

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 4th Quarter 2021 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	210	0.44	7.17	120	820	< 0.003	0.001	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	6.99	95	720	< 0.003	0.0018	0.035	< 0.001	< 0.0005	< 0.005	< 0.001	0.0014	0.011	< 0.0002	0.0061	< 0.626	< 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	260	0.39	7.28	120	910	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/17/2018	0.63	120	180	0.42	7.30	110	810	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	1,000	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	0.35	90	130	0.36	7.40	59	650	NA	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	NA	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	1,200	< 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	1,300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
8/30/2021	0.28	120	330	0.37	7.56	170	990	< 0.003	0.0012	0.051	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.012	< 0.0002	0.0065	0.51	< 0.0025	< 0.002		
11/16/2021	0.39	120	260	0.38	7.01	150	1,000	< 0.0030	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		
MW-03 down-gradient	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	0.0045	< 0.002	
	5/10/2016	0.48	95	240	0.44	7.07	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	0.0030	< 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	0.0086	< 0.373	0.0051	< 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	< 0.0051	< 0.001	< 0.0005	< 0.010	< 0.0002	0.0059	< 0.965	0.0032	< 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	0.0028	< 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	0.0052	< 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	0.0037	< 0.002	
	8/2/2017	0.41	99	200	0.40	7.34	110	850	< 0.003	0.0022	0.10	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.011	< 0.0002	0.0065	0.414	0.005	< 0.002	
	10/18/2017	0.35	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	0.0026	< 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	120	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	NA	930	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	290	0.4	7.13	190	1,200	< 0.003	0.0016	0.14	< 0.001	< 0.0005	< 0.005	< 0.0011	< 0.0005	0.014	< 0.0002	< 0.0050	1.1000	< 0.0025	< 0.002	
6/29/2021 R	NA	NA	NA	NA	7.34	210	1,300	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	1,000	< 0.0030	0.0018	0.14	< 0.001	< 0.00050	< 0.0050	0.0018	< 0.00050	0.011	< 0.00020	< 0.0050	1.15	< 0.0025	< 0.0020		
MW-04 down-gradient	10/28/2015	0.34	FI	200	0.45	7.07	83	740	< 0.003	0.0013	0.082	< 0.001	< 0.0005	< 0.005	< 0.0005	0.0063	< 0.0002	0.013	< 0.0002	0.0065	0.741	< 0.0025	< 0.002
	2/10/2016	0.32	97	210	0.47	7.22	140	810	< 0.003	0.0018	0.088	< 0.001	< 0.0005	< 0.005	< 0.0005	0.0074	< 0.0002	0.0063	< 1.52	< 0.0025	< 0.002		
	5/10/2016	0.47	100	260	0.46	6.71	150	900	< 0.003	0.0014	0.088	< 0.001	< 0.0005	< 0.005	< 0.0005	0.0086	< 0.0002	0.0088	< 0.365	< 0.0025	< 0.002		
	8/31/2016	0.42	100	210	0.45	7.07	120	890	< 0.003	0.0014	0.086</												

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	
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	2.8
	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	4.2	
MW-05	2/25/2021	1.57
	4/10/2021	8.36
	4/25/2021	2.42
	5/17/2021	5.2
	6/11/2021	14.22
	6/29/2021	5.33
	7/19/2021	26.9
	8/9/2021	3.69
	8/27/2021	8.7
	9/27/2021	14.92
11/16/2021	8.84	
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	

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
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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
Date Collected: 11/16/21 14:13
Date Received: 11/17/21 11:53

Lab Sample ID: 500-208539-1
Matrix: Water

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

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

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

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

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

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	

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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

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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	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	Limit
Mercury	<0.00020		<0.00020		mg/L		NC	20

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

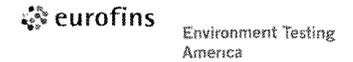
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	20.0	20.9		mg/L		104	88 - 123

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Eurofins TestAmerica, Chicago

