



ENVIRONMENTAL CONSULTATION & REMEDIATION

KPRG and Associates, Inc.

**CCR COMPLIANCE
ANNUAL GROUNDWATER MONITORING and
CORRECTIVE ACTION REPORT - 2018**

**Midwest Generation, LLC
Will County
259 E. 135th Street
Romeoville, Illinois**

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January 31, 2019

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1.0 INTRODUCTION

The Detection Monitoring requirements in accordance with the Federal Register, Environmental Protection Agency, 40 CFR Parts 257.94, Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities; Final Rule dated April 17, 2015 (CCR Rule) have been completed for the ash pond monitoring wells located at the Midwest Generation, LLC (Midwest Generation) Will County Generating Station. The wells sampled were selected to meet the monitoring requirements of the CCR Rule for Ash Ponds 2 South (2S) and 3 South (3S). The CCR monitoring well network around these ponds consists of six monitoring wells (MW-05, MW-06, MW-09, MW-10, MW-11 and MW-12) as shown on Figure 1. Wells MW-05 and MW-06 are upgradient wells.

The first CCR Compliance Annual Groundwater Monitoring and Corrective Action report was submitted January 24, 2018. This second annual report covers the work performed relative to CCR groundwater monitoring from January 1, 2018 through the end of 2018. It does not duplicate information or activities previously reported for 2017. It is prepared in accordance with Section 257.90(e)(1-5) and summarizes the sampling procedures used, provides an evaluation of groundwater flow conditions, summarizes the analytical data generated and provides a discussion of the statistical evaluations and alternate source demonstration testing completed as a basis for determining the appropriate next phase of compliance activities.

2.0 FIELD PROCEDURES AND GROUNDWATER FLOW EVALUATION

2.1 Field Procedures

As previously noted, the CCR groundwater monitoring network around the Ash Ponds 2S and 3S at the Will County facility consists of six wells (MW-05, MW-06, MW-09, MW-10, MW-11 and MW-12) as shown on Figure 1. As part of sampling procedures, the integrity of all monitoring wells was inspected and water levels obtained using an electronic water level meter (see summary of water level discussion below). Wells MW-05, MW-06, MW-09 were found in good condition with locked protector casings and intact concrete surface seals. Wells MW-10, MW-11 and MW-12 are completed with flush-mounts at ground surface and were also in good condition.

All groundwater samples were collected using the low-flow sampling technique from dedicated pumps. The samples were not filtered prior to analysis to provide for total metals concentrations as opposed to dissolved metals concentrations. One duplicate sample was collected from a randomly selected monitoring well per sampling event for quality assurance purposes.

2.2 Groundwater Flow Evaluation

Water level data measurements were obtained from each well during each round of groundwater monitoring. A complete round of water levels was collected prior to initiating sampling, and the water level data are summarized in Table 1. The water levels were used to generate a groundwater flow map for each sampling event. These maps are provided as Figures 2 and 3. A review of the maps indicates a consistent westerly groundwater flow direction. In accordance with general groundwater sampling requirements under Section 257.93(c), Table 2 provides a summary of the flow direction and an estimated rate of groundwater flow for each sampling event. The flow rate was calculated using the following equation:

$$V_s = \frac{Kdh}{n_e dl}, \text{ where}$$

V_s is seepage velocity (distance/time)

K is hydraulic conductivity (distance/time)

dh/dl is hydraulic gradient (unitless)

n_e is effective porosity (unitless)

The average hydraulic conductivity of 4.32×10^{-4} ft/sec used in Table 2 was obtained from the Hydrogeologic Assessment Report dated February 2011 and prepared by Patrick

Engineering. The estimated effective porosity of the aquifer materials (0.20) was obtained from literature (Groundwater, Freeze and Cherry, 1979).

3.0 ANALYTICAL DATA AND STATUS OF EVALUATIONS

3.1 Sampling Summary

The groundwater sampling summary from 2018 is provided in Table 3, in accordance with 257.90 (e)(3).

3.2 Data Summary

The analytical data from the detection monitoring groundwater sampling for Appendix III parameters are provided in Table 4 which includes calculated Prediction Limits (PLs) established in the initial CCR Groundwater Monitoring Statistical Evaluation Summary dated January 2018 for data comparison purposes. The downgradient intrawell prediction limits were established for the three parameters which were part of the Alternate Source Demonstration (ASD) as recommended at the end of that evaluation (see discussion in Section 4.2 below). For those parameters in downgradient wells, a concentration above both interwell and intrawell prediction limits would be considered a potential statistically significant increase (SSI).

Semi-annual groundwater sampling was completed for Appendix III in 2018 in accordance with detection monitoring requirements under Section 257.94. The data tables include the sample dates and whether the specific well is considered upgradient or downgradient relative to groundwater flow and the regulated unit. All duplicate values were within an acceptable range. The analytical data packages from the detection monitoring events are provided in Appendix A. Groundwater sampling for Appendix IV was not performed in 2018 since this facility is not in assessment monitoring.

Resampling events were limited to any potential statistically significant increases (SSI) for specific parameters at specific wells. First semi-annual sampling data indicated pH and sulfate above the PLs at MW-06 and sulfate above its PL at MW-09. Confirmatory resampling as permitted within the rule indicated that analytical results were below the PLs for each resampled well.

3.3 Current Status

Ash Ponds 2S and 3S are, and continue to be, in detection monitoring, and there has been no transition between monitoring programs in 2018 since no confirmed SSIs in association with the regulated unit(s) were recorded.

4.0 OTHER REQUIRED SUBMITTALS

4.1 Initial Statistical Evaluation Summary

The initial data to establish statistical background was collected as part of detection monitoring requirements under 257.94(b) and completed in 2017. Eight rounds of groundwater data were generated for all upgradient and downgradient monitoring wells for Appendix III and Appendix IV parameters. In addition, a ninth round and resample event was collected for subsequent use in statistical comparisons. The CCR Groundwater Monitoring Statistical Evaluation Summary dated January 2018 was prepared by KPRG and Associates, Inc. All statistical calculations were completed in accordance with the CCR Compliance Statistical Approach for Groundwater Data Evaluation for Will County Generating Station dated October 10, 2017.

The completed detection monitoring statistical evaluation determined that there were SSIs in downgradient monitoring wells relative to established background for chloride, fluoride and TDS. It was recommended to complete an ASD in accordance with 40 CFR 257.94(e)(2) to determine whether these SSIs may be associated with an actual release from the regulated unit(s) or if another potential source in the vicinity of the ash ponds may be affecting the local groundwater quality. The results of the ASD are discussed below.

4.2 Alternate Source Demonstration

The ASD was completed April 12, 2018 in accordance with 40 CFR 257.94(e)(2) for the Will County Generating Station Ash Ponds 2S and 3S (see Appendix B). Ash and water samples were collected from each of the two ponds (2S and 3S) and analyzed using the Leaching Environmental Assessment Framework (LEAF) method to determine whether SSIs may be associated with an actual release from the regulated unit(s) or if another potential source in the vicinity of the ash ponds may be affecting the local groundwater quality.

It was concluded that the SSIs for chloride, fluoride and TDS are not the result of a release of leachate from the regulated units (Ponds 2S and 3S) but rather from other potential source(s). The recommendation was to continue with routine detection monitoring. It was also recommended, if necessary, to include intrawell statistical evaluations/comparisons for the downgradient wells in addition to the current interwell evaluations, since upgradient well chemistry for various Appendix III constituents is similar to ash leachate chemistry at natural pH levels. Based on this recommendation, the intrawell PLs for the three parameters that were part of the ASD were calculated for the downgradient monitoring wells and are included in Table 4 (see discussion in Section 3.2 above).

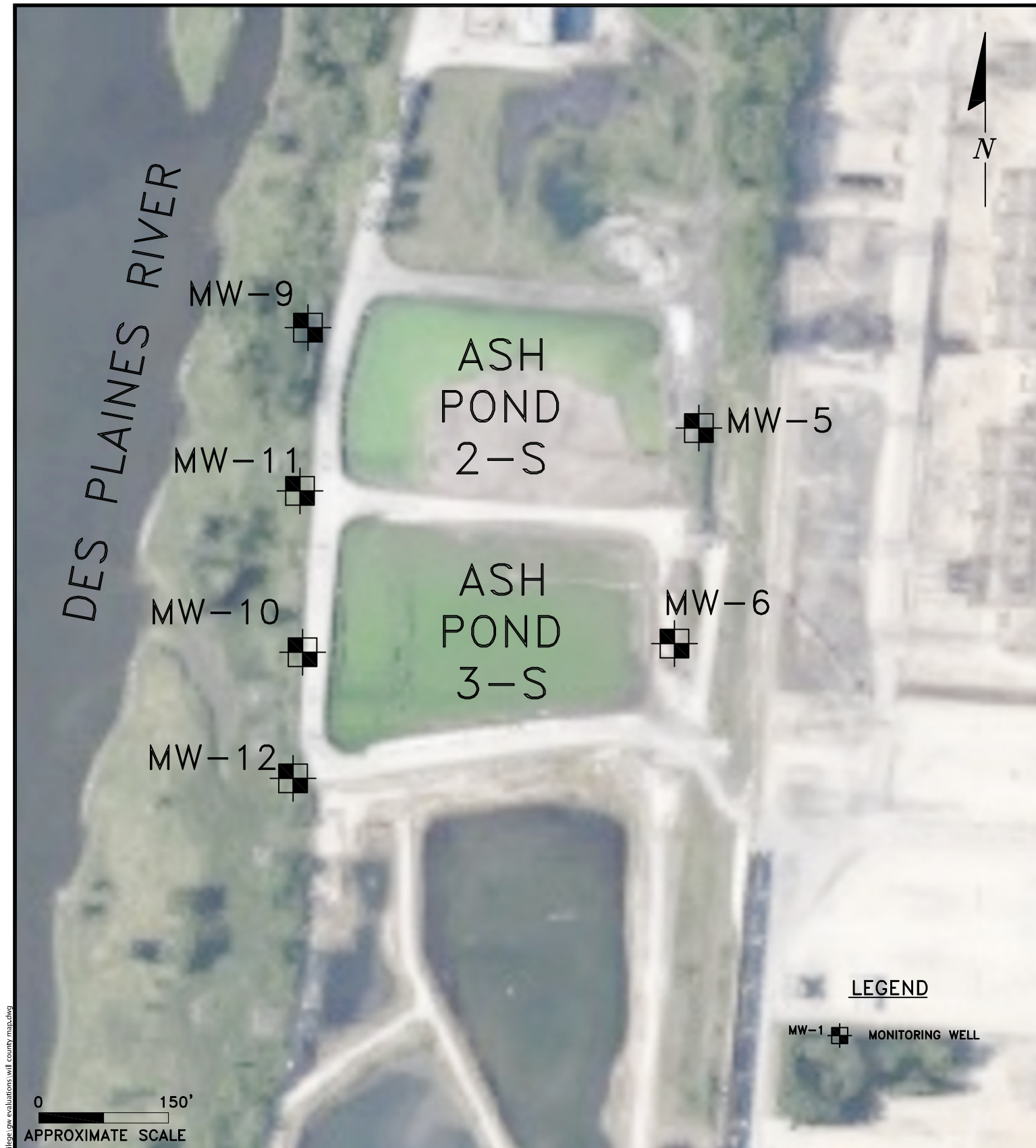
5.0 SUMMARY/CONCLUSIONS AND RECOMMENDATIONS

The detection monitoring requirements in accordance with the CCR Rule have been successfully met. While in detection monitoring, Ash Ponds 2S and 3S analytical results were below the established PLs. Groundwater monitoring wells that had analytical results that showed parameters above the PLs were resampled to minimize potential for a false positive. All monitoring wells that were resampled showed analytical results below the PLs. An ASD completed in April 2018 determined that SSIs for chloride, fluoride and TDS are from other sources, and not leakage of leachate from the regulated units (Ponds 2S and 3S). Therefore, it is recommended that the site continue with routine detection monitoring at this time. The next round of CCR semi-annual detection monitoring groundwater sampling is scheduled for 2nd Quarter of 2019.

6.0 REFERENCES

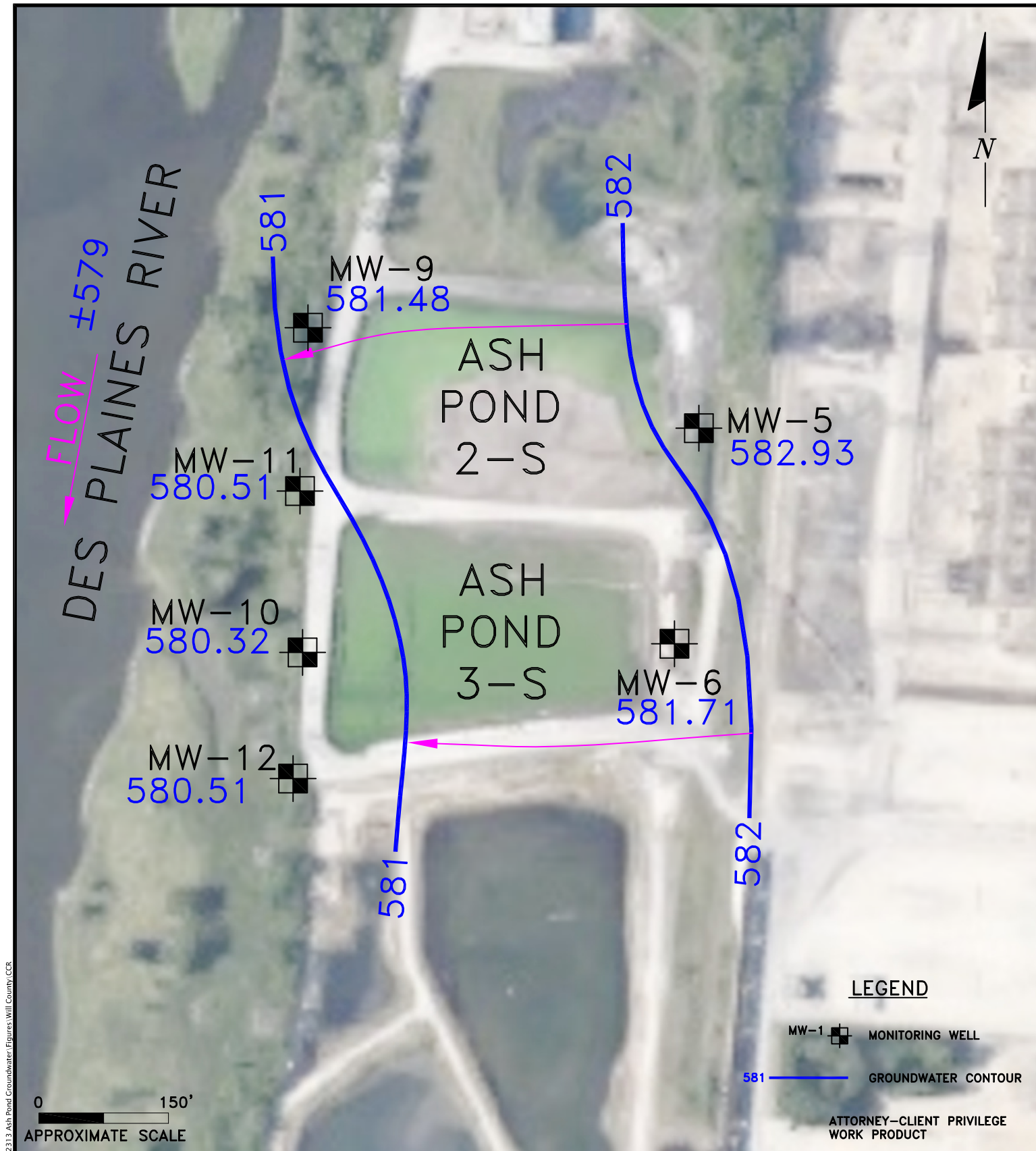
- Federal Register, Environmental Protection Agency, 40 CFR Parts 257 and 261, Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals From Electric Utilities; Final Rule. Vol. 80, No. 74, Friday April 17, 2015.
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- KPRG and Associates, Inc., CCR Compliance Monitoring, Sampling and Analysis Plan, Midwest Generation, LLC Will County Generating Station. October 10, 2017.
- KPRG and Associates, Inc., CCR Compliance Statistical Approach for Groundwater Data Evaluation, Midwest Generation, LLC Will County Generating Station. October 10, 2017.
- KPRG and Associates, Inc., CCR Groundwater Monitoring Statistical Evaluation Summary - 2017, Midwest Generation, LLC Will County Generating Station. January 12, 2018.
- R.A. Freeze and J.A. Cherry, Groundwater. Prentice-Hall, Inc. Publishing Co., 1979.

FIGURES



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ENVIRONMENTAL CONSULTATION & REMEDIATION		CCR MONITORING WELL SITE MAP	
K P R G KPRG and Associates, inc.		WILL COUNTY STATION ROMEONVILLE, ILLINOIS	
414 Plaza Drive, Suite 106 Westmont, Illinois 60559 Telephone 630-325-1300 Facsimile 630-325-1593		Scale: 1" = 150'	Date: December 27, 2017
14665 West Lisbon Road, Suite 28 Brookfield, Wisconsin 53005 Telephone 262-781-0475 Facsimile 262-781-0478		KPRG Project No. 12313.3	FIGURE 1



ENVIRONMENTAL CONSULTATION & REMEDIATION

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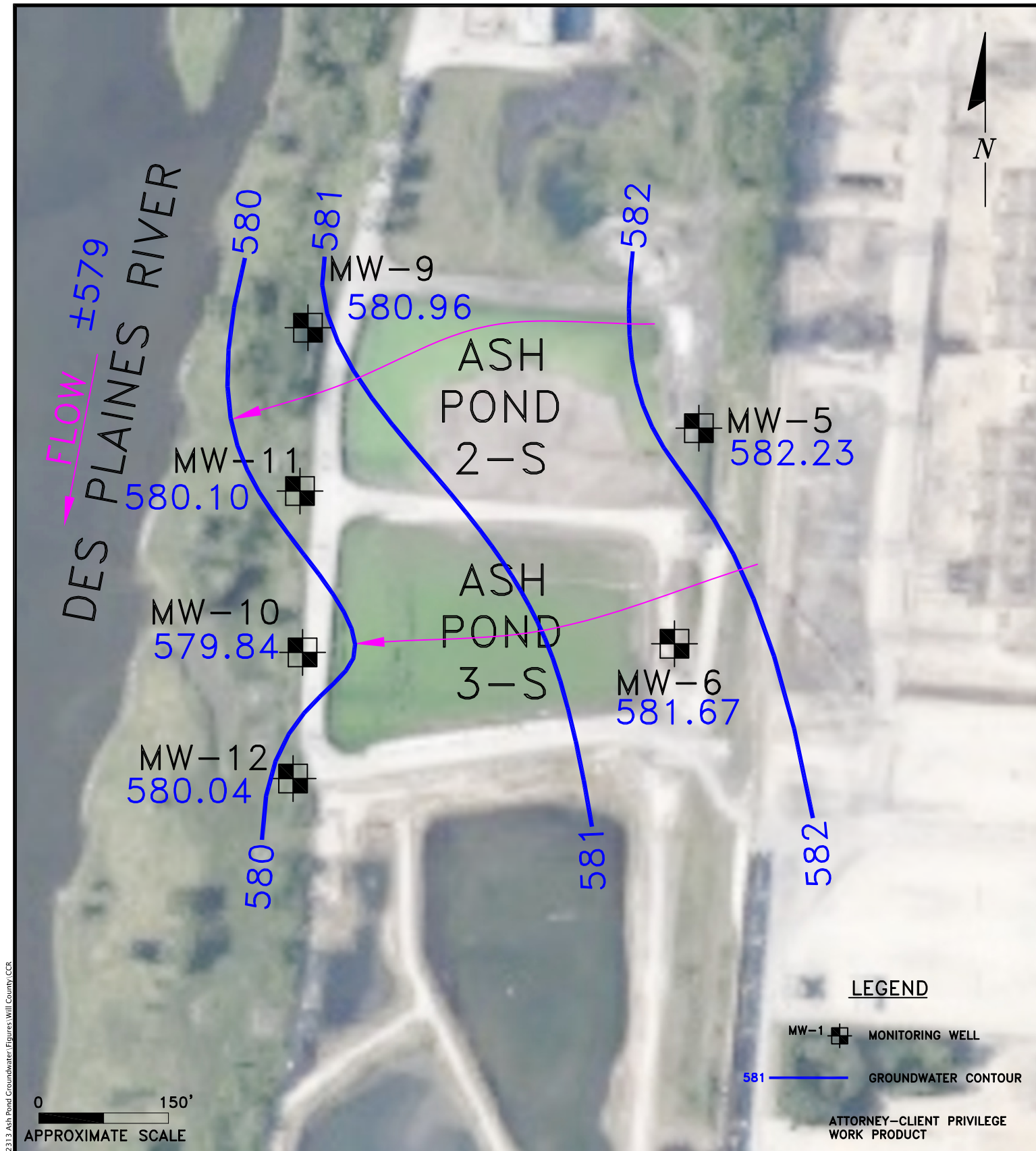
CCR GROUNDWATER CONTOUR-05/2018

WILL COUNTY STATION
ROMEOVILLE, ILLINOIS

Scale: 1" = 150' Date: June 07, 2018

KPRG Project No. 12313.3

FIGURE 2



ENVIRONMENTAL CONSULTATION & REMEDIATION

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CCR GROUNDWATER CONTOUR-10/2018

WILL COUNTY STATION
ROMEIOVILLE, ILLINOIS

Scale: 1" = 150' Date: December 26, 2018

KPRG Project No. 12313.3

FIGURE 3

TABLES

Table 1. Groundwater Elevations - Midwest Generation, LLC, Will County Station, Romeoville, IL

Well ID	Date	Top of Casing Elevation (ft above MSL)	Depth to Groundwater (ft below TOC)	Groundwater Elevation (ft above MSL)
MW-05	11/9/2015	592.87	9.99	582.88
	2/16/2016	592.87	9.91	582.96
	5/24/2016	592.87	9.94	582.93
	8/9/2016	592.87	10.09	582.78
	10/25/2016	592.87	9.02	583.85
	1/31/2017	592.87	9.81	583.06
	5/9/2017	592.87	9.63	583.24
	6/27/2017	592.87	10.26	582.61
	9/6/2017	592.87	10.48	582.39
	11/16/2017	592.87	10.02	582.85
	2/28/2018	592.87	9.48	583.39
	5/1/2018	592.87	9.94	582.93
MW-06	10/2/2018	592.87	10.64	582.23
	11/9/2015	593.18	9.96	583.22
	2/16/2016	593.18	11.37	581.81
	5/24/2016	593.18	11.37	581.81
	8/9/2016	593.18	11.54	581.64
	10/25/2016	593.18	11.37	581.81
	1/31/2017	593.18	11.24	581.94
	5/9/2017	593.18	10.86	582.32
	6/27/2017	593.18	11.55	581.63
	9/6/2017	593.18	11.77	581.41
	11/16/2017	593.18	11.49	581.69
	2/28/2018	593.18	10.91	582.27
MW-09	5/1/2018	593.18	11.47	581.71
	10/2/2018	593.18	11.89	581.29
	11/9/2015	592.87	11.38	581.49
	2/16/2016	592.87	11.03	581.84
	5/24/2016	592.87	11.35	581.52
	8/9/2016	592.87	11.43	581.44
	10/25/2016	592.87	10.74	582.13
	1/31/2017	592.87	11.15	581.72
	5/9/2017	592.87	10.45	582.42
	6/27/2017	592.87	11.66	581.21
	9/6/2017	592.87	11.95	580.92
	11/14/2017	592.87	11.54	581.33
MW-10	2/27/2018	592.87	10.13	582.74
	5/1/2018	592.87	11.39	581.48
	10/2/2018	592.87	11.91	580.96
	11/9/2015	590.96	10.65	580.31
	2/16/2016	590.96	10.43	580.53
	5/24/2016	590.96	10.72	580.24
	8/9/2016	590.96	11.12	579.84
	10/25/2016	590.96	10.73	580.23
	1/31/2017	590.96	10.37	580.59
	5/9/2017	590.96	9.78	581.18
	6/27/2017	590.96	11.09	579.87
	9/6/2017	590.96	11.20	579.76
MW-11	11/15/2017	590.96	10.76	580.20
	2/27/2018	590.96	9.54	581.42
	5/1/2018	590.96	10.64	580.32
	10/2/2018	590.96	11.12	579.84
	11/9/2015	590.69	10.28	580.41
	2/16/2016	590.69	10.15	580.54
	5/24/2016	590.69	10.25	580.44
	8/9/2016	590.69	10.66	580.03
	10/25/2016	590.69	10.42	580.27
	1/31/2017	590.69	9.91	580.78
	5/9/2017	590.69	9.21	581.48
	6/27/2017	590.69	10.48	580.21
MW-12	9/6/2017	590.69	10.73	579.96
	11/15/2017	590.69	10.43	580.26
	5/1/2018	590.69	10.18	580.51
	10/2/2018	590.69	10.59	580.10
	11/9/2015	590.81	10.15	580.66
	2/16/2016	590.81	10.24	580.57
	5/24/2016	590.81	10.31	580.50
	8/9/2016	590.81	10.73	580.08
	10/25/2016	590.81	10.45	580.36
	1/31/2017	590.81	10.16	580.65
	5/9/2017	590.81	9.88	580.93
	6/27/2017	590.81	10.62	580.19
	9/6/2017	590.81	10.61	580.20
	11/15/2017	590.81	10.20	580.61
	5/1/2018	590.81	10.30	580.51
	10/2/2018	590.81	10.77	580.04

MSL - Mean Sea Level
TOC - Top of Casing

Table 2. Groundwater Flow Direction and Estimated Seepage Velocity/Flow Rate - Midwest Generation, LLC, Will County Station, Romeoville, IL.

DATE	Groundwater Flow Direction	Kavg (ft/sec)*	Average Hydraulic Gradient (ft/ft)	Porosity (unitless)**	Estimated Seepage Velocity (ft/day)
11/9/2015	West	4.320E-04	0.0053	0.2	0.99
2/16/2016	West	4.320E-04	0.0030	0.2	0.55
5/24/2016	West	4.320E-04	0.0030	0.2	0.55
8/9/2016	West	4.320E-04	0.0030	0.2	0.55
10/25/2016	West	4.320E-04	0.0030	0.2	0.55
1/31/2017	West	4.320E-04	0.0030	0.2	0.55
5/9/2017	West	4.320E-04	0.0045	0.2	0.84
6/27/2017	West	4.320E-04	0.0049	0.2	0.91
9/6/2017	West	4.320E-04	0.0047	0.2	0.88
11/16/2017	West	4.320E-04	0.0026	0.2	0.49
5/1/2018	West	4.320E-04	0.0025	0.2	0.46
10/2/2018	West	4.320E-04	0.0040	0.2	0.75

* Kavg - Average hydraulic conductivity (feet/second) from Hydrogeologic Assessment Report, Patrick Engineering, February 2011.

** - Porosity estimate from Groundwater, Freeze and Cherry, 1979.

Table 3. CCR Groundwater Sample Collection Summary for 2018 - Will County Generating Station

Well ID	Number of Groundwater Sampling Events	Dates Groundwater Sampling Events	Detection Monitoring (D) versus Assessment Monitoring (A)
MW-5 (Upgradient)	2	5/2/2018	D
		10/3/2018	D
MW-6 (Upgradient)	2	5/3/2018	D
		10/3/2018	D
MW-9 (Downgradient)	2	5/1/2018	D
		10/2/2018	D
MW-10 (Downgradient)	2	5/1/2018	D
		10/3/2018	D
MW-11 (Downgradient)	2	5/3/2018	D
		10/3/2018	D
MW-12 (Downgradient)	2	5/3/2018	D
		10/2/2018	D

Table 4. Semi-Annual Detection Monitoring Statistical Comparisons - Appendix III Groundwater Analytical Results 2018 and Confirmatory Resampling - Midwest Generation, LLC, Will County Station, Romeoville, IL.

Well	Date	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	Total Dissolved Solids
MW-05 up-gradient	11/11/2015	6.1	220	110	0.31	7.24	770	1,900
	2/18/2016	4.4	230	120	0.31	6.99	730	1,600
	5/26/2016	3.7	170	110	0.33	6.73	670	1,500
	8/10/2016	3.6	67	120	0.72	8.62	480	970
	10/26/2016	3.6	44	120	0.70	9.08	410	920
	2/1/2017	4.6	250	48	0.35	6.81	530	1,600
	5/11/2017	4.0	140	85	0.31	7.86	610	1,200
	6/27/2017	3.8	83	99	0.53	7.95	500	1,000
	Pred. Limit*	6.65	359	148	0.72	9.93-5.39	923	2,286
	9/8/2017	4.8	89	78	0.52	9.40	490	1,000
	11/16/2017	4.8	180	52	0.45	6.70	650	1,500
	5/2/2018	3.6	200	32	0.39	7.23	510	1,300
	10/3/2018	4.9	150	55	0.48	7.07	430	1,200
MW-06 up-gradient	11/10/2015	3.0	52	100	0.55	8.63	300	660
	2/18/2016	2.5	74	150	0.47	8.58	280	650
	5/26/2016	2.7	86	92	0.44	7.79	350	800
	8/11/2016	3.6	110	58	0.35	7.74	330	840
	10/26/2016	3.8	86	74	0.40	8.16	220	800
	2/1/2017	3.4	70	83	0.41	7.88	260	700
	5/11/2017	3.0	75	84	0.28	8.68	330	570
	6/27/2017	3.1	65	74	0.38	8.15	330	710
	Pred. Limit*	4.29	122	162	0.62	9.21-7.19	415	956
	9/7/2017	3.5	75	67	0.40	8.20	300	740
	11/16/2017	3.9	88	54	0.39	7.59	280	810
	5/3/2018	3	91	52	0.26	6.91	530	750
	7/25/2018 R	NA	NA	NA	NA	7.47	280	NA
	10/3/2018	3.5	93	44	0.31	7.83	240	720
MW-09 down-gradient	11/11/2015	1.9	56	190	0.55	9.12	460	750
	2/17/2016	1.8	47	160	0.55	9.10	250	600
	5/24/2016	1.6	48	180	0.51	8.79	240	640
	8/9/2016	2.2	53	140	0.48	8.35	280	750
	10/26/2016	2.2	33	130	0.81	9.16	230	660
	1/31/2017	2.0	61	250	0.57	8.59	180	710
	5/9/2017	1.8	66	340	0.38	8.58	250	900
	6/27/2017	1.9	64	330	0.51	7.76	240	940
	Pred. Limit	4.26	275**	149**	0.72**	9.39-6.48**	413	950
	Pred. Limit*	NC	NC	431.2	0.87	NC	NC	1,060
	9/6/2017	1.8	59	310	0.51	8.98	240	890
	11/14/2017	2.6	160	270	0.51	8.1	290	910
	5/1/2018	1.7	49	200	0.52	7.81	430	820
	7/25/2018 R	NA	NA	NA	NA	NA	320	NA
	10/2/2018	2.1	49	170	0.55	8.09	270	820
MW-10 down-gradient	11/10/2015	3.9	140	140	0.77	7.34	310	980
	2/16/2016	3.6	150	240	0.79	7.29	290	950
	5/25/2016	3.6	120	140	0.83	7.26	260	1,000
	8/10/2016	4.3	150	120	0.78	7.22	230	970
	10/26/2016	3.0	160	74	0.52	7.30	220	1,000
	2/2/2017	3.7	180	81	0.54	7.16	160	930
	5/10/2017	3.0	150	100	0.44	7.83	340	860
	6/27/2017	2.8	130	110	0.67	7.49	250	930
	Pred. Limit	4.26	275**	149**	0.72**	9.39-6.48**	413	950
	Pred. Limit*	NC	NC	262.2	1.06	NC	NC	1,074
	9/7/2017	2.8	120	120	0.77	7.37	290	920
	11/15/2017	4.1	140	120	0.77	7.10	270	1,000
	5/1/2018	3.2	150	130	0.65	7.31	280	990
	10/3/2018	2.5	110	140	0.89	7.60	200	860

Notes: All units are in mg/l except pH is in standard units.

* - Intrawell Prediction Limit. All others are interwell comparisons.

** - Based on pooled background from MW-5/MW-6. All others based on MW-6 as background.

Italics Date - First round of Detection Monitoring and resample after statistical background establishment.

NC - Not calculated.

BOLD - Potential statistically significant increase relative to interwell Prediction Limit.**BOLD** - Potential statistically significant increase relative to intrawell Prediction Limit.**BOLD** - Above both interwell and intrawell Prediction Limits

NA - Not analyzed. No confirmation resample required.

