PATRICK
ENGINEERING

January 16, 2013

Ms. Andrea Rhodes
Illinois Environmental Protection Agency
Division of Public Water Supplies
MC #19
1021 North Grand Avenue East
Springfield, Illinois 62794-9276

Subject: Quarterly Groundwater Monitoring Results – Fourth Quarter 2012
Waukegan Generating Station- Ash Impoundments
Illinois EPA Violation Notice: W-2012-00056

Reference: Patrick Project No. 21253.053

To Whom It May Concern:

Patrick Engineering Inc. (Patrick) has prepared this letter report, on behalf of Midwest Generation, LLC, to provide groundwater monitoring results associated with the on-site ash ponds at the Waukegan Generating Station located at 401 E. Greenwood Avenue in Waukegan, Illinois (Figure 1). This groundwater monitoring is being performed as part of the Compliance Commitment Agreement (CCA) entered into by the Illinois Environmental Protection Agency (Illinois EPA) and MWG on October 24, 2012.

SAMPLING METHODOLOGY

In accordance with CCA referenced above, water samples are collected quarterly from seven monitoring wells (MW-1 through MW-7) surrounding the ash impoundments at the Waukegan facility. Monitoring wells MW-1 through MW-5 were installed in the fall of 2010; Monitoring wells MW-6 and MW-7 were installed in the fall of 2012 in accordance with Compliance Activity 5(d) of the above mentioned CCA. The well locations are shown on Figure 2. These wells were most recently sampled on December 19, 2012.

The groundwater elevation in each of the seven wells was measured prior to sampling. Groundwater samples were collected from each well with a peristaltic pump, using established low-flow sampling techniques. Temperature, turbidity, conductivity, dissolved oxygen (DO), oxygen reduction potential (ORP), and pH measurements were taken at each of the wells using a portable meter with a flow through cell. All groundwater samples were filtered in the field using a disposable, 0.45µm, in-line filter to allow for the analytical testing of dissolved compounds. Field parameter data is provided in Table 1. Groundwater elevation data is summarized in Table 2 and shown on Figure 3.

Quarterly Groundwater Monitoring Results – Fourth Quarter 2012
Waukegan Generating Station- Ash Impoundment
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ANALYTICAL RESULTS

After collection, all samples were immediately placed on ice in a cooler and kept at a temperature no higher than 4° C. The samples were transported to TestAmerica Laboratories, an Illinois-EPA accredited analytical laboratory, in accordance with chain-of-custody procedures to maintain sample integrity. Analytes tested included the inorganic compounds listed in 35 Illinois Administrative Code (IAC) 620.410(a), excluding radium 226/228, and 620.410(d). Analytical laboratory results are presented in Table 3 (both current and historical). The laboratory analytical reports provided by TestAmerica Laboratories are provided as Attachment A.

In accordance with the CCA, groundwater samples from the ash pond wells at the Waukegan facility will continue to be collected, analyzed, and reported to Illinois EPA on a quarterly basis.

If you have any questions regarding this report, please contact Maria Race, Director of Environmental Services for Midwest Generation at 630-771-7862.

Sincerely,

PATRICK ENGINEERING INC.

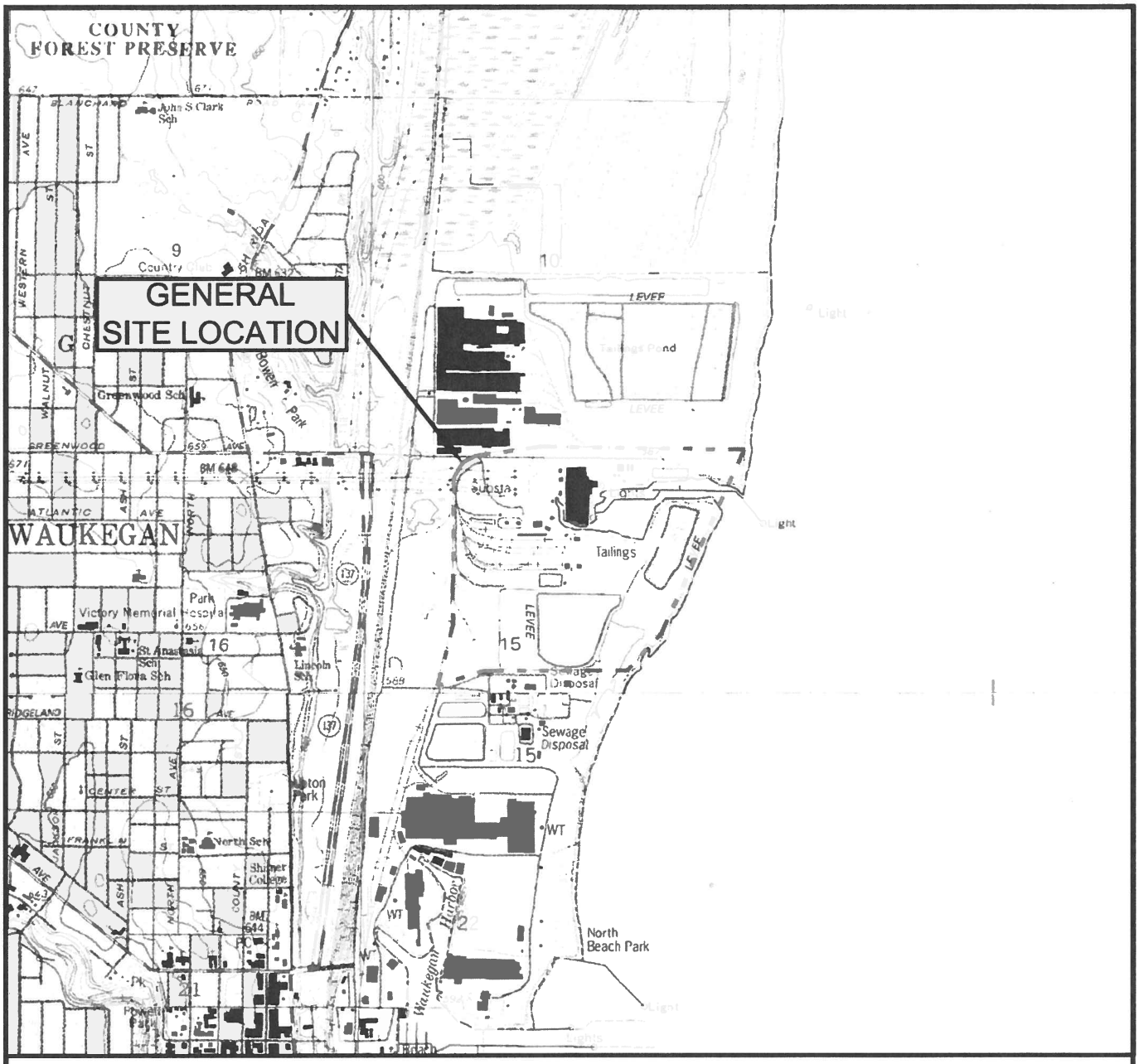
Richard M. Frendt, P.E
Senior Project Manager

RMF/sek
Enclosures: Figure 1: Site Location Map
Figure 2: Monitoring Well Location Map
Figure 3: Groundwater Elevation Map
Table 1: Field Parameter Data
Table 2: Groundwater Elevation Survey Data
Table 3: Groundwater Analytical Results
Attachment A: Laboratory Data

cc: Bill Buscher, Illinois EPA
Amy Hanrahan, MWG
Susan Franzetti, Nijman Franzetti LLP

FIGURE 1

SITE LOCATION MAP



LEGEND

SITE BOUNDARY

N

0 2,000'

GRAPHIC SCALE

NOTE:
THIS DRAWING WAS PREPARED USING ILLINOIS' WAUKEGAN (1993) AND ZION (1993) 7.5 MINUTE-SERIES TOPOGRAPHIC QUADRANGLE MAP.

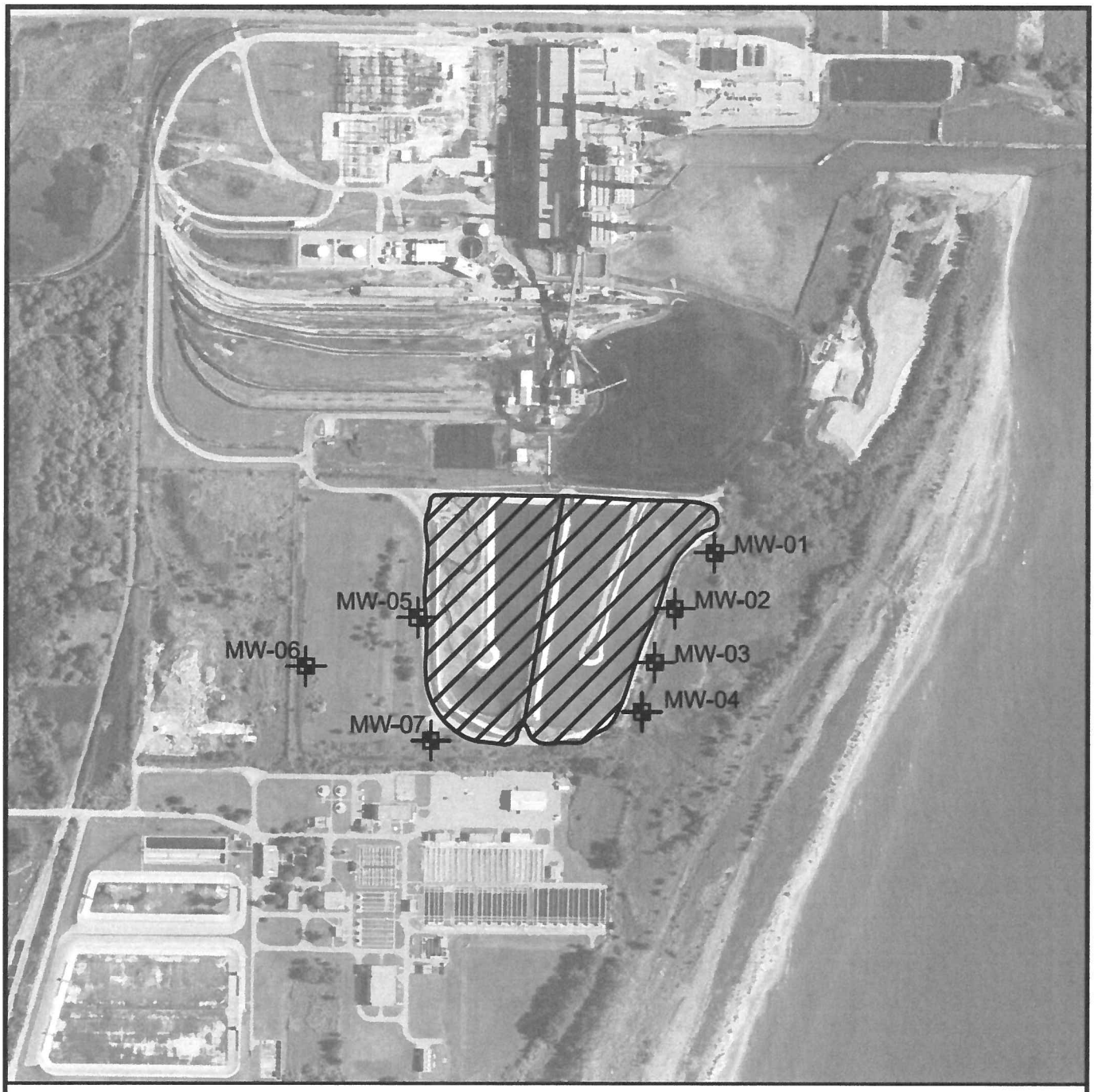
Date: JAN. 2013	FIGURE 1 SITE LOCATION MAP	PATRICK ENGINEERING INC.
Proj No.: 21153.033	WAUKEGAN STATION WAUKEGAN, ILLINOIS	4970 Varsity Drive, Lisle, Illinois 60532-4101 TEL. (630) 795-7200 FAX (630) 724-1681 PROFESSIONAL DESIGN FIRM LICENSE NO. 184-000409
App. By: RMF		

MWG13-15_41612

FIGURE 2

MONITORING WELL LOCATION MAP

MWG13-15_41613



LEGEND

MW-01 Monitoring Well Location

Ash Ponds

AERIAL IMAGE SOURCE:
LANDISCOR AERIAL INFORMATION INC., JULY 2008

N

1" = 600'

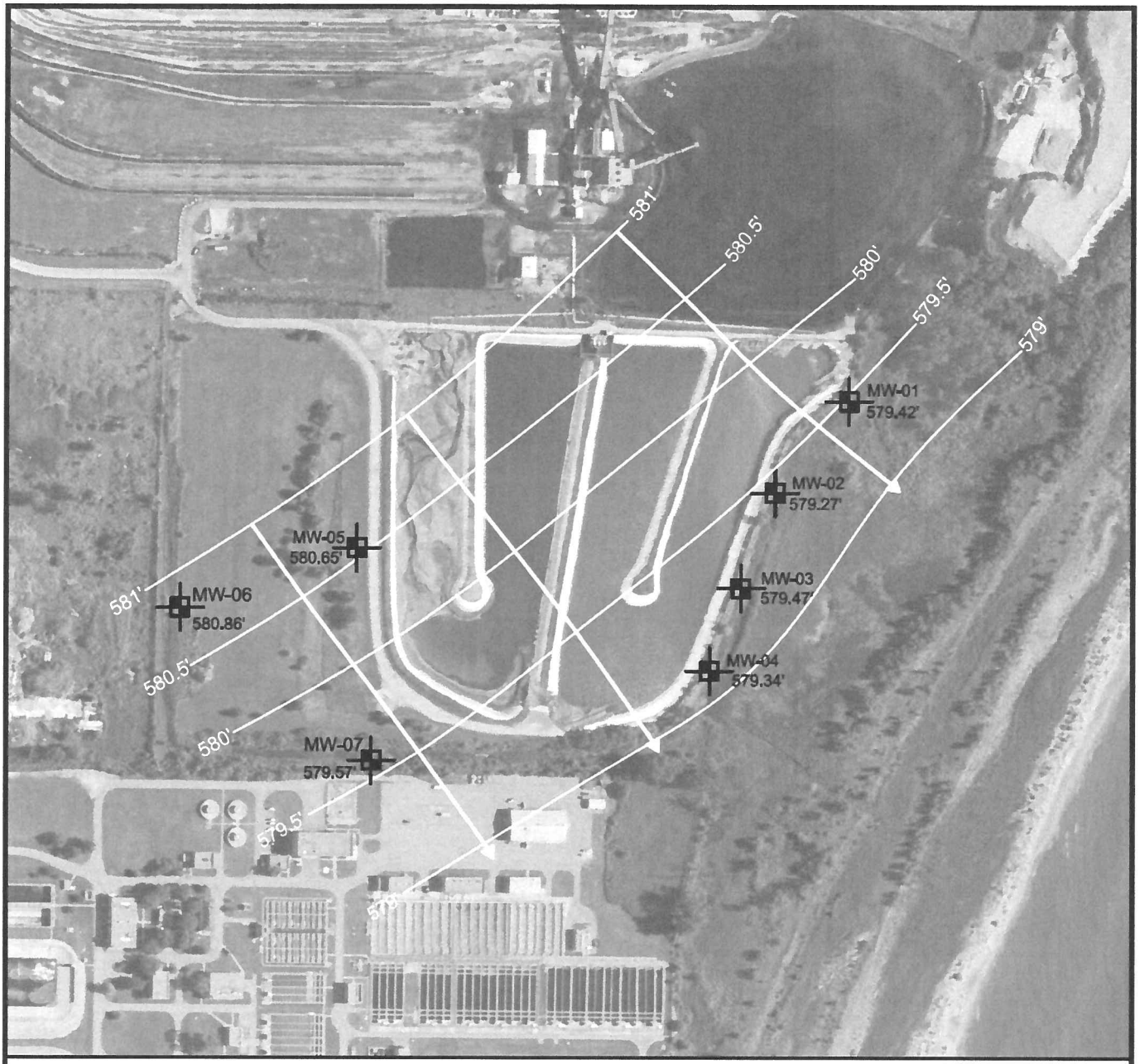
Date: JAN. 2013	FIGURE 1 MONITORING WELL LOCATION MAP	PATRICK ENGINEERING INC. 4970 Varsity Drive, Lisle, Illinois 60532-4101 TEL. (630) 795-7200 FAX (630) 724-1681 PROFESSIONAL DESIGN FIRM LICENSE NO. 184-000409
Proj No.: 21153.033	WAUKEGAN STATION WAUKEGAN, ILLINOIS	
App. By: RMF		

MWG13-15_41614

FIGURE 3

GROUNDWATER ELEVATION MAP

MWG13-15_41615



LEGEND

MW-01
581.13'

MONITORING WELL LOCATION WITH GROUNDWATER ELEVATION (FT. / MSL) - ELEVATION TAKEN ON DECEMBER 19, 2012.

