



ENVIRONMENTAL CONSULTATION & REMEDIATION

KPRG and Associates, Inc.

**FEDERAL CCR COMPLIANCE
ANNUAL GROUNDWATER MONITORING and
CORRECTIVE ACTION REPORT - 2021**

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

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January 31, 2022

**Exhibit
1502**

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OVERVIEW

Groundwater 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. 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 overview of the 2021 groundwater monitoring period is provided in accordance with revised 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) – There were confirmed statistically significant increases (SSIs) above established background for the Appendix III detection monitoring constituents of total dissolved solids (TDS), sulfate, chloride and calcium at varying well locations including upgradient well MW-10. A subsequent Alternate Source Demonstration (ASD) concluded that the noted SSIs were not associated with a potential release from Pond 2 but rather an alternate transient source of impacts, potentially from upgradient and offsite. It is recommended that the site remain in detection monitoring at this time.
- 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 2021 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 Figures 2 and 3. A review of the maps indicates a consistent generally southerly groundwater flow direction and a shallow horizontal hydraulic gradient. 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:

$$V_s = \frac{Kdh}{n_e dl}, \text{ where}$$

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)

Through 2020, the average hydraulic conductivity of 3.896×10^{-3} ft/sec used in Table 2 was obtained from the Hydrogeologic Assessment Report dated February 2011 and prepared by Patrick Engineering. As part of Illinois EPA State CCR Rule requirements, some groundwater modeling was being completed for Ash Pond 2. The Patrick Engineering slug test data were re-evaluated as part of the modeling exercise and a modified hydraulic

geometric mean of 1.968×10^{-3} ft/sec was estimated and subsequently used in Table 2 for 2021 estimates. 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 2021 is provided in Table 3, in accordance with 257.90 (e)(3). Analytical data packages are included in Appendix A.

3.2 Data Summary

The analytical data from the detection monitoring groundwater samples for Appendix III parameters are provided in Table 4. Semi-annual groundwater sampling was completed for Appendix III in 2021 in accordance with detection monitoring requirements under Section 257.94. The tables include 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 (May and November 2021) a duplicate sample was collected. The duplicates were from monitoring wells MW-10 and MW-5, respectively. All duplicate values were within an acceptable range. 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.

A statistical evaluation of the semi-annual detection monitoring sampling which occurred in the second quarter 2021 (Appendix III parameters) was completed. The initial sampling data indicated potential statistically significant increases (SSI) for total dissolved solids (TDS) and sulfate above the calculated Prediction Limit (PL) at wells MW-3, MW-4, MW-5 and MW-10, chloride above its respective PL at MW-5 and MW-10, and calcium above its respective PL at MW-10. It is noted that well MW-10 is the upgradient monitoring point. Confirmatory sampling was limited to these potential statistically significant increases to minimize potential false positives, as allotted by CCR Compliance Statistical Approach for Groundwater Data Evaluation for Joliet #29 Station dated October 10, 2017. All confirmatory resampling results continued to indicate a potential SSI for each noted constituent. It was recommended to proceed with completing an Alternate Source Demonstration (ASD) in accordance with provisions under 40 CFR 257.94(e)(2).

An ASD was completed on October 11, 2021. The results of the ASD concluded that the noted SSIs for TDS, sulfate, chloride and calcium were not associated with a potential release from Ash Pond 2 but rather an alternate transient source of impacts, potentially from upgradient and offsite.

Fourth quarter detection monitoring indicated ongoing TDS and sulfate detections above the established PLs, including in upgradient monitoring well MW-10, however

concentrations of chloride and calcium were again below the PLs for those constituents. These data are still consistent with conclusions forwarded in the above referenced ASD.

3.3. Current Status

The ASD completed on October 11, 2021 concluded that the noted SSIs for TDS, sulfate, chloride and calcium at various well locations were not the result of leakage of leachate from the regulated unit but rather an alternate transient source of impacts, potentially from upgradient and offsite. Therefore, it is recommended that the station remain in routine detection monitoring.

4.0 OTHER REQUIRED SUBMITTALS

4.1 Alternate Source Demonstration

An ASD was completed October 11, 2021 for TDS, sulfate, chloride and calcium at varying well locations (see Section 3.2) in accordance with Section 257.94(e)(2) of the Federal CCR Rule. Based on the data evaluation and discussions provided in the ASD report, it was concluded that the noted SSIs for TDS, sulfate, chloride and calcium are not associated with a potential release from Pond 2 but rather an alternate transient source of impacts, potentially from upgradient and offsite. 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.
- TDS, sulfate and chloride concentrations were noted above the PL in the upgradient well MW-10 as well as in the downgradient wells.
- Subsequent follow-up sampling showed concentrations of the above noted parameters to have decreased in all the subject wells with some reverting back to concentrations below the PL and within historically detected ranges at those wells.
- Calcium was only detected above the PL at the upgradient well location MW-10 with the follow-up sampling at that well indicated a calcium concentration below the PL and within the historically detected range at this location.

Based on this conclusion, it was recommended to continue with detection monitoring at this time. The full ASD report is provided in Appendix B.

5.0 SUMMARY/CONCLUSIONS AND RECOMMENDATIONS

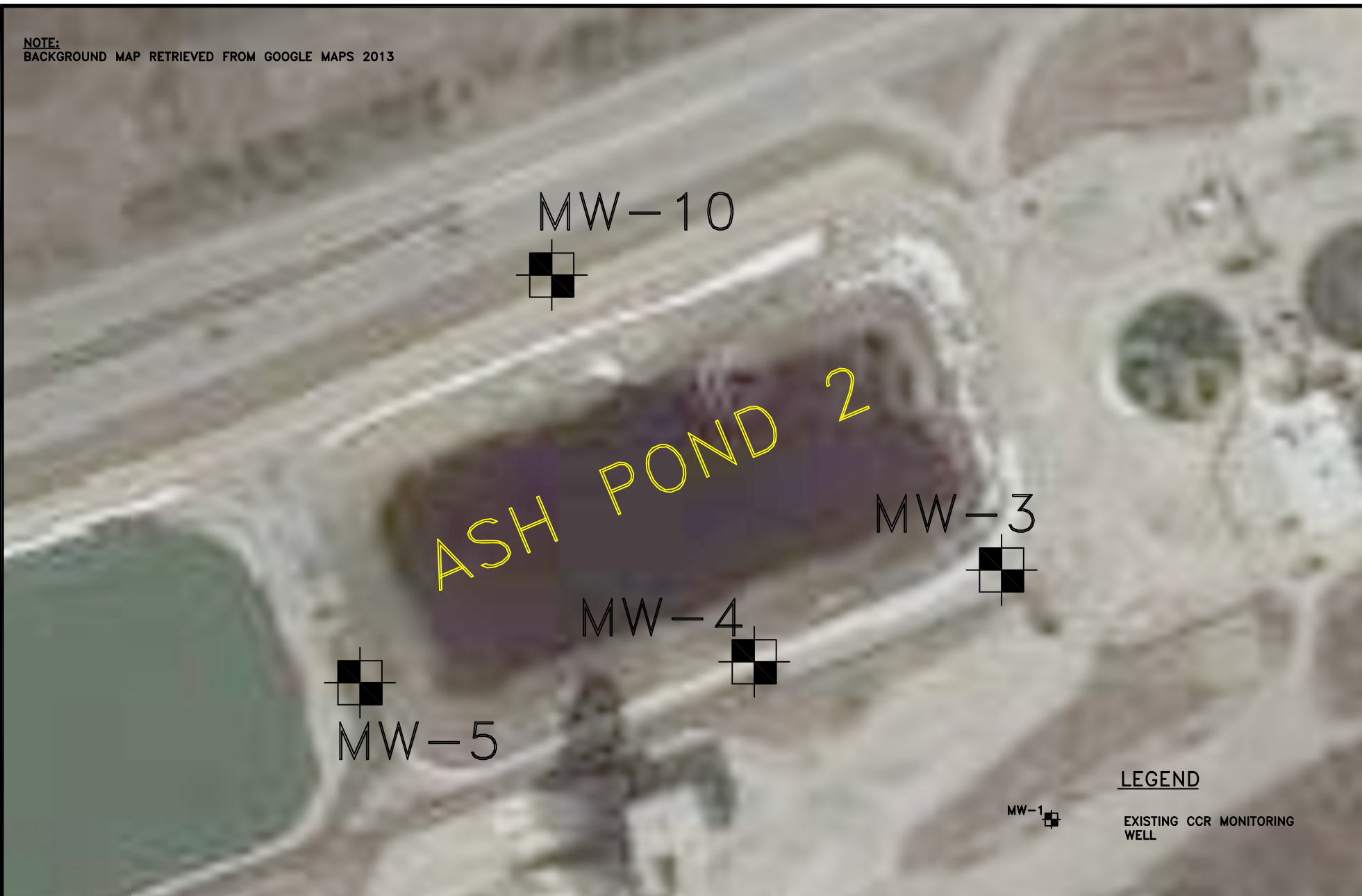
The detection monitoring requirements in accordance with the Federal CCR Rule have successfully been met. Groundwater monitoring wells that had analytical results showing parameters concentrations above established PLs were resampled to minimize potential for a false positive. An ASD was completed for TDS, sulfate, chloride and calcium at varying well locations. It was concluded that the noted SSIs for TDS, sulfate, chloride and calcium were not associated with a potential release from Pond 2 but rather an alternate transient source of impacts, potentially from upgradient and offsite. At this time, it is recommended that the station stay in routine detection monitoring.

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

FIGURES

NOTE:
BACKGROUND MAP RETRIEVED FROM GOOGLE MAPS 2013



LEGEND

MW-1

EXISTING CCR MONITORING
WELL

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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

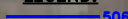
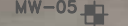
MWG13-15_110905

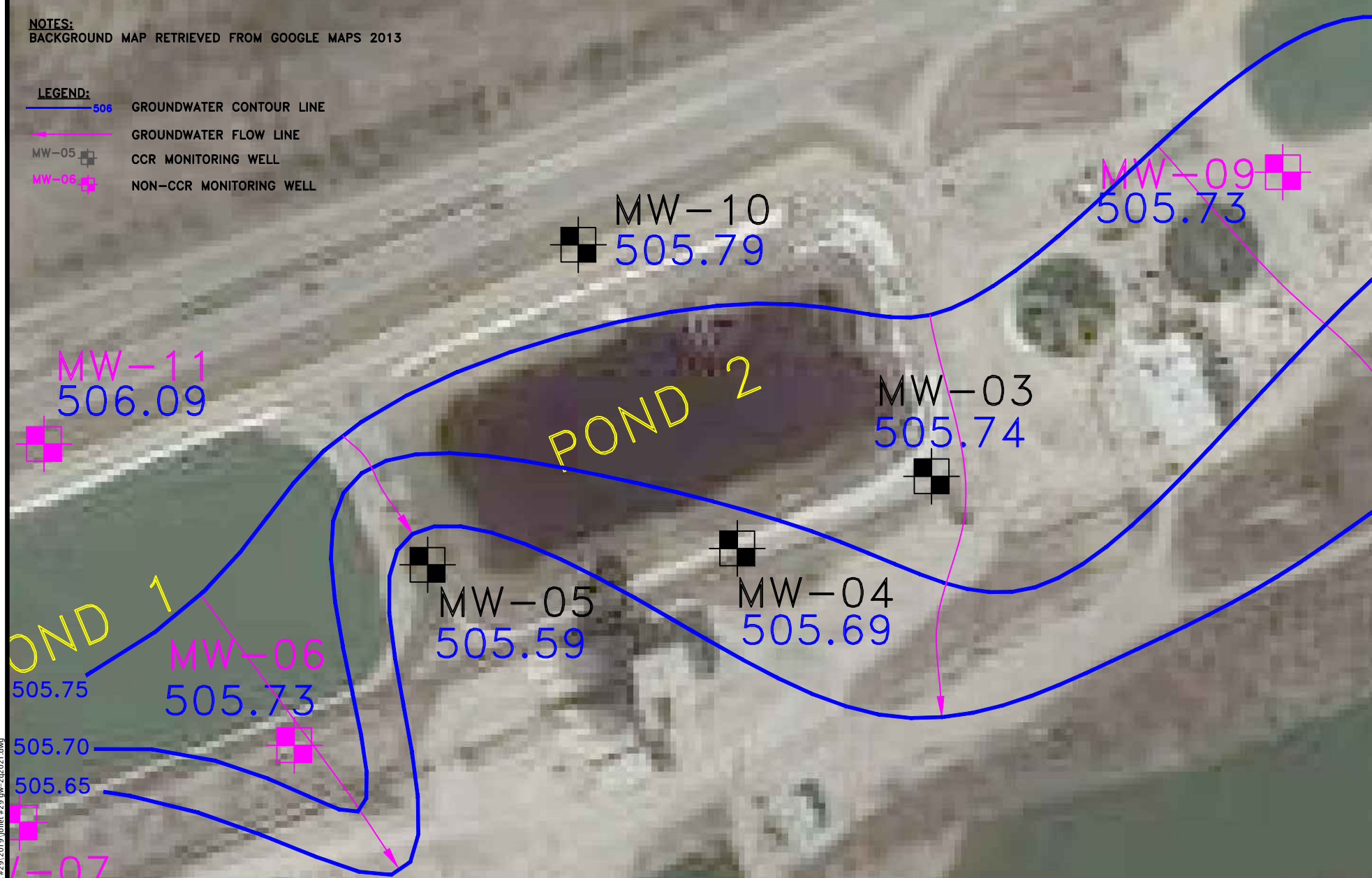
FIGURE 1

0 100'
APPROXIMATE SCALE



NOTES:
BACKGROUND MAP RETRIEVED FROM GOOGLE MAPS 2013

LEGEND:
 506 GROUNDWATER CONTOUR LINE
 GROUNDWATER FLOW LINE
 MW-05 CCR MONITORING WELL
 MW-06 NON-CCR MONITORING WELL



W:\projects\midwest\generation\12313\figures\joliets\joliets\#29\2019\joliets\#29\gw-202021.dwg

0 128'
APPROXIMATE SCALE



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CCR GROUNDWATER CONTOUR MAP 5/2021

