

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 2nd 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 as they will be calculated and proposed as part of the Operating Permit submittals due by October 31, 2021. Upon Illinois Environmental Protection Agency approval of the Operating Permit, the approved comparison values will be included for subsequent data comparisons/evaluations.

Table 2. Groundwater Turbidity - Midwest Generation, LLC, Joliet Station #29, Joliet, IL.

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
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
	6/29/201	3.34
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
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

ANALYTICAL REPORT

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

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

For:

Midwest Generation EME LLC
1800 Channahon Road
Joliet, Illinois 60436

Attn: DeAndre Cooley



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

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

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



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Case Narrative

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

Job ID: 500-199296-1

Job ID: 500-199296-1

Laboratory: Eurofins TestAmerica, Chicago

Narrative

**Job Narrative
500-199296-1**

Comments

No additional comments.

Receipt

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

Metals

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

General Chemistry

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

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Method Summary

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

Job ID: 500-199296-1

Method	Method Description	Protocol	Laboratory
6010C	Metals (ICP)	SW846	TAL CHI
6020A	Metals (ICP/MS)	SW846	TAL CHI
7470A	Mercury (CVAA)	SW846	TAL CHI
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL CHI
SM 4500 Cl- E	Chloride, Total	SM	TAL CHI
SM 4500 F C	Fluoride	SM	TAL CHI
SM 4500 SO4 E	Sulfate, Total	SM	TAL CHI
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL CHI
7470A	Preparation, Mercury	SW846	TAL CHI

Protocol References:

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

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

Laboratory References:

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

Sample Summary

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

Job ID: 500-199296-1

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

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Client Sample Results

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

Job ID: 500-199296-1

Client Sample ID: MW-05

Lab Sample ID: 500-199296-1

Date Collected: 05/17/21 12:06

Matrix: Water

Date Received: 05/18/21 13:00

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

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

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		05/19/21 08:28	05/19/21 18:18	1
Arsenic	0.0015		0.0010		mg/L		05/19/21 08:28	05/19/21 18:18	1
Barium	0.10		0.0025		mg/L		05/19/21 08:28	05/19/21 18:18	1
Beryllium	<0.0010		0.0010		mg/L		05/19/21 08:28	05/19/21 18:18	1
Boron	0.37		0.050		mg/L		05/19/21 08:28	05/19/21 18:18	1
Cadmium	<0.00050		0.00050		mg/L		05/19/21 08:28	05/19/21 18:18	1
Calcium	130		0.20		mg/L		05/19/21 08:28	05/19/21 18:18	1
Chromium	<0.0050		0.0050		mg/L		05/19/21 08:28	05/19/21 18:18	1
Cobalt	<0.0010		0.0010		mg/L		05/19/21 08:28	05/19/21 18:18	1
Lead	<0.00050		0.00050		mg/L		05/19/21 08:28	05/19/21 18:18	1
Molybdenum	<0.0050		0.0050		mg/L		05/19/21 08:28	05/19/21 18:18	1
Selenium	<0.0025		0.0025		mg/L		05/19/21 08:28	05/19/21 18:18	1
Thallium	<0.0020		0.0020		mg/L		05/19/21 08:28	05/19/21 18:18	1

Method: 7470A - Mercury (CVAA)

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

General Chemistry

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

Client Sample Results

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

Job ID: 500-199296-1

Client Sample ID: MW-03

Lab Sample ID: 500-199296-2

Date Collected: 05/18/21 11:55

Matrix: Water

Date Received: 05/19/21 11:33

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

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

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		05/20/21 18:19	05/26/21 00:31	1
Arsenic	0.0016		0.0010		mg/L		05/20/21 18:19	05/26/21 00:31	1
Barium	0.14		0.0025		mg/L		05/20/21 18:19	05/26/21 00:31	1
Beryllium	<0.0010		0.0010		mg/L		05/20/21 18:19	05/26/21 14:45	1
Boron	0.28		0.050		mg/L		05/20/21 18:19	05/26/21 00:31	1
Cadmium	<0.00050		0.00050		mg/L		05/20/21 18:19	05/26/21 00:31	1
Calcium	130		0.20		mg/L		05/20/21 18:19	05/26/21 00:31	1
Chromium	<0.0050		0.0050		mg/L		05/20/21 18:19	05/26/21 00:31	1
Cobalt	0.0011		0.0010		mg/L		05/20/21 18:19	05/26/21 00:31	1
Lead	<0.00050		0.00050		mg/L		05/20/21 18:19	05/26/21 00:31	1
Molybdenum	<0.0050		0.0050		mg/L		05/20/21 18:19	05/26/21 00:31	1
Selenium	<0.0025		0.0025		mg/L		05/20/21 18:19	05/26/21 00:31	1
Thallium	<0.0020		0.0020		mg/L		05/20/21 18:19	05/26/21 00:31	1

Method: 7470A - Mercury (CVAA)

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

General Chemistry

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

Client Sample Results

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

Job ID: 500-199296-1

Client Sample ID: MW-04
Date Collected: 05/18/21 12:53
Date Received: 05/19/21 11:33

Lab Sample ID: 500-199296-3
Matrix: Water

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

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

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		05/20/21 18:19	05/26/21 00:35	1
Arsenic	0.0019		0.0010		mg/L		05/20/21 18:19	05/26/21 00:35	1
Barium	0.12		0.0025		mg/L		05/20/21 18:19	05/26/21 00:35	1
Beryllium	<0.0010		0.0010		mg/L		05/20/21 18:19	05/26/21 14:49	1
Boron	0.22		0.050		mg/L		05/20/21 18:19	05/26/21 00:35	1
Cadmium	<0.00050		0.00050		mg/L		05/20/21 18:19	05/26/21 00:35	1
Calcium	120		0.20		mg/L		05/20/21 18:19	05/26/21 00:35	1
Chromium	<0.0050		0.0050		mg/L		05/20/21 18:19	05/26/21 00:35	1
Cobalt	0.0037		0.0010		mg/L		05/20/21 18:19	05/26/21 00:35	1
Lead	<0.00050		0.00050		mg/L		05/20/21 18:19	05/26/21 00:35	1
Molybdenum	<0.0050		0.0050		mg/L		05/20/21 18:19	05/26/21 00:35	1
Selenium	<0.0025		0.0025		mg/L		05/20/21 18:19	05/26/21 00:35	1
Thallium	<0.0020		0.0020		mg/L		05/20/21 18:19	05/26/21 00:35	1

