



ENVIRONMENTAL CONSULTATION & REMEDIATION

KPRG and Associates, Inc.

**CCR COMPLIANCE
ANNUAL GROUNDWATER MONITORING and
CORRECTIVE ACTION REPORT – 2018
ASH BY-PASS BASIN AND ASH SURGE BASIN**

**Midwest Generation, LLC
Powerton Station
13082 E. Manito Rd.
Pekin, IL 61554**

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January 31, 2019

TABLE OF CONTENTS

1.0	INTRODUCTION	1
2.0	FIELD PROCEDURES AND GROUNDWATER FLOW EVALUATION	2
2.1	Field Procedures.....	2
2.2	Groundwater Flow Evaluation	2
3.0	ANALYTICAL DATA AND STATUS OF EVALUATIONS	4
3.1	Sampling Summary	4
3.2	Data Summary	4
3.3	Current Status.....	4
4.0	OTHER REQUIRED SUBMITTALS	5
4.1	Initial Statistical Evaluation Summaries	5
4.2	Alternate Source Demonstration	6
5.0	SUMMARY/CONCLUSIONS AND RECOMMENDATIONS.....	7
6.0	REFERENCES	8

FIGURES

- 1 – CCR Monitoring Wells Site Map
- 2 – CCR Groundwater Contour Silt/Clay Unit 05/2018
- 3 – CCR Groundwater Contour Gravelly Sand Unit 05/2018
- 4 – CCR Groundwater Contour Silt/Clay Unit 08/2018
- 5 – CCR Groundwater Contour Gravelly Sand Unit 08/2018

TABLES

- 1 – Groundwater Elevations
- 2 – Groundwater Flow Direction and Estimated Seepage Velocity/Flow Rate
- 3 – Groundwater Sampling Summary
- 4 – Assessment Monitoring Appendix III Groundwater Analytical Results – Ash Bypass Basin and Ash Surge Basin
- 5 – Assessment Monitoring Detected Appendix IV Groundwater Analytical Results – Ash Bypass Basin and Ash Surge Basin

APPENDICES

- A – Analytical Data Packages from 2018 Assessment Monitoring
- B – Alternate Source Demonstration April 12, 2018

1.0 INTRODUCTION

Based on the results of the initial detection monitoring statistical evaluation performed in January 2018, an Alternate Source Demonstration (ASD) was performed for the Ash Surge Basin (ASB) and Ash By-pass Basin (ABB). The ASD was completed on April 12, 2018, in accordance with 40 CFR 257.94(e)(2) and concluded that based upon statistically significant increases (SSIs) in various detection monitoring parameters, the ASB and ABB monitoring would transition from detection monitoring to assessment monitoring in accordance with 40 CFR 257.95.

The Assessment Monitoring requirements in accordance with the Federal Register, Environmental Protection Agency, 40 CFR Parts 257.95, 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) Powerton Generating Station. The wells sampled were selected to meet the monitoring requirements of the CCR Rule for the ASB and the ABB. The monitoring well network around these ponds consists of monitoring wells (MW-01 [upgradient], MW-08, MW-09 [upgradient], MW-11, MW-12, MW-15, MW-17, MW-18 and MW-19 [upgradient]) as shown on Figure 1.

With the vacating of Section 257.100(b) through (d) in October 2016, the inactive Former Ash Basin (FAB), which is being planned for closure, was added to the CCR units that would require monitoring under the CCR Rule. Wells MW-02 through MW-05 and MW-10 were added to the CCR sampling program specifically for the FAB and are not part of the monitoring program for the Ash Surge Basin and Ash By-pass Basin. The FAB monitoring results are discussed under separate cover.

The 2017 CCR Compliance Annual Groundwater Monitoring and Corrective Action Report was submitted on January 24, 2018. This annual report covers the work performed relative to CCR groundwater monitoring from January 1, 2018 through the end of 2018 for the ASB and ABB. 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, provides a discussion of an initial statistical evaluation summary completed for Appendix III and IV parameters, and summarizes the results of an alternate source demonstration completed at the site.