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

Chain of Custody Record



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		 <p>500-208539 COC</p>				Preservation Codes			
City Brookfield		TAT Requested (days):						A HCL M Hexane		B NaOH N None	
State Zip WI 53005		Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No						C Zn Acetate O AsNaO2		D Nitric Acid P Na2O4S	
Phone 779-279-2321(Tel)		PO # 4502042860						E NaHSO4 Q Na2SO3		F MeOH R Na2S2O3	
Email erinb@kprginc.com		WO #						G Amchlor S H2SO4		H Ascorbic Acid T TSP Dodecahydrate	
Project Name Joliet #29 CCR/ Event Desc Quarterly MWG Joliet #29 CCR		Project # 50011568		I Ice U Acetone		J DI Water V MCAA		K EDTA W pH 4-5			
Site Illinois		SSOW#		L EDA Z other (specify)		Other:					
Sample Identification		Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oli, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Total Number of Containers	Special Instructions/Note		
				Preservation Code:							
1 MW-03		<i>11/16</i>	<i>1413</i>		Water						
2 MW-04		<i>11/16</i>	<i>13:30</i>		Water						
3 MW-05		<i>11/16</i>	<i>15:13</i>		Water						
4 MW-10		<i>11/16</i>	<i>1154</i>		Water						
5 Duplicate		<i>11/16</i>	<i>-</i>		Water						
Possible Hazard Identification					Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)						
<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>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>			
Relinquished by <i>S. Neal</i>		Date/Time: <i>11/17/21 1153</i>		Company <i>empire</i>		Received by <i>Stephanie Hemminger</i>		Date/Time: <i>11/17/21 1153</i>			
Relinquished by		Date/Time		Company		Received by		Date/Time			
Custody Seals Intact. <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No		Cooler Temperature(s) °C and Other Remarks		<i>5 1.5 3, 55</i>					



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 </= 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 <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: 500-208539-1

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

Lab Chronicle

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

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

Lab Sample ID: 500-208539-4

Date Collected: 11/16/21 11:54

Matrix: Water

Date Received: 11/17/21 11:53

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

Lab Sample ID: 500-208539-5

Date Collected: 11/16/21 00:00

Matrix: Water

Date Received: 11/17/21 11:53

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

ANALYTICAL REPORT

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

Laboratory Job ID: 500-208539-2
Client Project/Site: Joliet #29 CCR

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

Attn: DeAndre Cooley



Authorized for release by:
12/29/2021 1:18:46 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: 500-208539-2

Job ID: 500-208539-2

Laboratory: Eurofins TestAmerica, Chicago

Narrative

Job Narrative 500-208539-2

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.

RAD

Method 903.0: Radium 226 batch 538017

The LCS recovered at (72%). The limits in our LIMS system at 75-125 reflect the requirements of a regulatory agency that represents a large amount of our work. However the samples associated with this LCS are not from this agency and are therefore held to our in-house statistical limits of (67-118%) per method requirements. The LCS passes, no further action is required

(LCS 160-538017/1-A)

Method 903.0: Radium 226 batch 538017

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 (500-208539-1), MW-04 (500-208539-2), MW-05 (500-208539-3), MW-10 (500-208539-4), Duplicate (500-208539-5), (LCS 160-538017/1-A), (MB 160-538017/20-A) and (500-208539-D-1-B DU)

Method 904.0: Radium 226 batch 538020

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 (500-208539-1), MW-04 (500-208539-2), MW-05 (500-208539-3), MW-10 (500-208539-4), Duplicate (500-208539-5), (LCS 160-538020/1-A), (MB 160-538020/20-A) and (500-208539-D-1-C DU)

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

Method Summary

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

Job ID: 500-208539-2

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

Protocol References:

EPA = US Environmental Protection Agency

None = None

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

Laboratory References:

TAL SL = Eurofins TestAmerica, 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

Job ID: 500-208539-2

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: 500-208539-2

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

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.427	U	0.306	0.309	1.00	0.446	pCi/L	11/22/21 12:42	12/14/21 18:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.1		40 - 110					11/22/21 12:42	12/14/21 18:13	1

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.719		0.292	0.300	1.00	0.394	pCi/L	11/22/21 13:28	12/14/21 13:07	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.1		40 - 110					11/22/21 13:28	12/14/21 13:07	1
Y Carrier	77.0		40 - 110					11/22/21 13:28	12/14/21 13:07	1

Method: 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	1.15		0.423	0.431	5.00	0.446	pCi/L		12/29/21 12:43	1

Client Sample Results

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

Job ID: 500-208539-2

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

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.192	U	0.233	0.233	1.00	0.384	pCi/L	11/22/21 12:42	12/14/21 18:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.1		40 - 110					11/22/21 12:42	12/14/21 18:15	1

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.700		0.326	0.332	1.00	0.475	pCi/L	11/22/21 13:28	12/14/21 13:07	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.1		40 - 110					11/22/21 13:28	12/14/21 13:07	1
Y Carrier	76.6		40 - 110					11/22/21 13:28	12/14/21 13:07	1

