> <td></td> <td></td> <td></td>	Client Name: Pule-KS				
Tracking Number: 6.091.0793.8059 Examined By PS Custody Seal on Cooler/Box Present: Type of Ice: Wet Blu None Temped By Thermometer Used: Type of Ice: Wet Blu None Temped By Temped By Cooler Temperature: Observed Temp C Correction Factor: C Final Temp: C Conter Temperature: Observed Temp C Correction Factor: C Final Temp: C Chain of Custody Present 1. 1. PH paper Lot# D.P.D. Residual Chlorine Lot # Chain of Custody Present 1. 1. Chain of Custody Relinguished 3. 3. <					
Custody Seal on Cooler/Box Present: I Yes INO Seals Intact: I Yes Integed By Thermometer Used:	1000	5			
Thermometer Used: Type of Ice: Wet Blue Temped By Cooler Temperature: Observed Temp °C Correction Factor: °C Final Temp: °C Temp should be above freezing to 6°C PH paper Lot# D.P.D. Residual Chlorine Lot # D.P.D. Residual Chlorine Lot # Comments: Yes NA I. D.P.D. Residual Chlorine Lot # Chain of Custody Present 1 1. D.P.D. Residual Chlorine Lot # -Were client corrections present on COC 4. 3. Sample Labels match COC: 4. 5. -Includes date/time/ID Matrix: WT Samples Arrived within Hold Time: 6. Short Hold Time Analysis (<72hr	Tracking Number: 60910795	<u> </u>	05	1	Examined By
Cooler Temperature: Observed Temp •C Correction Factor: •C Final Temp: •C Temp should be above freezing to 6+C PH paper Lot# D.P.D. Residual Chlorine Lot # Comments: Yes No NA DOP.D. Residual Chlorine Lot # Chain of Custody Present 1. 2.	Custody Seal on Cooler/Box Present:	es ⊡Nia	0	Seals	Intact: Yes No Labeled By PS
Temp should be above freezing to 6*C PH paper Lot# D.P.D. Residual Chlorine Lot # Comments: Yes No NA I. Chain of Custody Present 1. 2.	Thermometer Used: Type	e of Ic	e: W	/et Bl	ue None Temped By
Comments: Yes No NA 10D2221 Chain of Custody Present 1. Chain of Custody Filled Out: 2. -Were dient corrections present on COC 3. Sample Labels match COC: 4. -Includes date/time/ID 5. -Includes date/time/ID 7. Matrix: WT Sample Labels match COC: 6. Short Hold Time Analysis (<72hr			۰C	Corre	ction Factor:°C Final Temp:°C
Comments: Yes No NA IOD2221 Chain of Custody Present 1. Chain of Custody Filled Out: 2. -Were dient corrections present on COC 3. Sample Labels match COC: 4. -Includes date/time/ID 5. -Includes date/time/ID 7. Matrix: WT Sample Labels match COC: 6. Short Hold Time Analysis (<72hr					pH paper Lot# D.P.D. Residual Chlorine Lot #
Chain of Custody Filled Out: 	Comments:	Yes	No	NA	
-Were client corrections present on COC Image: Second	Chain of Custody Present				1.
Chain of Custody Relinquished 3. Sampler Name & Signature on COC: 4. Sample Labels match COC: 5. -Includes date/time/ID 5. Matrix: WT Samples Arrived within Hold Time: 6. Short Hold Time Analysis (<72hr	Chain of Custody Filled Out:				2.
Sampler Name & Signature on COC: 4. Sample Labels match COC: 5. -Includes date/time/ID 5. Matrix: WT Samples Arrived within Hold Time: 6. Short Hold Time Analysis (<72hr	-Were client corrections present on COC				
Sample Labels match COC: -Includes date/time/ID Matrix: 5. Samples Arrived within Hold Time: 6. Short Hold Time Analysis (<72hr	Chain of Custody Relinquished	·	····		3.
-Includes date/time/ID Matrix: Samples Arrived within Hold Time: Samples Arrived within Hold Time: Short Hold Time Analysis (<72hr			/		4.
Matrix: WT Samples Arrived within Hold Time: 6. Short Hold Time Analysis (<72hr					5.
Samples Arrived within Hold Time: 6. Short Hold Time Analysis (<72hr			1		
Short Hold Time Analysis (<72hr		U	M		
remaining): 8. Rush Turn Around Time Requested: 9. Sufficient Volume: 9. Correct Containers Used: 10. -Pace Containers Used 10. Orthophosphate field filtered: 11. Orthophosphate field filtered: 12. Hex Cr Aqueous samples field filtered: 13. Organic Samples checked for dechlorination 14: Filtered volume received for dissolved tests: 15: All containers checked for preservation: 16. exceptions: VOA, coliform, TOC, O&GG, Phenolics, Radon, non-aqueous matrix Preservation All containers meet method preservation requirements: 17. Trip Blank Present: 17. Trip Blank Present: 18. Trip Blank Custody Seals Present 18. Rad Samples Screened <0.5 mrem/hr.		_	-		
Rush Turn Around Time Requested: ////////////////////////////////////					7.
Sufficient Volume: 9. Correct Containers Used: 10. -Pace Containers Used 11. Orthophosphate field filtered: 12. Hex Cr Aqueous samples field filtered: 13. Organic Samples checked for dechlorination 14: Filtered volume received for dissolved tests: 15: All containers checked for preservation: 16. exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, non-aqueous matrix All containers meet method preservation requirements: Initial when P.5 Date/Time of Headspace in VOA Vials (>6mm): 17. 17. Trip Blank Present: 18. Trip Blank Custody Seals Present 18. Initial when PS Date:: Survey Meter 156.3 Rad Samples Screened <0.5 mrem/hr.					
Correct Containers Used: 10. -Pace Containers Used 11. Containers Intact: 11. Orthophosphate field filtered: 12. Hex Cr Aqueous samples field filtered: 13. Organic Samples checked for dechlorination 14: Filtered volume received for dissolved tests: 15: All containers checked for preservation: 16. exceptions: VOA, coliform, TOC, 0&G, PHEOD Phenolics, Radon, non-aqueous matrix 16. All containers meet method preservation 16. requirements: Lot# of added Preservative Preservative Headspace in VOA Vials (>6mm): 17. Trip Blank Present: 18. Trip Blank Custody Seals Present 18. Rad Samples Screened <0.5 mrem/hr.					
-Pace Containers Used -					
Containers Intact: 11. Orthophosphate field filtered: 12. Hex Cr Aqueous samples field filtered: 13. Organic Samples checked for dechlorination 14: Filtered volume received for dissolved tests: 15: All containers checked for preservation: 16. exceptions: VOA, coliform, TOC, 0&G, Phenolics, Radon, non-aqueous matrix All containers meet method preservation Initial when ps requirements: Date/Time of Headspace in VOA Vials (>6mm): 17. Trip Blank Present: 18. Trip Blank Custody Seals Present 18. Rad Samples Screened <0.5 mrem/hr.	1				10.
Orthophosphate field filtered: 12. Hex Cr Aqueous samples field filtered: 13. Organic Samples checked for dechlorination 14: Filtered volume received for dissolved tests: 15: All containers checked for preservation: 16. exceptions: VOA, coliform, TOC, 0&G, Phenolics, Radon, non-aqueous matrix All containers meet method preservation requirements: Initial when ps Date/Time of Preservation Headspace in VOA Vials (>6mm): 17. 17. Trip Blank Present: 18. 18. Trip Blank Custody Seals Present 18. Rad Samples Screened <0.5 mrem/hr.		_			11
Hex Cr Aqueous samples field filtered: 13. Organic Samples checked for dechlorination 14: Filtered volume received for dissolved tests: 15: All containers checked for preservation: 16. exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, non-aqueous matrix All containers meet method preservation requirements: Initial when ps Lot# of added Preservation Lot# of added Preservation Trip Blank Present: 17. Trip Blank Custody Seals Present 18. Rad Samples Screened <0.5 mrem/hr.					
Organic Samples checked for dechlorination 14: Filtered volume received for dissolved tests: 15: All containers checked for preservation: 16. exceptions: VOA, coliform, TOC, 0&G, Phenolics, Radon, non-aqueous matrix All containers meet method preservation Initial when completed requirements: Initial when completed Headspace in VOA Vials (>6mm): 17. Trip Blank Present: 18. Trip Blank Custody Seals Present 18. Rad Samples Screened <0.5 mrem/hr.					
Filtered volume received for dissolved tests: 15: All containers checked for preservation: 16. exceptions: VOA, coliform, TOC, O&G, PH - P Phenolics, Radon, non-aqueous matrix PH - P All containers meet method preservation Date/Time of requirements: Lot# of added Headspace in VOA Vials (>6mm): 17. Trip Blank Present: 18. Trip Blank Custody Seals Present 18. Rad Samples Screened <0.5 mrem/hr.	· · · · · · · · · · · · · · · · · · ·				
All containers checked for preservation: 16. exceptions: VOA, coliform, TOC, O&G, PH - P Phenolics, Radon, non-aqueous matrix Initial when All containers meet method preservation Initial when requirements: Initial when Lot# of added Preservation Headspace in VOA Vials (>6mm): 17. Trip Blank Present: 18. Trip Blank Custody Seals Present Initial when RS Rad Samples Screened <0.5 mrem/hr.					
exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, non-aqueous matrix All containers meet method preservation requirements: Headspace in VOA Vials (>6mm): Trip Blank Present: Trip Blank Custody Seals Present Rad Samples Screened <0.5 mrem/hr. March All when and a state of the st					
completed Preservation requirements: Lot# of added Headspace in VOA Vials (>6mm): 17. Trip Blank Present: 18. Trip Blank Custody Seals Present Date: Illia When PS Date: Illia View Survey Meter S63 Rad Samples Screened <0.5 mrem/hr. Initial when PS Date: Illia View Survey Meter S63	exceptions: VOA, coliform, TOC, O&G,				PHC2
Headspace in VOA Vials (>6mm): 17. Trip Blank Present: 18. Trip Blank Custody Seals Present 18. Rad Samples Screened <0.5 mrem/hr.	· · ·				completed F'S Preservation
Trip Blank Present: 18. Trip Blank Custody Seals Present 18. Rad Samples Screened <0.5 mrem/hr.	Headspace in VOA Vials (>6mm):	Γ	Τ		
Rad Samples Screened <0.5 mrem/hr. Initial when PS Date: 12/16/122 Survey Meter 1563			_	-	18.
Rad Samples Screened <0.5 mrem/hr. Initial when PS Date: 12/16/122 Survey Meter 1563	Trip Blank Custody Seals Present				
Comments:	Rad Samples Screened <0.5 mrem/hr.	7	-		thitial when B Date: 11/177 Survey Meter 1563
	Comments:	(