580.5'

GROUNDWATER ELEVATION CONTOUR (FT. / MSL)

GROUNDWATER FLOW DIRECTION

N

1" = 400'

AERIAL IMAGE SOURCE:
LANDISCOR AERIAL INFORMATION INC., JULY 2008

Date: JAN 2013	FIGURE 3 GROUNDWATER ELEVATION MAP	PATRICK ENGINEERING INC.
Proj No.: 21253.053	WAUKEGAN STATION WAUKEGAN, ILLINOIS	4970 Varsity Drive Lisle, Illinois 60532-4101 TEL. (630) 795-7200 FAX (630) 724-1681
App. By: RMF		PROFESSIONAL DESIGN FIRM LICENSE NO. 184-000409

MWG13-15_41616

TABLE 1

FIELD PARAMETER DATA

Table 1
Field Parameter Data
Waukegan Station, Waukegan, Illinois
Midwest Generation
21153.033

PATRICK ENGINEERING	Field Parameter Data - Waukegan Station							
Monitoring Well	**Date**	**Time**	**Temperature (°C)**	**Conductivity (ms/cm[c])**	**Turbidity (NTU)**	**pH**	**DO (mg/L)**	**ORP (mV)**
MW-1	3/24/2011	12:39	14.19	0.73	7.1	9.81	1.51	-37.9
		12:41	14.50	0.73	5.1	9.93	0.65	-44.9
		12:43	14.74	0.74	3.4	9.94	0.64	-47.6
		12:45	14.85	0.74	5.0	9.92	0.31	-48.8
		12:47	14.79	0.74	5.1	9.91	0.29	-50.4
		12:49	14.81	0.74	2.7	9.92	0.33	-52.8
MW-1	6/13/2011	11:00	16.40	0.75	2.14	9.84	1.96	-60.3
		11:02	16.28	0.75	2.14	9.93	1.03	-86.5
		11:04	15.99	0.75	1.97	9.96	0.61	-98.4
		11:06	15.95	0.74	1.96	9.95	0.36	-111.4
		11:08	16.00	0.74	1.82	9.98	0.30	-120.6
		11:10	15.98	0.74	1.79	9.97	0.24	-126.2
MW-1	9/13/2011	12:14	16.38	0.67	42.65	8.88	0.27	-282
		12:16	16.04	0.67	3.89	8.81	0.14	-294
		12:18	15.86	0.66	14.33	8.77	0.12	-300
		12:20	15.82	0.66	23.35	8.81	0.11	-307
		12:22	15.82	0.67	16.01	8.76	0.11	-309
		12:24	15.82	0.67	25.87	8.78	0.10	-313
MW-1	12/6/2011	12:34	13.45	0.78	613.80	8.49	1.90	-260
		12:36	13.94	0.78	1479	8.55	0.56	-269
		12:38	14.14	0.78	1373	8.54	0.40	-270
		12:40	14.25	0.79	2092	8.55	0.35	-271
		12:42	14.21	0.79	2248	8.60	0.31	-273
		12:44	14.18	0.79	963.90	8.62	0.30	-274
MW-1	3/14/2012	12:08	16.80	0.79	56.13	9.37	1.48	-105
		12:10	16.47	0.79	16.80	9.42	0.31	-146
		12:12	16.23	0.79	24.07	9.40	0.22	-157
		12:14	16.07	0.78	305.50	9.43	0.19	-167
		12:16	15.93	0.78	87.43	9.50	0.18	-169
		12:18	15.88	0.77	123.00	9.54	0.16	-173
MW-1	6/18/2012	12:52	19.77	0.75	2967	9.70	0.80	-144
		12:54	18.93	0.74	112.80	9.71	0.54	-179
		12:06	18.26	0.73	121.60	9.69	0.55	-187
		12:58	18.01	0.72	41.16	9.71	0.49	-193
		13:00	18.09	0.72	33.15	9.72	0.46	-196
		13:02	18.27	0.72	44.19	9.75	0.41	-198
MW-1	9/28/2012	10:14	15.81	0.58	1.91	10.69	2.69	-88
		10:16	15.68	0.57	2.77	10.66	0.66	-124
		10:18	15.60	0.58	1.32	10.68	0.24	-143
		10:20	15.53	0.58	1.19	10.71	0.13	-157
		10:22	15.47	0.58	1.45	10.78	0.08	-167
		10:24	15.45	0.58	1.07	10.78	0.06	-179
MW-1	12/19/2012	11:20	13.80	0.50	4.00	10.04	0.53	-150
		11:22	13.96	0.51	2.20	10.15	0.41	-170
		11:24	14.11	0.52	2.60	10.25	0.36	-183
		11:26	14.16	0.52	2.10	10.32	0.32	-193
		11:28	14.10	0.52	1.70	10.40	0.43	-200
		11:30	14.17	0.53	1.70	10.47	0.45	-205

Table 1
Field Parameter Data
Waukegan Station, Waukegan, Illinois
Midwest Generation
21153.033

PATRICK ENGINEERING	Field Parameter Data - Waukegan Station							
Monitoring Well	**Date**	**Time**	**Temperature (°C)**	**Conductivity (ms/cm^{c})**	**Turbidity (NTU)**	**pH**	**DO (mg/L)**	**ORP (mV)**
MW-2	3/24/2011	11:56	12.86	0.61	4.3	8.99	3.28	45.2
		11:58	13.08	0.62	3.7	9.26	0.95	35.9
		12:00	13.26	0.62	2.4	9.28	0.55	33.3
		12:02	13.32	0.62	1.7	9.30	0.42	31.9
		12:04	13.34	0.62	1.6	9.31	0.32	31.0
		12:06	13.40	0.62	1.3	9.31	0.47	28.4
		12:08	13.42	0.62	1.2	9.31	0.29	28.4
MW-2	6/13/2011	10:06	14.96	0.71	5.21	8.56	2.18	158.4
		10:08	14.71	0.69	4.63	8.59	0.39	135.4
		10:10	14.63	0.69	4.54	8.63	0.26	125.2
		10:12	14.60	0.69	4.31	8.64	0.22	112.5
		10:14	14.59	0.69	3.80	8.66	0.22	98.4
		10:16	14.58	0.69	3.73	8.65	0.22	93
MW-2	9/13/2011	11:22	14.96	0.57	13.58	7.79	0.26	-102
		11:24	14.63	0.57	34.95	7.73	0.18	-146
		11:26	14.55	0.56	14.07	7.74	0.16	-170
		11:28	14.49	0.56	11.62	7.79	0.15	-186
		11:30	14.97	0.56	5.53	7.77	0.15	-195
		11:32	14.46	0.56	10.21	7.82	0.14	-206
MW-2	12/6/2011	11:29	12.78	0.56	290.90	7.90	3.06	17
		11:31	13.16	0.55	2083	7.82	0.58	-59
		11:33	13.37	0.55	2332	7.81	0.37	-92
		11:35	13.46	0.55	2332	7.78	0.30	-103
		11:37	13.48	0.55	682.6	7.78	0.26	-113
		11:39	13.50	0.55	2332	7.77	0.24	-119
MW-2	3/14/2012	11:18	15.68	0.54	1135	8.07	1.66	42
		11:20	15.22	0.54	3018	7.91	0.38	-13
		11:22	15.02	0.53	3018	7.90	0.30	-27
		11:24	14.88	0.53	3018	7.84	0.24	-40
		11:26	14.81	0.56	285.30	7.79	0.23	-60
		11:28	14.79	0.55	692.80	7.82	0.12	-76
MW-2	6/18/2012	12:06	17.24	0.65	155.60	7.90	0.67	20
		12:08	16.75	0.64	26.79	7.88	0.30	-42
		12:10	16.44	0.64	20.10	7.88	0.25	-65
		12:12	16.30	0.63	17.92	7.88	0.20	-77
		12:14	16.31	0.63	16.03	7.90	0.18	-89
		12:16	16.22	0.63	31.51	7.90	0.17	-87
MW-2	9/28/2012	9:28	14.64	0.67	4.54	8.11	2.78	24
		9:30	14.52	0.67	2.95	8.17	0.74	-46
		9:32	14.37	0.67	2.87	8.16	0.28	-79
		9:34	14.30	0.66	5.34	8.18	0.16	-97
		9:36	14.27	0.66	2.95	8.20	0.10	-108
		9:38	14.24	0.66	4.36	8.24	0.07	-116
MW-2	12/19/2012	11:58	12.79	0.55	9.10	8.00	0.57	-40
		12:00	12.93	0.55	30.80	7.91	0.41	-36
		12:02	12.97	0.55	17.10	7.88	0.34	-35
		12:04	13.02	0.55	13.20	7.91	0.27	-37
		12:06	13.01	0.54	18.20	7.93	0.29	-40
		12:08	13.01	0.54	10.20	7.94	0.33	-43

Table 1
Field Parameter Data
Waukegan Station, Waukegan, Illinois
Midwest Generation
21153.033

PATRICK ENGINEERING	Field Parameter Data - Waukegan Station							
Monitoring Well	**Date**	**Time**	**Temperature (°C)**	**Conductivity (ms/cm[c])**	**Turbidity (NTU)**	**pH**	**DO (mg/L)**	**ORP (mV)**
MW-3	3/24/2011	11:16	14.05	0.55	8.0	8.39	2.61	91.9
		11:18	13.91	0.55	8.2	8.44	0.93	92
		11:20	14.02	0.55	7.3	8.49	1.08	91.4
		11:22	14.19	0.55	5.0	8.52	0.63	90
		11:24	14.35	0.55	3.9	8.56	0.53	87.7
		11:26	14.27	0.55	3.4	8.58	0.53	87
MW-3	6/13/2011	9:17	15.90	0.59	7.67	8.50	3.60	197.4
		9:19	15.65	0.59	7.61	8.64	1.04	182.7
		9:21	15.52	0.59	7.30	8.63	0.43	176.8
		9:23	15.51	0.59	7.24	8.65	0.30	169.5
		9:25	15.51	0.59	7.23	8.65	0.20	165.5
		9:27	15.50	0.59	7.10	8.64	0.16	163.2
MW-3	9/13/2011	10:34	15.02	0.34	20.18	9.37	0.65	-20
		10:36	14.68	0.34	29.54	9.27	0.13	-108
		10:38	14.45	0.34	20.37	9.24	0.09	-153
		10:40	14.36	0.34	18.88	9.25	0.07	-178
		10:42	14.33	0.34	16.53	9.24	0.06	-192
		10:44	14.32	0.34	19.87	9.20	0.06	-199
MW-3	12/6/2011	10:38	12.79	0.40	17.35	8.72	2.96	59
		10:40	13.24	0.41	67.38	8.71	0.62	27
		10:42	13.37	0.41	189.80	8.68	0.35	1
		10:44	13.42	0.41	610.90	8.66	0.24	-20
		10:46	13.57	0.41	430.50	8.63	0.20	-38
		10:48	13.62	0.41	254.40	8.61	0.17	-52
MW-3	3/14/2012	10:28	15.30	0.43	3018	8.85	1.78	128
		10:30	15.30	0.44	3018	8.84	0.32	89
		10:32	14.97	0.42	3018	8.90	0.16	-27
		10:34	14.89	0.43	2287	8.98	0.13	-46
		10:36	14.88	0.44	3018	8.93	0.13	-49
		10:38	14.89	0.44	3018	8.89	0.13	-47
MW-3	6/18/2012	11:26	17.47	0.56	32.68	7.42	1.04	125
		11:28	16.66	0.54	39.63	7.41	0.57	101
		11:30	16.47	0.54	47.17	7.45	0.45	94
		11:32	16.29	0.53	19.77	7.51	0.43	88
		11:34	16.24	0.53	28.04	7.58	0.42	82
		11:36	16.32	0.53	10.71	7.58	0.47	78
MW-3	9/28/2012	8:50	14.00	0.59	7.42	8.92	3.35	26
		8:52	13.92	0.59	5.44	8.97	0.84	20
		8:54	13.88	0.59	6.74	9.00	0.31	15
		8:56	13.87	0.59	5.42	9.05	0.16	10
		8:58	13.84	0.58	3.72	9.10	0.10	5
		9:00	13.83	0.58	4.89	9.14	0.07	2
MW-3	12/19/2012	12:38	12.98	0.56	10.60	7.34	0.43	46
		12:40	12.99	0.55	8.00	7.48	0.32	41
		12:42	13.01	0.55	5.80	7.68	0.24	35
		12:44	13.10	0.55	4.90	7.99	0.21	26
		12:46	13.06	0.55	4.00	8.17	0.25	19
		12:48	13.02	0.55	3.40	8.22	0.27	17

Table 1
Field Parameter Data
Waukegan Station, Waukegan, Illinois
Midwest Generation
21153.033

PATRICK ENGINEERING	Field Parameter Data - Waukegan Station							
Monitoring Well	**Date**	**Time**	**Temperature (°C)**	**Conductivity (ms/cm[c])**	**Turbidity (NTU)**	**pH**	**DO (mg/L)**	**ORP (mV)**
MW-4	3/24/2011	10:30	12.71	0.65	15.0	8.34	1.32	49
		10:32	12.87	0.63	12.0	8.41	0.68	21
		10:34	13.03	0.62	8.2	8.44	0.66	9.6
		10:36	13.12	0.62	8.3	8.46	0.42	9.1
		10:38	13.13	0.62	7.6	8.48	0.62	1.2
		10:40	13.14	0.62	5.6	8.54	0.30	-10.6
MW-4	6/13/2011	8:26	14.21	0.64	3.10	7.93	0.82	170.9
		8:28	14.12	0.60	3.14	7.83	0.42	153.9
		8:30	14.07	0.60	3.65	7.76	0.36	137.1
		8:32	14.09	0.60	3.70	7.74	0.31	125
		8:34	14.06	0.60	3.64	7.73	0.30	114.1
		8:36	14.07	0.60	3.51	7.69	0.31	115.3
MW-4	9/13/2011	9:48	14.14	0.60	15.19	7.91	2.04	40
		9:50	13.74	0.58	8.06	7.47	0.33	-18
		9:52	13.55	0.57	9.23	7.42	0.25	-49
		9:54	13.45	0.57	8.28	7.44	0.22	-69
		9:56	13.40	0.56	1.43	7.45	0.22	-80
		9:58	13.38	0.56	8.92	7.42	0.23	-85
MW-4	12/6/2011	9:48	11.99	0.52	155.8	7.45	1.40	51
		9:50	12.38	0.52	649.4	7.39	0.67	46
		9:52	12.40	0.52	1650	7.36	0.55	43
		9:54	12.48	0.52	684.4	7.33	0.51	41
		9:56	12.50	0.52	1349	7.35	0.48	40
		9:58	12.35	0.52	877.4	7.35	0.45	38
MW-4	3/14/2012	9:38	14.08	0.61	43.15	6.95	1.42	207
		9:40	13.89	0.59	3018	7.12	1.10	181
		9:42	13.82	0.59	3018	7.20	0.84	162
		9:44	13.84	0.62	3018	7.25	0.62	147
		9:46	13.80	0.59	1319	7.26	0.52	136
		9:48	13.78	0.58	1593	7.25	0.33	43
MW-4	6/18/2012	10:46	17.13	0.63	32.33	7.68	0.75	96
		10:48	16.44	0.61	29.84	7.52	0.39	56
		10:50	16.16	0.61	30.29	7.49	0.31	39
		10:52	15.77	0.60	37.48	7.57	0.26	27
		10:54	15.77	0.61	19.21	7.61	0.24	18
		10:56	15.78	0.61	30.85	7.51	0.25	17
MW-4	9/28/2012	8:08	13.26	0.54	8.82	8.52	4.02	-19
		8:10	13.27	0.54	3.35	8.56	1.37	-68
		8:12	13.28	0.54	4.79	8.59	0.79	-92
		8:14	13.28	0.53	3.87	8.61	0.63	-107
		8:16	13.29	0.53	2.26	8.62	0.53	-117
		8:18	13.28	0.53	3.61	8.63	0.49	-123
MW-4	12/19/2012	13:16	12.86	0.57	1.30	8.21	0.22	-101
		13:18	12.91	0.57	0.50	8.24	0.16	-111
		13:20	12.99	0.57	1.40	8.30	0.12	-124
		13:22	13.08	0.57	0.60	8.34	0.10	-134
		13:24	13.11	0.57	1.90	8.37	0.09	-141
		13:26	13.11	0.57	2.20	8.41	0.07	-151

Table 1
Field Parameter Data
Waukegan Station, Waukegan, Illinois
Midwest Generation
21153.033

PATRICK ENGINEERING	Field Parameter Data - Waukegan Station							
Monitoring Well	Date	Time	Temperature (°C)	Conductivity (ms/cm[c])	Turbidity (NTU)	pH	DO (mg/L)	ORP (mV)
MW-5	3/24/2011	9:44	11.72	2.13	6.6	7.56	2.33	-52.5
		9:46	11.86	2.16	56.1	7.57	1.06	-60.2
		9:48	11.88	2.16	79.9	7.56	0.74	-64.9
		9:50	12.11	2.16	37.2	7.56	0.76	-67.7
		9:52	12.14	2.16	157.2	7.56	0.50	-70.6
		9:54	12.13	2.16	109.0	7.56	0.45	-72.1
MW-5	6/13/2011	7:37	13.52	4.34	10.11	7.23	2.32	104.4
		7:39	13.44	4.34	12.58	6.90	0.92	93.8
		7:41	13.38	4.34	12.32	6.77	0.67	90.1
		7:43	13.39	4.34	12.10	6.73	0.65	87.3
		7:45	13.40	4.34	11.54	6.72	0.56	83.6
		7:47	13.41	4.34	11.09	6.72	0.49	81.8
MW-5	9/13/2011	9:02	13.63	2.38	49.10	6.86	1.55	49
		9:04	13.50	2.35	42.17	6.85	0.15	14
		9:06	13.43	2.33	440.10	6.85	0.07	-3
		9:08	13.40	2.31	23.21	6.86	0.05	-15
		9:10	13.35	2.29	672.30	6.85	0.04	-23
		9:12	13.35	2.28	174.40	6.86	0.04	-32
		9:14	13.37	2.26	620.20	6.87	0.04	-40
MW-5	12/6/2011	9:02	11.54	1.86	71.77	7.16	0.99	-59
		9:04	11.70	1.85	102.7	7.15	0.76	-65
		9:06	11.59	1.85	255.0	7.15	0.61	-70
		9:08	11.58	1.85	1105	7.15	0.51	-74
		9:10	11.62	1.86	922.0	7.15	0.43	-79
		9:12	11.63	1.87	1316	7.15	0.35	-84
MW-5	3/14/2012	8:42	14.16	0.59	3018	7.26	1.54	143
		8:44	14.16	0.59	3018	7.33	1.09	22
		8:46	14.19	0.56	3018	7.37	0.30	-10
		8:48	14.22	0.55	1673	7.44	0.28	-25
		8:50	14.22	0.55	3018	7.45	0.25	-33
		8:52	14.23	0.52	1562	7.45	0.16	-39
MW-5	6/18/2012	10:08	16.61	1.71	660.0	7.06	0.86	-19
		10:10	16.19	1.67	2917	7.02	0.41	-52
		10:12	15.89	1.67	2967	6.97	0.28	-61
		10:14	15.77	1.67	2967	6.95	0.19	-66
		10:16	15.77	1.68	2967	6.96	0.15	-72
		10:18	15.74	1.68	2967	6.97	0.12	-76
MW-5	9/28/2012	7:34	13.15	1.76	8.38	7.35	3.62	-90
		7:36	13.13	1.76	5.64	7.33	1.00	-101
		7:38	13.15	1.75	3.08	7.33	0.40	-104
		7:40	13.17	1.76	3.72	7.33	0.23	-106
		7:42	13.18	1.76	3.32	7.32	0.16	-107
		7:44	13.17	1.76	2.77	7.32	0.13	-108
MW-5	12/19/2012	15:20	12.13	1.73	24.80	7.37	0.28	-94
		15:22	12.23	1.74	29.40	7.37	0.22	-95
		15:24	12.42	1.74	31.50	7.36	0.16	-98
		15:26	12.43	1.74	31.00	7.36	0.14	-99
		15:28	12.47	1.75	34.90	7.36	0.12	-100
		15:30	12.46	1.74	34.20	7.36	0.10	-101