Method: 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	0.892		0.401	0.406	5.00	0.475	pCi/L		12/29/21 12:43	1

Client Sample Results

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

Job ID: 500-208539-2

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: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.284	U	0.263	0.264	1.00	0.409	pCi/L	11/22/21 12:42	12/14/21 18:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.1		40 - 110					11/22/21 12:42	12/14/21 18:15	1

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.454	U	0.317	0.320	1.00	0.494	pCi/L	11/22/21 13:28	12/14/21 13:07	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.1		40 - 110					11/22/21 13:28	12/14/21 13:07	1
Y Carrier	75.9		40 - 110					11/22/21 13:28	12/14/21 13:07	1

Method: 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	0.738		0.412	0.415	5.00	0.494	pCi/L		12/29/21 12:43	1

Client Sample Results

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

Job ID: 500-208539-2

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

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.130	U	0.220	0.220	1.00	0.381	pCi/L	11/22/21 12:42	12/14/21 18:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.6		40 - 110					11/22/21 12:42	12/14/21 18:15	1

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.561		0.283	0.288	1.00	0.413	pCi/L	11/22/21 13:28	12/14/21 13:08	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.6		40 - 110					11/22/21 13:28	12/14/21 13:08	1
Y Carrier	78.5		40 - 110					11/22/21 13:28	12/14/21 13:08	1

Method: 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	0.692		0.358	0.362	5.00	0.413	pCi/L		12/29/21 12:43	1

Client Sample Results

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

Job ID: 500-208539-2

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

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.205	U	0.222	0.223	1.00	0.358	pCi/L	11/22/21 12:42	12/14/21 18:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.9		40 - 110					11/22/21 12:42	12/14/21 18:15	1

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.730		0.305	0.312	1.00	0.429	pCi/L	11/22/21 13:28	12/14/21 13:08	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.9		40 - 110					11/22/21 13:28	12/14/21 13:08	1
Y Carrier	80.7		40 - 110					11/22/21 13:28	12/14/21 13:08	1

Method: 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	0.935		0.377	0.384	5.00	0.429	pCi/L		12/29/21 12:43	1

Definitions/Glossary

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

Job ID: 500-208539-2

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

Job ID: 500-208539-2

Rad

Prep Batch: 538017

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-208539-1	MW-03	Total/NA	Water	PrecSep-21	
500-208539-2	MW-04	Total/NA	Water	PrecSep-21	
500-208539-3	MW-05	Total/NA	Water	PrecSep-21	
500-208539-4	MW-10	Total/NA	Water	PrecSep-21	
500-208539-5	Duplicate	Total/NA	Water	PrecSep-21	
MB 160-538017/20-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-538017/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
500-208539-1 DU	MW-03	Total/NA	Water	PrecSep-21	

Prep Batch: 538020

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-208539-1	MW-03	Total/NA	Water	PrecSep_0	
500-208539-2	MW-04	Total/NA	Water	PrecSep_0	
500-208539-3	MW-05	Total/NA	Water	PrecSep_0	
500-208539-4	MW-10	Total/NA	Water	PrecSep_0	
500-208539-5	Duplicate	Total/NA	Water	PrecSep_0	
MB 160-538020/20-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-538020/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
500-208539-1 DU	MW-03	Total/NA	Water	PrecSep_0	

QC Sample Results

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

Job ID: 500-208539-2

Method: 903.0 - Radium-226 (GFPC)

Lab Sample ID: MB 160-538017/20-A
Matrix: Water
Analysis Batch: 541920

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 538017

Analyte	MB	MB	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.6431		0.313	0.318	1.00	0.346	pCi/L	11/22/21 12:42	12/14/21 20:23	1
Carrier	MB	MB	Limits				Prepared		Analyzed	Dil Fac
Ba Carrier	%Yield	Qualifier	40 - 110				11/22/21 12:42		12/14/21 20:23	1
	91.9									

Lab Sample ID: LCS 160-538017/1-A
Matrix: Water
Analysis Batch: 541957

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 538017

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits
				Uncert. (2σ+/-)					
Radium-226	15.1	10.86		1.53	1.00	0.548	pCi/L	72	75 - 125
Carrier	LCS	LCS	Limits						
Ba Carrier	%Yield	Qualifier	40 - 110						
	94.9								