2.0 FIELD PROCEDURES AND GROUNDWATER FLOW EVALUATION

2.1 Field Procedures

As previously noted, the CCR groundwater monitoring network around the ASB and ABB consists of monitoring wells (MW-01 [upgradient], MW-08, MW-09 [upgradient], MW-11, MW-12, MW-15, MW-17, MW-18 and MW-19 [upgradient]) 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). All wells were found in generally 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 monitoring wells during each round of groundwater sampling. A complete round of water levels was collected prior to initiating sampling, and the water level data are summarized in Table 1. It is noted that water levels were also concurrently measured at other monitoring well locations in the area that are not part of the CCR monitoring network for the ASB and ABB. The full set of water levels were used to generate a groundwater flow map for each sampling event. It is also noted that CCR monitoring wells MW-08, MW-12, MW-15 and MW-17 are screened within a shallow, localized, saturated clay/silt unit which is underlain by a more extensive sand unit. The remaining monitoring wells, have deeper screens, within the more extensive sand unit. The water levels from wells screened in the clay/silt unit and the water levels from monitoring wells screened within the sand unit were evaluated separately and used to generate groundwater flow maps for each unit. These maps are provided on Figures 2 through 5.

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 conductivities of 3.28×10^{-7} ft/sec (silt/clay unit) in Table 2 was estimated from literature (Freeze and Cherry, 1979). The hydraulic conductivity of 3.81×10^{-3} (sandy unit) used in Table 2 was obtained from the Hydrogeologic Assessment Report dated February 2011 and prepared by Patrick Engineering. The estimated effective porosities of the silt/clay materials (0.40) and of the sandy materials (0.35) were obtained from literature (Applied Hydrogeology, Fetter, 1980).

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

In accordance with assessment monitoring requirements, a complete round of CCR well groundwater samples were collected in May 2018 and analyzed for the full list of parameters specified in both Appendix III and Appendix IV of the CCR Rule. This initial round of assessment monitoring data was evaluated and summarized in a letter report dated July 12, 2018 (see discussion in Section 4.1).

In accordance with Section 257.95(d)(1), within 90 days of obtaining the initial assessment results, the CCR wells were resampled for all parameters in Appendix III and all constituents in Appendix IV that were detected in the initial assessment sampling round in August 2018.

The analytical data from the ABB and ASB assessment monitoring groundwater sampling for Appendix III and IV parameters are provided in Tables 4 and 5, respectively. Table 4 includes Prediction Limits (PLs) for Appendix III parameters and Table 5 includes Groundwater Protection Standards (GWPS) for detected Appendix IV constituents (see discussion in Section 4.1). Both tables include the sample dates and whether the specific well is considered upgradient or downgradient relative to groundwater flow and the regulated unit(s). All duplicate values were within an acceptable range. The analytical data packages from these sampling events are provided in Appendix A.

3.3 Current Status

The ASB and ABB were transitioned from detection monitoring to assessment monitoring in April, 2018 and currently remain in assessment monitoring.

4.0 OTHER REQUIRED SUBMITTALS

4.1 Initial Statistical Evaluation Summaries

The first eight rounds of Appendix III detection monitoring data from established upgradient wells MW-01 and MW-09 were statistically evaluated to establish background water quality in accordance with procedures defined in CCR Compliance Statistical Approach for Groundwater Data Evaluation, Midwest Generation Powerton Generating Station dated October 10, 2017. This included outlier testing, spatial/temporal variability testing, distributional testing, and the establishment of Prediction Limits for all Appendix III compounds to which the ninth round of groundwater detection monitoring data were compared to determine whether there may be a SSI for a specific compound at each well location. The Statistical Evaluation Summary Dated January 12, 2018 was prepared by KPRG and Associates, Inc. It is noted that at the time of the initial statistical data evaluation, a full eight rounds of groundwater data was not available for upgradient monitoring well MW-19 which was installed at a later date than the original monitoring wells. Since that time the full set of eight rounds of sampling was completed for this well and PLs were established and are included in the summary data tables referenced in Section 3.2.

The completed initial detection monitoring statistical evaluations determined that there were potential SSIs in various downgradient monitoring wells relative to established background for all seven Appendix III parameters, not all parameters were above SSIs at all well locations. It was recommended to complete an ASD in accordance with Section 257.94(e)(2) of the CCR Rule 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 in Section 4.2 of this report.

Based on the results of the ASD (see Section 4.2), the site was transitioned to assessment monitoring. As required under Part 257.95(b), all CCR monitoring wells were sampled and analyzed for Appendix III and Appendix IV parameters. The Appendix IV parameters that were detected during this round of sampling included arsenic, barium, cadmium, cobalt, fluoride, lead, lithium, mercury, molybdenum, radium 226/228, selenium and thallium. Based on the results of the initial assessment sampling, all CCR monitoring wells were sampled again for Appendix III parameters and the detected Appendix IV parameters in accordance with Part 257.95(d)(1).