MWG13-15_41622

Table 1
Field Parameter Data
Waukegan Station, Waukegan, Illinois
Midwest Generation
21153.033

PATRICK ENGINEERING	Field Parameter Data - Waukegan Station							
Monitoring Well	**Date**	**Time**	**Temperature (°C)**	**Conductivity (ms/cm[c])**	**Turbidity (NTU)**	**pH**	**DO (mg/L)**	**ORP (mV)**
MW-6	12/19/2012	14:48	11.30	1.05	9.60	7.52	0.19	-121
		14:50	11.36	1.05	9.00	7.52	0.12	-123
		14:52	11.37	1.05	6.10	7.52	0.08	-125
		14:54	11.38	1.05	7.40	7.52	0.06	-127
		14:56	11.33	1.05	3.80	7.52	0.05	-128
		14:58	11.32	1.05	4.80	7.52	0.07	-128
MW-7	12/19/2012	14:10	12.55	1.52	10.70	7.28	0.42	-115
		14:12	12.68	1.53	6.50	7.28	0.26	-118
		14:14	12.85	1.54	7.60	7.27	0.14	-123
		14:16	12.90	1.54	5.00	7.28	0.10	-126
		14:18	12.95	1.54	4.40	7.28	0.08	-128
		14:20	12.99	1.54	6.10	7.27	0.05	-129

°C	degrees Celsius
ms/cm[c]	Millisiemens/Centimeters
NTU	Nephelometric Turbidity Units
mg/L	milligrams/Liter
mV	milliVolts

TABLE 2

GROUNDWATER ELEVATION SURVEY DATA

Table 2
Groundwater Elevation Data
Waukegan Station, Waukegan, Illinois
Midwest Generation
21153.033

PATRICK ENGINEERING	Date	Water Elevation	Depth to Water Pre-Purge	Depth to Water Pre-Sampling	Water Elevation Pre-Sampling	Depth to Bottom of Well	Bottom of Well Elevation	Ground Elevation	Top of Riser Elevation
MONITORING WELLS									
MW-1	3/24/2011	581.725	21.41	21.41	581.725	32.18	570.955	603.462	603.135
	6/13/2011	583.335	19.80	19.81	583.325	32.18	570.955	603.462	603.135
	9/13/2011	581.135	22.00	22.00	581.135	32.18	570.955	603.462	603.135
	12/6/2011	581.145	21.99	21.99	581.145	32.18	570.955	603.462	603.135
	3/14/2012	581.175	21.96	21.96	581.175	32.18	570.955	603.462	603.135
	6/18/2012	580.855	22.28	22.28	580.855	32.18	570.955	603.462	603.135
	9/28/2012	579.645	23.49	23.49	579.645	32.18	570.955	603.462	603.135
	12/19/2012	579.415	23.72	23.72	579.415	32.18	570.955	603.462	603.135
MW-2	3/24/2011	581.663	21.38	21.32	581.723	29.56	573.483	603.283	603.043
	6/13/2011	583.313	19.73	19.73	583.313	29.56	573.483	603.283	603.043
	9/13/2011	581.193	21.85	21.85	581.193	29.56	573.483	603.283	603.043
	12/6/2011	581.223	21.82	21.82	581.223	29.56	573.483	603.283	603.043
	3/14/2012	581.233	21.81	21.83	581.213	29.56	573.483	603.283	603.043
	6/18/2012	580.893	22.15	22.15	580.893	29.56	573.483	603.283	603.043
	9/28/2012	579.733	23.31	23.31	579.733	29.56	573.483	603.283	603.043
	12/19/2012	579.273	23.77	23.77	579.273	29.56	573.483	603.283	603.043
MW-3	3/24/2011	581.746	21.15	21.16	581.736	29.84	573.056	603.178	602.896
	6/13/2011	583.336	19.56	19.56	583.336	29.84	573.056	603.178	602.896
	9/13/2011	581.176	21.72	21.72	581.176	29.84	573.056	603.178	602.896
	12/6/2011	581.216	21.68	21.68	581.216	29.84	573.056	603.178	602.896
	3/14/2012	581.216	21.68	21.68	581.216	29.84	573.056	603.178	602.896
	6/18/2012	580.916	21.98	21.98	580.916	29.84	573.056	603.178	602.896
	9/28/2012	579.676	23.22	23.22	579.676	29.84	573.056	603.178	602.896
	12/19/2012	579.446	23.45	23.45	579.446	29.84	573.056	603.178	602.896
MW-4	3/24/2011	581.831	21.32	21.38	581.771	29.85	573.301	603.525	603.151
	6/13/2011	583.351	19.80	19.80	583.351	29.85	573.301	603.525	603.151
	9/13/2011	581.191	21.96	21.96	581.191	29.85	573.301	603.525	603.151
	12/6/2011	581.231	21.92	21.92	581.231	29.85	573.301	603.525	603.151
	3/14/2012	581.201	21.95	21.95	581.201	29.85	573.301	603.525	603.151
	6/18/2012	580.881	22.27	22.27	580.881	29.85	573.301	603.525	603.151
	9/28/2012	579.551	23.60	23.60	579.551	29.85	573.301	603.525	603.151
	12/19/2012	579.341	23.81	23.81	579.341	29.85	573.301	603.525	603.151
MW-5	3/24/2011	583.430	21.41	21.41	583.430	31.92	572.920	601.526	604.840
	6/13/2011	584.550	20.29	20.28	584.560	31.92	572.920	601.526	604.840
	9/13/2011	582.660	22.18	22.20	582.640	31.92	572.920	601.526	604.840
	12/6/2011	582.820	22.02	22.02	582.820	31.92	572.920	601.526	604.840
	3/14/2012	582.980	21.86	21.86	582.980	31.92	572.920	601.526	604.840
	6/18/2012	582.220	22.62	22.62	582.220	31.92	572.920	601.526	604.840
	9/28/2012	581.130	23.71	23.71	581.130	31.92	572.920	601.526	604.840
	12/19/2012	580.650	24.19	24.19	580.650	31.92	572.920	601.526	604.840
MW-6	12/19/2012	580.885	8.84	8.84	580.885	17.70	572.025	586.745	589.725
MW-7	12/19/2012	579.570	18.72	18.72	579.570	27.96	570.330	595.870	598.290

Notes- Elevations are leveled from site control points per Commonwealth Edison Drawing "Coordinates & Elevations for Coal Monuments & Test Borings-Waukegan" revised 12/1/1999
- Elevations are shown in feet

MWG13-15_41625

TABLE 3

GROUNDWATER ANALYTICAL RESULTS

Table 3
GROUNDWATER ANALYTICAL RESULTS
Waukegan Station
Waukegan, Illinois
Midwest Generation
21253.053

PATRICK ENGINEERING	Sample Analysis Method	Groundwater Quality Standard (mg/L)	MW-1 (mg/L)	MW-1 (mg/L)	MW-1 (mg/L)	MW-1 (mg/L)	MW-1 (mg/L)	MW-1 (mg/L)	MW-1 (mg/L)	MW-1 (mg/L)	MW-1 (mg/L)
Chemical Name		Class I*	10/25/10	3/24/11	6/13/11	9/13/11	12/6/11	3/14/12	6/18/12	9/28/12	12/19/12
Antimony	Metals 6020	0.006	0.0052	ND	ND	ND	ND	ND	0.0056	ND	ND
Arsenic	Metals 6020	0.01[a]	**0.054**	0.04	**0.17**	**0.077**	**0.057**	**0.078**	**0.07**	**0.07**	**0.091**
Barium	Metals 6020	2.0	0.023	0.022	0.02	0.038	0.051	0.034	0.028	0.013	0.013
Beryllium	Metals 6020	0.004	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium	Metals 6020	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium	Metals 6020	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cobalt	Metals 6020	1.0	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper	Metals 6020	0.65	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cyanide	Dissolved 9014	0.2	ND	ND	0.02	0.013	ND	ND	0.012	0.019	ND
Iron	Metals 6020	5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lead	Metals 6020	0.0075	ND	ND	ND	ND	ND	ND	ND	ND	ND
Manganese	Metals 6020	0.15	ND	0.0027	0.0086	0.02	0.011	0.0052	ND	ND	ND
Mercury	Mercury 7470A	0.002	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	Metals 6020	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND
Selenium	Metals 6020	0.05	0.031	0.03	0.016	0.039	0.032	0.037	0.013	0.0093	ND
Silver	Metals 6020	0.05	ND	ND	ND	ND	ND	ND	ND	ND	ND
Thallium	Metals 6020	0.002	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	Metals 6020	0.049	NS	NS	NS	NS	NS	NS	NS	NS	0.026
Zinc	Metals 6020	5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND
Boron	Metals 6020	2	**2.6**	2	**2.6**	**2.5**	**2.8**	**2.5**	2.0	1.9	1.9
Sulfate	Dissolved 9038	400	350	230	260	280	330	390	300	240	200
Chloride	Dissolved 9251	200	39	48	52	41	32	47	46	47	48
Nitrogen/Nitrate	Nitrogen By calc	10	ND	ND	ND	0.52	0.3	ND	ND	ND	ND
Total Dissolved Solids	Dissolved 2540C	1,200	460	470	460	570	750	630	630	450	460
Fluoride	Dissolved 4500 FC	4	0.45	0.59	0.71	0.33	0.46	0.46	0.39	0.34	0.41
Nitrogen/Nitrite	Dissolved 4500 NO2	NA	ND	ND	ND	ND	0.021	0.1	0.023	ND	0.055
Nitrogen/Nitrate/Nitrite	Dissolved 4500 NO3	NA	ND	ND	ND	0.52	0.32	ND	ND	ND	ND
Perchlorate	EPA 314.0	0.0049	NS	NS	NS	NS	NS	NS	NS	NS	ND
Benzene	8260B	0.005	NS	NS	NS	NS	NS	NS	NS	NS	ND
BTEX	8260B	11.705	NS	NS	NS	NS	NS	NS	NS	NS	ND

Notes:
*Class I Groundwater Standards from 35 IAC Part 620
[a]Groundwater standard for arsenic changed from 0.05 mg/L to 0.01 mg/L
Bold values show exceedences of 35 IAC Part 620
NA - No Class I Groundwater Standard available
ND-non detect
mg/L-milligrams per liter

Table 3
GROUNDWATER ANALYTICAL RESULTS
Waukegan Station
Waukegan, Illinois
Midwest Generation
21253.053

PATRICK ENGINEERING	Sample Analysis Method	Groundwater Quality Standard (mg/L)	MW-2 (mg/L)	MW-2 (mg/L)	MW-2 (mg/L)	MW-2 (mg/L)	MW-2 (mg/L)	MW-2 (mg/L)	MW-2 (mg/L)	MW-2 (mg/L)	MW-2 (mg/L)
Chemical Name		Class I*	10/25/10	3/24/11	6/13/11	9/13/11	12/6/11	3/14/12	6/18/12	9/28/12	12/19/12
Antimony	Metals 6020	0.006	**0.015**	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	Metals 6020	0.01[a]	**0.025**	**0.016**	**0.012**	0.0087	0.0094	0.0094	**0.011**	**0.011**	0.0089
Barium	Metals 6020	2.0	0.0091	0.014	0.024	0.02	0.023	0.017	0.016	0.019	0.016
Beryllium	Metals 6020	0.004	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium	Metals 6020	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium	Metals 6020	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cobalt	Metals 6020	1.0	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper	Metals 6020	0.65	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cyanide	Dissolved 9014	0.2	ND	ND	0.014	0.019	ND	ND	ND	ND	ND
Iron	Metals 6020	5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lead	Metals 6020	0.0075	ND	ND	ND	ND	ND	ND	ND	ND	ND
Manganese	Metals 6020	0.15	0.0034	0.018	0.032	0.038	0.035	0.028	0.031	0.025	0.023
Mercury	Mercury 7470A	0.002	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	Metals 6020	0.1	ND	ND	ND	ND	ND	ND	ND	0.0025	ND
Selenium	Metals 6020	0.05	0.026	0.0085	0.028	0.022	0.0086	0.0046	ND	0.0027	ND
Silver	Metals 6020	0.05	ND	ND	ND	ND	ND	ND	ND	ND	ND
Thallium	Metals 6020	0.002	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	Metals 6020	0.049	NS	NS	NS	NS	NS	NS	NS	NS	ND
Zinc	Metals 6020	5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND
Boron	Metals 6020	2	**2.2**	**2.2**	2	1.7	1.9	2	**2.6**	**2.1**	1.9
Sulfate	Dissolved 9038	400	230	160	150	200	180	200	210	270	210
Chloride	Dissolved 9251	200	42	45	46	45	50	53	48	55	54
Nitrogen/Nitrate	Nitrogen By calc	10	ND	ND	0.23	0.12	ND	ND	ND	ND	ND
Total Dissolved Solids	Dissolved 2540C	1,200	410	400	410	460	490	400	520	540	500
Fluoride	Dissolved 4500 FC	4	0.35	0.53	0.8	0.56	0.67	0.88	1.1	1.1	1.3
Nitrogen/Nitrite	Dissolved 4500 NO2	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrogen/Nitrate/Nitrite	Dissolved 4500 NO3	NA	ND	ND	0.23	0.12	ND	ND	ND	ND	ND
Perchlorate	EPA 314.0	0.0049	NS	NS	NS	NS	NS	NS	NS	NS	ND
Benzene	8260B	0.005	NS	NS	NS	NS	NS	NS	NS	NS	ND
BTEX	8260B	11.705	NS	NS	NS	NS	NS	NS	NS	NS	ND

Notes:
*Class I Groundwater Standards from 35 IAC Part 620
[a]Groundwater standard for arsenic changed from 0.05 mg/L to 0.01 mg/L
Bold values show exceedences of 35 IAC Part 620
NA - No Class I Groundwater Standard available
ND-non detect
mg/L-milligrams per liter

MWG13-15_41628

Table 3
GROUNDWATER ANALYTICAL RESULTS
Waukegan Station
Waukegan, Illinois
Midwest Generation
21253.053

PATRICK ENGINEERING	Sample Analysis Method	Groundwater Quality Standard (mg/L)	MW-3 (mg/L)	MW-3 (mg/L)	MW-3 (mg/L)	MW-3 (mg/L)	MW-3 (mg/L)	MW-3 (mg/L)	MW-3 (mg/L)	MW-3 (mg/L)	MW-3 (mg/L)
Chemical Name		Class I*	10/25/10	3/24/11	6/13/11	9/13/11	12/6/11	3/14/12	6/18/12	9/28/12	12/19/12
Antimony	Metals 6020	0.006	0.0051	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	Metals 6020	0.01[a]	0.0043	0.0041	0.0049	0.0077	0.0049	0.0071	0.0030	0.0044	0.0031
Barium	Metals 6020	2.0	0.0057	0.0086	0.018	0.0044	0.0058	0.0049	0.0067	0.01	0.011
Beryllium	Metals 6020	0.004	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium	Metals 6020	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium	Metals 6020	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cobalt	Metals 6020	1.0	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper	Metals 6020	0.65	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cyanide	Dissolved 9014	0.2	ND	ND	ND	0.03	ND	ND	ND	ND	ND
Iron	Metals 6020	5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lead	Metals 6020	0.0075	ND	ND	ND	ND	ND	ND	ND	ND	ND
Manganese	Metals 6020	0.15	ND	0.0059	0.0044	ND	0.0054	0.0036	0.0070	0.0034	0.0034
Mercury	Mercury 7470A	0.002	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	Metals 6020	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND
Selenium	Metals 6020	0.05	0.0094	0.016	0.03	0.012	0.011	0.0064	0.017	0.0072	ND
Silver	Metals 6020	0.05	ND	ND	ND	ND	ND	ND	ND	ND	ND
Thallium	Metals 6020	0.002	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	Metals 6020	0.049	NS	NS	NS	NS	NS	NS	NS	NS	ND
Zinc	Metals 6020	5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND
Boron	Metals 6020	2	1.7	**2.2**	**2.3**	1.6	1.6	1.5	1.3	1.4	1.9
Sulfate	Dissolved 9038	400	120	130	130	97	110	140	150	260	240
Chloride	Dissolved 9251	200	53	49	53	49	51	52	41	47	49
Nitrogen/Nitrate	Nitrogen By calc	10	ND	ND	0.29	ND	ND	ND	0.17	0.42	ND
Total Dissolved Solids	Dissolved 2540C	1,200	280	350	340	300	380	340	420	480	520
Fluoride	Dissolved 4500 FC	4	0.27	0.47	0.39	0.24	0.67	0.64	0.76	0.96	1.1
Nitrogen/Nitrite	Dissolved 4500 NO2	NA	ND	ND	ND	ND	ND	ND	ND	0.076	ND
Nitrogen/Nitrate/Nitrite	Dissolved 4500 NO3	NA	ND	ND	0.29	ND	ND	ND	0.17	0.5	ND
Perchlorate	EPA 314.0	0.0049	NS	NS	NS	NS	NS	NS	NS	NS	ND
Benzene	8260B	0.005	NS	NS	NS	NS	NS	NS	NS	NS	ND
BTEX	8260B	11.705	NS	NS	NS	NS	NS	NS	NS	NS	ND