R - Resample

F1 - MS and/or MSD Recovery outside of limits.

Table 4. Semi-Annual Detection Monitoring Statistical Comparisons - Appendix III Groundwater Analytical Results 2018 and Confirmatory Resampling - Midwest Generation, LLC, Will County Station, Romeoville, IL.

Well	Date	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	Total Dissolved Solids
MW-11 down-gradient	11/10/2015	2.6	120	89	0.61	7.60	180	620
	2/16/2016	3.0	100	88	0.68	7.47	170	640
	5/25/2016	2.8	82	98	0.75	7.43	170	640
	8/10/2016	3.1	96	86	0.72	7.57	150	660
	10/26/2016	2.5	110	67	0.53	7.82	120	630
	2/1/2017	3.9	110	72	0.65	7.54	110	600
	5/10/2017	3.1	95	84	0.46	8.37	170	590
	6/27/2017	2.8	87	90	0.59	7.57	150	680
	Pred. Limit	4.26	275**	149**	0.72**	9.39-6.48**	413	950
	Pred. Limit*	NC	NC	110.6	0.88	NC	NC	710
	9/7/2017	2.8	90	94	0.58	7.40	150	730
	11/15/2017	2.9	96	100	0.65	7.41	160	750
	5/3/2018	3.8	73	110	0.69	6.74	190	670
	10/3/2018	3.1	78	110	0.66	7.65	120	680
MW-12 down-gradient	11/10/2015	2.3	150	160	0.59	7.44	290	1,000
	2/16/2016	1.8	130	140	0.52	7.38	220	850
	5/25/2016	1.9	130	150	0.54	7.23	250	890
	8/10/2016	2.4	170	140	0.49	7.20	280	1000
	10/26/2016	2.6	140	120	0.49	7.44	220	980
	2/1/2017	2.0	160	120	0.48	7.30	150	900
	5/10/2017	2.3	200	240	0.30	7.65	260	1,300
	6/27/2017	2.4	180	280	0.44	7.31	260	1,300
	Pred. Limit	4.26	275**	149**	0.72**	9.39-6.48**	413	950
	Pred. Limit*	NC	NC	338.8	0.71	NC	NC	1,519
	9/6/2017	2.6	190	<u>270</u>	0.49	7.26	260	<u>1,400</u>
	11/15/2017	1.7	55	<u>200</u>	0.47	6.90	250	<u>1,200</u>
	5/3/2018	1.8	140	<u>170</u>	0.47	6.60	170	<u>960</u>
	10/2/2018	F1 2.2	150	<u>160</u>	0.49	7.30	170	<u>1,100</u>

Notes: All units are in mg/l except pH is in standard units.

* - Intrawell Prediction Limit. All others are interwell comparisons.

** - Based on pooled background from MW-5/MW-6. All others based on MW-6 as background.

Italics Date - First round of Detection Monitoring and resample after statistical background establishment.

NC- Not calculated.

BOLD - Potential statistically significant increase relative to interwell Prediction Limit.**BOLD** - Potential statistically significant increase relative to intrawell Prediction Limit.**BOLD** - Above both interwell and intrawell Prediction Limits

NA - Not analyzed. No confirmation resample required.

R - Resample

F1 - MS and/or MSD Recovery outside of limits.

APPENDIX A
Analytical Data Packages

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: 500-144853-1

Client Project/Site: Will County CCR

For:

KPRG and Associates, Inc.

14665 West Lisbon Road,

Suite 2B

Brookfield, Wisconsin 53005

Attn: Richard Gnat



Authorized for release by:

5/17/2018 12:33:58 PM

Therese Hargraves, Project Manager I

therese.hargraves@testamericainc.com

Designee for

Eric Lang, Manager of Project Management

(708)534-5200

eric.lang@testamericainc.com

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www.testamericainc.com

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

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

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Case Narrative

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

TestAmerica Job ID: 500-144853-1

Job ID: 500-144853-1

Laboratory: TestAmerica Chicago

Narrative

Job Narrative
500-144853-1

Comments

No additional comments.

Receipt

The samples were received on 5/3/2018 3:40 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.9° C and 3.2° C.

Metals

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

General Chemistry

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

Method Summary

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

TestAmerica Job ID: 500-144853-1

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

Protocol References:

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

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

Laboratory References:

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

Sample Summary

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

TestAmerica Job ID: 500-144853-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-144853-1	MW-05	Water	05/02/18 15:42	05/03/18 15:40
500-144853-2	MW-06	Water	05/03/18 10:04	05/03/18 15:40
500-144853-3	MW-09	Water	05/01/18 14:35	05/03/18 15:40
500-144853-4	MW-10	Water	05/01/18 16:17	05/03/18 15:40
500-144853-5	MW-11	Water	05/03/18 11:25	05/03/18 15:40
500-144853-6	MW-12	Water	05/03/18 12:17	05/03/18 15:40
500-144853-7	Duplicate	Water	05/03/18 00:00	05/03/18 15:40

Client Sample Results

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

TestAmerica Job ID: 500-144853-1

Client Sample ID: MW-05

Date Collected: 05/02/18 15:42

Date Received: 05/03/18 15:40

Lab Sample ID: 500-144853-1

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	3.6		0.50		mg/L		05/04/18 07:13	05/07/18 11:30	10
Calcium	200		0.20		mg/L		05/04/18 07:13	05/04/18 17:36	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1300		10		mg/L			05/08/18 04:43	1
Chloride	32		2.0		mg/L			05/13/18 19:37	1
Fluoride	0.39		0.10		mg/L			05/11/18 23:05	1
Sulfate	510		100		mg/L			05/12/18 06:06	20

Client Sample Results

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

TestAmerica Job ID: 500-144853-1

Client Sample ID: MW-06

Date Collected: 05/03/18 10:04

Date Received: 05/03/18 15:40

Lab Sample ID: 500-144853-2

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	3.0		0.50		mg/L		05/04/18 07:13	05/07/18 11:33	10
Calcium	91		0.20		mg/L		05/04/18 07:13	05/04/18 17:39	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	750		10		mg/L			05/10/18 05:35	1
Chloride	52		2.0		mg/L			05/13/18 19:38	1
Fluoride	0.26		0.10		mg/L			05/11/18 23:09	1
Sulfate	530		100		mg/L			05/12/18 06:07	20

Client Sample Results

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

TestAmerica Job ID: 500-144853-1

Client Sample ID: MW-09

Date Collected: 05/01/18 14:35

Date Received: 05/03/18 15:40

Lab Sample ID: 500-144853-3

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.7		0.25		mg/L		05/04/18 07:13	05/07/18 11:37	5
Calcium	49		0.20		mg/L		05/04/18 07:13	05/04/18 17:43	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	820		10		mg/L			05/07/18 04:58	1
Chloride	200		10		mg/L			05/13/18 20:16	5
Fluoride	0.52		0.10		mg/L			05/11/18 23:14	1
Sulfate	430		100		mg/L			05/12/18 06:08	20

Client Sample Results

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

TestAmerica Job ID: 500-144853-1

Client Sample ID: MW-10

Date Collected: 05/01/18 16:17

Date Received: 05/03/18 15:40

Lab Sample ID: 500-144853-4

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	3.2		0.50		mg/L		05/04/18 07:13	05/07/18 11:41	10
Calcium	150		0.20		mg/L		05/04/18 07:13	05/04/18 17:47	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	990		10		mg/L			05/07/18 05:01	1
Chloride	130		10		mg/L			05/13/18 20:17	5
Fluoride	0.65		0.10		mg/L			05/11/18 23:18	1
Sulfate	280		50		mg/L			05/12/18 06:09	10

Client Sample Results

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

TestAmerica Job ID: 500-144853-1

Client Sample ID: MW-11

Date Collected: 05/03/18 11:25

Date Received: 05/03/18 15:40

Lab Sample ID: 500-144853-5

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	3.8		0.50		mg/L		05/04/18 07:13	05/07/18 11:45	10
Calcium	73		0.20		mg/L		05/04/18 07:13	05/04/18 17:51	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	670		10		mg/L			05/10/18 05:37	1
Chloride	110		10		mg/L			05/13/18 20:18	5
Fluoride	0.69		0.10		mg/L			05/11/18 23:22	1
Sulfate	190		50		mg/L			05/12/18 06:10	10

Client Sample Results

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

TestAmerica Job ID: 500-144853-1

Client Sample ID: MW-12

Date Collected: 05/03/18 12:17

Date Received: 05/03/18 15:40

Lab Sample ID: 500-144853-6

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.8		0.25		mg/L		05/04/18 07:13	05/07/18 11:48	5
Calcium	140		0.20		mg/L		05/04/18 07:13	05/04/18 17:54	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	960		10		mg/L			05/10/18 05:40	1
Chloride	170		10		mg/L			05/13/18 20:18	5
Fluoride	0.47		0.10		mg/L			05/11/18 23:26	1
Sulfate	170		50		mg/L			05/12/18 06:11	10

Client Sample Results

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

TestAmerica Job ID: 500-144853-1

Client Sample ID: Duplicate

Date Collected: 05/03/18 00:00

Date Received: 05/03/18 15:40

Lab Sample ID: 500-144853-7

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	3.9	F1	0.50		mg/L		05/04/18 07:13	05/07/18 12:00	10
Calcium	68		0.20		mg/L		05/04/18 07:13	05/04/18 18:06	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	670		10		mg/L			05/10/18 05:43	1
Chloride	110		10		mg/L			05/13/18 20:19	5
Fluoride	0.70		0.10		mg/L			05/11/18 23:30	1
Sulfate	180		25		mg/L			05/12/18 06:12	5

Definitions/Glossary

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

TestAmerica Job ID: 500-144853-1

Qualifiers

Metals

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

General Chemistry

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

Glossary

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

QC Association Summary

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

TestAmerica Job ID: 500-144853-1

Metals

Prep Batch: 430640

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-144853-1	MW-05	Total Recoverable	Water	3005A	
500-144853-2	MW-06	Total Recoverable	Water	3005A	
500-144853-3	MW-09	Total Recoverable	Water	3005A	
500-144853-4	MW-10	Total Recoverable	Water	3005A	
500-144853-5	MW-11	Total Recoverable	Water	3005A	
500-144853-6	MW-12	Total Recoverable	Water	3005A	
500-144853-7	Duplicate	Total Recoverable	Water	3005A	
MB 500-430640/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-430640/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
500-144853-7 MS	Duplicate	Total Recoverable	Water	3005A	
500-144853-7 MSD	Duplicate	Total Recoverable	Water	3005A	
500-144853-7 DU	Duplicate	Total Recoverable	Water	3005A	

Analysis Batch: 430950

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-144853-1	MW-05	Total Recoverable	Water	6020A	430640
500-144853-2	MW-06	Total Recoverable	Water	6020A	430640
500-144853-3	MW-09	Total Recoverable	Water	6020A	430640
500-144853-4	MW-10	Total Recoverable	Water	6020A	430640
500-144853-5	MW-11	Total Recoverable	Water	6020A	430640
500-144853-6	MW-12	Total Recoverable	Water	6020A	430640
500-144853-7	Duplicate	Total Recoverable	Water	6020A	430640
MB 500-430640/1-A	Method Blank	Total Recoverable	Water	6020A	430640
LCS 500-430640/2-A	Lab Control Sample	Total Recoverable	Water	6020A	430640
500-144853-7 MS	Duplicate	Total Recoverable	Water	6020A	430640
500-144853-7 MSD	Duplicate	Total Recoverable	Water	6020A	430640
500-144853-7 DU	Duplicate	Total Recoverable	Water	6020A	430640

Analysis Batch: 431132

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-144853-1	MW-05	Total Recoverable	Water	6020A	430640
500-144853-2	MW-06	Total Recoverable	Water	6020A	430640
500-144853-3	MW-09	Total Recoverable	Water	6020A	430640
500-144853-4	MW-10	Total Recoverable	Water	6020A	430640
500-144853-5	MW-11	Total Recoverable	Water	6020A	430640
500-144853-6	MW-12	Total Recoverable	Water	6020A	430640
500-144853-7	Duplicate	Total Recoverable	Water	6020A	430640
MB 500-430640/1-A	Method Blank	Total Recoverable	Water	6020A	430640
LCS 500-430640/2-A	Lab Control Sample	Total Recoverable	Water	6020A	430640
500-144853-7 MS	Duplicate	Total Recoverable	Water	6020A	430640
500-144853-7 MSD	Duplicate	Total Recoverable	Water	6020A	430640
500-144853-7 DU	Duplicate	Total Recoverable	Water	6020A	430640

General Chemistry

Analysis Batch: 430893

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-144853-3	MW-09	Total/NA	Water	SM 2540C	
500-144853-4	MW-10	Total/NA	Water	SM 2540C	
MB 500-430893/1	Method Blank	Total/NA	Water	SM 2540C	

TestAmerica Chicago

QC Association Summary

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

TestAmerica Job ID: 500-144853-1

General Chemistry (Continued)

Analysis Batch: 430893 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 500-430893/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 431082

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-144853-1	MW-05	Total/NA	Water	SM 2540C	
MB 500-431082/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-431082/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 431535

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-144853-2	MW-06	Total/NA	Water	SM 2540C	
500-144853-5	MW-11	Total/NA	Water	SM 2540C	
500-144853-6	MW-12	Total/NA	Water	SM 2540C	
500-144853-7	Duplicate	Total/NA	Water	SM 2540C	
MB 500-431535/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-431535/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 431959

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-144853-1	MW-05	Total/NA	Water	SM 4500 F C	
500-144853-2	MW-06	Total/NA	Water	SM 4500 F C	
500-144853-3	MW-09	Total/NA	Water	SM 4500 F C	
500-144853-4	MW-10	Total/NA	Water	SM 4500 F C	
500-144853-5	MW-11	Total/NA	Water	SM 4500 F C	
500-144853-6	MW-12	Total/NA	Water	SM 4500 F C	
500-144853-7	Duplicate	Total/NA	Water	SM 4500 F C	
MB 500-431959/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 500-431959/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
500-144853-7 MS	Duplicate	Total/NA	Water	SM 4500 F C	
500-144853-7 MSD	Duplicate	Total/NA	Water	SM 4500 F C	

Analysis Batch: 431994

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-144853-1	MW-05	Total/NA	Water	SM 4500 SO4 E	
500-144853-2	MW-06	Total/NA	Water	SM 4500 SO4 E	
500-144853-3	MW-09	Total/NA	Water	SM 4500 SO4 E	
500-144853-4	MW-10	Total/NA	Water	SM 4500 SO4 E	
500-144853-5	MW-11	Total/NA	Water	SM 4500 SO4 E	
500-144853-6	MW-12	Total/NA	Water	SM 4500 SO4 E	
500-144853-7	Duplicate	Total/NA	Water	SM 4500 SO4 E	
MB 500-431994/3	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 500-431994/4	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 432035

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-144853-1	MW-05	Total/NA	Water	SM 4500 Cl- E	
500-144853-2	MW-06	Total/NA	Water	SM 4500 Cl- E	
500-144853-3	MW-09	Total/NA	Water	SM 4500 Cl- E	
500-144853-4	MW-10	Total/NA	Water	SM 4500 Cl- E	
500-144853-5	MW-11	Total/NA	Water	SM 4500 Cl- E	
500-144853-6	MW-12	Total/NA	Water	SM 4500 Cl- E	

TestAmerica Chicago

QC Association Summary

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

TestAmerica Job ID: 500-144853-1

General Chemistry (Continued)

Analysis Batch: 432035 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-144853-7	Duplicate	Total/NA	Water	SM 4500 Cl- E	
MB 500-432035/4	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 500-432035/5	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
500-144853-3 MS	MW-09	Total/NA	Water	SM 4500 Cl- E	
500-144853-3 MSD	MW-09	Total/NA	Water	SM 4500 Cl- E	

QC Sample Results

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

TestAmerica Job ID: 500-144853-1

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 500-430640/1-A
Matrix: Water
Analysis Batch: 430950

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 430640

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	<0.20		0.20		mg/L		05/04/18 07:13	05/04/18 16:43	1

Lab Sample ID: MB 500-430640/1-A
Matrix: Water
Analysis Batch: 431132

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 430640

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.050		0.050		mg/L		05/04/18 07:13	05/07/18 11:22	1

Lab Sample ID: LCS 500-430640/2-A
Matrix: Water
Analysis Batch: 430950

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 430640

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	10.0	9.63		mg/L		96	80 - 120

Lab Sample ID: LCS 500-430640/2-A
Matrix: Water
Analysis Batch: 431132

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 430640

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1.00	1.02		mg/L		102	80 - 120

Lab Sample ID: 500-144853-7 MS
Matrix: Water
Analysis Batch: 430950

Client Sample ID: Duplicate
Prep Type: Total Recoverable
Prep Batch: 430640

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	68		10.0	77.6	4	mg/L		96	75 - 125

Lab Sample ID: 500-144853-7 MS
Matrix: Water
Analysis Batch: 431132

Client Sample ID: Duplicate
Prep Type: Total Recoverable
Prep Batch: 430640

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	3.9	F1	1.00	5.09		mg/L		123	75 - 125

Lab Sample ID: 500-144853-7 MSD
Matrix: Water
Analysis Batch: 430950

Client Sample ID: Duplicate
Prep Type: Total Recoverable
Prep Batch: 430640

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Calcium	68		10.0	79.4	4	mg/L		114	75 - 125	2	20

Lab Sample ID: 500-144853-7 MSD
Matrix: Water
Analysis Batch: 431132

Client Sample ID: Duplicate
Prep Type: Total Recoverable
Prep Batch: 430640

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Boron	3.9	F1	1.00	5.18	F1	mg/L		132	75 - 125	2	20

TestAmerica Chicago

QC Sample Results

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

TestAmerica Job ID: 500-144853-1

Lab Sample ID: 500-144853-7 DU
Matrix: Water
Analysis Batch: 430950

Client Sample ID: Duplicate
Prep Type: Total Recoverable
Prep Batch: 430640

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Calcium	68		69.8		mg/L		3	20

Lab Sample ID: 500-144853-7 DU
Matrix: Water
Analysis Batch: 431132

Client Sample ID: Duplicate
Prep Type: Total Recoverable
Prep Batch: 430640

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Boron	3.9	F1	3.98		mg/L		3	20

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

Lab Sample ID: MB 500-430893/1
Matrix: Water
Analysis Batch: 430893

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10		mg/L			05/07/18 04:02	1

Lab Sample ID: LCS 500-430893/2
Matrix: Water
Analysis Batch: 430893

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	292		mg/L		117	80 - 120

Lab Sample ID: MB 500-431082/1
Matrix: Water
Analysis Batch: 431082

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10		mg/L			05/08/18 03:49	1

Lab Sample ID: LCS 500-431082/2
Matrix: Water
Analysis Batch: 431082

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	292		mg/L		117	80 - 120

Lab Sample ID: MB 500-431535/1
Matrix: Water
Analysis Batch: 431535

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10		mg/L			05/10/18 05:12	1

TestAmerica Chicago

QC Sample Results

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

TestAmerica Job ID: 500-144853-1

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

Lab Sample ID: LCS 500-431535/2

Matrix: Water

Analysis Batch: 431535

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	288		mg/L		115	80 - 120

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 500-432035/4

Matrix: Water

Analysis Batch: 432035

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<2.0		2.0		mg/L			05/13/18 19:35	1

Lab Sample ID: LCS 500-432035/5

Matrix: Water

Analysis Batch: 432035

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	52.0		mg/L		104	85 - 115

Lab Sample ID: 500-144853-3 MS

Matrix: Water

Analysis Batch: 432035

Client Sample ID: MW-09

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	200		50.0	230	4	mg/L		58	75 - 125

Lab Sample ID: 500-144853-3 MSD

Matrix: Water

Analysis Batch: 432035

Client Sample ID: MW-09

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	200		50.0	238	4	mg/L		75	75 - 125	4	20

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 500-431959/3

Matrix: Water

Analysis Batch: 431959

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.10		0.10		mg/L			05/11/18 21:56	1

Lab Sample ID: LCS 500-431959/4

Matrix: Water

Analysis Batch: 431959

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

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

TestAmerica Chicago

QC Sample Results

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

TestAmerica Job ID: 500-144853-1

Method: SM 4500 F C - Fluoride (Continued)

Lab Sample ID: 500-144853-7 MS

Matrix: Water

Analysis Batch: 431959

Client Sample ID: Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	0.70		5.00	5.84		mg/L		103	75 - 125

Lab Sample ID: 500-144853-7 MSD

Matrix: Water

Analysis Batch: 431959

Client Sample ID: Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	0.70		5.00	5.87		mg/L		103	75 - 125	1	20

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 500-431994/3

Matrix: Water

Analysis Batch: 431994

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	<5.0		5.0		mg/L			05/12/18 05:51	1

Lab Sample ID: LCS 500-431994/4

Matrix: Water

Analysis Batch: 431994

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	20.0	18.4		mg/L		92	80 - 120

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Chicago

2417 Bond St.

University Park, IL 60484

708-534-5200

Fax 708-534-5211

Report To:

Contact: Richard Gnat
Company: KPRG and Associates, Inc
Address: 14665 W. Lisbon Rd., Suite 2B
Brookfield, WI 53005
Phone: 262-781-0475
Email: richardg@kprginc.com

Bill To:

Contact:
Company:
Address:
Phone:
Email:
PO #:

Lab Lot # 500-144853

Package Sealed
Yes ☒ No ☒
Received on Ice
Yes ☒ No ☒
Temperature °C of Cooler
(3.2)/(2.9)

Within Hold Time
Yes ☒ No ☒
Preserv. Indicated
Yes ☒ No ☒
pH Check OK
Yes ☒ No ☒
Res. CL₂ Check OK
Yes ☒ No ☒
Sample Labels and COC Agree
Yes ☒ No ☒
COC not present

Sampler Name:		COMPANY:		# / Cont.		Volume		Preserv.		Matrix		# of Cont		6020A - Total Metals (B, Ca)		2540C - TDS		4500_F_C - Fluoride		SM4500_Cl_E Chloride		SM4500_SO4_E - Sulfate		Additional Analyses / Remarks	
Project Name:		TestAmerica Project Number:		Matrix		# of Cont		Sampling Date		Sampling Time		W		2		X		X		X		X		X	
Quarterly- Will County CCR		50011609																							
Project Location:		TAT																							
Romeoville, IL		15 Days																							
Lab PM:		eric.lang@testamerica.com																							
Eric Lang																									
Laboratory ID		Client Sample ID		MS/MSD																					
1		MW-05						5-2-18		15:42		W		2		X		X		X		X		X	
2		MW-06						5-3-18		10:04		W		2		X		X		X		X		X	
3		MW-09						5-1-18		14:35		W		2		X		X		X		X		X	
4		MW-10						5-1-18		16:17		W		2		X		X		X		X		X	
5		MW-11						5-3-18		11:25		W		2		X		X		X		X		X	
6		MW-12						5-3-18		12:17		W		2		X		X		X		X		X	
7		Duplicate						5-3-18		N/A		W		2		X		X		X		X		X	

RELINQUISHED BY: IJH	COMPANY: KPRG	DATE: 5-3-18	TIME: 15:40	RECEIVED BY: [Signature]	COMPANY: TA-CAT	DATE: 5/3/18	TIME: 1540
RELINQUISHED BY:	COMPANY:	DATE:	TIME:	RECEIVED BY:	COMPANY:	DATE:	TIME:

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

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

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



500-144853 COC

Date Received 5.3.18
Courier: 144
Hand Delivered ☐
Bill of Lading:

2 of 2

STL-8208 (0600)

Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-144853-1

Login Number: 144853

List Source: TestAmerica Chicago

List Number: 1

Creator: Kelsey, Shawn M

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	(3.2)(2.9)c
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	

Lab Chronicle

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

TestAmerica Job ID: 500-144853-1

Client Sample ID: MW-05

Date Collected: 05/02/18 15:42

Date Received: 05/03/18 15:40

Lab Sample ID: 500-144853-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			430640	05/04/18 07:13	JEF	TAL CHI
Total Recoverable	Analysis	6020A		1	430950	05/04/18 17:36	FXG	TAL CHI
Total Recoverable	Prep	3005A			430640	05/04/18 07:13	JEF	TAL CHI
Total Recoverable	Analysis	6020A		10	431132	05/07/18 11:30	FXG	TAL CHI
Total/NA	Analysis	SM 2540C		1	431082	05/08/18 04:43	CLB	TAL CHI
Total/NA	Analysis	SM 4500 CI- E		1	432035	05/13/18 19:37	HMW	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	431959	05/11/18 23:05	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		20	431994		CLB	TAL CHI
					(Start)	05/12/18 06:06		
					(End)	05/12/18 06:07		

Client Sample ID: MW-06

Date Collected: 05/03/18 10:04

Date Received: 05/03/18 15:40

Lab Sample ID: 500-144853-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			430640	05/04/18 07:13	JEF	TAL CHI
Total Recoverable	Analysis	6020A		1	430950	05/04/18 17:39	FXG	TAL CHI
Total Recoverable	Prep	3005A			430640	05/04/18 07:13	JEF	TAL CHI
Total Recoverable	Analysis	6020A		10	431132	05/07/18 11:33	FXG	TAL CHI
Total/NA	Analysis	SM 2540C		1	431535	05/10/18 05:35	CLB	TAL CHI
Total/NA	Analysis	SM 4500 CI- E		1	432035	05/13/18 19:38	HMW	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	431959	05/11/18 23:09	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		20	431994		CLB	TAL CHI
					(Start)	05/12/18 06:07		
					(End)	05/12/18 06:08		

Client Sample ID: MW-09

Date Collected: 05/01/18 14:35

Date Received: 05/03/18 15:40

Lab Sample ID: 500-144853-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			430640	05/04/18 07:13	JEF	TAL CHI
Total Recoverable	Analysis	6020A		1	430950	05/04/18 17:43	FXG	TAL CHI
Total Recoverable	Prep	3005A			430640	05/04/18 07:13	JEF	TAL CHI
Total Recoverable	Analysis	6020A		5	431132	05/07/18 11:37	FXG	TAL CHI
Total/NA	Analysis	SM 2540C		1	430893	05/07/18 04:58	CLB	TAL CHI
Total/NA	Analysis	SM 4500 CI- E		5	432035	05/13/18 20:16	HMW	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	431959	05/11/18 23:14	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		20	431994		CLB	TAL CHI
					(Start)	05/12/18 06:08		
					(End)	05/12/18 06:09		

TestAmerica Chicago

Lab Chronicle

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

TestAmerica Job ID: 500-144853-1

Client Sample ID: MW-10

Date Collected: 05/01/18 16:17

Date Received: 05/03/18 15:40

Lab Sample ID: 500-144853-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			430640	05/04/18 07:13	JEF	TAL CHI
Total Recoverable	Analysis	6020A		1	430950	05/04/18 17:47	FXG	TAL CHI
Total Recoverable	Prep	3005A			430640	05/04/18 07:13	JEF	TAL CHI
Total Recoverable	Analysis	6020A		10	431132	05/07/18 11:41	FXG	TAL CHI
Total/NA	Analysis	SM 2540C		1	430893	05/07/18 05:01	CLB	TAL CHI
Total/NA	Analysis	SM 4500 CI- E		5	432035	05/13/18 20:17	HMW	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	431959	05/11/18 23:18	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		10	431994		CLB	TAL CHI
						(Start) 05/12/18 06:09		
						(End) 05/12/18 06:10		

Client Sample ID: MW-11

Date Collected: 05/03/18 11:25

Date Received: 05/03/18 15:40

Lab Sample ID: 500-144853-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			430640	05/04/18 07:13	JEF	TAL CHI
Total Recoverable	Analysis	6020A		1	430950	05/04/18 17:51	FXG	TAL CHI
Total Recoverable	Prep	3005A			430640	05/04/18 07:13	JEF	TAL CHI
Total Recoverable	Analysis	6020A		10	431132	05/07/18 11:45	FXG	TAL CHI
Total/NA	Analysis	SM 2540C		1	431535	05/10/18 05:37	CLB	TAL CHI
Total/NA	Analysis	SM 4500 CI- E		5	432035	05/13/18 20:18	HMW	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	431959	05/11/18 23:22	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		10	431994		CLB	TAL CHI
						(Start) 05/12/18 06:10		
						(End) 05/12/18 06:11		

Client Sample ID: MW-12

Date Collected: 05/03/18 12:17

Date Received: 05/03/18 15:40

Lab Sample ID: 500-144853-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			430640	05/04/18 07:13	JEF	TAL CHI
Total Recoverable	Analysis	6020A		1	430950	05/04/18 17:54	FXG	TAL CHI
Total Recoverable	Prep	3005A			430640	05/04/18 07:13	JEF	TAL CHI
Total Recoverable	Analysis	6020A		5	431132	05/07/18 11:48	FXG	TAL CHI
Total/NA	Analysis	SM 2540C		1	431535	05/10/18 05:40	CLB	TAL CHI
Total/NA	Analysis	SM 4500 CI- E		5	432035	05/13/18 20:18	HMW	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	431959	05/11/18 23:26	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		10	431994		CLB	TAL CHI
						(Start) 05/12/18 06:11		
						(End) 05/12/18 06:12		

TestAmerica Chicago

Lab Chronicle

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

TestAmerica Job ID: 500-144853-1

Client Sample ID: Duplicate

Date Collected: 05/03/18 00:00

Date Received: 05/03/18 15:40

Lab Sample ID: 500-144853-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			430640	05/04/18 07:13	JEF	TAL CHI
Total Recoverable	Analysis	6020A		1	430950	05/04/18 18:06	FXG	TAL CHI
Total Recoverable	Prep	3005A			430640	05/04/18 07:13	JEF	TAL CHI
Total Recoverable	Analysis	6020A		10	431132	05/07/18 12:00	FXG	TAL CHI
Total/NA	Analysis	SM 2540C		1	431535	05/10/18 05:43	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		5	432035	05/13/18 20:19	HMW	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	431959	05/11/18 23:30	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		5	431994		CLB	TAL CHI
						(Start) 05/12/18 06:12		
						(End) 05/12/18 06:13		

Laboratory References:

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

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: 500-149021-1

Client Project/Site: Will County CCR

For:

KPRG and Associates, Inc.

14665 West Lisbon Road,

Suite 1A

Brookfield, Wisconsin 53005

Attn: Richard Gnat



Authorized for release by:

8/3/2018 4:47:52 PM

Eric Lang, Manager of Project Management

(708)534-5200

eric.lang@testamericainc.com

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www.testamericainc.com

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

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

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Case Narrative

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

TestAmerica Job ID: 500-149021-1

Job ID: 500-149021-1

Laboratory: TestAmerica Chicago

Narrative

Job Narrative
500-149021-1

Comments

No additional comments.

Receipt

The samples were received on 7/26/2018 11:20 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 5.6° C.

General Chemistry

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

Method Summary

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

TestAmerica Job ID: 500-149021-1

Method	Method Description	Protocol	Laboratory
SM 4500 SO4 E	Sulfate, Total	SM	TAL CHI

Protocol References:

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

Laboratory References:

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

Sample Summary

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

TestAmerica Job ID: 500-149021-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-149021-1	MW-06	Water	07/25/18 16:16	07/26/18 11:20
500-149021-2	MW-09	Water	07/25/18 12:10	07/26/18 11:20

Client Sample Results

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

TestAmerica Job ID: 500-149021-1

Client Sample ID: MW-06

Date Collected: 07/25/18 16:16

Date Received: 07/26/18 11:20

Lab Sample ID: 500-149021-1

Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	280		50		mg/L			08/02/18 11:50	10

Client Sample Results

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

TestAmerica Job ID: 500-149021-1

Client Sample ID: MW-09

Date Collected: 07/25/18 12:10

Date Received: 07/26/18 11:20

Lab Sample ID: 500-149021-2

Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	320		50		mg/L			08/02/18 11:51	10

Definitions/Glossary

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

TestAmerica Job ID: 500-149021-1

Glossary

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

QC Association Summary

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

TestAmerica Job ID: 500-149021-1

General Chemistry

Analysis Batch: 443674

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-149021-1	MW-06	Total/NA	Water	SM 4500 SO4 E	
500-149021-2	MW-09	Total/NA	Water	SM 4500 SO4 E	
MB 500-443674/3	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 500-443674/4	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	

QC Sample Results

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

TestAmerica Job ID: 500-149021-1

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 500-443674/3

Matrix: Water

Analysis Batch: 443674

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	<5.0		5.0		mg/L			08/02/18 11:31	1

Lab Sample ID: LCS 500-443674/4

Matrix: Water

Analysis Batch: 443674

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	20.0		mg/L		100	80 - 120



Fax. 708-534-5211

8/3/2018

Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-149021-1

Login Number: 149021

List Source: TestAmerica Chicago

List Number: 1

Creator: Sanchez, Ariel M

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	5.6
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?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Lab Chronicle

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

TestAmerica Job ID: 500-149021-1

Client Sample ID: MW-06

Date Collected: 07/25/18 16:16

Date Received: 07/26/18 11:20

Lab Sample ID: 500-149021-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 SO4 E		10	443674	(Start) 08/02/18 11:50 (End) 08/02/18 11:51	CLB	TAL CHI

Client Sample ID: MW-09

Date Collected: 07/25/18 12:10

Date Received: 07/26/18 11:20

Lab Sample ID: 500-149021-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 SO4 E		10	443674	(Start) 08/02/18 11:51 (End) 08/02/18 11:52	CLB	TAL CHI

Laboratory References:

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

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Chicago

2417 Bond Street

University Park, IL 60484

Tel: (708)534-5200

TestAmerica Job ID: 500-152628-1

Client Project/Site: Will County CCR

For:

KPRG and Associates, Inc.