The initial eight rounds of CCR sampling included analysis of all Appendix IV parameters for the purposes of establishing background statistics. The first eight rounds of Appendix IV monitoring data from upgradient wells MW-01, MW-09 and MW-19 were statistically evaluated to establish the applicable site specific Groundwater Protection Standards

(GWPSs) for the twelve detected Appendix IV parameters in accordance with procedures defined in CCR Compliance Statistical Approach for Groundwater Data Evaluation, Midwest Generation Powerton Generating Station dated October 10, 2017 and Part 257.95(h)(1-3) of the CCR Rule. This evaluation was summarized in a letter report titled Statistical Evaluation Summary CCR Groundwater Assessment Monitoring Powerton Generating Station dated December 26, 2018.

The completed assessment monitoring statistical evaluations and data comparison to the established GWPSs for the site indicated the following detection above the established GWPSs: arsenic at three well locations MW-11, MW-12 and MW-17, barium at well location MW-11 (August sampling only), selenium at well location MW-15 and molybdenum (May sampling only) and thallium at well location MW-17. In accordance with the CCR Rule requirements, it was recommended that a notification of the Appendix IV parameters that were found to be above the GWPSs be completed and the notification placed in the facilities operating record. It was also recommended that an ASD be completed in accordance with provisions in Section 257.95(g)(ii) 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.

4.2 Alternate Source Demonstration

An ASD for SSIs of Appendix III detection monitoring parameters was completed April 12, 2018 in accordance with Section 257.94(e)(2) for the Powerton Generating Station ASB and ABB. As required under section 257.94(e)(2) a full copy of the ASD is provided in Appendix B. Ash and water samples were collected from each of the two ponds (ASB and ABB) and analyzed using the Leaching Environmental Assessment Framework (LEAF) method to determine whether the noted SSIs 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.

It was concluded that the ASB is not the source of downgradient monitoring well SSIs and that there is an alternate source(s) of impacts. However, the data relative to the ABB was not as definitive and potential contribution of leachate from the ABB to the local downgradient groundwater impacts could not be ruled out. Since the monitoring well network for the ABB and the ASB are somewhat integrated, it was recommended that the ASB and ABB be shifted from detection monitoring into assessment monitoring in accordance with Section 257.95 of the CCR Rule.

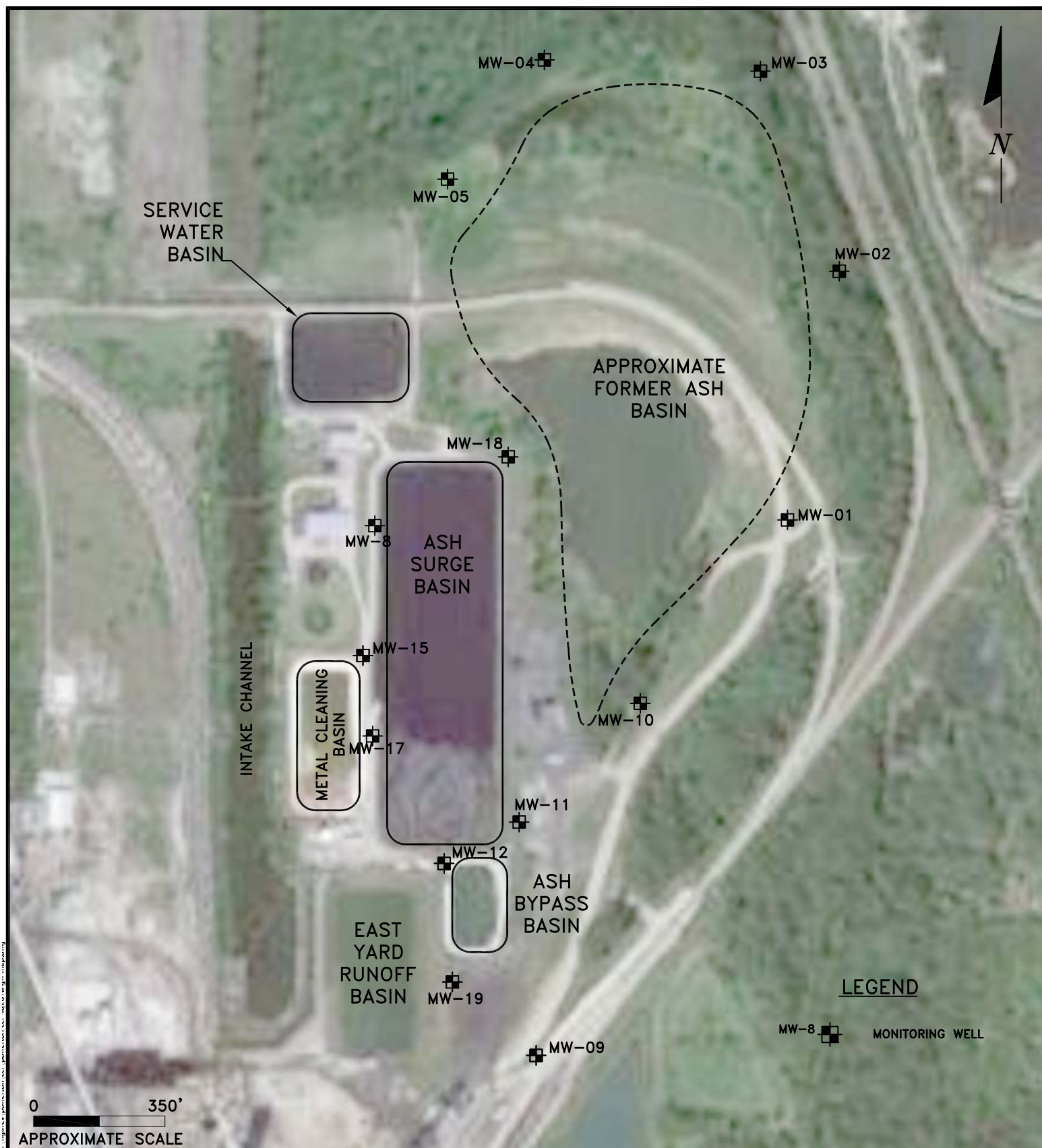
5.0 SUMMARY/CONCLUSIONS AND RECOMMENDATIONS