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

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

www.pacelabs.com Test:	Ra-226				
Analyst:	JDZ		Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Date:	12/20/2022		Sample Collection Date:		
Batch ID:	70623		Sample I.D.		
Matrix:	DW		Sample MS I.D.		
		-	Sample MSD I.D.		
Method Blank Assessment			Spike I.D.:		
MB Sample ID	2695240		MS/MSD Decay Corrected Spike Concentration (pCi/mL):	and the stand	en kurs and die
MB concentration:	0.000 0.118		Spike Volume Used in MS (mL): Spike Volume Used in MSD (mL):	Restances Seere e	o anto esperante da Ar
M/B Counting Uncertainty: MB MDC:	0.312		MS Aliquot (L, g, F):		
MB Numerical Performance Indicator:	0.00		MS Anquot (L, g, F). MS Target Conc.(pCi/L, g, F):		
MB Status vs Numerical Indicator:	N/A		MSD Aliguot (L, g, F):		
MB Status vs. MDC:	Pass		MSD Target Conc. (pCi/L, g, F):		
		1	MS Spike Uncertainty (calculated):		
Laboratory Control Sample Assessment	LCSD (Y or N)?	Y	MSD Spike Uncertainty (calculated):		
	LCS70623	LCSD70623	Sample Result:		
Count Date:	1/5/2023	1/5/2023	Sample Result Counting Uncertainty (pCi/L, g, F):		
Spike I.D.:	21-040	21-040	Sample Matrix Spike Result:		
Spike Concentration (pCi/mL):	32.422	32.422	Matrix Spike Result Counting Uncertainty (pCi/L, g, F):		
Volume Used (mL):	0.10	0.10	Sample Matrix Spike Duplicate Result:		
Aliquot Volume (L, g, F):	0.655	0.657	Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):		
Target Conc. (pCi/L, g, F):	4.952	4.937	MS Numerical Performance Indicator:		
Uncertainty (Calculated):	0.233	0.232	MSD Numerical Performance Indicator:		
Result (pCi/L, g, F):	5.655	4.326	MS Percent Recovery:		
LCS/LCSD Counting Uncertainty (pCi/L, g, F): Numerical Performance Indicator:	0.988	0.843 -1.37	MSD Percent Recovery: MS Status vs Numerical Indicator:		
Percent Recovery:	114.19%	87.63%	MSD Status vs Numerical Indicator:		
Status vs Numerical Indicator:	N/A	N/A	MOD Status vs Recovery:		
Status vs Recovery:	Pass	Pass	MSD Status vs Recovery:		
Upper % Recovery Limits:	135%	135%	MS/MSD Upper % Recovery Limits:		
Lower % Recovery Limits:	73%	73%	MS/MSD Lower % Recovery Limits:		
Duplicate Sample Assessment			Matrix Spike/Matrix Spike Duplicate Sample Assessment		
Sample I.D.:	LCS70623	Enter Duplicate	Sample I.D.		
Duplicate Sample I.D.	LCSD70623	sample IDs if	Sample I.D. Sample MS I.D.	1	
Sample Result (pCi/L, g, F):	5.655	other than	Sample MSD I.D.		
Sample Result Counting Uncertainty (pCi/L, g, F):		LCS/LCSD in	Sample Matrix Spike Result:		
Sample Duplicate Result (pCi/L, g, F):	4.326	the space below.	Matrix Spike Result Counting Uncertainty (pCi/L, g, F):		
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.843		Sample Matrix Spike Duplicate Result:		
Are sample and/or duplicate results below RL?			Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):		
Duplicate Numerical Performance Indicator:	2.005		Duplicate Numerical Performance Indicator:		
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	26.32%	en elle spiele spiele elle	(Based on the Percent Recoveries) MS/ MSD Duplicate RPD:		
Duplicate Status vs Numerical Indicator:	N/A		MS/ MSD Duplicate Status vs Numerical Indicator:		
Duplicate Status vs RPD:	Pass		MS/ MSD Duplicate Status vs RPD:		
% RPD Limit:	32%		% RPD Limit:		

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

Comments:

Pace Analytical

(5))+ (1)5/23 Page 22 of 24 Ra-226 NELA Printed: 1/5/2

PACE Analytical Services Ra-228 Analysis

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

www.pacelabs.com	D- 000		Analyst must manually Enter An Tierds ringhinghted in		
lest.	Ra-228		Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Analyst:	ZPC		Sample Matrix Spike Control Assessment Sample Collection Date:	MO/MOD 1	11.0/11.00 1
Date:	1/6/2023				
Worklist:	70624		Sample I.D.		
Matrix:			Sample MS I.D.		
			Sample MSD I.D.		
Method Blank Assessment			Spike I.D.:		
MB Sample ID			MS/MSD Decay Corrected Spike Concentration (pCi/mL):		
MB concentration:			Spike Volume Used in MS (mL):		
			Spike Volume Used in MSD (mL):		
MB MDC:			MS Aliquot (L, g, F):		
MB Numerical Performance Indicator:			MS Target Conc.(pCi/L, g, F):		
MB Status vs Numerical Indicator:			MSD Aliquot (L, g, F):		
MB Status vs. MDC:			MSD Target Conc. (pCi/L, g, F):		
			MS Spike Uncertainty (calculated):		
Laboratory Control Sample Assessment	LCSD (Y or N)?	Υ	MSD Spike Uncertainty (calculated):		
•	LCS70624	LCSD70624	Sample Result:		
Count Date:	1/9/2023	1/9/2023			
Spike I.D.:	22-040	22-040	Sample Matrix Spike Result:		
Decay Corrected Spike Concentration (pCi/mL):	33.956	33.956			
Volume Used (mL):	0.10	0.10	Sample Matrix Spike Duplicate Result:		
Aliquot Volume (L, g, F):	0.810	0.804			
Target Conc. (pCi/L, g, F):	4.190	4.221	MS Numerical Performance Indicator:		
Uncertainty (Calculated):	0.205	0.207	MSD Numerical Performance Indicator:		
Result (pCi/L, g, F):	3.926	3.425	MS Percent Recovery:		
	0.948	0.887	MSD Percent Recovery:		
Numerical Performance Indicator:	-0.53	-1.71	MS Status vs Numerical Indicator:		
Percent Recovery:	93.70%	81.13%	MSD Status vs Numerical Indicator:		
Status vs Numerical Indicator:	N/A	N/A	MS Status vs Recovery:		
Status vs Recovery:	Pass	Pass	MSD Status vs Recovery:		
Upper % Recovery Limits:	135%	135%	MS/MSD Upper % Recovery Limits:		
Lower % Recovery Limits:	60%	60%	MS/MSD Lower % Recovery Limits:		
		-			1
Duplicate Sample Assessment			Matrix Spike/Matrix Spike Duplicate Sample Assessment		
Sample I.D.:	LCS70624	Enter Duplicate	Sample I.D.		
Duplicate Sample I.D.	LCSD70624	sample IDs if	Sample MS I.D.		
Sample Result (pCi/L, g, F):	3.926	other than	Sample MSD I.D.		
	0.948	LCS/LCSD in	Sample Matrix Spike Result:		
Sample Duplicate Result (pCi/L, g, F):	3.425	the space below.	Oursels Matrix Online Durnitante Deputit		
	0.887		Sample Matrix Spike Duplicate Result:		
Are sample and/or duplicate results below RL?	NO		D. P. de Numerie I. De deserver Indiantem		
Duplicate Numerical Performance Indicator:	0.756		Duplicate Numerical Performance Indicator:		
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	14.38%		(Based on the Percent Recoveries) MS/ MSD Duplicate RPD:		
Duplicate Status vs Numerical Indicator:	Pass		MS/ MSD Duplicate Status vs Numerical Indicator:		
Duplicate Status vs RPD:	Pass		MS/ MSD Duplicate Status vs RPD:		
% RPD Limit:	36%		% RPD Limit:		