Method: 7470A - Mercury (CVAA)

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

General Chemistry

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

Client Sample Results

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

Job ID: 500-199296-1

Client Sample ID: MW-10

Lab Sample ID: 500-199296-4

Date Collected: 05/18/21 00:00

Matrix: Water

Date Received: 05/19/21 11:33

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

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

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		05/20/21 18:19	05/26/21 00:38	1
Arsenic	0.0014		0.0010		mg/L		05/20/21 18:19	05/26/21 00:38	1
Barium	0.060		0.0025		mg/L		05/20/21 18:19	05/26/21 00:38	1
Beryllium	<0.0010		0.0010		mg/L		05/20/21 18:19	05/26/21 14:52	1
Boron	0.33		0.050		mg/L		05/20/21 18:19	05/26/21 00:38	1
Cadmium	<0.00050		0.00050		mg/L		05/20/21 18:19	05/26/21 00:38	1
Calcium	140		0.20		mg/L		05/20/21 18:19	05/26/21 00:38	1
Chromium	<0.0050		0.0050		mg/L		05/20/21 18:19	05/26/21 00:38	1
Cobalt	<0.0010		0.0010		mg/L		05/20/21 18:19	05/26/21 00:38	1
Lead	<0.00050		0.00050		mg/L		05/20/21 18:19	05/26/21 00:38	1
Molybdenum	0.0055		0.0050		mg/L		05/20/21 18:19	05/26/21 00:38	1
Selenium	<0.0025		0.0025		mg/L		05/20/21 18:19	05/26/21 00:38	1
Thallium	<0.0020		0.0020		mg/L		05/20/21 18:19	05/26/21 00:38	1

Method: 7470A - Mercury (CVAA)

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

General Chemistry

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

Client Sample Results

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

Job ID: 500-199296-1

Client Sample ID: Duplicate
 Date Collected: 05/18/21 00:00
 Date Received: 05/19/21 11:33

Lab Sample ID: 500-199296-5
 Matrix: Water

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

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

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		05/20/21 18:19	05/26/21 00:42	1
Arsenic	0.0015		0.0010		mg/L		05/20/21 18:19	05/26/21 00:42	1
Barium	0.061		0.0025		mg/L		05/20/21 18:19	05/26/21 00:42	1
Beryllium	<0.0010		0.0010		mg/L		05/20/21 18:19	05/26/21 14:56	1
Boron	0.34		0.050		mg/L		05/20/21 18:19	05/26/21 00:42	1
Cadmium	<0.00050		0.00050		mg/L		05/20/21 18:19	05/26/21 00:42	1
Calcium	140		0.20		mg/L		05/20/21 18:19	05/26/21 00:42	1
Chromium	<0.0050		0.0050		mg/L		05/20/21 18:19	05/26/21 00:42	1
Cobalt	<0.0010		0.0010		mg/L		05/20/21 18:19	05/26/21 00:42	1
Lead	<0.00050		0.00050		mg/L		05/20/21 18:19	05/26/21 00:42	1
Molybdenum	0.0059		0.0050		mg/L		05/20/21 18:19	05/26/21 00:42	1
Selenium	<0.0025		0.0025		mg/L		05/20/21 18:19	05/26/21 00:42	1
Thallium	<0.0020		0.0020		mg/L		05/20/21 18:19	05/26/21 00:42	1

Method: 7470A - Mercury (CVAA)

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

General Chemistry

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

Definitions/Glossary

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

Job ID: 500-199296-1

Qualifiers

General Chemistry

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

Glossary

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

QC Association Summary

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

Job ID: 500-199296-1

Metals

Prep Batch: 599713

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

Analysis Batch: 599943

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

Analysis Batch: 599958

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

Prep Batch: 600086

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

Analysis Batch: 600441

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

Analysis Batch: 600933

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

Analysis Batch: 601019

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

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QC Association Summary

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

Job ID: 500-199296-1

Metals

Prep Batch: 601691

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

Analysis Batch: 601923

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

General Chemistry

Analysis Batch: 600116

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

Analysis Batch: 602163

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

Analysis Batch: 602679

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

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QC Association Summary

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

Job ID: 500-199296-1

General Chemistry (Continued)

Analysis Batch: 602679 (Continued)

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

Analysis Batch: 602680

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

Analysis Batch: 602742

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

QC Sample Results

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

Job ID: 500-199296-1

Method: 6010C - Metals (ICP)

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

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

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

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

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

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

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

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

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

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

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

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

Method: 6020A - Metals (ICP/MS)

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

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

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

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

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

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

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QC Sample Results

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

Job ID: 500-199296-1

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

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

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

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

Lab Sample ID: MB 500-600086/1-A
Matrix: Water
Analysis Batch: 600933

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

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

Lab Sample ID: MB 500-600086/1-A
Matrix: Water
Analysis Batch: 601019

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

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

Lab Sample ID: LCS 500-600086/2-A
Matrix: Water
Analysis Batch: 600933

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.500	0.487		mg/L		97	80 - 120
Arsenic	0.100	0.0948		mg/L		95	80 - 120
Barium	2.00	2.03		mg/L		102	80 - 120
Boron	1.00	0.998		mg/L		100	80 - 120
Cadmium	0.0500	0.0493		mg/L		99	80 - 120
Calcium	10.0	8.90		mg/L		89	80 - 120

Eurofins TestAmerica, Chicago

QC Sample Results

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

Job ID: 500-199296-1

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

Lab Sample ID: LCS 500-600086/2-A
Matrix: Water
Analysis Batch: 600933

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

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

Lab Sample ID: LCS 500-600086/2-A
Matrix: Water
Analysis Batch: 601019

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

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

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 500-601691/12-A
Matrix: Water
Analysis Batch: 601923