Notes:
*Class I Groundwater Standards from 35 IAC Part 620
[a]Groundwater standard for arsenic changed from 0.05 mg/L to 0.01 mg/L
Bold values show exceedences of 35 IAC Part 620
NA - No Class I Groundwater Standard available
ND-non detect
mg/L-milligrams per liter

Table 3
GROUNDWATER ANALYTICAL RESULTS
Waukegan Station
Waukegan, Illinois
Midwest Generation
21253.053

PATRICK ENGINEERING	Sample Analysis Method	Groundwater Quality Standard (mg/L)	MW-4 (mg/L)	MW-4 (mg/L)	MW-4 (mg/L)	MW-4 (mg/L)	MW-4 (mg/L)	MW-4 (mg/L)	MW-4 (mg/L)	MW-4 (mg/L)	MW-4 (mg/L)
Chemical Name		Class I*	10/25/10	3/24/11	6/13/11	9/13/11	12/6/11	3/14/12	6/18/12	9/28/12	12/19/12
Antimony	Metals 6020	0.006	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	Metals 6020	0.01[a]	0.006	0.0077	0.0059	0.0058	0.0065	0.0068	0.0091	0.0079	0.008
Barium	Metals 6020	2.0	0.026	0.025	0.034	0.039	0.036	0.038	0.025	0.024	0.031
Beryllium	Metals 6020	0.004	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium	Metals 6020	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium	Metals 6020	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cobalt	Metals 6020	1.0	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper	Metals 6020	0.65	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cyanide	Dissolved 9014	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iron	Metals 6020	5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lead	Metals 6020	0.0075	ND	ND	ND	ND	ND	ND	ND	ND	ND
Manganese	Metals 6020	0.15	0.058	0.035	0.028	**0.36**	0.025	0.038	0.041	0.028	0.031
Mercury	Mercury 7470A	0.002	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	Metals 6020	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND
Selenium	Metals 6020	0.05	0.0039	ND	0.022	0.025	0.015	0.0091	ND	0.0061	ND
Silver	Metals 6020	0.05	ND	ND	ND	ND	ND	ND	ND	ND	ND
Thallium	Metals 6020	0.002	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	Metals 6020	0.049	NS	NS	NS	NS	NS	NS	NS	NS	ND
Zinc	Metals 6020	5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND
Boron	Metals 6020	2	2	**2.1**	2	1.8	**2.1**	2.2	**2.5**	**2.2**	**2.5**
Sulfate	Dissolved 9038	400	250	170	160	160	160	280	250	210	220
Chloride	Dissolved 9251	200	39	47	45	59	60	71	53	55	55
Nitrogen/Nitrate	Nitrogen By calc	10	ND	ND	0.18	0.14	ND	ND	ND	ND	0.31
Total Dissolved Solids	Dissolved 2540C	1,200	430	400	380	470	480	490	540	440	510
Fluoride	Dissolved 4500 FC	4	0.6	0.84	0.97	0.67	0.82	0.73	0.82	0.85	0.72
Nitrogen/Nitrite	Dissolved 4500 NO2	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrogen/Nitrate/Nitrite	Dissolved 4500 NO3	NA	ND	ND	0.18	0.14	ND	ND	ND	ND	0.31
Perchlorate	EPA 314.0	0.0049	NS	NS	NS	NS	NS	NS	NS	NS	ND
Benzene	8260B	0.005	NS	NS	NS	NS	NS	NS	NS	NS	ND
BTEX	8260B	11.705	NS	NS	NS	NS	NS	NS	NS	NS	ND

Notes:
*Class I Groundwater Standards from 35 IAC Part 620
[a]Groundwater standard for arsenic changed from 0.05 mg/L to 0.01 mg/L
Bold values show exceedences of 35 IAC Part 620
NA - No Class I Groundwater Standard available
ND-non detect
mg/L-milligrams per liter

Table 3
GROUNDWATER ANALYTICAL RESULTS
Waukegan Station
Waukegan, Illinois
Midwest Generation
21253.053

PATRICK ENGINEERING	Sample Analysis Method	Groundwater Quality Standard (mg/L)	MW-5 (mg/L)	MW-5 (mg/L)	MW-5 (mg/L)	MW-5 (mg/L)	MW-5 (mg/L)	MW-5 (mg/L)	MW-5 (mg/L)	MW-5 (mg/L)	MW-5 (mg/L)
Chemical Name		Class I*	10/25/10	3/24/11	6/13/11	9/13/11	12/6/11	3/14/12	6/18/12	9/28/12	12/19/12
Antimony	Metals 6020	0.006	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	Metals 6020	0.01[a]	0.0076	0.0082	0.0013	ND	0.01	0.01	0.0098	**0.012**	**0.011**
Barium	Metals 6020	2.0	0.06	0.066	0.057	0.041	0.073	0.063	0.051	0.067	0.07
Beryllium	Metals 6020	0.004	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium	Metals 6020	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium	Metals 6020	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cobalt	Metals 6020	1.0	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper	Metals 6020	0.65	ND	ND	ND	ND	ND	ND	ND	0.0021	ND
Cyanide	Dissolved 9014	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iron	Metals 6020	5.0	3.5	2.8	0.95	0.42	**5.6**	**6.6**	**5.9**	**5.1**	3.9
Lead	Metals 6020	0.0075	ND	ND	ND	ND	ND	ND	ND	ND	ND
Manganese	Metals 6020	0.15	**0.71**	**0.6**	**0.28**	0.03	**0.99**	**0.76**	**0.75**	**0.57**	**0.48**
Mercury	Mercury 7470A	0.002	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	Metals 6020	0.1	ND	ND	0.0026	ND	ND	ND	ND	ND	ND
Selenium	Metals 6020	0.05	0.0028	ND	0.0094	ND	ND	ND	ND	ND	ND
Silver	Metals 6020	0.05	ND	ND	ND	ND	ND	ND	ND	ND	ND
Thallium	Metals 6020	0.002	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	Metals 6020	0.049	NS	NS	NS	NS	NS	NS	NS	NS	ND
Zinc	Metals 6020	5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND
Boron	Metals 6020	2	**28**	**33**	**12**	**30**	**37**	**44**	**47**	**41**	**27**
Sulfate	Dissolved 9038	400	**920**	**780**	**1,100**	**810**	**1,100**	**980**	**800**	**710**	**550**
Chloride	Dissolved 9251	200	100	120	**540**	**220**	110	50	50	170	**220**
Nitrogen/Nitrate	Nitrogen By calc	10	ND	0.27	0.2	ND	ND	ND	ND	ND	ND
Total Dissolved Solids	Dissolved 2540C	1,200	**1,500**	**1,800**	**3,300**	**2,300**	**2,300**	**2,000**	**2,000**	**1,900**	**1,800**
Fluoride	Dissolved 4500 FC	4	0.29	0.34	0.24	0.18	0.29	0.29	0.31	0.32	0.36
Nitrogen/Nitrite	Dissolved 4500 NO2	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrogen/Nitrate/Nitrite	Dissolved 4500 NO3	NA	ND	0.27	0.2	ND	ND	ND	ND	ND	ND
Perchlorate	EPA 314.0	0.0049	NS	NS	NS	NS	NS	NS	NS	NS	ND
Benzene	8260B	0.005	NS	NS	NS	NS	NS	NS	NS	NS	ND
BTEX	8260B	11.705	NS	NS	NS	NS	NS	NS	NS	NS	ND

Notes:
*Class I Groundwater Standards from 35 IAC Part 620
[a]Groundwater standard for arsenic changed from 0.05 mg/L to 0.01 mg/L
Bold values show exceedences of 35 IAC Part 620
NA - No Class I Groundwater Standard available
ND-non detect
mg/L-milligrams per liter

MWG13-15_41631

Table 3
GROUNDWATER ANALYTICAL RESULTS
Waukegan Station
Waukegan, Illinois
Midwest Generation
21253.053

PATRICK ENGINEERING Chemical Name	Sample Analysis Method	Groundwater Quality Standard (mg/L) Class I*	MW-6 (mg/L) 12/19/12	MW-7 (mg/L) 12/19/12
Antimony	Metals 6020	0.006	ND	ND
Arsenic	Metals 6020	0.01[a]	0.0029	0.0099
Barium	Metals 6020	2.0	0.11	0.08
Beryllium	Metals 6020	0.004	ND	ND
Cadmium	Metals 6020	0.005	ND	ND
Chromium	Metals 6020	0.1	ND	ND
Cobalt	Metals 6020	1.0	ND	ND
Copper	Metals 6020	0.65	ND	ND
Cyanide	Dissolved 9014	0.2	ND	ND
Iron	Metals 6020	5.0	2.6	**12**
Lead	Metals 6020	0.0075	ND	ND
Manganese	Metals 6020	0.15	**0.21**	**0.46**
Mercury	Mercury 7470A	0.002	ND	ND
Nickel	Metals 6020	0.1	ND	ND
Selenium	Metals 6020	0.05	ND	ND
Silver	Metals 6020	0.05	ND	ND
Thallium	Metals 6020	0.002	ND	ND
Vanadium	Metals 6020	0.049	ND	ND
Zinc	Metals 6020	5.0	ND	ND
Boron	Metals 6020	2	1.1	**43**
Sulfate	Dissolved 9038	400	160	**630**
Chloride	Dissolved 9251	200	110	60
Nitrogen/Nitrate	Nitrogen By calc	10	ND	ND
Total Dissolved Solids	Dissolved 2540C	1,200	940	**1,800**
Fluoride	Dissolved 4500 FC	4	0.43	0.48
Nitrogen/Nitrite	Dissolved 4500 NO2	NA	ND	ND
Nitrogen/Nitrate/Nitrite	Dissolved 4500 NO3	NA	ND	ND
Perchlorate	EPA 314.0	0.0049	ND	ND
Benzene	8260B	0.005	ND	ND
BTEX	8260B	11.705	ND	ND

Notes:
*Class I Groundwater Standards from 35 IAC Part 620
[a]Groundwater standard for arsenic changed from 0.05 mg/L to 0.01 mg/L
Bold values show exceedences of 35 IAC Part 620
NA - No Class I Groundwater Standard available
ND-non detect
mg/L-milligrams per liter

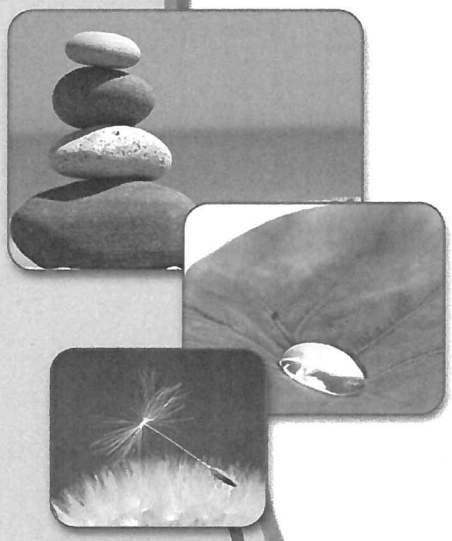
MWG13-15_41632

ATTACHMENT A

LABORATORY DATA

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: 500-53406-1
Client Project/Site: Midwest Generation Waukegan Groundwater

For:
Patrick Engineering
4985 Varsity Drive
Lisle, Illinois 60532-4144

Attn: Andrew Gagnon

Authorized for release by:
1/11/2013 2:32:05 PM

Bonnie Stadelmann
Project Manager II
bonnie.stadelmann@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.

Table of Contents

Job ID: 500-53406-1

Laboratory: TestAmerica Chicago

Narrative

Job Narrative
500-53406-1

Comments
No additional comments.

Receipt
The samples were received on 12/20/2012 7:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 3.9° C and 4.2° C.

GC/MS VOA
No analytical or quality issues were noted.

Metals
No analytical or quality issues were noted.

Field Service / Mobile Lab
No analytical or quality issues were noted.

General Chemistry
Method(s) 314.0: The following samples: MW-5 (500-53406-5), MW-6 (500-53406-6), MW-7 (500-53406-7), in batch 8356, were re-analyzed, due to matrix, at a 2X dilution. Per the method, sample conductivities must not exceed the maximum conductivity threshold that has been established. Initial conductivity readings for these samples did not indicate that dilutions were necessary. However, after analysis, it was determined that the samples (MW-5 (500-53406-5), MW-6 (500-53406-6), MW-7 (500-53406-7)) were very close to exceeding the level of the interference anions in the Instrument Performance Check (IPC labeled as INF in position 5 of batch 8305) To ensure that the sample matrix was not interfering with the detection of perchlorate, the samples indicated above were diluted and re-analyzed.

Method(s) SM 4500 F C: The initial control blank (ICB) for the following fluoride samples in batch 174166 was outside of the control limits. However, the method blank (MB) was in control and effectively bracketed. The remaining QC was in control, therefore the data was reported. (ICB 500-174166/2)

No other analytical or quality issues were noted.

Detection Summary

Client: Patrick Engineering
Project/Site: Midwest Generation Waukegan Groundwater

TestAmerica Job ID: 500-53406-1

Client Sample ID: MW-1 — Lab Sample ID: 500-53406-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.091		0.0010		mg/L	1		6020	Dissolved
Barium	0.013		0.0025		mg/L	1		6020	Dissolved
Boron	1.9		0.050		mg/L	1		6020	Dissolved
Vanadium	0.026		0.0050		mg/L	1		6020	Dissolved
Sulfate	200		50		mg/L	10		9038	Dissolved
Chloride	48		2.0		mg/L	1		9251	Dissolved
Total Dissolved Solids	460		10		mg/L	1		SM 2540C	Dissolved
Fluoride	0.41	^	0.10		mg/L	1		SM 4500 F C	Dissolved
Nitrogen, Nitrite	0.055		0.020		mg/L	1		SM 4500 NO2 B	Dissolved

Client Sample ID: MW-2 — Lab Sample ID: 500-53406-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0089		0.0010		mg/L	1		6020	Dissolved
Barium	0.016		0.0025		mg/L	1		6020	Dissolved
Boron	1.9		0.050		mg/L	1		6020	Dissolved
Manganese	0.023		0.0025		mg/L	1		6020	Dissolved
Sulfate	210		50		mg/L	10		9038	Dissolved
Chloride	54		2.0		mg/L	1		9251	Dissolved
Total Dissolved Solids	500		10		mg/L	1		SM 2540C	Dissolved
Fluoride	1.3	^	0.10		mg/L	1		SM 4500 F C	Dissolved

Client Sample ID: MW-3 — Lab Sample ID: 500-53406-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0031		0.0010		mg/L	1		6020	Dissolved
Barium	0.011		0.0025		mg/L	1		6020	Dissolved
Boron	1.9		0.050		mg/L	1		6020	Dissolved
Manganese	0.0034		0.0025		mg/L	1		6020	Dissolved
Sulfate	240		50		mg/L	10		9038	Dissolved
Chloride	49		2.0		mg/L	1		9251	Dissolved
Total Dissolved Solids	520		10		mg/L	1		SM 2540C	Dissolved
Fluoride	1.1	^	0.10		mg/L	1		SM 4500 F C	Dissolved

Client Sample ID: MW-4 — Lab Sample ID: 500-53406-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0080		0.0010		mg/L	1		6020	Dissolved
Barium	0.031		0.0025		mg/L	1		6020	Dissolved
Boron	2.5		0.50		mg/L	10		6020	Dissolved
Manganese	0.031		0.0025		mg/L	1		6020	Dissolved
Sulfate	220		50		mg/L	10		9038	Dissolved
Chloride	55		2.0		mg/L	1		9251	Dissolved
Nitrogen, Nitrate	0.31		0.10		mg/L	1		Nitrate by calc	Dissolved
Total Dissolved Solids	510		10		mg/L	1		SM 2540C	Dissolved
Fluoride	0.72	^	0.10		mg/L	1		SM 4500 F C	Dissolved
Nitrogen, Nitrate Nitrite	0.31		0.10		mg/L	1		SM 4500 NO3 F	Dissolved

Client Sample ID: MW-5 — Lab Sample ID: 500-53406-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.011		0.0010		mg/L	1		6020	Dissolved

Detection Summary

Client: Patrick Engineering
Project/Site: Midwest Generation Waukegan Groundwater

TestAmerica Job ID: 500-53406-1

Client Sample ID: MW-5 (Continued)