The assessment monitoring requirements in accordance with the CCR rule are being successfully met. An initial ASD was completed which determined that potential contribution of leachate from the ABB could not be ruled out for SSIs of various Appendix III parameters. It was recommended that the regulated units be transitioned from detection monitoring to assessment monitoring based on these conclusions. This triggered an initial round of assessment monitoring sampling for all Appendix III and IV for parameters. CCR wells were then resampled for all parameters in Appendix III and all constituents in Appendix IV that were detected in the initial assessment sampling round. The Statistical Evaluation Summary dated December 26, 2018 established GWPSs for the twelve detected Appendix IV parameters. Four wells showed various parameter concentrations above the established GWPSs. Midwest Generation is in the process of completing another ASD for these parameters in accordance with provisions in Section 257.95(g)(ii) of the CCR Rule. Once the ASD is completed, appropriate recommendations will be made regarding the next steps that should be taken to maintain compliance with the CCR Rule.

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.
- Patrick Engineering, Inc., Hydrogeologic Assessment Report – Powerton Generating Station, Pekin, IL. February 2011.
- KPRG and Associates, Inc., CCR Compliance Monitoring, Sampling and Analysis Plan, Midwest Generation, LLC Powerton Generating Station. October 10, 2017.
- KPRG and Associates, Inc., CCR Compliance Statistical Approach for Groundwater Data Evaluation, Midwest Generation, LLC Powerton Generating Station. October 10, 2017.
- KPRG and Associates, Inc., Statistical Evaluation Summary CCR Groundwater Monitoring Powerton Generating Station. January 12, 2018.
- KPRG and Associates, Inc., Initial Assessment Monitoring Data Evaluation CCR Groundwater Monitoring Powerton Generating Station. July 12, 2018.
- KPRG and Associates, Inc., Statistical Evaluation Summary CCR Groundwater Assessment Monitoring Powerton Generation Station. December 26, 2018.
- C.W. Fetter, Jr., Applied Hydrogeology. Charles E. Merrill Publishing Co., 1980.
- R.A. Freeze and J.A. Cherry, Groundwater. Prentice-Hall, Inc. Publishing Co., 1979

FIGURES



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CCR MONITORING WELL SITE MAP