JOLIET #29 GENERATING STATION
JOLIET, ILLINOIS

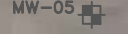
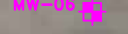
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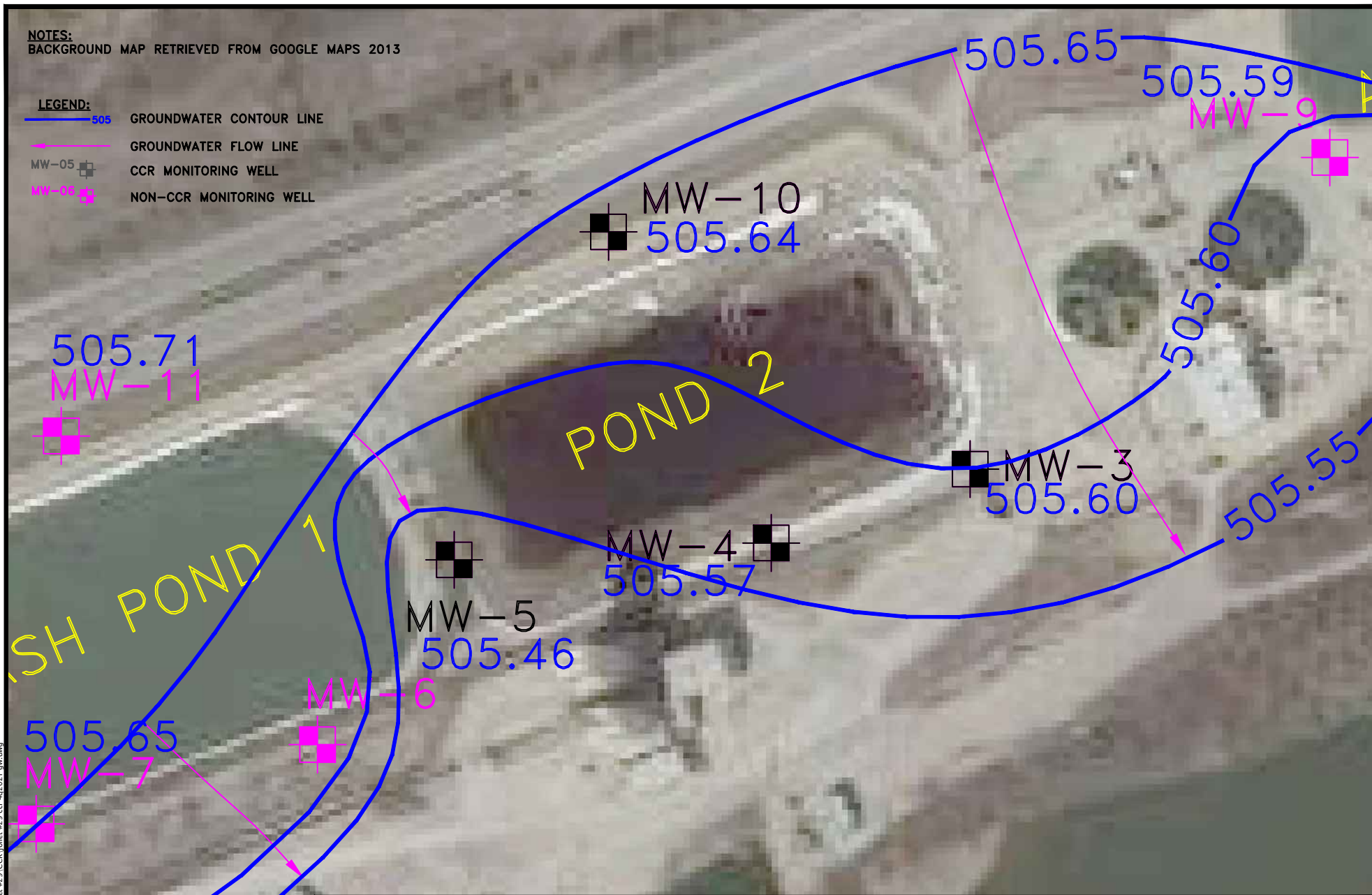
Date: July 12, 2021

KPRG Project No. 12313.0

FIGURE 2

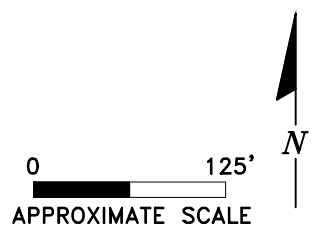
NOTES:
BACKGROUND MAP RETRIEVED FROM GOOGLE MAPS 2013

LEGEND:
 GROUNDWATER CONTOUR LINE
 GROUNDWATER FLOW LINE
 CCR MONITORING WELL
 NON-CCR MONITORING WELL



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CCR GROUNDWATER CONTOUR MAP 11/2021	
JOLIET #29 GENERATING STATION JOLIET, ILLINOIS	
Scale: 1" = 125'	Date: January 2, 2022
KPRG Project No. 12313.0	FIGURE 3



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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
	05/20/20	538.79	27.13	511.66
MW-04	10/21/20	538.79	33.52	505.27
	05/17/21	538.79	33.05	505.74
	11/15/21	538.79	33.19	505.60
	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
MW-05	05/06/19	539.01	29.83	509.18
	11/06/19	539.01	31.65	507.36
	05/20/20	539.01	27.40	511.61
	10/21/20	539.01	33.48	505.53
	05/17/21	539.01	33.32	505.69
	11/15/21	539.01	33.44	505.57
	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
MW-10	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
	05/20/20	539.64	28.16	511.48
	10/21/20	539.64	34.52	505.12
	05/17/21	539.64	34.05	505.59
	11/15/21	539.64	34.18	505.46
	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
	05/20/20	540.02	28.09	511.93
	10/21/20	540.02	34.72	505.30
	05/17/21	540.02	34.23	505.79
	11/15/21	540.02	34.38	505.64

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	Kavg (ft/sec)*	Average Hydraulic Gradient (ft/ft)	Porosity (unitless)**	Estimated Seepage Velocity (ft/day)
10/28/2015	Southerly (SSW-SSE)	3.896E-03	0.0003	0.35	0.26
2/10/2016	Southerly (SSW-SSE)	3.896E-03	0.0007	0.35	0.63
5/12/2016	Southerly (SSW-SSE)	3.896E-03	0.0004	0.35	0.34
8/31/2016	Southerly (SSW-SSE)	3.896E-03	0.0004	0.35	0.34
11/2/2016	Southerly (SSW-SSE)	3.896E-03	0.0007	0.35	0.63
2/6/2017	Southerly (SSW-SSE)	3.896E-03	0.0005	0.35	0.43
4/26/2017	Southerly (SSW-SSE)	3.896E-03	0.0006	0.35	0.58
6/14/2017	Southerly (SSW-SSE)	3.896E-03	0.0006	0.35	0.58
8/2/2017	Southerly (SSW-SSE)	3.896E-03	0.0008	0.35	0.77
10/18/2017	Southerly (SSW-SSE)	3.896E-03	0.0004	0.35	0.38
4/24/2018	Southerly (SSW-SSE)	3.896E-03	0.0008	0.35	0.77
10/16/2018	Southerly (SSW)	3.896E-03	0.00053	0.35	0.51
5/6/2019	Southerly (SSW-SSE)	3.896E-03	0.0010	0.35	0.91
11/6/2019	Southerly (SSW-SSE)	3.896E-03	0.00200	0.35	1.92
5/20/2020	Southerly (SSW-SSE)	3.896E-03	0.0043	0.35	4.16
10/21/2020	Southerly (SSW-SSE)	3.896E-03	0.0008	0.35	0.77
5/17/2021	Southerly (SSW-SSE)	1.968E-03	0.0008	0.35	0.37
11/15/2021	Southerly (SSW-SSE)	1.968E-03	0.00118	0.35	0.57

* Kavg - Pre-2021 K values from Hydrologic Assessment Report, Patrick Engineering, February 2011. 2021 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 2021 - 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)	2	5/17/2021	D
		11/15/2021	D
MW-3 (Downgradient)	2	5/17/2021	D
		11/15/2021	D
MW-4 (Downgradient)	2	5/17/2021	D
		11/15/2021	D
MW-5 (Downgradient)	2	5/17/2021	D
		11/15/2021	D

Table 4. Semi-Annual Detection Monitoring Statistical Comparisons - Appendix III Groundwater Analytical Results - 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
	11/16/2021	0.39	120	260	0.38	7.01	150	1,000
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	0.30	130	280	0.37	7.11	150	1,000
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	0.30	130	290	0.42	7.11	140	1,000
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	0.30	7.08	140	970

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

APPENDIX A
Analytical Data Packages

ANALYTICAL REPORT

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

Laboratory Job ID: 500-199296-1
Client Project/Site: Joliet #29 CCR

For:

Midwest Generation EME LLC
1800 Channahon Road
Joliet, Illinois 60436

Attn: DeAndre Cooley



Authorized for release by:
6/15/2021 1:36:14 PM

Diana Mockler, Project Manager I
(219)252-7570

Diana.Mockler@Eurofinset.com

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

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

Job ID: 500-199296-1

Job ID: 500-199296-1

Laboratory: Eurofins TestAmerica, Chicago

Narrative

Job Narrative 500-199296-1

Comments

No additional comments.

Receipt

The samples were received on 5/18/2021 1:00 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 5.5° C, 5.9° C and 6.0° 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: 500-199296-1

Method	Method Description	Protocol	Laboratory
6010C	Metals (ICP)	SW846	TAL CHI
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 TestAmerica, 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: 500-199296-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
500-199296-1	MW-05	Water	05/17/21 12:06	05/18/21 13:00	
500-199296-2	MW-03	Water	05/18/21 11:55	05/19/21 11:33	
500-199296-3	MW-04	Water	05/18/21 12:53	05/19/21 11:33	
500-199296-4	MW-10	Water	05/18/21 00:00	05/19/21 11:33	
500-199296-5	Duplicate	Water	05/18/21 00:00	05/19/21 11:33	

Client Sample Results

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

Job ID: 500-199296-1

Client Sample ID: MW-05

Lab Sample ID: 500-199296-1

Date Collected: 05/17/21 12:06

Matrix: Water

Date Received: 05/18/21 13:00

Method: 6010C - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.023		0.010		mg/L		05/19/21 08:28	05/19/21 17:38	1

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		05/19/21 08:28	05/19/21 18:18	1
Arsenic	0.0015		0.0010		mg/L		05/19/21 08:28	05/19/21 18:18	1
Barium	0.10		0.0025		mg/L		05/19/21 08:28	05/19/21 18:18	1
Beryllium	<0.0010		0.0010		mg/L		05/19/21 08:28	05/19/21 18:18	1
Boron	0.37		0.050		mg/L		05/19/21 08:28	05/19/21 18:18	1
Cadmium	<0.00050		0.00050		mg/L		05/19/21 08:28	05/19/21 18:18	1
Calcium	130		0.20		mg/L		05/19/21 08:28	05/19/21 18:18	1
Chromium	<0.0050		0.0050		mg/L		05/19/21 08:28	05/19/21 18:18	1
Cobalt	<0.0010		0.0010		mg/L		05/19/21 08:28	05/19/21 18:18	1
Lead	<0.00050		0.00050		mg/L		05/19/21 08:28	05/19/21 18:18	1
Molybdenum	<0.0050		0.0050		mg/L		05/19/21 08:28	05/19/21 18:18	1
Selenium	<0.0025		0.0025		mg/L		05/19/21 08:28	05/19/21 18:18	1
Thallium	<0.0020		0.0020		mg/L		05/19/21 08:28	05/19/21 18:18	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		06/01/21 09:35	06/02/21 07:10	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1300		10		mg/L			05/22/21 19:35	1
Chloride	410		40		mg/L			06/07/21 10:48	20
Fluoride	0.30		0.10		mg/L			06/03/21 10:53	1
Sulfate	160		25		mg/L			06/07/21 17:06	5

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MWG13-15_113979

6/15/2021

Client Sample Results

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

Job ID: 500-199296-1

Client Sample ID: MW-03

Lab Sample ID: 500-199296-2

Date Collected: 05/18/21 11:55

Matrix: Water

Date Received: 05/19/21 11:33

Method: 6010C - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.014		0.010		mg/L		05/20/21 18:19	05/22/21 00:09	1

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		05/20/21 18:19	05/26/21 00:31	1
Arsenic	0.0016		0.0010		mg/L		05/20/21 18:19	05/26/21 00:31	1
Barium	0.14		0.0025		mg/L		05/20/21 18:19	05/26/21 00:31	1
Beryllium	<0.0010		0.0010		mg/L		05/20/21 18:19	05/26/21 14:45	1
Boron	0.28		0.050		mg/L		05/20/21 18:19	05/26/21 00:31	1
Cadmium	<0.00050		0.00050		mg/L		05/20/21 18:19	05/26/21 00:31	1
Calcium	130		0.20		mg/L		05/20/21 18:19	05/26/21 00:31	1
Chromium	<0.0050		0.0050		mg/L		05/20/21 18:19	05/26/21 00:31	1
Cobalt	0.0011		0.0010		mg/L		05/20/21 18:19	05/26/21 00:31	1
Lead	<0.00050		0.00050		mg/L		05/20/21 18:19	05/26/21 00:31	1
Molybdenum	<0.0050		0.0050		mg/L		05/20/21 18:19	05/26/21 00:31	1
Selenium	<0.0025		0.0025		mg/L		05/20/21 18:19	05/26/21 00:31	1
Thallium	<0.0020		0.0020		mg/L		05/20/21 18:19	05/26/21 00:31	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		06/01/21 09:35	06/02/21 07:12	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1200		10		mg/L			05/22/21 19:38	1
Chloride	290		40		mg/L			06/07/21 10:59	20
Fluoride	0.40		0.10		mg/L			06/03/21 10:56	1
Sulfate	190		25		mg/L			06/07/21 17:10	5

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MWG13-15_113980

6/15/2021

Client Sample Results

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

Job ID: 500-199296-1

Client Sample ID: MW-04

Lab Sample ID: 500-199296-3

Date Collected: 05/18/21 12:53

Matrix: Water

Date Received: 05/19/21 11:33

Method: 6010C - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.014		0.010		mg/L		05/20/21 18:19	05/22/21 00:12	1

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		05/20/21 18:19	05/26/21 00:35	1
Arsenic	0.0019		0.0010		mg/L		05/20/21 18:19	05/26/21 00:35	1
Barium	0.12		0.0025		mg/L		05/20/21 18:19	05/26/21 00:35	1
Beryllium	<0.0010		0.0010		mg/L		05/20/21 18:19	05/26/21 14:49	1
Boron	0.22		0.050		mg/L		05/20/21 18:19	05/26/21 00:35	1
Cadmium	<0.00050		0.00050		mg/L		05/20/21 18:19	05/26/21 00:35	1
Calcium	120		0.20		mg/L		05/20/21 18:19	05/26/21 00:35	1
Chromium	<0.0050		0.0050		mg/L		05/20/21 18:19	05/26/21 00:35	1
Cobalt	0.0037		0.0010		mg/L		05/20/21 18:19	05/26/21 00:35	1
Lead	<0.00050		0.00050		mg/L		05/20/21 18:19	05/26/21 00:35	1
Molybdenum	<0.0050		0.0050		mg/L		05/20/21 18:19	05/26/21 00:35	1
Selenium	<0.0025		0.0025		mg/L		05/20/21 18:19	05/26/21 00:35	1
Thallium	<0.0020		0.0020		mg/L		05/20/21 18:19	05/26/21 00:35	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		06/01/21 09:35	06/02/21 07:14	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1100		10		mg/L			05/22/21 19:40	1
Chloride	280		40		mg/L			06/07/21 11:00	20
Fluoride	0.42		0.10		mg/L			06/03/21 10:59	1
Sulfate	190		25		mg/L			06/07/21 17:10	5

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MWG13-15_113981

6/15/2021

Client Sample Results

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

Job ID: 500-199296-1

Client Sample ID: MW-10

Lab Sample ID: 500-199296-4

Date Collected: 05/18/21 00:00

Matrix: Water

Date Received: 05/19/21 11:33

Method: 6010C - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.015		0.010		mg/L		05/20/21 18:19	05/22/21 00:16	1