Lab Sample ID: 500-53406-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.070		0.0025		mg/L	1		6020	Dissolved
Boron	27		5.0		mg/L	100		6020	Dissolved
Iron	3.9		0.10		mg/L	1		6020	Dissolved
Manganese	0.48		0.0025		mg/L	1		6020	Dissolved
Sulfate	550		250		mg/L	50		9038	Dissolved
Chloride	220		10		mg/L	5		9251	Dissolved
Total Dissolved Solids	1800		10		mg/L	1		SM 2540C	Dissolved
Fluoride	0.36	^	0.10		mg/L	1		SM 4500 F C	Dissolved

Client Sample ID: MW-6

Lab Sample ID: 500-53406-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0029		0.0010		mg/L	1		6020	Dissolved
Barium	0.11		0.0025		mg/L	1		6020	Dissolved
Boron	1.1		0.25		mg/L	5		6020	Dissolved
Iron	2.6		0.10		mg/L	1		6020	Dissolved
Manganese	0.21		0.0025		mg/L	1		6020	Dissolved
Sulfate	160		50		mg/L	10		9038	Dissolved
Chloride	110		10		mg/L	5		9251	Dissolved
Total Dissolved Solids	940		10		mg/L	1		SM 2540C	Dissolved
Fluoride	0.43	^	0.10		mg/L	1		SM 4500 F C	Dissolved

Client Sample ID: MW-7

Lab Sample ID: 500-53406-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0099		0.0010		mg/L	1		6020	Dissolved
Barium	0.080		0.0025		mg/L	1		6020	Dissolved
Boron	43		5.0		mg/L	100		6020	Dissolved
Iron	12		0.10		mg/L	1		6020	Dissolved
Manganese	0.46		0.0025		mg/L	1		6020	Dissolved
Sulfate	630		250		mg/L	50		9038	Dissolved
Chloride	60		2.0		mg/L	1		9251	Dissolved
Total Dissolved Solids	1800		10		mg/L	1		SM 2540C	Dissolved
Fluoride	0.48		0.10		mg/L	1		SM 4500 F C	Dissolved

Method Summary

Client: Patrick Engineering
Project/Site: Midwest Generation Waukegan Groundwater

TestAmerica Job ID: 500-53406-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL CHI
314.0	Perchlorate (IC)	EPA	TAL WSC
6020	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:

EPA = US Environmental Protection Agency

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

TAL WSC = TestAmerica West Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: Patrick Engineering
Project/Site: Midwest Generation Waukegan Groundwater

TestAmerica Job ID: 500-53406-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-53406-1	MW-1	Water	12/19/12 11:30	12/20/12 07:45
500-53406-2	MW-2	Water	12/19/12 12:10	12/20/12 07:45
500-53406-3	MW-3	Water	12/19/12 12:45	12/20/12 07:45
500-53406-4	MW-4	Water	12/19/12 13:30	12/20/12 07:45
500-53406-5	MW-5	Water	12/19/12 15:30	12/20/12 07:45
500-53406-6	MW-6	Water	12/19/12 15:00	12/20/12 07:45
500-53406-7	MW-7	Water	12/19/12 14:20	12/20/12 07:45

Client: Patrick Engineering
Project/Site: Midwest Generation Waukegan Groundwater

TestAmerica Job ID: 500-53406-1

Client Sample ID: MW-1
Date Collected: 12/19/12 11:30
Date Received: 12/20/12 07:45

Lab Sample ID: 500-53406-1
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.50		0.50		ug/L			12/21/12 15:20	1
Toluene	<0.50		0.50		ug/L			12/21/12 15:20	1
Ethylbenzene	<0.50		0.50		ug/L			12/21/12 15:20	1
Xylenes, Total	<1.0		1.0		ug/L			12/21/12 15:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*75 - 125*		*12/21/12 15:20*	*1*
Toluene-d8 (Surr)	*101*		*75 - 120*		*12/21/12 15:20*	*1*
4-Bromofluorobenzene (Surr)	*96*		*75 - 120*		*12/21/12 15:20*	*1*
Dibromofluoromethane	*97*		*75 - 120*		*12/21/12 15:20*	*1*

Method: 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	<4.0		4.0		ug/L			01/04/13 22:41	1

Method: 6020 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		12/26/12 12:30	01/03/13 12:13	1
Arsenic	**0.091**		0.0010		mg/L		12/26/12 12:30	12/28/12 15:35	1
Barium	**0.013**		0.0025		mg/L		12/26/12 12:30	12/28/12 15:35	1
Beryllium	<0.0010		0.0010		mg/L		12/26/12 12:30	01/02/13 12:01	1
Boron	**1.9**		0.050		mg/L		12/26/12 12:30	01/02/13 12:01	1
Cadmium	<0.00050		0.00050		mg/L		12/26/12 12:30	12/28/12 15:35	1
Chromium	<0.0050		0.0050		mg/L		12/26/12 12:30	12/28/12 15:35	1
Cobalt	<0.0010		0.0010		mg/L		12/26/12 12:30	12/28/12 15:35	1
Copper	<0.0020		0.0020		mg/L		12/26/12 12:30	12/28/12 15:35	1
Iron	<0.10		0.10		mg/L		12/26/12 12:30	12/28/12 15:35	1
Lead	<0.00050		0.00050		mg/L		12/26/12 12:30	12/28/12 15:35	1
Manganese	<0.0025		0.0025		mg/L		12/26/12 12:30	12/28/12 15:35	1
Nickel	<0.0020		0.0020		mg/L		12/26/12 12:30	12/28/12 15:35	1
Selenium	<0.0025		0.0025		mg/L		12/26/12 12:30	12/28/12 15:35	1
Silver	<0.00050		0.00050		mg/L		12/26/12 12:30	12/28/12 15:35	1
Thallium	<0.0020		0.0020		mg/L		12/26/12 12:30	01/03/13 12:13	1
Vanadium	**0.026**		0.0050		mg/L		12/26/12 12:30	12/28/12 15:35	1
Zinc	<0.020		0.020		mg/L		12/26/12 12:30	12/28/12 15:35	1

Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		12/20/12 15:00	12/21/12 09:21	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.010		0.010		mg/L		12/26/12 09:25	12/26/12 13:37	1
Sulfate	**200**		50		mg/L			12/27/12 00:10	10
Chloride	**48**		2.0		mg/L			12/21/12 18:54	1
Nitrogen, Nitrate	<0.10		0.10		mg/L			12/21/12 16:54	1
Total Dissolved Solids	**460**		10		mg/L			12/23/12 23:04	1
Fluoride	**0.41**	^	0.10		mg/L			12/27/12 11:12	1
Nitrogen, Nitrite	**0.055**		0.020		mg/L			12/20/12 15:56	1
Nitrogen, Nitrate Nitrite	<0.10		0.10		mg/L			12/27/12 10:51	1

Client Sample ID: MW-2

Lab Sample ID: 500-53406-2

Date Collected: 12/19/12 12:10
Matrix: Water
Date Received: 12/20/12 07:45

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.50		0.50		ug/L			12/21/12 15:42	1
Toluene	<0.50		0.50		ug/L			12/21/12 15:42	1
Ethylbenzene	<0.50		0.50		ug/L			12/21/12 15:42	1
Xylenes, Total	<1.0		1.0		ug/L			12/21/12 15:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*94*		*75 - 125*		*12/21/12 15:42*	*1*
Toluene-d8 (Surr)	*98*		*75 - 120*		*12/21/12 15:42*	*1*
4-Bromofluorobenzene (Surr)	*95*		*75 - 120*		*12/21/12 15:42*	*1*
Dibromofluoromethane	*94*		*75 - 120*		*12/21/12 15:42*	*1*

Method: 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	<4.0		4.0		ug/L			01/04/13 22:56	1

Method: 6020 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		12/26/12 12:30	01/03/13 12:24	1
Arsenic	**0.0089**		0.0010		mg/L		12/26/12 12:30	12/28/12 15:53	1
Barium	**0.016**		0.0025		mg/L		12/26/12 12:30	12/28/12 15:53	1
Beryllium	<0.0010		0.0010		mg/L		12/26/12 12:30	01/02/13 12:05	1
Boron	**1.9**		0.050		mg/L		12/26/12 12:30	01/02/13 12:05	1
Cadmium	<0.00050		0.00050		mg/L		12/26/12 12:30	12/28/12 15:53	1
Chromium	<0.0050		0.0050		mg/L		12/26/12 12:30	12/28/12 15:53	1
Cobalt	<0.0010		0.0010		mg/L		12/26/12 12:30	12/28/12 15:53	1
Copper	<0.0020		0.0020		mg/L		12/26/12 12:30	12/28/12 15:53	1
Iron	<0.10		0.10		mg/L		12/26/12 12:30	12/28/12 15:53	1
Lead	<0.00050		0.00050		mg/L		12/26/12 12:30	12/28/12 15:53	1
Manganese	**0.023**		0.0025		mg/L		12/26/12 12:30	12/28/12 15:53	1
Nickel	<0.0020		0.0020		mg/L		12/26/12 12:30	12/28/12 15:53	1
Selenium	<0.0025		0.0025		mg/L		12/26/12 12:30	12/28/12 15:53	1
Silver	<0.00050		0.00050		mg/L		12/26/12 12:30	12/28/12 15:53	1
Thallium	<0.0020		0.0020		mg/L		12/26/12 12:30	01/03/13 12:24	1
Vanadium	<0.0050		0.0050		mg/L		12/26/12 12:30	12/28/12 15:53	1
Zinc	<0.020		0.020		mg/L		12/26/12 12:30	12/28/12 15:53	1

Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		12/20/12 15:00	12/21/12 09:32	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.010		0.010		mg/L		12/26/12 09:25	12/26/12 13:38	1
Sulfate	**210**		50		mg/L			12/27/12 00:11	10
Chloride	**54**		2.0		mg/L			12/21/12 18:57	1
Nitrogen, Nitrate	<0.10		0.10		mg/L			12/21/12 16:54	1
Total Dissolved Solids	**500**		10		mg/L			12/23/12 23:12	1
Fluoride	**1.3**	^	0.10		mg/L			12/27/12 11:19	1
Nitrogen, Nitrite	<0.020		0.020		mg/L			12/20/12 15:56	1
Nitrogen, Nitrate Nitrite	<0.10		0.10		mg/L			12/27/12 10:53	1

Client: Patrick Engineering
Project/Site: Midwest Generation Waukegan Groundwater

TestAmerica Job ID: 500-53406-1

Client Sample ID: MW-3
Date Collected: 12/19/12 12:45
Date Received: 12/20/12 07:45

Lab Sample ID: 500-53406-3
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.50		0.50		ug/L			12/21/12 16:04	1
Toluene	<0.50		0.50		ug/L			12/21/12 16:04	1
Ethylbenzene	<0.50		0.50		ug/L			12/21/12 16:04	1
Xylenes, Total	<1.0		1.0		ug/L			12/21/12 16:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*96*		*75 - 125*		*12/21/12 16:04*	*1*
Toluene-d8 (Surr)	*99*		*75 - 120*		*12/21/12 16:04*	*1*
4-Bromofluorobenzene (Surr)	*93*		*75 - 120*		*12/21/12 16:04*	*1*
Dibromofluoromethane	*95*		*75 - 120*		*12/21/12 16:04*	*1*

Method: 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	<4.0		4.0		ug/L			01/04/13 23:11	1

Method: 6020 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		12/26/12 12:30	01/03/13 12:25	1
Arsenic	**0.0031**		0.0010		mg/L		12/26/12 12:30	12/28/12 15:56	1
Barium	**0.011**		0.0025		mg/L		12/26/12 12:30	12/28/12 15:56	1
Beryllium	<0.0010		0.0010		mg/L		12/26/12 12:30	01/02/13 12:06	1
Boron	**1.9**		0.050		mg/L		12/26/12 12:30	01/02/13 12:06	1
Cadmium	<0.00050		0.00050		mg/L		12/26/12 12:30	12/28/12 15:56	1
Chromium	<0.0050		0.0050		mg/L		12/26/12 12:30	12/28/12 15:56	1
Cobalt	<0.0010		0.0010		mg/L		12/26/12 12:30	12/28/12 15:56	1
Copper	<0.0020		0.0020		mg/L		12/26/12 12:30	12/28/12 15:56	1
Iron	<0.10		0.10		mg/L		12/26/12 12:30	12/28/12 15:56	1
Lead	<0.00050		0.00050		mg/L		12/26/12 12:30	12/28/12 15:56	1
Manganese	**0.0034**		0.0025		mg/L		12/26/12 12:30	12/28/12 15:56	1
Nickel	<0.0020		0.0020		mg/L		12/26/12 12:30	12/28/12 15:56	1
Selenium	<0.0025		0.0025		mg/L		12/26/12 12:30	12/28/12 15:56	1
Silver	<0.00050		0.00050		mg/L		12/26/12 12:30	12/28/12 15:56	1
Thallium	<0.0020		0.0020		mg/L		12/26/12 12:30	01/03/13 12:25	1
Vanadium	<0.0050		0.0050		mg/L		12/26/12 12:30	12/28/12 15:56	1
Zinc	<0.020		0.020		mg/L		12/26/12 12:30	12/28/12 15:56	1

Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		12/20/12 15:00	12/21/12 09:34	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.010		0.010		mg/L		12/26/12 09:25	12/26/12 13:38	1
Sulfate	**240**		50		mg/L			12/27/12 00:12	10
Chloride	**49**		2.0		mg/L			12/21/12 18:57	1
Nitrogen, Nitrate	<0.10		0.10		mg/L			12/21/12 16:54	1
Total Dissolved Solids	**520**		10		mg/L			12/23/12 23:14	1
Fluoride	**1.1**	^	0.10		mg/L			12/27/12 11:22	1
Nitrogen, Nitrite	<0.020		0.020		mg/L			12/20/12 15:56	1
Nitrogen, Nitrate Nitrite	<0.10		0.10		mg/L			12/27/12 10:55	1

Client Sample Results

Client: Patrick Engineering
Project/Site: Midwest Generation Waukegan Groundwater

TestAmerica Job ID: 500-53406-1

Client Sample ID: MW-4
Date Collected: 12/19/12 13:30
Date Received: 12/20/12 07:45

Lab Sample ID: 500-53406-4
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.50		0.50		ug/L			12/21/12 16:27	1
Toluene	<0.50		0.50		ug/L			12/21/12 16:27	1
Ethylbenzene	<0.50		0.50		ug/L			12/21/12 16:27	1
Xylenes, Total	<1.0		1.0		ug/L			12/21/12 16:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*75 - 125*		*12/21/12 16:27*	*1*
Toluene-d8 (Surr)	*104*		*75 - 120*		*12/21/12 16:27*	*1*
4-Bromofluorobenzene (Surr)	*95*		*75 - 120*		*12/21/12 16:27*	*1*
Dibromofluoromethane	*98*		*75 - 120*		*12/21/12 16:27*	*1*

Method: 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	<4.0		4.0		ug/L			01/04/13 23:27	1

Method: 6020 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		12/26/12 12:30	01/03/13 12:19	1
Arsenic	**0.0080**		0.0010		mg/L		12/26/12 12:30	12/28/12 15:58	1
Barium	**0.031**		0.0025		mg/L		12/26/12 12:30	12/28/12 15:58	1
Beryllium	<0.0010		0.0010		mg/L		12/26/12 12:30	01/02/13 12:13	1
Boron	**2.5**		0.50		mg/L		12/26/12 12:30	01/03/13 14:50	10
Cadmium	<0.00050		0.00050		mg/L		12/26/12 12:30	12/28/12 15:58	1
Chromium	<0.0050		0.0050		mg/L		12/26/12 12:30	12/28/12 15:58	1
Cobalt	<0.0010		0.0010		mg/L		12/26/12 12:30	12/28/12 15:58	1
Copper	<0.0020		0.0020		mg/L		12/26/12 12:30	12/28/12 15:58	1
Iron	<0.10		0.10		mg/L		12/26/12 12:30	12/28/12 15:58	1
Lead	<0.00050		0.00050		mg/L		12/26/12 12:30	12/28/12 15:58	1
Manganese	**0.031**		0.0025		mg/L		12/26/12 12:30	12/28/12 15:58	1
Nickel	<0.0020		0.0020		mg/L		12/26/12 12:30	12/28/12 15:58	1
Selenium	<0.0025		0.0025		mg/L		12/26/12 12:30	12/28/12 15:58	1
Silver	<0.00050		0.00050		mg/L		12/26/12 12:30	12/28/12 15:58	1
Thallium	<0.0020		0.0020		mg/L		12/26/12 12:30	01/03/13 12:19	1
Vanadium	<0.0050		0.0050		mg/L		12/26/12 12:30	12/28/12 15:58	1
Zinc	<0.020		0.020		mg/L		12/26/12 12:30	12/28/12 15:58	1

Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		12/20/12 15:00	12/21/12 09:36	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.010		0.010		mg/L		12/26/12 09:25	12/26/12 13:39	1
Sulfate	**220**		50		mg/L			12/27/12 00:13	10
Chloride	**55**		2.0		mg/L			12/21/12 18:58	1
Nitrogen, Nitrate	**0.31**		0.10		mg/L			12/21/12 16:54	1
Total Dissolved Solids	**510**		10		mg/L			12/23/12 23:17	1
Fluoride	**0.72**	^	0.10		mg/L			12/27/12 11:24	1
Nitrogen, Nitrite	<0.020		0.020		mg/L			12/20/12 15:57	1
Nitrogen, Nitrate Nitrite	**0.31**		0.10		mg/L			12/27/12 10:57	1

Client: Patrick Engineering
Project/Site: Midwest Generation Waukegan Groundwater

TestAmerica Job ID: 500-53406-1

Client Sample ID: MW-5
Date Collected: 12/19/12 15:30
Date Received: 12/20/12 07:45

