HALEY ALDRICH

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# 2024 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
# BOTTOM ASH SETTLING AREA/BOTTOM ASH LANDFILL
# JEFFREY ENERGY CENTER
# ST. MARYS, KANSAS

by
Haley & Aldrich, Inc.
Cleveland, Ohio

for
Evergy Kansas Central, Inc.
Topeka, Kansas

File No. 0210308-000
January 2025

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| Revision No. | Date | Notes |
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This Annual Groundwater Monitoring and Corrective Action Report documents the groundwater monitoring program for the Jeffrey Energy Center (JEC) Bottom Ash Settling Area/Bottom Ash Landfill (BASA/BAL) consistent with applicable sections of 257.90 through 257.98, and describes activities conducted in the prior calendar year (2024) and documents compliance with the U.S. Environmental Protection Agency Coal Combustion Residual Rule. I certify that the 2024 Annual Groundwater Monitoring and Corrective Action Report for the JEC BASA/BAL is, to the best of my knowledge, accurate and complete.

Signed:_____
Professional Geologist


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

# 1. Introduction

This 2024 Annual Groundwater Monitoring and Corrective Action Report (Annual Report) addresses the Bottom Ash Settling Area/Bottom Ash Landfill (BASA/BAL) at the Jeffrey Energy Center (JEC), operated by Evergy Kansas Central, Inc. (Evergy). This Annual Report was developed in accordance with the U.S. Environmental Protection Agency Coal Combustion Residual (CCR) Rule (Rule) effective October 19, 2015, including subsequent revisions, specifically Title 40 Code of Federal Regulations (40 CFR), subsection 257.90(e). The Annual Report documents the groundwater monitoring system for the BASA/BAL consistent with applicable sections of 257.90 through 257.98, and describes activities conducted in the prior calendar year (2024) 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.

## 1.1 40 CFR § 257.90(e)(6) SUMMARY

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

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

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

At the start of the current annual reporting period (January 1, 2024), the BASA/BAL was operating under a detection monitoring program in compliance with 40 CFR § 257.94.

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

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

At the end of the current annual reporting period (December 31, 2024), the BASA/BAL was operating under a detection monitoring program in compliance with 40 CFR § 257.94.

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

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

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

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

No statistically significant increases (SSI) over background were identified during the 2024 calendar year. The statistical evaluation reports for semiannual assessment monitoring sampling events from September 2023 and March 2024 were completed in January 2024 and July 2024, respectively, and are included in Attachment 1.

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

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

No SSIs over background were identified during the 2024 calendar year. Therefore, an assessment monitoring program was not initiated for the BASA/BAL in 2024.

### 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;***

The BASA/BAL remains in detection monitoring, and no Appendix IV constituents were collected or analyzed in 2024. Therefore, no statistically significant levels above the groundwater protection standard were identified for the BASA/BAL.

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

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

No assessment of corrective measures was required to be initiated in 2024 for this unit. The BASA/BAL remained in detection monitoring during 2024.

#### *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 BASA/BAL in 2024. Therefore, a public meeting was not held.

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

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

No assessment of corrective measures was required to be initiated in 2024 for this unit. The BASA/BAL remained in detection monitoring during 2024.

### 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 BASA/BAL remains in detection monitoring, and no remedy was required to be selected.

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

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

No remedial activities were required during 2024.

# 2. 40 CFR § 257.90 Applicability

## 2.1 40 CFR § 257.90(a)

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

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

## 2.2 40 CFR § 257.90(e) – SUMMARY

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

This Annual Report describes monitoring completed and actions taken for the groundwater monitoring system at the JEC BASA/BAL as required by the Rule. Groundwater sampling and analysis was conducted in accordance with requirements described in § 257.93, and the status of the groundwater monitoring program described in § 257.94 is provided in this report. This Annual Report documents the applicable groundwater-related activities completed in the calendar year 2024.

### 2.2.1 Status of the Groundwater Monitoring Program

The BASA/BAL remained in the detection monitoring program during 2024.

### 2.2.2 Key Actions Completed

The 2023 Annual Groundwater Monitoring and Corrective Action Report was completed in January 2024. Statistical evaluation was completed in January 2024 on analytical data from the September 2023 semiannual detection monitoring sampling event. Semiannual detection monitoring events were completed in March and September of 2024. Statistical evaluation was completed in July 2024 on analytical data from the March 2024 semiannual detection monitoring sampling event. Statistical

evaluation of the results from the September 2024 semiannual detection monitoring sampling event are due to be completed in January 2025 and will be reported in the next annual report.

### 2.2.3 Problems Encountered

Problems encountered during groundwater monitoring activities in 2024 consisted of a laboratory analytical error that necessitated reanalysis of select samples. The total dissolved solids concentration were reanalyzed for monitoring wells BAA-6 and BAA-7 following the March 2024 semiannual detection monitoring sampling event. Verification samples were collected from monitoring wells BAA-6 and BAA-7 in May 2024. The chloride concentration was reanalyzed for monitoring well BAA-3 following the September 2024 semiannual detection monitoring sampling event. A verification sample was collected from monitoring well BAA-3 in October 2024. The analytical results were revised accordingly. These were the only sampling and analysis problems encountered that needed to be addressed at the BASA/BAL in 2024.

### 2.2.4 Actions to Resolve Problems

The resolution to problems encountered in 2024 included collection of a confirmation groundwater sample from BAA-6 and BAA-7 in May 2024 and from BAA-3 in October 2024, as described above. The analytical results were revised accordingly. No other problems were encountered at the BASA/BAL in 2024. Therefore, no additional actions to resolve problems were required.

### 2.2.5 Project Key Activities for Upcoming Year

Key activities planned for 2025 include completion of the 2024 Annual Groundwater Monitoring and Corrective Action Report, statistical evaluation of semiannual detection monitoring analytical data collected in September 2024, and semiannual detection monitoring and subsequent statistical evaluations.

## 2.3 40 CFR § 257.90(e) – INFORMATION

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

### 2.3.1 40 CFR § 257.90(e)(1)

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

As required by § 257.90(e)(1), a map showing the locations of the CCR unit and associated upgradient and downgradient monitoring wells for the BASA/BAL 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 in 2024.

### 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 § 257.94(b), two independent detection monitoring samples from each background and downgradient monitoring well were collected during 2024. A summary including the sample names, dates of sample collection, field parameters, and monitoring data obtained for the groundwater monitoring program for the BASA/BAL is provided 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 event in 2024 are shown on Figures 2 and 3.

### 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***

There was no transition between monitoring programs in 2024. Only detection monitoring was conducted in 2024.

### 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 § 257.94 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 the activities completed in calendar year 2024.

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

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

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

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

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

No alternate source demonstration or certification was required in 2024. Therefore, no 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).***

The BASA/BAL remains in detection monitoring and 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).***

The BASA/BAL remains in detection monitoring, and no assessment monitoring samples were collected or analyzed in 2024. Consequently, Evergy is not required to establish groundwater protection standards for this CCR unit, and this criterion is not applicable.

#### *2.3.5.5 40 CFR § 257.95(g)(3)(ii) – Assessment Monitoring Alternate Source Demonstration*

***Demonstrate that a source other than the CCR unit caused the contamination, or that the statistically significant increase resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. Any such demonstration must be supported by a report that includes the factual or evidentiary basis for any conclusions and must be certified to be accurate by a qualified professional engineer or approval from the Participating State Director or approval from EPA where EPA is the permitting authority. If a successful demonstration is made, the owner or operator must continue monitoring in accordance with the assessment monitoring program pursuant to this section and may return to detection monitoring if the constituents in appendices III and IV to this part are at or below background as specified in paragraph (e) of this section. The owner or operator must also include the demonstration in the annual groundwater monitoring and corrective action report required by § 257.90(e), in addition to the certification by a qualified professional engineer or the approval from the Participating State Director or approval from EPA where EPA is the permitting authority.***

No assessment monitoring alternate source demonstration or certification was required in 2024. The BASA/BAL remained in detection monitoring during 2024.

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

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

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

No assessment of corrective measures was required to be initiated in 2024. Therefore, no demonstration or certification is applicable for this unit.

# TABLE

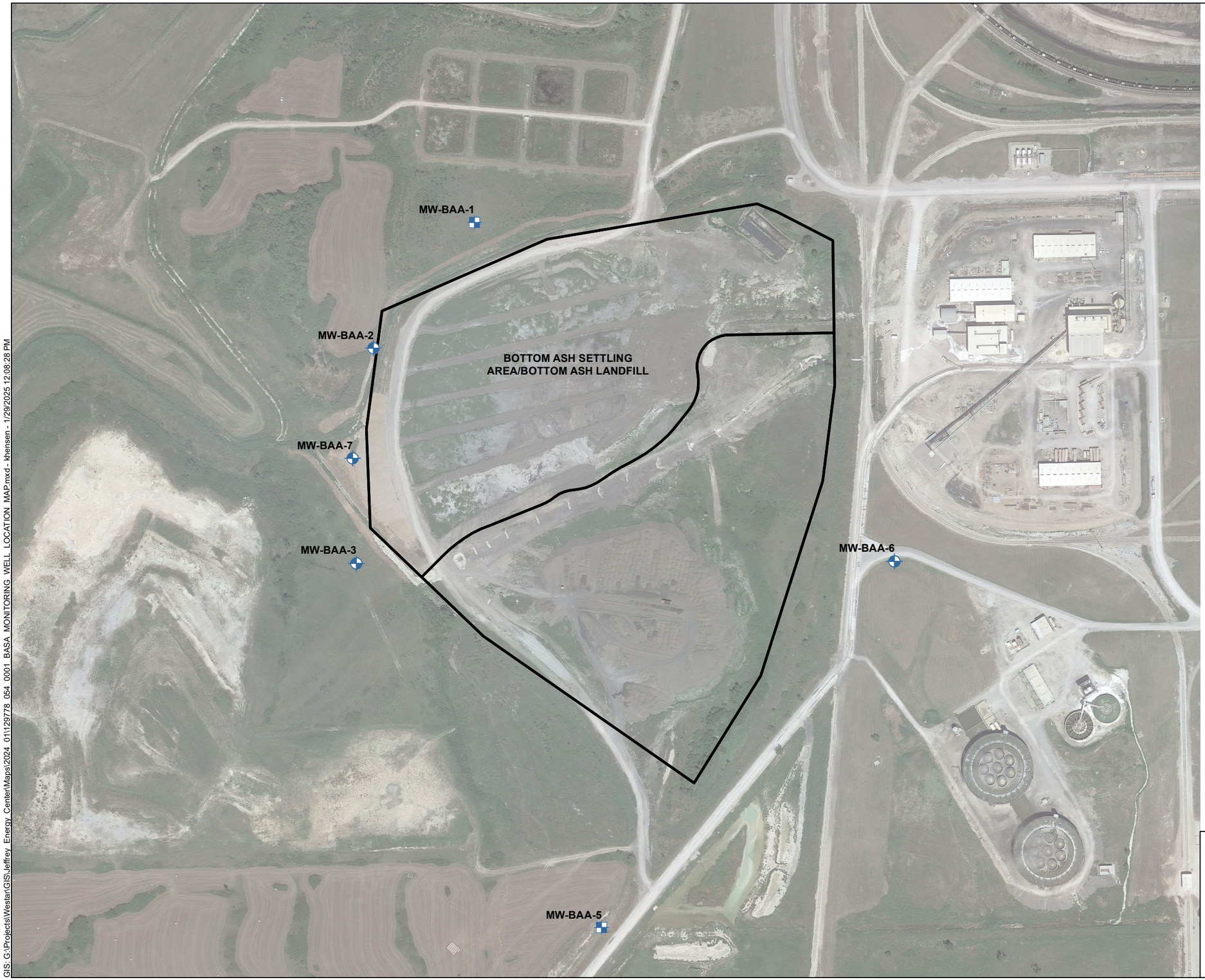
**TABLE I**
**SUMMARY OF ANALYTICAL RESULTS - 2024 DETECTION MONITORING**
EVERGY KANSAS CENTRAL, INC.
JEFFREY ENERGY CENTER
BOTTOM ASH SETTLING AREA / BOTTOM ASH LANDFILL
ST. MARYS, KANSAS

| Location | Upgradient | | | | Downgradient | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MW-BAA-6 | | | | MW-BAA-2 | | | MW-BAA-3 | | | MW-BAA-7 | | |
| Measure Point (TOC) | 1301.81 | | | | 1226.56 | | | 1222.00 | | | 1213.15 | | |
| Sample Name | BAA-6-031324 | JEC-BAA-DUP-031324 | BAA-6-051424 | BAA-6-090424 | BAA-2-031324 | BAA-2-090424 | JEC-BAA-DUP-090424 | BAA-3-031324 | BAA-3-090424 | BAA-3-102324 | BAA-7-031324 | BAA-7-051424 | BAA-7-090424 |
| Sample Date | 03/13/2024 | 03/13/2024 | 05/14/2024 | 09/04/2024 | 03/13/2024 | 09/04/2024 | 09/04/2024 | 03/13/2024 | 09/04/2024 | 10/23/2024 | 03/13/2024 | 05/14/2024 | 09/04/2024 |
| Final Lab Report Date | 3/26/2024 | 3/26/2024 | 5/22/2024 | 9/19/2024 | 3/26/2024 | 9/19/2024 | 9/19/2024 | 3/26/2024 | 9/19/2024 | 11/19/2024 | 3/26/2024 | 5/22/2024 | 9/19/2024 |
| Final Lab Report Revision Date | 6/20/2024 | 6/20/2024 | N/A | N/A | 6/20/2024 | N/A | N/A | 6/20/2024 | N/A | N/A | 6/20/2024 | N/A | N/A |
| Lab Data Reviewed and Validated | 7/12/2024 | 7/12/2024 | 7/12/2024 | 12/16/2024 | 7/12/2024 | 12/16/2024 | 12/16/2024 | 7/12/2024 | 12/16/2024 | 12/16/2024 | 7/12/2024 | 7/12/2024 | 12/16/2024 |
| Depth to Water (ft btoc) | 78.79 | 78.79 | 76.58 | 77.55 | 22.09 | 22.26 | 22.26 | 16.11 | 15.51 | 17.20 | 22.92 | 22.32 | 24.31 |
| Temperature (Deg C) | 15.12 | - | 21.04 | 17.81 | 16.47 | 15.32 | - | 14.05 | 14.95 | 16.02 | 22.43 | 17.76 | 15.98 |
| Conductivity (µS/cm) | 3860 | - | 4060 | 4045 | 1390 | 1280 | - | 3210 | 3042 | 3890 | 1870 | 2170 | 2340 |
| Turbidity (NTU) | 3.0 | - | 0.0 | 0.0 | 19.5 | 10.0 | - | 31.4 | 6.0 | 0.5 | 1.3 | 0.0 | 1.0 |
| pH, Field (su) | 7.31 | - | 7.11 | 6.83 | 7.54 | 6.95 | - | 7.49 | 6.66 | 7.10 | 7.51 | 7.37 | 6.84 |
| Dissolved Oxygen, Field (mg/L) | 0.09 | - | 0.14 | 1.65 | 0.27 | 0.68 | - | 0.00 | 0.51 | 0.00 | 0.03 | 0.19 | 0.05 |
| ORP, Field (mV) | 105 | - | -63 | -73 | 121 | 108 | - | 47 | -59 | -72 | 117 | -42 | -39 |
| Boron, Total (mg/L) | **3.5** | **3.5** | - | **5.9** | **0.89** | **0.79** | **0.78** | **2.4** | **2.3** | - | **0.68** | - | **0.64** |
| Calcium, Total (mg/L) | **546** | **533** | - | **503** | **161** | **154** | **157** | **537** | **510** | - | **265** | - | **255** |
| Chloride (mg/L) | **268** | **277** | - | **284** | **129** | **107** | **106** | **143** | **74.9** | **81.2** | **156** | - | **149** |
| Fluoride (mg/L) | **0.86** | **0.84** | - | **0.72** | **0.29** | **0.49** | **0.50** | **1.10** | **1.0** | - | < 0.20 | - | **0.52** |
| Sulfate (mg/L) | **1840** | **1990** | - | **1980** | **543** | **491** | **492** | **2020** | **1950** | - | **991** | - | **897** |
| pH (su) | **7.1** | **7.0** | - | **6.8** | **7.2** | **7.3** | **7.4** | **7.1** | **7.0** | - | **7.2** | - | **7.2** |
| TDS (mg/L) | **4460** | **2730** | **3310** | **3780** | **1060** | **1090** | **1120** | **2880** | **3220** | - | **1510** | **1450** | **1730** |

