

## **DATA SUMMARY POSTING**

Station: Midwest Generation Joliet #29 Generating Station

Regulated Unit(s): Pond 2 (IEPA ID No. W1970450047-02)

In accordance with the new Ill. Adm. Code Title 35, Part 845: Standards for the Disposal of Coal Combustion Residuals in Surface Impoundments (State CCR Rule) groundwater monitoring was completed during the 2<sup>nd</sup> quarter 2023 which includes the entire list of parameters specified under Section 845.600(a)(1) and (b). Table 1 is a summary table of all available CCR monitoring data to date including any data generated previously as part of the Federal CCR Rule monitoring. In addition, Table 2 provides a summary of turbidity data which was collected as part of State CCR Rule requirements which is a data parameter that was not required under the Federal CCR Rule.

No background statistics or proposed Groundwater Protection Standards are included on these tables. The background statistics and Proposed Groundwater Protection Standards were submitted to Illinois Environmental Protection Agency (EPA) as part of the Application for Initial Operating Permit submitted October 31, 2021. Upon Illinois EPA approval of the Operating Permit and Proposed Groundwater Protection Standards, the approved comparison values will be included on the tables for subsequent data comparisons/evaluations.

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

Well	Date	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	Total Dissolved Solids	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Lithium	Mercury	Molybdenum	Radium 226 + 228	Selenium	Thallium	
MW-10 up-gradient	10/28/2015	0.47	100	200	0.41	7.04	84	790	< 0.003	< 0.001	0.041	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.013	< 0.0002	0.0060	0.2981	< 0.0025	< 0.002	
	2/10/2016	0.41	100	200	0.44	7.17	120	830	< 0.003	0.003	0.043	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.011	< 0.0002	0.0067	< 0.438	< 0.0025	< 0.002	
	5/12/2016	0.29	100	300	0.42	7.02	110	920	< 0.003	< 0.001	0.046	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.012	< 0.0002	0.0051	< 0.414	< 0.0025	< 0.002	
	8/31/2016	0.36	89	170	0.46	6.95	100	760	< 0.003	< 0.001	0.039	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.010	< 0.0002	0.0077	< 0.394	< 0.0025	< 0.002	
	11/2/2016	0.48	100	130	0.45	7.01	95	730	< 0.003	0.008	0.035	< 0.001	< 0.0005	< 0.005	< 0.001	0.0014	0.011	< 0.0002	0.0071	< 0.426	< 0.0025	< 0.002	
	2/6/2017	0.44	120	190	0.36	6.99	88	820	< 0.003	0.0011	0.048	< 0.001	< 0.0005	< 0.005	< 0.001	0.00086	0.014	< 0.0002	0.0056	< 0.389	< 0.0025	< 0.002	
	4/26/2017	0.35	120	200	0.35	7.27	87	760	< 0.003	0.0015	0.046	< 0.001	< 0.0005	< 0.005	< 0.001	0.0012	< 0.01	< 0.0002	0.006	< 0.34	< 0.0025	< 0.002	
	6/14/2017	0.29	91	160	0.43	7.48	75	690	< 0.003	< 0.001	0.034	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.012	< 0.0002	0.0072	< 0.356	< 0.0025	< 0.002	
	8/2/2017	0.45	97	170	0.38	7.23	110	750	< 0.003	0.0011	0.036	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.011	< 0.0002	0.0079	< 0.429	< 0.0025	< 0.002	
	10/18/2017	0.61	120	140	0.41	7.11	130	820	< 0.003	0.0012	0.04	< 0.001	< 0.0005	< 0.005	< 0.001	0.00059	0.013	< 0.0002	0.0066	< 0.422	< 0.0025	< 0.002	
	4/24/2018	0.4	110	280	0.39	7.28	120	910	< 0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/17/2018	0.63	120	0.42	7.30	110	810	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/24/2018 R	0.44	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/7/2019	0.56	130	410	0.39	7.17	95	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/3/2019 R	NA	NA	230	NA	NA	NA	830	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/7/2019	0.55	90	280	0.36	7.40	99	650	< 0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/20/2020	0.85	120	250	0.41	6.90	100	960	< 0.003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/11/2020 R	0.26	NA	NA	NA	NA	NA	770	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/22/2020	0.34	110	230	0.41	7.11	93	850	< 0.003	0.001	0.043	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.011	< 0.0002	0.0057	NA	< 0.0025	< 0.002	
	5/18/2021	0.33	140	350	0.39	7.16	210	1200	< 0.003	0.0014	0.06	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.015	< 0.0002	0.0055	< 0.4800	< 0.0025	< 0.002	
	6/29/2021 R	NA	160	420	NA	7.32	190	1300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/30/2021	0.28	120	320	0.37	7.56	170	800	< 0.003	0.0012	0.051	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.012	< 0.0002	0.0062	0.51	< 0.0025	< 0.002	
	11/16/2021	0.39	120	260	0.38	7.01	150	1000	< 0.003	0.0012	0.049	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.011	< 0.0002	0.0066	0.692	< 0.0025	< 0.002	
	3/3/2022	0.47	120	280	0.41	7.05	190	1000	< 0.003	0.0014	0.055	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.013	< 0.0002	0.0066	< 0.4	< 0.0025	< 0.002	
	5/26/2022	0.39	120	280	0.41	6.90	160	1000	< 0.003	0.0013	0.046	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	0.0064	< 0.593	< 0.0025	< 0.002	
	8/31/2022	0.33	110	240	0.41	6.58	160	970	< 0.003	0.0012	0.042	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	0.0057	0.534	< 0.0025	< 0.002	
11/9/2022	0.32	110	240	0.57	7.00	150	880	< 0.003	0.0014	0.043	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.01	< 0.0002	0.0055	0.728	< 0.0025	< 0.002		
12/20/2022 R	NS	NS	NS	0.68	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
2/28/2023	0.36	130	300	0.38	7.06	170	1200	< 0.003	0.0012	0.053	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.013	< 0.0002	0.0058	< 0.787	< 0.0025	< 0.002		
5/3/2023	0.37	130	310	0.39	6.99	190	1100	< 0.0030	< 0.0010	0.053	< 0.0010	< 0.00050	< 0.0050	< 0.0010	< 0.00050	0.014	< 0.00020	0.0068	< 0.487	< 0.0025	< 0.0020		
10/28/2015	0.34	110	230	0.41	7.11	110	960	< 0.003	0.0015	0.100	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.013	< 0.0002	< 0.0050	0.41	< 0.0025	< 0.002		
2/10/2016	0.49	100	220	0.44	7.31	130	790	< 0.003	0.0017	0.100	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.011	< 0.0002	0.0060	< 1.68	0.045	< 0.002		
5/10/2016	0.48	95	240	0.45	7.27	130	800	< 0.003	0.0011	0.095	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.012	< 0.0002	0.0062	< 0.326	< 0.0025	< 0.002		
8/31/2016	0.49	100	250	0.45	7.18	120	920	< 0.003	0.0013	0.095	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.012	< 0.0002	0.0066	< 0.373	0.051	< 0.002		
11/2/2016	0.34	87	190	0.44	7.45	94	780	< 0.003	0.0019	0.082	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.010	< 0.0002	0.0059	0.965	0.032	< 0.002		
2/6/2017	0.40	97	140	0.39	7.35	77	720	< 0.003	0.0019	0.093	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.012	< 0.0002	0.0066	< 0.356	0.028	< 0.002		
4/26/2017	0.54	100	210	0.36	7.03	120	820	< 0.003	0.0017	0.11	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.010	< 0.0002	0.0088	< 0.411	0.052	< 0.002		
6/14/2017	0.45	88	190	0.44	7.43	75	760	< 0.003	0.0014	0.09	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.012	< 0.0002	0.0072	< 0.358	0.037	< 0.002		
8/2/2017	0.41	99	200	0.40	7.40	110	850	< 0.003	0.0012	0.10	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.011	< 0.0002	0.0061	0.414	0.05	< 0.002		
10/18/2017	0.55	93	160	0.42	7.11	100	850	< 0.003	0.0015	0.088	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.012	< 0.0002	0.0055	< 0.417	0.026	< 0.002		
4/24/2018	0.52	100	220	0.42	7.2	150	930	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
7/31/2018 R	NA	NA	NA	NA	NA	110	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
10/17/2018	0.25	100	250	0.4	7.04	110	870	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
5/7/2019	0.43	130	280	0.4	7.27	140	880	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
7/3/2019 R	NA	NA	NA	NA	NA	65	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
11/7/2019	0.34	100	150	0.4	7.32	65	660	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
5/20/2020	0.38	100	230	0.42	7.56	78	960	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
6/11/2020 R	NA	NA	NA	NA	NA	930	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
10/22/2020	0.32	110	180	0.43	7.23	90	770	< 0.003	0.0014	0.1	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.01	< 0.0002	< 0.005	NA	< 0.0025	< 0.002		
5/18/2021	0.28	130	280	0.4	7.23	190	1300	< 0.003	0.0016	0.14	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.014	< 0.0002	< 0.0050	1.080	< 0.0025	< 0.002		
6/29/2021 R	NA	NA	NA	NA	7.34	210	1300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
8/30/2021	0.23	120	290	0.36	7.33	140	800	< 0.003	0.0018	0.12	< 0.001	< 0.0005	< 0.005	0.0014	< 0.0005	0.012	< 0.0002	< 0.005	0.641	< 0.0025	< 0.002		
11/16/2021	0.3	130	280	0.37	7.11	150	1000	< 0.003	0.0018	0.14	< 0.001	< 0.0005	< 0.005	0.0018	< 0.0005	0.011	< 0.0002	< 0.005	1.15	< 0.0025	< 0.002		
3/3/2022	0.3	130	270	0.4	7.05	180	1300	< 0.003	0.0019	0.14	< 0.001	< 0.0005	< 0.005	0.0014	< 0.0005	0.012	< 0.0002	< 0.005	< 0.672	< 0.0025	< 0.002		
5/26/2022	0.39	120	280	0.41	6.98	160	1100	< 0.003	0.002	0.13	< 0.001	< 0.0005	< 0.005	0.0011									

