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ENVIRONMENTAL CONSULTATION & REMEDIATION

KPRG and Associates, Inc.

FEDERAL CCR COMPLIANCE
ANNUAL GROUNDWATER MONITORING and CORRECTIVE ACTION REPORT - 2023

Midwest Generation, LLC
Joliet #29 Generating Station
1800 Channahon Road
Joliet, Illinois

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January 31, 2024

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This overview of the 2023 groundwater monitoring period is provided in accordance with requirements under Section 257.90(e)(6). Each required item is discussed separately below.

- Section 257.90(e)(6)(i) – At the start of the current monitoring period, the subject CCR unit was operating under the detection monitoring program outlined in Section 257.94.

- Section 257.90(e)(6)(ii) – At the end of the current monitoring period, the subject CCR unit continues to operate under the detection monitoring program outlined in Section 257.94.

- Section 257.90(e)(6)(iii) – The following verified potential statistically significant increases (SSIs) above established background for Appendix III detection monitoring constituents were noted during this reporting period:

    - MW-10 – Chloride (1st quarter); sulfate (all sampling events); total dissolved solids (TDS; all sampling events)
    - MW-03 – TDS (all sampling events); sulfate (all sampling events)
    - MW-04 – Sulfate (all sampling events); TDS (all sampling events)
    - MW-05 – TDS (1st quarter); sulfate (1st and 4th quarters); calcium (1st quarter); boron (1st quarter)

    Well MW-10 is the upgradient monitoring point.

    There was a first quarter elevated boron detection at well MW-05 which was inadvertently not resampled, however, all previous and subsequent analytical data indicates no potential statistically significant detections above the established prediction limit. The potential SSIs for chloride, TDS and sulfate have been addressed under a completed and previously submitted Alternate Source Demonstrations (ASD) in 2021 with determination being made

that the SSIs are not associated with a release from the regulated unit. The fourth quarter 2022 monitoring determined a potential SSI relative to fluoride concentrations at upgradient well location MW-10 and downgradient well locations MW-3 and MW-4. A subsequent ASD dated April 11, 2023 determined that the elevated fluoride in the fourth quarter 2022 was not associated with a potential release from Pond 2 but rather due to a documented temporary change in laboratory analytical method for that parameter.

- Section 257.90(e)(6)(iv) – The subject site is not in assessment monitoring.

- Section 257.90(e)(6)(v) – The subject unit is not under corrective action.

- Section 257.90(e)(6)(vi) – The subject unit is not under corrective action.

1.0 INTRODUCTION

The Detection Monitoring requirements in accordance with the Federal Register, Environmental Protection Agency, 40 CFR Parts 257.94, Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities; Final Rule dated April 17, 2015 (CCR Rule) and subsequent amendments have been completed for the ash pond monitoring wells located at the Midwest Generation, LLC (Midwest Generation) Joliet #29 Generating Station. The wells sampled were selected to meet the monitoring requirements of the CCR Rule for Ash Pond 2 which no longer contains any ash, however, the warning layer and liner are still in place. The monitoring well network around this pond consists of four monitoring wells (MW-3, MW-4, MW-5 and MW-10 [upgradient]) as shown on Figure 1.

This annual report covers the work performed relative to CCR groundwater monitoring for the 2023 calendar year. It does not duplicate information or activities reported in previous years. It is prepared in accordance with Section 257.90(e)(1-6) and summarizes the sampling procedures used, provides an evaluation of groundwater flow conditions, summarizes the analytical data generated and provides a discussion of the statistical evaluations completed as a basis for determining the appropriate next phase of compliance activities.

2.0 FIELD PROCEDURES AND GROUNDWATER FLOW EVALUATION

2.1 Field Procedures

As previously noted, the CCR groundwater monitoring network for Ash Pond 2 consists of four wells (MW-3, MW-4, MW-5 and MW-10) as shown on Figure 1. As part of sampling procedures, the integrity of all monitoring wells was inspected and water levels were obtained using an electronic water level meter (see summary of water level discussion below). During all sampling events, the wells were found in good condition with locked protector casings, and the concrete surface seals were intact.

All groundwater samples were collected using the low-flow sampling technique from dedicated pumps. The samples were not filtered prior to analysis to provide for total metals concentrations as opposed to dissolved metals concentrations. One duplicate sample was collected from a randomly selected monitoring well per sampling event for quality assurance purposes.

2.2 Groundwater Flow Evaluation

Water level data measurements were obtained from each well during each round of groundwater monitoring. A complete round of water levels was collected prior to initiating sampling, and the water level data are summarized in Table 1. The water levels were used to generate a groundwater flow map for each sampling event. These maps are provided as Attachment 1. A review of the maps indicates a consistent generally southerly groundwater flow direction toward the intake channel and a shallow horizontal hydraulic gradient. This is consistent with historical trends. In accordance with general groundwater sampling requirements under Section 257.93(c), Table 2 provides a summary of the flow direction and an estimated rate of groundwater flow for each sampling event. The flow rate was calculated using the following equation:

$$V_s = \frac{K dh}{n_e dl}$$, where

V_s is seepage velocity (distance/time)
K is hydraulic conductivity (distance/time)
dh/dl is hydraulic gradient (unitless)
n_e is effective porosity (unitless)

The hydraulic conductivity used in Table 2 was based on a re-evaluation of slug test data performed by Patrick Engineering as part of a hydrogeologic assessment dated February 2011. The estimated effective porosity of the aquifer materials (0.35) was obtained from literature (Applied Hydrogeology, Fetter, 1980).

3.0 ANALYTICAL DATA AND STATUS OF EVALUATIONS

3.1 Sampling Summary

The groundwater sampling summary from 2023 is provided in Table 3, in accordance with 257.90 (e)(3). Analytical data packages are included in Attachment 2.

3.2 Data Summary

The analytical data from the detection monitoring groundwater samples for Appendix III parameters are provided in Table 4. Quarterly groundwater sampling was completed for Appendix III in 2023 which exceeds the minimum detection monitoring requirements under Section 257.94. The table includes the sample dates and whether the specific well is considered upgradient or downgradient relative to groundwater flow and the regulated unit. For each monitoring event a duplicate sample was collected. Confirmatory resampling in accordance with CCR Compliance Statistical Approach for Groundwater Data Evaluation for Joliet #29 Station dated October 10, 2017 were limited to any potential statistically significant increases (SSI) for specific parameters at specific wells for which previous ASDs were not completed.

Relative to the other potential SSIs for TDS, sulfate, and chloride noted for 2022 sampling, an ASD was completed on October 11, 2021, and was included in the Annual Groundwater Monitoring and Corrective Action Report – 2021 dated January 31, 2022. The results of the ASD concluded that the noted SSIs for TDS, sulfate, and chloride were not associated with a potential release from Ash Pond 2 but rather an alternate transient source of impacts, potentially from upgradient and offsite. The detections of these parameters during the 2023 sampling were within the same range or less than in 2022 sampling. An ASD completed April 11, 2023, for elevated fluoride concentrations detected in several monitoring wells in the fourth quarter 2022 determined that the elevated fluoride concentrations were the result of a temporary change in laboratory analytical method as opposed to resulting from a release from the regulated unit (see Section 4.0).

3.3. Current Status

Joliet Generating Station #29 – Pond 2 is currently, and continues to be, in detection monitoring. There has been no transition between monitoring programs in 2023.

4.0 OTHER REQUIRED SUBMITTALS

An ASD was completed April 11, 2023, for fluoride at upgradient monitoring well MW-10 and downgradient monitoring wells MW-03 and MW-04 in accordance with Section 257.94(e)(2) of the Federal CCR Rule. Based on the data evaluations and discussions provided in the ASD report, it was determined that the elevated fluoride concentrations were the direct result of a temporary change in laboratory analytical method as opposed to being an indication of a release from the regulated unit. This conclusion was based on the following:

- There have been no CCR materials or associated liquids contained within Pond 2 since 2019 at which time the liner was decontaminated.

- Fluoride concentrations were noted above the PL in the upgradient well MW-10 as well as in downgradient wells MW-03 and MW-04. Downgradient monitoring well MW-05 also displayed an elevated fluoride concentration during the fourth quarter 2022 sampling relative to recent prior quarterly results, however not at a concentration above the established PL.

- Subsequent follow-up sampling during the first quarter 2023 showed all fluoride concentrations again below the established PL at levels consistent with previous rounds of sampling prior to the fourth quarter 2022.

- Historically, fluoride analysis was performed by the laboratory using analytical Method 4500FC, which is an ion selective electrode method. Fluoride analysis during the fourth quarter 2022, for both the initial sampling as well as the verification sampling, was performed by the laboratory using a different analytical method (Method 300.0 – ion chromatography) due to malfunction of the equipment normally used. Method 300.0 can bias high the analytical results due to various matrix interferences that do not affect Method 4500FC. The first quarter 2023 fluoride analysis was again completed by what had been used historically by the laboratory, Method 4500FC, resulting in fluoride concentrations again below the established PL at concentrations consistent with the historic data.

Based on this conclusion, it was recommended to continue with detection monitoring at this time. A copy of the complete ASD report is provided in Attachment 3.

5.0 SUMMARY/CONCLUSIONS AND RECOMMENDATIONS

The detection monitoring requirements in accordance with the Federal CCR Rule have successfully been met. The ASD completed within this reporting period for elevated fluoride concentrations documented that those concentrations were the result of a temporary change in analytical method as opposed to being reflective of a potential release from the regulated unit (see Section 4.0).

At this time it is recommended to continue with detection monitoring in accordance with Section 257.94 of the Federal CCR Rule.

6.0 REFERENCES

- Federal Register, Environmental Protection Agency, 40 CFR Parts 257 and 261, Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals From Electric Utilities; Final Rule. Vol. 80, No. 74, Friday April 17, 2015.

- Fetter, C.W. Jr., Applied Hydrogeology. Charles E. Merrill Publishing Co., 1980.

- KPRG and Associates, Inc., CCR Compliance Monitoring, Sampling and Analysis Plan, Midwest Generation, LLC Joliet #29 Generating Station. October 10, 2017.

- KPRG and Associates, Inc., CCR Compliance Statistical Approach for Groundwater Data Evaluation, Midwest Generation, LLC Joliet #29 Generating Station. October 10, 2017.

- KPRG and Associates, Inc., CCR Groundwater Monitoring Statistical Evaluation Summary - 2017, Midwest Generation, LLC Joliet #29 Generating Station. January 12, 2018.

- KPRG and Associates, Inc., CCR Annual Groundwater Monitoring and Corrective Action Report - 2017, Midwest Generation, LLC Joliet #29 Generating Station. January 31, 2018.

- KPRG and Associates, Inc., CCR Annual Groundwater Monitoring and Corrective Action Report - 2018, Midwest Generation, LLC Joliet #29 Generating Station. January 31, 2019.

- KPRG and Associates, Inc., CCR Annual Groundwater Monitoring and Corrective Action Report - 2019, Midwest Generation, LLC Joliet #29 Generating Station. January 31, 2020.

- KPRG and Associates, Inc., CCR Annual Groundwater Monitoring and Corrective Action Report - 2020, Midwest Generation, LLC Joliet #29 Generating Station. January 31, 2021.

- KPRG and Associates, Inc., Alternate Source Demonstration – CCR Groundwater Monitoring Joliet #29 Generating Station, October 11, 2021.

- KPRG and Associates, Inc., CCR Annual Groundwater Monitoring and Corrective Action Report - 2021, Midwest Generation, LLC Joliet #29 Generating Station. January 31, 2022.

- KPRG and Associates, Inc., CCR Annual Groundwater Monitoring and Corrective Action Report - 2022, Midwest Generation, LLC Joliet #29 Generating Station. January 31, 2023.

- KPRG and Associates, Inc., Alternate Source Demonstration – CCR Groundwater Monitoring Joliet #29 Generating Station, April 11, 2023.

- Patrick Engineering, Inc., Hydrogeologic Assessment Report – Joliet Generating Station No. 29, Joliet, IL. February 2011.

FIGURE

0 100'
APPROXIMATE SCALE

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CCR MONITORING WELLS SITE MAP

JOLIET #29 GENERATING STATION
JOLIET, ILLINOIS

Scale: 1" = 100' | Date: December 27, 2017

KPRG Project No. 12313.0 | FIGURE 1

W:\projects\midwest generation attorney-client privilege\gw evaluations\joliet #29 map.dwg

TABLES

Table 1. Groundwater Elevations - Midwest Generation, LLC, Joliet Station #29, Joliet, IL

Well ID	Date	Top of Casing Elevation (ft above MSL)	Depth to Groundwater (ft below TOC)	Groundwater Elevation (ft above MSL)
MW-03	10/27/15	538.78	33.87	504.91
	02/09/16	538.79	33.17	505.62
	05/10/16	538.79	32.82	505.97
	08/30/16	538.79	31.88	506.91
	11/01/16	538.79	32.88	505.91
	02/06/17	538.79	33.25	505.54
	04/25/17	538.79	33.06	505.73
	06/14/17	538.79	33.74	505.05
	08/01/17	538.79	32.36	506.43
	10/18/17	538.79	30.03	508.76
	04/24/18	538.79	32.83	505.96
	10/16/18	538.79	32.58	506.21
	05/06/19	538.79	29.59	509.20
	11/06/19	538.79	33.38	505.41
	05/28/20	538.79	27.13	511.66
	10/21/20	538.79	33.52	505.27
	05/17/21	538.79	33.05	505.74
	06/11/21	538.79	33.64	505.15
	07/19/21	538.79	33.28	505.51
	08/09/21	538.79	33.85	504.94
	11/15/21	538.79	33.19	505.60
	01/19/22	538.79	33.38	505.41
	02/16/22	538.79	33.17	505.62
	03/03/22	538.79	32.92	505.87
	04/05/22	538.79	31.76	507.03
	05/23/22	538.79	33.03	505.76
	06/30/22	538.79	33.47	505.32
	07/19/22	538.79	33.62	505.17
	08/30/22	538.79	33.58	505.21
	09/26/22	538.79	33.56	505.23
	10/13/22	538.79	33.40	505.39
	11/08/22	538.79	33.37	505.42
	12/20/22	538.79	33.05	505.74
	01/26/23	538.79	33.15	505.64
	02/21/23	538.79	32.45	506.34
	03/15/23	538.79	32.78	506.01
	04/20/23	538.79	33.28	505.51
	05/02/23	538.79	33.19	505.60
	06/08/23	538.79	33.45	505.34
	07/19/23	538.79	33.35	505.44
	08/29/23	538.79	33.66	505.13
	09/21/23	538.79	32.61	506.18
	10/25/23	538.79	33.12	505.67
	11/14/23	538.79	33.29	505.50
	12/07/23	538.79	32.96	505.83
MW-04	10/27/15	539.03	34.05	504.98
	02/09/16	539.01	33.42	505.59
	05/10/16	539.01	33.07	505.94
	08/30/16	539.01	32.08	506.93
	11/01/16	539.01	33.16	505.85
	02/06/17	539.01	33.51	505.50
	04/25/17	539.01	33.29	505.72
	06/14/17	539.01	33.99	505.02
	08/01/17	539.01	32.09	506.92
	10/18/17	539.01	30.28	508.73
	04/24/18	539.01	33.10	505.91
	10/16/18	539.01	32.85	506.16
	05/06/19	539.01	29.83	509.18
	11/06/19	539.01	31.65	507.36
	05/28/20	539.01	27.40	511.61
	10/21/20	539.01	33.48	505.53
	05/17/21	539.01	33.32	505.69
	06/11/21	539.01	33.91	505.10
	07/19/21	539.01	33.55	505.46
	08/09/21	539.01	34.14	504.87
	11/15/21	539.01	33.44	505.57
	01/19/22	539.01	33.66	505.35
	02/16/22	539.01	33.44	505.57
	03/03/22	539.01	33.17	505.84
	04/05/22	539.01	32.05	506.96
	05/23/22	539.01	33.28	505.73
	06/30/22	539.01	33.72	505.29
	07/19/22	539.01	33.87	505.14
	08/30/22	539.01	33.83	505.18
	09/26/22	539.01	33.82	505.19
	10/13/22	539.01	33.67	505.34
	11/08/22	539.01	33.64	505.37
	12/20/22	539.01	33.34	505.67
	01/26/23	539.01	33.38	505.63
	02/21/23	539.01	32.70	506.31
	03/15/23	539.01	33.07	505.94
	04/20/23	539.01	33.55	505.46
	05/02/23	539.01	33.44	505.57
	6/08/2023	539.01	33.71	505.30
	07/19/23	539.01	33.66	505.35
	08/29/23	539.01	33.92	505.09
	09/21/23	539.01	32.89	506.12
	10/25/23	539.01	33.39	505.62
	11/14/23	539.01	33.58	505.43
	12/07/23	539.01	33.24	505.77
MW-05	10/27/15	539.69	34.91	504.78
	02/09/16	539.64	34.18	505.46
	05/10/16	539.64	33.81	505.83
	08/30/16	539.64	32.82	506.82
	11/01/16	539.64	33.90	505.74
	02/06/17	539.64	34.23	505.41
	04/25/17	539.64	34.04	505.60
	06/14/17	539.64	34.74	504.90
	08/01/17	539.64	33.12	506.52
	10/18/17	539.64	31.03	508.61
	04/24/18	539.64	33.79	505.85
	10/16/18	539.64	33.61	506.03
	05/06/19	539.64	30.55	509.09
	11/06/19	539.64	32.40	507.24
	05/28/20	539.64	28.16	511.48
	10/21/20	539.64	34.52	505.12
	05/17/21	539.64	34.05	505.59
	06/11/21	539.64	34.66	504.98
	07/19/21	539.64	34.27	505.37
	08/09/21	539.64	34.78	504.86
	11/15/21	539.64	34.18	505.46
	01/19/22	539.64	34.37	505.27
	02/16/22	539.64	34.15	505.49
	03/03/22	539.64	33.93	505.71
	04/05/22	539.64	32.82	506.82
	05/23/22	539.64	34.00	505.64
	06/30/22	539.64	34.45	505.19
	07/19/22	539.64	34.64	505.00
	08/30/22	539.26	34.58	504.68
	09/26/22	539.26	34.58	504.68
	10/13/22	539.26	34.39	504.87
	11/08/22	539.26	34.38	504.88
	12/20/22	539.26	34.05	505.21
	01/26/23	539.26	34.08	505.18
	02/21/23	539.26	33.40	505.86
	03/15/23	539.26	33.79	505.47
	04/20/23	539.26	34.28	504.98
	05/02/23	539.26	34.17	505.09
	06/08/23	539.26	34.45	504.81
	07/19/23	539.26	34.38	504.88
	08/29/23	539.26	34.62	504.64
	09/21/23	539.26	33.60	505.66
	10/25/23	539.26	34.10	505.16
	11/14/23	539.26	34.28	504.98
	12/07/23	539.26	33.93	505.33
MW-10	10/27/15	540.03	35.10	504.93
	02/09/16	540.02	34.32	505.70
	05/10/16	540.02	34.02	506.00
	08/30/16	540.02	32.97	507.05
	11/01/16	540.02	34.04	505.98
	02/06/17	540.02	34.42	505.60
	04/25/17	540.02	34.22	505.80
	06/14/17	540.02	34.91	505.11
	08/01/17	540.02	33.18	506.84
	10/18/17	540.02	31.13	508.89
	04/24/18	540.02	33.97	506.05
	10/16/18	540.02	33.73	506.29
	05/06/19	540.02	30.58	509.44
	11/06/19	540.02	32.42	507.60
	05/28/20	540.02	28.09	511.93
	10/21/20	540.02	34.72	505.30
	05/17/21	540.02	34.23	505.79
	06/11/21	540.02	34.81	505.21
	07/19/21	540.02	34.45	505.57
	08/09/21	540.02	35.05	504.97
	11/15/21	540.02	34.38	505.64
	01/19/22	540.02	34.59	505.43
	02/16/22	540.02	34.38	505.64
	03/03/22	540.02	34.10	505.92
	04/05/22	540.02	32.89	507.13
	05/23/22	540.02	34.20	505.82
	06/30/22	540.02	34.68	505.34
	07/19/22	540.02	34.80	505.22
	08/30/22	540.02	34.76	505.26
	09/26/22	540.02	34.74	505.28
	10/13/22	540.02	34.61	505.41
	11/08/22	540.02	34.56	505.46
	12/20/22	540.02	34.22	505.80
	01/26/23	540.02	34.32	505.70
	02/21/23	540.02	33.61	506.41
	03/15/23	540.02	33.96	506.06
	04/20/23	540.02	34.45	505.57
	05/02/23	540.02	34.36	505.66
	06/08/23	540.02	34.64	505.38
	07/19/23	540.02	34.53	505.49
	08/29/23	540.02	34.85	505.17
	09/21/23	540.02	33.79	506.23
	10/25/23	540.02	34.39	505.72
	11/14/23	540.02	34.49	505.53
	12/07/23	540.02	34.14	505.88

MSL - Mean Sea Level
TOC - Top of Casing

Table 2. Groundwater Flow Direction and Estimated Seepage Velocity/Flow Rate - Joliet #29 Generation Station.

DATE	Groundwater Flow Direction	K_{avg} (ft/sec)*	Average Hydraulic Gradient (ft/ft)	Porosity (unitless)**	Estimated Seepage Velocity (ft/day)
2/28/2023	Southerly (SSW-SSE)	1.968E-03	0.0006	0.35	0.29
5/19/2023	Southerly (SSW-SSE)	1.968E-03	0.0007	0.35	0.34
7/19/2023	Southerly (SSW-SSE)	1.968E-03	0.0004	0.35	0.19
10/25/2023	Southerly (SSW-SSE)	1.968E-03	0.0004	0.35	0.19

* K_{avg} - K values from re-evaluation of slug test data as part of groundwater modeling in support of Application for Construction Permit per Illinois State CCR Rule.

** - Porosity estimate from Applied Hydrogeology, Fetter, 1980.

SSW - South-southwest

SSE - South-southeast

Table 3. CCR Groundwater Sample Collection Summary for 2023 - Joliet #29 Generating Station

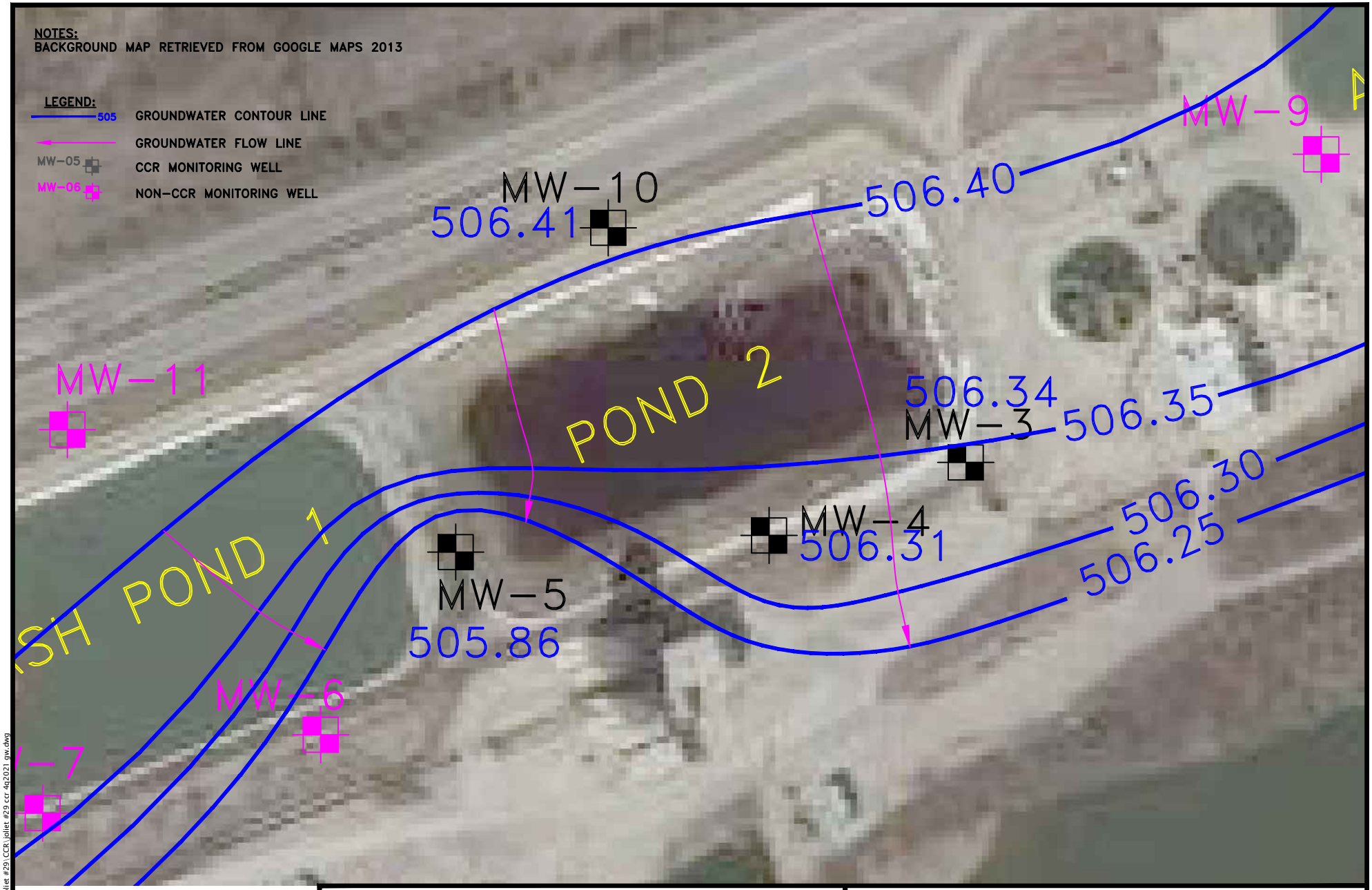
Well ID	Number of Groundwater Sampling Events	Dates Groundwater Sampling Events	Detection Monitoring (D) versus Assessment Monitoring (A)
MW-10 (Upgradient)	4	2/28/2023	D
		5/3/2023	D
		7/20/2023	D
		10/26/2023	D
MW-03 (Downgradient)	4	2/28/2023	D
		5/3/2023	D
		7/20/2023	D
		10/26/2023	D
MW-04 (Downgradient)	4	2/28/2023	D
		5/3/2023	D
		7/20/2023	D
		10/26/2023	D
MW-05 (Downgradient)	4	2/28/2023	D
		5/3/2023	D
		7/20/2023	D
		10/26/2023	D

Table 4. Appendix III Groundwater Analytical Results for 2022 - Midwest Generation, LLC, Joliet Station #29, Joliet, IL.

