

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

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

TestAmerica Job ID: 500-121215-1
Client Project/Site: Waukegan CCR

For:
KPRG and Associates, Inc.
14665 West Lisbon Road,
Suite 2B
Brookfield, Wisconsin 53005

Attn: Richard Gnat



Authorized for release by:
12/19/2016 1:22:27 PM

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

MWG13-15_59140

Comp. Ex. 224J

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Case Narrative

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

TestAmerica Job ID: 500-121215-1

Job ID: 500-121215-1

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Laboratory: TestAmerica Chicago

Narrative

Job Narrative
500-121215-1

Comments

No additional comments.

Receipt

The samples were received on 12/8/2016 3:15 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 1.2° C, 3.2° C and 3.3° C.

Metals

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

General Chemistry

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

Method Summary

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

TestAmerica Job ID: 500-121215-1

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

Protocol References:

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

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

Laboratory References:

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

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Sample Summary

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

TestAmerica Job ID: 500-121215-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-121215-1	MW-01	Water	12/05/16 09:24	12/08/16 15:15
500-121215-2	MW-02	Water	12/05/16 11:06	12/08/16 15:15
500-121215-3	MW-03	Water	12/05/16 12:33	12/08/16 15:15
500-121215-4	MW-04	Water	12/05/16 14:34	12/08/16 15:15
500-121215-5	MW-09	Water	12/08/16 10:38	12/08/16 15:15
500-121215-6	MW-11	Water	12/07/16 15:01	12/08/16 15:15
500-121215-7	MW-14	Water	12/07/16 13:10	12/08/16 15:15
500-121215-8	MW-16	Water	12/05/16 16:20	12/08/16 15:15
500-121215-9	Dup	Water	12/05/16 00:00	12/08/16 15:15

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TestAmerica Chicago

Client Sample Results

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

TestAmerica Job ID: 500-121215-1

Client Sample ID: MW-01

Lab Sample ID: 500-121215-1

Date Collected: 12/05/16 09:24

Matrix: Water

Date Received: 12/08/16 15:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.010		0.010		mg/L		12/09/16 09:00	12/09/16 18:26	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		12/09/16 09:00	12/13/16 18:22	1
Arsenic	0.13		0.0010		mg/L		12/09/16 09:00	12/13/16 18:22	1
Barium	0.017		0.0025		mg/L		12/09/16 09:00	12/13/16 18:22	1
Beryllium	<0.0010		0.0010		mg/L		12/09/16 09:00	12/13/16 18:22	1
Boron	2.2		0.25		mg/L		12/09/16 09:00	12/16/16 12:53	5
Cadmium	<0.00050		0.00050		mg/L		12/09/16 09:00	12/13/16 18:22	1
Calcium	55		0.20		mg/L		12/09/16 09:00	12/15/16 18:13	1
Chromium	<0.0050		0.0050		mg/L		12/09/16 09:00	12/13/16 18:22	1
Cobalt	<0.0010		0.0010		mg/L		12/09/16 09:00	12/13/16 18:22	1
Lead	<0.00050		0.00050		mg/L		12/09/16 09:00	12/15/16 18:13	1
Molybdenum	0.070		0.0050		mg/L		12/09/16 09:00	12/15/16 18:13	1
Selenium	0.0025		0.0025		mg/L		12/09/16 09:00	12/15/16 18:13	1
Thallium	<0.0020		0.0020		mg/L		12/09/16 09:00	12/15/16 18:13	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		12/09/16 13:00	12/12/16 10:41	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	560		10		mg/L			12/09/16 02:01	1
Chloride	65		2.0		mg/L			12/12/16 21:40	1
Fluoride	0.34		0.10		mg/L			12/10/16 13:37	1
Sulfate	180		50		mg/L			12/16/16 06:16	10

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Client Sample Results

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

TestAmerica Job ID: 500-121215-1

Client Sample ID: MW-02

Lab Sample ID: 500-121215-2

Date Collected: 12/05/16 11:06

Matrix: Water

Date Received: 12/08/16 15:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.010		0.010		mg/L		12/09/16 09:00	12/09/16 18:54	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		12/09/16 09:00	12/13/16 18:41	1
Arsenic	0.018		0.0010		mg/L		12/09/16 09:00	12/13/16 18:41	1
Barium	0.015		0.0025		mg/L		12/09/16 09:00	12/13/16 18:41	1
Beryllium	<0.0010		0.0010		mg/L		12/09/16 09:00	12/13/16 18:41	1
Boron	3.1		0.25		mg/L		12/09/16 09:00	12/16/16 13:12	5
Cadmium	<0.00050		0.00050		mg/L		12/09/16 09:00	12/13/16 18:41	1
Calcium	28		0.20		mg/L		12/09/16 09:00	12/15/16 18:32	1
Chromium	<0.0050		0.0050		mg/L		12/09/16 09:00	12/13/16 18:41	1
Cobalt	<0.0010		0.0010		mg/L		12/09/16 09:00	12/13/16 18:41	1
Lead	<0.00050		0.00050		mg/L		12/09/16 09:00	12/15/16 18:32	1
Molybdenum	0.071		0.0050		mg/L		12/09/16 09:00	12/15/16 18:32	1
Selenium	<0.0025		0.0025		mg/L		12/09/16 09:00	12/15/16 18:32	1
Thallium	<0.0020		0.0020		mg/L		12/09/16 09:00	12/15/16 18:32	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		12/09/16 13:00	12/12/16 10:43	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	430		10		mg/L			12/09/16 02:10	1
Chloride	56		2.0		mg/L			12/12/16 21:41	1
Fluoride	1.0		0.10		mg/L			12/10/16 13:40	1
Sulfate	160		50		mg/L			12/16/16 06:19	10