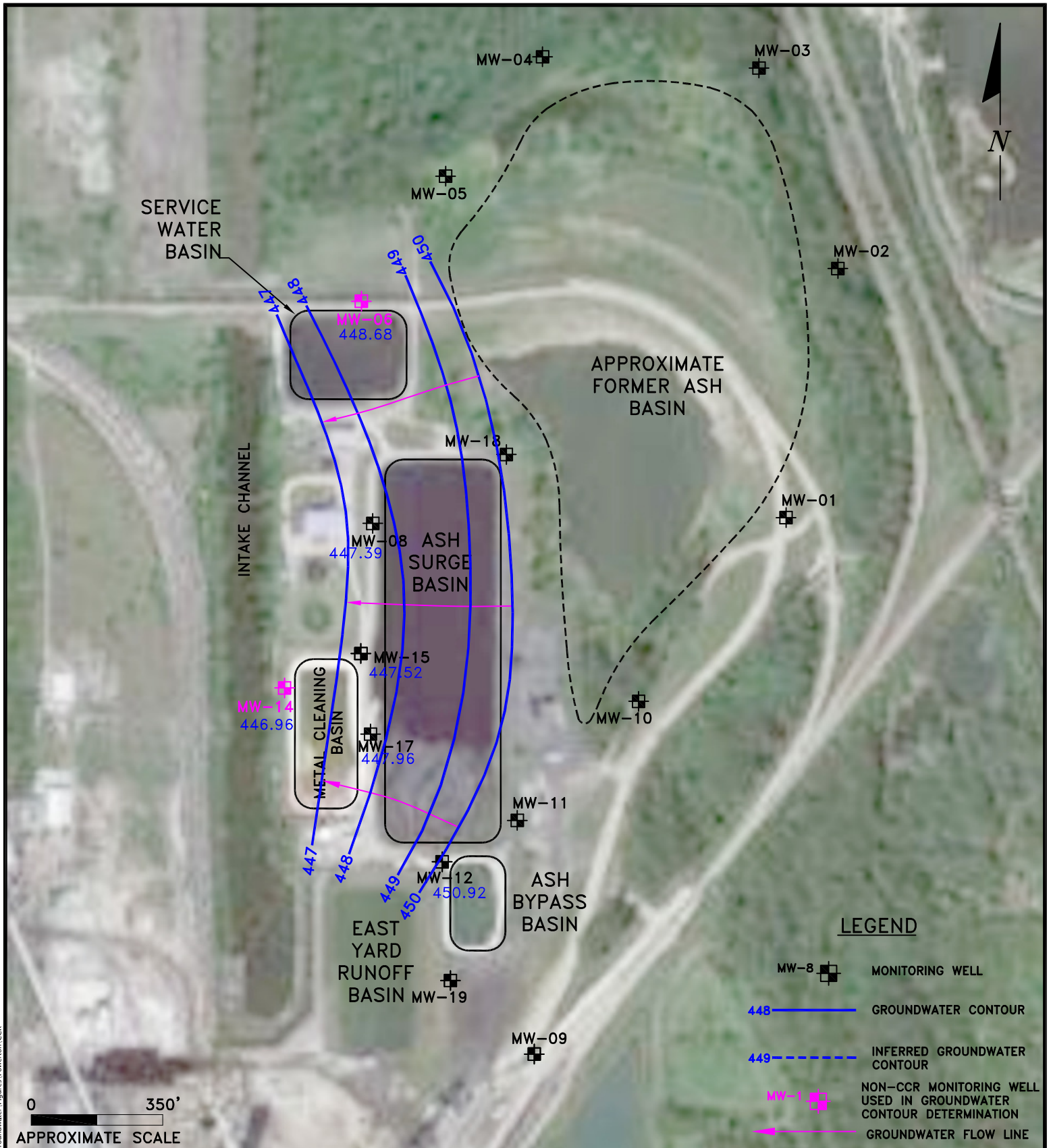
POWERTON STATION
PEKIN, ILLINOIS

Scale: 1" = 350'