Well	Date	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	Total Dissolved Solids
MW-10 up-gradient	10/28/2015	0.47	100	200	0.41	7.04	84	790
	2/10/2016	0.41	100	210	0.44	7.17	120	820
	5/12/2016	0.29	100	300	0.42	7.02	110	920
	8/31/2016	0.36	89	170	0.46	6.95	100	760
	11/2/2016	0.48	100	130	0.45	6.99	95	720
	2/6/2017	0.44	120	190	0.36	6.99	88	820
	4/26/2017	0.35	120	200	0.35	7.27	87	760
	6/14/2017	0.29	91	160	0.43	7.47	75	690
	Pred. Limit*	**0.57**	**131**	**318**	**0.51**	**7.56-6.67**	**131**	**959**
	8/2/2017	0.45	97	170	0.38	7.23	110	790
	10/18/2017	**0.61**	120	140	0.41	7.11	130	820
	4/24/2018	0.4	110	260	0.39	7.28	120	910
	10/17/2018	**0.63**	120	180	0.42	7.30	110	810
	11/24/2018 R	0.44	NA	NA	NA	NA	NA	NA
	5/7/2019	0.56	130	**410**	0.39	7.17	95	**1,000**
	7/3/2019 R	NA	NA	230	NA	NA	NA	830
	11/7/2019	0.35	90	130	0.36	7.40	59	650
	5/20/2020	**0.85**	120	250	0.41	6.90	100	**960**
	6/11/2020 R	0.26	NA	NA	NA	NA	NA	770
	10/22/2020	0.34	110	230	0.41	7.11	93	850
	5/18/2021	0.33	**140**	**350**	0.39	7.16	**210**	**1,200**
	6/29/2021 R	NA	**160**	**420**	NA	7.32	**190**	**1,300**
	8/30/2021	0.28	120	**330**	0.37	7.56	**170**	**990**
	11/16/2021	0.39	120	260	0.38	7.01	**150**	**1,000**
	3/3/2022	0.47	120	280	0.41	7.05	**190**	**1,000**
	5/26/2022	0.39	120	280	0.41	6.90	**160**	**1,000**
	8/31/2022	0.33	110	240	0.41	6.58	**160**	**970**
	11/9/2022	0.32	110	240	**0.57**	7.00	**150**	**880**
	12/20/2022 (R)	NS	NS	NS	**0.68**	NS	NS	NS
	2/28/2023	0.36	130	**330**	0.38	7.06	**170**	**1,200**
	5/3/2023	0.37	130	310	0.39	6.99	**190**	**1,100**
	7/20/2023	0.33	110	250	0.39	6.95	**160**	**960**
	10/26/2023	0.40	120	300	0.41	6.96	**160**	**1,100**
MW-03 down-gradient	10/28/2015	0.34	110	230	0.41	7.11	110	960
	2/10/2016	0.49	100	220	0.44	7.31	130	790
	5/10/2016	0.48	95	240	0.44	7.07	130	800
	8/31/2016	0.49	100	250	0.45	7.18	120	920
	11/2/2016	0.34	87	190	0.44	7.45	94	780
	2/6/2017	0.40	97	140	0.39	7.35	77	720
	4/26/2017	0.54	100	210	0.36	7.03	120	820
	6/14/2017	0.45	88	190	0.44	7.48	75	760
	Pred. Limit	**0.57**	**131**	**316**	**0.51**	**7.56-6.67**	**130**	**956**
	8/2/2017	0.41	99	200	0.40	7.34	110	850
	10/18/2017	0.35	93	160	0.42	7.11	100	850
	4/24/2018	0.52	100	220	0.42	7.2	**150**	930
	7/31/2018 R	NA	NA	NA	NA	NA	110	NA
	10/17/2018	0.25	100	250	0.4	7.04	110	870
	5/7/2019	0.43	120	280	0.4	7.27	**140**	880
	7/3/2019 R	NA	NA	NA	NA	NA	65	NA
	11/7/2019	0.34	100	150	0.4	7.32	65	660
	5/20/2020	0.38	100	230	0.42	7.56	78	**960**
	6/11/2020 R	NA	NA	NA	NA	NA	NA	930
	10/22/2020	0.32	110	180	0.43	7.23	90	770
	5/18/2021	0.28	130	290	0.4	7.13	**190**	**1,200**
	6/29/2021 R	NA	NA	NA	NA	7.34	**210**	**1,300**
	11/16/2021	0.3	130	280	0.37	7.11	**150**	**1,000**
	3/3/2022	0.3	130	270	0.4	7.05	**180**	**1,300**
	5/26/2022	0.39	120	280	0.41	6.98	**160**	**1,100**
	8/31/2022	0.23	110	270	0.39	6.25	130	**1,200**
	11/9/2022	0.25	120	300	**0.54**	7.03	**140**	**1,100**
	2/28/2023	0.3	120	280	0.37	7.06	**160**	**1,000**
	5/3/2023	0.36	130	250	0.37	6.97	**200**	**980**
	7/20/2023	0.32	130	250	0.36	6.86	**190**	**1,000**
	10/26/2023	0.31	130	300	0.40	6.93	**170**	**1,100**
MW-04 down-gradient	10/28/2015	0.34	94	F1 200	0.45	7.07	83	740
	2/10/2016	0.32	97	210	0.47	7.22	140	810
	5/10/2016	0.47	100	260	0.46	6.71	150	900
	8/31/2016	0.42	100	210	0.45	7.07	120	890
	11/2/2016	0.32	98	160	0.43	7.25	83	750
	2/6/2017	0.40	110	200	0.37	7.19	98	790
	4/26/2017	0.33	100	220	0.37	7.46	89	770
	6/14/2017	0.37	92	190	0.47	7.43	80	770
	Pred. Limit	**0.57**	**131**	**316**	**0.51**	**7.56-6.67**	**130**	**956**
	8/2/2017	0.35	93	180	0.43	7.41	100	770
	10/18/2017	0.54	97	140	0.45	7.2	120	790
	4/24/2018	0.4	110	240	0.43	7.21	**160**	940
	7/31/2018 R	NA	NA	NA	NA	NA	120	NA
	10/17/2018	0.29	100	230	0.45	7.2	130	840
	5/7/2019	**0.76**	120	**340**	0.42	7.27	120	**1,000**
	7/3/2019 R	0.23	NA	250	NA	NA	NA	870
	11/6/2019	0.3	77	140	0.41	7.33	53	670
	5/20/2020	**0.79**	110	250	0.45	7.3	110	**1,100**
	6/11/2020 R	0.28	NA	NA	NA	NA	NA	850
	10/22/2020	0.33	100	190	0.48	7.15	83	770
	5/18/2021	0.22	120	280	0.42	7.3	**190**	**1,100**
	6/29/2021 R	NA	NA	NA	NA	7.36	**190**	**1,200**
	11/16/2021	0.3	130	290	0.42	7.11	**140**	**1,000**
	3/3/2022	0.31	120	220	0.42	7.11	**170**	**1,300**
	5/26/2022	0.26	110	290	0.44	6.94	**150**	**1,100**
	8/31/2022	0.32	120	240	0.45	6.38	**150**	870
	11/9/2022	0.34	120	240	**0.61**	7.08	**150**	940
	2/28/2023	0.34	120	280	0.4	7.16	**150**	**1,100**
	5/3/2023	0.28	110	290	0.40	6.97	**160**	**1,100**
	7/20/2023	0.37	120	240	0.41	7.02	**180**	**970**
	10/26/2023	0.31	120	**320**	0.43	6.95	**140**	**1,100**
	12/17/2023 R	NS	NS	280	NS	NS	NS	NS
MW-05 down-gradient	10/28/2015	0.64	100	160	0.39	7.12	120	790
	2/10/2016	0.46	110	220	0.39	7.25	120	790
	5/10/2016	0.8	150	220	0.46	6.88	290	950
	8/31/2016	1.0	140	99	0.56	6.81	260	820
	11/2/2016	0.41	98	130	0.37	7.26	100	700
	2/6/2017	0.48	150	180	0.30	7.22	120	790
	4/26/2017	0.67	110	F1 190	0.37	7.28	170	770
	6/14/2017	0.44	75	150	0.46	7.45	110	670
	Pred. Limit	**0.57**	**131**	**316**	**0.51**	**7.56-6.67**	**130**	**956**
	8/2/2017	0.28	83	170	0.35	7.30	99	770
	10/18/2017	0.42	110	110	0.38	7.16	95	720
	4/24/2018	0.31	110	300	0.34	7.33	130	**1,000**
	7/31/2018 R	NA	NA	NA	NA	NA	NA	940
	10/17/2018	0.31	110	210	0.36	7.29	93	810
	5/6/2019	0.38	130	**500**	0.31	7.11	84	**1,300**
	7/3/2019 R	NA	NA	150	NA	NA	NA	890
	11/7/2019	0.31	**180**	130	0.3	7.44	64	590
	12/4/2019 R	NA	89	NA	NA	NA	NA	NA
	5/20/2020	0.32	100	270	0.37	7.03	67	890
	10/22/2020	0.52	92	180	0.38	7.16	85	720
	5/18/2021	0.37	130	**410**	0.3	7.00	**160**	**1,300**
	6/29/2021 R	NA	NA	**430**	NA	7.33	**150**	**1,300**
	11/16/2021	0.44	120	260	0.3	7.08	**140**	**970**
	3/3/2022	0.43	110	230	0.3	7.04	**140**	900
	5/26/2022	0.55	120	**320**	0.31	6.86	**140**	**1,100**
	8/31/2022	0.43	110	240	0.32	6.50	130	**1,100**
	11/9/2022	0.39	120	230	0.42	7.00	120	910
	2/28/2023	**0.60**	**160**	130	0.35	7.15	**260**	**980**
	3/23/2023 R	NA	130	NA	NA	NA	**170**	NA
	5/3/2023	0.50	110	270	0.30	6.96	120	910
	7/20/2023	0.45	110	240	0.30	6.94	120	900
	10/26/2023	0.42	110	220	0.32	6.96	**150**	910

Notes: All units are in mg/l except pH is in standard units.
* - Intrawell Prediction Limit. All others are interwell comparisons with MW-10 as background..
Bold - Potential statistically significant increase.
F1 - MS and/or MSD Recovery outside of limits.
Pred. Limit - Prediction Limit
Italics Date - First round of Detection Monitoring and resample after statistical background establishment.
NA - Not analyzed. No confirmation resample required.
R - Resample

ATTACHMENT 1
Groundwater Flow Contour Maps



ENVIRONMENTAL CONSULTATION & REMEDIATION

KPRG

KPRG and Associates, inc.

14665 West Lisbon Road, Suite 1A Brookfield, Wisconsin 53005 Telephone 262-781-0475 Facsimile 262-781-0478

414 Plaza Drive, Suite 106 Westmont, Illinois 60559 Telephone 630-325-1300 Facsimile 630-325-1593

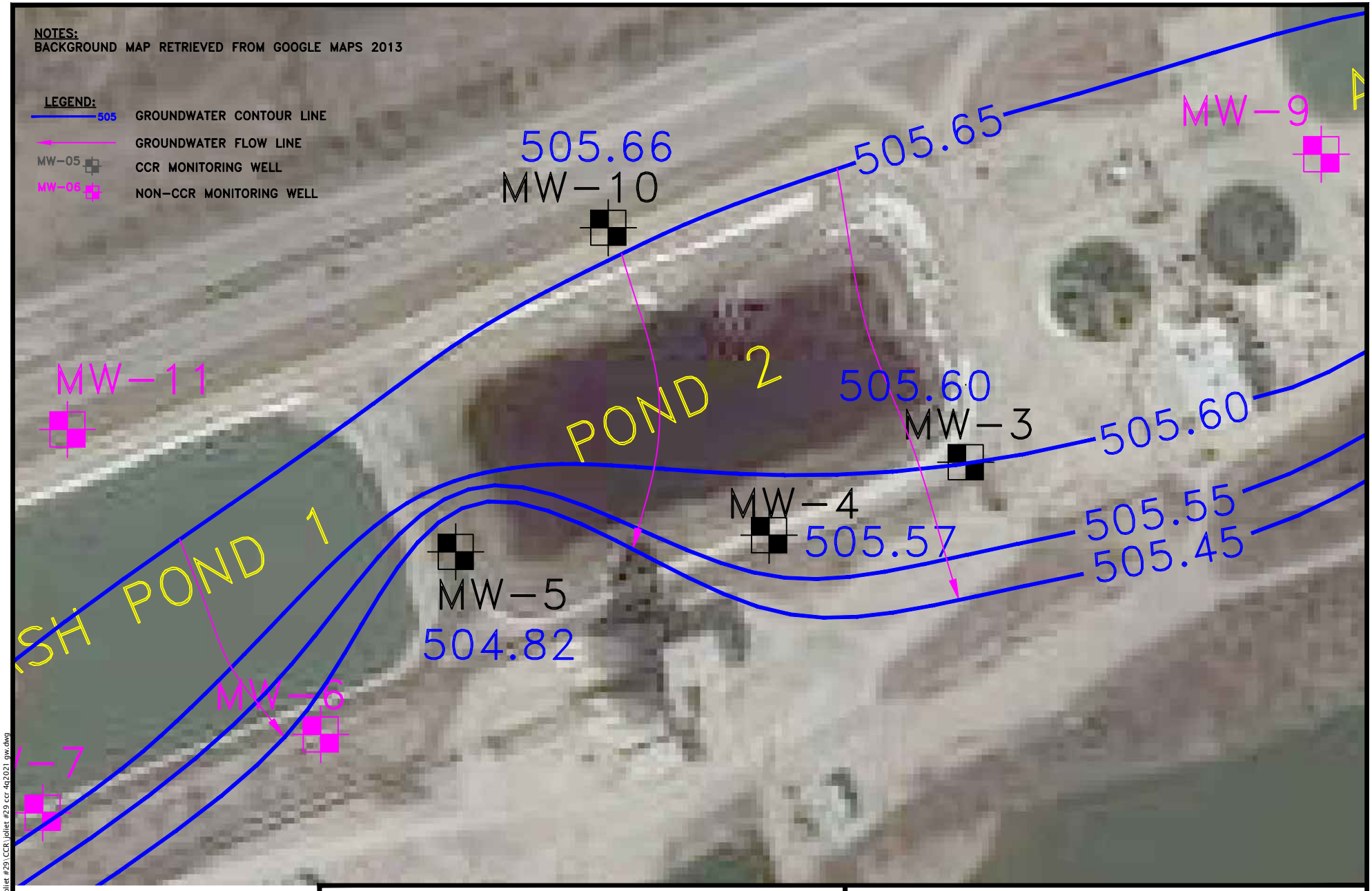
POTENTIOMETRIC MAP 02/2023

JOLIET #29 GENERATING STATION
JOLIET, ILLINOIS

Scale: 1" = 125' | Date: June 27, 2023

KPRG Project No. 12313.0 | ATTACHMENT 1

W:\projects\midwest generation\12313\figures\joliet #29 CCR\joliet #29 ccr 4q2021 gw.dwg



0 125'
APPROXIMATE SCALE

N

ENVIRONMENTAL CONSULTATION & REMEDIATION

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14665 West Lisbon Road, Suite 1A Brookfield, Wisconsin 53005 Telephone 262-781-0475 Facsimile 262-781-0478

414 Plaza Drive, Suite 106 Westmont, Illinois 60559 Telephone 630-325-1300 Facsimile 630-325-1593

POTENTIOMETRIC MAP 05/2023

JOLIET #29 GENERATING STATION
JOLIET, ILLINOIS

Scale: 1" = 125' | Date: June 8, 2023

KPRG Project No. 12313.0 | ATTACHMENT 1

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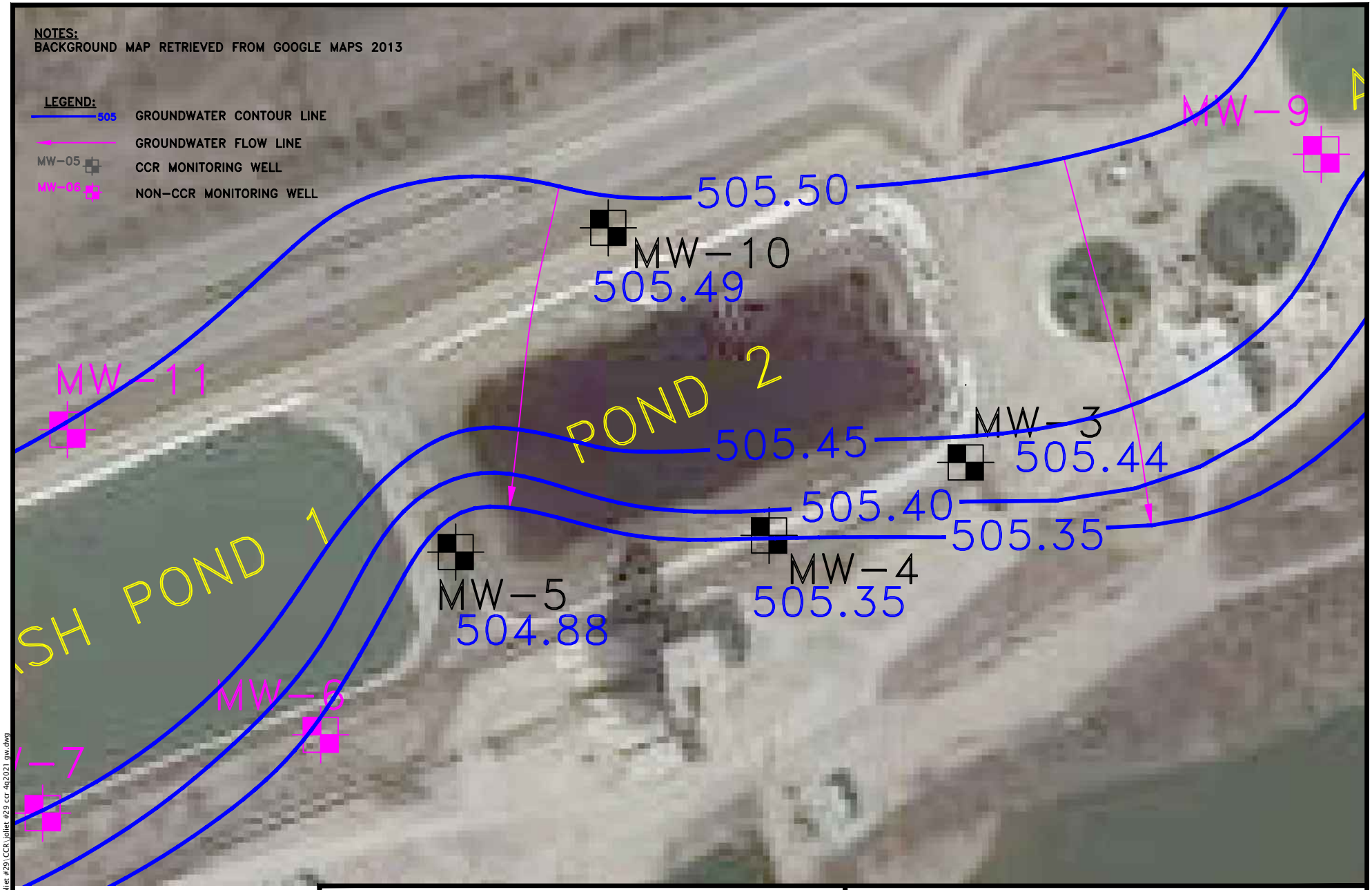

0 125'
APPROXIMATE SCALE

N

ENVIRONMENTAL CONSULTATION & REMEDIATION

K P R G

KPRG and Associates, inc.

14665 West Lisbon Road, Suite 1A Brookfield, Wisconsin 53005 Telephone 262-781-0475 Facsimile 262-781-0478

414 Plaza Drive, Suite 106 Westmont, Illinois 60559 Telephone 630-325-1300 Facsimile 630-325-1593

POTENTIOMETRIC MAP 07/2023

JOLIET #29 GENERATING STATION
JOLIET, ILLINOIS

Scale: 1" = 125' | Date: August 15, 2023

KPRG Project No. 12313.0 | ATTACHMENT 1

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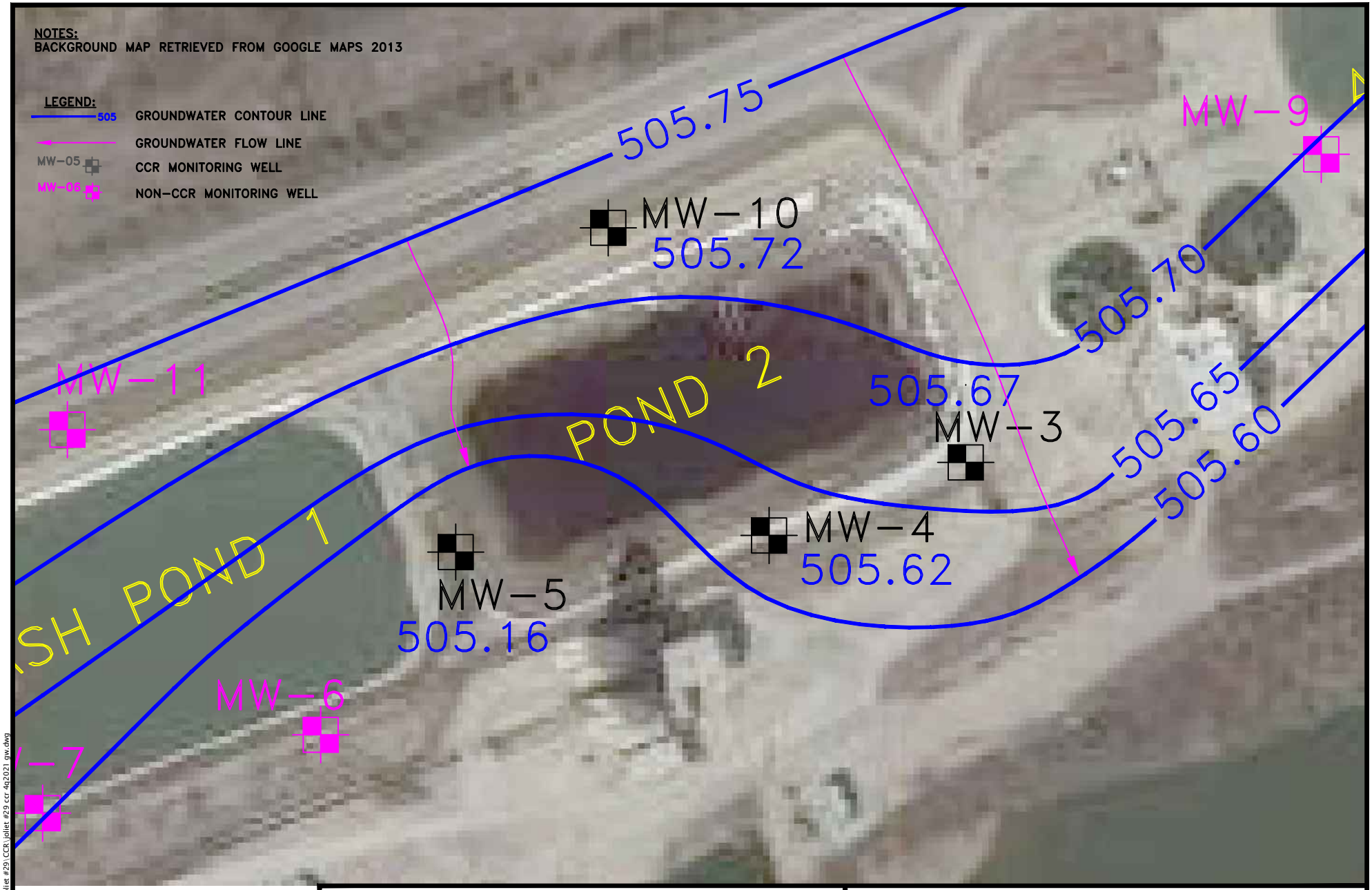

0 125'
APPROXIMATE SCALE

N

ENVIRONMENTAL CONSULTATION & REMEDIATION

K P R G

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POTENTIOMETRIC MAP 10/2023

JOLIET #29 GENERATING STATION
JOLIET, ILLINOIS

Scale: 1" = 125' | Date: January 2, 2023

KPRG Project No. 12313.0 | ATTACHMENT 1

W:\projects\midwest generation\12313\figures\joliet #29 CCR\joliet #29 ccr 4q2021 gw.dwg

ATTACHMENT 2
Analytical Data Packages

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

Laboratory Job ID: 500-213202-1
Client Project/Site: Joliet #29 CCR

For:
Midwest Generation EME LLC
1800 Channahon Road
Joliet, Illinois 60436

Attn: DeAndre Cooley

Diana Mockler

Authorized for release by:
3/23/2022 2:55:18 PM

Diana Mockler, Project Manager I
(219)252-7570
Diana.Mockler@Eurofinset.com

Table of Contents

Case Narrative

Client: Midwest Generation EME LLC
Project/Site: Joliet #29 CCR

Job ID: 500-213202-1

Job ID: 500-213202-1

Laboratory: Eurofins Chicago

Narrative

Job Narrative
500-213202-1

Comments
No additional comments.

Receipt
The samples were received on 3/4/2022 1:51 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 3.1° C.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Method Summary

Client: Midwest Generation EME LLC
Project/Site: Joliet #29 CCR

Job ID: 500-213202-1

Method	Method Description	Protocol	Laboratory
6020A	Metals (ICP/MS)	SW846	TAL CHI
7470A	Mercury (CVAA)	SW846	TAL CHI
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL CHI
SM 4500 Cl- E	Chloride, Total	SM	TAL CHI
SM 4500 F C	Fluoride	SM	TAL CHI
SM 4500 SO4 E	Sulfate, Total	SM	TAL CHI
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL CHI
7470A	Preparation, Mercury	SW846	TAL CHI

Protocol References:

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

Sample Summary

Client: Midwest Generation EME LLC
Project/Site: Joliet #29 CCR

Job ID: 500-213202-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-213202-1	MW-03	Water	03/03/22 10:50	03/04/22 13:51
500-213202-2	MW-04	Water	03/03/22 11:58	03/04/22 13:51
500-213202-3	MW-05	Water	03/03/22 14:00	03/04/22 13:51
500-213202-4	MW-10	Water	03/03/22 13:02	03/04/22 13:51
500-213202-5	Duplicate	Water	03/03/22 00:00	03/04/22 13:51

Client Sample Results

Client: Midwest Generation EME LLC
Project/Site: Joliet #29 CCR

Job ID: 500-213202-1

Client Sample ID: MW-03

Date Collected: 03/03/22 10:50
Date Received: 03/04/22 13:51

Lab Sample ID: 500-213202-1

Matrix: Water

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		03/15/22 09:04	03/15/22 18:55	1
Arsenic	**0.0019**		0.0010		mg/L		03/15/22 09:04	03/15/22 18:55	1
Barium	**0.14**		0.0025		mg/L		03/15/22 09:04	03/15/22 18:55	1
Beryllium	<0.0010		0.0010		mg/L		03/15/22 09:04	03/15/22 18:55	1
Boron	**0.30**		0.050		mg/L		03/15/22 09:04	03/16/22 12:56	1
Cadmium	<0.00050		0.00050		mg/L		03/15/22 09:04	03/15/22 18:55	1
Calcium	**130**		0.20		mg/L		03/15/22 09:04	03/15/22 18:55	1
Chromium	<0.0050		0.0050		mg/L		03/15/22 09:04	03/15/22 18:55	1
Cobalt	**0.0014**		0.0010		mg/L		03/15/22 09:04	03/15/22 18:55	1
Lead	<0.00050		0.00050		mg/L		03/15/22 09:04	03/15/22 18:55	1
Lithium	**0.012**		0.0020		mg/L		03/15/22 09:04	03/15/22 18:55	1
Molybdenum	<0.0050		0.0050		mg/L		03/15/22 09:04	03/15/22 18:55	1
Selenium	<0.0025		0.0025		mg/L		03/15/22 09:04	03/15/22 18:55	1
Thallium	<0.0020		0.0020		mg/L		03/15/22 09:04	03/15/22 18:55	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		03/15/22 10:10	03/16/22 09:59	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**1300**		10		mg/L			03/10/22 04:39	1
Chloride	**270**		20		mg/L			03/22/22 11:01	10
Fluoride	**0.40**		0.10		mg/L			03/14/22 11:34	1
Sulfate	**180**		25		mg/L			03/22/22 13:10	5

Client: Midwest Generation EME LLC
Project/Site: Joliet #29 CCR

Job ID: 500-213202-1

Client Sample ID: MW-04
Date Collected: 03/03/22 11:58
Date Received: 03/04/22 13:51

Lab Sample ID: 500-213202-2
Matrix: Water

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		03/15/22 09:04	03/15/22 18:58	1
Arsenic	**0.0018**		0.0010		mg/L		03/15/22 09:04	03/15/22 18:58	1
Barium	**0.12**		0.0025		mg/L		03/15/22 09:04	03/15/22 18:58	1
Beryllium	<0.0010		0.0010		mg/L		03/15/22 09:04	03/15/22 18:58	1
Boron	**0.31**		0.050		mg/L		03/15/22 09:04	03/16/22 12:59	1
Cadmium	<0.00050		0.00050		mg/L		03/15/22 09:04	03/15/22 18:58	1
Calcium	**120**		0.20		mg/L		03/15/22 09:04	03/15/22 18:58	1
Chromium	<0.0050		0.0050		mg/L		03/15/22 09:04	03/15/22 18:58	1
Cobalt	**0.0029**		0.0010		mg/L		03/15/22 09:04	03/15/22 18:58	1
Lead	<0.00050		0.00050		mg/L		03/15/22 09:04	03/15/22 18:58	1
Lithium	**0.012**		0.0020		mg/L		03/15/22 09:04	03/15/22 18:58	1
Molybdenum	**0.0056**		0.0050		mg/L		03/15/22 09:04	03/15/22 18:58	1
Selenium	<0.0025		0.0025		mg/L		03/15/22 09:04	03/15/22 18:58	1
Thallium	<0.0020		0.0020		mg/L		03/15/22 09:04	03/15/22 18:58	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		03/15/22 10:10	03/16/22 10:01	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**1300**		10		mg/L			03/10/22 04:45	1
Chloride	**220**		20		mg/L			03/22/22 11:02	10
Fluoride	**0.42**		0.10		mg/L			03/14/22 11:38	1
Sulfate	**170**		25		mg/L			03/22/22 13:10	5

Client: Midwest Generation EME LLC
Project/Site: Joliet #29 CCR

Job ID: 500-213202-1

Client Sample ID: MW-05

Date Collected: 03/03/22 14:00
Date Received: 03/04/22 13:51

Lab Sample ID: 500-213202-3

Matrix: Water

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		03/15/22 09:04	03/15/22 19:02	1
Arsenic	**0.0015**		0.0010		mg/L		03/15/22 09:04	03/15/22 19:02	1
Barium	**0.074**		0.0025		mg/L		03/15/22 09:04	03/15/22 19:02	1
Beryllium	<0.0010		0.0010		mg/L		03/15/22 09:04	03/15/22 19:02	1
Boron	**0.43**		0.050		mg/L		03/15/22 09:04	03/16/22 13:02	1
Cadmium	<0.00050		0.00050		mg/L		03/15/22 09:04	03/15/22 19:02	1
Calcium	**110**		0.20		mg/L		03/15/22 09:04	03/15/22 19:02	1
Chromium	<0.0050		0.0050		mg/L		03/15/22 09:04	03/15/22 19:02	1
Cobalt	<0.0010		0.0010		mg/L		03/15/22 09:04	03/15/22 19:02	1
Lead	<0.00050		0.00050		mg/L		03/15/22 09:04	03/15/22 19:02	1
Lithium	**0.017**		0.0020		mg/L		03/15/22 09:04	03/15/22 19:02	1
Molybdenum	<0.0050		0.0050		mg/L		03/15/22 09:04	03/15/22 19:02	1
Selenium	<0.0025		0.0025		mg/L		03/15/22 09:04	03/15/22 19:02	1
Thallium	<0.0020		0.0020		mg/L		03/15/22 09:04	03/15/22 19:02	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		03/15/22 10:10	03/16/22 10:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**900**		10		mg/L			03/10/22 04:47	1
Chloride	**230**		20		mg/L			03/22/22 11:02	10
Fluoride	**0.30**		0.10		mg/L			03/14/22 11:42	1
Sulfate	**140**		25		mg/L			03/22/22 13:10	5

Client Sample Results

Client: Midwest Generation EME LLC
Project/Site: Joliet #29 CCR

Job ID: 500-213202-1

Client Sample ID: MW-10

Date Collected: 03/03/22 13:02
Date Received: 03/04/22 13:51

Lab Sample ID: 500-213202-4

Matrix: Water

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		03/15/22 09:04	03/15/22 19:05	1
Arsenic	**0.0014**		0.0010		mg/L		03/15/22 09:04	03/15/22 19:05	1
Barium	**0.055**		0.0025		mg/L		03/15/22 09:04	03/15/22 19:05	1
Beryllium	<0.0010		0.0010		mg/L		03/15/22 09:04	03/15/22 19:05	1
Boron	**0.47**		0.050		mg/L		03/15/22 09:04	03/16/22 13:06	1
Cadmium	<0.00050		0.00050		mg/L		03/15/22 09:04	03/15/22 19:05	1
Calcium	**120**		0.20		mg/L		03/15/22 09:04	03/15/22 19:05	1
Chromium	<0.0050		0.0050		mg/L		03/15/22 09:04	03/15/22 19:05	1
Cobalt	<0.0010		0.0010		mg/L		03/15/22 09:04	03/15/22 19:05	1
Lead	<0.00050		0.00050		mg/L		03/15/22 09:04	03/15/22 19:05	1
Lithium	**0.013**		0.0020		mg/L		03/15/22 09:04	03/15/22 19:05	1
Molybdenum	**0.0066**		0.0050		mg/L		03/15/22 09:04	03/15/22 19:05	1
Selenium	<0.0025		0.0025		mg/L		03/15/22 09:04	03/15/22 19:05	1
Thallium	<0.0020		0.0020		mg/L		03/15/22 09:04	03/15/22 19:05	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		03/15/22 10:10	03/16/22 10:05	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**1000**		10		mg/L			03/10/22 04:50	1
Chloride	**280**		20		mg/L			03/22/22 11:02	10
Fluoride	**0.41**		0.10		mg/L			03/14/22 11:46	1
Sulfate	**190**		25		mg/L			03/22/22 13:11	5

Client: Midwest Generation EME LLC
Project/Site: Joliet #29 CCR

Job ID: 500-213202-1

Client Sample ID: Duplicate

Date Collected: 03/03/22 00:00
Date Received: 03/04/22 13:51

Lab Sample ID: 500-213202-5

Matrix: Water

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		03/15/22 09:04	03/15/22 19:09	1
Arsenic	**0.0020**		0.0010		mg/L		03/15/22 09:04	03/15/22 19:09	1
Barium	**0.14**		0.0025		mg/L		03/15/22 09:04	03/15/22 19:09	1
Beryllium	<0.0010		0.0010		mg/L		03/15/22 09:04	03/15/22 19:09	1
Boron	**0.31**		0.050		mg/L		03/15/22 09:04	03/16/22 13:10	1
Cadmium	<0.00050		0.00050		mg/L		03/15/22 09:04	03/15/22 19:09	1
Calcium	**130**		0.20		mg/L		03/15/22 09:04	03/15/22 19:09	1
Chromium	<0.0050		0.0050		mg/L		03/15/22 09:04	03/15/22 19:09	1
Cobalt	**0.0013**		0.0010		mg/L		03/15/22 09:04	03/15/22 19:09	1
Lead	<0.00050		0.00050		mg/L		03/15/22 09:04	03/15/22 19:09	1
Lithium	**0.012**		0.0020		mg/L		03/15/22 09:04	03/15/22 19:09	1
Molybdenum	<0.0050		0.0050		mg/L		03/15/22 09:04	03/15/22 19:09	1
Selenium	<0.0025		0.0025		mg/L		03/15/22 09:04	03/15/22 19:09	1
Thallium	<0.0020		0.0020		mg/L		03/15/22 09:04	03/15/22 19:09	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		03/15/22 10:10	03/16/22 10:18	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**1000**		10		mg/L			03/10/22 04:52	1
Chloride	**270**		20		mg/L			03/22/22 11:30	10
Fluoride	**0.39**		0.10		mg/L			03/14/22 12:00	1
Sulfate	**180**		25		mg/L			03/22/22 13:11	5

