

2024 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT FLUE GAS DESULFURIZATION LANDFILL JEFFREY ENERGY CENTER ST. MARYS, KANSAS

by Haley & Aldrich, Inc. Cleveland, Ohio

for Evergy Kansas Central, Inc. Topeka, Kansas

File No. 210308-000 January 2025

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This Annual Groundwater Monitoring and Corrective Action Report documents the groundwater monitoring program for the Jeffrey Energy Center Flue Gas Desulfurization (FGD) Landfill 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 FGD Landfill is, to the best of my knowledge, accurate and complete.

Signed:

Professional Geologist

Print Name: Mark Nicholls

Kansas License No.: Professional Geologist No. 881

Title: Principal Consultant

Company: Haley & Aldrich, Inc.

1. Introduction

This 2024 Annual Groundwater Monitoring and Corrective Action Report (Annual Report) addresses the Flue Gas Desulfurization (FGD) Landfill 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 FGD Landfill 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 FGD Landfill was operating under a detection monitoring program in compliance with 40 CFR § 257.95.

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

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

At the end of the current annual reporting period (December 31, 2024), the FGD Landfill 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 August 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.

An assessment monitoring program was initiated on July 17, 2018 for the FGD Landfill and a notification of assessment monitoring was provided on August 15, 2018 to meet requirements of 40 CFR § 257.95. The FGD Landfill returned to a detection monitoring program on August 14, 2020.

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 FGD Landfill 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 FGD Landfill.

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 FGD Landfill 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 FGD Landfill 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 FGD Landfill 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 FGD Landfill 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 at the FGD Landfill in 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 FGD Landfill. The FGD Landfill is subject to the groundwater monitoring and corrective action requirements described under 40 CFR §§ 257.90 through 257.98. This document addresses the requirement for the Owner/Operator to prepare an Annual Report 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 FGD Landfill as required by the Rule. Groundwater sampling and analysis was conducted per the requirements described in § 257.93, and the status of the groundwater monitoring program described in § 257.94 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 FGD Landfill 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 sampling events were completed in March and September of 2024. Statistical evaluation was completed in August 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

No noteworthy problems (i.e., problems could include damaged wells, issues with sample collection or lack of sampling, or problems with analytical analysis) were encountered at the FGD Landfill in 2024.

2.2.4 Actions to Resolve Problems

No problems were encountered at the FGD Landfill in 2024, therefore, no additional actions to resolve problems were required.

2.2.5 Projected 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 FGD Landfill is included in this report as Figure 1.

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

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

No monitoring wells were installed or decommissioned 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 in 2024. A summary including sample names, sampling dates, field parameters, and monitoring data obtained for the groundwater monitoring program for the JEC FGD Landfill is presented in Table I of this report, with corresponding laboratory analytical reports provided in Attachment 2. Groundwater potentiometric elevation contour maps, which include calculated groundwater flow rates and directions, associated with each groundwater monitoring sampling event in 2024 are provided in 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.

An assessment monitoring program was initiated on July 17, 2018 with a notification establishing assessment monitoring provided on August 15, 2018 to meet the requirements of 40 CFR § 257.95. In accordance with 40 CFR § 257.95(e), the concentrations of Appendix III and detected Appendix IV constituents at the FGD Landfill were shown to be at or below background values for two consecutive sampling events; therefore, the CCR unit returned to detection monitoring on August 14, 2020.

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 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 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 Alterative 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 FGD Landfill 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 FGD Landfill 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 FGD Landfill 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, FLUE GAS DESULFURIZATION LANDFILL

ST. MARYS, KANSAS

Location		U	pgradient			Downgradient									
Location	MW-FGD-1			MW-FGD-6		MW-	MW-FGD-2		MW-FGD-3		MW-FGD-4			MW-FGD-9	
Measure Point (TOC)	1239.05			1277.52		1184.20		1186.26		1188.43			1175.51		
Sample Name	FGD-1-031424	JEC-FDG-DUP-031424	FGD-1-090424	FDG-6-031424	FGD-6-090424	FDG-2-031424	FGD-2-090324	FDG-3-031424	FGD-3-090324	FDG-4-031424	FGD-4-090324	JEC-FGD-DUP-090324	FDG-9-031424	FGD-9-090324	
Sample Date	3/14/2024	3/14/2024	9/4/2024	3/14/2024	9/4/2024	3/14/2024	9/3/2024	3/14/2024	9/3/2024	3/14/2024	9/3/2024	9/3/2024	3/14/2024	9/3/2024	
Final Lab Report Date	3/26/2024	3/26/2024	9/19/2024	3/26/2024	9/19/2024	3/26/2024	9/19/2024	3/26/2024	9/19/2024	3/26/2024	9/19/2024	9/19/2024	3/26/2024	9/19/2024	
Final Lab Report Revision Date	4/26/2024	4/26/2024	N/A	4/26/2024	N/A	4/26/2024	N/A	4/26/2024	N/A	4/26/2024	N/A	N/A	4/26/2024	N/A	
Lab Data Reviewed and Validated	6/19/2024	6/19/2024	10/31/2024	6/19/2024	10/31/2024	6/19/2024	10/31/2024	6/19/2024	10/31/2024	6/19/2024	10/31/2024	10/31/2024	6/19/2024	10/31/2024	
Depth to Water (ft btoc)	72.60	72.60	72.95	100.84	100.05	21.24	21.78	22.97	23.52	30.10	30.79	30.79	9.32	9.78	
Temperature (Deg C)	13.75	-	15.98	14.25	21.15	13.94	20.06	13.97	23.61	14.13	23.09	-	13.74	16.81	
Conductivity (μS/cm)	891	-	891	9,470	9630	1,470	1350	1,210	948	2,310	2100	-	1,230	1190	
Turbidity (NTU)	0.0	=	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	1.8	•	0.0	0.6	
Dissolved Oxygen, Field (mg/L)	2.03	=	0.00	0.16	1.76	0.00	0.00	1.59	0.85	0.00	0.05	1	3.89	0.00	
ORP, Field (mV)	66	-	-22	-34	-108	92	102	98	202	156	218	1	133	116	
pH, Field (su)	7.76	-	6.69	7.65	6.55	7.06	7.04	7.20	7.13	7.29	6.86	1	7.12	7.31	
Boron, Total (mg/L)	0.10	< 0.10	0.10	10.8	11.0	0.20	0.20	0.10	0.10	0.43	0.41	0.43	0.46	0.52	
Calcium, Total (mg/L)	104	101	104	608	613	188	212	143	147	319	300	318	132	138	
Chloride (mg/L)	75.7	86.6	61.4	2,270	2420	78.4	78.8	84.4	77.8	228	177	186	69.1	49.2	
Fluoride (mg/L)	0.26	0.26	0.31	0.52	1.2	< 0.20	0.25	< 0.20	0.24	< 0.20	0.20	0.21	< 0.20	0.42	
Sulfate (mg/L)	101	117	98.6	2,840	2940	332	393	201	216	879	720	746	336	335	
pH (su)	7.5	7.4	7.3	7.2	7.5	7.4	7.0	7.5	7.1	7.2	7.0	7.0	7.7	7.2	
TDS (mg/L)	510	533	528	7,820	8100	864	1050	712	752	1,460	1850	1750	761	832	

