

QUARTERLY GROUNDWATER MONITORING REPORT
WAUKEGAN GENERATING STATION

July 11, 2017

Groundwater Section
Illinois Environmental Protection Agency
Division of Public Water Supplies
MC#13
1021 North Grand Avenue East
Springfield, IL 62794-9276

VIA FEDERAL EXPRESS

Re: Quarterly Groundwater Monitoring Results – Second Quarter 2017
Waukegan Generating Station – Ash Impoundments
Water Pollution Control Permit No. 2016-EB-61340

Dear Sir/Madam:

The second quarterly groundwater sampling for 2017 has been completed for the ash pond monitoring wells located at the Midwest Generation, LLC (Midwest Generation) Waukegan Generating Station in accordance with Water Pollution Control Permit No. 2016-EB-61340 (Permit) Special Condition Section #4 dated August 17, 2016. This quarterly monitoring report summarizes the results of the monitoring event.

Well Inspection and Sampling Procedures

The groundwater monitoring network around the ash ponds at this facility consists of seven wells (MW-01 through MW-07) as shown on Figure 1. As part of sampling procedures, the integrity of all monitoring wells was inspected and water levels were obtained using an electronic water level meter (see summary of water level discussion below). The wells were found in good condition with locked protector casings and the concrete surface seals were intact.

Groundwater samples at well locations MW-01 through MW-07 were collected using the low-flow sampling technique. The groundwater monitoring samples were analyzed for the inorganic compounds (unfiltered) listed in Illinois Administrative Code (IAC) 620.410(a) with the exception of perchlorate. Static water levels and field parameters, including pH, were also collected.

Groundwater Flow Evaluation

Water level data from the most recent round of sampling along with historical water levels obtained from each well are summarized in Table 1. The water levels from the most recent sampling were used to generate a groundwater flow map which is provided on Figure 2. The water elevation data indicates a general east to southeasterly flow of groundwater in the vicinity of the ash ponds.

Summary of Analytical Data

A copy of the analytical data package is provided in Attachment 1. The field parameter and groundwater analytical data from the most recent sampling, along with the previous eight quarters of data, are summarized in Table 2. The duplicate sample was collected from well MW-5 and the relative percent difference for each detectable analyte was below 30% which is within an acceptable range.

All wells for which the sampling data reports a value above one or more groundwater standards are located within the area of the approved Environmental Land Use Control (ELUC).

If there are any questions, please contact either Sharene Shealey of Midwest Generation at 815-372-4625 or Richard Gnat of KPRG at 262-781-0475.

Sincerely,

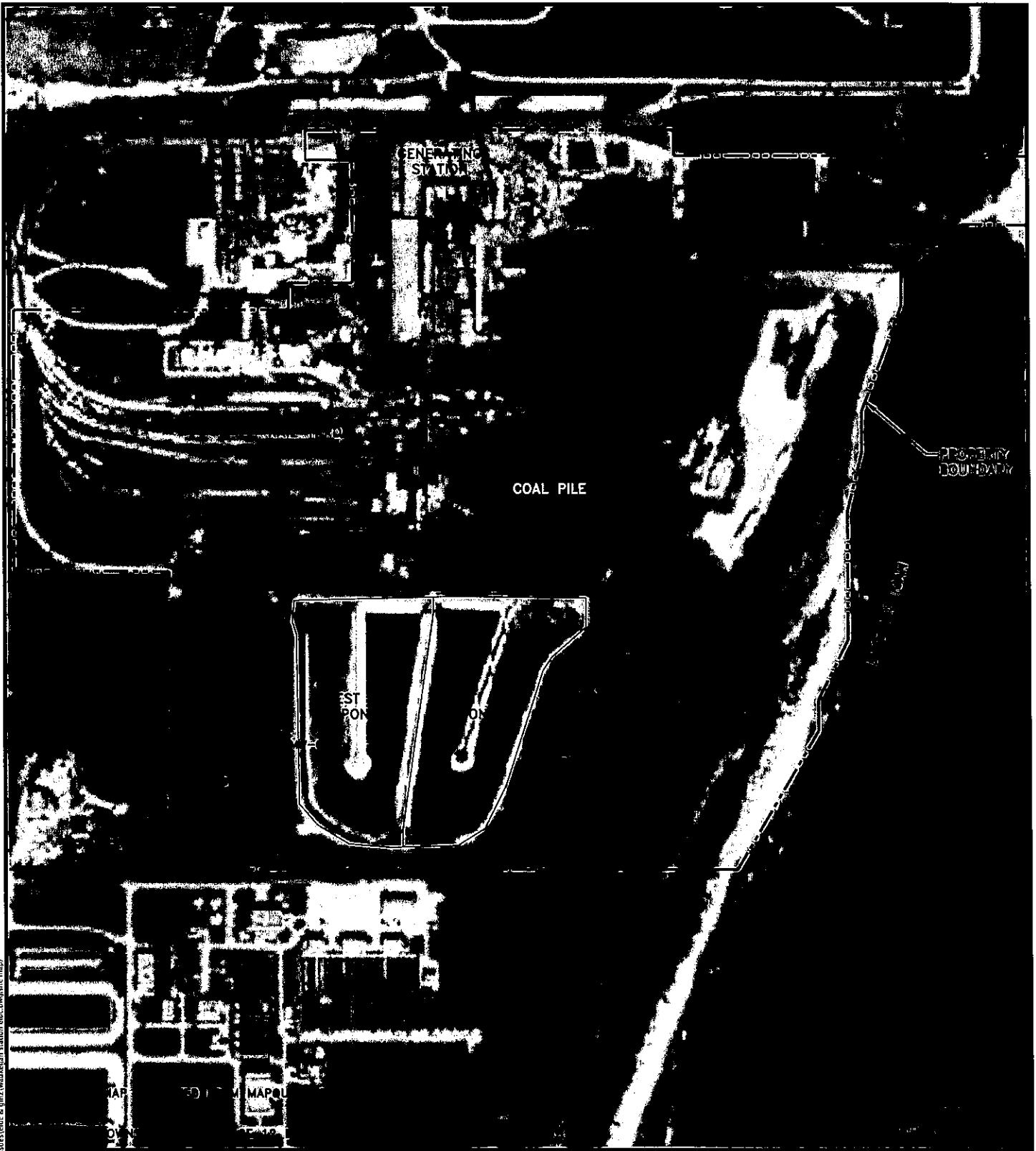


Michael Munroe
Station Manager

Attachments

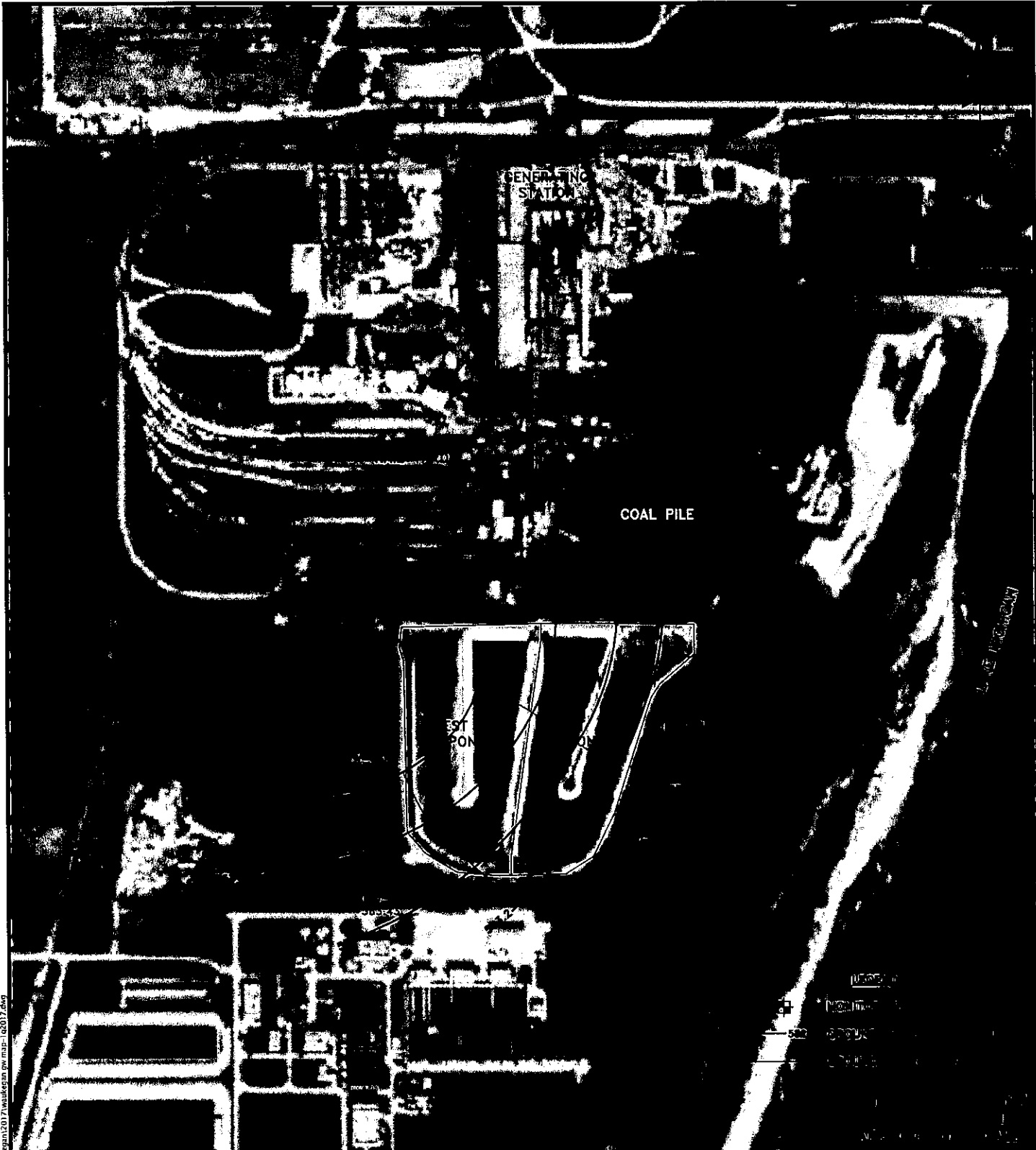
cc: William Buscher, IEPA
Andrea Rhodes, IEPA
Fred Veenbaas, Midwest Generation
Sharene Shealey, Midwest Generation
Richard Gnat, KPRG and Associates, Inc.

FIGURES



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ENVIRONMENTAL CONSULTATION & REMEDIATION		SITE MAP	
<h1>K P R G</h1> KPRG and Associates, Inc. 14665 West Lisbon Road, Suite 2B Brookfield, Wisconsin 53005 Telephone 262-781-0475 Facsimile 262-781-0478 414 Plaza Drive, Suite 106 Westmont, Illinois 60559 Telephone 630-325-1300 Facsimile 630-325-1593		WAUKEGAN STATION WAUKEGAN, ILLINOIS	
		Scale: 1" = 500'	Date: January 23, 2015 <small>MWB15-15-02090</small>
KPRG Project No. 12313.2		FIGURE 1	



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ENVIRONMENTAL CONSULTATION & REMEDIATION

K P R G

KPRG and Associates, Inc.

14665 West Lisbon Road, Suite 28 Brookfield, Wisconsin 53005 Telephone 262-781-0475 Facsimile 262-781-0478

414 Plaza Drive, Suite 106 Westmont, Illinois 60559 Telephone 630-325-1300 Facsimile 630-325-1593

GROUNDWATER CONTOUR MAP 05/2017

WAUKEGAN STATION
WAUKEGAN, ILLINOIS

Scale: 1" = 500'

Date: June 22, 2017

KPRG Project No. 12313.2

MWB 7348_020912
FIGURE 2

TABLES

Table 1. Groundwater Elevations - Midwest Generation, LLC, Waukegan Station, Waukegan, IL

Well ID	Date	Top of Casing (TOC) Elevation (ft above MSL)	Ground Elevation (ft above MSL)	Groundwater Elevation (ft above MSL)	Sampling Groundwater Elevation (ft above MSL)	Bottom of Well Elevation (ft above MSL)	Depth to Groundwater (ft below TOC)	Sampling Depth to Groundwater (ft below TOC)	Depth to Bottom of Well (ft below TOC)
MW-01	11/6/2014	603.14	603.46	582.01	582.01	571.30	21.13	21.13	31.84
	2/17/2015	603.14	603.46	582.42	582.43	571.30	20.72	20.71	31.84
	4/21/2015	603.14	603.46	583.65	583.64	571.30	19.49	19.50	31.84
	8/12/2015	603.14	603.46	582.47	582.47	571.30	20.67	20.67	31.84
	11/2/2015	603.14	603.46	582.39	582.39	571.30	20.75	20.75	31.84
	2/29/2016	603.12	603.37	582.41	582.41	571.28	20.71	20.71	31.84
	5/2/2016	603.12	603.37	582.23	582.25	571.28	20.89	20.87	31.84
	8/23/2016	603.12	603.37	581.11	580.98	571.28	22.01	22.14	31.84
	12/2/2016	603.62	600.22	581.35	581.38	571.78	22.27	22.24	31.84
	2/2/2017	603.62	600.22	581.20	581.22	571.78	22.42	22.40	31.84
	5/15/2017	603.62	600.22	583.10	583.10	571.78	20.52	20.52	31.84
	MW-02	11/6/2014	603.04	603.28	581.91	581.91	573.48	21.13	21.13
2/17/2015		603.04	603.28	582.21	582.21	573.48	20.83	20.83	29.56
4/21/2015		603.04	603.28	583.54	583.54	573.48	19.50	19.50	29.56
8/12/2015		603.04	603.28	582.40	582.38	573.48	20.64	20.66	29.56
11/2/2015		603.04	603.28	582.33	582.34	573.48	20.71	20.70	29.56
2/29/2016		603.04	603.32	582.45	582.45	573.48	20.59	20.59	29.56
5/2/2016		603.04	603.32	582.22	582.26	573.48	20.82	20.78	29.56
8/23/2016		603.04	603.32	581.00	580.86	573.48	22.04	22.18	29.56
12/2/2016		603.39	599.86	581.26	581.28	573.83	22.13	22.11	29.56
2/21/2017		603.39	599.86	581.15	581.18	573.83	22.24	22.21	29.56
5/15/2017		603.39	599.86	583.14	583.15	573.83	20.25	20.24	29.56
MW-03		11/6/2014	602.90	603.18	581.97	581.98	573.10	20.93	20.92
	2/17/2015	602.90	603.18	582.22	582.22	573.10	20.68	20.68	29.80
	4/21/2015	602.90	603.18	583.56	583.53	573.10	19.34	19.37	29.80
	8/12/2015	602.90	603.18	582.48	582.47	573.10	20.42	20.43	29.80
	11/2/2015	602.90	603.18	582.53	582.39	573.10	20.37	20.51	29.80
	2/29/2016	602.91	603.19	582.48	582.48	573.11	20.43	20.43	29.80
	5/2/2016	602.91	603.19	582.25	582.25	573.11	20.66	20.66	29.80
	8/23/2016	602.91	603.19	580.79	580.73	573.11	22.12	22.18	29.80
	12/2/2016	603.70	600.48	581.18	581.21	573.90	22.52	22.49	29.80
	2/21/2017	603.70	600.48	581.06	581.06	573.90	22.64	22.64	29.80
	5/15/2017	603.70	600.48	583.15	583.14	573.90	20.55	20.56	29.80
	MW-04	11/6/2014	603.15	603.53	581.86	581.88	573.57	21.29	21.27
2/17/2015		603.15	603.53	582.14	582.14	573.57	21.01	21.01	29.58
4/21/2015		603.15	603.53	583.56	583.55	573.57	19.59	19.60	29.58
8/12/2015		603.15	603.53	582.32	582.33	573.57	20.83	20.82	29.58
11/2/2015		603.15	603.53	582.32	582.29	573.57	20.83	20.86	29.58
2/29/2016		603.19	603.53	582.49	582.46	573.61	20.70	20.73	29.58
5/2/2016		603.19	603.53	582.25	582.25	573.61	20.94	20.94	29.58
8/23/2016		603.19	603.53	580.50	580.46	573.61	22.69	22.73	29.58
12/2/2016		603.17	599.77	580.99	580.98	573.59	22.18	22.19	29.58
2/21/2017		603.17	599.77	580.81	580.82	573.59	22.36	22.35	29.58
5/15/2017		603.17	599.77	583.13	583.09	573.59	20.04	20.08	29.58
MW-05		11/5/2014	604.84	601.53	582.54	582.55	572.92	22.30	22.29
	2/17/2015	604.84	601.53	582.38	582.38	572.92	22.46	22.46	31.92
	4/20/2015	604.84	601.53	584.15	584.15	572.92	20.69	20.69	31.92
	8/13/2015	604.84	601.53	583.20	583.21	572.92	21.64	21.63	31.92
	11/2/2015	604.84	601.53	583.17	583.14	572.92	21.67	21.70	31.92
	2/29/2016	604.84	601.56	583.25	583.25	572.92	21.59	21.59	31.92
	5/2/2016	604.84	601.56	583.20	583.18	572.92	21.64	21.66	31.92
	8/23/2016	604.84	601.56	581.02	581.56	572.92	23.82	23.28	31.92
	12/2/2016	604.84	601.56	581.94	581.98	572.92	22.90	22.86	31.92
	2/21/2017	604.84	601.56	582.06	582.11	572.92	22.78	22.73	31.92
	5/15/2017	604.84	601.56	583.96	583.97	572.92	20.88	20.87	31.92
	MW-06	11/5/2014	589.73	586.75	582.92	582.91	572.03	6.81	6.82
2/18/2015		589.73	586.75	583.39	583.39	572.03	6.34	6.34	17.70
4/20/2015		589.73	586.75	583.87	583.88	572.03	5.86	5.85	17.70
8/12/2015		589.73	586.75	583.29	583.28	572.03	6.44	6.45	17.70
11/2/2015		589.73	586.75	583.32	583.27	572.03	6.41	6.46	17.70
2/29/2016		590.00	587.04	583.57	583.57	572.30	6.43	6.43	17.70
5/2/2016		590.00	587.04	583.80	583.73	572.30	6.20	6.27	17.70
8/23/2016		590.00	587.04	581.81	581.81	572.30	8.19	8.19	17.70
12/2/2016		590.00	587.04	582.79	582.87	572.30	7.21	7.13	17.70
2/21/2017		590.00	587.04	582.89	582.95	572.30	7.11	7.05	17.70
5/15/2017		590.00	587.04	583.68	583.67	572.30	6.32	6.33	17.70
MW-07		11/5/2014	598.29	595.87	581.39	581.40	570.39	16.90	16.89
	2/17/2015	598.29	595.87	581.14	581.14	570.39	17.15	17.15	27.90
	4/20/2015	598.29	595.87	584.02	584.01	570.39	14.27	14.28	27.90
	8/12/2015	598.29	595.87	582.35	582.35	570.39	15.94	15.94	27.90
	11/2/2015	598.29	595.87	582.33	582.23	570.39	15.96	16.06	27.90
	2/29/2016	598.27	595.98	582.53	582.55	570.37	15.74	15.72	27.90
	5/2/2016	598.27	595.98	582.44	582.44	570.37	15.83	15.83	27.90
	8/23/2016	598.27	595.98	579.66	579.63	570.37	18.61	18.64	27.90
	12/2/2016	598.27	595.98	579.99	580.00	570.37	18.28	18.27	27.90
	2/21/2017	598.27	595.98	580.41	580.36	570.37	17.86	17.91	27.90
	5/15/2017	598.27	595.98	583.43	583.31	570.37	14.84	14.96	27.90

Note: Values for Depth to Bottom of Well are from prior to the installation of the dedicated pumps.