Date: December 19, 2018

KPRG Project No. 12313.1

FIGURE 1



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CCR GROUNDWATER CONTOUR MAP FOR SILT/CLAY UNIT 05/2018

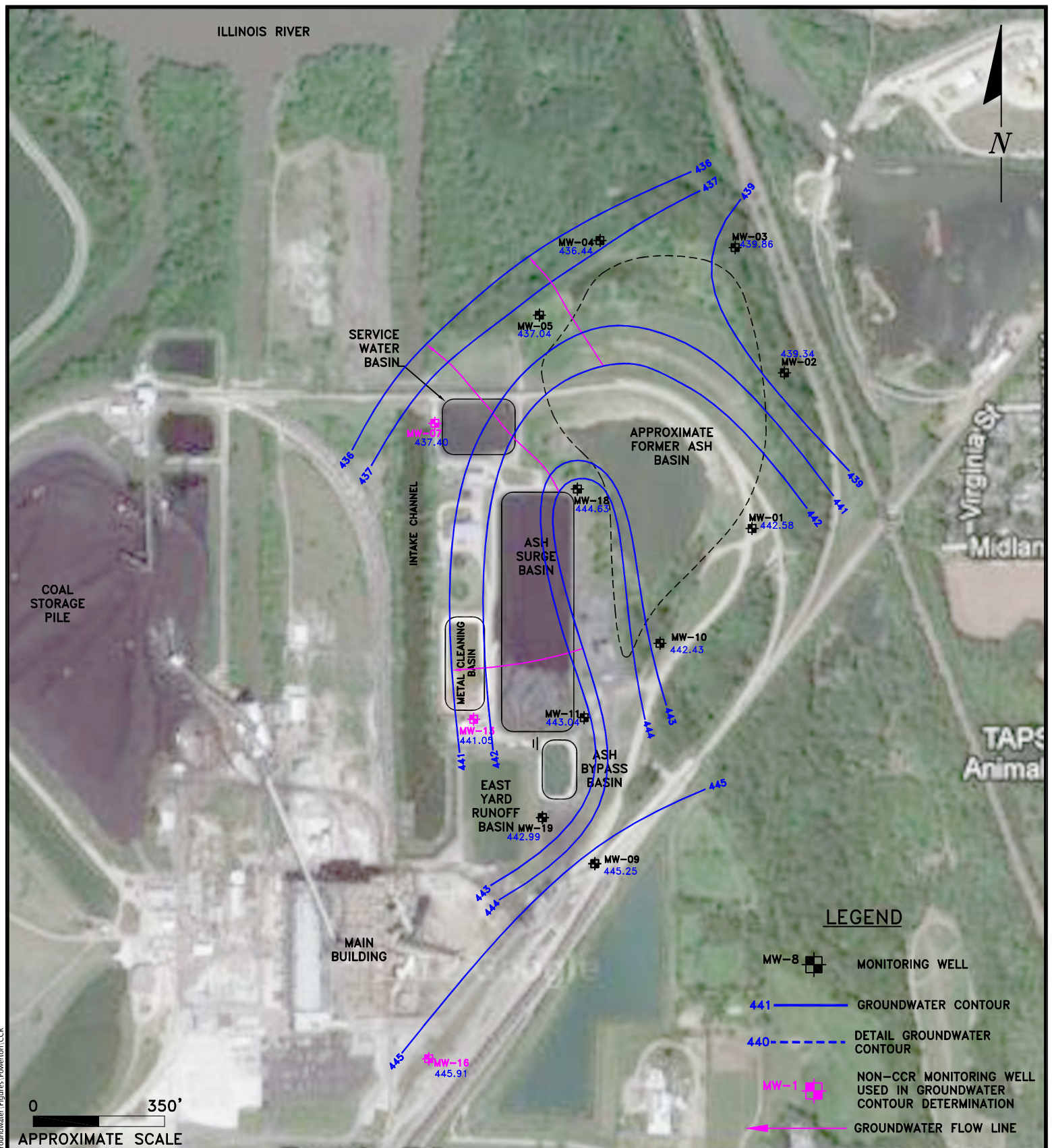
POWERTON STATION
PEKIN, ILLINOIS

Scale: 1" = 350'