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

N/A = Not Applicable

NTU = Nephelometric Turbidity Unit

ORP = oxidation reduction potential

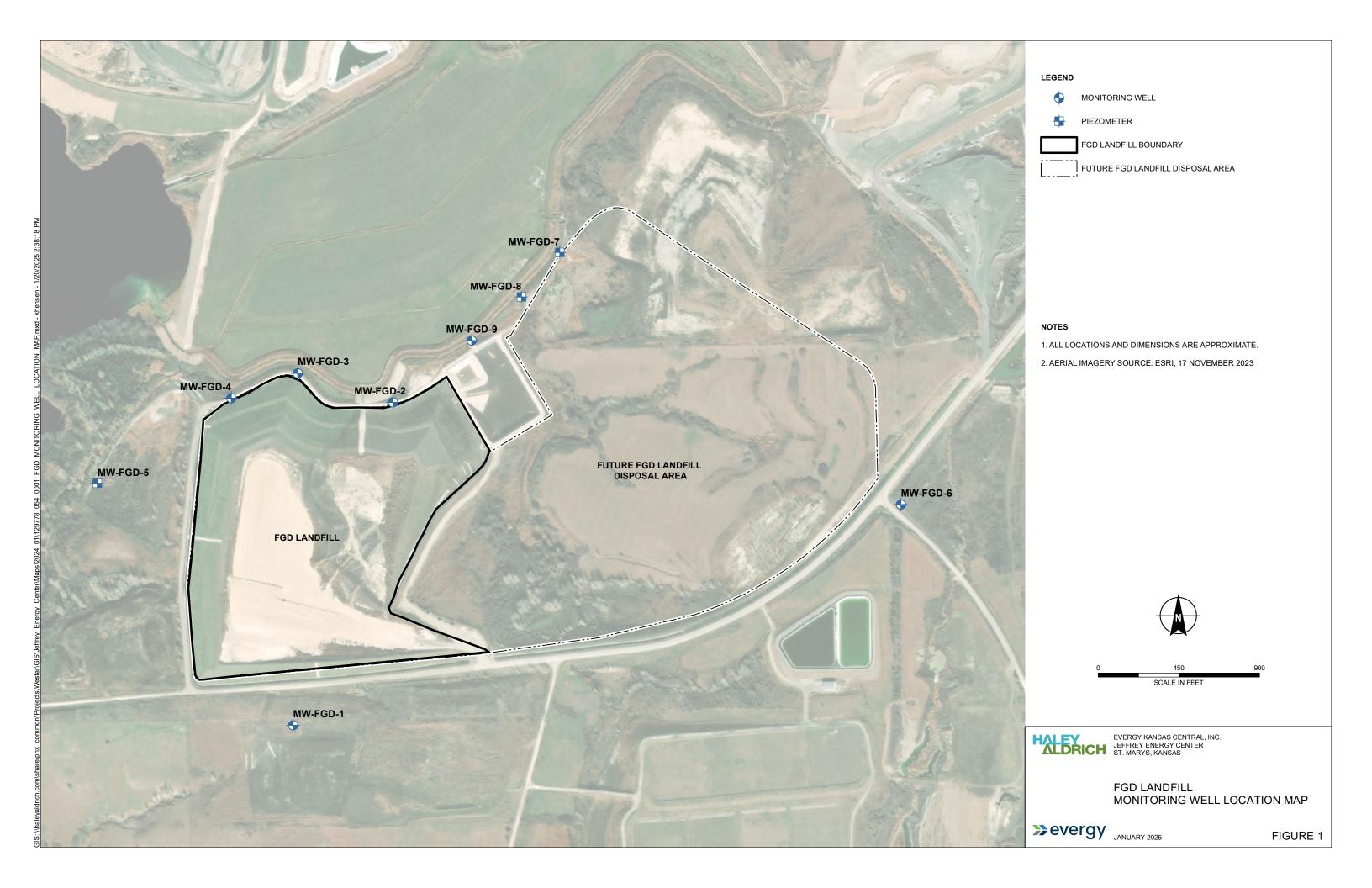
su = standard unit

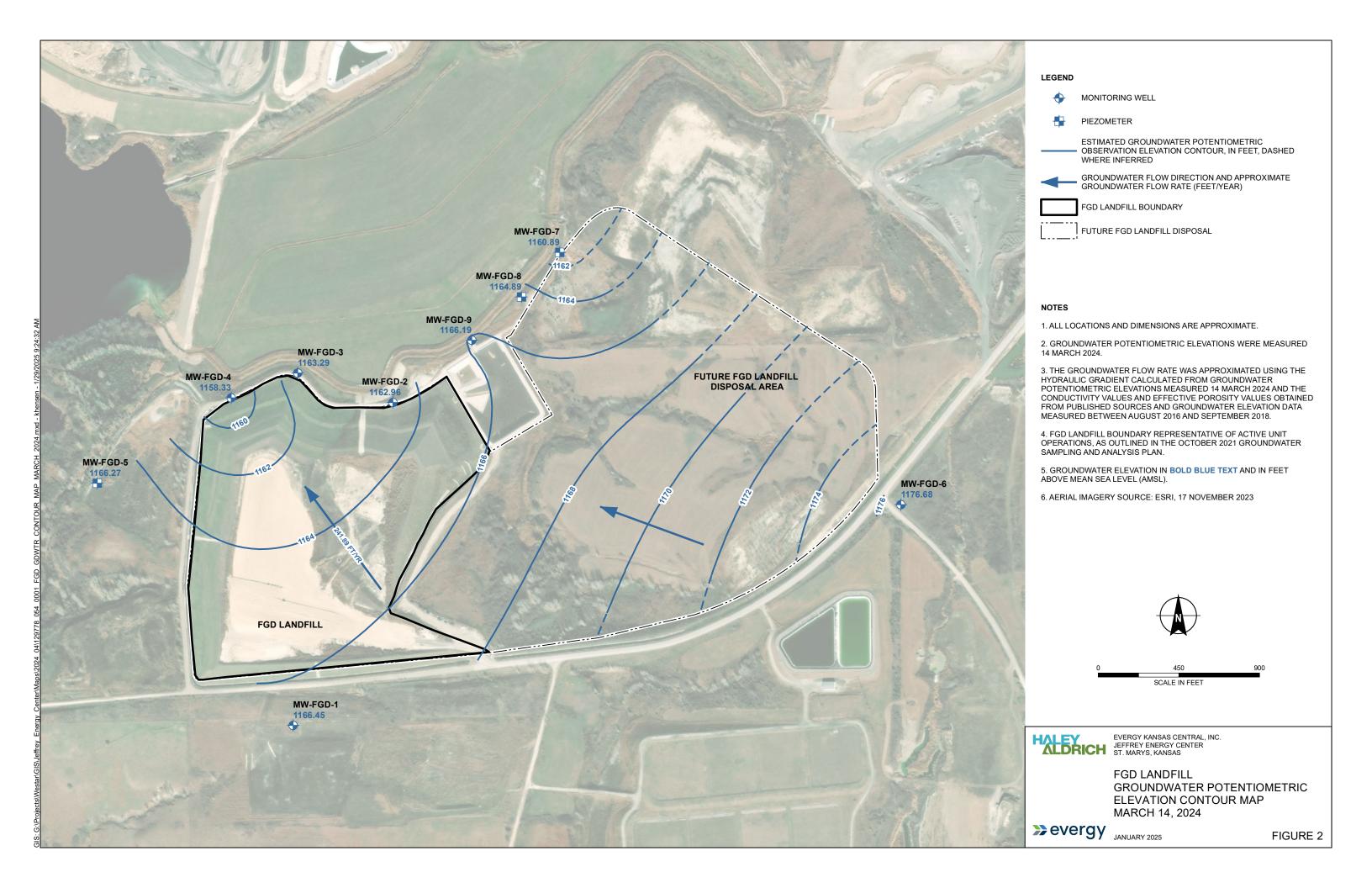
TDS = total dissolved solids

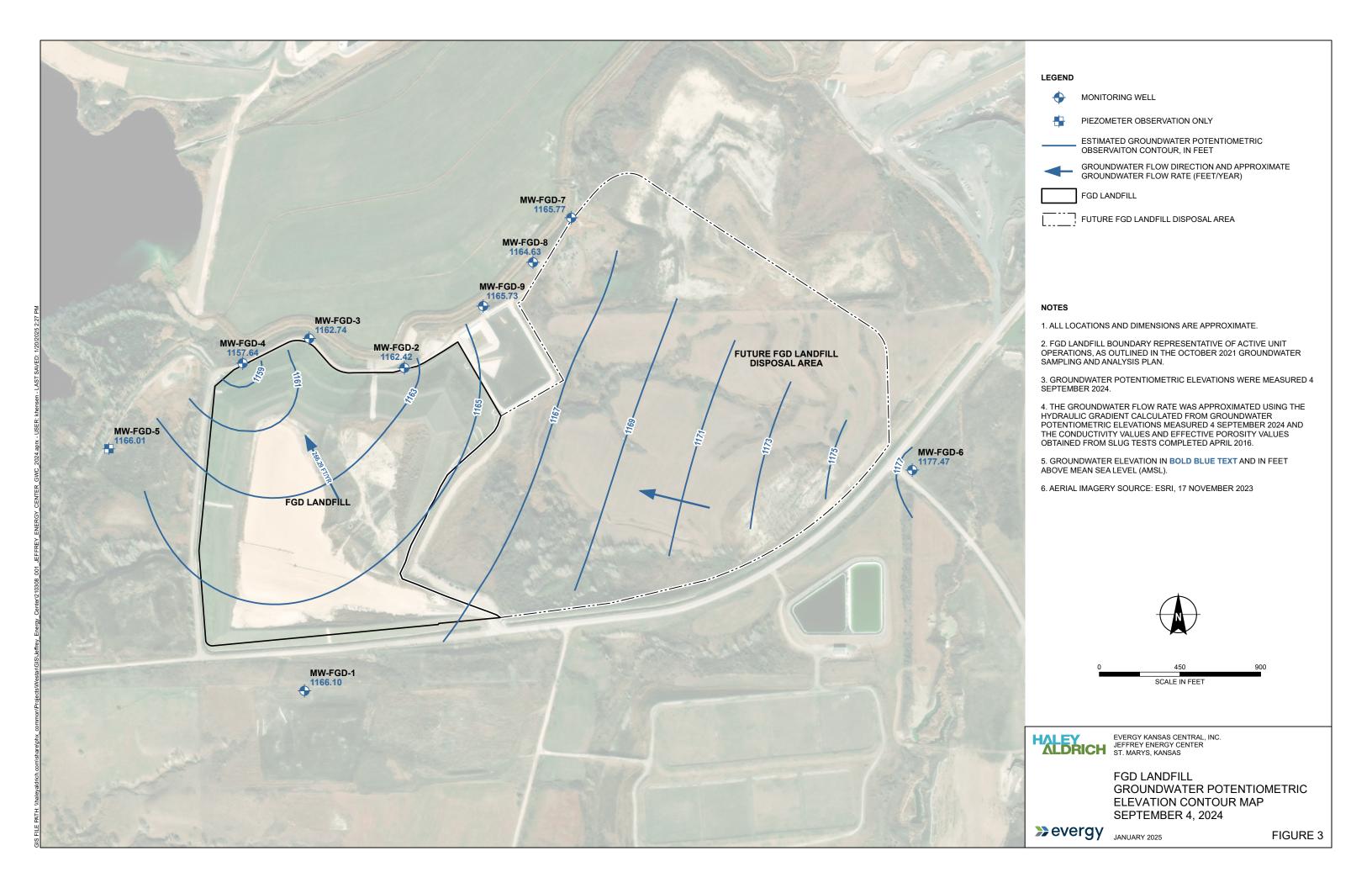
TOC = top of casing



FIGURES







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 5, 2024

Jeffrey Energy Center

Flue Gas Desulfurization 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) Flue Gas Desulfurization (FGD) Landfill. This semiannual detection monitoring groundwater sampling event was completed on **September 6, 2023**, with laboratory results received and validated on **December 13, 2023**.

The Rule provides four specific options for statistical evaluation of groundwater quality data collected at a coal combustion residual (CCR) unit (40 CFR § 257.93(f)(1-4)). The statistical 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 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.

Evergy Kansas Central, Inc. February 6, 2024 Page 2

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-FGD-1 and MW-FGD-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 locations (MW-FGD-1 and MW-FGD-6) were combined to calculate the UPL for each detected 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 **March 2023.**

RESULTS OF APPENDIX III DOWNGRADIENT STATISTICAL COMPARISONS

The 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 FGD Landfill.**

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 FLUE GAS DESULFURIZATION LANDFILL ST. MARYS, KANSAS

													Interwell A	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	September 2023 Concentration (mg/L)	Background Limits ¹ (UPL) mg/L	SSI
						CCR Ap	pendix-III: Boron	, Total (mg/L)						
MW-FGD-1 (upgradient)	7/20	65%	0.1-0.1	0.13	0.00006816	0.008256	0.079	Yes	No	Stable	Non-parametric	<0.10	11.400	
MW-FGD-6 (upgradient)	18/18	0%	-	11.4	2.574	1.604	0.1606	No	No	Increasing	Non-parametric	10.8	11.400	
MW-FGD-2	20/20	0%	-	0.26	0.0004403	0.02098	0.09201	No	No	Decreasing	Normal	0.19		N
MW-FGD-3	16/20	20%	0.1-0.1	0.18	0.0005791	0.02406	0.18	No	No	Stable	Normal	<0.10		N
MW-FGD-4	20/20	0%	-	0.45	0.004183	0.06467	0.1992	No	No	Increasing	Normal	0.40		N
MW-FGD-9	18/18	0%	-	0.59	0.002955	0.05436	0.1101	No	No	Decreasing	Normal	0.44		N
						CCR App	endix-III: Calciun	n, Total (mg/L)						
MW-FGD-1 (upgradient)	20/20	0%	-	111	23.92	4.89	0.05089	Yes	No	Stable	Non parametric	101	695	
MW-FGD-6 (upgradient)	18/18	0%	-	695	1479	38.46	0.06357	No	No	Stable	Non-parametric	620	555	
MW-FGD-2	20/20	0%	-	236	1481	38.48	0.2304	No	No	Increasing	Normal	180		N
MW-FGD-3	20/20	0%	-	228	808.5	28.43	0.1803	No	No	Stable	Normal	131		N
MW-FGD-4	20/20	0%	-	376	6219	78.86	0.3267	No	No	Increasing	Normal	316		N
MW-FGD-9	18/18	0%	-	144	256.2	16.01	0.1379	No	No	Increasing	Normal	144		N
						CCR /	Appendix-III: Chlo	ride (mg/L)						
MW-FGD-1 (upgradient)	20/20	0%	-	75.5	131.3	11.46	0.1878	No	No	Increasing	N	75.5	2000	
MW-FGD-6 (upgradient)	18/18	0%	-	2900	229100	478.7	0.2415	Yes	No	Increasing	Non-parametric	1950	2900	
MW-FGD-2	20/20	0%	-	85.1	305.3	17.47	0.3464	No	No	Increasing	Normal	59.7		N
MW-FGD-3	20/20	0%	-	132	635	25.2	0.349	No	No	Stable	Normal	60.1		N
MW-FGD-4	20/20	0%	-	246	3342	57.81	0.4318	No	No	Increasing	Normal	186		N
MW-FGD-9	18/18	0%	-	49	38.94	6.24	0.1613	Yes	No	Stable	Normal	49.0		N
						CCR A	Appendix-III: Fluo	ride (mg/L)						
MW-FGD-1 (upgradient)	22/23	4%	0.2-0.2	0.44	0.003393	0.05825	0.1779	No	No	Stable		0.22	2 400	
MW-FGD-6 (upgradient)	17/21	19%	0.2-0.2	3.4	0.5435	0.7373	0.6296	Yes	No	Stable	Non-parametric	<0.20	3.400	
MW-FGD-2	18/23	22%	0.2-0.2	0.41	0.005584	0.07472	0.239	No	No	Decreasing	Normal	<0.20		N
MW-FGD-3	17/23	26%	0.2-0.2	0.53	0.005894	0.07677	0.2755	Yes	No	Stable	Normal	<0.20		N
MW-FGD-4	18/23	22%	0.2-0.2	0.46	0.006133	0.07831	0.2512	No	No	Stable	Non-parametric	<0.20		N
MW-FGD-9	17/20	15%	0.2-0.2	0.56	0.01559	0.1249	0.2806	Yes	No	Decreasing	Normal	<0.20		N
	•						Appendix-III: pH	(lab) (SU)			1			
MW-FGD-1 (upgradient)	20/20	0%	-	7.8	0.03671	0.1916	0.02598	No	No	Stable		7.3		
MW-FGD-6 (upgradient)	18/18	0%	-	7.5	0.05232	0.2287	0.03179	No	No	Decreasing	Normal	6.7	8.1	
MW-FGD-2	20/20	0%	-	7.8	0.04747	0.2179	0.02997	No	No	Decreasing	Normal	7.0		N
MW-FGD-3	20/20	0%	-	7.6	0.03589	0.1895	0.0262	No	No	Stable	Normal	7.2		N
MW-FGD-4	20/20	0%	-	7.6	0.02779	0.1667	0.02328	Yes	No	Decreasing	Normal	7.0		N
MW-FGD-9	18/18	0%	_	7.8	0.03359	0.1833	0.02503	No	No	Stable	Normal	7.2		N



SUMMARY OF SEMIANNUAL DETECTION GROUNDWATER MONITORING STATISTICAL EVALUATION

SEPTEMBER 2023 SAMPLING EVENT
JEFFREY ENERGY CENTER FLUE GAS DESULFURIZATION LANDFILL

ST. MARYS, KANSAS

													Interwell A	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	September 2023 Concentration (mg/L)	Background Limits ¹ (UPL) mg/L	SSI	
						CCR	Appendix-III: Sul	fate (mg/L)							
MW-FGD-1 (upgradient)	20/20	0%	-	106	41.77	6.463	0.07123	Yes	No	Stable	Non parametris	Non-months	90.8	2100	
MW-FGD-6 (upgradient)	18/18	0%	-	3190	101700	319	0.1153	Yes	No	Stable	Non-parametric	2500	3190		
MW-FGD-2	20/20	0%	-	528	10300	101.5	0.3274	No	No	Increasing	Normal	308		N	
MW-FGD-3	20/20	0%	-	479	10230	101.2	0.3403	No	No	Stable	Normal	162		N	
MW-FGD-4	20/20	0%	-	899	40410	201	0.3512	No	No	Increasing	Normal	544		N	
MW-FGD-9	18/18	0%	-	310	3119	55.85	0.2477	No	No	Increasing	Normal	299		N	
						CCR Appendix-	III: Total Dissolve	d Solids (TDS)	(mg/L)						
MW-FGD-1 (upgradient)	20/20	0%	-	559	411.1	20.28	0.03856	No	No	Stable	Non-parametric	559	9100		
MW-FGD-6 (upgradient)	18/18	0%	-	9100	1789000	1338	0.1809	Yes	No	Stable	Non-parametric	8240	9100		
MW-FGD-2	20/20	0%	-	1280	39350	198.4	0.2359	No	No	Increasing	Normal	896		N	
MW-FGD-3	20/20	0%	-	1310	36000	189.7	0.219	No	No	Stable	Normal	652		N	
MW-FGD-4	20/20	0%	-	2150	219500	468.5	0.3306	No	No	Increasing	Normal	1980		N	
MW-FGD-9	18/18	0%	-	796	6540	80.87	0.1234	No	No	Increasing	Normal	796		N	

Notes:

CCR = coal combustion residual

mg/L = milligrams per liter

SSI = statistically significant increase

SU = standard unit

UPL = upper prediction limit



¹ Based on background data collected from 08/24/2016 through 03/14/2023.