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		05/20/21 18:19	05/26/21 00:38	1
Arsenic	0.0014		0.0010		mg/L		05/20/21 18:19	05/26/21 00:38	1
Barium	0.060		0.0025		mg/L		05/20/21 18:19	05/26/21 00:38	1
Beryllium	<0.0010		0.0010		mg/L		05/20/21 18:19	05/26/21 14:52	1
Boron	0.33		0.050		mg/L		05/20/21 18:19	05/26/21 00:38	1
Cadmium	<0.00050		0.00050		mg/L		05/20/21 18:19	05/26/21 00:38	1
Calcium	140		0.20		mg/L		05/20/21 18:19	05/26/21 00:38	1
Chromium	<0.0050		0.0050		mg/L		05/20/21 18:19	05/26/21 00:38	1
Cobalt	<0.0010		0.0010		mg/L		05/20/21 18:19	05/26/21 00:38	1
Lead	<0.00050		0.00050		mg/L		05/20/21 18:19	05/26/21 00:38	1
Molybdenum	0.0055		0.0050		mg/L		05/20/21 18:19	05/26/21 00:38	1
Selenium	<0.0025		0.0025		mg/L		05/20/21 18:19	05/26/21 00:38	1
Thallium	<0.0020		0.0020		mg/L		05/20/21 18:19	05/26/21 00:38	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		06/01/21 09:35	06/02/21 07:16	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1200		10		mg/L			05/22/21 19:43	1
Chloride	350		40		mg/L			06/07/21 11:00	20
Fluoride	0.39		0.10		mg/L			06/03/21 11:02	1
Sulfate	210		25		mg/L			06/07/21 17:11	5

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MWG13-15_113982

6/15/2021

Client Sample Results

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

Job ID: 500-199296-1

Client Sample ID: Duplicate

Lab Sample ID: 500-199296-5

Date Collected: 05/18/21 00:00

Matrix: Water

Date Received: 05/19/21 11:33

Method: 6010C - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.015		0.010		mg/L		05/20/21 18:19	05/22/21 00:20	1

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		05/20/21 18:19	05/26/21 00:42	1
Arsenic	0.0015		0.0010		mg/L		05/20/21 18:19	05/26/21 00:42	1
Barium	0.061		0.0025		mg/L		05/20/21 18:19	05/26/21 00:42	1
Beryllium	<0.0010		0.0010		mg/L		05/20/21 18:19	05/26/21 14:56	1
Boron	0.34		0.050		mg/L		05/20/21 18:19	05/26/21 00:42	1
Cadmium	<0.00050		0.00050		mg/L		05/20/21 18:19	05/26/21 00:42	1
Calcium	140		0.20		mg/L		05/20/21 18:19	05/26/21 00:42	1
Chromium	<0.0050		0.0050		mg/L		05/20/21 18:19	05/26/21 00:42	1
Cobalt	<0.0010		0.0010		mg/L		05/20/21 18:19	05/26/21 00:42	1
Lead	<0.00050		0.00050		mg/L		05/20/21 18:19	05/26/21 00:42	1
Molybdenum	0.0059		0.0050		mg/L		05/20/21 18:19	05/26/21 00:42	1
Selenium	<0.0025		0.0025		mg/L		05/20/21 18:19	05/26/21 00:42	1
Thallium	<0.0020		0.0020		mg/L		05/20/21 18:19	05/26/21 00:42	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		06/01/21 09:35	06/02/21 07:53	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1300		10		mg/L			05/22/21 19:45	1
Chloride	350		40		mg/L			06/07/21 11:01	20
Fluoride	0.39		0.10		mg/L			06/03/21 11:05	1
Sulfate	210		25		mg/L			06/07/21 17:11	5

Eurofins TestAmerica, Chicago

MWG13-15_113983

6/15/2021

Definitions/Glossary

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

Job ID: 500-199296-1

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.
α	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
Project/Site: Joliet #29 CCR

Job ID: 500-199296-1

Metals

Prep Batch: 599713

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-199296-1	MW-05	Total Recoverable	Water	3005A	
MB 500-599713/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-599713/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 599943

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-199296-1	MW-05	Total Recoverable	Water	6010C	599713
MB 500-599713/1-A	Method Blank	Total Recoverable	Water	6010C	599713
LCS 500-599713/2-A	Lab Control Sample	Total Recoverable	Water	6010C	599713

Analysis Batch: 599958

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-199296-1	MW-05	Total Recoverable	Water	6020A	599713
MB 500-599713/1-A	Method Blank	Total Recoverable	Water	6020A	599713
LCS 500-599713/2-A	Lab Control Sample	Total Recoverable	Water	6020A	599713

Prep Batch: 600086

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-199296-2	MW-03	Total Recoverable	Water	3005A	
500-199296-3	MW-04	Total Recoverable	Water	3005A	
500-199296-4	MW-10	Total Recoverable	Water	3005A	
500-199296-5	Duplicate	Total Recoverable	Water	3005A	
MB 500-600086/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-600086/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 600441

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-199296-2	MW-03	Total Recoverable	Water	6010C	600086
500-199296-3	MW-04	Total Recoverable	Water	6010C	600086
500-199296-4	MW-10	Total Recoverable	Water	6010C	600086
500-199296-5	Duplicate	Total Recoverable	Water	6010C	600086
MB 500-600086/1-A	Method Blank	Total Recoverable	Water	6010C	600086
LCS 500-600086/2-A	Lab Control Sample	Total Recoverable	Water	6010C	600086

Analysis Batch: 600933

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-199296-2	MW-03	Total Recoverable	Water	6020A	600086
500-199296-3	MW-04	Total Recoverable	Water	6020A	600086
500-199296-4	MW-10	Total Recoverable	Water	6020A	600086
500-199296-5	Duplicate	Total Recoverable	Water	6020A	600086
MB 500-600086/1-A	Method Blank	Total Recoverable	Water	6020A	600086
LCS 500-600086/2-A	Lab Control Sample	Total Recoverable	Water	6020A	600086

Analysis Batch: 601019

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-199296-2	MW-03	Total Recoverable	Water	6020A	600086
500-199296-3	MW-04	Total Recoverable	Water	6020A	600086
500-199296-4	MW-10	Total Recoverable	Water	6020A	600086
500-199296-5	Duplicate	Total Recoverable	Water	6020A	600086
MB 500-600086/1-A	Method Blank	Total Recoverable	Water	6020A	600086
LCS 500-600086/2-A	Lab Control Sample	Total Recoverable	Water	6020A	600086

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QC Association Summary

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

Job ID: 500-199296-1

Metals

Prep Batch: 601691

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-199296-1	MW-05	Total/NA	Water	7470A	
500-199296-2	MW-03	Total/NA	Water	7470A	
500-199296-3	MW-04	Total/NA	Water	7470A	
500-199296-4	MW-10	Total/NA	Water	7470A	
500-199296-5	Duplicate	Total/NA	Water	7470A	
MB 500-601691/12-A	Method Blank	Total/NA	Water	7470A	
LCS 500-601691/13-A	Lab Control Sample	Total/NA	Water	7470A	
LCSD 500-601691/14-A	Lab Control Sample Dup	Total/NA	Water	7470A	
500-199296-4 MS	MW-10	Total/NA	Water	7470A	
500-199296-4 MSD	MW-10	Total/NA	Water	7470A	
500-199296-4 DU	MW-10	Total/NA	Water	7470A	

Analysis Batch: 601923

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-199296-1	MW-05	Total/NA	Water	7470A	601691
500-199296-2	MW-03	Total/NA	Water	7470A	601691
500-199296-3	MW-04	Total/NA	Water	7470A	601691
500-199296-4	MW-10	Total/NA	Water	7470A	601691
500-199296-5	Duplicate	Total/NA	Water	7470A	601691
MB 500-601691/12-A	Method Blank	Total/NA	Water	7470A	601691
LCS 500-601691/13-A	Lab Control Sample	Total/NA	Water	7470A	601691
LCSD 500-601691/14-A	Lab Control Sample Dup	Total/NA	Water	7470A	601691
500-199296-4 MS	MW-10	Total/NA	Water	7470A	601691
500-199296-4 MSD	MW-10	Total/NA	Water	7470A	601691
500-199296-4 DU	MW-10	Total/NA	Water	7470A	601691

General Chemistry

Analysis Batch: 600116

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-199296-1	MW-05	Total/NA	Water	SM 2540C	
500-199296-2	MW-03	Total/NA	Water	SM 2540C	
500-199296-3	MW-04	Total/NA	Water	SM 2540C	
500-199296-4	MW-10	Total/NA	Water	SM 2540C	
500-199296-5	Duplicate	Total/NA	Water	SM 2540C	
MB 500-600116/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-600116/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 602163

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-199296-1	MW-05	Total/NA	Water	SM 4500 F C	
500-199296-2	MW-03	Total/NA	Water	SM 4500 F C	
500-199296-3	MW-04	Total/NA	Water	SM 4500 F C	
500-199296-4	MW-10	Total/NA	Water	SM 4500 F C	
500-199296-5	Duplicate	Total/NA	Water	SM 4500 F C	
MB 500-602163/31	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 500-602163/32	Lab Control Sample	Total/NA	Water	SM 4500 F C	

Analysis Batch: 602679

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-199296-1	MW-05	Total/NA	Water	SM 4500 Cl- E	

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QC Association Summary

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

Job ID: 500-199296-1

General Chemistry (Continued)

Analysis Batch: 602679 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-199296-2	MW-03	Total/NA	Water	SM 4500 Cl- E	
500-199296-3	MW-04	Total/NA	Water	SM 4500 Cl- E	
500-199296-4	MW-10	Total/NA	Water	SM 4500 Cl- E	
500-199296-5	Duplicate	Total/NA	Water	SM 4500 Cl- E	
MB 500-602679/31	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 500-602679/36	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
500-199296-1 MS	MW-05	Total/NA	Water	SM 4500 Cl- E	
500-199296-1 MSD	MW-05	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 602680

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 500-602680/15	Method Blank	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 602742

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-199296-1	MW-05	Total/NA	Water	SM 4500 SO4 E	
500-199296-2	MW-03	Total/NA	Water	SM 4500 SO4 E	
500-199296-3	MW-04	Total/NA	Water	SM 4500 SO4 E	
500-199296-4	MW-10	Total/NA	Water	SM 4500 SO4 E	
500-199296-5	Duplicate	Total/NA	Water	SM 4500 SO4 E	
500-199296-1 MS	MW-05	Total/NA	Water	SM 4500 SO4 E	
500-199296-1 MSD	MW-05	Total/NA	Water	SM 4500 SO4 E	

QC Sample Results

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

Job ID: 500-199296-1

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 500-599713/1-A
Matrix: Water
Analysis Batch: 599943

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 599713

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.010		0.010		mg/L		05/19/21 08:28	05/19/21 16:54	1

Lab Sample ID: LCS 500-599713/2-A
Matrix: Water
Analysis Batch: 599943

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 599713

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lithium	0.500	0.548		mg/L		110	80 - 120

Lab Sample ID: MB 500-600086/1-A
Matrix: Water
Analysis Batch: 600441

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 600086

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.010		0.010		mg/L		05/20/21 18:19	05/21/21 23:35	1

Lab Sample ID: LCS 500-600086/2-A
Matrix: Water
Analysis Batch: 600441

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 600086

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lithium	0.500	0.536		mg/L		107	80 - 120

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 500-599713/1-A
Matrix: Water
Analysis Batch: 599958

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 599713

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		05/19/21 08:28	05/19/21 17:15	1
Arsenic	<0.0010		0.0010		mg/L		05/19/21 08:28	05/19/21 17:15	1
Barium	<0.0025		0.0025		mg/L		05/19/21 08:28	05/19/21 17:15	1
Beryllium	<0.0010		0.0010		mg/L		05/19/21 08:28	05/19/21 17:15	1
Boron	<0.050		0.050		mg/L		05/19/21 08:28	05/19/21 17:15	1
Cadmium	<0.00050		0.00050		mg/L		05/19/21 08:28	05/19/21 17:15	1
Calcium	<0.20		0.20		mg/L		05/19/21 08:28	05/19/21 17:15	1
Chromium	<0.0050		0.0050		mg/L		05/19/21 08:28	05/19/21 17:15	1
Cobalt	<0.0010		0.0010		mg/L		05/19/21 08:28	05/19/21 17:15	1
Lead	<0.00050		0.00050		mg/L		05/19/21 08:28	05/19/21 17:15	1
Molybdenum	<0.0050		0.0050		mg/L		05/19/21 08:28	05/19/21 17:15	1
Selenium	<0.0025		0.0025		mg/L		05/19/21 08:28	05/19/21 17:15	1
Thallium	<0.0020		0.0020		mg/L		05/19/21 08:28	05/19/21 17:15	1

Lab Sample ID: LCS 500-599713/2-A
Matrix: Water
Analysis Batch: 599958

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 599713

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.500	0.508		mg/L		102	80 - 120

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QC Sample Results

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

Job ID: 500-199296-1

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 500-599713/2-A

Matrix: Water

Analysis Batch: 599958

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 599713

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.100	0.0991		mg/L		99	80 - 120
Barium	2.00	2.06		mg/L		103	80 - 120
Beryllium	0.0500	0.0483		mg/L		97	80 - 120
Boron	1.00	1.03		mg/L		103	80 - 120
Cadmium	0.0500	0.0495		mg/L		99	80 - 120
Calcium	10.0	8.88		mg/L		89	80 - 120
Chromium	0.200	0.199		mg/L		99	80 - 120
Cobalt	0.500	0.491		mg/L		98	80 - 120
Lead	0.100	0.104		mg/L		104	80 - 120
Molybdenum	1.00	0.944		mg/L		94	80 - 120
Selenium	0.100	0.100		mg/L		100	80 - 120
Thallium	0.100	0.106		mg/L		106	80 - 120

Lab Sample ID: MB 500-600086/1-A

Matrix: Water

Analysis Batch: 600933

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 600086

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		05/20/21 18:19	05/26/21 00:16	1
Arsenic	<0.0010		0.0010		mg/L		05/20/21 18:19	05/26/21 00:16	1
Barium	<0.0025		0.0025		mg/L		05/20/21 18:19	05/26/21 00:16	1
Boron	<0.050		0.050		mg/L		05/20/21 18:19	05/26/21 00:16	1
Cadmium	<0.00050		0.00050		mg/L		05/20/21 18:19	05/26/21 00:16	1
Calcium	<0.20		0.20		mg/L		05/20/21 18:19	05/26/21 00:16	1
Chromium	<0.0050		0.0050		mg/L		05/20/21 18:19	05/26/21 00:16	1
Cobalt	<0.0010		0.0010		mg/L		05/20/21 18:19	05/26/21 00:16	1
Lead	<0.00050		0.00050		mg/L		05/20/21 18:19	05/26/21 00:16	1
Molybdenum	<0.0050		0.0050		mg/L		05/20/21 18:19	05/26/21 00:16	1
Selenium	<0.0025		0.0025		mg/L		05/20/21 18:19	05/26/21 00:16	1
Thallium	<0.0020		0.0020		mg/L		05/20/21 18:19	05/26/21 00:16	1

Lab Sample ID: MB 500-600086/1-A

Matrix: Water

Analysis Batch: 601019

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 600086

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	<0.0010		0.0010		mg/L		05/20/21 18:19	05/26/21 14:37	1

Lab Sample ID: LCS 500-600086/2-A

Matrix: Water

Analysis Batch: 600933

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 600086

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	0.0948		mg/L		95	80 - 120
Barium	2.00	2.03		mg/L		102	80 - 120
Boron	1.00	0.998		mg/L		100	80 - 120
Cadmium	0.0500	0.0493		mg/L		99	80 - 120
Calcium	10.0	8.90		mg/L		89	80 - 120

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MWG13-15_113989

QC Sample Results

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

Job ID: 500-199296-1

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 500-600086/2-A

Matrix: Water

Analysis Batch: 600933

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 600086

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chromium	0.200	0.193		mg/L		96	80 - 120
Cobalt	0.500	0.494		mg/L		99	80 - 120
Lead	0.100	0.107		mg/L		107	80 - 120
Molybdenum	1.00	0.974		mg/L		97	80 - 120
Selenium	0.100	0.0967		mg/L		97	80 - 120
Thallium	0.100	0.108		mg/L		108	80 - 120