Definitions/Glossary

Client: Midwest Generation EME LLC
Project/Site: Joliet #29 CCR

Job ID: 500-213202-1

Qualifiers

General Chemistry

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Metals

Prep Batch: 647021

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-213202-1	MW-03	Total Recoverable	Water	3005A	
500-213202-2	MW-04	Total Recoverable	Water	3005A	
500-213202-3	MW-05	Total Recoverable	Water	3005A	
500-213202-4	MW-10	Total Recoverable	Water	3005A	
500-213202-5	Duplicate	Total Recoverable	Water	3005A	
MB 500-647021/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-647021/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 647036

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-213202-1	MW-03	Total/NA	Water	7470A	
500-213202-2	MW-04	Total/NA	Water	7470A	
500-213202-3	MW-05	Total/NA	Water	7470A	
500-213202-4	MW-10	Total/NA	Water	7470A	
500-213202-5	Duplicate	Total/NA	Water	7470A	
MB 500-647036/12-A	Method Blank	Total/NA	Water	7470A	
LCS 500-647036/13-A	Lab Control Sample	Total/NA	Water	7470A	
500-213202-4 MS	MW-10	Total/NA	Water	7470A	
500-213202-4 MSD	MW-10	Total/NA	Water	7470A	
500-213202-4 DU	MW-10	Total/NA	Water	7470A	

Analysis Batch: 647251

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-213202-1	MW-03	Total Recoverable	Water	6020A	647021
500-213202-2	MW-04	Total Recoverable	Water	6020A	647021
500-213202-3	MW-05	Total Recoverable	Water	6020A	647021
500-213202-4	MW-10	Total Recoverable	Water	6020A	647021
500-213202-5	Duplicate	Total Recoverable	Water	6020A	647021
MB 500-647021/1-A	Method Blank	Total Recoverable	Water	6020A	647021
LCS 500-647021/2-A	Lab Control Sample	Total Recoverable	Water	6020A	647021

Analysis Batch: 647320

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-213202-1	MW-03	Total/NA	Water	7470A	647036
500-213202-2	MW-04	Total/NA	Water	7470A	647036
500-213202-3	MW-05	Total/NA	Water	7470A	647036
500-213202-4	MW-10	Total/NA	Water	7470A	647036
500-213202-5	Duplicate	Total/NA	Water	7470A	647036
MB 500-647036/12-A	Method Blank	Total/NA	Water	7470A	647036
LCS 500-647036/13-A	Lab Control Sample	Total/NA	Water	7470A	647036
500-213202-4 MS	MW-10	Total/NA	Water	7470A	647036
500-213202-4 MSD	MW-10	Total/NA	Water	7470A	647036
500-213202-4 DU	MW-10	Total/NA	Water	7470A	647036

Analysis Batch: 647348

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-213202-1	MW-03	Total Recoverable	Water	6020A	647021
500-213202-2	MW-04	Total Recoverable	Water	6020A	647021
500-213202-3	MW-05	Total Recoverable	Water	6020A	647021
500-213202-4	MW-10	Total Recoverable	Water	6020A	647021
500-213202-5	Duplicate	Total Recoverable	Water	6020A	647021

Metals (Continued)

Analysis Batch: 647348 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 500-647021/1-A	Method Blank	Total Recoverable	Water	6020A	647021
LCS 500-647021/2-A	Lab Control Sample	Total Recoverable	Water	6020A	647021

General Chemistry

Analysis Batch: 646338

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-213202-1	MW-03	Total/NA	Water	SM 2540C	
500-213202-2	MW-04	Total/NA	Water	SM 2540C	
500-213202-3	MW-05	Total/NA	Water	SM 2540C	
500-213202-4	MW-10	Total/NA	Water	SM 2540C	
500-213202-5	Duplicate	Total/NA	Water	SM 2540C	
MB 500-646338/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-646338/2	Lab Control Sample	Total/NA	Water	SM 2540C	
500-213202-1 DU	MW-03	Total/NA	Water	SM 2540C	

Analysis Batch: 646928

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-213202-1	MW-03	Total/NA	Water	SM 4500 F C	
500-213202-2	MW-04	Total/NA	Water	SM 4500 F C	
500-213202-3	MW-05	Total/NA	Water	SM 4500 F C	
500-213202-4	MW-10	Total/NA	Water	SM 4500 F C	
500-213202-5	Duplicate	Total/NA	Water	SM 4500 F C	
MB 500-646928/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 500-646928/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	

Analysis Batch: 648185

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-213202-1	MW-03	Total/NA	Water	SM 4500 Cl- E	
500-213202-2	MW-04	Total/NA	Water	SM 4500 Cl- E	
500-213202-3	MW-05	Total/NA	Water	SM 4500 Cl- E	
500-213202-4	MW-10	Total/NA	Water	SM 4500 Cl- E	
500-213202-5	Duplicate	Total/NA	Water	SM 4500 Cl- E	
MB 500-648185/16	Method Blank	Total/NA	Water	SM 4500 Cl- E	
MB 500-648185/58	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 500-648185/17	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
LCS 500-648185/59	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
500-213202-5 MS	Duplicate	Total/NA	Water	SM 4500 Cl- E	
500-213202-5 MSD	Duplicate	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 648186

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-213202-1	MW-03	Total/NA	Water	SM 4500 SO4 E	
500-213202-2	MW-04	Total/NA	Water	SM 4500 SO4 E	
500-213202-3	MW-05	Total/NA	Water	SM 4500 SO4 E	
500-213202-4	MW-10	Total/NA	Water	SM 4500 SO4 E	
500-213202-5	Duplicate	Total/NA	Water	SM 4500 SO4 E	
MB 500-648186/42	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 500-648186/43	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
500-213202-5 MS	Duplicate	Total/NA	Water	SM 4500 SO4 E	
500-213202-5 MSD	Duplicate	Total/NA	Water	SM 4500 SO4 E	

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 500-647021/1-A
Matrix: Water
Analysis Batch: 647251

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 647021

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		03/15/22 09:04	03/15/22 18:13	1
Arsenic	<0.0010		0.0010		mg/L		03/15/22 09:04	03/15/22 18:13	1
Barium	<0.0025		0.0025		mg/L		03/15/22 09:04	03/15/22 18:13	1
Beryllium	<0.0010		0.0010		mg/L		03/15/22 09:04	03/15/22 18:13	1
Cadmium	<0.00050		0.00050		mg/L		03/15/22 09:04	03/15/22 18:13	1
Calcium	<0.20		0.20		mg/L		03/15/22 09:04	03/15/22 18:13	1
Chromium	<0.0050		0.0050		mg/L		03/15/22 09:04	03/15/22 18:13	1
Cobalt	<0.0010		0.0010		mg/L		03/15/22 09:04	03/15/22 18:13	1
Lead	<0.00050		0.00050		mg/L		03/15/22 09:04	03/15/22 18:13	1
Lithium	<0.0020		0.0020		mg/L		03/15/22 09:04	03/15/22 18:13	1
Molybdenum	<0.0050		0.0050		mg/L		03/15/22 09:04	03/15/22 18:13	1
Selenium	<0.0025		0.0025		mg/L		03/15/22 09:04	03/15/22 18:13	1
Thallium	<0.0020		0.0020		mg/L		03/15/22 09:04	03/15/22 18:13	1

Lab Sample ID: MB 500-647021/1-A
Matrix: Water
Analysis Batch: 647348

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 647021

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.050		0.050		mg/L		03/15/22 09:04	03/16/22 12:48	1

Lab Sample ID: LCS 500-647021/2-A
Matrix: Water
Analysis Batch: 647251

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 647021

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.500	0.542		mg/L		108	80 - 120
Arsenic	0.100	0.103		mg/L		103	80 - 120
Barium	0.500	0.531		mg/L		106	80 - 120
Beryllium	0.0500	0.0493		mg/L		99	80 - 120
Cadmium	0.0500	0.0516		mg/L		103	80 - 120
Calcium	10.0	10.3		mg/L		103	80 - 120
Chromium	0.200	0.211		mg/L		105	80 - 120
Cobalt	0.500	0.531		mg/L		106	80 - 120
Lead	0.100	0.108		mg/L		108	80 - 120
Lithium	0.100	0.105		mg/L		105	80 - 120
Molybdenum	1.00	0.996		mg/L		100	80 - 120
Selenium	0.100	0.103		mg/L		103	80 - 120
Thallium	0.100	0.105		mg/L		105	80 - 120

Lab Sample ID: LCS 500-647021/2-A
Matrix: Water
Analysis Batch: 647348

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 647021

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1.00	1.04		mg/L		104	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 500-647036/12-A
Matrix: Water
Analysis Batch: 647320

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 647036

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		03/15/22 10:10	03/16/22 09:36	1

Lab Sample ID: LCS 500-647036/13-A
Matrix: Water
Analysis Batch: 647320

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 647036

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00200	0.00204		mg/L		102	80 - 120

Lab Sample ID: 500-213202-4 MS
Matrix: Water
Analysis Batch: 647320

Client Sample ID: MW-10
Prep Type: Total/NA
Prep Batch: 647036

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	<0.00020		0.00100	0.00102		mg/L		102	75 - 125

Lab Sample ID: 500-213202-4 MSD
Matrix: Water
Analysis Batch: 647320

Client Sample ID: MW-10
Prep Type: Total/NA
Prep Batch: 647036

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	<0.00020		0.00100	0.000954		mg/L		95	75 - 125	6	20

Lab Sample ID: 500-213202-4 DU
Matrix: Water
Analysis Batch: 647320

Client Sample ID: MW-10
Prep Type: Total/NA
Prep Batch: 647036

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Mercury	<0.00020		<0.00020		mg/L		NC	20

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 500-646338/1
Matrix: Water
Analysis Batch: 646338

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10		mg/L			03/10/22 04:27	1

Lab Sample ID: LCS 500-646338/2
Matrix: Water
Analysis Batch: 646338

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	250	254		mg/L		102	80 - 120

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: 500-213202-1 DU
Matrix: Water
Analysis Batch: 646338

Client Sample ID: MW-03
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	1300		1240		mg/L		2	5

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 500-648185/16
Matrix: Water
Analysis Batch: 648185

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<2.0		2.0		mg/L			03/22/22 10:55	1

Lab Sample ID: MB 500-648185/58
Matrix: Water
Analysis Batch: 648185

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<2.0		2.0		mg/L			03/22/22 11:30	1

Lab Sample ID: LCS 500-648185/17
Matrix: Water
Analysis Batch: 648185

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	20.0	19.9		mg/L		100	85 - 115

Lab Sample ID: LCS 500-648185/59
Matrix: Water
Analysis Batch: 648185

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	20.0	20.4		mg/L		102	85 - 115

Lab Sample ID: 500-213202-5 MS
Matrix: Water
Analysis Batch: 648185

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	270		20.0	277	4	mg/L		43	75 - 125

Lab Sample ID: 500-213202-5 MSD
Matrix: Water
Analysis Batch: 648185

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	270		20.0	280	4	mg/L		55	75 - 125	1	20

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 500-646928/3
Matrix: Water
Analysis Batch: 646928

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.10		0.10		mg/L			03/14/22 10:33	1

Lab Sample ID: LCS 500-646928/4
Matrix: Water
Analysis Batch: 646928

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Fluoride			10.0	10.6		mg/L		106	90 - 119		

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 500-648186/42
Matrix: Water
Analysis Batch: 648186

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	<5.0		5.0		mg/L			03/22/22 13:09	1

Lab Sample ID: LCS 500-648186/43
Matrix: Water
Analysis Batch: 648186

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Sulfate			20.0	18.1		mg/L		91	88 - 123		

Lab Sample ID: 500-213202-5 MS
Matrix: Water
Analysis Batch: 648186

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Sulfate	180		20.0	193	4	mg/L		69	75 - 125		

Lab Sample ID: 500-213202-5 MSD
Matrix: Water
Analysis Batch: 648186

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	180		20.0	193	4	mg/L		69	75 - 125	0	20

Eurofins Chicago
2417 Bond Street
University Park IL 60484
Phone 708-534-5200 Fax 708-534-5211

Chain of Custody Record

MKE 282

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Client Information	Sampler: M. Ress	Lab PM: Mockler Diana J	Carrier Tracking No(s):	COC No: 500-98806-43325 1
Client Contact: Mitchel Dolan	Phone: 630.203.7240	E-Mail: Diana.Mockler@Eurofinset.com	State of Origin:	Page: Page 1 of 1
Company: KPRG and Associates Inc.	PWS ID:	Analysis Requested		Job #: 500-213202

Address: 414 Plaza Drive Suite 106
City: Westmont
State, Zip: IL 60559
Phone: 779-279-2321(Tel)
Email: mitchell@kprginc.com
500-213202 COC

Due Date Requested:
TAT Requested (days):
Compliance Project: Δ Yes Δ No
PO #: 4502042860
WO #:
Project #: 50011568
SSOW#:

Project Name: Joliet #29 CCR/ Event Desc Quarterly MWG Joliet #29 CCR
Site: Illinois

Preservation Codes

A	HCL	M	Hexane
B	NaOH	N	None
C	Zn Acetate	O	AsNaO2
D	Nitric Acid	P	Na2O4S
E	NaHSO4	Q	Na2SO3
F	MeOH	R	Na2S2O3
G	Amchlor	S	H2SO4
H	Ascorbic Acid	T	TSP Dodecahydrate
I	Ice	U	Acetone
J	DI Water	V	MCAA
K	EDTA	W	pH 4-5
L	EDA	Z	other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp G=grab)	Matrix (W=water S=solid O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010C 6020A, 7470A	2540C 4500_F_C, SM4500_Cl_E, SM4500_SO4_E	903.0, 904.0	Total Number of containers	Special Instructions/Note
			Preservation Codes:				D	N	D		
1 MW-03	3/3/22	10:50	G	Water			X	X	X		
2 MW-04	3/3/22	11:58	G	Water			X	X	X		
3 MW-05	3/3/22	14:00	G	Water			X	X	X		
4 ~~MW 10~~	3/3/22	13:07	G	Water			X	X	X		
5 Duplicate	3/3/22	↓	G	Water			X	X	X		

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested I II III IV Other (specify)

Special Instructions/QC Requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
M. Ress	3/4/22 9:00	KPRG	J. Neal	3/4/22 0900	EA
J. Neal	3/4/22 1125	EA		3/4/22 1125	EAP
Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact: Δ Yes Δ No
Custody Seal No:
Cooler Temperature(s) °C and Other Remarks: 3.1

Ver 06/08/2021

Login Sample Receipt Checklist

Client: Midwest Generation EME LLC

Job Number: 500-213202-1

Login Number: 213202
List Number: 1
Creator: Scott, Sherri L

List Source: Eurofins Chicago

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.1
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Lab Chronicle

Client: Midwest Generation EME LLC
Project/Site: Joliet #29 CCR

Job ID: 500-213202-1

Client Sample ID: MW-03
Date Collected: 03/03/22 10:50
Date Received: 03/04/22 13:51

Lab Sample ID: 500-213202-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			647021	03/15/22 09:04	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	647251	03/15/22 18:55	FXG	TAL CHI
Total Recoverable	Prep	3005A			647021	03/15/22 09:04	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	647348	03/16/22 12:56	FXG	TAL CHI
Total/NA	Prep	7470A			647036	03/15/22 10:10	MJG	TAL CHI
Total/NA	Analysis	7470A		1	647320	03/16/22 09:59	MJG	TAL CHI
Total/NA	Analysis	SM 2540C		1	646338	03/10/22 04:39	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		10	648185	03/22/22 11:01	LP	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	646928	03/14/22 11:34	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		5	648186	03/22/22 13:10	LP	TAL CHI

Client Sample ID: MW-04
Date Collected: 03/03/22 11:58
Date Received: 03/04/22 13:51

Lab Sample ID: 500-213202-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			647021	03/15/22 09:04	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	647251	03/15/22 18:58	FXG	TAL CHI
Total Recoverable	Prep	3005A			647021	03/15/22 09:04	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	647348	03/16/22 12:59	FXG	TAL CHI
Total/NA	Prep	7470A			647036	03/15/22 10:10	MJG	TAL CHI
Total/NA	Analysis	7470A		1	647320	03/16/22 10:01	MJG	TAL CHI
Total/NA	Analysis	SM 2540C		1	646338	03/10/22 04:45	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		10	648185	03/22/22 11:02	LP	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	646928	03/14/22 11:38	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		5	648186	03/22/22 13:10	LP	TAL CHI

Client Sample ID: MW-05
Date Collected: 03/03/22 14:00
Date Received: 03/04/22 13:51

Lab Sample ID: 500-213202-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			647021	03/15/22 09:04	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	647251	03/15/22 19:02	FXG	TAL CHI
Total Recoverable	Prep	3005A			647021	03/15/22 09:04	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	647348	03/16/22 13:02	FXG	TAL CHI
Total/NA	Prep	7470A			647036	03/15/22 10:10	MJG	TAL CHI
Total/NA	Analysis	7470A		1	647320	03/16/22 10:03	MJG	TAL CHI
Total/NA	Analysis	SM 2540C		1	646338	03/10/22 04:47	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		10	648185	03/22/22 11:02	LP	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	646928	03/14/22 11:42	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		5	648186	03/22/22 13:10	LP	TAL CHI

Lab Chronicle

Client: Midwest Generation EME LLC
Project/Site: Joliet #29 CCR

Job ID: 500-213202-1

Client Sample ID: MW-10

Lab Sample ID: 500-213202-4

Date Collected: 03/03/22 13:02

Matrix: Water

Date Received: 03/04/22 13:51

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			647021	03/15/22 09:04	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	647251	03/15/22 19:05	FXG	TAL CHI
Total Recoverable	Prep	3005A			647021	03/15/22 09:04	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	647348	03/16/22 13:06	FXG	TAL CHI
Total/NA	Prep	7470A			647036	03/15/22 10:10	MJG	TAL CHI
Total/NA	Analysis	7470A		1	647320	03/16/22 10:05	MJG	TAL CHI
Total/NA	Analysis	SM 2540C		1	646338	03/10/22 04:50	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		10	648185	03/22/22 11:02	LP	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	646928	03/14/22 11:46	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		5	648186	03/22/22 13:11	LP	TAL CHI

Client Sample ID: Duplicate

Lab Sample ID: 500-213202-5

Date Collected: 03/03/22 00:00

Matrix: Water

Date Received: 03/04/22 13:51

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			647021	03/15/22 09:04	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	647251	03/15/22 19:09	FXG	TAL CHI
Total Recoverable	Prep	3005A			647021	03/15/22 09:04	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	647348	03/16/22 13:10	FXG	TAL CHI
Total/NA	Prep	7470A			647036	03/15/22 10:10	MJG	TAL CHI
Total/NA	Analysis	7470A		1	647320	03/16/22 10:18	MJG	TAL CHI
Total/NA	Analysis	SM 2540C		1	646338	03/10/22 04:52	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		10	648185	03/22/22 11:30	LP	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	646928	03/14/22 12:00	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		5	648186	03/22/22 13:11	LP	TAL CHI

Laboratory References:

TAL CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

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ANALYTICAL REPORT

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

Laboratory Job ID: 500-217282-1
Client Project/Site: Joliet #29 CCR Q2
Sampling Event: Quarterly MWG Joliet #29 CCR

For:
Midwest Generation EME LLC
1800 Channahon Road
Joliet, Illinois 60436

Attn: John Niedzwiecki

Authorized for release by:
6/14/2022 9:42:07 AM

Diana Mockler, Project Manager I
(219)252-7570
Diana.Mockler@et.eurofinsus.com

Table of Contents

Job ID: 500-217282-1

Laboratory: Eurofins Chicago

Narrative

Job Narrative
500-217282-1

Comments
No additional comments.

Receipt
The samples were received on 5/27/2022 10:05 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 2.5º C and 4.4º C.

Receipt Exceptions
The following sample(s) was submitted for analysis; however, it was not listed on the Chain-of-Custody (COC): "Trip Blank" however no VOCs were received for any of the samples.

Metals
Method 6020A: The low level continuing calibration verification (CCVL) associated with batch 500-660498 recovered above the upper control limit for Beryllium. The samples associated with this CCVL were non-detects for the affected analyte; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Method Summary

Client: Midwest Generation EME LLC
Project/Site: Joliet #29 CCR Q2

Job ID: 500-217282-1

Method	Method Description	Protocol	Laboratory
6020A	Metals (ICP/MS)	SW846	TAL CHI
7470A	Mercury (CVAA)	SW846	TAL CHI
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL CHI
SM 4500 Cl- E	Chloride, Total	SM	TAL CHI
SM 4500 F C	Fluoride	SM	TAL CHI
SM 4500 SO4 E	Sulfate, Total	SM	TAL CHI
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL CHI
7470A	Preparation, Mercury	SW846	TAL CHI

Protocol References:

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

Sample Summary

Client: Midwest Generation EME LLC
Project/Site: Joliet #29 CCR Q2

Job ID: 500-217282-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-217282-1	MW-03	Water	05/26/22 15:03	05/27/22 10:05
500-217282-2	MW-04	Water	05/26/22 12:50	05/27/22 10:05
500-217282-3	MW-05	Water	05/26/22 16:50	05/27/22 10:05
500-217282-4	MW-10	Water	05/26/22 11:32	05/27/22 10:05
500-217282-5	Duplicate	Water	05/26/22 00:00	05/27/22 10:05

Client: Midwest Generation EME LLC
Project/Site: Joliet #29 CCR Q2

Job ID: 500-217282-1

Client Sample ID: MW-03
Date Collected: 05/26/22 15:03
Date Received: 05/27/22 10:05

Lab Sample ID: 500-217282-1
Matrix: Water

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		06/07/22 08:40	06/09/22 03:08	1
Arsenic	**0.0020**		0.0010		mg/L		06/07/22 08:40	06/09/22 03:08	1
Barium	**0.13**		0.0025		mg/L		06/07/22 08:40	06/09/22 03:08	1
Beryllium	<0.0010	^+	0.0010		mg/L		06/07/22 08:40	06/09/22 03:08	1
Boron	**0.39**		0.050		mg/L		06/07/22 08:40	06/09/22 03:08	1
Cadmium	<0.00050		0.00050		mg/L		06/07/22 08:40	06/09/22 03:08	1
Calcium	**120**		0.20		mg/L		06/07/22 08:40	06/09/22 03:08	1
Chromium	<0.0050		0.0050		mg/L		06/07/22 08:40	06/09/22 03:08	1
Cobalt	**0.0011**		0.0010		mg/L		06/07/22 08:40	06/09/22 03:08	1
Lead	<0.00050		0.00050		mg/L		06/07/22 08:40	06/09/22 03:08	1
Lithium	<0.010		0.010		mg/L		06/07/22 08:40	06/09/22 03:08	1
Molybdenum	<0.0050		0.0050		mg/L		06/07/22 08:40	06/09/22 03:08	1
Selenium	**0.0042**		0.0025		mg/L		06/07/22 08:40	06/09/22 03:08	1
Thallium	<0.0020		0.0020		mg/L		06/07/22 08:40	06/09/22 03:08	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		06/08/22 10:15	06/09/22 10:02	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**1100**		10		mg/L			06/02/22 02:17	1
Chloride	**280**		20		mg/L			06/01/22 09:00	10
Fluoride	**0.41**		0.10		mg/L			06/12/22 00:15	1
Sulfate	**160**		50		mg/L			06/02/22 09:40	10

Client Sample Results

Client: Midwest Generation EME LLC
Project/Site: Joliet #29 CCR Q2

Job ID: 500-217282-1

Client Sample ID: MW-04

Date Collected: 05/26/22 12:50
Date Received: 05/27/22 10:05

Lab Sample ID: 500-217282-2

Matrix: Water

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		06/07/22 08:40	06/09/22 03:11	1
Arsenic	**0.0019**		0.0010		mg/L		06/07/22 08:40	06/09/22 03:11	1
Barium	**0.10**		0.0025		mg/L		06/07/22 08:40	06/09/22 03:11	1
Beryllium	<0.0010	^+	0.0010		mg/L		06/07/22 08:40	06/09/22 03:11	1
Boron	**0.26**		0.050		mg/L		06/07/22 08:40	06/09/22 03:11	1
Cadmium	<0.00050		0.00050		mg/L		06/07/22 08:40	06/09/22 03:11	1
Calcium	**110**		0.20		mg/L		06/07/22 08:40	06/09/22 03:11	1
Chromium	<0.0050		0.0050		mg/L		06/07/22 08:40	06/09/22 03:11	1
Cobalt	**0.0036**		0.0010		mg/L		06/07/22 08:40	06/09/22 03:11	1
Lead	<0.00050		0.00050		mg/L		06/07/22 08:40	06/09/22 03:11	1
Lithium	<0.010		0.010		mg/L		06/07/22 08:40	06/09/22 03:11	1
Molybdenum	<0.0050		0.0050		mg/L		06/07/22 08:40	06/09/22 03:11	1
Selenium	<0.0025		0.0025		mg/L		06/07/22 08:40	06/09/22 03:11	1
Thallium	<0.0020		0.0020		mg/L		06/07/22 08:40	06/09/22 03:11	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		06/08/22 10:15	06/09/22 10:08	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**1100**		10		mg/L			06/02/22 02:19	1
Chloride	**290**		20		mg/L			06/01/22 09:00	10
Fluoride	**0.44**		0.10		mg/L			06/12/22 00:18	1
Sulfate	**150**		50		mg/L			06/02/22 09:41	10

Client Sample Results

Client: Midwest Generation EME LLC
Project/Site: Joliet #29 CCR Q2

Job ID: 500-217282-1

Client Sample ID: MW-05

Date Collected: 05/26/22 16:50
Date Received: 05/27/22 10:05

Lab Sample ID: 500-217282-3

Matrix: Water

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		06/07/22 08:40	06/09/22 03:15	1
Arsenic	**0.0030**		0.0010		mg/L		06/07/22 08:40	06/09/22 03:15	1
Barium	**0.082**		0.0025		mg/L		06/07/22 08:40	06/09/22 03:15	1
Beryllium	<0.0010	^+	0.0010		mg/L		06/07/22 08:40	06/09/22 03:15	1
Boron	**0.55**		0.050		mg/L		06/07/22 08:40	06/09/22 03:15	1
Cadmium	<0.00050		0.00050		mg/L		06/07/22 08:40	06/09/22 03:15	1
Calcium	**120**		0.20		mg/L		06/07/22 08:40	06/09/22 03:15	1
Chromium	<0.0050		0.0050		mg/L		06/07/22 08:40	06/09/22 03:15	1
Cobalt	<0.0010		0.0010		mg/L		06/07/22 08:40	06/09/22 03:15	1
Lead	**0.0018**		0.00050		mg/L		06/07/22 08:40	06/09/22 03:15	1
Lithium	**0.015**		0.010		mg/L		06/07/22 08:40	06/09/22 03:15	1
Molybdenum	<0.0050		0.0050		mg/L		06/07/22 08:40	06/09/22 03:15	1
Selenium	**0.0029**		0.0025		mg/L		06/07/22 08:40	06/09/22 03:15	1
Thallium	<0.0020		0.0020		mg/L		06/07/22 08:40	06/09/22 03:15	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		06/08/22 10:15	06/09/22 10:11	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**1100**		10		mg/L			06/02/22 02:22	1
Chloride	**320**		20		mg/L			06/01/22 09:00	10
Fluoride	**0.31**		0.10		mg/L			06/12/22 00:21	1
Sulfate	**140**		50		mg/L			06/02/22 09:41	10

Client Sample Results

Client: Midwest Generation EME LLC
Project/Site: Joliet #29 CCR Q2

Job ID: 500-217282-1

Client Sample ID: MW-10

Date Collected: 05/26/22 11:32
Date Received: 05/27/22 10:05

Lab Sample ID: 500-217282-4

Matrix: Water

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		06/07/22 08:40	06/09/22 03:18	1
Arsenic	**0.0013**		0.0010		mg/L		06/07/22 08:40	06/09/22 03:18	1
Barium	**0.046**		0.0025		mg/L		06/07/22 08:40	06/09/22 03:18	1
Beryllium	<0.0010	^+	0.0010		mg/L		06/07/22 08:40	06/09/22 03:18	1
Boron	**0.39**		0.050		mg/L		06/07/22 08:40	06/09/22 03:18	1
Cadmium	<0.00050		0.00050		mg/L		06/07/22 08:40	06/09/22 03:18	1
Calcium	**120**		0.20		mg/L		06/07/22 08:40	06/09/22 03:18	1
Chromium	<0.0050		0.0050		mg/L		06/07/22 08:40	06/09/22 03:18	1
Cobalt	<0.0010		0.0010		mg/L		06/07/22 08:40	06/09/22 03:18	1
Lead	<0.00050		0.00050		mg/L		06/07/22 08:40	06/09/22 03:18	1
Lithium	<0.010		0.010		mg/L		06/07/22 08:40	06/09/22 03:18	1
Molybdenum	**0.0064**		0.0050		mg/L		06/07/22 08:40	06/09/22 03:18	1
Selenium	<0.0025		0.0025		mg/L		06/07/22 08:40	06/09/22 03:18	1
Thallium	<0.0020		0.0020		mg/L		06/07/22 08:40	06/09/22 03:18	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		06/08/22 10:15	06/09/22 10:13	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**1000**		10		mg/L			06/02/22 03:19	1
Chloride	**280**		20		mg/L			06/01/22 09:35	10
Fluoride	**0.41**		0.10		mg/L			06/12/22 00:24	1
Sulfate	**160**		50		mg/L			06/02/22 09:42	10

Client Sample Results

Client: Midwest Generation EME LLC
Project/Site: Joliet #29 CCR Q2

Job ID: 500-217282-1

Client Sample ID: Duplicate

Date Collected: 05/26/22 00:00
Date Received: 05/27/22 10:05

Lab Sample ID: 500-217282-5

Matrix: Water

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		06/07/22 08:40	06/09/22 03:22	1
Arsenic	**0.0014**		0.0010		mg/L		06/07/22 08:40	06/09/22 03:22	1
Barium	**0.047**		0.0025		mg/L		06/07/22 08:40	06/09/22 03:22	1
Beryllium	<0.0010	^+	0.0010		mg/L		06/07/22 08:40	06/09/22 03:22	1
Boron	**0.39**		0.050		mg/L		06/07/22 08:40	06/09/22 03:22	1
Cadmium	<0.00050		0.00050		mg/L		06/07/22 08:40	06/09/22 03:22	1
Calcium	**120**		0.20		mg/L		06/07/22 08:40	06/09/22 03:22	1
Chromium	<0.0050		0.0050		mg/L		06/07/22 08:40	06/09/22 03:22	1
Cobalt	<0.0010		0.0010		mg/L		06/07/22 08:40	06/09/22 03:22	1
Lead	<0.00050		0.00050		mg/L		06/07/22 08:40	06/09/22 03:22	1
Lithium	<0.010		0.010		mg/L		06/07/22 08:40	06/09/22 03:22	1
Molybdenum	**0.0064**		0.0050		mg/L		06/07/22 08:40	06/09/22 03:22	1
Selenium	<0.0025		0.0025		mg/L		06/07/22 08:40	06/09/22 03:22	1
Thallium	<0.0020		0.0020		mg/L		06/07/22 08:40	06/09/22 03:22	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		06/08/22 10:15	06/09/22 10:15	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**1100**		10		mg/L			06/02/22 03:26	1
Chloride	**280**		20		mg/L			06/01/22 09:35	10
Fluoride	**0.41**		0.10		mg/L			06/12/22 00:40	1
Sulfate	**160**		50		mg/L			06/02/22 09:42	10

Definitions/Glossary

Client: Midwest Generation EME LLC
Project/Site: Joliet #29 CCR Q2

Job ID: 500-217282-1

Qualifiers

Metals

Qualifier	Qualifier Description
^+	Continuing Calibration Verification (CCV) is outside acceptance limits, high biased.