Table 2.Turbidity Measurement Data, Midwest Generation, LLC, Joliet #29 Generating Station

Well ID	Date	Turbidity (NTU)
MW-03	3/2/2021	0.45
	4/10/2021	22.9
	4/25/2021	2.40
	5/18/2021	2.53
	6/11/2021	2.34
	6/29/2021	2.86
	7/19/2021	37.40
	8/9/2021	2.71
	8/30/2021	5.70
	9/27/2021	10.27
	11/16/2021	0.80
	3/3/2022	0.00
	5/26/2022	4.26
	8/31/2022	4.10
	11/9/2022	32.60
2/28/2023	6.98	
5/3/2023	3.00	
MW-04	3/2/2021	81.89
	4/10/2021	5.96
	4/25/2021	3.02
	5/18/2021	2.52
	6/11/2021	2.80
	6/29/2021	3.34
	7/19/2021	47.4
	8/9/2021	4.13
	8/30/2021	18.3
	9/27/2021	1.76
	11/16/2021	4.20
	3/3/2022	0.00
	5/26/2022	1.23
	8/31/2022	3.78
	11/9/2022	43.50
2/28/2023	62.10	
5/3/2023	6.30	
MW-05	2/25/2021	1.57
	4/10/2021	8.36
	4/25/2021	2.42
	5/17/2021	5.20
	6/11/2021	14.22
	6/29/2021	5.33
	7/19/2021	26.9
	8/9/2021	3.69
	8/27/2021	8.70
	9/27/2021	14.92
	11/16/2021	8.84
	3/3/2022	3.25
	5/26/2022	1.28
	8/31/2022	8.87
	11/9/2022	63.4
2/28/2023	58.32	
5/3/2023	2.50	
MW-10	3/2/2021	26.07
	4/10/2021	7.31
	4/25/2021	5.21
	5/18/2021	3.73
	6/11/2021	6.65
	6/29/2021	9.49
	7/19/2021	14.5
	8/9/2021	10.08
	8/30/2021	9.3
	9/27/2021	16.3
	11/16/2021	5.59
	3/3/2022	2.86
	5/26/2022	2.08
	8/31/2022	2.93
	11/9/2022	19.6
2/28/2023	17.13	
5/3/2023	2.6	



# ANALYTICAL REPORT

## PREPARED FOR

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

Generated 5/24/2023 9:26:00 AM

## JOB DESCRIPTION

Joliet #29 CCR  
Quarterly MWG Joliet #29 CCR

## JOB NUMBER

500-233300-1

# Eurofins Chicago

## Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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

## Authorization



Generated  
5/24/2023 9:26:00 AM

Authorized for release by  
Diana Mockler, Project Manager I  
[Diana.Mockler@et.eurofinsus.com](mailto:Diana.Mockler@et.eurofinsus.com)  
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# Case Narrative

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

Job ID: 500-233300-1

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**Job ID: 500-233300-1**

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**Laboratory: Eurofins Chicago**

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**Narrative**

**Job Narrative  
500-233300-1**

**Receipt**

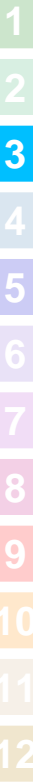
The samples were received on 5/4/2023 9:28 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 2.7° C and 3.1° C.

**Metals**

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

**General Chemistry**

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



# Method Summary

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

Job ID: 500-233300-1

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

#### Protocol References:

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

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

#### Laboratory References:

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



# Sample Summary

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

Job ID: 500-233300-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-233300-1	MW-03	Water	05/03/23 09:32	05/04/23 09:28
500-233300-2	MW-04	Water	05/03/23 10:39	05/04/23 09:28
500-233300-3	MW-05	Water	05/03/23 11:57	05/04/23 09:28
500-233300-4	MW-10	Water	05/03/23 13:39	05/04/23 09:28
500-233300-5	Duplicate	Water	05/03/23 00:00	05/04/23 09:28

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# Client Sample Results

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

Job ID: 500-233300-1

**Client Sample ID: MW-03**

**Lab Sample ID: 500-233300-1**

Date Collected: 05/03/23 09:32

Matrix: Water

Date Received: 05/04/23 09:28

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		05/11/23 17:32	05/12/23 18:09	1
<b>Arsenic</b>	<b>0.0014</b>		0.0010		mg/L		05/11/23 17:32	05/18/23 02:46	1
<b>Barium</b>	<b>0.12</b>		0.0025		mg/L		05/11/23 17:32	05/12/23 18:09	1
Beryllium	<0.0010		0.0010		mg/L		05/11/23 17:32	05/12/23 18:09	1
<b>Boron</b>	<b>0.36</b>		0.050		mg/L		05/11/23 17:32	05/17/23 14:48	1
Cadmium	<0.00050		0.00050		mg/L		05/11/23 17:32	05/12/23 18:09	1
<b>Calcium</b>	<b>130</b>		0.20		mg/L		05/11/23 17:32	05/12/23 18:09	1
Chromium	<0.0050		0.0050		mg/L		05/11/23 17:32	05/12/23 18:09	1
Cobalt	<0.0010		0.0010		mg/L		05/11/23 17:32	05/12/23 18:09	1
Lead	<0.00050		0.00050		mg/L		05/11/23 17:32	05/12/23 18:09	1
<b>Lithium</b>	<b>0.012</b>		0.010		mg/L		05/11/23 17:32	05/12/23 18:09	1
Molybdenum	<0.0050		0.0050		mg/L		05/11/23 17:32	05/12/23 18:09	1
<b>Selenium</b>	<b>0.0028</b>		0.0025		mg/L		05/11/23 17:32	05/12/23 18:09	1
Thallium	<0.0020		0.0020		mg/L		05/11/23 17:32	05/12/23 18:09	1

**Method: SW846 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		05/22/23 11:50	05/23/23 09:50	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids (SM 2540C)</b>	<b>980</b>		10		mg/L			05/07/23 21:59	1
<b>Chloride (SM 4500 Cl- E)</b>	<b>250</b>		20		mg/L			05/16/23 15:47	10
<b>Fluoride (SM 4500 F C)</b>	<b>0.37</b>		0.10		mg/L			05/14/23 08:17	1
<b>Sulfate (SM 4500 SO4 E)</b>	<b>200</b>		50		mg/L			05/16/23 11:18	10

# Client Sample Results

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

Job ID: 500-233300-1

**Client Sample ID: MW-04**

**Lab Sample ID: 500-233300-2**

Date Collected: 05/03/23 10:39

Matrix: Water

Date Received: 05/04/23 09:28

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		05/11/23 17:32	05/12/23 18:13	1
<b>Arsenic</b>	<b>0.0014</b>		0.0010		mg/L		05/11/23 17:32	05/18/23 02:49	1
<b>Barium</b>	<b>0.095</b>		0.0025		mg/L		05/11/23 17:32	05/12/23 18:13	1
Beryllium	<0.0010		0.0010		mg/L		05/11/23 17:32	05/12/23 18:13	1
<b>Boron</b>	<b>0.28</b>		0.050		mg/L		05/11/23 17:32	05/17/23 14:52	1
Cadmium	<0.00050		0.00050		mg/L		05/11/23 17:32	05/12/23 18:13	1
<b>Calcium</b>	<b>110</b>		0.20		mg/L		05/11/23 17:32	05/12/23 18:13	1
Chromium	<0.0050		0.0050		mg/L		05/11/23 17:32	05/12/23 18:13	1
<b>Cobalt</b>	<b>0.0074</b>		0.0010		mg/L		05/11/23 17:32	05/12/23 18:13	1
Lead	<0.00050		0.00050		mg/L		05/11/23 17:32	05/12/23 18:13	1
<b>Lithium</b>	<b>0.011</b>		0.010		mg/L		05/11/23 17:32	05/12/23 18:13	1
<b>Molybdenum</b>	<b>0.0051</b>		0.0050		mg/L		05/11/23 17:32	05/12/23 18:13	1
Selenium	<0.0025		0.0025		mg/L		05/11/23 17:32	05/12/23 18:13	1
Thallium	<0.0020		0.0020		mg/L		05/11/23 17:32	05/12/23 18:13	1

**Method: SW846 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		05/22/23 11:50	05/23/23 09:52	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids (SM 2540C)</b>	<b>1100</b>		10		mg/L			05/07/23 22:02	1
<b>Chloride (SM 4500 Cl- E)</b>	<b>290</b>		20		mg/L			05/16/23 15:47	10
<b>Fluoride (SM 4500 F C)</b>	<b>0.40</b>		0.10		mg/L			05/14/23 08:17	1
<b>Sulfate (SM 4500 SO4 E)</b>	<b>160</b>		50		mg/L			05/16/23 11:18	10