Lab Sample ID: LCS 500-600086/2-A

Matrix: Water

Analysis Batch: 601019

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 600086

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Beryllium	0.0500	0.0521		mg/L		104	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 500-601691/12-A

Matrix: Water

Analysis Batch: 601923

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 601691

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		06/01/21 09:35	06/02/21 07:02	1

Lab Sample ID: LCS 500-601691/13-A

Matrix: Water

Analysis Batch: 601923

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 601691

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00200	0.00187		mg/L		93	80 - 120

Lab Sample ID: LCSD 500-601691/14-A

Matrix: Water

Analysis Batch: 601923

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 601691

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.00200	0.00201		mg/L		101	80 - 120	7	20

Lab Sample ID: 500-199296-4 MS

Matrix: Water

Analysis Batch: 601923

Client Sample ID: MW-10

Prep Type: Total/NA

Prep Batch: 601691

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	<0.00020		0.00100	0.000898		mg/L		90	75 - 125

Lab Sample ID: 500-199296-4 MSD

Matrix: Water

Analysis Batch: 601923

Client Sample ID: MW-10

Prep Type: Total/NA

Prep Batch: 601691

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	<0.00020		0.00100	0.000893		mg/L		89	75 - 125	1	20

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QC Sample Results

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

Job ID: 500-199296-1

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

Lab Sample ID: 500-199296-4 DU
Matrix: Water
Analysis Batch: 601923

Client Sample ID: MW-10
Prep Type: Total/NA
Prep Batch: 601691

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

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

Lab Sample ID: MB 500-600116/1
Matrix: Water
Analysis Batch: 600116

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			05/22/21 18:49	1

Lab Sample ID: LCS 500-600116/2
Matrix: Water
Analysis Batch: 600116

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	242		mg/L		97	80 - 120

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 500-602679/31
Matrix: Water
Analysis Batch: 602679

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			06/07/21 10:42	1

Lab Sample ID: LCS 500-602679/36
Matrix: Water
Analysis Batch: 602679

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	17.5		mg/L		87	85 - 115

Lab Sample ID: 500-199296-1 MS
Matrix: Water
Analysis Batch: 602679

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	410		20.0	417	4	mg/L		15	75 - 125

Lab Sample ID: 500-199296-1 MSD
Matrix: Water
Analysis Batch: 602679

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Chloride	410		20.0	415	4	mg/L		4	75 - 125	1	20

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QC Sample Results

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

Job ID: 500-199296-1

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 500-602163/31

Matrix: Water

Analysis Batch: 602163

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			06/03/21 10:26	1

Lab Sample ID: LCS 500-602163/32

Matrix: Water

Analysis Batch: 602163

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	11.3		mg/L		113	80 - 120

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 500-602680/15

Matrix: Water

Analysis Batch: 602680

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			06/07/21 12:34	1

Lab Sample ID: 500-199296-1 MS

Matrix: Water

Analysis Batch: 602742

Client Sample ID: MW-05

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	160		20.0	176	4	mg/L		80	75 - 125

Lab Sample ID: 500-199296-1 MSD

Matrix: Water

Analysis Batch: 602742

Client Sample ID: MW-05

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	175	4	mg/L		77	75 - 125	0	20

 eurofins Environment Testing
America

Ver 01/16/2019/15/2021

Eurofins TestAmerica, Chicago

2417 Bond Street

University Park, IL 60484

Phone (708) 534-5200 Phone (708) 534-5211

Chain of Custody Record

Environmental Testing
America

Client Information		Sampler		Lab PM		Carrier Tracking No(s)		COC No	
Client Contact Erin Bulson		Phone		E-Mail Diana Mockler@Eurofinset.com		State of Origin		Page Page 1 of 1	
Company KPRG and Associates, Inc.		PWSID		Analysis Requested					
Address 14665 West Lisbon Road Suite 1A		Due Date Requested		Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No) 6010C, 6020A, 7470A 2840C, 4500_F_C, SM4500_C1_E, SM4500_S04_E 903.0, 904.0 Total Number of Containers					
City Brookfield		TAT Requested (days)							
State Zip WI 53005		Compliance Project: ☐ Yes ☐ No							
Phone		PO # 4502042860							
Email erinb@kprginc.com		WO #							
Project Name Joliet #29 CCR/ Event Desc. Quarterly MWG Joliet #29 CCR		Project # 50011568		Preservation Codes					
Site Illinois		SSOW#		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)					
Sample Identification		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	
						Preservation Code:		Special Instructions/Note:	
2 MW-03		5-18		1155				Water	
3 MW-04		5-18		1253				Water	
4 MW-05		-		-				Water	
5 MW-10		5-18		-				Water	
Duplicate		5-18		-				Water	
Possible Hazard Identification		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)							
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological		☐ 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: <i>g Bulson</i>		Date/Time: 5-18 4pm		Company: <i>KPRG</i>		Received by: <i>John V...</i>		Date/Time: 5/19/21 1040	
Relinquished by: <i>John V...</i>		Date/Time: 5/19/21 1133		Company: <i>ELT</i>		Received by: <i>John V...</i>		Date/Time: 5/19/21 1133	
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:	
Custody Seals Intact. ☐ Yes ☐ No		Custody Seal No		Cooler Temperature(s) °C and Other Remarks. 6.0 36qt 5.9 43qt					

Login Sample Receipt Checklist

Client: Midwest Generation EME LLC

Job Number: 500-199296-1

Login Number: 199296

List Source: Eurofins TestAmerica, Chicago

List Number: 1

Creator: Scott, Sherri L

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ 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	5.5,6.0,5.9
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 $<6\text{mm}$ (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: 500-199296-1

Client Sample ID: MW-05

Date Collected: 05/17/21 12:06

Date Received: 05/18/21 13:00

Lab Sample ID: 500-199296-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			599713	05/19/21 08:28	BDE	TAL CHI
Total Recoverable	Analysis	6010C		1	599943	05/19/21 17:38	JJB	TAL CHI
Total Recoverable	Prep	3005A			599713	05/19/21 08:28	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	599958	05/19/21 18:18	FXG	TAL CHI
Total/NA	Prep	7470A			601691	06/01/21 09:35	MJG	TAL CHI
Total/NA	Analysis	7470A		1	601923	06/02/21 07:10	MJG	TAL CHI
Total/NA	Analysis	SM 2540C		1	600116	05/22/21 19:35	CLB	TAL CHI
Total/NA	Analysis	SM 4500 CI- E		20	602679	06/07/21 10:48	MS	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	602163	06/03/21 10:53	MS	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		5	602742	06/07/21 17:06	RES	TAL CHI

Client Sample ID: MW-03

Date Collected: 05/18/21 11:55

Date Received: 05/19/21 11:33

Lab Sample ID: 500-199296-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			600086	05/20/21 18:19	LMN	TAL CHI
Total Recoverable	Analysis	6010C		1	600441	05/22/21 00:09	EEN	TAL CHI
Total Recoverable	Prep	3005A			600086	05/20/21 18:19	LMN	TAL CHI
Total Recoverable	Analysis	6020A		1	600933	05/26/21 00:31	FXG	TAL CHI
Total Recoverable	Prep	3005A			600086	05/20/21 18:19	LMN	TAL CHI
Total Recoverable	Analysis	6020A		1	601019	05/26/21 14:45	FXG	TAL CHI
Total/NA	Prep	7470A			601691	06/01/21 09:35	MJG	TAL CHI
Total/NA	Analysis	7470A		1	601923	06/02/21 07:12	MJG	TAL CHI
Total/NA	Analysis	SM 2540C		1	600116	05/22/21 19:38	CLB	TAL CHI
Total/NA	Analysis	SM 4500 CI- E		20	602679	06/07/21 10:59	MS	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	602163	06/03/21 10:56	MS	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		5	602742	06/07/21 17:10	RES	TAL CHI

Client Sample ID: MW-04

Date Collected: 05/18/21 12:53

Date Received: 05/19/21 11:33

Lab Sample ID: 500-199296-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			600086	05/20/21 18:19	LMN	TAL CHI
Total Recoverable	Analysis	6010C		1	600441	05/22/21 00:12	EEN	TAL CHI
Total Recoverable	Prep	3005A			600086	05/20/21 18:19	LMN	TAL CHI
Total Recoverable	Analysis	6020A		1	600933	05/26/21 00:35	FXG	TAL CHI
Total Recoverable	Prep	3005A			600086	05/20/21 18:19	LMN	TAL CHI
Total Recoverable	Analysis	6020A		1	601019	05/26/21 14:49	FXG	TAL CHI
Total/NA	Prep	7470A			601691	06/01/21 09:35	MJG	TAL CHI
Total/NA	Analysis	7470A		1	601923	06/02/21 07:14	MJG	TAL CHI
Total/NA	Analysis	SM 2540C		1	600116	05/22/21 19:40	CLB	TAL CHI
Total/NA	Analysis	SM 4500 CI- E		20	602679	06/07/21 11:00	MS	TAL CHI

Eurofins TestAmerica, Chicago

Lab Chronicle

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

Job ID: 500-199296-1

Client Sample ID: MW-04

Date Collected: 05/18/21 12:53

Date Received: 05/19/21 11:33

Lab Sample ID: 500-199296-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 F C		1	602163	06/03/21 10:59	MS	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		5	602742	06/07/21 17:10	RES	TAL CHI

Client Sample ID: MW-10

Date Collected: 05/18/21 00:00

Date Received: 05/19/21 11:33

Lab Sample ID: 500-199296-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			600086	05/20/21 18:19	LMN	TAL CHI
Total Recoverable	Analysis	6010C		1	600441	05/22/21 00:16	EEN	TAL CHI
Total Recoverable	Prep	3005A			600086	05/20/21 18:19	LMN	TAL CHI
Total Recoverable	Analysis	6020A		1	600933	05/26/21 00:38	FXG	TAL CHI
Total Recoverable	Prep	3005A			600086	05/20/21 18:19	LMN	TAL CHI
Total Recoverable	Analysis	6020A		1	601019	05/26/21 14:52	FXG	TAL CHI
Total/NA	Prep	7470A			601691	06/01/21 09:35	MJG	TAL CHI
Total/NA	Analysis	7470A		1	601923	06/02/21 07:16	MJG	TAL CHI
Total/NA	Analysis	SM 2540C		1	600116	05/22/21 19:43	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		20	602679	06/07/21 11:00	MS	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	602163	06/03/21 11:02	MS	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		5	602742	06/07/21 17:11	RES	TAL CHI

Client Sample ID: Duplicate

Date Collected: 05/18/21 00:00

Date Received: 05/19/21 11:33

Lab Sample ID: 500-199296-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			600086	05/20/21 18:19	LMN	TAL CHI
Total Recoverable	Analysis	6010C		1	600441	05/22/21 00:20	EEN	TAL CHI
Total Recoverable	Prep	3005A			600086	05/20/21 18:19	LMN	TAL CHI
Total Recoverable	Analysis	6020A		1	600933	05/26/21 00:42	FXG	TAL CHI
Total Recoverable	Prep	3005A			600086	05/20/21 18:19	LMN	TAL CHI
Total Recoverable	Analysis	6020A		1	601019	05/26/21 14:56	FXG	TAL CHI
Total/NA	Prep	7470A			601691	06/01/21 09:35	MJG	TAL CHI
Total/NA	Analysis	7470A		1	601923	06/02/21 07:53	MJG	TAL CHI
Total/NA	Analysis	SM 2540C		1	600116	05/22/21 19:45	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		20	602679	06/07/21 11:01	MS	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	602163	06/03/21 11:05	MS	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		5	602742	06/07/21 17:11	RES	TAL CHI

Laboratory References:

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

Eurofins TestAmerica, Chicago

ANALYTICAL REPORT

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

Laboratory Job ID: 500-208539-1
Client Project/Site: Joliet #29 CCR

For:

Midwest Generation EME LLC
1800 Channahon Road
Joliet, Illinois 60436

Attn: DeAndre Cooley



*Authorized for release by:
12/16/2021 3:58:31 PM*

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

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

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

Job ID: 500-208539-1

Job ID: 500-208539-1

Laboratory: Eurofins TestAmerica, Chicago

Narrative

Job Narrative 500-208539-1

Comments

No additional comments.

Receipt

The samples were received on 11/17/2021 11:53 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 5.1° C and 5.3° C.

Metals

Method 6020A: The initial low level continuing calibration verification (ICVL) associated with batch 500-633145 recovered above the upper control limit for Beryllium. The samples associated with this ICVL 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: 500-208539-1

Method	Method Description	Protocol	Laboratory
6010C	Metals (ICP)	SW846	TAL CHI
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 TestAmerica, 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: 500-208539-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-208539-1	MW-03	Water	11/16/21 14:13	11/17/21 11:53
500-208539-2	MW-04	Water	11/16/21 13:30	11/17/21 11:53
500-208539-3	MW-05	Water	11/16/21 15:13	11/17/21 11:53
500-208539-4	MW-10	Water	11/16/21 11:54	11/17/21 11:53
500-208539-5	Duplicate	Water	11/16/21 00:00	11/17/21 11:53

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Client Sample Results

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

Job ID: 500-208539-1

Client Sample ID: MW-03

Lab Sample ID: 500-208539-1

Date Collected: 11/16/21 14:13

Matrix: Water

Date Received: 11/17/21 11:53

Method: 6010C - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.011		0.010		mg/L		12/08/21 08:10	12/16/21 13:10	1

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		12/08/21 08:10	12/08/21 16:39	1
Arsenic	0.0018		0.0010		mg/L		12/08/21 08:10	12/08/21 16:39	1
Barium	0.14		0.0025		mg/L		12/08/21 08:10	12/08/21 16:39	1
Beryllium	<0.0010	^1+	0.0010		mg/L		12/08/21 08:10	12/09/21 15:01	1
Boron	0.30		0.050		mg/L		12/08/21 08:10	12/08/21 16:39	1
Cadmium	<0.00050		0.00050		mg/L		12/08/21 08:10	12/08/21 16:39	1
Calcium	130		0.20		mg/L		12/08/21 08:10	12/08/21 16:39	1
Chromium	<0.0050		0.0050		mg/L		12/08/21 08:10	12/08/21 16:39	1
Cobalt	0.0018		0.0010		mg/L		12/08/21 08:10	12/08/21 16:39	1
Lead	<0.00050		0.00050		mg/L		12/08/21 08:10	12/08/21 16:39	1
Molybdenum	<0.0050		0.0050		mg/L		12/08/21 08:10	12/08/21 16:39	1
Selenium	<0.0025		0.0025		mg/L		12/08/21 08:10	12/08/21 16:39	1
Thallium	<0.0020		0.0020		mg/L		12/08/21 08:10	12/08/21 16:39	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		11/30/21 10:05	12/01/21 08:59	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1000		10		mg/L			11/22/21 06:32	1
Chloride	280		20		mg/L			11/22/21 15:59	10
Fluoride	0.37		0.10		mg/L			12/06/21 16:31	1
Sulfate	150		25		mg/L			11/22/21 17:44	5

Eurofins TestAmerica, Chicago

MWG13-15_114003

Client Sample Results

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

Job ID: 500-208539-1

Client Sample ID: MW-04

Lab Sample ID: 500-208539-2

Date Collected: 11/16/21 13:30

Matrix: Water

Date Received: 11/17/21 11:53

Method: 6010C - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.011		0.010		mg/L		12/08/21 08:10	12/16/21 13:14	1