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 August 7, 2024

Jeffrey Energy Center

Flue Gas Desulfurization 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) Flue Gas Desulfurization (FGD) Landfill. This semiannual detection monitoring groundwater sampling event was completed on **March 14**, **2024**, with laboratory results received and validated on **June 19**, **2024**.

The Rule provides four specific options for statistical evaluation of groundwater quality data collected at a coal combustion residual (CCR) unit (40 CFR § 257.93(f)(1-4)). The statistical 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 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.

Evergy Kansas Central, Inc. August 14, 2024 Page 2

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-FGD-1 and MW-FGD-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 locations (MW-FGD-1 and MW-FGD-6) were combined to calculate the UPL for each detected 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 **March 2024.**

RESULTS OF APPENDIX III DOWNGRADIENT STATISTICAL COMPARISONS

The 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 FGD Landfill.

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 FLUE GAS DESULFURIZATION LANDFILL ST. MARYS, KANSAS

													Interwell A	nalysis
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: Bord	on, Total (mg/	L)					
MW-FGD-1	8/21	62%	0.1-0.1	0.13	0.00006571	0.008106	0.07773	Yes	No	Stable	Nan nananatria	0.10	11 400	
MW-FGD-6	19/19	0%	-	11.4	2.466	1.57	0.1565	Yes	No	Increasing	Non-parametric	10.8	11.400	
MW-FGD-2	21/21	0%	-	0.26	0.0004557	0.02135	0.09416	No	No	Decreasing	Normal	0.20		No
MW-FGD-3	17/21	19%	0.1-0.1	0.18	0.0006042	0.02458	0.1861	No	No	Stable	Normal	0.10		No
MW-FGD-4	21/21	0%	-	0.45	0.004501	0.06709	0.2035	No	No	Increasing	Normal	0.43		No
MW-FGD-9	19/19	0%	-	0.59	0.002851	0.05339	0.1085	No	No	Decreasing	Normal	0.46		No
						CCR A	Appendix-III: Calci	um, Total (mg	/L)					
MW-FGD-1	21/21	0%	-	111	25.7	5.069	0.05255	Yes	No	Increasing	Non-parametric	104	695	
MW-FGD-6	19/19	0%	-	695	1397	37.38	0.06178	No	No	Stable	Non-parametric	608	095	
MW-FGD-2	21/21	0%	-	236	1428	37.78	0.2249	No	No	Increasing	Normal	188		No
MW-FGD-3	21/21	0%	-	228	778.4	27.9	0.1777	No	No	Stable	Normal	143		No
MW-FGD-4	21/21	0%	-	376	6195	78.71	0.3212	No	No	Increasing	Normal	319		No
MW-FGD-9	19/19	0%	-	144	255.3	15.98	0.1367	No	No	Increasing	Normal	132		No
						CC	R Appendix-III: Ch	nloride (mg/L)						
MW-FGD-1	21/21	0%	-	75.7	135	11.62	0.1883	No	No	Increasing	Non-parametric	75.7	2900	
MW-FGD-6	19/19	0%	-	2900	220800	469.8	0.2353	Yes	No	Increasing	Non-parametric —	2270	2900	
MW-FGD-2	21/21	0%	-	85.1	327.2	18.09	0.3495	No	No	Increasing	Normal	78.4		No
MW-FGD-3	21/21	0%	-	132	610.3	24.71	0.3394	No	No	Stable	Normal	84.4		No
MW-FGD-4	21/21	0%	-	246	3597	59.97	0.4334	No	No	Increasing	Normal	228		No
MW-FGD-9	19/19	0%	-	69.1	85.49	9.246	0.2295	Yes	No	Stable	Normal	69.1		No
						CC	R Appendix-III: Flu	uoride (mg/L)						
MW-FGD-1	23/24	4%	0.2-0.2	0.44	0.003435	0.05861	0.1806	No	No	Stable	Non-parametric	0.26	3.400	
MW-FGD-6	18/22	19%	0.2-0.2	3.4	0.5435	0.7373	0.6296	Yes	No	Stable	Non-parametric	0.52	3.400	
MW-FGD-2	18/24	25%	0.2-0.2	0.41	0.005869	0.07661	0.2488	No	No	Decreasing	Normal	< 0.20		No
MW-FGD-3	17/24	29%	0.2-0.2	0.53	0.005895	0.07678	0.2788	Yes	No	Stable	Normal	< 0.20		No
MW-FGD-4	18/24	25%	0.2-0.2	0.46	0.006387	0.07992	0.2602	No	No	Decreasing	Non-parametric	< 0.20		No
MW-FGD-9	17/21	19%	0.2-0.2	0.56	0.01767	0.1329	0.3068	Yes	No	Decreasing	Normal	< 0.20		No
						C	CR Appendix-III: p	oH (lab) (SU)						
MW-FGD-1	21/21	0%	-	7.8	0.03562	0.1887	0.02557	No	No	Stable	Normal	7.5	8.1	
MW-FGD-6	19/19	0%	-	7.5	0.04942	0.2223	0.0309	No	No	Decreasing	Normal	7.2	0.1	
MW-FGD-2	21/21	0%	-	7.8	0.0459	0.2143	0.02945	No	No	Decreasing	Normal	7.4		No
MW-FGD-3	21/21	0%	-	7.6	0.03757	0.1938	0.02676	No	No	Stable	Normal	7.5		No
MW-FGD-4	21/21	0%	-	7.6	0.02648	0.1627	0.02272	Yes	No	Decreasing	Normal	7.2		No
MW-FGD-9	19/19	0%	-	7.8	0.03924	0.1981	0.02698	No	No	Stable	Normal	7.7		No



SUMMARY OF SEMIANNUAL DETECTION GROUNDWATER MONITORING STATISTICAL EVALUATION

MARCH 2024 SAMPLING EVENT

JEFFREY ENERGY CENTER FLUE GAS DESULFURIZATION LANDFILL

ST. MARYS, KANSAS

													Interwell A	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
						CC	R Appendix-III: S	ulfate (mg/L)						
MW-FGD-1	21/21	0%	-	106	44.71	6.686	0.0733	No	No	Stable	Non narametric	101	3190	
MW-FGD-6	19/19	0%	-	3190	96370	310.4	0.112	Yes	No	Stable	Non-parametric	2840	3190	
MW-FGD-2	21/21	0%	-	528	9813	99.06	0.3184	No	No	Increasing	Normal	332		No
MW-FGD-3	21/21	0%	-	479	10160	100.8	0.3444	No	No	Stable	Normal	201		No
MW-FGD-4	21/21	0%	-	899	42860	207	0.3527	No	No	Increasing	Normal	879		No
MW-FGD-9	19/19	0%	-	336	3589	59.91	0.259	No	No	Increasing	Normal	336		No
						CCR Append	ix-III: Total Dissol	ved Solids (TD	S) (mg/L)					
MW-FGD-1	21/21	0%	-	559	402.5	20.06	0.03821	No	No	Stable	Non-parametric	510	9100	
MW-FGD-6	19/19	0%	-	9100	1699000	1304	0.1757	Yes	No	Increasing	Non-parametric	7820	3100	
MW-FGD-2	21/21	0%	-	1280	37410	193.4	0.2297	No	No	Increasing	Normal	864		No
MW-FGD-3	21/21	0%	-	1310	35330	188	0.2188	No	No	Stable	Normal	712		No
MW-FGD-4	21/21	0%	-	2150	208600	456.7	0.3219	No	No	Increasing	Normal	1460		No
MW-FGD-9	19/19	0%	-	796	6764	82.25	0.1244	No	No	Increasing	Normal	761		No

Notes:

CCR = coal combustion residual

mg/L = milligrams per liter

SSI = statistically significant increase

SU = standard unit

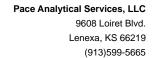
UPL = upper prediction limit



¹ Based on background data collected from 08/24/2016 through 03/14/2024.

ATTACHMENT 2 Laboratory Analytical Reports

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





April 26, 2024

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

RE: Project: JEC FGD CCR-Revised Report

Pace Project No.: 60449065

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

REVISED to report reanalysis data *see narrative

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

Sincerely,

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

Alice Spiller

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



REPORT OF LABORATORY ANALYSIS

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



CERTIFICATIONS

Project: JEC FGD CCR-Revised Report

Pace Project No.: 60449065

Pace Analytical Services Kansas

9608 Loiret Boulevard, Lenexa, KS 66219 Arkansas Inorganic Drinking Water Certification

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

REPORT OF LABORATORY ANALYSIS



SAMPLE SUMMARY

Project: JEC FGD CCR-Revised Report

Pace Project No.: 60449065

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60449065001	FGD-1-031424	Water	03/14/24 11:40	03/14/24 17:30
60449065002	FDG-2-031424	Water	03/14/24 12:05	03/14/24 17:30
60449065003	FDG-3-031424	Water	03/14/24 11:30	03/14/24 17:30
60449065004	FDG-4-031424	Water	03/14/24 12:35	03/14/24 17:30
60449065005	FDG-6-031424	Water	03/14/24 10:55	03/14/24 17:30
60449065006	FDG-9-031424	Water	03/14/24 12:40	03/14/24 17:30
60449065007	JEC-FDG-DUP-031424	Water	03/14/24 11:40	03/14/24 17:30

REPORT OF LABORATORY ANALYSIS



SAMPLE ANALYTE COUNT

Project: JEC FGD CCR-Revised Report

Pace Project No.: 60449065

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60449065001	FGD-1-031424	EPA 200.7		2	PASI-K
		SM 2540C	KVI	1	PASI-K
		SM 4500-H+B	SR1	1	PASI-K
		EPA 300.0	PL	3	PASI-K
60449065002	FDG-2-031424	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
60449065003	FDG-3-031424	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
60449065004	FDG-4-031424	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
60449065005	FDG-6-031424	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
60449065006	FDG-9-031424	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
60449065007	JEC-FDG-DUP-031424	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

PASI-K = Pace Analytical Services - Kansas City





Project: JEC FGD CCR-Revised Report

Pace Project No.: 60449065

Date: April 26, 2024

Report was amended to provide reanlaysis data for sample 60449065004, Fluoride and pH and sample 60449065006 Chloride and Sulfate per client request.

(913)599-5665



PROJECT NARRATIVE

Project: JEC FGD CCR-Revised Report

Pace Project No.: 60449065

Method: EPA 200.7

Description: 200.7 Metals, Total

Client: Evergy Kansas Central, Inc.

Date: April 26, 2024

General Information:

7 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



Project: JEC FGD CCR-Revised Report

Pace Project No.: 60449065

Method: SM 2540C

Description: 2540C Total Dissolved Solids **Client:** Evergy Kansas Central, Inc.

Date: April 26, 2024

General Information:

7 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.