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

Mulions

Comments:

Pace Analytical"

Page 23 of 24

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

/ www.pacelabs.com Test	: Ra-228				
Analyst	ZPC		Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Date			Sample Collection Date:		
Worklist			Sample I.D.		
Matrix:	WT		Sample MS I.D.		
			Sample MSD I.D.		
Method Blank Assessment		1	Spike I.D.:		
MB Sample ID	2695245		MS/MSD Decay Corrected Spike Concentration (pCi/mL):		
MB concentration	: 0.027		Spike Volume Used in MS (mL):		
M/B 2 Sigma CSU	: 0.236		Spike Volume Used in MSD (mL):		
MB MDC	: 0.545		MS Aliquot (L, g, F):		
MB Numerical Performance Indicator	. 0.22		MS Target Conc.(pCi/L, g, F):		
MB Status vs Numerical Indicator	n Pass		MSD Aliquot (L, g, F):		
MB Status vs. MDC	: Pass]	MSD Target Conc. (pCi/L, g, F):		
			MS Spike Uncertainty (calculated):		
Laboratory Control Sample Assessment	LCSD (Y or N)?	Y	MSD Spike Uncertainty (calculated):		
	LCS70624	LCSD70624	Sample Result:		
Count Date		12/29/2022	Sample Result 2 Sigma CSU (pCi/L, g, F): Sample Matrix Spike Result:		
Spike I.D		22-040	Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):		
Decay Corrected Spike Concentration (pCi/mL)		34,078	Sample Matrix Spike Result 2 Signa CSO (pCrL, g, F).		
Volume Used (mL)		0.10	Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):		
Aliquot Volume (L, g, F)		0.804	Matrix Spike Duplicate Result 2 Signa CSO (pCirL, g, F). MS Numerical Performance Indicator:		
Target Conc. (pCi/L, g, F		4.237	MSD Numerical Performance Indicator:		
Uncertainty (Calculated		0.208 3.025	MSD Numerical Performance indicator: MS Percent Recovery:		
Result (pCi/L, g, F		0.755	MSD Percent Recovery:		
LCS/LCSD 2 Sigma CSU (pCi/L, g, F		-3.03	MS Status vs Numerical Indicator:		
Numerical Performance Indicato Percent Recoven		71.40%	MSD Status vs Numerical Indicator:		
Status vs Numerical Indicato		N/A	MS Status vs Recovery:		
Status vs Numerical Indicato		Pass	MSD Status vs Recovery:		
Upper % Recovery Limits		135%	MS/MSD Upper % Recovery Limits:		
Lower % Recovery Limits		60%	MS/MSD Lower % Recovery Limits:		
Duplicate Sample Assessment			Matrix Spike/Matrix Spike Duplicate Sample Assessment		
, ,					
Sample I.D	.: LCS70624	Enter Duplicate	Sample I.D.		1
Duplicate Sample I.		sample IDs if	Sample MS I.D.		
Sample Result (pCi/L, g, F		other than	Sample MSD I.D. Sample Matrix Spike Result:		
Sample Result 2 Sigma CSU (pCi/L, g, F		LCS/LCSD in	Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):		
Sample Duplicate Result (pCi/L, g, F		the space below.	Sample Matrix Spike Result 2 Sigma CSU (pCi/L, g, F).		1
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F			Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):		
Are sample and/or duplicate results below RL			Duplicate Numerical Performance Indicator:		
Duplicate Numerical Performance Indicato			(Based on the Percent Recoveries) MS/ MSD Duplicate RPD:		
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPI			MS/ MSD Duplicate Status vs Numerical Indicator:		
Duplicate Status vs Numerical Indicato			MS/ MSD Duplicate Status vs Humaniau integration		
Duplicate Status vs RPI	J. 1 Pass	1	% RPD Limit:		1

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC. Mu/9/23

Comments:

Batch must be re-prepped due to LCS failure.

RIUS

Pace Analytical"

VAL 1/5/23

Ra-228 NELAC DW2 Printed: 1/5/2023 1:52 PM

Attachment 2-3 March 2023 Semi-Annual Sampling Event Laboratory Analytical Report



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

March 29, 2023

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

RE: Project: JEC INACTIVE BOTTOM ASH POND C Pace Project No.: 60423977

Dear Jake Humphrey:

Enclosed are the analytical results for sample(s) received by the laboratory on March 15, 2023. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

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

Sincerely,

Alice Spiller

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

Enclosures

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





CERTIFICATIONS

Project: JEC INACTIVE BOTTOM ASH POND C

Pace Project No.: 60423977

Pace Analytical Services Kansas

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



SAMPLE SUMMARY

Project: JEC INACTIVE BOTTOM ASH POND C

Pace Project No.: 60423977

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60423977001	MW IBA-1-031423	Water	03/14/23 11:16	03/15/23 12:40
60423977002	MW IBA-2-031423	Water	03/14/23 12:06	03/15/23 12:40
60423977003	MW IBA-3-031423	Water	03/14/23 13:48	03/15/23 12:40
60423977004	MW IBA-4-031423	Water	03/14/23 15:15	03/15/23 12:40
60423977005	DUP JEC IBA-031423	Water	03/14/23 12:06	03/15/23 12:40



SAMPLE ANALYTE COUNT

Project: JEC INACTIVE BOTTOM ASH POND C

Pace Project No.: 60423977

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60423977001	MW IBA-1-031423	EPA 200.7	ALH	3	PASI-K
		EPA 6010	ALH	1	PASI-K
		EPA 200.8	JGP	2	PASI-K
		SM 2540C	MLD	1	PASI-K
		SM 4500-H+B	CRN2	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
60423977002	MW IBA-2-031423	EPA 200.7	ALH	3	PASI-K
		EPA 6010	ALH	1	PASI-K
		EPA 200.8	JGP	2	PASI-K
		SM 2540C	MLD	1	PASI-K
		SM 4500-H+B	CRN2	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
0423977003	MW IBA-3-031423	EPA 200.7	ALH	3	PASI-K
		EPA 6010	ALH	1	PASI-K
		EPA 200.8	JGP	2	PASI-K
		SM 2540C	MLD	1	PASI-K
		SM 4500-H+B	CRN2	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
0423977004	MW IBA-4-031423	EPA 200.7	ALH	3	PASI-K
		EPA 6010	ALH	1	PASI-K
		EPA 200.8	JGP	2	PASI-K
		SM 2540C	MLD	1	PASI-K
		SM 4500-H+B	CRN2	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K
0423977005	DUP JEC IBA-031423	EPA 200.7	ALH	3	PASI-K
		EPA 6010	ALH	1	PASI-K
		EPA 200.8	JGP	2	PASI-K
		SM 2540C	MLD	1	PASI-K
		SM 4500-H+B	CRN2	1	PASI-K
		EPA 300.0	CRN2	3	PASI-K

PASI-K = Pace Analytical Services - Kansas City



Project: JEC INACTIVE BOTTOM ASH POND C

Pace Project No.: 60423977

Method: EPA 200.7

Description:200.7 Metals, TotalClient:Evergy Kansas Central, Inc.Date:March 29, 2023

General Information:

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

Hold Time:

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

Sample Preparation:

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

Initial Calibrations (including MS Tune as applicable):

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

Continuing Calibration:

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

Method Blank:

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

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

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

QC Batch: 836953

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60423973001

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

- MS (Lab ID: 3319287)
 - Boron
 - Calcium
- MSD (Lab ID: 3319288)
 - Barium
 - Boron
 - Calcium

Additional Comments:



Project: JEC INACTIVE BOTTOM ASH POND C

Pace Project No.: 60423977

Method: EPA 6010

Description:6010 MET ICPClient:Evergy Kansas Central, Inc.Date:March 29, 2023

General Information:

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

Hold Time:

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

Sample Preparation:

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

Initial Calibrations (including MS Tune as applicable):

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

Continuing Calibration:

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

Method Blank:

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

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

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

QC Batch: 836954

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60423973001

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

- MS (Lab ID: 3319291)
 - Lithium
- MSD (Lab ID: 3319292)
 - Lithium

Additional Comments:



Project: JEC INACTIVE BOTTOM ASH POND C

Pace Project No.: 60423977

Method: EPA 200.8

Description:200.8 MET ICPMSClient:Evergy Kansas Central, Inc.Date:March 29, 2023

General Information:

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

Hold Time:

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

Sample Preparation:

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

Initial Calibrations (including MS Tune as applicable):

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

Continuing Calibration:

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

Internal Standards:

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

Method Blank:

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

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

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

Additional Comments:



Project: JEC INACTIVE BOTTOM ASH POND C

Pace Project No.: 60423977

Method: SM 2540C

Description:2540C Total Dissolved SolidsClient:Evergy Kansas Central, Inc.Date:March 29, 2023

General Information:

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

Hold Time:

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

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:



Project: JEC INACTIVE BOTTOM ASH POND C

Pace Project No.: 60423977

Method:	SM 4500-H+B
Description:	4500H+ pH, Electrometric
Client:	Evergy Kansas Central, Inc.
Date:	March 29, 2023

General Information:

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

Hold Time:

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

H6: Analysis initiated outside of the 15 minute EPA required holding time.