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 601691

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

Lab Sample ID: LCS 500-601691/13-A
Matrix: Water
Analysis Batch: 601923

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 601691

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

Lab Sample ID: LCSD 500-601691/14-A
Matrix: Water
Analysis Batch: 601923

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 601691

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

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

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

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

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

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

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

Eurofins TestAmerica, Chicago

QC Sample Results

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

Job ID: 500-199296-1

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

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

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

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

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

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

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10		mg/L			05/22/21 18:49	1

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

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	250	242		mg/L		97	80 - 120

Method: SM 4500 Cl- E - Chloride, Total

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

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<2.0		2.0		mg/L			06/07/21 10:42	1

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

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	20.0	17.5		mg/L		87	85 - 115

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

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

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

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

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

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

QC Sample Results

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

Job ID: 500-199296-1

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 500-602163/31
 Matrix: Water
 Analysis Batch: 602163

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.10		0.10		mg/L			06/03/21 10:26	1

Lab Sample ID: LCS 500-602163/32
 Matrix: Water
 Analysis Batch: 602163

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	10.0	11.3		mg/L		113	80 - 120

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 500-602680/15
 Matrix: Water
 Analysis Batch: 602680

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	<5.0		5.0		mg/L			06/07/21 12:34	1

Lab Sample ID: 500-199296-1 MS
 Matrix: Water
 Analysis Batch: 602742

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

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

Lab Sample ID: 500-199296-1 MSD
 Matrix: Water
 Analysis Batch: 602742

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	160		20.0	175	4	mg/L		77	75 - 125	0	20

Eurofins TestAmerica, Chicago

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

Chain of Custody Record

Client Information		Sampler: <i>Erin Bulson</i>		Lab PM: Mockler, Diana J		Carrier Tracking No(s)		COC No: 500-91207-40679 1							
Client Contact: Erin Bulson		Phone: <i>815 212 278 1621</i>		E-Mail: Diana Mockler@Eurofinset.com		State of Origin		Page: Page 1 of 1							
Company: KPRG and Associates, Inc.		PWSID		Analysis Requested						Job #: <i>500-199296</i>					
Address: 14665 West Lisbon Road, Suite 1A		Due Date Requested		Field Filtered Sample (Yes or No) * Perform MS/MSD (Yes or No) 6010C, 6020A, 7470A 2540C, 4500_F_C, SM4500_CL_E, SM4500_SO4_E 903.0, 904.0						Total Number of Containers 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: 500-199296 COC		PO #: 4502042860													
Email: ernb@kprginc.com		WFO#:													
Project Name: Joliet #29 CCR/ Event Desc. Quarterly MWG Joliet #29 CCR		Project #: 50011568													
Site: Illinois		SSOW#:													
Sample Identification		Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)							Special Instructions/Note.			
				Preservation Code											
MW-03					Water										
MW-04					Water										
MW-05		<i>5-17</i>	<i>1200</i>		Water	X	X	X							
MW-10					Water										
Duplicate					Water										
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						Special Instructions/QC Requirements.					
Empty Kit Relinquished by		Date		Time		Method of Shipment:									
Relinquished by: <i>Erin Bulson</i>		Date/Time: <i>5-17 4:20pm</i>		Company: <i>KPRG</i>		Received by: <i>[Signature]</i>		Date/Time: <i>5/18/21 1200</i>		Company: <i>[Signature]</i>					
Relinquished by: <i>[Signature]</i>		Date/Time: <i>5/18/20 1300</i>		Company: <i>JA</i>		Received by: <i>[Signature]</i>		Date/Time: <i>5/18/21 1300</i>		Company: <i>ETA-CH</i>					
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: <i>5.5</i>											



Eurofins TestAmerica, Chicago

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

Chain of Custody Record

eurofins Environmental Testing America

Client Information		Sampler		Lab PM		Carrier Tracking No(s)		COC No			
Client Contact Erin Bulson		Phone		E-Mail Diana Mockler@Eurofinset.com		State of Origin		Page Page 1 of 1			
Company KPRG and Associates, Inc.		PWSID		Analysis Requested		Job #		500-199296			
Address 14665 West Lisbon Road Suite 1A		Due Date Requested		Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No) 6010C, 6020A, 7470A 2640C, 4500_F_C, SM4500_CL_E, SM4600_S04_E 903.0, 904.0		Total Number of Containers		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 500-199296 COC		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		I Ice U Acetone			
Project Name Joliet #29 CCR/ Event Desc. Quarterly MWG Joliet #29 CCR		Project # 50011568		J DI Water V - MCAA		K EDTA W pH 4-5		L EDA Z - other (specify)			
Site Illinois		SSOW#		Other:							
Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Total Number of Containers	Special Instructions/Note:		
				Preservation Code:							
2 MW-03		5-18	1155		Water	X	X	X			
3 MW-04		5-18	1253		Water						
4 MW-05		-	-		Water						
5 MW-10		5-18			Water						
5 Duplicate		5-18	-		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>g Bulson</i>		Date/Time 5-18 4PM		Company KPRG		Received by <i>John V...</i>		Date/Time 5/19/21 1040		Company ETA	
Relinquished by <i>John V...</i>		Date/Time 5/19/21 1133		Company ETA		Received by <i>John V...</i>		Date/Time 5/19/21 1133		Company ETA	
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. 6.0 36qt. 5.9 48qt.							