Project: JEC FGD CCR-Revised Report

Pace Project No.: 60449065

Method: SM 4500-H+B

Description: 4500H+ pH, Electrometric **Client:** Evergy Kansas Central, Inc.

Date: April 26, 2024

General Information:

7 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.

- FDG-2-031424 (Lab ID: 60449065002)
- FDG-3-031424 (Lab ID: 60449065003)
- FDG-4-031424 (Lab ID: 60449065004)
- FDG-6-031424 (Lab ID: 60449065005)
- FDG-9-031424 (Lab ID: 60449065006)
- FGD-1-031424 (Lab ID: 60449065001)
- JEC-FDG-DUP-031424 (Lab ID: 60449065007)

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.

(913)599-5665



PROJECT NARRATIVE

Project: JEC FGD CCR-Revised Report

Pace Project No.: 60449065

Method: EPA 300.0

Description: 300.0 IC Anions 28 Days **Client:** Evergy Kansas Central, Inc.

Date: April 26, 2024

General Information:

7 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.

• FDG-4-031424 (Lab ID: 60449065004) • FDG-9-031424 (Lab ID: 60449065006)

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

QC Batch: 891537

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- BLANK (Lab ID: 3528658)
 - Fluoride
- FDG-4-031424 (Lab ID: 60449065004)
 - Fluoride
- FDG-9-031424 (Lab ID: 60449065006)
 - Fluoride



Project: JEC FGD CCR-Revised Report

Pace Project No.: 60449065

Method: EPA 300.0

Description: 300.0 IC Anions 28 Days **Client:** Evergy Kansas Central, Inc.

Date: April 26, 2024

Analyte Comments:

QC Batch: 891537

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

• LCS (Lab ID: 3528659)

• Fluoride

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



Project: JEC FGD CCR-Revised Report

Pace Project No.: 60449065

Date: 04/26/2024 03:24 PM

Sample: FGD-1-031424	Lab ID: 604	49065001	Collected: 03/14/2	24 11:40	Received: 03	/14/24 17:30 M	fatrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual			
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7										
	Pace Analytical Services - Kansas City										
Boron, Total Recoverable	0.10	mg/L	0.10	1	03/20/24 10:30	03/21/24 14:50	7440-42-8				
Calcium, Total Recoverable	104	mg/L	0.20	1	03/20/24 10:30	03/21/24 14:50	7440-70-2				
2540C Total Dissolved Solids	Analytical Meth	nod: SM 25	40C								
	Pace Analytica	l Services -	Kansas City								
Total Dissolved Solids	510	mg/L	10.0	1		03/21/24 11:36					
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B										
-	Pace Analytica	l Services -	Kansas City								
pH at 25 Degrees C	7.5	Std. Units	0.10	1		03/21/24 11:36		H6			
300.0 IC Anions 28 Days	Analytical Meth	nod: EPA 30	0.00								
·	Pace Analytica	l Services -	Kansas City								
Chloride	75.7	mg/L	50.0	50		03/21/24 14:19	16887-00-6				
Fluoride	0.26	mg/L	0.20	1		03/21/24 14:07	16984-48-8				
Sulfate	101	mg/L	50.0	50		03/21/24 14:19	14808-79-8				



Project: JEC FGD CCR-Revised Report

Pace Project No.: 60449065

Date: 04/26/2024 03:24 PM

Sample: FDG-2-031424	Lab ID: 604	49065002	Collected: C	3/14/2	4 12:05	Received: 03	/14/24 17:30 N	fatrix: Water				
Parameters	Results	Units	Report L	imit	DF	Prepared	Analyzed	CAS No.	Qual			
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7											
	Pace Analytical Services - Kansas City											
Boron, Total Recoverable	0.20	mg/L		0.10	1	03/20/24 10:30	03/21/24 14:57	7440-42-8				
Calcium, Total Recoverable	188	mg/L		0.20	1	03/20/24 10:30	03/21/24 14:57	7440-70-2				
2540C Total Dissolved Solids	Analytical Meth	nod: SM 25	40C									
	Pace Analytica	l Services -	Kansas City									
Total Dissolved Solids	864	mg/L		13.3	1		03/21/24 11:36					
4500H+ pH, Electrometric	Analytical Meth	nod: SM 450	00-H+B									
•	Pace Analytica	l Services -	Kansas City									
pH at 25 Degrees C	7.4	Std. Units	i	0.10	1		03/21/24 11:38		H6			
300.0 IC Anions 28 Days	Analytical Meth	nod: EPA 30	0.0									
•	Pace Analytica	l Services -	Kansas City									
Chloride	78.4	mg/L		50.0	50		03/21/24 14:56	16887-00-6				
Fluoride	<0.20	mg/L		0.20	1		03/21/24 14:31	16984-48-8				
Sulfate	332	mg/L		50.0	50		03/21/24 14:56	14808-79-8				



Project: JEC FGD CCR-Revised Report

Pace Project No.: 60449065

Date: 04/26/2024 03:24 PM

Sample: FDG-3-031424	Lab ID: 604	49065003	Collected: 03/14/2	24 11:30	Received: 03	/14/24 17:30 N	Matrix: Water					
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual				
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7											
	Pace Analytical Services - Kansas City											
Boron, Total Recoverable	0.10	mg/L	0.10	1	03/20/24 10:30	03/21/24 14:59	7440-42-8					
Calcium, Total Recoverable	143	mg/L	0.20	1	03/20/24 10:30	03/21/24 14:59	7440-70-2					
2540C Total Dissolved Solids	Analytical Meth	nod: SM 25	40C									
	Pace Analytica	l Services -	Kansas City									
Total Dissolved Solids	712	mg/L	13.3	1		03/21/24 11:36						
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B											
•	Pace Analytica	l Services -	Kansas City									
pH at 25 Degrees C	7.5	Std. Units	0.10	1		03/21/24 11:41		H6				
300.0 IC Anions 28 Days	Analytical Meth	nod: EPA 30	0.00									
•	Pace Analytica	l Services -	Kansas City									
Chloride	84.4	mg/L	50.0	50		03/21/24 15:33	16887-00-6					
Fluoride	<0.20	mg/L	0.20	1		03/21/24 15:21	16984-48-8					
Sulfate	201	mg/L	50.0	50		03/21/24 15:33	14808-79-8					



Project: JEC FGD CCR-Revised Report

Pace Project No.: 60449065

Date: 04/26/2024 03:24 PM

Sample: FDG-4-031424	Lab ID: 604	49065004	Collected: 03/1	1/24 12:3	5 Received: 03	3/14/24 17:30 N	Matrix: Water			
Parameters	Results	Units	Report Limi	DF	Prepared	Analyzed	CAS No.	Qual		
200.7 Metals, Total	Analytical Met	hod: EPA 200	0.7 Preparation N	lethod: E	PA 200.7					
	Pace Analytica	al Services - I	Kansas City							
Boron, Total Recoverable	0.43	mg/L	0.1	0 1	03/20/24 10:30	03/21/24 15:01	7440-42-8			
Calcium, Total Recoverable	319	mg/L	0.2	0 1	03/20/24 10:30	03/21/24 15:01	7440-70-2			
2540C Total Dissolved Solids	Analytical Met	hod: SM 254	OC .							
	Pace Analytica	al Services - I	Kansas City							
Total Dissolved Solids	1460	mg/L	40.	0 1		03/21/24 11:36				
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B									
-	Pace Analytica	al Services - I	Kansas City							
pH at 25 Degrees C	7.5	Std. Units	0.1	0 1		03/21/24 11:43		H6		
pH at 25 Degrees C	7.2	Std. Units	0.1	0 1		04/23/24 13:11		H6		
300.0 IC Anions 28 Days	Analytical Met	hod: EPA 300	0.0							
•	Pace Analytica	al Services - I	Kansas City							
Chloride	228	mg/L	50.	50		04/23/24 13:05	16887-00-6	H1		
Fluoride	0.67	mg/L	0.2	0 1		03/21/24 16:10	16984-48-8			
Fluoride	<0.20	mg/L	0.2	0 1		04/23/24 15:45	16984-48-8	H1,N2		
Sulfate	879	mg/L	50.	50		04/23/24 13:05	14808-79-8	H1		



Project: JEC FGD CCR-Revised Report

Pace Project No.: 60449065

Date: 04/26/2024 03:24 PM

Sample: FDG-6-031424	Lab ID: 604	49065005	Collected: 03/14/2	24 10:55	Received: 03	/14/24 17:30 N	Natrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual			
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7										
	Pace Analytical Services - Kansas City										
Boron, Total Recoverable	10.8	mg/L	0.10	1	03/20/24 10:30	03/21/24 15:04	7440-42-8				
Calcium, Total Recoverable	608	mg/L	0.20	1	03/20/24 10:30	03/21/24 15:04	7440-70-2				
2540C Total Dissolved Solids	Analytical Meth	nod: SM 25	40C								
	Pace Analytica	l Services -	Kansas City								
Total Dissolved Solids	7820	mg/L	200	1		03/21/24 11:36					
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B										
-	Pace Analytica	l Services -	Kansas City								
pH at 25 Degrees C	7.2	Std. Units	0.10	1		03/20/24 12:03		H6			
300.0 IC Anions 28 Days	Analytical Meth	nod: EPA 30	0.0								
·	Pace Analytica	l Services -	Kansas City								
Chloride	2270	mg/L	500	500		03/22/24 18:30	16887-00-6				
Fluoride	0.52	mg/L	0.20	1		03/21/24 16:35	16984-48-8				
Sulfate	2840	mg/L	500	500		03/22/24 18:30	14808-79-8				



Project: JEC FGD CCR-Revised Report

Pace Project No.: 60449065

Date: 04/26/2024 03:24 PM

Sample: FDG-9-031424	Lab ID: 604	49065006	Collected:	03/14/2	4 12:40	Received: 03	/14/24 17:30 M	latrix: Water	
Parameters	Results	Units	Report	Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Met	hod: EPA 20	0.7 Preparati	on Met	hod: EP	A 200.7			
	Pace Analytica	al Services -	Kansas City						
Boron, Total Recoverable Calcium, Total Recoverable	0.46 132	mg/L mg/L		0.10 0.20	1 1		03/21/24 15:13 03/21/24 15:13		
2540C Total Dissolved Solids	Analytical Met Pace Analytica								
Total Dissolved Solids	761	mg/L		13.3	1		03/21/24 11:36		
4500H+ pH, Electrometric	Analytical Met Pace Analytica								
pH at 25 Degrees C	7.7	Std. Units	i	0.10	1		03/21/24 11:46		H6
300.0 IC Anions 28 Days	Analytical Met Pace Analytica								
Chloride Chloride Fluoride Sulfate	67.5 69.1 <0.20 314	mg/L mg/L mg/L mg/L		50.0 50.0 0.20 50.0	50 50 1 50		03/21/24 17:12 04/23/24 13:29 04/23/24 13:17 03/21/24 17:12	16887-00-6 16984-48-8 14808-79-8	H1 H1,N2
Sulfate	336	mg/L		50.0	50		04/23/24 13:29	14808-79-8	H1



Project: JEC FGD CCR-Revised Report

Pace Project No.: 60449065

Date: 04/26/2024 03:24 PM

Sample: JEC-FDG-DUP-031424	Lab ID: 6044	19065007	Collected: 03/14/2	24 11:40	Received: 03	/14/24 17:30 N	/latrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual			
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7										
	Pace Analytical Services - Kansas City										
Boron, Total Recoverable	<0.10	mg/L	0.10	1	03/20/24 10:30	03/21/24 15:15	7440-42-8				
Calcium, Total Recoverable	101	mg/L	0.20	1	03/20/24 10:30	03/21/24 15:15	7440-70-2				
2540C Total Dissolved Solids	Analytical Meth	od: SM 25	40C								
	Pace Analytical	Services -	Kansas City								
Total Dissolved Solids	533	mg/L	10.0	1		03/21/24 11:37					
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B										
•	Pace Analytical	Services -	Kansas City								
pH at 25 Degrees C	7.4	Std. Units	0.10	1		03/21/24 11:47		H6			
300.0 IC Anions 28 Days	Analytical Meth	od: EPA 30	0.0								
•	Pace Analytical	Services -	Kansas City								
Chloride	86.6	mg/L	50.0	50		03/21/24 17:36	16887-00-6				
Fluoride	0.26	mg/L	0.20	1		03/21/24 17:24	16984-48-8				
Sulfate	117	mg/L	50.0	50		03/21/24 17:36	14808-79-8				