***Notes:***

***Bold value:*** *Detection above laboratory reporting limit.*
*µS/cm = micro Siemens per centimeter*
*Deg C = degrees Celsius*
*ft btoc = feet below top of casing*
*mg/L = milligrams per liter*
*mV = millivolt*
*NTU = Nephelometric Turbidity Unit*
*ORP = oxidation reduction potential*
*su = standard unit*
*TDS = total dissolved solids*
*TOC = top of casing*

# FIGURES




**LEGEND**

- MONITORING WELL
- PIEZOMETER OBSERVATION ONLY
- BOTTOM ASH SETTLING AREA /BOTTOM ASH LANDFILL BOUNDARY

**NOTES**

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. AERIAL IMAGERY SOURCE: GOOGLE EARTH

N

0 300 600
SCALE IN FEET

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

# BOTTOM ASH SETTLING AREA/ BOTTOM ASH LANDFILL MONITORING WELL LOCATION MAP

evergy

JANUARY 2025

FIGURE 1

GIS: G:\Projects\Westar\GIS\Jeffrey Energy Center\Maps\2024 01\1129778 054 0001 BASA MONITORING WELL LOCATION MAP.mxd - khensen - 1/29/2025 12:08:28 PM


**LEGEND**

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

**NOTES**

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.

2. GROUNDWATER POTENTIOMETRIC ELEVATIONS WERE MEASURED 13 MARCH 2024.

3. THE GROUNDWATER FLOW RATE WAS APPROXIMATED USING THE HYDRAULIC GRADIENT CALCULATED FROM GROUNDWATER POTENTIOMETRIC ELEVATIONS MEASURED 13 MARCH 2024 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: GOOGLE EARTH

N

0 300 600
SCALE IN FEET

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# BOTTOM ASH SETTLING AREA/ BOTTOM ASH LANDFILL GROUNDWATER POTENTIOMETRIC ELEVATION CONTOUR MAP MARCH 13, 2024

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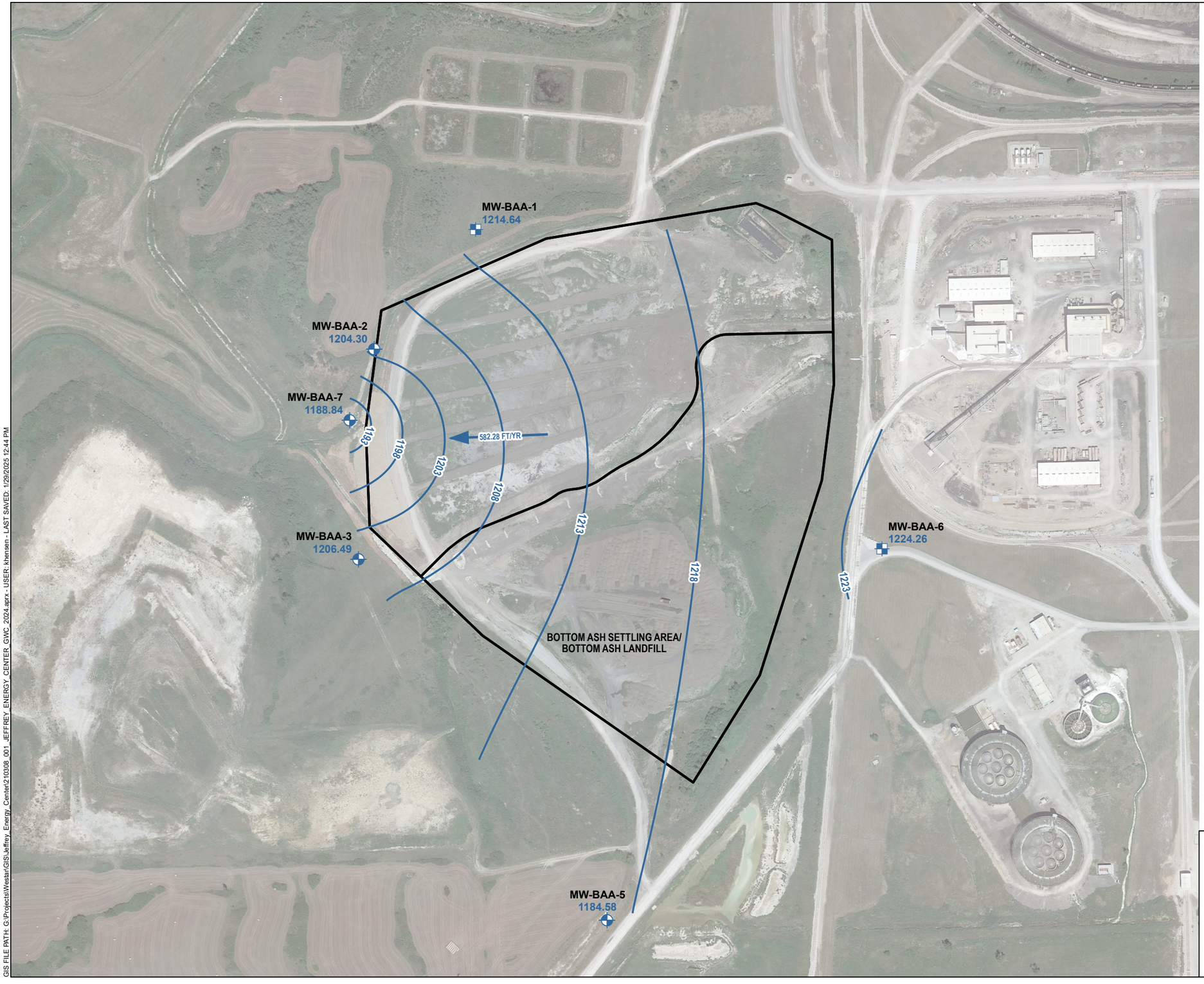
JANUARY 2025

FIGURE 2

GIS: G:\Projects\Westan\GIS\Jeffrey Energy Center\Maps\2024 041129778 054 0001 BASA GDWTR CONTOUR MAP MARCH 2024.mxd - khensen - 1/29/2025 12:04:34 PM




**LEGEND**

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

**NOTES**

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. GROUNDWATER POTENTIOMETRIC ELEVATIONS WERE MEASURED 4 SEPTEMBER 2024.
3. THE GROUNDWATER FLOW RATE WAS APPROXIMATED USING THE HYDRAULIC GRADIENT CALCULATED FROM GROUNDWATER POTENTIOMETRIC ELEVATIONS MEASURED 4 SEPTEMBER 2024 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: GOOGLE EARTH

N

0 300 600
SCALE IN FEET

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JEFFREY ENERGY CENTER
ST. MARYS, KANSAS

# BOTTOM ASH SETTLING AREA/ BOTTOM ASH LANDFILL GROUNDWATER POTENTIOMETRIC ELEVATION CONTOUR MAP SEPTEMBER 4, 2024

evergy

JANUARY 2025

FIGURE 3

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# ATTACHMENT 1
# Statistical Analyses

# ATTACHMENT 1-1
# September 2023 Semiannual Groundwater Assessment Monitoring Data Statistical Evaluation

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

**TECHNICAL MEMORANDUM**

February 6, 2024
File No. 129778-050

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

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

SUBJECT: September 2023 Semiannual Groundwater Detection Monitoring Data Statistical Evaluation
**Completed January 10, 2024**
Jeffrey Energy Center
Bottom Ash Settling Area/Bottom Ash Landfill

Pursuant to Title 40 Code of Federal Regulations (40 CFR) §§ 257.93 and 257.94 (Rule), this memorandum summarizes the statistical evaluation of the analytical results for the **September 2023** semiannual detection monitoring groundwater sampling event for the Jeffrey Energy Center (JEC) Bottom Ash Settling Area/Bottom Ash Landfill (BASA/BAL). This semiannual detection monitoring groundwater sampling event was completed on **September 9, 2023,** with laboratory results received and validated on **December 13, 2023**.

The statistical evaluation discussed in this memorandum was conducted to determine if Appendix III groundwater monitoring constituents have been detected in downgradient wells at concentrations that represent a statistically significant increase (SSI) above background or upgradient wells consistent with the requirements in 40 CFR § 257.94.

## Statistical Evaluation of Appendix III 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 two statistical methods used for these evaluations, prediction limits (PL) and Parametric Analysis of Variance, were certified by Haley & Aldrich, Inc. on April 17, 2019. The PL method, as determined applicable for this sampling event, was used to evaluate potential SSIs above background. Background levels for each constituent listed in Appendix III (boron, calcium, chloride, fluoride, pH, sulfate, and total dissolved solids) were computed as upper prediction limits (UPL), considering one future observation, and a minimum 95 percent confidence coefficient. The most recent groundwater sampling event from each compliance well was compared to the corresponding background PL to determine if a SSI existed.

## STATISTICAL EVALUATION

An interwell evaluation using the PL method was used to complete the statistical evaluation of the referenced dataset. Interwell evaluation compares the most recent values from downgradient compliance wells against a background dataset composed of upgradient well data (MW-BAA-6). A PL procedure is one in which a concentration limit for each constituent is established from the distribution of the background data, with a specified confidence level (e.g., 95 percent). The upper endpoint of a concentration limit is called the UPL. Depending on the background data distribution, parametric or non-parametric PL procedures are used to evaluate groundwater monitoring data using this method. Parametric PLs 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 PL. If all the background data are non-detect, a maximum reporting limit may serve as an appropriate UPL.

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

## BACKGROUND DISTRIBUTIONS

The groundwater analytical results for each sampling event from the background sample location MW-BAA-6 were combined to calculate the UPL for each Appendix III constituent. The variability and distribution of the pooled dataset were evaluated to determine the method for UPL calculation. In accordance with the document titled *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance*, March 2009, background concentrations were updated based on statistical evaluation of analytical results collected through **September 2023**.

## RESULTS OF APPENDIX III DOWNGRADIENT STATISTICAL COMPARISONS

Sample concentrations from the downgradient wells for each of the Appendix III constituents from the **September 2023** semiannual detection monitoring sampling event were compared to their respective background UPLs (Table I). A sample concentration greater than the background UPL is considered to represent a SSI. The results of the groundwater detection monitoring statistical evaluation are provided in Table I. **Based on this statistical evaluation of groundwater sampling data collected in September 2023, no SSIs above background PLs occurred at the JEC BASA/BAL.**

Attachments:
Table I – Summary of Semiannual Detection Groundwater Monitoring Statistical Evaluation

# TABLE

TABLE I
SUMMARY OF SEMIANNUAL DETECTION GROUNDWATER MONITORING STATISTICAL EVALUATION
SEPTEMBER 2023 SAMPLING EVENT
JEFFREY ENERGY CENTER BOTTOM ASH SETTLING AREA/BOTTOM ASH LANDFILL
ST. MARYS, KANSAS

| | | | | | | | | | | | | | Interwell | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Location Id** | **Frequency of Detection** | **Percent Non-Detects** | **Range of Non-Detect** | **Maximum Detect** | **Variance** | **Standard Deviation** | **Coefficient of Variance** | **Outlier Presence** | **Outlier Removed** | **Trend** | **Distribution Well** | **September 2023 Concentration (mg/L)** | **Background Limits[1] (UPL) mg/L** | **SSI** |
| **CCR Appendix-III: Boron, Total (mg/L)** | | | | | | | | | | | | | | |
| MW-BAA-6 (upgradient) | 20/20 | 0% | - | 5.92 | 1.583 | 1.258 | 0.3111 | No | No | Stable | Normal | 4.5 | 8.95 | |
| MW-BAA-2 | 20/20 | 0% | - | 1.4 | 0.03357 | 0.1832 | 0.1708 | No | No | Stable | Normal | 0.80 | | No |
| MW-BAA-3 | 20/20 | 0% | - | 2.5 | 0.01008 | 0.1004 | 0.04406 | Yes | No | Stable | Non-parametric | 2.3 | | No |
| MW-BAA-7 | 20/20 | 0% | - | 1.3 | 0.09145 | 0.3024 | 0.3448 | No | No | Decrease | Non-parametric | 0.61 | | No |
| **CCR Appendix-III: Calcium, Total (mg/L)** | | | | | | | | | | | | | | |
| MW-BAA-6 (upgradient) | 20/20 | 0% | - | 575 | 3080 | 55.49 | 0.1095 | Yes | No | Increase | Non-parametric | 531 | 575 | |
| MW-BAA-2 | 20/20 | 0% | - | 224 | 451.8 | 21.26 | 0.1191 | No | No | Stable | Normal | 187 | | No |
| MW-BAA-3 | 20/20 | 0% | - | 552 | 628.7 | 25.07 | 0.04857 | No | No | Stable | Normal | 514 | | No |
| MW-BAA-7 | 20/20 | 0% | - | 276 | 498.4 | 22.33 | 0.09571 | No | No | Stable | Normal | 251 | | No |
| **CCR Appendix-III: Chloride (mg/L)** | | | | | | | | | | | | | | |
| MW-BAA-6 (upgradient) | 20/20 | 0% | - | 326 | 2046 | 45.23 | 0.1791 | No | No | Increase | Normal | 270 | 429 | |
| MW-BAA-2 | 20/20 | 0% | - | 220 | 1498 | 38.7 | 0.3003 | No | No | Stable | Normal | 98.8 | | No |
| MW-BAA-3 | 20/20 | 0% | - | 189 | 327.3 | 18.09 | 0.1175 | No | No | Stable | Normal | 116 | | No |
| MW-BAA-7 | 20/20 | 0% | - | 211 | 798 | 28.25 | 0.1567 | Yes | No | Stable | Non-parametric | 156 | | No |
| **CCR Appendix-III: Fluoride (mg/L)** | | | | | | | | | | | | | | |
| MW-BAA-6 (upgradient) | 15/20 | 25% | 0.2-0.2 | 0.88 | 0.05622 | 0.2371 | 0.4658 | No | No | Decrease | Normal | <0.20 | 1.434 | |
| MW-BAA-2 | 19/20 | 5% | 0.2-0.2 | 0.63 | 0.01194 | 0.1093 | 0.2286 | No | No | Stable | Normal | 0.36 | | No |
| MW-BAA-3 | 18/20 | 10% | 0.2-0.2 | 1 | 0.08177 | 0.286 | 0.3915 | No | No | Decrease | Non-parametric | 0.33 | | No |
| MW-BAA-7 | 19/20 | 5% | 0.2-0.2 | 0.9 | 0.03756 | 0.1938 | 0.2917 | No | No | Decrease | Normal | 0.34 | | No |
| **CCR Appendix-III: pH (lab) (SU)** | | | | | | | | | | | | | | |
| MW-BAA-6 (upgradient) | 20/20 | 0% | - | 7.5 | 0.032 | 0.1789 | 0.02534 | No | No | Stable | Normal | 7.0 | 7.80 | |
| MW-BAA-2 | 20/20 | 0% | - | 8.5 | 0.09042 | 0.3007 | 0.04069 | Yes | No | Decrease | Non-parametric | 7.2 | | No |
| MW-BAA-3 | 20/20 | 0% | - | 7.6 | 0.02997 | 0.1731 | 0.02437 | Yes | No | Decrease | Normal | 7.1 | | No |
| MW-BAA-7 | 20/20 | 0% | - | 7.6 | 0.0325 | 0.1803 | 0.02461 | No | No | Stable | Normal | 7.2 | | No |
| **CCR Appendix-III: Sulfate (mg/L)** | | | | | | | | | | | | | | |
| MW-BAA-6 (upgradient) | 20/20 | 0% | - | 2190 | 116000 | 340.6 | 0.1864 | No | No | Stable | Non-parametric | 2140 | 2190 | |
| MW-BAA-2 | 20/20 | 0% | - | 983 | 29440 | 171.6 | 0.2704 | No | No | Stable | Normal | 424 | | No |
| MW-BAA-3 | 20/20 | 0% | - | 2290 | 13840 | 117.6 | 0.05839 | No | No | Stable | Normal | 2110 | | No |
| MW-BAA-7 | 20/20 | 0% | - | 986 | 2734 | 52.29 | 0.05785 | Yes | No | Stable | Non-parametric | 850 | | No |
| **CCR Appendix-III: Total Dissolved Solids (TDS) (mg/L)** | | | | | | | | | | | | | | |
| MW-BAA-6 (upgradient) | 20/20 | 0% | - | 4530 | 232100 | 481.8 | 0.1439 | Yes | No | Increase | Normal | 3920 | 5227 | |
| MW-BAA-2 | 20/20 | 0% | - | 1790 | 43680 | 209 | 0.1661 | No | No | Stable | Normal | 996 | | No |
| MW-BAA-3 | 20/20 | 0% | - | 3780 | 58500 | 241.9 | 0.07306 | No | No | Stable | Normal | 3520 | | No |
| MW-BAA-7 | 20/20 | 0% | - | 1990 | 8331 | 91.28 | 0.05044 | No | No | Stable | Normal | 1760 | | No |