14665 West Lisbon Road,

Suite 1A

Brookfield, Wisconsin 53005

Attn: Richard Gnat



Authorized for release by:

10/22/2018 3:05:36 PM

Eric Lang, Manager of Project Management

(708)534-5200

eric.lang@testamericainc.com

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

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



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Case Narrative

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

TestAmerica Job ID: 500-152628-1

Job ID: 500-152628-1

Laboratory: TestAmerica Chicago

Narrative

Job Narrative 500-152628-1

Comments

No additional comments.

Receipt

The samples were received on 10/4/2018 1:25 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.9° C.

Metals

Method(s) 6020A: The matrix spike duplicate (MSD) recovery for sample (500-152628-A-6-D MSD ^5) were outside control limits for Boron. The associated laboratory control sample (LCS) recovery was within acceptance limits, therefore the data has been reported.

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

General Chemistry

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

Method Summary

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

TestAmerica Job ID: 500-152628-1

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

Protocol References:

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

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

Laboratory References:

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

Sample Summary

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

TestAmerica Job ID: 500-152628-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-152628-1	MW-05	Water	10/03/18 09:18	10/04/18 13:25
500-152628-2	MW-06	Water	10/03/18 10:44	10/04/18 13:25
500-152628-3	MW-09	Water	10/02/18 14:10	10/04/18 13:25
500-152628-4	MW-10	Water	10/03/18 12:52	10/04/18 13:25
500-152628-5	MW-11	Water	10/03/18 15:05	10/04/18 13:25
500-152628-6	MW-12	Water	10/03/18 11:56	10/04/18 13:25
500-152628-7	Duplicate	Water	10/03/18 00:00	10/04/18 13:25

Client Sample Results

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

TestAmerica Job ID: 500-152628-1

Client Sample ID: MW-05

Date Collected: 10/03/18 09:18

Date Received: 10/04/18 13:25

Lab Sample ID: 500-152628-1

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	4.9		0.50		mg/L		10/08/18 08:49	10/10/18 14:31	10
Calcium	150		0.20		mg/L		10/08/18 08:49	10/09/18 21:59	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1200		10		mg/L			10/08/18 00:03	1
Chloride	55		2.0		mg/L			10/19/18 11:30	1
Fluoride	0.48		0.10		mg/L			10/05/18 23:31	1
Sulfate	430		100		mg/L			10/12/18 08:00	20

Client Sample Results

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

TestAmerica Job ID: 500-152628-1

Client Sample ID: MW-06

Date Collected: 10/03/18 10:44

Date Received: 10/04/18 13:25

Lab Sample ID: 500-152628-2

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	3.5		0.50		mg/L		10/08/18 08:49	10/10/18 14:35	10
Calcium	93		0.20		mg/L		10/08/18 08:49	10/09/18 22:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	720		10		mg/L			10/08/18 00:08	1
Chloride	44		2.0		mg/L			10/19/18 11:31	1
Fluoride	0.31		0.10		mg/L			10/05/18 23:35	1
Sulfate	240		50		mg/L			10/12/18 08:01	10

Client Sample Results

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

TestAmerica Job ID: 500-152628-1

Client Sample ID: MW-09

Date Collected: 10/02/18 14:10

Date Received: 10/04/18 13:25

Lab Sample ID: 500-152628-3

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2.1		0.25		mg/L		10/08/18 08:49	10/10/18 14:45	5
Calcium	49		0.20		mg/L		10/08/18 08:49	10/09/18 22:14	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	820		10		mg/L			10/08/18 00:11	1
Chloride	170		10		mg/L			10/19/18 11:32	5
Fluoride	0.55		0.10		mg/L			10/05/18 23:40	1
Sulfate	270		100		mg/L			10/12/18 08:02	20

Client Sample Results

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

TestAmerica Job ID: 500-152628-1

Client Sample ID: MW-10

Date Collected: 10/03/18 12:52

Date Received: 10/04/18 13:25

Lab Sample ID: 500-152628-4

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2.5		0.25		mg/L		10/08/18 08:49	10/10/18 14:49	5
Calcium	110		0.20		mg/L		10/08/18 08:49	10/09/18 22:18	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	860		10		mg/L			10/08/18 00:14	1
Chloride	140		10		mg/L			10/19/18 11:33	5
Fluoride	0.89		0.10		mg/L			10/05/18 23:42	1
Sulfate	200		100		mg/L			10/12/18 08:05	20

Client Sample Results

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

TestAmerica Job ID: 500-152628-1

Client Sample ID: MW-11

Date Collected: 10/03/18 15:05

Date Received: 10/04/18 13:25

Lab Sample ID: 500-152628-5

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	3.1		0.50		mg/L		10/08/18 08:49	10/10/18 14:52	10
Calcium	78		0.20		mg/L		10/08/18 08:49	10/09/18 22:22	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	680		10		mg/L			10/08/18 00:16	1
Chloride	110		10		mg/L			10/19/18 11:34	5
Fluoride	0.66		0.10		mg/L			10/05/18 23:46	1
Sulfate	120		50		mg/L			10/12/18 08:06	10

Client Sample Results

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

TestAmerica Job ID: 500-152628-1

Client Sample ID: MW-12

Date Collected: 10/03/18 11:56

Date Received: 10/04/18 13:25

Lab Sample ID: 500-152628-6

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2.2	F1	0.25		mg/L		10/08/18 08:49	10/10/18 14:56	5
Calcium	150		0.20		mg/L		10/08/18 08:49	10/09/18 22:26	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1100		10		mg/L			10/08/18 00:19	1
Chloride	160		10		mg/L			10/19/18 11:35	5
Fluoride	0.49		0.10		mg/L			10/06/18 00:02	1
Sulfate	170		50		mg/L			10/12/18 08:07	10

Client Sample Results

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

TestAmerica Job ID: 500-152628-1

Client Sample ID: Duplicate

Date Collected: 10/03/18 00:00

Date Received: 10/04/18 13:25

Lab Sample ID: 500-152628-7

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	5.0		0.50		mg/L		10/08/18 08:49	10/10/18 15:22	10
Calcium	140		0.20		mg/L		10/08/18 08:49	10/09/18 22:45	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1200		10		mg/L			10/08/18 00:21	1
Chloride	56		2.0		mg/L			10/19/18 11:40	1
Fluoride	0.47		0.10		mg/L			10/06/18 00:06	1
Sulfate	400		100		mg/L			10/12/18 08:08	20

Definitions/Glossary

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

TestAmerica Job ID: 500-152628-1

Qualifiers

Metals

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

Glossary

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

QC Association Summary

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

TestAmerica Job ID: 500-152628-1

Metals

Prep Batch: 453720

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-152628-1	MW-05	Total Recoverable	Water	3005A	
500-152628-2	MW-06	Total Recoverable	Water	3005A	
500-152628-3	MW-09	Total Recoverable	Water	3005A	
500-152628-4	MW-10	Total Recoverable	Water	3005A	
500-152628-5	MW-11	Total Recoverable	Water	3005A	
500-152628-6	MW-12	Total Recoverable	Water	3005A	
500-152628-7	Duplicate	Total Recoverable	Water	3005A	
MB 500-453720/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-453720/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
500-152628-6 MS	MW-12	Total Recoverable	Water	3005A	
500-152628-6 MSD	MW-12	Total Recoverable	Water	3005A	
500-152628-6 DU	MW-12	Total Recoverable	Water	3005A	

Analysis Batch: 454115

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-152628-1	MW-05	Total Recoverable	Water	6020A	453720
500-152628-2	MW-06	Total Recoverable	Water	6020A	453720
500-152628-3	MW-09	Total Recoverable	Water	6020A	453720
500-152628-4	MW-10	Total Recoverable	Water	6020A	453720
500-152628-5	MW-11	Total Recoverable	Water	6020A	453720
500-152628-6	MW-12	Total Recoverable	Water	6020A	453720
500-152628-7	Duplicate	Total Recoverable	Water	6020A	453720
MB 500-453720/1-A	Method Blank	Total Recoverable	Water	6020A	453720
LCS 500-453720/2-A	Lab Control Sample	Total Recoverable	Water	6020A	453720
500-152628-6 MS	MW-12	Total Recoverable	Water	6020A	453720
500-152628-6 MSD	MW-12	Total Recoverable	Water	6020A	453720
500-152628-6 DU	MW-12	Total Recoverable	Water	6020A	453720

Analysis Batch: 454359

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-152628-1	MW-05	Total Recoverable	Water	6020A	453720
500-152628-2	MW-06	Total Recoverable	Water	6020A	453720
500-152628-3	MW-09	Total Recoverable	Water	6020A	453720
500-152628-4	MW-10	Total Recoverable	Water	6020A	453720
500-152628-5	MW-11	Total Recoverable	Water	6020A	453720
500-152628-6	MW-12	Total Recoverable	Water	6020A	453720
500-152628-7	Duplicate	Total Recoverable	Water	6020A	453720
MB 500-453720/1-A	Method Blank	Total Recoverable	Water	6020A	453720
LCS 500-453720/2-A	Lab Control Sample	Total Recoverable	Water	6020A	453720
500-152628-6 MS	MW-12	Total Recoverable	Water	6020A	453720
500-152628-6 MSD	MW-12	Total Recoverable	Water	6020A	453720
500-152628-6 DU	MW-12	Total Recoverable	Water	6020A	453720

General Chemistry

Analysis Batch: 453606

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-152628-1	MW-05	Total/NA	Water	SM 4500 F C	
500-152628-2	MW-06	Total/NA	Water	SM 4500 F C	
500-152628-3	MW-09	Total/NA	Water	SM 4500 F C	

TestAmerica Chicago

QC Association Summary

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

TestAmerica Job ID: 500-152628-1

General Chemistry (Continued)

Analysis Batch: 453606 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-152628-4	MW-10	Total/NA	Water	SM 4500 F C	
500-152628-5	MW-11	Total/NA	Water	SM 4500 F C	
500-152628-6	MW-12	Total/NA	Water	SM 4500 F C	
500-152628-7	Duplicate	Total/NA	Water	SM 4500 F C	
MB 500-453606/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 500-453606/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	

Analysis Batch: 453675

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-152628-1	MW-05	Total/NA	Water	SM 2540C	
500-152628-2	MW-06	Total/NA	Water	SM 2540C	
500-152628-3	MW-09	Total/NA	Water	SM 2540C	
500-152628-4	MW-10	Total/NA	Water	SM 2540C	
500-152628-5	MW-11	Total/NA	Water	SM 2540C	
500-152628-6	MW-12	Total/NA	Water	SM 2540C	
500-152628-7	Duplicate	Total/NA	Water	SM 2540C	
MB 500-453675/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-453675/2	Lab Control Sample	Total/NA	Water	SM 2540C	
500-152628-1 DU	MW-05	Total/NA	Water	SM 2540C	

Analysis Batch: 454555

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-152628-1	MW-05	Total/NA	Water	SM 4500 SO4 E	
500-152628-2	MW-06	Total/NA	Water	SM 4500 SO4 E	
500-152628-3	MW-09	Total/NA	Water	SM 4500 SO4 E	
500-152628-4	MW-10	Total/NA	Water	SM 4500 SO4 E	
500-152628-5	MW-11	Total/NA	Water	SM 4500 SO4 E	
500-152628-6	MW-12	Total/NA	Water	SM 4500 SO4 E	
500-152628-7	Duplicate	Total/NA	Water	SM 4500 SO4 E	
MB 500-454555/3	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 500-454555/4	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 455858

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-152628-1	MW-05	Total/NA	Water	SM 4500 Cl- E	
500-152628-2	MW-06	Total/NA	Water	SM 4500 Cl- E	
500-152628-3	MW-09	Total/NA	Water	SM 4500 Cl- E	
500-152628-4	MW-10	Total/NA	Water	SM 4500 Cl- E	
500-152628-5	MW-11	Total/NA	Water	SM 4500 Cl- E	
500-152628-6	MW-12	Total/NA	Water	SM 4500 Cl- E	
500-152628-7	Duplicate	Total/NA	Water	SM 4500 Cl- E	
MB 500-455858/39	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 500-455858/40	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
500-152628-6 MS	MW-12	Total/NA	Water	SM 4500 Cl- E	
500-152628-6 MSD	MW-12	Total/NA	Water	SM 4500 Cl- E	

TestAmerica Chicago

QC Sample Results

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

TestAmerica Job ID: 500-152628-1

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 500-453720/1-A

Matrix: Water

Analysis Batch: 454115

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 453720

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	<0.20		0.20		mg/L		10/08/18 08:49	10/09/18 21:28	1

Lab Sample ID: MB 500-453720/1-A

Matrix: Water

Analysis Batch: 454359

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 453720

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.050		0.050		mg/L		10/08/18 08:49	10/10/18 14:24	1

Lab Sample ID: LCS 500-453720/2-A

Matrix: Water

Analysis Batch: 454115

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 453720

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	10.0	10.6		mg/L		106	80 - 120

Lab Sample ID: LCS 500-453720/2-A

Matrix: Water

Analysis Batch: 454359

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 453720

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1.00	0.869		mg/L		87	80 - 120

Lab Sample ID: 500-152628-6 MS

Matrix: Water

Analysis Batch: 454115

Client Sample ID: MW-12

Prep Type: Total Recoverable

Prep Batch: 453720

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	150		10.0	151	4	mg/L		30	75 - 125

Lab Sample ID: 500-152628-6 MS

Matrix: Water

Analysis Batch: 454359

Client Sample ID: MW-12

Prep Type: Total Recoverable

Prep Batch: 453720

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	2.2	F1	1.00	3.03		mg/L		80	75 - 125

Lab Sample ID: 500-152628-6 MSD

Matrix: Water

Analysis Batch: 454115

Client Sample ID: MW-12

Prep Type: Total Recoverable

Prep Batch: 453720

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Calcium	150		10.0	156	4	mg/L		81	75 - 125	3	20

Lab Sample ID: 500-152628-6 MSD

Matrix: Water

Analysis Batch: 454359

Client Sample ID: MW-12

Prep Type: Total Recoverable

Prep Batch: 453720

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Boron	2.2	F1	1.00	2.97	F1	mg/L		74	75 - 125	2	20

TestAmerica Chicago

QC Sample Results

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

TestAmerica Job ID: 500-152628-1

Lab Sample ID: 500-152628-6 DU
Matrix: Water
Analysis Batch: 454115

Client Sample ID: MW-12
Prep Type: Total Recoverable
Prep Batch: 453720

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Calcium	150		147		mg/L		1	20

Lab Sample ID: 500-152628-6 DU
Matrix: Water
Analysis Batch: 454359

Client Sample ID: MW-12
Prep Type: Total Recoverable
Prep Batch: 453720

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Boron	2.2	F1	2.17		mg/L		3	20

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

Lab Sample ID: MB 500-453675/1
Matrix: Water
Analysis Batch: 453675

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			10/07/18 23:25	1

Lab Sample ID: LCS 500-453675/2
Matrix: Water
Analysis Batch: 453675

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	252		mg/L		101	80 - 120

Lab Sample ID: 500-152628-1 DU
Matrix: Water
Analysis Batch: 453675

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

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Dissolved Solids	1200		1240		mg/L		2	5

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 500-455858/39
Matrix: Water
Analysis Batch: 455858

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			10/19/18 11:28	1

Lab Sample ID: LCS 500-455858/40
Matrix: Water
Analysis Batch: 455858

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	48.5		mg/L		97	85 - 115

TestAmerica Chicago

QC Sample Results

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

TestAmerica Job ID: 500-152628-1

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

Lab Sample ID: 500-152628-6 MS

Matrix: Water

Analysis Batch: 455858

Client Sample ID: MW-12

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	160		50.0	207		mg/L		86	75 - 125

Lab Sample ID: 500-152628-6 MSD

Matrix: Water

Analysis Batch: 455858

Client Sample ID: MW-12

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	160		50.0	212		mg/L		97	75 - 125	3	20

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 500-453606/3

Matrix: Water

Analysis Batch: 453606

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			10/05/18 22:17	1

Lab Sample ID: LCS 500-453606/4

Matrix: Water

Analysis Batch: 453606

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	10.6		mg/L		106	80 - 120

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 500-454555/3

Matrix: Water

Analysis Batch: 454555

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			10/12/18 07:53	1

Lab Sample ID: LCS 500-454555/4

Matrix: Water

Analysis Batch: 454555

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	19.3		mg/L		97	80 - 120

TestAmerica Chicago

Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-152628-1

Login Number: 152628

List Source: TestAmerica Chicago

List Number: 1

Creator: Scott, Sherri L

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	4.9
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Lab Chronicle

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

TestAmerica Job ID: 500-152628-1

Client Sample ID: MW-05

Date Collected: 10/03/18 09:18

Date Received: 10/04/18 13:25

Lab Sample ID: 500-152628-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			453720	10/08/18 08:49	SAH	TAL CHI
Total Recoverable	Analysis	6020A		1	454115	10/09/18 21:59	FXG	TAL CHI
Total Recoverable	Prep	3005A			453720	10/08/18 08:49	SAH	TAL CHI
Total Recoverable	Analysis	6020A		10	454359	10/10/18 14:31	FXG	TAL CHI
Total/NA	Analysis	SM 2540C		1	453675	10/08/18 00:03	CLB	TAL CHI
Total/NA	Analysis	SM 4500 CI- E		1	455858	10/19/18 11:30	CCK	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	453606	10/05/18 23:31	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		20	454555		CLB	TAL CHI
					(Start)	10/12/18 08:00		
					(End)	10/12/18 08:01		

Client Sample ID: MW-06

Date Collected: 10/03/18 10:44

Date Received: 10/04/18 13:25

Lab Sample ID: 500-152628-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			453720	10/08/18 08:49	SAH	TAL CHI
Total Recoverable	Analysis	6020A		1	454115	10/09/18 22:03	FXG	TAL CHI
Total Recoverable	Prep	3005A			453720	10/08/18 08:49	SAH	TAL CHI
Total Recoverable	Analysis	6020A		10	454359	10/10/18 14:35	FXG	TAL CHI
Total/NA	Analysis	SM 2540C		1	453675	10/08/18 00:08	CLB	TAL CHI
Total/NA	Analysis	SM 4500 CI- E		1	455858	10/19/18 11:31	CCK	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	453606	10/05/18 23:35	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		10	454555		CLB	TAL CHI
					(Start)	10/12/18 08:01		
					(End)	10/12/18 08:02		

Client Sample ID: MW-09

Date Collected: 10/02/18 14:10

Date Received: 10/04/18 13:25

Lab Sample ID: 500-152628-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			453720	10/08/18 08:49	SAH	TAL CHI
Total Recoverable	Analysis	6020A		1	454115	10/09/18 22:14	FXG	TAL CHI
Total Recoverable	Prep	3005A			453720	10/08/18 08:49	SAH	TAL CHI
Total Recoverable	Analysis	6020A		5	454359	10/10/18 14:45	FXG	TAL CHI
Total/NA	Analysis	SM 2540C		1	453675	10/08/18 00:11	CLB	TAL CHI
Total/NA	Analysis	SM 4500 CI- E		5	455858	10/19/18 11:32	CCK	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	453606	10/05/18 23:40	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		20	454555		CLB	TAL CHI
					(Start)	10/12/18 08:02		
					(End)	10/12/18 08:03		

TestAmerica Chicago

Lab Chronicle

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

TestAmerica Job ID: 500-152628-1

Client Sample ID: MW-10

Date Collected: 10/03/18 12:52

Date Received: 10/04/18 13:25

Lab Sample ID: 500-152628-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			453720	10/08/18 08:49	SAH	TAL CHI
Total Recoverable	Analysis	6020A		1	454115	10/09/18 22:18	FXG	TAL CHI
Total Recoverable	Prep	3005A			453720	10/08/18 08:49	SAH	TAL CHI
Total Recoverable	Analysis	6020A		5	454359	10/10/18 14:49	FXG	TAL CHI
Total/NA	Analysis	SM 2540C		1	453675	10/08/18 00:14	CLB	TAL CHI
Total/NA	Analysis	SM 4500 CI- E		5	455858	10/19/18 11:33	CCK	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	453606	10/05/18 23:42	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		20	454555		CLB	TAL CHI
					(Start)	10/12/18 08:05		
					(End)	10/12/18 08:06		

Client Sample ID: MW-11

Date Collected: 10/03/18 15:05

Date Received: 10/04/18 13:25

Lab Sample ID: 500-152628-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			453720	10/08/18 08:49	SAH	TAL CHI
Total Recoverable	Analysis	6020A		1	454115	10/09/18 22:22	FXG	TAL CHI
Total Recoverable	Prep	3005A			453720	10/08/18 08:49	SAH	TAL CHI
Total Recoverable	Analysis	6020A		10	454359	10/10/18 14:52	FXG	TAL CHI
Total/NA	Analysis	SM 2540C		1	453675	10/08/18 00:16	CLB	TAL CHI
Total/NA	Analysis	SM 4500 CI- E		5	455858	10/19/18 11:34	CCK	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	453606	10/05/18 23:46	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		10	454555		CLB	TAL CHI
					(Start)	10/12/18 08:06		
					(End)	10/12/18 08:07		

Client Sample ID: MW-12

Date Collected: 10/03/18 11:56

Date Received: 10/04/18 13:25

Lab Sample ID: 500-152628-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			453720	10/08/18 08:49	SAH	TAL CHI
Total Recoverable	Analysis	6020A		1	454115	10/09/18 22:26	FXG	TAL CHI
Total Recoverable	Prep	3005A			453720	10/08/18 08:49	SAH	TAL CHI
Total Recoverable	Analysis	6020A		5	454359	10/10/18 14:56	FXG	TAL CHI
Total/NA	Analysis	SM 2540C		1	453675	10/08/18 00:19	CLB	TAL CHI
Total/NA	Analysis	SM 4500 CI- E		5	455858	10/19/18 11:35	CCK	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	453606	10/06/18 00:02	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		10	454555		CLB	TAL CHI
					(Start)	10/12/18 08:07		
					(End)	10/12/18 08:08		

TestAmerica Chicago

Lab Chronicle

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

TestAmerica Job ID: 500-152628-1

Client Sample ID: Duplicate

Lab Sample ID: 500-152628-7

Date Collected: 10/03/18 00:00

Matrix: Water

Date Received: 10/04/18 13:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			453720	10/08/18 08:49	SAH	TAL CHI
Total Recoverable	Analysis	6020A		1	454115	10/09/18 22:45	FXG	TAL CHI
Total Recoverable	Prep	3005A			453720	10/08/18 08:49	SAH	TAL CHI
Total Recoverable	Analysis	6020A		10	454359	10/10/18 15:22	FXG	TAL CHI
Total/NA	Analysis	SM 2540C		1	453675	10/08/18 00:21	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		1	455858	10/19/18 11:40	CCK	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	453606	10/06/18 00:06	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		20	454555		CLB	TAL CHI
					(Start)	10/12/18 08:08		
					(End)	10/12/18 08:09		

Laboratory References:

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

APPENDIX B

Alternate Source Demonstration April 12, 2018



ENVIRONMENTAL CONSULTATION & REMEDIATION

KPRG and Associates, Inc.

ALTERNATE SOURCE DEMONSTRATION
CCR GROUNDWATER MONITORING
WILL COUNTY GENERATING STATION

April 12, 2018

Ms. Sharene Shealey
Midwest Generation, LLC
529 E. Romeo Road
Romeoville, IL 60446

VIA E-MAIL

Re: Alternate Source Demonstration
Will County Generating Station – Ash Ponds

Dear Ms. Shealey:

The initial Detection Monitoring requirements in accordance with the Federal Register, Environmental Protection Agency, 40 CFR Parts 257.94, Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities; Final Rule dated April 17, 2015 (CCR Rule) have been completed for the ash pond monitoring wells located at the Midwest Generation, LLC (Midwest Generation) Will County Generating Station. The wells sampled were selected by Midwest Generation to meet the monitoring requirements of the CCR Rule for Ash Ponds 2 South (2S) and 3 South (3S). The CCR monitoring well network around these ponds consists of six monitoring wells (MW-05, MW-06, MW-09, MW-10, MW-11 and MW-12) as shown on Figure 1. Wells MW-05 and MW-06 are upgradient wells.

A statistical evaluation of the initial detection monitoring data was completed and submitted to Midwest Generation. The statistical evaluations were completed in accordance with the CCR Compliance Statistical Approach for Groundwater Data Evaluation, Midwest Generation Will County Generating Station dated October 10, 2017. The evaluations included outlier testing, spatial/temporal variability testing, distributional testing, and the establishment of statistical Prediction Limits (PLs) for all Appendix III compounds to which the ninth round of groundwater detection monitoring data were compared to determine whether there may be a statistically significant increase (SSI) for a specific compound at each well location. The evaluations were performed with the assistance of the SanitasTM statistical software package and provided in the Statistical Evaluation Summary – 2017 CCR Groundwater Monitoring Will County Generating

Station dated January 12, 2018. The following conclusion/recommendations were provided:

“The completed detection monitoring statistical evaluations have determined that there are SSIs in downgradient monitoring wells relative to established background for chloride, fluoride and TDS. At this time, KPRG recommends completing an alternate source demonstration to determine whether these exceedances may be associated with an actual release from the regulated unit(s) or if another potential historical source in the vicinity of the ash ponds may be affecting the local groundwater quality. If the alternate source demonstration is successful, then detection monitoring will resume. If the alternate source demonstration is not successful, then a transition to an assessment monitoring program complying with Section 257.95 will be required.”

This report summarizes the results of the Alternate Source Demonstration in accordance with 40 CFR 257.94(e)(2) completed for the Will County Generating Station Ash Ponds 2S and 3S. The report is structured to provide a documentation of field investigation activities, a summary of LEAF Test data observations, an alternate source evaluation of the SSI parameters, conclusions and recommendations. Each is discussed separately below. The statistical evaluation data tables from the January 12, 2018 submittal are provided in Attachment 1 for reference.

DOCUMENTATION OF FIELD ACTIVITIES

To assist in evaluating a potential alternate source, both pond water and ash samples were collected. A pond water sample was collected from ash pond 3S directly into laboratory prepared containers, transported on ice under a completed chain-of-custody to the analytical laboratory and analyzed for CCR Appendix III detection monitoring parameters. No sample was collected for ash pond 2S due to frozen conditions. The analytical data package is provided in Attachment 2.

One composite ash sample was collected for each of the two ponds (2S and 3S). The composite samples consisted of a series of equivalent grab samples from across the length of the pond, from the inlet area to the outfall, to minimize potential skewing of the sample due to gradation changes (i.e., a larger coarse fraction near the inlet and a larger fine fraction near outfall). The individual grab samples were thoroughly mixed to form a single composite sample for each pond. The composite sample was transferred directly into laboratory prepared containers, placed on ice and shipped to the analytical laboratory under a completed chain-of-custody. The ash sediment samples were analyzed using the Leaching Environmental Assessment Framework (LEAF) test using Method 1313. Under this method, each ash sediment sample underwent leaching over a range of eight pH values plus under “Natural pH” conditions. The Natural pH condition is the actual pH of the ash itself measured in the laboratory prior to any pH modifications performed under the LEAF Test. The collected leachate from each pH value was analyzed for CCR Appendix III detection monitoring parameters. The analytical data package is included in Attachment 2.

LEAF TEST DATA OBSERVATIONS

The results of the pond water and the ash LEAF Test analyses are provided in Tables 1 and 2, respectively. A review of Tables 1 and 2 indicates that the Natural pH of the ash leachate ranges from 8.8 to 9.2 which is higher by an order of magnitude, or more, than the noted pH of the pond water sample (7.8). This suggests that the pond water sample is not fully representative of equilibrium conditions of expected pore water within the ash sediment and, therefore, that the compound specific data from the pond water sample may also not be representative of leachate under equilibrium conditions. Based on this observation, the focus of this analysis will rely on the results of the LEAF Test data and in particular the data from the “Natural pH” samples.

Focusing on the LEAF Test data, it is noted that fluoride appears to be fairly minor component of the ash leachate with most measurements at varying pH levels being below reporting limits. The Natural pH fluoride test data for Pond 2S was <0.10 mg/l and the Natural pH fluoride test data for Pond 3S was 0.31 mg/l. The remaining analytical constituent LEAF Test data are illustrated in graphical form on Figures 2 through 8 as a function of pH. On those figures are also plotted the results of the “Natural pH” test samples and the up- and downgradient monitoring well data from the September 2017 sampling event (the initial detection monitoring event which was compared to established statistical background). In general, the following observations are made:

- Boron – The boron leachate concentration is a function of pH with concentrations decreasing from a pH of 2 through a pH of 12. There is a noted disparity in boron concentrations above a pH of 12 with Pond 2S showing a substantial increase in boron concentration and Pond 3S fairly consistent with the overall curve trend. The Natural pH sample data plots close to where it would be expected on the LEAF Test curves. The boron concentrations at all downgradient wells are slightly lower than the boron concentration noted for the Natural pH test analyses for both ash samples. The upgradient monitoring well detections for boron are within the same range as the Natural pH test analyses for both ash samples.
- Sulfate – The sulfate leachate concentration shows some scatter relative to pH. The Natural pH test samples plot within an expected range for sulfate based on their pH as compared to the two LEAF Test curves. The upgradient well sulfate data plots similar to the Natural pH analyses for both ash samples and most downgradient monitoring wells show lower sulfate concentrations than from the Natural pH analyses for both ash samples.
- Calcium – The calcium leachate concentration is a function of pH with concentrations decreasing with increasing pH. The Natural pH sample data for both Ponds 2S and 3S plots close to where it would be expected on the LEAF Test curve with calcium concentrations ranging from 59 to 95 mg/l. The upgradient well concentrations fall within the noted Natural pH test range for both ash samples. Downgradient wells generally show lower concentrations than within the noted Natural pH test range for both ash samples.

- Chloride – There were some non-detect values within the LEAF Test chloride data. For these cases, one-half of the noted detection limit was used for graphing purposes. The chloride concentrations do not appear to be a function of pH with a relatively narrow range of concentrations. The Natural pH test data and the upgradient monitoring well data all plot within a similar range as defined by the LEAF Test data. All downgradient monitoring wells show elevated chloride levels relative to the LEAF Test data.
- ORP – The oxidation-reduction potential (ORP) is a known function of pH with ORP generally decreasing with increasing pH. This is reflected in the LEAF Test curves. The Natural pH sample data for both Ponds 2S and 3S plots slightly lower than what would be expected on the LEAF Test curves. The ORP in all downgradient (and upgradient) monitoring wells plot lower than the LEAF Test curve and Natural pH test data for both ash samples.
- Specific Conductance (SC) – The SC measurements have a clear correlation with pH with measurements decreasing from a pH of 2 to a pH of 10 and then again increasing sharply as a pH of 13 is approached. The SC values of the Natural pH samples both plot slightly below the LEAF Test curve. The specific conductivity values in both the up- and downgradient monitoring wells plots below the Natural pH test data for both ash samples.
- Total Dissolved Solids (TDS) – The TDS LEAF Test curves mimic the SC curves with concentrations decreasing to a pH of just over 10 and then increasing as pH increases. The TDS values of the Natural pH samples both plot slightly below the LEAF Test curve with a narrow range of 590 to 610 mg/l. The TDS concentrations in the upgradient wells and downgradient wells are above the concentration range for both ash samples.

ALTERNATE SOURCE EVALUATION OF THE SSI PARAMETERS

As previously noted, the three parameters that were determined to have SSIs in downgradient monitoring wells relative to established background were chloride, fluoride and TDS. Each is discussed separately below.

