

DATA SUMMARY POSTING

Station: Midwest Generation Waukegan Generating Station

Regulated Unit(s): East Pond (IEPA ID No. W0971900021-01)
West Pond (IEPA ID No. W0971900021-02)

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 3rd quarter 2022 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 on 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 2. Groundwater Turbidity - Midwest Generation, LLC, Waukegan Station, Waukegan, IL.

Well	Date	Turbidity (NTU)
MW-09	3/3/2021	4.70
	3/30/2021	10.15
	5/6/2021	3.44
	5/27/2021	12.41
	6/18/2021	27.7
	7/8/2021	28.77
	8/19/2021	77.36
	9/29/2021	18.41
	11/4/2021	12.66
	2/10/2022	34.39
	5/24/2022	170.87
8/23/2022	34.9	
MW-11	3/2/2021	2.20
	3/30/2021	6.08
	5/6/2021	2.34
	5/27/2021	2.69
	6/18/2021	13.7
	7/8/2021	4.71
	8/19/2021	139.34
	9/29/2021	402.9
	11/4/2021	152.7
	2/10/2022	13.8
	5/24/2022	2.18
8/23/2022	3.17	
MW-14	3/2/2021	2035
	3/30/2021	151.5
	5/6/2021	901.4
	5/27/2021	2385.61
	6/18/2021	69.25
	7/8/2021	73.18
	8/19/2021	77.04
	9/29/2021	8.42
	11/4/2021	7.42
	2/10/2022	81.72
	5/24/2022	43.52
8/23/2022	24.76	
MW-01	3/1/2021	0.59
	3/30/2021	5.72
	5/5/2021	1.42
	5/27/2021	2.02
	6/18/2021	2.33
	7/8/2021	3.60
	8/18/2021	2.33
	9/29/2021	3.03
	11/3/2021	3.05
	2/8/2022	4.60
	5/23/2022	2.92
8/22/2022	1.31	

Table 2. Groundwater Turbidity - Midwest Generation, LLC, Waukegan Station, Waukegan, IL.

Well	Date	Turbidity (NTU)
MW-02	3/1/2021	0.69
	3/30/2021	5.66
	5/5/2021	1.65
	5/27/2021	2.95
	6/18/2021	2.71
	7/8/2021	4.20
	8/18/2021	9.03
	9/29/2021	3.42
	11/3/2021	4.05
	2/8/2022	13.4
	5/23/2022	30.54
8/22/2022	25.43	
MW-03	3/1/2021	0.75
	3/30/2021	5.73
	5/5/2021	1.71
	5/27/2021	2.02
	6/18/2021	2.56
	7/8/2021	3.74
	8/18/2021	2.60
	9/29/2021	2.82
	11/3/2021	3.26
	2/8/2022	8.27
	5/23/2022	4.11
8/22/2022	1.91	
MW-04	3/1/2021	1.30
	3/30/2021	6.21
	5/5/2021	1.77
	5/27/2021	2.73
	6/18/2021	3.69
	7/8/2021	5.36
	8/18/2021	40.61
	9/29/2021	3.48
	11/3/2021	4.26
	2/8/2022	13.32
	5/23/2022	28.94
8/22/2022	2.57	
MW-16	3/1/2021	0.77
	3/30/2021	6.07
	5/6/2021	1.63
	5/27/2021	2.00
	6/18/2021	2.59
	7/8/2021	3.58
	8/18/2021	3.22
	9/29/2021	6.05
	11/4/2021	4.00
	2/8/2022	21.6
	5/23/2022	11.75
8/22/2022	3.54	

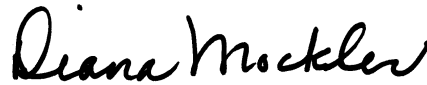
ANALYTICAL REPORT

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

Laboratory Job ID: 500-221195-1
Client Project/Site: Waukegan CCR

For:
KPRG and Associates, Inc.
14665 West Lisbon Road,
Suite 1A
Brookfield, Wisconsin 53005

Attn: Richard Gnat



Authorized for release by:
9/23/2022 8:19:04 AM

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

Diana.Mockler@et.eurofinsus.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: KPRG and Associates, Inc.
Project/Site: Waukegan CCR

Job ID: 500-221195-1

Job ID: 500-221195-1

Laboratory: Eurofins Chicago

Narrative

**Job Narrative
500-221195-1**

Comments

No additional comments.

Receipt

The samples were received on 8/23/2022 10:25 AM. 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 2.8° C, 6.0° C and 9.2° C.

Receipt Exceptions

The following samples were received at the laboratory outside the required temperature criteria: MW-04 (500-221195-4), MW-16 (500-221195-5) and Duplicate (500-221195-6). This does not meet regulatory requirements. The client was contacted regarding this issue, and the laboratory was instructed to proceed with analysis.

Metals

Method 6020A: The initial low level calibration verification (ICVL) result for batch 500-672561 was outside control limit for Beryllium. The bracketing low level calibration verification (CCVL) were within control limits. Sample results were non-detects, and have been reported as qualified data.

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

General Chemistry

Method SM 2540C: The TDS matrix duplicate (DU) % RPD precision was outside of control limits for the following sample in batch:672194 (500-221195-B-1 DU). The laboratory control standard (LCS) recovery met acceptance criteria

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



Method Summary

Client: KPRG and Associates, Inc.
Project/Site: Waukegan CCR

Job ID: 500-221195-1

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

Protocol References:

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

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

Laboratory References:

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

Sample Summary

Client: KPRG and Associates, Inc.
Project/Site: Waukegan CCR

Job ID: 500-221195-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-221195-1	MW-01	Water	08/22/22 10:31	08/23/22 10:25
500-221195-2	MW-02	Water	08/22/22 11:19	08/23/22 10:25
500-221195-3	MW-03	Water	08/22/22 12:07	08/23/22 10:25
500-221195-4	MW-04	Water	08/22/22 12:57	08/23/22 10:25
500-221195-5	MW-16	Water	08/22/22 13:45	08/23/22 10:25
500-221195-6	Duplicate	Water	08/22/22 00:00	08/23/22 10:25
500-221195-7	MW-09	Water	08/23/22 10:53	08/24/22 09:35
500-221195-8	MW-11	Water	08/23/22 09:07	08/24/22 09:35
500-221195-9	MW-14	Water	08/23/22 09:59	08/24/22 09:35

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

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Waukegan CCR

Job ID: 500-221195-1

Client Sample ID: MW-01

Lab Sample ID: 500-221195-1

Date Collected: 08/22/22 10:31

Matrix: Water

Date Received: 08/23/22 10:25

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		08/30/22 07:50	08/30/22 17:08	1
Arsenic	0.023		0.0010		mg/L		08/30/22 07:50	08/30/22 17:08	1
Barium	0.027		0.0025		mg/L		08/30/22 07:50	08/30/22 17:08	1
Beryllium	<0.0010	^1-	0.0010		mg/L		08/30/22 07:50	08/30/22 17:08	1
Boron	2.8		0.50		mg/L		08/30/22 07:50	08/31/22 19:18	10
Cadmium	<0.00050		0.00050		mg/L		08/30/22 07:50	08/30/22 17:08	1
Calcium	52		0.20		mg/L		08/30/22 07:50	08/30/22 17:08	1
Chromium	<0.0050		0.0050		mg/L		08/30/22 07:50	08/30/22 17:08	1
Cobalt	<0.0010		0.0010		mg/L		08/30/22 07:50	08/30/22 17:08	1
Lead	<0.00050		0.00050		mg/L		08/30/22 07:50	08/30/22 17:08	1
Lithium	<0.010		0.010		mg/L		08/30/22 07:50	08/30/22 17:08	1
Molybdenum	0.032		0.0050		mg/L		08/30/22 07:50	08/30/22 17:08	1
Selenium	<0.0025		0.0025		mg/L		08/30/22 07:50	08/30/22 17:08	1
Thallium	<0.0020		0.0020		mg/L		08/30/22 07:50	08/30/22 17:08	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		08/29/22 10:30	08/30/22 09:28	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	430		10		mg/L			08/29/22 16:25	1
Chloride	43		4.0		mg/L			08/24/22 10:59	2
Fluoride	0.34		0.10		mg/L			08/29/22 14:25	1
Sulfate	190		50		mg/L			08/24/22 13:35	10

Client Sample ID: MW-02

Lab Sample ID: 500-221195-2

Date Collected: 08/22/22 11:19

Matrix: Water

Date Received: 08/23/22 10:25

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		08/30/22 07:50	08/30/22 17:11	1
Arsenic	0.011		0.0010		mg/L		08/30/22 07:50	08/30/22 17:11	1
Barium	0.024		0.0025		mg/L		08/30/22 07:50	08/30/22 17:11	1
Beryllium	<0.0010	^1-	0.0010		mg/L		08/30/22 07:50	08/30/22 17:11	1
Boron	3.3		0.50		mg/L		08/30/22 07:50	08/31/22 19:22	10
Cadmium	<0.00050		0.00050		mg/L		08/30/22 07:50	08/30/22 17:11	1
Calcium	84		0.20		mg/L		08/30/22 07:50	08/30/22 17:11	1
Chromium	<0.0050		0.0050		mg/L		08/30/22 07:50	08/30/22 17:11	1
Cobalt	<0.0010		0.0010		mg/L		08/30/22 07:50	08/30/22 17:11	1
Lead	<0.00050		0.00050		mg/L		08/30/22 07:50	08/30/22 17:11	1
Lithium	<0.010		0.010		mg/L		08/30/22 07:50	08/30/22 17:11	1
Molybdenum	0.029		0.0050		mg/L		08/30/22 07:50	08/30/22 17:11	1
Selenium	<0.0025		0.0025		mg/L		08/30/22 07:50	08/30/22 17:11	1
Thallium	<0.0020		0.0020		mg/L		08/30/22 07:50	08/30/22 17:11	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		08/29/22 10:30	08/30/22 09:37	1

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Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Waukegan CCR

Job ID: 500-221195-1

Client Sample ID: MW-02
Date Collected: 08/22/22 11:19
Date Received: 08/23/22 10:25

Lab Sample ID: 500-221195-2
Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	650		10		mg/L			08/29/22 16:31	1
Chloride	33		4.0		mg/L			08/24/22 11:00	2
Fluoride	0.28		0.10		mg/L			08/29/22 14:28	1
Sulfate	220		50		mg/L			08/24/22 13:35	10

Client Sample ID: MW-03
Date Collected: 08/22/22 12:07
Date Received: 08/23/22 10:25

Lab Sample ID: 500-221195-3
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		08/30/22 07:50	08/30/22 17:15	1
Arsenic	0.0054		0.0010		mg/L		08/30/22 07:50	08/30/22 17:15	1
Barium	0.020		0.0025		mg/L		08/30/22 07:50	08/30/22 17:15	1
Beryllium	<0.0010	^1-	0.0010		mg/L		08/30/22 07:50	08/30/22 17:15	1
Boron	1.8		0.25		mg/L		08/30/22 07:50	08/31/22 19:25	5
Cadmium	<0.00050		0.00050		mg/L		08/30/22 07:50	08/30/22 17:15	1
Calcium	80		0.20		mg/L		08/30/22 07:50	08/30/22 17:15	1
Chromium	<0.0050		0.0050		mg/L		08/30/22 07:50	08/30/22 17:15	1
Cobalt	<0.0010		0.0010		mg/L		08/30/22 07:50	08/30/22 17:15	1
Lead	<0.00050		0.00050		mg/L		08/30/22 07:50	08/30/22 17:15	1
Lithium	<0.010		0.010		mg/L		08/30/22 07:50	08/30/22 17:15	1
Molybdenum	0.026		0.0050		mg/L		08/30/22 07:50	08/30/22 17:15	1
Selenium	0.0040		0.0025		mg/L		08/30/22 07:50	08/30/22 17:15	1
Thallium	<0.0020		0.0020		mg/L		08/30/22 07:50	08/30/22 17:15	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		08/29/22 10:30	08/30/22 09:39	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	570		10		mg/L			08/29/22 16:33	1
Chloride	45		4.0		mg/L			08/24/22 11:00	2
Fluoride	0.20		0.10		mg/L			08/29/22 14:37	1
Sulfate	180		50		mg/L			08/24/22 13:36	10

Client Sample ID: MW-04
Date Collected: 08/22/22 12:57
Date Received: 08/23/22 10:25

Lab Sample ID: 500-221195-4
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		08/30/22 07:50	08/30/22 17:18	1
Arsenic	0.0070		0.0010		mg/L		08/30/22 07:50	08/30/22 17:18	1
Barium	0.043		0.0025		mg/L		08/30/22 07:50	08/30/22 17:18	1
Beryllium	<0.0010	^1-	0.0010		mg/L		08/30/22 07:50	08/30/22 17:18	1
Boron	3.1	F1	0.50		mg/L		08/30/22 07:50	08/31/22 19:28	10
Cadmium	<0.00050		0.00050		mg/L		08/30/22 07:50	08/30/22 17:18	1
Calcium	100		0.20		mg/L		08/30/22 07:50	08/30/22 17:18	1
Chromium	<0.0050		0.0050		mg/L		08/30/22 07:50	08/30/22 17:18	1

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Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Waukegan CCR

Job ID: 500-221195-1

Client Sample ID: MW-04
Date Collected: 08/22/22 12:57
Date Received: 08/23/22 10:25

Lab Sample ID: 500-221195-4
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	<0.0010		0.0010		mg/L		08/30/22 07:50	08/30/22 17:18	1
Lead	<0.00050		0.00050		mg/L		08/30/22 07:50	08/30/22 17:18	1
Lithium	<0.010		0.010		mg/L		08/30/22 07:50	08/30/22 17:18	1
Molybdenum	0.025		0.0050		mg/L		08/30/22 07:50	08/30/22 17:18	1
Selenium	0.011		0.0025		mg/L		08/30/22 07:50	08/30/22 17:18	1
Thallium	<0.0020		0.0020		mg/L		08/30/22 07:50	08/30/22 17:18	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		08/29/22 10:30	08/30/22 09:45	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	660		10		mg/L			08/29/22 16:35	1
Chloride	31		4.0		mg/L			08/24/22 11:01	2
Fluoride	0.55		0.10		mg/L			08/29/22 14:39	1
Sulfate	230		25		mg/L			08/24/22 13:36	5