Lab Sample ID: 500-53406-5
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.50		0.50		ug/L			12/21/12 16:50	1
Toluene	<0.50		0.50		ug/L			12/21/12 16:50	1
Ethylbenzene	<0.50		0.50		ug/L			12/21/12 16:50	1
Xylenes, Total	<1.0		1.0		ug/L			12/21/12 16:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*75 - 125*		*12/21/12 16:50*	*1*
Toluene-d8 (Surr)	*100*		*75 - 120*		*12/21/12 16:50*	*1*
4-Bromofluorobenzene (Surr)	*97*		*75 - 120*		*12/21/12 16:50*	*1*
Dibromofluoromethane	*97*		*75 - 120*		*12/21/12 16:50*	*1*

Method: 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	<8.0		8.0		ug/L			01/09/13 20:18	2

Method: 6020 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		12/26/12 12:30	01/03/13 12:20	1
Arsenic	**0.011**		0.0010		mg/L		12/26/12 12:30	12/28/12 16:01	1
Barium	**0.070**		0.0025		mg/L		12/26/12 12:30	12/28/12 16:01	1
Beryllium	<0.0010		0.0010		mg/L		12/26/12 12:30	01/02/13 12:14	1
Boron	**27**		5.0		mg/L		12/26/12 12:30	01/03/13 14:51	100
Cadmium	<0.00050		0.00050		mg/L		12/26/12 12:30	12/28/12 16:01	1
Chromium	<0.0050		0.0050		mg/L		12/26/12 12:30	12/28/12 16:01	1
Cobalt	<0.0010		0.0010		mg/L		12/26/12 12:30	12/28/12 16:01	1
Copper	<0.0020		0.0020		mg/L		12/26/12 12:30	12/28/12 16:01	1
Iron	**3.9**		0.10		mg/L		12/26/12 12:30	12/28/12 16:01	1
Lead	<0.00050		0.00050		mg/L		12/26/12 12:30	12/28/12 16:01	1
Manganese	**0.48**		0.0025		mg/L		12/26/12 12:30	12/28/12 16:01	1
Nickel	<0.0020		0.0020		mg/L		12/26/12 12:30	12/28/12 16:01	1
Selenium	<0.0025		0.0025		mg/L		12/26/12 12:30	12/28/12 16:01	1
Silver	<0.00050		0.00050		mg/L		12/26/12 12:30	12/28/12 16:01	1
Thallium	<0.0020		0.0020		mg/L		12/26/12 12:30	01/03/13 12:20	1
Vanadium	<0.0050		0.0050		mg/L		12/26/12 12:30	12/28/12 16:01	1
Zinc	<0.020		0.020		mg/L		12/26/12 12:30	12/28/12 16:01	1

Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		12/20/12 15:00	12/21/12 09:38	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.010		0.010		mg/L		12/26/12 09:25	12/26/12 13:39	1
Sulfate	**550**		250		mg/L			12/27/12 00:14	50
Chloride	**220**		10		mg/L			12/21/12 19:29	5
Nitrogen, Nitrate	<0.10		0.10		mg/L			12/21/12 16:54	1
Total Dissolved Solids	**1800**		10		mg/L			12/23/12 23:19	1
Fluoride	**0.36**	^	0.10		mg/L			12/27/12 11:27	1
Nitrogen, Nitrite	<0.020		0.020		mg/L			12/20/12 15:57	1
Nitrogen, Nitrate Nitrite	<0.10		0.10		mg/L			12/27/12 11:00	1

Client: Patrick Engineering
Project/Site: Midwest Generation Waukegan Groundwater

TestAmerica Job ID: 500-53406-1

Client Sample ID: MW-6
Date Collected: 12/19/12 15:00
Date Received: 12/20/12 07:45

Lab Sample ID: 500-53406-6
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.50		0.50		ug/L			12/21/12 17:13	1
Toluene	<0.50		0.50		ug/L			12/21/12 17:13	1
Ethylbenzene	<0.50		0.50		ug/L			12/21/12 17:13	1
Xylenes, Total	<1.0		1.0		ug/L			12/21/12 17:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*75 - 125*		*12/21/12 17:13*	*1*
Toluene-d8 (Surr)	*99*		*75 - 120*		*12/21/12 17:13*	*1*
4-Bromofluorobenzene (Surr)	*96*		*75 - 120*		*12/21/12 17:13*	*1*
Dibromofluoromethane	*95*		*75 - 120*		*12/21/12 17:13*	*1*

Method: 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	<8.0		8.0		ug/L			01/09/13 20:34	2

Method: 6020 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		12/26/12 12:30	01/03/13 12:21	1
Arsenic	**0.0029**		0.0010		mg/L		12/26/12 12:30	12/28/12 16:03	1
Barium	**0.11**		0.0025		mg/L		12/26/12 12:30	12/28/12 16:03	1
Beryllium	<0.0010		0.0010		mg/L		12/26/12 12:30	01/02/13 12:15	1
Boron	**1.1**		0.25		mg/L		12/26/12 12:30	01/03/13 14:52	5
Cadmium	<0.00050		0.00050		mg/L		12/26/12 12:30	12/28/12 16:03	1
Chromium	<0.0050		0.0050		mg/L		12/26/12 12:30	12/28/12 16:03	1
Cobalt	<0.0010		0.0010		mg/L		12/26/12 12:30	12/28/12 16:03	1
Copper	<0.0020		0.0020		mg/L		12/26/12 12:30	12/28/12 16:03	1
Iron	**2.6**		0.10		mg/L		12/26/12 12:30	12/28/12 16:03	1
Lead	<0.00050		0.00050		mg/L		12/26/12 12:30	12/28/12 16:03	1
Manganese	**0.21**		0.0025		mg/L		12/26/12 12:30	12/28/12 16:03	1
Nickel	<0.0020		0.0020		mg/L		12/26/12 12:30	12/28/12 16:03	1
Selenium	<0.0025		0.0025		mg/L		12/26/12 12:30	12/28/12 16:03	1
Silver	<0.00050		0.00050		mg/L		12/26/12 12:30	12/28/12 16:03	1
Thallium	<0.0020		0.0020		mg/L		12/26/12 12:30	01/03/13 12:21	1
Vanadium	<0.0050		0.0050		mg/L		12/26/12 12:30	12/28/12 16:03	1
Zinc	<0.020		0.020		mg/L		12/26/12 12:30	12/28/12 16:03	1

Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		12/20/12 15:00	12/21/12 09:40	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.010		0.010		mg/L		12/26/12 09:25	12/26/12 13:40	1
Sulfate	**160**		50		mg/L			12/27/12 00:15	10
Chloride	**110**		10		mg/L			12/26/12 13:59	5
Nitrogen, Nitrate	<0.10		0.10		mg/L			12/21/12 16:54	1
Total Dissolved Solids	**940**		10		mg/L			12/23/12 23:22	1
Fluoride	**0.43**	^	0.10		mg/L			12/27/12 11:29	1
Nitrogen, Nitrite	<0.020		0.020		mg/L			12/20/12 15:57	1
Nitrogen, Nitrate Nitrite	<0.10		0.10		mg/L			12/27/12 11:00	1

Client: Patrick Engineering
Project/Site: Midwest Generation Waukegan Groundwater

TestAmerica Job ID: 500-53406-1

Client Sample ID: MW-7
Date Collected: 12/19/12 14:20
Date Received: 12/20/12 07:45

Lab Sample ID: 500-53406-7
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.50		0.50		ug/L			12/21/12 17:35	1
Toluene	<0.50		0.50		ug/L			12/21/12 17:35	1
Ethylbenzene	<0.50		0.50		ug/L			12/21/12 17:35	1
Xylenes, Total	<1.0		1.0		ug/L			12/21/12 17:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*75 - 125*		*12/21/12 17:35*	*1*
Toluene-d8 (Surr)	*99*		*75 - 120*		*12/21/12 17:35*	*1*
4-Bromofluorobenzene (Surr)	*96*		*75 - 120*		*12/21/12 17:35*	*1*
Dibromofluoromethane	*98*		*75 - 120*		*12/21/12 17:35*	*1*

Method: 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	<8.0		8.0		ug/L			01/09/13 20:49	2

Method: 6020 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		12/26/12 12:30	01/03/13 12:22	1
Arsenic	**0.0099**		0.0010		mg/L		12/26/12 12:30	12/28/12 16:06	1
Barium	**0.080**		0.0025		mg/L		12/26/12 12:30	12/28/12 16:06	1
Beryllium	<0.0010		0.0010		mg/L		12/26/12 12:30	01/02/13 12:16	1
Boron	**43**		5.0		mg/L		12/26/12 12:30	01/03/13 14:53	100
Cadmium	<0.00050		0.00050		mg/L		12/26/12 12:30	12/28/12 16:06	1
Chromium	<0.0050		0.0050		mg/L		12/26/12 12:30	12/28/12 16:06	1
Cobalt	<0.0010		0.0010		mg/L		12/26/12 12:30	12/28/12 16:06	1
Copper	<0.0020		0.0020		mg/L		12/26/12 12:30	12/28/12 16:06	1
Iron	**12**		0.10		mg/L		12/26/12 12:30	12/28/12 16:06	1
Lead	<0.00050		0.00050		mg/L		12/26/12 12:30	12/28/12 16:06	1
Manganese	**0.46**		0.0025		mg/L		12/26/12 12:30	12/28/12 16:06	1
Nickel	<0.0020		0.0020		mg/L		12/26/12 12:30	12/28/12 16:06	1
Selenium	<0.0025		0.0025		mg/L		12/26/12 12:30	12/28/12 16:06	1
Silver	<0.00050		0.00050		mg/L		12/26/12 12:30	12/28/12 16:06	1
Thallium	<0.0020		0.0020		mg/L		12/26/12 12:30	01/03/13 12:22	1
Vanadium	<0.0050		0.0050		mg/L		12/26/12 12:30	12/28/12 16:06	1
Zinc	<0.020		0.020		mg/L		12/26/12 12:30	12/28/12 16:06	1

Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		12/20/12 15:00	12/21/12 09:42	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.010		0.010		mg/L		12/26/12 09:25	12/26/12 13:40	1
Sulfate	**630**		250		mg/L			12/27/12 00:16	50
Chloride	**60**		2.0		mg/L			12/26/12 14:00	1
Nitrogen, Nitrate	<0.10		0.10		mg/L			12/21/12 16:54	1
Total Dissolved Solids	**1800**		10		mg/L			12/23/12 23:24	1
Fluoride	**0.48**		0.10		mg/L			01/02/13 15:33	1
Nitrogen, Nitrite	<0.020		0.020		mg/L			12/20/12 15:58	1
Nitrogen, Nitrate Nitrite	<0.10		0.10		mg/L			12/27/12 11:03	1

Definitions/Glossary

Client: Patrick Engineering
Project/Site: Midwest Generation Waukegan Groundwater

TestAmerica Job ID: 500-53406-1

Qualifiers

General Chemistry

Qualifier	Qualifier Description
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC exceeds the control limits.

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
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or addi ional Initial metals/anion analysis of the sample
DLC	Decision level concentration
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDA	Minimum detectable activity
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ra io
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the rela ive difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

GC/MS VOA

Analysis Batch: 173673

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-53406-1	MW-1	Total/NA	Water	8260B	
500-53406-2	MW-2	Total/NA	Water	8260B	
500-53406-3	MW-3	Total/NA	Water	8260B	
500-53406-4	MW-4	Total/NA	Water	8260B	
500-53406-5	MW-5	Total/NA	Water	8260B	
500-53406-6	MW-6	Total/NA	Water	8260B	
500-53406-7	MW-7	Total/NA	Water	8260B	
LCS 500-173673/4	Lab Control Sample	Total/NA	Water	8260B	
MB 500-173673/6	Method Blank	Total/NA	Water	8260B	

HPLC/IC

Analysis Batch: 8536

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-53406-1	MW-1	Total/NA	Water	314.0	
500-53406-2	MW-2	Total/NA	Water	314.0	
500-53406-3	MW-3	Total/NA	Water	314.0	
500-53406-4	MW-4	Total/NA	Water	314.0	
500-53406-5	MW-5	Total/NA	Water	314.0	
500-53406-6	MW-6	Total/NA	Water	314.0	
500-53406-7	MW-7	Total/NA	Water	314.0	
LCS 320-8536/9	Lab Control Sample	Total/NA	Water	314.0	
MB 320-8536/8	Method Blank	Total/NA	Water	314.0	
MRL 320-8536/7 MRL	Lab Control Sample	Total/NA	Water	314.0	

Analysis Batch: 8546

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-53406-5	MW-5	Total/NA	Water	314.0	
500-53406-6	MW-6	Total/NA	Water	314.0	
500-53406-7	MW-7	Total/NA	Water	314.0	
LCS 320-8546/9	Lab Control Sample	Total/NA	Water	314.0	
MB 320-8546/8	Method Blank	Total/NA	Water	314.0	
MRL 320-8546/7 MRL	Lab Control Sample	Total/NA	Water	314.0	

Metals

Prep Batch: 173582

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-53406-1	MW-1	Dissolved	Water	7470A	
500-53406-1 DU	MW-1	Dissolved	Water	7470A	
500-53406-1 MS	MW-1	Dissolved	Water	7470A	
500-53406-1 MSD	MW-1	Dissolved	Water	7470A	
500-53406-2	MW-2	Dissolved	Water	7470A	
500-53406-3	MW-3	Dissolved	Water	7470A	
500-53406-4	MW-4	Dissolved	Water	7470A	
500-53406-5	MW-5	Dissolved	Water	7470A	
500-53406-6	MW-6	Dissolved	Water	7470A	
500-53406-7	MW-7	Dissolved	Water	7470A	
LCS 500-173582/8-A	Lab Control Sample	Total/NA	Water	7470A	
MB 500-173582/7-A	Method Blank	Total/NA	Water	7470A	

Metals (Continued)

Analysis Batch: 173730

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-53406-1	MW-1	Dissolved	Water	7470A	173582
500-53406-1 DU	MW-1	Dissolved	Water	7470A	173582
500-53406-1 MS	MW-1	Dissolved	Water	7470A	173582
500-53406-1 MSD	MW-1	Dissolved	Water	7470A	173582
500-53406-2	MW-2	Dissolved	Water	7470A	173582
500-53406-3	MW-3	Dissolved	Water	7470A	173582
500-53406-4	MW-4	Dissolved	Water	7470A	173582
500-53406-5	MW-5	Dissolved	Water	7470A	173582
500-53406-6	MW-6	Dissolved	Water	7470A	173582
500-53406-7	MW-7	Dissolved	Water	7470A	173582
LCS 500-173582/8-A	Lab Control Sample	Total/NA	Water	7470A	173582
MB 500-173582/7-A	Method Blank	Total/NA	Water	7470A	173582

Prep Batch: 173915

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-53406-1	MW-1	Dissolved	Water	Soluble Metals	
500-53406-1 DU	MW-1	Dissolved	Water	Soluble Metals	
500-53406-1 MS	MW-1	Dissolved	Water	Soluble Metals	
500-53406-1 MSD	MW-1	Dissolved	Water	Soluble Metals	
500-53406-2	MW-2	Dissolved	Water	Soluble Metals	
500-53406-3	MW-3	Dissolved	Water	Soluble Metals	
500-53406-4	MW-4	Dissolved	Water	Soluble Metals	
500-53406-5	MW-5	Dissolved	Water	Soluble Metals	
500-53406-6	MW-6	Dissolved	Water	Soluble Metals	
500-53406-7	MW-7	Dissolved	Water	Soluble Metals	
LCS 500-173915/2-A	Lab Control Sample	Soluble	Water	Soluble Metals	
MB 500-173915/1-A	Method Blank	Soluble	Water	Soluble Metals	

Analysis Batch: 174206

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-53406-1	MW-1	Dissolved	Water	6020	173915
500-53406-1 DU	MW-1	Dissolved	Water	6020	173915
500-53406-1 MS	MW-1	Dissolved	Water	6020	173915
500-53406-1 MSD	MW-1	Dissolved	Water	6020	173915
500-53406-2	MW-2	Dissolved	Water	6020	173915
500-53406-3	MW-3	Dissolved	Water	6020	173915
500-53406-4	MW-4	Dissolved	Water	6020	173915
500-53406-5	MW-5	Dissolved	Water	6020	173915
500-53406-6	MW-6	Dissolved	Water	6020	173915
500-53406-7	MW-7	Dissolved	Water	6020	173915
LCS 500-173915/2-A	Lab Control Sample	Soluble	Water	6020	173915
MB 500-173915/1-A	Method Blank	Soluble	Water	6020	173915

Analysis Batch: 174292

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-53406-1	MW-1	Dissolved	Water	6020	173915
500-53406-1 DU	MW-1	Dissolved	Water	6020	173915
500-53406-1 MS	MW-1	Dissolved	Water	6020	173915
500-53406-1 MSD	MW-1	Dissolved	Water	6020	173915
500-53406-2	MW-2	Dissolved	Water	6020	173915
500-53406-3	MW-3	Dissolved	Water	6020	173915

Metals (Continued)

Analysis Batch: 174292 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-53406-4	MW-4	Dissolved	Water	6020	173915
500-53406-5	MW-5	Dissolved	Water	6020	173915
500-53406-6	MW-6	Dissolved	Water	6020	173915
500-53406-7	MW-7	Dissolved	Water	6020	173915
LCS 500-173915/2-A	Lab Control Sample	Soluble	Water	6020	173915
MB 500-173915/1-A	Method Blank	Soluble	Water	6020	173915