Boron

Calcium

Date: 04/26/2024 03:24 PM

QUALITY CONTROL DATA

Project: JEC FGD CCR-Revised Report

Pace Project No.: 60449065

QC Batch: 887344 Analysis Method: EPA 200.7

QC Batch Method: EPA 200.7 Analysis Description: 200.7 Metals, Total

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60449065001, 60449065002, 60449065003, 60449065004, 60449065005, 60449065006, 60449065007

METHOD BLANK: 3512345 Matrix: Water

Associated Lab Samples: 60449065001, 60449065002, 60449065003, 60449065004, 60449065005, 60449065006, 60449065007

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

LABORATORY CONTROL SAMPLE: 3512346

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3512347 3512348 MS MSD 60449065001 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Result Conc. Conc. Result Result % Rec % Rec Limits **RPD** RPD Qual Boron mg/L 0.10 1 1 1.1 1.1 99 70-130 2 20 Calcium 104 10 10 113 111 99 70-130 2 20 mg/L 73

MATRIX SPIKE SAMPLE: 3512349 60449066003 MS MS Spike % Rec Parameter Units Result Conc. Result % Rec Limits Qualifiers 3.5 70-130 Boron 4.6 102 mg/L 1 546 10 549 70-130 M1 Calcium mg/L 38

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



Project: JEC FGD CCR-Revised Report

Pace Project No.: 60449065

QC Batch: 887513 Analysis Method: SM 2540C

QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60449065001, 60449065002, 60449065003, 60449065004, 60449065005, 60449065006, 60449065007

METHOD BLANK: 3513109 Matrix: Water

Associated Lab Samples: 60449065001, 60449065002, 60449065003, 60449065004, 60449065005, 60449065006, 60449065007

Blank Reporting

Parameter Units Result Limit Analyzed Qualifiers

Total Dissolved Solids mg/L <5.0 5.0 03/21/24 11:35

LABORATORY CONTROL SAMPLE: 3513110

Spike LCS LCS % Rec Conc. Result % Rec Limits Qualifiers Parameter Units **Total Dissolved Solids** 2000 1830 92 80-120 mg/L

SAMPLE DUPLICATE: 3513111

60449026001 Dup Max Parameter Units Result Result **RPD RPD** Qualifiers 489 **Total Dissolved Solids** 3 mg/L 507 10

SAMPLE DUPLICATE: 3513112

Date: 04/26/2024 03:24 PM

60449065006 Dup Max RPD RPD Parameter Units Result Result Qualifiers Total Dissolved Solids 761 793 mg/L 4 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.

(913)599-5665



QUALITY CONTROL DATA

Project: JEC FGD CCR-Revised Report

Pace Project No.: 60449065

QC Batch: 887322 Analysis Method: SM 4500-H+B
QC Batch Method: SM 4500-H+B Analysis Description: 4500H+B pH

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60449065005

SAMPLE DUPLICATE: 3512242

Date: 04/26/2024 03:24 PM

ParameterUnits60449215003 ResultDup ResultMax RPDMax RPDQualifierspH at 25 Degrees CStd. Units8.99.015 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.

(913)599-5665



QUALITY CONTROL DATA

Project: JEC FGD CCR-Revised Report

Pace Project No.: 60449065

QC Batch: 887529 Analysis Method: SM 4500-H+B
QC Batch Method: SM 4500-H+B Analysis Description: 4500H+B pH

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60449065001, 60449065002, 60449065003, 60449065004, 60449065006, 60449065007

SAMPLE DUPLICATE: 3513165

Date: 04/26/2024 03:24 PM

60448977001 Dup Max Parameter Units Result RPD RPD Qualifiers Result pH at 25 Degrees C 6.4 6.7 5 H6 Std. Units 5

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



Project: JEC FGD CCR-Revised Report

Pace Project No.: 60449065

QC Batch: 891664 Analysis Method: SM 4500-H+B
QC Batch Method: SM 4500-H+B Analysis Description: 4500H+B pH

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60449065004

SAMPLE DUPLICATE: 3529109

Date: 04/26/2024 03:24 PM

60449052003 Dup Max Parameter Units Result RPD RPD Qualifiers Result pH at 25 Degrees C 8.0 8.1 2 5 H6 Std. Units

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



Project: JEC FGD CCR-Revised Report

Pace Project No.: 60449065

Date: 04/26/2024 03:24 PM

QC Batch: 887337 Analysis Method: EPA 300.0

QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60449065001, 60449065002, 60449065003, 60449065004, 60449065005, 60449065006, 60449065007

METHOD BLANK: 3512315 Matrix: Water

Associated Lab Samples: 60449065001, 60449065002, 60449065003, 60449065004, 60449065005, 60449065006, 60449065007

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

MATRIX SPIKE & MATRIX SP	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3512317											
			MS	MSD								
		60449052001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	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						
		60449065002	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% 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.



Project: JEC FGD CCR-Revised Report

Pace Project No.: 60449065

QC Batch: 891537 Analysis Method: EPA 300.0

QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60449065004, 60449065006

METHOD BLANK: 3528658 Matrix: Water

Associated Lab Samples: 60449065004, 60449065006

Blank Reporting Limit Qualifiers Parameter Units Result Analyzed Chloride mg/L <1.0 1.0 04/23/24 10:31 Fluoride mg/L < 0.20 0.20 04/23/24 10:31 N2 Sulfate mg/L 04/23/24 10:31 <1.0 1.0

LABORATORY CONTROL SAMPLE: 3528659

Date: 04/26/2024 03:24 PM

		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
Chloride	mg/L		4.8	97	90-110	
Fluoride	mg/L	2.5	2.5	100	90-110	N2
Sulfate	mg/L	5	5.0	99	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.



QUALIFIERS

Project: JEC FGD CCR-Revised Report

Pace Project No.: 60449065

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

Date: 04/26/2024 03:24 PM

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

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A

complete list of accreditations/certifications is available upon request.



QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: JEC FGD CCR-Revised Report

Pace Project No.: 60449065

Date: 04/26/2024 03:24 PM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60449065001	FGD-1-031424	EPA 200.7	887344	EPA 200.7	887419
60449065002	FDG-2-031424	EPA 200.7	887344	EPA 200.7	887419
60449065003	FDG-3-031424	EPA 200.7	887344	EPA 200.7	887419
60449065004	FDG-4-031424	EPA 200.7	887344	EPA 200.7	887419
60449065005	FDG-6-031424	EPA 200.7	887344	EPA 200.7	887419
60449065006	FDG-9-031424	EPA 200.7	887344	EPA 200.7	887419
60449065007	JEC-FDG-DUP-031424	EPA 200.7	887344	EPA 200.7	887419
60449065001	FGD-1-031424	SM 2540C	887513		
60449065002	FDG-2-031424	SM 2540C	887513		
60449065003	FDG-3-031424	SM 2540C	887513		
60449065004	FDG-4-031424	SM 2540C	887513		
60449065005	FDG-6-031424	SM 2540C	887513		
60449065006	FDG-9-031424	SM 2540C	887513		
60449065007	JEC-FDG-DUP-031424	SM 2540C	887513		
60449065001	FGD-1-031424	SM 4500-H+B	887529		
60449065002	FDG-2-031424	SM 4500-H+B	887529		
60449065003	FDG-3-031424	SM 4500-H+B	887529		
60449065004	FDG-4-031424	SM 4500-H+B	887529		
60449065004	FDG-4-031424	SM 4500-H+B	891664		
60449065005	FDG-6-031424	SM 4500-H+B	887322		
60449065006	FDG-9-031424	SM 4500-H+B	887529		
60449065007	JEC-FDG-DUP-031424	SM 4500-H+B	887529		
60449065001	FGD-1-031424	EPA 300.0	887337		
60449065002	FDG-2-031424	EPA 300.0	887337		
60449065003	FDG-3-031424	EPA 300.0	887337		
60449065004	FDG-4-031424	EPA 300.0	887337		
60449065004	FDG-4-031424	EPA 300.0	891537		
60449065005	FDG-6-031424	EPA 300.0	887337		
60449065006	FDG-9-031424	EPA 300.0	887337		
60449065006	FDG-9-031424	EPA 300.0	891537		
60449065007	JEC-FDG-DUP-031424	EPA 300.0	887337		

Pace MALETICAL SERVICES

DC#_Title: ENV-FRM-LENE-0009_Sample

WO#:60449065

Revision: 2 Effective Date: 01/12/2022

Client Name:		
Courier: FedEx □ UPS □ VIA □ Clay □	PEX 🗆 ECI 🗆	Pace □ Xroads □ Clien(□ Other □
Tracking #: Pac	ce Shipping Label Use	ed? Yes □ No∕⊡
Custody Seal on Cooler/Box Present: Yes ☐ No ☐	Seals intact: Yes	A No□
Packing Material: Bubble Wrap □ Bubble Bags [☐ Foam ☐	None □ Other 🗗 🕡 (
Thermometer Used: To 95 Type of	fice: (Wet) Blue No	
Cooler Temperature (°C): As-read <u>U. S</u> Corr. Fact	or O > Correc	ted 1,5 Date and initials of person examining contents: 01/5.20
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:	ZYes □No □N/A	
Short Hold Time analyses (<72hr):	□Yes ZNo □N/A	
Rush Turn Around Time requested:	□Yes ZNo □N/A	
Sufficient volume:	fyes □No □N/A	
Correct containers used:	es □No □N/A	
Pace containers used:	Ves □No □N/A	
Containers intact:	ZYes □No □N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	□Yes □No □N/A	
Filtered volume received for dissolved tests?	□Yes □No □X/A	
Sample labels match COC: Date / time / ID / analyses	Ayes □No □N/A	
Samples contain multiple phases? Matrix: W	□Yes □No □N/A	
Containers requiring pH preservation in compliance?	r Yes □No □N/A	List sample IDs, volumes, lot #'s of preservative and the
(HNO ₃ , H ₂ SO ₄ , HCI<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO)	67187	date/time added.
Cyanide water sample checks:	Q 1 O I	9
ead acetate strip turns dark? (Record only)	□Yes □No	
Potassium iodide test strip turns blue/purple? (Preserve)	□Yes □No	
rip Blank present:	□Yes □No ZIN/A	
leadspace in VOA vials (>6mm):	□Yes □No ØN/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		Field Data Required? Y / N
Person Contacted: Date/Tir	ne:	
comments/ Resolution:		
roject Manager Review:	Date	·

Pace® Location Requested (City/State): Pace Analytical Kansas					CHAIN-OF-CUSTODY Analytical Request Document						LAB USE ONLY- Affix Workorder/Login Label Here																							
Company Name: Eve Street Address: 818	8 Loiret Blvd., Lenexa, KS rgy Kansas Central, Ir S Kansas Avenue, To	nc.	2			o: Jake Hu (913)63 jake.hur	L DOCUMENT - Co	mplete all rele							1980年					i ructions														
Customer Project #:															Specify (Container	Size **					ize: (1) 1L, (2) 5												
Project Name: JEC	FGD CCR				Invoice To:	Jeffrey (Center					3	2	3								0mL, (6) 40mL v 90mL, (10) Oth		e, (8)										
					Invoice E-Mail:	evergya	p@onlinecaptur	ecenter.com	1					Ident	ify Contain	er Preser	vative T	/pe***		-	** Preservat	ive Types: (1) N	one (2) HNO:	3 (3)										
Site Collection Info/Facility	y ID (as applicable):				Purchase Order # applicable):	(if WSTR-2	000095397					2	1	1	Analy	sis Reque	sted			H	12SO4, (4) HC	l, (5) NaOH, (6) od, Thiosulfate	Zn Acetate, (7	7)										
			1		Quote #:																Proj. Mg	r:		1_										
] AK [] PT []	MT [X]CT			County / State or	igin of sample(s): Kansas														Alice S			ed for										
Data Deliverables:		Regulatory Prog	gram (DW	, RCRA, et	c.) as applicable:	Reportab	le []Yes [X	No				1	9								AcctNun	n / Client ID:		identifi										
[]LevelII []LevelI	III [] Level IV		- D.	- h (D			1200					ļ	Total Dissolved Solids								2			e ide										
		[] Same Day		-	pproval require Day [] 3 Day [DW PWS	ID # or WW Pe	rmit # as	applicable	1:		g								Table #:			nanc										
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* Matrix Codes (Insert in N	vlatrix box below): Drink	ing Water (DW),	Ground V	Vater (GW), Waste Water (V	VW), Product (I	P), Soil/Solid (SS), C	il (OL), Wipe ((WP), Ti	ssue (TS),	Bioassay		=	<u>p</u>								Bottle Ord. I	D:	- J. G.										
(B), Vapor (V), Surface Wat	ter (SW),Sediment (SED)	, Sludge (SL), Cau	ılk (CK), L	eachate (L	L), Biosolid (BS), C	ther (OT)						B,Ca	🌣	0.							EZ 308			ation										
Custo	omer Sample ID		Matrix *	Matrix *	Matrix *	Matrix 1	Matrix *	Matrix *	Matrix *	Matrix *	Matrix *	Matrix '	Matrix *	Comp /	Composi	te Start	Collected or Co	mposite End	#	Res. C	hlorine] =	2540C	pH, 300.0 CI,F,SO4										serv
				Grab	Date	Time	Date	Time	Cont.	Results	Units	200.7	254	핕							Sai	mple Com	ment	P										
F	GD-1-031424		WT	Grab		•	3/14/2024	1140	3	:	14°)	X	X	X																				
Fe	GD-2-031424		WT	Grab	-	•	3/14/2024	1205	3	*	343	Х	X	X																				
F	GD-3-031424		WT	Grab		•	3/14/2024	3/14/2024	1130	3	3	29 00	Х	X	X			_			Ш				\perp									
F	GD-4-031424		WT	Grab	•	3.5	3/14/2024	1235	3	٠	150	X	X	X						Ш				\perp										
F(GD-6-031424		WT	Grab	-	-	3/14/2024	1055	3	•	127	Х	Х	X						Ш				_										
F	GD-9-031424		WT	Grab	-		3/14/2024	1240	3	٠	(4):	Х	X	Х																				
JEC-F	GD-DUP-031424		WT	Grab	•	•	3/14/2024	1140	3	•	350	X	X	X						Ш				\perp										
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Additional Instructions fro	om Pace®:					Collected By: (Printed Nam		Matt Var	nderPut	ten				marks /	Special Co	nditions /	Possible	e Hazaro	is:															
						Signature:						# Co	olers:		Thermomet	g	Corre	ection Fac	tor (°C):	Obs. To	- Lie 8	Corrected To	emp. (*C)	On Ice:										
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Relinquished by/Company: (Sign	nature)			Date/Time:			Received by/Compan	y: (Signature)							Date/Time:					Delivere	d by: [] l	n- Person [] Courier											
Relibquished by/Company: (Sign	nature)			Date/Time:			Received by/Compan	y: (Signature)							Date/Time:						[] FedEX	[] UPS	[] Other	г										
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ATTACHMENT 2-2 September 2024 Semiannual Sampling Event Laboratory Analytical Report