***Notes:***

*[1] Based on background data collected from 08/25/2016 through 09/06/2023.*
*CCR = coal combustion residual*
*mg/L = milligrams per liter*
*SSI = statistically significant increase*
*SU = standard unit*
*UPL = upper prediction limit*

# ATTACHMENT 1-2
# March 2024 Semiannual Groundwater Assessment Monitoring Data Statistical Evaluation

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

**TECHNICAL MEMORANDUM**

August 14, 2024
File No. 0210308-000

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., Principal Consultant –Hydrogeologist

SUBJECT: March 2024 Semiannual Groundwater Detection Monitoring Data
Statistical Evaluation
**Completed July 29, 2024**
Jeffrey Energy Center
Bottom Ash Settling Area/Bottom Ash Landfill

Pursuant to Title 40 Code of Federal Regulations (40 CFR) §§ 257.93 and 257.94 (Rule), this memorandum summarizes the statistical evaluation of the analytical results for the **March 2024** semiannual detection monitoring groundwater sampling event for the Jeffrey Energy Center (JEC) Bottom Ash Settling Area/Bottom Ash Landfill (BASA/BAL). This semiannual detection monitoring groundwater sampling event was completed on **March 13, 2024,** with laboratory results received and validated on **July 12, 2024**. Wells MW-BAA-6 and MW-BAA-7 were resampled on **May 22, 2024** to confirm the total dissolved solids concentrations collected on March 13, 2024.

The statistical evaluation discussed in this memorandum was conducted to determine if Appendix III groundwater monitoring constituents have been detected in downgradient wells at concentrations that represent a statistically significant increase (SSI) above background or upgradient wells consistent with the requirements in 40 CFR § 257.94.

## Statistical Evaluation of Appendix III 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 two statistical methods used for these evaluations, prediction limits (PL) and Parametric Analysis of Variance, were certified by Haley & Aldrich, Inc. on April 17, 2019. The PL method, as determined applicable for this sampling event, was used to evaluate potential SSIs above background. Background levels for each constituent listed in Appendix III (boron, calcium, chloride, fluoride, pH, sulfate, and total dissolved solids) were computed as upper prediction limits (UPL), considering one future observation, and a minimum 95 percent confidence coefficient. The most recent groundwater sampling event from each compliance well was compared to the corresponding background PL to determine if a SSI existed.

## STATISTICAL EVALUATION

An interwell evaluation using the PL method was used to complete the statistical evaluation of the referenced dataset. Interwell evaluation compares the most recent values from downgradient compliance wells against a background dataset composed of upgradient well data (MW-BAA-6). A PL procedure is one in which a concentration limit for each constituent is established from the distribution of the background data, with a specified confidence level (e.g., 95 percent). The upper endpoint of a concentration limit is called the UPL. Depending on the background data distribution, parametric or non-parametric PL procedures are used to evaluate groundwater monitoring data using this method. Parametric PLs 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 PL. If all the background data are non-detect, a maximum reporting limit may serve as an appropriate UPL.

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

## BACKGROUND DISTRIBUTIONS

The groundwater analytical results for each sampling event from the background sample location MW-BAA-6 were combined to calculate the UPL for each Appendix III constituent. The variability and distribution of the pooled dataset were evaluated to determine the method for UPL calculation. In accordance with the document titled *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance*, March 2009, background concentrations were updated based on statistical evaluation of analytical results collected through **September 2023**.

## RESULTS OF APPENDIX III DOWNGRADIENT STATISTICAL COMPARISONS

Sample concentrations from the downgradient wells for each of the Appendix III constituents from the **March 2024** semiannual detection monitoring sampling event were compared to their respective background UPLs (Table I). A sample concentration greater than the background UPL is considered to represent a SSI. The results of the groundwater detection monitoring statistical evaluation are provided in Table I. **Based on this statistical evaluation of groundwater sampling data collected in March 2024, no SSIs above background PLs occurred at the JEC BASA/BAL.**

Attachments:
Table I – Summary of Semiannual Detection Groundwater Monitoring Statistical Evaluation

# TABLE

**TABLE I**
**SUMMARY OF SEMIANNUAL DETECTION GROUNDWATER MONITORING STATISTICAL EVALUATION**
MARCH 2024 SAMPLING EVENT
JEFFREY ENERGY CENTER BOTTOM ASH SETTLING AREA/BOTTOM ASH LANDFILL
ST. MARYS, KANSAS

| | | | | | | | | | | | | | Interwell Analysis | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Location Id** | **Frequency of Detection** | **Percent Non-Detects** | **Range of Non-Detect** | **Maximum Detect** | **Variance** | **Standard Deviation** | **Coefficient of Variance** | **Outlier Presence** | **Outlier Removed** | **Trend** | **Distribution Well** | **March 2024 Concentration (mg/L)** | **Background Limits[1] (UPL) mg/L** | **SSI** |
| **CCR Appendix-III: Boron, Total (mg/L)** | | | | | | | | | | | | | | |
| MW-BAA-6 | 21/21 | 0% | - | 5.92 | 1.518 | 1.232 | 0.3066 | No | No | Stable | Normal | 3.5 | 8.95 | |
| MW-BAA-2 | 21/21 | 0% | - | 1.4 | 0.03347 | 0.183 | 0.172 | No | No | Stable | Normal | 0.89 | | No |
| MW-BAA-3 | 21/21 | 0% | - | 2.5 | 0.01028 | 0.1014 | 0.04437 | No | No | Stable | Non-parametric | 2.4 | | No |
| MW-BAA-7 | 21/21 | 0% | - | 1.3 | 0.08872 | 0.2979 | 0.3433 | No | No | Decrease | Non-parametric | 0.68 | | No |
| **CCR Appendix-III: Calcium, Total (mg/L)** | | | | | | | | | | | | | | |
| MW-BAA-6 | 21/21 | 0% | - | 575 | 2999 | 54.76 | 0.1076 | Yes | No | Increase | Non-parametric | 546 | 575 | |
| MW-BAA-2 | 21/21 | 0% | - | 224 | 443.8 | 21.07 | 0.1186 | No | No | Stable | Normal | 161 | | No |
| MW-BAA-3 | 21/21 | 0% | - | 552 | 617.9 | 24.86 | 0.04806 | No | No | Stable | Normal | 537 | | No |
| MW-BAA-7 | 21/21 | 0% | - | 276 | 521.5 | 22.84 | 0.09727 | No | No | Stable | Normal | 265 | | No |
| **CCR Appendix-III: Chloride (mg/L)** | | | | | | | | | | | | | | |
| MW-BAA-6 | 21/21 | 0% | - | 326 | 1955 | 44.21 | 0.1745 | No | No | Increase | Normal | 268 | 429 | |
| MW-BAA-2 | 21/21 | 0% | - | 220 | 1423 | 37.72 | 0.2926 | No | No | Stable | Normal | 129 | | No |
| MW-BAA-3 | 21/21 | 0% | - | 189 | 316.7 | 17.79 | 0.1159 | Yes | No | Stable | Normal | 143 | | No |
| MW-BAA-7 | 21/21 | 0% | - | 211 | 786.1 | 28.04 | 0.1565 | Yes | No | Stable | Non-parametric | 156 | | No |
| **CCR Appendix-III: Fluoride (mg/L)** | | | | | | | | | | | | | | |
| MW-BAA-6 | 16/21 | 24% | 0.2-0.2 | 0.88 | 0.05928 | 0.2435 | 0.4631 | No | No | Stable | Normal | 0.86 | 1.434 | |
| MW-BAA-2 | 20/21 | 5% | 0.2-0.2 | 0.63 | 0.01303 | 0.1141 | 0.2434 | No | No | Decrease | Normal | 0.29 | | No |
| MW-BAA-3 | 19/21 | 10% | 0.2-0.2 | 1.1 | 0.08419 | 0.2901 | 0.3878 | No | No | Decrease | Non-parametric | 1.10 | | No |
| MW-BAA-7 | 19/21 | 10% | 0.2-0.2 | 0.9 | 0.04596 | 0.2144 | 0.3337 | No | No | Decrease | Non-parametric | < 0.20 | | No |
| **CCR Appendix-III: pH (lab) (SU)** | | | | | | | | | | | | | | |
| MW-BAA-6 | 21/21 | 0% | - | 7.5 | 0.03048 | 0.1746 | 0.02472 | No | No | Stable | Normal | 7.1 | 7.80 | |
| MW-BAA-2 | 21/21 | 0% | - | 8.5 | 0.08762 | 0.296 | 0.0401 | Yes | No | Decrease | Non-parametric | 7.2 | | No |
| MW-BAA-3 | 21/21 | 0% | - | 7.6 | 0.02848 | 0.1687 | 0.02375 | Yes | No | Decrease | Normal | 7.1 | | No |
| MW-BAA-7 | 21/21 | 0% | - | 7.6 | 0.03162 | 0.1778 | 0.0243 | No | No | Stable | Normal | 7.2 | | No |
| **CCR Appendix-III: Sulfate (mg/L)** | | | | | | | | | | | | | | |
| MW-BAA-6 | 21/21 | 0% | - | 2190 | 110200 | 332 | 0.1816 | No | No | Stable | Non-parametric | 1840 | 2190 | |
| MW-BAA-2 | 21/21 | 0% | - | 983 | 28370 | 168.4 | 0.2673 | No | No | Stable | Normal | 543 | | No |
| MW-BAA-3 | 21/21 | 0% | - | 2290 | 13150 | 114.7 | 0.05691 | No | No | Stable | Normal | 2020 | | No |
| MW-BAA-7 | 21/21 | 0% | - | 991 | 2959 | 54.39 | 0.0599 | Yes | No | Stable | Normal | 991 | | No |
| **CCR Appendix-III: Total Dissolved Solids (TDS) (mg/L)** | | | | | | | | | | | | | | |
| MW-BAA-6 | 21/21 | 0% | - | 4530 | 220600 | 469.7 | 0.1404 | Yes | No | Increase | Normal | 3310 | 5227 | |
| MW-BAA-2 | 21/21 | 0% | - | 1790 | 43360 | 208.2 | 0.1668 | No | No | Stable | Normal | 1060 | | No |
| MW-BAA-3 | 21/21 | 0% | - | 3780 | 141100 | 375.7 | 0.1157 | Yes | No | Stable | Normal | 2880 | | No |
| MW-BAA-7 | 21/21 | 0% | - | 1990 | 14070 | 118.6 | 0.06618 | No | No | Stable | Normal | 1450 | | No |

***Notes:***

*[1] Based on background data collected from 08/25/2016 through 09/06/2023.*
*CCR = coal combustion residual*
*mg/L = milligrams per liter*
*SSI = statistically significant increase*
*SU = standard unit*
*UPL = upper prediction limit*

# ATTACHMENT 2
# Laboratory Analytical Reports

# ATTACHMENT 2-1
# March 2024 Semiannual Sampling Event Laboratory Analytical Report

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

August 06, 2024

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

RE: Project: JEC BASA/BAL-Revised Report
Pace Project No.: 60449066

Dear Jake Humphrey:

Enclosed are the analytical results for sample(s) received by the laboratory on March 14, 2024. 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
Nick Williams, Haley Aldrich

**Pace Analytical Services, LLC**
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# CERTIFICATIONS

Project: JEC BASA/BAL-Revised Report
Pace Project No.: 60449066

**Pace Analytical Services Kansas**
9608 Loiret Boulevard, Lenexa, KS 66219
Arkansas Certification #: 88-00679
Illinois Certification #: 2000302023-6
Colorado Division of Oil and Public Safety
Iowa Certification #: 118
Kansas Field Laboratory Certification #: E-92587
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Missouri Inorganic Drinking Water Certification
Nevada Certification #: KS000212024-1
Oklahoma Certification #: 2023-073
Texas Certification #: T104704407-23-17
Utah Certification #: KS000212022-13

## REPORT OF LABORATORY ANALYSIS

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

## SAMPLE SUMMARY

Project: JEC BASA/BAL-Revised Report
Pace Project No.: 60449066

| Lab ID | Sample ID | Matrix | Date Collected | Date Received |
|---|---|---|---|---|
| **60449066001** | **BAA-2-031324** | Water | 03/13/24 11:40 | 03/14/24 17:30 |
| **60449066002** | **BAA-3-031324** | Water | 03/13/24 09:35 | 03/14/24 17:30 |
| **60449066003** | **BAA-6-031324** | Water | 03/13/24 10:30 | 03/14/24 17:30 |
| **60449066004** | **BAA-7-031324** | Water | 03/13/24 13:35 | 03/14/24 17:30 |
| **60449066005** | **JEC-BAA-DUP-031324** | Water | 03/13/24 10:30 | 03/14/24 17:30 |