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		12/08/21 08:10	12/08/21 16:43	1
Arsenic	0.0021		0.0010		mg/L		12/08/21 08:10	12/08/21 16:43	1
Barium	0.12		0.0025		mg/L		12/08/21 08:10	12/08/21 16:43	1
Beryllium	<0.0010	^1+	0.0010		mg/L		12/08/21 08:10	12/09/21 15:04	1
Boron	0.30		0.050		mg/L		12/08/21 08:10	12/08/21 16:43	1
Cadmium	<0.00050		0.00050		mg/L		12/08/21 08:10	12/08/21 16:43	1
Calcium	130		0.20		mg/L		12/08/21 08:10	12/08/21 16:43	1
Chromium	<0.0050		0.0050		mg/L		12/08/21 08:10	12/08/21 16:43	1
Cobalt	0.0040		0.0010		mg/L		12/08/21 08:10	12/08/21 16:43	1
Lead	<0.00050		0.00050		mg/L		12/08/21 08:10	12/08/21 16:43	1
Molybdenum	0.0059		0.0050		mg/L		12/08/21 08:10	12/08/21 16:43	1
Selenium	<0.0025		0.0025		mg/L		12/08/21 08:10	12/08/21 16:43	1
Thallium	<0.0020		0.0020		mg/L		12/08/21 08:10	12/08/21 16:43	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		11/30/21 10:05	12/01/21 10:51	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1000		10		mg/L			11/22/21 06:34	1
Chloride	290		20		mg/L			11/22/21 16:00	10
Fluoride	0.42		0.10		mg/L			12/06/21 16:34	1
Sulfate	140		25		mg/L			11/22/21 17:44	5

Eurofins TestAmerica, Chicago

Client Sample Results

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

Job ID: 500-208539-1

Client Sample ID: MW-05

Lab Sample ID: 500-208539-3

Date Collected: 11/16/21 15:13

Matrix: Water

Date Received: 11/17/21 11:53

Method: 6010C - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.014		0.010		mg/L		12/08/21 08:10	12/16/21 13:17	1

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		12/08/21 08:10	12/08/21 16:46	1
Arsenic	0.0016		0.0010		mg/L		12/08/21 08:10	12/08/21 16:46	1
Barium	0.079		0.0025		mg/L		12/08/21 08:10	12/08/21 16:46	1
Beryllium	<0.0010	^1+	0.0010		mg/L		12/08/21 08:10	12/09/21 15:08	1
Boron	0.44		0.050		mg/L		12/08/21 08:10	12/08/21 16:46	1
Cadmium	<0.00050		0.00050		mg/L		12/08/21 08:10	12/08/21 16:46	1
Calcium	120		0.20		mg/L		12/08/21 08:10	12/08/21 16:46	1
Chromium	<0.0050		0.0050		mg/L		12/08/21 08:10	12/08/21 16:46	1
Cobalt	<0.0010		0.0010		mg/L		12/08/21 08:10	12/08/21 16:46	1
Lead	<0.00050		0.00050		mg/L		12/08/21 08:10	12/08/21 16:46	1
Molybdenum	0.0069		0.0050		mg/L		12/08/21 08:10	12/08/21 16:46	1
Selenium	<0.0025		0.0025		mg/L		12/08/21 08:10	12/08/21 16:46	1
Thallium	<0.0020		0.0020		mg/L		12/08/21 08:10	12/08/21 16:46	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		11/30/21 10:05	12/01/21 10:53	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	970		10		mg/L			11/22/21 06:37	1
Chloride	260		20		mg/L			11/22/21 16:00	10
Fluoride	0.30		0.10		mg/L			12/06/21 16:37	1
Sulfate	140		25		mg/L			11/22/21 17:44	5

Eurofins TestAmerica, Chicago

Client Sample Results

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

Job ID: 500-208539-1

Client Sample ID: MW-10

Lab Sample ID: 500-208539-4

Date Collected: 11/16/21 11:54

Matrix: Water

Date Received: 11/17/21 11:53

Method: 6010C - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.011		0.010		mg/L		12/08/21 08:10	12/16/21 13:20	1

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		12/08/21 08:10	12/08/21 16:50	1
Arsenic	0.0012		0.0010		mg/L		12/08/21 08:10	12/08/21 16:50	1
Barium	0.049		0.0025		mg/L		12/08/21 08:10	12/08/21 16:50	1
Beryllium	<0.0010	^1+	0.0010		mg/L		12/08/21 08:10	12/09/21 15:12	1
Boron	0.39		0.050		mg/L		12/08/21 08:10	12/08/21 16:50	1
Cadmium	<0.00050		0.00050		mg/L		12/08/21 08:10	12/08/21 16:50	1
Calcium	120		0.20		mg/L		12/08/21 08:10	12/08/21 16:50	1
Chromium	<0.0050		0.0050		mg/L		12/08/21 08:10	12/08/21 16:50	1
Cobalt	<0.0010		0.0010		mg/L		12/08/21 08:10	12/08/21 16:50	1
Lead	<0.00050		0.00050		mg/L		12/08/21 08:10	12/08/21 16:50	1
Molybdenum	0.0066		0.0050		mg/L		12/08/21 08:10	12/08/21 16:50	1
Selenium	<0.0025		0.0025		mg/L		12/08/21 08:10	12/08/21 16:50	1
Thallium	<0.0020		0.0020		mg/L		12/08/21 08:10	12/08/21 16:50	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		11/30/21 10:05	12/01/21 10:55	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1000		10		mg/L			11/22/21 06:39	1
Chloride	260		20		mg/L			11/22/21 16:00	10
Fluoride	0.38		0.10		mg/L			12/06/21 16:51	1
Sulfate	150		25		mg/L			11/22/21 17:45	5

Eurofins TestAmerica, Chicago

Client Sample Results

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

Job ID: 500-208539-1

Client Sample ID: Duplicate

Lab Sample ID: 500-208539-5

Date Collected: 11/16/21 00:00

Matrix: Water

Date Received: 11/17/21 11:53

Method: 6010C - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.011		0.010		mg/L		12/08/21 08:10	12/16/21 13:23	1

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		12/08/21 08:10	12/08/21 16:53	1
Arsenic	0.0013		0.0010		mg/L		12/08/21 08:10	12/08/21 16:53	1
Barium	0.048		0.0025		mg/L		12/08/21 08:10	12/08/21 16:53	1
Beryllium	<0.0010	^1+	0.0010		mg/L		12/08/21 08:10	12/09/21 15:15	1
Boron	0.39		0.050		mg/L		12/08/21 08:10	12/08/21 16:53	1
Cadmium	<0.00050		0.00050		mg/L		12/08/21 08:10	12/08/21 16:53	1
Calcium	110		0.20		mg/L		12/08/21 08:10	12/08/21 16:53	1
Chromium	<0.0050		0.0050		mg/L		12/08/21 08:10	12/08/21 16:53	1
Cobalt	<0.0010		0.0010		mg/L		12/08/21 08:10	12/08/21 16:53	1
Lead	<0.00050		0.00050		mg/L		12/08/21 08:10	12/08/21 16:53	1
Molybdenum	0.0075		0.0050		mg/L		12/08/21 08:10	12/08/21 16:53	1
Selenium	<0.0025		0.0025		mg/L		12/08/21 08:10	12/08/21 16:53	1
Thallium	<0.0020		0.0020		mg/L		12/08/21 08:10	12/08/21 16:53	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		11/30/21 10:05	12/01/21 10:57	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1000		10		mg/L			11/22/21 06:42	1
Chloride	260		20		mg/L			11/22/21 16:01	10
Fluoride	0.38		0.10		mg/L			12/06/21 16:54	1
Sulfate	150		25		mg/L			11/22/21 17:45	5

Eurofins TestAmerica, Chicago

Definitions/Glossary

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

Job ID: 500-208539-1

Qualifiers

Metals

Qualifier	Qualifier Description
^1+	Initial Calibration Verification (ICV) is outside acceptance limits, high biased.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	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
Project/Site: Joliet #29 CCR

Job ID: 500-208539-1

Metals

Prep Batch: 631439

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-208539-1	MW-03	Total/NA	Water	7470A	
500-208539-2	MW-04	Total/NA	Water	7470A	
500-208539-3	MW-05	Total/NA	Water	7470A	
500-208539-4	MW-10	Total/NA	Water	7470A	
500-208539-5	Duplicate	Total/NA	Water	7470A	
MB 500-631439/12-A	Method Blank	Total/NA	Water	7470A	
LCS 500-631439/13-A	Lab Control Sample	Total/NA	Water	7470A	
500-208539-1 MS	MW-03	Total/NA	Water	7470A	
500-208539-1 MSD	MW-03	Total/NA	Water	7470A	
500-208539-1 DU	MW-03	Total/NA	Water	7470A	

Analysis Batch: 631690

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-208539-1	MW-03	Total/NA	Water	7470A	631439
500-208539-2	MW-04	Total/NA	Water	7470A	631439
500-208539-3	MW-05	Total/NA	Water	7470A	631439
500-208539-4	MW-10	Total/NA	Water	7470A	631439
500-208539-5	Duplicate	Total/NA	Water	7470A	631439
MB 500-631439/12-A	Method Blank	Total/NA	Water	7470A	631439
LCS 500-631439/13-A	Lab Control Sample	Total/NA	Water	7470A	631439
500-208539-1 MS	MW-03	Total/NA	Water	7470A	631439
500-208539-1 MSD	MW-03	Total/NA	Water	7470A	631439
500-208539-1 DU	MW-03	Total/NA	Water	7470A	631439

Prep Batch: 632685

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-208539-1	MW-03	Total Recoverable	Water	3005A	
500-208539-2	MW-04	Total Recoverable	Water	3005A	
500-208539-3	MW-05	Total Recoverable	Water	3005A	
500-208539-4	MW-10	Total Recoverable	Water	3005A	
500-208539-5	Duplicate	Total Recoverable	Water	3005A	
MB 500-632685/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-632685/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 632918

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-208539-1	MW-03	Total Recoverable	Water	6020A	632685
500-208539-2	MW-04	Total Recoverable	Water	6020A	632685
500-208539-3	MW-05	Total Recoverable	Water	6020A	632685
500-208539-4	MW-10	Total Recoverable	Water	6020A	632685
500-208539-5	Duplicate	Total Recoverable	Water	6020A	632685
MB 500-632685/1-A	Method Blank	Total Recoverable	Water	6020A	632685
LCS 500-632685/2-A	Lab Control Sample	Total Recoverable	Water	6020A	632685

Analysis Batch: 633145

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-208539-1	MW-03	Total Recoverable	Water	6020A	632685
500-208539-2	MW-04	Total Recoverable	Water	6020A	632685
500-208539-3	MW-05	Total Recoverable	Water	6020A	632685
500-208539-4	MW-10	Total Recoverable	Water	6020A	632685
500-208539-5	Duplicate	Total Recoverable	Water	6020A	632685

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QC Association Summary

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

Job ID: 500-208539-1

Metals (Continued)

Analysis Batch: 633145 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 500-632685/1-A	Method Blank	Total Recoverable	Water	6020A	632685
LCS 500-632685/2-A	Lab Control Sample	Total Recoverable	Water	6020A	632685

Analysis Batch: 634142

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-208539-1	MW-03	Total Recoverable	Water	6010C	632685
500-208539-2	MW-04	Total Recoverable	Water	6010C	632685
500-208539-3	MW-05	Total Recoverable	Water	6010C	632685
500-208539-4	MW-10	Total Recoverable	Water	6010C	632685
500-208539-5	Duplicate	Total Recoverable	Water	6010C	632685
MB 500-632685/1-A	Method Blank	Total Recoverable	Water	6010C	632685
LCS 500-632685/2-A	Lab Control Sample	Total Recoverable	Water	6010C	632685

General Chemistry

Analysis Batch: 630259

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-208539-1	MW-03	Total/NA	Water	SM 2540C	
500-208539-2	MW-04	Total/NA	Water	SM 2540C	
500-208539-3	MW-05	Total/NA	Water	SM 2540C	
500-208539-4	MW-10	Total/NA	Water	SM 2540C	
500-208539-5	Duplicate	Total/NA	Water	SM 2540C	
MB 500-630259/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-630259/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 630527

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-208539-1	MW-03	Total/NA	Water	SM 4500 Cl- E	
500-208539-2	MW-04	Total/NA	Water	SM 4500 Cl- E	
500-208539-3	MW-05	Total/NA	Water	SM 4500 Cl- E	
500-208539-4	MW-10	Total/NA	Water	SM 4500 Cl- E	
500-208539-5	Duplicate	Total/NA	Water	SM 4500 Cl- E	
MB 500-630527/54	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 500-630527/55	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 630528

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-208539-1	MW-03	Total/NA	Water	SM 4500 SO4 E	
500-208539-2	MW-04	Total/NA	Water	SM 4500 SO4 E	
500-208539-3	MW-05	Total/NA	Water	SM 4500 SO4 E	
500-208539-4	MW-10	Total/NA	Water	SM 4500 SO4 E	
500-208539-5	Duplicate	Total/NA	Water	SM 4500 SO4 E	
MB 500-630528/15	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 500-630528/16	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 632394

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-208539-1	MW-03	Total/NA	Water	SM 4500 F C	
500-208539-2	MW-04	Total/NA	Water	SM 4500 F C	
500-208539-3	MW-05	Total/NA	Water	SM 4500 F C	
500-208539-4	MW-10	Total/NA	Water	SM 4500 F C	

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QC Association Summary

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

Job ID: 500-208539-1

General Chemistry (Continued)

Analysis Batch: 632394 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-208539-5	Duplicate	Total/NA	Water	SM 4500 F C	
MB 500-632394/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 500-632394/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	

QC Sample Results

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

Job ID: 500-208539-1

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 500-632685/1-A
Matrix: Water
Analysis Batch: 634142

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 632685

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.010		0.010		mg/L		12/08/21 08:10	12/16/21 12:57	1

Lab Sample ID: LCS 500-632685/2-A
Matrix: Water
Analysis Batch: 634142

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 632685

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lithium	0.500	0.561		mg/L		112	80 - 120

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 500-632685/1-A
Matrix: Water
Analysis Batch: 632918

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 632685

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		12/08/21 08:10	12/08/21 16:32	1
Arsenic	<0.0010		0.0010		mg/L		12/08/21 08:10	12/08/21 16:32	1
Barium	<0.0025		0.0025		mg/L		12/08/21 08:10	12/08/21 16:32	1
Boron	<0.050		0.050		mg/L		12/08/21 08:10	12/08/21 16:32	1
Cadmium	<0.00050		0.00050		mg/L		12/08/21 08:10	12/08/21 16:32	1
Calcium	<0.20		0.20		mg/L		12/08/21 08:10	12/08/21 16:32	1
Chromium	<0.0050		0.0050		mg/L		12/08/21 08:10	12/08/21 16:32	1
Cobalt	<0.0010		0.0010		mg/L		12/08/21 08:10	12/08/21 16:32	1
Lead	<0.00050		0.00050		mg/L		12/08/21 08:10	12/08/21 16:32	1
Molybdenum	<0.0050		0.0050		mg/L		12/08/21 08:10	12/08/21 16:32	1
Selenium	<0.0025		0.0025		mg/L		12/08/21 08:10	12/08/21 16:32	1
Thallium	<0.0020		0.0020		mg/L		12/08/21 08:10	12/08/21 16:32	1

Lab Sample ID: MB 500-632685/1-A
Matrix: Water
Analysis Batch: 633145

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 632685

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	<0.0010	^1+	0.0010		mg/L		12/08/21 08:10	12/09/21 14:54	1