Client Sample ID: MW-16
Date Collected: 08/22/22 13:45
Date Received: 08/23/22 10:25

Lab Sample ID: 500-221195-5
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		08/30/22 07:50	08/30/22 17:42	1
Arsenic	<0.0010		0.0010		mg/L		08/30/22 07:50	08/30/22 17:42	1
Barium	0.029		0.0025		mg/L		08/30/22 07:50	08/30/22 17:42	1
Beryllium	<0.0010	^1-	0.0010		mg/L		08/30/22 07:50	08/30/22 17:42	1
Boron	2.7		0.50		mg/L		08/30/22 07:50	08/31/22 19:52	10
Cadmium	<0.00050		0.00050		mg/L		08/30/22 07:50	08/30/22 17:42	1
Calcium	110		0.20		mg/L		08/30/22 07:50	08/30/22 17:42	1
Chromium	<0.0050		0.0050		mg/L		08/30/22 07:50	08/30/22 17:42	1
Cobalt	<0.0010		0.0010		mg/L		08/30/22 07:50	08/30/22 17:42	1
Lead	<0.00050		0.00050		mg/L		08/30/22 07:50	08/30/22 17:42	1
Lithium	0.011		0.010		mg/L		08/30/22 07:50	08/30/22 17:42	1
Molybdenum	0.021		0.0050		mg/L		08/30/22 07:50	08/30/22 17:42	1
Selenium	<0.0025		0.0025		mg/L		08/30/22 07:50	08/30/22 17:42	1
Thallium	<0.0020		0.0020		mg/L		08/30/22 07:50	08/30/22 17:42	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		08/29/22 10:30	08/30/22 09:47	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	780		10		mg/L			08/29/22 16:37	1
Chloride	42		4.0		mg/L			08/24/22 11:01	2
Fluoride	0.62		0.10		mg/L			08/29/22 14:41	1
Sulfate	280		100		mg/L			08/24/22 13:36	20

Eurofins Chicago

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Waukegan CCR

Job ID: 500-221195-1

Client Sample ID: Duplicate

Lab Sample ID: 500-221195-6

Date Collected: 08/22/22 00:00

Matrix: Water

Date Received: 08/23/22 10:25

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		08/30/22 07:50	08/30/22 17:45	1
Arsenic	<0.0010		0.0010		mg/L		08/30/22 07:50	08/30/22 17:45	1
Barium	0.029		0.0025		mg/L		08/30/22 07:50	08/30/22 17:45	1
Beryllium	<0.0010	^1-	0.0010		mg/L		08/30/22 07:50	08/30/22 17:45	1
Boron	2.6		0.50		mg/L		08/30/22 07:50	08/31/22 19:56	10
Cadmium	<0.00050		0.00050		mg/L		08/30/22 07:50	08/30/22 17:45	1
Calcium	120		0.20		mg/L		08/30/22 07:50	08/30/22 17:45	1
Chromium	<0.0050		0.0050		mg/L		08/30/22 07:50	08/30/22 17:45	1
Cobalt	<0.0010		0.0010		mg/L		08/30/22 07:50	08/30/22 17:45	1
Lead	<0.00050		0.00050		mg/L		08/30/22 07:50	08/30/22 17:45	1
Lithium	0.010		0.010		mg/L		08/30/22 07:50	08/30/22 17:45	1
Molybdenum	0.021		0.0050		mg/L		08/30/22 07:50	08/30/22 17:45	1
Selenium	<0.0025		0.0025		mg/L		08/30/22 07:50	08/30/22 17:45	1
Thallium	<0.0020		0.0020		mg/L		08/30/22 07:50	08/30/22 17:45	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		08/29/22 10:30	08/30/22 09:49	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	810		10		mg/L			08/29/22 16:39	1
Chloride	43		4.0		mg/L			08/24/22 11:01	2
Fluoride	0.62		0.10		mg/L			08/29/22 14:44	1
Sulfate	290		100		mg/L			08/24/22 13:37	20

Client Sample ID: MW-09

Lab Sample ID: 500-221195-7

Date Collected: 08/23/22 10:53

Matrix: Water

Date Received: 08/24/22 09:35

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		08/30/22 07:50	08/30/22 17:49	1
Arsenic	0.0012		0.0010		mg/L		08/30/22 07:50	08/30/22 17:49	1
Barium	0.046		0.0025		mg/L		08/30/22 07:50	08/30/22 17:49	1
Beryllium	<0.0010	^1-	0.0010		mg/L		08/30/22 07:50	08/30/22 17:49	1
Boron	12		5.0		mg/L		08/30/22 07:50	08/31/22 19:59	100
Cadmium	<0.00050		0.00050		mg/L		08/30/22 07:50	08/30/22 17:49	1
Calcium	170		0.20		mg/L		08/30/22 07:50	08/30/22 17:49	1
Chromium	<0.0050		0.0050		mg/L		08/30/22 07:50	08/30/22 17:49	1
Cobalt	<0.0010		0.0010		mg/L		08/30/22 07:50	08/30/22 17:49	1
Lead	<0.00050		0.00050		mg/L		08/30/22 07:50	08/30/22 17:49	1
Lithium	0.048		0.010		mg/L		08/30/22 07:50	08/30/22 17:49	1
Molybdenum	0.21		0.0050		mg/L		08/30/22 07:50	08/30/22 17:49	1
Selenium	0.0034		0.0025		mg/L		08/30/22 07:50	08/30/22 17:49	1
Thallium	<0.0020		0.0020		mg/L		08/30/22 07:50	08/30/22 17:49	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		08/29/22 10:30	08/30/22 09:51	1

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Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Waukegan CCR

Job ID: 500-221195-1

Client Sample ID: MW-09

Date Collected: 08/23/22 10:53

Date Received: 08/24/22 09:35

Lab Sample ID: 500-221195-7

Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1100		10		mg/L			08/30/22 15:06	1
Chloride	170		20		mg/L			08/25/22 14:19	10
Fluoride	0.22		0.10		mg/L			08/29/22 14:46	1
Sulfate	290		50		mg/L			08/25/22 15:30	10

Client Sample ID: MW-11

Date Collected: 08/23/22 09:07

Date Received: 08/24/22 09:35

Lab Sample ID: 500-221195-8

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		08/30/22 07:50	08/30/22 17:52	1
Arsenic	0.43		0.0010		mg/L		08/30/22 07:50	08/30/22 17:52	1
Barium	0.053		0.0025		mg/L		08/30/22 07:50	08/30/22 17:52	1
Beryllium	<0.0010	^1-	0.0010		mg/L		08/30/22 07:50	08/30/22 17:52	1
Boron	1.4		0.50		mg/L		08/30/22 07:50	08/31/22 20:03	10
Cadmium	<0.00050		0.00050		mg/L		08/30/22 07:50	08/30/22 17:52	1
Calcium	140		0.20		mg/L		08/30/22 07:50	08/30/22 17:52	1
Chromium	<0.0050		0.0050		mg/L		08/30/22 07:50	08/30/22 17:52	1
Cobalt	<0.0010		0.0010		mg/L		08/30/22 07:50	08/30/22 17:52	1
Lead	<0.00050		0.00050		mg/L		08/30/22 07:50	08/30/22 17:52	1
Lithium	0.031		0.010		mg/L		08/30/22 07:50	08/30/22 17:52	1
Molybdenum	<0.0050		0.0050		mg/L		08/30/22 07:50	08/30/22 17:52	1
Selenium	<0.0025		0.0025		mg/L		08/30/22 07:50	08/30/22 17:52	1
Thallium	<0.0020		0.0020		mg/L		08/30/22 07:50	08/30/22 17:52	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		08/29/22 10:30	08/30/22 09:54	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	780		10		mg/L			08/30/22 15:08	1
Chloride	97		10		mg/L			08/25/22 14:20	5
Fluoride	0.18		0.10		mg/L			08/29/22 14:49	1
Sulfate	30		10		mg/L			08/25/22 15:31	2

Client Sample ID: MW-14

Date Collected: 08/23/22 09:59

Date Received: 08/24/22 09:35

Lab Sample ID: 500-221195-9

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		08/30/22 07:50	08/30/22 17:55	1
Arsenic	2.7		0.0010		mg/L		08/30/22 07:50	08/30/22 17:55	1
Barium	0.057		0.0025		mg/L		08/30/22 07:50	08/30/22 17:55	1
Beryllium	<0.0010	^1-	0.0010		mg/L		08/30/22 07:50	08/30/22 17:55	1
Boron	0.58		0.050		mg/L		08/30/22 07:50	08/31/22 20:06	1
Cadmium	<0.00050		0.00050		mg/L		08/30/22 07:50	08/30/22 17:55	1
Calcium	150		0.20		mg/L		08/30/22 07:50	08/30/22 17:55	1
Chromium	0.034		0.0050		mg/L		08/30/22 07:50	08/30/22 17:55	1

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Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Waukegan CCR

Job ID: 500-221195-1

Client Sample ID: MW-14

Lab Sample ID: 500-221195-9

Date Collected: 08/23/22 09:59

Matrix: Water

Date Received: 08/24/22 09:35

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	<0.0010		0.0010		mg/L		08/30/22 07:50	08/30/22 17:55	1
Lead	<0.00050		0.00050		mg/L		08/30/22 07:50	08/30/22 17:55	1
Lithium	0.012		0.010		mg/L		08/30/22 07:50	08/30/22 17:55	1
Molybdenum	<0.0050		0.0050		mg/L		08/30/22 07:50	08/30/22 17:55	1
Selenium	<0.0025		0.0025		mg/L		08/30/22 07:50	08/30/22 17:55	1
Thallium	<0.0020		0.0020		mg/L		08/30/22 07:50	08/30/22 17:55	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		08/29/22 10:30	08/30/22 09:56	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	740		10		mg/L			08/30/22 15:10	1
Chloride	52		4.0		mg/L			08/25/22 14:20	2
Fluoride	0.15		0.10		mg/L			08/29/22 14:51	1
Sulfate	28		10		mg/L			08/25/22 15:31	2

Definitions/Glossary

Client: KPRG and Associates, Inc.
Project/Site: Waukegan CCR

Job ID: 500-221195-1

Qualifiers

Metals

Qualifier	Qualifier Description
^1-	Initial Calibration Verification (ICV) is outside acceptance limits, low biased.
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.
F1	MS and/or MSD recovery exceeds control limits.

General Chemistry

Qualifier	Qualifier Description
F3	Duplicate RPD exceeds the control 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: KPRG and Associates, Inc.
Project/Site: Waukegan CCR

Job ID: 500-221195-1

Metals

Prep Batch: 672129

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-221195-1	MW-01	Total/NA	Water	7470A	
500-221195-2	MW-02	Total/NA	Water	7470A	
500-221195-3	MW-03	Total/NA	Water	7470A	
500-221195-4	MW-04	Total/NA	Water	7470A	
500-221195-5	MW-16	Total/NA	Water	7470A	
500-221195-6	Duplicate	Total/NA	Water	7470A	
500-221195-7	MW-09	Total/NA	Water	7470A	
500-221195-8	MW-11	Total/NA	Water	7470A	
500-221195-9	MW-14	Total/NA	Water	7470A	
MB 500-672129/12-A	Method Blank	Total/NA	Water	7470A	
LCS 500-672129/13-A	Lab Control Sample	Total/NA	Water	7470A	
500-221195-1 MS	MW-01	Total/NA	Water	7470A	
500-221195-1 MSD	MW-01	Total/NA	Water	7470A	
500-221195-1 DU	MW-01	Total/NA	Water	7470A	

Prep Batch: 672233

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-221195-1	MW-01	Total Recoverable	Water	3005A	
500-221195-2	MW-02	Total Recoverable	Water	3005A	
500-221195-3	MW-03	Total Recoverable	Water	3005A	
500-221195-4	MW-04	Total Recoverable	Water	3005A	
500-221195-5	MW-16	Total Recoverable	Water	3005A	
500-221195-6	Duplicate	Total Recoverable	Water	3005A	
500-221195-7	MW-09	Total Recoverable	Water	3005A	
500-221195-8	MW-11	Total Recoverable	Water	3005A	
500-221195-9	MW-14	Total Recoverable	Water	3005A	
MB 500-672233/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-672233/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
500-221195-4 MS	MW-04	Total Recoverable	Water	3005A	
500-221195-4 MSD	MW-04	Total Recoverable	Water	3005A	
500-221195-4 DU	MW-04	Total Recoverable	Water	3005A	

Analysis Batch: 672331

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-221195-1	MW-01	Total/NA	Water	7470A	672129
500-221195-2	MW-02	Total/NA	Water	7470A	672129
500-221195-3	MW-03	Total/NA	Water	7470A	672129
500-221195-4	MW-04	Total/NA	Water	7470A	672129
500-221195-5	MW-16	Total/NA	Water	7470A	672129
500-221195-6	Duplicate	Total/NA	Water	7470A	672129
500-221195-7	MW-09	Total/NA	Water	7470A	672129
500-221195-8	MW-11	Total/NA	Water	7470A	672129
500-221195-9	MW-14	Total/NA	Water	7470A	672129
MB 500-672129/12-A	Method Blank	Total/NA	Water	7470A	672129
LCS 500-672129/13-A	Lab Control Sample	Total/NA	Water	7470A	672129
500-221195-1 MS	MW-01	Total/NA	Water	7470A	672129
500-221195-1 MSD	MW-01	Total/NA	Water	7470A	672129
500-221195-1 DU	MW-01	Total/NA	Water	7470A	672129