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

## SAMPLE ANALYTE COUNT

Project: JEC BASA/BAL-Revised Report
Pace Project No.: 60449066

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|---|---|---|---|---|---|
| **60449066001** | **BAA-2-031324** | EPA 200.7 | JXD | 2 | PASI-K |
| | | SM 2540C | KVI | 1 | PASI-K |
| | | SM 4500-H+B | SR1 | 1 | PASI-K |
| | | EPA 300.0 | PL | 3 | PASI-K |
| **60449066002** | **BAA-3-031324** | EPA 200.7 | JXD | 2 | PASI-K |
| | | SM 2540C | KVI | 1 | PASI-K |
| | | SM 4500-H+B | SR1 | 1 | PASI-K |
| | | EPA 300.0 | PL, RKA | 3 | PASI-K |
| **60449066003** | **BAA-6-031324** | EPA 200.7 | JXD | 2 | PASI-K |
| | | SM 2540C | KVI | 1 | PASI-K |
| | | SM 4500-H+B | SR1 | 1 | PASI-K |
| | | EPA 300.0 | PL, RKA | 3 | PASI-K |
| **60449066004** | **BAA-7-031324** | EPA 200.7 | JXD | 2 | PASI-K |
| | | SM 2540C | KVI | 1 | PASI-K |
| | | SM 4500-H+B | SR1 | 1 | PASI-K |
| | | EPA 300.0 | PL | 3 | PASI-K |
| **60449066005** | **JEC-BAA-DUP-031324** | EPA 200.7 | JXD | 2 | PASI-K |
| | | SM 2540C | KVI | 1 | PASI-K |
| | | SM 4500-H+B | SR1 | 1 | PASI-K |
| | | EPA 300.0 | PL, RKA | 3 | PASI-K |

PASI-K = Pace Analytical Services - Kansas City

**Pace Analytical Services, LLC**
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(913)599-5665

# PROJECT NARRATIVE

Project: JEC BASA/BAL-Revised Report
Pace Project No.: 60449066

**Date:** August 06, 2024

REVISED to include reanlaysis data per client reqeust
REV_1 Report amended to include reanalysis data per client request for samples 60449066004 (SO4, TDS), 60449066001 (Fluoride, TDS), 60449066002 (Fluoride, TDS) 60449066003 (TDS)
REV_3 Report amended to report original TDS results and remove reanalysis results for samples 60449066002 and 60449066003 per client request.
REVSION_2 to remove duplicate results per client request.

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# PROJECT NARRATIVE

Project: JEC BASA/BAL-Revised Report
Pace Project No.: 60449066

**Method:** **EPA 200.7**
**Description:** 200.7 Metals, Total
**Client:** Evergy Kansas Central, Inc.
**Date:** August 06, 2024

**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: 887344

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60449065001,60449066003

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

- MS (Lab ID: 3512349)
  - Calcium

**Additional Comments:**

## REPORT OF LABORATORY ANALYSIS

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# PROJECT NARRATIVE

Project: JEC BASA/BAL-Revised Report
Pace Project No.: 60449066

**Method:** **SM 2540C**
**Description:** 2540C Total Dissolved Solids
**Client:** Evergy Kansas Central, Inc.
**Date:** August 06, 2024

**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: 887323

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

- DUP (Lab ID: 3512246)
  - Total Dissolved Solids

**Additional Comments:**

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# PROJECT NARRATIVE

Project: JEC BASA/BAL-Revised Report
Pace Project No.: 60449066

**Method:** **SM 4500-H+B**
**Description:** 4500H+ pH, Electrometric
**Client:** Evergy Kansas Central, Inc.
**Date:** August 06, 2024

**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.
- BAA-2-031324 (Lab ID: 60449066001)
- BAA-3-031324 (Lab ID: 60449066002)
- BAA-6-031324 (Lab ID: 60449066003)
- BAA-7-031324 (Lab ID: 60449066004)
- JEC-BAA-DUP-031324 (Lab ID: 60449066005)

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

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

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

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

**Additional Comments:**

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# PROJECT NARRATIVE

Project: JEC BASA/BAL-Revised Report
Pace Project No.: 60449066

**Method:** **EPA 300.0**
**Description:** 300.0 IC Anions 28 Days
**Client:** Evergy Kansas Central, Inc.
**Date:** August 06, 2024

**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.

H1: Analysis conducted outside the EPA method holding time.
- BAA-3-031324 (Lab ID: 60449066002)

**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: 887337

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60449052001,60449065002

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
- MS (Lab ID: 3512317)
  - Sulfate

**Additional Comments:**

Analyte Comments:

QC Batch: 887337

E: Analyte concentration exceeded the calibration range. The reported result is estimated.
- MS (Lab ID: 3512317)
  - Sulfate
- MSD (Lab ID: 3512318)
  - Sulfate

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

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: JEC BASA/BAL-Revised Report
Pace Project No.: 60449066

**Sample: BAA-2-031324** **Lab ID: 60449066001** Collected: 03/13/24 11:40 Received: 03/14/24 17:30 Matrix: Water

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **200.7 Metals, Total** | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7<br>Pace Analytical Services - Kansas City | | | | | | | |
| Boron, Total Recoverable | **0.89** | mg/L | 0.10 | 1 | 03/20/24 10:30 | 03/21/24 15:18 | 7440-42-8 | |
| Calcium, Total Recoverable | **161** | mg/L | 0.20 | 1 | 03/20/24 10:30 | 03/21/24 15:18 | 7440-70-2 | |
| **2540C Total Dissolved Solids** | Analytical Method: SM 2540C<br>Pace Analytical Services - Kansas City | | | | | | | |
| Total Dissolved Solids | **1060** | mg/L | 13.3 | 1 | | 03/20/24 10:37 | | |
| **4500H+ pH, Electrometric** | Analytical Method: SM 4500-H+B<br>Pace Analytical Services - Kansas City | | | | | | | |
| pH at 25 Degrees C | **7.2** | Std. Units | 0.10 | 1 | | 03/18/24 12:50 | | H6 |
| **300.0 IC Anions 28 Days** | Analytical Method: EPA 300.0<br>Pace Analytical Services - Kansas City | | | | | | | |
| Chloride | **129** | mg/L | 50.0 | 50 | | 03/21/24 18:01 | 16887-00-6 | |
| Fluoride | **0.29** | mg/L | 0.20 | 1 | | 03/21/24 17:49 | 16984-48-8 | |
| Sulfate | **543** | mg/L | 50.0 | 50 | | 03/21/24 18:01 | 14808-79-8 | |

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: JEC BASA/BAL-Revised Report
Pace Project No.: 60449066

**Sample: BAA-3-031324** **Lab ID: 60449066002** Collected: 03/13/24 09:35 Received: 03/14/24 17:30 Matrix: Water

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **200.7 Metals, Total** | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7<br>Pace Analytical Services - Kansas City | | | | | | | |
| Boron, Total Recoverable | **2.4** | mg/L | 0.10 | 1 | 03/20/24 10:30 | 03/21/24 15:20 | 7440-42-8 | |
| Calcium, Total Recoverable | **537** | mg/L | 0.20 | 1 | 03/20/24 10:30 | 03/21/24 15:20 | 7440-70-2 | |
| **2540C Total Dissolved Solids** | Analytical Method: SM 2540C<br>Pace Analytical Services - Kansas City | | | | | | | |
| Total Dissolved Solids | **2880** | mg/L | 66.7 | 1 | | 03/20/24 10:37 | | |
| **4500H+ pH, Electrometric** | Analytical Method: SM 4500-H+B<br>Pace Analytical Services - Kansas City | | | | | | | |
| pH at 25 Degrees C | **7.1** | Std. Units | 0.10 | 1 | | 03/18/24 12:41 | | H6 |
| **300.0 IC Anions 28 Days** | Analytical Method: EPA 300.0<br>Pace Analytical Services - Kansas City | | | | | | | |
| Chloride | **143** | mg/L | 50.0 | 50 | | 04/23/24 13:54 | 16887-00-6 | H1 |
| Fluoride | **1.1** | mg/L | 0.20 | 1 | | 03/21/24 18:38 | 16984-48-8 | |
| Sulfate | **2020** | mg/L | 500 | 500 | | 03/22/24 18:42 | 14808-79-8 | |

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: JEC BASA/BAL-Revised Report
Pace Project No.: 60449066

**Sample: BAA-6-031324** **Lab ID: 60449066003** Collected: 03/13/24 10:30 Received: 03/14/24 17:30 Matrix: Water

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **200.7 Metals, Total** | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7<br>Pace Analytical Services - Kansas City | | | | | | | |
| Boron, Total Recoverable | **3.5** | mg/L | 0.10 | 1 | 03/20/24 10:30 | 03/21/24 15:22 | 7440-42-8 | |
| Calcium, Total Recoverable | **546** | mg/L | 0.20 | 1 | 03/20/24 10:30 | 03/21/24 15:22 | 7440-70-2 | M1 |
| **2540C Total Dissolved Solids** | Analytical Method: SM 2540C<br>Pace Analytical Services - Kansas City | | | | | | | |
| Total Dissolved Solids | **4460** | mg/L | 100 | 1 | | 03/20/24 10:37 | | |
| **4500H+ pH, Electrometric** | Analytical Method: SM 4500-H+B<br>Pace Analytical Services - Kansas City | | | | | | | |
| pH at 25 Degrees C | **7.1** | Std. Units | 0.10 | 1 | | 03/18/24 12:45 | | H6 |
| **300.0 IC Anions 28 Days** | Analytical Method: EPA 300.0<br>Pace Analytical Services - Kansas City | | | | | | | |
| Chloride | **268** | mg/L | 50.0 | 50 | | 03/21/24 19:15 | 16887-00-6 | |
| Fluoride | **0.86** | mg/L | 0.20 | 1 | | 03/21/24 19:03 | 16984-48-8 | |
| Sulfate | **1840** | mg/L | 500 | 500 | | 03/22/24 18:55 | 14808-79-8 | |

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: JEC BASA/BAL-Revised Report
Pace Project No.: 60449066

**Sample: BAA-7-031324** **Lab ID: 60449066004** Collected: 03/13/24 13:35 Received: 03/14/24 17:30 Matrix: Water

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **200.7 Metals, Total** | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7<br>Pace Analytical Services - Kansas City | | | | | | | |
| Boron, Total Recoverable | **0.68** | mg/L | 0.10 | 1 | 03/20/24 10:30 | 03/21/24 15:27 | 7440-42-8 | |
| Calcium, Total Recoverable | **265** | mg/L | 0.20 | 1 | 03/20/24 10:30 | 03/21/24 15:27 | 7440-70-2 | |
| **2540C Total Dissolved Solids** | Analytical Method: SM 2540C<br>Pace Analytical Services - Kansas City | | | | | | | |
| Total Dissolved Solids | **1510** | mg/L | 40.0 | 1 | | 03/20/24 10:40 | | |
| **4500H+ pH, Electrometric** | Analytical Method: SM 4500-H+B<br>Pace Analytical Services - Kansas City | | | | | | | |
| pH at 25 Degrees C | **7.2** | Std. Units | 0.10 | 1 | | 03/19/24 10:02 | | H6 |
| **300.0 IC Anions 28 Days** | Analytical Method: EPA 300.0<br>Pace Analytical Services - Kansas City | | | | | | | |
| Chloride | **156** | mg/L | 50.0 | 50 | | 03/21/24 19:40 | 16887-00-6 | |
| Fluoride | **<0.20** | mg/L | 0.20 | 1 | | 03/21/24 19:27 | 16984-48-8 | |
| Sulfate | **991** | mg/L | 50.0 | 50 | | 03/21/24 19:40 | 14808-79-8 | |

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: JEC BASA/BAL-Revised Report
Pace Project No.: 60449066

**Sample: JEC-BAA-DUP-031324** **Lab ID: 60449066005** Collected: 03/13/24 10:30 Received: 03/14/24 17:30 Matrix: Water

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **200.7 Metals, Total** | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7<br>Pace Analytical Services - Kansas City | | | | | | | |
| Boron, Total Recoverable | **3.5** | mg/L | 0.10 | 1 | 03/20/24 10:30 | 03/21/24 15:29 | 7440-42-8 | |
| Calcium, Total Recoverable | **533** | mg/L | 0.20 | 1 | 03/20/24 10:30 | 03/21/24 15:29 | 7440-70-2 | |
| **2540C Total Dissolved Solids** | Analytical Method: SM 2540C<br>Pace Analytical Services - Kansas City | | | | | | | |
| Total Dissolved Solids | **2730** | mg/L | 66.7 | 1 | | 03/20/24 10:40 | | |
| **4500H+ pH, Electrometric** | Analytical Method: SM 4500-H+B<br>Pace Analytical Services - Kansas City | | | | | | | |
| pH at 25 Degrees C | **7.0** | Std. Units | 0.10 | 1 | | 03/18/24 12:46 | | H6 |
| **300.0 IC Anions 28 Days** | Analytical Method: EPA 300.0<br>Pace Analytical Services - Kansas City | | | | | | | |
| Chloride | **277** | mg/L | 50.0 | 50 | | 03/21/24 20:05 | 16887-00-6 | |
| Fluoride | **0.84** | mg/L | 0.20 | 1 | | 03/21/24 19:52 | 16984-48-8 | |
| Sulfate | **1990** | mg/L | 500 | 500 | | 03/22/24 19:08 | 14808-79-8 | |

## REPORT OF LABORATORY ANALYSIS

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# QUALITY CONTROL DATA

Project: JEC BASA/BAL-Revised Report
Pace Project No.: 60449066

QC Batch: 887344
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Total
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60449066001, 60449066002, 60449066003, 60449066004, 60449066005

METHOD BLANK: 3512345 Matrix: Water
Associated Lab Samples: 60449066001, 60449066002, 60449066003, 60449066004, 60449066005

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Boron | mg/L | <0.10 | 0.10 | 03/21/24 14:45 | |
| Calcium | mg/L | <0.20 | 0.20 | 03/21/24 14:45 | |

LABORATORY CONTROL SAMPLE: 3512346

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Boron | mg/L | 1 | 0.95 | 95 | 85-115 | |
| Calcium | mg/L | 10 | 10.0 | 100 | 85-115 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3512347 3512348

| Parameter | Units | 60449065001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | mg/L | 0.10 | 1 | 1 | 1.1 | 1.1 | 99 | 98 | 70-130 | 2 | 20 | |
| Calcium | mg/L | 104 | 10 | 10 | 113 | 111 | 99 | 73 | 70-130 | 2 | 20 | |

MATRIX SPIKE SAMPLE: 3512349

| Parameter | Units | 60449066003 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|---|
| Boron | mg/L | 3.5 | 1 | 4.6 | 102 | 70-130 | |
| Calcium | mg/L | 546 | 10 | 549 | 38 | 70-130 | M1 |

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

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: JEC BASA/BAL-Revised Report
Pace Project No.: 60449066

QC Batch: 887323
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60449066001, 60449066002, 60449066003

METHOD BLANK: 3512243 Matrix: Water
Associated Lab Samples: 60449066001, 60449066002, 60449066003

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Total Dissolved Solids | mg/L | <5.0 | 5.0 | 03/20/24 10:34 | |

LABORATORY CONTROL SAMPLE: 3512244

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Total Dissolved Solids | mg/L | 2000 | 1860 | 93 | 80-120 | |