Lab Sample ID: 500-208539-1 DU
Matrix: Water
Analysis Batch: 541957

Client Sample ID: MW-03
Prep Type: Total/NA
Prep Batch: 538017

Analyte	Sample	Sample	DU	DU	Total	RL	MDC	Unit	RER	RER Limit
	Result	Qual	Result	Qual	Uncert. (2σ+/-)					
Radium-226	0.427	U	0.2946	U	0.278	1.00	0.435	pCi/L	0.22	1
Carrier	DU	DU	Limits							
Ba Carrier	%Yield	Qualifier	40 - 110							
	94.9									

Method: 904.0 - Radium-228 (GFPC)

Lab Sample ID: MB 160-538020/20-A
Matrix: Water
Analysis Batch: 541920

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 538020

Analyte	MB	MB	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-228	0.6130		0.366	0.370	1.00	0.550	pCi/L	11/22/21 13:28	12/14/21 13:10	1
Carrier	MB	MB	Limits				Prepared		Analyzed	Dil Fac
Ba Carrier	%Yield	Qualifier	40 - 110				11/22/21 13:28		12/14/21 13:10	1
Y Carrier	74.4		40 - 110				11/22/21 13:28		12/14/21 13:10	1

QC Sample Results

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

Job ID: 500-208539-2

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

Lab Sample ID: LCS 160-538020/1-A
Matrix: Water
Analysis Batch: 541920

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 538020

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	
Radium-228	12.1	13.82		1.61	1.00	0.470	pCi/L	114	75 - 125	
LCS LCS										
Carrier	%Yield	Qualifier	Limits							
Ba Carrier	94.9		40 - 110							
Y Carrier	77.4		40 - 110							

Lab Sample ID: 500-208539-1 DU
Matrix: Water
Analysis Batch: 541920

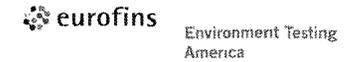
Client Sample ID: MW-03
Prep Type: Total/NA
Prep Batch: 538020

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-228	0.719		0.2167	U	0.237	1.00	0.386	pCi/L	0.94	1
DU DU										
Carrier	%Yield	Qualifier	Limits							
Ba Carrier	94.9		40 - 110							
Y Carrier	79.3		40 - 110							

Eurofins TestAmerica, Chicago

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

Chain of Custody Record



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		 <p>500-208539 COC</p>				Preservation Codes A HCL M Hexane B NaOH N None C Zn Acetate O AsNaO2 D Nitric Acid P Na2O4S E NaHSO4 Q Na2SO3 F MeOH R Na2S2O3 G Amchlor S H2SO4 H Ascorbic Acid T TSP Dodecahydrate I Ice U Acetone J DI Water V MCAA K EDTA W pH 4-5 L EDA Z other (specify) Other:	
City Brookfield		TAT Requested (days):							
State Zip WI 53005		Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No							
Phone 779-279-2321(Tel)		PO # 4502042860							
Email erinb@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)		Total Number of Containers	
Site Illinois		SSOW#		6010C, 6020A, 7470A		2540C, 4500_F_C, SM4500_CI_E, SM4500_SO4_E		903.0, 904.0	
Sample Identification		Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oli, BT=Tissue, A=Air)	D	N	D	Special Instructions/Note
				Preservation Code:		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
<i>1</i>	MW-03	<i>11/16</i>	<i>1413</i>	Water		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
<i>2</i>	MW-04	<i>11/16</i>	<i>13:30</i>	Water		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
<i>3</i>	MW-05	<i>11/16</i>	<i>15:13</i>	Water		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
<i>4</i>	MW-10	<i>11/16</i>	<i>1154</i>	Water		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
<i>5</i>	Duplicate	<i>11/16</i>	<i>-</i>	Water		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Possible Hazard Identification		<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		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)					
Deliverable Requested I II III IV Other (specify)				<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months					
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>	
Relinquished by <i>S. Neal</i>		Date/Time: <i>11/17/21 1153</i>		Company: <i>empire</i>		Received by: <i>Stephanie Hemminger</i>		Date/Time: <i>11/17/21 1153</i>	
Relinquished by		Date/Time		Company		Received by		Date/Time	
Custody Seals Intact. <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No		Cooler Temperature(s) °C and Other Remarks <i>5 1.5 3, 5.5</i>					