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

MW-01 Parameter	Date Standards	2/21/2017		5/15/2017	
		DL	Result	DL	Result
Antimony	0.006	0.0030	ND	0.0030	ND
Arsenic	0.010	0.0010	0.14	0.0010	0.11
Barium	2.0	0.0025	0.015	0.0025	0.016
Beryllium	0.004	0.0010	ND	0.0010	ND
Boron	2.0	0.25	2.1	0.25	2.3
Cadmium	0.005	0.00050	ND	0.00050	ND
Chloride	200.0	2.0	61	2.0	58
Chromium	0.1	0.0050	ND	0.0050	ND
Cobalt	1.0	0.0010	ND	0.0010	ND
Copper	0.65	0.0020	ND	0.0020	ND
Cyanide, Total	0.2	0.010	0.014	0.010	0.018
Fluoride	4.0	0.10	0.30	0.10	0.29
Iron	5.0	0.10	ND	0.10	ND
Lead	0.0075	0.00050	ND	0.00050	ND
Manganese	0.15	0.0025	ND	0.0025	ND
Mercury	0.002	0.00020	ND	0.00020	ND
Nickel	0.1	0.0020	ND	0.0020	ND
Nitrogen, Nitrate	10.0	0.10	ND	0.10	0.11
Nitrogen, Nitrate Nitrite	NA	0.10	ND	0.10	0.19
Nitrogen, Nitrite	NA	0.020	0.038	0.020	0.078
Radium 226	20	0.119	ND	0.0943	0.114
Radium 228	20	0.518	ND *	0.474	ND
Selenium	0.05	0.0025	0.0025	0.0025	0.0055
Silver	0.05	0.00050	ND	0.00050	ND
Sulfate	400.0	50	260	50	330
Thallium	0.002	0.0020	ND	0.0020	ND
Total Dissolved Solids	1,200	10	550	10	600
Vanadium	0.049	0.0050	0.077	0.0050	0.088
Zinc	5.0	0.020	ND	0.020	ND
pH	6.5 - 9.0	NA	11.30	NA	10.69
Temperature	NA	NA	14.8	NA	15.1
Conductivity	NA	NA	0.81	NA	0.71
Dissolved Oxygen	NA	NA	1.98	NA	2.73
ORP	NA	NA	65.2	NA	-22.1

Notes: Standards obtained from IAC, Title 35, Chapter I, Part 620, Subpart D, Section 620.410 - Groundwater Quality Standards for Class I: Potable Resource Groundwater
All values are in mg/L (ppm) unless otherwise noted.

DL - Detection limit
* - LCS or LCSD is outside acceptable limits.
NA - Not Applicable
ND - Not Detected

Temperature °C degrees Celsius
Conductivity ms/cm² millisiemens/centimeters
Dissolved Oxygen mg/L milligrams/liter
Oxygen Reduction Potential (ORP) mV millivolts

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

MW-2	Date	2/21/2017		5/15/2017	
		Standards	DL	Result	DL
Antimony	0.006	0.0030	ND	0.0030	ND
Arsenic	0.010	0.0010	0.026	0.0010	0.016
Barium	2.0	0.0025	0.010	0.0025	0.027
Beryllium	0.004	0.0010	ND	0.0010	ND
Boron	2.0	0.25	2.9	0.50	3.4
Cadmium	0.005	0.00050	ND	0.00050	ND
Chloride	200.0	2.0	51	2.0	50
Chromium	0.1	0.0050	ND	0.0050	ND
Cobalt	1.0	0.0010	ND	0.0010	ND
Copper	0.65	0.0020	ND	0.0020	ND
Cyanide, Total	0.2	0.010	0.019	0.010	ND
Fluoride	4.0	0.10	0.78	0.10	0.38
Iron	5.0	0.10	ND	0.10	ND
Lead	0.0075	0.00050	ND	0.00050	ND
Manganese	0.15	0.0025	0.017	0.0025	0.019
Mercury	0.002	0.00020	ND	0.00020	ND
Nickel	0.1	0.0020	ND	0.0020	ND
Nitrogen, Nitrate	10.0	0.10	ND	0.10	0.67
Nitrogen, Nitrate Nitrite	NA	0.10	ND	0.10	0.73
Nitrogen, Nitrite	NA	0.020	ND	0.020	0.057
Radium 226	20	0.144	ND	0.108	ND
Radium 228	20	0.406	ND *	0.518	ND
Selenium	0.05	0.0025	ND	0.0025	0.022
Silver	0.05	0.00050	ND	0.00050	ND
Sulfate	400.0	50	210	50	350
Thallium	0.002	0.0020	ND	0.0020	ND
Total Dissolved Solids	1,200	10	380	10	630
Vanadium	0.049	0.0050	0.0066	0.0050	0.0091
Zinc	5.0	0.020	ND	0.020	ND
pH	6.5 - 9.0	NA	8.75	NA	8.33
Temperature	NA	NA	12.8	NA	18.3
Conductivity	NA	NA	0.50	NA	0.68
Dissolved Oxygen	NA	NA	2.19	NA	5.13
ORP	NA	NA	67.4	NA	-49.2

Notes: Standards obtained from IAC, Title 35, Chapter I, Part 620, Subpart D, Section 620.410 - Groundwater Quality Standards for Class I: Potable Resource Groundwater
All values are in mg/L (ppm) unless otherwise noted.

DL - Detection limit
* - LCS or LCSD is outside acceptable limits.
NA - Not Applicable
ND - Not Detected

Temperature °C degrees Celsius
Conductivity ms/cm² milliSiemens/centimeters
Dissolved Oxygen mg/L milligrams/liter
Oxygen Reduction Potential (ORP) mV millivolts

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

MW-3 Parameter	Date Standards	2/21/2017		5/16/2017	
		DL	Result	DL	Result
Antimony	0.006	0.0030	ND	0.0030	ND
Arsenic	0.010	0.0010	0.016	0.0010	0.0036
Barium	2.0	0.0025	0.0064	0.0025	0.028
Beryllium	0.004	0.0010	ND	0.0010	ND
Boron	2.0	0.25	2.1	0.25	3.5
Cadmium	0.005	0.00050	ND	0.00050	ND
Chloride	200.0	2.0	67	2.0	60
Chromium	0.1	0.0050	ND	0.0050	ND
Cobalt	1.0	0.0010	ND	0.0010	ND
Copper	0.65	0.0020	ND	0.0020	ND
Cyanide, Total	0.2	0.010	ND	0.010	ND
Fluoride	4.0	0.10	0.36	0.10	0.27
Iron	5.0	0.10	ND	0.10	ND
Lead	0.0075	0.00050	ND	0.00050	ND
Manganese	0.15	0.0025	0.0025	0.0025	0.010
Mercury	0.002	0.00020	ND	0.00020	ND
Nickel	0.1	0.0020	ND	0.0020	ND
Nitrogen, Nitrate	10.0	0.10	0.10	0.10	0.72
Nitrogen, Nitrate Nitrite	NA	0.10	0.10	0.10	0.72
Nitrogen, Nitrite	NA	0.020	ND	0.020	ND
Radium 226	20	0.122	ND	0.110	0.159
Radium 228	20	0.389	ND *	0.402	ND
Selenium	0.05	0.0025	ND	0.0025	0.0088
Silver	0.05	0.00050	ND	0.00050	ND
Sulfate	400.0	50	170	50	280
Thallium	0.002	0.0020	ND	0.0020	ND
Total Dissolved Solids	1,200	10	440	10	690
Vanadium	0.049	0.0050	0.028	0.0050	0.013
Zinc	5.0	0.020	ND	0.020	ND
pH	6.5 - 9.0	NA	7.56	NA	7.90
Temperature	NA	NA	11.4	NA	14.5
Conductivity	NA	NA	0.53	NA	0.78
Dissolved Oxygen	NA	NA	1.64	NA	5.46
ORP	NA	NA	83.5	NA	-30.5

Notes: Standards obtained from IAC, Title 35, Chapter 1, Part 620, Subpart D, Section 620.410 - Groundwater Quality Standards for Class I: Potable Resource Groundwater
All values are in mg/L (ppm) unless otherwise noted.

DL - Detection limit
* - LCS or LCSD is outside acceptable limits.
NA - Not Applicable
ND - Not Detected

Temperature °C degrees Celsius
Conductivity ms/cm millisiemens/centimeters
Dissolved Oxygen mg/L milligrams/liter
Oxygen Reduction Potential (ORP) mV millivolts

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

MW-4 Parameter	Date Standards	2/22/2017		5/16/2017	
		DL	Result	DL	Result
Antimony	0.006	0.0030	ND	0.0030	ND
Arsenic	0.010	0.0010	0.018	0.0010	0.0058
Barium	2.0	0.0025	0.092	0.0025	0.075
Beryllium	0.004	0.0010	ND	0.0010	ND
Boron	2.0	0.25	2.4	0.25	2.6
Cadmium	0.005	0.00050	ND	0.00050	ND
Chloride	200.0	2.0	41	2.0	34
Chromium	0.1	0.0050	ND	0.0050	ND
Cobalt	1.0	0.0010	ND	0.0010	ND
Copper	0.65	0.0020	ND	0.0020	ND
Cyanide, Total	0.2	0.010	ND	0.010	ND
Fluoride	4.0	0.10	0.14	0.10	0.26
Iron	5.0	0.10	0.56	0.10	0.13
Lead	0.0075	0.00050	ND	0.00050	ND
Manganese	0.15	0.0025	0.14	0.0025	0.032
Mercury	0.002	0.00020	ND	0.00020	ND
Nickel	0.1	0.0020	ND	0.0020	ND
Nitrogen, Nitrate	10.0	0.10	ND	0.10	0.58
Nitrogen, Nitrate Nitrite	NA	0.10	ND	0.10	0.58
Nitrogen, Nitrite	NA	0.020	ND	0.020	ND
Radium 226	20	0.125	0.376	0.0831	0.198
Radium 228	20	0.395	0.624 *	0.336	0.521
Selenium	0.05	0.0025	0.0043	0.0025	0.021
Silver	0.05	0.00050	ND	0.00050	ND
Sulfate	400.0	100	350	100	350
Thallium	0.002	0.0020	ND	0.0020	ND
Total Dissolved Solids	1,200	10	850	10	950
Vanadium	0.049	0.0050	ND	0.0050	ND
Zinc	5.0	0.020	ND	0.020	ND
pH	6.5 - 9.0	NA	7.44	NA	7.94
Temperature	NA	NA	11.9	NA	13.4
Conductivity	NA	NA	0.92	NA	0.89
Dissolved Oxygen	NA	NA	2.82	NA	3.89
ORP	NA	NA	99.9	NA	-15.8

Notes: Standards obtained from IAC, Title 35, Chapter I, Part 620, Subpart D, Section 620.410 - Groundwater Quality Standards for Class I: Potable Resource Groundwater
All values are in mg/L (ppm) unless otherwise noted.

DL - Detection Limit
* - LCS or LCSD is outside acceptable limits.
NA - Not Applicable
ND - Not Detected

Temperature °C degrees Celsius
Conductivity ms/cm² millisiemens/centimeters
Dissolved Oxygen mg/L milligrams/liter
Oxygen Reduction Potential (ORP) mV millivolts

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

MW-5 Parameter	Date Standards	2/22/2017		5/15/2017	
		DL	Result	DL	Result
Antimony	0.006	0.0030	ND	0.0030	ND
Arsenic	0.010	0.0010	0.040	0.0010	0.0053
Barium	2.0	0.0025	0.061	0.0025	0.036
Beryllium	0.004	0.0010	ND	0.0010	ND
Boron	2.0	5.0	42	0.50	7.7
Cadmium	0.005	0.00050	ND	0.00050	ND
Chloride	200.0	10	82	2.0	73
Chromium	0.1	0.0050	ND	0.0050	ND
Cobalt	1.0	0.0010	ND	0.0010	ND
Copper	0.65	0.0020	ND	0.0020	ND
Cyanide, Total	0.2	0.010	ND	0.010	ND
Fluoride	4.0	0.10	0.21	0.10	0.15
Iron	5.0	0.10	15	0.10	1.9
Lead	0.0075	0.00050	ND	0.00050	ND
Manganese	0.15	0.0025	0.54	0.0025	0.12
Mercury	0.002	0.00020	ND	0.00020	ND
Nickel	0.1	0.0020	ND	0.0020	0.0038
Nitrogen, Nitrate	10.0	0.10	ND	0.10	ND
Nitrogen, Nitrate Nitrite	NA	0.10	ND	0.10	ND
Nitrogen, Nitrite	NA	0.020	ND	0.020	ND
Radium 226	20	0.110	0.331	0.110	ND
Radium 228	20	0.443	0.805	0.531	0.703
Selenium	0.05	0.0025	ND	0.0025	0.0041
Silver	0.05	0.00050	ND	0.00050	ND
Sulfate	400.0	250	700	500	1100
Thallium	0.002	0.0020	ND	0.0020	ND
Total Dissolved Solids	1,200	10	1700	10	2600
Vanadium	0.049	0.0050	ND	0.0050	ND
Zinc	5.0	0.020	ND	0.020	ND
pH	6.5 - 9.0	NA	7.46	NA	7.78
Temperature	NA	NA	14.8	NA	13.9
Conductivity	NA	NA	1.63	NA	2.20
Dissolved Oxygen	NA	NA	1.46	NA	5.90
ORP	NA	NA	-29.1	NA	-20.7

Notes: Standards obtained from IAC, Title 35, Chapter 1, Part 620, Subpart D, Section 620.410 - Groundwater Quality Standards for Class I: Potable Resource Groundwater
All values are in mg/L (ppm) unless otherwise noted.

DL - Detection limit
* - LCS or LCSD is outside acceptable limits.
NA - Not Applicable
ND - Not Detected

Temperature °C degrees Celsius
Conductivity ms/cm² millisiemens/centimeters
Dissolved Oxygen mg/L milligrams/liter
Oxygen Reduction Potential (ORP) mV millivolts

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

MW-6 Parameter	Date Standards	2/22/2017		5/15/2017	
		DL	Result	DL	Result
Antimony	0.006	0.0030	ND	0.0030	ND
Arsenic	0.010	0.0010	0.0087	0.0010	0.0055
Barium	2.0	0.0025	0.073	0.0025	0.086
Beryllium	0.004	0.0010	ND	0.0010	ND
Boron	2.0	1.0	8.9	0.25	1.8
Cadmium	0.005	0.00050	ND	0.00050	ND
Chloride	200.0	2.0	44	10	100
Chromium	0.1	0.0050	ND	0.0050	ND
Cobalt	1.0	0.0010	ND	0.0010	ND
Copper	0.65	0.0020	ND	0.0020	ND
Cyanide, Total	0.2	0.010	ND	0.010	ND
Fluoride	4.0	0.10	0.21	0.10	0.34
Iron	5.0	0.10	12	0.10	7.7
Lead	0.0075	0.00050	ND	0.00050	ND
Manganese	0.15	0.0025	0.47	0.0025	0.20
Mercury	0.002	0.00020	ND	0.00020	ND
Nickel	0.1	0.0020	ND	0.0020	ND
Nitrogen, Nitrate	10.0	0.10	ND	0.10	ND
Nitrogen, Nitrate Nitrite	NA	0.10	ND	0.10	ND
Nitrogen, Nitrite	NA	0.020	ND	0.020	ND
Radium 226	20	0.146	0.255	0.116	0.227
Radium 228	20	0.475	ND	0.413	0.651
Selenium	0.05	0.0025	0.0037	0.0025	ND
Silver	0.05	0.00050	ND	0.00050	ND
Sulfate	400.0	100	290	50	130
Thallium	0.002	0.0020	ND	0.0020	ND
Total Dissolved Solids	1,200	10	930	10	730
Vanadium	0.049	0.0050	0.0077	0.0050	0.0054
Zinc	5.0	0.020	ND	0.020	ND
pH	6.5 - 9.0	NA	7.35	NA	8.26
Temperature	NA	NA	11.4	NA	15.2
Conductivity	NA	NA	1.00	NA	0.87
Dissolved Oxygen	NA	NA	1.66	NA	8.11
ORP	NA	NA	7.9	NA	-116.2

Notes: Standards obtained from IAC, Title 35, Chapter I, Part 620, Subpart D, Section 620.410 - Groundwater Quality Standards for Class I: Potable Resource Groundwater
All values are in mg/L (ppm) unless otherwise noted.

DL - Detection limit
* - LCS or LCSD is outside acceptable limits.
NA - Not Applicable
ND - Not Detected

Temperature °C degrees Celsius
Conductivity ms/cm² millisiemens/centimeters
Dissolved Oxygen mg/L milligrams/liter
Oxygen Reduction Potential (ORP) mV millivolts

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

MW-7 Parameter	Date Standards	2/22/2017		5/16/2017	
		DL	Result	DL	Result
Antimony	0.006	0.0030	ND	0.0030	ND
Arsenic	0.010	0.0010	0.010	0.0010	0.0095
Barium	2.0	0.0025	0.096	0.0025	0.087
Beryllium	0.004	0.0010	ND	0.0010	ND
Boron	2.0	5.0	49	1.0	50
Cadmium	0.005	0.00050	ND	0.00050	ND
Chloride	200.0	2.0	65	2.0	49
Chromium	0.1	0.0050	ND	0.0050	ND
Cobalt	1.0	0.0010	ND	0.0010	ND
Copper	0.65	0.0020	0.0021	0.0020	ND
Cyanide, Total	0.2	0.010	ND	0.010	ND
Fluoride	4.0	0.10	0.25	0.10	0.31
Iron	5.0	0.10	18	0.10	19
Lead	0.0075	0.00050	0.0010	0.00050	0.00072
Manganese	0.15	0.0025	0.62	0.0025	0.69
Mercury	0.002	0.00020	ND	0.00020	ND
Nickel	0.1	0.0020	ND	0.0020	ND
Nitrogen, Nitrate	10.0	0.10	ND	0.10	ND
Nitrogen, Nitrate Nitrite	NA	0.10	ND	0.10	ND
Nitrogen, Nitrite	NA	0.020	ND	0.020	ND
Radium 226	20	0.127	0.738	0.112	0.548
Radium 228	20	0.454	1.38	0.360	0.875
Selenium	0.05	0.0025	ND	0.0025	ND
Silver	0.05	0.00050	ND	0.00050	ND
Sulfate	400.0	250	880	250	690
Thallium	0.002	0.0020	ND	0.0020	ND
Total Dissolved Solids	1,200	10	1900	10	1800
Vanadium	0.049	0.0050	ND	0.0050	ND
Zinc	5.0	0.020	ND	0.020	ND
pH	6.5 - 9.0	NA	7.48	NA	7.97
Temperature	NA	NA	12.6	NA	15.1
Conductivity	NA	NA	1.57	NA	1.52
Dissolved Oxygen	NA	NA	1.71	NA	2.83
ORP	NA	NA	-26.8	NA	-93.2

Notes: Standards obtained from IAC, Title 35, Chapter 1, Part 620, Subpart D, Section 620.410 - Groundwater Quality Standards for Class I: Potable Resource Groundwater
All values are in mg/L (ppm) unless otherwise noted.