Login Sample Receipt Checklist

Client: Midwest Generation EME LLC

Job Number: 500-199296-1

Login Number: 199296

List Source: Eurofins TestAmerica, Chicago

List Number: 1

Creator: Scott, Sherri L

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	5.5,6.0,5.9
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <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	



Lab Chronicle

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

Job ID: 500-199296-1

Client Sample ID: MW-05
Date Collected: 05/17/21 12:06
Date Received: 05/18/21 13:00

Lab Sample ID: 500-199296-1
Matrix: Water

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

Client Sample ID: MW-03
Date Collected: 05/18/21 11:55
Date Received: 05/19/21 11:33

Lab Sample ID: 500-199296-2
Matrix: Water

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

Client Sample ID: MW-04
Date Collected: 05/18/21 12:53
Date Received: 05/19/21 11:33

Lab Sample ID: 500-199296-3
Matrix: Water

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

Eurofins TestAmerica, Chicago

Lab Chronicle

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

Job ID: 500-199296-1

Client Sample ID: MW-04

Lab Sample ID: 500-199296-3

Date Collected: 05/18/21 12:53

Matrix: Water

Date Received: 05/19/21 11:33

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

Client Sample ID: MW-10

Lab Sample ID: 500-199296-4

Date Collected: 05/18/21 00:00

Matrix: Water

Date Received: 05/19/21 11:33

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

Client Sample ID: Duplicate

Lab Sample ID: 500-199296-5

Date Collected: 05/18/21 00:00

Matrix: Water

Date Received: 05/19/21 11:33

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

Laboratory References:

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

ANALYTICAL REPORT

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

Laboratory Job ID: 500-199296-2
Client Project/Site: Joliet #29 CCR

For:

Midwest Generation EME LLC
1800 Channahon Road
Joliet, Illinois 60436

Attn: DeAndre Cooley



*Authorized for release by:
7/19/2021 1:41:33 PM*

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

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

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

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Case Narrative

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

Job ID: 500-199296-2

Job ID: 500-199296-2

Laboratory: Eurofins TestAmerica, Chicago

Narrative

Job Narrative 500-199296-2

Comments

No additional comments.

Receipt

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

RAD

Method 903.0: Radium-226 Batch 511584

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-05 (500-199296-1), MW-03 (500-199296-2), MW-04 (500-199296-3), (LCS 160-511584/1-A), (MB 160-511584/24-A) and (500-199296-E-1-A DU)

Methods 903.0, 9315: Radium-226 prep batch 160-515419:

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-10 (500-199296-4), Duplicate (500-199296-5), (LCS 160-515419/1-A), (MB 160-515419/23-A) and (500-199296-D-4-A DU)

Method 904.0: Radium-228 Batch 511594

The following sample(s) did not meet the requested limit (RL) due to the reduced sample volume attributed to the presence of matrix interferences. The method blank (MB) and laboratory control sample (LCS) were also run at the reduced aliquot following NELAC guidance to match the nominal volume of client samples in the prep batch. The data have been reported with this narrative. (MB 160-511594/24-A)

Method 904.0: Radium-228 Batch 511594

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-05 (500-199296-1), MW-03 (500-199296-2), MW-04 (500-199296-3), (LCS 160-511594/1-A), (MB 160-511594/24-A) and (500-199296-E-1-B DU)

Methods 904.0, 9320: Radium228 prep batch 160-511755

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-10 (500-199296-4), Duplicate (500-199296-5), (LCS 160-511755/1-A), (MB 160-511755/23-A) and (500-199296-E-5-C DU)

Methods 904.0, 9320: Radium228 prep batch 160-511755

The carrier recovery is outside acceptance limit for the laboratory control sample (LCS). The LCS spike recoveries are within control limits, which demonstrates acceptable sample preparation and instrument performance. As such, this was an apparent anomaly in the sample preparation, isolated to the LCS, which is not indicative of the entire batch. (LCS 160-511755/1-A)

Method PrecSep_0: Radium 228 Prep Batch 160-511594:

Case Narrative

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

Job ID: 500-199296-2

Job ID: 500-199296-2 (Continued)

Laboratory: Eurofins TestAmerica, Chicago (Continued)

During the in-growth process, the following samples needed to be filtered due to sediment present in the sample: MW-05 (500-199296-1), MW-03 (500-199296-2) and (500-199296-E-1 DU). This is an indicator of matrix interference.

Method PrecSep_0: Ra-228 Batch 160-511755:

During the in-growth process, the following samples needed to be filtered due to sediment present in the sample: (500-199296-E-5 DU). This is an indicator of matrix interference.

Method PrecSep-21: Radium 226 Prep Batch 160-511584:

During the in-growth process, the following samples needed to be filtered due to sediment present in the sample: MW-05 (500-199296-1), MW-03 (500-199296-2) and (500-199296-E-1 DU). This is an indicator of matrix interference.

Method PrecSep-21: Ra-226 Batch 160-511750:

During the in-growth process, the following samples needed to be filtered due to sediment present in the sample: (500-199296-E-5 DU). This is an indicator of matrix interference.

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: 500-199296-2

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: 500-199296-2

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

- 1
- 2
- 3
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Client Sample Results

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

Job ID: 500-199296-2

Client Sample ID: MW-05

Lab Sample ID: 500-199296-1

Date Collected: 05/17/21 12:06

Matrix: Water

Date Received: 05/18/21 13:00

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0437	U	0.156	0.156	1.00	0.294	pCi/L	05/25/21 11:28	06/17/21 22:27	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	69.8		40 - 110					05/25/21 11:28	06/17/21 22:27	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	0.248	U	0.357	0.357	1.00	0.597	pCi/L	05/25/21 13:45	06/16/21 14:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	69.8		40 - 110					05/25/21 13:45	06/16/21 14:05	1
Y Carrier	87.1		40 - 110					05/25/21 13:45	06/16/21 14:05	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	0.292	U	0.390	0.390	5.00	0.597	pCi/L		07/18/21 21:42	1

Client Sample Results

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

Job ID: 500-199296-2

Client Sample ID: MW-03
Date Collected: 05/18/21 11:55
Date Received: 05/19/21 11:33

Lab Sample ID: 500-199296-2
Matrix: Water

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.259	U	0.191	0.193	1.00	0.278	pCi/L	05/25/21 11:28	06/17/21 22:27	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	74.5		40 - 110					05/25/21 11:28	06/17/21 22:27	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	0.840		0.358	0.366	1.00	0.508	pCi/L	05/25/21 13:45	06/16/21 13:59	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	74.5		40 - 110					05/25/21 13:45	06/16/21 13:59	1
Y Carrier	87.1		40 - 110					05/25/21 13:45	06/16/21 13:59	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	1.10		0.406	0.414	5.00	0.508	pCi/L		07/18/21 21:42	1