Chloride

Downgradient monitoring wells MW-09 and MW-12 had potential SSIs for chloride during the September 2017 sampling event relative to the established pooled upgradient background. The two exceeding chloride concentrations were 310 and 270 mg/l, respectively with an established background of 149 mg/l. As discussed above in the LEAF Test curve evaluation, the chloride concentrations are independent of pH. The range of detected chloride concentrations from the LEAF Testing, including the Natural pH test, is 12 to 210 mg/l with an average of 48.7 (using one-half reporting limit for non-detect values). It is also noted that the 210 mg/l value appears to be an outlier with the next highest LEAF Test concentration

being 69 mg/l. The upgradient well chloride concentrations were 67 to 78 mg/l. Based on this data distribution, the elevated chloride concentrations detected in downgradient wells MW-09 and MW-12 must have a source other than the leachate from the ponds.

Fluoride

Downgradient monitoring well MW-10 had a potential SSI for this parameter during the September 2017 sampling event relative to the established pooled upgradient background. The exceeding fluoride concentration was 0.77 mg/l which was just above the established background of 0.72 mg/l. Most of the LEAF Test data shows no detections of fluoride. The two Natural pH test samples reported fluoride at <0.10 mg/l (Pond 2S) and 0.31 mg/l (Pond 3S). The upgradient well fluoride concentrations ranged from 0.40 to 0.52 mg/l. Based on this data distribution, the elevated fluoride concentration detected in monitoring well MW-10 must have a different source other than the leachate from the ponds.

TDS

Downgradient monitoring well MW-12 had a potential SSI for this parameter during the September 2017 sampling event relative to the established upgradient background. The exceeding TDS concentration was 1,400 mg/l which was above the established background of 950 mg/l. The TDS concentrations in the Natural pH test data ranged from 590 mg/l to 610 mg/l. The upgradient well TDS concentrations ranged from 740 mg/l to 1,000 mg/l. Based on this data, the elevated TDS concentration detected in monitoring well MW-12 must have a different source other than the leachate from the ponds.

CONCLUSIONS/RECOMMENDATIONS

Based on the data evaluation and discussions provided above, it is concluded that the noted SSIs for chloride, fluoride and TDS are not the result of leakage of leachate from the regulated units (Ponds 2S and 3S) but rather from other potential sources. This is based on the following:

- Upgradient monitoring well concentrations of fluoride and TDS are higher than those measured for ash leachate at Natural pH conditions.
- The ash leachate at Natural pH conditions does not contain a sufficient concentration of each of these constituents to result in the measured downgradient well concentrations.

It is therefore, recommended to continue with routine detection monitoring at this time. It is noted that since upgradient well chemistry for various Appendix III constituents is similar to ash leachate chemistry at natural pH levels, it is also recommended to include intra-well statistical evaluations/comparisons for the downgradient wells in addition to the current inter-well evaluations.

If there are any questions, please contact me at 262-781-0475.

Sincerely,
KPRG and Associates, Inc.



Richard R. Gnat, P.G.
Principal



Timothy Stohner, P.E.
Project Manager/Sr. Engineer

cc: David Bacher, NRG
Peter O'Day, Midwest Generation

CERTIFICATION

In accordance with Section 257.94(e)(2) of the CCR Rule, I hereby certify based on a review of the information contained within this CCR Alternate Source Demonstration dated April 12, 2018, that the information contained in this report is accurate to the best of my knowledge.

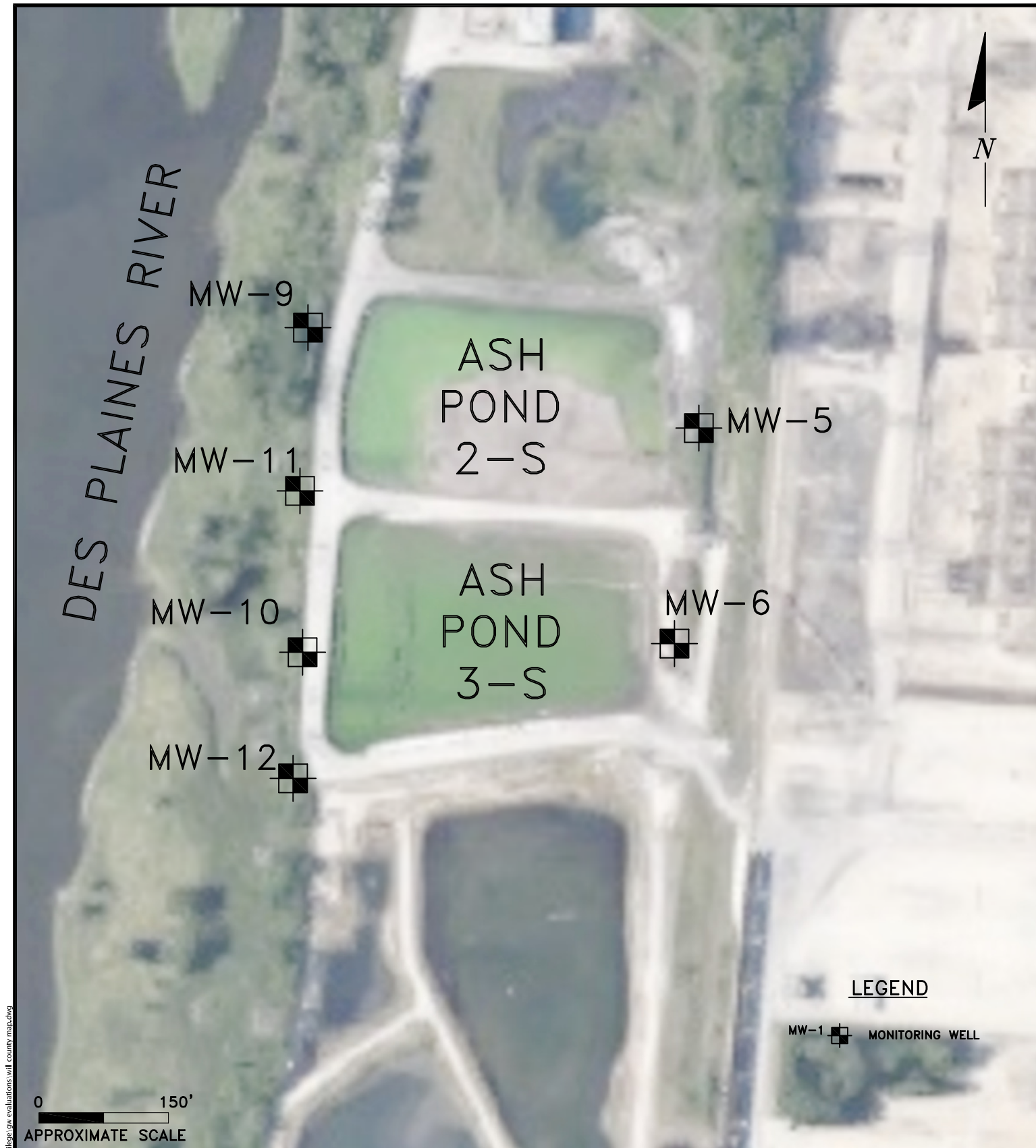


Certified by:

Date: April 12, 2018

Timothy Stohner, P.E.
Illinois Professional Engineer Registration No.: 062.057635
KPRG and Associates, Inc.

FIGURES



W:\projects\midwest\generation\attorney-client\privilege_gw\evaluations\will_county_map.dwg

ENVIRONMENTAL CONSULTATION & REMEDIATION		CCR MONITORING WELL SITE MAP	
K P R G KPRG and Associates, inc.		WILL COUNTY STATION ROMEONVILLE, ILLINOIS	
414 Plaza Drive, Suite 106 Westmont, Illinois 60559 Telephone 630-325-1300 Facsimile 630-325-1593 14665 West Lisbon Road, Suite 28 Brookfield, Wisconsin 53005 Telephone 262-781-0475 Facsimile 262-781-0478		Scale: 1" = 150'	Date: December 27, 2017
KPRG Project No. 12313.3			FIGURE 1

Figure 2. Boron Concentration vs. pH Value - Will County Station

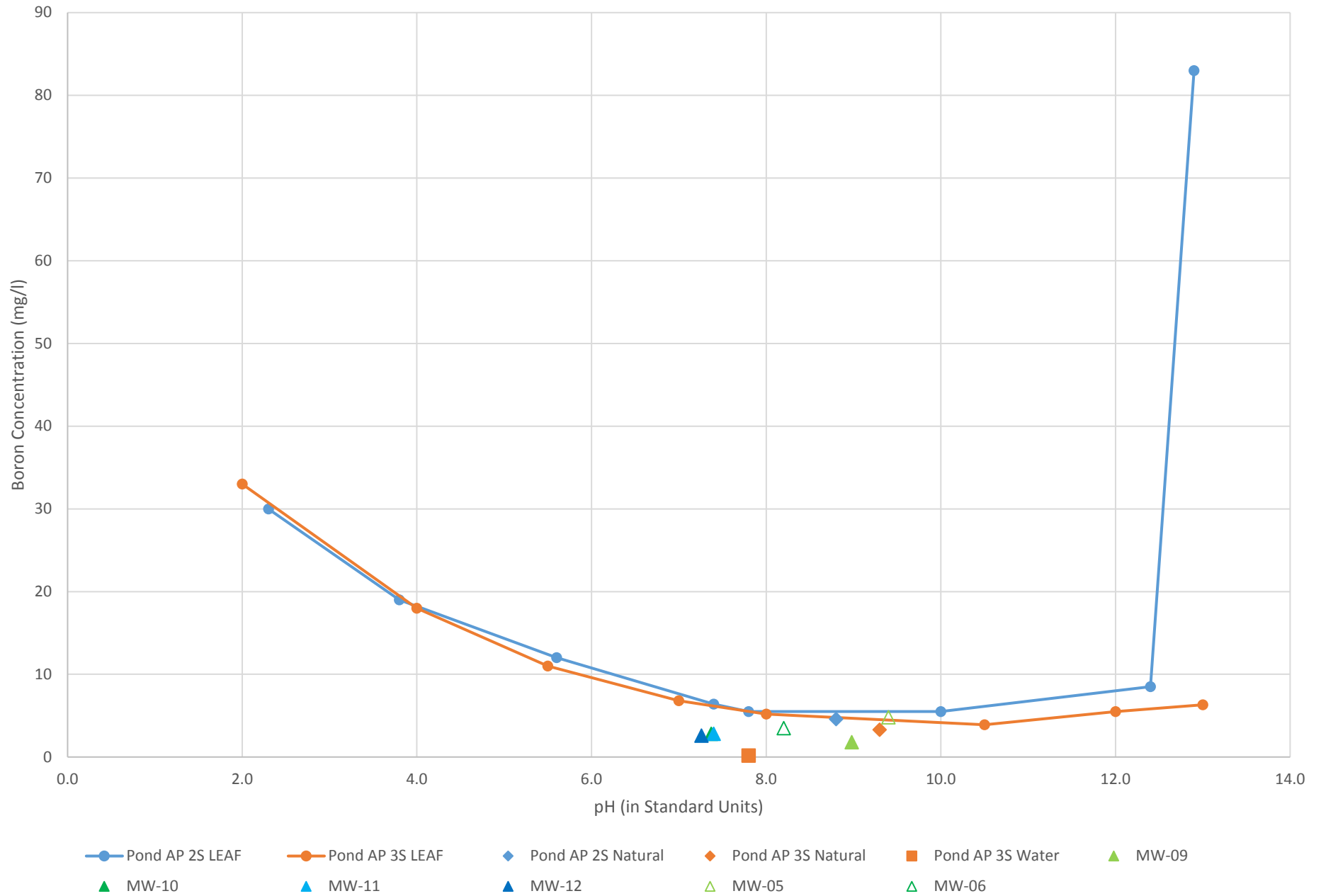


Figure 3. Sulfate Concentration vs. pH Value - Will County Station

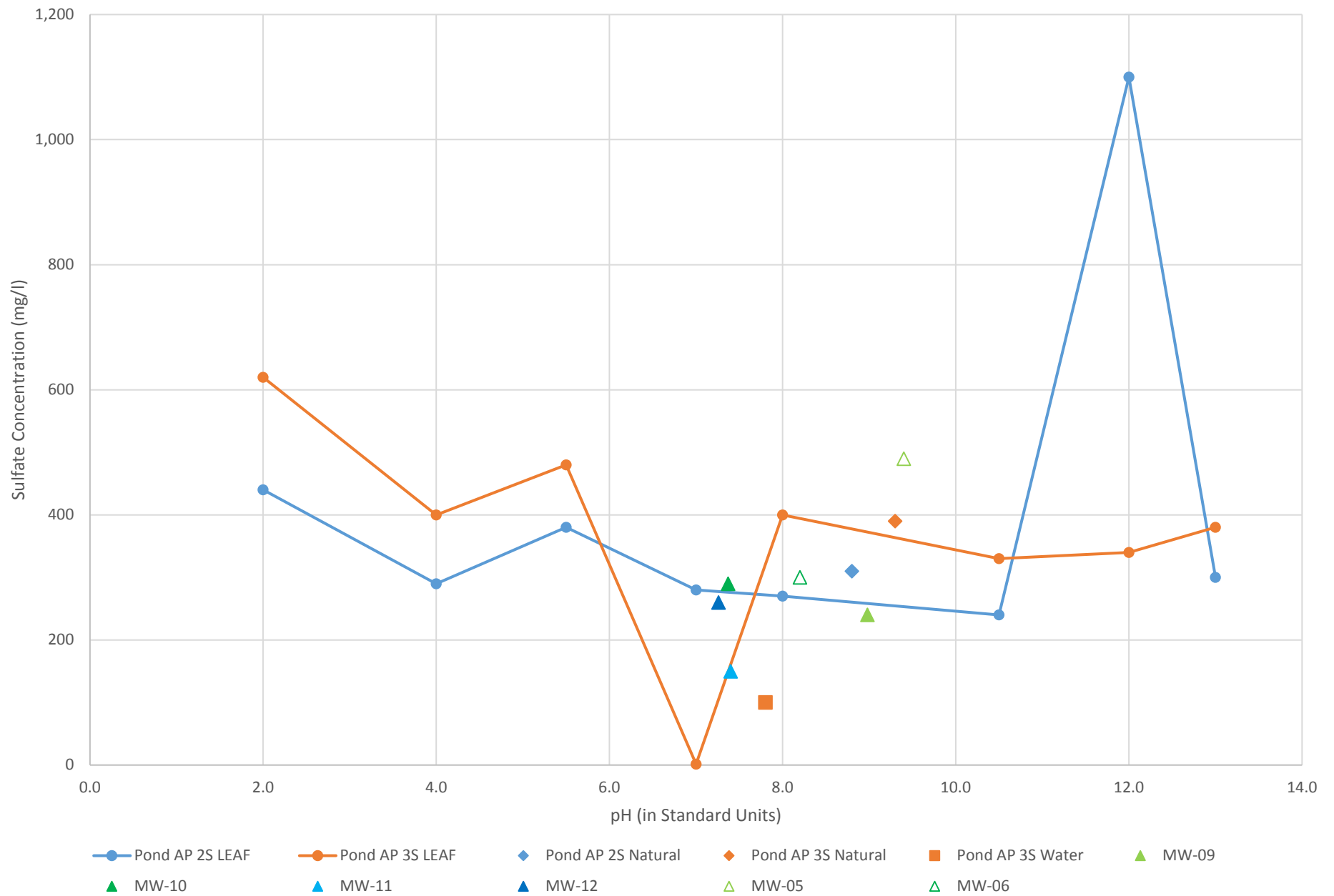


Figure 4. Calcium Concentration vs. pH Value - Will County Station

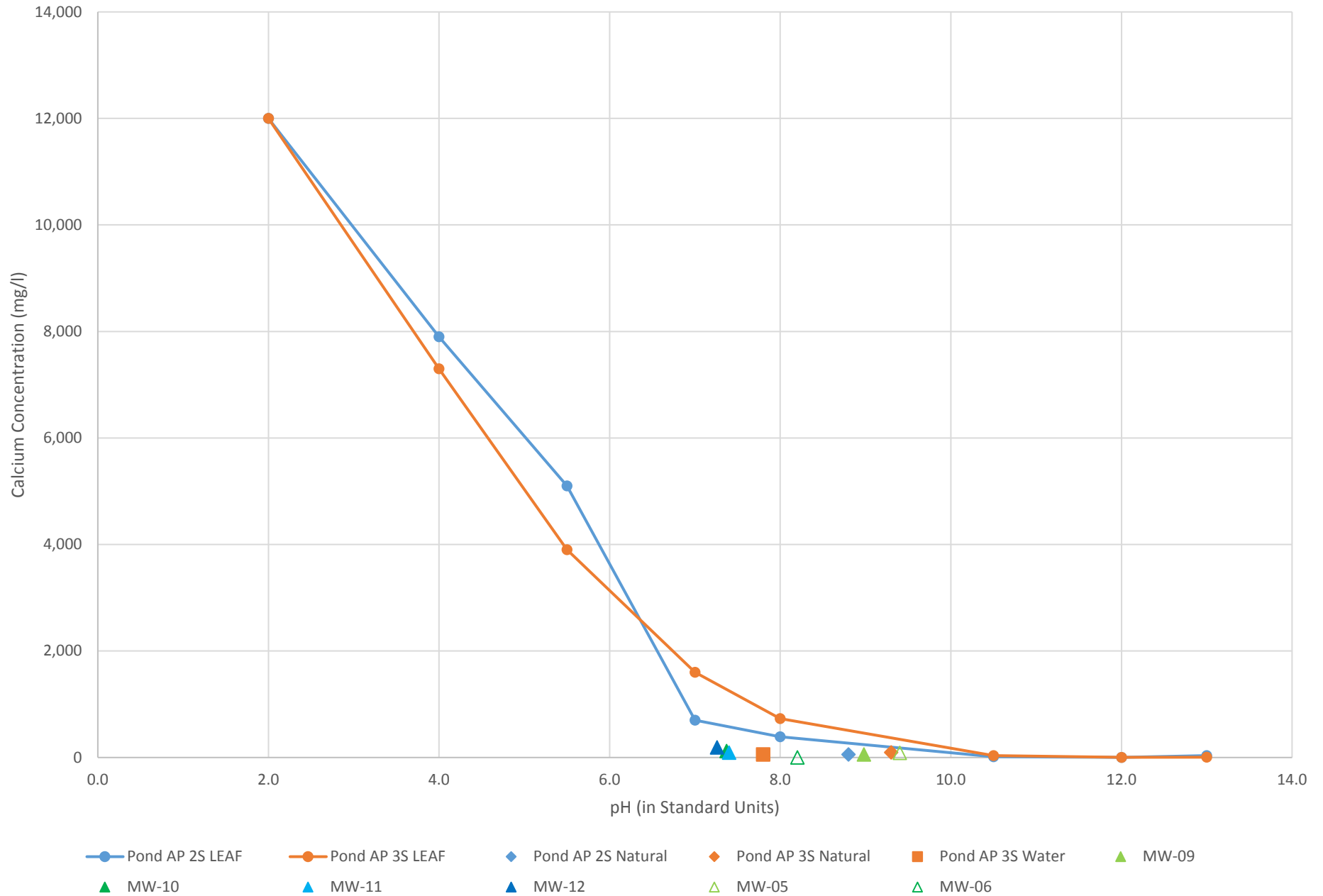


Figure 5. Chloride Concentration vs. pH Value - Will County Station

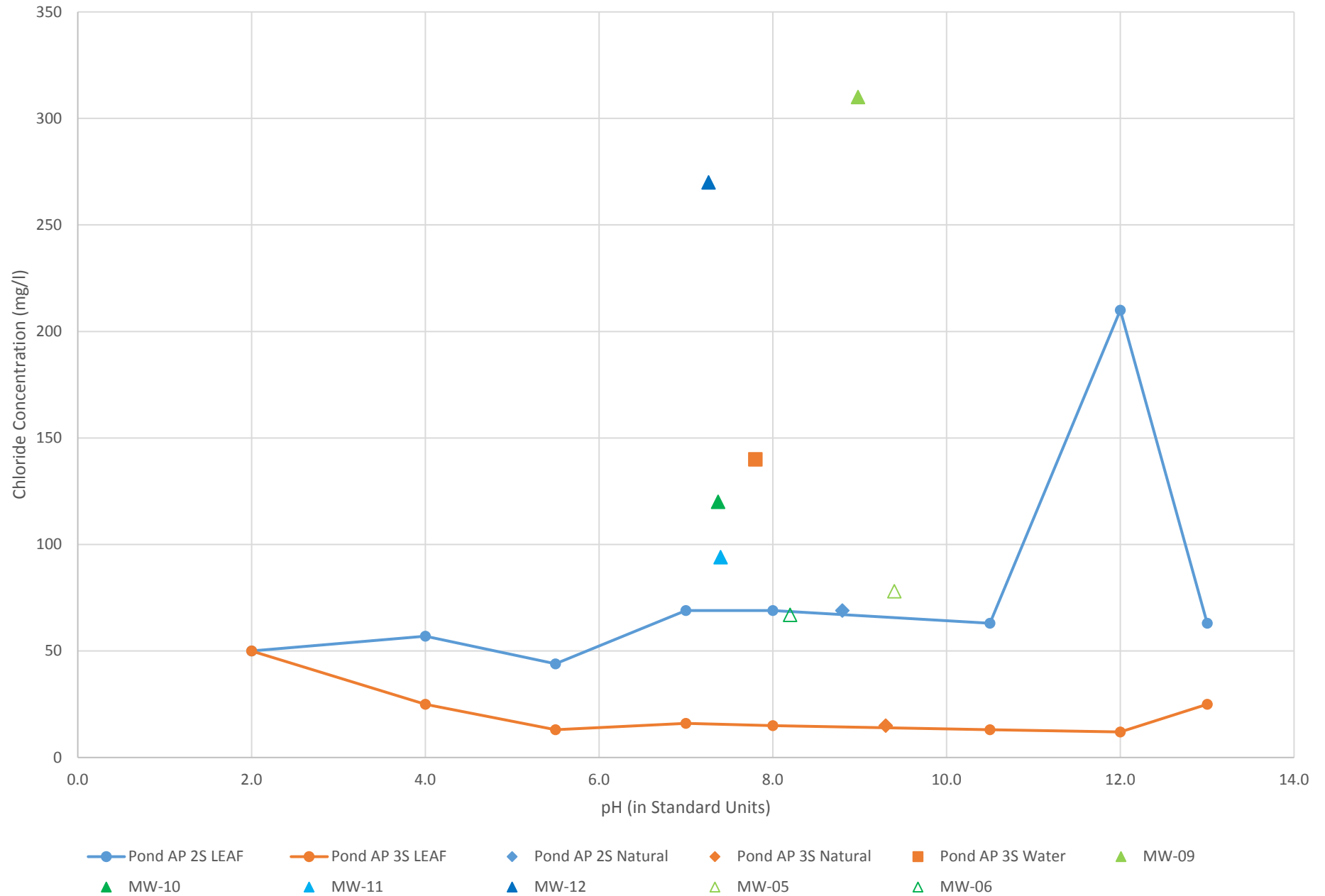


Figure 6. ORP Concentration vs. pH Value - Will County Station

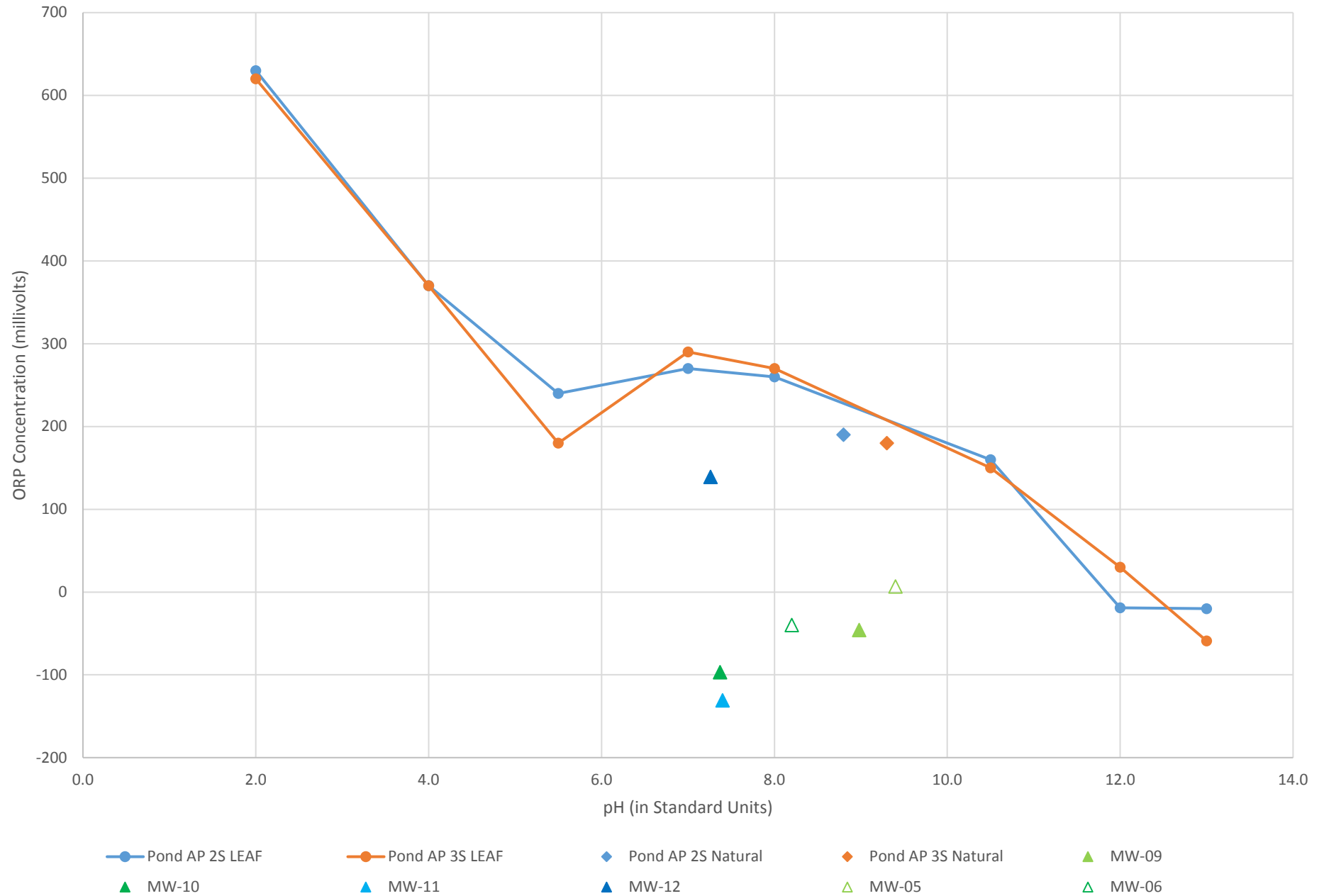


Figure 7. Specific Conductivity vs. pH Value - Will County Station

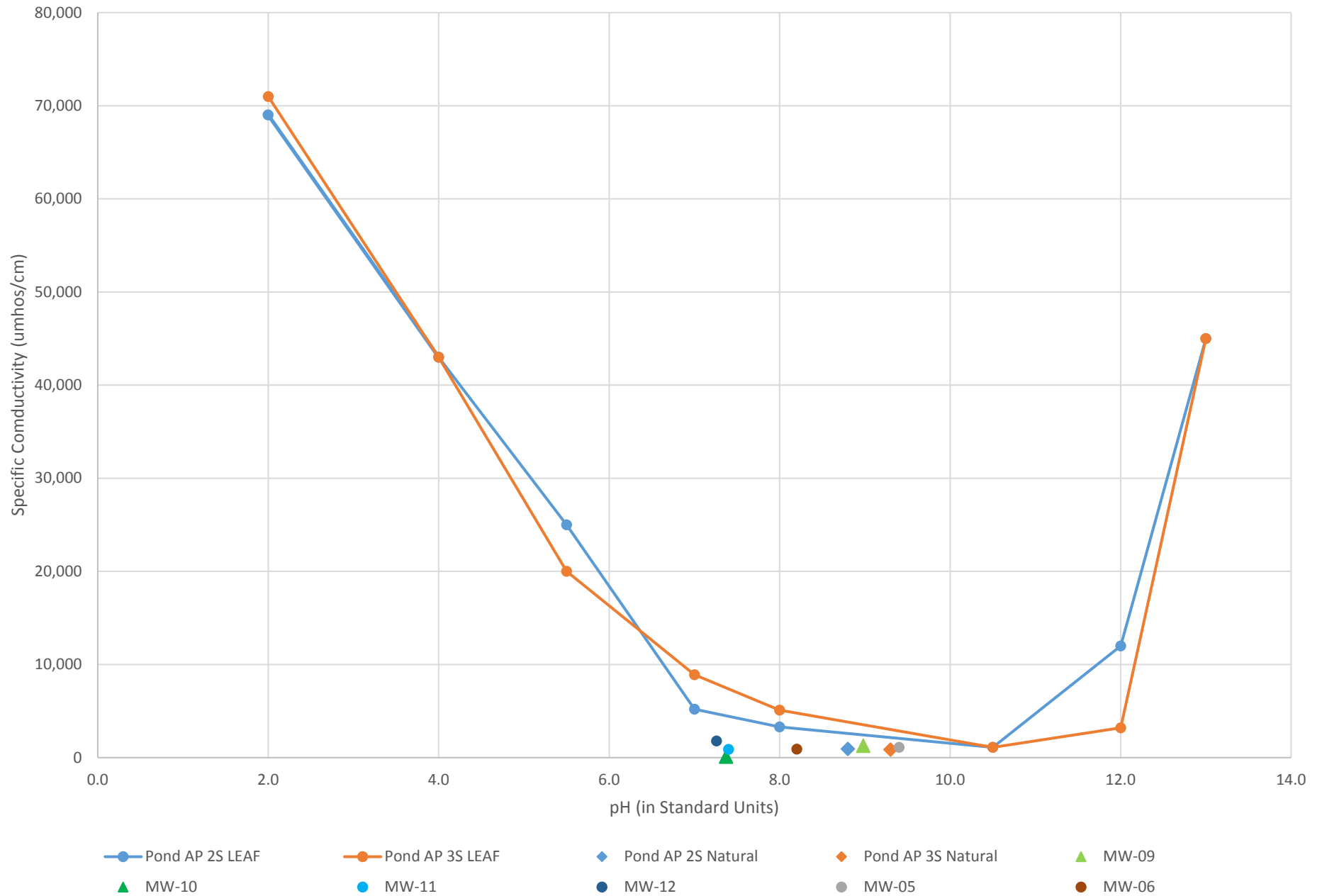
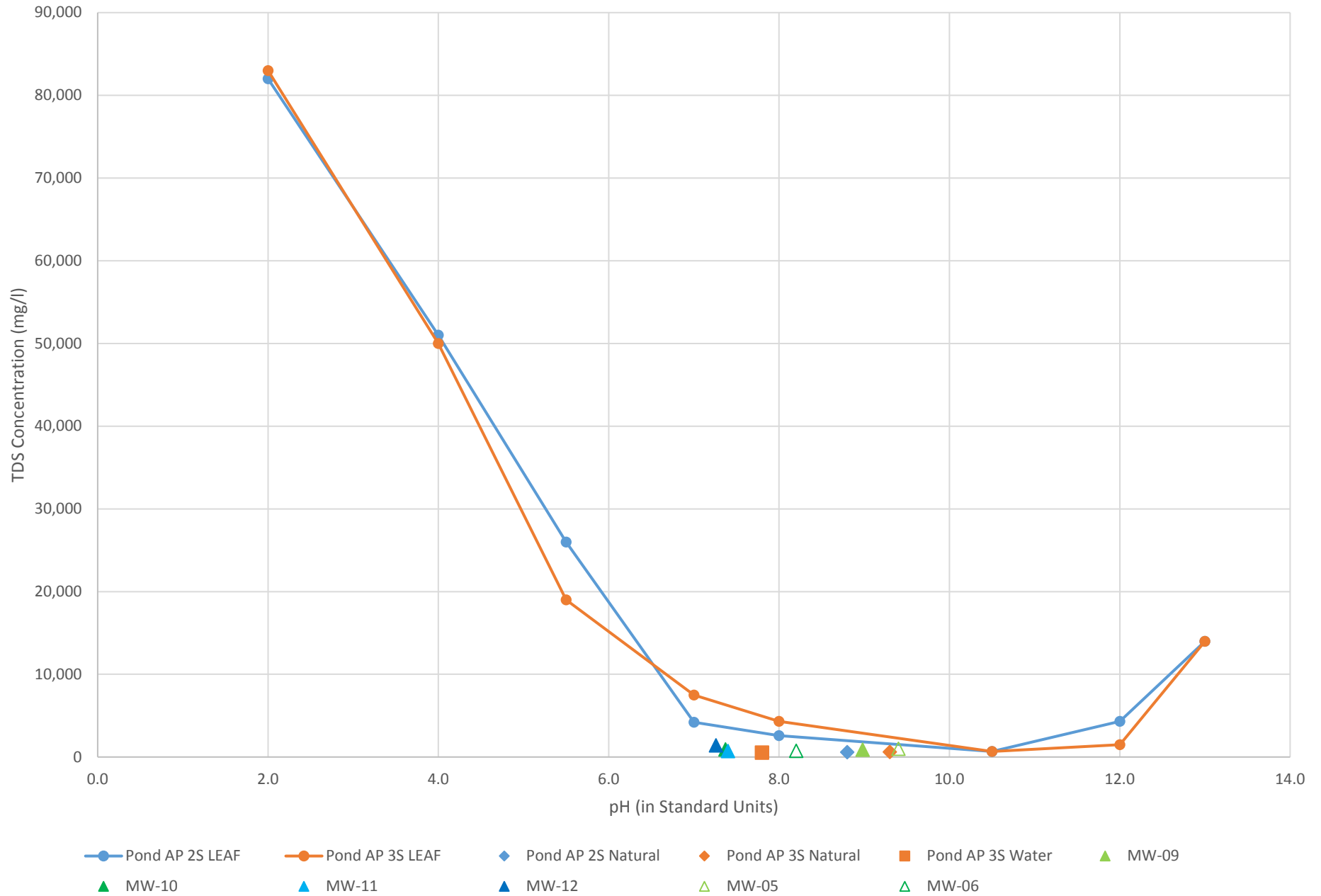


Figure 8. TDS Concentration vs. pH Value - Will County Station



TABLES

Table 1. Pond Water Results - Midwest Generation Will County Station, Romeoville, Illinois

PARAMETER	UNITS	Pond AP 3S
Boron	mg/L	0.18
Calcium	mg/L	56
Chloride	mg/L	140
Fluoride	mg/L	0.52
pH	SU	7.8
Sulfate	mg/L	100
TDS	mg/L	540

Notes: Units are as noted.
TDS - Total Dissolved Solids

Table 2. LEAF Test Results from Ash Samples - Midwest Generation Will County Station, Romeoville, Illinois

AP 2S ASH PARAMETER	UNITS	LEAF TEST TARGETED pH VALUES								
		13.0	12.0	10.5	8.0	7.0	5.5	4.0	2.0	Natural*
Boron	mg/L	83	8.5	5.5	5.5	6.4	12	19	30	4.6
Calcium	mg/L	34	2.5	13	390	700	5,100	7,900	12,000	59
Chloride	mg/L	63	210	63	69	69	44	57	<100	69
Fluoride	mg/L	<5.0	<10	0.42	<0.50	<0.50	<2.5	<10	<10	<0.10
ORP	millivolts	-20	-19	160	260	270	240	370	630	190
pH	SU	12.9	12.4	10.0	7.8	7.4	5.6	3.8	2.3	8.8
Spec Cond	umhos/cm	45,000	12,000	1,100	3,300	5,200	25,000	43,000	69,000	930
Sulfate	mg/L	300	1,100	240	270	280	380	290	440	310
TDS	mg/L	14,000	4,300	670	2,600	4,200	26,000	51,000	82,000	590

AP 3S ASH PARAMETER	UNITS	LEAF TEST TARGETED pH VALUES								
		13.0	12.0	10.5	8.0	7.0	5.5	4.0	2.0	Natural*
Boron	mg/L	6.3	5.5	3.9	5.2	6.8	11	18	33	3.3
Calcium	mg/L	4.7	3.6	37	730	1,600	3,900	7,300	12,000	95
Chloride	mg/L	<50	12	13	15	16	<25	<50	<100	15
Fluoride	mg/L	<5.0	1.0	0.47	<0.50	<0.50	<2.5	11	<10	0.31
ORP	millivolts	-59	30	150	270	290	180	370	620	180
pH	SU	12.7	11.9	10.2	7.5	7.0	6.0	3.8	2.3	9.3
Spec Cond	umhos/cm	45,000	3,200	1,100	5,100	8,900	20,000	43,000	71,000	870
Sulfate	mg/L	380	340	330	400	<2.5	480	400	620	390
TDS	mg/L	14,000	1,500	670	4,300	7,500	19,000	50,000	83,000	610

Notes: Units are as noted.