- DUP JEC IBA-031423 (Lab ID: 60423977005)
- MW IBA-1-031423 (Lab ID: 60423977001)
- MW IBA-2-031423 (Lab ID: 60423977002)
- MW IBA-3-031423 (Lab ID: 60423977003)
- MW IBA-4-031423 (Lab ID: 60423977004)

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:



Project: JEC INACTIVE BOTTOM ASH POND C

Pace Project No.: 60423977

Method:EPA 300.0Description:300.0 IC Anions 28 DaysClient:Evergy Kansas Central, Inc.Date:March 29, 2023

General Information:

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

Hold Time:

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

Method Blank:

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

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

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

Additional Comments:

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



Project: JEC INACTIVE BOTTOM ASH POND C

Pace Project No.:

No.: 60423977

Sample: MW IBA-1-031423	Lab ID: 604	23977001	Collected: 03/14/2	23 11:16	8 Received: 03	8/15/23 12:40	Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Met	hod: EPA 20	00.7 Preparation Met	thod: EF	PA 200.7			
	Pace Analytica	al Services -	Kansas City					
Barium, Total Recoverable	0.031	mg/L	0.0050	1	03/16/23 12:12	03/27/23 15:30	7440-39-3	
Boron, Total Recoverable	0.39	mg/L	0.10	1	03/16/23 12:12	03/27/23 15:30	7440-42-8	
Calcium, Total Recoverable	287	mg/L	0.20	1	03/16/23 12:12	03/27/23 15:30) 7440-70-2	
6010 MET ICP	Analytical Met	hod: EPA 60	010 Preparation Met	hod: EP	A 3010			
	Pace Analytica	al Services -	Kansas City					
Lithium, Total Recoverable	0.019	mg/L	0.010	1	03/16/23 12:12	03/27/23 16:04	7439-93-2	
200.8 MET ICPMS	Analytical Met	hod: EPA 20	0.8 Preparation Met	thod: EF	PA 200.8			
	Pace Analytica	al Services -	Kansas City					
Cobalt, Total Recoverable	0.0017	mg/L	0.0010	1	03/16/23 12:12	03/22/23 16:02	2 7440-48-4	
Molybdenum, Total Recoverable	0.0086	mg/L	0.0010	1	03/16/23 12:12	03/22/23 16:02	2 7439-98-7	
2540C Total Dissolved Solids	Analytical Met	hod: SM 25	40C					
	Pace Analytica	al Services -	Kansas City					
Total Dissolved Solids	1570	mg/L	13.3	1		03/16/23 09:39)	
4500H+ pH, Electrometric	Analytical Met	hod: SM 45	00-H+B					
•	Pace Analytica	al Services -	Kansas City					
pH at 25 Degrees C	6.9	Std. Units	0.10	1		03/16/23 10:38	3	H6
300.0 IC Anions 28 Days	Analytical Met	hod: EPA 30	0.0					
-	Pace Analytica							
Chloride	159	mg/L	100	100		03/23/23 20:17	16887-00-6	
Fluoride	<0.20	mg/L	0.20	1		03/21/23 18:46	6 16984-48-8	
Sulfate	757	mg/L	100	100		03/23/23 20:17	14808-79-8	



Project: JEC INACTIVE BOTTOM ASH POND C

Pace Project No .: 60423977

Sample: MW IBA-2-031423	Lab ID: 604	23977002	Collected: 03/14/2	23 12:00	6 Received: 03	8/15/23 12:40 N	Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Met	hod: EPA 20	00.7 Preparation Met	hod: El	PA 200.7			
	Pace Analytica	al Services -	Kansas City					
Barium, Total Recoverable	0.026	mg/L	0.0050	1	03/16/23 12:12	03/27/23 15:32	7440-39-3	
Boron, Total Recoverable	0.22	mg/L	0.10	1	03/16/23 12:12	03/27/23 15:32	7440-42-8	
Calcium, Total Recoverable	230	mg/L	0.20	1	03/16/23 12:12	03/27/23 15:32	7440-70-2	
6010 MET ICP	Analytical Met	hod: EPA 60	010 Preparation Met	nod: EF	PA 3010			
	Pace Analytica	al Services -	Kansas City					
Lithium, Total Recoverable	0.025	mg/L	0.010	1	03/16/23 12:12	03/27/23 16:06	7439-93-2	
200.8 MET ICPMS	Analytical Met	hod: EPA 20	0.8 Preparation Met	hod: El	PA 200.8			
	Pace Analytica	al Services -	Kansas City					
Cobalt, Total Recoverable	<0.0010	mg/L	0.0010	1	03/16/23 12:12	03/22/23 16:21	7440-48-4	
Molybdenum, Total Recoverable	0.0024	mg/L	0.0010	1	03/16/23 12:12	03/22/23 16:21	7439-98-7	
2540C Total Dissolved Solids	Analytical Met	hod: SM 254	40C					
	Pace Analytica	al Services -	Kansas City					
Total Dissolved Solids	1250	mg/L	13.3	1		03/16/23 09:39		
4500H+ pH, Electrometric	Analytical Met	hod: SM 450	00-H+B					
•	Pace Analytica	al Services -	Kansas City					
pH at 25 Degrees C	7.0	Std. Units	s 0.10	1		03/16/23 10:38		H6
300.0 IC Anions 28 Days	Analytical Met	hod: EPA 30	0.0					
	Pace Analytica	al Services -	Kansas City					
Chloride	115	mg/L	10.0	10		03/23/23 20:57	16887-00-6	
Fluoride	<0.20	mg/L	0.20	1		03/21/23 19:13	16984-48-8	
Sulfate	696	mg/L	500	500		03/23/23 21:11	14808-79-8	



Project: JEC INACTIVE BOTTOM ASH POND C

Pace Project No .: 60423977

Sample: MW IBA-3-031423	Lab ID: 604	23977003	Collected: 03/14/2	23 13:48	8 Received: 03	8/15/23 12:40 N	Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Met	hod: EPA 20	0.7 Preparation Met	hod: El	PA 200.7			
	Pace Analytica	al Services -	Kansas City					
Barium, Total Recoverable	0.017	mg/L	0.0050	1	03/16/23 12:12	03/27/23 15:34	7440-39-3	
Boron, Total Recoverable	0.29	mg/L	0.10	1	03/16/23 12:12	03/27/23 15:34	7440-42-8	
Calcium, Total Recoverable	251	mg/L	0.20	1	03/16/23 12:12	03/27/23 15:34	7440-70-2	
6010 MET ICP	Analytical Met	hod: EPA 60	10 Preparation Met	nod: EF	PA 3010			
	Pace Analytica	al Services -	Kansas City					
Lithium, Total Recoverable	0.023	mg/L	0.010	1	03/16/23 12:12	03/27/23 16:08	7439-93-2	
200.8 MET ICPMS	Analytical Met	hod: EPA 20	0.8 Preparation Met	hod: El	PA 200.8			
	Pace Analytica	al Services -	Kansas City					
Cobalt, Total Recoverable	0.0013	mg/L	0.0010	1	03/16/23 12:12	03/22/23 16:25	7440-48-4	
Molybdenum, Total Recoverable	0.0023	mg/L	0.0010	1	03/16/23 12:12	03/22/23 16:25	7439-98-7	
2540C Total Dissolved Solids	Analytical Met	hod: SM 254	40C					
	Pace Analytica	al Services -	Kansas City					
Total Dissolved Solids	1530	mg/L	13.3	1		03/16/23 09:39	1	
4500H+ pH, Electrometric	Analytical Met	hod: SM 450	00-H+B					
•	Pace Analytica	al Services -	Kansas City					
pH at 25 Degrees C	7.0	Std. Units	0.10	1		03/16/23 10:38		H6
300.0 IC Anions 28 Days	Analytical Met	hod: EPA 30	0.0					
-	Pace Analytica	al Services -	Kansas City					
Chloride	123	mg/L	10.0	10		03/23/23 21:24	16887-00-6	
Fluoride	<0.20	mg/L	0.20	1		03/21/23 19:39	16984-48-8	
Sulfate	712	mg/L	100	100		03/23/23 21:37	14808-79-8	