Client Sample Results

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

Job ID: 500-199296-2

Client Sample ID: MW-04

Lab Sample ID: 500-199296-3

Date Collected: 05/18/21 12:53

Matrix: Water

Date Received: 05/19/21 11:33

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0777	U	0.138	0.138	1.00	0.242	pCi/L	05/25/21 11:28	06/17/21 22:29	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.0		40 - 110					05/25/21 11:28	06/17/21 22:29	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	0.299	U	0.276	0.277	1.00	0.445	pCi/L	05/25/21 13:45	06/16/21 13:59	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.0		40 - 110					05/25/21 13:45	06/16/21 13:59	1
Y Carrier	88.6		40 - 110					05/25/21 13:45	06/16/21 13:59	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	0.377	U	0.309	0.309	5.00	0.445	pCi/L		07/18/21 21:42	1

Client Sample Results

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

Job ID: 500-199296-2

Client Sample ID: MW-10
Date Collected: 05/18/21 00:00
Date Received: 05/19/21 11:33

Lab Sample ID: 500-199296-4
Matrix: Water

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.217		0.0956	0.0975	1.00	0.113	pCi/L	06/22/21 10:46	07/15/21 13:27	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.7		40 - 110					06/22/21 10:46	07/15/21 13:27	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	-0.117	U	0.255	0.256	1.00	0.480	pCi/L	05/26/21 13:25	06/17/21 09:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	78.2		40 - 110					05/26/21 13:25	06/17/21 09:21	1
Y Carrier	83.7		40 - 110					05/26/21 13:25	06/17/21 09:21	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	0.100	U	0.272	0.274	5.00	0.480	pCi/L		07/18/21 21:42	1

Client Sample Results

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

Job ID: 500-199296-2

Client Sample ID: Duplicate
 Date Collected: 05/18/21 00:00
 Date Received: 05/19/21 11:33

Lab Sample ID: 500-199296-5
 Matrix: Water

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.138		0.0852	0.0861	1.00	0.118	pCi/L	06/22/21 10:46	07/15/21 13:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.4		40 - 110					06/22/21 10:46	07/15/21 13:21	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	0.0841	U	0.286	0.286	1.00	0.496	pCi/L	05/26/21 13:25	06/17/21 09:22	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	81.0		40 - 110					05/26/21 13:25	06/17/21 09:22	1
Y Carrier	86.0		40 - 110					05/26/21 13:25	06/17/21 09:22	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	0.222	U	0.298	0.299	5.00	0.496	pCi/L		07/18/21 21:42	1

Definitions/Glossary

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

Job ID: 500-199296-2

Qualifiers

Rad

Qualifier	Qualifier Description
G	The Sample MDC is greater than the requested RL.
U	Result is less than the sample detection limit.
X	Carrier is outside acceptance limits.

Glossary

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

QC Association Summary

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

Job ID: 500-199296-2

Rad

Prep Batch: 511584

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-199296-1	MW-05	Total/NA	Water	PrecSep-21	
500-199296-2	MW-03	Total/NA	Water	PrecSep-21	
500-199296-3	MW-04	Total/NA	Water	PrecSep-21	
MB 160-511584/24-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-511584/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
500-199296-1 DU	MW-05	Total/NA	Water	PrecSep-21	

Prep Batch: 511594

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-199296-1	MW-05	Total/NA	Water	PrecSep_0	
500-199296-2	MW-03	Total/NA	Water	PrecSep_0	
500-199296-3	MW-04	Total/NA	Water	PrecSep_0	
MB 160-511594/24-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-511594/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
500-199296-1 DU	MW-05	Total/NA	Water	PrecSep_0	

Prep Batch: 511755

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-199296-4	MW-10	Total/NA	Water	PrecSep_0	
500-199296-5	Duplicate	Total/NA	Water	PrecSep_0	
MB 160-511755/23-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-511755/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
500-199296-5 DU	Duplicate	Total/NA	Water	PrecSep_0	

Prep Batch: 515419

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-199296-4	MW-10	Total/NA	Water	PrecSep-21	
500-199296-5	Duplicate	Total/NA	Water	PrecSep-21	
MB 160-515419/23-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-515419/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
500-199296-4 DU	MW-10	Total/NA	Water	PrecSep-21	

QC Sample Results

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

Job ID: 500-199296-2

Method: 903.0 - Radium-226 (GFPC)

Lab Sample ID: MB 160-511584/24-A
Matrix: Water
Analysis Batch: 514735

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 511584

Analyte	MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	MB Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.1440	U	0.265	0.266	1.00	0.473	pCi/L	05/25/21 11:28	06/17/21 22:30	1
Carrier	MB		Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	%Yield	MB Qualifier	40 - 110					05/25/21 11:28	06/17/21 22:30	1
	47.7									

Lab Sample ID: LCS 160-511584/1-A
Matrix: Water
Analysis Batch: 514698

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 511584

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits
				Uncert. (2σ+/-)					
Radium-226	15.1	12.97		1.57	1.00	0.306	pCi/L	86	75 - 125
Carrier	LCS	LCS	Limits						
Ba Carrier	%Yield	Qualifier	40 - 110						
	85.7								

Lab Sample ID: 500-199296-1 DU
Matrix: Water
Analysis Batch: 514718

Client Sample ID: MW-05
Prep Type: Total/NA
Prep Batch: 511584

Analyte	Sample		DU		Total	RL	MDC	Unit	RER	RER Limit
	Result	Sample Qual	Result	DU Qual	Uncert. (2σ+/-)					
Radium-226	0.0437	U	0.1412	U	0.169	1.00	0.276	pCi/L	0.30	1
Carrier	DU	DU	Limits							
Ba Carrier	%Yield	Qualifier	40 - 110							
	75.4									