QC Association Summary

Client: KPRG and Associates, Inc.
Project/Site: Waukegan CCR

Job ID: 500-221195-1

Metals

Analysis Batch: 672561

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-221195-1	MW-01	Total Recoverable	Water	6020A	672233
500-221195-2	MW-02	Total Recoverable	Water	6020A	672233
500-221195-3	MW-03	Total Recoverable	Water	6020A	672233
500-221195-4	MW-04	Total Recoverable	Water	6020A	672233
500-221195-5	MW-16	Total Recoverable	Water	6020A	672233
500-221195-6	Duplicate	Total Recoverable	Water	6020A	672233
500-221195-7	MW-09	Total Recoverable	Water	6020A	672233
500-221195-8	MW-11	Total Recoverable	Water	6020A	672233
500-221195-9	MW-14	Total Recoverable	Water	6020A	672233
MB 500-672233/1-A	Method Blank	Total Recoverable	Water	6020A	672233
LCS 500-672233/2-A	Lab Control Sample	Total Recoverable	Water	6020A	672233
500-221195-4 MS	MW-04	Total Recoverable	Water	6020A	672233
500-221195-4 MSD	MW-04	Total Recoverable	Water	6020A	672233
500-221195-4 DU	MW-04	Total Recoverable	Water	6020A	672233

Analysis Batch: 672787

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-221195-1	MW-01	Total Recoverable	Water	6020A	672233
500-221195-2	MW-02	Total Recoverable	Water	6020A	672233
500-221195-3	MW-03	Total Recoverable	Water	6020A	672233
500-221195-4	MW-04	Total Recoverable	Water	6020A	672233
500-221195-5	MW-16	Total Recoverable	Water	6020A	672233
500-221195-6	Duplicate	Total Recoverable	Water	6020A	672233
500-221195-7	MW-09	Total Recoverable	Water	6020A	672233
500-221195-8	MW-11	Total Recoverable	Water	6020A	672233
500-221195-9	MW-14	Total Recoverable	Water	6020A	672233
MB 500-672233/1-A	Method Blank	Total Recoverable	Water	6020A	672233
LCS 500-672233/2-A	Lab Control Sample	Total Recoverable	Water	6020A	672233
500-221195-4 MS	MW-04	Total Recoverable	Water	6020A	672233
500-221195-4 MSD	MW-04	Total Recoverable	Water	6020A	672233
500-221195-4 DU	MW-04	Total Recoverable	Water	6020A	672233

General Chemistry

Analysis Batch: 671502

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-221195-1	MW-01	Total/NA	Water	SM 4500 CI- E	
500-221195-2	MW-02	Total/NA	Water	SM 4500 CI- E	
500-221195-3	MW-03	Total/NA	Water	SM 4500 CI- E	
500-221195-4	MW-04	Total/NA	Water	SM 4500 CI- E	
500-221195-5	MW-16	Total/NA	Water	SM 4500 CI- E	
500-221195-6	Duplicate	Total/NA	Water	SM 4500 CI- E	
MB 500-671502/52	Method Blank	Total/NA	Water	SM 4500 CI- E	
LCS 500-671502/53	Lab Control Sample	Total/NA	Water	SM 4500 CI- E	

Analysis Batch: 671521

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-221195-1	MW-01	Total/NA	Water	SM 4500 SO4 E	
500-221195-2	MW-02	Total/NA	Water	SM 4500 SO4 E	
500-221195-3	MW-03	Total/NA	Water	SM 4500 SO4 E	
500-221195-4	MW-04	Total/NA	Water	SM 4500 SO4 E	

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QC Association Summary

Client: KPRG and Associates, Inc.
Project/Site: Waukegan CCR

Job ID: 500-221195-1

General Chemistry (Continued)

Analysis Batch: 671521 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-221195-5	MW-16	Total/NA	Water	SM 4500 SO4 E	
500-221195-6	Duplicate	Total/NA	Water	SM 4500 SO4 E	
MB 500-671521/16	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 500-671521/17	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 671760

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-221195-7	MW-09	Total/NA	Water	SM 4500 CI- E	
500-221195-8	MW-11	Total/NA	Water	SM 4500 CI- E	
500-221195-9	MW-14	Total/NA	Water	SM 4500 CI- E	
MB 500-671760/16	Method Blank	Total/NA	Water	SM 4500 CI- E	
LCS 500-671760/17	Lab Control Sample	Total/NA	Water	SM 4500 CI- E	

Analysis Batch: 671776

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-221195-7	MW-09	Total/NA	Water	SM 4500 SO4 E	
500-221195-8	MW-11	Total/NA	Water	SM 4500 SO4 E	
500-221195-9	MW-14	Total/NA	Water	SM 4500 SO4 E	
MB 500-671776/16	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 500-671776/17	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 672194

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-221195-1	MW-01	Total/NA	Water	SM 2540C	
500-221195-2	MW-02	Total/NA	Water	SM 2540C	
500-221195-3	MW-03	Total/NA	Water	SM 2540C	
500-221195-4	MW-04	Total/NA	Water	SM 2540C	
500-221195-5	MW-16	Total/NA	Water	SM 2540C	
500-221195-6	Duplicate	Total/NA	Water	SM 2540C	
MB 500-672194/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-672194/2	Lab Control Sample	Total/NA	Water	SM 2540C	
500-221195-1 MS	MW-01	Total/NA	Water	SM 2540C	
500-221195-1 DU	MW-01	Total/NA	Water	SM 2540C	

Analysis Batch: 672211

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-221195-1	MW-01	Total/NA	Water	SM 4500 F C	
500-221195-2	MW-02	Total/NA	Water	SM 4500 F C	
500-221195-3	MW-03	Total/NA	Water	SM 4500 F C	
500-221195-4	MW-04	Total/NA	Water	SM 4500 F C	
500-221195-5	MW-16	Total/NA	Water	SM 4500 F C	
500-221195-6	Duplicate	Total/NA	Water	SM 4500 F C	
500-221195-7	MW-09	Total/NA	Water	SM 4500 F C	
500-221195-8	MW-11	Total/NA	Water	SM 4500 F C	
500-221195-9	MW-14	Total/NA	Water	SM 4500 F C	
MB 500-672211/31	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 500-672211/32	Lab Control Sample	Total/NA	Water	SM 4500 F C	

Analysis Batch: 672355

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-221195-7	MW-09	Total/NA	Water	SM 2540C	

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QC Association Summary

Client: KPRG and Associates, Inc.
Project/Site: Waukegan CCR

Job ID: 500-221195-1

General Chemistry (Continued)

Analysis Batch: 672355 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-221195-8	MW-11	Total/NA	Water	SM 2540C	
500-221195-9	MW-14	Total/NA	Water	SM 2540C	
MB 500-672355/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-672355/2	Lab Control Sample	Total/NA	Water	SM 2540C	

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QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Waukegan CCR

Job ID: 500-221195-1

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 500-672233/1-A
Matrix: Water
Analysis Batch: 672561

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 672233

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Antimony	<0.0030		0.0030		mg/L		08/30/22 07:50	08/30/22 17:01	1
Arsenic	<0.0010		0.0010		mg/L		08/30/22 07:50	08/30/22 17:01	1
Barium	<0.0025		0.0025		mg/L		08/30/22 07:50	08/30/22 17:01	1
Beryllium	<0.0010	^1-	0.0010		mg/L		08/30/22 07:50	08/30/22 17:01	1
Cadmium	<0.00050		0.00050		mg/L		08/30/22 07:50	08/30/22 17:01	1
Calcium	<0.20		0.20		mg/L		08/30/22 07:50	08/30/22 17:01	1
Chromium	<0.0050		0.0050		mg/L		08/30/22 07:50	08/30/22 17:01	1
Cobalt	<0.0010		0.0010		mg/L		08/30/22 07:50	08/30/22 17:01	1
Lead	<0.00050		0.00050		mg/L		08/30/22 07:50	08/30/22 17:01	1
Lithium	<0.010		0.010		mg/L		08/30/22 07:50	08/30/22 17:01	1
Molybdenum	<0.0050		0.0050		mg/L		08/30/22 07:50	08/30/22 17:01	1
Selenium	<0.0025		0.0025		mg/L		08/30/22 07:50	08/30/22 17:01	1
Thallium	<0.0020		0.0020		mg/L		08/30/22 07:50	08/30/22 17:01	1

Lab Sample ID: MB 500-672233/1-A
Matrix: Water
Analysis Batch: 672787

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 672233

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Boron	<0.050		0.050		mg/L		08/30/22 07:50	08/31/22 19:11	1

Lab Sample ID: LCS 500-672233/2-A
Matrix: Water
Analysis Batch: 672561

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 672233

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	0.100	0.0989		mg/L		99	80 - 120
Barium	0.500	0.514		mg/L		103	80 - 120
Beryllium	0.0500	0.0477	^1-	mg/L		95	80 - 120
Cadmium	0.0500	0.0497		mg/L		99	80 - 120
Calcium	10.0	10.7		mg/L		107	80 - 120
Chromium	0.200	0.186		mg/L		93	80 - 120
Cobalt	0.500	0.461		mg/L		92	80 - 120
Lead	0.100	0.0976		mg/L		98	80 - 120
Lithium	0.100	0.103		mg/L		103	80 - 120
Molybdenum	1.00	0.923		mg/L		92	80 - 120
Selenium	0.100	0.105		mg/L		105	80 - 120
Thallium	0.100	0.0943		mg/L		94	80 - 120

Lab Sample ID: LCS 500-672233/2-A
Matrix: Water
Analysis Batch: 672787

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 672233

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits

QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Waukegan CCR

Job ID: 500-221195-1

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

Lab Sample ID: 500-221195-4 MS
Matrix: Water
Analysis Batch: 672561

Client Sample ID: MW-04
Prep Type: Total Recoverable
Prep Batch: 672233

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	<0.0030		0.500	0.469		mg/L		94	75 - 125
Arsenic	0.0070		0.100	0.110		mg/L		103	75 - 125
Barium	0.043		0.500	0.535		mg/L		98	75 - 125
Beryllium	<0.0010	^1-	0.0500	0.0485	^1-	mg/L		97	75 - 125
Cadmium	<0.00050		0.0500	0.0521		mg/L		104	75 - 125
Calcium	100		10.0	110	4	mg/L		72	75 - 125
Chromium	<0.0050		0.200	0.180		mg/L		90	75 - 125
Cobalt	<0.0010		0.500	0.449		mg/L		90	75 - 125
Lead	<0.00050		0.100	0.0977		mg/L		98	75 - 125
Lithium	<0.010		0.100	0.103		mg/L		103	75 - 125
Molybdenum	0.025		1.00	0.945		mg/L		92	75 - 125
Selenium	0.011		0.100	0.118		mg/L		108	75 - 125
Thallium	<0.0020		0.100	0.0950		mg/L		95	75 - 125

Lab Sample ID: 500-221195-4 MS
Matrix: Water
Analysis Batch: 672787

Client Sample ID: MW-04
Prep Type: Total Recoverable
Prep Batch: 672233

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	3.1	F1	1.00	4.41	F1	mg/L		131	75 - 125

Lab Sample ID: 500-221195-4 MSD
Matrix: Water
Analysis Batch: 672561

Client Sample ID: MW-04
Prep Type: Total Recoverable
Prep Batch: 672233

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Antimony	<0.0030		0.500	0.472		mg/L		94	75 - 125	1	20
Arsenic	0.0070		0.100	0.111		mg/L		104	75 - 125	1	20
Barium	0.043		0.500	0.546		mg/L		101	75 - 125	2	20
Beryllium	<0.0010	^1-	0.0500	0.0536	^1-	mg/L		107	75 - 125	10	20
Cadmium	<0.00050		0.0500	0.0481		mg/L		96	75 - 125	8	20
Calcium	100		10.0	113	4	mg/L		106	75 - 125	3	20
Chromium	<0.0050		0.200	0.191		mg/L		95	75 - 125	6	20
Cobalt	<0.0010		0.500	0.466		mg/L		93	75 - 125	4	20
Lead	<0.00050		0.100	0.100		mg/L		100	75 - 125	3	20
Lithium	<0.010		0.100	0.107		mg/L		107	75 - 125	4	20
Molybdenum	0.025		1.00	0.946		mg/L		92	75 - 125	0	20
Selenium	0.011		0.100	0.119		mg/L		109	75 - 125	1	20
Thallium	<0.0020		0.100	0.0966		mg/L		97	75 - 125	2	20

Lab Sample ID: 500-221195-4 MSD
Matrix: Water
Analysis Batch: 672787

Client Sample ID: MW-04
Prep Type: Total Recoverable
Prep Batch: 672233

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Boron	3.1	F1	1.00	3.84	F1	mg/L		73	75 - 125	14	20

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QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Waukegan CCR

Job ID: 500-221195-1

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

Lab Sample ID: 500-221195-4 DU
Matrix: Water
Analysis Batch: 672561

Client Sample ID: MW-04
Prep Type: Total Recoverable
Prep Batch: 672233

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Antimony	<0.0030		<0.0030		mg/L		NC	20
Arsenic	0.0070		0.00724		mg/L		4	20
Barium	0.043		0.0435		mg/L		2	20
Beryllium	<0.0010	^1-	<0.0010	^1-	mg/L		NC	20
Cadmium	<0.00050		<0.00050		mg/L		NC	20
Calcium	100		98.8		mg/L		4	20
Chromium	<0.0050		<0.0050		mg/L		NC	20
Cobalt	<0.0010		<0.0010		mg/L		NC	20
Lead	<0.00050		<0.00050		mg/L		NC	20
Lithium	<0.010		<0.010		mg/L		NC	20
Molybdenum	0.025		0.0241		mg/L		5	20
Selenium	0.011		0.0113		mg/L		6	20
Thallium	<0.0020		<0.0020		mg/L		NC	20

Lab Sample ID: 500-221195-4 DU
Matrix: Water
Analysis Batch: 672787

Client Sample ID: MW-04
Prep Type: Total Recoverable
Prep Batch: 672233

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Boron	3.1	F1	2.85		mg/L		8	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 500-672129/12-A
Matrix: Water
Analysis Batch: 672331

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 672129

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	<0.00020		0.00020		mg/L		08/29/22 10:30	08/30/22 09:03	1

Lab Sample ID: LCS 500-672129/13-A
Matrix: Water
Analysis Batch: 672331

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 672129

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits

Lab Sample ID: 500-221195-1 MS
Matrix: Water
Analysis Batch: 672331

Client Sample ID: MW-01
Prep Type: Total/NA
Prep Batch: 672129

Analyte	Sample	Sample	Spike Added	MS	MS	Unit	D	%Rec	%Rec Limits
	Result	Qualifier		Result	Qualifier				
Mercury	<0.00020		0.00100	0.00101		mg/L		101	75 - 125