Project: JEC INACTIVE BOTTOM ASH POND C

Pace Project No .: 60423977

Sample: MW IBA-4-031423	Lab ID: 604	23977004	Collected: 03/14/2	23 15:15	5 Received: 03	B/15/23 12:40 N	Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Met	hod: EPA 20	0.7 Preparation Me	hod: Ef	PA 200.7			
	Pace Analytic	al Services -	Kansas City					
Barium, Total Recoverable	0.019	mg/L	0.0050	1	03/16/23 12:12	03/27/23 15:36	7440-39-3	
Boron, Total Recoverable	0.24	mg/L	0.10	1	03/16/23 12:12	03/27/23 15:36	7440-42-8	
Calcium, Total Recoverable	108	mg/L	0.20	1	03/16/23 12:12	03/27/23 15:36	7440-70-2	
6010 MET ICP	Analytical Met	hod: EPA 60	010 Preparation Met	nod: EP	PA 3010			
	Pace Analytic	al Services -	Kansas City					
Lithium, Total Recoverable	0.037	mg/L	0.010	1	03/16/23 12:12	03/27/23 16:10	7439-93-2	
200.8 MET ICPMS	Analytical Met	hod: EPA 20	0.8 Preparation Me	hod: EF	PA 200.8			
	Pace Analytic	al Services -	Kansas City					
Cobalt, Total Recoverable	<0.0010	mg/L	0.0010	1	03/16/23 12:12	03/22/23 16:28	7440-48-4	
Molybdenum, Total Recoverable	0.0019	mg/L	0.0010	1	03/16/23 12:12	03/22/23 16:28	7439-98-7	
2540C Total Dissolved Solids	Analytical Met	hod: SM 254	40C					
	Pace Analytic	al Services -	Kansas City					
Total Dissolved Solids	639	mg/L	10.0	1		03/16/23 09:39		
4500H+ pH, Electrometric	Analytical Met	hod: SM 45	00-H+B					
•	Pace Analytic	al Services -	Kansas City					
pH at 25 Degrees C	7.1	Std. Units	0.10	1		03/16/23 10:38		H6
300.0 IC Anions 28 Days	Analytical Met	hod: EPA 30	0.0					
-	Pace Analytic	al Services -	Kansas City					
Chloride	18.7	mg/L	1.0	1		03/23/23 21:51	16887-00-6	
Fluoride	0.42	mg/L	0.20	1		03/23/23 21:51	16984-48-8	
Sulfate	163	mg/L	10.0	10		03/21/23 20:19	14808-79-8	



Project: JEC INACTIVE BOTTOM ASH POND C

Pace Project No.:

No.:	60423977	

Sample: DUP JEC IBA-031423	Lab ID: 604	23977005	Collected: 03/14/2	3 12:06	6 Received: 03	8/15/23 12:40 I	Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Met	hod: EPA 20	0.7 Preparation Met	hod: El	PA 200.7			
	Pace Analytica	al Services -	Kansas City					
Barium, Total Recoverable	0.028	mg/L	0.0050	1	03/16/23 12:12	03/27/23 15:45	7440-39-3	
Boron, Total Recoverable	0.22	mg/L	0.10	1	03/16/23 12:12	03/27/23 15:45	7440-42-8	
Calcium, Total Recoverable	230	mg/L	0.20	1	03/16/23 12:12	03/27/23 15:45	7440-70-2	
6010 MET ICP	Analytical Met	hod: EPA 60	10 Preparation Meth	nod: EP	PA 3010			
	Pace Analytica	al Services -	Kansas City					
Lithium, Total Recoverable	0.024	mg/L	0.010	1	03/16/23 12:12	03/27/23 16:19	7439-93-2	
200.8 MET ICPMS	Analytical Met	hod: EPA 20	0.8 Preparation Met	hod: El	PA 200.8			
	Pace Analytica	al Services -	Kansas City					
Cobalt, Total Recoverable	<0.0010	mg/L	0.0010	1	03/16/23 12:12	03/22/23 16:32	7440-48-4	
Molybdenum, Total Recoverable	0.0024	mg/L	0.0010	1	03/16/23 12:12	03/22/23 16:32	7439-98-7	
2540C Total Dissolved Solids	Analytical Met	hod: SM 254	IOC					
	Pace Analytica	al Services -	Kansas City					
Total Dissolved Solids	1320	mg/L	13.3	1		03/16/23 09:39		
4500H+ pH, Electrometric	Analytical Met	hod: SM 450)0-H+B					
	Pace Analytica	al Services -	Kansas City					
pH at 25 Degrees C	7.2	Std. Units	0.10	1		03/16/23 10:38		H6
300.0 IC Anions 28 Days	Analytical Met	hod: EPA 30	0.0					
-	Pace Analytica	al Services -	Kansas City					
Chloride	112	mg/L	10.0	10		03/21/23 21:13	16887-00-6	
Fluoride	<0.20	mg/L	0.20	1		03/21/23 20:33	16984-48-8	
Sulfate	608	mg/L	50.0	50		03/23/23 22:04	14808-79-8	



Project: JEC I	NACTIVE BO	TTOM ASH PON	ID C									
Pace Project No.: 60423	3977											
QC Batch: 836	953		Analy	sis Metho	od: E	PA 200.7						
QC Batch Method: EPA	200.7		Analy	sis Descr	iption: 20	00.7 Metals	s, Total					
			Labor	ratory:	Р	ace Analyti	cal Service	es - Kansas	s City			
Associated Lab Samples:	604239770	01, 6042397700	2, 6042397	7003, 604	123977004, 6	042397700)5					
METHOD BLANK: 33192	285			Matrix: V	Vater							
Associated Lab Samples:	604239770	01, 6042397700	2, 6042397	7003, 604	123977004, 6	042397700)5					
			Blan	k	Reporting							
Parameter		Units	Resu	ult	Limit	Analy	zed	Qualifiers	5			
Barium		mg/L	<0	0.0050	0.0050	03/27/23	15:19					
Boron		mg/L		<0.10	0.10	03/27/23	15:19					
Boron												
Calcium		mg/L		<0.20	0.20	03/27/23	15:19					
Calcium				<0.20	0.20	03/27/23	15:19					
	SAMPLE:	mg/L 3319286										
Calcium	. SAMPLE: 3	3319286	Spike	L	CS	LCS	% Re		Qualifiara			
Calcium LABORATORY CONTROL Parameter	. SAMPLE: 3	3319286 Units	Spike Conc.	L(Re	CS sult	LCS % Rec	% Re Limi	ts (Qualifiers			
Calcium LABORATORY CONTROL Parameter Barium	SAMPLE:	3319286 Units mg/L	Spike Conc.	L(Re 1	CS sult	LCS % Rec 104	% Re Limi	ts (35-115	Qualifiers			
Calcium LABORATORY CONTROL Parameter Barium Boron	SAMPLE:	3319286 Units mg/L mg/L	Spike Conc.	L(CS sult 1.0 1.0	LCS % Rec 104 100	% Re Limi	ts (35-115 35-115	Qualifiers			
Calcium LABORATORY CONTROL Parameter Barium	SAMPLE:	3319286 Units mg/L	Spike Conc.	L(CS sult	LCS % Rec 104	% Re Limi	ts (35-115	Qualifiers	_		
Calcium LABORATORY CONTROL Parameter Barium Boron		3319286 Units mg/L mg/L mg/L	Spike Conc.	L(CS sult 1.0 1.0 10.5	LCS % Rec 104 100	% Re Limi	ts (35-115 35-115	Qualifiers	_		
Calcium LABORATORY CONTROL Parameter Barium Boron Calcium		3319286 Units mg/L mg/L mg/L	Spike Conc.	L(CS sult 1.0 1.0	LCS % Rec 104 100	% Re Limi	ts (35-115 35-115	Qualifiers	_		
Calcium LABORATORY CONTROL Parameter Barium Boron Calcium	SPIKE DUPL	3319286 Units mg/L mg/L mg/L	Spike Conc. 11 287	L(Re 1 1 0	CS sult 1.0 1.0 10.5	LCS % Rec 104 100	% Re Limi	ts (35-115 35-115	Qualifiers % Rec	_	Max	
Calcium LABORATORY CONTROL Parameter Barium Boron Calcium	SPIKE DUPL	3319286 Units mg/L mg/L mg/L LICATE: 33192	Spike Conc. 11 287 MS	L(Re 1 1 0 MSD	CS sult 1.0 1.0 10.5 3319288	LCS % Rec 104 100 105	% Re Limi E	ts (35-115 35-115 35-115 35-115		RPD	Max RPD	Qual
Calcium LABORATORY CONTROL Parameter Barium Boron Calcium MATRIX SPIKE & MATRIX	SPIKE DUPL	3319286 Units mg/L mg/L mg/L LICATE: 33192 60423973001	Spike Conc. 11 287 MS Spike	L(Re 1 1 0 MSD Spike	CS sult 1.0 10.5 3319288 MS	LCS % Rec 104 100 105 MSD	% Re Limi & & & & & & & & & & & & & & & & & &	ts (35-115 35-115 35-115 35-115 MSD	% Rec		RPD	
Calcium LABORATORY CONTROL Parameter Barium Boron Calcium MATRIX SPIKE & MATRIX Parameter	SPIKE DUPL	3319286 Units mg/L mg/L mg/L LICATE: 33192 60423973001 Result	Spike Conc. 11 287 MS Spike Conc.	LC Re 1 1 0 MSD Spike Conc.	CS sult 1.0 1.0 10.5 3319288 MS Result	LCS % Rec 104 100 105 MSD Result	% Re Limi & & & & & & & & & & & & & & & & & &	ts (35-115 35-115 35-115 35-115 MSD % Rec	% Rec Limits		RPD 20	M1