# Client Sample Results

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

Job ID: 500-233300-1

**Client Sample ID: MW-05**  
**Date Collected: 05/03/23 11:57**  
**Date Received: 05/04/23 09:28**

**Lab Sample ID: 500-233300-3**  
**Matrix: Water**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		05/11/23 17:32	05/12/23 18:17	1
Arsenic	<0.0010		0.0010		mg/L		05/11/23 17:32	05/18/23 02:52	1
<b>Barium</b>	<b>0.072</b>		0.0025		mg/L		05/11/23 17:32	05/12/23 18:17	1
Beryllium	<0.0010		0.0010		mg/L		05/11/23 17:32	05/12/23 18:17	1
<b>Boron</b>	<b>0.50</b>		0.050		mg/L		05/11/23 17:32	05/17/23 14:55	1
Cadmium	<0.00050		0.00050		mg/L		05/11/23 17:32	05/12/23 18:17	1
<b>Calcium</b>	<b>110</b>		0.20		mg/L		05/11/23 17:32	05/12/23 18:17	1
Chromium	<0.0050		0.0050		mg/L		05/11/23 17:32	05/12/23 18:17	1
Cobalt	<0.0010		0.0010		mg/L		05/11/23 17:32	05/12/23 18:17	1
Lead	<0.00050		0.00050		mg/L		05/11/23 17:32	05/12/23 18:17	1
<b>Lithium</b>	<b>0.016</b>		0.010		mg/L		05/11/23 17:32	05/12/23 18:17	1
Molybdenum	<0.0050		0.0050		mg/L		05/11/23 17:32	05/12/23 18:17	1
<b>Selenium</b>	<b>0.0027</b>		0.0025		mg/L		05/11/23 17:32	05/12/23 18:17	1
Thallium	<0.0020		0.0020		mg/L		05/11/23 17:32	05/12/23 18:17	1

**Method: SW846 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		05/22/23 11:50	05/23/23 09:59	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids (SM 2540C)</b>	<b>910</b>		10		mg/L			05/07/23 22:04	1
<b>Chloride (SM 4500 Cl- E)</b>	<b>270</b>		20		mg/L			05/16/23 15:48	10
<b>Fluoride (SM 4500 F C)</b>	<b>0.30</b>		0.10		mg/L			05/14/23 08:17	1
<b>Sulfate (SM 4500 SO4 E)</b>	<b>120</b>		50		mg/L			05/16/23 11:18	10

# Client Sample Results

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

Job ID: 500-233300-1

**Client Sample ID: MW-10**

**Lab Sample ID: 500-233300-4**

Date Collected: 05/03/23 13:39

Matrix: Water

Date Received: 05/04/23 09:28

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		05/11/23 17:32	05/12/23 18:21	1
Arsenic	<0.0010		0.0010		mg/L		05/11/23 17:32	05/18/23 02:56	1
<b>Barium</b>	<b>0.053</b>		0.0025		mg/L		05/11/23 17:32	05/12/23 18:21	1
Beryllium	<0.0010		0.0010		mg/L		05/11/23 17:32	05/12/23 18:21	1
<b>Boron</b>	<b>0.37</b>		0.050		mg/L		05/11/23 17:32	05/17/23 14:59	1
Cadmium	<0.00050		0.00050		mg/L		05/11/23 17:32	05/12/23 18:21	1
<b>Calcium</b>	<b>130</b>		0.20		mg/L		05/11/23 17:32	05/12/23 18:21	1
Chromium	<0.0050		0.0050		mg/L		05/11/23 17:32	05/12/23 18:21	1
Cobalt	<0.0010		0.0010		mg/L		05/11/23 17:32	05/12/23 18:21	1
Lead	<0.00050		0.00050		mg/L		05/11/23 17:32	05/12/23 18:21	1
<b>Lithium</b>	<b>0.014</b>		0.010		mg/L		05/11/23 17:32	05/12/23 18:21	1
<b>Molybdenum</b>	<b>0.0068</b>		0.0050		mg/L		05/11/23 17:32	05/12/23 18:21	1
Selenium	<0.0025		0.0025		mg/L		05/11/23 17:32	05/12/23 18:21	1
Thallium	<0.0020		0.0020		mg/L		05/11/23 17:32	05/12/23 18:21	1

**Method: SW846 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		05/22/23 11:50	05/23/23 10:01	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids (SM 2540C)</b>	<b>1100</b>		10		mg/L			05/07/23 22:07	1
<b>Chloride (SM 4500 Cl- E)</b>	<b>310</b>		20		mg/L			05/16/23 15:48	10
<b>Fluoride (SM 4500 F C)</b>	<b>0.39</b>		0.10		mg/L			05/14/23 08:17	1
<b>Sulfate (SM 4500 SO4 E)</b>	<b>190</b>		50		mg/L			05/16/23 11:19	10

# Client Sample Results

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

Job ID: 500-233300-1

**Client Sample ID: Duplicate**

**Lab Sample ID: 500-233300-5**

Date Collected: 05/03/23 00:00

Matrix: Water

Date Received: 05/04/23 09:28

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		05/11/23 17:32	05/12/23 18:26	1
<b>Arsenic</b>	<b>0.0014</b>		0.0010		mg/L		05/11/23 17:32	05/18/23 02:59	1
<b>Barium</b>	<b>0.093</b>		0.0025		mg/L		05/11/23 17:32	05/12/23 18:26	1
Beryllium	<0.0010		0.0010		mg/L		05/11/23 17:32	05/12/23 18:26	1
<b>Boron</b>	<b>0.29</b>		0.050		mg/L		05/11/23 17:32	05/17/23 15:02	1
Cadmium	<0.00050		0.00050		mg/L		05/11/23 17:32	05/12/23 18:26	1
<b>Calcium</b>	<b>120</b>		0.20		mg/L		05/11/23 17:32	05/12/23 18:26	1
Chromium	<0.0050		0.0050		mg/L		05/11/23 17:32	05/12/23 18:26	1
<b>Cobalt</b>	<b>0.0076</b>		0.0010		mg/L		05/11/23 17:32	05/12/23 18:26	1
Lead	<0.00050		0.00050		mg/L		05/11/23 17:32	05/12/23 18:26	1
<b>Lithium</b>	<b>0.011</b>		0.010		mg/L		05/11/23 17:32	05/12/23 18:26	1
<b>Molybdenum</b>	<b>0.0050</b>		0.0050		mg/L		05/11/23 17:32	05/12/23 18:26	1
Selenium	<0.0025		0.0025		mg/L		05/11/23 17:32	05/12/23 18:26	1
Thallium	<0.0020		0.0020		mg/L		05/11/23 17:32	05/12/23 18:26	1

**Method: SW846 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.00027</b>		0.00020		mg/L		05/22/23 11:50	05/23/23 10:03	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Dissolved Solids (SM 2540C)</b>	<b>1000</b>		10		mg/L			05/07/23 22:10	1
<b>Chloride (SM 4500 Cl- E)</b>	<b>290</b>		20		mg/L			05/16/23 15:48	10
<b>Fluoride (SM 4500 F C)</b>	<b>0.41</b>		0.10		mg/L			05/14/23 08:17	1
<b>Sulfate (SM 4500 SO4 E)</b>	<b>160</b>		50		mg/L			05/16/23 11:19	10

# Definitions/Glossary

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

Job ID: 500-233300-1

## 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: 500-233300-1

## Metals

### Prep Batch: 712806

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-233300-1	MW-03	Total Recoverable	Water	3005A	
500-233300-2	MW-04	Total Recoverable	Water	3005A	
500-233300-3	MW-05	Total Recoverable	Water	3005A	
500-233300-4	MW-10	Total Recoverable	Water	3005A	
500-233300-5	Duplicate	Total Recoverable	Water	3005A	
MB 500-712806/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-712806/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

### Analysis Batch: 713274

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-233300-1	MW-03	Total Recoverable	Water	6020A	712806
500-233300-2	MW-04	Total Recoverable	Water	6020A	712806
500-233300-3	MW-05	Total Recoverable	Water	6020A	712806
500-233300-4	MW-10	Total Recoverable	Water	6020A	712806
500-233300-5	Duplicate	Total Recoverable	Water	6020A	712806
MB 500-712806/1-A	Method Blank	Total Recoverable	Water	6020A	712806
LCS 500-712806/2-A	Lab Control Sample	Total Recoverable	Water	6020A	712806

### Analysis Batch: 714025

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-233300-1	MW-03	Total Recoverable	Water	6020A	712806
500-233300-2	MW-04	Total Recoverable	Water	6020A	712806
500-233300-3	MW-05	Total Recoverable	Water	6020A	712806
500-233300-4	MW-10	Total Recoverable	Water	6020A	712806
500-233300-5	Duplicate	Total Recoverable	Water	6020A	712806
MB 500-712806/1-A	Method Blank	Total Recoverable	Water	6020A	712806
LCS 500-712806/2-A	Lab Control Sample	Total Recoverable	Water	6020A	712806

### Analysis Batch: 714026

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-233300-1	MW-03	Total Recoverable	Water	6020A	712806
500-233300-2	MW-04	Total Recoverable	Water	6020A	712806
500-233300-3	MW-05	Total Recoverable	Water	6020A	712806
500-233300-4	MW-10	Total Recoverable	Water	6020A	712806
500-233300-5	Duplicate	Total Recoverable	Water	6020A	712806
MB 500-712806/1-A	Method Blank	Total Recoverable	Water	6020A	712806
LCS 500-712806/2-A	Lab Control Sample	Total Recoverable	Water	6020A	712806