Date: June 08, 2018

KPRG Project No. 12313.1

FIGURE 2



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CCR GROUNDWATER CONTOUR MAP FOR GRAVELLY SAND UNIT 05/2018

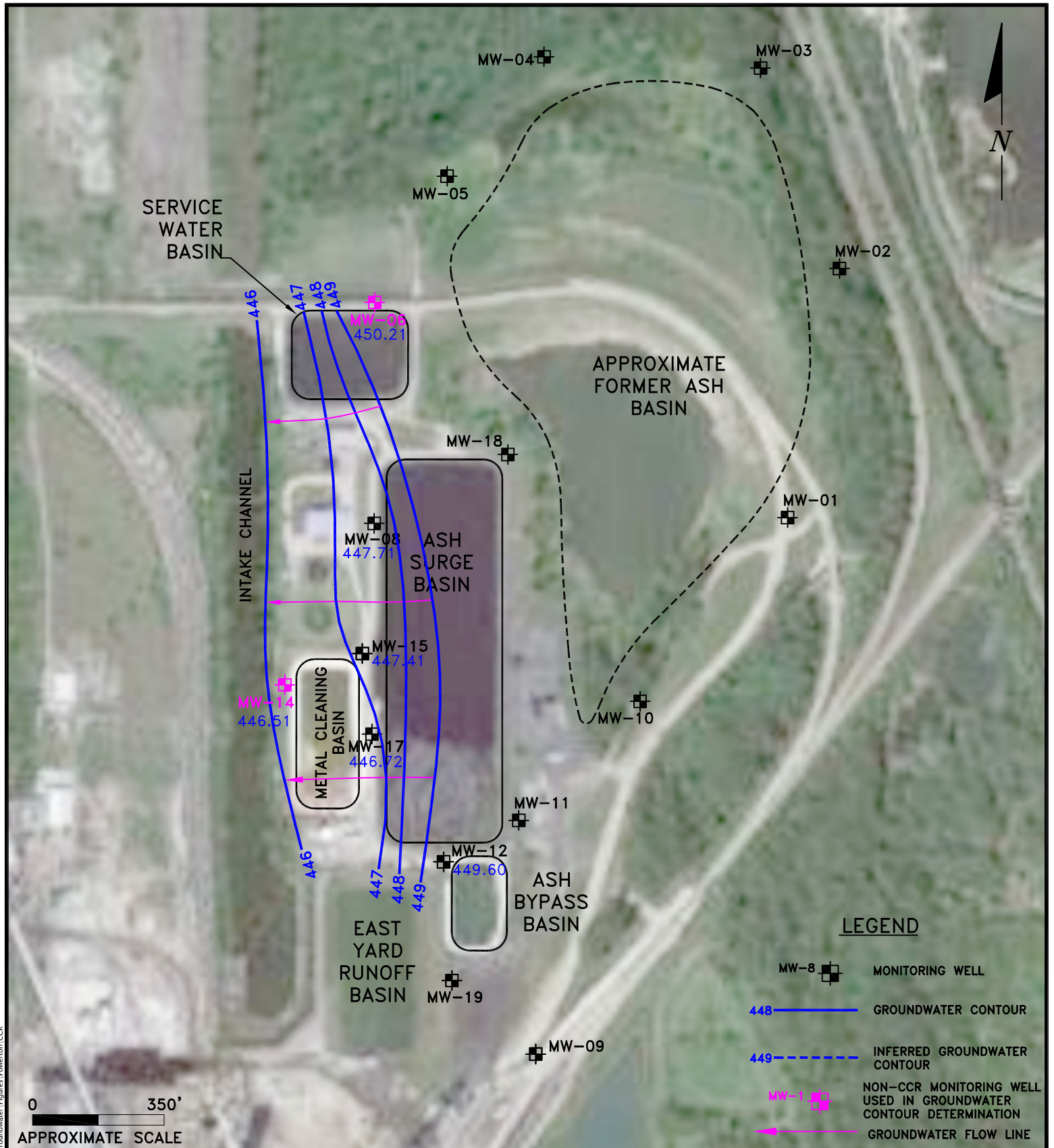
POWERTON STATION
PEKIN, ILLINOIS

Scale: 1" = 350'