Client Sample Results

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

TestAmerica Job ID: 500-121215-1

Client Sample ID: MW-03

Lab Sample ID: 500-121215-3

Date Collected: 12/05/16 12:33

Matrix: Water

Date Received: 12/08/16 15:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.010		0.010		mg/L		12/09/16 09:00	12/09/16 18:58	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		12/09/16 09:00	12/13/16 18:45	1
Arsenic	0.0065		0.0010		mg/L		12/09/16 09:00	12/13/16 18:45	1
Barium	0.0094		0.0025		mg/L		12/09/16 09:00	12/13/16 18:45	1
Beryllium	<0.0010		0.0010		mg/L		12/09/16 09:00	12/13/16 18:45	1
Boron	2.4		0.25		mg/L		12/09/16 09:00	12/16/16 13:15	5
Cadmium	<0.00050		0.00050		mg/L		12/09/16 09:00	12/13/16 18:45	1
Calcium	57		0.20		mg/L		12/09/16 09:00	12/15/16 18:36	1
Chromium	<0.0050		0.0050		mg/L		12/09/16 09:00	12/13/16 18:45	1
Cobalt	<0.0010		0.0010		mg/L		12/09/16 09:00	12/13/16 18:45	1
Lead	<0.00050		0.00050		mg/L		12/09/16 09:00	12/15/16 18:36	1
Molybdenum	0.044		0.0050		mg/L		12/09/16 09:00	12/15/16 18:36	1
Selenium	<0.0025		0.0025		mg/L		12/09/16 09:00	12/15/16 18:36	1
Thallium	<0.0020		0.0020		mg/L		12/09/16 09:00	12/15/16 18:36	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		12/09/16 13:00	12/12/16 10:44	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	440		10		mg/L			12/09/16 02:14	1
Chloride	60		2.0		mg/L			12/12/16 21:41	1
Fluoride	0.41		0.10		mg/L			12/10/16 13:44	1
Sulfate	120		50		mg/L			12/16/16 08:22	10

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TestAmerica Chicago

Client Sample Results

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

TestAmerica Job ID: 500-121215-1

Client Sample ID: MW-04

Lab Sample ID: 500-121215-4

Date Collected: 12/05/16 14:34

Matrix: Water

Date Received: 12/08/16 15:15

Method: 6010C - Metals (ICP) - Total Recoverable									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.010		0.010		mg/L		12/09/16 09:00	12/09/16 19:02	1

Method: 6020A - Metals (ICP/MS) - Total Recoverable									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		12/09/16 09:00	12/13/16 18:48	1
Arsenic	0.019		0.0010		mg/L		12/09/16 09:00	12/13/16 18:48	1
Barium	0.13		0.0025		mg/L		12/09/16 09:00	12/13/16 18:48	1
Beryllium	<0.0010		0.0010		mg/L		12/09/16 09:00	12/13/16 18:48	1
Boron	3.4		0.25		mg/L		12/09/16 09:00	12/16/16 13:19	5
Cadmium	<0.00050		0.00050		mg/L		12/09/16 09:00	12/13/16 18:48	1
Calcium	200		0.20		mg/L		12/09/16 09:00	12/15/16 18:39	1
Chromium	<0.0050		0.0050		mg/L		12/09/16 09:00	12/13/16 18:48	1
Cobalt	<0.0010		0.0010		mg/L		12/09/16 09:00	12/13/16 18:48	1
Lead	<0.00050		0.00050		mg/L		12/09/16 09:00	12/15/16 18:39	1
Molybdenum	0.0097		0.0050		mg/L		12/09/16 09:00	12/15/16 18:39	1
Selenium	0.020		0.0025		mg/L		12/09/16 09:00	12/15/16 18:39	1
Thallium	<0.0020		0.0020		mg/L		12/09/16 09:00	12/15/16 18:39	1

Method: 7470A - Mercury (CVAA)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		12/09/16 13:00	12/12/16 10:49	1

General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1000		10		mg/L			12/09/16 02:19	1
Chloride	60		2.0		mg/L			12/12/16 21:42	1
Fluoride	0.21		0.10		mg/L			12/10/16 13:56	1
Sulfate	300		100		mg/L			12/16/16 06:23	20

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Client Sample Results

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

TestAmerica Job ID: 500-121215-1

Client Sample ID: MW-09

Lab Sample ID: 500-121215-5

Date Collected: 12/08/16 10:38

Matrix: Water

Date Received: 12/08/16 15:15

Method: 6010C - Metals (ICP) - Total Recoverable										
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Lithium	0.077		0.010		mg/L		12/09/16 09:00	12/09/16 19:06	1	

Method: 6020A - Metals (ICP/MS) - Total Recoverable										
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Antimony	<0.0030		0.0030		mg/L		12/09/16 09:00	12/13/16 18:52	1	
Arsenic	0.0040		0.0010		mg/L		12/09/16 09:00	12/13/16 18:52	1	
Barium	0.016		0.0025		mg/L		12/09/16 09:00	12/13/16 18:52	1	
Beryllium	<0.0010		0.0010		mg/L		12/09/16 09:00	12/13/16 18:52	1	
Boron	15		1.0		mg/L		12/09/16 09:00	12/16/16 13:30	20	
Cadmium	0.00052		0.00050		mg/L		12/09/16 09:00	12/13/16 18:52	1	
Calcium	200		0.20		mg/L		12/09/16 09:00	12/15/16 18:51	1	
Chromium	<0.0050		0.0050		mg/L		12/09/16 09:00	12/13/16 18:52	1	
Cobalt	<0.0010		0.0010		mg/L		12/09/16 09:00	12/13/16 18:52	1	
Lead	<0.00050		0.00050		mg/L		12/09/16 09:00	12/15/16 18:51	1	
Molybdenum	0.24		0.0050		mg/L		12/09/16 09:00	12/15/16 18:51	1	
Selenium	0.038		0.0025		mg/L		12/09/16 09:00	12/15/16 18:51	1	
Thallium	<0.0020		0.0020		mg/L		12/09/16 09:00	12/15/16 18:51	1	

Method: 7470A - Mercury (CVAA)										
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Mercury	<0.00020		0.00020		mg/L		12/09/16 13:00	12/12/16 10:50	1	

General Chemistry										
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Total Dissolved Solids	1300		10		mg/L			12/09/16 02:23	1	
Chloride	330		10		mg/L			12/12/16 21:43	5	
Fluoride	0.18		0.10		mg/L			12/10/16 14:05	1	
Sulfate	270		100		mg/L			12/16/16 06:24	20	