ORP - Oxidation Reduction Potential

Spec Cond - Specific Conductivity

TDS - Total Dissolved Solids

Natural* - pH of ash as measured in the laboratory prior to any pH test modifications.

ATTACHMENT 1

Statistical Evaluation Data Tables – January 12, 2018

Table 1. Detection Monitoring Statistical Comparisons - Appendix III Groundwater Analytical Results 3rd Quarter 2017 and Resample - Midwest Generation, LLC, Will County Station, Romeoville, IL.

Well	Date	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	Total Dissolved Solids
MW-05 up-gradient	11/11/2015	6.1	220	110	0.31	7.24	770	1900
	2/18/2016	4.4	230	120	0.31	6.99	730	1600
	5/26/2016	3.7	170	110	0.33	6.73	670	1500
	8/10/2016	3.6	67	120	0.72	8.62	480	970
	10/26/2016	3.6	44	120	0.70	9.08	410	920
	2/1/2017	4.6	250	48	0.35	6.81	530	1600
	5/11/2017	4	140	85	0.31	7.86	610	1200
	6/27/2017	3.8	83	99	0.53	7.95	500	1000
	Pred. Limit*	6.65	359	148	0.72	9.93-5.39	923	2286
	9/8/2017	4.8	89	78	0.52	9.4	490	1000
	11/16/2017	4.8	180	52	0.45	6.7	650	1500
MW-06 up-gradient	11/10/2015	3.0	52	100	0.55	8.63	300	660
	2/18/2016	2.5	74	150	0.47	8.58	280	650
	5/26/2016	2.7	86	92	0.44	7.79	350	800
	8/11/2016	3.6	110	58	0.35	7.74	330	840
	10/26/2016	3.8	86	74	0.40	8.16	220	800
	2/1/2017	3.4	70	83	0.41	7.88	260	700
	5/11/2017	3	75	84	0.28	8.68	330	570
	6/27/2017	3.1	65	74	0.38	8.15	330	710
	Pred. Limit*	4.29	122	162	0.62	9.21-7.19	415	956
	9/7/2017	3.5	75	67	0.40	8.2	300	740
	11/16/2017	3.9	88	54	0.39	7.59	280	810
MW-09 down-gradient	11/11/2015	1.9	56	190	0.55	9.12	460	750
	2/17/2016	1.8	47	160	0.55	9.10	250	600
	5/24/2016	1.6	48	180	0.51	8.79	240	640
	8/9/2016	2.2	53	140	0.48	8.35	280	750
	10/26/2016	2.2	33	130	0.81	9.16	230	660
	1/31/2017	2	61	250	0.57	8.59	180	710
	5/9/2017	1.8	66	340	0.38	8.58	250	900
	6/27/2017	1.9	64	330	0.51	7.76	240	940
	Pred. Limit	4.26	275**	149**	0.72**	9.39-6.48**	413	950
	9/6/2017	1.8	59	<u>310</u>	0.51	8.98	240	890
	11/14/2017	2.6	160	<u>270</u>	0.51	8.1	290	910
MW-10 down-gradient	11/10/2015	3.9	140	140	0.77	7.34	310	980
	2/16/2016	3.6	150	240	0.79	7.29	290	950
	5/25/2016	3.6	120	140	0.83	7.26	260	1000
	8/10/2016	4.3	150	120	0.78	7.22	230	970
	10/26/2016	3.0	160	74	0.52	7.30	220	1000
	2/2/2017	3.7	180	81	0.54	7.16	160	930
	5/10/2017	3.0	150	100	0.44	7.83	340	860
	6/27/2017	2.8	130	110	0.67	7.49	250	930
	Pred. Limit	4.26	275**	149**	0.72**	9.39-6.48**	413	950
	9/7/2017	2.8	120	120	<u>0.77</u>	7.37	290	920
	11/15/2017	4.1	140	120	<u>0.77</u>	7.10	270	<u>1000</u>

Notes:

* - Intrawell Prediction Limit. All others are interwell comparisons.

** - Based on pooled background from MW-5/MW-6.

All units are in mg/l except pH is in standard units.

All others based on MW-6 as background.

F1 - MS and/or MSD Recovery outside of limits.

Bold - Potential statistically significant increase.

Italics Date - First round of Detection Monitoring and resample after statistical background establishment.

Table 1. Detection Monitoring Statistical Comparisons - Appendix III Groundwater Analytical Results 3rd Quarter 2017 and Resample - Midwest Generation, LLC, Will County Station, Romeoville, IL.

Well	Date	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	Total Dissolved Solids
MW-11 down-gradient	11/10/2015	2.6	120	89	0.61	7.60	180	620
	2/16/2016	3.0	100	88	0.68	7.47	170	640
	5/25/2016	2.8	82	98	0.75	7.43	170	640
	8/10/2016	3.1	96	86	0.72	7.57	150	660
	10/26/2016	2.5	110	67	0.53	7.82	120	630
	2/1/2017	3.9	110	72	0.65	7.54	110	600
	5/10/2017	3.1	95	84	0.46	8.37	170	590
	6/27/2017	2.8	87	90	0.59	7.57	150	680
	Pred. Limit	4.26	275**	149**	0.72**	9.39-6.48**	413	950
	9/7/2017	2.8	90	94	0.58	7.4	150	730
MW-12 down-gradient	11/10/2015	2.3	150	160	0.59	7.44	290	1000
	2/16/2016	1.8	130	140	0.52	7.38	220	850
	5/25/2016	1.9	130	150	0.54	7.23	250	890
	8/10/2016	2.4	170	140	0.49	7.20	280	1000
	10/26/2016	2.6	140	120	0.49	7.44	220	980
	2/1/2017	2	160	120	0.48	7.3	150	900
	5/10/2017	2.3	200	240	0.3	7.65	260	1300
	6/27/2017	2.4	180	280	0.44	7.31	260	1300
	Pred. Limit	4.26	275**	149**	0.72**	9.39-6.48**	413	950
	9/6/2017	2.6	190	270	0.49	7.26	260	1400
	11/15/2017	1.7	55	200	0.47	6.90	250	1200

Notes:

* - Intrawell Prediction Limit. All others are interwell comparisons.

All units are in mg/l except pH is in standard units.

** - Based on pooled background from MW-5/MW-6.

All others based on MW-6 as background.

F1 - MS and/or MSD Recovery outside of limits.

Bold - Potential statistically significant increase.

Italics Date - First round of Detection Monitoring and resample after statistical background establishment.

ATTACHMENT 2
Analytical Data Packages

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: 500-139618-1

Client Project/Site: Will County CCR

For:

KPRG and Associates, Inc.

14665 West Lisbon Road,

Suite 2B

Brookfield, Wisconsin 53005

Attn: Richard Gnat



Authorized for release by:

1/26/2018 2:20:29 PM

Richard Wright, Senior Project Manager

richard.wright@testamericainc.com

Designee for

Eric Lang, Manager of Project Management

(708)534-5200

eric.lang@testamericainc.com

LINKS

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www.testamericainc.com

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

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



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Case Narrative

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

TestAmerica Job ID: 500-139618-1

Job ID: 500-139618-1

Laboratory: TestAmerica Chicago

Narrative

Job Narrative
500-139618-1

Comments

No additional comments.

Receipt

The sample was received on 1/12/2018 9:40 AM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.3° C.

Metals

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

General Chemistry

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

Method Summary

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

TestAmerica Job ID: 500-139618-1

Method	Method Description	Protocol	Laboratory
6020A	Metals (ICP/MS)	SW846	TAL CHI
9040C	pH	SW846	TAL CHI
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL CHI
SM 4500 Cl- E	Chloride, Total	SM	TAL CHI
SM 4500 F C	Fluoride	SM	TAL CHI
SM 4500 SO4 E	Sulfate, Total	SM	TAL CHI

Protocol References:

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

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

Laboratory References:

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

Sample Summary

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

TestAmerica Job ID: 500-139618-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-139618-1	AP 3-S	Water	01/10/18 09:55	01/12/18 09:40

Client Sample Results

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

TestAmerica Job ID: 500-139618-1

Client Sample ID: AP 3-S

Date Collected: 01/10/18 09:55

Date Received: 01/12/18 09:40

Lab Sample ID: 500-139618-1

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.18		0.050		mg/L		01/12/18 14:46	01/15/18 13:05	1
Calcium	56		0.20		mg/L		01/12/18 14:46	01/15/18 13:05	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.8	HF	0.2		SU			01/12/18 15:56	1
Total Dissolved Solids	540		10		mg/L			01/14/18 23:49	1
Chloride	140		10		mg/L			01/15/18 00:54	5
Fluoride	0.52		0.10		mg/L			01/25/18 11:25	1
Sulfate	100		25		mg/L			01/16/18 04:24	5

Definitions/Glossary

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

TestAmerica Job ID: 500-139618-1

Qualifiers

Metals

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

General Chemistry

Qualifier	Qualifier Description
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.

Glossary

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

QC Association Summary

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

TestAmerica Job ID: 500-139618-1

Metals

Prep Batch: 416709

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-139618-1	AP 3-S	Total Recoverable	Water	3005A	
MB 500-416709/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-416709/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
500-139618-1 MS	AP 3-S	Total Recoverable	Water	3005A	
500-139618-1 MSD	AP 3-S	Total Recoverable	Water	3005A	
500-139618-1 DU	AP 3-S	Total Recoverable	Water	3005A	

Analysis Batch: 416965

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-139618-1	AP 3-S	Total Recoverable	Water	6020A	416709
MB 500-416709/1-A	Method Blank	Total Recoverable	Water	6020A	416709
LCS 500-416709/2-A	Lab Control Sample	Total Recoverable	Water	6020A	416709
500-139618-1 MS	AP 3-S	Total Recoverable	Water	6020A	416709
500-139618-1 MSD	AP 3-S	Total Recoverable	Water	6020A	416709
500-139618-1 DU	AP 3-S	Total Recoverable	Water	6020A	416709

General Chemistry

Analysis Batch: 416763

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-139618-1	AP 3-S	Total/NA	Water	SM 2540C	
MB 500-416763/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-416763/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 416921

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-139618-1	AP 3-S	Total/NA	Water	SM 4500 Cl- E	
MB 500-416921/4	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 500-416921/37	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 416927

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-139618-1	AP 3-S	Total/NA	Water	SM 4500 SO4 E	
MB 500-416927/3	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 500-416927/4	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 416975

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-139618-1	AP 3-S	Total/NA	Water	9040C	
500-139618-1 DU	AP 3-S	Total/NA	Water	9040C	

Analysis Batch: 418006

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-139618-1	AP 3-S	Total/NA	Water	SM 4500 F C	
MB 500-418006/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 500-418006/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
500-139618-1 MS	AP 3-S	Total/NA	Water	SM 4500 F C	
500-139618-1 MSD	AP 3-S	Total/NA	Water	SM 4500 F C	

TestAmerica Chicago

QC Sample Results

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

TestAmerica Job ID: 500-139618-1

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 500-416709/1-A
Matrix: Water
Analysis Batch: 416965

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 416709

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.050		0.050		mg/L		01/12/18 14:46	01/15/18 12:57	1
Calcium	<0.20		0.20		mg/L		01/12/18 14:46	01/15/18 12:57	1

Lab Sample ID: LCS 500-416709/2-A
Matrix: Water
Analysis Batch: 416965

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 416709

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1.00	0.988		mg/L		99	80 - 120
Calcium	10.0	9.54		mg/L		95	80 - 120

Lab Sample ID: 500-139618-1 MS
Matrix: Water
Analysis Batch: 416965

Client Sample ID: AP 3-S
Prep Type: Total Recoverable
Prep Batch: 416709

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	0.18		1.00	1.19		mg/L		101	75 - 125
Calcium	56		10.0	65.5	4	mg/L		93	75 - 125

Lab Sample ID: 500-139618-1 MSD
Matrix: Water
Analysis Batch: 416965

Client Sample ID: AP 3-S
Prep Type: Total Recoverable
Prep Batch: 416709

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Boron	0.18		1.00	1.18		mg/L		100	75 - 125	2	20
Calcium	56		10.0	64.3	4	mg/L		81	75 - 125	2	20

Lab Sample ID: 500-139618-1 DU
Matrix: Water
Analysis Batch: 416965

Client Sample ID: AP 3-S
Prep Type: Total Recoverable
Prep Batch: 416709

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Boron	0.18		0.174		mg/L		4	20
Calcium	56		56.5		mg/L		0.4	20

Method: 9040C - pH

Lab Sample ID: 500-139618-1 DU
Matrix: Water
Analysis Batch: 416975

Client Sample ID: AP 3-S
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	7.8	HF	7.8		SU		0.3	

TestAmerica Chicago

QC Sample Results

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

TestAmerica Job ID: 500-139618-1

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

Lab Sample ID: MB 500-416763/1
Matrix: Water
Analysis Batch: 416763

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			01/14/18 22:56	1

Lab Sample ID: LCS 500-416763/2
Matrix: Water
Analysis Batch: 416763

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

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 500-416921/4
Matrix: Water
Analysis Batch: 416921

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			01/15/18 00:10	1

Lab Sample ID: LCS 500-416921/37
Matrix: Water
Analysis Batch: 416921

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	52.5		mg/L		105	85 - 115

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 500-418006/3
Matrix: Water
Analysis Batch: 418006

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			01/25/18 11:20	1

Lab Sample ID: LCS 500-418006/4
Matrix: Water
Analysis Batch: 418006

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

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

Lab Sample ID: 500-139618-1 MS
Matrix: Water
Analysis Batch: 418006

Client Sample ID: AP 3-S
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	0.52		5.00	5.51		mg/L		100	75 - 125

TestAmerica Chicago

QC Sample Results

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

TestAmerica Job ID: 500-139618-1

Method: SM 4500 F C - Fluoride (Continued)

Lab Sample ID: 500-139618-1 MSD

Matrix: Water

Analysis Batch: 418006

Client Sample ID: AP 3-S

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	0.52		5.00	5.46		mg/L		99	75 - 125	1	20

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 500-416927/3

Matrix: Water

Analysis Batch: 416927

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			01/16/18 04:04	1

Lab Sample ID: LCS 500-416927/4

Matrix: Water

Analysis Batch: 416927

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	19.4		mg/L		97	80 - 120

Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-139618-1

Login Number: 139618

List Source: TestAmerica Chicago

List Number: 1

Creator: Scott, Sherri L

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	4.3
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

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

TestAmerica Job ID: 500-139618-1

Laboratory: TestAmerica Chicago

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

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

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

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pittsburgh

301 Alpha Drive

RIDC Park

Pittsburgh, PA 15238

Tel: (412)963-7058

TestAmerica Job ID: 180-74122-1

Client Project/Site: Midwest Generation

For:

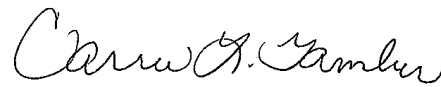
KPRG and Associates, Inc.

14665 West Lisbon Road,

Suite 2B

Brookfield, Wisconsin 53005

Attn: Richard Gnat



Authorized for release by:

2/28/2018 5:01:06 PM

Carrie Gamber, Senior Project Manager

(412)963-2428

carrie.gamber@testamericainc.com

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

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

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Case Narrative

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-74122-1

Job ID: 180-74122-1

Laboratory: TestAmerica Pittsburgh

Narrative

CASE NARRATIVE

Client: KPRG and Associates, Inc.

Project: Midwest Generation

Report Number: 180-74122-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 01/12/2018; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 0.8 C.

IC

Several samples were diluted due to the nature of the sample matrix. Elevated reporting limits (RLs) were provided. Dilutions were based on conductivity pre-screen of samples.

METALS

Several samples were diluted due to the nature of the sample matrix. Elevated reporting limits (RLs) are provided.

GENERAL CHEMISTRY

Due to the matrix, the initial volumes used for several samples deviated from the standard procedure for TDS.

Definitions/Glossary

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-74122-1

Glossary

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

Accreditation/Certification Summary

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-74122-1

Laboratory: TestAmerica Pittsburgh

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
Illinois	NELAP	5	200005	06-30-18

The following analytes are included in this report, but are not accredited/certified under this accreditation/certification:

Analysis Method	Prep Method	Matrix	Analyte
SM 2510B		Solid	Specific Conductance
SM 2540C		Solid	Total Dissolved Solids

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
2540G		Solid	Percent Moisture
2540G		Solid	Percent Solids
SM 2580B		Solid	Oxidation Reduction Potential

Sample Summary

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-74122-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-74122-1	AP 3-S - PRETEST	Solid	01/10/18 10:20	01/12/18 09:10
180-74122-2	AP 3-S - PH 13.0	Solid	01/10/18 10:20	01/12/18 09:10
180-74122-3	AP 3-S - PH 12.0	Solid	01/10/18 10:20	01/12/18 09:10
180-74122-4	AP 3-S - PH 10.5	Solid	01/10/18 10:20	01/12/18 09:10
180-74122-6	AP 3-S - PH 8.0	Solid	01/10/18 10:20	01/12/18 09:10
180-74122-7	AP 3-S - PH 7.0	Solid	01/10/18 10:20	01/12/18 09:10
180-74122-8	AP 3-S - PH 5.5	Solid	01/10/18 10:20	01/12/18 09:10
180-74122-9	AP 3-S - PH 4.0	Solid	01/10/18 10:20	01/12/18 09:10
180-74122-10	AP 3-S - PH 2.0	Solid	01/10/18 10:50	01/12/18 09:10
180-74122-11	AP 3-S - NATURAL	Solid	01/10/18 10:50	01/12/18 09:10
180-74122-12	AP 2-S - PRETEST	Solid	01/10/18 10:50	01/12/18 09:10
180-74122-13	AP 2-S - PH 13.0	Solid	01/10/18 10:50	01/12/18 09:10
180-74122-14	AP 2-S - PH 12.0	Solid	01/10/18 10:50	01/12/18 09:10
180-74122-15	AP 2-S - PH 10.5	Solid	01/10/18 10:50	01/12/18 09:10
180-74122-17	AP 2-S - PH 8.0	Solid	01/10/18 10:50	01/12/18 09:10
180-74122-18	AP 2-S - PH 7.0	Solid	01/10/18 10:50	01/12/18 09:10
180-74122-19	AP 2-S - PH 5.5	Solid	01/10/18 10:50	01/12/18 09:10
180-74122-20	AP 2-S - PH 4.0	Solid	01/10/18 10:50	01/12/18 09:10
180-74122-21	AP 2-S - PH 2.0	Solid	01/10/18 10:50	01/12/18 09:10
180-74122-22	AP 2-S - NATURAL	Solid	01/10/18 10:50	01/12/18 09:10
180-74122-23	AP 3-S - AIR DIED	Solid	01/10/18 10:20	01/12/18 09:10
180-74122-24	AP 2-S - AIR DRIED	Solid	01/10/18 10:50	01/12/18 09:10

Method Summary

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-74122-1

Method	Method Description	Protocol	Laboratory
EPA 9056A	Anions, Ion Chromatography	SW846	TAL PIT
EPA 6020A	Metals (ICP/MS)	SW846	TAL PIT
2540G	SM 2540G	SM22	TAL PIT
EPA 9040C	pH	SW846	TAL PIT
SM 2510B	Conductivity, Specific Conductance	SM	TAL PIT
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PIT
SM 2580B	Reduction-Oxidation (REDOX) Potential	SM	TAL PIT

Protocol References:

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

SM22 = SM22

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

Laboratory References:

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-74122-1

Client Sample ID: AP 3-S - PRETEST

Date Collected: 01/10/18 10:20

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74122-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			234952	01/24/18 06:29	CLL	TAL PIT
	Instrument ID: NOEQUIP									
Leach	Leach	1313			40.5 g	400 mL	236165	02/05/18 11:30	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			236465	02/07/18 11:36	MTW	TAL PIT
	Instrument ID: NOEQUIP									
Leach	Leach	1313			40.5 g	950 mL	237107	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			237380	02/12/18 14:21	MTW	TAL PIT
	Instrument ID: NOEQUIP									
Leach	Leach	1313			40.5 g	950 mL	237107	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			237380	02/12/18 14:24	MTW	TAL PIT
	Instrument ID: NOEQUIP									
Leach	Leach	1313			40.5 g	950 mL	237107	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			237380	02/12/18 14:27	MTW	TAL PIT
	Instrument ID: NOEQUIP									
Leach	Leach	1313			40.5 g	950 mL	237107	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			237380	02/12/18 14:33	MTW	TAL PIT
	Instrument ID: NOEQUIP									
Leach	Leach	1313			40.5 g	400 mL	237733	02/14/18 08:00	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			237737	02/16/18 13:05	MTW	TAL PIT
	Instrument ID: NOEQUIP									
Leach	Leach	1313			40.5 g	400 mL	237733	02/14/18 08:00	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			237737	02/16/18 13:10	MTW	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: AP 3-S - PH 13.0

Date Collected: 01/10/18 10:20

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74122-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1313			40.5 g	400 mL	236165	02/05/18 11:30	LWM	TAL PIT
Leach	Analysis	EPA 9056A		50			236377	02/08/18 20:09	MJH	TAL PIT
	Instrument ID: CHIC2100A									
Leach	Leach	1313			40.5 g	400 mL	236165	02/05/18 11:30	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	236440	02/08/18 11:28	KA	TAL PIT
Leach	Analysis	EPA 6020A		1			236729	02/10/18 00:33	WTR	TAL PIT
	Instrument ID: A									
Leach	Leach	1313			40.5 g	400 mL	236165	02/05/18 11:30	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	236440	02/08/18 11:28	KA	TAL PIT
Leach	Analysis	EPA 6020A		1			236828	02/13/18 03:33	WTR	TAL PIT
	Instrument ID: M									
Leach	Leach	1313			40.5 g	400 mL	236165	02/05/18 11:30	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			236465	02/07/18 11:43	MTW	TAL PIT
	Instrument ID: NOEQUIP									
Leach	Leach	1313			40.5 g	400 mL	236165	02/05/18 11:30	LWM	TAL PIT

TestAmerica Pittsburgh

Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-74122-1

Client Sample ID: AP 3-S - PH 13.0

Lab Sample ID: 180-74122-2

Date Collected: 01/10/18 10:20

Matrix: Solid

Date Received: 01/12/18 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Analysis	SM 2510B		1			236475	02/07/18 11:25	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.5 g	400 mL	236165	02/05/18 11:30	LWM	TAL PIT
Leach	Analysis	SM 2540C		1	3 mL	100 mL	237078	02/15/18 14:59	KXW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.5 g	400 mL	236165	02/05/18 11:30	LWM	TAL PIT
Leach	Analysis	SM 2580B		1			236472	02/07/18 11:21	MTW	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: AP 3-S - PH 12.0

Lab Sample ID: 180-74122-3

Date Collected: 01/10/18 10:20

Matrix: Solid

Date Received: 01/12/18 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1313			40.5 g	400 mL	237165	02/14/18 08:00	LWM	TAL PIT
Leach	Analysis	EPA 9056A		5			237859	02/26/18 16:14	MJH	TAL PIT
		Instrument ID: CHICS2000								
Leach	Leach	1313			40.5 g	400 mL	237165	02/14/18 08:00	LWM	TAL PIT
Leach	Analysis	EPA 9056A		50			237859	02/26/18 16:30	MJH	TAL PIT
		Instrument ID: CHICS2000								
Leach	Leach	1313			40.5 g	400 mL	237165	02/14/18 08:00	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	237311	02/19/18 13:03	KA	TAL PIT
Leach	Analysis	EPA 6020A		1			237590	02/21/18 01:14	WTR	TAL PIT
		Instrument ID: A								
Leach	Leach	1313			40.5 g	400 mL	237165	02/14/18 08:00	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	237311	02/19/18 13:03	KA	TAL PIT
Leach	Analysis	EPA 6020A		1			237713	02/22/18 04:21	WTR	TAL PIT
		Instrument ID: M								
Leach	Leach	1313			40.5 g	400 mL	237165	02/14/18 08:00	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			237737	02/16/18 12:54	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.5 g	400 mL	237165	02/14/18 08:00	LWM	TAL PIT
Leach	Analysis	SM 2510B		1			237752	02/16/18 12:48	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.5 g	400 mL	237165	02/14/18 08:00	LWM	TAL PIT
Leach	Analysis	SM 2540C		1	25 mL	100 mL	237329	02/19/18 15:41	KXW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.5 g	400 mL	237165	02/14/18 08:00	LWM	TAL PIT
Leach	Analysis	SM 2580B		1			237751	02/16/18 12:53	MTW	TAL PIT
		Instrument ID: NOEQUIP								

TestAmerica Pittsburgh

Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-74122-1

Client Sample ID: AP 3-S - PH 10.5

Lab Sample ID: 180-74122-4

Date Collected: 01/10/18 10:20

Matrix: Solid

Date Received: 01/12/18 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1313			40.5 g	400 mL	237381	02/17/18 10:00	LWM	TAL PIT
Leach	Analysis	EPA 9056A		1	1 mL	1.0 mL	237598	02/22/18 12:20	MJH	TAL PIT
		Instrument ID: CHICS2000								
Leach	Leach	1313			40.5 g	400 mL	237381	02/17/18 10:00	LWM	TAL PIT
Leach	Analysis	EPA 9056A		10	1 mL	1.0 mL	237598	02/22/18 12:35	MJH	TAL PIT
		Instrument ID: CHICS2000								
Leach	Leach	1313			40.5 g	400 mL	237381	02/17/18 10:00	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	237537	02/21/18 11:22	KA	TAL PIT
Leach	Analysis	EPA 6020A		1			237821	02/23/18 11:40	RSK	TAL PIT
		Instrument ID: A								
Leach	Leach	1313			40.5 g	400 mL	237381	02/17/18 10:00	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	237537	02/21/18 11:22	KA	TAL PIT
Leach	Analysis	EPA 6020A		1			238052	02/26/18 21:29	WTR	TAL PIT
		Instrument ID: M								
Leach	Leach	1313			40.5 g	400 mL	237381	02/17/18 10:00	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			237531	02/19/18 10:12	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.5 g	400 mL	237381	02/17/18 10:00	LWM	TAL PIT
Leach	Analysis	SM 2510B		1			237553	02/19/18 10:18	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.5 g	400 mL	237381	02/17/18 10:00	LWM	TAL PIT
Leach	Analysis	SM 2540C		1	100 mL	100 mL	237940	02/26/18 14:33	KXW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.5 g	400 mL	237381	02/17/18 10:00	LWM	TAL PIT
Leach	Analysis	SM 2580B		1			237550	02/19/18 10:13	MTW	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: AP 3-S - PH 8.0

Lab Sample ID: 180-74122-6

Date Collected: 01/10/18 10:20

Matrix: Solid

Date Received: 01/12/18 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1313			40.5 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	EPA 9056A		2.5			236732	02/13/18 11:30	MJH	TAL PIT
		Instrument ID: CHIC2100A								
Leach	Leach	1313			40.5 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	EPA 9056A		5			236891	02/14/18 14:33	MJH	TAL PIT
		Instrument ID: CHICS2000								
Leach	Leach	1313			40.5 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	236807	02/13/18 13:38	KA	TAL PIT
Leach	Analysis	EPA 6020A		1			237198	02/15/18 22:34	WTR	TAL PIT
		Instrument ID: M								
Leach	Leach	1313			40.5 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			237380	02/12/18 14:39	MTW	TAL PIT
		Instrument ID: NOEQUIP								

TestAmerica Pittsburgh

Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-74122-1

Client Sample ID: AP 3-S - PH 8.0

Lab Sample ID: 180-74122-6

Date Collected: 01/10/18 10:20

Matrix: Solid

Date Received: 01/12/18 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1313			40.5 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	SM 2510B		1			237425	02/12/18 14:19	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.5 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	SM 2540C		1	25 mL	100 mL	237078	02/15/18 14:59	KXW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.5 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	SM 2580B		1			237422	02/12/18 14:17	MTW	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: AP 3-S - PH 7.0