Lab Sample ID: 500-221195-1 MSD
Matrix: Water
Analysis Batch: 672331

Client Sample ID: MW-01
Prep Type: Total/NA
Prep Batch: 672129

Analyte	Sample	Sample	Spike Added	MSD	MSD	Unit	D	%Rec	%Rec Limits	RPD	Limit
	Result	Qualifier		Result	Qualifier						
Mercury	<0.00020		0.00100	0.000993		mg/L		99	75 - 125	2	20

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QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Waukegan CCR

Job ID: 500-221195-1

Method: 7470A - Mercury (CVAA)

Lab Sample ID: 500-221195-1 DU
Matrix: Water
Analysis Batch: 672331

Client Sample ID: MW-01
Prep Type: Total/NA
Prep Batch: 672129

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 500-672194/1
Matrix: Water
Analysis Batch: 672194

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10		mg/L			08/29/22 16:15	1

Lab Sample ID: LCS 500-672194/2
Matrix: Water
Analysis Batch: 672194

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	300		mg/L		120	80 - 120

Lab Sample ID: 500-221195-1 MS
Matrix: Water
Analysis Batch: 672194

Client Sample ID: MW-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	430		250	738		mg/L		123	75 - 125

Lab Sample ID: 500-221195-1 DU
Matrix: Water
Analysis Batch: 672194

Client Sample ID: MW-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Dissolved Solids	430		456	F3	mg/L		6	5

Lab Sample ID: MB 500-672355/1
Matrix: Water
Analysis Batch: 672355

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10		mg/L			08/30/22 15:00	1

Lab Sample ID: LCS 500-672355/2
Matrix: Water
Analysis Batch: 672355

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	274		mg/L		110	80 - 120

QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Waukegan CCR

Job ID: 500-221195-1

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 500-671502/52
Matrix: Water
Analysis Batch: 671502

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			08/24/22 10:57	1

Lab Sample ID: LCS 500-671502/53
Matrix: Water
Analysis Batch: 671502

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

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

Lab Sample ID: MB 500-671760/16
Matrix: Water
Analysis Batch: 671760

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			08/25/22 14:17	1

Lab Sample ID: LCS 500-671760/17
Matrix: Water
Analysis Batch: 671760

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	20.0	19.8		mg/L		99	85 - 115

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 500-672211/31
Matrix: Water
Analysis Batch: 672211

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			08/29/22 13:44	1

Lab Sample ID: LCS 500-672211/32
Matrix: Water
Analysis Batch: 672211

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	11.2		mg/L		112	90 - 119

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 500-671521/16
Matrix: Water
Analysis Batch: 671521

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			08/24/22 13:31	1

QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Waukegan CCR

Job ID: 500-221195-1

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

Lab Sample ID: LCS 500-671521/17
Matrix: Water
Analysis Batch: 671521

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfate	20.0	21.1		mg/L		106	88 - 123

Lab Sample ID: MB 500-671776/16
Matrix: Water
Analysis Batch: 671776

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			08/25/22 15:28	1

Lab Sample ID: LCS 500-671776/17
Matrix: Water
Analysis Batch: 671776

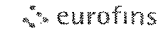
Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfate	20.0	21.1		mg/L		105	88 - 123

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

Chain of Custody Record



Client Information			Sampler <i>Mitchel Dolan</i>		Lab PM Mockler Diana J		Carrier Tracking No(s)		COC No 500-104255-44027 1			
Client Contact Mitchel Dolan			Phone <i>262-622-1143</i>		E-Mail Diana Mockler@et.eurofins.com		State of Origin <i>IL</i>		Page Page 1 of 1			
Company KPRG and Associates Inc.			PWSID		Analysis Requested					Job #: <i>500-221195</i>		
Address 14665 West Lisbon Road Suite 1A			Due Date Requested							Preservation Codes		
City Brookfield			TAT Requested (days)							Preservation Codes		
State Zip WI 53005			Compliance Project. Δ Yes Δ No							Preservation Codes		
Phone 262-781-0475(Tel)			PO # 4502102435							Preservation Codes		
Email mitcheld@kprginc.com			WO #		A HCL M Hexane B NaOH N None C Zn Acetate C AsNaO2 D Nitric Acid P Na2O4S E NaHSO4 Q Na2SO5 F MeOH S H2SO4 G Amchlor T TsP Dodecahydrate H Ascorbic Acid U Acetone I Ice V MCAA J DI Water W pH 4-5 K EDTA Y T.zma L EDA Z other (specify)					Other		
Project Name Waukegan CCR Event Desc: Quarterly Waukegan CCR			Project # 50011587									
Site: Illinois			SSOW#									
Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Pesticide/MS/MS/ED (Yes or No)	903.0, 904.0	6010C 6020A, 7470A	2540C, 4500_F, C 5M4500_CI, E, 5M4500_S04_E	1828a-Turbidity	Total Number of Containers	Special Instructions/Note
<i>1</i> MW-01	8/22/22	1031	G	Water	N	N	X	X	X	X		No Turbidity Analysis
<i>2</i> MW-02	8/22/22	1119	G	Water	N	N	X	X	X			
<i>3</i> MW-03	8/22/22	1207	G	Water	N	N	X	X	X			
<i>4</i> MW-04	8/22/22	1257	G	Water	N	N	X	X	X			
<i>5</i> MW-16	8/22/22	1345	G	Water	N	N	X	X	X			
<i>6</i> Duplicate	8/22/22	-	G	Water	N	N	X	X	X			
Water				Water								
Water				Water								
Water				Water								
Water				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>me</i>			Date/Time: 8/22/22 / 1600		Company: KPRG		Received by: <i>FEDEX</i>		Date/Time: 8/22/22 / 1600		Company: FEDEX	
Relinquished by			Date/Time		Company		Received by: <i>Ann Scott</i>		Date/Time: 8/23/22 1025		Company: <i>EPRI</i>	
Relinquished by			Date/Time		Company		Received by		Date/Time		Company	
Custody Seals Intact: Δ Yes Δ No			Custody Seal No		Cooler Temperature(s) °C, and Other Remarks <i>6.2+0.0, 0.4 → 9.2</i>							

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

Chain of Custody Record



Client Information Client Contact: Mitchel Dolan Mitchel Dolan Company: KPRG and Associates Inc. Address: 14665 West Lisbon Road Suite 1A City: Brookfield State, Zip: WI 53005 Phone: 262-781-0475(Tel) Email: mitchdel@kprginc.com Project Name: Waukegan CCR Event Desc: Quarterly Waukegan CCR Site: Illinois		Sampler: Mitchel Dolan Phone: 262-622-1143 PWSID: Due Date Requested: TAT Requested (days): Standard Compliance Project. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No ID #: 502102435 PO #:	Lab PM: Mockler Diana J E-Mail: Diana.Mockler@et.eurofinsus.com Carrier Tracking No(s): State of Origin: IL Analysis Requested: Job #: 500-22/195	COC No.: 500-104255-44027 1 Page: Page 1 of 1
Sample Identification Sample Date Sample Time Sample Type (C=comp, G=grab) Matrix (W=water, S=solid, O=waste/soil, BT=Tissue, A=Air)		Field Filtered Sample (Yes or No) Perform MS/MS D (Yes or No) 903.0, 904.0 6010C, 6020A, 7470A 2540C, 4500_F_C, SM4500_CL_E, SM4500_SO4_E 400.4 - Toxicity		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 ED+ M Hexane, N None, O AsNaO2, P Na2O4S, Q Na2SO5, R Na2S2O3, S H2SO4, T TSP Dodecahydrate, U Acetone, V MCAA, W pH 4-5, X .zma, Z other (specify)
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) <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: [Signature] Relinquished by: [Signature] Relinquished by:		Date: 8/23/22 / 1600 Date/Time: Date/Time: Date/Time:	Time: Company: KPRG Company: Company:	Method of Shipment: Received by: FEDEX Received by: [Signature] Received by: Date/Time: 8/23/22 / 1600 Date/Time: 8/24/22 0935 Date/Time: Company: FEDEX Company: [Signature] Company:
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No Custody Seal No:		Cooler Temperature(s) °C and Other Remarks: 41 → 28		

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ORIGIN ID: FEPA (262) 729-5865
KAELYN SPERLE
KPRG AND ASSOCIATES
414 PLAZA DR STE 106

SHIP DATE: 22AUG22
ACTWGT: 49.10 LB
CAD: 6994085/SSFE2321
DIMS: 25x14x14 IN

WESTMONT, IL 60559
UNITED STATES US

BILL THIRD PARTY

TO EUROFINS CHICAGO
EUROFINS CHICAGO
2417 BOND ST



UNIVERSITY PARK IL 60484

500-221195 Waybi

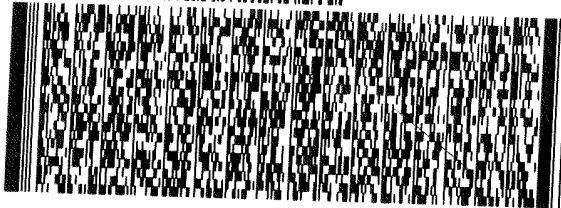
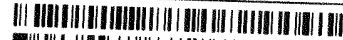
(708) 634-6200

INU:

REF:

PO:

DEPT:



FedEx Express



2 of 4

MPS# 2770 8035 3186
0263

Mstr# 2770 8035 3175

0201

79 JOTA

TUE - 23 AUG 10:30A
PRIORITY OVERNIGHT

60484

IL-US ORD



RT 519

5 10:30

A

3197
08 23

ORIGIN ID: FEPA (262) 729-5

ST 22

KAELYN SPERLE
KPRG AND ASSOCIATES
414 PLAZA DR STE 106

BILL THIRD PARTY

WESTMONT, IL 60559
UNITED STATES US

TO EUROFINS CHICAGO
EUROFINS CHICAGO
2417 BOND ST

UNIVERSITY PARK IL 60484

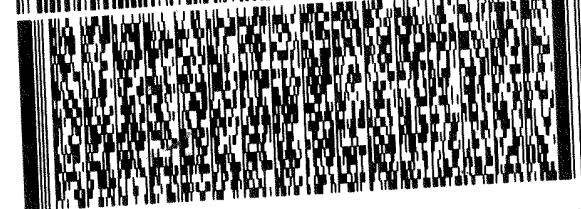
(708) 634-6200

INU:

REF:

PO:

DEPT:



FedEx Express



3 of 4

MPS# 2770 8035 3197
0263

Mstr# 2770 8035 3175

0201

79 JOTA

TUE - 23 AUG 10:30A
PRIORITY OVERNIGHT

60484

IL-US ORD



Part # 158297-435 RRDBF EXP 01/23

Part # 158297-435 RRDBF EXP 01/23

ORIGIN ID:FEPA (262) 278-1621

KPRG AND ASSOCIATES
414 PLAZA DR STE 106

WESTMONT, IL 60559
UNITED STATES US

SHIP DATE: 23AUG22
ACTWTG: 52.75 LB
CAD: 6994085/SSFE2321
DIMS: 26x14x14 IN

BILL THIRD PARTY

Part # 156297-435 RRDBF EXP 01/23

TO **ATTN: SAMPLE COLLECTION**
EUROFINS CHICAGO
2417 BOND ST



UNIVERSITY PARK IL 60484

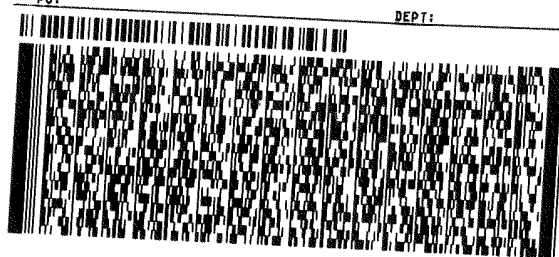
(708) 534-5200

REF:

500-2211954Waybi

INU:

DEPT:



FedEx
Express



4 of 4

MPS# 2771 2544 9943

Mstr# 2771 2544 9910

WED - 24 AUG 10:30A
PRIORITY OVERNIGHT

0201

79 JOTA

60484
IL-US ORD



Chain of Custody Record



Client Information (Sub Contract Lab)		Sampler:	Lab PM:	Carrier Tracking No(s):	COC No:						
Client Contact: Shipping/Receiving		Phone:	Mockler, Diana J		500-164531.1						
Company: TestAmerica Laboratories, Inc.		E-Mail: Diana.Mockler@et.eurofins.com		State of Origin: Illinois	Page: Page 1 of 1						
Address: 13715 Rider Trail North,		Accreditations Required (See note): NELAP - Illinois		Job #: 500-221195-1							
City: Earth City	Due Date Requested: 9/13/2022	Analysis Requested									
State, Zip: MO, 63045	TAT Requested (days):										
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:										
Email:	WO #:										
Project Name: Waukegan CCR	Project #: 50011597										
Site: NRG Midwest Generation Waukegan	SSOW#:										
Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Solid, Oil, Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	903.0/PreSep_21 Standard Target List	904.0/PreSep_0 Standard Target List	Raz26Raz28_GFP	Total Number of Containers	Special Instructions/Note:
MW-01 (500-221195-1)	8/22/22	10:31 Central	Water	Water	X	X	X	X		3	Batch QC must be performed (dup. spikes, etc) - no NCMs concerning limited volume.
MW-02 (500-221195-2)	8/22/22	11:19 Central	Water	Water	X	X	X	X		3	Batch QC must be performed (dup. spikes, etc) - no NCMs concerning limited volume.
MW-03 (500-221195-3)	8/22/22	12:07 Central	Water	Water	X	X	X	X		3	Batch QC must be performed (dup. spikes, etc) - no NCMs concerning limited volume.
MW-04 (500-221195-4)	8/22/22	12:57 Central	Water	Water	X	X	X	X		3	Batch QC must be performed (dup. spikes, etc) - no NCMs concerning limited volume.
MW-16 (500-221195-5)	8/22/22	13:45 Central	Water	Water	X	X	X	X		3	Batch QC must be performed (dup. spikes, etc) - no NCMs concerning limited volume.
Duplicate (500-221195-6)	8/22/22	Central	Water	Water	X	X	X	X		3	Batch QC must be performed (dup. spikes, etc) - no NCMs concerning limited volume.