Lab Sample ID: LCS 500-632685/2-A
Matrix: Water
Analysis Batch: 632918

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 632685

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.500	0.517		mg/L		103	80 - 120
Arsenic	0.100	0.106		mg/L		106	80 - 120
Barium	2.00	2.09		mg/L		104	80 - 120
Boron	1.00	1.07		mg/L		107	80 - 120
Cadmium	0.0500	0.0519		mg/L		104	80 - 120
Calcium	10.0	10.4		mg/L		104	80 - 120
Chromium	0.200	0.216		mg/L		108	80 - 120
Cobalt	0.500	0.536		mg/L		107	80 - 120
Lead	0.100	0.113		mg/L		113	80 - 120

Eurofins TestAmerica, Chicago

QC Sample Results

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

Job ID: 500-208539-1

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 500-632685/2-A

Matrix: Water

Analysis Batch: 632918

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 632685

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Molybdenum	1.00	1.01		mg/L		101	80 - 120
Selenium	0.100	0.108		mg/L		108	80 - 120
Thallium	0.100	0.111		mg/L		111	80 - 120

Lab Sample ID: LCS 500-632685/2-A

Matrix: Water

Analysis Batch: 633145

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 632685

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Beryllium	0.0500	0.0515	^1+	mg/L		103	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 500-631439/12-A

Matrix: Water

Analysis Batch: 631690

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 631439

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		11/30/21 10:05	12/01/21 08:44	1

Lab Sample ID: LCS 500-631439/13-A

Matrix: Water

Analysis Batch: 631690

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 631439

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00200	0.00178		mg/L		89	80 - 120

Lab Sample ID: 500-208539-1 MS

Matrix: Water

Analysis Batch: 631690

Client Sample ID: MW-03

Prep Type: Total/NA

Prep Batch: 631439

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	<0.00020		0.00100	0.000873		mg/L		87	75 - 125

Lab Sample ID: 500-208539-1 MSD

Matrix: Water

Analysis Batch: 631690

Client Sample ID: MW-03

Prep Type: Total/NA

Prep Batch: 631439

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	<0.00020		0.00100	0.000900		mg/L		90	75 - 125	3	20

Lab Sample ID: 500-208539-1 DU

Matrix: Water

Analysis Batch: 631690

Client Sample ID: MW-03

Prep Type: Total/NA

Prep Batch: 631439

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

Eurofins TestAmerica, Chicago

QC Sample Results

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

Job ID: 500-208539-1

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

Lab Sample ID: MB 500-630259/1

Matrix: Water

Analysis Batch: 630259

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			11/22/21 06:27	1

Lab Sample ID: LCS 500-630259/2

Matrix: Water

Analysis Batch: 630259

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	246		mg/L		98	80 - 120

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 500-630527/54

Matrix: Water

Analysis Batch: 630527

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			11/22/21 15:53	1

Lab Sample ID: LCS 500-630527/55

Matrix: Water

Analysis Batch: 630527

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		102	85 - 115

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 500-632394/3

Matrix: Water

Analysis Batch: 632394

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			12/06/21 15:28	1

Lab Sample ID: LCS 500-632394/4

Matrix: Water

Analysis Batch: 632394

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	10.3		mg/L		103	90 - 119

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 500-630528/15

Matrix: Water

Analysis Batch: 630528

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			11/22/21 17:08	1

Eurofins TestAmerica, Chicago

QC Sample Results

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

Job ID: 500-208539-1

Method: SM 4500 SO4 E - Sulfate, Total (Continued)

Lab Sample ID: LCS 500-630528/16

Matrix: Water

Analysis Batch: 630528

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	20.9		mg/L		104	88 - 123

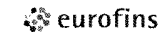
Eurofins TestAmerica, Chicago

2417 Bond Street

University Park IL 60484

Phone 708-534-5200 Fax 708-534-5211

Chain of Custody Record

Environment Testing
America

Client Information		Sampler <i>M. Riss</i>		Lab PM Mockler Diana J		Carrier Tracking No(s)		COC No 500-96001-42456 1				
Client Contact: Erin Bulson		Phone <i>630.602.7240</i>		E-Mail Diana Mockler@Eurofinset.com		State of Origin		Page 1 of 1				
Company KPRG and Associates Inc		PWSID		Analysis Requested					Job #: <i>500-208539</i>			
Address 14665 West Lisbon Road Suite 1A		Due Date Requested		 500-208539 COC					Preservation Codes			
City Brookfield		TAT Requested (days):							Preservation Codes			
State Zip WI 53005		Compliance Project: ☐ Yes ☐ No							Preservation Codes			
Phone 779-279-2321(Tel)		PO #: 4502042860							Preservation Codes			
Email erinb@kprginc.com		WO #:							Preservation Codes			
Project Name Joliet #29 CCR/ Event Desc Quarterly MWG Joliet #29 CCR		Project # 50011568							Other:			
Site Illinois		SSOW#										
Sample Identification		Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oli, 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
1	MW-03	<i>11/16</i>	<i>1413</i>		Water			X	X	X		
2	MW-04	<i>11/16</i>	<i>13:30</i>		Water			X	X	X		
3	MW-05	<i>11/16</i>	<i>15:13</i>		Water			X	X	X		
4	MW-10	<i>11/16</i>	<i>1154</i>		Water			X	X	X		
5	Duplicate	<i>11/16</i>	<i>—</i>		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 <i>Michael Riss</i>		Date/Time: <i>11/17 9:00</i>		Company <i>KPRG</i>		Received by <i>S. Neal</i>		Date/Time: <i>11/17/21 1055</i>		Company <i>Mockler</i>		
Relinquished by <i>S. Neal</i>		Date/Time: <i>11/17/21 1153</i>		Company <i>unifying</i>		Received by <i>Stephanie Hemminger</i>		Date/Time: <i>11/17/21 1153</i>		Company <i>ETA-CH</i>		
Relinquished by		Date/Time		Company		Received by		Date/Time		Company		
Custody Seals Intact. ☐ Yes ☐ No		Custody Seal No				Cooler Temperature(s) °C and Other Remarks <i>5 1.5 3.5 5</i>		MWG13-15_114016				

Login Sample Receipt Checklist

Client: Midwest Generation EME LLC

Job Number: 500-208539-1

Login Number: 208539

List Source: Eurofins TestAmerica, Chicago

List Number: 1

Creator: Hernandez, Stephanie

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ 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	5.1,5.3,5.5
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 $<6\text{mm}$ (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: 500-208539-1

Client Sample ID: MW-03

Date Collected: 11/16/21 14:13

Date Received: 11/17/21 11:53

Lab Sample ID: 500-208539-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			632685	12/08/21 08:10	BDE	TAL CHI
Total Recoverable	Analysis	6010C		1	634142	12/16/21 13:10	JJB	TAL CHI
Total Recoverable	Prep	3005A			632685	12/08/21 08:10	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	632918	12/08/21 16:39	FXG	TAL CHI
Total Recoverable	Prep	3005A			632685	12/08/21 08:10	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	633145	12/09/21 15:01	FXG	TAL CHI
Total/NA	Prep	7470A			631439	11/30/21 10:05	MJG	TAL CHI
Total/NA	Analysis	7470A		1	631690	12/01/21 08:59	MJG	TAL CHI
Total/NA	Analysis	SM 2540C		1	630259	11/22/21 06:32	CLB	TAL CHI
Total/NA	Analysis	SM 4500 CI- E		10	630527	11/22/21 15:59	RES	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	632394	12/06/21 16:31	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		5	630528	11/22/21 17:44	RES	TAL CHI

Client Sample ID: MW-04

Date Collected: 11/16/21 13:30

Date Received: 11/17/21 11:53

Lab Sample ID: 500-208539-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			632685	12/08/21 08:10	BDE	TAL CHI
Total Recoverable	Analysis	6010C		1	634142	12/16/21 13:14	JJB	TAL CHI
Total Recoverable	Prep	3005A			632685	12/08/21 08:10	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	632918	12/08/21 16:43	FXG	TAL CHI
Total Recoverable	Prep	3005A			632685	12/08/21 08:10	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	633145	12/09/21 15:04	FXG	TAL CHI
Total/NA	Prep	7470A			631439	11/30/21 10:05	MJG	TAL CHI
Total/NA	Analysis	7470A		1	631690	12/01/21 10:51	MJG	TAL CHI
Total/NA	Analysis	SM 2540C		1	630259	11/22/21 06:34	CLB	TAL CHI
Total/NA	Analysis	SM 4500 CI- E		10	630527	11/22/21 16:00	RES	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	632394	12/06/21 16:34	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		5	630528	11/22/21 17:44	RES	TAL CHI

Client Sample ID: MW-05

Date Collected: 11/16/21 15:13

Date Received: 11/17/21 11:53

Lab Sample ID: 500-208539-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			632685	12/08/21 08:10	BDE	TAL CHI
Total Recoverable	Analysis	6010C		1	634142	12/16/21 13:17	JJB	TAL CHI
Total Recoverable	Prep	3005A			632685	12/08/21 08:10	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	632918	12/08/21 16:46	FXG	TAL CHI
Total Recoverable	Prep	3005A			632685	12/08/21 08:10	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	633145	12/09/21 15:08	FXG	TAL CHI
Total/NA	Prep	7470A			631439	11/30/21 10:05	MJG	TAL CHI
Total/NA	Analysis	7470A		1	631690	12/01/21 10:53	MJG	TAL CHI

Eurofins TestAmerica, Chicago

Lab Chronicle

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

Job ID: 500-208539-1

Client Sample ID: MW-05

Date Collected: 11/16/21 15:13

Date Received: 11/17/21 11:53

Lab Sample ID: 500-208539-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540C		1	630259	11/22/21 06:37	CLB	TAL CHI
Total/NA	Analysis	SM 4500 CI- E		10	630527	11/22/21 16:00	RES	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	632394	12/06/21 16:37	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		5	630528	11/22/21 17:44	RES	TAL CHI

Client Sample ID: MW-10

Date Collected: 11/16/21 11:54

Date Received: 11/17/21 11:53

Lab Sample ID: 500-208539-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			632685	12/08/21 08:10	BDE	TAL CHI
Total Recoverable	Analysis	6010C		1	634142	12/16/21 13:20	JJB	TAL CHI
Total Recoverable	Prep	3005A			632685	12/08/21 08:10	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	632918	12/08/21 16:50	FXG	TAL CHI
Total Recoverable	Prep	3005A			632685	12/08/21 08:10	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	633145	12/09/21 15:12	FXG	TAL CHI
Total/NA	Prep	7470A			631439	11/30/21 10:05	MJG	TAL CHI
Total/NA	Analysis	7470A		1	631690	12/01/21 10:55	MJG	TAL CHI
Total/NA	Analysis	SM 2540C		1	630259	11/22/21 06:39	CLB	TAL CHI
Total/NA	Analysis	SM 4500 CI- E		10	630527	11/22/21 16:00	RES	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	632394	12/06/21 16:51	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		5	630528	11/22/21 17:45	RES	TAL CHI

Client Sample ID: Duplicate

Date Collected: 11/16/21 00:00

Date Received: 11/17/21 11:53

Lab Sample ID: 500-208539-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			632685	12/08/21 08:10	BDE	TAL CHI
Total Recoverable	Analysis	6010C		1	634142	12/16/21 13:23	JJB	TAL CHI
Total Recoverable	Prep	3005A			632685	12/08/21 08:10	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	632918	12/08/21 16:53	FXG	TAL CHI
Total Recoverable	Prep	3005A			632685	12/08/21 08:10	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	633145	12/09/21 15:15	FXG	TAL CHI
Total/NA	Prep	7470A			631439	11/30/21 10:05	MJG	TAL CHI
Total/NA	Analysis	7470A		1	631690	12/01/21 10:57	MJG	TAL CHI
Total/NA	Analysis	SM 2540C		1	630259	11/22/21 06:42	CLB	TAL CHI
Total/NA	Analysis	SM 4500 CI- E		10	630527	11/22/21 16:01	RES	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	632394	12/06/21 16:54	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		5	630528	11/22/21 17:45	RES	TAL CHI

Laboratory References:

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

Eurofins TestAmerica, Chicago

APPENDIX B

Alternate Source Demonstration October 11, 2021



ENVIRONMENTAL CONSULTATION & REMEDIATION

KPRG and Associates, Inc.

ALTERNATE SOURCE DEMONSTRATION
CCR GROUNDWATER MONITORING
JOLIET #29 GENERATING STATION

October 11, 2021

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

VIA E-MAIL

Re: Alternate Source Demonstration
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) was completed in the second quarter 2021 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-3 through MW-5. The monitoring well network is shown on Figure 1. A statistical evaluation of the semi-annual detection monitoring sampling which occurred in the second quarter 2021 (Appendix III parameters) was completed and submitted to Midwest Generation. The following conclusions/recommendations were provided:

“...The initial sampling data indicated potential statistically significant increases (SSI) for total dissolved solids (TDS) and sulfate above the calculated Prediction Limit (PL) at wells MW-3, MW-4, MW-5 and MW-10, chloride above its respective PL at MW-5 and MW-10, and calcium above its respective PL at MW-10. It is noted that MW-10 is the upgradient monitoring point.

Confirmatory sampling was limited to these potential statistically significant increases to minimize potential false positives, as allotted by CCR Compliance Statistical Approach for Groundwater Data Evaluation for Joliet #29 Station dated October 10, 2017. All confirmatory resampling results continued to indicate a

potential SSI for each noted constituent. It is recommended to proceed with completing an Alternate Source Demonstration (ASD) in accordance with provisions under 40 CFR 257.94(e)(2). Depending on the results of the ASD, a determination will be made whether to continue with detection monitoring under Part 257.94 or to initiate assessment monitoring under Part 257.95.”

This report summarizes the results of the Alternate Source Demonstration 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 currently operates as a natural gas-fired generating station. The station switched from burning coal to natural gas in 2016. 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) was determined to not have sufficient ash and is not a CCR surface impoundment. Pond 2 continued to be used for CCR management/storage until 2019 at which point 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 CCR materials or CCR related fluids since 2019.

ALTERNATE SOURCE EVALUATION OF THE SSI PARAMETERS

As stated above, the first semi-annual detection monitoring sampling which occurred in the second quarter 2021 confirmed potential SSIs for TDS, sulfate, chloride and calcium at varying well locations. Another round of groundwater sampling for these parameters at the subject well locations was completed during the third quarter 2021, the results of which are used to assist in this evaluation. Each is discussed separately below. The applicable data are summarized in Table 1. The third quarter sampling data package is included as Attachment 1.

Total Dissolved Solids

TDS detections were confirmed above the PL during the second quarter sampling at upgradient well MW-10 as well as in downgradient wells MW-3 through MW-5. The follow-up sampling completed during the third quarter 2021 still showed concentrations above the PL at well locations MW-10 (upgradient) and downgradient wells MW-4 and MW-5, however, all concentrations had decreased compared to the previous round. The third quarter sampling result at downgradient well location MW-3 was below the PL and within concentrations historically detected at this location. This is illustrated in the time versus concentration curves for TDS provided in Attachment 2.

Consider these factors: that there have been no CCR materials or associated liquids contained within this pond since 2019; that the upgradient well also displayed a similar

magnitude concentration above the PL; and that subsequent sampling has documented decreasing concentrations at all locations. These factors indicate that the noted SSIs are not related to a potential release from Pond 2 but rather indicate an alternate transient upgradient source of TDS concentrations.