General Chemistry

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Metals

Prep Batch: 660074

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-217282-1	MW-03	Total Recoverable	Water	3005A	
500-217282-2	MW-04	Total Recoverable	Water	3005A	
500-217282-3	MW-05	Total Recoverable	Water	3005A	
500-217282-4	MW-10	Total Recoverable	Water	3005A	
500-217282-5	Duplicate	Total Recoverable	Water	3005A	
MB 500-660074/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-660074/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 660300

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-217282-1	MW-03	Total/NA	Water	7470A	
500-217282-2	MW-04	Total/NA	Water	7470A	
500-217282-3	MW-05	Total/NA	Water	7470A	
500-217282-4	MW-10	Total/NA	Water	7470A	
500-217282-5	Duplicate	Total/NA	Water	7470A	
MB 500-660300/12-A	Method Blank	Total/NA	Water	7470A	
LCS 500-660300/13-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 660498

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-217282-1	MW-03	Total Recoverable	Water	6020A	660074
500-217282-2	MW-04	Total Recoverable	Water	6020A	660074
500-217282-3	MW-05	Total Recoverable	Water	6020A	660074
500-217282-4	MW-10	Total Recoverable	Water	6020A	660074
500-217282-5	Duplicate	Total Recoverable	Water	6020A	660074
MB 500-660074/1-A	Method Blank	Total Recoverable	Water	6020A	660074
LCS 500-660074/2-A	Lab Control Sample	Total Recoverable	Water	6020A	660074

Analysis Batch: 660533

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-217282-1	MW-03	Total/NA	Water	7470A	660300
500-217282-2	MW-04	Total/NA	Water	7470A	660300
500-217282-3	MW-05	Total/NA	Water	7470A	660300
500-217282-4	MW-10	Total/NA	Water	7470A	660300
500-217282-5	Duplicate	Total/NA	Water	7470A	660300
MB 500-660300/12-A	Method Blank	Total/NA	Water	7470A	660300
LCS 500-660300/13-A	Lab Control Sample	Total/NA	Water	7470A	660300

General Chemistry

Analysis Batch: 659384

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-217282-1	MW-03	Total/NA	Water	SM 4500 Cl- E	
500-217282-2	MW-04	Total/NA	Water	SM 4500 Cl- E	
500-217282-3	MW-05	Total/NA	Water	SM 4500 Cl- E	
500-217282-4	MW-10	Total/NA	Water	SM 4500 Cl- E	
500-217282-5	Duplicate	Total/NA	Water	SM 4500 Cl- E	
MB 500-659384/16	Method Blank	Total/NA	Water	SM 4500 Cl- E	
MB 500-659384/52	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 500-659384/17	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
LCS 500-659384/53	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	

General Chemistry (Continued)

Analysis Batch: 659384 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-217282-5 MS	Duplicate	Total/NA	Water	SM 4500 Cl- E	
500-217282-5 MSD	Duplicate	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 659458

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-217282-1	MW-03	Total/NA	Water	SM 2540C	
500-217282-2	MW-04	Total/NA	Water	SM 2540C	
500-217282-3	MW-05	Total/NA	Water	SM 2540C	
MB 500-659458/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-659458/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 659459

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-217282-4	MW-10	Total/NA	Water	SM 2540C	
500-217282-5	Duplicate	Total/NA	Water	SM 2540C	
MB 500-659459/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-659459/2	Lab Control Sample	Total/NA	Water	SM 2540C	
500-217282-4 MS	MW-10	Total/NA	Water	SM 2540C	
500-217282-4 DU	MW-10	Total/NA	Water	SM 2540C	
500-217282-5 DU	Duplicate	Total/NA	Water	SM 2540C	

Analysis Batch: 659587

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-217282-1	MW-03	Total/NA	Water	SM 4500 SO4 E	
500-217282-2	MW-04	Total/NA	Water	SM 4500 SO4 E	
500-217282-3	MW-05	Total/NA	Water	SM 4500 SO4 E	
500-217282-4	MW-10	Total/NA	Water	SM 4500 SO4 E	
500-217282-5	Duplicate	Total/NA	Water	SM 4500 SO4 E	
MB 500-659587/16	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 500-659587/17	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
500-217282-1 MS	MW-03	Total/NA	Water	SM 4500 SO4 E	
500-217282-1 MSD	MW-03	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 660856

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-217282-1	MW-03	Total/NA	Water	SM 4500 F C	
500-217282-2	MW-04	Total/NA	Water	SM 4500 F C	
500-217282-3	MW-05	Total/NA	Water	SM 4500 F C	
500-217282-4	MW-10	Total/NA	Water	SM 4500 F C	
500-217282-5	Duplicate	Total/NA	Water	SM 4500 F C	
MB 500-660856/31	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 500-660856/32	Lab Control Sample	Total/NA	Water	SM 4500 F C	

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 500-660074/1-A
Matrix: Water
Analysis Batch: 660498

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 660074

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		06/07/22 08:40	06/09/22 02:12	1
Arsenic	<0.0010		0.0010		mg/L		06/07/22 08:40	06/09/22 02:12	1
Barium	<0.0025		0.0025		mg/L		06/07/22 08:40	06/09/22 02:12	1
Beryllium	<0.0010	^+	0.0010		mg/L		06/07/22 08:40	06/09/22 02:12	1
Boron	<0.050		0.050		mg/L		06/07/22 08:40	06/09/22 02:12	1
Cadmium	<0.00050		0.00050		mg/L		06/07/22 08:40	06/09/22 02:12	1
Calcium	<0.20		0.20		mg/L		06/07/22 08:40	06/09/22 02:12	1
Chromium	<0.0050		0.0050		mg/L		06/07/22 08:40	06/09/22 02:12	1
Cobalt	<0.0010		0.0010		mg/L		06/07/22 08:40	06/09/22 02:12	1
Lead	<0.00050		0.00050		mg/L		06/07/22 08:40	06/09/22 02:12	1
Lithium	<0.010		0.010		mg/L		06/07/22 08:40	06/09/22 02:12	1
Molybdenum	<0.0050		0.0050		mg/L		06/07/22 08:40	06/09/22 02:12	1
Selenium	<0.0025		0.0025		mg/L		06/07/22 08:40	06/09/22 02:12	1
Thallium	<0.0020		0.0020		mg/L		06/07/22 08:40	06/09/22 02:12	1

Lab Sample ID: LCS 500-660074/2-A
Matrix: Water
Analysis Batch: 660498

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 660074

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	0.500	0.489		mg/L		98	80 - 120
Arsenic	0.100	0.0960		mg/L		96	80 - 120
Barium	0.500	0.491		mg/L		98	80 - 120
Beryllium	0.0500	0.0499	^+	mg/L		100	80 - 120
Boron	1.00	1.01		mg/L		101	80 - 120
Cadmium	0.0500	0.0488		mg/L		98	80 - 120
Calcium	10.0	9.34		mg/L		93	80 - 120
Chromium	0.200	0.199		mg/L		100	80 - 120
Cobalt	0.500	0.496		mg/L		99	80 - 120
Lead	0.100	0.0982		mg/L		98	80 - 120
Lithium	0.100	0.0965		mg/L		97	80 - 120
Molybdenum	1.00	0.925		mg/L		93	80 - 120
Selenium	0.100	0.0984		mg/L		98	80 - 120
Thallium	0.100	0.0980		mg/L		98	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 500-660300/12-A
Matrix: Water
Analysis Batch: 660533

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 660300

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		06/08/22 10:15	06/09/22 09:24	1

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: LCS 500-660300/13-A
Matrix: Water
Analysis Batch: 660533

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 660300

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00200	0.00213		mg/L		107	80 - 120

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 500-659458/1
Matrix: Water
Analysis Batch: 659458

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10		mg/L			06/02/22 01:23	1

Lab Sample ID: LCS 500-659458/2
Matrix: Water
Analysis Batch: 659458

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	250	258		mg/L		103	80 - 120

Lab Sample ID: MB 500-659459/1
Matrix: Water
Analysis Batch: 659459

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10		mg/L			06/02/22 03:14	1

Lab Sample ID: LCS 500-659459/2
Matrix: Water
Analysis Batch: 659459

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	250	256		mg/L		102	80 - 120

Lab Sample ID: 500-217282-4 MS
Matrix: Water
Analysis Batch: 659459

Client Sample ID: MW-10
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	1000		250	1340	4	mg/L		119	75 - 125

Lab Sample ID: 500-217282-4 DU
Matrix: Water
Analysis Batch: 659459

Client Sample ID: MW-10
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	1000		1060		mg/L		2	5

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: 500-217282-5 DU
Matrix: Water
Analysis Batch: 659459

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	1100		1080		mg/L		2	5

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 500-659384/16
Matrix: Water
Analysis Batch: 659384

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<2.0		2.0		mg/L			06/01/22 08:53	1

Lab Sample ID: MB 500-659384/52
Matrix: Water
Analysis Batch: 659384

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<2.0		2.0		mg/L			06/01/22 09:34	1

Lab Sample ID: LCS 500-659384/17
Matrix: Water
Analysis Batch: 659384

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	20.0	20.2		mg/L		101	85 - 115

Lab Sample ID: LCS 500-659384/53
Matrix: Water
Analysis Batch: 659384

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	20.0	20.3		mg/L		101	85 - 115

Lab Sample ID: 500-217282-5 MS
Matrix: Water
Analysis Batch: 659384

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	280		20.0	294	4	mg/L		83	75 - 125

Lab Sample ID: 500-217282-5 MSD
Matrix: Water
Analysis Batch: 659384

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	280		20.0	292	4	mg/L		76	75 - 125	0	20

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 500-660856/31
Matrix: Water
Analysis Batch: 660856

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.10		0.10		mg/L			06/11/22 23:28	1

Lab Sample ID: LCS 500-660856/32
Matrix: Water
Analysis Batch: 660856

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	10.0	10.6		mg/L		106	90 - 119

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 500-659587/16
Matrix: Water
Analysis Batch: 659587

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	<5.0		5.0		mg/L			06/02/22 09:39	1

Lab Sample ID: LCS 500-659587/17
Matrix: Water
Analysis Batch: 659587

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfate	20.0	21.8		mg/L		109	88 - 123

Lab Sample ID: 500-217282-1 MS
Matrix: Water
Analysis Batch: 659587

Client Sample ID: MW-03
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfate	160		20.0	179	4	mg/L		99	75 - 125

Lab Sample ID: 500-217282-1 MSD
Matrix: Water
Analysis Batch: 659587

Client Sample ID: MW-03
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfate	160		20.0	179	4	mg/L		99	75 - 125	0	20

Eurofins TestAmerica, Chicago
2417 Bond Street
University Park IL 60484
Phone (708) 534-5200 Phone (708) 534-5211

Chain of Custody Record

eurofins Environment Testing America

Client Information	Sampler: CORY HIGGINS	Lab PM: Mockler Diana J	Carrier Tracking No(s):	COC No: 500-91207-40679 1
Client Contact: Mitchel Dolan	Phone: 630 277 6038	E-Mail: Diana Mockler@Eurofinset.com		Page: Page 1 of 1
Company: KPRG and Associates, Inc.	PWSID:			Job #: 500-217282

Address: 14665 West Lisbon Road, Suite 1A	Due Date Requested:	Analysis Req
City: Brookfield	TAT Requested (days):	
State Zip: WI, 53005	Compliance Project: Δ Yes Δ No	
Phone: 262-781-0475	PO #: 4502042860	
Email: mitcheld@kprginc.com	WO #:	
Project Name: Quarterly MWG Joliet #29 CCR	Project #: 50011568	
Site: Illinois	SSOW#:	

500-217282 COC

Preservation Codes

A - HCL	M Hexane		
B NaOH	N None		
C Zn Acetate	O AsNaO2		
D Nitric Acid	P - Na2O4S		
E NaHSO4	Q Na2SO3		
F MeOH	R Na2S2O3		
G Amchlor	S H2SO4		
H Ascorbic Acid	T TSP Dodecahydrate		
I Ice	U Acetone		
J DI Water	V MCAA		
K EDTA	W pH 4-5		
L EDA	Z other (specify)		

Other:

	Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010C - Lithium, 6020A - +13 elemenets, 7470A - Mercury	2540C - TDS	4500FC - Fluoride	SM00CLE - Chloride	SM4500SO4 - Sulfate	903- Rad 226	904 - Rad 228	Rad Combined				Total Number of containers	Special Instructions/Note:
				Preservation Code:				D	N	N	N	N	D	D	D					
1	MW-3	5/26/22	1503	G	W	N	N	X	X	X	X	X	X	X	X				5	*Metals List Sb,As,Ba,Be,B,Cd,Ca,Cr,Co,Pb,Mo,SeTl
2	MW-4		1250																	
3	MW-5		1650																	
4	MW-10		1132																	
5	DUPLICATE																			
	TRIP BLANK																			

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested I II, III, IV Other (specify)

Special Instructions/QC Requirements.

Empty Kit Relinquished by:	Date	Time	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Cory Higgins	5/27/22 1005	KPRG	Paula Buckley	5/27/22 1005	EETA
Relinquished by:	Date/Time	Company	Received by:	Date/Time	Company
Relinquished by:	Date/Time.	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks.
		5.8→4.4, 3.9→2.5

Login Sample Receipt Checklist

Client: Midwest Generation EME LLC

Job Number: 500-217282-1

Login Number: 217282
List Number: 1
Creator: Hernandez, Stephanie

List Source: Eurofins Chicago

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	4.4,2.5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Lab Chronicle

Client: Midwest Generation EME LLC
Project/Site: Joliet #29 CCR Q2

Job ID: 500-217282-1

Client Sample ID: MW-03
Date Collected: 05/26/22 15:03
Date Received: 05/27/22 10:05

Lab Sample ID: 500-217282-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			660074	06/07/22 08:40	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	660498	06/09/22 03:08	FXG	TAL CHI
Total/NA	Prep	7470A			660300	06/08/22 10:15	MJG	TAL CHI
Total/NA	Analysis	7470A		1	660533	06/09/22 10:02	MJG	TAL CHI
Total/NA	Analysis	SM 2540C		1	659458	06/02/22 02:17	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		10	659384	06/01/22 09:00	LP	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	660856	06/12/22 00:15	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		10	659587	06/02/22 09:40	LP	TAL CHI

Client Sample ID: MW-04
Date Collected: 05/26/22 12:50
Date Received: 05/27/22 10:05

Lab Sample ID: 500-217282-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			660074	06/07/22 08:40	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	660498	06/09/22 03:11	FXG	TAL CHI
Total/NA	Prep	7470A			660300	06/08/22 10:15	MJG	TAL CHI
Total/NA	Analysis	7470A		1	660533	06/09/22 10:08	MJG	TAL CHI
Total/NA	Analysis	SM 2540C		1	659458	06/02/22 02:19	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		10	659384	06/01/22 09:00	LP	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	660856	06/12/22 00:18	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		10	659587	06/02/22 09:41	LP	TAL CHI

Client Sample ID: MW-05
Date Collected: 05/26/22 16:50
Date Received: 05/27/22 10:05

Lab Sample ID: 500-217282-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			660074	06/07/22 08:40	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	660498	06/09/22 03:15	FXG	TAL CHI
Total/NA	Prep	7470A			660300	06/08/22 10:15	MJG	TAL CHI
Total/NA	Analysis	7470A		1	660533	06/09/22 10:11	MJG	TAL CHI
Total/NA	Analysis	SM 2540C		1	659458	06/02/22 02:22	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		10	659384	06/01/22 09:00	LP	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	660856	06/12/22 00:21	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		10	659587	06/02/22 09:41	LP	TAL CHI

Client Sample ID: MW-10
Date Collected: 05/26/22 11:32
Date Received: 05/27/22 10:05

Lab Sample ID: 500-217282-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			660074	06/07/22 08:40	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	660498	06/09/22 03:18	FXG	TAL CHI

Lab Chronicle

Client: Midwest Generation EME LLC
Project/Site: Joliet #29 CCR Q2

Job ID: 500-217282-1

Client Sample ID: MW-10

Lab Sample ID: 500-217282-4

Date Collected: 05/26/22 11:32

Matrix: Water

Date Received: 05/27/22 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7470A			660300	06/08/22 10:15	MJG	TAL CHI
Total/NA	Analysis	7470A		1	660533	06/09/22 10:13	MJG	TAL CHI
Total/NA	Analysis	SM 2540C		1	659459	06/02/22 03:19	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		10	659384	06/01/22 09:35	LP	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	660856	06/12/22 00:24	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		10	659587	06/02/22 09:42	LP	TAL CHI

Client Sample ID: Duplicate

Lab Sample ID: 500-217282-5

Date Collected: 05/26/22 00:00

Matrix: Water

Date Received: 05/27/22 10:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			660074	06/07/22 08:40	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	660498	06/09/22 03:22	FXG	TAL CHI
Total/NA	Prep	7470A			660300	06/08/22 10:15	MJG	TAL CHI
Total/NA	Analysis	7470A		1	660533	06/09/22 10:15	MJG	TAL CHI
Total/NA	Analysis	SM 2540C		1	659459	06/02/22 03:26	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		10	659384	06/01/22 09:35	LP	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	660856	06/12/22 00:40	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		10	659587	06/02/22 09:42	LP	TAL CHI

Laboratory References:

TAL CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

Laboratory Job ID: 500-221617-1
Client Project/Site: Joliet #29 CCR

For:
Midwest Generation EME LLC
1800 Channahon Road
Joliet, Illinois 60436

Attn: John Niedzwiecki

Authorized for release by:
9/29/2022 3:16:31 PM

Diana Mockler, Project Manager I
(219)252-7570
Diana.Mockler@et.eurofinsus.com

Table of Contents

Job ID: 500-221617-1

Laboratory: Eurofins Chicago

Narrative

Job Narrative
500-221617-1

Comments
No additional comments.

Receipt
The samples were received on 9/1/2022 9:30 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 0.9º C and 1.3º C.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
Method SM 4500 SO4 E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 500-674233 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Method Summary

Client: Midwest Generation EME LLC
Project/Site: Joliet #29 CCR

Job ID: 500-221617-1

Method	Method Description	Protocol	Laboratory
6020A	Metals (ICP/MS)	SW846	EET CHI
7470A	Mercury (CVAA)	SW846	EET CHI
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET CHI
SM 4500 Cl- E	Chloride, Total	SM	EET CHI
SM 4500 F C	Fluoride	SM	EET CHI
SM 4500 SO4 E	Sulfate, Total	SM	EET CHI
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET CHI
7470A	Preparation, Mercury	SW846	EET CHI

Protocol References:

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

Sample Summary

Client: Midwest Generation EME LLC
Project/Site: Joliet #29 CCR

Job ID: 500-221617-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-221617-1	MW-03	Water	08/31/22 10:05	09/01/22 09:30
500-221617-2	MW-04	Water	08/31/22 11:07	09/01/22 09:30
500-221617-3	MW-05	Water	08/31/22 12:18	09/01/22 09:30
500-221617-4	MW-10	Water	08/31/22 13:17	09/01/22 09:30
500-221617-5	Duplicate	Water	08/31/22 00:00	09/01/22 09:30

Client Sample Results

Client: Midwest Generation EME LLC
Project/Site: Joliet #29 CCR

Job ID: 500-221617-1

Client Sample ID: MW-03

Date Collected: 08/31/22 10:05
Date Received: 09/01/22 09:30

Lab Sample ID: 500-221617-1

Matrix: Water

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		09/02/22 07:45	09/09/22 00:16	1
Arsenic	**0.0018**		0.0010		mg/L		09/02/22 07:45	09/09/22 00:16	1
Barium	**0.11**		0.0025		mg/L		09/02/22 07:45	09/09/22 00:16	1
Beryllium	<0.0010		0.0010		mg/L		09/02/22 07:45	09/09/22 00:16	1
Boron	**0.23**		0.050		mg/L		09/02/22 07:45	09/09/22 16:59	1
Cadmium	<0.00050		0.00050		mg/L		09/02/22 07:45	09/09/22 00:16	1
Calcium	**110**		0.20		mg/L		09/02/22 07:45	09/09/22 00:16	1
Chromium	<0.0050		0.0050		mg/L		09/02/22 07:45	09/09/22 00:16	1
Cobalt	**0.0011**		0.0010		mg/L		09/02/22 07:45	09/09/22 00:16	1
Lead	<0.00050		0.00050		mg/L		09/02/22 07:45	09/09/22 00:16	1
Lithium	**0.011**		0.010		mg/L		09/02/22 07:45	09/13/22 19:08	1
Molybdenum	<0.0050		0.0050		mg/L		09/02/22 07:45	09/09/22 00:16	1
Selenium	<0.0025		0.0025		mg/L		09/02/22 07:45	09/09/22 00:16	1
Thallium	<0.0020		0.0020		mg/L		09/02/22 07:45	09/09/22 00:16	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		09/12/22 10:20	09/13/22 09:01	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**1200**		170		mg/L			09/07/22 18:57	1
Chloride	**270**		20		mg/L			09/12/22 13:16	10
Fluoride	**0.39**		0.10		mg/L			09/10/22 15:20	1
Sulfate	**130**		50		mg/L			09/12/22 15:44	10

Client: Midwest Generation EME LLC
Project/Site: Joliet #29 CCR

Job ID: 500-221617-1

Client Sample ID: MW-04
Date Collected: 08/31/22 11:07
Date Received: 09/01/22 09:30

Lab Sample ID: 500-221617-2
Matrix: Water

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		09/02/22 07:45	09/09/22 00:19	1
Arsenic	**0.0016**		0.0010		mg/L		09/02/22 07:45	09/09/22 00:19	1
Barium	**0.11**		0.0025		mg/L		09/02/22 07:45	09/09/22 00:19	1
Beryllium	<0.0010		0.0010		mg/L		09/02/22 07:45	09/09/22 00:19	1
Boron	**0.32**		0.050		mg/L		09/02/22 07:45	09/09/22 17:02	1
Cadmium	<0.00050		0.00050		mg/L		09/02/22 07:45	09/09/22 00:19	1
Calcium	**120**		0.20		mg/L		09/02/22 07:45	09/09/22 00:19	1
Chromium	<0.0050		0.0050		mg/L		09/02/22 07:45	09/09/22 00:19	1
Cobalt	**0.0018**		0.0010		mg/L		09/02/22 07:45	09/09/22 00:19	1
Lead	<0.00050		0.00050		mg/L		09/02/22 07:45	09/09/22 00:19	1
Lithium	**0.012**		0.010		mg/L		09/02/22 07:45	09/13/22 19:11	1
Molybdenum	**0.0055**		0.0050		mg/L		09/02/22 07:45	09/09/22 00:19	1
Selenium	<0.0025		0.0025		mg/L		09/02/22 07:45	09/09/22 00:19	1
Thallium	<0.0020		0.0020		mg/L		09/02/22 07:45	09/09/22 00:19	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		09/12/22 10:20	09/13/22 09:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**870**		170		mg/L			09/07/22 18:59	1
Chloride	**240**		20		mg/L			09/12/22 13:17	10
Fluoride	**0.45**		0.10		mg/L			09/10/22 15:22	1
Sulfate	**150**		50		mg/L			09/12/22 15:45	10

Client: Midwest Generation EME LLC
Project/Site: Joliet #29 CCR

Job ID: 500-221617-1

Client Sample ID: MW-05

Date Collected: 08/31/22 12:18
Date Received: 09/01/22 09:30

Lab Sample ID: 500-221617-3

Matrix: Water

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		09/02/22 07:45	09/09/22 00:23	1
Arsenic	**0.0015**		0.0010		mg/L		09/02/22 07:45	09/09/22 00:23	1
Barium	**0.066**		0.0025		mg/L		09/02/22 07:45	09/09/22 00:23	1
Beryllium	<0.0010		0.0010		mg/L		09/02/22 07:45	09/09/22 00:23	1
Boron	**0.43**		0.050		mg/L		09/02/22 07:45	09/09/22 17:05	1
Cadmium	<0.00050		0.00050		mg/L		09/02/22 07:45	09/09/22 00:23	1
Calcium	**110**		0.20		mg/L		09/02/22 07:45	09/09/22 00:23	1
Chromium	<0.0050		0.0050		mg/L		09/02/22 07:45	09/09/22 00:23	1
Cobalt	<0.0010		0.0010		mg/L		09/02/22 07:45	09/09/22 00:23	1
Lead	<0.00050		0.00050		mg/L		09/02/22 07:45	09/09/22 00:23	1
Lithium	**0.016**		0.010		mg/L		09/02/22 07:45	09/13/22 19:15	1
Molybdenum	<0.0050		0.0050		mg/L		09/02/22 07:45	09/09/22 00:23	1
Selenium	<0.0025		0.0025		mg/L		09/02/22 07:45	09/09/22 00:23	1
Thallium	<0.0020		0.0020		mg/L		09/02/22 07:45	09/09/22 00:23	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		09/12/22 10:20	09/13/22 09:10	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**1100**		170		mg/L			09/07/22 19:00	1
Chloride	**240**		20		mg/L			09/12/22 13:18	10
Fluoride	**0.32**		0.10		mg/L			09/10/22 15:24	1
Sulfate	**130**		50		mg/L			09/12/22 15:46	10

Client Sample Results

Client: Midwest Generation EME LLC
Project/Site: Joliet #29 CCR

Job ID: 500-221617-1

Client Sample ID: MW-10

Date Collected: 08/31/22 13:17
Date Received: 09/01/22 09:30

Lab Sample ID: 500-221617-4

Matrix: Water

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		09/02/22 07:45	09/09/22 00:26	1
Arsenic	**0.0012**		0.0010		mg/L		09/02/22 07:45	09/09/22 00:26	1
Barium	**0.042**		0.0025		mg/L		09/02/22 07:45	09/09/22 00:26	1
Beryllium	<0.0010		0.0010		mg/L		09/02/22 07:45	09/09/22 00:26	1
Boron	**0.33**		0.050		mg/L		09/02/22 07:45	09/09/22 17:09	1
Cadmium	<0.00050		0.00050		mg/L		09/02/22 07:45	09/09/22 00:26	1
Calcium	**110**		0.20		mg/L		09/02/22 07:45	09/09/22 00:26	1
Chromium	<0.0050		0.0050		mg/L		09/02/22 07:45	09/09/22 00:26	1
Cobalt	<0.0010		0.0010		mg/L		09/02/22 07:45	09/09/22 00:26	1
Lead	<0.00050		0.00050		mg/L		09/02/22 07:45	09/09/22 00:26	1
Lithium	<0.010		0.010		mg/L		09/02/22 07:45	09/13/22 19:18	1
Molybdenum	**0.0057**		0.0050		mg/L		09/02/22 07:45	09/09/22 00:26	1
Selenium	<0.0025		0.0025		mg/L		09/02/22 07:45	09/09/22 00:26	1
Thallium	<0.0020		0.0020		mg/L		09/02/22 07:45	09/09/22 00:26	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		09/12/22 10:20	09/13/22 09:12	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**970**		170		mg/L			09/07/22 19:02	1
Chloride	**240**		20		mg/L			09/12/22 13:18	10
Fluoride	**0.41**		0.10		mg/L			09/10/22 15:27	1
Sulfate	**160**		50		mg/L			09/12/22 15:46	10

Client: Midwest Generation EME LLC
Project/Site: Joliet #29 CCR

Job ID: 500-221617-1

Client Sample ID: Duplicate

Date Collected: 08/31/22 00:00
Date Received: 09/01/22 09:30

Lab Sample ID: 500-221617-5

Matrix: Water

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		09/02/22 07:45	09/09/22 00:29	1
Arsenic	**0.0019**		0.0010		mg/L		09/02/22 07:45	09/09/22 00:29	1
Barium	**0.11**		0.0025		mg/L		09/02/22 07:45	09/09/22 00:29	1
Beryllium	<0.0010		0.0010		mg/L		09/02/22 07:45	09/09/22 00:29	1
Boron	**0.23**		0.050		mg/L		09/02/22 07:45	09/09/22 17:12	1
Cadmium	<0.00050		0.00050		mg/L		09/02/22 07:45	09/09/22 00:29	1
Calcium	**110**		0.20		mg/L		09/02/22 07:45	09/09/22 00:29	1
Chromium	<0.0050		0.0050		mg/L		09/02/22 07:45	09/09/22 00:29	1
Cobalt	**0.0011**		0.0010		mg/L		09/02/22 07:45	09/09/22 00:29	1
Lead	<0.00050		0.00050		mg/L		09/02/22 07:45	09/09/22 00:29	1
Lithium	**0.011**		0.010		mg/L		09/02/22 07:45	09/13/22 19:22	1
Molybdenum	<0.0050		0.0050		mg/L		09/02/22 07:45	09/09/22 00:29	1
Selenium	<0.0025		0.0025		mg/L		09/02/22 07:45	09/09/22 00:29	1
Thallium	<0.0020		0.0020		mg/L		09/02/22 07:45	09/09/22 00:29	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		09/12/22 10:20	09/13/22 09:14	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**1300**		170		mg/L			09/07/22 19:03	1
Chloride	**270**		20		mg/L			09/12/22 13:18	10
Fluoride	**0.40**		0.10		mg/L			09/10/22 15:29	1
Sulfate	**130**		50		mg/L			09/12/22 15:46	10

Definitions/Glossary

Client: Midwest Generation EME LLC
Project/Site: Joliet #29 CCR

Job ID: 500-221617-1

Qualifiers

General Chemistry

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Metals

Prep Batch: 672889

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-221617-1	MW-03	Total Recoverable	Water	3005A	
500-221617-2	MW-04	Total Recoverable	Water	3005A	
500-221617-3	MW-05	Total Recoverable	Water	3005A	
500-221617-4	MW-10	Total Recoverable	Water	3005A	
500-221617-5	Duplicate	Total Recoverable	Water	3005A	
MB 500-672889/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-672889/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 673884