Note: Since laboratory accreditations are subject to change, Eurofins Chicago 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 Chicago laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Chicago attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Chicago.

Possible Hazard Identification
 Unconfirmed
 Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2
 Empty Kit Relinquished by: Date: Method of Shipment:
 Relinquished by: *Stephanie Hammonds* Date/Time: 8/23/22 10:00 Company: EETA
 Relinquished by: *FED EX* Date/Time: Company:
 Relinquished by: Date/Time: Company:
 Custody Seals Intact: Custody Seal No.:
 Δ Yes Δ No

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: *Suma Worthington* Date/Time: *AUG 24 2022 0910* Company: *EMSR*
 Received by: Date/Time: Company:
 Cooler Temperature(s) °C and Other Remarks:



Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-221195-1

Login Number: 221195

List Number: 1

Creator: Scott, Sherri L

List Source: Eurofins Chicago

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	6.0,9.2,2.8
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: KPRG and Associates, Inc.
Project/Site: Waukegan CCR

Job ID: 500-221195-1

Client Sample ID: MW-01
Date Collected: 08/22/22 10:31
Date Received: 08/23/22 10:25

Lab Sample ID: 500-221195-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			672233	BDE	EET CHI	08/30/22 07:50 - 08/30/22 08:20 ¹
Total Recoverable	Analysis	6020A		1	672561	FXG	EET CHI	08/30/22 17:08
Total Recoverable	Prep	3005A			672233	BDE	EET CHI	08/30/22 07:50 - 08/30/22 08:20 ¹
Total Recoverable	Analysis	6020A		10	672787	FXG	EET CHI	08/31/22 19:18
Total/NA	Prep	7470A			672129	MJG	EET CHI	08/29/22 10:30 - 08/29/22 12:30 ¹
Total/NA	Analysis	7470A		1	672331	MJG	EET CHI	08/30/22 09:28
Total/NA	Analysis	SM 2540C		1	672194	SMO	EET CHI	08/29/22 16:25
Total/NA	Analysis	SM 4500 CI- E		2	671502	LP	EET CHI	08/24/22 10:59
Total/NA	Analysis	SM 4500 F C		1	672211	EAT	EET CHI	08/29/22 14:25
Total/NA	Analysis	SM 4500 SO4 E		10	671521	LP	EET CHI	08/24/22 13:35

Client Sample ID: MW-02
Date Collected: 08/22/22 11:19
Date Received: 08/23/22 10:25

Lab Sample ID: 500-221195-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			672233	BDE	EET CHI	08/30/22 07:50 - 08/30/22 08:20 ¹
Total Recoverable	Analysis	6020A		1	672561	FXG	EET CHI	08/30/22 17:11
Total Recoverable	Prep	3005A			672233	BDE	EET CHI	08/30/22 07:50 - 08/30/22 08:20 ¹
Total Recoverable	Analysis	6020A		10	672787	FXG	EET CHI	08/31/22 19:22
Total/NA	Prep	7470A			672129	MJG	EET CHI	08/29/22 10:30 - 08/29/22 12:30 ¹
Total/NA	Analysis	7470A		1	672331	MJG	EET CHI	08/30/22 09:37
Total/NA	Analysis	SM 2540C		1	672194	SMO	EET CHI	08/29/22 16:31
Total/NA	Analysis	SM 4500 CI- E		2	671502	LP	EET CHI	08/24/22 11:00
Total/NA	Analysis	SM 4500 F C		1	672211	EAT	EET CHI	08/29/22 14:28
Total/NA	Analysis	SM 4500 SO4 E		10	671521	LP	EET CHI	08/24/22 13:35

Client Sample ID: MW-03
Date Collected: 08/22/22 12:07
Date Received: 08/23/22 10:25

Lab Sample ID: 500-221195-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			672233	BDE	EET CHI	08/30/22 07:50 - 08/30/22 08:20 ¹
Total Recoverable	Analysis	6020A		1	672561	FXG	EET CHI	08/30/22 17:15
Total Recoverable	Prep	3005A			672233	BDE	EET CHI	08/30/22 07:50 - 08/30/22 08:20 ¹
Total Recoverable	Analysis	6020A		5	672787	FXG	EET CHI	08/31/22 19:25
Total/NA	Prep	7470A			672129	MJG	EET CHI	08/29/22 10:30 - 08/29/22 12:30 ¹
Total/NA	Analysis	7470A		1	672331	MJG	EET CHI	08/30/22 09:39
Total/NA	Analysis	SM 2540C		1	672194	SMO	EET CHI	08/29/22 16:33
Total/NA	Analysis	SM 4500 CI- E		2	671502	LP	EET CHI	08/24/22 11:00
Total/NA	Analysis	SM 4500 F C		1	672211	EAT	EET CHI	08/29/22 14:37
Total/NA	Analysis	SM 4500 SO4 E		10	671521	LP	EET CHI	08/24/22 13:36

Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Waukegan CCR

Job ID: 500-221195-1

Client Sample ID: MW-04
Date Collected: 08/22/22 12:57
Date Received: 08/23/22 10:25

Lab Sample ID: 500-221195-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			672233	BDE	EET CHI	08/30/22 07:50 - 08/30/22 08:20 ¹
Total Recoverable	Analysis	6020A		1	672561	FXG	EET CHI	08/30/22 17:18
Total Recoverable	Prep	3005A			672233	BDE	EET CHI	08/30/22 07:50 - 08/30/22 08:20 ¹
Total Recoverable	Analysis	6020A		10	672787	FXG	EET CHI	08/31/22 19:28
Total/NA	Prep	7470A			672129	MJG	EET CHI	08/29/22 10:30 - 08/29/22 12:30 ¹
Total/NA	Analysis	7470A		1	672331	MJG	EET CHI	08/30/22 09:45
Total/NA	Analysis	SM 2540C		1	672194	SMO	EET CHI	08/29/22 16:35
Total/NA	Analysis	SM 4500 CI- E		2	671502	LP	EET CHI	08/24/22 11:01
Total/NA	Analysis	SM 4500 F C		1	672211	EAT	EET CHI	08/29/22 14:39
Total/NA	Analysis	SM 4500 SO4 E		5	671521	LP	EET CHI	08/24/22 13:36

Client Sample ID: MW-16
Date Collected: 08/22/22 13:45
Date Received: 08/23/22 10:25

Lab Sample ID: 500-221195-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			672233	BDE	EET CHI	08/30/22 07:50 - 08/30/22 08:20 ¹
Total Recoverable	Analysis	6020A		1	672561	FXG	EET CHI	08/30/22 17:42
Total Recoverable	Prep	3005A			672233	BDE	EET CHI	08/30/22 07:50 - 08/30/22 08:20 ¹
Total Recoverable	Analysis	6020A		10	672787	FXG	EET CHI	08/31/22 19:52
Total/NA	Prep	7470A			672129	MJG	EET CHI	08/29/22 10:30 - 08/29/22 12:30 ¹
Total/NA	Analysis	7470A		1	672331	MJG	EET CHI	08/30/22 09:47
Total/NA	Analysis	SM 2540C		1	672194	SMO	EET CHI	08/29/22 16:37
Total/NA	Analysis	SM 4500 CI- E		2	671502	LP	EET CHI	08/24/22 11:01
Total/NA	Analysis	SM 4500 F C		1	672211	EAT	EET CHI	08/29/22 14:41
Total/NA	Analysis	SM 4500 SO4 E		20	671521	LP	EET CHI	08/24/22 13:36

Client Sample ID: Duplicate
Date Collected: 08/22/22 00:00
Date Received: 08/23/22 10:25

Lab Sample ID: 500-221195-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			672233	BDE	EET CHI	08/30/22 07:50 - 08/30/22 08:20 ¹
Total Recoverable	Analysis	6020A		1	672561	FXG	EET CHI	08/30/22 17:45
Total Recoverable	Prep	3005A			672233	BDE	EET CHI	08/30/22 07:50 - 08/30/22 08:20 ¹
Total Recoverable	Analysis	6020A		10	672787	FXG	EET CHI	08/31/22 19:56
Total/NA	Prep	7470A			672129	MJG	EET CHI	08/29/22 10:30 - 08/29/22 12:30 ¹
Total/NA	Analysis	7470A		1	672331	MJG	EET CHI	08/30/22 09:49
Total/NA	Analysis	SM 2540C		1	672194	SMO	EET CHI	08/29/22 16:39
Total/NA	Analysis	SM 4500 CI- E		2	671502	LP	EET CHI	08/24/22 11:01
Total/NA	Analysis	SM 4500 F C		1	672211	EAT	EET CHI	08/29/22 14:44
Total/NA	Analysis	SM 4500 SO4 E		20	671521	LP	EET CHI	08/24/22 13:37

Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Waukegan CCR

Job ID: 500-221195-1

Client Sample ID: MW-09

Date Collected: 08/23/22 10:53

Date Received: 08/24/22 09:35

Lab Sample ID: 500-221195-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			672233	BDE	EET CHI	08/30/22 07:50 - 08/30/22 08:20 ¹
Total Recoverable	Analysis	6020A		1	672561	FXG	EET CHI	08/30/22 17:49
Total Recoverable	Prep	3005A			672233	BDE	EET CHI	08/30/22 07:50 - 08/30/22 08:20 ¹
Total Recoverable	Analysis	6020A		100	672787	FXG	EET CHI	08/31/22 19:59
Total/NA	Prep	7470A			672129	MJG	EET CHI	08/29/22 10:30 - 08/29/22 12:30 ¹
Total/NA	Analysis	7470A		1	672331	MJG	EET CHI	08/30/22 09:51
Total/NA	Analysis	SM 2540C		1	672355	SMO	EET CHI	08/30/22 15:06
Total/NA	Analysis	SM 4500 CI- E		10	671760	LP	EET CHI	08/25/22 14:19
Total/NA	Analysis	SM 4500 F C		1	672211	EAT	EET CHI	08/29/22 14:46
Total/NA	Analysis	SM 4500 SO4 E		10	671776	LP	EET CHI	08/25/22 15:30

Client Sample ID: MW-11

Date Collected: 08/23/22 09:07

Date Received: 08/24/22 09:35

Lab Sample ID: 500-221195-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			672233	BDE	EET CHI	08/30/22 07:50 - 08/30/22 08:20 ¹
Total Recoverable	Analysis	6020A		1	672561	FXG	EET CHI	08/30/22 17:52
Total Recoverable	Prep	3005A			672233	BDE	EET CHI	08/30/22 07:50 - 08/30/22 08:20 ¹
Total Recoverable	Analysis	6020A		10	672787	FXG	EET CHI	08/31/22 20:03
Total/NA	Prep	7470A			672129	MJG	EET CHI	08/29/22 10:30 - 08/29/22 12:30 ¹
Total/NA	Analysis	7470A		1	672331	MJG	EET CHI	08/30/22 09:54
Total/NA	Analysis	SM 2540C		1	672355	SMO	EET CHI	08/30/22 15:08
Total/NA	Analysis	SM 4500 CI- E		5	671760	LP	EET CHI	08/25/22 14:20
Total/NA	Analysis	SM 4500 F C		1	672211	EAT	EET CHI	08/29/22 14:49
Total/NA	Analysis	SM 4500 SO4 E		2	671776	LP	EET CHI	08/25/22 15:31

Client Sample ID: MW-14

Date Collected: 08/23/22 09:59

Date Received: 08/24/22 09:35

Lab Sample ID: 500-221195-9

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			672233	BDE	EET CHI	08/30/22 07:50 - 08/30/22 08:20 ¹
Total Recoverable	Analysis	6020A		1	672561	FXG	EET CHI	08/30/22 17:55
Total Recoverable	Prep	3005A			672233	BDE	EET CHI	08/30/22 07:50 - 08/30/22 08:20 ¹
Total Recoverable	Analysis	6020A		1	672787	FXG	EET CHI	08/31/22 20:06
Total/NA	Prep	7470A			672129	MJG	EET CHI	08/29/22 10:30 - 08/29/22 12:30 ¹
Total/NA	Analysis	7470A		1	672331	MJG	EET CHI	08/30/22 09:56
Total/NA	Analysis	SM 2540C		1	672355	SMO	EET CHI	08/30/22 15:10
Total/NA	Analysis	SM 4500 CI- E		2	671760	LP	EET CHI	08/25/22 14:20
Total/NA	Analysis	SM 4500 F C		1	672211	EAT	EET CHI	08/29/22 14:51
Total/NA	Analysis	SM 4500 SO4 E		2	671776	LP	EET CHI	08/25/22 15:31

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

Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Waukegan CCR

Job ID: 500-221195-1

Laboratory References:

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

- 1
- 2
- 3
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Accreditation/Certification Summary

Client: KPRG and Associates, Inc.
Project/Site: Waukegan CCR

Job ID: 500-221195-1

Laboratory: Eurofins Chicago

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Illinois	NELAP	IL00035	04-30-23

1

2

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13

ANALYTICAL REPORT

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

Laboratory Job ID: 500-221195-2
Client Project/Site: Waukegan CCR

For:
KPRG and Associates, Inc.
14665 West Lisbon Road,
Suite 1A
Brookfield, Wisconsin 53005

Attn: Richard Gnat



Authorized for release by:
9/28/2022 10:56:34 AM

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

LINKS

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results through



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www.eurofinsus.com/Env

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: KPRG and Associates, Inc.
Project/Site: Waukegan CCR

Job ID: 500-221195-2

Job ID: 500-221195-2

Laboratory: Eurofins Chicago

Narrative

Job Narrative 500-221195-2

Comments

No additional comments.

Receipt

The samples were received on 8/23/2022 10:25 AM. 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 2.8° C, 6.0° C and 9.2° C.

Receipt Exceptions

The following samples were received at the laboratory outside the required temperature criteria: MW-04 (500-221195-4), MW-16 (500-221195-5) and Duplicate (500-221195-6). This does not meet regulatory requirements. The client was contacted regarding this issue, and the laboratory was instructed to <CHOOSE_ONE> proceed with/cancel analysis.