Lab Sample ID: MB 160-515419/23-A
Matrix: Water
Analysis Batch: 518711

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 515419

Analyte	MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	MB Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.03898	U	0.0627	0.0628	1.00	0.109	pCi/L	06/22/21 10:46	07/15/21 16:54	1
Carrier	MB		Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	%Yield	MB Qualifier	40 - 110					06/22/21 10:46	07/15/21 16:54	1
	78.3									

Lab Sample ID: LCS 160-515419/1-A
Matrix: Water
Analysis Batch: 518711

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 515419

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits
				Uncert. (2σ+/-)					
Radium-226	11.3	11.25		1.17	1.00	0.130	pCi/L	99	75 - 125

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QC Sample Results

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

Job ID: 500-199296-2

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

Lab Sample ID: LCS 160-515419/1-A
Matrix: Water
Analysis Batch: 518711

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 515419

	LCS	LCS	
Carrier	%Yield	Qualifier	Limits
Ba Carrier	74.7		40 - 110

Lab Sample ID: 500-199296-4 DU
Matrix: Water
Analysis Batch: 518711

Client Sample ID: MW-10
Prep Type: Total/NA
Prep Batch: 515419

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER
										Limit
Radium-226	0.217		0.1231		0.0860	1.00	0.123	pCi/L	0.51	1

	DU	DU	
Carrier	%Yield	Qualifier	Limits
Ba Carrier	84.0		40 - 110

Method: 904.0 - Radium-228 (GFPC)

Lab Sample ID: MB 160-511594/24-A
Matrix: Water
Analysis Batch: 514499

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 511594

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared		Analyzed		Dil Fac
								Time	Time	Time	Time	
Radium-228	0.1671	U G	0.667	0.667	1.00	1.16	pCi/L	05/25/21 13:45	06/16/21 14:00			1

	MB	MB		Prepared	Analyzed	Dil Fac
Carrier	%Yield	Qualifier	Limits	Time	Time	
Ba Carrier	47.7		40 - 110	05/25/21 13:45	06/16/21 14:00	1
Y Carrier	88.6		40 - 110	05/25/21 13:45	06/16/21 14:00	1

Lab Sample ID: LCS 160-511594/1-A
Matrix: Water
Analysis Batch: 514499

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 511594

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	
									Time	Time
Radium-228	12.8	13.56		1.62	1.00	0.609	pCi/L	106	75 - 125	

	LCS	LCS	
Carrier	%Yield	Qualifier	Limits
Ba Carrier	85.7		40 - 110
Y Carrier	80.7		40 - 110

Lab Sample ID: 500-199296-1 DU
Matrix: Water
Analysis Batch: 514553

Client Sample ID: MW-05
Prep Type: Total/NA
Prep Batch: 511594

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER
										Limit
Radium-228	0.248	U	0.6353		0.335	1.00	0.484	pCi/L	0.56	1

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QC Sample Results

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

Job ID: 500-199296-2

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

Lab Sample ID: 500-199296-1 DU
Matrix: Water
Analysis Batch: 514553

Client Sample ID: MW-05
Prep Type: Total/NA
Prep Batch: 511594

	DU	DU	
Carrier	%Yield	Qualifier	Limits
Ba Carrier	75.4		40 - 110
Y Carrier	86.7		40 - 110

Lab Sample ID: MB 160-511755/23-A
Matrix: Water
Analysis Batch: 514718

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 511755

Analyte	MB MB		Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier								
Radium-228	0.2218	U	0.323	0.323	1.00	0.541	pCi/L	05/26/21 13:25	06/17/21 09:18	1

	MB	MB		Prepared	Analyzed	Dil Fac
Carrier	%Yield	Qualifier	Limits			
Ba Carrier	66.4		40 - 110	05/26/21 13:25	06/17/21 09:18	1
Y Carrier	87.5		40 - 110	05/26/21 13:25	06/17/21 09:18	1

Lab Sample ID: LCS 160-511755/1-A
Matrix: Water
Analysis Batch: 514698

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 511755

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits

	LCS	LCS	
Carrier	%Yield	Qualifier	Limits
Ba Carrier	11.5	X	40 - 110
Y Carrier	83.4		40 - 110

Lab Sample ID: 500-199296-5 DU
Matrix: Water
Analysis Batch: 514698

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 511755

Analyte	Sample Sample		DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
	Result	Qual								
Radium-228	0.0841	U	0.5136		0.305	1.00	0.454	pCi/L	0.73	1

	DU	DU	
Carrier	%Yield	Qualifier	Limits
Ba Carrier	77.6		40 - 110
Y Carrier	84.5		40 - 110

Eurofins TestAmerica, Chicago

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

Chain of Custody Record



Environment Testing
 America

Client Information		Sampler: <i>Enn Bulson</i>		Lab PM: Mockler, Diana J		Carrier Tracking No(s)		COC No: 500-91207-40679 1					
Client Contact: Enn Bulson		Phone: <i>815 212 278 1621</i>		E-Mail: Diana Mockler@Eurofinset.com		State of Origin		Page: Page 1 of 1					
Company: KPRG and Associates, Inc.		PWSID		Analysis Requested						Job #: <i>500-199296</i>			
Address: 14665 West Lisbon Road, Suite 1A		Due Date Requested		Total Number of Containers Perform MS/MSD (Yes or No) 6010C, 6020A, 7470A 2540C, 4500_F_C, SM4500_CL_E, SM4500_SO4_E 903.0, 904.0						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)			
City: Brookfield		TAT Requested (days)											
State Zip: WI, 53005		Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No											
Phone: 500-199296 COC		PO #: 4502042860											
Email: ennb@kprginc.com		WFO#:											
Project Name: Joliet #29 CCR/ Event Desc. Quarterly MWG Joliet #29 CCR		Project #: 50011568		Field Filtered Sample (Yes or No)						Other:			
Site: Illinois		SSOW#:											
Sample Identification		Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Preservation Code: <input checked="" type="checkbox"/> D <input checked="" type="checkbox"/> N <input checked="" type="checkbox"/> D						Special Instructions/Note.	
MW-03					Water								
MW-04					Water								
MW-05		<i>5-17</i>	<i>1200</i>		Water	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>							
MW-10					Water								
Duplicate					Water								
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									
Special Instructions/QC Requirements.													
Empty Kit Relinquished by		Date		Time		Method of Shipment:							
Relinquished by: <i>Enn Bulson</i>		Date/Time: <i>5-17 4:20pm</i>		Company: <i>KPRG</i>		Received by: <i>[Signature]</i>		Date/Time: <i>5/18/21 1200</i>		Company: <i>[Signature]</i>			
Relinquished by: <i>[Signature]</i>		Date/Time: <i>5/18/21 1300</i>		Company: <i>JA</i>		Received by: <i>[Signature]</i>		Date/Time: <i>5/18/21 1300</i>		Company: <i>ETA-CH</i>			
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: <i>5.5</i>									