### Prep Batch: 714587

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-233300-1	MW-03	Total/NA	Water	7470A	
500-233300-2	MW-04	Total/NA	Water	7470A	
500-233300-3	MW-05	Total/NA	Water	7470A	
500-233300-4	MW-10	Total/NA	Water	7470A	
500-233300-5	Duplicate	Total/NA	Water	7470A	
MB 500-714587/12-A	Method Blank	Total/NA	Water	7470A	
LCS 500-714587/13-A	Lab Control Sample	Total/NA	Water	7470A	

### Analysis Batch: 714794

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-233300-1	MW-03	Total/NA	Water	7470A	714587

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# QC Association Summary

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

Job ID: 500-233300-1

## Metals (Continued)

### Analysis Batch: 714794 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-233300-2	MW-04	Total/NA	Water	7470A	714587
500-233300-3	MW-05	Total/NA	Water	7470A	714587
500-233300-4	MW-10	Total/NA	Water	7470A	714587
500-233300-5	Duplicate	Total/NA	Water	7470A	714587
MB 500-714587/12-A	Method Blank	Total/NA	Water	7470A	714587
LCS 500-714587/13-A	Lab Control Sample	Total/NA	Water	7470A	714587

## General Chemistry

### Analysis Batch: 711853

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-233300-1	MW-03	Total/NA	Water	SM 2540C	
500-233300-2	MW-04	Total/NA	Water	SM 2540C	
500-233300-3	MW-05	Total/NA	Water	SM 2540C	
500-233300-4	MW-10	Total/NA	Water	SM 2540C	
500-233300-5	Duplicate	Total/NA	Water	SM 2540C	
MB 500-711853/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-711853/2	Lab Control Sample	Total/NA	Water	SM 2540C	

### Analysis Batch: 713198

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-233300-1	MW-03	Total/NA	Water	SM 4500 F C	
500-233300-2	MW-04	Total/NA	Water	SM 4500 F C	
500-233300-3	MW-05	Total/NA	Water	SM 4500 F C	
500-233300-4	MW-10	Total/NA	Water	SM 4500 F C	
500-233300-5	Duplicate	Total/NA	Water	SM 4500 F C	
MB 500-713198/3	Method Blank	Total/NA	Water	SM 4500 F C	
MB 500-713198/31	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 500-713198/32	Lab Control Sample	Total/NA	Water	SM 4500 F C	
LCS 500-713198/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
500-233300-2 MS	MW-04	Total/NA	Water	SM 4500 F C	
500-233300-2 MSD	MW-04	Total/NA	Water	SM 4500 F C	

### Analysis Batch: 713522

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-233300-1	MW-03	Total/NA	Water	SM 4500 SO4 E	
500-233300-2	MW-04	Total/NA	Water	SM 4500 SO4 E	
500-233300-3	MW-05	Total/NA	Water	SM 4500 SO4 E	
500-233300-4	MW-10	Total/NA	Water	SM 4500 SO4 E	
500-233300-5	Duplicate	Total/NA	Water	SM 4500 SO4 E	
MB 500-713522/94	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 500-713522/95	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	

### Analysis Batch: 713577

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-233300-1	MW-03	Total/NA	Water	SM 4500 CI- E	
500-233300-2	MW-04	Total/NA	Water	SM 4500 CI- E	
500-233300-3	MW-05	Total/NA	Water	SM 4500 CI- E	
500-233300-4	MW-10	Total/NA	Water	SM 4500 CI- E	
500-233300-5	Duplicate	Total/NA	Water	SM 4500 CI- E	
MB 500-713577/109	Method Blank	Total/NA	Water	SM 4500 CI- E	

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# QC Association Summary

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

Job ID: 500-233300-1

## General Chemistry (Continued)

### Analysis Batch: 713577 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 500-713577/110	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	

1

2

3

4

5

6

7

8

9

10

11

12

# QC Sample Results

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

Job ID: 500-233300-1

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

**Lab Sample ID: MB 500-712806/1-A**  
**Matrix: Water**  
**Analysis Batch: 713274**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 712806**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Antimony	<0.0030		0.0030		mg/L		05/11/23 17:32	05/12/23 17:12	1
Barium	<0.0025		0.0025		mg/L		05/11/23 17:32	05/12/23 17:12	1
Beryllium	<0.0010		0.0010		mg/L		05/11/23 17:32	05/12/23 17:12	1
Cadmium	<0.00050		0.00050		mg/L		05/11/23 17:32	05/12/23 17:12	1
Calcium	<0.20		0.20		mg/L		05/11/23 17:32	05/12/23 17:12	1
Chromium	<0.0050		0.0050		mg/L		05/11/23 17:32	05/12/23 17:12	1
Cobalt	<0.0010		0.0010		mg/L		05/11/23 17:32	05/12/23 17:12	1
Lead	<0.00050		0.00050		mg/L		05/11/23 17:32	05/12/23 17:12	1
Lithium	<0.010		0.010		mg/L		05/11/23 17:32	05/12/23 17:12	1
Molybdenum	<0.0050		0.0050		mg/L		05/11/23 17:32	05/12/23 17:12	1
Selenium	<0.0025		0.0025		mg/L		05/11/23 17:32	05/12/23 17:12	1
Thallium	<0.0020		0.0020		mg/L		05/11/23 17:32	05/12/23 17:12	1

**Lab Sample ID: MB 500-712806/1-A**  
**Matrix: Water**  
**Analysis Batch: 714025**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 712806**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Boron	<0.050		0.050		mg/L		05/11/23 17:32	05/17/23 13:50	1

**Lab Sample ID: MB 500-712806/1-A**  
**Matrix: Water**  
**Analysis Batch: 714026**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 712806**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Arsenic	<0.0010		0.0010		mg/L		05/11/23 17:32	05/18/23 01:58	1

**Lab Sample ID: LCS 500-712806/2-A**  
**Matrix: Water**  
**Analysis Batch: 713274**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 712806**

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Antimony	0.500	0.515		mg/L		103	80 - 120
Barium	0.500	0.526		mg/L		105	80 - 120
Beryllium	0.0500	0.0542		mg/L		108	80 - 120
Cadmium	0.0500	0.0517		mg/L		103	80 - 120
Calcium	10.0	10.2		mg/L		102	80 - 120
Chromium	0.200	0.213		mg/L		106	80 - 120
Cobalt	0.500	0.535		mg/L		107	80 - 120
Lead	0.100	0.0998		mg/L		100	80 - 120
Lithium	0.100	0.111		mg/L		111	80 - 120
Molybdenum	1.00	0.975		mg/L		97	80 - 120
Selenium	0.100	0.0966		mg/L		97	80 - 120
Thallium	0.100	0.107		mg/L		107	80 - 120

# QC Sample Results

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

Job ID: 500-233300-1

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

Lab Sample ID: LCS 500-712806/2-A  
 Matrix: Water  
 Analysis Batch: 714025

Client Sample ID: Lab Control Sample  
 Prep Type: Total Recoverable  
 Prep Batch: 712806

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	1.00	1.03		mg/L		103	80 - 120

Lab Sample ID: LCS 500-712806/2-A  
 Matrix: Water  
 Analysis Batch: 714026

Client Sample ID: Lab Control Sample  
 Prep Type: Total Recoverable  
 Prep Batch: 712806

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	0.100	0.107		mg/L		107	80 - 120

## Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 500-714587/12-A  
 Matrix: Water  
 Analysis Batch: 714794

Client Sample ID: Method Blank  
 Prep Type: Total/NA  
 Prep Batch: 714587

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		05/22/23 11:50	05/23/23 12:03	1

Lab Sample ID: LCS 500-714587/13-A  
 Matrix: Water  
 Analysis Batch: 714794

Client Sample ID: Lab Control Sample  
 Prep Type: Total/NA  
 Prep Batch: 714587

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00198	0.00198		mg/L		100	80 - 120

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

Lab Sample ID: MB 500-711853/1  
 Matrix: Water  
 Analysis Batch: 711853

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			05/07/23 21:39	1

Lab Sample ID: LCS 500-711853/2  
 Matrix: Water  
 Analysis Batch: 711853

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 500-713577/109  
 Matrix: Water  
 Analysis Batch: 713577

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			05/16/23 15:46	1

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# QC Sample Results

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

Job ID: 500-233300-1

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

Lab Sample ID: LCS 500-713577/110  
Matrix: Water  
Analysis Batch: 713577

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	20.5		mg/L		102	85 - 115

## Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 500-713198/3  
Matrix: Water  
Analysis Batch: 713198

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			05/14/23 08:17	1

Lab Sample ID: MB 500-713198/31  
Matrix: Water  
Analysis Batch: 713198

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			05/14/23 08:17	1

Lab Sample ID: LCS 500-713198/32  
Matrix: Water  
Analysis Batch: 713198

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	10.2		mg/L		102	90 - 119

Lab Sample ID: LCS 500-713198/4  
Matrix: Water  
Analysis Batch: 713198

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	10.2		mg/L		102	90 - 119

Lab Sample ID: 500-233300-2 MS  
Matrix: Water  
Analysis Batch: 713198

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	0.40		5.00	5.37		mg/L		99	75 - 125

Lab Sample ID: 500-233300-2 MSD  
Matrix: Water  
Analysis Batch: 713198

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Fluoride	0.40		5.00	5.37		mg/L		99	75 - 125	0	20