September 19, 2024

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

RE: Project: JEC FGD CCR

Pace Project No.: 60459968

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@pacelabs.com

alice Spiller

(913)599-5665

PM Lab Management

Enclosures

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







CERTIFICATIONS

Project: JEC FGD CCR
Pace Project No.: 60459968

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



SAMPLE SUMMARY

Project: JEC FGD CCR
Pace Project No.: 60459968

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60459968001	FGD-1-090424	Water	09/04/24 12:00	09/05/24 17:05
60459968002	FGD-2-090324	Water	09/03/24 16:55	09/05/24 17:05
60459968003	FGD-3-090324	Water	09/03/24 16:20	09/05/24 17:05
60459968004	FGD-4-090324	Water	09/03/24 15:40	09/05/24 17:05
60459968005	FGD-6-090424	Water	09/04/24 12:50	09/05/24 17:05
60459968006	FGD-9-090324	Water	09/03/24 17:25	09/05/24 17:05
60459968007	JEC-FGD-DUP-090324	Water	09/03/24 15:40	09/05/24 17:05



SAMPLE ANALYTE COUNT

Project: JEC FGD CCR
Pace Project No.: 60459968

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60459968001	FGD-1-090424	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
60459968002	FGD-2-090324	EPA 200.7	Method Analysts Reported Late EPA 200.7 ARMN 2 F EPA 300.0 MLL 3 P/ SM 2540C TML 1 F SM 4500-H+B TML 1 F EPA 300.0 MLL 3 P/ SM 2540C TML 1 F SM 4500-H+B TML 1 F EPA 300.0 MLL 3 P/ SM 2540C TML 1 F SM 4500-H+B TML 1 F EPA 300.0 MLL 3 P/ SM 2540C TML 1 F EPA 300.0 MLL 3 P/ SM 2540C TML 1 F EPA 300.0 MLL 3 P/ SM 2540C TML 1 F SM 2540C TML 1 F SM 2540C TML 1 F EPA 300.0 </td <td>PASI-K</td>	PASI-K	
		EPA 300.0	MLL	3	PASI-SA
		SM 2540C	TML	1	PASI-K
		SM 4500-H+B	TML	3 1 1 2 3 1 1 2 3 1 1 2 3 1 1 2 3 1 1 2 3 3 1 1 2 3 3 1 1 2 3 1 1 2 3	PASI-K
60459968003	FGD-3-090324	EPA 200.7	ARMN	2	PASI-K
		EPA 300.0	MLL	3	PASI-SA
		SM 2540C	MLL 3 TML 1 TML 1 ARMN 2 MLL 3 TML 1	1	PASI-K
		SM 4500-H+B	TML	1	PASI-K
60459968004	FGD-4-090324	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
60459968005	FGD-6-090424	EPA 200.7	ARMN	2	PASI-K
	459968002 FGD-2-090324 459968003 FGD-3-090324 459968004 FGD-4-090324 459968005 FGD-6-090424	EPA 300.0	MLL	3	PASI-SA
		SM 2540C	TML	1 2 3 1 1 2 3 1 1 2 3 1 1 2 3 1 1 1 2 3 1 1 1 2 3 1 1 1 2 3 1 1 1 2 3 1 1 1 1	PASI-K
		SM 4500-H+B	TML	1	PASI-K
60459968006	FGD-9-090324	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
60459968007	JEC-FGD-DUP-090324	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

(913)599-5665



PROJECT NARRATIVE

Project: JEC FGD CCR Pace Project No.: 60459968

Method: EPA 200.7

Description:200.7 Metals, TotalClient:Evergy_Haley & AldrichDate:September 19, 2024

General Information:

7 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:



Project: JEC FGD CCR
Pace Project No.: 60459968

Method: EPA 300.0

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

General Information:

7 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.



Project: JEC FGD CCR
Pace Project No.: 60459968

Method: SM 2540C

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

General Information:

7 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.



Project: JEC FGD CCR
Pace Project No.: 60459968

Method: SM 4500-H+B

Description: 4500H+ pH, Electrometric
Client: Evergy_Haley & Aldrich
Date: September 19, 2024

General Information:

7 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.

- FGD-1-090424 (Lab ID: 60459968001)
- FGD-2-090324 (Lab ID: 60459968002)
- FGD-3-090324 (Lab ID: 60459968003)
- FGD-4-090324 (Lab ID: 60459968004)
- FGD-6-090424 (Lab ID: 60459968005)
- FGD-9-090324 (Lab ID: 60459968006)
- JEC-FGD-DUP-090324 (Lab ID: 60459968007)

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.



Project: JEC FGD CCR
Pace Project No.: 60459968

Date: 09/19/2024 02:49 PM

Sample: FGD-1-090424	Lab ID: 604	59968001	Collected: 09/04	1/24 12:0	0 Received: 09	0/05/24 17:05 N	fatrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual		
200.7 Metals, Total	Analytical Metl	nod: EPA 20	0.7 Preparation M	ethod: E	PA 200.7					
	Pace Analytica	l Services -	Kansas City							
Boron, Total Recoverable	0.10	mg/L	0.1) 1	09/06/24 15:06	09/18/24 12:38	7440-42-8			
Calcium, Total Recoverable	104	mg/L	0.2) 1	09/06/24 15:06	09/18/24 12:38	7440-70-2			
300.0 IC Anions 28 Days	Analytical Meth	nod: EPA 30	0.0							
	Pace Analytica	l Services -	Salina							
Chloride	61.4	mg/L	10.) 10		09/10/24 23:23	16887-00-6			
Fluoride	0.31	mg/L	0.1) 1		09/10/24 18:30	16984-48-8			
Sulfate	98.6	mg/L	10.	10		09/10/24 23:23	14808-79-8			
2540C Total Dissolved Solids	Analytical Method: SM 2540C									
	Pace Analytica	l Services -	Kansas City							
Total Dissolved Solids	528	mg/L	10.) 1		09/09/24 12:13				
4500H+ pH, Electrometric	Analytical Meth	nod: SM 450	00-H+B							
-	Pace Analytica	l Services -	Kansas City							
pH at 25 Degrees C	7.3	Std. Units	0.1) 1		09/10/24 17:18		H6		



Project: JEC FGD CCR
Pace Project No.: 60459968

Date: 09/19/2024 02:49 PM

Sample: FGD-2-090324	Lab ID: 604	59968002	Collected: 09/03	24 16:55	Received: 09	0/05/24 17:05 N	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual		
200.7 Metals, Total	Analytical Met	hod: EPA 20	0.7 Preparation Me	ethod: EF	PA 200.7					
	Pace Analytica	al Services -	Kansas City							
Boron, Total Recoverable	0.20	mg/L	0.10	1	09/06/24 15:06	09/18/24 11:48	7440-42-8			
Calcium, Total Recoverable	212	mg/L	0.20	1	09/06/24 15:06	09/18/24 11:48	7440-70-2			
300.0 IC Anions 28 Days	Analytical Met	hod: EPA 30	0.0							
	Pace Analytica	al Services -	Salina							
Chloride	78.8	mg/L	10.0	10		09/10/24 23:37	16887-00-6			
Fluoride	0.25	mg/L	0.10	1		09/10/24 18:44	16984-48-8			
Sulfate	393	mg/L	50.0	50		09/11/24 00:21	14808-79-8			
2540C Total Dissolved Solids	Analytical Method: SM 2540C									
	Pace Analytica	al Services -	Kansas City							
Total Dissolved Solids	1050	mg/L	20.0	1		09/09/24 12:11				
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B									
	Pace Analytica	al Services -	Kansas City							
pH at 25 Degrees C	7.0	Std. Units	0.10	1		09/09/24 16:36		H6		



Project: JEC FGD CCR
Pace Project No.: 60459968

Date: 09/19/2024 02:49 PM

Sample: FGD-3-090324	Lab ID: 604	59968003	Collected: 09/03	24 16:20	Received: 09)/05/24 17:05 N	Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qua
200.7 Metals, Total	Analytical Met	hod: EPA 20	00.7 Preparation Me	ethod: EF	PA 200.7			
	Pace Analytica	al Services -	Kansas City					
Boron, Total Recoverable	0.10	mg/L	0.10	1	09/06/24 15:06	09/18/24 11:50	7440-42-8	
Calcium, Total Recoverable	147	mg/L	0.20	1	09/06/24 15:06	09/18/24 11:50	7440-70-2	
300.0 IC Anions 28 Days	Analytical Met	hod: EPA 30	0.00					
	Pace Analytica	al Services -	Salina					
Chloride	77.8	mg/L	10.0	10		09/11/24 00:36	16887-00-6	
Fluoride	0.24	mg/L	0.10	1		09/10/24 18:59	16984-48-8	
Sulfate	216	mg/L	20.0	20		09/11/24 00:51	14808-79-8	
2540C Total Dissolved Solids	Analytical Met	hod: SM 25	40C					
	Pace Analytica	al Services -	Kansas City					
Total Dissolved Solids	752	mg/L	13.3	1		09/09/24 12:12		
4500H+ pH, Electrometric	Analytical Met	hod: SM 450	00-H+B					
	Pace Analytica	al Services -	Kansas City					
pH at 25 Degrees C	7.1	Std. Units	0.10	1		09/09/24 16:35		H6



Project: JEC FGD CCR
Pace Project No.: 60459968

Date: 09/19/2024 02:49 PM

Sample: FGD-4-090324	Lab ID: 604	59968004	Collected: 09/0	03/24	15:40	Received: 09	/05/24 17:05 N	Matrix: Water	
Parameters	Results	Units	Report Lim	it	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Met	nod: EPA 20	0.7 Preparation	Metho	od: EP	A 200.7			
	Pace Analytica	al Services -	Kansas City						
Boron, Total Recoverable	0.41	mg/L	0.	10	1	09/06/24 15:06	09/18/24 11:52	7440-42-8	
Calcium, Total Recoverable	300	mg/L	0.2	20	1	09/06/24 15:06	09/18/24 11:52	7440-70-2	
300.0 IC Anions 28 Days	Analytical Met	hod: EPA 30	0.0						
	Pace Analytica	l Services -	Salina						
Chloride	177	mg/L	20	0.0	20		09/11/24 01:05	16887-00-6	
Fluoride	0.20	mg/L	0.	10	1		09/10/24 19:14	16984-48-8	
Sulfate	720	mg/L	10	00	100		09/11/24 01:20	14808-79-8	
2540C Total Dissolved Solids	Analytical Met	hod: SM 254	40C						
	Pace Analytica	al Services -	Kansas City						
Total Dissolved Solids	1850	mg/L	66	5.7	1		09/09/24 12:12		
4500H+ pH, Electrometric	Analytical Met	hod: SM 450	00-H+B						
-	Pace Analytica	al Services -	Kansas City						
pH at 25 Degrees C	7.0	Std. Units	0.	10	1		09/09/24 16:32		H6