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-221617-1	MW-03	Total Recoverable	Water	6020A	672889
500-221617-2	MW-04	Total Recoverable	Water	6020A	672889
500-221617-3	MW-05	Total Recoverable	Water	6020A	672889
500-221617-4	MW-10	Total Recoverable	Water	6020A	672889
500-221617-5	Duplicate	Total Recoverable	Water	6020A	672889
MB 500-672889/1-A	Method Blank	Total Recoverable	Water	6020A	672889
LCS 500-672889/2-A	Lab Control Sample	Total Recoverable	Water	6020A	672889

Analysis Batch: 674091

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-221617-1	MW-03	Total Recoverable	Water	6020A	672889
500-221617-2	MW-04	Total Recoverable	Water	6020A	672889
500-221617-3	MW-05	Total Recoverable	Water	6020A	672889
500-221617-4	MW-10	Total Recoverable	Water	6020A	672889
500-221617-5	Duplicate	Total Recoverable	Water	6020A	672889
MB 500-672889/1-A	Method Blank	Total Recoverable	Water	6020A	672889
LCS 500-672889/2-A	Lab Control Sample	Total Recoverable	Water	6020A	672889

Prep Batch: 674142

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-221617-1	MW-03	Total/NA	Water	7470A	
500-221617-2	MW-04	Total/NA	Water	7470A	
500-221617-3	MW-05	Total/NA	Water	7470A	
500-221617-4	MW-10	Total/NA	Water	7470A	
500-221617-5	Duplicate	Total/NA	Water	7470A	
MB 500-674142/12-A	Method Blank	Total/NA	Water	7470A	
LCS 500-674142/15-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 674381

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-221617-1	MW-03	Total/NA	Water	7470A	674142
500-221617-2	MW-04	Total/NA	Water	7470A	674142
500-221617-3	MW-05	Total/NA	Water	7470A	674142
500-221617-4	MW-10	Total/NA	Water	7470A	674142
500-221617-5	Duplicate	Total/NA	Water	7470A	674142
MB 500-674142/12-A	Method Blank	Total/NA	Water	7470A	674142
LCS 500-674142/15-A	Lab Control Sample	Total/NA	Water	7470A	674142

Analysis Batch: 674538

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-221617-1	MW-03	Total Recoverable	Water	6020A	672889

Metals (Continued)

Analysis Batch: 674538 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-221617-2	MW-04	Total Recoverable	Water	6020A	672889
500-221617-3	MW-05	Total Recoverable	Water	6020A	672889
500-221617-4	MW-10	Total Recoverable	Water	6020A	672889
500-221617-5	Duplicate	Total Recoverable	Water	6020A	672889

General Chemistry

Analysis Batch: 673533

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-221617-1	MW-03	Total/NA	Water	SM 2540C	
500-221617-2	MW-04	Total/NA	Water	SM 2540C	
500-221617-3	MW-05	Total/NA	Water	SM 2540C	
500-221617-4	MW-10	Total/NA	Water	SM 2540C	
500-221617-5	Duplicate	Total/NA	Water	SM 2540C	
MB 500-673533/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-673533/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 674042

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-221617-1	MW-03	Total/NA	Water	SM 4500 F C	
500-221617-2	MW-04	Total/NA	Water	SM 4500 F C	
500-221617-3	MW-05	Total/NA	Water	SM 4500 F C	
500-221617-4	MW-10	Total/NA	Water	SM 4500 F C	
500-221617-5	Duplicate	Total/NA	Water	SM 4500 F C	
MB 500-674042/31	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 500-674042/32	Lab Control Sample	Total/NA	Water	SM 4500 F C	

Analysis Batch: 674220

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-221617-1	MW-03	Total/NA	Water	SM 4500 Cl- E	
500-221617-2	MW-04	Total/NA	Water	SM 4500 Cl- E	
500-221617-3	MW-05	Total/NA	Water	SM 4500 Cl- E	
500-221617-4	MW-10	Total/NA	Water	SM 4500 Cl- E	
500-221617-5	Duplicate	Total/NA	Water	SM 4500 Cl- E	
MB 500-674220/16	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 500-674220/17	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 674233

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-221617-1	MW-03	Total/NA	Water	SM 4500 SO4 E	
500-221617-2	MW-04	Total/NA	Water	SM 4500 SO4 E	
500-221617-3	MW-05	Total/NA	Water	SM 4500 SO4 E	
500-221617-4	MW-10	Total/NA	Water	SM 4500 SO4 E	
500-221617-5	Duplicate	Total/NA	Water	SM 4500 SO4 E	
MB 500-674233/16	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 500-674233/17	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
500-221617-1 MS	MW-03	Total/NA	Water	SM 4500 SO4 E	
500-221617-1 MSD	MW-03	Total/NA	Water	SM 4500 SO4 E	

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 500-672889/1-A
Matrix: Water
Analysis Batch: 673884

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 672889

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		09/02/22 07:45	09/08/22 23:21	1
Arsenic	<0.0010		0.0010		mg/L		09/02/22 07:45	09/08/22 23:21	1
Barium	<0.0025		0.0025		mg/L		09/02/22 07:45	09/08/22 23:21	1
Beryllium	<0.0010		0.0010		mg/L		09/02/22 07:45	09/08/22 23:21	1
Cadmium	<0.00050		0.00050		mg/L		09/02/22 07:45	09/08/22 23:21	1
Calcium	<0.20		0.20		mg/L		09/02/22 07:45	09/08/22 23:21	1
Chromium	<0.0050		0.0050		mg/L		09/02/22 07:45	09/08/22 23:21	1
Cobalt	<0.0010		0.0010		mg/L		09/02/22 07:45	09/08/22 23:21	1
Lead	<0.00050		0.00050		mg/L		09/02/22 07:45	09/08/22 23:21	1
Molybdenum	<0.0050		0.0050		mg/L		09/02/22 07:45	09/08/22 23:21	1
Selenium	<0.0025		0.0025		mg/L		09/02/22 07:45	09/08/22 23:21	1
Thallium	<0.0020		0.0020		mg/L		09/02/22 07:45	09/08/22 23:21	1

Lab Sample ID: MB 500-672889/1-A
Matrix: Water
Analysis Batch: 674091

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 672889

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.050		0.050		mg/L		09/02/22 07:45	09/09/22 15:39	1
Lithium	<0.010		0.010		mg/L		09/02/22 07:45	09/09/22 15:39	1

Lab Sample ID: LCS 500-672889/2-A
Matrix: Water
Analysis Batch: 673884

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 672889

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	0.500	0.487		mg/L		97	80 - 120
Arsenic	0.100	0.0969		mg/L		97	80 - 120
Barium	0.500	0.514		mg/L		103	80 - 120
Beryllium	0.0500	0.0525		mg/L		105	80 - 120
Cadmium	0.0500	0.0489		mg/L		98	80 - 120
Calcium	10.0	10.3		mg/L		103	80 - 120
Chromium	0.200	0.207		mg/L		103	80 - 120
Cobalt	0.500	0.512		mg/L		102	80 - 120
Lead	0.100	0.105		mg/L		105	80 - 120
Molybdenum	1.00	0.952		mg/L		95	80 - 120
Selenium	0.100	0.0982		mg/L		98	80 - 120
Thallium	0.100	0.106		mg/L		106	80 - 120

Lab Sample ID: LCS 500-672889/2-A
Matrix: Water
Analysis Batch: 674091

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 672889

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	1.00	1.02		mg/L		102	80 - 120
Lithium	0.100	0.106		mg/L		106	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 500-674142/12-A
Matrix: Water
Analysis Batch: 674381

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 674142

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		09/12/22 10:20	09/13/22 07:49	1

Lab Sample ID: LCS 500-674142/15-A
Matrix: Water
Analysis Batch: 674381

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 674142

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00200	0.00171		mg/L		86	80 - 120

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 500-673533/1
Matrix: Water
Analysis Batch: 673533

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10		mg/L			09/07/22 18:30	1

Lab Sample ID: LCS 500-673533/2
Matrix: Water
Analysis Batch: 673533

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	250	260		mg/L		104	80 - 120

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 500-674220/16
Matrix: Water
Analysis Batch: 674220

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<2.0		2.0		mg/L			09/12/22 13:15	1

Lab Sample ID: LCS 500-674220/17
Matrix: Water
Analysis Batch: 674220

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	20.0	20.0		mg/L		100	85 - 115

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 500-674042/31
Matrix: Water
Analysis Batch: 674042

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.10		0.10		mg/L			09/10/22 14:28	1

Method: SM 4500 F C - Fluoride (Continued)

Lab Sample ID: LCS 500-674042/32
Matrix: Water
Analysis Batch: 674042

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Fluoride			10.0	10.8		mg/L		108	90 - 119		

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 500-674233/16
Matrix: Water
Analysis Batch: 674233

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	<5.0		5.0		mg/L			09/12/22 15:43	1

Lab Sample ID: LCS 500-674233/17
Matrix: Water
Analysis Batch: 674233

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Sulfate			20.0	21.3		mg/L		106	88 - 123		

Lab Sample ID: 500-221617-1 MS
Matrix: Water
Analysis Batch: 674233

Client Sample ID: MW-03
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Sulfate	130		20.0	146	4	mg/L		79	75 - 125		

Lab Sample ID: 500-221617-1 MSD
Matrix: Water
Analysis Batch: 674233

Client Sample ID: MW-03
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfate	130		20.0	146	4	mg/L		78	75 - 125	0	20

Eurofins TestAmerica, Chicago
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Phone (708) 534-5211

Chain of Custody Record

eurofins Environment Testing America

Client Information	Sampler: IAN, S. HOUKSON	Lab PM: Mockler, Diana J	Carrier Tracking No(s):	COC No: 500-91207-40679 1
Client Contact: Mitchel Dolan	Phone: 630 290 6850	E-Mail: Diana.Mockler@Eurofinset.com	State:	Page: Page 1 of 1
Company: KPRG and Associates Inc	PWSID:	Analysis Requ		Job #: 500-221617
Address: 14665 West Lisbon Road, Suite 1A	Due Date Requested:		500-221617 COC	Preservation Codes: A HCL, B NaOH, C Zn Acetate, D Nitric Acid, E NaHSO4, F MeOH, G Amchlor, H Ascorbic Acid, I Ice, J DI Water, K EDTA, L EDA, M Hexane, N None, O AsNaO2, P Na2O4S, Q Na2SO3, R Na2S2O3, S H2SO4, T TSP Dodecahydrate, U Acetone, V MCAA, W pH 4-5, Z other (specify); Other:
City: Brookfield	TAT Requested (days):			
State, Zip: WI, 53005	Compliance Project: Δ Yes Δ No			
Phone: 262-781-0475	PO #: 4502042860			
Email: mitcheld@kprginc.com	WO #:			
Project Name: Quarterly MWG Joliet #29 CCR	Project #: 50011568			
Site: Illinois	SSOW#:			

	Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010C - Lithium 6020A - *13 elemenets 7470A - Mercury	2540C - TDS	4500FC - Fluoride	SM00CLE - Chloride	SM4500SO4 - Sulfate	903- Rad 226	904 - Rad 228	Rad Combined	Total Number of containers	Special Instructions/Note
	Preservation Code:							D	N	N	N	N	D	D	D		
1	MW-03	8-31-22	10:05		W	N	N	X	X	X	X	X	X	X	X	5	Metals List Sb,As,Ba,Be,B,Cd,Ca,Cr,Co,Pb,Mo,SeTl
2	MW-04	8-31-22	11:07		W	N	N	X	X	X	X	X	X	X	X	5	
3	MW-05	8-31-22	12:18		W	N	N	X	X	X	X	X	X	X	X	5	
4	MW-10	8-31-22	13:17		W	N	N	X	X	X	X	X	X	X	X	5	
5	DUPLICATE	8-31-22	—		W	N	N	X	X	X	X	X	X	X	X	5	
	TRIP BLANK	~~8-31-22~~	—	—	—											2	

Possible Hazard Identification
☐ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* ☐ *Poison B* ☐ *Unknown* ☐ *Radiological*

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Deliverable Requested I, II, III IV Other (specify)

Special Instructions/QC Requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
	[signature]	9-1-22 09:30	KPRG	Stephanie Hernandez	9/1/22 0930	EETA
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time	Company
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time	Company

Custody Seals Intact Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks	
		18+13.1+0.9	

9/29/2022

Login Sample Receipt Checklist

Client: Midwest Generation EME LLC

Job Number: 500-221617-1

Login Number: 221617

List Source: Eurofins Chicago

List Number: 1

Creator: Hernandez, Stephanie

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.3,0.9
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Lab Chronicle

Client: Midwest Generation EME LLC
Project/Site: Joliet #29 CCR

Job ID: 500-221617-1

Client Sample ID: MW-03
Date Collected: 08/31/22 10:05
Date Received: 09/01/22 09:30

Lab Sample ID: 500-221617-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			672889	BDE	EET CHI	09/02/22 07:45 - 09/02/22 08:15 [1]
Total Recoverable	Analysis	6020A		1	673884	FXG	EET CHI	09/09/22 00:16
Total Recoverable	Prep	3005A			672889	BDE	EET CHI	09/02/22 07:45 - 09/02/22 08:15 [1]
Total Recoverable	Analysis	6020A		1	674091	FXG	EET CHI	09/09/22 16:59
Total Recoverable	Prep	3005A			672889	BDE	EET CHI	09/02/22 07:45 - 09/02/22 08:15 [1]
Total Recoverable	Analysis	6020A		1	674538	FXG	EET CHI	09/13/22 19:08
Total/NA	Prep	7470A			674142	MJG	EET CHI	09/12/22 10:20 - 09/12/22 12:20 [1]
Total/NA	Analysis	7470A		1	674381	MJG	EET CHI	09/13/22 09:01
Total/NA	Analysis	SM 2540C		1	673533	SMO	EET CHI	09/07/22 18:57
Total/NA	Analysis	SM 4500 Cl- E		10	674220	LP	EET CHI	09/12/22 13:16
Total/NA	Analysis	SM 4500 F C		1	674042	EAT	EET CHI	09/10/22 15:20
Total/NA	Analysis	SM 4500 SO4 E		10	674233	LP	EET CHI	09/12/22 15:44

Client Sample ID: MW-04
Date Collected: 08/31/22 11:07
Date Received: 09/01/22 09:30

Lab Sample ID: 500-221617-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			672889	BDE	EET CHI	09/02/22 07:45 - 09/02/22 08:15 [1]
Total Recoverable	Analysis	6020A		1	673884	FXG	EET CHI	09/09/22 00:19
Total Recoverable	Prep	3005A			672889	BDE	EET CHI	09/02/22 07:45 - 09/02/22 08:15 [1]
Total Recoverable	Analysis	6020A		1	674091	FXG	EET CHI	09/09/22 17:02
Total Recoverable	Prep	3005A			672889	BDE	EET CHI	09/02/22 07:45 - 09/02/22 08:15 [1]
Total Recoverable	Analysis	6020A		1	674538	FXG	EET CHI	09/13/22 19:11
Total/NA	Prep	7470A			674142	MJG	EET CHI	09/12/22 10:20 - 09/12/22 12:20 [1]
Total/NA	Analysis	7470A		1	674381	MJG	EET CHI	09/13/22 09:03
Total/NA	Analysis	SM 2540C		1	673533	SMO	EET CHI	09/07/22 18:59
Total/NA	Analysis	SM 4500 Cl- E		10	674220	LP	EET CHI	09/12/22 13:17
Total/NA	Analysis	SM 4500 F C		1	674042	EAT	EET CHI	09/10/22 15:22
Total/NA	Analysis	SM 4500 SO4 E		10	674233	LP	EET CHI	09/12/22 15:45

Client Sample ID: MW-05
Date Collected: 08/31/22 12:18
Date Received: 09/01/22 09:30

Lab Sample ID: 500-221617-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			672889	BDE	EET CHI	09/02/22 07:45 - 09/02/22 08:15 [1]
Total Recoverable	Analysis	6020A		1	673884	FXG	EET CHI	09/09/22 00:23
Total Recoverable	Prep	3005A			672889	BDE	EET CHI	09/02/22 07:45 - 09/02/22 08:15 [1]
Total Recoverable	Analysis	6020A		1	674091	FXG	EET CHI	09/09/22 17:05
Total Recoverable	Prep	3005A			672889	BDE	EET CHI	09/02/22 07:45 - 09/02/22 08:15 [1]
Total Recoverable	Analysis	6020A		1	674538	FXG	EET CHI	09/13/22 19:15
Total/NA	Prep	7470A			674142	MJG	EET CHI	09/12/22 10:20 - 09/12/22 12:20 [1]
Total/NA	Analysis	7470A		1	674381	MJG	EET CHI	09/13/22 09:10

Lab Chronicle

Client: Midwest Generation EME LLC
Project/Site: Joliet #29 CCR

Job ID: 500-221617-1

Client Sample ID: MW-05
Date Collected: 08/31/22 12:18
Date Received: 09/01/22 09:30

Lab Sample ID: 500-221617-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	SM 2540C		1	673533	SMO	EET CHI	09/07/22 19:00
Total/NA	Analysis	SM 4500 Cl- E		10	674220	LP	EET CHI	09/12/22 13:18
Total/NA	Analysis	SM 4500 F C		1	674042	EAT	EET CHI	09/10/22 15:24
Total/NA	Analysis	SM 4500 SO4 E		10	674233	LP	EET CHI	09/12/22 15:46

Client Sample ID: MW-10
Date Collected: 08/31/22 13:17
Date Received: 09/01/22 09:30

Lab Sample ID: 500-221617-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			672889	BDE	EET CHI	09/02/22 07:45 - 09/02/22 08:15 [1]
Total Recoverable	Analysis	6020A		1	673884	FXG	EET CHI	09/09/22 00:26
Total Recoverable	Prep	3005A			672889	BDE	EET CHI	09/02/22 07:45 - 09/02/22 08:15 [1]
Total Recoverable	Analysis	6020A		1	674091	FXG	EET CHI	09/09/22 17:09
Total Recoverable	Prep	3005A			672889	BDE	EET CHI	09/02/22 07:45 - 09/02/22 08:15 [1]
Total Recoverable	Analysis	6020A		1	674538	FXG	EET CHI	09/13/22 19:18
Total/NA	Prep	7470A			674142	MJG	EET CHI	09/12/22 10:20 - 09/12/22 12:20 [1]
Total/NA	Analysis	7470A		1	674381	MJG	EET CHI	09/13/22 09:12
Total/NA	Analysis	SM 2540C		1	673533	SMO	EET CHI	09/07/22 19:02
Total/NA	Analysis	SM 4500 Cl- E		10	674220	LP	EET CHI	09/12/22 13:18
Total/NA	Analysis	SM 4500 F C		1	674042	EAT	EET CHI	09/10/22 15:27
Total/NA	Analysis	SM 4500 SO4 E		10	674233	LP	EET CHI	09/12/22 15:46

Client Sample ID: Duplicate
Date Collected: 08/31/22 00:00
Date Received: 09/01/22 09:30

Lab Sample ID: 500-221617-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			672889	BDE	EET CHI	09/02/22 07:45 - 09/02/22 08:15 [1]
Total Recoverable	Analysis	6020A		1	673884	FXG	EET CHI	09/09/22 00:29
Total Recoverable	Prep	3005A			672889	BDE	EET CHI	09/02/22 07:45 - 09/02/22 08:15 [1]
Total Recoverable	Analysis	6020A		1	674091	FXG	EET CHI	09/09/22 17:12
Total Recoverable	Prep	3005A			672889	BDE	EET CHI	09/02/22 07:45 - 09/02/22 08:15 [1]
Total Recoverable	Analysis	6020A		1	674538	FXG	EET CHI	09/13/22 19:22
Total/NA	Prep	7470A			674142	MJG	EET CHI	09/12/22 10:20 - 09/12/22 12:20 [1]
Total/NA	Analysis	7470A		1	674381	MJG	EET CHI	09/13/22 09:14
Total/NA	Analysis	SM 2540C		1	673533	SMO	EET CHI	09/07/22 19:03
Total/NA	Analysis	SM 4500 Cl- E		10	674220	LP	EET CHI	09/12/22 13:18
Total/NA	Analysis	SM 4500 F C		1	674042	EAT	EET CHI	09/10/22 15:29
Total/NA	Analysis	SM 4500 SO4 E		10	674233	LP	EET CHI	09/12/22 15:46

[1] Completion dates and times are reported or not reported per method requirements or individual lab discretion.

Laboratory References:
EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

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ANALYTICAL REPORT

PREPARED FOR

Attn: John Niedzwiecki
Midwest Generation EME LLC
1800 Channahon Road
Joliet, Illinois 60436

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JOB DESCRIPTION

Joliet #29 CCR

JOB NUMBER

500-225174-1

Eurofins Chicago
2417 Bond Street
University Park IL 60484

See page two for job notes and contact information.

Job Notes

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Authorization

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Authorized for release by
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Table of Contents

Case Narrative

Client: Midwest Generation EME LLC
Project/Site: Joliet #29 CCR

Job ID: 500-225174-1

Job ID: 500-225174-1

Laboratory: Eurofins Chicago

Narrative

Job Narrative
500-225174-1

Comments
No additional comments.

Receipt
The samples were received on 11/10/2022 8:45 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 1.3º C and 3.2º C.

Metals
Method 6020A: The continuing calibration verification (CCV) at line 108 associated with batch 500-687308 recovered above the upper control limit for Lead. The samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Method Summary

Client: Midwest Generation EME LLC
Project/Site: Joliet #29 CCR

Job ID: 500-225174-1

Method	Method Description	Protocol	Laboratory
6020A	Metals (ICP/MS)	SW846	EET CHI
7470A	Mercury (CVAA)	SW846	EET CHI
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET CHI
SM 4500 Cl- E	Chloride, Total	SM	EET CHI
SM 4500 F C	Fluoride	SM	EET PEN
SM 4500 SO4 E	Sulfate, Total	SM	EET CHI
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET CHI
7470A	Preparation, Mercury	SW846	EET CHI

Protocol References:

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

EET PEN = Eurofins Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Sample Summary

Client: Midwest Generation EME LLC
Project/Site: Joliet #29 CCR

Job ID: 500-225174-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-225174-1	MW-03	Water	11/09/22 09:19	11/10/22 08:45
500-225174-2	MW-04	Water	11/09/22 10:25	11/10/22 08:45
500-225174-3	MW-05	Water	11/09/22 12:11	11/10/22 08:45
500-225174-4	MW-10	Water	11/09/22 14:48	11/10/22 08:45
500-225174-5	Duplicate	Water	11/09/22 00:00	11/10/22 08:45

Client Sample Results

Client: Midwest Generation EME LLC
Project/Site: Joliet #29 CCR

Job ID: 500-225174-1

Client Sample ID: MW-03

Date Collected: 11/09/22 09:19
Date Received: 11/10/22 08:45

Lab Sample ID: 500-225174-1

Matrix: Water

Method: SW846 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		11/23/22 08:54	11/28/22 21:05	1
Arsenic	**0.0020**		0.0010		mg/L		11/23/22 08:54	11/28/22 21:05	1
Barium	**0.12**		0.0025		mg/L		11/23/22 08:54	11/28/22 21:05	1
Beryllium	<0.0010		0.0010		mg/L		11/23/22 08:54	11/28/22 21:05	1
Boron	**0.25**		0.050		mg/L		11/23/22 08:54	11/28/22 21:05	1
Cadmium	<0.00050		0.00050		mg/L		11/23/22 08:54	11/28/22 21:05	1
Calcium	**120**		0.20		mg/L		11/23/22 08:54	11/28/22 21:05	1
Chromium	<0.0050		0.0050		mg/L		11/23/22 08:54	11/28/22 21:05	1
Cobalt	**0.0015**		0.0010		mg/L		11/23/22 08:54	11/28/22 21:05	1
Lead	<0.00050	^+	0.00050		mg/L		11/23/22 08:54	11/28/22 21:05	1
Lithium	**0.012**		0.010		mg/L		11/23/22 08:54	11/30/22 16:29	1
Molybdenum	<0.0050		0.0050		mg/L		11/23/22 08:54	11/28/22 21:05	1
Selenium	<0.0025		0.0025		mg/L		11/23/22 08:54	11/28/22 21:05	1
Thallium	<0.0020		0.0020		mg/L		11/23/22 08:54	11/28/22 21:05	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		11/21/22 10:20	11/22/22 07:17	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**1100**		10		mg/L			11/15/22 23:38	1
Chloride (SM 4500 Cl- E)	**300**		20		mg/L			11/23/22 10:30	10
Fluoride (SM 4500 F C)	**0.54**		0.10		mg/L			11/16/22 11:39	1
Sulfate (SM 4500 SO4 E)	**140**		50		mg/L			11/29/22 09:15	10

Client Sample Results

Client: Midwest Generation EME LLC
Project/Site: Joliet #29 CCR

Job ID: 500-225174-1

Client Sample ID: MW-04

Date Collected: 11/09/22 10:25
Date Received: 11/10/22 08:45

Lab Sample ID: 500-225174-2

Matrix: Water

Method: SW846 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		11/23/22 08:54	11/28/22 21:09	1
Arsenic	**0.0021**		0.0010		mg/L		11/23/22 08:54	11/28/22 21:09	1
Barium	**0.11**		0.0025		mg/L		11/23/22 08:54	11/28/22 21:09	1
Beryllium	<0.0010		0.0010		mg/L		11/23/22 08:54	11/28/22 21:09	1
Boron	**0.34**		0.050		mg/L		11/23/22 08:54	11/28/22 21:09	1
Cadmium	<0.00050		0.00050		mg/L		11/23/22 08:54	11/28/22 21:09	1
Calcium	**120**		0.20		mg/L		11/23/22 08:54	11/28/22 21:09	1
Chromium	<0.0050		0.0050		mg/L		11/23/22 08:54	11/28/22 21:09	1
Cobalt	**0.0030**		0.0010		mg/L		11/23/22 08:54	11/28/22 21:09	1
Lead	<0.00050	^+	0.00050		mg/L		11/23/22 08:54	11/28/22 21:09	1
Lithium	**0.012**		0.010		mg/L		11/23/22 08:54	11/30/22 16:32	1
Molybdenum	**0.0056**		0.0050		mg/L		11/23/22 08:54	11/28/22 21:09	1
Selenium	<0.0025		0.0025		mg/L		11/23/22 08:54	11/28/22 21:09	1
Thallium	<0.0020		0.0020		mg/L		11/23/22 08:54	11/28/22 21:09	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		11/21/22 10:20	11/22/22 07:19	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**940**		10		mg/L			11/16/22 03:53	1
Chloride (SM 4500 Cl- E)	**240**		20		mg/L			11/23/22 10:31	10
Fluoride (SM 4500 F C)	**0.61**		0.10		mg/L			11/16/22 11:42	1
Sulfate (SM 4500 SO4 E)	**150**		50		mg/L			11/29/22 09:15	10

Client Sample Results

Client: Midwest Generation EME LLC
Project/Site: Joliet #29 CCR

Job ID: 500-225174-1

Client Sample ID: MW-05

Date Collected: 11/09/22 12:11
Date Received: 11/10/22 08:45

Lab Sample ID: 500-225174-3

Matrix: Water

Method: SW846 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		11/23/22 08:54	11/28/22 21:12	1
Arsenic	**0.0021**		0.0010		mg/L		11/23/22 08:54	11/28/22 21:12	1
Barium	**0.068**		0.0025		mg/L		11/23/22 08:54	11/28/22 21:12	1
Beryllium	<0.0010		0.0010		mg/L		11/23/22 08:54	11/28/22 21:12	1
Boron	**0.39**		0.050		mg/L		11/23/22 08:54	11/28/22 21:12	1
Cadmium	<0.00050		0.00050		mg/L		11/23/22 08:54	11/28/22 21:12	1
Calcium	**120**		0.20		mg/L		11/23/22 08:54	11/28/22 21:12	1
Chromium	<0.0050		0.0050		mg/L		11/23/22 08:54	11/28/22 21:12	1
Cobalt	<0.0010		0.0010		mg/L		11/23/22 08:54	11/28/22 21:12	1
Lead	**0.00093**		0.00050		mg/L		11/23/22 08:54	11/30/22 16:36	1
Lithium	**0.015**		0.010		mg/L		11/23/22 08:54	11/30/22 16:36	1
Molybdenum	<0.0050		0.0050		mg/L		11/23/22 08:54	11/28/22 21:12	1
Selenium	<0.0025		0.0025		mg/L		11/23/22 08:54	11/28/22 21:12	1
Thallium	<0.0020		0.0020		mg/L		11/23/22 08:54	11/28/22 21:12	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		11/21/22 10:20	11/22/22 07:54	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**910**		10		mg/L			11/16/22 04:00	1
Chloride (SM 4500 Cl- E)	**230**		20		mg/L			11/23/22 10:31	10
Fluoride (SM 4500 F C)	**0.42**		0.10		mg/L			11/16/22 11:45	1
Sulfate (SM 4500 SO4 E)	**120**		50		mg/L			11/29/22 09:16	10

Client Sample Results

Client: Midwest Generation EME LLC
Project/Site: Joliet #29 CCR

Job ID: 500-225174-1

Client Sample ID: MW-10

Date Collected: 11/09/22 14:48
Date Received: 11/10/22 08:45

Lab Sample ID: 500-225174-4

Matrix: Water

Method: SW846 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		11/23/22 08:54	11/28/22 21:16	1
Arsenic	**0.0014**		0.0010		mg/L		11/23/22 08:54	11/28/22 21:16	1
Barium	**0.043**		0.0025		mg/L		11/23/22 08:54	11/28/22 21:16	1
Beryllium	<0.0010		0.0010		mg/L		11/23/22 08:54	11/28/22 21:16	1
Boron	**0.32**		0.050		mg/L		11/23/22 08:54	11/28/22 21:16	1
Cadmium	<0.00050		0.00050		mg/L		11/23/22 08:54	11/28/22 21:16	1
Calcium	**110**		0.20		mg/L		11/23/22 08:54	11/28/22 21:16	1
Chromium	<0.0050		0.0050		mg/L		11/23/22 08:54	11/28/22 21:16	1
Cobalt	<0.0010		0.0010		mg/L		11/23/22 08:54	11/28/22 21:16	1
Lead	<0.00050	^+	0.00050		mg/L		11/23/22 08:54	11/28/22 21:16	1
Lithium	**0.010**		0.010		mg/L		11/23/22 08:54	11/30/22 16:39	1
Molybdenum	**0.0055**		0.0050		mg/L		11/23/22 08:54	11/28/22 21:16	1
Selenium	<0.0025		0.0025		mg/L		11/23/22 08:54	11/28/22 21:16	1
Thallium	<0.0020		0.0020		mg/L		11/23/22 08:54	11/28/22 21:16	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		11/21/22 10:20	11/22/22 07:56	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**880**		10		mg/L			11/16/22 04:06	1
Chloride (SM 4500 Cl- E)	**240**		20		mg/L			11/23/22 10:48	10
Fluoride (SM 4500 F C)	**0.57**		0.10		mg/L			11/16/22 11:48	1
Sulfate (SM 4500 SO4 E)	**150**		50		mg/L			11/29/22 09:04	10