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



- ,	JEC INACTIVE BC 60423977	OTTOM ASH PON	ID C									
QC Batch:	836955		Analy	sis Metho	d: E	PA 200.8						
QC Batch Method:	EPA 200.8		,	sis Descri		00.8 MET						
				ratory:	•	ace Analyti	cal Service	es - Kansa	s City			
Associated Lab Sam	ples: 60423977	001, 6042397700	2, 6042397	7003, 604	23977004, 6	6042397700)5					
METHOD BLANK:	3319294			Matrix: W	/ater							
Associated Lab Sam	ples: 60423977	001, 6042397700	2, 6042397	7003, 604	23977004, 6	6042397700)5					
			Blar	nk	Reporting							
Param	eter	Units	Res	ult	Limit	Analy	zed	Qualifier	S			
		mg/L		0.0010	0.0010	03/22/23	3 15:56					
Cobalt		ing/L										
Cobalt Molybdenum		mg/L		0.0010	0.0010	03/22/23	3 15:56					
Molybdenum LABORATORY CON Param		0	Spike Conc.	LC Res	CS sult	LCS % Rec	% Re Limit	ts (Qualifiers			
Molybdenum LABORATORY CON Param Cobalt		mg/L 3319295 Units mg/L	Spike Conc.	LC Res 4	CS sult	LCS % Rec 105	% Re Limit	ts (35-115	Qualifiers			
Molybdenum LABORATORY CON Param		mg/L 3319295 Units	Spike Conc.	LC Res 4	CS sult	LCS % Rec	% Re Limit	ts (Qualifiers	_		
Molybdenum LABORATORY CON Param Cobalt	eter	mg/L 3319295 Units mg/L mg/L	Spike Conc. 0.0 0.0	LC Res 4	CS sult	LCS % Rec 105	% Re Limit	ts (35-115	Qualifiers	_		
Molybdenum LABORATORY CON Param Cobalt Molybdenum	eter	mg/L 3319295 Units mg/L mg/L LICATE: 3319	Spike Conc. 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	LC Res 4 4 MSD	CS sult 0.042 0.042 3319297	LCS % Rec 105 104	% Re 	ts (35-115 35-115		_		
Molybdenum LABORATORY CON Param Cobalt Molybdenum MATRIX SPIKE & M/	eter ATRIX SPIKE DUP	mg/L 3319295 Units mg/L mg/L LICATE: 3319 60423977001	Spike Conc. 0.0 0.0 296 MS Spike	LC Res 4 4 MSD Spike	CS sult 0.042 0.042 3319297 MS	LCS % Rec 105 104 MSD	% Re Limit 5 E 6 E	ts (35-115 35-115 MSD	% Rec	_	Max	
Molybdenum LABORATORY CON Param Cobalt Molybdenum	eter	mg/L 3319295 Units mg/L mg/L LICATE: 3319 60423977001	Spike Conc. 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	LC Res 4 4 MSD	CS sult 0.042 0.042 3319297	LCS % Rec 105 104	% Re 	ts (35-115 35-115		RPD	Max RPD	Qual
Molybdenum LABORATORY CON Param Cobalt Molybdenum MATRIX SPIKE & M/	eter ATRIX SPIKE DUP	mg/L 3319295 Units mg/L mg/L LICATE: 3319 60423977001	Spike Conc. 0.0 0.0 296 MS Spike	LC Res 4 4 MSD Spike	CS sult 0.042 0.042 3319297 MS	LCS % Rec 105 104 MSD	% Re Limit 5 E 6 E	ts (35-115 35-115 MSD	% Rec		RPD 20	Qual

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.



Project: Pace Project No.:	JEC INACTIVE BO 60423977	TTOM ASH PON	ID C									
QC Batch:	836954		Anal	ysis Metho	d:	EPA 6010						
QC Batch Method:	EPA 3010		Anal	, ysis Descri	ption:	6010 MET						
			Labo	oratory:		Pace Analyt	ical Service	es - Kansas	s City			
Associated Lab San	nples: 604239770	001, 6042397700	2, 6042397	77003, 604	23977004,	604239770	05		-			
METHOD BLANK:	3319289			Matrix: W	/ater							
Associated Lab San	nples: 604239770	01, 6042397700	2, 6042397	77003, 604	23977004,	604239770	05					
			Bla	nk	Reporting							
Paran	neter	Units	Res	sult	Limit	Analy	/zed	Qualifiers	6			
Lithium		mg/L		<0.010	0.01	0 03/27/23	3 15:53					
	NTROL SAMPLE:	3319290										
			Spike	LC	s	LCS	% Re	ec				
Paran	neter	Units	Conc.	Re	sult	% Rec	Limi	ts (Qualifiers			
Lithium		mg/L		1	1.0	10 ⁻	<u> </u>	80-120		_		
MATRIX SPIKE & M	IATRIX SPIKE DUP	LICATE: 3319	-		3319292	2						
		00400070004	MS	MSD					04 D			
Parameter	r Units	60423973001 Result	Spike Conc.	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lithium	mg/L	3.4	1	1	4.0	4.0	59	59	75-125			

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.



Project: Pace Project No.:	JEC INACTIVE B 60423977	OTTOM ASH POI	ND C					
QC Batch:	836930		Analysis Me	ethod:	SM 2540C			
QC Batch Method:	SM 2540C		Analysis De	escription:	2540C Total D	issolved Solids		
			Laboratory:		Pace Analytic	al Services - Ka	nsas C	ity
Associated Lab Sam	nples: 60423977	7001, 6042397700	02, 60423977003,	60423977004	, 60423977005	i i		
METHOD BLANK:	3319188		Matrix	: Water				
Associated Lab Sam	nples: 60423977	7001, 6042397700	02, 60423977003,	60423977004	l, 60423977005	i		
			Blank	Reporting				
Param	neter	Units	Result	Limit	Analyz	ed Qual	ifiers	_
Total Dissolved Solid	ds	mg/L	<5.0		5.0 03/16/23 (09:38		-
LABORATORY CON	NTROL SAMPLE:	3319189						
			Spike	LCS	LCS	% Rec		
Param	neter	Units	Conc	Result	% Rec	Limits	Qua	alifiers
Total Dissolved Solid	ds	mg/L	1000	1000	100	80-120		
SAMPLE DUPLICAT	TE: 3319190			_				
Davas		L la ita	60423873001	Dup		Max		Qualifiers
Param		Units	Result	Result	RPD	RPD		Qualifiers
Total Dissolved Solid	ds	mg/L	533	5 5	558	5	10	
SAMPLE DUPLICAT	TE: 3310101							
			60423977003	Dup		Max		
Param	neter	Units	Result	Result	RPD	RPD		Qualifiers

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.