Analysis Batch: 174365

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-53406-1	MW-1	Dissolved	Water	6020	173915
500-53406-1 DU	MW-1	Dissolved	Water	6020	173915
500-53406-1 MS	MW-1	Dissolved	Water	6020	173915
500-53406-1 MSD	MW-1	Dissolved	Water	6020	173915
500-53406-2	MW-2	Dissolved	Water	6020	173915
500-53406-3	MW-3	Dissolved	Water	6020	173915
500-53406-4	MW-4	Dissolved	Water	6020	173915
500-53406-5	MW-5	Dissolved	Water	6020	173915
500-53406-6	MW-6	Dissolved	Water	6020	173915
500-53406-7	MW-7	Dissolved	Water	6020	173915
LCS 500-173915/2-A	Lab Control Sample	Soluble	Water	6020	173915
MB 500-173915/1-A	Method Blank	Soluble	Water	6020	173915

Analysis Batch: 174380

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-53406-4	MW-4	Dissolved	Water	6020	173915
500-53406-5	MW-5	Dissolved	Water	6020	173915
500-53406-6	MW-6	Dissolved	Water	6020	173915
500-53406-7	MW-7	Dissolved	Water	6020	173915

General Chemistry

Analysis Batch: 173628

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-53406-1	MW-1	Dissolved	Water	SM 4500 NO2 B	
500-53406-2	MW-2	Dissolved	Water	SM 4500 NO2 B	
500-53406-3	MW-3	Dissolved	Water	SM 4500 NO2 B	
500-53406-4	MW-4	Dissolved	Water	SM 4500 NO2 B	
500-53406-5	MW-5	Dissolved	Water	SM 4500 NO2 B	
500-53406-6	MW-6	Dissolved	Water	SM 4500 NO2 B	
500-53406-7	MW-7	Dissolved	Water	SM 4500 NO2 B	
LCS 500-173628/4	Lab Control Sample	Total/NA	Water	SM 4500 NO2 B	
MB 500-173628/3	Method Blank	Total/NA	Water	SM 4500 NO2 B	

Analysis Batch: 173765

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-53406-1	MW-1	Dissolved	Water	Nitrate by calc	
500-53406-2	MW-2	Dissolved	Water	Nitrate by calc	
500-53406-3	MW-3	Dissolved	Water	Nitrate by calc	
500-53406-4	MW-4	Dissolved	Water	Nitrate by calc	
500-53406-5	MW-5	Dissolved	Water	Nitrate by calc	

General Chemistry (Continued)

Analysis Batch: 173765 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-53406-6	MW-6	Dissolved	Water	Nitrate by calc	
500-53406-7	MW-7	Dissolved	Water	Nitrate by calc	

Analysis Batch: 173771

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-53406-1	MW-1	Dissolved	Water	9251	
500-53406-1 MS	MW-1	Dissolved	Water	9251	
500-53406-1 MSD	MW-1	Dissolved	Water	9251	
500-53406-2	MW-2	Dissolved	Water	9251	
500-53406-3	MW-3	Dissolved	Water	9251	
500-53406-4	MW-4	Dissolved	Water	9251	
500-53406-5	MW-5	Dissolved	Water	9251	
LCS 500-173771/5	Lab Control Sample	Total/NA	Water	9251	
MB 500-173771/4	Method Blank	Total/NA	Water	9251	

Analysis Batch: 173806

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-53406-1	MW-1	Dissolved	Water	SM 2540C	
500-53406-1 DU	MW-1	Dissolved	Water	SM 2540C	
500-53406-1 MS	MW-1	Dissolved	Water	SM 2540C	
500-53406-2	MW-2	Dissolved	Water	SM 2540C	
500-53406-3	MW-3	Dissolved	Water	SM 2540C	
500-53406-4	MW-4	Dissolved	Water	SM 2540C	
500-53406-5	MW-5	Dissolved	Water	SM 2540C	
500-53406-6	MW-6	Dissolved	Water	SM 2540C	
500-53406-7	MW-7	Dissolved	Water	SM 2540C	
LCS 500-173806/2	Lab Control Sample	Total/NA	Water	SM 2540C	
MB 500-173806/1	Method Blank	Total/NA	Water	SM 2540C	

Prep Batch: 173880

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-53406-1	MW-1	Dissolved	Water	9010B	
500-53406-2	MW-2	Dissolved	Water	9010B	
500-53406-3	MW-3	Dissolved	Water	9010B	
500-53406-4	MW-4	Dissolved	Water	9010B	
500-53406-5	MW-5	Dissolved	Water	9010B	
500-53406-6	MW-6	Dissolved	Water	9010B	
500-53406-7	MW-7	Dissolved	Water	9010B	
LCS 500-173880/2-A	Lab Control Sample	Total/NA	Water	9010B	
MB 500-173880/1-A	Method Blank	Total/NA	Water	9010B	

Analysis Batch: 173928

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-53406-6	MW-6	Dissolved	Water	9251	
500-53406-7	MW-7	Dissolved	Water	9251	
LCS 500-173928/13	Lab Control Sample	Total/NA	Water	9251	
MB 500-173928/12	Method Blank	Total/NA	Water	9251	

Analysis Batch: 173942

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-53406-1	MW-1	Dissolved	Water	9014	173880

General Chemistry (Continued)

Analysis Batch: 173942 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-53406-2	MW-2	Dissolved	Water	9014	173880
500-53406-3	MW-3	Dissolved	Water	9014	173880
500-53406-4	MW-4	Dissolved	Water	9014	173880
500-53406-5	MW-5	Dissolved	Water	9014	173880
500-53406-6	MW-6	Dissolved	Water	9014	173880
500-53406-7	MW-7	Dissolved	Water	9014	173880
LCS 500-173880/2-A	Lab Control Sample	Total/NA	Water	9014	173880
MB 500-173880/1-A	Method Blank	Total/NA	Water	9014	173880

Analysis Batch: 173960

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-53406-1	MW-1	Dissolved	Water	9038	
500-53406-2	MW-2	Dissolved	Water	9038	
500-53406-3	MW-3	Dissolved	Water	9038	
500-53406-4	MW-4	Dissolved	Water	9038	
500-53406-5	MW-5	Dissolved	Water	9038	
500-53406-6	MW-6	Dissolved	Water	9038	
500-53406-7	MW-7	Dissolved	Water	9038	
LCS 500-173960/4	Lab Control Sample	Total/NA	Water	9038	
MB 500-173960/3	Method Blank	Total/NA	Water	9038	

Analysis Batch: 174007

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-53406-1	MW-1	Dissolved	Water	SM 4500 NO3 F	
500-53406-2	MW-2	Dissolved	Water	SM 4500 NO3 F	
500-53406-3	MW-3	Dissolved	Water	SM 4500 NO3 F	
500-53406-4	MW-4	Dissolved	Water	SM 4500 NO3 F	
500-53406-5	MW-5	Dissolved	Water	SM 4500 NO3 F	
500-53406-6	MW-6	Dissolved	Water	SM 4500 NO3 F	
500-53406-7	MW-7	Dissolved	Water	SM 4500 NO3 F	
500-53406-7 MS	MW-7	Dissolved	Water	SM 4500 NO3 F	
500-53406-7 MSD	MW-7	Dissolved	Water	SM 4500 NO3 F	
LCS 500-174007/13	Lab Control Sample	Total/NA	Water	SM 4500 NO3 F	
MB 500-174007/12	Method Blank	Total/NA	Water	SM 4500 NO3 F	

Analysis Batch: 174166

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-53406-1	MW-1	Dissolved	Water	SM 4500 F C	
500-53406-1 MS	MW-1	Dissolved	Water	SM 4500 F C	
500-53406-1 MSD	MW-1	Dissolved	Water	SM 4500 F C	
500-53406-2	MW-2	Dissolved	Water	SM 4500 F C	
500-53406-3	MW-3	Dissolved	Water	SM 4500 F C	
500-53406-4	MW-4	Dissolved	Water	SM 4500 F C	
500-53406-5	MW-5	Dissolved	Water	SM 4500 F C	
500-53406-6	MW-6	Dissolved	Water	SM 4500 F C	
LCS 500-174166/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
MB 500-174166/3	Method Blank	Total/NA	Water	SM 4500 F C	

Analysis Batch: 174356

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-53406-7	MW-7	Dissolved	Water	SM 4500 F C	

General Chemistry (Continued)

Analysis Batch: 174356 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-53406-7 MS	MW-7	Dissolved	Water	SM 4500 F C	
500-53406-7 MSD	MW-7	Dissolved	Water	SM 4500 F C	
LCS 500-174356/5	Lab Control Sample	Total/NA	Water	SM 4500 F C	
MB 500-174356/4	Method Blank	Total/NA	Water	SM 4500 F C	

Surrogate Summary

Client: Patrick Engineering
Project/Site: Midwest Generation Waukegan Groundwater

TestAmerica Job ID: 500-53406-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
Lab Sample ID	Client Sample ID	12DCE (75-125)	TOL (75-120)	BFB (75-120)	DBFM (75-120)
500-53406-1	MW-1	97	101	96	97
500-53406-2	MW-2	94	98	95	94
500-53406-3	MW-3	96	99	93	95
500-53406-4	MW-4	98	104	95	98
500-53406-5	MW-5	102	100	97	97
500-53406-6	MW-6	101	99	96	95
500-53406-7	MW-7	98	99	96	98
LCS 500-173673/4	Lab Control Sample	93	97	97	98
MB 500-173673/6	Method Blank	96	101	94	95

Surrogate Legend

12DCE = 1,2-Dichloroe hane-d4 (Surr)
TOL = Toluene-d8 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 500-173673/6
Matrix: Water
Analysis Batch: 173673

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.50		0.50		ug/L			12/21/12 11:33	1
Toluene	<0.50		0.50		ug/L			12/21/12 11:33	1
Ethylbenzene	<0.50		0.50		ug/L			12/21/12 11:33	1
Xylenes, Total	<1.0		1.0		ug/L			12/21/12 11:33	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*96*		*75 - 125*		*12/21/12 11:33*	*1*
Toluene-d8 (Surr)	*101*		*75 - 120*		*12/21/12 11:33*	*1*
4-Bromofluorobenzene (Surr)	*94*		*75 - 120*		*12/21/12 11:33*	*1*
Dibromofluoromethane	*95*		*75 - 120*		*12/21/12 11:33*	*1*

Lab Sample ID: LCS 500-173673/4
Matrix: Water
Analysis Batch: 173673

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	50.0	38.1		ug/L		76	70 - 120
Toluene	50.0	36.6		ug/L		73	70 - 120
Ethylbenzene	50.0	42.1		ug/L		84	75 - 120
Xylenes, Total	150	118		ug/L		79	70 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*93*		*75 - 125*
Toluene-d8 (Surr)	*97*		*75 - 120*
4-Bromofluorobenzene (Surr)	*97*		*75 - 120*
Dibromofluoromethane	*98*		*75 - 120*

Method: 314.0 - Perchlorate (IC)

Lab Sample ID: MB 320-8536/8
Matrix: Water
Analysis Batch: 8536

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	<4.0		4.0		ug/L			01/04/13 18:34	1

Lab Sample ID: LCS 320-8536/9
Matrix: Water
Analysis Batch: 8536

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perchlorate	50.0	50.8		ug/L		102	85 - 115

Method: 314.0 - Perchlorate (IC) (Continued)

Lab Sample ID: MRL 320-8536/7 MRL
Matrix: Water
Analysis Batch: 8536

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Perchlorate	4.00	4.12		ug/L		103	75 - 125

Lab Sample ID: MB 320-8546/8
Matrix: Water
Analysis Batch: 8546

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	<4.0		4.0		ug/L			01/09/13 19:01	1

Lab Sample ID: LCS 320-8546/9
Matrix: Water
Analysis Batch: 8546

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perchlorate	50.0	51.0		ug/L		102	85 - 115

Lab Sample ID: MRL 320-8546/7 MRL
Matrix: Water
Analysis Batch: 8546

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Perchlorate	4.00	<4.0		ug/L		97	75 - 125

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: 500-53406-1 MS
Matrix: Water
Analysis Batch: 174206

Client Sample ID: MW-1
Prep Type: Dissolved
Prep Batch: 173915

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.091		0.100	0.197		mg/L		106	75 - 125
Barium	0.013		0.500	0.521		mg/L		102	75 - 125
Cadmium	<0.00050		0.0500	0.0533		mg/L		107	75 - 125
Chromium	<0.0050		0.200	0.201		mg/L		101	75 - 125
Cobalt	<0.0010		0.500	0.506		mg/L		101	75 - 125
Copper	<0.0020		0.250	0.256		mg/L		102	75 - 125
Iron	<0.10		1.00	0.992		mg/L		99	75 - 125
Lead	<0.00050		0.100	0.0987		mg/L		99	75 - 125
Manganese	<0.0025		0.500	0.499		mg/L		100	75 - 125
Nickel	<0.0020		0.500	0.513		mg/L		103	75 - 125
Selenium	<0.0025		0.100	0.108		mg/L		107	75 - 125
Silver	<0.00050		0.0500	0.0478		mg/L		96	75 - 125
Vanadium	0.026		0.500	0.524		mg/L		100	75 - 125
Zinc	<0.020		0.500	0.545		mg/L		109	75 - 125

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

Lab Sample ID: 500-53406-1 MS
Matrix: Water
Analysis Batch: 174292

Client Sample ID: MW-1
Prep Type: Dissolved
Prep Batch: 173915

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Beryllium	<0.0010		0.0500	0.0554		mg/L		111	75 - 125
Boron	1.9		1.00	2.99		mg/L		113	75 - 125

Lab Sample ID: 500-53406-1 MS
Matrix: Water
Analysis Batch: 174365

Client Sample ID: MW-1
Prep Type: Dissolved
Prep Batch: 173915

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	<0.0030		0.500	0.460		mg/L		92	75 - 125
Thallium	<0.0020		0.100	0.108		mg/L		108	75 - 125

Lab Sample ID: 500-53406-1 MSD
Matrix: Water
Analysis Batch: 174206

Client Sample ID: MW-1
Prep Type: Dissolved
Prep Batch: 173915

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.091		0.100	0.204		mg/L		113	75 - 125	3	20
Barium	0.013		0.500	0.525		mg/L		103	75 - 125	1	20
Cadmium	<0.00050		0.0500	0.0554		mg/L		111	75 - 125	4	20
Chromium	<0.0050		0.200	0.204		mg/L		102	75 - 125	1	20
Cobalt	<0.0010		0.500	0.514		mg/L		103	75 - 125	2	20
Copper	<0.0020		0.250	0.258		mg/L		103	75 - 125	1	20
Iron	<0.10		1.00	1.03		mg/L		103	75 - 125	3	20
Lead	<0.00050		0.100	0.100		mg/L		100	75 - 125	1	20
Manganese	<0.0025		0.500	0.507		mg/L		101	75 - 125	2	20
Nickel	<0.0020		0.500	0.520		mg/L		104	75 - 125	1	20
Selenium	<0.0025		0.100	0.113		mg/L		113	75 - 125	5	20
Silver	<0.00050		0.0500	0.0474		mg/L		95	75 - 125	1	20
Vanadium	0.026		0.500	0.534		mg/L		102	75 - 125	2	20
Zinc	<0.020		0.500	0.562		mg/L		112	75 - 125	3	20

Lab Sample ID: 500-53406-1 MSD
Matrix: Water
Analysis Batch: 174292

Client Sample ID: MW-1
Prep Type: Dissolved
Prep Batch: 173915

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Beryllium	<0.0010		0.0500	0.0540		mg/L		108	75 - 125	3	20
Boron	1.9		1.00	3.00		mg/L		114	75 - 125	0	20

Lab Sample ID: 500-53406-1 MSD
Matrix: Water
Analysis Batch: 174365

Client Sample ID: MW-1
Prep Type: Dissolved
Prep Batch: 173915

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	<0.0030		0.500	0.476		mg/L		95	75 - 125	3	20
Thallium	<0.0020		0.100	0.110		mg/L		110	75 - 125	1	20

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

Lab Sample ID: 500-53406-1 DU
Matrix: Water
Analysis Batch: 174206

Client Sample ID: MW-1
Prep Type: Dissolved
Prep Batch: 173915

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	0.091		0.0906		mg/L		0.1	20
Barium	0.013		0.0128		mg/L		0.4	20
Cadmium	<0.00050		<0 00050		mg/L		NC	20
Chromium	<0.0050		<0.0050		mg/L		NC	20
Cobalt	<0.0010		<0.0010		mg/L		NC	20
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	<0.0025		<0.0025		mg/L		NC	20
Silver	<0.00050		<0 00050		mg/L		NC	20
Vanadium	0.026		0.0267		mg/L		2	20
Zinc	<0.020		<0.020		mg/L		NC	20

Lab Sample ID: 500-53406-1 DU
Matrix: Water
Analysis Batch: 174292

Client Sample ID: MW-1
Prep Type: Dissolved
Prep Batch: 173915

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Beryllium	<0.0010		<0.0010		mg/L		NC	20
Boron	1.9		1.87		mg/L		0.4	20

Lab Sample ID: 500-53406-1 DU
Matrix: Water
Analysis Batch: 174365

Client Sample ID: MW-1
Prep Type: Dissolved
Prep Batch: 173915

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Antimony	<0.0030		<0.0030		mg/L		NC	20
Thallium	<0.0020		<0.0020		mg/L		NC	20