Client: Midwest Generation EME LLC
Project/Site: Joliet #29 CCR

Job ID: 500-225174-1

Client Sample ID: Duplicate

Date Collected: 11/09/22 00:00
Date Received: 11/10/22 08:45

Lab Sample ID: 500-225174-5

Matrix: Water

Method: SW846 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		11/23/22 08:54	11/28/22 21:19	1
Arsenic	**0.0021**		0.0010		mg/L		11/23/22 08:54	11/28/22 21:19	1
Barium	**0.11**		0.0025		mg/L		11/23/22 08:54	11/28/22 21:19	1
Beryllium	<0.0010		0.0010		mg/L		11/23/22 08:54	11/28/22 21:19	1
Boron	**0.33**		0.050		mg/L		11/23/22 08:54	11/28/22 21:19	1
Cadmium	<0.00050		0.00050		mg/L		11/23/22 08:54	11/28/22 21:19	1
Calcium	**120**		0.20		mg/L		11/23/22 08:54	11/28/22 21:19	1
Chromium	<0.0050		0.0050		mg/L		11/23/22 08:54	11/28/22 21:19	1
Cobalt	**0.0031**		0.0010		mg/L		11/23/22 08:54	11/28/22 21:19	1
Lead	<0.00050	^+	0.00050		mg/L		11/23/22 08:54	11/28/22 21:19	1
Lithium	**0.012**		0.010		mg/L		11/23/22 08:54	11/30/22 16:43	1
Molybdenum	**0.0054**		0.0050		mg/L		11/23/22 08:54	11/28/22 21:19	1
Selenium	<0.0025		0.0025		mg/L		11/23/22 08:54	11/28/22 21:19	1
Thallium	<0.0020		0.0020		mg/L		11/23/22 08:54	11/28/22 21:19	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		11/21/22 10:20	11/22/22 08:09	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**960**		10		mg/L			11/16/22 04:08	1
Chloride (SM 4500 Cl- E)	**240**		20		mg/L			11/23/22 10:48	10
Fluoride (SM 4500 F C)	**0.61**		0.10		mg/L			11/16/22 11:51	1
Sulfate (SM 4500 SO4 E)	**150**		50		mg/L			11/29/22 09:04	10

Definitions/Glossary

Client: Midwest Generation EME LLC
Project/Site: Joliet #29 CCR

Job ID: 500-225174-1

Qualifiers

Metals

Qualifier	Qualifier Description
^+	Continuing Calibration Verification (CCV) is outside acceptance limits, high biased.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Metals

Prep Batch: 686309

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-225174-1	MW-03	Total/NA	Water	7470A	
500-225174-2	MW-04	Total/NA	Water	7470A	
500-225174-3	MW-05	Total/NA	Water	7470A	
500-225174-4	MW-10	Total/NA	Water	7470A	
500-225174-5	Duplicate	Total/NA	Water	7470A	
MB 500-686309/12-A	Method Blank	Total/NA	Water	7470A	
LCS 500-686309/13-A	Lab Control Sample	Total/NA	Water	7470A	
500-225174-2 MS	MW-04	Total/NA	Water	7470A	
500-225174-2 MSD	MW-04	Total/NA	Water	7470A	
500-225174-2 DU	MW-04	Total/NA	Water	7470A	

Analysis Batch: 686552

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-225174-1	MW-03	Total/NA	Water	7470A	686309
500-225174-2	MW-04	Total/NA	Water	7470A	686309
500-225174-3	MW-05	Total/NA	Water	7470A	686309
500-225174-4	MW-10	Total/NA	Water	7470A	686309
500-225174-5	Duplicate	Total/NA	Water	7470A	686309
MB 500-686309/12-A	Method Blank	Total/NA	Water	7470A	686309
LCS 500-686309/13-A	Lab Control Sample	Total/NA	Water	7470A	686309
500-225174-2 MS	MW-04	Total/NA	Water	7470A	686309
500-225174-2 MSD	MW-04	Total/NA	Water	7470A	686309
500-225174-2 DU	MW-04	Total/NA	Water	7470A	686309

Prep Batch: 686689

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-225174-1	MW-03	Total Recoverable	Water	3005A	
500-225174-2	MW-04	Total Recoverable	Water	3005A	
500-225174-3	MW-05	Total Recoverable	Water	3005A	
500-225174-4	MW-10	Total Recoverable	Water	3005A	
500-225174-5	Duplicate	Total Recoverable	Water	3005A	
MB 500-686689/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-686689/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 687308

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-225174-1	MW-03	Total Recoverable	Water	6020A	686689
500-225174-2	MW-04	Total Recoverable	Water	6020A	686689
500-225174-3	MW-05	Total Recoverable	Water	6020A	686689
500-225174-4	MW-10	Total Recoverable	Water	6020A	686689
500-225174-5	Duplicate	Total Recoverable	Water	6020A	686689
MB 500-686689/1-A	Method Blank	Total Recoverable	Water	6020A	686689
LCS 500-686689/2-A	Lab Control Sample	Total Recoverable	Water	6020A	686689

Analysis Batch: 687746

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-225174-1	MW-03	Total Recoverable	Water	6020A	686689
500-225174-2	MW-04	Total Recoverable	Water	6020A	686689
500-225174-3	MW-05	Total Recoverable	Water	6020A	686689
500-225174-4	MW-10	Total Recoverable	Water	6020A	686689
500-225174-5	Duplicate	Total Recoverable	Water	6020A	686689

General Chemistry

Analysis Batch: 600791

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-225174-1	MW-03	Total/NA	Water	SM 4500 F C	
500-225174-2	MW-04	Total/NA	Water	SM 4500 F C	
500-225174-3	MW-05	Total/NA	Water	SM 4500 F C	
500-225174-4	MW-10	Total/NA	Water	SM 4500 F C	
500-225174-5	Duplicate	Total/NA	Water	SM 4500 F C	
MB 400-600791/33	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 400-600791/36	Lab Control Sample	Total/NA	Water	SM 4500 F C	
MRL 400-600791/35	Lab Control Sample	Total/NA	Water	SM 4500 F C	

Analysis Batch: 685172

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-225174-1	MW-03	Total/NA	Water	SM 2540C	
MB 500-685172/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-685172/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 685176

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-225174-2	MW-04	Total/NA	Water	SM 2540C	
500-225174-3	MW-05	Total/NA	Water	SM 2540C	
500-225174-4	MW-10	Total/NA	Water	SM 2540C	
500-225174-5	Duplicate	Total/NA	Water	SM 2540C	
MB 500-685176/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-685176/2	Lab Control Sample	Total/NA	Water	SM 2540C	
500-225174-2 MS	MW-04	Total/NA	Water	SM 2540C	
500-225174-2 DU	MW-04	Total/NA	Water	SM 2540C	
500-225174-3 DU	MW-05	Total/NA	Water	SM 2540C	

Analysis Batch: 686775

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-225174-1	MW-03	Total/NA	Water	SM 4500 Cl- E	
500-225174-2	MW-04	Total/NA	Water	SM 4500 Cl- E	
500-225174-3	MW-05	Total/NA	Water	SM 4500 Cl- E	
500-225174-4	MW-10	Total/NA	Water	SM 4500 Cl- E	
500-225174-5	Duplicate	Total/NA	Water	SM 4500 Cl- E	
MB 500-686775/52	Method Blank	Total/NA	Water	SM 4500 Cl- E	
MB 500-686775/85	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 500-686775/53	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
LCS 500-686775/86	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 687313

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-225174-1	MW-03	Total/NA	Water	SM 4500 SO4 E	
500-225174-2	MW-04	Total/NA	Water	SM 4500 SO4 E	
500-225174-3	MW-05	Total/NA	Water	SM 4500 SO4 E	
500-225174-4	MW-10	Total/NA	Water	SM 4500 SO4 E	
500-225174-5	Duplicate	Total/NA	Water	SM 4500 SO4 E	
MB 500-687313/16	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 500-687313/17	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 500-686689/1-A
Matrix: Water
Analysis Batch: 687308

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 686689

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		11/23/22 08:54	11/28/22 20:09	1
Arsenic	<0.0010		0.0010		mg/L		11/23/22 08:54	11/28/22 20:09	1
Barium	<0.0025		0.0025		mg/L		11/23/22 08:54	11/28/22 20:09	1
Beryllium	<0.0010		0.0010		mg/L		11/23/22 08:54	11/28/22 20:09	1
Boron	<0.050		0.050		mg/L		11/23/22 08:54	11/28/22 20:09	1
Cadmium	<0.00050		0.00050		mg/L		11/23/22 08:54	11/28/22 20:09	1
Calcium	<0.20		0.20		mg/L		11/23/22 08:54	11/28/22 20:09	1
Chromium	<0.0050		0.0050		mg/L		11/23/22 08:54	11/28/22 20:09	1
Cobalt	<0.0010		0.0010		mg/L		11/23/22 08:54	11/28/22 20:09	1
Lead	<0.00050	^+	0.00050		mg/L		11/23/22 08:54	11/28/22 20:09	1
Lithium	<0.010		0.010		mg/L		11/23/22 08:54	11/28/22 20:09	1
Molybdenum	<0.0050		0.0050		mg/L		11/23/22 08:54	11/28/22 20:09	1
Selenium	<0.0025		0.0025		mg/L		11/23/22 08:54	11/28/22 20:09	1
Thallium	<0.0020		0.0020		mg/L		11/23/22 08:54	11/28/22 20:09	1

Lab Sample ID: LCS 500-686689/2-A
Matrix: Water
Analysis Batch: 687308

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 686689

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	0.500	0.486		mg/L		97	80 - 120
Arsenic	0.100	0.0877		mg/L		88	80 - 120
Barium	2.00	1.99		mg/L		100	80 - 120
Beryllium	0.0500	0.0445		mg/L		89	80 - 120
Boron	1.00	0.961		mg/L		96	80 - 120
Cadmium	0.0500	0.0460		mg/L		92	80 - 120
Calcium	10.0	9.56		mg/L		96	80 - 120
Chromium	0.200	0.196		mg/L		98	80 - 120
Cobalt	0.500	0.509		mg/L		102	80 - 120
Lead	0.100	0.104	^+	mg/L		104	80 - 120
Lithium	0.500	0.492		mg/L		98	80 - 120
Molybdenum	1.00	0.924		mg/L		92	80 - 120
Selenium	0.100	0.0912		mg/L		91	80 - 120
Thallium	0.100	0.104		mg/L		104	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 500-686309/12-A
Matrix: Water
Analysis Batch: 686552

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 686309

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		11/21/22 10:20	11/22/22 07:02	1

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: LCS 500-686309/13-A
Matrix: Water
Analysis Batch: 686552

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 686309

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Mercury			0.00198	0.00177		mg/L		89	80 - 120		

Lab Sample ID: 500-225174-2 MS
Matrix: Water
Analysis Batch: 686552

Client Sample ID: MW-04
Prep Type: Total/NA
Prep Batch: 686309

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Mercury	<0.00020		0.00100	0.000972		mg/L		97	75 - 125		

Lab Sample ID: 500-225174-2 MSD
Matrix: Water
Analysis Batch: 686552

Client Sample ID: MW-04
Prep Type: Total/NA
Prep Batch: 686309

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	<0.00020		0.00100	0.000964		mg/L		96	75 - 125	1	20

Lab Sample ID: 500-225174-2 DU
Matrix: Water
Analysis Batch: 686552

Client Sample ID: MW-04
Prep Type: Total/NA
Prep Batch: 686309

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Mercury	<0.00020		<0.00020		mg/L		NC	20

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 500-685172/1
Matrix: Water
Analysis Batch: 685172

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10		mg/L			11/15/22 22:39	1

Lab Sample ID: LCS 500-685172/2
Matrix: Water
Analysis Batch: 685172

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Dissolved Solids			250	252		mg/L		101	80 - 120		

Lab Sample ID: MB 500-685176/1
Matrix: Water
Analysis Batch: 685176

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10		mg/L			11/16/22 03:48	1

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: LCS 500-685176/2
Matrix: Water
Analysis Batch: 685176

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Dissolved Solids			250	240		mg/L		96	80 - 120		

Lab Sample ID: 500-225174-2 MS
Matrix: Water
Analysis Batch: 685176

Client Sample ID: MW-04
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Dissolved Solids	940		250	1170		mg/L		92	75 - 125		

Lab Sample ID: 500-225174-2 DU
Matrix: Water
Analysis Batch: 685176

Client Sample ID: MW-04
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Dissolved Solids	940			974		mg/L				4	5

Lab Sample ID: 500-225174-3 DU
Matrix: Water
Analysis Batch: 685176

Client Sample ID: MW-05
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Dissolved Solids	910			904		mg/L				0.4	5

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 500-686775/52
Matrix: Water
Analysis Batch: 686775

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<2.0		2.0		mg/L			11/23/22 10:23	1

Lab Sample ID: MB 500-686775/85
Matrix: Water
Analysis Batch: 686775

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<2.0		2.0		mg/L			11/23/22 10:46	1

Lab Sample ID: LCS 500-686775/53
Matrix: Water
Analysis Batch: 686775

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			20.0	20.1		mg/L		100	85 - 115		

Method: SM 4500 Cl- E - Chloride, Total (Continued)

Lab Sample ID: LCS 500-686775/86
Matrix: Water
Analysis Batch: 686775

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			20.0	20.4		mg/L		102	85 - 115		

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 400-600791/33
Matrix: Water
Analysis Batch: 600791

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.10		0.10		mg/L			11/16/22 12:40	1

Lab Sample ID: LCS 400-600791/36
Matrix: Water
Analysis Batch: 600791

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Fluoride			5.00	5.19		mg/L		104	90 - 110		

Lab Sample ID: MRL 400-600791/35
Matrix: Water
Analysis Batch: 600791

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits		
Fluoride			0.100	0.105		mg/L		105			

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 500-687313/16
Matrix: Water
Analysis Batch: 687313

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	<5.0		5.0		mg/L			11/29/22 08:58	1

Lab Sample ID: LCS 500-687313/17
Matrix: Water
Analysis Batch: 687313

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Sulfate			20.0	21.9		mg/L		109	88 - 123		

Eurofins TestAmerica, Chicago
2417 Bond Street
University Park IL 60484
Phone (708) 534-5200 Phone (708) 534-5211

Chain of Custody Record

eurofins Environment Testing America

Client Information	Sampler: IAN JOHN HOWIESON	Lab PM: Mockler Diana J	Carrier Tracking No(s):	COC No: 500-91207-40679 1
Client Contact: Mitchel Dolan	Phone: 630-325-1300	E-Mail: Diana Mockler@Eurofinset com	State of Origin:	Page: Page 1 of 1
Company: KPRG and Associates, Inc	PWSID:			Job #: 500-225174

Address: 14665 West Lisbon Road, Suite 1A	Due Date Requested	Analysis Requested
City: Brookfield	TAT Requested (days)	
State, Zip: WI 53005	Compliance Project: Δ Yes Δ No	
Phone: 262-781-0475	PO #: 4502042860	
Email: mitchell@kprginc.com	WO #:	
Project Name: Quarterly MWG Joliet #29 CCR	Project #: 50011568	
Site: Illinois	SSOW#:	

500-225174 COC

Preservation Codes

A	HCL	M	Hexane
B	NaOH	N	None
C	Zn Acetate	O	AsNaO2
D	Nitric Acid	P	Na2O4S
E	NaHSO4	Q	Na2SO3
F	MeOH	R	Na2S2O3
G	Amchlor	S	H2SO4
H	Ascorbic Acid	T	TSP Dodecahydrate
I	Ice	U	Acetone
J	DI Water	V	MCAA
K	EDTA	W	pH 4-5
L	EDA	Z	other (specify)

Other:

Sample Identification	Sample Date	Sample Time (CT)	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010C - Lithium	6020A - *13 elemenets, 7470A - Mercury	2540C - TDS	4500FC - Fluoride	SM00CLE - Chloride	SM4500SO4 - Sulfate	903- Rad 226	904 - Rad 228	Rad Combined	Total Number of containers	Special Instructions/Note
			Preservation Code:				D	D	N	N	N	N	D	D	D		
1 MW-03	11-9-22	09:19	G	W	N	N	X	X	X	X	X	X	X	X		5	Metals List Sb,As,Ba,Be,B,Cd,Ca,Cr,Co,Pb,Mo,Se,Tl
2 MW-04	11-9-22	10:25	G	W	N	N	X	X	X	X	X	X	X	X		5	
3 MW-05	11-9-22	12:11	G	W	N	N	X	X	X	X	X	X	X	X		5	
4 MW-10	11-9-22	14:48	G	W	N	N	X	X	X	X	X	X	X	X		5	
5 DUPLICATE	11-9-22	—	G	W	N	N	X	X	X	X	X	X	X	X		5	
6 TRIP BLANK	—	—	—	W	X	X	2									2	

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested I II III, IV Other (specify)

Special Instructions/QC Requirements

Empty Kit Relinquished by:	Date	Time	Method of Shipment: 11/10/22
Relinquished by:	Date/Time: 11-10-22 08:45	Company: KPRG	Received by: SS Date/Time: 11/9/22 0845 Company: EBTA
Relinquished by:	Date/Time:	Company	Received by: Date/Time: Company
Relinquished by:	Date/Time:	Company	Received by: Date/Time: Company

Custody Seals Intact Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks: (2.3-1.3) (2.2-3.2)

12/1/2022

Ver: 01/16/2019

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler:	Lab PM: Mockler, Diana J	Carrier Tracking No(s):	COC No: 500-167316.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Diana.Mockler@et.eurofinsus.com	State of Origin: Illinois	Page: Page 1 of 1
Company: Eurofins Environment Testing Southeast,		Accreditations Required (See note): NELAP - Illinois		Job #: 500-225174-1
Address: 3355 McLemore Drive, ,	Due Date Requested: 12/5/2022			
City: Pensacola	TAT Requested (days):			
State, Zip: FL, 32514				
Phone: 850-474-1001(Tel) 850-478-2671(Fax)	PO #:			
Email:	WO #:			
Project Name: Joliet #29 CCR	Project #: 50011568			
Site: NRG Midwest Generation LSQ Joliet#29 CCR	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	4500_F_C	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-03 (500-225174-1)	11/9/22	09:19 Central		Water			X	1	
MW-04 (500-225174-2)	11/9/22	10:25 Central		Water			X	1	
MW-05 (500-225174-3)	11/9/22	12:11 Central		Water			X	1	
MW-10 (500-225174-4)	11/9/22	14:48 Central		Water			X	1	
Duplicate (500-225174-5)	11/9/22	Central		Water			X	1	

Note: Since laboratory accreditations are subject to change, Eurofins Chicago places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Chicago laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Chicago attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins Chicago.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Melissa Carlson	11/10/22 1600	EETA			
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 11-11-22 8:56	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 4-6°C CRS

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ORIGIN ID:JOTA (708) 534-5200
SAMPLE LOGIN
TESTAMERICA LABS
2417 BOND ST

UNIVERSITY PARK, IL 60484
UNITED STATES US

SHIP DATE: 10NOV22
ACTWGT: 22.00 LB MAN
CAD: 033264/CAFE3616

BILL SENDER

TO SAMPLE RECEIVING
EUROFINS-PENSACOLA
3355 MCLEMORE DR.

PENSACOLA FL 32514
(850) 474-1001
REF: 225074 104 174 SH

4.4 IR8

FedEx Express

E

FRI - 11 NOV 10:30A
PRIORITY OVERNIGHT

TRK# 0201 6180 7191 9563

XH PNSA

32514
FL-US BFM

Login Sample Receipt Checklist

Client: Midwest Generation EME LLC

Job Number: 500-225174-1

Login Number: 225174
List Number: 1
Creator: Scott, Sherri L

List Source: Eurofins Chicago

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.3,3.2
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Midwest Generation EME LLC

Job Number: 500-225174-1

Login Number: 225174
List Number: 3
Creator: Whitley, Adrian

List Source: Eurofins Pensacola
List Creation: 11/12/22 08:32 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	4.4°C IR8
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Lab Chronicle

Client: Midwest Generation EME LLC
Project/Site: Joliet #29 CCR

Job ID: 500-225174-1

Client Sample ID: MW-03
Date Collected: 11/09/22 09:19
Date Received: 11/10/22 08:45

Lab Sample ID: 500-225174-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			686689	BDE	EET CHI	11/23/22 08:54 - 11/23/22 09:24 [1]
Total Recoverable	Analysis	6020A		1	687308	FXG	EET CHI	11/28/22 21:05
Total Recoverable	Prep	3005A			686689	BDE	EET CHI	11/23/22 08:54 - 11/23/22 09:24 [1]
Total Recoverable	Analysis	6020A		1	687746	FXG	EET CHI	11/30/22 16:29
Total/NA	Prep	7470A			686309	MJG	EET CHI	11/21/22 10:20 - 11/21/22 12:20 [1]
Total/NA	Analysis	7470A		1	686552	MJG	EET CHI	11/22/22 07:17
Total/NA	Analysis	SM 2540C		1	685172	CLB	EET CHI	11/15/22 23:38
Total/NA	Analysis	SM 4500 Cl- E		10	686775	LP	EET CHI	11/23/22 10:30
Total/NA	Analysis	SM 4500 F C		1	600791	JP	EET PEN	11/16/22 11:39
Total/NA	Analysis	SM 4500 SO4 E		10	687313	LP	EET CHI	11/29/22 09:15

Client Sample ID: MW-04
Date Collected: 11/09/22 10:25
Date Received: 11/10/22 08:45

Lab Sample ID: 500-225174-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			686689	BDE	EET CHI	11/23/22 08:54 - 11/23/22 09:24 [1]
Total Recoverable	Analysis	6020A		1	687308	FXG	EET CHI	11/28/22 21:09
Total Recoverable	Prep	3005A			686689	BDE	EET CHI	11/23/22 08:54 - 11/23/22 09:24 [1]
Total Recoverable	Analysis	6020A		1	687746	FXG	EET CHI	11/30/22 16:32
Total/NA	Prep	7470A			686309	MJG	EET CHI	11/21/22 10:20 - 11/21/22 12:20 [1]
Total/NA	Analysis	7470A		1	686552	MJG	EET CHI	11/22/22 07:19
Total/NA	Analysis	SM 2540C		1	685176	CLB	EET CHI	11/16/22 03:53
Total/NA	Analysis	SM 4500 Cl- E		10	686775	LP	EET CHI	11/23/22 10:31
Total/NA	Analysis	SM 4500 F C		1	600791	JP	EET PEN	11/16/22 11:42
Total/NA	Analysis	SM 4500 SO4 E		10	687313	LP	EET CHI	11/29/22 09:15

Client Sample ID: MW-05
Date Collected: 11/09/22 12:11
Date Received: 11/10/22 08:45

Lab Sample ID: 500-225174-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			686689	BDE	EET CHI	11/23/22 08:54 - 11/23/22 09:24 [1]
Total Recoverable	Analysis	6020A		1	687308	FXG	EET CHI	11/28/22 21:12
Total Recoverable	Prep	3005A			686689	BDE	EET CHI	11/23/22 08:54 - 11/23/22 09:24 [1]
Total Recoverable	Analysis	6020A		1	687746	FXG	EET CHI	11/30/22 16:36
Total/NA	Prep	7470A			686309	MJG	EET CHI	11/21/22 10:20 - 11/21/22 12:20 [1]
Total/NA	Analysis	7470A		1	686552	MJG	EET CHI	11/22/22 07:54
Total/NA	Analysis	SM 2540C		1	685176	CLB	EET CHI	11/16/22 04:00
Total/NA	Analysis	SM 4500 Cl- E		10	686775	LP	EET CHI	11/23/22 10:31
Total/NA	Analysis	SM 4500 F C		1	600791	JP	EET PEN	11/16/22 11:45
Total/NA	Analysis	SM 4500 SO4 E		10	687313	LP	EET CHI	11/29/22 09:16

Lab Chronicle

Client: Midwest Generation EME LLC
Project/Site: Joliet #29 CCR

Job ID: 500-225174-1

Client Sample ID: MW-10

Lab Sample ID: 500-225174-4

Date Collected: 11/09/22 14:48

Matrix: Water

Date Received: 11/10/22 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			686689	BDE	EET CHI	11/23/22 08:54 - 11/23/22 09:24 [1]
Total Recoverable	Analysis	6020A		1	687308	FXG	EET CHI	11/28/22 21:16
Total Recoverable	Prep	3005A			686689	BDE	EET CHI	11/23/22 08:54 - 11/23/22 09:24 [1]
Total Recoverable	Analysis	6020A		1	687746	FXG	EET CHI	11/30/22 16:39
Total/NA	Prep	7470A			686309	MJG	EET CHI	11/21/22 10:20 - 11/21/22 12:20 [1]
Total/NA	Analysis	7470A		1	686552	MJG	EET CHI	11/22/22 07:56
Total/NA	Analysis	SM 2540C		1	685176	CLB	EET CHI	11/16/22 04:06
Total/NA	Analysis	SM 4500 Cl- E		10	686775	LP	EET CHI	11/23/22 10:48
Total/NA	Analysis	SM 4500 F C		1	600791	JP	EET PEN	11/16/22 11:48
Total/NA	Analysis	SM 4500 SO4 E		10	687313	LP	EET CHI	11/29/22 09:04

Client Sample ID: Duplicate

Lab Sample ID: 500-225174-5

Date Collected: 11/09/22 00:00

Matrix: Water

Date Received: 11/10/22 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			686689	BDE	EET CHI	11/23/22 08:54 - 11/23/22 09:24 [1]
Total Recoverable	Analysis	6020A		1	687308	FXG	EET CHI	11/28/22 21:19
Total Recoverable	Prep	3005A			686689	BDE	EET CHI	11/23/22 08:54 - 11/23/22 09:24 [1]
Total Recoverable	Analysis	6020A		1	687746	FXG	EET CHI	11/30/22 16:43
Total/NA	Prep	7470A			686309	MJG	EET CHI	11/21/22 10:20 - 11/21/22 12:20 [1]
Total/NA	Analysis	7470A		1	686552	MJG	EET CHI	11/22/22 08:09
Total/NA	Analysis	SM 2540C		1	685176	CLB	EET CHI	11/16/22 04:08
Total/NA	Analysis	SM 4500 Cl- E		10	686775	LP	EET CHI	11/23/22 10:48
Total/NA	Analysis	SM 4500 F C		1	600791	JP	EET PEN	11/16/22 11:51
Total/NA	Analysis	SM 4500 SO4 E		10	687313	LP	EET CHI	11/29/22 09:04

[1] Completion dates and times are reported or not reported per method requirements or individual lab discretion.

Laboratory References:

EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

EET PEN = Eurofins Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

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ANALYTICAL REPORT

PREPARED FOR

Attn: John Niedzwiecki
Midwest Generation EME LLC
1800 Channahon Road
Joliet, Illinois 60436

Generated 1/13/2023 7:50:04 AM

JOB DESCRIPTION

Joliet #29 CCR MW-10 Resample (Fluoride)

JOB NUMBER

500-227415-1

Eurofins Chicago
2417 Bond Street
University Park IL 60484

See page two for job notes and contact information.

Job Notes

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins Environment Testing North Central, LLC and its client. All questions regarding this report should be directed to the Eurofins Environment Testing North Central, LLC Project Manager who has signed this report.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Chicago Project Manager.

Authorization

Generated
1/13/2023 7:50:04 AM

Authorized for release by
Diana Mockler, Project Manager I
Diana.Mockler@et.eurofinsus.com
(219)252-7570

Table of Contents

Case Narrative

Client: Midwest Generation EME LLC
Job ID: 500-227415-1
Project/Site: Joliet #29 CCR MW-10 Resample (Fluoride)

Job ID: 500-227415-1

Laboratory: Eurofins Chicago

Narrative

Job Narrative
500-227415-1

Comments
No additional comments.

Receipt
The sample was received on 12/28/2022 3:18 PM. Unless otherwise noted below, the sample arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.5º C.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Method Summary

Client: Midwest Generation EME LLC
Job ID: 500-227415-1
Project/Site: Joliet #29 CCR MW-10 Resample (Fluoride)

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	EET CHI

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

Laboratory References:

EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

Sample Summary

Client: Midwest Generation EME LLC
Job ID: 500-227415-1
Project/Site: Joliet #29 CCR MW-10 Resample (Fluoride)

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-227415-1	MW-10	Water	12/20/22 12:35	12/28/22 15:18

Client Sample Results

Client: Midwest Generation EME LLC
Job ID: 500-227415-1
Project/Site: Joliet #29 CCR MW-10 Resample (Fluoride)

Client Sample ID: MW-10
Date Collected: 12/20/22 12:35
Date Received: 12/28/22 15:18

Lab Sample ID: 500-227415-1
Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride (MCAWW 300.0)	0.68		0.20		mg/L			01/07/23 16:30	1

Definitions/Glossary

Client: Midwest Generation EME LLC
Job ID: 500-227415-1
Project/Site: Joliet #29 CCR MW-10 Resample (Fluoride)

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

QC Association Summary

Client: Midwest Generation EME LLC
Job ID: 500-227415-1
Project/Site: Joliet #29 CCR MW-10 Resample (Fluoride)

General Chemistry

Analysis Batch: 693172

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-227415-1	MW-10	Total/NA	Water	300.0	
MB 500-693172/3	Method Blank	Total/NA	Water	300.0	
LCS 500-693172/4	Lab Control Sample	Total/NA	Water	300.0	

QC Sample Results

Client: Midwest Generation EME LLC
Project/Site: Joliet #29 CCR MW-10 Resample (Fluoride)

Job ID: 500-227415-1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 500-693172/3
Matrix: Water
Analysis Batch: 693172

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.20		0.20		mg/L			01/07/23 15:27	1

Lab Sample ID: LCS 500-693172/4
Matrix: Water
Analysis Batch: 693172

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Fluoride			1.00	0.987		mg/L		99	90 - 110		

650-523 [illegible] Diana Mockler@Eurofinset.com

Page 1 of 1

Job #: 500-22741-5

Analysis Requested

Preservation Codes

A HCL	M Hexane
B NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q Na2SO3
F MeOH	R Na2S2O3
G - Amchlor	S H2SO4
H - Ascorbic Acid	T TSP Dodecahydrate
I - Ice	U Acetone
J DI Water	V MCAA
K - EDTA	W pH 4-5
L - EDA	Z other (specify)

Other:

Due Date Requested:

TAT Requested (days):

Compliance Project: Δ Yes Δ No

PO #: 4502041043

WO #: MW 12/29

Project #: ~~50011569~~ 50011568

SSOW#:

Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	903.0, 904.0, Radium Combined	6010C - Lithium, 6020A - Metals (13 elements), 7470A - Mercury	2540C TDS, 4500FC - Fluoride	SM4500ClE Chloride, SM4500SO4E - Sulfate	Fluoride 4500FC	Total Number of Containers	Special Instructions/Note:
Preservation Code:				N	N	D	D	N	N			
12-20-22	1235	G	W	N						X		*Metals List Sb,As,Ba,Be,B,Cd,Ca,Cr,Co,Pb,Mo,SeTl

Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

specify)

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements.