Chain of Custody Record



Client Information (Sub Contract Lab)		Lab PM: Mockler, Diana J	Carmer Tracking No(s): 500-154554.1
Client Contact: Shipping/Receiving		E-Mail: Diana.Mockler@Eurofinset.com	Page: 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): NELAP - Illinois	Job #: 500-208539-2
Address: 13715 Rider Trail North, Earth City, MO, 63045		Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2OAS Q - Na2SO3 R - MeOH S - H2SO4 T - TSP Dodecahydrate U - Ice V - MCAA W - pH 4-5 Z - other (specify) Other:	
Due Date Requested: 12/22/2021		Analysis Requested	
TAT Requested (days):		Total Number of Containers	
PO #:		904.0/PreSep_0 Standard Target List	
WO #:		903.0/PreSep_21 Standard Target List	
Project #: 50011568		Field Filtered Sample (Yes or No)	
SSOW#:		Perform MS/MSD (Yes or No)	
Site: NRG Midwest Generation LSQ Joliet#29 CCR		R226Ra228 GPPC	
Sample Identification - Client ID (Lab ID)		Special Instructions/Note:	
MW-03 (500-208539-1)	Sample Date: 11/16/21	Sample Time: 14:13 Central	Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume;
MW-04 (500-208539-2)	Sample Date: 11/16/21	Sample Time: 13:30 Central	Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume;
MW-05 (500-208539-3)	Sample Date: 11/16/21	Sample Time: 15:13 Central	Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume;
MW-10 (500-208539-4)	Sample Date: 11/16/21	Sample Time: 11:54 Central	Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume;
Duplicate (500-208539-5)	Sample Date: 11/16/21	Sample Time: Central	Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume;
Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.			
Possible Hazard Identification			
Unconfirmed			
Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/QC Requirements:	
Primary Deliverable Rank: 2		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)	
Empty Kit Relinquished by:		Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For <input type="checkbox"/> Months	
Relinquished by: <i>[Signature]</i>		Method of Shipment:	
Relinquished by: <i>[Signature]</i>		Date/Time:	
Relinquished by: <i>[Signature]</i>		Date/Time: NOV 18 2021 0930	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Date/Time: Autumn R. Johnson	
Custody Seal No.:		Date/Time: Autumn R. Johnson	
Cooler Temperature(s) °C and Other Remarks:		Company: E17A STL	



Chain of Custody Record



Client Information (Sub Contract Lab)		Lab PM: Mockler, Diana J	Carrier Tracking No(s): 500-154554.1									
Shipping/Receiving		E-Mail: Diana.Mockler@Eurofins.com	Page: Page 1 of 1									
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): NELAP - Illinois	Job #: 500-208539-2									
Address: 13715 Rider Trail North, City: Earth City State, Zip: MO, 63045		Due Date Requested: 12/22/2021	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 - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - DH 4-5 Z - other (specify)									
PO #: WO #: Project #: 50011568 SSOW#:		TAT Requested (days):										
Sample Date		Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Newer, Swab, On-wastecol, BT-Tissue, AnAb)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	903.0/PreSep. 21 Standard Target List	904.0/PreSep. 10 Standard Target List	Ra226Ra228_GFPc	Analysis Requested	Total Number of Containers	Special Instructions/Note:
MW-03 (500-208539-1)	11/16/21	14:13 Central		Water	X	X	X	X			3	Batch QC must be performed (dup. spikes, etc) - no NCMs concerning limited volume.
MW-04 (500-208539-2)	11/16/21	13:30 Central		Water	X	X	X	X			3	Batch QC must be performed (dup. spikes, etc) - no NCMs concerning limited volume.
MW-05 (500-208539-3)	11/16/21	15:13 Central		Water	X	X	X	X			3	Batch QC must be performed (dup. spikes, etc) - no NCMs concerning limited volume.
MW-10 (500-208539-4)	11/16/21	11:54 Central		Water	X	X	X	X			3	Batch QC must be performed (dup. spikes, etc) - no NCMs concerning limited volume.
Duplicate (500-208539-5)	11/16/21	Central		Water	X	X	X	X			3	Batch QC must be performed (dup. spikes, etc) - no NCMs concerning limited volume.
<p>Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/mainx being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica</p>												
<p>Possible Hazard Identification</p> <p>Unconfirmed Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2</p> <p>Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months</p> <p>Special Instructions/QC Requirements:</p>												
Empty Kit Relinquished by:		Date:	Time:									
Relinquished by: <i>[Signature]</i>		Date/Time: 11/16/21 1600	Received by: FED EX									
Relinquished by: FED EX		Date/Time:	Received by: <i>[Signature]</i>									
Relinquished by:		Date/Time:	Received by: Autumn R. Johnson									
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Cooler Temperature(s) °C and Other Remarks:										