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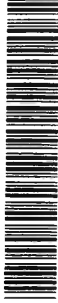
Chain of Custody Record

Client Information		Sampler	Lab PM	Carrier Tracking No(s)	COC No
Client Contact: Erin Bulson		Phone	Mockler Diana J		500-91207-40679 1
Company: KPRG and Associates, Inc.		PWSID:	E-Mail: Diana Mockler@Eurofinset.com	State of Origin	Page 1 of 1
Address: 14665 West Lisbon Road Suite 1A City: Brookfield State/Zip: WI 53005 Phone: 500-199296 COC		Due Date Requested	Analysis Requested		
Email: erinb@kprginc.com		TAT Requested (days)	Job #: 500-199296		
Project Name: Joliet #29 CCR/ Event Desc. Quarterly MWG Joliet #29 CCR		Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No	Preservation Codes		
Site: Illinois		PO #: 4502042860	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)		
Project #: 50011568		WO #:	Other:		
SSOW#:		Total Number of Containers			Special Instructions/Note:
Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	
Preservation Code:		Field Filtered Sample (Yes or No)			
MW-03		5-18	1155	Water	6010C, 6020A, 7470A
MW-04		5-18	1253	Water	2640C, 4500_F_C, SM4500_CL_E, SM4500_SO4_E
MW-05		-	-	Water	903.0, 904.0
MW-10		5-18	-	Water	
Duplicate		5-18	-	Water	
Possible Hazard Identification		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)			
<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: 5-18 4PM	Company: <i>[Signature]</i>	Received by: <i>[Signature]</i>	Date/Time: 5/19/21 1040
Relinquished by: <i>[Signature]</i>		Date/Time: 5/19/21 1133	Company: <i>[Signature]</i>	Received by: <i>[Signature]</i>	Date/Time: 5/19/21 1133
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.
					6.0 36qt. 5.9 48qt.

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Chain of Custody Record



Client Information (Sub Contract Lab)		Lab PM: Mockler, Diana J		Carrier Tracking No(s):		COC No: 500-148770-1	
Shipping/Receiving		E-Mail: Diana.Mockler@Eurofins.com		State of Origin: Illinois		Page: Page 1 of 1	
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): NELAP - Illinois		Job #:		500-199296-1	
Address: 13715 Rider Trail North.		Due Date Requested: 6/8/2021		Analysis Requested		Preservation Codes:	
City: Earth City		TAT Requested (days):		Field Filtered Sample (Yes or No)		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 Other:	
State, Zip: MO, 63045		PO #:		Perform MS/MSD (Yes or No)		M - Hexane N - None O - AshAO2 P - Na2O4S Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)	
Phone: 314-298-8566(Tel) 314-298-8757(Fax)		WO #:		903.0/PreSep_21 Standard Target List		Total Number of Containers	
Email:		Project #: 500T1568		904.0/PreSep_0 Standard Target List		3	
Site: NRG Midwest Generation LSQ Joliet#29 CCR		SSOW#:		Ra226Ra228_GFPc		Special Instructions/Note:	
Sample Identification - Client ID (Lab ID)		Sample Date		Sample Time		Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume;	
MW-05 (500-199296-1)		5/17/21		12:06 Central			
Sample Type (C=Comp, G=grab)		Matrix (W=water, S=solid, O=organic, B=Trace, A=As)		Preservation Code:			
G=grab		Water					

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/matrix, 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) _____
 Primary Deliverable Rank: 2
 Empty Kit Relinquished by: _____ Date: _____
 Relinquished by: *[Signature]* Date: 5/18/21
 Relinquished by: *[Signature]* Date: 5/18/21
 Relinquished by: *[Signature]* Date: 5/18/21
 Custody Seals Intact: Yes No
 Custody Seal No.: _____
 Cooler Temperature(s) °C and Other Remarks: _____

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months
 Special Instructions/QC Requirements: _____

Received by: **FED EX**
 Received by: *[Signature]*
 Date/Time: 5/19/21 10:15
 Company: **EFA STL**



Chain of Custody Record



Client Information (Sub Contract Lab)		Lab PM: Mockler, Diana J		Carrier Tracking No(s): 500-148798-1							
Shipping/Receiving		E-Mail: Diana.Mockler@Eurofins.com		State of Origin: Illinois							
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): NELAP - Illinois		Job #: 500-199296-1							
Address: 13715 Rider Trail North,		Due Date Requested: 6/9/2021		Preservation Codes:							
City: Earth City		TAT Requested (days):		A - HCL M - Hexane N - None O - AsNaO2 P - Na2OAS Q - Na2SO3 R - H2SO4 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 X - EDTA Z - other (specify)							
State, Zip: MO, 63045		PO #:		Other:							
Phone: 314-298-8566(Tel) 314-298-8757(Fax)		WO #:									
Email:		Project #: 50011568									
Site: NRG Midwest Generation LSQ Joliet#29 CCR		SSOW#:									
Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Solid, Overstake, BT=Issue, AA=)	Field Filled Sample (Yes or No)	Perform MS/MSD (Yes or No)	903.0/PreSep_21 Standard Target List	904.0/PreSep_0 Standard Target List	Ra226Ra228 GFPC	Total Number of Containers	Special Instructions/Note:
MW-03 (500-199296-2)	5/18/21	11:55 Central	Water	Water	X	X	X	X	X	3	Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume;
MW-04 (500-199296-3)	5/18/21	12:53 Central	Water	Water	X	X	X	X	X	3	Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume;
MW-10 (500-199296-4)	5/18/21	Central	Water	Water	X	X	X	X	X	3	Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume;
Duplicate (500-199296-5)	5/18/21	Central	Water	Water	X	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/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.</p>											
Possible Hazard Identification											
Unconfirmed											
Deliverable Requested: I, II, III, IV, Other (specify)											
Primary Deliverable Rank: 2											
Empty Kit Relinquished by:											
Date: 5/19/21											
Company: EFA											
Date/Time: 1500											
Company: EFA											
Date/Time: 5/19/21 10:10											
Company: EFA											
Date/Time: 5/19/21 10:10											
Company: EFA											
Custody Seals Intact: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No											
Custody Seal No.:											
Cooler Temperature(s) °C and Other Remarks:											