	Date	Time	Method of Shipment:
~			

	Date/Time	Company	Received by	Date/Time	Company
	12/21/22 1030	KRG		12/21/22 1030	EMT
	12/21/22		Nicole Kozen	12/21/22 1808	KRG
	12/28/22 1403	KRG		12/28/22 1403	EETA

Cooler Temperature(s) °C and Other Remarks: 3.5 - 2.5

12/29/22 [illegible]

Ver: 01/16/2019

1/13/2023

Page 11 of 13

Login Sample Receipt Checklist

Client: Midwest Generation EME LLC

Job Number: 500-227415-1

Login Number: 227415
List Number: 1
Creator: James, Jeff A

List Source: Eurofins Chicago

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Lab Chronicle

Client: Midwest Generation EME LLC
Job ID: 500-227415-1
Project/Site: Joliet #29 CCR MW-10 Resample (Fluoride)

Client Sample ID: MW-10
Date Collected: 12/20/22 12:35
Date Received: 12/28/22 15:18

Lab Sample ID: 500-227415-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.0		1	693172	MM	EET CHI	01/07/23 16:30

Laboratory References:

EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

ATTACHMENT 3
Alternate Source Demonstration

K P R G

ENVIRONMENTAL CONSULTATION & REMEDIATION

KPRG and Associates, Inc.

ALTERNATE SOURCE DEMONSTRATION
CCR GROUNDWATER MONITORING
JOLIET #29 GENERATING STATION

April 11, 2023

Ms. Sharene Shealey
Midwest Generation, LLC
529 E. Romeo Road
Romeoville, IL 60446

VIA E-MAIL

Re: Alternate Source Demonstration - Fluoride
Joliet #29 Generating Station – Pond 2

Dear Ms. Shealey:

The routine Detection Monitoring requirements, in accordance with the Federal Register, Environmental Protection Agency, 40 CFR Parts 257.94, Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities; Final Rule dated April 17, 2015 (CCR Rule), were completed in the fourth quarter 2022 for the Pond 2 monitoring wells located at the Midwest Generation, LLC (Midwest Generation) Joliet #29 Generating Station. The CCR monitoring well network around Pond 2 consists of four monitoring wells: MW-10 [upgradient] and downgradient wells MW-03 through MW-05. The monitoring well network is shown on Figure 1. A statistical comparison of the fourth quarter sampling data (Appendix III parameters) was completed and submitted to Midwest Generation. The following conclusions/recommendations were provided:

> "…The resampling for the potential fluoride SSI in the fourth quarter at upgradient monitoring well MW-10 confirmed the elevated fluoride concentration. At this time, it is recommended that an ASD in accordance with 40 CFR Section 257.94(e)(2) be completed for the elevated fluoride detections at upgradient well MW-10 and downgradient wells MW-03 and MW-04. The results of that ASD will be used to determine whether the site will remain within detection monitoring under Section 257.94 or be transitioned to assessment monitoring under Section 257.95."

This report summarizes the results of the Alternate Source Demonstration (ASD) completed for the Joliet #29 Generating Station Pond 2 in accordance with 40 CFR 257.94(e)(2).

DOCUMENTATION OF EXISTING CONDITIONS

The Joliet #29 Generating Station stopped coal-fired operations and was converted to natural gas in 2016 at which time no additional ash materials were generated. As part of the previous coal-fired operations, the station operated two ash ponds (Ponds 1 and 2) and a settling pond (Pond 3). Pond 1 was taken out of service in 2015 with all ash being removed, the liner decontaminated and the use of the pond repurposed for low volume wastewater. Pond 1 is not a coal combustion residual (CCR) surface impoundment. The settling pond (Pond 3) is not a CCR surface impoundment. Pond 2 continued to be used for CCR management/storage until 2019 at which point all the ash was removed. The warning and cushion layers remain in-place and all other portions of the liner have been decontaminated. Therefore, Pond 2 has not contained any substantive CCR materials or CCR related fluids since 2019.

ALTERNATE SOURCE EVALUATOIN OF THE SSI PARAMETERS

As stated above, the fourth quarter detection monitoring sampling confirmed potential SSIs for fluoride at upgradient monitoring well MW-10 as well as at downgradient monitoring wells MW-03 and MW-04. Another round of groundwater sampling for fluoride at the subject well locations was completed during the first quarter 2023, the results of which are used to assist in this evaluation. The applicable data are summarized in Table 1. The first quarter 2023 sampling data package is included as Attachment 1. The fourth quarter 2022 data package was submitted as part of the Federal CCR Compliance Annual Groundwater Monitoring and Corrective Action Report dated January 31, 2023.

Fluoride

Fluoride detections were confirmed above the established prediction limit (PL) of 0.51 mg/l during the fourth quarter 2022 sampling at upgradient well MW-10 and fluoride concentrations above the PL were also detected at downgradient well locations MW-03 and MW-04. It is also noted that at downgradient monitoring well MW-05, fluoride was elevated relative to the previous recent sampling data, however not at a concentration above the established PL. The follow-up sampling completed during the first quarter 2023 showed all fluoride concentrations back below the established PL of 0.51 mg/l, at concentrations consistent with the sampling data prior to the fourth quarter 2022. This is illustrated in the time versus concentration curves for fluoride provided in Attachment 2.

Discussions with the analytical laboratory (Eurofins in University Park, Illinois) indicated that normally the fluoride analysis is performed using Method 4500FC, which is an ion selective electrode method. This piece of analytical equipment was not operating properly during the fourth quarter 2022 and the laboratory had to switch to using analytical Method 300.0, which is an ion chromatography (IC) method. This method was used for both the initial sampling as well as the verification sampling during the fourth quarter. For the first quarter 2023 sampling, the analytical method was switched back to the titration Method 4500FC (see e-mail chain provided in Attachment 3). All of the previous background

sampling data which was used for the statistical evaluations and calculation of background prediction limits was generated using analytical Method 4500FC.

With regard to a potential higher bias for fluoride using the Method 300.0 protocol, the following discussion was provided by the Technical Director for Eurofins (see Attachment 3):

> " Method 300 has a lot of interferences for fluoride. Things like organic acids are a common interference that can cause a high bias. There is often a water dip at the beginning of an IC run that can interfere with fluoride determination. Historically we have used Method 4500 by Ion Selective Electrode (ISE), which has very few interferences and the common IC problems are not applicable to ISE. I looked at jobs 227415 and 225636 as a reference. The high bias that the client noticed during Q4 2022 related to analysis by IC are most likely due to matrix interference, not a deviation from historical data."

Consider these factors: that there have been no substantive CCR materials or associated liquids contained within this pond since 2019; that the upgradient well also displayed a similar magnitude concentration above the PL; that the analytical method for the fourth quarter 2022 analysis of fluoride was changed by the laboratory due to equipment malfunction; and that subsequent first quarter 2023 sampling has again documented no concentrations above the established PL at all well locations after changing back to the historically used analytical method. These factors indicate that the noted SSIs for fluoride in the fourth quarter 2022 are not related to a potential release from Pond 2 but rather due to a temporary change in analytical method and equipment used by the laboratory for this parameter due to malfunction of the equipment normally used.

CONCLUSIONS/RECOMMENDATIONS

Based on the data evaluation and discussions provided above, it is concluded that the noted SSIs for fluoride in the fourth quarter 2022 are not associated with a potential release from Pond 2 but rather due to a temporary change in laboratory analytical method for that parameter. This conclusion is based on the following:

- There have been no CCR materials or associated liquids contained within Pond 2 since 2019 at which time the liner was decontaminated.

- Fluoride concentrations were noted above the PL in the upgradient well MW-10 as well as in downgradient wells MW-03 and MW-04. Downgradient monitoring well MW-05 also displayed an elevated fluoride concentration during the fourth quarter 2022 sampling relative to recent prior quarterly results, however not at a concentration above the established PL.

- Subsequent follow-up sampling during the first quarter 2023 showed all fluoride concentrations again below the established PL at levels consistent with previous rounds of sampling prior to the fourth quarter 2022.

- Historically, fluoride analysis was performed by the laboratory using analytical Method 4500FC, which is an ion selective elctrode method. Fluoride analysis during the fourth quarter 2022, for both the initial sampling as well as the verification sampling, was performed by the laboratory using a different analytical method (Method 300.0 – ion chromatography) due to malfunction of the equipment normally used. Method 300.0 can bias high the analytical results due to various matrix interferences that do not affect Method 4500FC. The first quarter 2023 fluoride analysis was again completed by what had been used historically by the laboratory, Method 4500FC, resulting in fluoride concentrations again below the established PL at concentrations consistent with the historic data.

Therefore, the noted fourth quarter elevated fluoride concentrations appear to be directly related to the temporary change in analytical method as opposed to indicating a potential release from the pond.

Based on this conclusion, it is recommended to continue with detection monitoring at this time.

Sincerely,
KPRG and Associates, Inc.

Richard R. Gnat, P.G.
Principal

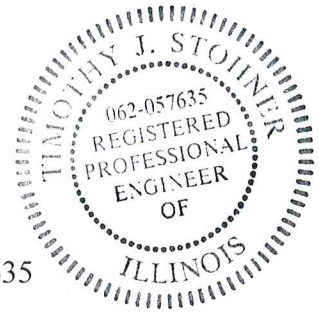
Timothy Stohner, P.E.
Project Manager/Sr. Engineer

cc: David Bacher, NRG
James Thorne, Midwest Generation
Jill Buckley, NRG

CERTIFICATION

In accordance with Section 257.94(e)(2) of the CCR Rule, I hereby certify based on a review of the information contained within this CCR Alternate Source Demonstration dated April 11, 2023, that the information contained in this report is accurate to the best of my knowledge.

Certified by:
Date: April 11, 2023



Timothy Stohner, P.E.
Illinois Professional Engineer Registration No.: 062.057635
KPRG and Associates, Inc.

FIGURE

0 100'
APPROXIMATE SCALE

N

ENVIRONMENTAL CONSULTATION & REMEDIATION

K P R G

KPRG and Associates, inc.

414 Plaza Drive, Suite 106 Westmont, Illinois 60559 Telephone 630-325-1300 Facsimile 630-325-1593

14665 West Lisbon Road, Suite 2B Brookfield, Wisconsin 53005 Telephone 262-781-0475 Facsimile 262-781-0478

CCR MONITORING WELLS SITE MAP

JOLIET #29 GENERATING STATION
JOLIET, ILLINOIS

Scale: 1" = 100' | Date: December 27, 2017

KPRG Project No. 12313.0 | FIGURE 1

W:\projects\midwest generation attorney-client privilege\gw evaluations\joliet #29 map.dwg

TABLE

Table 4. Appendix III Groundwater Analytical Results for 2022 - Midwest Generation, LLC, Joliet Station #29, Joliet, IL.

Well	Date	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	Total Dissolved Solids
MW-10 up-gradient	10/28/2015	0.47	100	200	0.41	7.04	84	790
	2/10/2016	0.41	100	210	0.44	7.17	120	820
	5/12/2016	0.29	100	300	0.42	7.02	110	920
	8/31/2016	0.36	89	170	0.46	6.95	100	760
	11/2/2016	0.48	100	130	0.45	6.99	95	720
	2/6/2017	0.44	120	190	0.36	6.99	88	820
	4/26/2017	0.35	120	200	0.35	7.27	87	760
	6/14/2017	0.29	91	160	0.43	7.47	75	690
	Pred. Limit*	**0.57**	**131**	**318**	**0.51**	**7.56-6.67**	**131**	**959**
	8/2/2017	0.45	97	170	0.38	7.23	110	750
	10/18/2017	**0.61**	120	140	0.41	7.11	130	820
	4/24/2018	0.4	110	260	0.39	7.28	120	910
	10/17/2018	**0.63**	120	180	0.42	7.30	110	810
	11/24/2018 R	0.44	NA	NA	NA	NA	NA	NA
	5/7/2019	0.56	130	**410**	0.39	7.17	95	**1,000**
	7/3/2019 R	NA	NA	230	NA	NA	NA	830
	11/7/2019	0.35	90	130	0.36	7.40	59	650
	5/20/2020	**0.85**	120	250	0.41	6.90	100	**960**
	6/11/2020 R	0.26	NA	NA	NA	NA	NA	770
	10/22/2020	0.34	110	230	0.41	7.11	93	850
	5/18/2021	0.33	**140**	**350**	0.39	7.16	**210**	**1,200**
	6/29/2021 R	NA	**160**	**420**	NA	7.32	**190**	**1,300**
	8/30/2021	0.28	120	**330**	0.37	7.56	**170**	**990**
	11/16/2021	0.39	120	260	0.38	7.01	**150**	**1,000**
	3/3/2022	0.47	120	280	0.41	7.05	**190**	**1,000**
	5/26/2022	0.39	120	280	0.41	6.90	**160**	**1,000**
	8/31/2022	0.33	110	240	0.41	6.58	**160**	**970**
	11/9/2022	0.32	110	240	**0.57**	7.00	**150**	**880**
	12/20/2022 (R)	NS	NS	NS	**0.68**	NS	NS	NS
	2/28/2023	0.36	130	**330**	0.38	7.06	**170**	**1200**
MW-03 down-gradient	10/28/2015	0.34	110	230	0.41	7.11	110	960
	2/10/2016	0.49	100	220	0.44	7.31	130	790
	5/10/2016	0.48	95	240	0.44	7.07	130	800
	8/31/2016	0.49	100	250	0.45	7.18	120	920
	11/2/2016	0.34	87	190	0.44	7.45	94	780
	2/6/2017	0.40	97	140	0.39	7.35	77	720
	4/26/2017	0.54	100	210	0.36	7.03	120	820
	6/14/2017	0.45	88	190	0.44	7.48	75	760
	Pred. Limit	**0.57**	**131**	**316**	**0.51**	**7.56-6.67**	**130**	**956**
	8/2/2017	0.41	99	200	0.40	7.34	110	850
	10/18/2017	0.35	93	160	0.42	7.11	100	850
	4/24/2018	0.52	100	220	0.42	7.2	**150**	930
	7/31/2018 R	NA	NA	NA	NA	NA	110	NA
	10/17/2018	0.25	100	250	0.4	7.04	110	870
	5/7/2019	0.43	120	280	0.4	7.27	**140**	880
	7/3/2019 R	NA	NA	NA	NA	NA	65	NA
	11/7/2019	0.34	100	150	0.4	7.32	65	660
	5/20/2020	0.38	100	230	0.42	7.56	78	**960**
	6/11/2020 R	NA	NA	NA	NA	NA	NA	930
	10/22/2020	0.32	110	180	0.43	7.23	90	770
	5/18/2021	0.28	130	290	0.4	7.13	**190**	**1,200**
	6/29/2021 R	NA	NA	NA	NA	7.34	**210**	**1,300**
	11/16/2021	0.3	130	280	0.37	7.11	**150**	**1,000**
	3/3/2022	0.3	130	270	0.4	7.05	**180**	**1,300**
	5/26/2022	0.39	120	280	0.41	6.98	**160**	**1,100**
	8/31/2022	0.23	110	270	0.39	6.25	130	**1,200**
	11/9/2022	0.25	120	300	**0.54**	7.03	140	**1,100**
	2/28/2023	0.30	120	280	0.37	7.06	**160**	**1000**
MW-04 down-gradient	10/28/2015	0.34	94	F1 200	0.45	7.07	83	740
	2/10/2016	0.32	97	210	0.47	7.22	140	810
	5/10/2016	0.47	100	260	0.46	6.71	150	900
	8/31/2016	0.42	100	210	0.45	7.07	120	890
	11/2/2016	0.32	98	160	0.43	7.25	83	750
	2/6/2017	0.40	110	200	0.37	7.19	98	790
	4/26/2017	0.33	100	220	0.37	7.46	89	770
	6/14/2017	0.37	92	190	0.47	7.43	80	770
	Pred. Limit	**0.57**	**131**	**316**	**0.51**	**7.56-6.67**	**130**	**956**
	8/2/2017	0.35	93	180	0.43	7.41	100	770
	10/18/2017	0.54	97	140	0.45	7.2	120	790
	4/24/2018	0.4	110	240	0.43	7.21	**160**	940
	7/31/2018 R	NA	NA	NA	NA	NA	120	NA
	10/17/2018	0.29	100	230	0.45	7.2	130	840
	5/7/2019	**0.76**	120	**340**	0.42	7.27	120	**1,000**
	7/3/2019 R	0.23	NA	250	NA	NA	NA	870
	11/6/2019	0.3	77	140	0.41	7.33	53	670
	5/20/2020	**0.79**	110	250	0.45	7.3	110	**1,100**
	6/11/2020 R	0.28	NA	NA	NA	NA	NA	850
	10/22/2020	0.33	100	190	0.48	7.15	83	770
	5/18/2021	0.22	120	280	0.42	7.3	**190**	**1,100**
	6/29/2021 R	NA	NA	NA	NA	7.36	**190**	**1,200**
	11/16/2021	0.3	130	290	0.42	7.11	**140**	**1,000**
	3/3/2022	0.31	120	220	0.42	7.11	**170**	**1,300**
	5/26/2022	0.26	110	290	0.44	6.94	**150**	**1,100**
	8/31/2022	0.32	120	240	0.45	6.38	**150**	870
	11/9/2022	0.34	120	240	**0.61**	7.08	**150**	940
	2/28/2023	0.34	120	280	0.40	7.16	**150**	**1100**
MW-05 down-gradient	10/28/2015	0.64	100	160	0.39	7.12	120	790
	2/10/2016	0.46	110	220	0.39	7.25	120	790
	5/10/2016	0.8	150	220	0.46	6.88	290	950
	8/31/2016	1.0	140	99	0.56	6.81	260	820
	11/2/2016	0.41	98	130	0.37	7.26	100	700
	2/6/2017	0.48	150	180	0.30	7.22	120	790
	4/26/2017	0.67	110	F1 190	0.37	7.28	170	770
	6/14/2017	0.44	75	150	0.46	7.45	110	670
	Pred. Limit	**0.57**	**131**	**316**	**0.51**	**7.56-6.67**	**130**	**956**
	8/2/2017	0.28	83	170	0.35	7.30	99	770
	10/18/2017	0.42	110	110	0.38	7.16	95	720
	4/24/2018	0.31	110	300	0.34	7.33	130	**1,000**
	7/31/2018 R	NA	NA	NA	NA	NA	NA	940
	10/17/2018	0.31	110	210	0.36	7.29	93	810
	5/6/2019	0.38	130	**500**	0.31	7.11	84	**1,300**
	7/3/2019 R	NA	NA	150	NA	NA	NA	890
	11/7/2019	0.31	**180**	130	0.3	7.44	64	590
	12/4/2019 R	NA	89	NA	NA	NA	NA	NA
	5/20/2020	0.32	100	270	0.37	7.03	67	890
	10/22/2020	0.52	92	180	0.38	7.16	85	720
	5/18/2021	0.37	130	**410**	0.3	7.00	**160**	**1,300**
	6/29/2021 R	NA	NA	**430**	NA	7.33	**150**	**1,300**
	11/16/2021	0.44	120	260	0.3	7.08	**140**	**970**
	3/3/2022	0.43	110	230	0.3	7.04	**140**	900
	5/26/2022	0.55	120	**320**	0.31	6.86	**140**	**1,100**
	8/31/2022	0.43	110	240	0.32	6.50	130	**1,100**
	11/9/2022	0.39	120	230	0.42	7.00	120	910
	2/28/2023	**0.60**	**160**	130	0.35	7.15	**260**	**980**

Notes: All units are in mg/l except pH is in standard units.
* - Intrawell Prediction Limit. All others are interwell comparisons with MW-10 as background..
Bold - Potential statistically significant increase.
F1 - MS and/or MSD Recovery outside of limits.
Pred. Limit - Prediction Limit
Italics Date - First round of Detection Monitoring and resample after statistical background establishment.
NA - Not analyzed. No confirmation resample required.
R - Resample

ATTACHMENT 1
Laboratory Data Package

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: John Niedzwiecki
Midwest Generation EME LLC
1800 Channahon Road
Joliet, Illinois 60436

Generated 3/21/2023 8:08:59 AM

JOB DESCRIPTION

Joliet #29 CCR

JOB NUMBER

500-230034-1

Eurofins Chicago
2417 Bond Street
University Park IL 60484

See page two for job notes and contact information.

Job Notes

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins Environment Testing North Central, LLC and its client. All questions regarding this report should be directed to the Eurofins Environment Testing North Central, LLC Project Manager who has signed this report.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Chicago Project Manager.

Authorization

Generated
3/21/2023 8:08:59 AM

Authorized for release by
Diana Mockler, Project Manager I
Diana.Mockler@et.eurofinsus.com
(219)252-7570

Table of Contents

Case Narrative

Client: Midwest Generation EME LLC
Project/Site: Joliet #29 CCR

Job ID: 500-230034-1

Job ID: 500-230034-1

Laboratory: Eurofins Chicago

Narrative

Job Narrative
500-230034-1

Comments
No additional comments.

Receipt
The samples were received on 3/1/2023 9:23 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 1.5º C and 1.7º C.

Metals
No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Method Summary

Client: Midwest Generation EME LLC
Project/Site: Joliet #29 CCR

Job ID: 500-230034-1

Method	Method Description	Protocol	Laboratory
6020A	Metals (ICP/MS)	SW846	EET CHI
7470A	Mercury (CVAA)	SW846	EET CHI
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET CHI
SM 4500 Cl- E	Chloride, Total	SM	EET CHI
SM 4500 F C	Fluoride	SM	EET CHI
SM 4500 SO4 E	Sulfate, Total	SM	EET CHI
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET CHI
7470A	Preparation, Mercury	SW846	EET CHI

Protocol References:

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

Sample Summary

Client: Midwest Generation EME LLC
Project/Site: Joliet #29 CCR

Job ID: 500-230034-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-230034-1	MW-03	Water	02/28/23 09:26	03/01/23 09:23
500-230034-2	MW-04	Water	02/28/23 10:32	03/01/23 09:23
500-230034-3	MW-05	Water	02/28/23 11:31	03/01/23 09:23
500-230034-4	MW-10	Water	02/28/23 15:35	03/01/23 09:23
500-230034-5	Duplicate	Water	02/28/23 00:00	03/01/23 09:23

Client Sample Results

Client: Midwest Generation EME LLC
Project/Site: Joliet #29 CCR

Job ID: 500-230034-1

Client Sample ID: MW-03

Date Collected: 02/28/23 09:26
Date Received: 03/01/23 09:23

Lab Sample ID: 500-230034-1

Matrix: Water

Method: SW846 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		03/07/23 15:27	03/08/23 12:21	1
Arsenic	**0.0014**		0.0010		mg/L		03/07/23 15:27	03/08/23 12:21	1
Barium	**0.12**		0.0025		mg/L		03/07/23 15:27	03/08/23 12:21	1
Beryllium	<0.0010		0.0010		mg/L		03/07/23 15:27	03/08/23 12:21	1
Boron	**0.30**		0.050		mg/L		03/07/23 15:27	03/08/23 12:21	1
Cadmium	<0.00050		0.00050		mg/L		03/07/23 15:27	03/08/23 12:21	1
Calcium	**120**		0.20		mg/L		03/07/23 15:27	03/08/23 12:21	1
Chromium	<0.0050		0.0050		mg/L		03/07/23 15:27	03/08/23 12:21	1
Cobalt	**0.0015**		0.0010		mg/L		03/07/23 15:27	03/08/23 12:21	1
Lead	<0.00050		0.00050		mg/L		03/07/23 15:27	03/08/23 12:21	1
Lithium	**0.011**		0.010		mg/L		03/07/23 15:27	03/08/23 12:21	1
Molybdenum	<0.0050		0.0050		mg/L		03/07/23 15:27	03/08/23 12:21	1
Selenium	**0.0033**		0.0025		mg/L		03/07/23 15:27	03/08/23 12:21	1
Thallium	<0.0020		0.0020		mg/L		03/07/23 15:27	03/08/23 12:21	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		03/07/23 11:05	03/08/23 10:48	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**1000**		10		mg/L			03/02/23 07:28	1
Chloride (SM 4500 Cl- E)	**280**		40		mg/L			03/09/23 12:29	20
Fluoride (SM 4500 F C)	**0.37**		0.10		mg/L			03/08/23 12:54	1
Sulfate (SM 4500 SO4 E)	**160**		50		mg/L			03/08/23 11:47	10

Client Sample Results

Client: Midwest Generation EME LLC
Project/Site: Joliet #29 CCR

Job ID: 500-230034-1

Client Sample ID: MW-04

Date Collected: 02/28/23 10:32
Date Received: 03/01/23 09:23

Lab Sample ID: 500-230034-2

Matrix: Water

Method: SW846 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		03/07/23 15:27	03/08/23 12:45	1
Arsenic	**0.0019**		0.0010		mg/L		03/07/23 15:27	03/08/23 12:45	1
Barium	**0.10**		0.0025		mg/L		03/07/23 15:27	03/08/23 12:45	1
Beryllium	<0.0010		0.0010		mg/L		03/07/23 15:27	03/08/23 12:45	1
Boron	**0.34**		0.050		mg/L		03/07/23 15:27	03/08/23 12:45	1
Cadmium	<0.00050		0.00050		mg/L		03/07/23 15:27	03/08/23 12:45	1
Calcium	**120**		0.20		mg/L		03/07/23 15:27	03/08/23 12:45	1
Chromium	<0.0050		0.0050		mg/L		03/07/23 15:27	03/08/23 12:45	1
Cobalt	**0.0078**		0.0010		mg/L		03/07/23 15:27	03/08/23 12:45	1
Lead	<0.00050		0.00050		mg/L		03/07/23 15:27	03/08/23 12:45	1
Lithium	**0.011**		0.010		mg/L		03/07/23 15:27	03/08/23 12:45	1
Molybdenum	**0.0058**		0.0050		mg/L		03/07/23 15:27	03/08/23 12:45	1
Selenium	<0.0025		0.0025		mg/L		03/07/23 15:27	03/08/23 12:45	1
Thallium	<0.0020		0.0020		mg/L		03/07/23 15:27	03/08/23 12:45	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		03/07/23 11:05	03/08/23 10:50	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**1100**		10		mg/L			03/02/23 07:31	1
Chloride (SM 4500 Cl- E)	**280**		40		mg/L			03/09/23 12:29	20
Fluoride (SM 4500 F C)	**0.40**		0.10		mg/L			03/08/23 12:54	1
Sulfate (SM 4500 SO4 E)	**150**		50		mg/L			03/08/23 11:47	10

Client Sample Results

Client: Midwest Generation EME LLC
Project/Site: Joliet #29 CCR

Job ID: 500-230034-1

Client Sample ID: MW-05

Date Collected: 02/28/23 11:31
Date Received: 03/01/23 09:23

Lab Sample ID: 500-230034-3

Matrix: Water

Method: SW846 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		03/07/23 15:27	03/08/23 12:49	1
Arsenic	**0.0019**		0.0010		mg/L		03/07/23 15:27	03/08/23 12:49	1
Barium	**0.080**		0.0025		mg/L		03/07/23 15:27	03/08/23 12:49	1
Beryllium	<0.0010		0.0010		mg/L		03/07/23 15:27	03/08/23 12:49	1
Boron	**0.60**		0.050		mg/L		03/07/23 15:27	03/08/23 12:49	1
Cadmium	<0.00050		0.00050		mg/L		03/07/23 15:27	03/08/23 12:49	1
Calcium	**160**		0.20		mg/L		03/07/23 15:27	03/08/23 12:49	1
Chromium	<0.0050		0.0050		mg/L		03/07/23 15:27	03/08/23 12:49	1
Cobalt	<0.0010		0.0010		mg/L		03/07/23 15:27	03/08/23 12:49	1
Lead	**0.00084**		0.00050		mg/L		03/07/23 15:27	03/08/23 12:49	1
Lithium	**0.013**		0.010		mg/L		03/07/23 15:27	03/08/23 12:49	1
Molybdenum	**0.011**		0.0050		mg/L		03/07/23 15:27	03/08/23 12:49	1
Selenium	**0.022**		0.0025		mg/L		03/07/23 15:27	03/08/23 12:49	1
Thallium	<0.0020		0.0020		mg/L		03/07/23 15:27	03/08/23 12:49	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		03/07/23 11:05	03/08/23 11:00	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**980**		10		mg/L			03/02/23 07:33	1
Chloride (SM 4500 Cl- E)	**130**		40		mg/L			03/09/23 12:29	20
Fluoride (SM 4500 F C)	**0.35**		0.10		mg/L			03/08/23 12:54	1
Sulfate (SM 4500 SO4 E)	**260**		50		mg/L			03/08/23 11:47	10

Client Sample Results

Client: Midwest Generation EME LLC
Project/Site: Joliet #29 CCR

Job ID: 500-230034-1

Client Sample ID: MW-10

Date Collected: 02/28/23 15:35
Date Received: 03/01/23 09:23

Lab Sample ID: 500-230034-4

Matrix: Water

Method: SW846 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		03/07/23 15:27	03/08/23 12:52	1
Arsenic	**0.0012**		0.0010		mg/L		03/07/23 15:27	03/08/23 12:52	1
Barium	**0.053**		0.0025		mg/L		03/07/23 15:27	03/08/23 12:52	1
Beryllium	<0.0010		0.0010		mg/L		03/07/23 15:27	03/08/23 12:52	1
Boron	**0.36**		0.050		mg/L		03/07/23 15:27	03/08/23 12:52	1
Cadmium	<0.00050		0.00050		mg/L		03/07/23 15:27	03/08/23 12:52	1
Calcium	**130**		0.20		mg/L		03/07/23 15:27	03/08/23 12:52	1
Chromium	<0.0050		0.0050		mg/L		03/07/23 15:27	03/08/23 12:52	1
Cobalt	<0.0010		0.0010		mg/L		03/07/23 15:27	03/08/23 12:52	1
Lead	<0.00050		0.00050		mg/L		03/07/23 15:27	03/08/23 12:52	1
Lithium	**0.013**		0.010		mg/L		03/07/23 15:27	03/08/23 12:52	1
Molybdenum	**0.0058**		0.0050		mg/L		03/07/23 15:27	03/08/23 12:52	1
Selenium	<0.0025		0.0025		mg/L		03/07/23 15:27	03/08/23 12:52	1
Thallium	<0.0020		0.0020		mg/L		03/07/23 15:27	03/08/23 12:52	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		03/07/23 11:05	03/08/23 11:02	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**1200**		10		mg/L			03/02/23 07:36	1
Chloride (SM 4500 Cl- E)	**330**		40		mg/L			03/09/23 12:48	20
Fluoride (SM 4500 F C)	**0.38**		0.10		mg/L			03/08/23 12:54	1
Sulfate (SM 4500 SO4 E)	**170**		50		mg/L			03/08/23 11:48	10