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TestAmerica Chicago

MWG13-15_59149
12/19/2016

Client Sample Results

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

TestAmerica Job ID: 500-121215-1

Client Sample ID: MW-11

Lab Sample ID: 500-121215-6

Date Collected: 12/07/16 15:01

Matrix: Water

Date Received: 12/08/16 15:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.038		0.010		mg/L		12/09/16 09:00	12/09/16 19:11	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		12/09/16 09:00	12/13/16 18:56	1
Arsenic	0.87		0.0010		mg/L		12/09/16 09:00	12/13/16 18:56	1
Barium	0.049		0.0025		mg/L		12/09/16 09:00	12/13/16 18:56	1
Beryllium	<0.0010		0.0010		mg/L		12/09/16 09:00	12/13/16 18:56	1
Boron	3.0		0.25		mg/L		12/09/16 09:00	12/16/16 13:34	5
Cadmium	<0.00050		0.00050		mg/L		12/09/16 09:00	12/13/16 18:56	1
Calcium	170		0.20		mg/L		12/09/16 09:00	12/15/16 18:55	1
Chromium	<0.0050		0.0050		mg/L		12/09/16 09:00	12/13/16 18:56	1
Cobalt	<0.0010		0.0010		mg/L		12/09/16 09:00	12/13/16 18:56	1
Lead	<0.00050		0.00050		mg/L		12/09/16 09:00	12/15/16 18:55	1
Molybdenum	<0.0050		0.0050		mg/L		12/09/16 09:00	12/15/16 18:55	1
Selenium	<0.0025		0.0025		mg/L		12/09/16 09:00	12/15/16 18:55	1
Thallium	<0.0020		0.0020		mg/L		12/09/16 09:00	12/15/16 18:55	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		12/09/16 13:00	12/12/16 10:52	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1200		10		mg/L			12/09/16 02:27	1
Chloride	270		10		mg/L			12/12/16 21:43	5
Fluoride	0.12		0.10		mg/L			12/10/16 14:18	1
Sulfate	110		25		mg/L			12/16/16 06:25	5

Client Sample Results

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

TestAmerica Job ID: 500-121215-1

Client Sample ID: MW-14

Lab Sample ID: 500-121215-7

Date Collected: 12/07/16 13:10

Matrix: Water

Date Received: 12/08/16 15:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.022		0.010		mg/L		12/09/16 09:00	12/09/16 19:15	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0096		0.0030		mg/L		12/09/16 09:00	12/13/16 19:07	1
Arsenic	19		0.020		mg/L		12/09/16 09:00	12/16/16 14:24	20
Barium	0.42		0.0025		mg/L		12/09/16 09:00	12/13/16 19:07	1
Beryllium	<0.0010		0.0010		mg/L		12/09/16 09:00	12/13/16 19:07	1
Boron	0.95		0.10		mg/L		12/09/16 09:00	12/16/16 13:38	2
Cadmium	0.00089		0.00050		mg/L		12/09/16 09:00	12/13/16 19:07	1
Calcium	240		0.20		mg/L		12/09/16 09:00	12/15/16 18:59	1
Chromium	4.6		0.0050		mg/L		12/09/16 09:00	12/13/16 19:07	1
Cobalt	0.0025		0.0010		mg/L		12/09/16 09:00	12/13/16 19:07	1
Lead	0.00084		0.00050		mg/L		12/09/16 09:00	12/15/16 18:59	1
Molybdenum	0.0094		0.0050		mg/L		12/09/16 09:00	12/15/16 18:59	1
Selenium	0.014		0.0025		mg/L		12/09/16 09:00	12/15/16 18:59	1
Thallium	<0.0020		0.0020		mg/L		12/09/16 09:00	12/15/16 18:59	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		12/09/16 13:00	12/12/16 10:53	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1100		10		mg/L			12/09/16 02:32	1
Chloride	340		10		mg/L			12/12/16 21:46	5
Fluoride	0.25		0.10		mg/L			12/10/16 14:21	1
Sulfate	120		25		mg/L			12/16/16 06:26	5

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Client Sample Results

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

TestAmerica Job ID: 500-121215-1

Client Sample ID: MW-16

Lab Sample ID: 500-121215-8

Date Collected: 12/05/16 16:20

Matrix: Water

Date Received: 12/08/16 15:15

Method: 6010C - Metals (ICP) - Total Recoverable									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.011		0.010		mg/L		12/09/16 09:00	12/09/16 19:19	1

Method: 6020A - Metals (ICP/MS) - Total Recoverable									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		12/09/16 09:00	12/13/16 19:11	1
Arsenic	0.036		0.0010		mg/L		12/09/16 09:00	12/13/16 19:11	1
Barium	0.062		0.0025		mg/L		12/09/16 09:00	12/13/16 19:11	1
Beryllium	<0.0010		0.0010		mg/L		12/09/16 09:00	12/13/16 19:11	1
Boron	3.8		0.25		mg/L		12/09/16 09:00	12/16/16 13:42	5
Cadmium	<0.00050		0.00050		mg/L		12/09/16 09:00	12/13/16 19:11	1
Calcium	160		0.20		mg/L		12/09/16 09:00	12/15/16 19:03	1
Chromium	<0.0050		0.0050		mg/L		12/09/16 09:00	12/13/16 19:11	1
Cobalt	0.0012		0.0010		mg/L		12/09/16 09:00	12/13/16 19:11	1
Lead	0.00054		0.00050		mg/L		12/09/16 09:00	12/15/16 19:03	1
Molybdenum	0.021		0.0050		mg/L		12/09/16 09:00	12/15/16 19:03	1
Selenium	<0.0025		0.0025		mg/L		12/09/16 09:00	12/15/16 19:03	1
Thallium	<0.0020		0.0020		mg/L		12/09/16 09:00	12/15/16 19:03	1

Method: 7470A - Mercury (CVAA)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		12/09/16 13:00	12/12/16 10:55	1

General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	920		10		mg/L			12/09/16 02:36	1
Chloride	52		2.0		mg/L			12/12/16 22:13	1
Fluoride	0.51		0.10		mg/L			12/10/16 14:24	1
Sulfate	280		100		mg/L			12/16/16 06:27	20

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Client Sample Results

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

TestAmerica Job ID: 500-121215-1

Client Sample ID: Dup

Lab Sample ID: 500-121215-9

Date Collected: 12/05/16 00:00

Matrix: Water

Date Received: 12/08/16 15:15

Method: 6010C - Metals (ICP) - Total Recoverable									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.010		0.010		mg/L		12/09/16 09:00	12/09/16 19:23	1