# QC Sample Results

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

Job ID: 500-233300-1

## Method: SM 4500 SO4 E - Sulfate, Total

**Lab Sample ID: MB 500-713522/94**  
**Matrix: Water**  
**Analysis Batch: 713522**

**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			05/16/23 11:16	1

**Lab Sample ID: LCS 500-713522/95**  
**Matrix: Water**  
**Analysis Batch: 713522**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfate	20.0	21.4		mg/L		107	88 - 123



**Eurofins Chicago**

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

**Chain of Custody Record**



Environment Testing

<b>Client Information</b>		Sampler: <b>FAN JOHN HOWISON</b>		Lab PM: Mockler Diana J		Carrier Tracking No(s): 500-233300 COC						
Client Contact: Patrick Allenstein		Phone: <b>630-325-1300</b>		E-Mail: Diana Mockler@et.eurofinsus.com		State of Origin: _____						
Company: KPRG and Associates Inc		PWSID: _____		<b>Analysis Requested</b>				Page 1 of 1				
Address: 14665 West Lisbon Road Suite 1A		Due Date Requested: _____		Job #: <b>500-233300</b> Preservation Codes: A HCL M Hexane B NaOH N None C Zn Acetate O AsNaO2 D Nitric Acid P Na2O4S E NaHSO4 Q Na2SO3 F MeOH R Na2S2O3 G Amchlor S H2SO4 H Ascorbic Acid T TSP Dodecahydrate I Ice U Acetone J DI Water V MCAA K EDTA W pH 4-5 L EDA Y Trizma Z other (specify) Other: _____				Page 1 of 1				
City: Brookfield		TAT Requested (days): _____										
State/Zip: WI 53005		Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No										
Phone: _____		PO #: 4502085968										
Email: patricka@kprginc.com		WO #: _____										
Project Name: Joliet #29 CCR/ Event Desc Quarterly MWG Joliet #29 CCR		Project #: 50011568		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				
Site: Illinois		SSOW#: _____										
<b>Sample Identification</b>		Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010C, 6020A, 7470A	2540C, 4500_F_C, SM4500_CL_E, SM4500_SO4_E	903.0 904.0	Total Number of Containers	Special Instructions/Note
		Preservation Code:				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
		MW-03	5-3-23 09:32	G	Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	5	
		MW-04	5-3-23 10:39	G	Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	5	
		MW-05	5-3-23 11:57	G	Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	5	
		MW-10	5-3-23 13:39	G	Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	5	
		Duplicate	5-3-23 —	G	Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	5	
					Water							
<b>Possible Hazard Identification</b>						<b>Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)</b>						
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological						<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> 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>[Signature]</i>			Date/Time: 5-4-23 09:28			Company: KPRG			Received by: <i>[Signature]</i>			
Relinquished by:			Date/Time:			Company:			Received by:			
Relinquished by:			Date/Time:			Company:			Received by:			
Custody Seals Intact. <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No		Cooler Temperature(s) °C and Other Remarks: (3.2-3.1) (2.8-2.7)								



# Login Sample Receipt Checklist

Client: Midwest Generation EME LLC

Job Number: 500-233300-1

**Login Number: 233300**

**List Number: 1**

**Creator: James, Jeff A**

**List Source: Eurofins Chicago**

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.1, 2.7
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



# Lab Chronicle

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

Job ID: 500-233300-1

## Client Sample ID: MW-03

Date Collected: 05/03/23 09:32

Date Received: 05/04/23 09:28

## Lab Sample ID: 500-233300-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			712806	RN	EET CHI	05/11/23 17:32 - 05/11/23 18:02 <sup>1</sup>
Total Recoverable	Analysis	6020A		1	713274	FXG	EET CHI	05/12/23 18:09
Total Recoverable	Prep	3005A			712806	RN	EET CHI	05/11/23 17:32 - 05/11/23 18:02 <sup>1</sup>
Total Recoverable	Analysis	6020A		1	714025	FXG	EET CHI	05/17/23 14:48
Total Recoverable	Prep	3005A			712806	RN	EET CHI	05/11/23 17:32 - 05/11/23 18:02 <sup>1</sup>
Total Recoverable	Analysis	6020A		1	714026	FXG	EET CHI	05/18/23 02:46
Total/NA	Prep	7470A			714587	MJG	EET CHI	05/22/23 11:50 - 05/22/23 13:50 <sup>1</sup>
Total/NA	Analysis	7470A		1	714794	MJG	EET CHI	05/23/23 09:50
Total/NA	Analysis	SM 2540C		1	711853	CLB	EET CHI	05/07/23 21:59
Total/NA	Analysis	SM 4500 CI- E		10	713577	MM	EET CHI	05/16/23 15:47
Total/NA	Analysis	SM 4500 F C		1	713198	EH	EET CHI	05/14/23 08:17
Total/NA	Analysis	SM 4500 SO4 E		10	713522	MM	EET CHI	05/16/23 11:18

## Client Sample ID: MW-04

Date Collected: 05/03/23 10:39

Date Received: 05/04/23 09:28

## Lab Sample ID: 500-233300-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			712806	RN	EET CHI	05/11/23 17:32 - 05/11/23 18:02 <sup>1</sup>
Total Recoverable	Analysis	6020A		1	713274	FXG	EET CHI	05/12/23 18:13
Total Recoverable	Prep	3005A			712806	RN	EET CHI	05/11/23 17:32 - 05/11/23 18:02 <sup>1</sup>
Total Recoverable	Analysis	6020A		1	714025	FXG	EET CHI	05/17/23 14:52
Total Recoverable	Prep	3005A			712806	RN	EET CHI	05/11/23 17:32 - 05/11/23 18:02 <sup>1</sup>
Total Recoverable	Analysis	6020A		1	714026	FXG	EET CHI	05/18/23 02:49
Total/NA	Prep	7470A			714587	MJG	EET CHI	05/22/23 11:50 - 05/22/23 13:50 <sup>1</sup>
Total/NA	Analysis	7470A		1	714794	MJG	EET CHI	05/23/23 09:52
Total/NA	Analysis	SM 2540C		1	711853	CLB	EET CHI	05/07/23 22:02
Total/NA	Analysis	SM 4500 CI- E		10	713577	MM	EET CHI	05/16/23 15:47
Total/NA	Analysis	SM 4500 F C		1	713198	EH	EET CHI	05/14/23 08:17
Total/NA	Analysis	SM 4500 SO4 E		10	713522	MM	EET CHI	05/16/23 11:18

## Client Sample ID: MW-05

Date Collected: 05/03/23 11:57

Date Received: 05/04/23 09:28

## Lab Sample ID: 500-233300-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			712806	RN	EET CHI	05/11/23 17:32 - 05/11/23 18:02 <sup>1</sup>
Total Recoverable	Analysis	6020A		1	713274	FXG	EET CHI	05/12/23 18:17
Total Recoverable	Prep	3005A			712806	RN	EET CHI	05/11/23 17:32 - 05/11/23 18:02 <sup>1</sup>
Total Recoverable	Analysis	6020A		1	714025	FXG	EET CHI	05/17/23 14:55
Total Recoverable	Prep	3005A			712806	RN	EET CHI	05/11/23 17:32 - 05/11/23 18:02 <sup>1</sup>
Total Recoverable	Analysis	6020A		1	714026	FXG	EET CHI	05/18/23 02:52
Total/NA	Prep	7470A			714587	MJG	EET CHI	05/22/23 11:50 - 05/22/23 13:50 <sup>1</sup>
Total/NA	Analysis	7470A		1	714794	MJG	EET CHI	05/23/23 09:59

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# Lab Chronicle

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

Job ID: 500-233300-1

**Client Sample ID: MW-05**  
**Date Collected: 05/03/23 11:57**  
**Date Received: 05/04/23 09:28**

**Lab Sample ID: 500-233300-3**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	SM 2540C		1	711853	CLB	EET CHI	05/07/23 22:04
Total/NA	Analysis	SM 4500 CI- E		10	713577	MM	EET CHI	05/16/23 15:48
Total/NA	Analysis	SM 4500 F C		1	713198	EH	EET CHI	05/14/23 08:17
Total/NA	Analysis	SM 4500 SO4 E		10	713522	MM	EET CHI	05/16/23 11:18

**Client Sample ID: MW-10**  
**Date Collected: 05/03/23 13:39**  
**Date Received: 05/04/23 09:28**

**Lab Sample ID: 500-233300-4**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			712806	RN	EET CHI	05/11/23 17:32 - 05/11/23 18:02 <sup>1</sup>
Total Recoverable	Analysis	6020A		1	713274	FXG	EET CHI	05/12/23 18:21
Total Recoverable	Prep	3005A			712806	RN	EET CHI	05/11/23 17:32 - 05/11/23 18:02 <sup>1</sup>
Total Recoverable	Analysis	6020A		1	714025	FXG	EET CHI	05/17/23 14:59
Total Recoverable	Prep	3005A			712806	RN	EET CHI	05/11/23 17:32 - 05/11/23 18:02 <sup>1</sup>
Total Recoverable	Analysis	6020A		1	714026	FXG	EET CHI	05/18/23 02:56
Total/NA	Prep	7470A			714587	MJG	EET CHI	05/22/23 11:50 - 05/22/23 13:50 <sup>1</sup>
Total/NA	Analysis	7470A		1	714794	MJG	EET CHI	05/23/23 10:01
Total/NA	Analysis	SM 2540C		1	711853	CLB	EET CHI	05/07/23 22:07
Total/NA	Analysis	SM 4500 CI- E		10	713577	MM	EET CHI	05/16/23 15:48
Total/NA	Analysis	SM 4500 F C		1	713198	EH	EET CHI	05/14/23 08:17
Total/NA	Analysis	SM 4500 SO4 E		10	713522	MM	EET CHI	05/16/23 11:19