Login Sample Receipt Checklist

Client: Midwest Generation EME LLC

Job Number: 500-208539-2

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 <math><6\text{mm}</math> (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: 500-208539-2

Login Number: 208539

List Number: 2

Creator: Johnson, Autumn R

List Source: Eurofins TestAmerica, St. Louis

List Creation: 11/18/21 02:11 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	

Login Sample Receipt Checklist

Client: Midwest Generation EME LLC

Job Number: 500-208539-2

Login Number: 208539

List Number: 3

Creator: Johnson, Autumn R

List Source: Eurofins TestAmerica, St. Louis

List Creation: 11/19/21 11:17 AM

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

Job ID: 500-208539-2

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/NA	Prep	PrecSep-21			538017	11/22/21 12:42	LPS	TAL SL
Total/NA	Analysis	903.0		1	541957	12/14/21 18:13	SCB	TAL SL
Total/NA	Prep	PrecSep_0			538020	11/22/21 13:28	LPS	TAL SL
Total/NA	Analysis	904.0		1	541920	12/14/21 13:07	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	543986	12/29/21 12:43	EMH	TAL SL

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/NA	Prep	PrecSep-21			538017	11/22/21 12:42	LPS	TAL SL
Total/NA	Analysis	903.0		1	541921	12/14/21 18:15	ANW	TAL SL
Total/NA	Prep	PrecSep_0			538020	11/22/21 13:28	LPS	TAL SL
Total/NA	Analysis	904.0		1	541920	12/14/21 13:07	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	543986	12/29/21 12:43	EMH	TAL SL

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	Prep	PrecSep-21			538017	11/22/21 12:42	LPS	TAL SL
Total/NA	Analysis	903.0		1	541921	12/14/21 18:15	ANW	TAL SL
Total/NA	Prep	PrecSep_0			538020	11/22/21 13:28	LPS	TAL SL
Total/NA	Analysis	904.0		1	541920	12/14/21 13:07	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	543986	12/29/21 12:43	EMH	TAL SL

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/NA	Prep	PrecSep-21			538017	11/22/21 12:42	LPS	TAL SL
Total/NA	Analysis	903.0		1	541921	12/14/21 18:15	ANW	TAL SL
Total/NA	Prep	PrecSep_0			538020	11/22/21 13:28	LPS	TAL SL
Total/NA	Analysis	904.0		1	541920	12/14/21 13:08	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	543986	12/29/21 12:43	EMH	TAL SL

Lab Chronicle

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

Job ID: 500-208539-2

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

<u>Prep Type</u>	<u>Batch Type</u>	<u>Batch Method</u>	<u>Run</u>	<u>Dilution Factor</u>	<u>Batch Number</u>	<u>Prepared or Analyzed</u>	<u>Analyst</u>	<u>Lab</u>
Total/NA	Prep	PrecSep-21			538017	11/22/21 12:42	LPS	TAL SL
Total/NA	Analysis	903.0		1	541921	12/14/21 18:15	ANW	TAL SL
Total/NA	Prep	PrecSep_0			538020	11/22/21 13:28	LPS	TAL SL
Total/NA	Analysis	904.0		1	541920	12/14/21 13:08	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	543986	12/29/21 12:43	EMH	TAL SL

Laboratory References:

TAL SL = Eurofins TestAmerica, 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

Job ID: 500-208539-2

Method: 903.0 - Radium-226 (GFPC)

Matrix: Water

Prep Type: Total/NA

Percent Yield (Acceptance Limits)

Lab Sample ID	Client Sample ID	Ba (40-110)
500-208539-1	MW-03	85.1
500-208539-1 DU	MW-03	94.9
500-208539-2	MW-04	91.1
500-208539-3	MW-05	85.1
500-208539-4	MW-10	91.6
500-208539-5	Duplicate	89.9
LCS 160-538017/1-A	Lab Control Sample	94.9
MB 160-538017/20-A	Method Blank	91.9

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 (40-110)	Y (40-110)
500-208539-1	MW-03	85.1	77.0
500-208539-1 DU	MW-03	94.9	79.3
500-208539-2	MW-04	91.1	76.6
500-208539-3	MW-05	85.1	75.9
500-208539-4	MW-10	91.6	78.5
500-208539-5	Duplicate	89.9	80.7
LCS 160-538020/1-A	Lab Control Sample	94.9	77.4
MB 160-538020/20-A	Method Blank	91.9	74.4

Tracer/Carrier Legend

Ba = Ba Carrier

Y = Y Carrier