RAD

Methods 903.0, 9315: Radium-226 batch 580452

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-01 (500-221195-1), MW-02 (500-221195-2), MW-03 (500-221195-3), MW-04 (500-221195-4), MW-16 (500-221195-5), Duplicate (500-221195-6), MW-09 (500-221195-7), MW-11 (500-221195-8), MW-14 (500-221195-9), (LCS 160-580452/2-A), (MB 160-580452/1-A) and (500-221195-D-1-A DU)

Methods 904.0, 9320: Radium-228 batch 580477

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-01 (500-221195-1), MW-02 (500-221195-2), MW-03 (500-221195-3), MW-04 (500-221195-4), MW-16 (500-221195-5), Duplicate (500-221195-6), MW-09 (500-221195-7), MW-11 (500-221195-8), MW-14 (500-221195-9), (LCS 160-580477/2-A), (MB 160-580477/1-A) and (500-221195-D-1-C DU)

Method PrecSep-21:

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

Method Summary

Client: KPRG and Associates, Inc.
Project/Site: Waukegan CCR

Job ID: 500-221195-2

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

Protocol References:

EPA = US Environmental Protection Agency

None = None

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

Laboratory References:

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

Sample Summary

Client: KPRG and Associates, Inc.
Project/Site: Waukegan CCR

Job ID: 500-221195-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-221195-1	MW-01	Water	08/22/22 10:31	08/23/22 10:25
500-221195-2	MW-02	Water	08/22/22 11:19	08/23/22 10:25
500-221195-3	MW-03	Water	08/22/22 12:07	08/23/22 10:25
500-221195-4	MW-04	Water	08/22/22 12:57	08/23/22 10:25
500-221195-5	MW-16	Water	08/22/22 13:45	08/23/22 10:25
500-221195-6	Duplicate	Water	08/22/22 00:00	08/23/22 10:25
500-221195-7	MW-09	Water	08/23/22 10:53	08/24/22 09:35
500-221195-8	MW-11	Water	08/23/22 09:07	08/24/22 09:35
500-221195-9	MW-14	Water	08/23/22 09:59	08/24/22 09:35

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Waukegan CCR

Job ID: 500-221195-2

Client Sample ID: MW-01

Lab Sample ID: 500-221195-1

Date Collected: 08/22/22 10:31

Matrix: Water

Date Received: 08/23/22 10:25

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	<0.115	U	0.0753	0.0757	1.00	0.115	pCi/L	09/02/22 11:42	09/27/22 15:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.1		40 - 110					09/02/22 11:42	09/27/22 15:13	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	0.612		0.336	0.341	1.00	0.484	pCi/L	09/02/22 11:42	09/14/22 11:29	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.1		40 - 110					09/02/22 11:42	09/14/22 11:29	1
Y Carrier	95.3		40 - 110					09/02/22 11:42	09/14/22 11:29	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	0.698		0.344	0.349	5.00	0.484	pCi/L		09/28/22 10:11	1

Client Sample ID: MW-02

Lab Sample ID: 500-221195-2

Date Collected: 08/22/22 11:19

Matrix: Water

Date Received: 08/23/22 10:25

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	<0.110	U	0.0709	0.0713	1.00	0.110	pCi/L	09/02/22 11:42	09/27/22 15:14	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					09/02/22 11:42	09/27/22 15:14	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	<0.400	U	0.244	0.245	1.00	0.400	pCi/L	09/02/22 11:42	09/14/22 11:29	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					09/02/22 11:42	09/14/22 11:29	1
Y Carrier	95.7		40 - 110					09/02/22 11:42	09/14/22 11:29	1

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Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Waukegan CCR

Job ID: 500-221195-2

Client Sample ID: MW-02

Lab Sample ID: 500-221195-2

Date Collected: 08/22/22 11:19

Matrix: Water

Date Received: 08/23/22 10:25

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	<0.400	U	0.254	0.255	5.00	0.400	pCi/L		09/28/22 10:11	1

Client Sample ID: MW-03

Lab Sample ID: 500-221195-3

Date Collected: 08/22/22 12:07

Matrix: Water

Date Received: 08/23/22 10:25

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.174		0.0853	0.0867	1.00	0.107	pCi/L	09/02/22 11:42	09/27/22 15:14	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					09/02/22 11:42	09/27/22 15:14	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	0.635		0.291	0.297	1.00	0.386	pCi/L	09/02/22 11:42	09/14/22 11:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					09/02/22 11:42	09/14/22 11:30	1
Y Carrier	94.6		40 - 110					09/02/22 11:42	09/14/22 11:30	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	0.809		0.303	0.309	5.00	0.386	pCi/L		09/28/22 10:11	1

Client Sample ID: MW-04

Lab Sample ID: 500-221195-4

Date Collected: 08/22/22 12:57

Matrix: Water

Date Received: 08/23/22 10:25

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.211		0.0816	0.0837	1.00	0.0786	pCi/L	09/02/22 11:42	09/27/22 15:14	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					09/02/22 11:42	09/27/22 15:14	1

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Waukegan CCR

Job ID: 500-221195-2

Client Sample ID: MW-04

Date Collected: 08/22/22 12:57

Date Received: 08/23/22 10:25

Lab Sample ID: 500-221195-4

Matrix: Water

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	<0.426	U	0.282	0.284	1.00	0.426	pCi/L	09/02/22 11:42	09/14/22 11:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					09/02/22 11:42	09/14/22 11:30	1
Y Carrier	95.0		40 - 110					09/02/22 11:42	09/14/22 11:30	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	0.618		0.294	0.296	5.00	0.426	pCi/L		09/28/22 10:11	1

Client Sample ID: MW-16

Date Collected: 08/22/22 13:45

Date Received: 08/23/22 10:25

Lab Sample ID: 500-221195-5

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	<0.0875	U	0.0557	0.0559	1.00	0.0875	pCi/L	09/02/22 11:42	09/27/22 15:14	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	106		40 - 110					09/02/22 11:42	09/27/22 15:14	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	<0.411	U	0.233	0.233	1.00	0.411	pCi/L	09/02/22 11:42	09/14/22 11:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	106		40 - 110					09/02/22 11:42	09/14/22 11:30	1
Y Carrier	95.0		40 - 110					09/02/22 11:42	09/14/22 11:30	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	<0.411	U	0.240	0.240	5.00	0.411	pCi/L		09/28/22 10:11	1

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Waukegan CCR

Job ID: 500-221195-2

Client Sample ID: Duplicate
Date Collected: 08/22/22 00:00
Date Received: 08/23/22 10:25

Lab Sample ID: 500-221195-6
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	<0.0901	U	0.0621	0.0625	1.00	0.0901	pCi/L	09/02/22 11:42	09/27/22 15:14	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	106		40 - 110					09/02/22 11:42	09/27/22 15:14	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	<0.428	U	0.262	0.262	1.00	0.428	pCi/L	09/02/22 11:42	09/14/22 11:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	106		40 - 110					09/02/22 11:42	09/14/22 11:30	1
Y Carrier	96.4		40 - 110					09/02/22 11:42	09/14/22 11:30	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	<0.428	U	0.269	0.269	5.00	0.428	pCi/L		09/28/22 10:11	1

Client Sample ID: MW-09
Date Collected: 08/23/22 10:53
Date Received: 08/24/22 09:35

Lab Sample ID: 500-221195-7
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	0.121		0.0683	0.0692	1.00	0.0860	pCi/L	09/02/22 11:42	09/27/22 15:14	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	107		40 - 110					09/02/22 11:42	09/27/22 15:14	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	<0.388	U	0.257	0.259	1.00	0.388	pCi/L	09/02/22 11:42	09/14/22 11:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	107		40 - 110					09/02/22 11:42	09/14/22 11:30	1
Y Carrier	95.3		40 - 110					09/02/22 11:42	09/14/22 11:30	1

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Waukegan CCR

Job ID: 500-221195-2

Client Sample ID: MW-09

Date Collected: 08/23/22 10:53

Date Received: 08/24/22 09:35

Lab Sample ID: 500-221195-7

Matrix: Water

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	0.487		0.266	0.268	5.00	0.388	pCi/L		09/28/22 10:11	1

Client Sample ID: MW-11

Date Collected: 08/23/22 09:07

Date Received: 08/24/22 09:35

Lab Sample ID: 500-221195-8

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	0.240		0.102	0.104	1.00	0.122	pCi/L	09/02/22 11:42	09/27/22 15:14	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	105		40 - 110					09/02/22 11:42	09/27/22 15:14	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	0.809		0.314	0.323	1.00	0.402	pCi/L	09/02/22 11:42	09/14/22 11:31	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	105		40 - 110					09/02/22 11:42	09/14/22 11:31	1
Y Carrier	96.1		40 - 110					09/02/22 11:42	09/14/22 11:31	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	1.05		0.330	0.339	5.00	0.402	pCi/L		09/28/22 10:11	1

Client Sample ID: MW-14

Date Collected: 08/23/22 09:59

Date Received: 08/24/22 09:35

Lab Sample ID: 500-221195-9

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	0.147		0.0736	0.0748	1.00	0.0894	pCi/L	09/02/22 11:42	09/27/22 15:14	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	104		40 - 110					09/02/22 11:42	09/27/22 15:14	1

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Waukegan CCR

Job ID: 500-221195-2

Client Sample ID: MW-14

Lab Sample ID: 500-221195-9

Date Collected: 08/23/22 09:59

Matrix: Water

Date Received: 08/24/22 09:35

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.441		0.269	0.272	1.00	0.392	pCi/L	09/02/22 11:42	09/14/22 11:31	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	104		40 - 110					09/02/22 11:42	09/14/22 11:31	1
Y Carrier	94.2		40 - 110					09/02/22 11:42	09/14/22 11:31	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	0.588		0.279	0.282	5.00	0.392	pCi/L		09/28/22 10:11	1



Definitions/Glossary

Client: KPRG and Associates, Inc.
Project/Site: Waukegan CCR

Job ID: 500-221195-2

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: KPRG and Associates, Inc.
Project/Site: Waukegan CCR

Job ID: 500-221195-2

Rad

Prep Batch: 580452

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-221195-1	MW-01	Total/NA	Water	PrecSep-21	
500-221195-2	MW-02	Total/NA	Water	PrecSep-21	
500-221195-3	MW-03	Total/NA	Water	PrecSep-21	
500-221195-4	MW-04	Total/NA	Water	PrecSep-21	
500-221195-5	MW-16	Total/NA	Water	PrecSep-21	
500-221195-6	Duplicate	Total/NA	Water	PrecSep-21	
500-221195-7	MW-09	Total/NA	Water	PrecSep-21	
500-221195-8	MW-11	Total/NA	Water	PrecSep-21	
500-221195-9	MW-14	Total/NA	Water	PrecSep-21	
MB 160-580452/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-580452/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
500-221195-1 DU	MW-01	Total/NA	Water	PrecSep-21	

Prep Batch: 580477

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-221195-1	MW-01	Total/NA	Water	PrecSep_0	
500-221195-2	MW-02	Total/NA	Water	PrecSep_0	
500-221195-3	MW-03	Total/NA	Water	PrecSep_0	
500-221195-4	MW-04	Total/NA	Water	PrecSep_0	
500-221195-5	MW-16	Total/NA	Water	PrecSep_0	
500-221195-6	Duplicate	Total/NA	Water	PrecSep_0	
500-221195-7	MW-09	Total/NA	Water	PrecSep_0	
500-221195-8	MW-11	Total/NA	Water	PrecSep_0	
500-221195-9	MW-14	Total/NA	Water	PrecSep_0	
MB 160-580477/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-580477/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
500-221195-1 DU	MW-01	Total/NA	Water	PrecSep_0	

QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Waukegan CCR

Job ID: 500-221195-2

Method: 903.0 - Radium-226 (GFPC)

Lab Sample ID: MB 160-580452/1-A
Matrix: Water
Analysis Batch: 583744

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 580452

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	<0.0918	U	0.0536	0.0537	1.00	0.0918	pCi/L	09/02/22 11:42	09/27/22 15:13	1
Carrier	MB MB		Limits			Prepared	Analyzed	Dil Fac		
	%Yield	Qualifier								
Ba Carrier	103		40 - 110			09/02/22 11:42	09/27/22 15:13	1		

Lab Sample ID: LCS 160-580452/2-A
Matrix: Water
Analysis Batch: 583744

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 580452

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec Limits
				Uncert. (2σ+/-)					
Radium-226	11.3	9.187		0.959	1.00	0.100	pCi/L	81	75 - 125
Carrier	LCS %Yield	LCS Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Ba Carrier	102		40 - 110						

Lab Sample ID: 500-221195-1 DU
Matrix: Water
Analysis Batch: 583744

Client Sample ID: MW-01
Prep Type: Total/NA
Prep Batch: 580452

Analyte	Sample Sample		DU	DU	Total	RL	MDC	Unit	RER	RER Limit
	Result	Qual	Result	Qual	Uncert. (2σ+/-)					
Radium-226	<0.115	U	<0.105	U	0.0594	1.00	0.105	pCi/L	0.39	1
Carrier	DU %Yield	DU Qualifier	Limits			Prepared	Analyzed	Dil Fac		
Ba Carrier	106		40 - 110							

Method: 904.0 - Radium-228 (GFPC)

Lab Sample ID: MB 160-580477/1-A
Matrix: Water
Analysis Batch: 582046

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 580477

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-228	<0.391	U	0.188	0.188	1.00	0.391	pCi/L	09/02/22 11:42	09/14/22 11:28	1
Carrier	MB MB		Limits			Prepared	Analyzed	Dil Fac		
	%Yield	Qualifier								
Ba Carrier	103		40 - 110			09/02/22 11:42	09/14/22 11:28	1		
Y Carrier	94.2		40 - 110			09/02/22 11:42	09/14/22 11:28	1		

QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Waukegan CCR

Job ID: 500-221195-2

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

Lab Sample ID: LCS 160-580477/2-A
Matrix: Water
Analysis Batch: 582046

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 580477

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	
Radium-228	8.28	8.945		1.15	1.00	0.418	pCi/L	108	75 - 125	
LCS LCS										
Carrier	%Yield	Qualifier	Limits							
Ba Carrier	102		40 - 110							
Y Carrier	95.3		40 - 110							