Login Sample Receipt Checklist

Client: Midwest Generation EME LLC

Job Number: 500-199296-2

Login Number: 199296

List Source: Eurofins TestAmerica, Chicago

List Number: 1

Creator: Scott, Sherri L

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	5.5,6.0,5.9
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <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: 500-199296-2

Login Number: 199296

List Number: 2

Creator: Worthington, Sierra M

List Source: Eurofins TestAmerica, St. Louis

List Creation: 05/19/21 12:41 PM

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	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	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: 500-199296-2

Login Number: 199296

List Number: 3

Creator: Mazariegos, Leonel A

List Source: Eurofins TestAmerica, St. Louis

List Creation: 05/20/21 12:10 PM

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.	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 $<6\text{mm}$ (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: 500-199296-2

Client Sample ID: MW-05
Date Collected: 05/17/21 12:06
Date Received: 05/18/21 13:00

Lab Sample ID: 500-199296-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			511584	05/25/21 11:28	MJ	TAL SL
Total/NA	Analysis	903.0		1	514718	06/17/21 22:27	ANW	TAL SL
Total/NA	Prep	PrecSep_0			511594	05/25/21 13:45	RBR	TAL SL
Total/NA	Analysis	904.0		1	514553	06/16/21 14:05	ANW	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	519144	07/18/21 21:42	GRW	TAL SL

Client Sample ID: MW-03
Date Collected: 05/18/21 11:55
Date Received: 05/19/21 11:33

Lab Sample ID: 500-199296-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			511584	05/25/21 11:28	MJ	TAL SL
Total/NA	Analysis	903.0		1	514718	06/17/21 22:27	ANW	TAL SL
Total/NA	Prep	PrecSep_0			511594	05/25/21 13:45	RBR	TAL SL
Total/NA	Analysis	904.0		1	514499	06/16/21 13:59	ANW	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	519144	07/18/21 21:42	GRW	TAL SL

Client Sample ID: MW-04
Date Collected: 05/18/21 12:53
Date Received: 05/19/21 11:33

Lab Sample ID: 500-199296-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			511584	05/25/21 11:28	MJ	TAL SL
Total/NA	Analysis	903.0		1	514735	06/17/21 22:29	ANW	TAL SL
Total/NA	Prep	PrecSep_0			511594	05/25/21 13:45	RBR	TAL SL
Total/NA	Analysis	904.0		1	514499	06/16/21 13:59	ANW	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	519144	07/18/21 21:42	GRW	TAL SL

Client Sample ID: MW-10
Date Collected: 05/18/21 00:00
Date Received: 05/19/21 11:33

Lab Sample ID: 500-199296-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			515419	06/22/21 10:46	MJ	TAL SL
Total/NA	Analysis	903.0		1	518711	07/15/21 13:27	JCB	TAL SL
Total/NA	Prep	PrecSep_0			511755	05/26/21 13:25	MJ	TAL SL
Total/NA	Analysis	904.0		1	514698	06/17/21 09:21	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	519144	07/18/21 21:42	GRW	TAL SL

Lab Chronicle

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

Job ID: 500-199296-2

Client Sample ID: Duplicate

Lab Sample ID: 500-199296-5

Date Collected: 05/18/21 00:00

Matrix: Water

Date Received: 05/19/21 11:33

<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			515419	06/22/21 10:46	MJ	TAL SL
Total/NA	Analysis	903.0		1	518711	07/15/21 13:21	JCB	TAL SL
Total/NA	Prep	PrecSep_0			511755	05/26/21 13:25	MJ	TAL SL
Total/NA	Analysis	904.0		1	514698	06/17/21 09:22	SCB	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	519144	07/18/21 21:42	GRW	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: 500-199296-2

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)	
500-199296-1	MW-05	69.8	
500-199296-1 DU	MW-05	75.4	
500-199296-2	MW-03	74.5	
500-199296-3	MW-04	85.0	
500-199296-4	MW-10	83.7	
500-199296-4 DU	MW-10	84.0	
500-199296-5	Duplicate	86.4	
LCS 160-511584/1-A	Lab Control Sample	85.7	
LCS 160-515419/1-A	Lab Control Sample	74.7	
MB 160-511584/24-A	Method Blank	47.7	
MB 160-515419/23-A	Method Blank	78.3	

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)
500-199296-1	MW-05	69.8	87.1
500-199296-1 DU	MW-05	75.4	86.7
500-199296-2	MW-03	74.5	87.1
500-199296-3	MW-04	85.0	88.6
500-199296-4	MW-10	78.2	83.7
500-199296-5	Duplicate	81.0	86.0
500-199296-5 DU	Duplicate	77.6	84.5
LCS 160-511594/1-A	Lab Control Sample	85.7	80.7
LCS 160-511755/1-A	Lab Control Sample	11.5 X	83.4
MB 160-511594/24-A	Method Blank	47.7	88.6
MB 160-511755/23-A	Method Blank	66.4	87.5

Tracer/Carrier Legend

Ba = Ba Carrier

Y = Y Carrier