Lab Sample ID: MB 500-173915/1-A
Matrix: Water
Analysis Batch: 174206

Client Sample ID: Method Blank
Prep Type: Soluble
Prep Batch: 173915

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.0010		0.0010		mg/L		12/26/12 12:30	12/28/12 15:07	1
Barium	<0.0025		0.0025		mg/L		12/26/12 12:30	12/28/12 15:07	1
Cadmium	<0.00050		0.00050		mg/L		12/26/12 12:30	12/28/12 15:07	1
Chromium	<0.0050		0.0050		mg/L		12/26/12 12:30	12/28/12 15:07	1
Cobalt	<0.0010		0.0010		mg/L		12/26/12 12:30	12/28/12 15:07	1
Copper	<0.0020		0.0020		mg/L		12/26/12 12:30	12/28/12 15:07	1
Iron	<0.10		0.10		mg/L		12/26/12 12:30	12/28/12 15:07	1
Lead	<0.00050		0.00050		mg/L		12/26/12 12:30	12/28/12 15:07	1
Manganese	<0.0025		0.0025		mg/L		12/26/12 12:30	12/28/12 15:07	1
Nickel	<0.0020		0.0020		mg/L		12/26/12 12:30	12/28/12 15:07	1
Selenium	<0.0025		0.0025		mg/L		12/26/12 12:30	12/28/12 15:07	1
Silver	<0.00050		0.00050		mg/L		12/26/12 12:30	12/28/12 15:07	1
Vanadium	<0.0050		0.0050		mg/L		12/26/12 12:30	12/28/12 15:07	1

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

Lab Sample ID: MB 500-173915/1-A
Matrix: Water
Analysis Batch: 174206

Client Sample ID: Method Blank
Prep Type: Soluble
Prep Batch: 173915

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Zinc	<0.020		0.020		mg/L		12/26/12 12:30	12/28/12 15:07	1

Lab Sample ID: MB 500-173915/1-A
Matrix: Water
Analysis Batch: 174292

Client Sample ID: Method Blank
Prep Type: Soluble
Prep Batch: 173915

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	<0.0010		0.0010		mg/L		12/26/12 12:30	01/02/13 11:59	1
Boron	<0.050		0.050		mg/L		12/26/12 12:30	01/02/13 11:59	1

Lab Sample ID: MB 500-173915/1-A
Matrix: Water
Analysis Batch: 174365

Client Sample ID: Method Blank
Prep Type: Soluble
Prep Batch: 173915

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		12/26/12 12:30	01/03/13 12:06	1
Thallium	<0.0020		0.0020		mg/L		12/26/12 12:30	01/03/13 12:06	1

Lab Sample ID: LCS 500-173915/2-A
Matrix: Water
Analysis Batch: 174206

Client Sample ID: Lab Control Sample
Prep Type: Soluble
Prep Batch: 173915

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.100	0.106		mg/L		106	80 - 120
Barium	0.500	0.499		mg/L		100	80 - 120
Cadmium	0.0500	0.0511		mg/L		102	80 - 120
Chromium	0.200	0.202		mg/L		101	80 - 120
Cobalt	0.500	0.511		mg/L		102	80 - 120
Copper	0.250	0.252		mg/L		101	80 - 120
Iron	1.00	0.987		mg/L		99	80 - 120
Lead	0.100	0.0968		mg/L		97	80 - 120
Manganese	0.500	0.504		mg/L		101	80 - 120
Nickel	0.500	0.521		mg/L		104	80 - 120
Selenium	0.100	0.109		mg/L		109	80 - 120
Silver	0.0500	0.0481		mg/L		96	80 - 120
Vanadium	0.500	0.494		mg/L		99	80 - 120
Zinc	0.500	0.550		mg/L		110	80 - 120

Lab Sample ID: LCS 500-173915/2-A
Matrix: Water
Analysis Batch: 174292

Client Sample ID: Lab Control Sample
Prep Type: Soluble
Prep Batch: 173915

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Beryllium	0.0500	0.0499		mg/L		100	80 - 120
Boron	1.00	1.06		mg/L		106	80 - 120

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

Lab Sample ID: LCS 500-173915/2-A
Matrix: Water
Analysis Batch: 174365

Client Sample ID: Lab Control Sample
Prep Type: Soluble
Prep Batch: 173915

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.500	0.465		mg/L		93	80 - 120
Thallium	0.100	0.100		mg/L		100	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 500-173582/7-A
Matrix: Water
Analysis Batch: 173730

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 173582

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		12/20/12 15:00	12/21/12 09:09	1

Lab Sample ID: LCS 500-173582/8-A
Matrix: Water
Analysis Batch: 173730

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 173582

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00200	0.00213		mg/L		106	80 - 120

Lab Sample ID: 500-53406-1 MS
Matrix: Water
Analysis Batch: 173730

Client Sample ID: MW-1
Prep Type: Dissolved
Prep Batch: 173582

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	<0.00020		0.00100	0.000837		mg/L		84	75 - 125

Lab Sample ID: 500-53406-1 MSD
Matrix: Water
Analysis Batch: 173730

Client Sample ID: MW-1
Prep Type: Dissolved
Prep Batch: 173582

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	<0.00020		0.00100	0.000939		mg/L		94	75 - 125	11	20

Lab Sample ID: 500-53406-1 DU
Matrix: Water
Analysis Batch: 173730

Client Sample ID: MW-1
Prep Type: Dissolved
Prep Batch: 173582

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Mercury	<0.00020		<0 00020		mg/L		NC	20

Method: 9014 - Cyanide

Lab Sample ID: MB 500-173880/1-A
Matrix: Water
Analysis Batch: 173942

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 173880

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.010		0.010		mg/L		12/26/12 09:25	12/26/12 13:35	1

Method: 9014 - Cyanide (Continued)

Lab Sample ID: LCS 500-173880/2-A
Matrix: Water
Analysis Batch: 173942

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 173880

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.100	0.101		mg/L		101	80 - 120

Method: 9038 - Sulfate, Turbidimetric

Lab Sample ID: MB 500-173960/3
Matrix: Water
Analysis Batch: 173960

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	<5.0		5.0		mg/L			12/27/12 00:07	1

Lab Sample ID: LCS 500-173960/4
Matrix: Water
Analysis Batch: 173960

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	20.0	20.1		mg/L		100	80 - 120

Method: 9251 - Chloride

Lab Sample ID: MB 500-173771/4
Matrix: Water
Analysis Batch: 173771

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<2.0		2.0		mg/L			12/21/12 18:39	1

Lab Sample ID: LCS 500-173771/5
Matrix: Water
Analysis Batch: 173771

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	50.0	51.5		mg/L		103	80 - 120

Lab Sample ID: MB 500-173928/12
Matrix: Water
Analysis Batch: 173928

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<2.0		2.0		mg/L			12/26/12 13:13	1

Lab Sample ID: LCS 500-173928/13
Matrix: Water
Analysis Batch: 173928

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	50.0	50.7		mg/L		101	80 - 120

Method: 9251 - Chloride (Continued)

Lab Sample ID: 500-53406-1 MS
Matrix: Water
Analysis Batch: 173771

Client Sample ID: MW-1
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	48		50.0	102		mg/L		108	75 - 125

Lab Sample ID: 500-53406-1 MSD
Matrix: Water
Analysis Batch: 173771

Client Sample ID: MW-1
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	48		50.0	101		mg/L		106	75 - 125	1	20

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

Lab Sample ID: MB 500-173806/1
Matrix: Water
Analysis Batch: 173806

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10		mg/L			12/23/12 23:00	1

Lab Sample ID: LCS 500-173806/2
Matrix: Water
Analysis Batch: 173806

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	278		mg/L		111	80 - 120

Lab Sample ID: 500-53406-1 MS
Matrix: Water
Analysis Batch: 173806

Client Sample ID: MW-1
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	460		250	744		mg/L		113	75 - 125

Lab Sample ID: 500-53406-1 DU
Matrix: Water
Analysis Batch: 173806

Client Sample ID: MW-1
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	460		478		mg/L		3	20

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 500-174166/3
Matrix: Water
Analysis Batch: 174166

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.10		0.10		mg/L			12/27/12 11:07	1

Method: SM 4500 F C - Fluoride (Continued)

Lab Sample ID: LCS 500-174166/4
Matrix: Water
Analysis Batch: 174166

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	10.8		mg/L		108	80 - 120

Lab Sample ID: MB 500-174356/4
Matrix: Water
Analysis Batch: 174356

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			01/02/13 15:28	1

Lab Sample ID: LCS 500-174356/5
Matrix: Water
Analysis Batch: 174356

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	10.9		mg/L		109	80 - 120

Lab Sample ID: 500-53406-1 MS
Matrix: Water
Analysis Batch: 174166

Client Sample ID: MW-1
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	0.41	^	5.00	4.63		mg/L		84	75 - 125

Lab Sample ID: 500-53406-1 MSD
Matrix: Water
Analysis Batch: 174166

Client Sample ID: MW-1
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	0.41	^	5.00	4.70		mg/L		86	75 - 125	1	20

Lab Sample ID: 500-53406-7 MS
Matrix: Water
Analysis Batch: 174356

Client Sample ID: MW-7
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	0.48		5.00	5.66		mg/L		104	75 - 125

Lab Sample ID: 500-53406-7 MSD
Matrix: Water
Analysis Batch: 174356

Client Sample ID: MW-7
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	0.48		5.00	5.55		mg/L		101	75 - 125	2	20

Method: SM 4500 NO2 B - Nitrogen, Nitrite

Lab Sample ID: MB 500-173628/3
Matrix: Water
Analysis Batch: 173628

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			12/20/12 15:55	1

Lab Sample ID: LCS 500-173628/4
Matrix: Water
Analysis Batch: 173628

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	0.0965		mg/L		97	80 - 120

Method: SM 4500 NO3 F - Nitrogen, Nitrate

Lab Sample ID: MB 500-174007/12
Matrix: Water
Analysis Batch: 174007

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrogen, Nitrate Nitrite	<0.10		0.10		mg/L			12/27/12 10:16	1

Lab Sample ID: LCS 500-174007/13
Matrix: Water
Analysis Batch: 174007

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrogen, Nitrate Nitrite	1.00	0.965		mg/L		96	80 - 120

Lab Sample ID: 500-53406-7 MS
Matrix: Water
Analysis Batch: 174007

Client Sample ID: MW-7
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrogen, Nitrate Nitrite	<0.10		1.00	0.992		mg/L		99	75 - 125

Lab Sample ID: 500-53406-7 MSD
Matrix: Water
Analysis Batch: 174007

Client Sample ID: MW-7
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrogen, Nitrate Nitrite	<0.10		1.00	0.975		mg/L		98	75 - 125	2	20

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484
Phone: 708.534.5200 Fax: 708.534.5211

Chain of Custody Record

Lab Job # 500-53406

Chain of Custody Number:

Page 1 of 1

Temperature °C of Cooler: 4.2, 3.9

(optional) Report To	(optional) Bill To
Contact: Steven Knoll	Contact:
Company: Patrick	Company:
Address:	Address:
Address:	Address:
Phone:	Phone:
Fax:	Fax:
E-Mail: Sknoll@patrickcorp.com	PO#/Reference#

Client: MW 6 | Client Project #: | Preservative:

Project Name: Waukegan Station | Parameter:

Project Location/State: Waukegan, IL | Lab Project #:

Sampler: Steven Knoll | Lab PM:

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. NaHSO4
7. Cool to 4°
8. None
9. Other

Lab ID	MS/MSD	Sample ID	Sampling Date	Sampling Time	# of Containers	Matrix	PP Metals, V (HG)	Cl, F, SO4, TDS	NO2	NO3	Cyanide	BTEX	Perchlorate	Comments
1		MW-1	12/19/12	1130	9	GW	X	X	X	X	X	X	X	
2		MW-2		1210										
3		MW-3		1245										
4		MW-4		1330										
5		MW-5		1530										
6		MW-6		1500										
7		MW-7		1420										

Turnaround Time Required (Business Days)
___ 1 Day ___ 2 Days ___ 5 Days ___ 7 Days ___ 10 Days ___ 15 Days _____ Other
Requested Due Date: _____

Sample Disposal
☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By	Company	Date	Time	Received By	Company	Date	Time
[signature]	Patrick	12/19/12	1800	[signature]		12/19/12	10:00PM
Relinquished By	Company	Date	Time	Received By	Company	Date	Time
				[signature]	TA-CHI	12/20/12	0745
Relinquished By	Company	Date	Time	Received By	Company	Date	Time

Lab Courier: ☐
Shipped: ☐
Hand Delivered: ☐

Matrix Key
WW – Wastewater
W – Water
S – Soil
SL – Sludge
MS – Miscellaneous
OL – Oil
A – Air
SE – Sediment
SO – Soil
L – Leachate
WI – Wipe
DW – Drinking Water
O – Other

Client Comments:

Lab Comments:

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

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Stadelmann, Bonnie M	Carrier Tracking No(s):	COC No: 500-29876.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: bonnie.stadelmann@testamericainc.com		Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		**Analysis Requested**		Job #: 500-53406-1
Address: 880 Riverside Parkway,	Due Date Requested: 1/4/2013			**Preservation Codes:** A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)
City: West Sacramento	TAT Requested (days):			
State, Zip: CA, 95605				Other:
Phone: 916-373-5600(Tel) 916-372-1059(Fax)	PO #:			
Email:	WO #:			
Project Name: Midwest Generation Waukegan Groundwater	Project #: 50004763			
Site:	SSOW#:			

500-53406 Chain of Custody

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	314.0/ Perchlorate	Total Number of containers	Special Instructions/Note:
			Preservation Code:					
MW-1 (500-53406-1)	12/19/12	11:30 Central		Water		X		
MW-2 (500-53406-2)	12/19/12	12:10 Central		Water		X		
MW-3 (500-53406-3)	12/19/12	12:45 Central		Water		X		
MW-4 (500-53406-4)	12/19/12	13:30 Central		Water		X		
MW-5 (500-53406-5)	12/19/12	15:30 Central		Water		X		
MW-6 (500-53406-6)	12/19/12	15:00 Central		Water		X		
MW-7 (500-53406-7)	12/19/12	14:20 Central		Water		X		

Possible Hazard Identification
Unconfirmed

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

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by: Sheri Scott	Date/Time: 12/21/12 1600	Company	Received by:	Date/Time: 12-22-12 1300	Company TALS
Relinquished by	Date/Time:	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Login Sample Receipt Checklist

Client: Patrick Engineering

Job Number: 500-53406-1

Login Number: 53406
List Number: 1
Creator: Scott, Sherri L

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	4.2, 3.9
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have leg ble labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Patrick Engineering

Job Number: 500-53406-1

Login Number: 53406
List Number: 1
Creator: Hytrek, Cheryl

List Source: TestAmerica Sacramento
List Creation: 12/22/12 01:11 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.6
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.	True	
Sample containers have leg ble 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.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Certification Summary

Client: Patrick Engineering
Project/Site: Midwest Generation Waukegan Groundwater

TestAmerica Job ID: 500-53406-1

Laboratory: TestAmerica Chicago

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40461	04-30-13
California	NELAP	9	01132CA	04-30-13
Georgia	State Program	4	N/A	04-30-13
Georgia	State Program	4	939	04-30-13
Hawaii	State Program	9	N/A	04-30-13
Illinois	NELAP	5	100201	04-30-13
Indiana	State Program	5	C-IL-02	04-30-13
Iowa	State Program	7	82	05-01-14
Kansas	NELAP	7	E-10161	10-31-13
Kentucky	State Program	4	90023	12-31-12
Kentucky (UST)	State Program	4	66	04-11-13
Louisiana	NELAP	6	30720	06-30-13
Massachusetts	State Program	1	M-IL035	06-30-13
Mississippi	State Program	4	N/A	04-30-13
North Carolina DENR	State Program	4	291	12-31-13
North Dakota	State Program	8	R-194	04-30-13
Oklahoma	State Program	6	8908	08-31-13
South Carolina	State Program	4	77001	04-30-13
Texas	NELAP	6	T104704252-09-TX	02-28-13
USDA	Federal		P330-12-00038	02-06-15
Virginia	NELAP	3	460142	06-14-13
Wisconsin	State Program	5	999580010	08-31-13
Wyoming	State Program	8	8TMS-Q	04-30-13

Laboratory: TestAmerica West Sacramento

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

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	DoD ELAP		2928-01	01-31-14
Alaska (UST)	State Program	10	UST-055	12-18-13
Arizona	State Program	9	AZ0708	08-11-13
Arkansas DEQ	State Program	6	88-0691	06-17-13
California	NELAP	9	1119CA	01-31-13
Colorado	State Program	8	N/A	08-31-13
Connecticut	State Program	1	PH-0691	06-30-13
Florida	NELAP	4	E87570	06-30-13
Guam	State Program	9	N/A	08-31-13
Hawaii	State Program	9	N/A	01-31-13
Illinois	NELAP	5	200060	03-17-13
Kansas	NELAP	7	E-10375	10-31-13
Louisiana	NELAP	6	30612	06-30-13
Michigan	State Program	5	9947	01-31-13
Nevada	State Program	9	CA44	07-31-13
New Jersey	NELAP	2	CA005	06-30-13
New York	NELAP	2	11666	04-01-13
Northern Mariana Islands	State Program	9	MP0007	01-31-13
Oregon	NELAP	10	CA200005	03-28-13
Pennsylvania	NELAP	3	68-01272	03-31-13
South Carolina	State Program	4	87014	06-30-13
Texas	NELAP	6	T104704399-08-TX	05-31-13
US Fish & Wildlife	Federal		LE148388-0	02-28-13
USDA	Federal		P330-11-00436	12-30-14

Certification Summary

Client: Patrick Engineering
Project/Site: Midwest Generation Waukegan Groundwater

TestAmerica Job ID: 500-53406-1

Laboratory: TestAmerica West Sacramento (Continued)

All certifica ions held by this laboratory are listed. Not all cer ifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
USEPA UCMR	Federal	1	CA00044	11-06-14
Utah	NELAP	8	QUAN1	01-31-13
Washington	State Program	10	C581	05-05-13
West Virginia	State Program	3	9930C	12-31-13
West Virginia DEP	State Program	3	334	07-31-13
Wyoming	State Program	8	8TMS-Q	01-31-13