Lab Sample ID: 500-221195-1 DU
Matrix: Water
Analysis Batch: 582046

Client Sample ID: MW-01
Prep Type: Total/NA
Prep Batch: 580477

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
										1
Radium-228	0.612		<0.344	U	0.201	1.00	0.344	pCi/L	0.90	1
DU DU										
Carrier	%Yield	Qualifier	Limits							
Ba Carrier	106		40 - 110							
Y Carrier	94.2		40 - 110							

Eurofins Chicago

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

Chain of Custody Record

eurofins

Client Information		Sampler <i>Mitchel Dolan</i>		Lab PM Mockler Diana J		Carrier Tracking No(s)		COC No 500-104255-44027 1			
Client Contact Mitchel Dolan		Phone <i>262-622-1143</i>		E-Mail Diana Mockler@et.eurofinsus.com		State of Origin <i>IL</i>		Page Page 1 of 1			
Company KPRG and Associates Inc.		PWSID		Analysis Requested						Job #: <i>500-221/95</i>	
Address 14665 West Lisbon Road Suite 1A		Due Date Requested		Field Filtered Sample (Yes or No) Pattern MS/MS/ED (Yes or No) 903.0, 904.0 6010C 6020A, 7470A 2540C, 4500_F_C 5M4500_CI_E, 5M4500_S04_E (82000-Turbidity)		Total Number of Containers		Preservation Codes			
City Brookfield		TAT Requested (days)						A HCL M Hexane B NaOH N None C Zn Acetate C AsNaO2 D Nitric Acid P Na2O4S E NaHSO4 Q Na2SO5 F MeOH S H2SO4 G Amchlor T TsP Dodecahydrate H Ascorbic Acid U Acetone I Ice V MCAA J DI Water W pH 4-5 K EDTA Y T.zma L EDA Z other specify)			
State Zip WI 53005		Compliance Project. Δ Yes Δ No						Other			
Phone 262-781-0475(Tel) 500-221195 COC		PO # 4502102435						Special Instructions/Note			
Email mitcheld@kprginc.com		WO #									
Project Name Waukegan CCR Event Desc: Quarterly Waukegan CCR		Project # 50011587									
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	
<i>1 MW-01</i>		<i>8/22/22</i>		<i>1031</i>		<i>G</i>		<i>Water</i>		<i>N N X X X X</i>	
<i>2 MW-02</i>		<i>8/22/22</i>		<i>1119</i>		<i>G</i>		<i>Water</i>		<i>N N X X X</i>	
<i>3 MW-03</i>		<i>8/22/22</i>		<i>1207</i>		<i>G</i>		<i>Water</i>		<i>N N X X X</i>	
<i>4 MW-04</i>		<i>8/22/22</i>		<i>1257</i>		<i>G</i>		<i>Water</i>		<i>N N X X X</i>	
<i>5 MW-16</i>		<i>8/22/22</i>		<i>1345</i>		<i>G</i>		<i>Water</i>		<i>N N X X X</i>	
<i>6 Duplicate</i>		<i>8/22/22</i>		<i>-</i>		<i>G</i>		<i>Water</i>		<i>N N X X X</i>	
<i>Water</i>								<i>Water</i>			
<i>Water</i>								<i>Water</i>			
<i>Water</i>								<i>Water</i>			
<i>Water</i>								<i>Water</i>			
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) <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>Mitchel Dolan</i>		Date/Time: <i>8/22/22 / 1600</i>		Company: <i>KPRG</i>		Received by: <i>FedEx</i>		Date/Time: <i>8/22/22 / 1600</i>		Company: <i>FedEx</i>	
Relinquished by		Date/Time		Company		Received by: <i>Ann Scott</i>		Date/Time: <i>8/23/22 1025</i>		Company: <i>KPRG</i>	
Relinquished by		Date/Time		Company		Received by		Date/Time		Company	
Custody Seals Intact: Δ Yes Δ No		Custody Seal No		Cooler Temperature(s) °C and Other Remarks <i>6.2+0.0, 0.4 → 9.2</i>							

ORIGIN ID:FEPA (262) 729-5865
KAELYN SPERLE
KPRG AND ASSOCIATES
414 PLAZA DR STE 106

WESTMONT, IL 60559
UNITED STATES US

SHIP DATE: 22AUG22
ACTWGT: 49.10 LB
CAD: 6994085/SSFE2321
DIMS: 25x14x14 IN

BILL THIRD PARTY

Part # 158297435 RRDBF EXP 01/23

TO EUROFINS CHICAGO
EUROFINS CHICAGO
2417 BOND ST



UNIVERSITY PARK IL 60484

500-221195 Waybi

(708) 634-6200

INU:

REF:

PO:

DEPT:



FedEx
Express



2 of 4

MPS# 2770 8035 3186
0263

Mstr# 2770 8035 3175

0201

79 JOTA

TUE - 23 AUG 10:30A
PRIORITY OVERNIGHT

60484

IL-US ORD



RT 519

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10:30

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3197
08 23

ORIGIN ID:FEPA (262) 729-5

ST 22

KAELYN SPERLE
KPRG AND ASSOCIATES
414 PLAZA DR STE 106

WESTMONT, IL 60559
UNITED STATES US

BILL THIRD PARTY

Part # 158297435 RRDBF EXP 01/23

TO EUROFINS CHICAGO
EUROFINS CHICAGO
2417 BOND ST

UNIVERSITY PARK IL 60484

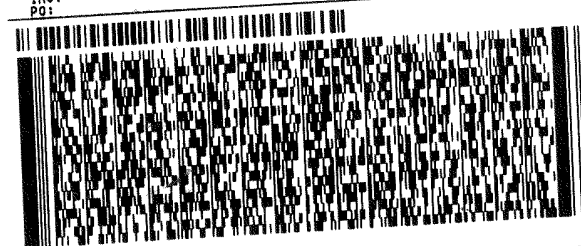
(708) 634-6200

INU:

REF:

PO:

DEPT:



FedEx
Express



3 of 4

MPS# 2770 8035 3197
0263

Mstr# 2770 8035 3175

0201

79 JOTA

TUE - 23 AUG 10:30A
PRIORITY OVERNIGHT

60484

IL-US ORD



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ORIGIN ID:FEPA (262) 278-1621

KPRG AND ASSOCIATES
414 PLAZA DR STE 106

WESTMONT, IL 60559
UNITED STATES US

SHIP DATE: 23AUG22
ACTWTG: 52.75 LB
CAD: 6994085/SSFE2321
DIMS: 26x14x14 IN

BILL THIRD PARTY

Part # 156297-435 RRDBF EXP 01/23

TO **ATTN: SAMPLE COLLECTION**
EUROFINS CHICAGO
2417 BOND ST



UNIVERSITY PARK IL 60484

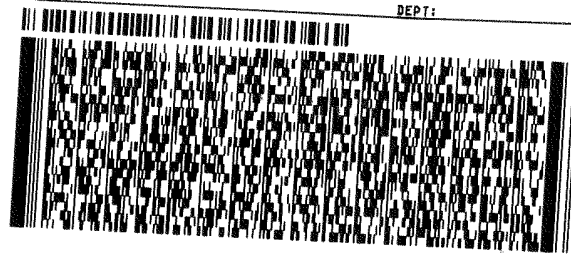
(708) 534-5200

REF:

500-2211954Waybl

INU:

DEPT:



4 of 4

MPS# 2771 2544 9943
0263

Mstr# 2771 2544 9910

WED - 24 AUG 10:30A
PRIORITY OVERNIGHT

0201

79 JOTA

60484
IL-US ORD



Chain of Custody Record



Client Information (Sub Contract Lab)		Sampler:	Lab PM:	Carrier Tracking No(s):	COC No:		
Client Contact: Shipping/Receiving		Phone:	Mockler, Diana J		500-164531.1		
Company: TestAmerica Laboratories, Inc.		E-Mail: Diana.Mockler@et.eurofins.com		State of Origin: Illinois	Page: Page 1 of 1		
Address: 13715 Rider Trail North,		Accreditations Required (See note): NELAP - Illinois		Job #: 500-221195-1			
City: Earth City		Due Date Requested: 9/13/2022		Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Y - Trizma Z - other (specify)			
State, Zip: MO, 63045		TAT Requested (days):		Analysis Requested			
Phone: 314-298-8566(Tel) 314-298-8757(Fax)		FO #:		Field Filtered Sample (Yes or No)			
Email:		WO #:		Perform MS/MSD (Yes or No)			
Project Name: Waukegan CCR		Project #: 50011597		903.0/PreSep_21 Standard Target List			
Site: NRG Midwest Generation Waukegan		SSOW#:		904.0/PreSep_0 Standard Target List			
Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Solid, Oil, Tissue, A=Air)	Preservation Code:	Total Number of Containers	Special Instructions/Note:
MW-01 (500-221195-1)	8/22/22	10:31 Central	Water	Water	X	3	Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume.
MW-02 (500-221195-2)	8/22/22	11:19 Central	Water	Water	X	3	Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume.
MW-03 (500-221195-3)	8/22/22	12:07 Central	Water	Water	X	3	Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume.
MW-04 (500-221195-4)	8/22/22	12:57 Central	Water	Water	X	3	Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume.
MW-16 (500-221195-5)	8/22/22	13:45 Central	Water	Water	X	3	Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume.
Duplicate (500-221195-6)	8/22/22	Central	Water	Water	X	3	Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume.

Note: Since laboratory accreditations are subject to change, Eurofins Chicago 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 Chicago laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Chicago attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Chicago.

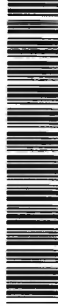
Possible Hazard Identification
 Unconfirmed
 Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2
 Empty Kit Relinquished by: Date: _____
 Relinquished by: *Stephanie Hammonds* Date: 8/13/22 10:00 Company: EETA
 Relinquished by: *FED EX* Date: _____ Company: _____
 Relinquished by: Date: _____ Company: _____

Custody Seals Intact: _____ Custody Seal No.: _____
 Yes No

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: *Suma Worthington* Date/Time: *AUG 24 2022 0910*
 Received by: _____ Date/Time: _____
 Received by: _____ Date/Time: _____
 Cooler Temperature(s) °C and Other Remarks: _____



Chain of Custody Record



Client Information (Sub Contract Lab)		Sampler:		Lab PM:	Carrier Tracking No(s):	COC No:
Client Contact:		Phone:		Mockler, Diana J	500-164577.1	
Shipping/Receiving		E-Mail:		Diana.Mockler@et.eurofinsus.com	State of Origin:	Page:
Company:		Accreditations Required (See note):		NELAP - Illinois	Illinois	Page: 1 of 1
Address:		Due Date Requested:		9/14/2022	Job #:	500-221195-2
City:		TAT Requested (days):			Preservation Codes:	
State, Zip:		PO #:			M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO4 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Y - Trizma Z - other (specify)	
Phone:		WO #:			Other:	
Email:		Project #:				
Project Name:		SSOW#:				
Site:		NRG Midwest Generation Waukegan				

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Solid, Other, etc.)	Preservation Code:	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	903.0/PreSep. 21 Standard Target List	904.0/PreSep. 0 Standard Target List	R226R228_GFP	Total Number of Containers	Special Instructions/Note:
MW-09 (500-221195-7)	8/23/22	10:53 Central	Water	Water		X	X	X	X		3	Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume.
MW-11 (500-221195-8)	8/23/22	09:07 Central	Water	Water		X	X	X	X		3	Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume.
MW-14 (500-221195-9)	8/23/22	09:59 Central	Water	Water		X	X	X	X		3	Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume.

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: *8/24/22* 1520
Relinquished by: _____ Date: _____
Relinquished by: _____ Date: _____
Relinquished by: _____ Date: _____

Received by: *[Signature]* Date/Time: _____
Received by: *[Signature]* Date/Time: **AUG 25 2022 0850**
Received by: _____ Date/Time: _____

Company: *[Signature]* Company
Company: *[Signature]* Company
Company: _____ Company

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

Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-221195-2

Login Number: 221195

List Number: 1

Creator: Scott, Sherri L

List Source: Eurofins Chicago

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	6.0,9.2,2.8
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: KPRG and Associates, Inc.

Job Number: 500-221195-2

Login Number: 221195

List Number: 2

Creator: Worthington, Sierra M

List Source: Eurofins St. Louis

List Creation: 08/24/22 12:55 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 <math><6\text{mm}</math> (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: KPRG and Associates, Inc.