Project: Pace Project No.:	JEC INACTIVE BC 60423977	TTOM ASH PON	DC					
QC Batch:	836964		Analysis Meth	od:	SM 4500-H+B			
QC Batch Method:	SM 4500-H+B		Analysis Desc	ription:	4500H+B pH			
			Laboratory:		Pace Analytical	Services - Kar	nsas City	
Associated Lab Sar	mples: 604239770	001, 60423977002	2, 60423977003, 60	423977004	, 60423977005			
SAMPLE DUPLICA	TE: 3319334							
			60423985001	Dup		Max		
Parar	neter	Units	Result	Result	RPD	RPD	Qualifiers	
pH at 25 Degrees C	;	Std. Units	6.7	(6.7	1	5 H6	

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REPORT OF LABORATORY ANALYSIS

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QC Batch: 8376	512		Analy	sis Method	d: E	PA 300.0						
	300.0		-	sis Descrip		00.0 IC Ani	ons					
			Labor			ace Analyt	cal Service	es - Kansa	s City			
Associated Lab Samples:	604239770	01, 6042397700	2, 6042397	7003, 6042								
METHOD BLANK: 33214	12			Matrix: Wa	ater							
Associated Lab Samples:	604239770	01, 6042397700			23977004, 6	042397700)5					
			Blan		Reporting			o ""				
Parameter		Units	Resu	ult	Limit	Analy	zed	Qualifier	S			
Chloride		mg/L		<1.0	1.0							
Fluoride		mg/L		<0.20	0.20							
Sulfate		mg/L		<1.0	1.0	03/21/23	3 13:47					
METHOD BLANK: 33244	17			Matrix: Wa	ater							
Associated Lab Samples:	604239770	01, 6042397700	2, 60423977	7003, 6042	23977004.6	042397700)5					
		,	Blan		Reporting							
Parameter		Units	Resu	ılt	Limit	Analy	zed	Qualifier	s			
Chloride		mg/L		<1.0	1.0	03/23/23	3 17:24					
Fluoride		-		<0.20	0.20	03/23/23	3 17:24					
Fluonue		mg/L		<0.20	0.20	00/20/20						
Sulfate		mg/L		<1.0	1.0							
Sulfate	SAMPLE:	mg/L										
Sulfate	SAMPLE:		Spike		1.0			ec				
Sulfate	SAMPLE:	mg/L		<1.0	1.0 S	03/23/23	3 17:24		Qualifiers			
Sulfate LABORATORY CONTROL Parameter	SAMPLE:	mg/L 3321413	Spike Conc.	<1.0 LC	1.0 S	03/23/23	3 17:24 % R(Qualifiers			
Sulfate LABORATORY CONTROL Parameter Chloride	SAMPLE:	mg/L 3321413 Units	Spike Conc.	<1.0 LC 5	1.0 S sult	03/23/23 LCS % Rec	3 17:24 % Ri Limi	ts (Qualifiers	_		
Sulfate LABORATORY CONTROL Parameter Chloride	SAMPLE:	mg/L 3321413 Units mg/L	Spike Conc.	<1.0 LC 5	1.0 S sult 4.9	03/23/23 LCS % Rec 98	3 17:24	ts (90-110	Qualifiers	_		
Sulfate LABORATORY CONTROL Parameter Chloride Fluoride Sulfate		mg/L 3321413 Units mg/L mg/L	Spike Conc.	<1.0 LC Res 5 5	1.0 S sult 4.9 2.7	0 03/23/23 LCS % Rec 98 107	3 17:24	ts (90-110 90-110	Qualifiers	_		
Sulfate LABORATORY CONTROL Parameter Chloride Fluoride Sulfate		mg/L 3321413 Units mg/L mg/L mg/L	Spike Conc.	<1.0 LC Res 5 5	1.0 S sult 4.9 2.7 5.3	0 03/23/23 LCS % Rec 98 107	3 17:24	ts (90-110 90-110 90-110	Qualifiers	_		
Sulfate LABORATORY CONTROL Parameter Chloride Fluoride Sulfate		mg/L 3321413 Units mg/L mg/L mg/L	Spike Conc.	<1.0 LC 5 5 5 5	1.0 S sult 4.9 2.7 5.3 S	0 03/23/23 LCS % Rec 98 107 106	3 17:24	ts (90-110 90-110 90-110 90-110 ec	Qualifiers	_		
Sulfate LABORATORY CONTROL Parameter Chloride Fluoride Sulfate LABORATORY CONTROL Parameter		mg/L 3321413 Units mg/L mg/L 3324418 Units	Spike Conc. 2.5 Spike Conc.	<1.0 LC Res 5 5 5 5	1.0 S sult 4.9 2.7 5.3 S sult	0 03/23/23 LCS % Rec 98 107 106 LCS % Rec	3 17:24	ts (90-110 90-110 90-110 90-110 ec ts (_		
Sulfate LABORATORY CONTROL Parameter Chloride Fluoride Sulfate LABORATORY CONTROL Parameter Chloride		mg/L 3321413 Units mg/L mg/L mg/L 3324418	Spike Conc. 2.5 Spike Conc.	<1.0 LC Res 5 5 5 5 5 5 5 5 5 5	1.0 S sult 4.9 2.7 5.3 S	0 03/23/23 LCS % Rec 98 107 106 LCS	3 17:24	ts (90-110 90-110 90-110 90-110 ec		_		
Sulfate LABORATORY CONTROL Parameter Chloride Fluoride Sulfate LABORATORY CONTROL Parameter Chloride Fluoride Fluoride		mg/L 3321413 Units mg/L mg/L 3324418 Units mg/L	Spike Conc. 2.5 Spike Conc.	<1.0 LC Res 5 5 5 5 5 5 5 5 5 5	1.0 S	0 03/23/23 LCS % Rec 98 107 106 LCS % Rec 103	3 17:24	ts (90-110 90-110 90-110 90-110 ecc ts (90-110		_		
Sulfate LABORATORY CONTROL Parameter Chloride Sulfate LABORATORY CONTROL Parameter Chloride Fluoride Sulfate	SAMPLE:	mg/L 3321413 Units mg/L mg/L 3324418 Units Mg/L mg/L mg/L mg/L	Spike Conc.	<1.0 LC Res 5 5 5 5 5 5 5 5 5 5 5	1.0 S sult 4.9 2.7 5.3 S sult 5.2 2.7 5.3	0 03/23/23 LCS % Rec 98 107 106 LCS % Rec 103 107	3 17:24	ts (90-110 90-110 90-110 90-110 ecc ts (90-110 90-110		_		
Sulfate LABORATORY CONTROL Parameter Chloride Fluoride Sulfate LABORATORY CONTROL Parameter	SAMPLE:	mg/L 3321413 Units mg/L mg/L 3324418 Units Mg/L mg/L mg/L mg/L	Spike Conc.	<1.0 LC Res 5 5 5 5 5 5 5 5 5 5 5	1.0 S sult 4.9 2.7 5.3 S sult 5.2 2.7	0 03/23/23 LCS % Rec 98 107 106 LCS % Rec 103 107	3 17:24	ts (90-110 90-110 90-110 90-110 ecc ts (90-110 90-110		_		
Sulfate LABORATORY CONTROL Parameter Chloride Fluoride Sulfate LABORATORY CONTROL Parameter Chloride Fluoride Sulfate MATRIX SPIKE & MATRIX	SAMPLE:	mg/L 3321413 Units mg/L mg/L 3324418 Units mg/L mg/L mg/L mg/L mg/L 3321413 00123918008	Spike Conc. 2.5 Spike Conc. 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.	<1.0 LC Res 5 5 5 5 5 5 5 5 5 5 5 5 5	1.0 S sult 4.9 2.7 5.3 S sult 5.2 2.7 5.3 3321415 MS	0 03/23/23 LCS % Rec 98 107 106 LCS % Rec 103 107 106 MSD	3 17:24	ts (90-110 90-110 90-110 ec (90-110 90-110 90-110 90-110 90-110	Qualifiers % Rec	_	Max	
Sulfate LABORATORY CONTROL Parameter Chloride Sulfate LABORATORY CONTROL Parameter Chloride Fluoride Sulfate	SAMPLE:	mg/L 3321413 Units mg/L mg/L 3324418 Units mg/L mg/L mg/L mg/L mg/L mg/L mg/L	Spike Conc. 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.	<1.0 LC Res 5 5 5 5 5 5 5 5 5 5 5 5 5	1.0 S sult 4.9 2.7 5.3 S sult 5.2 2.7 5.3 3321415	0 03/23/23 LCS % Rec 98 107 106 LCS % Rec 103 107 106	3 17:24	ts (90-110 90-110 90-110 ecc ts (90-110 90-110 90-110	Qualifiers	RPD		Qual
Sulfate LABORATORY CONTROL Parameter Chloride Fluoride Sulfate LABORATORY CONTROL Parameter Chloride Fluoride Sulfate MATRIX SPIKE & MATRIX	SAMPLE:	mg/L 3321413 Units mg/L mg/L 3324418 Units mg/L mg/L mg/L mg/L mg/L 3321413 00123918008	Spike Conc. 2.5 Spike Conc. 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.	<1.0 LC Res 5 5 5 5 5 5 5 5 5 5 5 5 5	1.0 S sult 4.9 2.7 5.3 S sult 5.2 2.7 5.3 3321415 MS	0 03/23/23 LCS % Rec 98 107 106 LCS % Rec 103 107 106 MSD	3 17:24	ts (90-110 90-110 90-110 ec (90-110 90-110 90-110 90-110 90-110	Qualifiers % Rec Limits		RPD	Qual

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: JEC INACTIVE BOTTOM ASH POND C

Pace Project No.: 60423977

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

H6 Analysis initiated outside of the 15 minute EPA required holding time.