Lab Sample ID: 180-74122-7

Date Collected: 01/10/18 10:20

Matrix: Solid

Date Received: 01/12/18 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1313			40.5 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	EPA 9056A		2.5			236732	02/13/18 12:00	MJH	TAL PIT
		Instrument ID: CHIC2100A								
Leach	Leach	1313			40.5 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	EPA 9056A		5			236891	02/14/18 14:49	MJH	TAL PIT
		Instrument ID: CHICS2000								
Leach	Leach	1313			40.5 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	236807	02/13/18 13:38	KA	TAL PIT
Leach	Analysis	EPA 6020A		10			237323	02/16/18 20:33	WTR	TAL PIT
		Instrument ID: M								
Leach	Leach	1313			40.5 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			237380	02/12/18 14:36	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.5 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	SM 2510B		1			237425	02/12/18 14:14	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.5 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	SM 2540C		1	25 mL	100 mL	237078	02/15/18 14:59	KXW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.5 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	SM 2580B		1			237422	02/12/18 14:10	MTW	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: AP 3-S - PH 5.5

Lab Sample ID: 180-74122-8

Date Collected: 01/10/18 10:20

Matrix: Solid

Date Received: 01/12/18 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1313			40.5 g	400 mL	237761	02/21/18 10:00	LWM	TAL PIT

TestAmerica Pittsburgh

Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-74122-1

Client Sample ID: AP 3-S - PH 5.5

Date Collected: 01/10/18 10:20

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74122-8

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Analysis	EPA 9056A		25			237859	02/26/18 08:57	MJH	TAL PIT
		Instrument ID: CHICS2000								
Leach	Leach	1313			40.5 g	400 mL	237761	02/21/18 10:00	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	237767	02/23/18 12:01	KA	TAL PIT
Leach	Analysis	EPA 6020A		10			238052	02/27/18 09:59	WTR	TAL PIT
		Instrument ID: M								
Leach	Leach	1313			40.5 g	400 mL	237761	02/21/18 10:00	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			237772	02/23/18 10:12	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.5 g	400 mL	237761	02/21/18 10:00	LWM	TAL PIT
Leach	Analysis	SM 2510B		1			237776	02/23/18 10:12	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.5 g	400 mL	237761	02/21/18 10:00	LWM	TAL PIT
Leach	Analysis	SM 2540C		1	5 mL	100 mL	238055	02/27/18 15:07	KXW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.5 g	400 mL	237761	02/21/18 10:00	LWM	TAL PIT
Leach	Analysis	SM 2580B		1			237774	02/23/18 10:12	MTW	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: AP 3-S - PH 4.0

Date Collected: 01/10/18 10:20

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74122-9

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1313			40.5 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	EPA 9056A		50			236732	02/13/18 13:32	MJH	TAL PIT
		Instrument ID: CHIC2100A								
Leach	Leach	1313			40.5 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	EPA 9056A		100			236891	02/14/18 15:04	MJH	TAL PIT
		Instrument ID: CHICS2000								
Leach	Leach	1313			40.5 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	236807	02/13/18 13:38	KA	TAL PIT
Leach	Analysis	EPA 6020A		10			237323	02/16/18 20:29	WTR	TAL PIT
		Instrument ID: M								
Leach	Leach	1313			40.5 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			237380	02/12/18 14:18	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.5 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	SM 2510B		1			237425	02/12/18 13:58	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.5 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	SM 2540C		1	3 mL	100 mL	237078	02/15/18 14:59	KXW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.5 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT

TestAmerica Pittsburgh

Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-74122-1

Client Sample ID: AP 3-S - PH 4.0

Date Collected: 01/10/18 10:20

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74122-9

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Analysis	SM 2580B		1			237422	02/12/18 13:57	MTW	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: AP 3-S - PH 2.0

Date Collected: 01/10/18 10:50

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74122-10

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1313			40.5 g	400 mL	237381	02/17/18 10:00	LWM	TAL PIT
Leach	Analysis	EPA 9056A		100	1 mL	1.0 mL	237598	02/22/18 11:16	MJH	TAL PIT
		Instrument ID: CHICS2000								
Leach	Leach	1313			40.5 g	400 mL	237381	02/17/18 10:00	LWM	TAL PIT
Leach	Prep	3010A			5 mL	50 mL	237767	02/23/18 12:01	KA	TAL PIT
Leach	Analysis	EPA 6020A		10			237942	02/24/18 17:13	WTR	TAL PIT
		Instrument ID: A								
Leach	Leach	1313			40.5 g	400 mL	237381	02/17/18 10:00	LWM	TAL PIT
Leach	Prep	3010A			5 mL	50 mL	237767	02/23/18 12:01	KA	TAL PIT
Leach	Analysis	EPA 6020A		10			238052	02/27/18 09:46	WTR	TAL PIT
		Instrument ID: M								
Leach	Leach	1313			40.5 g	400 mL	237381	02/17/18 10:00	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			237531	02/19/18 10:38	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.5 g	400 mL	237381	02/17/18 10:00	LWM	TAL PIT
Leach	Analysis	SM 2510B		1			237553	02/19/18 10:36	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.5 g	400 mL	237381	02/17/18 10:00	LWM	TAL PIT
Leach	Analysis	SM 2540C		1	2 mL	100 mL	237940	02/26/18 14:33	KXW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.5 g	400 mL	237381	02/17/18 10:00	LWM	TAL PIT
Leach	Analysis	SM 2580B		1			237550	02/19/18 10:34	MTW	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: AP 3-S - NATURAL

Date Collected: 01/10/18 10:50

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74122-11

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1313			40.5 g	400 mL	236165	02/05/18 11:30	LWM	TAL PIT
Leach	Analysis	EPA 9056A		1			236373	02/08/18 10:43	MJH	TAL PIT
		Instrument ID: CHICS2100B								
Leach	Leach	1313			40.5 g	400 mL	236165	02/05/18 11:30	LWM	TAL PIT
Leach	Analysis	EPA 9056A		5			236373	02/08/18 10:59	MJH	TAL PIT
		Instrument ID: CHICS2100B								
Leach	Leach	1313			40.5 g	400 mL	236165	02/05/18 11:30	LWM	TAL PIT

TestAmerica Pittsburgh

Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-74122-1

Client Sample ID: AP 3-S - NATURAL

Lab Sample ID: 180-74122-11

Date Collected: 01/10/18 10:50

Matrix: Solid

Date Received: 01/12/18 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Prep	3010A			50 mL	50 mL	236437	02/08/18 11:22	KA	TAL PIT
Leach	Analysis	EPA 6020A		1			236729	02/09/18 23:06	WTR	TAL PIT
		Instrument ID: A								
Leach	Leach	1313			40.5 g	400 mL	236165	02/05/18 11:30	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	236437	02/08/18 11:22	KA	TAL PIT
Leach	Analysis	EPA 6020A		1			236828	02/13/18 01:06	WTR	TAL PIT
		Instrument ID: M								
Leach	Leach	1313			40.5 g	400 mL	236165	02/05/18 11:30	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			236465	02/07/18 14:13	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.5 g	400 mL	236165	02/05/18 11:30	LWM	TAL PIT
Leach	Analysis	SM 2510B		1			236475	02/07/18 14:38	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.5 g	400 mL	236165	02/05/18 11:30	LWM	TAL PIT
Leach	Analysis	SM 2540C		1	100 mL	100 mL	236785	02/13/18 10:45	KXW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.5 g	400 mL	236165	02/05/18 11:30	LWM	TAL PIT
Leach	Analysis	SM 2580B		1			236472	02/07/18 14:38	MTW	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: AP 2-S - PRETEST

Lab Sample ID: 180-74122-12

Date Collected: 01/10/18 10:50

Matrix: Solid

Date Received: 01/12/18 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			234952	01/24/18 06:29	CLL	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.9 g	400 mL	236165	02/05/18 11:30	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			236465	02/07/18 11:49	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.9 g	950 mL	237107	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			237380	02/12/18 14:43	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.9 g	950 mL	237107	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			237380	02/12/18 14:46	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.9 g	950 mL	237107	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			237380	02/12/18 15:01	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.9 g	400 mL	237733	02/14/18 08:00	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			237737	02/16/18 13:16	MTW	TAL PIT
		Instrument ID: NOEQUIP								

TestAmerica Pittsburgh

Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-74122-1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1313			40.9 g	400 mL	237733	02/14/18 08:00	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			237737	02/16/18 13:27	MTW	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: AP 2-S - PH 13.0

Lab Sample ID: 180-74122-13

Date Collected: 01/10/18 10:50

Matrix: Solid

Date Received: 01/12/18 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1313			40.9 g	400 mL	236165	02/05/18 11:30	LWM	TAL PIT
Leach	Analysis	EPA 9056A		50			236377	02/08/18 20:40	MJH	TAL PIT
		Instrument ID: CHIC2100A								
Leach	Leach	1313			40.9 g	400 mL	236165	02/05/18 11:30	LWM	TAL PIT
Leach	Prep	3010A			5 mL	50 mL	236440	02/08/18 11:28	KA	TAL PIT
Leach	Analysis	EPA 6020A		1			236729	02/10/18 00:36	WTR	TAL PIT
		Instrument ID: A								
Leach	Leach	1313			40.9 g	400 mL	236165	02/05/18 11:30	LWM	TAL PIT
Leach	Prep	3010A			5 mL	50 mL	236440	02/08/18 11:28	KA	TAL PIT
Leach	Analysis	EPA 6020A		1			236828	02/13/18 03:38	WTR	TAL PIT
		Instrument ID: M								
Leach	Leach	1313			40.9 g	400 mL	236165	02/05/18 11:30	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			236465	02/07/18 11:30	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.9 g	400 mL	236165	02/05/18 11:30	LWM	TAL PIT
Leach	Analysis	SM 2510B		1			236475	02/07/18 11:10	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.9 g	400 mL	236165	02/05/18 11:30	LWM	TAL PIT
Leach	Analysis	SM 2540C		1	3 mL	100 mL	236788	02/13/18 11:04	KXW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.9 g	400 mL	236165	02/05/18 11:30	LWM	TAL PIT
Leach	Analysis	SM 2580B		1			236472	02/07/18 11:08	MTW	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: AP 2-S - PH 12.0

Lab Sample ID: 180-74122-14

Date Collected: 01/10/18 10:50

Matrix: Solid

Date Received: 01/12/18 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1313			40.9 g	400 mL	237165	02/14/18 08:00	LWM	TAL PIT
Leach	Analysis	EPA 9056A		100			237859	02/26/18 13:03	MJH	TAL PIT
		Instrument ID: CHICS2000								
Leach	Leach	1313			40.9 g	400 mL	237165	02/14/18 08:00	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	237311	02/19/18 13:03	KA	TAL PIT
Leach	Analysis	EPA 6020A		1			237590	02/21/18 01:17	WTR	TAL PIT
		Instrument ID: A								
Leach	Leach	1313			40.9 g	400 mL	237165	02/14/18 08:00	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	237311	02/19/18 13:03	KA	TAL PIT
Leach	Analysis	EPA 6020A		1			237713	02/22/18 04:26	WTR	TAL PIT
		Instrument ID: M								

TestAmerica Pittsburgh

Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-74122-1

Client Sample ID: AP 2-S - PH 12.0

Lab Sample ID: 180-74122-14

Date Collected: 01/10/18 10:50

Matrix: Solid

Date Received: 01/12/18 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1313			40.9 g	400 mL	237165	02/14/18 08:00	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			237737	02/16/18 13:21	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.9 g	400 mL	237165	02/14/18 08:00	LWM	TAL PIT
Leach	Analysis	SM 2510B		1			237752	02/16/18 13:09	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.9 g	400 mL	237165	02/14/18 08:00	LWM	TAL PIT
Leach	Analysis	SM 2540C		1	10 mL	100 mL	237329	02/19/18 15:41	KXW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.9 g	400 mL	237165	02/14/18 08:00	LWM	TAL PIT
Leach	Analysis	SM 2580B		1			237751	02/16/18 13:09	MTW	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: AP 2-S - PH 10.5

Lab Sample ID: 180-74122-15

Date Collected: 01/10/18 10:50

Matrix: Solid

Date Received: 01/12/18 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1313			40.9 g	400 mL	237381	02/17/18 10:00	LWM	TAL PIT
Leach	Analysis	EPA 9056A		1	1 mL	1.0 mL	237598	02/22/18 12:51	MJH	TAL PIT
		Instrument ID: CHICS2000								
Leach	Leach	1313			40.9 g	400 mL	237381	02/17/18 10:00	LWM	TAL PIT
Leach	Analysis	EPA 9056A		10	1 mL	1.0 mL	237598	02/22/18 13:07	MJH	TAL PIT
		Instrument ID: CHICS2000								
Leach	Leach	1313			40.9 g	400 mL	237381	02/17/18 10:00	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	237537	02/21/18 11:22	KA	TAL PIT
Leach	Analysis	EPA 6020A		1			237821	02/23/18 11:43	RSK	TAL PIT
		Instrument ID: A								
Leach	Leach	1313			40.9 g	400 mL	237381	02/17/18 10:00	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	237537	02/21/18 11:22	KA	TAL PIT
Leach	Analysis	EPA 6020A		1			238052	02/26/18 21:33	WTR	TAL PIT
		Instrument ID: M								
Leach	Leach	1313			40.9 g	400 mL	237381	02/17/18 10:00	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			237531	02/19/18 10:19	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.9 g	400 mL	237381	02/17/18 10:00	LWM	TAL PIT
Leach	Analysis	SM 2510B		1			237553	02/19/18 10:24	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.9 g	400 mL	237381	02/17/18 10:00	LWM	TAL PIT
Leach	Analysis	SM 2540C		1	100 mL	100 mL	237940	02/26/18 14:33	KXW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.9 g	400 mL	237381	02/17/18 10:00	LWM	TAL PIT
Leach	Analysis	SM 2580B		1			237550	02/19/18 10:20	MTW	TAL PIT
		Instrument ID: NOEQUIP								

TestAmerica Pittsburgh

Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-74122-1

Client Sample ID: AP 2-S - PH 8.0

Lab Sample ID: 180-74122-17

Date Collected: 01/10/18 10:50

Matrix: Solid

Date Received: 01/12/18 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1313			40.9 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	EPA 9056A		2.5			236732	02/13/18 14:03	MJH	TAL PIT
		Instrument ID: CHIC2100A								
Leach	Leach	1313			40.9 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	EPA 9056A		5			236891	02/14/18 15:20	MJH	TAL PIT
		Instrument ID: CHICS2000								
Leach	Leach	1313			40.9 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	236807	02/13/18 13:38	KA	TAL PIT
Leach	Analysis	EPA 6020A		1			237198	02/15/18 23:01	WTR	TAL PIT
		Instrument ID: M								
Leach	Leach	1313			40.9 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			237380	02/12/18 14:55	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.9 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	SM 2510B		1			237425	02/12/18 14:35	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.9 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	SM 2540C		1	50 mL	100 mL	237078	02/15/18 14:59	KXW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.9 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	SM 2580B		1			237422	02/12/18 14:36	MTW	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: AP 2-S - PH 7.0

Lab Sample ID: 180-74122-18

Date Collected: 01/10/18 10:50

Matrix: Solid

Date Received: 01/12/18 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1313			40.9 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	EPA 9056A		2.5			236732	02/13/18 14:34	MJH	TAL PIT
		Instrument ID: CHIC2100A								
Leach	Leach	1313			40.9 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	EPA 9056A		5			236891	02/14/18 15:36	MJH	TAL PIT
		Instrument ID: CHICS2000								
Leach	Leach	1313			40.9 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	236807	02/13/18 13:38	KA	TAL PIT
Leach	Analysis	EPA 6020A		1			237198	02/15/18 22:39	WTR	TAL PIT
		Instrument ID: M								
Leach	Leach	1313			40.9 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			237380	02/12/18 14:49	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.9 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	SM 2510B		1			237425	02/12/18 14:24	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.9 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT

TestAmerica Pittsburgh

Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-74122-1

Client Sample ID: AP 2-S - PH 7.0

Lab Sample ID: 180-74122-18

Date Collected: 01/10/18 10:50

Matrix: Solid

Date Received: 01/12/18 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Analysis	SM 2540C		1	25 mL	100 mL	237078	02/15/18 14:59	KXW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.9 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	SM 2580B		1			237422	02/12/18 14:23	MTW	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: AP 2-S - PH 5.5

Lab Sample ID: 180-74122-19

Date Collected: 01/10/18 10:50

Matrix: Solid

Date Received: 01/12/18 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1313			40.9 g	400 mL	237761	02/21/18 10:00	LWM	TAL PIT
Leach	Analysis	EPA 9056A		25			237859	02/26/18 09:13	MJH	TAL PIT
		Instrument ID: CHICS2000								
Leach	Leach	1313			40.9 g	400 mL	237761	02/21/18 10:00	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	237767	02/23/18 12:01	KA	TAL PIT
Leach	Analysis	EPA 6020A		10			238052	02/27/18 10:17	WTR	TAL PIT
		Instrument ID: M								
Leach	Leach	1313			40.9 g	400 mL	237761	02/21/18 10:00	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			237772	02/23/18 10:18	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.9 g	400 mL	237761	02/21/18 10:00	LWM	TAL PIT
Leach	Analysis	SM 2510B		1			237776	02/23/18 10:17	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.9 g	400 mL	237761	02/21/18 10:00	LWM	TAL PIT
Leach	Analysis	SM 2540C		1	5 mL	100 mL	238055	02/27/18 15:07	KXW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.9 g	400 mL	237761	02/21/18 10:00	LWM	TAL PIT
Leach	Analysis	SM 2580B		1			237774	02/23/18 10:18	MTW	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: AP 2-S - PH 4.0

Lab Sample ID: 180-74122-20

Date Collected: 01/10/18 10:50

Matrix: Solid

Date Received: 01/12/18 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1313			40.9 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	EPA 9056A		50			236732	02/13/18 16:40	MJH	TAL PIT
		Instrument ID: CHIC2100A								
Leach	Leach	1313			40.9 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	EPA 9056A		100			236891	02/14/18 15:52	MJH	TAL PIT
		Instrument ID: CHICS2000								
Leach	Leach	1313			40.9 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	236807	02/13/18 13:38	KA	TAL PIT

TestAmerica Pittsburgh

Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-74122-1

Client Sample ID: AP 2-S - PH 4.0

Lab Sample ID: 180-74122-20

Date Collected: 01/10/18 10:50

Matrix: Solid

Date Received: 01/12/18 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Analysis	EPA 6020A		10			237323	02/16/18 20:38	WTR	TAL PIT
		Instrument ID: M								
Leach	Leach	1313			40.9 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			237380	02/12/18 14:52	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.9 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	SM 2510B		1			237425	02/12/18 14:29	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.9 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	SM 2540C		1	3 mL	100 mL	237078	02/15/18 14:59	KXW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.9 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	SM 2580B		1			237422	02/12/18 14:29	MTW	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: AP 2-S - PH 2.0

Lab Sample ID: 180-74122-21

Date Collected: 01/10/18 10:50

Matrix: Solid

Date Received: 01/12/18 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1313			40.9 g	400 mL	237381	02/17/18 10:00	LWM	TAL PIT
Leach	Analysis	EPA 9056A		100	1 mL	1.0 mL	237598	02/22/18 11:48	MJH	TAL PIT
		Instrument ID: CHICS2000								
Leach	Leach	1313			40.9 g	400 mL	237381	02/17/18 10:00	LWM	TAL PIT
Leach	Prep	3010A			5 mL	50 mL	237767	02/23/18 12:01	KA	TAL PIT
Leach	Analysis	EPA 6020A		10			237942	02/24/18 17:16	WTR	TAL PIT
		Instrument ID: A								
Leach	Leach	1313			40.9 g	400 mL	237381	02/17/18 10:00	LWM	TAL PIT
Leach	Prep	3010A			5 mL	50 mL	237767	02/23/18 12:01	KA	TAL PIT
Leach	Analysis	EPA 6020A		10			238052	02/27/18 09:50	WTR	TAL PIT
		Instrument ID: M								
Leach	Leach	1313			40.9 g	400 mL	237381	02/17/18 10:00	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			237531	02/19/18 10:44	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.9 g	400 mL	237381	02/17/18 10:00	LWM	TAL PIT
Leach	Analysis	SM 2510B		1			237553	02/19/18 10:42	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.9 g	400 mL	237381	02/17/18 10:00	LWM	TAL PIT
Leach	Analysis	SM 2540C		1	2 mL	100 mL	237940	02/26/18 14:33	KXW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.9 g	400 mL	237381	02/17/18 10:00	LWM	TAL PIT
Leach	Analysis	SM 2580B		1			237550	02/19/18 10:40	MTW	TAL PIT
		Instrument ID: NOEQUIP								

TestAmerica Pittsburgh

Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-74122-1

Client Sample ID: AP 2-S - NATURAL

Lab Sample ID: 180-74122-22

Date Collected: 01/10/18 10:50

Matrix: Solid

Date Received: 01/12/18 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Leach	1313			40.9 g	400 mL	236165	02/05/18 11:30	LWM	TAL PIT
Leach	Analysis	EPA 9056A		1			236373	02/08/18 11:15	MJH	TAL PIT
		Instrument ID: CHICS2100B								
Leach	Leach	1313			40.9 g	400 mL	236165	02/05/18 11:30	LWM	TAL PIT
Leach	Analysis	EPA 9056A		5			236373	02/08/18 11:31	MJH	TAL PIT
		Instrument ID: CHICS2100B								
Leach	Leach	1313			40.9 g	400 mL	236165	02/05/18 11:30	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	236437	02/08/18 11:22	KA	TAL PIT
Leach	Analysis	EPA 6020A		1			236729	02/09/18 23:09	WTR	TAL PIT
		Instrument ID: A								
Leach	Leach	1313			40.9 g	400 mL	236165	02/05/18 11:30	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	236437	02/08/18 11:22	KA	TAL PIT
Leach	Analysis	EPA 6020A		1			236828	02/13/18 01:11	WTR	TAL PIT
		Instrument ID: M								
Leach	Leach	1313			40.9 g	400 mL	236165	02/05/18 11:30	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			236465	02/07/18 14:16	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.9 g	400 mL	236165	02/05/18 11:30	LWM	TAL PIT
Leach	Analysis	SM 2510B		1			236475	02/07/18 14:41	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.9 g	400 mL	236165	02/05/18 11:30	LWM	TAL PIT
Leach	Analysis	SM 2540C		1	100 mL	100 mL	236785	02/13/18 10:45	KXW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.9 g	400 mL	236165	02/05/18 11:30	LWM	TAL PIT
Leach	Analysis	SM 2580B		1			236472	02/07/18 14:43	MTW	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: AP 3-S - AIR DIED

Lab Sample ID: 180-74122-23

Date Collected: 01/10/18 10:20

Matrix: Solid

Date Received: 01/12/18 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			235859	02/02/18 11:37	SES	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: AP 2-S - AIR DRIED

Lab Sample ID: 180-74122-24

Date Collected: 01/10/18 10:50

Matrix: Solid

Date Received: 01/12/18 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			235859	02/02/18 11:37	SES	TAL PIT
		Instrument ID: NOEQUIP								

TestAmerica Pittsburgh

Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-74122-1

Laboratory References:

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Analyst References:

Lab: TAL PIT

Batch Type: Leach

LWM = Larry Matko

Batch Type: Prep

KA = Kayla Kalamasz

Batch Type: Analysis

CLL = Cheryl Loheyde

KXW = Kaitlyn White

MJH = Matthew Hartman

MTW = Michael Wesoloski

RSK = Robert Kurtz

SES = Samantha Strauser

WTR = Bill Reinheimer

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-74122-1

Client Sample ID: AP 3-S - PRETEST

Date Collected: 01/10/18 10:20

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74122-1

Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	28.6		0.1		%			01/24/18 06:29	1
Percent Solids	71.4		0.1		%			01/24/18 06:29	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	4.6		0.1		SU			02/07/18 11:36	1
pH	12.6		0.1		SU			02/12/18 14:21	1
pH	12.7		0.1		SU			02/12/18 14:24	1
pH	4.4		0.1		SU			02/12/18 14:27	1
pH	6.2		0.1		SU			02/12/18 14:33	1
pH	12.4		0.1		SU			02/16/18 13:05	1
pH	3.2		0.1		SU			02/16/18 13:10	1

Client Sample ID: AP 3-S - PH 13.0

Date Collected: 01/10/18 10:20

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74122-2

Matrix: Solid

Method: EPA 9056A - Anions, Ion Chromatography - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<50		50		mg/L			02/08/18 20:09	50
Fluoride	<5.0		5.0		mg/L			02/08/18 20:09	50
Sulfate	380		50		mg/L			02/08/18 20:09	50

Method: EPA 6020A - Metals (ICP/MS) - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	6300		80		ug/L		02/08/18 11:28	02/13/18 03:33	1
Calcium	4700		500		ug/L		02/08/18 11:28	02/10/18 00:33	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	12.7		0.1		SU			02/07/18 11:43	1
Specific Conductance	45000		1.0		umhos/cm			02/07/18 11:25	1
Total Dissolved Solids	14000		330		mg/L			02/15/18 14:59	1
Oxidation Reduction Potential	- 59		10		millivolts			02/07/18 11:21	1

Client Sample ID: AP 3-S - PH 12.0

Date Collected: 01/10/18 10:20

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74122-3

Matrix: Solid

Method: EPA 9056A - Anions, Ion Chromatography - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	12		5.0		mg/L			02/26/18 16:14	5
Fluoride	1.0		0.50		mg/L			02/26/18 16:14	5
Sulfate	340		50		mg/L			02/26/18 16:30	50

Method: EPA 6020A - Metals (ICP/MS) - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	5500		80		ug/L		02/19/18 13:03	02/22/18 04:21	1
Calcium	3600		500		ug/L		02/19/18 13:03	02/21/18 01:14	1

TestAmerica Pittsburgh

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-74122-1

Client Sample ID: AP 3-S - PH 12.0

Date Collected: 01/10/18 10:20

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74122-3

Matrix: Solid

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	11.9		0.1		SU			02/16/18 12:54	1
Specific Conductance	3200		1.0		umhos/cm			02/16/18 12:48	1
Total Dissolved Solids	1500		40		mg/L			02/19/18 15:41	1
Oxidation Reduction Potential	30		10		millivolts			02/16/18 12:53	1

Client Sample ID: AP 3-S - PH 10.5

Date Collected: 01/10/18 10:20

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74122-4

Matrix: Solid

Method: EPA 9056A - Anions, Ion Chromatography - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	13		1.0		mg/L			02/22/18 12:20	1
Fluoride	0.47		0.10		mg/L			02/22/18 12:20	1
Sulfate	330		10		mg/L			02/22/18 12:35	10

Method: EPA 6020A - Metals (ICP/MS) - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	3900		80		ug/L		02/21/18 11:22	02/26/18 21:29	1
Calcium	37000		500		ug/L		02/21/18 11:22	02/23/18 11:40	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	10.2		0.1		SU			02/19/18 10:12	1
Specific Conductance	1100		1.0		umhos/cm			02/19/18 10:18	1
Total Dissolved Solids	670		10		mg/L			02/26/18 14:33	1
Oxidation Reduction Potential	150		10		millivolts			02/19/18 10:13	1

Client Sample ID: AP 3-S - PH 8.0

Date Collected: 01/10/18 10:20

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74122-6

Matrix: Solid

Method: EPA 9056A - Anions, Ion Chromatography - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	15		2.5		mg/L			02/13/18 11:30	2.5
Fluoride	<0.50		0.50		mg/L			02/14/18 14:33	5
Sulfate	400		2.5		mg/L			02/13/18 11:30	2.5

Method: EPA 6020A - Metals (ICP/MS) - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	5200		80		ug/L		02/13/18 13:38	02/15/18 22:34	1
Calcium	730000		500		ug/L		02/13/18 13:38	02/15/18 22:34	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.5		0.1		SU			02/12/18 14:39	1
Specific Conductance	5100		1.0		umhos/cm			02/12/18 14:19	1
Total Dissolved Solids	4300		40		mg/L			02/15/18 14:59	1
Oxidation Reduction Potential	270		10		millivolts			02/12/18 14:17	1

TestAmerica Pittsburgh

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-74122-1

Client Sample ID: AP 3-S - PH 7.0

Date Collected: 01/10/18 10:20

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74122-7

Matrix: Solid

Method: EPA 9056A - Anions, Ion Chromatography - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	16		2.5		mg/L			02/13/18 12:00	2.5
Fluoride	<0.50		0.50		mg/L			02/14/18 14:49	5
Sulfate	<2.5		2.5		mg/L			02/13/18 12:00	2.5

Method: EPA 6020A - Metals (ICP/MS) - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	6800		800		ug/L		02/13/18 13:38	02/16/18 20:33	10
Calcium	1600000		5000		ug/L		02/13/18 13:38	02/16/18 20:33	10

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.0		0.1		SU			02/12/18 14:36	1
Specific Conductance	8900		1.0		umhos/cm			02/12/18 14:14	1
Total Dissolved Solids	7500		40		mg/L			02/15/18 14:59	1
Oxidation Reduction Potential	290		10		millivolts			02/12/18 14:10	1

Client Sample ID: AP 3-S - PH 5.5

Date Collected: 01/10/18 10:20

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74122-8

Matrix: Solid

Method: EPA 9056A - Anions, Ion Chromatography - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<25		25		mg/L			02/26/18 08:57	25
Fluoride	<2.5		2.5		mg/L			02/26/18 08:57	25
Sulfate	480		25		mg/L			02/26/18 08:57	25

Method: EPA 6020A - Metals (ICP/MS) - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	11000		800		ug/L		02/23/18 12:01	02/27/18 09:59	10
Calcium	3900000		5000		ug/L		02/23/18 12:01	02/27/18 09:59	10

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	6.0		0.1		SU			02/23/18 10:12	1
Specific Conductance	20000		1.0		umhos/cm			02/23/18 10:12	1
Total Dissolved Solids	19000		200		mg/L			02/27/18 15:07	1
Oxidation Reduction Potential	180		10		millivolts			02/23/18 10:12	1

Client Sample ID: AP 3-S - PH 4.0

Date Collected: 01/10/18 10:20

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74122-9

Matrix: Solid

Method: EPA 9056A - Anions, Ion Chromatography - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<50		50		mg/L			02/13/18 13:32	50
Fluoride	11		10		mg/L			02/14/18 15:04	100
Sulfate	400		50		mg/L			02/13/18 13:32	50

Method: EPA 6020A - Metals (ICP/MS) - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	18000		800		ug/L		02/13/18 13:38	02/16/18 20:29	10

TestAmerica Pittsburgh

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-74122-1

Client Sample ID: AP 3-S - PH 4.0

Date Collected: 01/10/18 10:20

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74122-9

Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	7300000		5000		ug/L		02/13/18 13:38	02/16/18 20:29	10

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	3.8		0.1		SU			02/12/18 14:18	1
Specific Conductance	43000		1.0		umhos/cm			02/12/18 13:58	1
Total Dissolved Solids	50000		330		mg/L			02/15/18 14:59	1
Oxidation Reduction Potential	370		10		millivolts			02/12/18 13:57	1

Client Sample ID: AP 3-S - PH 2.0

Date Collected: 01/10/18 10:50

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74122-10

Matrix: Solid

Method: EPA 9056A - Anions, Ion Chromatography - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<100		100		mg/L			02/22/18 11:16	100
Fluoride	<10		10		mg/L			02/22/18 11:16	100
Sulfate	620		100		mg/L			02/22/18 11:16	100

Method: EPA 6020A - Metals (ICP/MS) - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	33000		8000		ug/L		02/23/18 12:01	02/27/18 09:46	10
Calcium	12000000		50000		ug/L		02/23/18 12:01	02/24/18 17:13	10

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	2.3		0.1		SU			02/19/18 10:38	1
Specific Conductance	71000		1.0		umhos/cm			02/19/18 10:36	1
Total Dissolved Solids	83000		500		mg/L			02/26/18 14:33	1
Oxidation Reduction Potential	620		10		millivolts			02/19/18 10:34	1

Client Sample ID: AP 3-S - NATURAL

Date Collected: 01/10/18 10:50

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74122-11

Matrix: Solid

Method: EPA 9056A - Anions, Ion Chromatography - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	15		1.0		mg/L			02/08/18 10:43	1
Fluoride	0.31		0.10		mg/L			02/08/18 10:43	1
Sulfate	390		5.0		mg/L			02/08/18 10:59	5

Method: EPA 6020A - Metals (ICP/MS) - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	3300		80		ug/L		02/08/18 11:22	02/13/18 01:06	1
Calcium	95000		500		ug/L		02/08/18 11:22	02/09/18 23:06	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	9.3		0.1		SU			02/07/18 14:13	1
Specific Conductance	870		1.0		umhos/cm			02/07/18 14:38	1
Total Dissolved Solids	610		10		mg/L			02/13/18 10:45	1