Job Number: 500-221195-2

Login Number: 221195

List Number: 3

Creator: Worthington, Sierra M

List Source: Eurofins St. Louis

List Creation: 08/25/22 10:17 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: KPRG and Associates, Inc.
Project/Site: Waukegan CCR

Job ID: 500-221195-2

Client Sample ID: MW-01

Lab Sample ID: 500-221195-1

Date Collected: 08/22/22 10:31

Matrix: Water

Date Received: 08/23/22 10:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			580452	MLK	EET SL	09/02/22 11:42
Total/NA	Analysis	903.0		1	583744	FLC	EET SL	09/27/22 15:13
Total/NA	Prep	PrecSep_0			580477	MLK	EET SL	09/02/22 11:42
Total/NA	Analysis	904.0		1	582046	FLC	EET SL	09/14/22 11:29
Total/NA	Analysis	Ra226_Ra228		1	583802	SCB	EET SL	09/28/22 10:11

Client Sample ID: MW-02

Lab Sample ID: 500-221195-2

Date Collected: 08/22/22 11:19

Matrix: Water

Date Received: 08/23/22 10:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			580452	MLK	EET SL	09/02/22 11:42
Total/NA	Analysis	903.0		1	583744	FLC	EET SL	09/27/22 15:14
Total/NA	Prep	PrecSep_0			580477	MLK	EET SL	09/02/22 11:42
Total/NA	Analysis	904.0		1	582046	FLC	EET SL	09/14/22 11:29
Total/NA	Analysis	Ra226_Ra228		1	583802	SCB	EET SL	09/28/22 10:11

Client Sample ID: MW-03

Lab Sample ID: 500-221195-3

Date Collected: 08/22/22 12:07

Matrix: Water

Date Received: 08/23/22 10:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			580452	MLK	EET SL	09/02/22 11:42
Total/NA	Analysis	903.0		1	583744	FLC	EET SL	09/27/22 15:14
Total/NA	Prep	PrecSep_0			580477	MLK	EET SL	09/02/22 11:42
Total/NA	Analysis	904.0		1	582046	FLC	EET SL	09/14/22 11:30
Total/NA	Analysis	Ra226_Ra228		1	583802	SCB	EET SL	09/28/22 10:11

Client Sample ID: MW-04

Lab Sample ID: 500-221195-4

Date Collected: 08/22/22 12:57

Matrix: Water

Date Received: 08/23/22 10:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			580452	MLK	EET SL	09/02/22 11:42
Total/NA	Analysis	903.0		1	583744	FLC	EET SL	09/27/22 15:14
Total/NA	Prep	PrecSep_0			580477	MLK	EET SL	09/02/22 11:42
Total/NA	Analysis	904.0		1	582046	FLC	EET SL	09/14/22 11:30
Total/NA	Analysis	Ra226_Ra228		1	583802	SCB	EET SL	09/28/22 10:11

Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Waukegan CCR

Job ID: 500-221195-2

Client Sample ID: MW-16
Date Collected: 08/22/22 13:45
Date Received: 08/23/22 10:25

Lab Sample ID: 500-221195-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			580452	MLK	EET SL	09/02/22 11:42
Total/NA	Analysis	903.0		1	583744	FLC	EET SL	09/27/22 15:14
Total/NA	Prep	PrecSep_0			580477	MLK	EET SL	09/02/22 11:42
Total/NA	Analysis	904.0		1	582046	FLC	EET SL	09/14/22 11:30
Total/NA	Analysis	Ra226_Ra228		1	583802	SCB	EET SL	09/28/22 10:11

Client Sample ID: Duplicate
Date Collected: 08/22/22 00:00
Date Received: 08/23/22 10:25

Lab Sample ID: 500-221195-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			580452	MLK	EET SL	09/02/22 11:42
Total/NA	Analysis	903.0		1	583744	FLC	EET SL	09/27/22 15:14
Total/NA	Prep	PrecSep_0			580477	MLK	EET SL	09/02/22 11:42
Total/NA	Analysis	904.0		1	582046	FLC	EET SL	09/14/22 11:30
Total/NA	Analysis	Ra226_Ra228		1	583802	SCB	EET SL	09/28/22 10:11

Client Sample ID: MW-09
Date Collected: 08/23/22 10:53
Date Received: 08/24/22 09:35

Lab Sample ID: 500-221195-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			580452	MLK	EET SL	09/02/22 11:42
Total/NA	Analysis	903.0		1	583744	FLC	EET SL	09/27/22 15:14
Total/NA	Prep	PrecSep_0			580477	MLK	EET SL	09/02/22 11:42
Total/NA	Analysis	904.0		1	582046	FLC	EET SL	09/14/22 11:30
Total/NA	Analysis	Ra226_Ra228		1	583802	SCB	EET SL	09/28/22 10:11

Client Sample ID: MW-11
Date Collected: 08/23/22 09:07
Date Received: 08/24/22 09:35

Lab Sample ID: 500-221195-8
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			580452	MLK	EET SL	09/02/22 11:42
Total/NA	Analysis	903.0		1	583744	FLC	EET SL	09/27/22 15:14
Total/NA	Prep	PrecSep_0			580477	MLK	EET SL	09/02/22 11:42
Total/NA	Analysis	904.0		1	582046	FLC	EET SL	09/14/22 11:31
Total/NA	Analysis	Ra226_Ra228		1	583802	SCB	EET SL	09/28/22 10:11

Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Waukegan CCR

Job ID: 500-221195-2

Client Sample ID: MW-14

Date Collected: 08/23/22 09:59

Date Received: 08/24/22 09:35

Lab Sample ID: 500-221195-9

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			580452	MLK	EET SL	09/02/22 11:42
Total/NA	Analysis	903.0		1	583744	FLC	EET SL	09/27/22 15:14
Total/NA	Prep	PrecSep_0			580477	MLK	EET SL	09/02/22 11:42
Total/NA	Analysis	904.0		1	582046	FLC	EET SL	09/14/22 11:31
Total/NA	Analysis	Ra226_Ra228		1	583802	SCB	EET SL	09/28/22 10:11

Laboratory References:

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



Accreditation/Certification Summary

Client: KPRG and Associates, Inc.
Project/Site: Waukegan CCR

Job ID: 500-221195-2

Laboratory: Eurofins St. Louis

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Illinois	NELAP	200023	11-30-22

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Tracer/Carrier Summary

Client: KPRG and Associates, Inc.
Project/Site: Waukegan CCR

Job ID: 500-221195-2

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)
500-221195-1	MW-01	94.1
500-221195-1 DU	MW-01	106
500-221195-2	MW-02	101
500-221195-3	MW-03	102
500-221195-4	MW-04	102
500-221195-5	MW-16	106
500-221195-6	Duplicate	106
500-221195-7	MW-09	107
500-221195-8	MW-11	105
500-221195-9	MW-14	104
LCS 160-580452/2-A	Lab Control Sample	102
MB 160-580452/1-A	Method Blank	103

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)
500-221195-1	MW-01	94.1	95.3
500-221195-1 DU	MW-01	106	94.2
500-221195-2	MW-02	101	95.7
500-221195-3	MW-03	102	94.6
500-221195-4	MW-04	102	95.0
500-221195-5	MW-16	106	95.0
500-221195-6	Duplicate	106	96.4
500-221195-7	MW-09	107	95.3
500-221195-8	MW-11	105	96.1
500-221195-9	MW-14	104	94.2
LCS 160-580477/2-A	Lab Control Sample	102	95.3
MB 160-580477/1-A	Method Blank	103	94.2

Tracer/Carrier Legend

Ba = Ba Carrier

Y = Y Carrier

PROJECT NAME	NRG – WAUKEGAN STATION (12313.2)		DATE	8/22/22
Sample Name	MW-01	Start Time	1020	
Condition of Well	Good			
Water Level	21.78	Total Depth	-	
Well Diameter	PVC – 2 inch	Volume in Well	-	
Method of Purge	Low-Flow	Purge Characteristics	Clear	
Volume Removed	1 gal	W L at Sample Time	21.80	
Method of Sample	Low-Flow	Sample Characteristics	Clear	
Sample Analysis	CCR + Permit	Sample Time	1031	
Water Quality Meter	YSI ProDss			

Time	Depth to Water (ft)	ph (SU)	Temp (°C)	Spec. Cond (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)
1020	21.78	7.47	15.7	.687	8.16	196.5	2.58
1023	-	8.02	14.5	.558	2.71	185.7	2.00
1026	-	8.40	14.2	.559	0.98	173.4	1.54
1029	21.80	8.60	14.3	.561	1.08	155.9	1.31

SAMPLING NOTES:

Sampler Name and Company:

KPRG and Associates *MPD*

PROJECT NAME	NRG - WAUKEGAN STATION (12313.2)		DATE	8/22/22
Sample Name	MW-02	Start Time	1108	
Condition of Well	Good			
Water Level	21.65	Total Depth	-	
Well Diameter	PVC - 2 inch	Volume in Well	-	
Method of Purge	Low-Flow	Purge Characteristics	Clear	
Volume Removed	2.5 gts	W L at Sample Time	21.73	
Method of Sample	Low-Flow	Sample Characteristics	Clear	
Sample Analysis	CCR + Perm. St	Sample Time	1119	
Water Quality Meter	YSI ProDss			

Time	Depth to Water (ft)	ph (SU)	Temp (°C)	Spec. Cond (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)
1109	21.65	7.28	21.6	.694	6.97	98.1	2.42
1112	-	7.10	23.1	.697	6.75	77.5	2.54
1115	-	7.31	15.3	.826	5.20	85.7	5.71
1118	21.73	7.59	14.0	.801	1.34	70.1	25.43

SAMPLING NOTES:

Sampler Name and Company:

KPRG and Associates

MPO

PROJECT NAME	NRG – WAUKEGAN STATION (12313.2)		DATE	8/22/22
Sample Name	MW-03	Start Time	1156	
Condition of Well	Good			
Water Level	21.76	Total Depth	-	
Well Diameter	PVC – 2 inch	Volume in Well	-	
Method of Purge	Low-Flow	Purge Characteristics	Clear	
Volume Removed	4 Qts	WL at Sample Time	21.76	
Method of Sample	Low-Flow	Sample Characteristics	Clear	
Sample Analysis	Perm. + CLR	Sample Time	1207	
Water Quality Meter	YSI ProDss			

Time	Depth to Water (ft)	ph (SU)	Temp (°C)	Spec. Cond (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)
1157	21.76	7.47	13.6	.821	7.08	150.3	2.78
1200	-	7.37	13.5	.725	1.52	147.4	3.20
1203	-	7.36	13.2	.717	0.77	144.6	2.22
1206	21.76	7.38	13.3	.687	5.9	140.6	1.91

SAMPLING NOTES:

Sampler Name and Company:

KPRG and Associates

MAD

PROJECT NAME	NRG - WAUKEGAN STATION (12313.2)		DATE	8/22/22
Sample Name	MW - Ø4	Start Time	1246	
Condition of Well	good			
Water Level	21.55	Total Depth	-	
Well Diameter	PVC - 2 inch	Volume in Well	-	
Method of Purge	Low-Flow	Purge Characteristics	clear	
Volume Removed	5 qts	W L at Sample Time	21.62	
Method of Sample	Low-Flow	Sample Characteristics	Clear	
Sample Analysis	CCR & permit	Sample Time	1257	
Water Quality Meter	YSI ProDss			

Time	Depth to Water (ft)	ph (SU)	Temp (°C)	Spec. Cond (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)
1247	21.55	7.41	13.8	.563	6.17	141.1	3.24
1250	-	7.75	13.0	.507	1.74	132.1	12.70
1253	-	8.04	12.9	.501	0.72	117.9	5.63
1256	21.62	7.82	13.0	.540	0.57	107.7	2.57

SAMPLING NOTES:

Sampler Name and Company:

KPRG and Associates

MJD

PROJECT NAME	NRG - WAUKEGAN STATION (12313.2)		DATE	8/23/22
Sample Name	MW-09	Start Time	1040	
Condition of Well	Good			
Water Level	10.81	Total Depth	-	
Well Diameter	PVC - 2 inch	Volume in Well	-	
Method of Purge	Low-Flow	Purge Characteristics	Sl. cloudy	
Volume Removed	1 qt	W L at Sample Time	10.81	
Method of Sample	Low-Flow	Sample Characteristics	Sl. cloudy	
Sample Analysis	CCR + Perm. ↓	Sample Time	1053	
Water Quality Meter	YSI ProDss			

Time	Depth to Water (ft)	ph (SU)	Temp (°C)	Spec. Cond (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)
1043	10.81	7.53	18.0	1.305	6.32	125.9	67.66
1046	-	7.23	14.6	1.328	1.86	124.9	89.01
1049	-	7.16	14.1	1.334	0.90	117.6	74.89
1052	10.81	7.14	13.9	1.339	0.59	105.9	34.90

SAMPLING NOTES:

Sampler Name and Company:

KPRG and Associates

MPA

PROJECT NAME	NRG – WAUKEGAN STATION (12313.2)		DATE	8/23/22
Sample Name	MW-11	Start Time	0855	
Condition of Well	Good			
Water Level	6.45	Total Depth	-	
Well Diameter	PVC – 2 inch	Volume in Well	-	
Method of Purge	Low-Flow	Purge Characteristics	Clear	
Volume Removed	2.5 gfs	W L at Sample Time	6.41	
Method of Sample	Low-Flow	Sample Characteristics	Clear	
Sample Analysis	CCR + Permsst	Sample Time	0907	
Water Quality Meter	YSI ProDss			

Time	Depth to Water (ft)	ph (SU)	Temp (°C)	Spec. Cond (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)
0857	6.45	7.15	15.8	1.219	5.92	144.3	6.82
0900	-	7.00	15.3	1.256	1.30	45.0	4.83
0903	-	7.00	15.0	1.261	0.82	5.0	3.43
0906	6.41	7.01	15.2	1.268	0.59	-23.3	3.17

SAMPLING NOTES:

Sampler Name and Company:

KPRG and Associates

MPD

PROJECT NAME	NRG - WAUKEGAN STATION (12313.2)		DATE	8/23/22
Sample Name	MW-14	Start Time	0947	
Condition of Well	Good			
Water Level	5.90	Total Depth	-	
Well Diameter	PVC - 2 inch	Volume in Well	-	
Method of Purge	Low-Flow	Purge Characteristics	SL Cloudy	
Volume Removed	1.5 dts	W L at Sample Time	5.80	
Method of Sample	Low-Flow	Sample Characteristics	Cloudy - orange	
Sample Analysis	Permit + CCR	Sample Time	0959	
Water Quality Meter	YSI ProDss			

Time	Depth to Water (ft)	ph (SU)	Temp (°C)	Spec. Cond (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)
0949	5.90	7.76	17.6	.924	7.65	117.9	25.05
0952	-	7.08	15.9	1.140	1.48	48.2	128.19
0955	-	7.05	15.7	1.148	0.72	-3.5	29.44
0958	5.80	7.03	15.7	1.151	0.57	-22.7	24.76

SAMPLING NOTES:

Sampler Name and Company:

KPRG and Associates

MPO

PROJECT NAME	NRG - WAUKEGAN STATION (12313.2)		DATE	8/22/22
Sample Name	MW-16	Start Time	1333	
Condition of Well	Good			
Water Level	27.28	Total Depth	-	
Well Diameter	PVC - 2 inch	Volume in Well	-	
Method of Purge	Low-Flow	Purge Characteristics	Clear	
Volume Removed	2 Qts	W L at Sample Time	27.47	
Method of Sample	Low-Flow	Sample Characteristics	Clear	
Sample Analysis	CCR	Sample Time	1345	
Water Quality Meter	YSI ProDss			

Time	Depth to Water (ft)	ph (SU)	Temp (°C)	Spec. Cond (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)
1335	27.28	7.38	18.2	1.206	8.01	156.0	4.16
1338	-	7.36	15.4	.914	2.12	153.1	7.20
1341	-	7.35	14.8	.878	0.82	151.9	7.08
1344	27.47	7.33	15.0	.882	0.53	150.4	3.54

SAMPLING NOTES:

CCR Duplicate

Sampler Name and Company:

KPRG and Associates

MPD