Method: 6020A - Metals (ICP/MS) - Total Recoverable									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		12/09/16 09:00	12/13/16 19:15	1
Arsenic	0.0069		0.0010		mg/L		12/09/16 09:00	12/13/16 19:15	1
Barium	0.013		0.0025		mg/L		12/09/16 09:00	12/13/16 19:15	1
Beryllium	<0.0010		0.0010		mg/L		12/09/16 09:00	12/13/16 19:15	1
Boron	2.8		0.25		mg/L		12/09/16 09:00	12/16/16 13:46	5
Cadmium	<0.00050		0.00050		mg/L		12/09/16 09:00	12/13/16 19:15	1
Calcium	70		0.20		mg/L		12/09/16 09:00	12/15/16 19:07	1
Chromium	<0.0050		0.0050		mg/L		12/09/16 09:00	12/13/16 19:15	1
Cobalt	<0.0010		0.0010		mg/L		12/09/16 09:00	12/13/16 19:15	1
Lead	<0.00050		0.00050		mg/L		12/09/16 09:00	12/15/16 19:07	1
Molybdenum	0.044		0.0050		mg/L		12/09/16 09:00	12/15/16 19:07	1
Selenium	0.0025		0.0025		mg/L		12/09/16 09:00	12/15/16 19:07	1
Thallium	<0.0020		0.0020		mg/L		12/09/16 09:00	12/15/16 19:07	1

Method: 7470A - Mercury (CVAA)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		12/09/16 13:00	12/12/16 10:56	1

General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	520		10		mg/L			12/09/16 02:40	1
Chloride	63		2.0		mg/L			12/12/16 21:47	1
Fluoride	0.38		0.10		mg/L			12/10/16 14:28	1
Sulfate	140		50		mg/L			12/16/16 06:28	10

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TestAmerica Chicago

Definitions/Glossary

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

TestAmerica Job ID: 500-121215-1

Qualifiers

Metals

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
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)

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TestAmerica Chicago

QC Association Summary

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

TestAmerica Job ID: 500-121215-1

Metals

Prep Batch: 364352

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-121215-1	MW-01	Total Recoverable	Water	3005A	
500-121215-2	MW-02	Total Recoverable	Water	3005A	
500-121215-3	MW-03	Total Recoverable	Water	3005A	
500-121215-4	MW-04	Total Recoverable	Water	3005A	
500-121215-5	MW-09	Total Recoverable	Water	3005A	
500-121215-6	MW-11	Total Recoverable	Water	3005A	
500-121215-7	MW-14	Total Recoverable	Water	3005A	
500-121215-8	MW-16	Total Recoverable	Water	3005A	
500-121215-9	Dup	Total Recoverable	Water	3005A	
MB 500-364352/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-364352/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
500-121215-1 MS	MW-01	Total Recoverable	Water	3005A	
500-121215-1 MSD	MW-01	Total Recoverable	Water	3005A	
500-121215-1 DU	MW-01	Total Recoverable	Water	3005A	

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Prep Batch: 364393

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-121215-1	MW-01	Total/NA	Water	7470A	
500-121215-2	MW-02	Total/NA	Water	7470A	
500-121215-3	MW-03	Total/NA	Water	7470A	
500-121215-4	MW-04	Total/NA	Water	7470A	
500-121215-5	MW-09	Total/NA	Water	7470A	
500-121215-6	MW-11	Total/NA	Water	7470A	
500-121215-7	MW-14	Total/NA	Water	7470A	
500-121215-8	MW-16	Total/NA	Water	7470A	
500-121215-9	Dup	Total/NA	Water	7470A	
MB 500-364393/12-A	Method Blank	Total/NA	Water	7470A	
LCS 500-364393/13-A	Lab Control Sample	Total/NA	Water	7470A	
500-121215-9 MS	Dup	Total/NA	Water	7470A	
500-121215-9 MSD	Dup	Total/NA	Water	7470A	
500-121215-9 DU	Dup	Total/NA	Water	7470A	

Analysis Batch: 364522

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-121215-1	MW-01	Total Recoverable	Water	6010C	364352
500-121215-2	MW-02	Total Recoverable	Water	6010C	364352
500-121215-3	MW-03	Total Recoverable	Water	6010C	364352
500-121215-4	MW-04	Total Recoverable	Water	6010C	364352
500-121215-5	MW-09	Total Recoverable	Water	6010C	364352
500-121215-6	MW-11	Total Recoverable	Water	6010C	364352
500-121215-7	MW-14	Total Recoverable	Water	6010C	364352
500-121215-8	MW-16	Total Recoverable	Water	6010C	364352
500-121215-9	Dup	Total Recoverable	Water	6010C	364352
MB 500-364352/1-A	Method Blank	Total Recoverable	Water	6010C	364352
LCS 500-364352/2-A	Lab Control Sample	Total Recoverable	Water	6010C	364352
500-121215-1 MS	MW-01	Total Recoverable	Water	6010C	364352
500-121215-1 MSD	MW-01	Total Recoverable	Water	6010C	364352
500-121215-1 DU	MW-01	Total Recoverable	Water	6010C	364352

TestAmerica Chicago

QC Association Summary

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

TestAmerica Job ID: 500-121215-1

Metals (Continued)

Analysis Batch: 364705

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-121215-1	MW-01	Total/NA	Water	7470A	364393
500-121215-2	MW-02	Total/NA	Water	7470A	364393
500-121215-3	MW-03	Total/NA	Water	7470A	364393
500-121215-4	MW-04	Total/NA	Water	7470A	364393
500-121215-5	MW-09	Total/NA	Water	7470A	364393
500-121215-6	MW-11	Total/NA	Water	7470A	364393
500-121215-7	MW-14	Total/NA	Water	7470A	364393
500-121215-8	MW-16	Total/NA	Water	7470A	364393
500-121215-9	Dup	Total/NA	Water	7470A	364393
MB 500-364393/12-A	Method Blank	Total/NA	Water	7470A	364393
LCS 500-364393/13-A	Lab Control Sample	Total/NA	Water	7470A	364393
500-121215-9 MS	Dup	Total/NA	Water	7470A	364393
500-121215-9 MSD	Dup	Total/NA	Water	7470A	364393
500-121215-9 DU	Dup	Total/NA	Water	7470A	364393

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Analysis Batch: 365026

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-121215-1	MW-01	Total Recoverable	Water	6020A	364352
500-121215-2	MW-02	Total Recoverable	Water	6020A	364352
500-121215-3	MW-03	Total Recoverable	Water	6020A	364352
500-121215-4	MW-04	Total Recoverable	Water	6020A	364352
500-121215-5	MW-09	Total Recoverable	Water	6020A	364352
500-121215-6	MW-11	Total Recoverable	Water	6020A	364352
500-121215-7	MW-14	Total Recoverable	Water	6020A	364352
500-121215-8	MW-16	Total Recoverable	Water	6020A	364352
500-121215-9	Dup	Total Recoverable	Water	6020A	364352
MB 500-364352/1-A	Method Blank	Total Recoverable	Water	6020A	364352
LCS 500-364352/2-A	Lab Control Sample	Total Recoverable	Water	6020A	364352
500-121215-1 MS	MW-01	Total Recoverable	Water	6020A	364352
500-121215-1 MSD	MW-01	Total Recoverable	Water	6020A	364352
500-121215-1 DU	MW-01	Total Recoverable	Water	6020A	364352