DL - Detection limit
* - LCS or LCSD is outside acceptable limits.
NA - Not Applicable
ND - Not Detected

Temperature °C degrees Celsius
Conductivity ms/cm² millisiemens/centimeters
Dissolved Oxygen mg/L milligrams/liter
Oxygen Reduction Potential (ORP) mV millivolts

ATTACHMENT 1
Analytical Data Package(s)

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

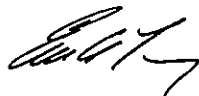
ANALYTICAL REPORT

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

TestAmerica Job ID: 500-128163-1
Client Project/Site: Waukegan Station Permit

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

Attn: Richard Gnat



*Authorized for release by:
5/31/2017 3:02:48 PM*

Eric Lang, Manager of Project Management
(708)534-5200
eric.lang@testamericainc.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.

MWG13-15_62402

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Case Narrative

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

TestAmerica Job ID: 500-128163-1

Job ID: 500-128163-1

Laboratory: TestAmerica Chicago

Narrative

**Job Narrative
500-128163-1**

Comments

No additional comments.

Receipt

The samples were received on 5/16/2017 9:40 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 5 coolers at receipt time were 1.9° C, 2.5° C, 3.3° C, 5.3° C and 6.0° C.

Metals

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

General Chemistry

Method(s) SM 4500 F C: The continuing calibration blank (CCB) associated with batch 500-386041 recovered above the upper control limit for Fluoride. The samples associated with this CCB was QC and found within control limits; therefore, the data have been reported. The following sample is impacted: (LCS 500-386041/33).

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



Detection Summary

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

TestAmerica Job ID: 500-128163-1

1

Client Sample ID: MW-01

Lab Sample ID: 500-128163-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	0.11		0.0010		mg/L	1			6020A	Total
Barium	0.016		0.0025		mg/L	1			6020A	Total
Boron	2.3		0.25		mg/L	5			6020A	Total
Selenium	0.0055		0.0025		mg/L	1			6020A	Total
Vanadium	0.088		0.0050		mg/L	1			6020A	Total
Cyanide, Total	0.018		0.010		mg/L	1			9014	Total/NA
Sulfate	330		50		mg/L	10			9038	Total/NA
Chloride	58		2.0		mg/L	1			9251	Total/NA
Nitrogen, Nitrate	0.11		0.10		mg/L	1			Nitrate by calc	Total/NA
Total Dissolved Solids	600		10		mg/L	1			SM 2540C	Total/NA
Fluoride	0.29		0.10		mg/L	1			SM 4500 F C	Total/NA
Nitrogen, Nitrite	0.078		0.020		mg/L	1			SM 4500 NO2 B	Total/NA
Nitrogen, Nitrate Nitrite	0.19		0.10		mg/L	1			SM 4500 NO3 F	Total/NA

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Client Sample ID: MW-02

Lab Sample ID: 500-128163-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	0.016		0.0010		mg/L	1			6020A	Total
Barium	0.027		0.0025		mg/L	1			6020A	Total
Boron	3.4		0.50		mg/L	10			6020A	Total
Manganese	0.019		0.0025		mg/L	1			6020A	Total
Selenium	0.022		0.0025		mg/L	1			6020A	Total
Vanadium	0.0091		0.0050		mg/L	1			6020A	Total
Sulfate	350		50		mg/L	10			9038	Total/NA
Chloride	50		2.0		mg/L	1			9251	Total/NA
Nitrogen, Nitrate	0.67		0.10		mg/L	1			Nitrate by calc	Total/NA
Total Dissolved Solids	630		10		mg/L	1			SM 2540C	Total/NA
Fluoride	0.38		0.10		mg/L	1			SM 4500 F C	Total/NA
Nitrogen, Nitrite	0.057		0.020		mg/L	1			SM 4500 NO2 B	Total/NA
Nitrogen, Nitrate Nitrite	0.73		0.10		mg/L	1			SM 4500 NO3 F	Total/NA

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Client Sample ID: MW-05

Lab Sample ID: 500-128163-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	0.0053		0.0010		mg/L	1			6020A	Total
Barium	0.036		0.0025		mg/L	1			6020A	Total
Boron	7.7		0.50		mg/L	10			6020A	Total
Iron	1.9		0.10		mg/L	1			6020A	Total

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

Detection Summary

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

TestAmerica Job ID: 500-128163-1

Client Sample ID: MW-05 (Continued)

Lab Sample ID: 500-128163-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Manganese	0.12		0.0025		mg/L	1		6020A	Total
Nickel	0.0038		0.0020		mg/L	1		6020A	Recoverable Total
Selenium	0.0041		0.0025		mg/L	1		6020A	Recoverable Total
Sulfate	1100		500		mg/L	100		9038	Total/NA
Chloride	73		2.0		mg/L	1		9251	Total/NA
Total Dissolved Solids	2600		10		mg/L	1		SM 2540C	Total/NA
Fluoride	0.15		0.10		mg/L	1		SM 4500 F C	Total/NA

Client Sample ID: DUPLICATE

Lab Sample ID: 500-128163-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0071		0.0010		mg/L	1		6020A	Total
Barium	0.035		0.0025		mg/L	1		6020A	Recoverable Total
Boron	7.0		0.50		mg/L	10		6020A	Recoverable Total
Iron	2.1		0.10		mg/L	1		6020A	Recoverable Total
Manganese	0.12		0.0025		mg/L	1		6020A	Total
Nickel	0.0035		0.0020		mg/L	1		6020A	Recoverable Total
Selenium	0.0038		0.0025		mg/L	1		6020A	Total
Sulfate	980		500		mg/L	100		9038	Total/NA
Chloride	74		2.0		mg/L	1		9251	Total/NA
Total Dissolved Solids	2800		10		mg/L	1		SM 2540C	Total/NA
Fluoride	0.14		0.10		mg/L	1		SM 4500 F C	Total/NA

Client Sample ID: MW-03

Lab Sample ID: 500-128163-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0036		0.0010		mg/L	1		6020A	Total
Barium	0.028		0.0025		mg/L	1		6020A	Recoverable Total
Boron	3.5		0.25		mg/L	5		6020A	Recoverable Total
Manganese	0.010		0.0025		mg/L	1		6020A	Total
Selenium	0.0088		0.0025		mg/L	1		6020A	Recoverable Total
Vanadium	0.013		0.0050		mg/L	1		6020A	Total
Sulfate	280		50		mg/L	10		9038	Total/NA
Chloride	60		2.0		mg/L	1		9251	Total/NA
Nitrogen, Nitrate	0.72		0.10		mg/L	1		Nitrate by calc	Total/NA
Total Dissolved Solids	690		10		mg/L	1		SM 2540C	Total/NA
Fluoride	0.27		0.10		mg/L	1		SM 4500 F C	Total/NA
Nitrogen, Nitrate Nitrite	0.72		0.10		mg/L	1		SM 4500 NO3 F	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

Detection Summary

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

TestAmerica Job ID: 500-128163-1

Client Sample ID: MW-04

Lab Sample ID: 500-128163-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	0.0058		0.0010		mg/L	1			6020A	Total
										Recoverable
Barium	0.075		0.0025		mg/L	1			6020A	Total
										Recoverable
Boron	2.6		0.25		mg/L	5			6020A	Total
										Recoverable
Iron	0.13		0.10		mg/L	1			6020A	Total
										Recoverable
Manganese	0.032		0.0025		mg/L	1			6020A	Total
										Recoverable
Selenium	0.021		0.0025		mg/L	1			6020A	Total
										Recoverable
Sulfate	350		100		mg/L	20			9038	Total/NA
Chloride	34		2.0		mg/L	1			9251	Total/NA
Nitrogen, Nitrate	0.58		0.10		mg/L	1			Nitrate by calc	Total/NA
Total Dissolved Solids	950		10		mg/L	1			SM 2540C	Total/NA
Fluoride	0.26		0.10		mg/L	1			SM 4500 F C	Total/NA
Nitrogen, Nitrate Nitrite	0.58		0.10		mg/L	1			SM 4500 NO3 F	Total/NA

Client Sample ID: MW-06

Lab Sample ID: 500-128163-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	0.0055		0.0010		mg/L	1			6020A	Total
										Recoverable
Barium	0.086		0.0025		mg/L	1			6020A	Total
										Recoverable
Boron	1.8		0.25		mg/L	5			6020A	Total
										Recoverable
Iron	7.7		0.10		mg/L	1			6020A	Total
										Recoverable
Manganese	0.20		0.0025		mg/L	1			6020A	Total
										Recoverable
Vanadium	0.0054		0.0050		mg/L	1			6020A	Total
										Recoverable
Sulfate	130		50		mg/L	10			9038	Total/NA
Chloride	100		10		mg/L	5			9251	Total/NA
Total Dissolved Solids	730		10		mg/L	1			SM 2540C	Total/NA
Fluoride	0.34		0.10		mg/L	1			SM 4500 F C	Total/NA

Client Sample ID: MW-07

Lab Sample ID: 500-128163-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	0.0095		0.0010		mg/L	1			6020A	Total
										Recoverable
Barium	0.087		0.0025		mg/L	1			6020A	Total
										Recoverable
Boron	50		1.0		mg/L	20			6020A	Total
										Recoverable
Iron	19		0.10		mg/L	1			6020A	Total
										Recoverable
Lead	0.00072		0.00050		mg/L	1			6020A	Total
										Recoverable
Manganese	0.69		0.0025		mg/L	1			6020A	Total
										Recoverable
Sulfate	690		250		mg/L	50			9038	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

MWG13-15_62407
 5/31/2017

Detection Summary

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

TestAmerica Job ID: 500-128163-1

Client Sample ID: MW-07 (Continued)

Lab Sample ID: 500-128163-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	49		2.0		mg/L	1		9251	Total/NA
Total Dissolved Solids	1800		10		mg/L	1		SM 2540C	Total/NA
Fluoride	0.31		0.10		mg/L	1		SM 4500 F C	Total/NA

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This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

Method Summary

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

TestAmerica Job ID: 500-128163-1

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Method	Method Description	Protocol	Laboratory
6020A	Metals (ICP/MS)	SW846	TAL CHI
7470A	Mercury (CVAA)	SW846	TAL CHI
9014	Cyanide	SW846	TAL CHI
9038	Sulfate, Turbidimetric	SW846	TAL CHI
9251	Chloride	SW846	TAL CHI
Nitrate by calc	Nitrogen, Nitrate-Nitrite	SM	TAL CHI
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL CHI
SM 4500 F C	Fluoride	SM	TAL CHI
SM 4500 NO2 B	Nitrogen, Nitrite	SM	TAL CHI
SM 4500 NO3 F	Nitrogen, Nitrate	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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TestAmerica Chicago

MWG13-15_62409
5/31/2017

Sample Summary

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

TestAmerica Job ID: 500-128163-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-128163-1	MW-01	Water	05/15/17 13:39	05/16/17 09:40
500-128163-2	MW-02	Water	05/15/17 14:56	05/16/17 09:40
500-128163-3	MW-05	Water	05/15/17 16:34	05/16/17 09:40
500-128163-4	DUPLICATE	Water	05/15/17 00:00	05/16/17 09:40
500-128163-5	MW-03	Water	05/16/17 10:44	05/17/17 09:55
500-128163-6	MW-04	Water	05/16/17 11:55	05/17/17 09:55
500-128163-7	MW-06	Water	05/16/17 14:50	05/17/17 09:55
500-128163-8	MW-07	Water	05/16/17 13:36	05/17/17 09:55



Client Sample Results

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

TestAmerica Job ID: 500-128163-1

Client Sample ID: MW-01
 Date Collected: 05/15/17 13:39
 Date Received: 05/16/17 09:40

Lab Sample ID: 500-128163-1
 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		05/19/17 08:41	05/19/17 21:49	1
Arsenic	0.11		0.0010		mg/L		05/19/17 08:41	05/19/17 21:49	1
Barium	0.016		0.0025		mg/L		05/19/17 08:41	05/19/17 21:49	1
Beryllium	<0.0010		0.0010		mg/L		05/19/17 08:41	05/22/17 16:08	1
Boron	2.3		0.25		mg/L		05/19/17 08:41	05/23/17 21:09	5
Cadmium	<0.00050		0.00050		mg/L		05/19/17 08:41	05/19/17 21:49	1
Chromium	<0.0050		0.0050		mg/L		05/19/17 08:41	05/19/17 21:49	1
Cobalt	<0.0010		0.0010		mg/L		05/19/17 08:41	05/19/17 21:49	1
Copper	<0.0020		0.0020		mg/L		05/19/17 08:41	05/19/17 21:49	1
Iron	<0.10		0.10		mg/L		05/19/17 08:41	05/19/17 21:49	1
Lead	<0.00050		0.00050		mg/L		05/19/17 08:41	05/19/17 21:49	1
Manganese	<0.0025		0.0025		mg/L		05/19/17 08:41	05/19/17 21:49	1
Nickel	<0.0020		0.0020		mg/L		05/19/17 08:41	05/19/17 21:49	1
Selenium	0.0055		0.0025		mg/L		05/19/17 08:41	05/19/17 21:49	1
Silver	<0.00050		0.00050		mg/L		05/19/17 08:41	05/19/17 21:49	1
Thallium	<0.0020		0.0020		mg/L		05/19/17 08:41	05/19/17 21:49	1
Vanadium	0.088		0.0050		mg/L		05/19/17 08:41	05/19/17 21:49	1
Zinc	<0.020		0.020		mg/L		05/19/17 08:41	05/19/17 21:49	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		05/19/17 13:15	05/22/17 11:46	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.018		0.010		mg/L		05/19/17 11:30	05/19/17 14:34	1
Sulfate	330		50		mg/L			05/26/17 09:21	10
Chloride	58		2.0		mg/L			05/24/17 19:47	1
Nitrogen, Nitrate	0.11		0.10		mg/L			05/30/17 16:27	1
Total Dissolved Solids	600		10		mg/L			05/22/17 22:30	1
Fluoride	0.29		0.10		mg/L			05/20/17 17:53	1
Nitrogen, Nitrite	0.078		0.020		mg/L			05/17/17 15:40	1
Nitrogen, Nitrate Nitrite	0.19		0.10		mg/L			05/24/17 01:08	1

TestAmerica Chicago

MWG13-15_62411
 5/31/2017

Client Sample Results

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

TestAmerica Job ID: 500-128163-1

Client Sample ID: MW-02

Date Collected: 05/15/17 14:56

Date Received: 05/16/17 09:40

Lab Sample ID: 500-128163-2

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		05/19/17 08:41	05/19/17 22:08	1
Arsenic	0.016		0.0010		mg/L		05/19/17 08:41	05/19/17 22:08	1
Barium	0.027		0.0025		mg/L		05/19/17 08:41	05/19/17 22:08	1
Beryllium	<0.0010		0.0010		mg/L		05/19/17 08:41	05/22/17 16:31	1
Boron	3.4		0.50		mg/L		05/19/17 08:41	05/23/17 21:29	10
Cadmium	<0.00050		0.00050		mg/L		05/19/17 08:41	05/19/17 22:08	1
Chromium	<0.0050		0.0050		mg/L		05/19/17 08:41	05/19/17 22:08	1
Cobalt	<0.0010		0.0010		mg/L		05/19/17 08:41	05/19/17 22:08	1
Copper	<0.0020		0.0020		mg/L		05/19/17 08:41	05/19/17 22:08	1
Iron	<0.10		0.10		mg/L		05/19/17 08:41	05/19/17 22:08	1
Lead	<0.00050		0.00050		mg/L		05/19/17 08:41	05/19/17 22:08	1
Manganese	0.019		0.0025		mg/L		05/19/17 08:41	05/19/17 22:08	1
Nickel	<0.0020		0.0020		mg/L		05/19/17 08:41	05/19/17 22:08	1
Selenium	0.022		0.0025		mg/L		05/19/17 08:41	05/19/17 22:08	1
Silver	<0.00050		0.00050		mg/L		05/19/17 08:41	05/19/17 22:08	1
Thallium	<0.0020		0.0020		mg/L		05/19/17 08:41	05/19/17 22:08	1
Vanadium	0.0091		0.0050		mg/L		05/19/17 08:41	05/19/17 22:08	1
Zinc	<0.020		0.020		mg/L		05/19/17 08:41	05/19/17 22:08	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		05/19/17 13:15	05/22/17 11:48	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.010		0.010		mg/L		05/19/17 11:30	05/19/17 14:35	1
Sulfate	350		50		mg/L			05/26/17 09:22	10
Chloride	50		2.0		mg/L			05/24/17 19:48	1
Nitrogen, Nitrate	0.67		0.10		mg/L			05/30/17 16:27	1
Total Dissolved Solids	630		10		mg/L			05/22/17 22:37	1
Fluoride	0.38		0.10		mg/L			05/20/17 17:56	1
Nitrogen, Nitrite	0.057		0.020		mg/L			05/17/17 15:40	1
Nitrogen, Nitrate Nitrite	0.73		0.10		mg/L			05/24/17 01:10	1

TestAmerica Chicago

Client Sample Results

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

TestAmerica Job ID: 500-128163-1

Client Sample ID: MW-05

Date Collected: 05/15/17 16:34

Date Received: 05/16/17 09:40

Lab Sample ID: 500-128163-3

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		05/19/17 08:41	05/19/17 22:12	1
Arsenic	0.0053		0.0010		mg/L		05/19/17 08:41	05/19/17 22:12	1
Barium	0.036		0.0025		mg/L		05/19/17 08:41	05/19/17 22:12	1
Beryllium	<0.0010		0.0010		mg/L		05/19/17 08:41	05/22/17 16:36	1
Boron	7.7		0.50		mg/L		05/19/17 08:41	05/23/17 21:33	10
Cadmium	<0.00050		0.00050		mg/L		05/19/17 08:41	05/19/17 22:12	1
Chromium	<0.0050		0.0050		mg/L		05/19/17 08:41	05/19/17 22:12	1
Cobalt	<0.0010		0.0010		mg/L		05/19/17 08:41	05/19/17 22:12	1
Copper	<0.0020		0.0020		mg/L		05/19/17 08:41	05/19/17 22:12	1
Iron	1.9		0.10		mg/L		05/19/17 08:41	05/19/17 22:12	1
Lead	<0.00050		0.00050		mg/L		05/19/17 08:41	05/19/17 22:12	1
Manganese	0.12		0.0025		mg/L		05/19/17 08:41	05/19/17 22:12	1
Nickel	0.0038		0.0020		mg/L		05/19/17 08:41	05/19/17 22:12	1
Selenium	0.0041		0.0025		mg/L		05/19/17 08:41	05/19/17 22:12	1
Silver	<0.00050		0.00050		mg/L		05/19/17 08:41	05/19/17 22:12	1
Thallium	<0.0020		0.0020		mg/L		05/19/17 08:41	05/19/17 22:12	1
Vanadium	<0.0050		0.0050		mg/L		05/19/17 08:41	05/19/17 22:12	1
Zinc	<0.020		0.020		mg/L		05/19/17 08:41	05/19/17 22:12	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		05/19/17 13:15	05/22/17 11:54	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.010		0.010		mg/L		05/19/17 11:30	05/19/17 14:36	1
Sulfate	1100		500		mg/L			05/26/17 09:23	100
Chloride	73		2.0		mg/L			05/24/17 19:51	1
Nitrogen, Nitrate	<0.10		0.10		mg/L			05/30/17 16:27	1
Total Dissolved Solids	2600		10		mg/L			05/22/17 22:40	1
Fluoride	0.15		0.10		mg/L			05/20/17 17:59	1
Nitrogen, Nitrite	<0.020		0.020		mg/L			05/17/17 15:40	1
Nitrogen, Nitrate Nitrite	<0.10		0.10		mg/L			05/24/17 01:12	1