SAMPLE DUPLICATE: 3512245

| Parameter | Units | 60448961001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|
| Total Dissolved Solids | mg/L | ND | <5.0 | | 10 | |

SAMPLE DUPLICATE: 3512246

| Parameter | Units | 60449062003 Result | Dup Result | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|
| Total Dissolved Solids | mg/L | 3250 | 3670 | 12 | 10 | D6 |

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## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: JEC BASA/BAL-Revised Report
Pace Project No.: 60449066

QC Batch: 887325
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60449066004, 60449066005

METHOD BLANK: 3512256 Matrix: Water
Associated Lab Samples: 60449066004, 60449066005

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Total Dissolved Solids | mg/L | <5.0 | 5.0 | 03/20/24 10:40 | |

LABORATORY CONTROL SAMPLE: 3512257

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Total Dissolved Solids | mg/L | 2000 | 1890 | 94 | 80-120 | |

SAMPLE DUPLICATE: 3512258

| Parameter | Units | 60449066004 Result | Dup Result | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|
| Total Dissolved Solids | mg/L | 1510 | 1510 | 0 | 10 | |

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## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: JEC BASA/BAL-Revised Report
Pace Project No.: 60449066

QC Batch: 886942
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60449066001, 60449066002, 60449066003, 60449066005

SAMPLE DUPLICATE: 3511036

| Parameter | Units | 60449101001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|
| pH at 25 Degrees C | Std. Units | 8.5 | 8.6 | 1 | 5 | H6 |

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

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: JEC BASA/BAL-Revised Report
Pace Project No.: 60449066

QC Batch: 887127
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60449066004

SAMPLE DUPLICATE: 3511675

| Parameter | Units | 60449064001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|
| pH at 25 Degrees C | Std. Units | 6.9 | 7.1 | 2 | 5 | H6 |

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

## REPORT OF LABORATORY ANALYSIS

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# QUALITY CONTROL DATA

Project: JEC BASA/BAL-Revised Report
Pace Project No.: 60449066

QC Batch: 887337
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60449066001, 60449066002, 60449066003, 60449066004, 60449066005

METHOD BLANK: 3512315 Matrix: Water
Associated Lab Samples: 60449066001, 60449066002, 60449066003, 60449066004, 60449066005

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Chloride | mg/L | <1.0 | 1.0 | 03/21/24 08:46 | |
| Fluoride | mg/L | <0.20 | 0.20 | 03/21/24 08:46 | |
| Sulfate | mg/L | <1.0 | 1.0 | 03/21/24 08:46 | |

LABORATORY CONTROL SAMPLE: 3512316

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Chloride | mg/L | 5 | 4.7 | 94 | 90-110 | |
| Fluoride | mg/L | 2.5 | 2.4 | 97 | 90-110 | |
| Sulfate | mg/L | 5 | 4.9 | 98 | 90-110 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3512317 3512318

| Parameter | Units | 60449052001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | mg/L | 170 | 250 | 250 | 427 | 398 | 103 | 91 | 80-120 | 7 | 15 | |
| Fluoride | mg/L | <0.20 | 2.5 | 2.5 | 2.6 | 2.6 | 101 | 100 | 80-120 | 1 | 15 | |
| Sulfate | mg/L | 874 | 250 | 250 | 1200 | 1120 | 129 | 100 | 80-120 | 6 | 15 | E,M1 |

MATRIX SPIKE SAMPLE: 3512319

| Parameter | Units | 60449065002 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|---|
| Chloride | mg/L | 78.4 | 250 | 323 | 98 | 80-120 | |
| Fluoride | mg/L | <0.20 | 2.5 | 2.1 | 82 | 80-120 | |
| Sulfate | mg/L | 332 | 250 | 601 | 107 | 80-120 | |

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

## REPORT OF LABORATORY ANALYSIS

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

## QUALITY CONTROL DATA

Project: JEC BASA/BAL-Revised Report
Pace Project No.: 60449066

QC Batch: 891537
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60449066002

METHOD BLANK: 3528658 Matrix: Water
Associated Lab Samples: 60449066002

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Chloride | mg/L | <1.0 | 1.0 | 04/23/24 10:31 | |

LABORATORY CONTROL SAMPLE: 3528659

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

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

## REPORT OF LABORATORY ANALYSIS

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

# QUALIFIERS

Project: JEC BASA/BAL-Revised Report
Pace Project No.: 60449066

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

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

## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: JEC BASA/BAL-Revised Report
Pace Project No.: 60449066

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|---|---|---|---|---|---|
| **60449066001** | **BAA-2-031324** | EPA 200.7 | 887344 | EPA 200.7 | 887419 |
| **60449066002** | **BAA-3-031324** | EPA 200.7 | 887344 | EPA 200.7 | 887419 |
| **60449066003** | **BAA-6-031324** | EPA 200.7 | 887344 | EPA 200.7 | 887419 |
| **60449066004** | **BAA-7-031324** | EPA 200.7 | 887344 | EPA 200.7 | 887419 |
| **60449066005** | **JEC-BAA-DUP-031324** | EPA 200.7 | 887344 | EPA 200.7 | 887419 |
| **60449066001** | **BAA-2-031324** | SM 2540C | 887323 | | |
| **60449066002** | **BAA-3-031324** | SM 2540C | 887323 | | |
| **60449066003** | **BAA-6-031324** | SM 2540C | 887323 | | |
| **60449066004** | **BAA-7-031324** | SM 2540C | 887325 | | |
| **60449066005** | **JEC-BAA-DUP-031324** | SM 2540C | 887325 | | |
| **60449066001** | **BAA-2-031324** | SM 4500-H+B | 886942 | | |
| **60449066002** | **BAA-3-031324** | SM 4500-H+B | 886942 | | |
| **60449066003** | **BAA-6-031324** | SM 4500-H+B | 886942 | | |
| **60449066004** | **BAA-7-031324** | SM 4500-H+B | 887127 | | |
| **60449066005** | **JEC-BAA-DUP-031324** | SM 4500-H+B | 886942 | | |
| **60449066001** | **BAA-2-031324** | EPA 300.0 | 887337 | | |
| **60449066002** | **BAA-3-031324** | EPA 300.0 | 887337 | | |
| **60449066002** | **BAA-3-031324** | EPA 300.0 | 891537 | | |
| **60449066003** | **BAA-6-031324** | EPA 300.0 | 887337 | | |
| **60449066004** | **BAA-7-031324** | EPA 300.0 | 887337 | | |
| **60449066005** | **JEC-BAA-DUP-031324** | EPA 300.0 | 887337 | | |

WO# : 60449066

60449066

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

Client Name: Evergy

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

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

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

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

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

**Cooler Temperature (°C):** **As-read** 2.7 **Corr. Factor** -0.3 **Corrected** 2.4

**Date and initials of person examining contents:** 05.15.2024 JL

Temperature should be above freezing to 6°C

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

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

Pace® Location Requested (City/State):
Pace Analytical Kansas
9608 Loiret Blvd., Lenexa, KS 66219

# CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here

60421 9066

Scan QR Code for instructions

| | | | |
|---|---|---|---|
| Company Name: | Evergy Kansas Central, Inc. | Contact/Report To: | Jake Humphrey |
| Street Address: | 818 S Kansas Avenue, Topeka, KS 66612 | Phone #: | (913)634-0605 |
| | | E-Mail: | jake.humphrey@evergy.com |
| | | Cc E-Mail: | skaney@haleyaldrich.com |
| Customer Project #: | | | |
| Project Name: | JEC BASA/BAL | Invoice To: | Jeffrey Center |
| | | Invoice E-Mail: | evergyap@onlinecapturecenter.com |
| Site Collection Info/Facility ID (as applicable): | | Purchase Order # (if applicable): | WSTR-2000095397 |
| | | Quote #: | |

Time Zone Collected: [ ] AK [ ] PT [ ] MT [ X ] CT [ ] ET

County / State origin of sample(s): Kansas

Data Deliverables:
[ ] Level II [ ] Level III [ ] Level IV
[ ] EQUIS
[ ] Other

Regulatory Program (DW, RCRA, etc.) as applicable: Reportable [ ] Yes [ X ] No

Rush (Pre-approval required):
[ ] Same Day [ ] 1 Day [ ] 2 Day [ ] 3 Day [ ] Other _____

DW PWSID # or WW Permit # as applicable:

Date Results Requested:

Field Filtered (if applicable): [ ] Yes [ X ] No
Analysis:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Waste Water (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW),Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)

Specify Container Size **: 3 2 3

Identify Container Preservative Type***: 2 1 1

**Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL vial, (7) EnCore, (8) TerraCore, (9) 90mL, (10) Other

*** Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod. Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other

Lab Use Only
Proj. Mgr: Alice Spiller
AcctNum / Client ID:
Table #:
Profile / Template: 9655
Prelog / Bottle Ord. ID: EZ 3080035

| Customer Sample ID | Matrix * | Comp / Grab | Composite Start Date | Composite Start Time | Collected or Composite End Date | Collected or Composite End Time | # Cont. | Res. Chlorine Results | Res. Chlorine Units | 200.7 B,Ca | 2540C Total Dissolved Solids | pH, 300.0 Cl,F,SO4 | Sample Comment | Preservation non-conformance identified for sample. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BAA-2-031324 | WT | Grab | - | - | 3/13/2024 | 1140 | 3 | - | - | X | X | X | | |
| BAA-3-031324 | WT | Grab | - | - | 3/13/2024 | 935 | 3 | - | - | X | X | X | | |
| BAA-6-031324 | WT | Grab | - | - | 3/13/2024 | 1030 | 3 | - | - | X | X | X | | |
| BAA-7-031324 | WT | Grab | - | - | 3/13/2024 | 1335 | 3 | - | - | X | X | X | | |
| JEC-BAA-DUP-031324 | WT | Grab | - | - | 3/13/2024 | 1030 | 3 | - | - | X | X | X | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |

Additional Instructions from Pace®:

Collected By: (Printed Name) Matt VanderPutten
Signature:

Customer Remarks / Special Conditions / Possible Hazards:

| # Coolers: | Thermometer ID: | Correction Factor (°C): | Obs. Temp. (°C) | Corrected Temp. (°C) | On Ice: |
|---|---|---|---|---|---|
| | T298 | -0.3 | 2.7 | 2.4 | |

| | | | | |
|---|---|---|---|---|
| Relinquished by/Company: (Signature) SCS Engineers | Date/Time: 03/14/2024 / 1730 | Received by/Company: (Signature) SA Pace | Date/Time: 3/14/24 1730 | Tracking Number: |
| Relinquished by/Company: (Signature) | Date/Time: | Received by/Company: (Signature) | Date/Time: | Delivered by: [ ] In- Person [ ] Courier |
| Relinquished by/Company: (Signature) | Date/Time: | Received by/Company: (Signature) | Date/Time: | [ ] FedEX [ ] UPS [ ] Other |
| Relinquished by/Company: (Signature) | Date/Time: | Received by/Company: (Signature) | Date/Time: | Page: 1 of 1 |

Page 22 of 22

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace® Terms and Conditions found at https://www.pacelabs.com/resource-library/resource/pace-terms-and-conditions/

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

May 22, 2024

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

RE: Project: JEC BASA/BAL
Pace Project No.: 60453067

Dear Jake Humphrey:

Enclosed are the analytical results for sample(s) received by the laboratory on May 16, 2024. 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
Andrew Watson, Haley & Aldrich

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

## CERTIFICATIONS

Project: JEC BASA/BAL
Pace Project No.: 60453067

**Pace Analytical Services Kansas**

9608 Loiret Boulevard, Lenexa, KS 66219
Arkansas Inorganic Drinking Water Certification
Arkansas Certification #: 88-00679
Illinois Certification #: 2000302023-6
Colorado Division of Oil and Public Safety
Iowa Certification #: 118
Kansas Field Laboratory Certification #: E-92587
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Missouri Inorganic Drinking Water Certification
Nevada Certification #: KS000212024-1
Oklahoma Certification #: 2023-073
Texas Certification #: T104704407-23-17
Utah Certification #: KS000212022-13

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

## SAMPLE SUMMARY

Project: JEC BASA/BAL
Pace Project No.: 60453067

| Lab ID | Sample ID | Matrix | Date Collected | Date Received |
|---|---|---|---|---|
| **60453067001** | **BAA-6** | Water | 05/14/24 12:15 | 05/16/24 10:15 |
| **60453067002** | **BAA-7** | Water | 05/14/24 11:35 | 05/16/24 10:15 |

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

## SAMPLE ANALYTE COUNT

Project: JEC BASA/BAL
Pace Project No.: 60453067

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|---|---|---|---|---|---|
| **60453067001** | **BAA-6** | SM 2540C | KVI | 1 | PASI-K |
| **60453067002** | **BAA-7** | SM 2540C | KVI | 1 | PASI-K |

PASI-K = Pace Analytical Services - Kansas City

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

# PROJECT NARRATIVE

Project: JEC BASA/BAL
Pace Project No.: 60453067

**Method:** **SM 2540C**
**Description:** 2540C Total Dissolved Solids
**Client:** Evergy Kansas Central, Inc.
**Date:** May 22, 2024

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

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

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

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

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

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

**Additional Comments:**

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

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

## ANALYTICAL RESULTS

Project: JEC BASA/BAL
Pace Project No.: 60453067

**Sample: BAA-6** **Lab ID: 60453067001** Collected: 05/14/24 12:15 Received: 05/16/24 10:15 Matrix: Water

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **2540C Total Dissolved Solids** | Analytical Method: SM 2540C<br>Pace Analytical Services - Kansas City | | | | | | | |
| Total Dissolved Solids | **3310** | mg/L | 66.7 | 1 | | 05/20/24 10:40 | | |

## REPORT OF LABORATORY ANALYSIS

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

## ANALYTICAL RESULTS

Project: JEC BASA/BAL
Pace Project No.: 60453067

**Sample: BAA-7** **Lab ID: 60453067002** Collected: 05/14/24 11:35 Received: 05/16/24 10:15 Matrix: Water

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **2540C Total Dissolved Solids** | Analytical Method: SM 2540C<br>Pace Analytical Services - Kansas City | | | | | | | |
| Total Dissolved Solids | **1450** | mg/L | 40.0 | 1 | | 05/20/24 10:40 | | |

## REPORT OF LABORATORY ANALYSIS

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

## QUALITY CONTROL DATA

Project: JEC BASA/BAL
Pace Project No.: 60453067

QC Batch: 895067
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60453067001, 60453067002

METHOD BLANK: 3542516 Matrix: Water
Associated Lab Samples: 60453067001, 60453067002

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Total Dissolved Solids | mg/L | <5.0 | 5.0 | 05/20/24 10:39 | |

LABORATORY CONTROL SAMPLE: 3542517

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Total Dissolved Solids | mg/L | 1000 | 900 | 90 | 80-120 | |

SAMPLE DUPLICATE: 3542518

| Parameter | Units | 60452946003 Result | Dup Result | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|
| Total Dissolved Solids | mg/L | 868 | 848 | 2 | 10 | |

SAMPLE DUPLICATE: 3542519

| Parameter | Units | 60453166004 Result | Dup Result | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|
| Total Dissolved Solids | mg/L | 657 | 652 | 1 | 10 | |

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

## REPORT OF LABORATORY ANALYSIS

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

# QUALIFIERS

Project: JEC BASA/BAL
Pace Project No.: 60453067

**DEFINITIONS**

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

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

TNI - The NELAC Institute.