Client: Midwest Generation EME LLC
Project/Site: Joliet #29 CCR

Job ID: 500-230034-1

Client Sample ID: Duplicate

Date Collected: 02/28/23 00:00
Date Received: 03/01/23 09:23

Lab Sample ID: 500-230034-5

Matrix: Water

Method: SW846 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		03/07/23 15:27	03/08/23 12:56	1
Arsenic	**0.0019**		0.0010		mg/L		03/07/23 15:27	03/08/23 12:56	1
Barium	**0.12**		0.0025		mg/L		03/07/23 15:27	03/08/23 12:56	1
Beryllium	<0.0010		0.0010		mg/L		03/07/23 15:27	03/08/23 12:56	1
Boron	**0.30**		0.050		mg/L		03/07/23 15:27	03/08/23 12:56	1
Cadmium	<0.00050		0.00050		mg/L		03/07/23 15:27	03/08/23 12:56	1
Calcium	**130**		0.20		mg/L		03/07/23 15:27	03/08/23 12:56	1
Chromium	<0.0050		0.0050		mg/L		03/07/23 15:27	03/08/23 12:56	1
Cobalt	**0.0014**		0.0010		mg/L		03/07/23 15:27	03/08/23 12:56	1
Lead	<0.00050		0.00050		mg/L		03/07/23 15:27	03/08/23 12:56	1
Lithium	**0.012**		0.010		mg/L		03/07/23 15:27	03/08/23 12:56	1
Molybdenum	<0.0050		0.0050		mg/L		03/07/23 15:27	03/08/23 12:56	1
Selenium	**0.0031**		0.0025		mg/L		03/07/23 15:27	03/08/23 12:56	1
Thallium	<0.0020		0.0020		mg/L		03/07/23 15:27	03/08/23 12:56	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		03/07/23 11:05	03/08/23 11:04	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**1100**		10		mg/L			03/02/23 07:38	1
Chloride (SM 4500 Cl- E)	**280**		40		mg/L			03/09/23 12:30	20
Fluoride (SM 4500 F C)	**0.36**		0.10		mg/L			03/08/23 12:54	1
Sulfate (SM 4500 SO4 E)	**160**		50		mg/L			03/08/23 11:49	10

Definitions/Glossary

Client: Midwest Generation EME LLC
Project/Site: Joliet #29 CCR

Job ID: 500-230034-1

Qualifiers

Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Metals

Prep Batch: 701436

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-230034-1	MW-03	Total/NA	Water	7470A	
500-230034-2	MW-04	Total/NA	Water	7470A	
500-230034-3	MW-05	Total/NA	Water	7470A	
500-230034-4	MW-10	Total/NA	Water	7470A	
500-230034-5	Duplicate	Total/NA	Water	7470A	
MB 500-701436/12-A	Method Blank	Total/NA	Water	7470A	
LCS 500-701436/13-A	Lab Control Sample	Total/NA	Water	7470A	

Prep Batch: 701480

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-230034-1	MW-03	Total Recoverable	Water	3005A	
500-230034-2	MW-04	Total Recoverable	Water	3005A	
500-230034-3	MW-05	Total Recoverable	Water	3005A	
500-230034-4	MW-10	Total Recoverable	Water	3005A	
500-230034-5	Duplicate	Total Recoverable	Water	3005A	
MB 500-701480/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-701480/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
500-230034-1 MS	MW-03	Total Recoverable	Water	3005A	
500-230034-1 MSD	MW-03	Total Recoverable	Water	3005A	
500-230034-1 DU	MW-03	Total Recoverable	Water	3005A	

Analysis Batch: 701622

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-230034-1	MW-03	Total/NA	Water	7470A	701436
500-230034-2	MW-04	Total/NA	Water	7470A	701436
500-230034-3	MW-05	Total/NA	Water	7470A	701436
500-230034-4	MW-10	Total/NA	Water	7470A	701436
500-230034-5	Duplicate	Total/NA	Water	7470A	701436
MB 500-701436/12-A	Method Blank	Total/NA	Water	7470A	701436
LCS 500-701436/13-A	Lab Control Sample	Total/NA	Water	7470A	701436

Analysis Batch: 701666

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-230034-1	MW-03	Total Recoverable	Water	6020A	701480
500-230034-2	MW-04	Total Recoverable	Water	6020A	701480
500-230034-3	MW-05	Total Recoverable	Water	6020A	701480
500-230034-4	MW-10	Total Recoverable	Water	6020A	701480
500-230034-5	Duplicate	Total Recoverable	Water	6020A	701480
MB 500-701480/1-A	Method Blank	Total Recoverable	Water	6020A	701480
LCS 500-701480/2-A	Lab Control Sample	Total Recoverable	Water	6020A	701480
500-230034-1 MS	MW-03	Total Recoverable	Water	6020A	701480
500-230034-1 MSD	MW-03	Total Recoverable	Water	6020A	701480
500-230034-1 DU	MW-03	Total Recoverable	Water	6020A	701480

General Chemistry

Analysis Batch: 700764

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-230034-1	MW-03	Total/NA	Water	SM 2540C	
500-230034-2	MW-04	Total/NA	Water	SM 2540C	
500-230034-3	MW-05	Total/NA	Water	SM 2540C	

General Chemistry (Continued)

Analysis Batch: 700764 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-230034-4	MW-10	Total/NA	Water	SM 2540C	
500-230034-5	Duplicate	Total/NA	Water	SM 2540C	
MB 500-700764/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-700764/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 701623

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-230034-1	MW-03	Total/NA	Water	SM 4500 SO4 E	
500-230034-2	MW-04	Total/NA	Water	SM 4500 SO4 E	
500-230034-3	MW-05	Total/NA	Water	SM 4500 SO4 E	
500-230034-4	MW-10	Total/NA	Water	SM 4500 SO4 E	
500-230034-5	Duplicate	Total/NA	Water	SM 4500 SO4 E	
MB 500-701623/16	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 500-701623/17	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 701685

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-230034-1	MW-03	Total/NA	Water	SM 4500 F C	
500-230034-2	MW-04	Total/NA	Water	SM 4500 F C	
500-230034-3	MW-05	Total/NA	Water	SM 4500 F C	
500-230034-4	MW-10	Total/NA	Water	SM 4500 F C	
500-230034-5	Duplicate	Total/NA	Water	SM 4500 F C	
MB 500-701685/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 500-701685/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	

Analysis Batch: 701820

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-230034-1	MW-03	Total/NA	Water	SM 4500 Cl- E	
500-230034-2	MW-04	Total/NA	Water	SM 4500 Cl- E	
500-230034-3	MW-05	Total/NA	Water	SM 4500 Cl- E	
500-230034-4	MW-10	Total/NA	Water	SM 4500 Cl- E	
500-230034-5	Duplicate	Total/NA	Water	SM 4500 Cl- E	
MB 500-701820/16	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 500-701820/17	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 500-701480/1-A
Matrix: Water
Analysis Batch: 701666

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 701480

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		03/07/23 15:27	03/08/23 12:14	1
Arsenic	<0.0010		0.0010		mg/L		03/07/23 15:27	03/08/23 12:14	1
Barium	<0.0025		0.0025		mg/L		03/07/23 15:27	03/08/23 12:14	1
Beryllium	<0.0010		0.0010		mg/L		03/07/23 15:27	03/08/23 12:14	1
Boron	<0.050		0.050		mg/L		03/07/23 15:27	03/08/23 12:14	1
Cadmium	<0.00050		0.00050		mg/L		03/07/23 15:27	03/08/23 12:14	1
Calcium	<0.20		0.20		mg/L		03/07/23 15:27	03/08/23 12:14	1
Chromium	<0.0050		0.0050		mg/L		03/07/23 15:27	03/08/23 12:14	1
Cobalt	<0.0010		0.0010		mg/L		03/07/23 15:27	03/08/23 12:14	1
Lead	<0.00050		0.00050		mg/L		03/07/23 15:27	03/08/23 12:14	1
Lithium	<0.010		0.010		mg/L		03/07/23 15:27	03/08/23 12:14	1
Molybdenum	<0.0050		0.0050		mg/L		03/07/23 15:27	03/08/23 12:14	1
Selenium	<0.0025		0.0025		mg/L		03/07/23 15:27	03/08/23 12:14	1
Thallium	<0.0020		0.0020		mg/L		03/07/23 15:27	03/08/23 12:14	1

Lab Sample ID: LCS 500-701480/2-A
Matrix: Water
Analysis Batch: 701666

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 701480

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	0.500	0.528		mg/L		106	80 - 120
Arsenic	0.100	0.0969		mg/L		97	80 - 120
Barium	2.00	2.02		mg/L		101	80 - 120
Beryllium	0.0500	0.0481		mg/L		96	80 - 120
Boron	1.00	0.996		mg/L		100	80 - 120
Cadmium	0.0500	0.0497		mg/L		99	80 - 120
Calcium	10.0	10.2		mg/L		102	80 - 120
Chromium	0.200	0.205		mg/L		102	80 - 120
Cobalt	0.500	0.509		mg/L		102	80 - 120
Lead	0.100	0.103		mg/L		103	80 - 120
Lithium	0.500	0.488		mg/L		98	80 - 120
Molybdenum	1.00	0.975		mg/L		97	80 - 120
Selenium	0.100	0.100		mg/L		100	80 - 120
Thallium	0.100	0.103		mg/L		103	80 - 120

Lab Sample ID: 500-230034-1 MS
Matrix: Water
Analysis Batch: 701666

Client Sample ID: MW-03
Prep Type: Total Recoverable
Prep Batch: 701480

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	<0.0030		0.500	0.554		mg/L		111	75 - 125
Arsenic	0.0014		0.100	0.105		mg/L		104	75 - 125
Barium	0.12		2.00	2.14		mg/L		101	75 - 125
Beryllium	<0.0010		0.0500	0.0468		mg/L		94	75 - 125
Boron	0.30		1.00	1.26		mg/L		96	75 - 125
Cadmium	<0.00050		0.0500	0.0500		mg/L		100	75 - 125
Calcium	120		10.0	132	4	mg/L		72	75 - 125
Chromium	<0.0050		0.200	0.198		mg/L		98	75 - 125
Cobalt	0.0015		0.500	0.475		mg/L		95	75 - 125

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: 500-230034-1 MS
Matrix: Water
Analysis Batch: 701666

Client Sample ID: MW-03
Prep Type: Total Recoverable
Prep Batch: 701480

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Lead	<0.00050		0.100	0.101		mg/L		101	75 - 125
Lithium	0.011		0.500	0.472		mg/L		92	75 - 125
Molybdenum	<0.0050		1.00	1.03		mg/L		102	75 - 125
Selenium	0.0033		0.100	0.110		mg/L		106	75 - 125
Thallium	<0.0020		0.100	0.101		mg/L		101	75 - 125

Lab Sample ID: 500-230034-1 MSD
Matrix: Water
Analysis Batch: 701666

Client Sample ID: MW-03
Prep Type: Total Recoverable
Prep Batch: 701480

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Antimony	<0.0030		0.500	0.563		mg/L		113	75 - 125	2	20
Arsenic	0.0014		0.100	0.107		mg/L		105	75 - 125	2	20
Barium	0.12		2.00	2.16		mg/L		102	75 - 125	1	20
Beryllium	<0.0010		0.0500	0.0470		mg/L		94	75 - 125	0	20
Boron	0.30		1.00	1.29		mg/L		99	75 - 125	2	20
Cadmium	<0.00050		0.0500	0.0503		mg/L		101	75 - 125	1	20
Calcium	120		10.0	132	4	mg/L		77	75 - 125	0	20
Chromium	<0.0050		0.200	0.199		mg/L		99	75 - 125	1	20
Cobalt	0.0015		0.500	0.480		mg/L		96	75 - 125	1	20
Lead	<0.00050		0.100	0.101		mg/L		101	75 - 125	0	20
Lithium	0.011		0.500	0.480		mg/L		94	75 - 125	2	20
Molybdenum	<0.0050		1.00	1.05		mg/L		104	75 - 125	2	20
Selenium	0.0033		0.100	0.111		mg/L		108	75 - 125	1	20
Thallium	<0.0020		0.100	0.101		mg/L		101	75 - 125	0	20

Lab Sample ID: 500-230034-1 DU
Matrix: Water
Analysis Batch: 701666

Client Sample ID: MW-03
Prep Type: Total Recoverable
Prep Batch: 701480

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Antimony	<0.0030		<0.0030		mg/L		NC	20
Arsenic	0.0014		0.00156		mg/L		14	20
Barium	0.12		0.116		mg/L		2	20
Beryllium	<0.0010		<0.0010		mg/L		NC	20
Boron	0.30		0.297		mg/L		0	20
Cadmium	<0.00050		<0.00050		mg/L		NC	20
Calcium	120		122		mg/L		2	20
Chromium	<0.0050		<0.0050		mg/L		NC	20
Cobalt	0.0015		0.00141		mg/L		3	20
Lead	<0.00050		<0.00050		mg/L		NC	20
Lithium	0.011		0.0114		mg/L		0.6	20
Molybdenum	<0.0050		<0.0050		mg/L		NC	20
Selenium	0.0033		0.00323		mg/L		4	20
Thallium	<0.0020		<0.0020		mg/L		NC	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 500-701436/12-A
Matrix: Water
Analysis Batch: 701622

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 701436

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		03/07/23 11:05	03/08/23 10:09	1

Lab Sample ID: LCS 500-701436/13-A
Matrix: Water
Analysis Batch: 701622

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 701436

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00198	0.00198		mg/L		100	80 - 120

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 500-700764/1
Matrix: Water
Analysis Batch: 700764

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10		mg/L			03/02/23 06:42	1

Lab Sample ID: LCS 500-700764/2
Matrix: Water
Analysis Batch: 700764

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	250	240		mg/L		96	80 - 120

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 500-701820/16
Matrix: Water
Analysis Batch: 701820

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<2.0		2.0		mg/L			03/09/23 12:25	1

Lab Sample ID: LCS 500-701820/17
Matrix: Water
Analysis Batch: 701820

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	20.0	19.9		mg/L		99	85 - 115

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 500-701685/3
Matrix: Water
Analysis Batch: 701685

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.10		0.10		mg/L			03/08/23 12:54	1

Method: SM 4500 F C - Fluoride (Continued)

Lab Sample ID: LCS 500-701685/4
Matrix: Water
Analysis Batch: 701685

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	10.0	10.4		mg/L		104	90 - 119

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 500-701623/16
Matrix: Water
Analysis Batch: 701623

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	<5.0		5.0		mg/L			03/08/23 11:44	1

Lab Sample ID: LCS 500-701623/17
Matrix: Water
Analysis Batch: 701623

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfate	20.0	21.5		mg/L		108	88 - 123

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Phone 708-534-5200 Fax. 708-534-5211

Chain of Custody Record

eurofins
Environment Testing

Client Information	Sampler	Lab PM: Mockler Diana J	Carrier Tracking No(s):	COC No: 500-110230-45941 1
Client Contact: Patrick Allenstein	Phone	E-Mail: Diana.Mockler@et eurofinsus com	State of Origin:	Page: Page 1 of 1
Company: KPRG and Associates Inc.	PWSID:			Job #: 500-230034

Address: 14665 West Lisbon Road Suite 1A
City: Brookfield
State, Zip: WI, 53005
Phone:
Email: patricka@kprginc.com
Project Name: Joliet #29 CCR/ Event Desc: Quarterly MWG Joliet #29 CCR
Site: Illinois

500-230034 COC

Due Date Requested:
TAT Requested (days):
Compliance Project: Δ Yes Δ No
PO #: 4502085968
WO #:
Project #: 50011568
SSOW#:

Analysis Requested

Preservation Codes

A HCL	M Hexane
B NaOH	N None
C Zn Acetate	O AsNaO2
D - Nitric Acid	P Na2O4S
E NaHSO4	Q Na2SO3
F - MeOH	R Na2S2O3
G - Amchlor	S H2SO4
H Ascorbic Acid	T - TSP Dodecahydrate
I Ice	U - Acetone
J DI Water	V - MCAA
K - EDTA	W pH 4-5
L - EDA	Y Trizma
	Z other (specify)

Other:

	Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010C, 6020A, 7470A	2540C, 4500_F_C, SM4500_Cl_E, SM4500_SO4_E	903.0, 904.0														Total Number of containers	Special Instructions/Note:
				Preservation Code:				D	N	D															
1	MW-03	2-28-23	09:26	G	Water	N	N	X	X	X														5	
2	MW-04	2-28-23	10:32	G	Water	N	N	X	X	X														5	
3	MW-05	2-28-23	11:31	G	Water	N	N	X	X	X														5	
4	MW-10	2-28-23	15:35	G	Water	N	N	X	X	X														5	
5	Duplicate	2-28-23	—	G	Water	N	N	X	X	X														5	
					Water																				

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested I, II III IV Other (specify)

Special Instructions/QC Requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment:

	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	3-1-23 09:23	KPRG	Shin Scott	3/1/23 0923	FEDX
Relinquished by	Date/Time:	Company	Received by	Date/Time:	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact: Δ Yes Δ No
Custody Seal No
Cooler Temperature(s) °C and Other Remarks: 1.7 - 2 | 5.9 - 7.2

Login Sample Receipt Checklist

Client: Midwest Generation EME LLC

Job Number: 500-230034-1

Login Number: 230034
List Number: 1
Creator: Scott, Sherri L

List Source: Eurofins Chicago

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.5,1.7
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Lab Chronicle

Client: Midwest Generation EME LLC
Project/Site: Joliet #29 CCR

Job ID: 500-230034-1

Client Sample ID: MW-03
Date Collected: 02/28/23 09:26
Date Received: 03/01/23 09:23

Lab Sample ID: 500-230034-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			701480	RN	EET CHI	03/07/23 15:27 - 03/07/23 15:57 [1]
Total Recoverable	Analysis	6020A		1	701666	FXG	EET CHI	03/08/23 12:21
Total/NA	Prep	7470A			701436	MJG	EET CHI	03/07/23 11:05 - 03/07/23 13:05 [1]
Total/NA	Analysis	7470A		1	701622	MJG	EET CHI	03/08/23 10:48
Total/NA	Analysis	SM 2540C		1	700764	CLB	EET CHI	03/02/23 07:28
Total/NA	Analysis	SM 4500 Cl- E		20	701820	LP	EET CHI	03/09/23 12:29
Total/NA	Analysis	SM 4500 F C		1	701685	EH	EET CHI	03/08/23 12:54
Total/NA	Analysis	SM 4500 SO4 E		10	701623	LP	EET CHI	03/08/23 11:47

Client Sample ID: MW-04
Date Collected: 02/28/23 10:32
Date Received: 03/01/23 09:23

Lab Sample ID: 500-230034-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			701480	RN	EET CHI	03/07/23 15:27 - 03/07/23 15:57 [1]
Total Recoverable	Analysis	6020A		1	701666	FXG	EET CHI	03/08/23 12:45
Total/NA	Prep	7470A			701436	MJG	EET CHI	03/07/23 11:05 - 03/07/23 13:05 [1]
Total/NA	Analysis	7470A		1	701622	MJG	EET CHI	03/08/23 10:50
Total/NA	Analysis	SM 2540C		1	700764	CLB	EET CHI	03/02/23 07:31
Total/NA	Analysis	SM 4500 Cl- E		20	701820	LP	EET CHI	03/09/23 12:29
Total/NA	Analysis	SM 4500 F C		1	701685	EH	EET CHI	03/08/23 12:54
Total/NA	Analysis	SM 4500 SO4 E		10	701623	LP	EET CHI	03/08/23 11:47

Client Sample ID: MW-05
Date Collected: 02/28/23 11:31
Date Received: 03/01/23 09:23

Lab Sample ID: 500-230034-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			701480	RN	EET CHI	03/07/23 15:27 - 03/07/23 15:57 [1]
Total Recoverable	Analysis	6020A		1	701666	FXG	EET CHI	03/08/23 12:49
Total/NA	Prep	7470A			701436	MJG	EET CHI	03/07/23 11:05 - 03/07/23 13:05 [1]
Total/NA	Analysis	7470A		1	701622	MJG	EET CHI	03/08/23 11:00
Total/NA	Analysis	SM 2540C		1	700764	CLB	EET CHI	03/02/23 07:33
Total/NA	Analysis	SM 4500 Cl- E		20	701820	LP	EET CHI	03/09/23 12:29
Total/NA	Analysis	SM 4500 F C		1	701685	EH	EET CHI	03/08/23 12:54
Total/NA	Analysis	SM 4500 SO4 E		10	701623	LP	EET CHI	03/08/23 11:47

Client Sample ID: MW-10
Date Collected: 02/28/23 15:35
Date Received: 03/01/23 09:23

Lab Sample ID: 500-230034-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			701480	RN	EET CHI	03/07/23 15:27 - 03/07/23 15:57 [1]
Total Recoverable	Analysis	6020A		1	701666	FXG	EET CHI	03/08/23 12:52

Lab Chronicle

Client: Midwest Generation EME LLC
Project/Site: Joliet #29 CCR

Job ID: 500-230034-1

Client Sample ID: MW-10

Lab Sample ID: 500-230034-4

Date Collected: 02/28/23 15:35
Matrix: Water
Date Received: 03/01/23 09:23

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	7470A			701436	MJG	EET CHI	03/07/23 11:05 - 03/07/23 13:05 [1]
Total/NA	Analysis	7470A		1	701622	MJG	EET CHI	03/08/23 11:02
Total/NA	Analysis	SM 2540C		1	700764	CLB	EET CHI	03/02/23 07:36
Total/NA	Analysis	SM 4500 Cl- E		20	701820	LP	EET CHI	03/09/23 12:48
Total/NA	Analysis	SM 4500 F C		1	701685	EH	EET CHI	03/08/23 12:54
Total/NA	Analysis	SM 4500 SO4 E		10	701623	LP	EET CHI	03/08/23 11:48

Client Sample ID: Duplicate

Lab Sample ID: 500-230034-5

Date Collected: 02/28/23 00:00
Matrix: Water
Date Received: 03/01/23 09:23

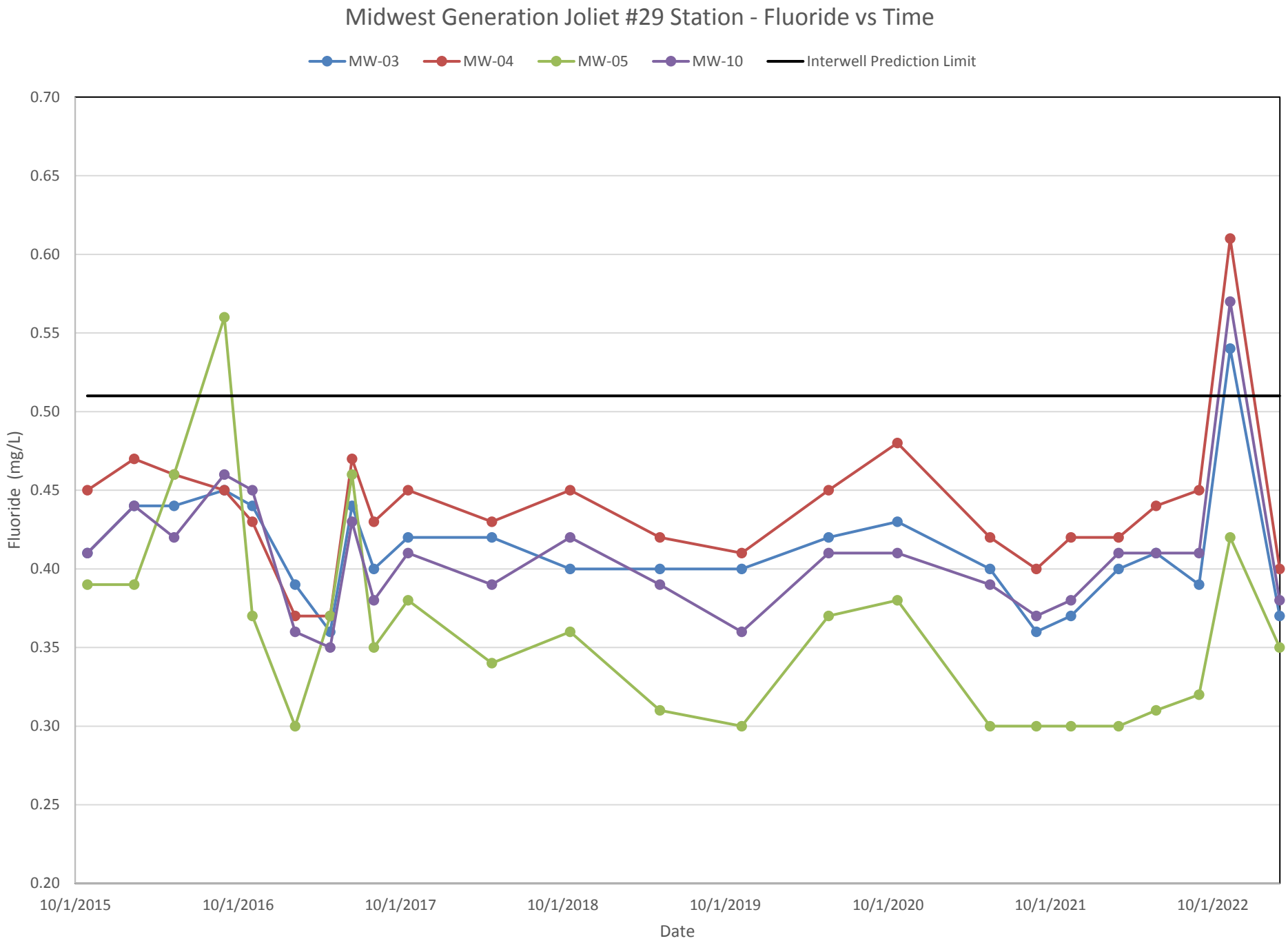
Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			701480	RN	EET CHI	03/07/23 15:27 - 03/07/23 15:57 [1]
Total Recoverable	Analysis	6020A		1	701666	FXG	EET CHI	03/08/23 12:56
Total/NA	Prep	7470A			701436	MJG	EET CHI	03/07/23 11:05 - 03/07/23 13:05 [1]
Total/NA	Analysis	7470A		1	701622	MJG	EET CHI	03/08/23 11:04
Total/NA	Analysis	SM 2540C		1	700764	CLB	EET CHI	03/02/23 07:38
Total/NA	Analysis	SM 4500 Cl- E		20	701820	LP	EET CHI	03/09/23 12:30
Total/NA	Analysis	SM 4500 F C		1	701685	EH	EET CHI	03/08/23 12:54
Total/NA	Analysis	SM 4500 SO4 E		10	701623	LP	EET CHI	03/08/23 11:49

[1] Completion dates and times are reported or not reported per method requirements or individual lab discretion.

Laboratory References:

EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

ATTACHMENT 2
Fluoride Time vs. Concentration Curve


Midwest Generation Joliet #29 Station - Fluoride vs Time
MW-03
MW-04
MW-05
MW-10
Interwell Prediction Limit
0.70
0.65
0.60
0.55
0.50
0.45
0.40
0.35
0.30
0.25
0.20
Fluoride (mg/L)
10/1/2015
10/1/2016
10/1/2017
10/1/2018
10/1/2019
10/1/2020
10/1/2021
10/1/2022
Date

ATTACHMENT 3
Laboratory E-mail Chain

From: Diana Mockler
To: Rich Gnat
Subject: RE: Fluoride Method
Date: Wednesday, March 22, 2023 12:43:39 PM
Attachments: image001.png

Hi Rich-
I reached out to our Technical Directory regarding the difference of running Fluoride by 300.0 IC method and the SM4500 method. Below is his response. Hope this helps? ☺
Thanks!

Diana,
Method 300 has a lot of interferences for fluoride. Things like organic acids are a common interference that can cause a high bias. There is often a water dip at the beginning of an IC run that can interfere with fluoride determination. Historically we have used Method 4500 by Ion Selective Electrode (ISE), which has very few interferences and the common IC problems are not applicable to ISE. I looked at jobs 227415 and 225636 as a reference. The high bias that the client noticed during Q4 2022 related to analysis by IC are most likely due to matrix interference, not a deviation from historical data. Please let me know if you have further questions.
Ray

Diana Mockler
Project Manager

Eurofins Environment Testing North Central LLC
Northwest Indiana Service Center
1581 East 93rd Avenue
Merrillville, IN 46410
USA

Phone: 219-252-7570
E-mail: diana.mockler@ET.EurofinsUS.com

From: Rich Gnat <RichardG@KPRGINC.COM>
Sent: Tuesday, March 14, 2023 8:48 AM
To: Diana Mockler <Diana.Mockler@et.eurofinsus.com>
Subject: RE: Fluoride Method

Thanks!

Richard R. Gnat, P.G.
KPRG and Associates, Inc.
14665 W. Lisbon Rd., Suite 1A
Brookfield, WI 53005

262-781-0475 (office)
262-227-7755 (cell)

From: Diana Mockler <Diana.Mockler@et.eurofinsus.com>
Sent: Tuesday, March 14, 2023 8:47 AM
To: Rich Gnat <RichardG@KPRGINC.COM>
Subject: RE: Fluoride Method

Oppsss…sorry☺

The 300.0 method was run on the IC (Ion Chromatograhpy), the 4500 method is a titration method

Refer to Section 3.0 of the Laboratory's Quality Assurance Manual (UP-QA_QAM).

1.2 Summary of Method

This method is applicable to drinking, surface and saline waters, domestic and industrial waste samples containing down to 0.1 mg/L. The linear range employed by this SOP is up to 30 mg/L (or ppm) of fluoride, but samples with concentrations above the linear range can and must be diluted. This SOP does not include distillation procedures found in Standards Methods 4500-F^- B.

The fluoride is determined potentiometrically using an automated ion selective electrode (ISE) system from Man-Tech Associates, Inc., the PC-Titration Plus.

This method measures the activity or concentration of the fluoride ion in aqueous samples by using an appropriate calibration curve. However, the fluoride activity depends on the total ionic strength of the sample. The electrode does not respond to bound or complexed fluoride. These difficulties are largely corrected by adding a buffer solution of high total ionic strength, which overcomes the differences in sample matrices and also contains CDTA, a chelating agent that binds preferentially to aluminum and iron, releasing fluoride ions for analysis.

Diana Mockler
Project Manager

Eurofins Environment Testing North Central LLC
Northwest Indiana Service Center
1581 East 93rd Avenue
Merrillville, IN 46410
USA

Phone: 219-252-7570
E-mail: diana.mockler@ET.EurofinsUS.com

From: Rich Gnat <RichardG@KPRGINC.COM>
Sent: Tuesday, March 14, 2023 8:35 AM
To: Diana Mockler <Diana.Mockler@et.eurofinsus.com>
Subject: RE: Fluoride Method

And was this done on a different piece of equipment?

Richard R. Gnat, P.G.
KPRG and Associates, Inc.
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From: Diana Mockler <Diana.Mockler@et.eurofinsus.com>
Sent: Tuesday, March 14, 2023 8:32 AM
To: Rich Gnat <RichardG@KPRGINC.COM>
Subject: Fluoride Method

Rich-
Please be advised that starting 1st quarter of 2023, fluoride analysis will be run by Method 4500FC as it has historically, during 4th quarter of 2022, we had instrumentation issues and had to switch fluoride analysis to method 300.0.
Thank you

Diana Mockler
Project Manager

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