TestAmerica Pittsburgh

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-74122-1

Client Sample ID: AP 3-S - NATURAL

Date Collected: 01/10/18 10:50

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74122-11

Matrix: Solid

General Chemistry - Leach (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Oxidation Reduction Potential	180		10		millivolts			02/07/18 14:38	1

Client Sample ID: AP 2-S - PRETEST

Date Collected: 01/10/18 10:50

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74122-12

Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	31.6		0.1		%			01/24/18 06:29	1
Percent Solids	68.4		0.1		%			01/24/18 06:29	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	4.9		0.1		SU			02/07/18 11:49	1
pH	12.5		0.1		SU			02/12/18 14:43	1
pH	6.3		0.1		SU			02/12/18 14:46	1
pH	4.7		0.1		SU			02/12/18 14:58	1
pH	12.7		0.1		SU			02/12/18 15:01	1
pH	11.3		0.1		SU			02/16/18 13:16	1
pH	3.4		0.1		SU			02/16/18 13:27	1

Client Sample ID: AP 2-S - PH 13.0

Date Collected: 01/10/18 10:50

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74122-13

Matrix: Solid

Method: EPA 9056A - Anions, Ion Chromatography - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	63		50		mg/L			02/08/18 20:40	50
Fluoride	<5.0		5.0		mg/L			02/08/18 20:40	50
Sulfate	300		50		mg/L			02/08/18 20:40	50

Method: EPA 6020A - Metals (ICP/MS) - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	83000		800		ug/L		02/08/18 11:28	02/13/18 03:38	1
Calcium	34000		5000		ug/L		02/08/18 11:28	02/10/18 00:36	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	12.9		0.1		SU			02/07/18 11:30	1
Specific Conductance	45000		1.0		umhos/cm			02/07/18 11:10	1
Total Dissolved Solids	14000		330		mg/L			02/13/18 11:04	1
Oxidation Reduction Potential	- 20		10		millivolts			02/07/18 11:08	1

Client Sample ID: AP 2-S - PH 12.0

Date Collected: 01/10/18 10:50

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74122-14

Matrix: Solid

Method: EPA 9056A - Anions, Ion Chromatography - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	210		100		mg/L			02/26/18 13:03	100
Fluoride	<10		10		mg/L			02/26/18 13:03	100

TestAmerica Pittsburgh

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-74122-1

Client Sample ID: AP 2-S - PH 12.0

Date Collected: 01/10/18 10:50

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74122-14

Matrix: Solid

Method: EPA 9056A - Anions, Ion Chromatography - Leach (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	1100		100		mg/L	-		02/26/18 13:03	100

Method: EPA 6020A - Metals (ICP/MS) - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	8500		80		ug/L	-	02/19/18 13:03	02/22/18 04:26	1
Calcium	2500		500		ug/L	-	02/19/18 13:03	02/21/18 01:17	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	12.4		0.1		SU	-		02/16/18 13:21	1
Specific Conductance	12000		1.0		umhos/cm	-		02/16/18 13:09	1
Total Dissolved Solids	4300		100		mg/L	-		02/19/18 15:41	1
Oxidation Reduction Potential	- 19		10		millivolts	-		02/16/18 13:09	1

Client Sample ID: AP 2-S - PH 10.5

Date Collected: 01/10/18 10:50

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74122-15

Matrix: Solid

Method: EPA 9056A - Anions, Ion Chromatography - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	63		1.0		mg/L	-		02/22/18 12:51	1
Fluoride	0.42		0.10		mg/L	-		02/22/18 12:51	1
Sulfate	240		10		mg/L	-		02/22/18 13:07	10

Method: EPA 6020A - Metals (ICP/MS) - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	5500		80		ug/L	-	02/21/18 11:22	02/26/18 21:33	1
Calcium	13000		500		ug/L	-	02/21/18 11:22	02/23/18 11:43	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	10.0		0.1		SU	-		02/19/18 10:19	1
Specific Conductance	1100		1.0		umhos/cm	-		02/19/18 10:24	1
Total Dissolved Solids	670		10		mg/L	-		02/26/18 14:33	1
Oxidation Reduction Potential	160		10		millivolts	-		02/19/18 10:20	1

Client Sample ID: AP 2-S - PH 8.0

Date Collected: 01/10/18 10:50

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74122-17

Matrix: Solid

Method: EPA 9056A - Anions, Ion Chromatography - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	69		2.5		mg/L	-		02/13/18 14:03	2.5
Fluoride	<0.50		0.50		mg/L	-		02/14/18 15:20	5
Sulfate	270		2.5		mg/L	-		02/13/18 14:03	2.5

Method: EPA 6020A - Metals (ICP/MS) - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	5500		80		ug/L	-	02/13/18 13:38	02/15/18 23:01	1
Calcium	390000		500		ug/L	-	02/13/18 13:38	02/15/18 23:01	1

TestAmerica Pittsburgh

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-74122-1

Client Sample ID: AP 2-S - PH 8.0

Lab Sample ID: 180-74122-17

Date Collected: 01/10/18 10:50

Matrix: Solid

Date Received: 01/12/18 09:10

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.8		0.1		SU			02/12/18 14:55	1
Specific Conductance	3300		1.0		umhos/cm			02/12/18 14:35	1
Total Dissolved Solids	2600		20		mg/L			02/15/18 14:59	1
Oxidation Reduction Potential	260		10		millivolts			02/12/18 14:36	1

Client Sample ID: AP 2-S - PH 7.0

Lab Sample ID: 180-74122-18

Date Collected: 01/10/18 10:50

Matrix: Solid

Date Received: 01/12/18 09:10

Method: EPA 9056A - Anions, Ion Chromatography - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	69		2.5		mg/L			02/13/18 14:34	2.5
Fluoride	<0.50		0.50		mg/L			02/14/18 15:36	5
Sulfate	280		2.5		mg/L			02/13/18 14:34	2.5

Method: EPA 6020A - Metals (ICP/MS) - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	6400		80		ug/L		02/13/18 13:38	02/15/18 22:39	1
Calcium	700000		500		ug/L		02/13/18 13:38	02/15/18 22:39	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.4		0.1		SU			02/12/18 14:49	1
Specific Conductance	5200		1.0		umhos/cm			02/12/18 14:24	1
Total Dissolved Solids	4200		40		mg/L			02/15/18 14:59	1
Oxidation Reduction Potential	270		10		millivolts			02/12/18 14:23	1

Client Sample ID: AP 2-S - PH 5.5

Lab Sample ID: 180-74122-19

Date Collected: 01/10/18 10:50

Matrix: Solid

Date Received: 01/12/18 09:10

Method: EPA 9056A - Anions, Ion Chromatography - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	44		25		mg/L			02/26/18 09:13	25
Fluoride	<2.5		2.5		mg/L			02/26/18 09:13	25
Sulfate	380		25		mg/L			02/26/18 09:13	25

Method: EPA 6020A - Metals (ICP/MS) - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	12000		800		ug/L		02/23/18 12:01	02/27/18 10:17	10
Calcium	5100000		5000		ug/L		02/23/18 12:01	02/27/18 10:17	10

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	5.6		0.1		SU			02/23/18 10:18	1
Specific Conductance	25000		1.0		umhos/cm			02/23/18 10:17	1
Total Dissolved Solids	26000		200		mg/L			02/27/18 15:07	1
Oxidation Reduction Potential	240		10		millivolts			02/23/18 10:18	1

TestAmerica Pittsburgh

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-74122-1

Client Sample ID: AP 2-S - PH 4.0

Date Collected: 01/10/18 10:50

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74122-20

Matrix: Solid

Method: EPA 9056A - Anions, Ion Chromatography - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	57		50		mg/L			02/13/18 16:40	50
Fluoride	<10		10		mg/L			02/14/18 15:52	100
Sulfate	290		50		mg/L			02/13/18 16:40	50

Method: EPA 6020A - Metals (ICP/MS) - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	19000		800		ug/L		02/13/18 13:38	02/16/18 20:38	10
Calcium	7900000		5000		ug/L		02/13/18 13:38	02/16/18 20:38	10

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	3.8		0.1		SU			02/12/18 14:52	1
Specific Conductance	43000		1.0		umhos/cm			02/12/18 14:29	1
Total Dissolved Solids	51000		330		mg/L			02/15/18 14:59	1
Oxidation Reduction Potential	370		10		millivolts			02/12/18 14:29	1

Client Sample ID: AP 2-S - PH 2.0

Date Collected: 01/10/18 10:50

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74122-21

Matrix: Solid

Method: EPA 9056A - Anions, Ion Chromatography - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<100		100		mg/L			02/22/18 11:48	100
Fluoride	<10		10		mg/L			02/22/18 11:48	100
Sulfate	440		100		mg/L			02/22/18 11:48	100

Method: EPA 6020A - Metals (ICP/MS) - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	30000		8000		ug/L		02/23/18 12:01	02/27/18 09:50	10
Calcium	12000000		50000		ug/L		02/23/18 12:01	02/24/18 17:16	10

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	2.3		0.1		SU			02/19/18 10:44	1
Specific Conductance	69000		1.0		umhos/cm			02/19/18 10:42	1
Total Dissolved Solids	82000		500		mg/L			02/26/18 14:33	1
Oxidation Reduction Potential	630		10		millivolts			02/19/18 10:40	1

Client Sample ID: AP 2-S - NATURAL

Date Collected: 01/10/18 10:50

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74122-22

Matrix: Solid

Method: EPA 9056A - Anions, Ion Chromatography - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	69		1.0		mg/L			02/08/18 11:15	1
Fluoride	<0.10		0.10		mg/L			02/08/18 11:15	1
Sulfate	310		5.0		mg/L			02/08/18 11:31	5

Method: EPA 6020A - Metals (ICP/MS) - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	4600		80		ug/L		02/08/18 11:22	02/13/18 01:11	1

TestAmerica Pittsburgh

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-74122-1

Client Sample ID: AP 2-S - NATURAL

Date Collected: 01/10/18 10:50

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74122-22

Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	59000		500		ug/L		02/08/18 11:22	02/09/18 23:09	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.8		0.1		SU			02/07/18 14:16	1
Specific Conductance	930		1.0		umhos/cm			02/07/18 14:41	1
Total Dissolved Solids	590		10		mg/L			02/13/18 10:45	1
Oxidation Reduction Potential	190		10		millivolts			02/07/18 14:43	1

Client Sample ID: AP 3-S - AIR DIED

Date Collected: 01/10/18 10:20

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74122-23

Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	1.2		0.1		%			02/02/18 11:37	1
Percent Solids	98.8		0.1		%			02/02/18 11:37	1

Client Sample ID: AP 2-S - AIR DRIED

Date Collected: 01/10/18 10:50

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74122-24

Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	2.1		0.1		%			02/02/18 11:37	1
Percent Solids	97.9		0.1		%			02/02/18 11:37	1

QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-74122-1

Method: EPA 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 180-236373/6

Matrix: Solid

Analysis Batch: 236373

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<1.0		1.0		mg/L			02/08/18 06:17	1
Fluoride	<0.10		0.10		mg/L			02/08/18 06:17	1
Sulfate	<1.0		1.0		mg/L			02/08/18 06:17	1

Lab Sample ID: LCS 180-236373/5

Matrix: Solid

Analysis Batch: 236373

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	25.0	25.0		mg/L		100	80 - 120
Fluoride	1.25	1.02		mg/L		82	80 - 120
Sulfate	25.0	24.0		mg/L		96	80 - 120

Lab Sample ID: MB 180-236377/17

Matrix: Solid

Analysis Batch: 236377

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<1.0		1.0		mg/L			02/08/18 09:27	1
Fluoride	<0.10		0.10		mg/L			02/08/18 09:27	1
Sulfate	<1.0		1.0		mg/L			02/08/18 09:27	1

Lab Sample ID: LCS 180-236377/16

Matrix: Solid

Analysis Batch: 236377

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	25.0	25.0		mg/L		100	80 - 120
Fluoride	1.25	1.18		mg/L		94	80 - 120
Sulfate	25.0	24.1		mg/L		96	80 - 120

Lab Sample ID: MB 180-236732/6

Matrix: Solid

Analysis Batch: 236732

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<1.0		1.0		mg/L			02/13/18 05:33	1
Sulfate	<1.0		1.0		mg/L			02/13/18 05:33	1

Lab Sample ID: LCS 180-236732/5

Matrix: Solid

Analysis Batch: 236732

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	25.0	25.9		mg/L		103	80 - 120
Sulfate	25.0	25.1		mg/L		100	80 - 120

TestAmerica Pittsburgh

QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-74122-1

Method: EPA 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 180-236891/6

Matrix: Solid

Analysis Batch: 236891

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<1.0		1.0		mg/L			02/14/18 11:05	1
Fluoride	<0.10		0.10		mg/L			02/14/18 11:05	1
Sulfate	<1.0		1.0		mg/L			02/14/18 11:05	1

Lab Sample ID: LCS 180-236891/5

Matrix: Solid

Analysis Batch: 236891

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	51.9		mg/L		104	80 - 120
Fluoride	2.50	2.58		mg/L		103	80 - 120
Sulfate	50.0	49.2		mg/L		98	80 - 120

Lab Sample ID: MB 180-237598/6

Matrix: Solid

Analysis Batch: 237598

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<1.0		1.0		mg/L			02/22/18 08:13	1
Fluoride	<0.10		0.10		mg/L			02/22/18 08:13	1
Sulfate	<1.0		1.0		mg/L			02/22/18 08:13	1

Lab Sample ID: LCS 180-237598/5

Matrix: Solid

Analysis Batch: 237598

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	25.0	25.4		mg/L		102	80 - 120
Fluoride	1.25	1.20		mg/L		96	80 - 120
Sulfate	25.0	21.2		mg/L		85	80 - 120

Lab Sample ID: MB 180-237859/6

Matrix: Solid

Analysis Batch: 237859

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<1.0		1.0		mg/L			02/26/18 08:06	1
Fluoride	<0.10		0.10		mg/L			02/26/18 08:06	1
Sulfate	<1.0		1.0		mg/L			02/26/18 08:06	1

Lab Sample ID: LCS 180-237859/5

Matrix: Solid

Analysis Batch: 237859

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	25.0	26.4		mg/L		106	80 - 120
Fluoride	1.25	1.23		mg/L		99	80 - 120
Sulfate	25.0	22.5		mg/L		90	80 - 120

TestAmerica Pittsburgh

QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-74122-1

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

Lab Sample ID: MB 180-236437/1-A

Matrix: Solid

Analysis Batch: 236729

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 236437

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	<500		500		ug/L		02/08/18 11:22	02/09/18 22:43	1

Lab Sample ID: MB 180-236437/1-A

Matrix: Solid

Analysis Batch: 236828

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 236437

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<80		80		ug/L		02/08/18 11:22	02/13/18 00:25	1

Lab Sample ID: LCS 180-236437/2-A

Matrix: Solid

Analysis Batch: 236729

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 236437

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	50000	53100		ug/L		106	80 - 120

Lab Sample ID: LCS 180-236437/2-A

Matrix: Solid

Analysis Batch: 236828

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 236437

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1000	1010		ug/L		101	80 - 120

Lab Sample ID: LCSD 180-236437/3-A

Matrix: Solid

Analysis Batch: 236729

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 236437

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Calcium	50000	52500		ug/L		105	80 - 120	1	20

Lab Sample ID: LCSD 180-236437/3-A

Matrix: Solid

Analysis Batch: 236828

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 236437

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Boron	1000	1030		ug/L		103	80 - 120	2	20

Lab Sample ID: MB 180-236440/1-A

Matrix: Solid

Analysis Batch: 236729

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 236440

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	<500		500		ug/L		02/08/18 11:28	02/10/18 00:04	1

Lab Sample ID: MB 180-236440/1-A

Matrix: Solid

Analysis Batch: 236828

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 236440

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<80		80		ug/L		02/08/18 11:28	02/13/18 02:47	1

TestAmerica Pittsburgh

QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-74122-1

Lab Sample ID: LCS 180-236440/2-A
Matrix: Solid
Analysis Batch: 236729

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 236440
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Calcium	50000	52800		ug/L		106	80 - 120

Lab Sample ID: LCS 180-236440/2-A
Matrix: Solid
Analysis Batch: 236828

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 236440
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Boron	1000	916		ug/L		92	80 - 120

Lab Sample ID: LCSD 180-236440/3-A
Matrix: Solid
Analysis Batch: 236729

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 236440
%Rec.

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Calcium	50000	51500		ug/L		103	80 - 120	2	20

Lab Sample ID: LCSD 180-236440/3-A
Matrix: Solid
Analysis Batch: 236828

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 236440
%Rec.

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Boron	1000	917		ug/L		92	80 - 120	0	20

Lab Sample ID: MB 180-236807/1-A
Matrix: Solid
Analysis Batch: 237198

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 236807

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<80		80		ug/L		02/13/18 13:38	02/15/18 21:43	1
Calcium	<500		500		ug/L		02/13/18 13:38	02/15/18 21:43	1

Lab Sample ID: LCS 180-236807/2-A
Matrix: Solid
Analysis Batch: 237198

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 236807
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Boron	1000	866		ug/L		87	80 - 120
Calcium	50000	46700		ug/L		93	80 - 120

Lab Sample ID: LCSD 180-236807/3-A
Matrix: Solid
Analysis Batch: 237198

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 236807
%Rec.

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Boron	1000	879		ug/L		88	80 - 120	1	20
Calcium	50000	46500		ug/L		93	80 - 120	1	20

TestAmerica Pittsburgh

QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-74122-1

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

Lab Sample ID: MB 180-237311/1-A

Matrix: Solid

Analysis Batch: 237590

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 237311

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	<500		500		ug/L		02/19/18 13:03	02/21/18 00:31	1

Lab Sample ID: MB 180-237311/1-A

Matrix: Solid

Analysis Batch: 237713

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 237311

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<80		80		ug/L		02/19/18 13:03	02/22/18 03:08	1

Lab Sample ID: LCS 180-237311/2-A

Matrix: Solid

Analysis Batch: 237590

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 237311

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	50000	48400		ug/L		97	80 - 120

Lab Sample ID: LCS 180-237311/2-A

Matrix: Solid

Analysis Batch: 237713

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 237311

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1000	1010		ug/L		101	80 - 120

Lab Sample ID: LCSD 180-237311/3-A

Matrix: Solid

Analysis Batch: 237590

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 237311

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Calcium	50000	48200		ug/L		96	80 - 120	0	20

Lab Sample ID: LCSD 180-237311/3-A

Matrix: Solid

Analysis Batch: 237713

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 237311

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Boron	1000	1020		ug/L		102	80 - 120	0	20

Lab Sample ID: MB 180-237537/1-A

Matrix: Solid

Analysis Batch: 237821

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 237537

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	<500		500		ug/L		02/21/18 11:22	02/23/18 11:29	1

Lab Sample ID: MB 180-237537/1-A

Matrix: Solid

Analysis Batch: 238052

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 237537

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<80		80		ug/L		02/21/18 11:22	02/26/18 21:10	1

TestAmerica Pittsburgh

QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-74122-1

Lab Sample ID: LCS 180-237537/2-A
Matrix: Solid
Analysis Batch: 237821

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 237537
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Calcium	50000	55300		ug/L		111	80 - 120

Lab Sample ID: LCS 180-237537/2-A
Matrix: Solid
Analysis Batch: 238052

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 237537
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Boron	1000	1010		ug/L		101	80 - 120

Lab Sample ID: LCSD 180-237537/3-A
Matrix: Solid
Analysis Batch: 237821

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 237537
%Rec. RPD

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Calcium	50000	55200		ug/L		110	80 - 120	0	20

Lab Sample ID: LCSD 180-237537/3-A
Matrix: Solid
Analysis Batch: 238052

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 237537
%Rec. RPD

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Boron	1000	1060		ug/L		106	80 - 120	5	20

Lab Sample ID: MB 180-237767/1-A
Matrix: Solid
Analysis Batch: 237942

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 237767

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	<500		500		ug/L		02/23/18 12:01	02/24/18 16:45	1

Lab Sample ID: MB 180-237767/1-A
Matrix: Solid
Analysis Batch: 238052

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 237767

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<80		80		ug/L		02/23/18 12:01	02/27/18 09:22	1

Lab Sample ID: LCS 180-237767/2-A
Matrix: Solid
Analysis Batch: 237942

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 237767
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Calcium	50000	51800		ug/L		104	80 - 120

Lab Sample ID: LCS 180-237767/2-A
Matrix: Solid
Analysis Batch: 238052

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 237767
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Boron	1000	970		ug/L		97	80 - 120

TestAmerica Pittsburgh

QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-74122-1

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

Lab Sample ID: LCSD 180-237767/3-A
Matrix: Solid
Analysis Batch: 237942

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 237767

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Calcium	50000	52100		ug/L		104	80 - 120	1	20

Lab Sample ID: LCSD 180-237767/3-A
Matrix: Solid
Analysis Batch: 238052

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 237767

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Boron	1000	1000		ug/L		100	80 - 120	3	20

Method: 2540G - SM 2540G

Lab Sample ID: 180-74122-12 DU
Matrix: Solid
Analysis Batch: 234952

Client Sample ID: AP 2-S - PRETEST
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Moisture	31.6		32.9		%		4	20
Percent Solids	68.4		67.1		%		2	20

Lab Sample ID: 180-74122-23 DU
Matrix: Solid
Analysis Batch: 235859

Client Sample ID: AP 3-S - AIR DIED
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Moisture	1.2		1.2		%		0.4	20
Percent Solids	98.8		98.8		%		0	20

Method: EPA 9040C - pH

Lab Sample ID: LCS 180-236465/1
Matrix: Solid
Analysis Batch: 236465

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH	7.00	7.0		SU		100	99 - 101

Lab Sample ID: LCS 180-236465/47
Matrix: Solid
Analysis Batch: 236465

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH	7.00	7.0		SU		100	99 - 101

Lab Sample ID: LCS 180-237380/1
Matrix: Solid
Analysis Batch: 237380

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH	7.00	7.0		SU		100	99 - 101

TestAmerica Pittsburgh

QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-74122-1

Lab Sample ID: LCS 180-237531/1
Matrix: Solid
Analysis Batch: 237531

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH	7.00	7.0		SU		100	99 - 101

Lab Sample ID: LCS 180-237737/1
Matrix: Solid
Analysis Batch: 237737

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH	7.00	7.0		SU		100	99 - 101

Lab Sample ID: LCS 180-237772/1
Matrix: Solid
Analysis Batch: 237772

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH	7.00	7.0		SU		100	99 - 101

Method: SM 2510B - Conductivity, Specific Conductance

Lab Sample ID: MB 180-236475/2
Matrix: Solid
Analysis Batch: 236475

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	<1.0		1.0		umhos/cm			02/07/18 11:03	1

Lab Sample ID: MB 180-236475/43
Matrix: Solid
Analysis Batch: 236475

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	<1.0		1.0		umhos/cm			02/07/18 13:32	1

Lab Sample ID: LCS 180-236475/1
Matrix: Solid
Analysis Batch: 236475

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Specific Conductance	84.0	85.1		umhos/cm		101	90 - 110

Lab Sample ID: LCS 180-236475/42
Matrix: Solid
Analysis Batch: 236475

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Specific Conductance	84.0	85.1		umhos/cm		101	90 - 110

Lab Sample ID: MB 180-237425/2
Matrix: Solid
Analysis Batch: 237425

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	<1.0		1.0		umhos/cm			02/12/18 10:05	1

TestAmerica Pittsburgh

QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-74122-1

Lab Sample ID: LCS 180-237425/1
Matrix: Solid
Analysis Batch: 237425

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Specific Conductance	84.0	85.0		umhos/cm		101	90 - 110

Lab Sample ID: MB 180-237553/2
Matrix: Solid
Analysis Batch: 237553

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	<1.0		1.0		umhos/cm			02/19/18 10:06	1

Lab Sample ID: LCS 180-237553/1
Matrix: Solid
Analysis Batch: 237553

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Specific Conductance	84.0	88.6		umhos/cm		105	90 - 110

Lab Sample ID: MB 180-237752/2
Matrix: Solid
Analysis Batch: 237752

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	<1.0		1.0		umhos/cm			02/16/18 08:07	1

Lab Sample ID: LCS 180-237752/1
Matrix: Solid
Analysis Batch: 237752

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Specific Conductance	84.0	85.1		umhos/cm		101	90 - 110

Lab Sample ID: MB 180-237776/2
Matrix: Solid
Analysis Batch: 237776

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	<1.0		1.0		umhos/cm			02/23/18 10:04	1

Lab Sample ID: LCS 180-237776/1
Matrix: Solid
Analysis Batch: 237776

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Specific Conductance	84.0	88.5		umhos/cm		105	90 - 110

TestAmerica Pittsburgh

QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-74122-1

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

Lab Sample ID: MB 180-236785/2

Matrix: Solid

Analysis Batch: 236785

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			02/13/18 10:45	1

Lab Sample ID: LCS 180-236785/1

Matrix: Solid

Analysis Batch: 236785

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	339	388		mg/L		114	80 - 120

Lab Sample ID: MB 180-236788/2

Matrix: Solid

Analysis Batch: 236788

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			02/13/18 11:04	1

Lab Sample ID: LCS 180-236788/1

Matrix: Solid

Analysis Batch: 236788

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	339	360		mg/L		106	80 - 120

Lab Sample ID: MB 180-237078/2

Matrix: Solid

Analysis Batch: 237078

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			02/15/18 14:59	1

Lab Sample ID: LCS 180-237078/1

Matrix: Solid

Analysis Batch: 237078

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	339	342		mg/L		101	80 - 120

Lab Sample ID: MB 180-237329/2

Matrix: Solid

Analysis Batch: 237329

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			02/19/18 15:41	1

Lab Sample ID: LCS 180-237329/1

Matrix: Solid

Analysis Batch: 237329

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	339	330		mg/L		97	80 - 120

TestAmerica Pittsburgh

QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-74122-1

Lab Sample ID: MB 180-237940/2
Matrix: Solid
Analysis Batch: 237940

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			02/26/18 14:33	1

Lab Sample ID: LCS 180-237940/1
Matrix: Solid
Analysis Batch: 237940

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	339	338		mg/L		100	80 - 120

Lab Sample ID: MB 180-238055/2
Matrix: Solid
Analysis Batch: 238055

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			02/27/18 15:07	1

Lab Sample ID: LCS 180-238055/1
Matrix: Solid
Analysis Batch: 238055

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	339	360		mg/L		106	80 - 120

Lab Sample ID: 180-74122-13 DU
Matrix: Solid
Analysis Batch: 236788

Client Sample ID: AP 2-S - PH 13.0
Prep Type: Leach

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	14000		13800		mg/L		3	10

Lab Sample ID: 180-74122-2 DU
Matrix: Solid
Analysis Batch: 237078

Client Sample ID: AP 3-S - PH 13.0
Prep Type: Leach

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	14000		13800		mg/L		1	10

Lab Sample ID: 180-74122-10 DU
Matrix: Solid
Analysis Batch: 237940

Client Sample ID: AP 3-S - PH 2.0
Prep Type: Leach

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	83000		83300		mg/L		0.8	10

Lab Sample ID: 180-74122-21 DU
Matrix: Solid
Analysis Batch: 237940

Client Sample ID: AP 2-S - PH 2.0
Prep Type: Leach

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	82000		79400		mg/L		4	10

TestAmerica Pittsburgh

QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-74122-1

Method: SM 2580B - Reduction-Oxidation (REDOX) Potential

Lab Sample ID: LCS 180-236472/1

Matrix: Solid

Analysis Batch: 236472

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Oxidation Reduction Potential	475	467		millivolts		98	90 - 110

Lab Sample ID: LCS 180-236472/36

Matrix: Solid

Analysis Batch: 236472

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Oxidation Reduction Potential	475	463		millivolts		97	90 - 110

Lab Sample ID: LCS 180-237422/1

Matrix: Solid

Analysis Batch: 237422

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Oxidation Reduction Potential	475	466		millivolts		98	90 - 110

Lab Sample ID: LCS 180-237550/1

Matrix: Solid

Analysis Batch: 237550

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Oxidation Reduction Potential	475	469		millivolts		99	90 - 110

Lab Sample ID: LCS 180-237751/1

Matrix: Solid

Analysis Batch: 237751

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Oxidation Reduction Potential	475	467		millivolts		98	90 - 110

Lab Sample ID: LCS 180-237774/1

Matrix: Solid

Analysis Batch: 237774

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Oxidation Reduction Potential	475	473		millivolts		100	90 - 110

TestAmerica Pittsburgh

QC Association Summary

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-74122-1

HPLC/IC

Leach Batch: 236165

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74122-2	AP 3-S - PH 13.0	Leach	Solid	1313	
180-74122-11	AP 3-S - NATURAL	Leach	Solid	1313	
180-74122-13	AP 2-S - PH 13.0	Leach	Solid	1313	
180-74122-22	AP 2-S - NATURAL	Leach	Solid	1313	

Analysis Batch: 236373

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74122-11	AP 3-S - NATURAL	Leach	Solid	EPA 9056A	236165
180-74122-11	AP 3-S - NATURAL	Leach	Solid	EPA 9056A	236165
180-74122-22	AP 2-S - NATURAL	Leach	Solid	EPA 9056A	236165
180-74122-22	AP 2-S - NATURAL	Leach	Solid	EPA 9056A	236165
MB 180-236373/6	Method Blank	Total/NA	Solid	EPA 9056A	
LCS 180-236373/5	Lab Control Sample	Total/NA	Solid	EPA 9056A	

Analysis Batch: 236377

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74122-2	AP 3-S - PH 13.0	Leach	Solid	EPA 9056A	236165
180-74122-13	AP 2-S - PH 13.0	Leach	Solid	EPA 9056A	236165
MB 180-236377/17	Method Blank	Total/NA	Solid	EPA 9056A	
LCS 180-236377/16	Lab Control Sample	Total/NA	Solid	EPA 9056A	

Leach Batch: 236722

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74122-6	AP 3-S - PH 8.0	Leach	Solid	1313	
180-74122-7	AP 3-S - PH 7.0	Leach	Solid	1313	
180-74122-9	AP 3-S - PH 4.0	Leach	Solid	1313	
180-74122-17	AP 2-S - PH 8.0	Leach	Solid	1313	
180-74122-18	AP 2-S - PH 7.0	Leach	Solid	1313	
180-74122-20	AP 2-S - PH 4.0	Leach	Solid	1313	

Analysis Batch: 236732

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74122-6	AP 3-S - PH 8.0	Leach	Solid	EPA 9056A	236722
180-74122-7	AP 3-S - PH 7.0	Leach	Solid	EPA 9056A	236722
180-74122-9	AP 3-S - PH 4.0	Leach	Solid	EPA 9056A	236722
180-74122-17	AP 2-S - PH 8.0	Leach	Solid	EPA 9056A	236722
180-74122-18	AP 2-S - PH 7.0	Leach	Solid	EPA 9056A	236722
180-74122-20	AP 2-S - PH 4.0	Leach	Solid	EPA 9056A	236722
MB 180-236732/6	Method Blank	Total/NA	Solid	EPA 9056A	
LCS 180-236732/5	Lab Control Sample	Total/NA	Solid	EPA 9056A	

Analysis Batch: 236891

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74122-6	AP 3-S - PH 8.0	Leach	Solid	EPA 9056A	236722
180-74122-7	AP 3-S - PH 7.0	Leach	Solid	EPA 9056A	236722
180-74122-9	AP 3-S - PH 4.0	Leach	Solid	EPA 9056A	236722
180-74122-17	AP 2-S - PH 8.0	Leach	Solid	EPA 9056A	236722
180-74122-18	AP 2-S - PH 7.0	Leach	Solid	EPA 9056A	236722
180-74122-20	AP 2-S - PH 4.0	Leach	Solid	EPA 9056A	236722
MB 180-236891/6	Method Blank	Total/NA	Solid	EPA 9056A	
LCS 180-236891/5	Lab Control Sample	Total/NA	Solid	EPA 9056A	

TestAmerica Pittsburgh

QC Association Summary

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-74122-1

Leach Batch: 237165

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74122-3	AP 3-S - PH 12.0	Leach	Solid	1313	
180-74122-14	AP 2-S - PH 12.0	Leach	Solid	1313	

Leach Batch: 237381

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74122-4	AP 3-S - PH 10.5	Leach	Solid	1313	
180-74122-10	AP 3-S - PH 2.0	Leach	Solid	1313	
180-74122-15	AP 2-S - PH 10.5	Leach	Solid	1313	
180-74122-21	AP 2-S - PH 2.0	Leach	Solid	1313	