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

## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: JEC BASA/BAL
Pace Project No.: 60453067

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|---|---|---|---|---|---|
| **60453067001** | **BAA-6** | SM 2540C | 895067 | | |
| **60453067002** | **BAA-7** | SM 2540C | 895067 | | |

WO# : 60453067

60453067

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

Client Name: Evergy Kansas Central

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

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

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

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

**Thermometer Used:** T2M 01 **Type of Ice:** (Wet) Blue None

**Cooler Temperature (°C):** **As-read** 1.8 **Corr. Factor** 0.0 **Corrected** 1.8

**Date and initials of person examining contents:** AFS 5/16

Temperature should be above freezing to 6°C

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

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

Qualtrax Document ID: 30468

Page 1 of 1

Pace® Location Requested (City/State):
Pace Analytical Kansas
9608 Loiret Blvd., Lenexa, KS 66219

# CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here

Scan QR Code for instructions

| | |
|---|---|
| Company Name: | **Evergy Kansas Central, Inc.** |
| Street Address: | **818 S Kansas Avenue, Topeka, KS 66612** |
| Customer Project #: | |
| Project Name: | **JEC BASA/BAL** |
| Site Collection Info/Facility ID (as applicable): | |
| Contact/Report To: | **Jake Humphrey** |
| Phone #: | **(913)634-0605** |
| E-Mail: | **jake.humphrey@evergy.com** |
| Cc E-Mail: | |
| Invoice To: | **Lawrence Center** |
| Invoice E-Mail: | **evergyap@onlinecapturecenter.com** |
| Purchase Order # (if applicable): | **WSTR-2000095397** |
| Quote #: | |

Time Zone Collected: [ ] AK [ ] PT [ ] MT [ X ] CT [ ] ET

County / State origin of sample(s): **Kansas**

Data Deliverables:
[ ] Level II [ ] Level III [ ] Level IV
[ ] EQUIS
[ ] Other

Regulatory Program (DW, RCRA, etc.) as applicable: Reportable [ ] Yes [ X ] No

**Rush (Pre-approval required):**
[ ] Same Day [ ] 1 Day [ X ] 2 Day [ ] 3 Day [ ] Other _____

DW PWSID # or WW Permit # as applicable:

**Date Results Requested:** Std

Field Filtered (if applicable): [ ] Yes [ X ] No
Analysis:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Waste Water (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW),Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)

| Customer Sample ID | Matrix * | Comp / Grab | Composite Start Date | Composite Start Time | Collected or Composite End Date | Collected or Composite End Time | # Cont. | Res. Chlorine Results | Res. Chlorine Units | 2540C Total Dissolved Solids |
|---|---|---|---|---|---|---|---|---|---|---|
| BAA-6 | WT | Grab | - | - | 5/14/24 | 1215 | 1 | - | - | X |
| BAA-7 | WT | Grab | - | - | 5/14/24 | 1135 | 1 | - | - | X |
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Specify Container Size **: 3
Identify Container Preservative Type***: 1
Analysis Requested

**Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL vial, (7) EnCore, (8) TerraCore, (9) 90mL, (10) Other

*** Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod. Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other

Lab Use Only
Proj. Mgr: **Alice Spiller**
AcctNum / Client ID:
Table #:
Profile / Template: **9655**
Prelog / Bottle Ord. ID: **EZ 3107178**

Preservation non-conformance identified for sample.

Sample Comment: 604593067

Additional Instructions from Pace®:

Collected By: (Printed Name) **Matt VanderPutten**
Signature:

Customer Remarks / Special Conditions / Possible Hazards:

| # Coolers: | Thermometer ID: | Correction Factor (°C): | Obs. Temp. (°C) | Corrected Temp. (°C) | On Ice: |
|---|---|---|---|---|---|
| | T299 | 0.0 | 1.8 | 1.8 | |

| Relinquished by/Company: (Signature) | Date/Time: | Received by/Company: (Signature) | Date/Time: |
|---|---|---|---|
| SCS | 5/16/24 1012 | JAPace | 5/16/24 1015 |
| Relinquished by/Company: (Signature) | Date/Time: | Received by/Company: (Signature) | Date/Time: |
| Relinquished by/Company: (Signature) | Date/Time: | Received by/Company: (Signature) | Date/Time: |
| Relinquished by/Company: (Signature) | Date/Time: | Received by/Company: (Signature) | Date/Time: |

Tracking Number:

Delivered by: [ ] In- Person [ ] Courier
[ ] FedEX [ ] UPS [ ] Other

# ATTACHMENT 2-2
# September 2024 Annual Assessment
# Sampling Event Laboratory Analytical Report

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

September 19, 2024

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

RE: Project: JEC BASA/BAL
Pace Project No.: 60459928

Dear Jake Humphrey:

Enclosed are the analytical results for sample(s) received by the laboratory on September 05, 2024. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Kansas City
- Pace Analytical Services - Salina

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: Samantha Kaney, Haley & Aldrich
Nick Williams, Haley Aldrich

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

# CERTIFICATIONS

Project: JEC BASA/BAL
Pace Project No.: 60459928

**Pace Analytical Services Kansas**

9608 Loiret Boulevard, Lenexa, KS 66219
Arkansas Certification #: 88-00679
Colorado Division of Oil and Public Safety
Illinois Certification #: 2000302023-6
Iowa Certification #: 118
Kansas Field Laboratory Certification #: E-92587
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Missouri Inorganic Drinking Water Certification
Nevada Certification #: KS000212024-1
Oklahoma Certification #: 2023-073
Texas Certification #: T104704407-23-17
Utah Certification #: KS000212022-13

**Pace Analytical Services Salina**

528 N 9th Street, Salina, KS 67401
Kansas/NELAP Certification: # E-10146
Oklahoma Certification: 2023-074
Texas Certification: T104704246-23-15

## REPORT OF LABORATORY ANALYSIS

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

## SAMPLE SUMMARY

Project: JEC BASA/BAL
Pace Project No.: 60459928

| Lab ID | Sample ID | Matrix | Date Collected | Date Received |
|---|---|---|---|---|
| **60459928001** | **BAA-2-090424** | Water | 09/04/24 09:15 | 09/05/24 12:50 |
| **60459928002** | **BAA-3-090424** | Water | 09/04/24 11:25 | 09/05/24 12:50 |
| **60459928003** | **BAA-6-090424** | Water | 09/04/24 10:35 | 09/05/24 12:50 |
| **60459928004** | **BAA-7-090424** | Water | 09/04/24 09:50 | 09/05/24 12:50 |
| **60459928005** | **JEC-BAA-DUP-090424** | Water | 09/04/24 09:10 | 09/05/24 12:50 |

**Pace Analytical Services, LLC**
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## SAMPLE ANALYTE COUNT

Project: JEC BASA/BAL
Pace Project No.: 60459928

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|---|---|---|---|---|---|
| **60459928001** | **BAA-2-090424** | EPA 200.7 | ARMN | 2 | PASI-K |
| | | EPA 300.0 | MLL | 3 | PASI-SA |
| | | SM 2540C | TML | 1 | PASI-K |
| | | SM 4500-H+B | TML | 1 | PASI-K |
| **60459928002** | **BAA-3-090424** | EPA 200.7 | ARMN | 2 | PASI-K |
| | | EPA 300.0 | MLL | 3 | PASI-SA |
| | | SM 2540C | TML | 1 | PASI-K |
| | | SM 4500-H+B | TML | 1 | PASI-K |
| **60459928003** | **BAA-6-090424** | EPA 200.7 | ARMN | 2 | PASI-K |
| | | EPA 300.0 | MLL | 3 | PASI-SA |
| | | SM 2540C | TML | 1 | PASI-K |
| | | SM 4500-H+B | TML | 1 | PASI-K |
| **60459928004** | **BAA-7-090424** | EPA 200.7 | ARMN | 2 | PASI-K |
| | | EPA 300.0 | MLL | 3 | PASI-SA |
| | | SM 2540C | TML | 1 | PASI-K |
| | | SM 4500-H+B | TML | 1 | PASI-K |
| **60459928005** | **JEC-BAA-DUP-090424** | EPA 200.7 | ARMN | 2 | PASI-K |
| | | EPA 300.0 | MLL | 3 | PASI-SA |
| | | SM 2540C | TML | 1 | PASI-K |
| | | SM 4500-H+B | TML | 1 | PASI-K |

PASI-K = Pace Analytical Services - Kansas City
PASI-SA = Pace Analytical Services - Salina

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

# PROJECT NARRATIVE

Project: JEC BASA/BAL
Pace Project No.: 60459928

**Method:** **EPA 200.7**
**Description:** 200.7 Metals, Total
**Client:** Evergy_Haley & Aldrich
**Date:** September 19, 2024

**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: 907702

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60459928004,60459957004

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

- MS (Lab ID: 3592655)
  - Calcium
- MS (Lab ID: 3592663)
  - Calcium

**Additional Comments:**

## REPORT OF LABORATORY ANALYSIS

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

# PROJECT NARRATIVE

Project: JEC BASA/BAL
Pace Project No.: 60459928

**Method:** **EPA 300.0**
**Description:** 300.0 IC Anions 28 Days
**Client:** Evergy_Haley & Aldrich
**Date:** September 19, 2024

**General Information:**
5 samples were analyzed for EPA 300.0 by Pace Analytical Services Salina. 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.

**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.

**Surrogates:**
All surrogates were within QC limits with any exceptions noted below.

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

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

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

**Additional Comments:**

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

# PROJECT NARRATIVE

Project: JEC BASA/BAL
Pace Project No.: 60459928

**Method:** **SM 2540C**
**Description:** 2540C Total Dissolved Solids
**Client:** Evergy_Haley & Aldrich
**Date:** September 19, 2024

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

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

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

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

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

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

**Additional Comments:**

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

# PROJECT NARRATIVE

Project: JEC BASA/BAL
Pace Project No.: 60459928

**Method:** **SM 4500-H+B**
**Description:** 4500H+ pH, Electrometric
**Client:** Evergy_Haley & Aldrich
**Date:** September 19, 2024

**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.
- BAA-2-090424 (Lab ID: 60459928001)
- BAA-3-090424 (Lab ID: 60459928002)
- BAA-6-090424 (Lab ID: 60459928003)
- BAA-7-090424 (Lab ID: 60459928004)
- JEC-BAA-DUP-090424 (Lab ID: 60459928005)

**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:**

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

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

## ANALYTICAL RESULTS

Project: JEC BASA/BAL
Pace Project No.: 60459928

**Sample: BAA-2-090424** **Lab ID: 60459928001** Collected: 09/04/24 09:15 Received: 09/05/24 12:50 Matrix: Water

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **200.7 Metals, Total** | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7<br>Pace Analytical Services - Kansas City | | | | | | | |
| Boron, Total Recoverable | **0.79** | mg/L | 0.10 | 1 | 09/06/24 14:17 | 09/11/24 11:30 | 7440-42-8 | |
| Calcium, Total Recoverable | **154** | mg/L | 0.20 | 1 | 09/06/24 14:17 | 09/11/24 11:30 | 7440-70-2 | |
| **300.0 IC Anions 28 Days** | Analytical Method: EPA 300.0<br>Pace Analytical Services - Salina | | | | | | | |
| Chloride | **107** | mg/L | 10.0 | 10 | | 09/12/24 00:11 | 16887-00-6 | |
| Fluoride | **0.49** | mg/L | 0.10 | 1 | | 09/11/24 13:12 | 16984-48-8 | |
| Sulfate | **491** | mg/L | 50.0 | 50 | | 09/12/24 00:26 | 14808-79-8 | |
| **2540C Total Dissolved Solids** | Analytical Method: SM 2540C<br>Pace Analytical Services - Kansas City | | | | | | | |
| Total Dissolved Solids | **1090** | mg/L | 20.0 | 1 | | 09/06/24 10:17 | | |
| **4500H+ pH, Electrometric** | Analytical Method: SM 4500-H+B<br>Pace Analytical Services - Kansas City | | | | | | | |
| pH at 25 Degrees C | **7.3** | Std. Units | 0.10 | 1 | | 09/09/24 16:55 | | H6 |

## REPORT OF LABORATORY ANALYSIS

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

## ANALYTICAL RESULTS

Project: JEC BASA/BAL
Pace Project No.: 60459928

**Sample: BAA-3-090424** **Lab ID: 60459928002** Collected: 09/04/24 11:25 Received: 09/05/24 12:50 Matrix: Water

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **200.7 Metals, Total** | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7<br>Pace Analytical Services - Kansas City | | | | | | | |
| Boron, Total Recoverable | **2.3** | mg/L | 0.10 | 1 | 09/06/24 14:17 | 09/11/24 11:32 | 7440-42-8 | |
| Calcium, Total Recoverable | **510** | mg/L | 0.20 | 1 | 09/06/24 14:17 | 09/11/24 11:32 | 7440-70-2 | |
| **300.0 IC Anions 28 Days** | Analytical Method: EPA 300.0<br>Pace Analytical Services - Salina | | | | | | | |
| Chloride | **74.9** | mg/L | 10.0 | 10 | | 09/12/24 00:40 | 16887-00-6 | |
| Fluoride | **1.0** | mg/L | 0.10 | 1 | | 09/11/24 13:27 | 16984-48-8 | |
| Sulfate | **1950** | mg/L | 200 | 200 | | 09/12/24 00:55 | 14808-79-8 | |
| **2540C Total Dissolved Solids** | Analytical Method: SM 2540C<br>Pace Analytical Services - Kansas City | | | | | | | |
| Total Dissolved Solids | **3220** | mg/L | 100 | 1 | | 09/06/24 10:17 | | |
| **4500H+ pH, Electrometric** | Analytical Method: SM 4500-H+B<br>Pace Analytical Services - Kansas City | | | | | | | |
| pH at 25 Degrees C | **7.0** | Std. Units | 0.10 | 1 | | 09/10/24 17:15 | | H6 |

## REPORT OF LABORATORY ANALYSIS

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

## ANALYTICAL RESULTS

Project: JEC BASA/BAL
Pace Project No.: 60459928

**Sample: BAA-6-090424** **Lab ID: 60459928003** Collected: 09/04/24 10:35 Received: 09/05/24 12:50 Matrix: Water

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **200.7 Metals, Total** | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7<br>Pace Analytical Services - Kansas City | | | | | | | |
| Boron, Total Recoverable | **5.9** | mg/L | 0.10 | 1 | 09/06/24 14:17 | 09/11/24 11:34 | 7440-42-8 | |
| Calcium, Total Recoverable | **503** | mg/L | 0.20 | 1 | 09/06/24 14:17 | 09/11/24 11:34 | 7440-70-2 | |
| **300.0 IC Anions 28 Days** | Analytical Method: EPA 300.0<br>Pace Analytical Services - Salina | | | | | | | |
| Chloride | **284** | mg/L | 50.0 | 50 | | 09/12/24 01:10 | 16887-00-6 | |
| Fluoride | **0.72** | mg/L | 0.10 | 1 | | 09/11/24 13:42 | 16984-48-8 | |
| Sulfate | **1980** | mg/L | 200 | 200 | | 09/12/24 01:24 | 14808-79-8 | |
| **2540C Total Dissolved Solids** | Analytical Method: SM 2540C<br>Pace Analytical Services - Kansas City | | | | | | | |
| Total Dissolved Solids | **3780** | mg/L | 125 | 1 | | 09/06/24 10:17 | | |
| **4500H+ pH, Electrometric** | Analytical Method: SM 4500-H+B<br>Pace Analytical Services - Kansas City | | | | | | | |
| pH at 25 Degrees C | **6.8** | Std. Units | 0.10 | 1 | | 09/10/24 17:07 | | H6 |