**Client Sample ID: Duplicate**  
**Date Collected: 05/03/23 00:00**  
**Date Received: 05/04/23 09:28**

**Lab Sample ID: 500-233300-5**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			712806	RN	EET CHI	05/11/23 17:32 - 05/11/23 18:02 <sup>1</sup>
Total Recoverable	Analysis	6020A		1	713274	FXG	EET CHI	05/12/23 18:26
Total Recoverable	Prep	3005A			712806	RN	EET CHI	05/11/23 17:32 - 05/11/23 18:02 <sup>1</sup>
Total Recoverable	Analysis	6020A		1	714025	FXG	EET CHI	05/17/23 15:02
Total Recoverable	Prep	3005A			712806	RN	EET CHI	05/11/23 17:32 - 05/11/23 18:02 <sup>1</sup>
Total Recoverable	Analysis	6020A		1	714026	FXG	EET CHI	05/18/23 02:59
Total/NA	Prep	7470A			714587	MJG	EET CHI	05/22/23 11:50 - 05/22/23 13:50 <sup>1</sup>
Total/NA	Analysis	7470A		1	714794	MJG	EET CHI	05/23/23 10:03
Total/NA	Analysis	SM 2540C		1	711853	CLB	EET CHI	05/07/23 22:10
Total/NA	Analysis	SM 4500 CI- E		10	713577	MM	EET CHI	05/16/23 15:48
Total/NA	Analysis	SM 4500 F C		1	713198	EH	EET CHI	05/14/23 08:17
Total/NA	Analysis	SM 4500 SO4 E		10	713522	MM	EET CHI	05/16/23 11:19

<sup>1</sup> This procedure uses a method stipulated length of time for the process. Both start and end times are displayed.

**Laboratory References:**

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



# ANALYTICAL REPORT

## PREPARED FOR

Attn: James Thorne  
Midwest Generation EME LLC  
1800 Channahon Road  
Joliet, Illinois 60436

Generated 6/2/2023 4:47:18 PM

## JOB DESCRIPTION

Joliet #29 CCR (RAD)  
Quarterly MWG Joliet #29 CCR

## JOB NUMBER

500-233300-2

# Eurofins Chicago

## Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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

## Authorization



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Authorized for release by  
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# Case Narrative

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

Job ID: 500-233300-2

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## Job ID: 500-233300-2

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### Laboratory: Eurofins Chicago

#### Narrative

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#### Job Narrative 500-233300-2

#### Receipt

The samples were received on 5/4/2023 9:28 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 2.7°C and 3.1°C

#### Gas Flow Proportional Counter

Method 903.0: Radium-226 batch 610851 Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. MW-03 (500-233300-1), MW-04 (500-233300-2), MW-05 (500-233300-3), MW-10 (500-233300-4), Duplicate (500-233300-5), (LCS 160-610851/2-A), (MB 160-610851/1-A), (310-254620-E-3-A), (310-254620-E-3-B MS) and (310-254620-D-3-A MSD)

Method 904.0: Radium-228 prep batch 160-610860: Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. MW-03 (500-233300-1), MW-04 (500-233300-2), MW-05 (500-233300-3), MW-10 (500-233300-4), Duplicate (500-233300-5), (LCS 160-610860/2-A), (MB 160-610860/1-A), (310-254620-E-3-C), (310-254620-E-3-D MS) and (310-254620-D-3-B MSD)

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

#### Rad

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

# Method Summary

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

Job ID: 500-233300-2

Method	Method Description	Protocol	Laboratory
903.0	Radium-226 (GFPC)	EPA	EET SL
904.0	Radium-228 (GFPC)	EPA	EET SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	EET SL
PrecSep_0	Preparation, Precipitate Separation	None	EET SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	EET SL

#### Protocol References:

EPA = US Environmental Protection Agency

None = None

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

#### Laboratory References:

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566



# Sample Summary

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

Job ID: 500-233300-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-233300-1	MW-03	Water	05/03/23 09:32	05/04/23 09:28
500-233300-2	MW-04	Water	05/03/23 10:39	05/04/23 09:28
500-233300-3	MW-05	Water	05/03/23 11:57	05/04/23 09:28
500-233300-4	MW-10	Water	05/03/23 13:39	05/04/23 09:28
500-233300-5	Duplicate	Water	05/03/23 00:00	05/04/23 09:28

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13



# Client Sample Results

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

Job ID: 500-233300-2

**Client Sample ID: MW-03**  
**Date Collected: 05/03/23 09:32**  
**Date Received: 05/04/23 09:28**

**Lab Sample ID: 500-233300-1**  
**Matrix: Water**

**Method: EPA 903.0 - Radium-226 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.142	U	0.150	0.151	1.00	0.237	pCi/L	05/10/23 10:06	06/01/23 15:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.3		30 - 110					05/10/23 10:06	06/01/23 15:48	1

**Method: EPA 904.0 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0749	U	0.224	0.224	1.00	0.453	pCi/L	05/10/23 11:00	05/30/23 16:09	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.3		30 - 110					05/10/23 11:00	05/30/23 16:09	1
Y Carrier	86.2		30 - 110					05/10/23 11:00	05/30/23 16:09	1

**Method: TAL-STL Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.0669	U	0.270	0.270	5.00	0.453	pCi/L		06/02/23 16:10	1

# Client Sample Results

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

Job ID: 500-233300-2

**Client Sample ID: MW-04**  
**Date Collected: 05/03/23 10:39**  
**Date Received: 05/04/23 09:28**

**Lab Sample ID: 500-233300-2**  
**Matrix: Water**

**Method: EPA 903.0 - Radium-226 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.133	U	0.160	0.160	1.00	0.262	pCi/L	05/10/23 10:06	06/01/23 15:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.0		30 - 110					05/10/23 10:06	06/01/23 15:51	1

**Method: EPA 904.0 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.108	U	0.241	0.241	1.00	0.488	pCi/L	05/10/23 11:00	05/30/23 16:09	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.0		30 - 110					05/10/23 11:00	05/30/23 16:09	1
Y Carrier	85.1		30 - 110					05/10/23 11:00	05/30/23 16:09	1

**Method: TAL-STL Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.0254	U	0.289	0.289	5.00	0.488	pCi/L		06/02/23 16:10	1

# Client Sample Results

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

Job ID: 500-233300-2

**Client Sample ID: MW-05**

**Lab Sample ID: 500-233300-3**

Date Collected: 05/03/23 11:57

Matrix: Water

Date Received: 05/04/23 09:28

**Method: EPA 903.0 - Radium-226 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.146	U	0.172	0.173	1.00	0.281	pCi/L	05/10/23 10:06	06/01/23 15:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.1		30 - 110					05/10/23 10:06	06/01/23 15:51	1

**Method: EPA 904.0 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.142	U	0.311	0.311	1.00	0.604	pCi/L	05/10/23 11:00	05/30/23 16:09	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.1		30 - 110					05/10/23 11:00	05/30/23 16:09	1
Y Carrier	88.2		30 - 110					05/10/23 11:00	05/30/23 16:09	1

**Method: TAL-STL Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.00433	U	0.355	0.356	5.00	0.604	pCi/L		06/02/23 16:10	1

# Client Sample Results

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

Job ID: 500-233300-2

**Client Sample ID: MW-10**

**Lab Sample ID: 500-233300-4**

Date Collected: 05/03/23 13:39

Matrix: Water

Date Received: 05/04/23 09:28

**Method: EPA 903.0 - Radium-226 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0999	U	0.162	0.163	1.00	0.281	pCi/L	05/10/23 10:06	06/01/23 15:51	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	90.5		30 - 110					05/10/23 10:06	06/01/23 15:51	1

**Method: EPA 904.0 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.324	U	0.306	0.307	1.00	0.487	pCi/L	05/10/23 11:00	05/30/23 16:09	1
<b>Carrier</b>	<b>%Yield</b>	<b>Qualifier</b>	<b>Limits</b>					<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Ba Carrier	90.5		30 - 110					05/10/23 11:00	05/30/23 16:09	1
Y Carrier	86.8		30 - 110					05/10/23 11:00	05/30/23 16:09	1

**Method: TAL-STL Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.424	U	0.346	0.348	5.00	0.487	pCi/L		06/02/23 16:10	1

# Client Sample Results

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

Job ID: 500-233300-2

**Client Sample ID: Duplicate**

**Lab Sample ID: 500-233300-5**

Date Collected: 05/03/23 00:00

Matrix: Water

Date Received: 05/04/23 09:28

**Method: EPA 903.0 - Radium-226 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0793	U	0.128	0.128	1.00	0.224	pCi/L	05/10/23 10:06	06/01/23 15:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.7		30 - 110					05/10/23 10:06	06/01/23 15:51	1

**Method: EPA 904.0 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.216	U	0.188	0.189	1.00	0.444	pCi/L	05/10/23 11:00	05/30/23 16:10	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.7		30 - 110					05/10/23 11:00	05/30/23 16:10	1
Y Carrier	82.0		30 - 110					05/10/23 11:00	05/30/23 16:10	1