Analysis Batch: 365454

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-121215-1	MW-01	Total Recoverable	Water	6020A	364352
500-121215-2	MW-02	Total Recoverable	Water	6020A	364352
500-121215-3	MW-03	Total Recoverable	Water	6020A	364352
500-121215-4	MW-04	Total Recoverable	Water	6020A	364352
500-121215-5	MW-09	Total Recoverable	Water	6020A	364352
500-121215-6	MW-11	Total Recoverable	Water	6020A	364352
500-121215-7	MW-14	Total Recoverable	Water	6020A	364352
500-121215-8	MW-16	Total Recoverable	Water	6020A	364352
500-121215-9	Dup	Total Recoverable	Water	6020A	364352
MB 500-364352/1-A	Method Blank	Total Recoverable	Water	6020A	364352
LCS 500-364352/2-A	Lab Control Sample	Total Recoverable	Water	6020A	364352
500-121215-1 MS	MW-01	Total Recoverable	Water	6020A	364352
500-121215-1 MSD	MW-01	Total Recoverable	Water	6020A	364352
500-121215-1 DU	MW-01	Total Recoverable	Water	6020A	364352

TestAmerica Chicago

QC Association Summary

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

TestAmerica Job ID: 500-121215-1

Metals (Continued)

Analysis Batch: 365522

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-121215-1	MW-01	Total Recoverable	Water	6020A	364352
500-121215-2	MW-02	Total Recoverable	Water	6020A	364352
500-121215-3	MW-03	Total Recoverable	Water	6020A	364352
500-121215-4	MW-04	Total Recoverable	Water	6020A	364352
500-121215-5	MW-09	Total Recoverable	Water	6020A	364352
500-121215-6	MW-11	Total Recoverable	Water	6020A	364352
500-121215-7	MW-14	Total Recoverable	Water	6020A	364352
500-121215-7	MW-14	Total Recoverable	Water	6020A	364352
500-121215-8	MW-16	Total Recoverable	Water	6020A	364352
500-121215-9	Dup	Total Recoverable	Water	6020A	364352
MB 500-364352/1-A	Method Blank	Total Recoverable	Water	6020A	364352
LCS 500-364352/2-A	Lab Control Sample	Total Recoverable	Water	6020A	364352
500-121215-1 MS	MW-01	Total Recoverable	Water	6020A	364352
500-121215-1 MSD	MW-01	Total Recoverable	Water	6020A	364352
500-121215-1 DU	MW-01	Total Recoverable	Water	6020A	364352

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General Chemistry

Analysis Batch: 364293

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-121215-1	MW-01	Total/NA	Water	SM 2540C	
500-121215-2	MW-02	Total/NA	Water	SM 2540C	
500-121215-3	MW-03	Total/NA	Water	SM 2540C	
500-121215-4	MW-04	Total/NA	Water	SM 2540C	
500-121215-5	MW-09	Total/NA	Water	SM 2540C	
500-121215-6	MW-11	Total/NA	Water	SM 2540C	
500-121215-7	MW-14	Total/NA	Water	SM 2540C	
500-121215-8	MW-16	Total/NA	Water	SM 2540C	
500-121215-9	Dup	Total/NA	Water	SM 2540C	
MB 500-364293/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-364293/2	Lab Control Sample	Total/NA	Water	SM 2540C	
500-121215-1 DU	MW-01	Total/NA	Water	SM 2540C	

Analysis Batch: 364769

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-121215-1	MW-01	Total/NA	Water	SM 4500 Cl- E	
500-121215-2	MW-02	Total/NA	Water	SM 4500 Cl- E	
500-121215-3	MW-03	Total/NA	Water	SM 4500 Cl- E	
500-121215-4	MW-04	Total/NA	Water	SM 4500 Cl- E	
500-121215-5	MW-09	Total/NA	Water	SM 4500 Cl- E	
500-121215-6	MW-11	Total/NA	Water	SM 4500 Cl- E	
500-121215-7	MW-14	Total/NA	Water	SM 4500 Cl- E	
500-121215-8	MW-16	Total/NA	Water	SM 4500 Cl- E	
500-121215-9	Dup	Total/NA	Water	SM 4500 Cl- E	
MB 500-364769/4	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 500-364769/5	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 364818

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-121215-1	MW-01	Total/NA	Water	SM 4500 F C	

TestAmerica Chicago

QC Association Summary

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

TestAmerica Job ID: 500-121215-1

General Chemistry (Continued)

Analysis Batch: 364818 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-121215-2	MW-02	Total/NA	Water	SM 4500 F C	
500-121215-3	MW-03	Total/NA	Water	SM 4500 F C	
500-121215-4	MW-04	Total/NA	Water	SM 4500 F C	
500-121215-5	MW-09	Total/NA	Water	SM 4500 F C	
500-121215-6	MW-11	Total/NA	Water	SM 4500 F C	
500-121215-7	MW-14	Total/NA	Water	SM 4500 F C	
500-121215-8	MW-16	Total/NA	Water	SM 4500 F C	
500-121215-9	Dup	Total/NA	Water	SM 4500 F C	
MB 500-364818/3	Method Blank	Total/NA	Water	SM 4500 F C	
MB 500-364818/31	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 500-364818/32	Lab Control Sample	Total/NA	Water	SM 4500 F C	
LCS 500-364818/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
500-121215-4 MS	MW-04	Total/NA	Water	SM 4500 F C	
500-121215-4 MSD	MW-04	Total/NA	Water	SM 4500 F C	

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Analysis Batch: 365401

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-121215-1	MW-01	Total/NA	Water	SM 4500 SO4 E	
500-121215-2	MW-02	Total/NA	Water	SM 4500 SO4 E	
500-121215-3	MW-03	Total/NA	Water	SM 4500 SO4 E	
500-121215-4	MW-04	Total/NA	Water	SM 4500 SO4 E	
500-121215-5	MW-09	Total/NA	Water	SM 4500 SO4 E	
500-121215-6	MW-11	Total/NA	Water	SM 4500 SO4 E	
500-121215-7	MW-14	Total/NA	Water	SM 4500 SO4 E	
500-121215-8	MW-16	Total/NA	Water	SM 4500 SO4 E	
500-121215-9	Dup	Total/NA	Water	SM 4500 SO4 E	
MB 500-365401/3	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 500-365401/4	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
500-121215-2 MS	MW-02	Total/NA	Water	SM 4500 SO4 E	
500-121215-2 MSD	MW-02	Total/NA	Water	SM 4500 SO4 E	