Sulfate

Sulfate detections were confirmed above the PL during the second quarter sampling at upgradient well MW-10 as well as in downgradient wells MW-3 through MW-5. The follow-up sampling completed during the third quarter 2021 still showed concentrations above the PL at all four well locations, however, all concentrations had decreased from the previous round. This is illustrated in the time versus concentration curves for sulfate provided in Attachment 2.

Consider these factors: that there have been no CCR materials or associated liquids contained within this pond since 2019; that the upgradient well also displayed a similar concentration above the PL; and that subsequent sampling has documented decreasing concentrations at all locations. These factors indicate that the noted SSIs are not related to a potential release from Pond 2 but rather indicate an alternate transient upgradient source of sulfate.

Chloride

Chloride detections were confirmed above the PL during the second quarter sampling at upgradient well MW-10 as well as in downgradient well MW-5. The follow-up sampling at those wells completed during the third quarter 2021 still showed concentrations above the PL at well location MW-10 (upgradient), however, the concentration had decreased from the previous round. The third quarter sampling at downgradient well location MW-5 was below the PL and within concentrations historically detected at this location. This is illustrated in the time versus concentration curves for chloride provided in Attachment 2.

Consider these factors: that there have been no CCR materials or associated liquids contained within this pond since 2019; that the upgradient well also displayed a similar concentration above the PL; and that subsequent sampling has documented decreasing concentrations at these locations. These factors indicate that the noted SSIs are not related to a potential release from Pond 2 but rather indicate an alternate transient upgradient source of chloride.

Calcium

Calcium was confirmed above the PL during the second quarter sampling only at upgradient well MW-10. There were no calcium detections above the PL in the downgradient wells. The follow-up sampling completed at that well during the third quarter 2021 showed the MW-10 calcium concentration to be below the PL and within concentrations historically detected at this location. This is illustrated in the time versus concentration curves for calcium provided in Attachment 2.

Consider these factors: that there have been no CCR materials or associated liquids contained within this pond since 2019; that the upgradient well was the only well that displayed a concentration above the PL; and that subsequent sampling of this well has documented a calcium concentration below the PL and within concentrations historically detected at this location. These factors indicate that the SSI was not related to a potential release from Pond 2 but rather indicates an alternate transient upgradient source of calcium.

CONCLUSIONS/RECOMMENDATIONS

Based on the data evaluation and discussions provided above, it is concluded that the noted SSIs for TDS, sulfate, chloride and calcium are not associated with a potential release from Pond 2 but rather an alternate transient source of impacts, potentially from upgradient and offsite. 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.
- TDS, sulfate and chloride concentrations were noted above the PL in the upgradient well MW-10 as well as in the downgradient wells.
- Subsequent follow-up sampling during the third quarter 2021 showed concentrations of the above noted parameters to have decreased in all the subject wells with some reverting back to concentrations below the PL and within historically detected ranges at those wells.
- Calcium was only detected above the PL at the upgradient well location MW-10 with the follow-up sampling at that well in the third quarter 2021 indicated a calcium concentration below the PL and within the historically detected range at this location.

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

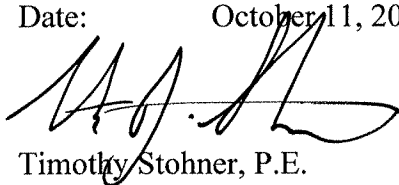
cc: David Bacher, NRG
DeAndre Cooley, Midwest Generation

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 October 11, 2021, that the information contained in this report is accurate to the best of my knowledge.

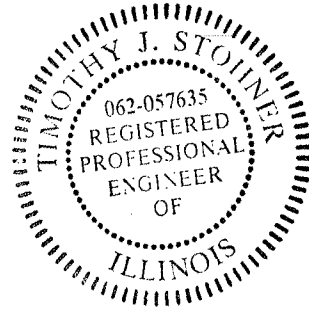
Certified by:

Date: October 11, 2021



Timothy Stohner, P.E.

Illinois Professional Engineer Registration No.: 062.057635
KPRG and Associates, Inc.



FIGURE

NOTE:
BACKGROUND MAP RETRIEVED FROM GOOGLE MAPS 2013

ASH POND 2

MW-10



MW-3



MW-4



MW-5



MW-1



LEGEND

EXISTING CCR MONITORING
WELL

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

MWG13-15_114027
FIGURE 1

0 100'
APPROXIMATE SCALE



TABLE

Table 1. Semi-Annual Detection Monitoring Statistical Comparisons - Appendix III Groundwater Analytical Results - 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	--	120	330	--	7.56	170	990
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
	8/30/2021	--	--	--	--	7.33	140	800
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
	8/30/2021	--	--	--	--	7.46	170	1,000
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
	8/27/2021	--	--	300	--	6.94	140	960

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.

-- - Not applicable relative to this Alternate Source Demonstration.

R - Resample

ATTACHMENT 1
Laboratory Data Package

ANALYTICAL REPORT

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

Laboratory Job ID: 500-204479-1
Client Project/Site: Joliet #29 CCR

For:

Midwest Generation EME LLC
1800 Channahon Road
Joliet, Illinois 60436

Attn: DeAndre Cooley



Authorized for release by:
9/21/2021 3:23:38 PM

Diana Mockler, Project Manager I
(219)252-7570

Diana.Mockler@Eurofinset.com

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

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

Job ID: 500-204479-1

Job ID: 500-204479-1

Laboratory: Eurofins TestAmerica, Chicago

Narrative

Job Narrative 500-204479-1

Comments

No additional comments.

Receipt

The samples were received on 8/27/2021 6:00 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 1.3° C, 2.5° C, 2.6° C and 3.2° C.

Receipt Exceptions

The following sample(s) was submitted for analysis; however, it was not listed on the Chain-of-Custody (COC): "Duplicate" Client did not check analysis off on COC and didn't not provide date. Logged as sample #5 and logged date per container label (8/30/21). Analysis logged per container labels (same as all previous samples).

Metals

Method 6020A: The continuing calibration verification (CCV) at line 64, associated with batch 500-617878 recovered above the upper control limit for Antimony. 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: 500-204479-1

Method	Method Description	Protocol	Laboratory
6010C	Metals (ICP)	SW846	TAL CHI
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 TestAmerica, 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: 500-204479-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-204479-1	MW-05	Water	08/27/21 12:36	08/27/21 18:00
500-204479-2	MW-03	Water	08/30/21 10:53	08/31/21 10:57
500-204479-3	MW-04	Water	08/30/21 12:15	08/31/21 10:57
500-204479-4	MW-10	Water	08/30/21 14:30	08/31/21 10:57
500-204479-5	Duplicate	Water	08/30/21 00:00	08/31/21 10:57

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12

Client Sample Results

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

Job ID: 500-204479-1

Client Sample ID: MW-05

Lab Sample ID: 500-204479-1

Date Collected: 08/27/21 12:36

Matrix: Water

Date Received: 08/27/21 18:00

Method: 6010C - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.015		0.010		mg/L		09/07/21 08:35	09/08/21 19:05	1

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		09/07/21 08:35	09/08/21 19:23	1
Arsenic	0.0014		0.0010		mg/L		09/07/21 08:35	09/08/21 19:23	1
Barium	0.069		0.0025		mg/L		09/07/21 08:35	09/08/21 19:23	1
Beryllium	<0.0010		0.0010		mg/L		09/07/21 08:35	09/08/21 19:23	1
Boron	0.36		0.050		mg/L		09/07/21 08:35	09/08/21 19:23	1
Cadmium	<0.00050		0.00050		mg/L		09/07/21 08:35	09/08/21 19:23	1
Calcium	100		0.20		mg/L		09/07/21 08:35	09/08/21 19:23	1
Chromium	<0.0050		0.0050		mg/L		09/07/21 08:35	09/08/21 19:23	1
Cobalt	<0.0010		0.0010		mg/L		09/07/21 08:35	09/08/21 19:23	1
Lead	<0.00050		0.00050		mg/L		09/07/21 08:35	09/08/21 19:23	1
Molybdenum	<0.0050		0.0050		mg/L		09/07/21 08:35	09/08/21 19:23	1
Selenium	0.0027		0.0025		mg/L		09/07/21 08:35	09/08/21 19:23	1
Thallium	<0.0020		0.0020		mg/L		09/07/21 08:35	09/08/21 19:23	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		09/02/21 10:10	09/03/21 08:41	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	960		10		mg/L			08/31/21 05:22	1
Chloride	300		40		mg/L			09/20/21 14:59	20
Fluoride	0.30		0.10		mg/L			09/20/21 10:33	1
Sulfate	140		25		mg/L			09/20/21 15:21	5

Eurofins TestAmerica, Chicago

MWG13-15_114036

9/21/2021

Client Sample Results

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

Job ID: 500-204479-1

Client Sample ID: MW-03

Lab Sample ID: 500-204479-2

Date Collected: 08/30/21 10:53

Matrix: Water

Date Received: 08/31/21 10:57

Method: 6010C - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.012		0.010		mg/L		09/07/21 08:35	09/08/21 19:09	1

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		09/07/21 08:35	09/08/21 19:27	1
Arsenic	0.0018		0.0010		mg/L		09/07/21 08:35	09/08/21 19:27	1
Barium	0.12		0.0025		mg/L		09/07/21 08:35	09/08/21 19:27	1
Beryllium	<0.0010		0.0010		mg/L		09/07/21 08:35	09/08/21 19:27	1
Boron	0.23		0.050		mg/L		09/07/21 08:35	09/08/21 19:27	1
Cadmium	<0.00050		0.00050		mg/L		09/07/21 08:35	09/08/21 19:27	1
Calcium	120		0.20		mg/L		09/07/21 08:35	09/08/21 19:27	1
Chromium	<0.0050		0.0050		mg/L		09/07/21 08:35	09/08/21 19:27	1
Cobalt	0.0014		0.0010		mg/L		09/07/21 08:35	09/08/21 19:27	1
Lead	<0.00050		0.00050		mg/L		09/07/21 08:35	09/08/21 19:27	1
Molybdenum	<0.0050		0.0050		mg/L		09/07/21 08:35	09/08/21 19:27	1
Selenium	<0.0025		0.0025		mg/L		09/07/21 08:35	09/08/21 19:27	1
Thallium	<0.0020		0.0020		mg/L		09/07/21 08:35	09/08/21 19:27	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		09/02/21 10:10	09/03/21 08:44	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	800		10		mg/L			09/02/21 03:16	1
Chloride	290		40		mg/L			09/20/21 14:59	20
Fluoride	0.36		0.10		mg/L			09/20/21 10:36	1
Sulfate	140		25		mg/L			09/20/21 15:21	5

Eurofins TestAmerica, Chicago

MWG13-15_114037

9/21/2021

Client Sample Results

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

Job ID: 500-204479-1

Client Sample ID: MW-04

Lab Sample ID: 500-204479-3

Date Collected: 08/30/21 12:15

Matrix: Water

Date Received: 08/31/21 10:57

Method: 6010C - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.013		0.010		mg/L		09/07/21 08:35	09/08/21 19:13	1

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		09/07/21 08:35	09/08/21 19:30	1
Arsenic	0.0016		0.0010		mg/L		09/07/21 08:35	09/08/21 19:30	1
Barium	0.12		0.0025		mg/L		09/07/21 08:35	09/08/21 19:30	1
Beryllium	<0.0010		0.0010		mg/L		09/07/21 08:35	09/08/21 19:30	1
Boron	0.33		0.050		mg/L		09/07/21 08:35	09/08/21 19:30	1
Cadmium	<0.00050		0.00050		mg/L		09/07/21 08:35	09/08/21 19:30	1
Calcium	120		0.20		mg/L		09/07/21 08:35	09/08/21 19:30	1
Chromium	<0.0050		0.0050		mg/L		09/07/21 08:35	09/08/21 19:30	1
Cobalt	0.0034		0.0010		mg/L		09/07/21 08:35	09/08/21 19:30	1
Lead	<0.00050		0.00050		mg/L		09/07/21 08:35	09/08/21 19:30	1
Molybdenum	0.0057		0.0050		mg/L		09/07/21 08:35	09/08/21 19:30	1
Selenium	0.0030		0.0025		mg/L		09/07/21 08:35	09/08/21 19:30	1
Thallium	<0.0020		0.0020		mg/L		09/07/21 08:35	09/08/21 19:30	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		09/02/21 10:10	09/03/21 08:46	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1000		10		mg/L			09/02/21 03:19	1
Chloride	330		40		mg/L			09/20/21 15:00	20
Fluoride	0.40		0.10		mg/L			09/20/21 10:39	1
Sulfate	170		25		mg/L			09/20/21 15:22	5

Eurofins TestAmerica, Chicago

MWG13-15_114038

9/21/2021

Client Sample Results

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

Job ID: 500-204479-1

Client Sample ID: MW-10

Lab Sample ID: 500-204479-4

Date Collected: 08/30/21 14:30

Matrix: Water

Date Received: 08/31/21 10:57

Method: 6010C - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.012		0.010		mg/L		09/07/21 08:35	09/08/21 19:17	1

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		09/07/21 08:35	09/08/21 19:34	1
Arsenic	0.0012		0.0010		mg/L		09/07/21 08:35	09/08/21 19:34	1
Barium	0.051		0.0025		mg/L		09/07/21 08:35	09/08/21 19:34	1
Beryllium	<0.0010		0.0010		mg/L		09/07/21 08:35	09/08/21 19:34	1
Boron	0.28		0.050		mg/L		09/07/21 08:35	09/08/21 19:34	1
Cadmium	<0.00050		0.00050		mg/L		09/07/21 08:35	09/08/21 19:34	1
Calcium	120		0.20		mg/L		09/07/21 08:35	09/08/21 19:34	1
Chromium	<0.0050		0.0050		mg/L		09/07/21 08:35	09/08/21 19:34	1
Cobalt	<0.0010		0.0010		mg/L		09/07/21 08:35	09/08/21 19:34	1
Lead	<0.00050		0.00050		mg/L		09/07/21 08:35	09/08/21 19:34	1
Molybdenum	0.0065		0.0050		mg/L		09/07/21 08:35	09/08/21 19:34	1
Selenium	<0.0025		0.0025		mg/L		09/07/21 08:35	09/08/21 19:34	1
Thallium	<0.0020		0.0020		mg/L		09/07/21 08:35	09/08/21 19:34	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		09/02/21 10:10	09/03/21 08:48	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	990		10		mg/L			09/02/21 03:22	1
Chloride	330		40		mg/L			09/20/21 15:00	20
Fluoride	0.37		0.10		mg/L			09/20/21 10:42	1
Sulfate	170		25		mg/L			09/20/21 15:22	5

Eurofins TestAmerica, Chicago

MWG13-15_114039

9/21/2021

Client Sample Results

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

Job ID: 500-204479-1

Client Sample ID: Duplicate

Lab Sample ID: 500-204479-5

Date Collected: 08/30/21 00:00

Matrix: Water

Date Received: 08/31/21 10:57

Method: 6010C - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.012		0.010		mg/L		09/07/21 08:35	09/08/21 19:22	1