**Method: TAL-STL Ra226\_Ra228 - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	-0.136	U	0.227	0.228	5.00	0.444	pCi/L		06/02/23 16:10	1

# Definitions/Glossary

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

Job ID: 500-233300-2

## Qualifiers

### Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

## 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 (RAD)

Job ID: 500-233300-2

## Rad

### Prep Batch: 610851

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-233300-1	MW-03	Total/NA	Water	PrecSep-21	
500-233300-2	MW-04	Total/NA	Water	PrecSep-21	
500-233300-3	MW-05	Total/NA	Water	PrecSep-21	
500-233300-4	MW-10	Total/NA	Water	PrecSep-21	
500-233300-5	Duplicate	Total/NA	Water	PrecSep-21	
MB 160-610851/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-610851/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	

### Prep Batch: 610860

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-233300-1	MW-03	Total/NA	Water	PrecSep_0	
500-233300-2	MW-04	Total/NA	Water	PrecSep_0	
500-233300-3	MW-05	Total/NA	Water	PrecSep_0	
500-233300-4	MW-10	Total/NA	Water	PrecSep_0	
500-233300-5	Duplicate	Total/NA	Water	PrecSep_0	
MB 160-610860/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-610860/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	

# QC Sample Results

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

Job ID: 500-233300-2

## Method: 903.0 - Radium-226 (GFPC)

**Lab Sample ID: MB 160-610851/1-A**  
**Matrix: Water**  
**Analysis Batch: 614157**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 610851**

Analyte	MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	MB Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.04828	U	0.139	0.139	1.00	0.258	pCi/L	05/10/23 10:06	06/01/23 15:47	1
Carrier	MB %Yield	MB Qualifier	Limits		Prepared	Analyzed	Dil Fac			
Ba Carrier	92.9		30 - 110		05/10/23 10:06	06/01/23 15:47	1			

**Lab Sample ID: LCS 160-610851/2-A**  
**Matrix: Water**  
**Analysis Batch: 614157**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 610851**

Analyte	Spike Added	LCS	LCS	Total	RL	MDC	Unit	%Rec	%Rec Limits
		Result	Qual	Uncert. (2σ+/-)					
Radium-226	11.3	11.92		1.41	1.00	0.256	pCi/L	105	75 - 113
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	91.0		30 - 110						

## Method: 904.0 - Radium-228 (GFPC)

**Lab Sample ID: MB 160-610860/1-A**  
**Matrix: Water**  
**Analysis Batch: 613795**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 610860**

Analyte	MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	MB Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-228	0.04623	U	0.258	0.258	1.00	0.471	pCi/L	05/10/23 11:00	05/30/23 16:09	1
Carrier	MB %Yield	MB Qualifier	Limits		Prepared	Analyzed	Dil Fac			
Ba Carrier	92.9		30 - 110		05/10/23 11:00	05/30/23 16:09	1			
Y Carrier	88.8		30 - 110		05/10/23 11:00	05/30/23 16:09	1			

**Lab Sample ID: LCS 160-610860/2-A**  
**Matrix: Water**  
**Analysis Batch: 613795**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 610860**

Analyte	Spike Added	LCS	LCS	Total	RL	MDC	Unit	%Rec	%Rec Limits
		Result	Qual	Uncert. (2σ+/-)					
Radium-228	8.16	7.976		1.11	1.00	0.441	pCi/L	98	75 - 125
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	91.0		30 - 110						
Y Carrier	87.6		30 - 110						



**Eurofins Chicago**

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

**Chain of Custody Record**



Environment Testing

<b>Client Information</b>		Sampler: <b>FAN JOHN HOWESON</b>		Lab PM: Mockler Diana J		Carrier Tracking No(s): 500-233300 COC										
Client Contact: Patrick Allenstein		Phone: <b>630-325-1300</b>		E-Mail: Diana Mockler@et.eurofinsus.com		State of Origin										
Company: KPRG and Associates Inc		PWSID:		<b>Analysis Requested</b>				Page 1 of 1								
Address: 14665 West Lisbon Road Suite 1A		Due Date Requested		Job #: <b>500-233300</b> Preservation Codes: A HCL M Hexane B NaOH N None C Zn Acetate O AsNaO2 D Nitric Acid P Na2O4S E NaHSO4 Q Na2SO3 F MeOH R Na2S2O3 G Amchlor S H2SO4 H Ascorbic Acid T TSP Dodecahydrate I Ice U Acetone J DI Water V MCAA K EDTA W pH 4-5 L EDA Y Trizma Z other (specify) Other:				Page 1 of 1								
City: Brookfield		TAT Requested (days):														
State/Zip: WI 53005		Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No														
Phone:		PO #: 4502085968														
Email: patricka@kprginc.com		WO #:														
Project Name: Joliet #29 CCR/ Event Desc Quarterly MWG Joliet #29 CCR		Project #: 50011568		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								
Site: Illinois		SSOW#:														
<b>Sample Identification</b>		<b>Sample Date</b>							<b>Sample Time</b>		<b>Sample Type (C=comp, G=grab)</b>		<b>Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)</b>		<b>Special Instructions/Note</b>	
MW-03		5-3-23		09:32		G		Water		N N X X X						
MW-04		5-3-23		10:39		G		Water		N N X X X						
MW-05		5-3-23		11:57		G		Water		N N X X X						
MW-10		5-3-23		13:39		G		Water		N N X X X						
Duplicate		5-3-23		—		G		Water		N N X X X						
								Water								
<b>Possible Hazard Identification</b>						<b>Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)</b>										
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological						<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> 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>[Signature]</i>		Date/Time: 5-4-23 09:28		Company: KPRG		Received by: <i>[Signature]</i>		Date/Time: 5/4/23 09:28		Company: ERDA						
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:		Company:						
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:		Company:						
Custody Seals Intact. <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No		Cooler Temperature(s) °C and Other Remarks: (3.2-3.1) (2.8-2.7)												



# Chain of Custody Record



**Client Information (Sub Contract Lab)**  
 Shipper: Mockler, Diana J  
 Lab PM: Mockler, Diana J  
 Client Contact: Diana Mockler@et.eurofins.com  
 E-Mail: Diana.Mockler@et.eurofins.com  
 Company: TestAmerica Laboratories, Inc.  
 Address: 13715 Rider Trail North, Joliet #29 CCR  
 City: Joliet, IL  
 State: MO, 63045  
 Phone: 314-298-8566 (Tel) 314-298-8757 (Fax)  
 Email: [Redacted]  
 Project Name: NRG Midwest Generation LSO Joliet#29 CCR  
 Project #: 50011568  
 Site: Joliet #29 CCR  
 Due Date Requested: 5/24/2023  
 TAT Requested (days): [Blank]  
 PO #: [Blank]  
 WO #: [Blank]  
 Accreditations Required (See note): NELAP - Illinois

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Spiked, Operational, Site/issue, A-Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	903.0/PreSep_21 Standard Target List	904.0/PreSep_0 Standard Target List	Raz26R228 GFPC	Total Number of Containers	Special Instructions/Note:
MW-03 (500-233300-1)	5/3/23	09:32 Central	Water	Water	X	X	X	X	X	3	Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume;
MW-04 (500-233300-2)	5/3/23	10:39 Central	Water	Water	X	X	X	X	X	3	Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume;
MW-05 (500-233300-3)	5/3/23	11:57 Central	Water	Water	X	X	X	X	X	3	Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume;
MW-10 (500-233300-4)	5/3/23	13:39 Central	Water	Water	X	X	X	X	X	3	Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume;
Duplicate (500-233300-5)	5/3/23	Central	Water	Water	X	X	X	X	X	3	Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume;

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

**Analysis Requested**

**Special Instructions/Note:**

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

**Possible Hazard Identification**  
 Unconfirmed  
 Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2

**Empty Kit Relinquished by:** [Signature] Date: 5/4/23 Time: 1515 Company: Fedex

**Relinquished by:** [Signature] Date/Time: [Blank] Company: [Blank]

**Relinquished by:** [Signature] Date/Time: [Blank] Company: [Blank]

**Relinquished by:** [Signature] Date/Time: [Blank] Company: [Blank]

**Custody Seals Intact:** Δ Yes Δ No  
 Cooler Temperature(s) °C and Other Remarks: [Blank]



# Login Sample Receipt Checklist

Client: Midwest Generation EME LLC

Job Number: 500-233300-2

**Login Number: 233300**

**List Number: 1**

**Creator: James, Jeff A**

**List Source: Eurofins Chicago**

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.1, 2.7
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



# Login Sample Receipt Checklist

Client: Midwest Generation EME LLC

Job Number: 500-233300-2

**Login Number: 233300**

**List Number: 2**

**Creator: Farrell, Conor P**

**List Source: Eurofins St. Louis**

**List Creation: 05/05/23 01:04 PM**

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



# Lab Chronicle

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

Job ID: 500-233300-2

## Client Sample ID: MW-03

Date Collected: 05/03/23 09:32

Date Received: 05/04/23 09:28

## Lab Sample ID: 500-233300-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			610851	KAC	EET SL	05/10/23 10:06
Total/NA	Analysis	903.0		1	614157	FLC	EET SL	06/01/23 15:48
Total/NA	Prep	PrecSep_0			610860	KAC	EET SL	05/10/23 11:00
Total/NA	Analysis	904.0		1	613795	SCB	EET SL	05/30/23 16:09
Total/NA	Analysis	Ra226_Ra228		1	614401	SCB	EET SL	06/02/23 16:10