QC Sample Results

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

TestAmerica Job ID: 500-121215-1

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 500-364352/1-A Matrix: Water Analysis Batch: 364522						Client Sample ID: Method Blank Prep Type: Total Recoverable Prep Batch: 364352			
Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.010		0.010		mg/L		12/09/16 09:00	12/09/16 18:17	1

Lab Sample ID: LCS 500-364352/2-A Matrix: Water Analysis Batch: 364522						Client Sample ID: Lab Control Sample Prep Type: Total Recoverable Prep Batch: 364352			
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits		
Lithium	0.500	0.521		mg/L		104	80 - 120		

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Lab Sample ID: 500-121215-1 MS Matrix: Water Analysis Batch: 364522						Client Sample ID: MW-01 Prep Type: Total Recoverable Prep Batch: 364352			
Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Lithium	<0.010		0.500	0.511		mg/L		102	75 - 125

Lab Sample ID: 500-121215-1 MSD Matrix: Water Analysis Batch: 364522						Client Sample ID: MW-01 Prep Type: Total Recoverable Prep Batch: 364352					
Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Lithium	<0.010		0.500	0.516		mg/L		103	75 - 125	1	20

Lab Sample ID: 500-121215-1 DU Matrix: Water Analysis Batch: 364522						Client Sample ID: MW-01 Prep Type: Total Recoverable Prep Batch: 364352				
Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit		
Lithium	<0.010		<0.010		mg/L		NC	20		

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 500-364352/1-A Matrix: Water Analysis Batch: 365026						Client Sample ID: Method Blank Prep Type: Total Recoverable Prep Batch: 364352			
Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		12/09/16 09:00	12/13/16 18:03	1
Arsenic	<0.0010		0.0010		mg/L		12/09/16 09:00	12/13/16 18:03	1
Barium	<0.0025		0.0025		mg/L		12/09/16 09:00	12/13/16 18:03	1
Beryllium	<0.0010		0.0010		mg/L		12/09/16 09:00	12/13/16 18:03	1
Cadmium	<0.00050		0.00050		mg/L		12/09/16 09:00	12/13/16 18:03	1
Chromium	<0.0050		0.0050		mg/L		12/09/16 09:00	12/13/16 18:03	1
Cobalt	<0.0010		0.0010		mg/L		12/09/16 09:00	12/13/16 18:03	1

TestAmerica Chicago

QC Sample Results

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

TestAmerica Job ID: 500-121215-1

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

Lab Sample ID: MB 500-364352/1-A Matrix: Water Analysis Batch: 365454						Client Sample ID: Method Blank Prep Type: Total Recoverable Prep Batch: 364352			
Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	<0.20		0.20		mg/L		12/09/16 09:00	12/15/16 18:06	1
Lead	<0.00050		0.00050		mg/L		12/09/16 09:00	12/15/16 18:06	1
Molybdenum	<0.0050		0.0050		mg/L		12/09/16 09:00	12/15/16 18:06	1
Selenium	<0.0025		0.0025		mg/L		12/09/16 09:00	12/15/16 18:06	1
Thallium	<0.0020		0.0020		mg/L		12/09/16 09:00	12/15/16 18:06	1

Lab Sample ID: MB 500-364352/1-A Matrix: Water Analysis Batch: 365522						Client Sample ID: Method Blank Prep Type: Total Recoverable Prep Batch: 364352			
Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.050		0.050		mg/L		12/09/16 09:00	12/16/16 12:45	1

Lab Sample ID: LCS 500-364352/2-A Matrix: Water Analysis Batch: 365026						Client Sample ID: Lab Control Sample Prep Type: Total Recoverable Prep Batch: 364352			
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Antimony	0.500	0.535		mg/L		107	80 - 120		
Arsenic	0.100	0.109		mg/L		109	80 - 120		
Barium	2.00	2.18		mg/L		109	80 - 120		
Beryllium	0.0500	0.0490		mg/L		98	80 - 120		
Cadmium	0.0500	0.0538		mg/L		108	80 - 120		
Chromium	0.200	0.206		mg/L		103	80 - 120		
Cobalt	0.500	0.509		mg/L		102	80 - 120		

Lab Sample ID: LCS 500-364352/2-A Matrix: Water Analysis Batch: 365454						Client Sample ID: Lab Control Sample Prep Type: Total Recoverable Prep Batch: 364352			
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Calcium	10.0	9.20		mg/L		92	80 - 120		
Lead	0.100	0.112		mg/L		112	80 - 120		
Molybdenum	1.00	0.992		mg/L		99	80 - 120		
Selenium	0.100	0.101		mg/L		101	80 - 120		
Thallium	0.100	0.112		mg/L		112	80 - 120		

Lab Sample ID: LCS 500-364352/2-A Matrix: Water Analysis Batch: 365522						Client Sample ID: Lab Control Sample Prep Type: Total Recoverable Prep Batch: 364352			
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Boron	1.00	1.04		mg/L		104	80 - 120		

9

QC Sample Results

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

TestAmerica Job ID: 500-121215-1

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

Lab Sample ID: 500-121215-1 MS Matrix: Water Analysis Batch: 365026				Client Sample ID: MW-01 Prep Type: Total Recoverable Prep Batch: 364352 %Rec.						
Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits	
Antimony	<0.0030		0.500	0.533		mg/L		107	75 - 125	
Arsenic	0.13		0.100	0.226		mg/L		97	75 - 125	
Barium	0.017		2.00	2.13		mg/L		106	75 - 125	
Beryllium	<0.0010		0.0500	0.0486		mg/L		97	75 - 125	
Cadmium	<0.00050		0.0500	0.0522		mg/L		104	75 - 125	
Chromium	<0.0050		0.200	0.197		mg/L		98	75 - 125	
Cobalt	<0.0010		0.500	0.481		mg/L		96	75 - 125	

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Lab Sample ID: 500-121215-1 MS Matrix: Water Analysis Batch: 365454				Client Sample ID: MW-01 Prep Type: Total Recoverable Prep Batch: 364352 %Rec.						
Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits	
Calcium	55		10.0	57.7	4	mg/L		25	75 - 125	
Lead	<0.00050		0.100	0.107		mg/L		106	75 - 125	
Molybdenum	0.070		1.00	1.05		mg/L		98	75 - 125	
Selenium	0.0025		0.100	0.0877		mg/L		85	75 - 125	
Thallium	<0.0020		0.100	0.106		mg/L		106	75 - 125	