## REPORT OF LABORATORY ANALYSIS

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

## ANALYTICAL RESULTS

Project: JEC BASA/BAL
Pace Project No.: 60459928

**Sample: BAA-7-090424** **Lab ID: 60459928004** Collected: 09/04/24 09:50 Received: 09/05/24 12:50 Matrix: Water

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **200.7 Metals, Total** | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7<br>Pace Analytical Services - Kansas City | | | | | | | |
| Boron, Total Recoverable | **0.64** | mg/L | 0.10 | 1 | 09/06/24 15:06 | 09/18/24 12:07 | 7440-42-8 | |
| Calcium, Total Recoverable | **255** | mg/L | 0.20 | 1 | 09/06/24 15:06 | 09/18/24 12:07 | 7440-70-2 | M1,P6 |
| **300.0 IC Anions 28 Days** | Analytical Method: EPA 300.0<br>Pace Analytical Services - Salina | | | | | | | |
| Chloride | **149** | mg/L | 20.0 | 20 | | 09/12/24 02:08 | 16887-00-6 | |
| Fluoride | **0.52** | mg/L | 0.10 | 1 | | 09/11/24 14:26 | 16984-48-8 | |
| Sulfate | **897** | mg/L | 100 | 100 | | 09/12/24 02:23 | 14808-79-8 | |
| **2540C Total Dissolved Solids** | Analytical Method: SM 2540C<br>Pace Analytical Services - Kansas City | | | | | | | |
| Total Dissolved Solids | **1730** | mg/L | 66.7 | 1 | | 09/06/24 10:17 | | |
| **4500H+ pH, Electrometric** | Analytical Method: SM 4500-H+B<br>Pace Analytical Services - Kansas City | | | | | | | |
| pH at 25 Degrees C | **7.2** | Std. Units | 0.10 | 1 | | 09/09/24 16:59 | | H6 |

## REPORT OF LABORATORY ANALYSIS

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

## ANALYTICAL RESULTS

Project: JEC BASA/BAL
Pace Project No.: 60459928

**Sample: JEC-BAA-DUP-090424** **Lab ID: 60459928005** Collected: 09/04/24 09:10 Received: 09/05/24 12:50 Matrix: Water

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **200.7 Metals, Total** | Analytical Method: EPA 200.7 Preparation Method: EPA 200.7<br>Pace Analytical Services - Kansas City | | | | | | | |
| Boron, Total Recoverable | **0.78** | mg/L | 0.10 | 1 | 09/06/24 15:06 | 09/18/24 12:12 | 7440-42-8 | |
| Calcium, Total Recoverable | **157** | mg/L | 0.20 | 1 | 09/06/24 15:06 | 09/18/24 12:12 | 7440-70-2 | |
| **300.0 IC Anions 28 Days** | Analytical Method: EPA 300.0<br>Pace Analytical Services - Salina | | | | | | | |
| Chloride | **106** | mg/L | 10.0 | 10 | | 09/12/24 02:38 | 16887-00-6 | |
| Fluoride | **0.50** | mg/L | 0.10 | 1 | | 09/11/24 14:40 | 16984-48-8 | |
| Sulfate | **492** | mg/L | 50.0 | 50 | | 09/12/24 02:52 | 14808-79-8 | |
| **2540C Total Dissolved Solids** | Analytical Method: SM 2540C<br>Pace Analytical Services - Kansas City | | | | | | | |
| Total Dissolved Solids | **1120** | mg/L | 20.0 | 1 | | 09/06/24 10:17 | | |
| **4500H+ pH, Electrometric** | Analytical Method: SM 4500-H+B<br>Pace Analytical Services - Kansas City | | | | | | | |
| pH at 25 Degrees C | **7.4** | Std. Units | 0.10 | 1 | | 09/09/24 16:53 | | H6 |

## REPORT OF LABORATORY ANALYSIS

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

# QUALITY CONTROL DATA

Project: JEC BASA/BAL
Pace Project No.: 60459928

QC Batch: 907701
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Total
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60459928001, 60459928002, 60459928003

METHOD BLANK: 3592646 Matrix: Water
Associated Lab Samples: 60459928001, 60459928002, 60459928003

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Boron | mg/L | <0.10 | 0.10 | 09/11/24 11:41 | |
| Calcium | mg/L | <0.20 | 0.20 | 09/11/24 11:41 | |

LABORATORY CONTROL SAMPLE: 3592647

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Boron | mg/L | 1 | 0.94 | 94 | 85-115 | |
| Calcium | mg/L | 10 | 10.8 | 108 | 85-115 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3592648 3592649

| Parameter | Units | 60460004001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | mg/L | 448 ug/L | 1 | 1 | 1.4 | 1.4 | 94 | 93 | 70-130 | 1 | 20 | |
| Calcium | mg/L | 12700 ug/L | 10 | 10 | 22.8 | 22.8 | 101 | 102 | 70-130 | 0 | 20 | |

MATRIX SPIKE SAMPLE: 3592650

| Parameter | Units | 60459912002 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|---|
| Boron | mg/L | 0.51 | 1 | 1.5 | 95 | 70-130 | |
| Calcium | mg/L | 189 | 10 | 199 | 106 | 70-130 | |

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

## REPORT OF LABORATORY ANALYSIS

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

# QUALITY CONTROL DATA

Project: JEC BASA/BAL
Pace Project No.: 60459928

QC Batch: 907702
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Total
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60459928004, 60459928005

METHOD BLANK: 3592651 Matrix: Water
Associated Lab Samples: 60459928004, 60459928005

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Boron | mg/L | <0.10 | 0.10 | 09/18/24 12:04 | |
| Calcium | mg/L | <0.20 | 0.20 | 09/18/24 12:04 | |

LABORATORY CONTROL SAMPLE: 3592652

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Boron | mg/L | 1 | 0.90 | 90 | 85-115 | |
| Calcium | mg/L | 10 | 10.1 | 101 | 85-115 | |

MATRIX SPIKE SAMPLE: 3592655

| Parameter | Units | 60459957004 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|---|
| Boron | mg/L | 0.20 | 1 | 1.2 | 96 | 70-130 | |
| Calcium | mg/L | 231 | 10 | 254 | 223 | 70-130 | M1 |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3592663 3592664

| Parameter | Units | 60459928004 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | mg/L | 0.64 | 1 | 1 | 1.6 | 1.6 | 99 | 91 | 70-130 | 5 | 20 | |
| Calcium | mg/L | 255 | 10 | 10 | 283 | 263 | 288 | 80 | 70-130 | 8 | 20 | M1 |

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

## REPORT OF LABORATORY ANALYSIS

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

# QUALITY CONTROL DATA

Project: JEC BASA/BAL
Pace Project No.: 60459928

QC Batch: 907950
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Salina
Associated Lab Samples: 60459928001, 60459928002, 60459928003, 60459928004, 60459928005

METHOD BLANK: 3593427 Matrix: Water
Associated Lab Samples: 60459928001, 60459928002, 60459928003, 60459928004, 60459928005

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Chloride | mg/L | <1.0 | 1.0 | 09/11/24 08:11 | |
| Fluoride | mg/L | <0.10 | 0.10 | 09/11/24 08:11 | |
| Sulfate | mg/L | <1.0 | 1.0 | 09/11/24 08:11 | |

LABORATORY CONTROL SAMPLE: 3593428

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Chloride | mg/L | 5 | 4.9 | 98 | 90-110 | |
| Fluoride | mg/L | 2.5 | 2.6 | 102 | 90-110 | |
| Sulfate | mg/L | 5 | 5.1 | 101 | 90-110 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3593429 3593430

| Parameter | Units | 60459912001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | mg/L | 175 | 100 | 100 | 282 | 281 | 107 | 106 | 80-120 | 0 | 15 | |
| Fluoride | mg/L | 0.30 | 2.5 | 2.5 | 2.7 | 2.7 | 96 | 96 | 80-120 | 0 | 15 | |
| Sulfate | mg/L | 880 | 500 | 500 | 1360 | 1380 | 97 | 99 | 80-120 | 1 | 15 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3593431 3593432

| Parameter | Units | 60459957004 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | mg/L | 66.0 | 50 | 50 | 119 | 120 | 106 | 108 | 80-120 | 1 | 15 | |
| Fluoride | mg/L | 0.33 | 2.5 | 2.5 | 2.7 | 2.7 | 95 | 95 | 80-120 | 0 | 15 | |
| Sulfate | mg/L | 592 | 500 | 500 | 1110 | 1100 | 104 | 102 | 80-120 | 1 | 15 | |

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

## REPORT OF LABORATORY ANALYSIS

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

## QUALITY CONTROL DATA

Project: JEC BASA/BAL
Pace Project No.: 60459928

QC Batch: 907636 | Analysis Method: SM 2540C
QC Batch Method: SM 2540C | Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60459928001, 60459928002, 60459928003, 60459928004, 60459928005

METHOD BLANK: 3592254 Matrix: Water
Associated Lab Samples: 60459928001, 60459928002, 60459928003, 60459928004, 60459928005

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Total Dissolved Solids | mg/L | <5.0 | 5.0 | 09/06/24 10:14 | |

LABORATORY CONTROL SAMPLE: 3592255

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Total Dissolved Solids | mg/L | 1000 | 981 | 98 | 80-120 | |

SAMPLE DUPLICATE: 3592256

| Parameter | Units | 60459722004 Result | Dup Result | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|
| Total Dissolved Solids | mg/L | 844 | 888 | 5 | 10 | |

SAMPLE DUPLICATE: 3592257

| Parameter | Units | 60459922004 Result | Dup Result | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|
| Total Dissolved Solids | mg/L | 624 | 633 | 1 | 10 | |

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

## REPORT OF LABORATORY ANALYSIS

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

## QUALITY CONTROL DATA

Project: JEC BASA/BAL
Pace Project No.: 60459928

QC Batch: 907853
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60459928001, 60459928004, 60459928005

SAMPLE DUPLICATE: 3593189

| Parameter | Units | 60459942001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|
| pH at 25 Degrees C | Std. Units | 8.3 | 8.3 | 0 | 5 | H6 |

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

## REPORT OF LABORATORY ANALYSIS

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

## QUALITY CONTROL DATA

Project: JEC BASA/BAL
Pace Project No.: 60459928

QC Batch: 907980
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60459928002, 60459928003

SAMPLE DUPLICATE: 3593536

| Parameter | Units | 60459928003 Result | Dup Result | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|
| pH at 25 Degrees C | Std. Units | 6.8 | 6.8 | 1 | 5 | H6 |

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

## REPORT OF LABORATORY ANALYSIS

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

# QUALIFIERS

Project: JEC BASA/BAL
Pace Project No.: 60459928

## 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. |
| P6 | Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level. |

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

## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: JEC BASA/BAL
Pace Project No.: 60459928

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|---|---|---|---|---|---|
| **60459928001** | **BAA-2-090424** | EPA 200.7 | 907701 | EPA 200.7 | 907728 |
| **60459928002** | **BAA-3-090424** | EPA 200.7 | 907701 | EPA 200.7 | 907728 |
| **60459928003** | **BAA-6-090424** | EPA 200.7 | 907701 | EPA 200.7 | 907728 |
| **60459928004** | **BAA-7-090424** | EPA 200.7 | 907702 | EPA 200.7 | 907742 |
| **60459928005** | **JEC-BAA-DUP-090424** | EPA 200.7 | 907702 | EPA 200.7 | 907742 |
| **60459928001** | **BAA-2-090424** | EPA 300.0 | 907950 | | |
| **60459928002** | **BAA-3-090424** | EPA 300.0 | 907950 | | |
| **60459928003** | **BAA-6-090424** | EPA 300.0 | 907950 | | |
| **60459928004** | **BAA-7-090424** | EPA 300.0 | 907950 | | |
| **60459928005** | **JEC-BAA-DUP-090424** | EPA 300.0 | 907950 | | |
| **60459928001** | **BAA-2-090424** | SM 2540C | 907636 | | |
| **60459928002** | **BAA-3-090424** | SM 2540C | 907636 | | |
| **60459928003** | **BAA-6-090424** | SM 2540C | 907636 | | |
| **60459928004** | **BAA-7-090424** | SM 2540C | 907636 | | |
| **60459928005** | **JEC-BAA-DUP-090424** | SM 2540C | 907636 | | |
| **60459928001** | **BAA-2-090424** | SM 4500-H+B | 907853 | | |
| **60459928002** | **BAA-3-090424** | SM 4500-H+B | 907980 | | |
| **60459928003** | **BAA-6-090424** | SM 4500-H+B | 907980 | | |
| **60459928004** | **BAA-7-090424** | SM 4500-H+B | 907853 | | |
| **60459928005** | **JEC-BAA-DUP-090424** | SM 4500-H+B | 907853 | | |

| Pace ANALYTICAL SERVICES | DC#_Title: ENV-FRM-LENE-0009_Sample | WO# : 60459928 |
|---|---|---|
| | Revision: 2 | Effective Date: 01/12/202 |

Client Name: Evergy Kansas Central, Inc.