Project: JEC FGD CCR
Pace Project No.: 60459968

Date: 09/19/2024 02:49 PM

Sample: FGD-6-090424	Lab ID: 604	59968005	Collected: 09/04/	24 12:50	Received: 09	0/05/24 17:05 N	Natrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Met	nod: EPA 20	0.7 Preparation Me	ethod: El	PA 200.7			
	Pace Analytica	l Services -	Kansas City					
Boron, Total Recoverable	11.0	mg/L	0.10	1	09/06/24 15:06	09/18/24 11:54	7440-42-8	
Calcium, Total Recoverable	613	mg/L	0.20	1	09/06/24 15:06	09/18/24 11:54	7440-70-2	
300.0 IC Anions 28 Days	Analytical Met	nod: EPA 30	0.0					
	Pace Analytica	l Services -	Salina					
Chloride	2420	mg/L	200	200		09/11/24 01:35	16887-00-6	
Fluoride	1.2	mg/L	0.10	1		09/10/24 19:28	16984-48-8	
Sulfate	2940	mg/L	200	200		09/11/24 01:35	14808-79-8	
2540C Total Dissolved Solids	Analytical Met	nod: SM 254	10C					
	Pace Analytica	l Services -	Kansas City					
Total Dissolved Solids	8100	mg/L	333	1		09/09/24 12:14		
4500H+ pH, Electrometric	Analytical Met	nod: SM 450	00-H+B					
-	Pace Analytica	l Services -	Kansas City					
pH at 25 Degrees C	7.5	Std. Units	0.10	1		09/10/24 17:23		H6



Project: JEC FGD CCR
Pace Project No.: 60459968

Date: 09/19/2024 02:49 PM

Sample: FGD-9-090324	Lab ID: 604	59968006	Collected: 09/03	/24 17:2	5 Received: 09	9/05/24 17:05 N	Natrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Met	nod: EPA 20	0.7 Preparation M	ethod: El	PA 200.7			
	Pace Analytica	l Services -	Kansas City					
Boron, Total Recoverable	0.52	mg/L	0.10	1	09/06/24 15:06	09/18/24 11:55	7440-42-8	
Calcium, Total Recoverable	138	mg/L	0.20	1	09/06/24 15:06	09/18/24 11:55	7440-70-2	
300.0 IC Anions 28 Days	Analytical Met	nod: EPA 30	0.0					
	Pace Analytica	l Services -	Salina					
Chloride	49.2	mg/L	5.0	5		09/11/24 02:04	16887-00-6	
Fluoride	0.42	mg/L	0.10	1		09/10/24 19:43	16984-48-8	
Sulfate	335	mg/L	50.0	50		09/11/24 02:19	14808-79-8	
2540C Total Dissolved Solids	Analytical Met	nod: SM 254	10C					
	Pace Analytica	l Services -	Kansas City					
Total Dissolved Solids	832	mg/L	13.3	1		09/09/24 12:12		
4500H+ pH, Electrometric	Analytical Met	nod: SM 450	00-H+B					
	Pace Analytica	l Services -	Kansas City					
pH at 25 Degrees C	7.2	Std. Units	0.10	1		09/09/24 16:38		H6



Project: JEC FGD CCR
Pace Project No.: 60459968

Date: 09/19/2024 02:49 PM

Sample: JEC-FGD-DUP-090324	Lab ID: 604	59968007	Collected: 09/03/	24 15:40	Received: 09)/05/24 17:05	Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qua
200.7 Metals, Total	Analytical Met	hod: EPA 20	00.7 Preparation Me	thod: EF	PA 200.7			
	Pace Analytica	al Services -	Kansas City					
Boron, Total Recoverable	0.43	mg/L	0.10	1	09/06/24 15:06	09/18/24 11:57	7440-42-8	
Calcium, Total Recoverable	318	mg/L	0.20	1	09/06/24 15:06	09/18/24 11:57	7440-70-2	
300.0 IC Anions 28 Days	Analytical Met	hod: EPA 30	0.00					
	Pace Analytica	al Services -	Salina					
Chloride	186	mg/L	20.0	20		09/11/24 02:33	16887-00-6	
Fluoride	0.21	mg/L	0.10	1		09/10/24 19:58	16984-48-8	
Sulfate	746	mg/L	100	100		09/11/24 03:47	14808-79-8	
2540C Total Dissolved Solids	Analytical Met	hod: SM 25	40C					
	Pace Analytica	al Services -	Kansas City					
Total Dissolved Solids	1750	mg/L	66.7	1		09/09/24 12:12	!	
4500H+ pH, Electrometric	Analytical Met	hod: SM 450	00-H+B					
	Pace Analytica	al Services -	Kansas City					
pH at 25 Degrees C	7.0	Std. Units	0.10	1		09/09/24 16:33	,	H6



Boron

Calcium

Date: 09/19/2024 02:49 PM

QUALITY CONTROL DATA

Project: JEC FGD CCR Pace Project No.: 60459968

QC Batch: 907702 Analysis Method: EPA 200.7

QC Batch Method: EPA 200.7 Analysis Description: 200.7 Metals, Total

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60459968001, 60459968002, 60459968003, 60459968004, 60459968005, 60459968006, 60459968007

METHOD BLANK: 3592651 Matrix: Water

Associated Lab Samples: 60459968001, 60459968002, 60459968003, 60459968004, 60459968005, 60459968006, 60459968007

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

LABORATORY CONTROL SAMPLE: 3592652

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3592663 3592664 MS MSD 60459928004 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Result Conc. Conc. Result Result % Rec % Rec Limits **RPD** RPD Qual Boron 0.64 1 1.6 5 20 mg/L 1 1.6 99 91 70-130 10 283 288 20 M1 Calcium mg/L 255 10 263 80 70-130 8

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



QUALITY CONTROL DATA

Project: JEC FGD CCR
Pace Project No.: 60459968

QC Batch: 908045 Analysis Method: EPA 300.0

QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions

Laboratory: Pace Analytical Services - Salina

Associated Lab Samples: 60459968001, 60459968002, 60459968003, 60459968004, 60459968005, 60459968006, 60459968007

METHOD BLANK: 3593773 Matrix: Water

Associated Lab Samples: 60459968001, 60459968002, 60459968003, 60459968004, 60459968005, 60459968006, 60459968007

Blank Reporting Qualifiers Parameter Units Result Limit Analyzed <1.0 Chloride mg/L 1.0 09/10/24 17:16 Fluoride mg/L <0.10 0.10 09/10/24 17:16 Sulfate mg/L 09/10/24 17:16 <1.0 1.0

LABORATORY CONTROL SAMPLE: 3593774

Date: 09/19/2024 02:49 PM

		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
Chloride	mg/L	5	4.9	98	90-110	
Fluoride	mg/L	2.5	2.5	101	90-110	
Sulfate	mg/L	5	5.0	100	90-110	

MATRIX SPIKE & MATRIX SP	IKE DUPL	ICATE: 3593	775		3593776							
		60459968007	MS Spike	MSD Spike	MS	MSD	MS	MSD	% Rec		Max	
		00439900001	Spike	Spike	IVIO	IVISD	IVIO	IVISD	70 Kec		IVIAX	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Chloride	mg/L	186	100	100	298	301	113	115	80-120	1	15	
Fluoride	mg/L	0.21	2.5	2.5	2.5	2.5	92	91	80-120	1	15	
Sulfate	mg/L	746	500	500	1250	1260	101	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.



QUALITY CONTROL DATA

Project: JEC FGD CCR Pace Project No.: 60459968

QC Batch: 907856 Analysis Method: SM 2540C

QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60459968001, 60459968002, 60459968003, 60459968004, 60459968005, 60459968006, 60459968007

METHOD BLANK: 3593195 Matrix: Water

Associated Lab Samples: 60459968001, 60459968002, 60459968003, 60459968004, 60459968005, 60459968006, 60459968007

Blank Reporting

Parameter Units Result Limit Analyzed Qualifiers

Total Dissolved Solids mg/L <5.0 5.0 09/09/24 12:11

LABORATORY CONTROL SAMPLE: 3593196

Spike LCS LCS % Rec Conc. % Rec Limits Qualifiers Parameter Units Result mg/L **Total Dissolved Solids** 1000 972 97 80-120

SAMPLE DUPLICATE: 3593197

60459968002 Dup Max Parameter Units Result Result **RPD RPD** Qualifiers 1050 **Total Dissolved Solids** 1050 0 mg/L 10

SAMPLE DUPLICATE: 3593198

Date: 09/19/2024 02:49 PM

60460019001 Dup Max RPD RPD Parameter Units Result Result Qualifiers Total Dissolved Solids 33200 mg/L 35000 5 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.

(913)599-5665



QUALITY CONTROL DATA

Project: JEC FGD CCR
Pace Project No.: 60459968

QC Batch: 907853 Analysis Method: SM 4500-H+B
QC Batch Method: SM 4500-H+B Analysis Description: 4500H+B pH

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60459968002, 60459968003, 60459968004, 60459968006, 60459968007

SAMPLE DUPLICATE: 3593189

Date: 09/19/2024 02:49 PM

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

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



QUALITY CONTROL DATA

Project: JEC FGD CCR 60459968

Pace Project No.:

QC Batch: 907980 Analysis Method: SM 4500-H+B QC Batch Method: SM 4500-H+B Analysis Description: 4500H+B pH

> Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60459968001, 60459968005

SAMPLE DUPLICATE: 3593536

Date: 09/19/2024 02:49 PM

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

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



QUALIFIERS

Project: JEC FGD CCR
Pace Project No.: 60459968

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

Date: 09/19/2024 02:49 PM

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

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



QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: JEC FGD CCR
Pace Project No.: 60459968

Date: 09/19/2024 02:49 PM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60459968001	FGD-1-090424	EPA 200.7	907702	EPA 200.7	907742
60459968002	FGD-2-090324	EPA 200.7	907702	EPA 200.7	907742
60459968003	FGD-3-090324	EPA 200.7	907702	EPA 200.7	907742
60459968004	FGD-4-090324	EPA 200.7	907702	EPA 200.7	907742
60459968005	FGD-6-090424	EPA 200.7	907702	EPA 200.7	907742
60459968006	FGD-9-090324	EPA 200.7	907702	EPA 200.7	907742
60459968007	JEC-FGD-DUP-090324	EPA 200.7	907702	EPA 200.7	907742
60459968001	FGD-1-090424	EPA 300.0	908045		
60459968002	FGD-2-090324	EPA 300.0	908045		
60459968003	FGD-3-090324	EPA 300.0	908045		
60459968004	FGD-4-090324	EPA 300.0	908045		
60459968005	FGD-6-090424	EPA 300.0	908045		
60459968006	FGD-9-090324	EPA 300.0	908045		
60459968007	JEC-FGD-DUP-090324	EPA 300.0	908045		
60459968001	FGD-1-090424	SM 2540C	907856		
60459968002	FGD-2-090324	SM 2540C	907856		
60459968003	FGD-3-090324	SM 2540C	907856		
60459968004	FGD-4-090324	SM 2540C	907856		
60459968005	FGD-6-090424	SM 2540C	907856		
60459968006	FGD-9-090324	SM 2540C	907856		
60459968007	JEC-FGD-DUP-090324	SM 2540C	907856		
60459968001	FGD-1-090424	SM 4500-H+B	907980		
60459968002	FGD-2-090324	SM 4500-H+B	907853		
60459968003	FGD-3-090324	SM 4500-H+B	907853		
60459968004	FGD-4-090324	SM 4500-H+B	907853		
60459968005	FGD-6-090424	SM 4500-H+B	907980		
60459968006	FGD-9-090324	SM 4500-H+B	907853		
60459968007	JEC-FGD-DUP-090324	SM 4500-H+B	907853		