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		09/07/21 08:35	09/08/21 19:37	1
Arsenic	0.0013		0.0010		mg/L		09/07/21 08:35	09/08/21 19:37	1
Barium	0.051		0.0025		mg/L		09/07/21 08:35	09/08/21 19:37	1
Beryllium	<0.0010		0.0010		mg/L		09/07/21 08:35	09/08/21 19:37	1
Boron	0.26		0.050		mg/L		09/07/21 08:35	09/08/21 19:37	1
Cadmium	<0.00050		0.00050		mg/L		09/07/21 08:35	09/08/21 19:37	1
Calcium	120		0.20		mg/L		09/07/21 08:35	09/08/21 19:37	1
Chromium	<0.0050		0.0050		mg/L		09/07/21 08:35	09/08/21 19:37	1
Cobalt	<0.0010		0.0010		mg/L		09/07/21 08:35	09/08/21 19:37	1
Lead	<0.00050		0.00050		mg/L		09/07/21 08:35	09/08/21 19:37	1
Molybdenum	0.0061		0.0050		mg/L		09/07/21 08:35	09/08/21 19:37	1
Selenium	<0.0025		0.0025		mg/L		09/07/21 08:35	09/08/21 19:37	1
Thallium	<0.0020		0.0020		mg/L		09/07/21 08:35	09/08/21 19:37	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		09/02/21 10:10	09/03/21 08:50	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	870		10		mg/L			09/02/21 03:24	1
Chloride	330		40		mg/L			09/20/21 15:00	20
Fluoride	0.37		0.10		mg/L			09/20/21 10:45	1
Sulfate	160		25		mg/L			09/20/21 15:22	5

Eurofins TestAmerica, Chicago

MWG13-15_114040

9/21/2021

Definitions/Glossary

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

Job ID: 500-204479-1

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.
α	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
Project/Site: Joliet #29 CCR

Job ID: 500-204479-1

Metals

Prep Batch: 617084

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-204479-1	MW-05	Total/NA	Water	7470A	
500-204479-2	MW-03	Total/NA	Water	7470A	
500-204479-3	MW-04	Total/NA	Water	7470A	
500-204479-4	MW-10	Total/NA	Water	7470A	
500-204479-5	Duplicate	Total/NA	Water	7470A	
MB 500-617084/12-A	Method Blank	Total/NA	Water	7470A	
LCS 500-617084/13-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 617281

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-204479-1	MW-05	Total/NA	Water	7470A	617084
500-204479-2	MW-03	Total/NA	Water	7470A	617084
500-204479-3	MW-04	Total/NA	Water	7470A	617084
500-204479-4	MW-10	Total/NA	Water	7470A	617084
500-204479-5	Duplicate	Total/NA	Water	7470A	617084
MB 500-617084/12-A	Method Blank	Total/NA	Water	7470A	617084
LCS 500-617084/13-A	Lab Control Sample	Total/NA	Water	7470A	617084

Prep Batch: 617441

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-204479-1	MW-05	Total Recoverable	Water	3005A	
500-204479-2	MW-03	Total Recoverable	Water	3005A	
500-204479-3	MW-04	Total Recoverable	Water	3005A	
500-204479-4	MW-10	Total Recoverable	Water	3005A	
500-204479-5	Duplicate	Total Recoverable	Water	3005A	
MB 500-617441/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-617441/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 617834

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-204479-1	MW-05	Total Recoverable	Water	6010C	617441
500-204479-2	MW-03	Total Recoverable	Water	6010C	617441
500-204479-3	MW-04	Total Recoverable	Water	6010C	617441
500-204479-4	MW-10	Total Recoverable	Water	6010C	617441
500-204479-5	Duplicate	Total Recoverable	Water	6010C	617441
MB 500-617441/1-A	Method Blank	Total Recoverable	Water	6010C	617441
LCS 500-617441/2-A	Lab Control Sample	Total Recoverable	Water	6010C	617441

Analysis Batch: 617878

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-204479-1	MW-05	Total Recoverable	Water	6020A	617441
500-204479-2	MW-03	Total Recoverable	Water	6020A	617441
500-204479-3	MW-04	Total Recoverable	Water	6020A	617441
500-204479-4	MW-10	Total Recoverable	Water	6020A	617441
500-204479-5	Duplicate	Total Recoverable	Water	6020A	617441
MB 500-617441/1-A	Method Blank	Total Recoverable	Water	6020A	617441
LCS 500-617441/2-A	Lab Control Sample	Total Recoverable	Water	6020A	617441

QC Association Summary

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

Job ID: 500-204479-1

General Chemistry

Analysis Batch: 616592

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-204479-1	MW-05	Total/NA	Water	SM 2540C	
MB 500-616592/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-616592/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 617000

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-204479-2	MW-03	Total/NA	Water	SM 2540C	
500-204479-3	MW-04	Total/NA	Water	SM 2540C	
500-204479-4	MW-10	Total/NA	Water	SM 2540C	
500-204479-5	Duplicate	Total/NA	Water	SM 2540C	
MB 500-617000/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-617000/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 619345

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-204479-1	MW-05	Total/NA	Water	SM 4500 F C	
500-204479-2	MW-03	Total/NA	Water	SM 4500 F C	
500-204479-3	MW-04	Total/NA	Water	SM 4500 F C	
500-204479-4	MW-10	Total/NA	Water	SM 4500 F C	
500-204479-5	Duplicate	Total/NA	Water	SM 4500 F C	
MB 500-619345/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 500-619345/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	

Analysis Batch: 619403

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-204479-1	MW-05	Total/NA	Water	SM 4500 SO4 E	
500-204479-2	MW-03	Total/NA	Water	SM 4500 SO4 E	
500-204479-3	MW-04	Total/NA	Water	SM 4500 SO4 E	
500-204479-4	MW-10	Total/NA	Water	SM 4500 SO4 E	
500-204479-5	Duplicate	Total/NA	Water	SM 4500 SO4 E	
MB 500-619403/15	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 500-619403/16	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 619404

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-204479-1	MW-05	Total/NA	Water	SM 4500 Cl- E	
500-204479-2	MW-03	Total/NA	Water	SM 4500 Cl- E	
500-204479-3	MW-04	Total/NA	Water	SM 4500 Cl- E	
500-204479-4	MW-10	Total/NA	Water	SM 4500 Cl- E	
500-204479-5	Duplicate	Total/NA	Water	SM 4500 Cl- E	
MB 500-619404/16	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 500-619404/17	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	

QC Sample Results

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

Job ID: 500-204479-1

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 500-617441/1-A
Matrix: Water
Analysis Batch: 617834

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 617441

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.010		0.010		mg/L		09/07/21 08:35	09/08/21 17:56	1

Lab Sample ID: LCS 500-617441/2-A
Matrix: Water
Analysis Batch: 617834

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 617441

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lithium	0.750	0.754		mg/L		101	80 - 120

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 500-617441/1-A
Matrix: Water
Analysis Batch: 617878

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 617441

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		09/07/21 08:35	09/08/21 17:55	1
Arsenic	<0.0010		0.0010		mg/L		09/07/21 08:35	09/08/21 17:55	1
Barium	<0.0025		0.0025		mg/L		09/07/21 08:35	09/08/21 17:55	1
Beryllium	<0.0010		0.0010		mg/L		09/07/21 08:35	09/08/21 17:55	1
Boron	<0.050		0.050		mg/L		09/07/21 08:35	09/08/21 17:55	1
Cadmium	<0.00050		0.00050		mg/L		09/07/21 08:35	09/08/21 17:55	1
Calcium	<0.20		0.20		mg/L		09/07/21 08:35	09/08/21 17:55	1
Chromium	<0.0050		0.0050		mg/L		09/07/21 08:35	09/08/21 17:55	1
Cobalt	<0.0010		0.0010		mg/L		09/07/21 08:35	09/08/21 17:55	1
Lead	<0.00050		0.00050		mg/L		09/07/21 08:35	09/08/21 17:55	1
Molybdenum	<0.0050		0.0050		mg/L		09/07/21 08:35	09/08/21 17:55	1
Selenium	<0.0025		0.0025		mg/L		09/07/21 08:35	09/08/21 17:55	1
Thallium	<0.0020		0.0020		mg/L		09/07/21 08:35	09/08/21 17:55	1

Lab Sample ID: LCS 500-617441/2-A
Matrix: Water
Analysis Batch: 617878

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 617441

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.750	0.780		mg/L		104	80 - 120
Arsenic	0.150	0.144		mg/L		96	80 - 120
Barium	3.00	2.97		mg/L		99	80 - 120
Beryllium	0.0750	0.0744		mg/L		99	80 - 120
Boron	1.50	1.40		mg/L		93	80 - 120
Cadmium	0.0750	0.0734		mg/L		98	80 - 120
Calcium	15.0	15.0		mg/L		100	80 - 120
Chromium	0.300	0.294		mg/L		98	80 - 120
Cobalt	0.750	0.745		mg/L		99	80 - 120
Lead	0.150	0.161		mg/L		108	80 - 120
Molybdenum	1.50	1.45		mg/L		97	80 - 120
Selenium	0.150	0.146		mg/L		97	80 - 120
Thallium	0.150	0.158		mg/L		105	80 - 120

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QC Sample Results

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

Job ID: 500-204479-1

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 500-617084/12-A
Matrix: Water
Analysis Batch: 617281

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 617084

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		09/02/21 10:10	09/03/21 08:37	1

Lab Sample ID: LCS 500-617084/13-A
Matrix: Water
Analysis Batch: 617281

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 617084

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00200	0.00211		mg/L		106	80 - 120

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

Lab Sample ID: MB 500-616592/1
Matrix: Water
Analysis Batch: 616592

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			08/31/21 04:33	1

Lab Sample ID: LCS 500-616592/2
Matrix: Water
Analysis Batch: 616592

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	278		mg/L		111	80 - 120

Lab Sample ID: MB 500-617000/1
Matrix: Water
Analysis Batch: 617000

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			09/02/21 02:51	1

Lab Sample ID: LCS 500-617000/2
Matrix: Water
Analysis Batch: 617000

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	246		mg/L		98	80 - 120

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 500-619404/16
Matrix: Water
Analysis Batch: 619404

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			09/20/21 14:36	1

Eurofins TestAmerica, Chicago

QC Sample Results

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

Job ID: 500-204479-1

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

Lab Sample ID: LCS 500-619404/17
Matrix: Water
Analysis Batch: 619404

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 500-619345/3
Matrix: Water
Analysis Batch: 619345

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			09/20/21 09:40	1

Lab Sample ID: LCS 500-619345/4
Matrix: Water
Analysis Batch: 619345

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 500-619403/15
Matrix: Water
Analysis Batch: 619403

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			09/20/21 13:41	1

Lab Sample ID: LCS 500-619403/16
Matrix: Water
Analysis Batch: 619403

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	20.5		mg/L		102	88 - 123

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2417 Bond Street
University Park IL 60484
Phone (708) 534-5200 Phone (708) 534-5211

CO, TC
DIA 3

sking No(s)

2
3
4
5

Login Sample Receipt Checklist

Client: Midwest Generation EME LLC

Job Number: 500-204479-1

Login Number: 204479

List Source: Eurofins TestAmerica, Chicago

List Number: 1

Creator: Hernandez, Stephanie

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ 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	2.6,1.3,3.2,2.5
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 $<6\text{mm}$ (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: 500-204479-1

Client Sample ID: MW-05

Date Collected: 08/27/21 12:36

Date Received: 08/27/21 18:00

Lab Sample ID: 500-204479-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			617441	09/07/21 08:35	BDE	TAL CHI
Total Recoverable	Analysis	6010C		1	617834	09/08/21 19:05	JJB	TAL CHI
Total Recoverable	Prep	3005A			617441	09/07/21 08:35	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	617878	09/08/21 19:23	FXG	TAL CHI
Total/NA	Prep	7470A			617084	09/02/21 10:10	MJG	TAL CHI
Total/NA	Analysis	7470A		1	617281	09/03/21 08:41	MJG	TAL CHI
Total/NA	Analysis	SM 2540C		1	616592	08/31/21 05:22	CLB	TAL CHI
Total/NA	Analysis	SM 4500 CI- E		20	619404	09/20/21 14:59	MS	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	619345	09/20/21 10:33	MS	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		5	619403	09/20/21 15:21	MS	TAL CHI

Client Sample ID: MW-03

Date Collected: 08/30/21 10:53

Date Received: 08/31/21 10:57

Lab Sample ID: 500-204479-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			617441	09/07/21 08:35	BDE	TAL CHI
Total Recoverable	Analysis	6010C		1	617834	09/08/21 19:09	JJB	TAL CHI
Total Recoverable	Prep	3005A			617441	09/07/21 08:35	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	617878	09/08/21 19:27	FXG	TAL CHI
Total/NA	Prep	7470A			617084	09/02/21 10:10	MJG	TAL CHI
Total/NA	Analysis	7470A		1	617281	09/03/21 08:44	MJG	TAL CHI
Total/NA	Analysis	SM 2540C		1	617000	09/02/21 03:16	CLB	TAL CHI
Total/NA	Analysis	SM 4500 CI- E		20	619404	09/20/21 14:59	MS	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	619345	09/20/21 10:36	MS	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		5	619403	09/20/21 15:21	MS	TAL CHI

Client Sample ID: MW-04

Date Collected: 08/30/21 12:15

Date Received: 08/31/21 10:57

Lab Sample ID: 500-204479-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			617441	09/07/21 08:35	BDE	TAL CHI
Total Recoverable	Analysis	6010C		1	617834	09/08/21 19:13	JJB	TAL CHI
Total Recoverable	Prep	3005A			617441	09/07/21 08:35	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	617878	09/08/21 19:30	FXG	TAL CHI
Total/NA	Prep	7470A			617084	09/02/21 10:10	MJG	TAL CHI
Total/NA	Analysis	7470A		1	617281	09/03/21 08:46	MJG	TAL CHI
Total/NA	Analysis	SM 2540C		1	617000	09/02/21 03:19	CLB	TAL CHI
Total/NA	Analysis	SM 4500 CI- E		20	619404	09/20/21 15:00	MS	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	619345	09/20/21 10:39	MS	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		5	619403	09/20/21 15:22	MS	TAL CHI

Eurofins TestAmerica, Chicago

Lab Chronicle

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

Job ID: 500-204479-1

Client Sample ID: MW-10

Date Collected: 08/30/21 14:30

Date Received: 08/31/21 10:57

Lab Sample ID: 500-204479-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			617441	09/07/21 08:35	BDE	TAL CHI
Total Recoverable	Analysis	6010C		1	617834	09/08/21 19:17	JJB	TAL CHI
Total Recoverable	Prep	3005A			617441	09/07/21 08:35	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	617878	09/08/21 19:34	FXG	TAL CHI
Total/NA	Prep	7470A			617084	09/02/21 10:10	MJG	TAL CHI
Total/NA	Analysis	7470A		1	617281	09/03/21 08:48	MJG	TAL CHI
Total/NA	Analysis	SM 2540C		1	617000	09/02/21 03:22	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		20	619404	09/20/21 15:00	MS	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	619345	09/20/21 10:42	MS	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		5	619403	09/20/21 15:22	MS	TAL CHI

Client Sample ID: Duplicate

Date Collected: 08/30/21 00:00

Date Received: 08/31/21 10:57

Lab Sample ID: 500-204479-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			617441	09/07/21 08:35	BDE	TAL CHI
Total Recoverable	Analysis	6010C		1	617834	09/08/21 19:22	JJB	TAL CHI
Total Recoverable	Prep	3005A			617441	09/07/21 08:35	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	617878	09/08/21 19:37	FXG	TAL CHI
Total/NA	Prep	7470A			617084	09/02/21 10:10	MJG	TAL CHI
Total/NA	Analysis	7470A		1	617281	09/03/21 08:50	MJG	TAL CHI
Total/NA	Analysis	SM 2540C		1	617000	09/02/21 03:24	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		20	619404	09/20/21 15:00	MS	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	619345	09/20/21 10:45	MS	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		5	619403	09/20/21 15:22	MS	TAL CHI

Laboratory References:

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

ATTACHMENT 2
Time vs. Concentration Curves