TestAmerica Chicago

MWG13-15_62413
 5/31/2017

Client Sample Results

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

TestAmerica Job ID: 500-128163-1

Client Sample ID: DUPLICATE

Date Collected: 05/15/17 00:00

Date Received: 05/16/17 09:40

Lab Sample ID: 500-128163-4

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		05/19/17 08:41	05/19/17 22:16	1
Arsenic	0.0071		0.0010		mg/L		05/19/17 08:41	05/19/17 22:16	1
Barium	0.035		0.0025		mg/L		05/19/17 08:41	05/19/17 22:16	1
Beryllium	<0.0010		0.0010		mg/L		05/19/17 08:41	05/22/17 16:41	1
Boron	7.0		0.50		mg/L		05/19/17 08:41	05/23/17 21:36	10
Cadmium	<0.00050		0.00050		mg/L		05/19/17 08:41	05/19/17 22:16	1
Chromium	<0.0050		0.0050		mg/L		05/19/17 08:41	05/19/17 22:16	1
Cobalt	<0.0010		0.0010		mg/L		05/19/17 08:41	05/19/17 22:16	1
Copper	<0.0020		0.0020		mg/L		05/19/17 08:41	05/19/17 22:16	1
Iron	2.1		0.10		mg/L		05/19/17 08:41	05/19/17 22:16	1
Lead	<0.00050		0.00050		mg/L		05/19/17 08:41	05/19/17 22:16	1
Manganese	0.12		0.0025		mg/L		05/19/17 08:41	05/19/17 22:16	1
Nickel	0.0035		0.0020		mg/L		05/19/17 08:41	05/19/17 22:16	1
Selenium	0.0038		0.0025		mg/L		05/19/17 08:41	05/19/17 22:16	1
Silver	<0.00050		0.00050		mg/L		05/19/17 08:41	05/19/17 22:16	1
Thallium	<0.0020		0.0020		mg/L		05/19/17 08:41	05/19/17 22:16	1
Vanadium	<0.0050		0.0050		mg/L		05/19/17 08:41	05/19/17 22:16	1
Zinc	<0.020		0.020		mg/L		05/19/17 08:41	05/19/17 22:16	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		05/19/17 13:15	05/22/17 11:56	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.010		0.010		mg/L		05/19/17 11:30	05/19/17 14:36	1
Sulfate	980		500		mg/L			05/26/17 09:24	100
Chloride	74		2.0		mg/L			05/24/17 19:52	1
Nitrogen, Nitrate	<0.10		0.10		mg/L			05/30/17 16:27	1
Total Dissolved Solids	2800		10		mg/L			05/22/17 22:43	1
Fluoride	0.14		0.10		mg/L			05/20/17 18:02	1
Nitrogen, Nitrite	<0.020		0.020		mg/L			05/17/17 15:41	1
Nitrogen, Nitrate Nitrite	<0.10		0.10		mg/L			05/24/17 01:14	1

TestAmerica Chicago

Client Sample Results

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

TestAmerica Job ID: 500-128163-1

Client Sample ID: MW-03

Date Collected: 05/16/17 10:44

Date Received: 05/17/17 09:55

Lab Sample ID: 500-128163-5

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		05/19/17 08:41	05/19/17 22:19	1
Arsenic	0.0036		0.0010		mg/L		05/19/17 08:41	05/19/17 22:19	1
Barium	0.028		0.0025		mg/L		05/19/17 08:41	05/19/17 22:19	1
Beryllium	<0.0010		0.0010		mg/L		05/19/17 08:41	05/22/17 16:55	1
Boron	3.5		0.25		mg/L		05/19/17 08:41	05/24/17 12:53	5
Cadmium	<0.00050		0.00050		mg/L		05/19/17 08:41	05/19/17 22:19	1
Chromium	<0.0050		0.0050		mg/L		05/19/17 08:41	05/19/17 22:19	1
Cobalt	<0.0010		0.0010		mg/L		05/19/17 08:41	05/19/17 22:19	1
Copper	<0.0020		0.0020		mg/L		05/19/17 08:41	05/19/17 22:19	1
Iron	<0.10		0.10		mg/L		05/19/17 08:41	05/19/17 22:19	1
Lead	<0.00050		0.00050		mg/L		05/19/17 08:41	05/19/17 22:19	1
Manganese	0.010		0.0025		mg/L		05/19/17 08:41	05/19/17 22:19	1
Nickel	<0.0020		0.0020		mg/L		05/19/17 08:41	05/19/17 22:19	1
Selenium	0.0088		0.0025		mg/L		05/19/17 08:41	05/19/17 22:19	1
Silver	<0.00050		0.00050		mg/L		05/19/17 08:41	05/19/17 22:19	1
Thallium	<0.0020		0.0020		mg/L		05/19/17 08:41	05/19/17 22:19	1
Vanadium	0.013		0.0050		mg/L		05/19/17 08:41	05/19/17 22:19	1
Zinc	<0.020		0.020		mg/L		05/19/17 08:41	05/19/17 22:19	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		05/19/17 13:15	05/22/17 12:00	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.010		0.010		mg/L		05/19/17 11:30	05/19/17 14:37	1
Sulfate	280		50		mg/L			05/26/17 09:25	10
Chloride	60		2.0		mg/L			05/24/17 19:56	1
Nitrogen, Nitrate	0.72		0.10		mg/L			05/30/17 16:27	1
Total Dissolved Solids	690		10		mg/L			05/22/17 22:45	1
Fluoride	0.27		0.10		mg/L			05/20/17 18:05	1
Nitrogen, Nitrite	<0.020		0.020		mg/L			05/17/17 17:21	1
Nitrogen, Nitrate Nitrite	0.72		0.10		mg/L			05/24/17 01:17	1

TestAmerica Chicago

MWG13-15_62415
5/31/2017

Client Sample Results

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

TestAmerica Job ID: 500-128163-1

Client Sample ID: MW-04

Date Collected: 05/16/17 11:55

Date Received: 05/17/17 09:55

Lab Sample ID: 500-128163-6

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		05/19/17 08:41	05/19/17 22:23	1
Arsenic	0.0058		0.0010		mg/L		05/19/17 08:41	05/19/17 22:23	1
Barium	0.075		0.0025		mg/L		05/19/17 08:41	05/19/17 22:23	1
Beryllium	<0.0010		0.0010		mg/L		05/19/17 08:41	05/22/17 16:59	1
Boron	2.6		0.25		mg/L		05/19/17 08:41	05/24/17 12:57	5
Cadmium	<0.00050		0.00050		mg/L		05/19/17 08:41	05/19/17 22:23	1
Chromium	<0.0050		0.0050		mg/L		05/19/17 08:41	05/19/17 22:23	1
Cobalt	<0.0010		0.0010		mg/L		05/19/17 08:41	05/19/17 22:23	1
Copper	<0.0020		0.0020		mg/L		05/19/17 08:41	05/19/17 22:23	1
Iron	0.13		0.10		mg/L		05/19/17 08:41	05/19/17 22:23	1
Lead	<0.00050		0.00050		mg/L		05/19/17 08:41	05/19/17 22:23	1
Manganese	0.032		0.0025		mg/L		05/19/17 08:41	05/19/17 22:23	1
Nickel	<0.0020		0.0020		mg/L		05/19/17 08:41	05/19/17 22:23	1
Selenium	0.021		0.0025		mg/L		05/19/17 08:41	05/19/17 22:23	1
Silver	<0.00050		0.00050		mg/L		05/19/17 08:41	05/19/17 22:23	1
Thallium	<0.0020		0.0020		mg/L		05/19/17 08:41	05/19/17 22:23	1
Vanadium	<0.0050		0.0050		mg/L		05/19/17 08:41	05/19/17 22:23	1
Zinc	<0.020		0.020		mg/L		05/19/17 08:41	05/19/17 22:23	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		05/19/17 13:15	05/22/17 12:02	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.010		0.010		mg/L		05/20/17 12:00	05/20/17 16:07	1
Sulfate	350		100		mg/L			05/26/17 09:28	20
Chloride	34		2.0		mg/L			05/24/17 19:57	1
Nitrogen, Nitrate	0.58		0.10		mg/L			05/30/17 16:27	1
Total Dissolved Solids	950		10		mg/L			05/22/17 22:48	1
Fluoride	0.26		0.10		mg/L			05/19/17 16:29	1
Nitrogen, Nitrite	<0.020		0.020		mg/L			05/17/17 17:22	1
Nitrogen, Nitrate Nitrite	0.58		0.10		mg/L			05/24/17 01:19	1

TestAmerica Chicago

Client Sample Results

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

TestAmerica Job ID: 500-128163-1

Client Sample ID: MW-06

Date Collected: 05/16/17 14:50

Date Received: 05/17/17 09:55

Lab Sample ID: 500-128163-7

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		05/19/17 08:41	05/19/17 22:34	1
Arsenic	0.0055		0.0010		mg/L		05/19/17 08:41	05/19/17 22:34	1
Barium	0.086		0.0025		mg/L		05/19/17 08:41	05/19/17 22:34	1
Beryllium	<0.0010		0.0010		mg/L		05/19/17 08:41	05/22/17 17:04	1
Boron	1.8		0.25		mg/L		05/19/17 08:41	05/24/17 13:01	5
Cadmium	<0.00050		0.00050		mg/L		05/19/17 08:41	05/19/17 22:34	1
Chromium	<0.0050		0.0050		mg/L		05/19/17 08:41	05/19/17 22:34	1
Cobalt	<0.0010		0.0010		mg/L		05/19/17 08:41	05/19/17 22:34	1
Copper	<0.0020		0.0020		mg/L		05/19/17 08:41	05/19/17 22:34	1
Iron	7.7		0.10		mg/L		05/19/17 08:41	05/19/17 22:34	1
Lead	<0.00050		0.00050		mg/L		05/19/17 08:41	05/19/17 22:34	1
Manganese	0.20		0.0025		mg/L		05/19/17 08:41	05/19/17 22:34	1
Nickel	<0.0020		0.0020		mg/L		05/19/17 08:41	05/19/17 22:34	1
Selenium	<0.0025		0.0025		mg/L		05/19/17 08:41	05/19/17 22:34	1
Silver	<0.00050		0.00050		mg/L		05/19/17 08:41	05/19/17 22:34	1
Thallium	<0.0020		0.0020		mg/L		05/19/17 08:41	05/19/17 22:34	1
Vanadium	0.0054		0.0050		mg/L		05/19/17 08:41	05/19/17 22:34	1
Zinc	<0.020		0.020		mg/L		05/19/17 08:41	05/19/17 22:34	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		05/19/17 13:15	05/22/17 12:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.010		0.010		mg/L		05/20/17 12:00	05/20/17 16:08	1
Sulfate	130		50		mg/L			05/26/17 09:29	10
Chloride	100		10		mg/L			05/24/17 20:36	5
Nitrogen, Nitrate	<0.10		0.10		mg/L			05/30/17 16:27	1
Total Dissolved Solids	730		10		mg/L			05/22/17 22:50	1
Fluoride	0.34		0.10		mg/L			05/19/17 16:32	1
Nitrogen, Nitrite	<0.020		0.020		mg/L			05/17/17 17:22	1
Nitrogen, Nitrate Nitrite	<0.10		0.10		mg/L			05/24/17 01:21	1

TestAmerica Chicago

MWG13-15_62417
 5/31/2017

Client Sample Results

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

TestAmerica Job ID: 500-128163-1

Client Sample ID: MW-07
Date Collected: 05/16/17 13:36
Date Received: 05/17/17 09:55

Lab Sample ID: 500-128163-8
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		05/19/17 08:41	05/19/17 22:38	1
Arsenic	0.0095		0.0010		mg/L		05/19/17 08:41	05/19/17 22:38	1
Barium	0.087		0.0025		mg/L		05/19/17 08:41	05/19/17 22:38	1
Beryllium	<0.0010		0.0010		mg/L		05/19/17 08:41	05/22/17 17:09	1
Boron	50		1.0		mg/L		05/19/17 08:41	05/24/17 13:05	20
Cadmium	<0.00050		0.00050		mg/L		05/19/17 08:41	05/19/17 22:38	1
Chromium	<0.0050		0.0050		mg/L		05/19/17 08:41	05/19/17 22:38	1
Cobalt	<0.0010		0.0010		mg/L		05/19/17 08:41	05/19/17 22:38	1
Copper	<0.0020		0.0020		mg/L		05/19/17 08:41	05/19/17 22:38	1
Iron	19		0.10		mg/L		05/19/17 08:41	05/19/17 22:38	1
Lead	0.00072		0.00050		mg/L		05/19/17 08:41	05/19/17 22:38	1
Manganese	0.69		0.0025		mg/L		05/19/17 08:41	05/19/17 22:38	1
Nickel	<0.0020		0.0020		mg/L		05/19/17 08:41	05/19/17 22:38	1
Selenium	<0.0025		0.0025		mg/L		05/19/17 08:41	05/19/17 22:38	1
Silver	<0.00050		0.00050		mg/L		05/19/17 08:41	05/19/17 22:38	1
Thallium	<0.0020		0.0020		mg/L		05/19/17 08:41	05/19/17 22:38	1
Vanadium	<0.0050		0.0050		mg/L		05/19/17 08:41	05/19/17 22:38	1
Zinc	<0.020		0.020		mg/L		05/19/17 08:41	05/19/17 22:38	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		05/19/17 13:15	05/22/17 12:05	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.010		0.010		mg/L		05/20/17 12:00	05/20/17 16:09	1
Sulfate	690		250		mg/L			05/26/17 09:30	50
Chloride	49		2.0		mg/L			05/24/17 19:58	1
Nitrogen, Nitrate	<0.10		0.10		mg/L			05/30/17 16:27	1
Total Dissolved Solids	1800		10		mg/L			05/22/17 22:53	1
Fluoride	0.31		0.10		mg/L			05/19/17 16:35	1
Nitrogen, Nitrite	<0.020		0.020		mg/L			05/17/17 17:23	1
Nitrogen, Nitrate Nitrite	<0.10		0.10		mg/L			05/24/17 01:23	1

TestAmerica Chicago

Definitions/Glossary

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

TestAmerica Job ID: 500-128163-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
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)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
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 (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)

TestAmerica Chicago

QC Association Summary

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

TestAmerica Job ID: 500-128163-1



Metals

Prep Batch: 385927

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-128163-1	MW-01	Total Recoverable	Water	3005A	
500-128163-2	MW-02	Total Recoverable	Water	3005A	
500-128163-3	MW-05	Total Recoverable	Water	3005A	
500-128163-4	DUPLICATE	Total Recoverable	Water	3005A	
500-128163-5	MW-03	Total Recoverable	Water	3005A	
500-128163-6	MW-04	Total Recoverable	Water	3005A	
500-128163-7	MW-06	Total Recoverable	Water	3005A	
500-128163-8	MW-07	Total Recoverable	Water	3005A	
MB 500-385927/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-385927/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
500-128163-1 MS	MW-01	Total Recoverable	Water	3005A	
500-128163-1 MSD	MW-01	Total Recoverable	Water	3005A	
500-128163-1 DU	MW-01	Total Recoverable	Water	3005A	

Prep Batch: 385991

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-128163-1	MW-01	Total/NA	Water	7470A	
500-128163-2	MW-02	Total/NA	Water	7470A	
500-128163-3	MW-05	Total/NA	Water	7470A	
500-128163-4	DUPLICATE	Total/NA	Water	7470A	
500-128163-5	MW-03	Total/NA	Water	7470A	
500-128163-6	MW-04	Total/NA	Water	7470A	
500-128163-7	MW-06	Total/NA	Water	7470A	
500-128163-8	MW-07	Total/NA	Water	7470A	
MB 500-385991/12-A	Method Blank	Total/NA	Water	7470A	
LCS 500-385991/13-A	Lab Control Sample	Total/NA	Water	7470A	
500-128163-2 MS	MW-02	Total/NA	Water	7470A	
500-128163-2 MSD	MW-02	Total/NA	Water	7470A	
500-128163-2 DU	MW-02	Total/NA	Water	7470A	

Analysis Batch: 386243

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-128163-1	MW-01	Total Recoverable	Water	6020A	385927
500-128163-2	MW-02	Total Recoverable	Water	6020A	385927
500-128163-3	MW-05	Total Recoverable	Water	6020A	385927
500-128163-4	DUPLICATE	Total Recoverable	Water	6020A	385927
500-128163-5	MW-03	Total Recoverable	Water	6020A	385927
500-128163-6	MW-04	Total Recoverable	Water	6020A	385927
500-128163-7	MW-06	Total Recoverable	Water	6020A	385927
500-128163-8	MW-07	Total Recoverable	Water	6020A	385927
MB 500-385927/1-A	Method Blank	Total Recoverable	Water	6020A	385927
LCS 500-385927/2-A	Lab Control Sample	Total Recoverable	Water	6020A	385927
500-128163-1 MS	MW-01	Total Recoverable	Water	6020A	385927
500-128163-1 MSD	MW-01	Total Recoverable	Water	6020A	385927
500-128163-1 DU	MW-01	Total Recoverable	Water	6020A	385927

Analysis Batch: 386307

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-128163-1	MW-01	Total/NA	Water	7470A	385991
500-128163-2	MW-02	Total/NA	Water	7470A	385991
500-128163-3	MW-05	Total/NA	Water	7470A	385991

TestAmerica Chicago

QC Association Summary

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

TestAmerica Job ID: 500-128163-1

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Metals (Continued)

Analysis Batch: 386307 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-128163-4	DUPLICATE	Total/NA	Water	7470A	385991
500-128163-5	MW-03	Total/NA	Water	7470A	385991
500-128163-6	MW-04	Total/NA	Water	7470A	385991
500-128163-7	MW-06	Total/NA	Water	7470A	385991
500-128163-8	MW-07	Total/NA	Water	7470A	385991
MB 500-385991/12-A	Method Blank	Total/NA	Water	7470A	385991
LCS 500-385991/13-A	Lab Control Sample	Total/NA	Water	7470A	385991
500-128163-2 MS	MW-02	Total/NA	Water	7470A	385991
500-128163-2 MSD	MW-02	Total/NA	Water	7470A	385991
500-128163-2 DU	MW-02	Total/NA	Water	7470A	385991