Analysis Batch: 237598

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74122-4	AP 3-S - PH 10.5	Leach	Solid	EPA 9056A	237381
180-74122-4	AP 3-S - PH 10.5	Leach	Solid	EPA 9056A	237381
180-74122-10	AP 3-S - PH 2.0	Leach	Solid	EPA 9056A	237381
180-74122-15	AP 2-S - PH 10.5	Leach	Solid	EPA 9056A	237381
180-74122-15	AP 2-S - PH 10.5	Leach	Solid	EPA 9056A	237381
180-74122-21	AP 2-S - PH 2.0	Leach	Solid	EPA 9056A	237381
MB 180-237598/6	Method Blank	Total/NA	Solid	EPA 9056A	
LCS 180-237598/5	Lab Control Sample	Total/NA	Solid	EPA 9056A	

Leach Batch: 237761

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74122-8	AP 3-S - PH 5.5	Leach	Solid	1313	
180-74122-19	AP 2-S - PH 5.5	Leach	Solid	1313	

Analysis Batch: 237859

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74122-3	AP 3-S - PH 12.0	Leach	Solid	EPA 9056A	237165
180-74122-3	AP 3-S - PH 12.0	Leach	Solid	EPA 9056A	237165
180-74122-8	AP 3-S - PH 5.5	Leach	Solid	EPA 9056A	237761
180-74122-14	AP 2-S - PH 12.0	Leach	Solid	EPA 9056A	237165
180-74122-19	AP 2-S - PH 5.5	Leach	Solid	EPA 9056A	237761
MB 180-237859/6	Method Blank	Total/NA	Solid	EPA 9056A	
LCS 180-237859/5	Lab Control Sample	Total/NA	Solid	EPA 9056A	

Metals

Leach Batch: 236165

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74122-2	AP 3-S - PH 13.0	Leach	Solid	1313	
180-74122-11	AP 3-S - NATURAL	Leach	Solid	1313	
180-74122-13	AP 2-S - PH 13.0	Leach	Solid	1313	
180-74122-22	AP 2-S - NATURAL	Leach	Solid	1313	

Prep Batch: 236437

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74122-11	AP 3-S - NATURAL	Leach	Solid	3010A	236165
180-74122-22	AP 2-S - NATURAL	Leach	Solid	3010A	236165
MB 180-236437/1-A	Method Blank	Total/NA	Solid	3010A	
LCS 180-236437/2-A	Lab Control Sample	Total/NA	Solid	3010A	
LCSD 180-236437/3-A	Lab Control Sample Dup	Total/NA	Solid	3010A	

TestAmerica Pittsburgh

QC Association Summary

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-74122-1

Metals (Continued)

Prep Batch: 236440

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74122-2	AP 3-S - PH 13.0	Leach	Solid	3010A	236165
180-74122-13	AP 2-S - PH 13.0	Leach	Solid	3010A	236165
MB 180-236440/1-A	Method Blank	Total/NA	Solid	3010A	
LCS 180-236440/2-A	Lab Control Sample	Total/NA	Solid	3010A	
LCSD 180-236440/3-A	Lab Control Sample Dup	Total/NA	Solid	3010A	

Leach Batch: 236722

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74122-6	AP 3-S - PH 8.0	Leach	Solid	1313	
180-74122-7	AP 3-S - PH 7.0	Leach	Solid	1313	
180-74122-9	AP 3-S - PH 4.0	Leach	Solid	1313	
180-74122-17	AP 2-S - PH 8.0	Leach	Solid	1313	
180-74122-18	AP 2-S - PH 7.0	Leach	Solid	1313	
180-74122-20	AP 2-S - PH 4.0	Leach	Solid	1313	

Analysis Batch: 236729

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74122-2	AP 3-S - PH 13.0	Leach	Solid	EPA 6020A	236440
180-74122-11	AP 3-S - NATURAL	Leach	Solid	EPA 6020A	236437
180-74122-13	AP 2-S - PH 13.0	Leach	Solid	EPA 6020A	236440
180-74122-22	AP 2-S - NATURAL	Leach	Solid	EPA 6020A	236437
MB 180-236437/1-A	Method Blank	Total/NA	Solid	EPA 6020A	236437
MB 180-236440/1-A	Method Blank	Total/NA	Solid	EPA 6020A	236440
LCS 180-236437/2-A	Lab Control Sample	Total/NA	Solid	EPA 6020A	236437
LCS 180-236440/2-A	Lab Control Sample	Total/NA	Solid	EPA 6020A	236440
LCSD 180-236437/3-A	Lab Control Sample Dup	Total/NA	Solid	EPA 6020A	236437
LCSD 180-236440/3-A	Lab Control Sample Dup	Total/NA	Solid	EPA 6020A	236440

Prep Batch: 236807

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74122-6	AP 3-S - PH 8.0	Leach	Solid	3010A	236722
180-74122-7	AP 3-S - PH 7.0	Leach	Solid	3010A	236722
180-74122-9	AP 3-S - PH 4.0	Leach	Solid	3010A	236722
180-74122-17	AP 2-S - PH 8.0	Leach	Solid	3010A	236722
180-74122-18	AP 2-S - PH 7.0	Leach	Solid	3010A	236722
180-74122-20	AP 2-S - PH 4.0	Leach	Solid	3010A	236722
MB 180-236807/1-A	Method Blank	Total/NA	Solid	3010A	
LCS 180-236807/2-A	Lab Control Sample	Total/NA	Solid	3010A	
LCSD 180-236807/3-A	Lab Control Sample Dup	Total/NA	Solid	3010A	

Analysis Batch: 236828

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74122-2	AP 3-S - PH 13.0	Leach	Solid	EPA 6020A	236440
180-74122-11	AP 3-S - NATURAL	Leach	Solid	EPA 6020A	236437
180-74122-13	AP 2-S - PH 13.0	Leach	Solid	EPA 6020A	236440
180-74122-22	AP 2-S - NATURAL	Leach	Solid	EPA 6020A	236437
MB 180-236437/1-A	Method Blank	Total/NA	Solid	EPA 6020A	236437
MB 180-236440/1-A	Method Blank	Total/NA	Solid	EPA 6020A	236440
LCS 180-236437/2-A	Lab Control Sample	Total/NA	Solid	EPA 6020A	236437
LCS 180-236440/2-A	Lab Control Sample	Total/NA	Solid	EPA 6020A	236440
LCSD 180-236437/3-A	Lab Control Sample Dup	Total/NA	Solid	EPA 6020A	236437

TestAmerica Pittsburgh

QC Association Summary

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-74122-1

Metals (Continued)

Analysis Batch: 236828 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 180-236440/3-A	Lab Control Sample Dup	Total/NA	Solid	EPA 6020A	236440

Leach Batch: 237165

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74122-3	AP 3-S - PH 12.0	Leach	Solid	1313	
180-74122-14	AP 2-S - PH 12.0	Leach	Solid	1313	

Analysis Batch: 237198

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74122-6	AP 3-S - PH 8.0	Leach	Solid	EPA 6020A	236807
180-74122-17	AP 2-S - PH 8.0	Leach	Solid	EPA 6020A	236807
180-74122-18	AP 2-S - PH 7.0	Leach	Solid	EPA 6020A	236807
MB 180-236807/1-A	Method Blank	Total/NA	Solid	EPA 6020A	236807
LCS 180-236807/2-A	Lab Control Sample	Total/NA	Solid	EPA 6020A	236807
LCSD 180-236807/3-A	Lab Control Sample Dup	Total/NA	Solid	EPA 6020A	236807

Prep Batch: 237311

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74122-3	AP 3-S - PH 12.0	Leach	Solid	3010A	237165
180-74122-14	AP 2-S - PH 12.0	Leach	Solid	3010A	237165
MB 180-237311/1-A	Method Blank	Total/NA	Solid	3010A	
LCS 180-237311/2-A	Lab Control Sample	Total/NA	Solid	3010A	
LCSD 180-237311/3-A	Lab Control Sample Dup	Total/NA	Solid	3010A	

Analysis Batch: 237323

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74122-7	AP 3-S - PH 7.0	Leach	Solid	EPA 6020A	236807
180-74122-9	AP 3-S - PH 4.0	Leach	Solid	EPA 6020A	236807
180-74122-20	AP 2-S - PH 4.0	Leach	Solid	EPA 6020A	236807

Leach Batch: 237381

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74122-4	AP 3-S - PH 10.5	Leach	Solid	1313	
180-74122-10	AP 3-S - PH 2.0	Leach	Solid	1313	
180-74122-15	AP 2-S - PH 10.5	Leach	Solid	1313	
180-74122-21	AP 2-S - PH 2.0	Leach	Solid	1313	

Prep Batch: 237537

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74122-4	AP 3-S - PH 10.5	Leach	Solid	3010A	237381
180-74122-15	AP 2-S - PH 10.5	Leach	Solid	3010A	237381
MB 180-237537/1-A	Method Blank	Total/NA	Solid	3010A	
LCS 180-237537/2-A	Lab Control Sample	Total/NA	Solid	3010A	
LCSD 180-237537/3-A	Lab Control Sample Dup	Total/NA	Solid	3010A	

Analysis Batch: 237590

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74122-3	AP 3-S - PH 12.0	Leach	Solid	EPA 6020A	237311
180-74122-14	AP 2-S - PH 12.0	Leach	Solid	EPA 6020A	237311
MB 180-237311/1-A	Method Blank	Total/NA	Solid	EPA 6020A	237311
LCS 180-237311/2-A	Lab Control Sample	Total/NA	Solid	EPA 6020A	237311

TestAmerica Pittsburgh

QC Association Summary

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-74122-1

Metals (Continued)

Analysis Batch: 237590 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 180-237311/3-A	Lab Control Sample Dup	Total/NA	Solid	EPA 6020A	237311

Analysis Batch: 237713

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74122-3	AP 3-S - PH 12.0	Leach	Solid	EPA 6020A	237311
180-74122-14	AP 2-S - PH 12.0	Leach	Solid	EPA 6020A	237311
MB 180-237311/1-A	Method Blank	Total/NA	Solid	EPA 6020A	237311
LCS 180-237311/2-A	Lab Control Sample	Total/NA	Solid	EPA 6020A	237311
LCSD 180-237311/3-A	Lab Control Sample Dup	Total/NA	Solid	EPA 6020A	237311

Leach Batch: 237761

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74122-8	AP 3-S - PH 5.5	Leach	Solid	1313	
180-74122-19	AP 2-S - PH 5.5	Leach	Solid	1313	

Prep Batch: 237767

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74122-8	AP 3-S - PH 5.5	Leach	Solid	3010A	237761
180-74122-10	AP 3-S - PH 2.0	Leach	Solid	3010A	237381
180-74122-19	AP 2-S - PH 5.5	Leach	Solid	3010A	237761
180-74122-21	AP 2-S - PH 2.0	Leach	Solid	3010A	237381
MB 180-237767/1-A	Method Blank	Total/NA	Solid	3010A	
LCS 180-237767/2-A	Lab Control Sample	Total/NA	Solid	3010A	
LCSD 180-237767/3-A	Lab Control Sample Dup	Total/NA	Solid	3010A	

Analysis Batch: 237821

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74122-4	AP 3-S - PH 10.5	Leach	Solid	EPA 6020A	237537
180-74122-15	AP 2-S - PH 10.5	Leach	Solid	EPA 6020A	237537
MB 180-237537/1-A	Method Blank	Total/NA	Solid	EPA 6020A	237537
LCS 180-237537/2-A	Lab Control Sample	Total/NA	Solid	EPA 6020A	237537
LCSD 180-237537/3-A	Lab Control Sample Dup	Total/NA	Solid	EPA 6020A	237537

Analysis Batch: 237942

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74122-10	AP 3-S - PH 2.0	Leach	Solid	EPA 6020A	237767
180-74122-21	AP 2-S - PH 2.0	Leach	Solid	EPA 6020A	237767
MB 180-237767/1-A	Method Blank	Total/NA	Solid	EPA 6020A	237767
LCS 180-237767/2-A	Lab Control Sample	Total/NA	Solid	EPA 6020A	237767
LCSD 180-237767/3-A	Lab Control Sample Dup	Total/NA	Solid	EPA 6020A	237767

Analysis Batch: 238052

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74122-4	AP 3-S - PH 10.5	Leach	Solid	EPA 6020A	237537
180-74122-8	AP 3-S - PH 5.5	Leach	Solid	EPA 6020A	237767
180-74122-10	AP 3-S - PH 2.0	Leach	Solid	EPA 6020A	237767
180-74122-15	AP 2-S - PH 10.5	Leach	Solid	EPA 6020A	237537
180-74122-19	AP 2-S - PH 5.5	Leach	Solid	EPA 6020A	237767
180-74122-21	AP 2-S - PH 2.0	Leach	Solid	EPA 6020A	237767
MB 180-237537/1-A	Method Blank	Total/NA	Solid	EPA 6020A	237537
MB 180-237767/1-A	Method Blank	Total/NA	Solid	EPA 6020A	237767

TestAmerica Pittsburgh

QC Association Summary

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-74122-1

Metals (Continued)

Analysis Batch: 238052 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 180-237537/2-A	Lab Control Sample	Total/NA	Solid	EPA 6020A	237537
LCS 180-237767/2-A	Lab Control Sample	Total/NA	Solid	EPA 6020A	237767
LCSD 180-237537/3-A	Lab Control Sample Dup	Total/NA	Solid	EPA 6020A	237537
LCSD 180-237767/3-A	Lab Control Sample Dup	Total/NA	Solid	EPA 6020A	237767

General Chemistry

Analysis Batch: 234952

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74122-1	AP 3-S - PRETEST	Total/NA	Solid	2540G	
180-74122-12	AP 2-S - PRETEST	Total/NA	Solid	2540G	
180-74122-12 DU	AP 2-S - PRETEST	Total/NA	Solid	2540G	

Analysis Batch: 235859

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74122-23	AP 3-S - AIR DIED	Total/NA	Solid	2540G	
180-74122-24	AP 2-S - AIR DRIED	Total/NA	Solid	2540G	
180-74122-23 DU	AP 3-S - AIR DIED	Total/NA	Solid	2540G	

Leach Batch: 236165

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74122-1	AP 3-S - PRETEST	Leach	Solid	1313	
180-74122-2	AP 3-S - PH 13.0	Leach	Solid	1313	
180-74122-11	AP 3-S - NATURAL	Leach	Solid	1313	
180-74122-12	AP 2-S - PRETEST	Leach	Solid	1313	
180-74122-13	AP 2-S - PH 13.0	Leach	Solid	1313	
180-74122-22	AP 2-S - NATURAL	Leach	Solid	1313	
180-74122-2 DU	AP 3-S - PH 13.0	Leach	Solid	1313	
180-74122-13 DU	AP 2-S - PH 13.0	Leach	Solid	1313	

Analysis Batch: 236465

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74122-1	AP 3-S - PRETEST	Leach	Solid	EPA 9040C	236165
180-74122-2	AP 3-S - PH 13.0	Leach	Solid	EPA 9040C	236165
180-74122-11	AP 3-S - NATURAL	Leach	Solid	EPA 9040C	236165
180-74122-12	AP 2-S - PRETEST	Leach	Solid	EPA 9040C	236165
180-74122-13	AP 2-S - PH 13.0	Leach	Solid	EPA 9040C	236165
180-74122-22	AP 2-S - NATURAL	Leach	Solid	EPA 9040C	236165
LCS 180-236465/1	Lab Control Sample	Total/NA	Solid	EPA 9040C	
LCS 180-236465/47	Lab Control Sample	Total/NA	Solid	EPA 9040C	

Analysis Batch: 236472

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74122-2	AP 3-S - PH 13.0	Leach	Solid	SM 2580B	236165
180-74122-11	AP 3-S - NATURAL	Leach	Solid	SM 2580B	236165
180-74122-13	AP 2-S - PH 13.0	Leach	Solid	SM 2580B	236165
180-74122-22	AP 2-S - NATURAL	Leach	Solid	SM 2580B	236165
LCS 180-236472/1	Lab Control Sample	Total/NA	Solid	SM 2580B	
LCS 180-236472/36	Lab Control Sample	Total/NA	Solid	SM 2580B	

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QC Association Summary

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-74122-1

General Chemistry (Continued)

Analysis Batch: 236475

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74122-2	AP 3-S - PH 13.0	Leach	Solid	SM 2510B	236165
180-74122-11	AP 3-S - NATURAL	Leach	Solid	SM 2510B	236165
180-74122-13	AP 2-S - PH 13.0	Leach	Solid	SM 2510B	236165
180-74122-22	AP 2-S - NATURAL	Leach	Solid	SM 2510B	236165
MB 180-236475/2	Method Blank	Total/NA	Solid	SM 2510B	
MB 180-236475/43	Method Blank	Total/NA	Solid	SM 2510B	
LCS 180-236475/1	Lab Control Sample	Total/NA	Solid	SM 2510B	
LCS 180-236475/42	Lab Control Sample	Total/NA	Solid	SM 2510B	

Leach Batch: 236722

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74122-6	AP 3-S - PH 8.0	Leach	Solid	1313	
180-74122-7	AP 3-S - PH 7.0	Leach	Solid	1313	
180-74122-9	AP 3-S - PH 4.0	Leach	Solid	1313	
180-74122-17	AP 2-S - PH 8.0	Leach	Solid	1313	
180-74122-18	AP 2-S - PH 7.0	Leach	Solid	1313	
180-74122-20	AP 2-S - PH 4.0	Leach	Solid	1313	

Analysis Batch: 236785

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74122-11	AP 3-S - NATURAL	Leach	Solid	SM 2540C	236165
180-74122-22	AP 2-S - NATURAL	Leach	Solid	SM 2540C	236165
MB 180-236785/2	Method Blank	Total/NA	Solid	SM 2540C	
LCS 180-236785/1	Lab Control Sample	Total/NA	Solid	SM 2540C	

Analysis Batch: 236788

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74122-13	AP 2-S - PH 13.0	Leach	Solid	SM 2540C	236165
MB 180-236788/2	Method Blank	Total/NA	Solid	SM 2540C	
LCS 180-236788/1	Lab Control Sample	Total/NA	Solid	SM 2540C	
180-74122-13 DU	AP 2-S - PH 13.0	Leach	Solid	SM 2540C	236165

Analysis Batch: 237078

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74122-2	AP 3-S - PH 13.0	Leach	Solid	SM 2540C	236165
180-74122-6	AP 3-S - PH 8.0	Leach	Solid	SM 2540C	236722
180-74122-7	AP 3-S - PH 7.0	Leach	Solid	SM 2540C	236722
180-74122-9	AP 3-S - PH 4.0	Leach	Solid	SM 2540C	236722
180-74122-17	AP 2-S - PH 8.0	Leach	Solid	SM 2540C	236722
180-74122-18	AP 2-S - PH 7.0	Leach	Solid	SM 2540C	236722
180-74122-20	AP 2-S - PH 4.0	Leach	Solid	SM 2540C	236722
MB 180-237078/2	Method Blank	Total/NA	Solid	SM 2540C	
LCS 180-237078/1	Lab Control Sample	Total/NA	Solid	SM 2540C	
180-74122-2 DU	AP 3-S - PH 13.0	Leach	Solid	SM 2540C	236165

Leach Batch: 237107

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74122-1	AP 3-S - PRETEST	Leach	Solid	1313	
180-74122-1	AP 3-S - PRETEST	Leach	Solid	1313	
180-74122-1	AP 3-S - PRETEST	Leach	Solid	1313	
180-74122-1	AP 3-S - PRETEST	Leach	Solid	1313	

TestAmerica Pittsburgh

QC Association Summary

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-74122-1

General Chemistry (Continued)

Leach Batch: 237107 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74122-12	AP 2-S - PRETEST	Leach	Solid	1313	
180-74122-12	AP 2-S - PRETEST	Leach	Solid	1313	
180-74122-12	AP 2-S - PRETEST	Leach	Solid	1313	
180-74122-12	AP 2-S - PRETEST	Leach	Solid	1313	

Leach Batch: 237165

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74122-3	AP 3-S - PH 12.0	Leach	Solid	1313	
180-74122-14	AP 2-S - PH 12.0	Leach	Solid	1313	

Analysis Batch: 237329

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74122-3	AP 3-S - PH 12.0	Leach	Solid	SM 2540C	237165
180-74122-14	AP 2-S - PH 12.0	Leach	Solid	SM 2540C	237165
MB 180-237329/2	Method Blank	Total/NA	Solid	SM 2540C	
LCS 180-237329/1	Lab Control Sample	Total/NA	Solid	SM 2540C	

Analysis Batch: 237380

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74122-1	AP 3-S - PRETEST	Leach	Solid	EPA 9040C	237107
180-74122-1	AP 3-S - PRETEST	Leach	Solid	EPA 9040C	237107
180-74122-1	AP 3-S - PRETEST	Leach	Solid	EPA 9040C	237107
180-74122-1	AP 3-S - PRETEST	Leach	Solid	EPA 9040C	237107
180-74122-6	AP 3-S - PH 8.0	Leach	Solid	EPA 9040C	236722
180-74122-7	AP 3-S - PH 7.0	Leach	Solid	EPA 9040C	236722
180-74122-9	AP 3-S - PH 4.0	Leach	Solid	EPA 9040C	236722
180-74122-12	AP 2-S - PRETEST	Leach	Solid	EPA 9040C	237107
180-74122-12	AP 2-S - PRETEST	Leach	Solid	EPA 9040C	237107
180-74122-12	AP 2-S - PRETEST	Leach	Solid	EPA 9040C	237107
180-74122-12	AP 2-S - PRETEST	Leach	Solid	EPA 9040C	237107
180-74122-17	AP 2-S - PH 8.0	Leach	Solid	EPA 9040C	236722
180-74122-18	AP 2-S - PH 7.0	Leach	Solid	EPA 9040C	236722
180-74122-20	AP 2-S - PH 4.0	Leach	Solid	EPA 9040C	236722
LCS 180-237380/1	Lab Control Sample	Total/NA	Solid	EPA 9040C	

Leach Batch: 237381

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74122-4	AP 3-S - PH 10.5	Leach	Solid	1313	
180-74122-10	AP 3-S - PH 2.0	Leach	Solid	1313	
180-74122-15	AP 2-S - PH 10.5	Leach	Solid	1313	
180-74122-21	AP 2-S - PH 2.0	Leach	Solid	1313	
180-74122-10 DU	AP 3-S - PH 2.0	Leach	Solid	1313	
180-74122-21 DU	AP 2-S - PH 2.0	Leach	Solid	1313	

Analysis Batch: 237422

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74122-6	AP 3-S - PH 8.0	Leach	Solid	SM 2580B	236722
180-74122-7	AP 3-S - PH 7.0	Leach	Solid	SM 2580B	236722
180-74122-9	AP 3-S - PH 4.0	Leach	Solid	SM 2580B	236722
180-74122-17	AP 2-S - PH 8.0	Leach	Solid	SM 2580B	236722
180-74122-18	AP 2-S - PH 7.0	Leach	Solid	SM 2580B	236722

TestAmerica Pittsburgh

QC Association Summary

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-74122-1

General Chemistry (Continued)

Analysis Batch: 237422 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74122-20	AP 2-S - PH 4.0	Leach	Solid	SM 2580B	236722
LCS 180-237422/1	Lab Control Sample	Total/NA	Solid	SM 2580B	

Analysis Batch: 237425

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74122-6	AP 3-S - PH 8.0	Leach	Solid	SM 2510B	236722
180-74122-7	AP 3-S - PH 7.0	Leach	Solid	SM 2510B	236722
180-74122-9	AP 3-S - PH 4.0	Leach	Solid	SM 2510B	236722
180-74122-17	AP 2-S - PH 8.0	Leach	Solid	SM 2510B	236722
180-74122-18	AP 2-S - PH 7.0	Leach	Solid	SM 2510B	236722
180-74122-20	AP 2-S - PH 4.0	Leach	Solid	SM 2510B	236722
MB 180-237425/2	Method Blank	Total/NA	Solid	SM 2510B	
LCS 180-237425/1	Lab Control Sample	Total/NA	Solid	SM 2510B	

Analysis Batch: 237531

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74122-4	AP 3-S - PH 10.5	Leach	Solid	EPA 9040C	237381
180-74122-10	AP 3-S - PH 2.0	Leach	Solid	EPA 9040C	237381
180-74122-15	AP 2-S - PH 10.5	Leach	Solid	EPA 9040C	237381
180-74122-21	AP 2-S - PH 2.0	Leach	Solid	EPA 9040C	237381
LCS 180-237531/1	Lab Control Sample	Total/NA	Solid	EPA 9040C	

Analysis Batch: 237550

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74122-4	AP 3-S - PH 10.5	Leach	Solid	SM 2580B	237381
180-74122-10	AP 3-S - PH 2.0	Leach	Solid	SM 2580B	237381
180-74122-15	AP 2-S - PH 10.5	Leach	Solid	SM 2580B	237381
180-74122-21	AP 2-S - PH 2.0	Leach	Solid	SM 2580B	237381
LCS 180-237550/1	Lab Control Sample	Total/NA	Solid	SM 2580B	

Analysis Batch: 237553

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74122-4	AP 3-S - PH 10.5	Leach	Solid	SM 2510B	237381
180-74122-10	AP 3-S - PH 2.0	Leach	Solid	SM 2510B	237381
180-74122-15	AP 2-S - PH 10.5	Leach	Solid	SM 2510B	237381
180-74122-21	AP 2-S - PH 2.0	Leach	Solid	SM 2510B	237381
MB 180-237553/2	Method Blank	Total/NA	Solid	SM 2510B	
LCS 180-237553/1	Lab Control Sample	Total/NA	Solid	SM 2510B	

Leach Batch: 237733

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74122-1	AP 3-S - PRETEST	Leach	Solid	1313	
180-74122-1	AP 3-S - PRETEST	Leach	Solid	1313	
180-74122-12	AP 2-S - PRETEST	Leach	Solid	1313	
180-74122-12	AP 2-S - PRETEST	Leach	Solid	1313	

Analysis Batch: 237737

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74122-1	AP 3-S - PRETEST	Leach	Solid	EPA 9040C	237733
180-74122-1	AP 3-S - PRETEST	Leach	Solid	EPA 9040C	237733
180-74122-3	AP 3-S - PH 12.0	Leach	Solid	EPA 9040C	237165

TestAmerica Pittsburgh

QC Association Summary

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-74122-1

General Chemistry (Continued)

Analysis Batch: 237737 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74122-12	AP 2-S - PRETEST	Leach	Solid	EPA 9040C	237733
180-74122-12	AP 2-S - PRETEST	Leach	Solid	EPA 9040C	237733
180-74122-14	AP 2-S - PH 12.0	Leach	Solid	EPA 9040C	237165
LCS 180-237737/1	Lab Control Sample	Total/NA	Solid	EPA 9040C	

Analysis Batch: 237751

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74122-3	AP 3-S - PH 12.0	Leach	Solid	SM 2580B	237165
180-74122-14	AP 2-S - PH 12.0	Leach	Solid	SM 2580B	237165
LCS 180-237751/1	Lab Control Sample	Total/NA	Solid	SM 2580B	

Analysis Batch: 237752

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74122-3	AP 3-S - PH 12.0	Leach	Solid	SM 2510B	237165
180-74122-14	AP 2-S - PH 12.0	Leach	Solid	SM 2510B	237165
MB 180-237752/2	Method Blank	Total/NA	Solid	SM 2510B	
LCS 180-237752/1	Lab Control Sample	Total/NA	Solid	SM 2510B	

Leach Batch: 237761

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74122-8	AP 3-S - PH 5.5	Leach	Solid	1313	
180-74122-19	AP 2-S - PH 5.5	Leach	Solid	1313	

Analysis Batch: 237772

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74122-8	AP 3-S - PH 5.5	Leach	Solid	EPA 9040C	237761
180-74122-19	AP 2-S - PH 5.5	Leach	Solid	EPA 9040C	237761
LCS 180-237772/1	Lab Control Sample	Total/NA	Solid	EPA 9040C	

Analysis Batch: 237774

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74122-8	AP 3-S - PH 5.5	Leach	Solid	SM 2580B	237761
180-74122-19	AP 2-S - PH 5.5	Leach	Solid	SM 2580B	237761
LCS 180-237774/1	Lab Control Sample	Total/NA	Solid	SM 2580B	

Analysis Batch: 237776

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74122-8	AP 3-S - PH 5.5	Leach	Solid	SM 2510B	237761
180-74122-19	AP 2-S - PH 5.5	Leach	Solid	SM 2510B	237761
MB 180-237776/2	Method Blank	Total/NA	Solid	SM 2510B	
LCS 180-237776/1	Lab Control Sample	Total/NA	Solid	SM 2510B	

Analysis Batch: 237940

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74122-4	AP 3-S - PH 10.5	Leach	Solid	SM 2540C	237381
180-74122-10	AP 3-S - PH 2.0	Leach	Solid	SM 2540C	237381
180-74122-15	AP 2-S - PH 10.5	Leach	Solid	SM 2540C	237381
180-74122-21	AP 2-S - PH 2.0	Leach	Solid	SM 2540C	237381
MB 180-237940/2	Method Blank	Total/NA	Solid	SM 2540C	
LCS 180-237940/1	Lab Control Sample	Total/NA	Solid	SM 2540C	
180-74122-10 DU	AP 3-S - PH 2.0	Leach	Solid	SM 2540C	237381

TestAmerica Pittsburgh

QC Association Summary

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-74122-1

General Chemistry (Continued)

Analysis Batch: 237940 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74122-21 DU	AP 2-S - PH 2.0	Leach	Solid	SM 2540C	237381

Analysis Batch: 238055

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74122-8	AP 3-S - PH 5.5	Leach	Solid	SM 2540C	237761
180-74122-19	AP 2-S - PH 5.5	Leach	Solid	SM 2540C	237761
MB 180-238055/2	Method Blank	Total/NA	Solid	SM 2540C	
LCS 180-238055/1	Lab Control Sample	Total/NA	Solid	SM 2540C	

Chain of Custody Record

TestAmerica		Chain of Custody Record	
THE LEADER IN ENVIRONMENTAL TESTING 2417 Bond Street, University Park, IL 60484 Phone: 708.534.5200 Fax: 708.534.5211		Lab Job #: _____ Chain of Custody Number: _____ Page _____ of _____ Temperature °C of Cooler: _____	
Report To _____ Contact: _____ Company: _____ Address: _____ Address: _____ Phone: _____ Fax: _____ E-Mail: _____		Bill To _____ Contact: _____ Company: _____ Address: _____ Address: _____ Phone: _____ Fax: _____ P.O.#/Reference# _____	

[illegible]

Turnaround Time Required (Business Days)				Sample Disposal		Archive for _____ Months		(A fee may be assessed if samples are retained longer than 1 month)	
Requested Due Date		1 Day	2 Days	5 Days	7 Days	10 Days	15 Days	Other	
Relinquished By <i>[Signature]</i>	Company KPRG	Date 4/4/18	Time 1630	Received By <i>[Signature]</i>	Company TA	Date 1-11-18	Time 730	Lab Courier	
Relinquished By <i>[Signature]</i>	Company A	Date 1-11-18	Time 1645	Received By <i>[Signature]</i>	Company TA	Date 1/12/18	Time 0910	Shipped	
Relinquished By	Company	Date	Time	Received By	Company	Date	Time	Hand Delivered	
Matrix Key				Client Comments		Lab Comments:			
WW - Wastewater W - Water S - Soil SL - Sludge MS - Miscellaneous OL - Oil A - Air				LEAF Method 1313 CCR Appendix 3 → B, Ca, Cl, FL, PH, SO₄, TDS					

ORIGIN ID: RRLA
SHIPPING
TESTAMERICA
4125 N 124TH ST

BROOKFIELD, WI 53005
UNITED STATES US

SHIP DATE: 11-
ACTWGT: 41.65
CAD: 525155/CA

BILL RECIPIENT

TO **SAMPLE RECEIPT**
TESTAMERICA
301 ALPHA DR.

PITTSBURGH PA 15238

(412) 963-7068

REF:



180-74122 Waybill

TRK# 7125 4937 5449
0201

FRI - 12 JAN
PRIORITY OVERNIGHT

02/18 **NA AGCA**

15238

PA-US

PIT

Uncorrected temp
Thermometer ID

1.3 / 0.8 °C
11

CE -0.5

Initials

TS

PT-WI-SR-001 effective 7/26/13

Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 180-74122-1

Login Number: 74122

List Number: 1

Creator: Neri, Tom

List Source: TestAmerica Pittsburgh

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	