Lab Sample ID: 500-121215-1 MS Matrix: Water Analysis Batch: 365522				Client Sample ID: MW-01 Prep Type: Total Recoverable Prep Batch: 364352 %Rec.						
Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits	
Boron	2.2		1.00	3.05		mg/L		81	75 - 125	

Lab Sample ID: 500-121215-1 MSD Matrix: Water Analysis Batch: 365026				Client Sample ID: MW-01 Prep Type: Total Recoverable Prep Batch: 364352 %Rec. RPD							
Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Antimony	<0.0030		0.500	0.528		mg/L		106	75 - 125	1	20
Arsenic	0.13		0.100	0.227		mg/L		98	75 - 125	0	20
Barium	0.017		2.00	2.13		mg/L		106	75 - 125	0	20
Beryllium	<0.0010		0.0500	0.0478		mg/L		96	75 - 125	2	20
Cadmium	<0.00050		0.0500	0.0517		mg/L		103	75 - 125	1	20
Chromium	<0.0050		0.200	0.197		mg/L		98	75 - 125	0	20
Cobalt	<0.0010		0.500	0.484		mg/L		97	75 - 125	1	20

Lab Sample ID: 500-121215-1 MSD Matrix: Water Analysis Batch: 365454				Client Sample ID: MW-01 Prep Type: Total Recoverable Prep Batch: 364352 %Rec. RPD							
Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Calcium	55		10.0	60.6	4	mg/L		54	75 - 125	5	20
Lead	<0.00050		0.100	0.107		mg/L		106	75 - 125	0	20
Molybdenum	0.070		1.00	1.05		mg/L		98	75 - 125	0	20
Selenium	0.0025		0.100	0.0896		mg/L		87	75 - 125	2	20
Thallium	<0.0020		0.100	0.106		mg/L		106	75 - 125	0	20

TestAmerica Chicago

MWG13-15_59161
12/19/2016

QC Sample Results

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

TestAmerica Job ID: 500-121215-1

Lab Sample ID: 500-121215-1 MSD
Matrix: Water
Analysis Batch: 365522

Client Sample ID: MW-01
Prep Type: Total Recoverable
Prep Batch: 364352

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Boron	2.2		1.00	3.09		mg/L		85	75 - 125	1	20

Lab Sample ID: 500-121215-1 DU
Matrix: Water
Analysis Batch: 365026

Client Sample ID: MW-01
Prep Type: Total Recoverable
Prep Batch: 364352

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Antimony	<0.0030		<0.0030		mg/L		NC	20
Arsenic	0.13		0.122		mg/L		5	20
Barium	0.017		0.0167		mg/L		3	20
Beryllium	<0.0010		<0.0010		mg/L		NC	20
Cadmium	<0.00050		<0.00050		mg/L		NC	20
Chromium	<0.0050		<0.0050		mg/L		NC	20
Cobalt	<0.0010		<0.0010		mg/L		NC	20

Lab Sample ID: 500-121215-1 DU
Matrix: Water
Analysis Batch: 365454

Client Sample ID: MW-01
Prep Type: Total Recoverable
Prep Batch: 364352

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Calcium	55		53.8		mg/L		3	20
Lead	<0.00050		<0.00050		mg/L		NC	20
Molybdenum	0.070		0.0661		mg/L		5	20
Selenium	0.0025		<0.0025		mg/L		NC	20
Thallium	<0.0020		<0.0020		mg/L		NC	20

Lab Sample ID: 500-121215-1 DU
Matrix: Water
Analysis Batch: 365522

Client Sample ID: MW-01
Prep Type: Total Recoverable
Prep Batch: 364352

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Boron	2.2		2.14		mg/L		4	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 500-364393/12-A
Matrix: Water
Analysis Batch: 364705

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 364393

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		12/09/16 13:00	12/12/16 10:34	1

Lab Sample ID: LCS 500-364393/13-A
Matrix: Water
Analysis Batch: 364705

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 364393

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00200	0.00184		mg/L		92	80 - 120

TestAmerica Chicago

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QC Sample Results

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

TestAmerica Job ID: 500-121215-1

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

Lab Sample ID: 500-121215-9 MS Matrix: Water Analysis Batch: 364705							Client Sample ID: Dup Prep Type: Total/NA Prep Batch: 364393 %Rec.				
Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits		
Mercury	<0.00020		0.00100	0.000975		mg/L		98	75 - 125		

Lab Sample ID: 500-121215-9 MSD Matrix: Water Analysis Batch: 364705							Client Sample ID: Dup Prep Type: Total/NA Prep Batch: 364393 %Rec.				
Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	<0.00020		0.00100	0.000903		mg/L		90	75 - 125	8	20

Lab Sample ID: 500-121215-9 DU Matrix: Water Analysis Batch: 364705							Client Sample ID: Dup Prep Type: Total/NA Prep Batch: 364393 RPD				
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 500-364293/1 Matrix: Water Analysis Batch: 364293							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			12/09/16 01:09	1		

Lab Sample ID: LCS 500-364293/2 Matrix: Water Analysis Batch: 364293							Client Sample ID: Lab Control Sample Prep Type: Total/NA				
Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits		
Total Dissolved Solids			250	276		mg/L		110	80 - 120		

Lab Sample ID: 500-121215-1 DU Matrix: Water Analysis Batch: 364293							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	560			558		mg/L			0.7	5	

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 500-364769/4 Matrix: Water Analysis Batch: 364769							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			12/12/16 21:39	1		

TestAmerica Chicago

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QC Sample Results

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

TestAmerica Job ID: 500-121215-1

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

Lab Sample ID: LCS 500-364769/5
Matrix: Water
Analysis Batch: 364769

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	50.0	50.2		mg/L		100	80 - 120

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 500-364818/3
Matrix: Water
Analysis Batch: 364818

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.10		0.10		mg/L			12/10/16 12:14	1

Lab Sample ID: MB 500-364818/31
Matrix: Water
Analysis Batch: 364818

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.10		0.10		mg/L			12/10/16 13:50	1

Lab Sample ID: LCS 500-364818/32
Matrix: Water
Analysis Batch: 364818

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	10.0	10.2		mg/L		102	80 - 120

Lab Sample ID: LCS 500-364818/4
Matrix: Water
Analysis Batch: 364818

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	10.0	10.1		mg/L		101	80 - 120