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6

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Analysis Batch: 386350

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-128163-1	MW-01	Total Recoverable	Water	6020A	385927
500-128163-2	MW-02	Total Recoverable	Water	6020A	385927
500-128163-3	MW-05	Total Recoverable	Water	6020A	385927
500-128163-4	DUPLICATE	Total Recoverable	Water	6020A	385927
500-128163-5	MW-03	Total Recoverable	Water	6020A	385927
500-128163-6	MW-04	Total Recoverable	Water	6020A	385927
500-128163-7	MW-06	Total Recoverable	Water	6020A	385927
500-128163-8	MW-07	Total Recoverable	Water	6020A	385927
MB 500-385927/1-A	Method Blank	Total Recoverable	Water	6020A	385927
LCS 500-385927/2-A	Lab Control Sample	Total Recoverable	Water	6020A	385927
500-128163-1 MS	MW-01	Total Recoverable	Water	6020A	385927
500-128163-1 MSD	MW-01	Total Recoverable	Water	6020A	385927
500-128163-1 DU	MW-01	Total Recoverable	Water	6020A	385927

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Analysis Batch: 386624

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-128163-1	MW-01	Total Recoverable	Water	6020A	385927
500-128163-2	MW-02	Total Recoverable	Water	6020A	385927
500-128163-3	MW-05	Total Recoverable	Water	6020A	385927
500-128163-4	DUPLICATE	Total Recoverable	Water	6020A	385927
MB 500-385927/1-A	Method Blank	Total Recoverable	Water	6020A	385927
LCS 500-385927/2-A	Lab Control Sample	Total Recoverable	Water	6020A	385927
500-128163-1 MS	MW-01	Total Recoverable	Water	6020A	385927
500-128163-1 MSD	MW-01	Total Recoverable	Water	6020A	385927
500-128163-1 DU	MW-01	Total Recoverable	Water	6020A	385927

Analysis Batch: 386849

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-128163-5	MW-03	Total Recoverable	Water	6020A	385927
500-128163-6	MW-04	Total Recoverable	Water	6020A	385927
500-128163-7	MW-06	Total Recoverable	Water	6020A	385927
500-128163-8	MW-07	Total Recoverable	Water	6020A	385927

TestAmerica Chicago

QC Association Summary

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

TestAmerica Job ID: 500-128163-1

1

General Chemistry

Analysis Batch: 385569

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-128163-1	MW-01	Total/NA	Water	SM 4500 NO2 B	
500-128163-2	MW-02	Total/NA	Water	SM 4500 NO2 B	
500-128163-3	MW-05	Total/NA	Water	SM 4500 NO2 B	
500-128163-4	DUPLICATE	Total/NA	Water	SM 4500 NO2 B	
MB 500-385569/3	Method Blank	Total/NA	Water	SM 4500 NO2 B	
LCS 500-385569/4	Lab Control Sample	Total/NA	Water	SM 4500 NO2 B	

2

3

4

5

6

Analysis Batch: 385625

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-128163-5	MW-03	Total/NA	Water	SM 4500 NO2 B	
500-128163-6	MW-04	Total/NA	Water	SM 4500 NO2 B	
500-128163-7	MW-06	Total/NA	Water	SM 4500 NO2 B	
500-128163-8	MW-07	Total/NA	Water	SM 4500 NO2 B	
MB 500-385625/3	Method Blank	Total/NA	Water	SM 4500 NO2 B	
LCS 500-385625/4	Lab Control Sample	Total/NA	Water	SM 4500 NO2 B	

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Prep Batch: 385947

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-128163-1	MW-01	Total/NA	Water	9010C	
500-128163-2	MW-02	Total/NA	Water	9010C	
500-128163-3	MW-05	Total/NA	Water	9010C	
500-128163-4	DUPLICATE	Total/NA	Water	9010C	
500-128163-5	MW-03	Total/NA	Water	9010C	
MB 500-385947/1-A	Method Blank	Total/NA	Water	9010C	
LCS 500-385947/2-A	Lab Control Sample	Total/NA	Water	9010C	
500-128163-1 MS	MW-01	Total/NA	Water	9010C	
500-128163-1 MSD	MW-01	Total/NA	Water	9010C	

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Analysis Batch: 386041

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-128163-6	MW-04	Total/NA	Water	SM 4500 F C	
500-128163-7	MW-06	Total/NA	Water	SM 4500 F C	
500-128163-8	MW-07	Total/NA	Water	SM 4500 F C	
MB 500-386041/32	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 500-386041/33	Lab Control Sample	Total/NA	Water	SM 4500 F C	

Prep Batch: 386110

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-128163-6	MW-04	Total/NA	Water	9010C	
500-128163-7	MW-06	Total/NA	Water	9010C	
500-128163-8	MW-07	Total/NA	Water	9010C	
MB 500-386110/1-A	Method Blank	Total/NA	Water	9010C	
LCS 500-386110/2-A	Lab Control Sample	Total/NA	Water	9010C	
500-128163-6 MS	MW-04	Total/NA	Water	9010C	
500-128163-6 MSD	MW-04	Total/NA	Water	9010C	

Analysis Batch: 386238

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-128163-1	MW-01	Total/NA	Water	SM 4500 F C	
500-128163-2	MW-02	Total/NA	Water	SM 4500 F C	
500-128163-3	MW-05	Total/NA	Water	SM 4500 F C	

TestAmerica Chicago

QC Association Summary

TestAmerica Job ID: 500-128163-1

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

General Chemistry (Continued)

Analysis Batch: 386238 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-128163-4	DUPLICATE	Total/NA	Water	SM 4500 F C	
500-128163-5	MW-03	Total/NA	Water	SM 4500 F C	
MB 500-386238/31	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 500-386238/32	Lab Control Sample	Total/NA	Water	SM 4500 F C	

Analysis Batch: 386254

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-128163-6	MW-04	Total/NA	Water	9014	386110
500-128163-7	MW-06	Total/NA	Water	9014	386110
500-128163-8	MW-07	Total/NA	Water	9014	386110
MB 500-386110/1-A	Method Blank	Total/NA	Water	9014	386110
LCS 500-386110/2-A	Lab Control Sample	Total/NA	Water	9014	386110
500-128163-6 MS	MW-04	Total/NA	Water	9014	386110
500-128163-6 MSD	MW-04	Total/NA	Water	9014	386110

Analysis Batch: 386258

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-128163-1	MW-01	Total/NA	Water	9014	385947
500-128163-2	MW-02	Total/NA	Water	9014	385947
500-128163-3	MW-05	Total/NA	Water	9014	385947
500-128163-4	DUPLICATE	Total/NA	Water	9014	385947
500-128163-5	MW-03	Total/NA	Water	9014	385947
MB 500-385947/1-A	Method Blank	Total/NA	Water	9014	385947
LCS 500-385947/2-A	Lab Control Sample	Total/NA	Water	9014	385947
500-128163-1 MS	MW-01	Total/NA	Water	9014	385947
500-128163-1 MSD	MW-01	Total/NA	Water	9014	385947

Analysis Batch: 386379

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-128163-1	MW-01	Total/NA	Water	SM 2540C	
500-128163-2	MW-02	Total/NA	Water	SM 2540C	
500-128163-3	MW-05	Total/NA	Water	SM 2540C	
500-128163-4	DUPLICATE	Total/NA	Water	SM 2540C	
500-128163-5	MW-03	Total/NA	Water	SM 2540C	
500-128163-6	MW-04	Total/NA	Water	SM 2540C	
500-128163-7	MW-06	Total/NA	Water	SM 2540C	
500-128163-8	MW-07	Total/NA	Water	SM 2540C	
MB 500-386379/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-386379/2	Lab Control Sample	Total/NA	Water	SM 2540C	
500-128163-1 MS	MW-01	Total/NA	Water	SM 2540C	
500-128163-1 DU	MW-01	Total/NA	Water	SM 2540C	

Analysis Batch: 386735

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-128163-1	MW-01	Total/NA	Water	SM 4500 NO3 F	
500-128163-2	MW-02	Total/NA	Water	SM 4500 NO3 F	
500-128163-3	MW-05	Total/NA	Water	SM 4500 NO3 F	
500-128163-4	DUPLICATE	Total/NA	Water	SM 4500 NO3 F	
500-128163-5	MW-03	Total/NA	Water	SM 4500 NO3 F	
500-128163-6	MW-04	Total/NA	Water	SM 4500 NO3 F	
500-128163-7	MW-06	Total/NA	Water	SM 4500 NO3 F	

TestAmerica Chicago

MWG13-15_62423
5/31/2017

QC Association Summary

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

TestAmerica Job ID: 500-128163-1

1

General Chemistry (Continued)

Analysis Batch: 386735 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-128163-8	MW-07	Total/NA	Water	SM 4500 NO3 F	
MB 500-386735/12	Method Blank	Total/NA	Water	SM 4500 NO3 F	
LCS 500-386735/13	Lab Control Sample	Total/NA	Water	SM 4500 NO3 F	

Analysis Batch: 386749

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-128163-1	MW-01	Total/NA	Water	9251	
500-128163-2	MW-02	Total/NA	Water	9251	
500-128163-3	MW-05	Total/NA	Water	9251	
500-128163-4	DUPLICATE	Total/NA	Water	9251	
500-128163-5	MW-03	Total/NA	Water	9251	
500-128163-6	MW-04	Total/NA	Water	9251	
500-128163-7	MW-06	Total/NA	Water	9251	
500-128163-8	MW-07	Total/NA	Water	9251	
MB 500-386749/12	Method Blank	Total/NA	Water	9251	
LCS 500-386749/13	Lab Control Sample	Total/NA	Water	9251	
500-128163-2 MS	MW-02	Total/NA	Water	9251	
500-128163-2 MSD	MW-02	Total/NA	Water	9251	

Analysis Batch: 387044

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-128163-1	MW-01	Total/NA	Water	9038	
500-128163-2	MW-02	Total/NA	Water	9038	
500-128163-3	MW-05	Total/NA	Water	9038	
500-128163-4	DUPLICATE	Total/NA	Water	9038	
500-128163-5	MW-03	Total/NA	Water	9038	
500-128163-6	MW-04	Total/NA	Water	9038	
500-128163-7	MW-06	Total/NA	Water	9038	
500-128163-8	MW-07	Total/NA	Water	9038	
MB 500-387044/3	Method Blank	Total/NA	Water	9038	
LCS 500-387044/4	Lab Control Sample	Total/NA	Water	9038	

Analysis Batch: 387424

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-128163-1	MW-01	Total/NA	Water	Nitrate by calc	
500-128163-2	MW-02	Total/NA	Water	Nitrate by calc	
500-128163-3	MW-05	Total/NA	Water	Nitrate by calc	
500-128163-4	DUPLICATE	Total/NA	Water	Nitrate by calc	
500-128163-5	MW-03	Total/NA	Water	Nitrate by calc	
500-128163-6	MW-04	Total/NA	Water	Nitrate by calc	
500-128163-7	MW-06	Total/NA	Water	Nitrate by calc	
500-128163-8	MW-07	Total/NA	Water	Nitrate by calc	

TestAmerica Chicago

QC Sample Results

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

TestAmerica Job ID: 500-128163-1

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 500-385927/1-A
 Matrix: Water
 Analysis Batch: 386243

Client Sample ID: Method Blank
 Prep Type: Total Recoverable
 Prep Batch: 385927

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Antimony	<0.0030		0.0030		mg/L		05/19/17 08:41	05/19/17 21:19	1
Arsenic	<0.0010		0.0010		mg/L		05/19/17 08:41	05/19/17 21:19	1
Barium	<0.0025		0.0025		mg/L		05/19/17 08:41	05/19/17 21:19	1
Cadmium	<0.00050		0.00050		mg/L		05/19/17 08:41	05/19/17 21:19	1
Chromium	<0.0050		0.0050		mg/L		05/19/17 08:41	05/19/17 21:19	1
Cobalt	<0.0010		0.0010		mg/L		05/19/17 08:41	05/19/17 21:19	1
Copper	<0.0020		0.0020		mg/L		05/19/17 08:41	05/19/17 21:19	1
Iron	<0.10		0.10		mg/L		05/19/17 08:41	05/19/17 21:19	1
Lead	<0.00050		0.00050		mg/L		05/19/17 08:41	05/19/17 21:19	1
Manganese	<0.0025		0.0025		mg/L		05/19/17 08:41	05/19/17 21:19	1
Nickel	<0.0020		0.0020		mg/L		05/19/17 08:41	05/19/17 21:19	1
Selenium	<0.0025		0.0025		mg/L		05/19/17 08:41	05/19/17 21:19	1
Silver	<0.00050		0.00050		mg/L		05/19/17 08:41	05/19/17 21:19	1
Thallium	<0.0020		0.0020		mg/L		05/19/17 08:41	05/19/17 21:19	1
Vanadium	<0.0050		0.0050		mg/L		05/19/17 08:41	05/19/17 21:19	1
Zinc	<0.020		0.020		mg/L		05/19/17 08:41	05/19/17 21:19	1

Lab Sample ID: MB 500-385927/1-A
 Matrix: Water
 Analysis Batch: 386350

Client Sample ID: Method Blank
 Prep Type: Total Recoverable
 Prep Batch: 385927

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Beryllium	<0.0010		0.0010		mg/L		05/19/17 08:41	05/22/17 15:59	1

Lab Sample ID: MB 500-385927/1-A
 Matrix: Water
 Analysis Batch: 386624

Client Sample ID: Method Blank
 Prep Type: Total Recoverable
 Prep Batch: 385927

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Boron	<0.050		0.050		mg/L		05/19/17 08:41	05/23/17 21:02	1

Lab Sample ID: LCS 500-385927/2-A
 Matrix: Water
 Analysis Batch: 386243

Client Sample ID: Lab Control Sample
 Prep Type: Total Recoverable
 Prep Batch: 385927

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Antimony	0.500	0.498		mg/L		100	80 - 120
Arsenic	0.100	0.0946		mg/L		95	80 - 120
Barium	0.500	0.499		mg/L		100	80 - 120
Cadmium	0.0500	0.0496		mg/L		99	80 - 120
Chromium	0.200	0.201		mg/L		101	80 - 120
Cobalt	0.500	0.496		mg/L		99	80 - 120
Copper	0.250	0.244		mg/L		97	80 - 120
Iron	1.00	1.04		mg/L		104	80 - 120
Lead	0.100	0.0972		mg/L		97	80 - 120
Manganese	0.500	0.511		mg/L		102	80 - 120
Nickel	0.500	0.504		mg/L		101	80 - 120
Selenium	0.100	0.0966		mg/L		97	80 - 120
Silver	0.0500	0.0502		mg/L		100	80 - 120

TestAmerica Chicago

QC Sample Results

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

TestAmerica Job ID: 500-128163-1

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

Lab Sample ID: LCS 500-385927/2-A
Matrix: Water
Analysis Batch: 386243

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 385927
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Thallium	0.100	0.101		mg/L		101	80 - 120
Vanadium	0.500	0.488		mg/L		98	80 - 120
Zinc	0.500	0.489		mg/L		98	80 - 120

Lab Sample ID: LCS 500-385927/2-A
Matrix: Water
Analysis Batch: 386350

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 385927
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Beryllium	0.0500	0.0459		mg/L		92	80 - 120

Lab Sample ID: LCS 500-385927/2-A
Matrix: Water
Analysis Batch: 386624

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 385927
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Boron	1.00	1.01		mg/L		101	80 - 120

Lab Sample ID: 500-128163-1 MS
Matrix: Water
Analysis Batch: 386243

Client Sample ID: MW-01
Prep Type: Total Recoverable
Prep Batch: 385927
%Rec.

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Antimony	<0.0030		0.500	0.531		mg/L		106	75 - 125
Arsenic	0.11		0.100	0.205		mg/L		96	75 - 125
Barium	0.016		0.500	0.537		mg/L		104	75 - 125
Cadmium	<0.00050		0.0500	0.0522		mg/L		104	75 - 125
Chromium	<0.0050		0.200	0.201		mg/L		101	75 - 125
Cobalt	<0.0010		0.500	0.496		mg/L		99	75 - 125
Copper	<0.0020		0.250	0.256		mg/L		103	75 - 125
Iron	<0.10		1.00	1.08		mg/L		108	75 - 125
Lead	<0.00050		0.100	0.102		mg/L		102	75 - 125
Manganese	<0.0025		0.500	0.509		mg/L		102	75 - 125
Nickel	<0.0020		0.500	0.499		mg/L		100	75 - 125
Selenium	0.0055		0.100	0.109		mg/L		104	75 - 125
Silver	<0.00050		0.0500	0.0510		mg/L		102	75 - 125
Thallium	<0.0020		0.100	0.101		mg/L		101	75 - 125
Vanadium	0.088		0.500	0.575		mg/L		97	75 - 125
Zinc	<0.020		0.500	0.518		mg/L		104	75 - 125

Lab Sample ID: 500-128163-1 MS
Matrix: Water
Analysis Batch: 386350

Client Sample ID: MW-01
Prep Type: Total Recoverable
Prep Batch: 385927
%Rec.

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Beryllium	<0.0010		0.0500	0.0480		mg/L		96	75 - 125

TestAmerica Chicago

QC Sample Results

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

TestAmerica Job ID: 500-128163-1

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

Lab Sample ID: 500-128163-1 MS
Matrix: Water
Analysis Batch: 386624

Client Sample ID: MW-01
Prep Type: Total Recoverable
Prep Batch: 385927
%Rec.