				410		
				1100	:6-	
Pace	C#_Title: ENV-FRM-	LENE-0009_S	Sample	60459958	:604595 /	UR)
Rev	vision: 2 Effe	ective Date: 01/	12/2022	Issued by		00
Client Name:	-91 KC					
Courier: FedEx □ UPS □	VÍA ☐ Clay ☐	PEX 🗆 ECI [□ Pac	e □ Xroads □	Client 🗆	10
Tracking #:	Pac	ce Shipping Labe	Used?	′es 📐 No 🗆		
Custody Seal on Cooler/Box Prese		Seals intact: `	Yes 🖒 🛚 1	No □		
Packing Material: Bubble Wra		^		None □ O	ther 🐧	. 1
Thermometer Used:	Type o	of Ice: West Blue	e None	cult	Date and initials	of person/
Cooler Temperature (°C): As-rea	V (.)	tor / Co	orrected _	47	examining conte	
Temperature should be above freezing to	6°C	Valuation				2.60
Chain of Custody present:		Yes No [□N/A			
Chain of Custody relinquished:		Dyes □No □	□N/A			
Samples arrived within holding time:		Yes No [JN/A			
Short Hold Time analyses (<72hr):	ä	□Yes □No □	□N/A			
Rush Turn Around Time requested	d:	□Yes □No □	□N/A			
Sufficient volume:		Yes □No □	□N/A			
Correct containers used:		Yes No [□N/A			
Pace containers used:		Yes 🗆 No 🗆	JN/A			
Containers intact:		7	□N/A			
Unpreserved 5035A / TX1005/1006 s	coils frozon in 49hrs2		JN/A			
Filtered volume received for dissolve			JN/A			
Sample labels match COC: Date / tin	2 1.2		JN/A			
Samples contain multiple phases?	Matrix: W	□Yes No □	□N/A			
Containers requiring pH preservation (HNO ₃ , H ₂ SO ₄ , HCl<2; NaOH>9 Sulfide, I (Exceptions: VOA, Micro, O&G, KS TPH, Cyanide water sample checks:	NaOH>10 Cyanide)	08701		ample IDs, volun time added.	nes, lot #'s of prese	ervative and the
Lead acetate strip turns dark? (Reco	rd only)	□Yes □No				
Potassium iodide test strip turns blue	/purple? (Preserve)	□Yes □No				
Trip Blank present:		□Yes □No □	MV/A			
Headspace in VOA vials (>6mm):		□Yes □No 🏲	KWZ			
Samples from USDA Regulated Area	: State:	□Yes □No 🕽	IN/A			
Additional labels attached to 5035A /			N/A			
Client Notification/ Resolution:	Copy COC to			Field Data Required	1? Y / N	
Person Contacted:	Date/T	ime:				
Comments/ Resolution:						

Date:

Project Manager Review:

Bonn	Pace Location Reques Pace Analytical Kansas	ited (City/Stat	te):		CHAIN-OE-	CUSTODY	' Analytical	Poguest	Dos							LAB USE	ONLY	- Affix V	Vorkor	der/Log	jin Label He	re		<u> </u>
/Pace*	9608 Loiret Blvd., Lenexa, K				Chain-of-Cu	ustody is a LEG	AL DOCUMENT - Co									1	γ	1	($\widehat{}$	111	4 -	e j	Page 24 of 26
Company Name: Street Address:	Evergy Kansas Central, Ir		_		Contact/Report							į		鳢	ď.	h (1	7			411	£ (.)	<u>1</u> 6
prieet Address.	818 S Kansas Avenue, To	река, къ 6661	.2		Phone #:	(913)63						1 3		9	2	() 7					(X	IX	à) ag
					E-Mail:		mphrey@evergy.					1				S	can QF	R Code	for ins	struction	is O			_
Customer Project #:					Cc E-Mail:	skaney(@haleyaldrich.co	m																
Project Name:	JEC FGD CCR)										Spec	ify Contair	er Size *	*				e: (1) 1L, (2) 500m mL, (6) 40mL vial,		
rojece wome.	JEC FOD CCK				Invoice To: Invoice E-Mail:	Jeffrey						3	2	3	3							0mL, (10) Other	(,, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	-,
Site Collection Info/	Facility ID (as applicable)				Purchase Order #		p@onlinecapture	ecenter.com	1					_	_	tainer Pres	ervative	Туре***				e Types: (1) None,		3)
,	, (p ,) _{1/2}				applicable):	T(II WYSTK-Z	000095597					2	1	1	1							(5) NaOH, (6) Zn A d. Thiosulfate, (9)		id, (10)
					Quote #:										T A	nalysis Req	juested			_	MeOH, (11) Oth	ner		
Time Zone Collected	i: []AK []PT []	MT [X]CT	[]E	Т	County / State or	rigin of sample(s): Kansas					1									Proj. Mgr Alice Sp			for
Data Deliverables:		Regulatory Pro	gram (DW	, RCRA, et	tc.) as applicable:	Reportab	le [] Yes [X] No					, n									/ Client ID:		conformance identified for sample.
[] Level II []	Level III [] Level IV												i ii								4	, chemis.		ident
		[] Same Da			approval require Day [] 3 Day [DW PWS	ID# or WW Pe	rmit # as	applicable	:		S P		etri						Table #:			ance
[] EQUIS		Date Results	, , , ,	-, , ,-		10000	Field Filtered (if a	policable): 1	1 Yes	f X I No		.00	8	_	§				1		8 - 81 48			form
[] Other		Requested:					Analysis:					B,Ca	Jiss	804	Electrometric						Profile / T	emplate:		
Matrix Codes (Insets) Matrix Codes (Insets)	ert in Matrix box below): Drink ce Water (SW),Sediment (SED	ting Water (DW)	, Ground V	Water (GW	/), Waste Water (\	WW), Product (P), Soil/Solid (SS), O	il (OL), Wipe ((WP), Tis	sue (TS),	Bioassay	Metals,	Total Dissolved Solids	C,F,	표		- 1					ottle Ord. ID:		non n
		I, sludge (SC), Co		Comp /	Composi		Collected or Cor	mnosite End	#	Res. Cl	lorino	_ §	Ę	으	‡	1 1					EZ 315	0855		vatio
	Sustomer Sample ID		Matrix *	Grab	Date	Time	Date	Time	Cont.	Results		200.7	2540C	300.0	4500H+						San	ple Comme	ent	Preservation
	FGD-1-090424		WT	Grab	9/88	•	9/4/2024	1200	4	22	•	Х	Х	X	X									
	FGD-2-090324		WT	Grab	**	•	9/3/2024	1655	4	180		X	X	X	X									
	FGD-3-090324		WT	Grab	(**)	-	9/3/2024	1620	4	•	25	Х	Х	х	Х									
	FGD-4-090324		WT	Grab	990		9/3/2024	1540	4	•		Х	х	х	х									
	FGD-6-090424		WT	Grab	5型	•	9/4/2024	1250	4	: =1	2:	Х	х	х	х									
	FGD-9-090324		WT	Grab	1	5	9/3/2024	1725	4			х	х	х	х				+	1				
	JEC-FGD-DUP-090324		WT	Grab	S (6)	-	9/3/2024	1540	4	5.75		х	х	х	х		+		+					
													-				+	+	+	+				
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Additional Instruction	ns from Pace®			L		Callant d Bu	I						<u>. </u>											
de donoscoro.	The state of the s					Collected By: (Printed Nam		Jason R	. Fra	nks		Custor	ner Ren	narks /	Special	Condition	s / Possil	ole Hazar	ds:					
						Signature:	0-1-	7	7			# Cor	olers:		Thermo	meter ID:	Co	rrection Fa	ctor (°C):	Obs.	Temp. (*C)	Corrected Temp.	m o	n Ice:
telinquished by/Compar	ny: (Signature)			Date/Time:		Į.	Received by/Company	u R.	tra	inks											10.39	44	Y G	ice.
	son R. Franks	/ SCS		Date/Time:	09/05/2024 / :	1739									Date	15	10	70	5	Tracking	Number:			
				pate/ fillie:			Received by/Company	r: (cognature)							Date/Ti	n≘:				Deliver	ed by: [] In-	Person [] C	Courier	
telinquished by/Compar				Date/Time:			Received by/Company	r: (Signature)							Date/Ti	ne:				1		[]UPS [
telinquished by/Compar	ny: (Signature)			Date/Time:			Received by/Company	: (Signature)							Date/Ti	ne:				Pag			1	-
ubmitting a sample	via this chain of custody cons	titutes acknowli	edement a	nd accent	ance of the Pace®	Terms and Co	nditions found at h	rtor://www.s	na alaka	warmer of	OUD VALUE OF	000000				2 C. O. C. O. C. O. C.				ئــــــــــــــــــــــــــــــــــــــ				

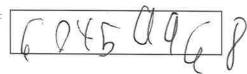
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COC Line Item	Matrix	VG9H	реэн	DG9G	NG9V	DG9O	DG9M	DG9B	BG1U	AG1H	AG1U	AG2U	AG3S	AG4U	AG5U	JGFU	WGKU	WGDU	BP1U	BP2U	BP3U	BP1N	BP3N	ВРЗЕ	BP3S	врзв	BP3Z	WPDU	ZPLC	Other	
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Container Codes

Glass				Plastic		Misc.	
OG9B	40mL bisulfate clear vial	WGKU	8oz clear soil jar	BP1B	1L NAOH plastic	11	Wipe/Swab
G9H	40mL HCI amber voa vial	WGFU	4oz clear soil jar	BP1N	1L HNO3 plastic	SP5T	120mL Coliform Na Thiosulfate
G9M	40mL MeOH clear vial	WG2U	2oz clear soil jar	BP1S	1L H2SO4 plastic	ZPLC	Ziploc Bag
G9Q	40mL TSP amber vial	JGFU	4oz unpreserved amber wide	BP1U	1L unpreserved plastic	AF	Air Filter
G9S	40mL H2SO4 amber vial	AG0U	100mL unores amber glass	BP1Z	1L NaOH, Zn Acetate	C	Air Cassettes
OG9T	40mL Na Thio amber vial	AG1H	1L HCl amber glass	BP2B	500mL NAOH plastic	R	Terracore Kit
G9U	40mL amber unpreserved	AG1S	1L H2SO4 amber glass	BP2N	500mL HNO3 plastic	U	Summa Can
/G9H	40mL HCl clear vial	AG1T	1L Na Thiosulfate clear/amber glass	BP2S	500mL H2SO4 plastic		
/G9T	40mL Na Thio. clear vial	AG1U	1liter unpres amber glass	BP2U	500mL unpreserved plastic	1	
/G9U	40mL unpreserved clear vial	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Acetate		
3G1S	1liter H2SO4 clear glass	AG2S	500mL H2SO4 amber glass	ВР3В	250mL NaOH plastic	Matrix	
G1U	1liter unpres glass	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic - field filtered	WT	Water
3G3H	250mL HCL Clear glass	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic	SL	Solid
3G3U	250mL Unpres Clear glass	AG3U	250mL unpres amber glass	BP3U	250mL unpreserved plastic	NAL	Non-aqueous Liquid
VGDU	16oz clear soil jar	AG4U	125mL unpres amber glass	BP3S	250mL H2SO4 plastic	OL	OIL
		AG5U	100mL unpres amber glass	BP3Z	250mL NaOH, Zn Acetate	WP	Wipe
				BP4U	125mL unpreserved plastic	DW	Drinking Water
				BP4N	125mL HNO3 plastic		
				BP4S	125mL H2SO4 plastic	1	
		A -		WPDU	16oz unpresserved plstic	7	

Work Order Number:



Intra-Regional Chain of Custody





Workorder Name: JEC FGD CCR Owner Received Date: 9/5/2024 Workorder: 60459968 Due Date: 9/20/2024 Received at: Send To Lab: Requested Analysis Pace Analytical Kansas Pace Analytical Salina 528 N. 9th Street 9608 Loiret Blvd. Salina, KS 67401 Lenexa, KS 66219 Phone (913)599-5665 Phone (785)827-1273 Report To: Alice Spiller **Preserved Containers** Sample Collect Date/Time LAB USE ONLY Item | Sample ID Type Lab ID Matrix PS Χ FGD-1-090424 " 9/4/2024 12:00 60459968001 Water Х FGD-2-090324 PS 9/3/2024 16:55 60459968002 Water Х FGD-3-090324 PS 9/3/2024 16:20 60459968003 Water 1 Χ PS FGD-4-090324 9/3/2024 15:40 60459968004 Water 1 Х PS 9/4/2024 12:50 60459968005 Water FGD-6-090424 Χ PS 9/3/2024 17:25 60459968006 Water FGD-9-090324 1 Х PS 60459968007 JEC-FGD-DUP-090324 9/3/2024 15:40 Water Comments Transfers Released By Date/Time Received By Date/Time 300.0 CI,F,SO4 10:24 80 KS sample location: 6090-R2-S2B 3 Cooler Temperature on Receipt 1.4 °C Custody Seal Por N Received on Ice Oor N Samples Intact 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.