Lab Sample ID: 500-121215-4 MS
Matrix: Water
Analysis Batch: 364818

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	0.21		5.00	5.22		mg/L		100	75 - 125

Lab Sample ID: 500-121215-4 MSD
Matrix: Water
Analysis Batch: 364818

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	0.21		5.00	5.22		mg/L		100	75 - 125	0	20

TestAmerica Chicago

QC Sample Results

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

TestAmerica Job ID: 500-121215-1

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 500-365401/3
Matrix: Water
Analysis Batch: 365401

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			12/16/16 06:07	1

Lab Sample ID: LCS 500-365401/4
Matrix: Water
Analysis Batch: 365401

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	18.9		mg/L		94	80 - 120

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Lab Sample ID: 500-121215-2 MS
Matrix: Water
Analysis Batch: 365401

Client Sample ID: MW-02
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	160		400	586		mg/L		107	75 - 125

Lab Sample ID: 500-121215-2 MSD
Matrix: Water
Analysis Batch: 365401

Client Sample ID: MW-02
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Sulfate	160		400	607		mg/L		112	75 - 125	4	20

TestAmerica Chicago

TestAmerica Chicago

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

Chain of Custody Record

TestAmerica

THE QUALITY OF THE INSTRUMENTS WE USE

Client Information		Sampler: Ian John Howison		Lab PI: Eric Lang		Carrier Tracking No(s):		COC No: 12313.2																													
Client Contact: Rich Gnat		Phone: 630-290-8850		E-Mail: eric.lang@testamericainc.com				Page Page 1 of 1																													
Company: KPRG & Associates Inc.		Address: 14886 W. Lisbon Rd		Due Date Requested:		Analysis Requested		Job #: 12313.2 500-121215																													
City: Brookfield		State, Zip: Wisconsin, 53005		TAT Requested (days): 15 days				<table border="1"> <tr> <td colspan="2">Preservation Codes:</td> </tr> <tr> <td>A - HCL</td> <td>M - Hexane</td> </tr> <tr> <td>B - NaOH</td> <td>N - None</td> </tr> <tr> <td>C - Zn Acetate</td> <td>O - AsNaO2</td> </tr> <tr> <td>D - Nitric Acid</td> <td>P - Na2O4S</td> </tr> <tr> <td>E - NaHSO4</td> <td>Q - Na2SO3</td> </tr> <tr> <td>F - MeOH</td> <td>R - Na2S2O3</td> </tr> <tr> <td>G - Amchlor</td> <td>S - H2SO4</td> </tr> <tr> <td>H - Ascorbic Acid</td> <td>T - TBP Dodecahydrate</td> </tr> <tr> <td>I - Ice</td> <td>U - Acetone</td> </tr> <tr> <td>J - DI Water</td> <td>V - NCAA</td> </tr> <tr> <td>K - EDTA</td> <td>W - pH 4-5</td> </tr> <tr> <td>L - EDTA</td> <td>Z - other (specify)</td> </tr> <tr> <td colspan="2">Other:</td> </tr> </table>		Preservation Codes:		A - HCL	M - Hexane	B - NaOH	N - None	C - Zn Acetate	O - AsNaO2	D - Nitric Acid	P - Na2O4S	E - NaHSO4	Q - Na2SO3	F - MeOH	R - Na2S2O3	G - Amchlor	S - H2SO4	H - Ascorbic Acid	T - TBP Dodecahydrate	I - Ice	U - Acetone	J - DI Water	V - NCAA	K - EDTA	W - pH 4-5	L - EDTA	Z - other (specify)	Other:	
Preservation Codes:																																					
A - HCL	M - Hexane																																				
B - NaOH	N - None																																				
C - Zn Acetate	O - AsNaO2																																				
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L - EDTA	Z - other (specify)																																				
Other:																																					
Phone: 262-781-0475		PO #: 4801571758		Project Name: Quarterly Waukegan CCR		<table border="1"> <tr> <td>303.0, 904.0 Radium 226/228</td> <td>3010C, 9020A, 7470A - Total Metals</td> </tr> <tr> <td>3040C - TDS, 4500 - F, C - Fluoride, SW4500 - Cl, E Chloride, SW4500 - SO4, E - Sulfate</td> <td></td> </tr> </table>		303.0, 904.0 Radium 226/228	3010C, 9020A, 7470A - Total Metals	3040C - TDS, 4500 - F, C - Fluoride, SW4500 - Cl, E Chloride, SW4500 - SO4, E - Sulfate																											
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Email: richardg@kprginc.com		WG #: 35596277		Project #: 60011597																																	
Project Name: Quarterly Waukegan CCR		SSON#:		Site: Illinois																																	
Sample Identification		Sample Date	Sample Time	Sample Type (Comp, Grab)	MATRIX (Water, Gas, etc.)	Preservation Code	Analysis	Special Instructions/Note:																													
1	MW-01	12-5-16	09:24	G	Water	N	X X X																														
2	MW-02	12-5-16	11:06	G	Water	N	X X X																														
3	MW-03	12-5-16	12:33	G	Water	N	X X X																														
4	MW-04	12-5-16	14:34	G	Water	N	X X X																														
5	MW-09	12-8-16	10:38	G	Water	V	X X X																														
6	MW-11	12-7-16	15:01	G	Water	N	X X X																														
7	MW-14	12-7-16	13:10	G	Water	N	X X X																														
8	MW-16	12-5-16	16:20	G	Water	N	X X X																														
9	Dup	12-5-16	-	G	Water	N	X X X																														



500-121215 COC

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological

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

Deliverable Requested: I, II, III, IV, Other (specify) _____
 Special Instructions/QC Requirements: _____

Relinquished by: <i>ISH</i>	Date: 12-8-16 15:15	Company: KPRG	Received by: <i>Shirley</i>	Date/Time: 12/8/16 15:15	Company: TIA-CH
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:

Custody Seals Intact: Yes No
 Custody Seal No.: _____
 Cooler Temperature(s) °C and Other Remarks: **3.2, 1.2, 3.3** MWG13-15_59166

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Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-121215-1

Login Number: 121215

List Source: TestAmerica Chicago

List Number: 1

Creator: Sanchez, Ariel M

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	1.2,3.2,3.3
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	



Certification Summary

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

TestAmerica Job ID: 500-121215-1

Laboratory: TestAmerica Chicago

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Illinois	NELAP	5	100201	04-30-17

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TestAmerica Chicago