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



QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: JEC INACTIVE BOTTOM ASH POND C

Pace Project No.: 60423977

Analytical QC Batch **QC Batch Method** Lab ID Sample ID **Analytical Method** Batch 60423977001 MW IBA-1-031423 EPA 200.7 836953 EPA 200.7 837016 60423977002 MW IBA-2-031423 EPA 200.7 836953 EPA 200.7 837016 60423977003 MW IBA-3-031423 EPA 200.7 836953 EPA 200.7 837016 60423977004 MW IBA-4-031423 836953 EPA 200.7 837016 EPA 200.7 60423977005 DUP JEC IBA-031423 EPA 200.7 836953 EPA 200.7 837016 836954 60423977001 MW IBA-1-031423 EPA 3010 EPA 6010 837017 60423977002 MW IBA-2-031423 EPA 3010 836954 EPA 6010 837017 60423977003 MW IBA-3-031423 EPA 3010 836954 EPA 6010 837017 60423977004 MW IBA-4-031423 EPA 3010 836954 EPA 6010 837017 DUP JEC IBA-031423 836954 60423977005 EPA 3010 EPA 6010 837017 60423977001 MW IBA-1-031423 EPA 200.8 836955 EPA 200.8 837018 60423977002 MW IBA-2-031423 EPA 200.8 836955 EPA 200.8 837018 60423977003 MW IBA-3-031423 EPA 200.8 836955 EPA 200.8 837018 60423977004 MW IBA-4-031423 EPA 200.8 836955 EPA 200.8 837018 60423977005 **DUP JEC IBA-031423** EPA 200.8 836955 EPA 200.8 837018 60423977001 MW IBA-1-031423 SM 2540C 836930 60423977002 MW IBA-2-031423 SM 2540C 836930 60423977003 MW IBA-3-031423 SM 2540C 836930 60423977004 MW IBA-4-031423 SM 2540C 836930 **DUP JEC IBA-031423** SM 2540C 836930 60423977005 836964 60423977001 MW IBA-1-031423 SM 4500-H+B 60423977002 MW IBA-2-031423 SM 4500-H+B 836964 60423977003 MW IBA-3-031423 SM 4500-H+B 836964 60423977004 MW IBA-4-031423 SM 4500-H+B 836964 DUP JEC IBA-031423 60423977005 SM 4500-H+B 836964 60423977001 MW IBA-1-031423 EPA 300.0 837612 60423977002 MW IBA-2-031423 EPA 300.0 837612 60423977003 MW IBA-3-031423 EPA 300.0 837612 60423977004 MW IBA-4-031423 EPA 300.0 837612 60423977005 DUP JEC IBA-031423 EPA 300.0 837612

		W0#:60423977
Pace DC#_Title: ENV-FRM-L	ENE-0009_Sample	60423977
AMANT/CALSURVELS Revision: 2 Effect	tive Date: 01/12/2022	2 Issued By: Lenexa
Client Name: Every Kunsaglen	ral	
		ace 🗆 Xroads 🗆 Client 🖌 Other 🗆
Tracking #: Page	Shipping Label Used?	Yes 🛃 No 🗆
Custody Seal on Cooler/Box Present: Yes 🗆 No 🛃	Seals intact: Yes 🗆	No 🖪
Packing Material: Bubble Wrap □ Bubble Bags □ Thermometer Used: TAAB Type of	Foam □ Ice: Wet Blue None	None Other
Cooler Temperature (°C): As-read 3 9 Corr. Facto	or <u>0, 1</u> Corrected	3.4 Date and initials of person examining contents:
Temperature should be above freezing to 6°C		AF 3/19
Chain of Custody present:		
Chain of Custody relinquished:		
Samples arrived within holding time:		
Short Hold Time analyses (<72hr):	□Yes □Mo □N/A	
Rush Turn Around Time requested:	□Yes மா₀ □N/A	
Sufficient volume:	Deres □No □N/A	
Correct containers used:	Îvres □No □N/A	
Pace containers used:		
Containers intact:		
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	□Yes □No □MA	
Filtered volume received for dissolved tests?	□Yes □No □N/A	
Sample labels match COC: Date / time / ID / analyses		
Samples contain multiple phases? Matrix: WT		
Containers requiring pH preservation in compliance?		st sample IDs, volumes, lot #'s of preservative and the
(HNO ₃ , H₂SO₄, HCI<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO) LOT#:	6204001	te/time added.
Cyanide water sample checks:	000 700 1	
Lead acetate strip turns dark? (Record only)	□Yes □No	
Potassium iodide test strip turns blue/purple? (Preserve)		8
Trip Blank present:		
Headspace in VOA vials (>6mm):		
Samples from USDA Regulated Area: State:		
Additional labels attached to 5035A / TX1005 vials in the field?		
Client Notification/ Resolution: Copy COC to Copy COC		Field Data Required? Y / N
Person Contacted: Date/Tir Comments/ Resolution:	ne:	_
Project Manager Review:	Date:	



CHAIN-OF-CUSTODY / Analytical Request Document

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

_	d Client Information:	Section E Required F	Project								tion C ce Info	C ormati	on:														Γ	Page	le:	1	of	1		
Compan		Report To:	Jake	e Hur	mphrey					Atten					-	able																		
Address		Сору То:	Laur	ra Hir	nes, Sam	antha Ka	aney, Melis	ssa Mich	els	Comp	bany N	Name:	E١	VER	GYI	KAN	SAS	CE	NTR/	AL, I	NOF	EGI	JLA	OR	YA	GEN	CY							
	Suite 545 Phoenix, AZ 85004									Addre	ess:	S	EE :	SEC	TIO	ΝA					1	1	NPDE	s	$\mathbf{\nabla}$	GR	OUNI	o wr	ATER	2	DRINK	(ING V	VATER	
Email To	skaney@haleyaldrich.com	Purchase C	Order N	No.:	10JEC-0	0000477	47			Pace Refere												- I	JST		Γ	RCF	RA			F	OTHER	२		
Phone:	507-251-2232 Fax:	Project Nar	ne:	JEC	Inactive	Bottom A	Ash Pond	CCR		Pace I Manag	Project aer:	t A	lice	Spill	er, 9	913-5	63-1	1403				Site	Loca	tion										
Reques	ted Due Date/TAT:	Project Nur	nber:									#: 9	657,	, 9					_				STA	TE:			KS							
	1								_										Redr	este	ed Ai	naly	sis F	ilter	red (Y/N))							
	Section D Valid Matrix Co Required Client Information MATRIX DRINKING WATER	DODE DW	codes to left)	C=COMP)		COLL	ECTED				L	Pi	rese	rvati	ves		TN /A	N	N	N	NI	N N												
ITEM #	WATER WASTE WATER PRODUCT SOIL/SOLID OIL OIL (A-Z, 0-9 / ,-) OTHER	DW WT WW SL OL WP AR ACT TS	MATRIX CODE (see valid code:	SAMPLE TYPE (G=GRAB C=C	COMPOSTAF		COMPOS END/GF		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H ₂ SO4 HND	HCI	NaOH	Na ₂ S ₂ O ₃	Methanol Other	4 Analysis Test4	200.7 Total B,Ba,Ca	Total C	6010 Lithium	Total dissolved solids							Residual Chlorine (Y/N)			42 Projec			
1	MW IBA-1-031423		WΤ		NA	NA	3/14/232	11:16		4	2	1	21				T	X	x			x ,	_					+	T					
2	MW IBA-2-031423		WΤ		NA	NA	3/14/232	12:06		4	14		2	\square			1	X	×	x	X :	× >		\square				+	1					
3	MW IBA-3-031423		WΤ		NA	NA	3/14/232	13:48		4	12		"				1	X	X	x	x :	<)								-				
4	MW IBA-4-031423		WT		NA	NA	3/14/232	15:15		4	23		1				1	X	X	x	X :	<)	(T	T					
5	Dup JEC IBA-031423		WT		NA	NA	3/14/232	12:06		4	123	1	1	Π			1	X	x	x	X I	<)	(T	Ť					
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	ADDITIONAL COMMENTS		RELI	NQUI	SHED BY /	AFFILIATI	ON	DAT	E	1	rime				ACC	EPTE	DBY	-	FILIA	TION	>		DAT	Έ		TIME			-	SAMP	LE CON	рітіо	IS	
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Page 25 of 26							PRINT Name	e of SAMF E of SAMF	PLER:	Matt	t Var	nderF	Putte		X	_st	eel		ATE : /IM/D				3	/15/	23			Temp in °C		Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	×1	Samples Intact	

DC#_Title: ENV-FRM-LENE-0001_Sample Container Count Revision: 3 | Effective Date: | Issued_by: Lenexa

client: <u>Every Kansas Central</u> site: JEC INactive Botton Ash PonL(CR

Profile #_____9657-9

Notes

COC Line Item	Matrix	/G9H	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	
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Container Codes

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

BP4N

BP4S

WPDU

125mL HNO3 plastic

125mL H2SO4 plastic

16oz unpresserved plstic

Work Order Number:

6040