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

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

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

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

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

**Cooler Temperature (°C):** **As-read** 3-5 **Corr. Factor** -0.1 **Corrected** 3-4

**Date and initials of person examining contents:** 9/5/24 JA

Temperature should be above freezing to 6°C

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

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

Pace® Location Requested (City/State):
Pace Analytical Kansas
9608 Lo ret Blvd., Lenexa, KS 66219

# CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here

6045928

Scan QR Code for instructions

| | | | |
|---|---|---|---|
| Company Name: | Evergy Kansas Central, Inc. | Contact/Report To: | Jake Humphrey |
| Street Address: | 818 S Kansas Avenue, Topeka, KS 66612 | Phone #: | (913)634-0605 |
| | | E-Mail: | jake.humphrey@evergy.com |
| | | Cc E-Mail: | skaney@haleyaldrich.com |
| Customer Project #: | | | |
| Project Name: | JEC BASA/BAL | Invoice To: | Jeffrey Center |
| | | Invoice E-Mail: | evergyap@onlinecapturecenter.com |
| Site Collection Info/Facility ID (as applicable): | | Purchase Order # (if applicable): | WSTR-2000095397 |
| | | Quote #: | |

Time Zone Collected: [ ] AK [ ] PT [ ] MT [ X ] CT [ ] ET

County / State origin of sample(s): Kansas

Data Deliverables:
[ ] Level II [ ] Level III [ ] Level IV
[ ] EQUIS
[ ] Other

Regulatory Program (DW, RCRA, etc.) as applicable: Reportable [ ] Yes [ X ] No

Rush (Pre-approval required):
[ ] Same Day [ ] 1 Day [ ] 2 Day [ ] 3 Day [ ] Other _____

DW PWSID # or WW Permit # as applicable:

Date Results Requested:

Field Filtered (if applicable): [ ] Yes [ X ] No

Analysis:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Waste Water (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW),Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)

Specify Container Size **: 3 2 3 3

Identify Container Preservative Type***: 2 1 1 1

**Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL vial, (7) EnCore, (8) TerraCore, (9) 90mL, (10) Other

*** Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod. Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other

Lab Use Only
Proj. Mgr: Alice Spiller
AcctNum / Client ID:
Table #:
Profile / Template: 16500
Prelog / Bottle Ord. ID: EZ 3150822

| Customer Sample ID | Matrix * | Comp / Grab | Composite Start Date | Composite Start Time | Collected or Composite End Date | Collected or Composite End Time | # Cont. | Res. Chlorine Results | Res. Chlorine Units | 200.7 B,Ca | 2540C Total Dissolved Solids | 300.0 IC Cl,F,SO4 | 4500H+ pH, Electrometric | Sample Comment | Preservation non-conformance identified for sample. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BAA-2-090424 | WT | Grab | - | - | 9/4/20224 | 915 | 4 | - | - | X | X | X | X | | |
| BAA-3-090424 | WT | Grab | - | - | 9/4/2024 | 1125 | 4 | - | - | X | X | X | X | | |
| BAA-6-090424 | WT | Grab | - | - | 9/4/20224 | 1035 | 4 | - | - | X | X | X | X | | |
| BAA-7-090424 | WT | Grab | - | - | 9/4/2024 | 950 | 4 | - | - | X | X | X | X | | |
| JEC-BAA-DUP-090424 | WT | Grab | - | - | 9/4/20224 | 910 | 4 | - | - | X | X | X | X | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |

Additional Instructions from Pace®:

Collected By: (Printed Name) Jason R. Franks

Signature: Jason R. Franks

Customer Remarks / Special Conditions / Possible Hazards:

| # Coolers: | Thermometer ID: | Correction Factor (°C): | Obs. Temp. (°C) | Corrected Temp. (°C) | On Ice: |
|---|---|---|---|---|---|
| | | | | 3.4 | |

| | | | | | |
|---|---|---|---|---|---|
| Relinquished by/Company: (Signature) Jason R. Franks / SCS | Date/Time: 09/05/2024 / 1200 | Received by/Company: (Signature) | Date/Time: 9/5 1250 | Tracking Number: | |
| Relinquished by/Company: (Signature) | Date/Time: | Received by/Company: (Signature) | Date/Time: | Delivered by: [ ] In- Person [ ] Courier | |
| Relinquished by/Company: (Signature) | Date/Time: | Received by/Company: (Signature) | Date/Time: | [ ] FedEx [ ] UPS [ ] Other | |
| Relinquished by/Company: (Signature) | Date/Time: | Received by/Company: (Signature) | Date/Time: | Page: 1 of 1 | |

Client: Evergy Kansas Central, Inc. Profile/EZ # 16500 EZ:3150822

Site: JEC BASA/BAL Notes

| COC Line Item | Matrix | VG9H | DG9I | DG9Q | VG9U | DG9U | DG9M | DG9B | BG1U | AG1H | AG1U | AG2U | AG3S | AG4U | AG5U | JGFU | WGKU | WGDU | BP1U | BP2U | BP3U | BP1N | BP3N | BP3F | BP3S | BP3B | BP3Z | WPDU | ZPLC | Other | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | WT | | | | | | | | | | | | | | | | | | | 1 | 2 | 3 | | | | | | | | | | |
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Container Codes

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

| Plastic | |
|---|---|
| BP1B | 1L NAOH plastic |
| BP1N | 1L HNO3 plastic |
| BP1S | 1L H2SO4 plastic |
| BP1U | 1L unpreserved plastic |
| BP1Z | 1L NaOH, Zn Acetate |
| BP2B | 500mL NAOH plastic |
| BP2N | 500mL HNO3 plastic |
| BP2S | 500mL H2SO4 plastic |
| BP2U | 500mL unpreserved plastic |
| BP2Z | 500mL NaOH, Zn Acetate |
| BP3B | 250mL NaOH plastic |
| BP3F | 250mL HNO3 plastic - field filtered |
| BP3N | 250mL HNO3 plastic |
| BP3U | 250mL unpreserved plastic |
| BP3S | 250mL H2SO4 plastic |
| BP3Z | 250mL NaOH, Zn Acetate |
| BP4U | 125mL unpreserved plastic |
| BP4N | 125mL HNO3 plastic |
| BP4S | 125mL H2SO4 plastic |
| WPDU | 16oz unpresserved plstic |

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

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

Work Order Number: 60459928

# Intra-Regional Chain of Custody

Pace Analytical®
www.pacelabs.com

**Workorder:** 60459928 **Workorder Name:** JEC BASA/BAL **Owner Received Date:** 9/5/2024 **Due Date:** 9/19/2024

| Received at: | Send To Lab: |
|---|---|
| Pace Analytical Kansas<br>9608 Loiret Blvd.<br>Lenexa, KS 66219<br>Phone (913)599-5665 | Pace Analytical Salina<br>528 N. 9th Street<br>Salina, KS 67401<br>Phone (785)827-1273 |

**Report To:**
Alice Spiller

| Item | Sample ID | Sample Type | Collect Date/Time | Lab ID | Matrix | Preserved Containers: Unpreserved | EPA 300.0 | LAB USE ONLY |
|---|---|---|---|---|---|---|---|---|
| 1 | BAA-2-090424 | PS | 9/4/2024 09:15 | 60459928001 | Water | 1 | X | |
| 2 | BAA-3-090424 | PS | 9/4/2024 11:25 | 60459928002 | Water | 1 | X | |
| 3 | BAA-6-090424 | PS | 9/4/2024 10:35 | 60459928003 | Water | 1 | X | |
| 4 | BAA-7-090424 | PS | 9/4/2024 09:50 | 60459928004 | Water | 1 | X | |
| 5 | JEC-BAA-DUP-090424 | PS | 9/4/2024 09:10 | 60459928005 | Water | 1 | X | |

| Transfers | Released By | Date/Time | Received By | Date/Time |
|---|---|---|---|---|
| 1 | | | | 9/4/24 800 |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |

**Comments**
300.0 Cl,F,SO4
KS sample location: 6090-R2-S5B

**Cooler Temperature on Receipt** 1.4 °C **Custody Seal** (Y) or N **Received on Ice** (Y) or N **Samples Intact** (Y) or N

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

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

November 19, 2024

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

RE: Project: JEC BASA/BAL BAA-3
Pace Project No.: 60463174

Dear Jake Humphrey:

Enclosed are the analytical results for sample(s) received by the laboratory on October 24, 2024. 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
Nick Williams, Haley Aldrich

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

## CERTIFICATIONS

Project: JEC BASA/BAL BAA-3
Pace Project No.: 60463174

**Pace Analytical Services Kansas**
9608 Loiret Boulevard, Lenexa, KS 66219
Arkansas Certification #: 88-00679
Illinois Certification #: 2000302023-6
Colorado Division of Oil and Public Safety
Iowa Certification #: 118
Kansas Field Laboratory Certification #: E-92587
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Missouri Inorganic Drinking Water Certification
Nevada Certification #: KS000212024-1
Oklahoma Certification #: 2023-073
Texas Certification #: T104704407-23-17
Utah Certification #: KS000212022-13

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

## SAMPLE SUMMARY

Project: JEC BASA/BAL BAA-3
Pace Project No.: 60463174

| Lab ID | Sample ID | Matrix | Date Collected | Date Received |
|---|---|---|---|---|
| **60463174001** | **BAA-3-102324** | Water | 10/23/24 11:25 | 10/24/24 00:48 |

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

## SAMPLE ANALYTE COUNT

Project: JEC BASA/BAL BAA-3
Pace Project No.: 60463174

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|---|---|---|---|---|---|
| **60463174001** | **BAA-3-102324** | EPA 300.0 | AAA | 1 | PASI-K |

PASI-K = Pace Analytical Services - Kansas City

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

# PROJECT NARRATIVE

Project: JEC BASA/BAL BAA-3
Pace Project No.: 60463174

**Method:** **EPA 300.0**
**Description:** 300.0 IC Anions 28 Days
**Client:** Evergy Kansas Central, Inc.
**Date:** November 19, 2024

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

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

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

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

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

**Additional Comments:**

Analyte Comments:

QC Batch: 914096

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

- MS (Lab ID: 3619084)
  - Chloride
- MSD (Lab ID: 3619085)
  - Chloride

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

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

## ANALYTICAL RESULTS

Project: JEC BASA/BAL BAA-3
Pace Project No.: 60463174

**Sample: BAA-3-102324** **Lab ID: 60463174001** Collected: 10/23/24 11:25 Received: 10/24/24 00:48 Matrix: Water

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **300.0 IC Anions 28 Days** | Analytical Method: EPA 300.0<br>Pace Analytical Services - Kansas City | | | | | | | |
| Chloride | **81.2** | mg/L | 20.0 | 20 | | 10/29/24 12:06 | 16887-00-6 | |

## REPORT OF LABORATORY ANALYSIS

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

# QUALITY CONTROL DATA

Project: JEC BASA/BAL BAA-3
Pace Project No.: 60463174

QC Batch: 914096
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60463174001

METHOD BLANK: 3619080 Matrix: Water
Associated Lab Samples: 60463174001

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Chloride | mg/L | <1.0 | 1.0 | 10/29/24 11:28 | |

LABORATORY CONTROL SAMPLE: 3619081

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Chloride | mg/L | 5 | 5.1 | 101 | 90-110 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3619082 3619083

| Parameter | Units | 60463174001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | mg/L | 81.2 | 100 | 100 | 171 | 176 | 90 | 95 | 80-120 | 3 | 15 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3619084 3619085

| Parameter | Units | 60462435004 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | mg/L | 184 | 50 | 50 | 224 | 227 | 80 | 84 | 80-120 | 1 | 15 | E |

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

## REPORT OF LABORATORY ANALYSIS

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

# QUALIFIERS

Project: JEC BASA/BAL BAA-3
Pace Project No.: 60463174

## DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

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

TNI - The NELAC Institute.

## ANALYTE QUALIFIERS

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

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

## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: JEC BASA/BAL BAA-3
Pace Project No.: 60463174

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|---|---|---|---|---|---|
| **60463174001** | **BAA-3-102324** | EPA 300.0 | 914096 | | |

WO# : 60463174

60463174

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

Client Name: FKC

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

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

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

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

**Thermometer Used:** IR08 **Type of Ice:** Wet Blue None

**Cooler Temperature (°C):** **As-read** 1.7 **Corr. Factor** -.1 **Corrected** 1.6

**Date and initials of person examining contents:** CW 6/7/24

Temperature should be above freezing to 6°C

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

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

Qualtrax Document ID: 30468

Pace® Location Requested (City/State):
Pace Analytical Kansas
9608 Loiret Blvd., Lenexa, KS 66219

# CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here

60463174

Scan QR Code for instructions

| | | | |
|---|---|---|---|
| Company Name: | Evergy Kansas Central, Inc. | Contact/Report To: | Jake Humphrey |
| Street Address: | 818 S Kansas Avenue<br>Topeka, KS 66612 | Phone #: | (913)634-0605 |
| | | E-Mail: | jake.humphrey@evergy.com |
| | | Cc E-Mail: | skaney@haleyaldrich.com |
| Customer Project #: | | | |
| Project Name: | JEC BASA/BAL BAA-3 | Invoice To: | Jeffrey Center |
| | | Invoice E-Mail: | evergyap@onlinecapturecenter.com |
| Site Collection Info/Facility ID (as applicable): | | Purchase Order # (if applicable): | WSTR-2000095397 |
| | | Quote #: | |

Time Zone Collected: [ ] AK [ ] PT [ ] MT [ X ] CT [ ] ET

County / State origin of sample(s): Kansas

Data Deliverables:
[ ] Level II [ ] Level III [ ] Level IV
[ ] EQUIS
[ ] Other

Regulatory Program (DW, RCRA, etc.) as applicable: Reportable [ ] Yes [ X ] No

Rush (Pre-approval required):
[ ] Same Day [ ] 1 Day [ X ] 2 Day [ ] 3 Day [ ] Other _____

DW PWSID # or WW Permit # as applicable:

Date Results Requested:

Field Filtered (if applicable): [ ] Yes [ X ] No
Analysis:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Waste Water (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW),Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)

| Customer Sample ID | Matrix * | Comp / Grab | Composite Start Date | Composite Start Time | Collected or Composite End Date | Collected or Composite End Time | # Cont. | Res. Chlorine Results | Res. Chlorine Units | 300.0 Chloride |
|---|---|---|---|---|---|---|---|---|---|---|
| BAA-3-102324 | WT | Grab | - | - | 10/23/2024 | 1125 | 1 | - | - | X |

Specify Container Size **: 3
Identify Container Preservative Type***: 1
Analysis Requested

**Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL vial, (7) EnCore, (8) TerraCore, (9) 90mL, (10) Other

*** Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod. Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other

Lab Use Only
Proj. Mgr: Alice Spiller
AcctNum / Client ID:
Table #:
Profile / Template: 9655
Prelog / Bottle Ord. ID: EZ 3166039

Sample Comment

Preservation non-conformance identified for sample.

Additional Instructions from Pace®:

Collected By: (Printed Name) Jason R. Franks
Signature: Jason R. Franks

Customer Remarks / Special Conditions / Possible Hazards:

| # Coolers: | Thermometer ID: | Correction Factor (°C): | Obs. Temp. (°C) | Corrected Temp. (°C) | On Ice: |
|---|---|---|---|---|---|
| | T298 | -0.1 | 1.7 | 1.6 | |

| Relinquished by/Company: (Signature) | Date/Time: | Received by/Company: (Signature) | Date/Time: |
|---|---|---|---|
| Jason R. Franks / SCS | 10/24/2024 / 1030 | Carmen June | 10/24 12:48 |
| | | | |
| | | | |
| | | | |

Tracking Number:

Delivered by: [ ] In-Person [ ] Courier
[ ] FedEx [ ] UPS [ ] Other

Page: 1 of 1

DC#_Title: ENV-FRM-LENE-0001 v07_Sample Container Count
Effective Date: 7/12/2024

Client: ekc JEC

Profile/EZ # 3166139

Site:

Notes

| COC Line Item | Matrix | VG9H | DG9H | DG9Q | VG9U | DG9U | DG9M | DG9B | BG1U | AG1H | AG1U | AG2U | AG3S | AG4U | AG5U | JGFU | WGKU | WGDU | BP1U | BP2U | BP3U | BP1N | BP3N | BP3F | BP3S | BP3B | BP3Z | WPDU | ZPLC | Other | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | WT | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | |
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Container Codes

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

| Plastic | |
|---|---|
| BP1B | 1L NAOH plastic |
| BP1N | 1L HNO3 plastic |
| BP1S | 1L H2SO4 plastic |
| BP1U | 1L unpreserved plastic |
| BP1Z | 1L NaOH, Zn Acetate |
| BP2B | 500mL NAOH plastic |
| BP2N | 500mL HNO3 plastic |
| BP2S | 500mL H2SO4 plastic |
| BP2U | 500mL unpreserved plastic |
| BP2Z | 500mL NaOH, Zn Acetate |
| BP3B | 250mL NaOH plastic |
| BP3F | 250mL HNO3 plastic - field filtered |
| BP3N | 250mL HNO3 plastic |
| BP3U | 250mL unpreserved plastic |
| BP3S | 250mL H2SO4 plastic |
| BP3Z | 250mL NaOH, Zn Acetate |
| BP4U | 125mL unpreserved plastic |
| BP4N | 125mL HNO3 plastic |
| BP4S | 125mL H2SO4 plastic |
| WPDU | 16oz unpresserved plstic |

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

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

Work Order Number: 60463174