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Boron	2.3		1.00	3.14		mg/L		89	75 - 125

Lab Sample ID: 500-128163-1 MSD
Matrix: Water
Analysis Batch: 386243

Client Sample ID: MW-01
Prep Type: Total Recoverable
Prep Batch: 385927
%Rec. RPD

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Antimony	<0.0030		0.500	0.523		mg/L		105	75 - 125	1	20
Arsenic	0.11		0.100	0.208		mg/L		99	75 - 125	2	20
Barium	0.016		0.500	0.530		mg/L		103	75 - 125	1	20
Cadmium	<0.00050		0.0500	0.0509		mg/L		102	75 - 125	3	20
Chromium	<0.0050		0.200	0.197		mg/L		99	75 - 125	2	20
Cobalt	<0.0010		0.500	0.487		mg/L		97	75 - 125	2	20
Copper	<0.0020		0.250	0.252		mg/L		101	75 - 125	2	20
Iron	<0.10		1.00	1.06		mg/L		106	75 - 125	2	20
Lead	<0.00050		0.100	0.0998		mg/L		100	75 - 125	2	20
Manganese	<0.0025		0.500	0.502		mg/L		100	75 - 125	1	20
Nickel	<0.0020		0.500	0.491		mg/L		98	75 - 125	2	20
Selenium	0.0055		0.100	0.108		mg/L		103	75 - 125	1	20
Silver	<0.00050		0.0500	0.0502		mg/L		100	75 - 125	2	20
Thallium	<0.0020		0.100	0.0992		mg/L		99	75 - 125	2	20
Vanadium	0.088		0.500	0.575		mg/L		97	75 - 125	0	20
Zinc	<0.020		0.500	0.512		mg/L		102	75 - 125	1	20

Lab Sample ID: 500-128163-1 MSD
Matrix: Water
Analysis Batch: 386350

Client Sample ID: MW-01
Prep Type: Total Recoverable
Prep Batch: 385927
%Rec. RPD

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Beryllium	<0.0010		0.0500	0.0481		mg/L		96	75 - 125	0	20

Lab Sample ID: 500-128163-1 MSD
Matrix: Water
Analysis Batch: 386624

Client Sample ID: MW-01
Prep Type: Total Recoverable
Prep Batch: 385927
%Rec. RPD

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Boron	2.3		1.00	3.37		mg/L		112	75 - 125	7	20

Lab Sample ID: 500-128163-1 DU
Matrix: Water
Analysis Batch: 386243

Client Sample ID: MW-01
Prep Type: Total Recoverable
Prep Batch: 385927
RPD

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Antimony	<0.0030		<0.0030		mg/L		NC	20
Arsenic	0.11		0.103		mg/L		7	20
Barium	0.016		0.0158		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

TestAmerica Chicago

MWG13-15_62427
5/31/2017



QC Sample Results

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

TestAmerica Job ID: 500-128163-1

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

Lab Sample ID: 500-128163-1 DU
Matrix: Water
Analysis Batch: 386243

Client Sample ID: MW-01
Prep Type: Total Recoverable
Prep Batch: 385927

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	
	Result	Qualifier	Result	Qualifier			RPD	Limit
Cobalt	<0.0010		<0.0010		mg/L		NC	20
Copper	<0.0020		<0.0020		mg/L		NC	20
Iron	<0.10		<0.10		mg/L		NC	20
Lead	<0.00050		<0.00050		mg/L		NC	20
Manganese	<0.0025		<0.0025		mg/L		NC	20
Nickel	<0.0020		<0.0020		mg/L		NC	20
Selenium	0.0055		0.00524		mg/L		5	20
Silver	<0.00050		<0.00050		mg/L		NC	20
Thallium	<0.0020		<0.0020		mg/L		NC	20
Vanadium	0.088		0.0819		mg/L		7	20
Zinc	<0.020		<0.020		mg/L		NC	20

Lab Sample ID: 500-128163-1 DU
Matrix: Water
Analysis Batch: 386350

Client Sample ID: MW-01
Prep Type: Total Recoverable
Prep Batch: 385927

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	
	Result	Qualifier	Result	Qualifier			RPD	Limit
Beryllium	<0.0010		<0.0010		mg/L		NC	20

Lab Sample ID: 500-128163-1 DU
Matrix: Water
Analysis Batch: 386624

Client Sample ID: MW-01
Prep Type: Total Recoverable
Prep Batch: 385927

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	
	Result	Qualifier	Result	Qualifier			RPD	Limit
Boron	2.3		2.09		mg/L		8	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 500-385991/12-A
Matrix: Water
Analysis Batch: 386307

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 385991

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	<0.00020		0.00020		mg/L		05/19/17 13:15	05/22/17 11:43	1

Lab Sample ID: LCS 500-385991/13-A
Matrix: Water
Analysis Batch: 386307

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 385991

Analyte	Spike	LCS	LCS	Unit	D	%Rec	Limits
	Added	Result	Qualifier				
Mercury	0.00200	0.00226		mg/L		113	80 - 120

Lab Sample ID: 500-128163-2 MS
Matrix: Water
Analysis Batch: 386307

Client Sample ID: MW-02
Prep Type: Total/NA
Prep Batch: 385991

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	Limits
	Result	Qualifier	Added	Result	Qualifier				
Mercury	<0.00020		0.00100	0.00109		mg/L		109	75 - 125

TestAmerica Chicago

QC Sample Results

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

TestAmerica Job ID: 500-128163-1

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

Lab Sample ID: 500-128163-2 MSD

Matrix: Water

Analysis Batch: 386307

Client Sample ID: MW-02

Prep Type: Total/NA

Prep Batch: 385991

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	<0.00020		0.00100	0.00105		mg/L		105	75 - 125	4	20

Lab Sample ID: 500-128163-2 DU

Matrix: Water

Analysis Batch: 386307

Client Sample ID: MW-02

Prep Type: Total/NA

Prep Batch: 385991

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

Method: 9014 - Cyanide

Lab Sample ID: MB 500-385947/1-A

Matrix: Water

Analysis Batch: 386258

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 385947

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.010		0.010		mg/L		05/19/17 11:30	05/19/17 14:33	1

Lab Sample ID: LCS 500-385947/2-A

Matrix: Water

Analysis Batch: 386258

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 385947

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Cyanide, Total	0.100	0.100		mg/L		100	80 - 120

Lab Sample ID: 500-128163-1 MS

Matrix: Water

Analysis Batch: 386258

Client Sample ID: MW-01

Prep Type: Total/NA

Prep Batch: 385947

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Cyanide, Total	0.018		0.0400	0.0569		mg/L		98	75 - 125

Lab Sample ID: 500-128163-1 MSD

Matrix: Water

Analysis Batch: 386258

Client Sample ID: MW-01

Prep Type: Total/NA

Prep Batch: 385947

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Cyanide, Total	0.018		0.0400	0.0578		mg/L		100	75 - 125	2	20

Lab Sample ID: MB 500-386110/1-A

Matrix: Water

Analysis Batch: 386254

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 386110

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.010		0.010		mg/L		05/20/17 12:00	05/20/17 16:05	1

TestAmerica Chicago

QC Sample Results

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

TestAmerica Job ID: 500-128163-1

Method: 9014 - Cyanide (Continued)

Lab Sample ID: LCS 500-386110/2-A
Matrix: Water
Analysis Batch: 386254

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 386110
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Cyanide, Total	0.100	0.0983		mg/L		98	80 - 120

Lab Sample ID: 500-128163-6 MS
Matrix: Water
Analysis Batch: 386254

Client Sample ID: MW-04
Prep Type: Total/NA
Prep Batch: 386110
%Rec.

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Cyanide, Total	<0.010		0.0400	0.0401		mg/L		100	75 - 125

Lab Sample ID: 500-128163-6 MSD
Matrix: Water
Analysis Batch: 386254

Client Sample ID: MW-04
Prep Type: Total/NA
Prep Batch: 386110
%Rec.

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Cyanide, Total	<0.010		0.0400	0.0394		mg/L		99	75 - 125	2	20

Method: 9038 - Sulfate, Turbidimetric

Lab Sample ID: MB 500-387044/3
Matrix: Water
Analysis Batch: 387044

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	<5.0		5.0		mg/L			05/26/17 09:16	1

Lab Sample ID: LCS 500-387044/4
Matrix: Water
Analysis Batch: 387044

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Sulfate	20.0	20.7		mg/L		103	80 - 120

Method: 9251 - Chloride

Lab Sample ID: MB 500-386749/12
Matrix: Water
Analysis Batch: 386749

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<2.0		2.0		mg/L			05/24/17 19:45	1

Lab Sample ID: LCS 500-386749/13
Matrix: Water
Analysis Batch: 386749

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Chloride	50.0	51.6		mg/L		103	80 - 120

TestAmerica Chicago

QC Sample Results

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

TestAmerica Job ID: 500-128163-1

Method: 9251 - Chloride (Continued)

Lab Sample ID: 500-128163-2 MS
 Matrix: Water
 Analysis Batch: 386749

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
Chloride	50		50.0	90.3		mg/L		81	75 - 125

Lab Sample ID: 500-128163-2 MSD
 Matrix: Water
 Analysis Batch: 386749

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	RPD Limit
Chloride	50		50.0	109		mg/L		119	75 - 125	19	20

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

Lab Sample ID: MB 500-386379/1
 Matrix: Water
 Analysis Batch: 386379

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10		mg/L			05/22/17 22:25	1

Lab Sample ID: LCS 500-386379/2
 Matrix: Water
 Analysis Batch: 386379

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	294		mg/L		118	80 - 120

Lab Sample ID: 500-128163-1 MS
 Matrix: Water
 Analysis Batch: 386379

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	600		250	892		mg/L		118	75 - 125

Lab Sample ID: 500-128163-1 DU
 Matrix: Water
 Analysis Batch: 386379

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

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	600		586		mg/L		2	5

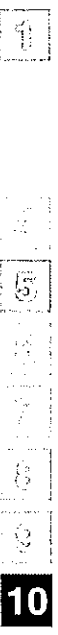
Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 500-386041/32
 Matrix: Water
 Analysis Batch: 386041

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.10		0.10		mg/L			05/19/17 15:29	1

TestAmerica Chicago



QC Sample Results

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

TestAmerica Job ID: 500-128163-1

Method: SM 4500 F C - Fluoride (Continued)

Lab Sample ID: LCS 500-386041/33
Matrix: Water
Analysis Batch: 386041

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	10.0	10.3		mg/L		103	80 - 120

Lab Sample ID: MB 500-386238/31
Matrix: Water
Analysis Batch: 386238

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.10		0.10		mg/L			05/20/17 17:16	1

Lab Sample ID: LCS 500-386238/32
Matrix: Water
Analysis Batch: 386238

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	9.76		mg/L		98	80 - 120

Method: SM 4500 NO2 B - Nitrogen, Nitrite

Lab Sample ID: MB 500-385569/3
Matrix: Water
Analysis Batch: 385569

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrogen, Nitrite	<0.020		0.020		mg/L			05/17/17 15:34	1

Lab Sample ID: LCS 500-385569/4
Matrix: Water
Analysis Batch: 385569

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrogen, Nitrite	0.100	0.0972		mg/L		97	80 - 120

Lab Sample ID: MB 500-385625/3
Matrix: Water
Analysis Batch: 385625

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrogen, Nitrite	<0.020		0.020		mg/L			05/17/17 17:20	1

Lab Sample ID: LCS 500-385625/4
Matrix: Water
Analysis Batch: 385625

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrogen, Nitrite	0.100	0.105		mg/L		105	80 - 120

TestAmerica Chicago

MWG13-15_62432
5/31/2017

QC Sample Results

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

TestAmerica Job ID: 500-128163-1

Method: SM 4500 NO3 F - Nitrogen, Nitrate

Lab Sample ID: MB 500-386735/12
 Matrix: Water
 Analysis Batch: 386735

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

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrogen, Nitrate Nitrite	<0.10		0.10		mg/L			05/24/17 01:04	1

Lab Sample ID: LCS 500-386735/13
 Matrix: Water
 Analysis Batch: 386735

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

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.
	Added	Result	Qualifier			Limits	
Nitrogen, Nitrate Nitrite	1.00	0.969		mg/L		97	80 - 120



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Chicago
2417 Bond St.
University Park, IL 60484
708-534-5200
Fax: 708-534-5211

Report To:		Bill To:	
Contact: Rich Gnat	Company: KPRG & Associates Inc.	Contact: Nrg	Company: Nrg
Address: 14665 W. Lisbon Rd, Suite 2B	Address: Brookfield, WI, 53005	Lab Lot # 500-128163	Package Sealed <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Phone: 262-781-0475	Phone:	Received on Ice <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Samples Sealed <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Fax:	Fax:	Samples Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No N/A	Temperature °C of Cooler 24-72.5
Email:	PO #: 4501754865	Within Hold Time <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Preserv. Indicated <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No N/A

Sampler Name: Ian John Howleson		Client Project # 12313.2		Refrg #																Within Hold Time <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Preserv. Indicated <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No N/A	
Project Name: Waukegan Station Permit		TestAmerica Project Number: 50004763		Volume																pH Check OK <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Check OK Res CL₂ Cl <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No N/A	
Project Location: Waukegan, IL		Date Required		Preserv.		7														Sample Labels and COC Agree <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		COC not present	
Lab PM: Eric Lang		Hard Copy: / /		Matrix		# of Containers		Total NO2												Additional Analyses / Remarks			
Laboratory ID	MS-MSD	Client Sample ID		Sampling Date Time		Matrix	# of Containers	Total NO2															
1		MW-01		5-15-17 13:39		W	1	X															
2		MW-02		5-15-17 14:56		W	1	X															
3		MW-05		5-15-17 16:34		W	1	X															
4		DUPLICATE		5-15-17		W	1	X															
NB N						W																	
						W																	
						W																	
						W																	
						W																	
						W																	
						W																	

RELINQUISHED BY: ISH	COMPANY: KPRG	DATE: 5-15-17	TIME: 18:00	RECEIVED BY: FEDEX	COMPANY:	DATE:	TIME:
RELINQUISHED BY:	COMPANY:	DATE:	TIME:	RECEIVED BY: [Signature]	COMPANY: TA	DATE: 05/16/17	TIME: 0940

- | | | |
|---|---|--|
| Matrix Key | Container Key | Preservative Key |
| WW = Wastewater
W = Water
S = Soil
SL = Sludge
MS = Miscellaneous
OL = Oil
A = Air | SE = Sediment
SO = Solid
DL = Drum Liquid
DS = Drum Solid
L = Leachate
W = Wipe
O = | 1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other
7. None |
| SE = Sediment
SO = Solid
DL = Drum Liquid
DS = Drum Solid
L = Leachate
W = Wipe
O = | 1. HCl, Cool to 4°
2. H ₂ SO ₄ , Cool to 4°
3. HNO ₃ , Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None | |

COMMENTS:	Date Received
 500-128163 COC	05/16/17
	Courier: FX
	Hand Delivered <input type="checkbox"/>
	Bill of Lading:

PAGE 1 of 1

STL-8208 (0800)

MWG13-15_62434
5/31/2017

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Chicago

2417 Bond St.

University Park, IL 60484

708-534-5200

Fax: 708-534-5211

Report To:		Bill To:	
Contact: Rich Gnat	Company: KPRG & Associates Inc.	Contact:	Company: Nrg
Address: 14685 W. Lisbon Rd. Suite 2B	Address: Brookfield, WI, 53005	Address:	
Phone: 282-781-0475	Phone:	PO #: 4501754865	
Fax:			
Email:			

Sampler Name: Ian John Howieson		Client Project # 12313.2		Refrg # # / Cont.						Lab Lot # 500-128163	
Project Name: Waukegan Station Permit		TestAmerica Project Number: 50004763		Volume						Package Sealed Yes No	
Project Location: Waukegan, IL		Date Required Hard Copy: / /		Preserv. 7						Samples Sealed Yes No	
Lab PM: Eric Lang		Fax: / /		Matrix						Received on Ice Yes No	
				# of Containers						Samples Intact Yes No N/A	
				Total NO2						Temperature °C of Cooler 0.4 → 1.9	
										Within Hold Time Yes No	
										Preserv. Indicated Yes No N/A	
										pH Check OK Yes No	
										Check OK Res CL₂ C Yes No N/A	
										Sample Labels and COC Agree Yes No	
										COC not present	
										Additional Analyses / Remarks	
Laboratory ID	MSD	Client Sample ID	Sampling Date	Time	Matrix	# of Containers	Total NO2				
5		MW-03	5-16-17	10:44	W	1	X				
6		MW-04	5-16-17	11:55	W	1	X				
7		MW-06	5-16-17	14:50	W	1	X				
8		MW-07	5-16-17	13:36	W	1	X				
NB N					W						
					W						
					W						
					W						
					W						
					W						
					W						



500-128163 COC

RELINQUISHED BY: ISH	COMPANY: KPRG	DATE: 5-16-17	TIME: 18:40	RECEIVED BY: KEXEX	COMPANY:	DATE:	TIME:
RELINQUISHED BY:	COMPANY:	DATE:	TIME:	RECEIVED BY: Ariel Sanchez	COMPANY: TAMM	DATE: 05/17/17	TIME: 09:55

- | | | |
|--|---|--|
| Matrix Key | Container Key | Preservative Key |
| WW = Wastewater
W = Water
S = Soil
SL = Sludge
MS = Miscellaneous
OL = Oil
A = Air | SE = Sediment
SO = Solid
DL = Drum Liquid
DS = Drum Solid
L = Leachate
W = Wipe
O = | 1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other
7. None |
| | | 1. HCl, Cool to 4°
2. H ₂ SO ₄ , Cool to 4°
3. HNO ₃ , Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4° |

COMMENTS:	Date Received 05/17/17
	Courier: FX STD
	Hand Delivered <input type="checkbox"/>
	Bill of Lading:

PAGE 1 of 2

STL-8208 (0600)

MWG13-15_62435
5/31/2017

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Chicago

2417 Bond St.

University Park, IL 60484

708-534-5200

Fax 708-534-5211

Report To:

Contact: Rich Gnat
 Company: KPRG & Associates Inc.
 Address: 14665 W. Lisbon Rd. Suite 2B
 Brookfield, WI, 53005
 Phone: 262-781-0475
 Fax:
 Email:

Bill To:

Contact:
 Company: Nrg
 Address:
 Phone:
 Fax:
 PO #: 4501754865

Lab Lot # 500-128163
 Package Sealed (Yes) No
 Samples Sealed (Yes) No
 Received on Ice (Yes) No
 Samples Intact (Yes) No N/A
 Temperature °C of Cooler 3.2-7.3
3.3-7.3, 5.9-7.0, 5.2-7.3

Sampler Name: Ian John Howieson		Client Project # 12313.2		Refrg #											Within Hold Time (Yes) No	Preserv. Indicated (Yes) No N/A
Project Name: Waukegan Station Permit		TestAmerica Project Number: 50004763		Volume											pH Check OK (Yes) No	CL ₂ Check OK Res CL ₂ Check (Yes) No N/A
Project Location: Waukegan, IL		Date Required Hard Copy: / /		Preserv.											Sample Labels and COC Agree (Yes) No COC not present	
Lab PM: Eric Lang		Fax: / /		Matrix	# of Containers	Metals Total	Cl, TDS, SO ₄ , F Total	NO ₂ Total	NO ₃ - NO ₂ Total	Cyanide Total	Radium 226/228	Additional Analyses / Remarks				
Laboratory ID	MS-MSD	Client Sample ID	Sampling Date Time													
1		MW-01	5-15-17 13:39	W	7	X	X	1	X	X	X					
2		MW-02	5-15-17 14:56	W	7	X	X	1	X	X	X					
5		MW-03	5-16-17 10:44	W	7	X	X	1	X	X	X					
6		MW-04	5-16-17 11:55	W	7	X	X	1	X	X	X					
NB N 3		MW-05	5-15-17 16:34	W	7	X	X	1	X	X	X					
7		MW-06	5-16-17 14:50	W	7	X	X	1	X	X	X					
8		MW-07	5-16-17 13:36	W	7	X	X	1	X	X	X					
4		Duplicate	5-15-17	W	7	X	X	1	X	X	X					



500-128163 COC

RELINQUISHED BY: <u>IAH</u>	COMPANY: <u>KPRG</u>	DATE: <u>5-18-17</u>	TIME: <u>16:15</u>	RECEIVED BY: <u>[Signature]</u>	COMPANY: <u>TR-CRPT</u>	DATE: <u>5/18/17</u>	TIME: <u>16:15</u>
RELINQUISHED BY:	COMPANY:	DATE:	TIME:	RECEIVED BY:	COMPANY:	DATE:	TIME:

Matrix Key
 WW = Wastewater
 W = Water
 S = Soil
 SL = Sludge
 MS = Miscellaneous
 OL = Oil
 A = Air
 SE = Sediment
 SO = Solid
 BL = Drum Liquid
 DS = Drum Solid
 L = Leachate
 W = Wipe
 O =

Container Key
 1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other

Preservative Key
 1. HCl, Cool to 4°
 2. H₂SO₄, Cool to 4°
 3. HNO₃, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS:

Date Received: / /
 Courier:
 Hand Delivered
 Bill of Lading:

PAGE 1 of 3
 STL-8208 (0600) MWG13-15_62436
 5/31/2017



500-128163 Waybill

ORIGIN ID: FEPA (630) 325-1300
IAN JOHN HOWIESON
KPRG ABS ASSOCIATES
414 PLAZA DR STE 106

SHIP DATE: 15MAY17
ACTWGT: 22.50 LB
CAD: 006994083/SSFE1801
DIMS: 15x10x13 IN

WESTMONT, IL 60559
UNITED STATES US

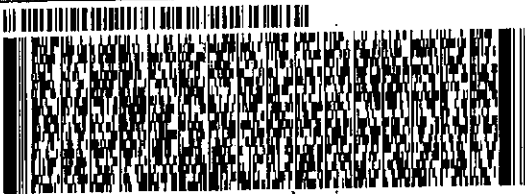
BILL THIRD PARTY

TO **ERIC LANG**
TESTAMERICA
2417 BOND ST

UNIVERSITY PARK IL 60484

(708) 694-6200 REF:

TRK# DEPT#



FedEx
Express

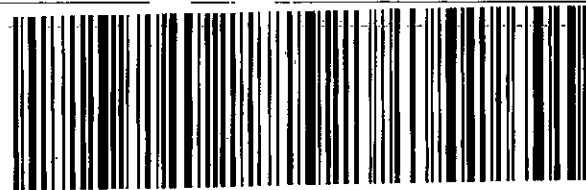


TUE - 16 MAY 3:00P
STANDARD OVERNIGHT

TRK# 7865 7885 2976
0201

79 JOTA

60484
IL-US ORD



Part # 158207V-485 RITE EXP 03/18/17



ORIGIN ID: FEPA (630) 325-1300
IAY JOHN HOWIESON
414 PLAZA DR STE 106
WESTMONT, IL 60559
UNITED STATES US

SHIP DATE: 16MAY17
ACTWGT: 28.40 LB
CAD: 006994083/88FE1801
DIMS: 19x11x14 IN
BILL THIRD PARTY

Part # 156297V-435 H12 EX-02116 ***
156297V-435 H12 EX-02116 ***

TO **ERIC LANG**
TESTAMERICA
2417 BOND ST
UNIVERSITY PARK IL 60484

(708) 584-5200
YNU
PBI

REF:

DEPT:



FedEx
Express



110120111111

TRK# 7865 9333 0452
0201

WED - 17 MAY 3:00P
STANDARD OVERNIGHT

79 JOTA

60484
IL-US ORD



500-128163 Waybill

1
5
7
8
9
11
13

Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-128163-1

Login Number: 128163

List Source: TestAmerica Chicago

List Number: 1

Creator: Kelsey, Shawn 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	2.5c, 1.9,6.0,3.3,5.3
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.	True	



Accreditation/Certification Summary

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

TestAmerica Job ID: 500-128163-1

Laboratory: TestAmerica Chicago

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Illinois	NELAP	5	100201	04-30-18



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: 500-128163-2
Client Project/Site: Waukegan Station Permit

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

Attn: Richard Gnat



Authorized for release by:
6/17/2017 7:21:37 AM

Eric Lang, Manager of Project Management
(708)534-5200
eric.lang@testamericainc.com



..... LINKS

Review your project results through
Total Access

Have a Question?
Ask The Expert

Visit us at:
www.testamericainc.com

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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QC Association	15
QC Sample Results	16
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Receipt Checklists	25
Certification Summary	27
Tracer Carrier Summary	28

Case Narrative

TestAmerica Job ID: 500-128163-2

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

Job ID: 500-128163-2

Laboratory: TestAmerica Chicago

Narrative

**Job Narrative
500-128163-2**

Comments

No additional comments.

Receipt

The samples were received on 5/16/2017 9:40 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 5 coolers at receipt time were 1.9° C, 2.5° C, 3.3° C, 5.3° C and 6.0° C.

RAD

Method(s) PrecSep_0: Radium 228 Prep Batch 160-310107
The following samples bubbled after sulfuric acid was added.
MW-05 (500-128163-3) and DUPLICATE (500-128163-4)

Method(s) PrecSep-21: Radium 226 Prep Batch 160-309851
The following samples bubbled after sulfuric acid was added.
MW-05 (500-128163-3) and DUPLICATE (500-128163-4)

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 Station Permit

TestAmerica Job ID: 500-128163-2

1

Method	Method Description	Protocol	Laboratory
903.0	Radium-226 (GFPC)	EPA	TAL SL
904.0	Radium-228 (GFPC)	EPA	TAL SL

4

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

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

5

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7

8

9

10

TestAmerica Chicago

Sample Summary

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

TestAmerica Job ID: 500-128163-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-128163-1	MW-01	Water	05/15/17 13:39	05/16/17 09:40
500-128163-2	MW-02	Water	05/15/17 14:56	05/16/17 09:40
500-128163-3	MW-05	Water	05/15/17 16:34	05/16/17 09:40
500-128163-4	DUPLICATE	Water	05/15/17 00:00	05/16/17 09:40
500-128163-5	MW-03	Water	05/16/17 10:44	05/17/17 09:55
500-128163-6	MW-04	Water	05/16/17 11:55	05/17/17 09:55
500-128163-7	MW-06	Water	05/16/17 14:50	05/17/17 09:55
500-128163-8	MW-07	Water	05/16/17 13:36	05/17/17 09:55



Client Sample Results

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

TestAmerica Job ID: 500-128163-2

Client Sample ID: MW-01

Date Collected: 05/15/17 13:39

Date Received: 05/16/17 09:40

Lab Sample ID: 500-128163-1

Matrix: Water

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.114		0.0743	0.0750	1.00	0.0943	pCi/L	05/22/17 17:35	06/14/17 08:49	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.3		40 - 110					05/22/17 17:35	06/14/17 08:49	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	0.259	U	0.289	0.290	1.00	0.474	pCi/L	05/23/17 10:44	06/05/17 14:42	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.3		40 - 110					05/23/17 10:44	06/05/17 14:42	1
Y Carrier	77.4		40 - 110					05/23/17 10:44	06/05/17 14:42	1



TestAmerica Chicago

MWG13-15_62446
 6/17/2017

Client Sample Results

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

TestAmerica Job ID: 500-128163-2

Client Sample ID: MW-02
 Date Collected: 05/15/17 14:56
 Date Received: 05/16/17 09:40

Lab Sample ID: 500-128163-2
 Matrix: Water

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0474	U	0.0641	0.0642	1.00	0.108	pCi/L	05/22/17 17:35	06/14/17 08:49	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	80.5		40 - 110					05/22/17 17:35	06/14/17 08:49	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	0.310	U	0.318	0.319	1.00	0.518	pCi/L	05/23/17 10:44	06/05/17 14:42	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	80.5		40 - 110					05/23/17 10:44	06/05/17 14:42	1
Y Carrier	83.4		40 - 110					05/23/17 10:44	06/05/17 14:42	1



Client Sample Results

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

TestAmerica Job ID: 500-128163-2

Client Sample ID: MW-05

Date Collected: 05/15/17 16:34

Date Received: 05/16/17 09:40

Lab Sample ID: 500-128163-3

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	0.106	U	0.0794	0.0800	1.00	0.110	pCi/L	05/22/17 17:35	06/14/17 08:50	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	72.0		40 - 110					05/22/17 17:35	06/14/17 08:50	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	0.703		0.358	0.364	1.00	0.531	pCi/L	05/23/17 10:44	06/05/17 14:42	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	72.0		40 - 110					05/23/17 10:44	06/05/17 14:42	1
Y Carrier	86.4		40 - 110					05/23/17 10:44	06/05/17 14:42	1

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Client Sample Results

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

TestAmerica Job ID: 500-128163-2

Client Sample ID: DUPLICATE

Date Collected: 05/15/17 00:00

Date Received: 05/16/17 09:40

Lab Sample ID: 500-128163-4

Matrix: Water

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
Radium-226	0.0840	U	0.0955 (2σ+/-)	0.0958 (2σ+/-)	1.00	0.155	pCi/L	05/22/17 17:35	06/14/17 08:50	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	61.4		40 - 110					05/22/17 17:35	06/14/17 08:50	1

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
Radium-228	0.0831	U	0.313 (2σ+/-)	0.314 (2σ+/-)	1.00	0.549	pCi/L	05/23/17 10:44	06/05/17 14:42	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	61.4		40 - 110					05/23/17 10:44	06/05/17 14:42	1
Y Carrier	88.6		40 - 110					05/23/17 10:44	06/05/17 14:42	1

TestAmerica Chicago

MWG13-15_62449
 6/17/2017

Client Sample Results

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

TestAmerica Job ID: 500-128163-2

Client Sample ID: MW-03

Date Collected: 05/16/17 10:44

Date Received: 05/17/17 09:55

Lab Sample ID: 500-128163-5

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	0.159		0.0876	0.0887	1.00	0.110	pCi/L	05/22/17 17:35	06/14/17 08:50	1
<i>Carrier</i>	<i>%Yield</i>	<i>Qualifier</i>	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Ba Carrier	87.3		40 - 110					05/22/17 17:35	06/14/17 08:50	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	0.329	U	0.255	0.257	1.00	0.402	pCi/L	05/23/17 10:44	06/05/17 14:42	1
<i>Carrier</i>	<i>%Yield</i>	<i>Qualifier</i>	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Ba Carrier	87.3		40 - 110					05/23/17 10:44	06/05/17 14:42	1
Y Carrier	86.7		40 - 110					05/23/17 10:44	06/05/17 14:42	1

TestAmerica Chicago

Client Sample Results

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

TestAmerica Job ID: 500-128163-2

Client Sample ID: MW-04
 Date Collected: 05/16/17 11:55
 Date Received: 05/17/17 09:55

Lab Sample ID: 500-128163-6
 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	0.198		0.0846	0.0865	1.00	0.0831	pCi/L	05/22/17 17:35	06/14/17 08:50	1
<i>Carrier</i>	<i>%Yield</i>	<i>Qualifier</i>	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Ba Carrier	95.0		40 - 110					05/22/17 17:35	06/14/17 08:50	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	0.521		0.237	0.242	1.00	0.336	pCi/L	05/23/17 10:44	06/05/17 14:42	1
<i>Carrier</i>	<i>%Yield</i>	<i>Qualifier</i>	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Ba Carrier	95.0		40 - 110					05/23/17 10:44	06/05/17 14:42	1
Y Carrier	86.0		40 - 110					05/23/17 10:44	06/05/17 14:42	1



Client Sample Results

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

TestAmerica Job ID: 500-128163-2

Client Sample ID: MW-06
 Date Collected: 05/16/17 14:50
 Date Received: 05/17/17 09:55

Lab Sample ID: 500-128163-7
 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	0.227		0.100	0.102	1.00	0.116	pCi/L	05/22/17 17:35	06/14/17 08:50	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.9		40 - 110					05/22/17 17:35	06/14/17 08:50	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	0.651		0.288	0.294	1.00	0.413	pCi/L	05/23/17 10:44	06/05/17 14:43	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.9		40 - 110					05/23/17 10:44	06/05/17 14:43	1
Y Carrier	84.9		40 - 110					05/23/17 10:44	06/05/17 14:43	1

Client Sample Results

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

TestAmerica Job ID: 500-128163-2

Client Sample ID: MW-07
 Date Collected: 05/16/17 13:36
 Date Received: 05/17/17 09:55

Lab Sample ID: 500-128163-8
 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	0.548		0.140	0.148	1.00	0.112	pCi/L	05/22/17 17:35	06/14/17 08:50	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.5		40 - 110					05/22/17 17:35	06/14/17 08:50	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	0.875		0.279	0.291	1.00	0.360	pCi/L	05/23/17 10:44	06/05/17 14:43	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.5		40 - 110					05/23/17 10:44	06/05/17 14:43	1
Y Carrier	89.7		40 - 110					05/23/17 10:44	06/05/17 14:43	1



Definitions/Glossary

TestAmerica Job ID: 500-128163-2

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

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.
■	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	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)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
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 (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)

TestAmerica Chicago

QC Association Summary

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

TestAmerica Job ID: 500-128163-2

1

Rad

Prep Batch: 309851

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-128163-1	MW-01	Total/NA	Water	PrecSep-21	
500-128163-2	MW-02	Total/NA	Water	PrecSep-21	
500-128163-3	MW-05	Total/NA	Water	PrecSep-21	
500-128163-4	DUPLICATE	Total/NA	Water	PrecSep-21	
500-128163-5	MW-03	Total/NA	Water	PrecSep-21	
500-128163-6	MW-04	Total/NA	Water	PrecSep-21	
500-128163-7	MW-06	Total/NA	Water	PrecSep-21	
500-128163-8	MW-07	Total/NA	Water	PrecSep-21	
MB 160-309851/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-309851/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
500-128163-1 DU	MW-01	Total/NA	Water	PrecSep-21	

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Prep Batch: 310107

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-128163-1	MW-01	Total/NA	Water	PrecSep_0	
500-128163-2	MW-02	Total/NA	Water	PrecSep_0	
500-128163-3	MW-05	Total/NA	Water	PrecSep_0	
500-128163-4	DUPLICATE	Total/NA	Water	PrecSep_0	
500-128163-5	MW-03	Total/NA	Water	PrecSep_0	
500-128163-6	MW-04	Total/NA	Water	PrecSep_0	
500-128163-7	MW-06	Total/NA	Water	PrecSep_0	
500-128163-8	MW-07	Total/NA	Water	PrecSep_0	
MB 160-310107/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-310107/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
500-128163-1 DU	MW-01	Total/NA	Water	PrecSep_0	

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13

QC Sample Results

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

TestAmerica Job ID: 500-128163-2

1

Method: 903.0 - Radium-226 (GFPC)

Lab Sample ID: MB 160-309851/1-A
Matrix: Water
Analysis Batch: 313280

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 309851

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert.	Uncert.						
Radium-226	0.04495	U	0.0536	0.0537	1.00	0.0863	pCi/L	05/22/17 17:35	06/14/17 08:49	1
Carrier	MB MB		Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	%Yield	Qualifier						05/22/17 17:35	06/14/17 08:49	1
	86.7		40 - 110							

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Lab Sample ID: LCS 160-309851/2-A
Matrix: Water
Analysis Batch: 313280

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 309851

Analyte	Spike Added	LCS	LCS	Total	RL	MDC	Unit	%Rec	%Rec.
		Result	Qual	Uncert.					Limits
Radium-226	11.4	10.80		1.12	1.00	0.0893	pCi/L	95	68 - 137
Carrier	LCS LCS		Limits						
Ba Carrier	%Yield	Qualifier							
	91.7		40 - 110						

10

Lab Sample ID: 500-128163-1 DU
Matrix: Water
Analysis Batch: 313280

Client Sample ID: MW-01
Prep Type: Total/NA
Prep Batch: 309851

Analyte	Sample	Sample	DU	DU	Total	RL	MDC	Unit	RER	RER
	Result	Qual	Result	Qual	Uncert.					Limit
Radium-226	0.114		0.03939	U	0.0612	1.00	0.106	pCi/L	0.55	1
Carrier	DU DU		Limits							
Ba Carrier	%Yield	Qualifier								
	81.1		40 - 110							

Method: 904.0 - Radium-228 (GFPC)

Lab Sample ID: MB 160-310107/1-A
Matrix: Water
Analysis Batch: 311850

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 310107

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert.	Uncert.						
Radium-228	0.1508	U	0.241	0.242	1.00	0.407	pCi/L	05/23/17 10:44	06/05/17 14:42	1
Carrier	MB MB		Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	%Yield	Qualifier						05/23/17 10:44	06/05/17 14:42	1
Y Carrier	88.6		40 - 110					05/23/17 10:44	06/05/17 14:42	1

TestAmerica Chicago

QC Sample Results

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

TestAmerica Job ID: 500-128163-2

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

Lab Sample ID: LCS 160-310107/2-A
 Matrix: Water
 Analysis Batch: 311850

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 310107

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Radium-228	13.4	15.54		1.67	1.00	0.391	pCi/L	116	56 - 140

Carrier	LCS %Yield	LCS Qualifier	LCS Limits
Ba Carrier	91.7		40 - 110
Y Carrier	86.4		40 - 110

Lab Sample ID: 500-128163-1 DU
 Matrix: Water
 Analysis Batch: 311850

Client Sample ID: MW-01
 Prep Type: Total/NA
 Prep Batch: 310107

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-228	0.259	U	0.1806	U	0.296	1.00	0.499	pCi/L	0.13	1

Carrier	DU %Yield	DU Qualifier	DU Limits
Ba Carrier	81.1		40 - 110
Y Carrier	83.7		40 - 110



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Chicago

2417 Bond St.

University Park, IL 60484

708-534-5200

Fax: 708-534-5211

Report To:		Bill To:	
Contact: Rich Gnat	Company: KPRG & Associates Inc.	Contact:	Company: Nrg
Address: 14665 W. Lisbon Rd, Suite 2B	Address: Brookfield, WI, 53005	Address:	
Phone: 262-781-0475	Phone:	Phone:	
Fax:	Fax:	PO #: 4501754865	
Email:			

Sampler Name: Ian John Howieson		Client Project # 12313.2		Refrg # # / Cont.		Lab Lot # 500-128163	
Project Name: Waukegan Station Permit		TestAmerica Project Number: 50004763		Volume Preserv. 7		Package Sealed Yes No	
Project Location: Waukegan, IL		Date Required Hard Copy: / /		Matrix		Samples Sealed Yes No	
Lab PM: Eric Lang		Fax: / /		# of Containers		Received on Ice Yes No	
Laboratory ID		Client Sample ID		Total NO2		Samples Intact Yes No N/A	
MS-MSD		Sampling Date Time				Temperature °C of Cooler 24-72.5	
						Within Hold Time Yes No	
						Preserv. Indicated Yes No N/A	
						pH Check OK Yes No	
						Check OK Res CL₂ Cl Yes No N/A	
						Sample Labels and COC Agree Yes No COC not present	
						Additional Analyses / Remarks	
1		MW-01	5-15-17 13:34	W	1	X	
2		MW-02	5-15-17 14:56	W	1	X	
3		MW-05	5-15-17 16:34	W	1	X	
4		DUPLICATE	5-15-17	W	1	X	
NB N				W			
				W			
				W			
				W			
				W			
				W			
				W			