## Client Sample ID: MW-04

Date Collected: 05/03/23 10:39

Date Received: 05/04/23 09:28

## Lab Sample ID: 500-233300-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			610851	KAC	EET SL	05/10/23 10:06
Total/NA	Analysis	903.0		1	614158	FLC	EET SL	06/01/23 15:51
Total/NA	Prep	PrecSep_0			610860	KAC	EET SL	05/10/23 11:00
Total/NA	Analysis	904.0		1	613795	SCB	EET SL	05/30/23 16:09
Total/NA	Analysis	Ra226_Ra228		1	614401	SCB	EET SL	06/02/23 16:10

## Client Sample ID: MW-05

Date Collected: 05/03/23 11:57

Date Received: 05/04/23 09:28

## Lab Sample ID: 500-233300-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			610851	KAC	EET SL	05/10/23 10:06
Total/NA	Analysis	903.0		1	614158	FLC	EET SL	06/01/23 15:51
Total/NA	Prep	PrecSep_0			610860	KAC	EET SL	05/10/23 11:00
Total/NA	Analysis	904.0		1	613795	SCB	EET SL	05/30/23 16:09
Total/NA	Analysis	Ra226_Ra228		1	614401	SCB	EET SL	06/02/23 16:10

## Client Sample ID: MW-10

Date Collected: 05/03/23 13:39

Date Received: 05/04/23 09:28

## Lab Sample ID: 500-233300-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			610851	KAC	EET SL	05/10/23 10:06
Total/NA	Analysis	903.0		1	614158	FLC	EET SL	06/01/23 15:51
Total/NA	Prep	PrecSep_0			610860	KAC	EET SL	05/10/23 11:00
Total/NA	Analysis	904.0		1	613795	SCB	EET SL	05/30/23 16:09
Total/NA	Analysis	Ra226_Ra228		1	614401	SCB	EET SL	06/02/23 16:10

# Lab Chronicle

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

Job ID: 500-233300-2

**Client Sample ID: Duplicate**

**Lab Sample ID: 500-233300-5**

**Date Collected: 05/03/23 00:00**

**Matrix: Water**

**Date Received: 05/04/23 09:28**

<u>Prep Type</u>	<u>Batch Type</u>	<u>Batch Method</u>	<u>Run</u>	<u>Dilution Factor</u>	<u>Batch Number</u>	<u>Analyst</u>	<u>Lab</u>	<u>Prepared or Analyzed</u>
Total/NA	Prep	PrecSep-21			610851	KAC	EET SL	05/10/23 10:06
Total/NA	Analysis	903.0		1	614158	FLC	EET SL	06/01/23 15:51
Total/NA	Prep	PrecSep_0			610860	KAC	EET SL	05/10/23 11:00
Total/NA	Analysis	904.0		1	613795	SCB	EET SL	05/30/23 16:10
Total/NA	Analysis	Ra226_Ra228		1	614401	SCB	EET SL	06/02/23 16:10

**Laboratory References:**

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566



# Tracer/Carrier Summary

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

Job ID: 500-233300-2

## Method: 903.0 - Radium-226 (GFPC)

Matrix: Water

Prep Type: Total/NA

### Percent Yield (Acceptance Limits)

Lab Sample ID	Client Sample ID	Ba (30-110)
500-233300-1	MW-03	90.3
500-233300-2	MW-04	91.0
500-233300-3	MW-05	89.1
500-233300-4	MW-10	90.5
500-233300-5	Duplicate	91.7
LCS 160-610851/2-A	Lab Control Sample	91.0
MB 160-610851/1-A	Method Blank	92.9

#### Tracer/Carrier Legend

Ba = Ba Carrier

## Method: 904.0 - Radium-228 (GFPC)

Matrix: Water

Prep Type: Total/NA

### Percent Yield (Acceptance Limits)

Lab Sample ID	Client Sample ID	Ba (30-110)	Y (30-110)
500-233300-1	MW-03	90.3	86.2
500-233300-2	MW-04	91.0	85.1
500-233300-3	MW-05	89.1	88.2
500-233300-4	MW-10	90.5	86.8
500-233300-5	Duplicate	91.7	82.0
LCS 160-610860/2-A	Lab Control Sample	91.0	87.6
MB 160-610860/1-A	Method Blank	92.9	88.8

#### Tracer/Carrier Legend

Ba = Ba Carrier


Y = Y Carrier

PROJECT NAME	NRG - JOLIET #29 STATION (12313.0)		DATE	05-03-2023
Sample Name	MW-03	Start Time	09:17	
Condition of Well	Good			
Water Level	33.22	Total Depth	—	
Well Diameter	PVC - 2 inch	Volume in Well	—	
Method of Purge	Low-Flow	Purge Characteristics	COLORLESS ODORLESS	
Volume Removed	2.0 GALS	WL at Sample Time	33.21	
Method of Sample	Low-Flow	Sample Characteristics	APPEARS CLEAR	
Sample Analysis	CCA + CCR	Sample Time	09:32	
Water Quality Meter	YSI ProDss			

Time	Depth to Water (ft)	ph (SU)	Temp (°C)	Spec. Cond (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)
09:20	33.21	7.31	11.6	1.786	9.14	141.8	4.1
09:23	33.21	7.14	11.4	1.877	7.83	144.7	2.8
09:26	33.20	7.02	11.6	1.860	6.72	144.8	2.9
09:29	33.21	6.97	11.7	1.839	5.90	144.2	3.1
09:32	33.21	6.97	11.8	1.834	5.76	143.7	3.0

SAMPLING NOTES:

Sampler Name and Company:

KPRG and Associates JAN JOHN HANICSON 




PROJECT NAME	NRG - JOLIET #29 STATION (12313.0)		DATE	05-03-2023
Sample Name	MW-04	Start Time	10:24	
Condition of Well	GOOD			
Water Level	33.49	Total Depth	—	
Well Diameter	PVC - 2 inch	Volume in Well	—	
Method of Purge	Low-Flow	Purge Characteristics	COLORLESS ODORLESS	
Volume Removed	2.25 GALS	W L at Sample Time	33.49	
Method of Sample	Low-Flow	Sample Characteristics	APPEARS CLEAR	
Sample Analysis	CCA + CCR + CCR DURS	Sample Time	10:39	
Water Quality Meter	YSI ProDss			

Time	Depth to Water (ft)	ph (SU)	Temp (°C)	Spec. Cond (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)
10:27	33.49	7.31	11.6	<del>8.96</del> <sup>1.854</sup>	8.85	114.7	4.0
10:30	33.49	7.07	11.8	1.826	7.81	126.1	7.6
10:33	33.49	7.05	12.1	1.844	7.01	132.3	6.7
10:36	33.49	6.96	12.4	1.850	6.70	134.6	7.1
10:39	33.49	6.97	12.4	1.856	6.53	136.2	6.3

SAMPLING NOTES:

Sampler Name and Company:

KPRG and Associates

IAN JOHN HOWIESEN 

PROJECT NAME	NRG - JOLIET #29 STATION (12313.0)		DATE	05-03-2023
Sample Name	MW-05	Start Time	11:42	
Condition of Well	GOOD			
Water Level	34.18	Total Depth	—	
Well Diameter	PVC - 2 inch	Volume in Well	—	
Method of Purge	Low-Flow	Purge Characteristics	COLORLESS ODORLESS	
Volume Removed	2.25 GALS.	W L at Sample Time	34.19	
Method of Sample	Low-Flow	Sample Characteristics	APPEARS CLEAR	
Sample Analysis	CCA + CCR +	Sample Time	11:57	
Water Quality Meter	YSI ProDss			

Time	Depth to Water (ft)	ph (SU)	Temp (°C)	Spec. Cond (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)
11:45	34.19	7.68	12.8	1.968	8.54	122.5	3.1
11:48	34.19	7.12	13.0	1.842	6.75	132.8	3.3
11:51	34.20	6.99	13.1	1.769	6.05	135.3	3.1
11:54	34.20	6.97	13.1	1.737	5.51	136.0	2.5
11:57	34.19	6.96	13.1	1.724	5.37	136.2	2.5

SAMPLING NOTES:

Sampler Name and Company:

KPRG and Associates

IAN JOHN HOWLSON



PROJECT NAME	NRG - JOLIET #29 STATION (12313.0)		DATE	05-03-2023
Sample Name	MW-10	Start Time	13:24	
Condition of Well	GOOD			
Water Level	34.38	Total Depth	—	
Well Diameter	PVC - 2 inch	Volume in Well	—	
Method of Purge	Low-Flow	Purge Characteristics	ODORLESS ODORLESS	
Volume Removed	2.5 GALS	W L at Sample Time	34.39	
Method of Sample	Low-Flow	Sample Characteristics	APPEARS CLEAR	
Sample Analysis	CCA + CCR	Sample Time	13:39	
Water Quality Meter	YSI ProDss			

Time	Depth to Water (ft)	ph (SU)	Temp (°C)	Spec. Cond (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)
13:27	34.39	7.69	13.1	1.961	8.03	119.6	2.3
13:30	34.40	7.25	12.9	1.955	7.04	124.4	3.5
13:33	34.39	7.06	12.8	1.950	6.36	127.4	2.9
13:36	34.39	6.99	12.8	1.953	6.02	129.2	3.0
13:39	34.39	6.99	12.7	1.952	5.96	129.8	2.6

SAMPLING NOTES:

Sampler Name and Company:

KPRG and Associates IAN JOHN HOWIESON