RELINQUISHED BY: ISH	COMPANY: KPRG	DATE: 5-15-17	TIME: 18:00	RECEIVED BY: FEDEx	COMPANY:	DATE:	TIME:
RELINQUISHED BY:	COMPANY:	DATE:	TIME:	RECEIVED BY: Junko	COMPANY: TA	DATE: 05/16/17	TIME: 0940

- | | | |
|--------------------|----------------------|--|
| Matrix Key | Container Key | Preservative Key |
| WW = Wastewater | 1. Plastic | 1. HCl, Cool to 4° |
| W = Water | 2. VOA Vial | 2. H ₂ SO ₄ , Cool to 4° |
| S = Soil | 3. Sterile Plastic | 3. HNO ₃ , Cool to 4° |
| SL = Sludge | 4. Amber Glass | 4. NaOH, Cool to 4° |
| MS = Miscellaneous | 5. Widemouth Glass | 5. NaOH/Zn, Cool to 4° |
| OL = Oil | 6. Other | 6. Cool to 4° |
| A = Air | | 7. None |
| SE = Sediment | | |
| SO = Solid | | |
| DL = Drum Liquid | | |
| DS = Drum Solid | | |
| L = Leachate | | |
| W = Wipe | | |
| O = | | |

COMMENTS:	Date
	Received 05/16/17
500-128163 COC	Courier: FX
	Hand Delivered <input type="checkbox"/>
	Bill of Lading:

PAGE 1 of 1

STL-8208 (0600)

MWG13-15_62458
6/17/2017

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING
 TestAmerica Chicago
 2417 Bond St.
 University Park, IL 60484
 708-534-5200
 Fax: 708-534-5211

Report To:

Contact: Rich Gnat
 Company: KPRG & Associates Inc.
 Address: 14685 W. Lilsbon Rd. Suite 2B
 Brookfield, WI, 53005
 Phone: 262-781-0475
 Fax:
 Email:

Bill To:

Contact:
 Company: Nrg
 Address:
 Phone:
 Fax:
 PO #: 4501754865


Lab Lot # 500-128163
 Package Sealed
 Yes No
 Received on Ice
 Yes No
 Temperature °C of Cooler
0.4 → 1.9

Sampler Name: Ian John Howleson
 Client Project #: 12313.2
 Project Name: Waukegan Station Permit
 TestAmerica Project Number: 50004763
 Project Location: Waukegan, IL
 Date Required
 Hard Copy: 1 1
 Lab PM: Eric Lang
 Fax: 1 1

Refrigerator #	Volume	Preserv.
		7

Within Hold Time
 Yes No
 pH Check OK
 Yes No
 Sample Labels and COC Agree
 Yes No
 Preserv. Indicated
 Yes No N/A
 Check OK Res Cl₂ Cl
 Yes No N/A
 COC not present

Laboratory ID	Client Sample ID	Sampling Date	Time	Matrix	# of Containers	Total NO2
5	MW-03	5-16-17	10:44	W	1	X
6	MW-04	5-16-17	11:55	W	1	X
7	MW-06	5-16-17	14:50	W	1	X
8	MW-07	5-16-17	13:36	W	1	X
NB N				W		
				W		
				W		
				W		
				W		
				W		
				W		
				W		

Additional Analyses / Remarks

 500-128163 COC

RELINQUISHED BY: ISH
 COMPANY: KPRG
 DATE: 5-16-17
 TIME: 18:40

RECEIVED BY: FEDEX
 COMPANY:
 DATE:
 TIME:
Michelle Sanchez
 COMPANY: TACTE
 DATE: 05/17/17
 TIME: 09:55

Matrix Key
 WW = Wastewater
 W = Water
 S = Soil
 SL = Sludge
 MS = Miscellaneous
 OL = Oil
 A = Air
 SE = Sediment
 SO = Solid
 DL = Drum Liquid
 DS = Drum Solid
 L = Leachate
 W = Wipe
 O =

Container Key
 1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other

Preservative Key
 1. HCl, Cool to 4°
 2. H₂SO₄, Cool to 4°
 3. HNO₃, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS:

Date Received 05/17/17
 Courier: FX STD
 Hand Delivered
 Bill of Lading:

PAGE 1 of 2

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Chicago
2417 Bond St.
University Park, IL 60484
708-534-5200
Fax: 708-534-5211

Report To:

Contact: Rich Gnat
Company: KPRG & Associates Inc.
Address: 14665 W. Lisbon Rd. Suite 2B
Brookfield, WI, 53005
Phone: 262-781-0475
Fax:
Email:

Bill To:

Contact:
Company: Nrg
Address:
Phone:
Fax:
PO #: 4501754865

Lab Lot # **500-128163**
Package Sealed (Yes) No
Samples Sealed (Yes) No
Received on Ice (Yes) No
Samples Intact (Yes) No N/A
Temperature °C of Cooler **3.2-7.3**
3.8-7.3, 5.9-7.0, 5.2-7.3

Sampler Name: Ian John Howieson	Client Project # 12313.2	Refrg # # / Cont.																		Within Hold Time (Yes) No	Preserv. Indicated (Yes) No N/A
Project Name: Waukegan Station Permit	TestAmerica Project Number: 50004763	Volume Preserv.																		pH Check OK (Yes) No	PL ₂ Check OK Res CL ₂ Check (Yes) No N/A
Project Location: Waukegan, IL	Date Required Hard Copy: / /	Matrix	# of Containers	Metals Total	Cl, TDS, SO ₄ , F Total	NO ₂ Total	NO ₃ - NO ₂ Total	Cyanide Total	Radium 226/228											Sample Labels and COC Agree (Yes) No COC not present	
Lab PM: Eric Lang	Fax: / /																				

Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Time	Matrix	# of Containers	Metals Total	Cl, TDS, SO ₄ , F Total	NO ₂ Total	NO ₃ - NO ₂ Total	Cyanide Total	Radium 226/228	Additional Analyses / Remarks
1		MW-01	5-15-17	13:39	W	7	X X	X	X	X	X	X	
2		MW-02	5-15-17	14:56	W	7	X X	X	X	X	X	X	
5		MW-03	5-16-17	10:44	W	7	X X	X	X	X	X	X	
6		MW-04	5-16-17	11:55	W	7	X X	X	X	X	X	X	
NB N 3		MW-05	5-15-17	16:34	W	7	X X	X	X	X	X	X	
7		MW-06	5-16-17	14:50	W	7	X X	X	X	X	X	X	
8		MW-07	5-16-17	13:36	W	7	X X	X	X	X	X	X	
4		Duplicate	5-15-17		W	7	X X	X	X	X	X	X	



500-128163 COC

RELINQUISHED BY: IAH	COMPANY: KPRG	DATE: 5-18-17	TIME: 16:15	RECEIVED BY: [Signature]	COMPANY: TR-CAPT	DATE: 5/18/17	TIME: 16:15
RELINQUISHED BY:	COMPANY:	DATE:	TIME:	RECEIVED BY:	COMPANY:	DATE:	TIME:

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MS = Miscellaneous
 - OL = Oil
 - A = Air
 - SE = Sediment
 - SO = Solid
 - DL = Drum Liquid
 - DS = Drum Solid
 - L = Leachate
 - W = Wipe
 - O =

- Container Key**
1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other

- Preservative Key**
1. HCl, Cool to 4°
 2. H₂SO₄, Cool to 4°
 3. HNO₃, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS:

Date Received: / /
Courier:
Hand Delivered:
Bill of Lading:

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500-128163 Waybill

ORIGIN ID: FEPA (630) 325-1300
IAN JOHN HOWIESON
KPRG ABS ASSOCIATES
414 PLAZA DR STE 106

SHIP DATE: 15MAY17
ACTWGT: 22.50 LB
CAD: 008894089/SSFE1801
DIMS: 18x10x13 IN

WESTMONT, IL 60559
UNITED STATES US

BILL THIRD PARTY

TO **ERIC LANG**
TESTAMERICA
2417 BOND ST

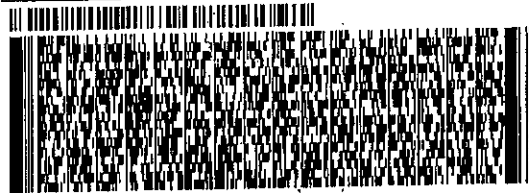
UNIVERSITY PARK IL 60484

(708) 684-6200

REF:

INVT

DEPT:



FedEx
Express



Part # 1582071287 RITE RITE 1582071287

TRK# 7865 7885 2976
0201

TUE - 16 MAY 3:00P
STANDARD OVERNIGHT

79 JOTA

60484
IL-US **ORD**



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ORIGIN ID: FEPA (830) 325-1300
IAY JOHN HOWIESON
414 PLAZA DR STE 106
WESTMONT, IL 60559
UNITED STATES US

SHIP DATE: 16MAY17
ACTWGT: 28.40 LB
CAD: 006994083/69FE1801
DIMS: 18x11x14 IN
BILL THIRD PARTY

Part # 158291
TESTAMERICA
205 RITE EXP
05/18/2017

TO ERIC LANG
TESTAMERICA
2417 BOND ST

UNIVERSITY PARK IL 60484

(709) 534-6200
REF: DEPT:



FedEx
Express



WED - 17 MAY 3:00P
STANDARD OVERNIGHT

TRK# 7865 9333 0452
0201

79 JOTA

60484
IL-US ORD

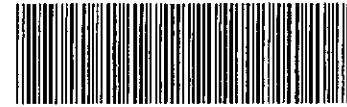


500-128163 Waybill

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

Chain of Custody Record



estAmerica
 A LEADER IN ENVIRONMENTAL TESTING

500-128163 Chain of Custody

J No: J-87736.1

Client Information (Sub Contract Lab)		Sampler:		Lab PM: Lang, Eric A.		500-128163 Chain of Custody		J No: J-87736.1																			
Client Contact: Shipping/Receiving		Phone:		E-Mail: eric.lang@testamericainc.com		State of Origin: Illinois		Page: Page 1 of 1																			
Company: TestAmerica Laboratories, Inc.		Address: 13715 Rider Trail North, City: Earth City State, Zip: MO, 63045 Phone: 314-298-8566(Tel) 314-298-8757(Fax) Email:		Due Date Requested: 5/26/2017 TAT Requested (days):		Accreditations Required (See note): NELAP - Illinois		Job #: 500-128163-1																			
Project Name: Waukegan Station Permit Site: NRG Midwest Generation Waukegan		Project #: 50004763 SSOW#:		Analysis Requested		Preservation Codes: A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Z - other (specify)		Other:																			
Sample Identification - Client ID (Lab ID)		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix (W=water, S=solid, O=soil, BT=trace, A=air)		Field Filtered Sample (Yes or No)		Performs MS/MSD (Yes or No)		903.0/PreSep_21 Standard Target List		904.0/PreSep_0 Standard Target List		Total Number of containers		Special Instructions/Note:							
MW-01 (500-128163-1)		5/15/17		13:39 Central		Water		Water		X		X						3		Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume;							
MW-02 (500-128163-2)		5/15/17		14:56 Central		Water		Water		X		X						3		Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume;							
MW-05 (500-128163-3)		5/15/17		16:34 Central		Water		Water		X		X						3		Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume;							
DUPLICATE (500-128163-4)		5/15/17		Central		Water		Water		X		X						3		Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume;							
MW-03 (500-128163-5)		5/16/17		10:44 Central		Water		Water		X		X						3		Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume;							
MW-04 (500-128163-6)		5/16/17		11:55 Central		Water		Water		X		X						3		Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume;							
MW-06 (500-128163-7)		5/16/17		14:50 Central		Water		Water		X		X						3		Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume;							
MW-07 (500-128163-8)		5/16/17		13:36 Central		Water		Water		X		X						3		Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume;							
<p>Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. 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/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.</p>																											
Possible Hazard Identification										Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)																	
Unconfirmed										<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)										Primary Deliverable Rank: 2																	
Special Instructions/QC Requirements:																											
Empty Kit Relinquished by:										Date:		Time:		Method of Shipment:													
Relinquished by: <i>Sherrill Scott</i>										Date/Time: 5/18/17 1700		Company: TR-CHI		Received by: <i>C McK</i>		Date/Time: 05/19/17 0930		Company:									
Relinquished by:										Date/Time:		Company:		Received by:		Date/Time:		Company:									
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:																	

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TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING
 TestAmerica Chicago
 2417 Bond St
 University Park, IL 60484
 708-534-5200
 Fax 708-534-5211

Report To:

Contact Rich Gnat
 Company KPRG & Associates Inc
 Address 14665 W. Lisbon Rd Suite 2B
 Brookfield, WI, 53005
 Phone 262-781-0475
 Fax
 Email

Bill To:

Contact
 Company Nig
 Address
 Phone
 Fax
 PO # 4501754865

Lab Lot # 500-128163
 Package Sealed (Yes) No
 Samples Sealed (Yes) No
 Received on Ice (Yes) No
 Samples Intact (Yes) No N/A
 Temperature °C of Cooler 3.2733
 3.2733, 5.9260, 5.2703
 Within Hold Time (Yes) No
 Preserv. Indicated (Yes) No N/A
 pH Check OK (Yes) No
 L₂ Check OK Res Cl₂ Check (Yes) No N/A
 Sample Labels and COC Agree (Yes) No
 COC not present

Sampler Name: Ian John Howieson		Client Project # 12313.2		Refrg #										
Project Name: Waukegan Station Permit		TestAmerica Project Number: 50004763		# / Cont.										
Project Location: Waukegan, IL		Date Required		Volume										
Lab PM: Eric Lang		Hard Copy: / /		Preserv.										
Laboratory ID	MS-MSD	Client Sample ID	Sampling Time	Date	Matrix	# of Containers	Metals Total	Cl, TDS, SO4 F, Total	NO2 Total	NO3 - NO2 Total	Cyanide Total	Radium 226/228	Additional Analyses / Remarks	
1		MW-01	5-15-17 13:39	W	7	X	X	X	X	X	X	X		
2		MW-02	5-15-17 14:56	W	7	X	X	X	X	X	X	X		
5		MW-03	5-16-17 10:44	W	7	X	X	X	X	X	X	X		
6		MW-04	5-16-17 11:55	W	7	X	X	X	X	X	X	X		
NB N		MW-05	5-15-17 16:34	W	7	X	X	X	X	X	X	X		
3		MW-06	5-16-17 14:50	W	7	X	X	X	X	X	X	X		
8		MW-07	5-16-17 13:36	W	7	X	X	X	X	X	X	X		
4		Duplicate	5-15-17	W	7	X	X	X	X	X	X	X		

RELINQUISHED BY: <i>IAH</i>	COMPANY: <i>KPRG</i>	DATE: <i>5-18-17</i>	TIME: <i>16:15</i>	RECEIVED BY: <i>Shirley Smith</i>	COMPANY: <i>TA-CRT</i>	DATE: <i>5/18/17</i>	TIME: <i>16:15</i>
RELINQUISHED BY: <i>Shirley Smith</i>	COMPANY: <i>TA-CRT</i>	DATE: <i>5/18/17</i>	TIME: <i>17:00</i>	RECEIVED BY: <i>C. Mack</i>	COMPANY: <i>TA STL</i>	DATE: <i>05/19/17</i>	TIME: <i>0930</i>

- | Matrix Key | Container Key | Preservative Key |
|--|---|--|
| WW = Wastewater
W = Water
S = Soil
SL = Sludge
MS = Miscellaneous
OL = Oil
A = Air | SE = Sediment
SO = Solid
DL = Drum Liquid
OS = Drum Solid
L = Leachate
W = Wipe
O = _____ | 1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other
7. None |

COMMENTS:

Date Received: / /
 Courier:
 Hand Delivered:
 Bill of Lading:

MWG13-15_62464
 6/17/2017
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Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-128163-2

Login Number: 128163
List Number: 1
Creator: Kelsey, Shawn M

List Source: TestAmerica 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	2.5c, 1.9,6.0,3.3,5.3
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 <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	



Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-128163-2

Login Number: 128163
List Number: 2
Creator: Taylor, Kristene N

List Source: TestAmerica St. Louis
List Creation: 05/19/17 07:43 PM

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
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	18.0,18.0,18.0,18.0
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?	N/A	
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	

Accreditation/Certification Summary

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

TestAmerica Job ID: 500-128163-2

Laboratory: TestAmerica Chicago

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Illinois	NELAP	5	100201	04-30-18

Laboratory: TestAmerica St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska	State Program	10	MO00054	06-30-17 *
California	State Program	9	2886	03-31-18 *
Connecticut	State Program	1	PH-0241	03-31-19
Florida	NELAP	4	E87689	06-30-17 *
Illinois	NELAP	5	200023	11-30-17
Iowa	State Program	7	373	02-01-18
Kansas	NELAP	7	E-10236	10-31-17
Kentucky (DW)	State Program	4	90125	12-31-17
L-A-B	DoD ELAP		L2305	04-06-19
Louisiana	NELAP	6	04080	06-30-17 *
Louisiana (DW)	NELAP	6	LA170011	12-31-17
Maryland	State Program	3	310	09-30-17
Missouri	State Program	7	780	06-30-17 *
Nevada	State Program	9	MO000542017-1	07-31-17 *
New Jersey	NELAP	2	MO002	06-30-17 *
New York	NELAP	2	11616	03-31-18
North Dakota	State Program	8	R207	06-30-17 *
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State Program	6	9997	08-31-17
Pennsylvania	NELAP	3	68-00540	02-21-18
South Carolina	State Program	4	85002001	06-30-17 *
Texas	NELAP	6	T104704193-16-10	07-31-17 *
US Fish & Wildlife	Federal		LE058448-0	10-31-17
USDA	Federal		P330-17-0028	02-02-20
Utah	NELAP	8	MO000542016-8	07-31-17 *
Virginia	NELAP	3	460230	06-14-18
Washington	State Program	10	C592	08-30-17
West Virginia DEP	State Program	3	381	08-31-17 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Tracer/Carrier Summary

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

TestAmerica Job ID: 500-128163-2

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)
500-128163-1	MW-01	87.3
500-128163-1 DU	MW-01	81.1
500-128163-2	MW-02	80.5
500-128163-3	MW-05	72.0
500-128163-4	DUPLICATE	61.4
500-128163-5	MW-03	87.3
500-128163-6	MW-04	95.0
500-128163-7	MW-06	90.9
500-128163-8	MW-07	88.5
LCS 160-309851/2-A	Lab Control Sample	91.7
MB 160-309851/1-A	Method Blank	86.7

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)
500-128163-1	MW-01	87.3	77.4
500-128163-1 DU	MW-01	81.1	83.7
500-128163-2	MW-02	80.5	83.4
500-128163-3	MW-05	72.0	86.4
500-128163-4	DUPLICATE	61.4	88.6
500-128163-5	MW-03	87.3	86.7
500-128163-6	MW-04	95.0	86.0
500-128163-7	MW-06	90.9	84.9
500-128163-8	MW-07	88.5	89.7
LCS 160-310107/2-A	Lab Control Sample	91.7	86.4
MB 160-310107/1-A	Method Blank	86.7	88.6

Tracer/Carrier Legend

Ba = Ba Carrier

Y = Y Carrier

TestAmerica Chicago