Date: June 08, 2018

KPRG Project No. 12313.1

FIGURE 3



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CCR GROUNDWATER CONTOUR MAP FOR SILT/CLAY UNIT 08/2018

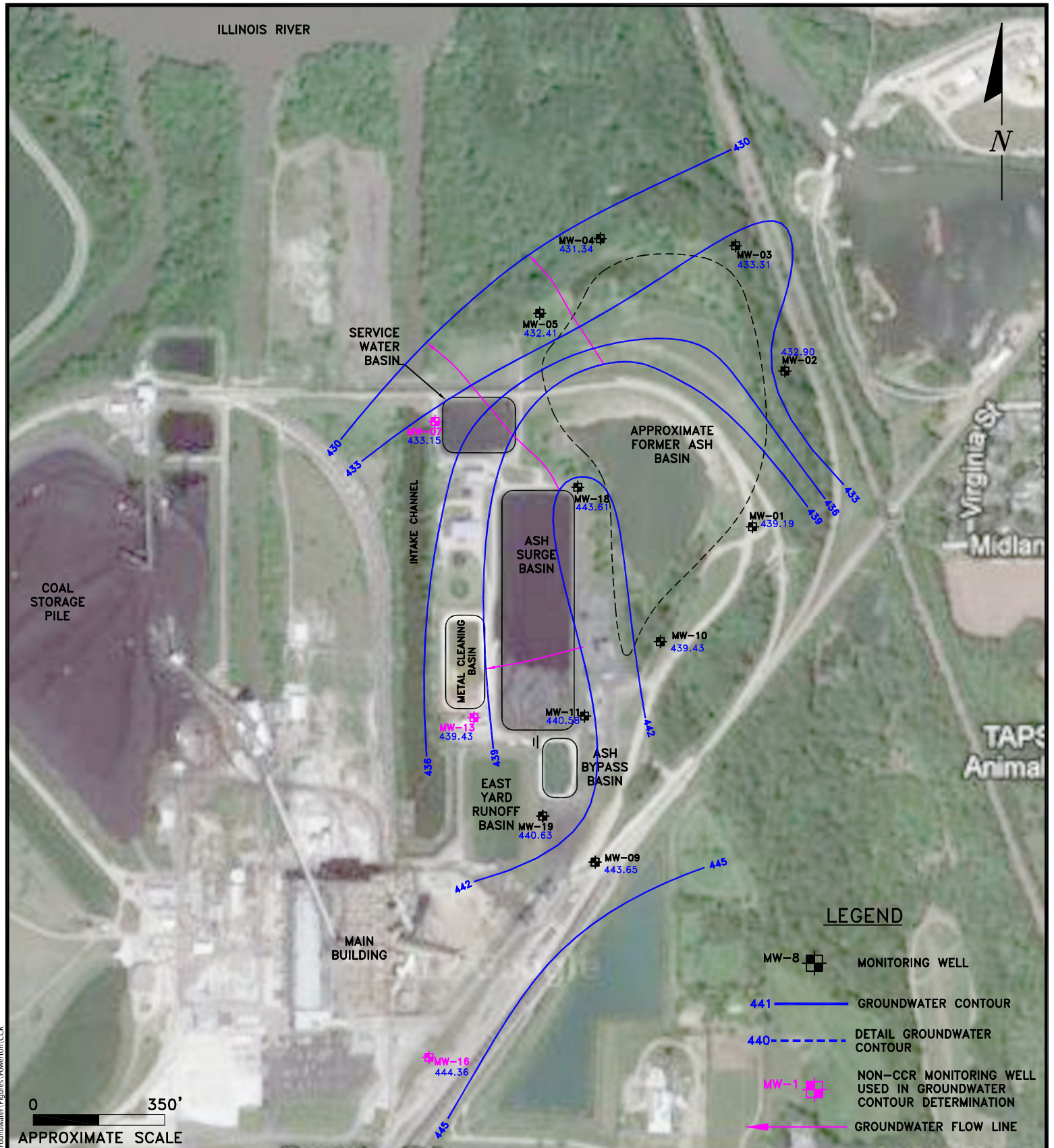
POWERTON STATION
PEKIN, ILLINOIS

Scale: 1" = 350'

Date: October 08, 2018

KPRG Project No. 12313.1

FIGURE 4



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CCR GROUNDWATER CONTOUR MAP FOR GRAVELLY SAND UNIT 08/2018

POWERTON STATION
PEKIN, ILLINOIS

Scale: 1" = 350'

Date: June 08, 2018

KPRG Project No. 12313.1

FIGURE 5

TABLES

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

Well ID	Date	Top of Casing Elevation (ft above MSL)	Depth to Groundwater (ft below TOC)	Groundwater Elevation (ft above MSL)
MW-01	11/16/2015	465.24	26.04	439.20
	2/22/2016	465.24	21.90	443.34
	5/16/2016	465.24	21.83	443.41
	8/15/2016	465.24	23.89	441.35
	11/14/2016	465.24	23.38	441.86
	2/13/2017	465.24	21.71	443.53
	5/1/2017	465.24	18.87	446.37
	6/20/2017	465.24	21.54	443.70
	8/25/2017	465.24	24.70	440.54
	11/8/2017	465.24	24.92	440.32
	5/17/2018	465.24	22.66	442.58
MW-08	8/8/2018	465.24	26.05	439.19
	10/30/2018	465.24	24.69	440.55
	11/16/2015	471.75	26.06	445.69
	2/22/2016	471.75	23.99	447.76
	5/16/2016	471.75	25.48	446.27
	8/15/2016	471.75	23.61	448.14
	11/14/2016	471.75	24.31	447.44
	2/13/2017	471.75	23.97	447.78
	5/1/2017	471.75	23.28	448.47
	6/20/2017	471.75	23.31	448.44
	8/29/2017	471.75	24.52	447.23
MW-09	11/8/2017	471.75	25.27	446.48
	5/17/2018	471.75	24.36	447.39
	8/8/2018	471.75	24.04	447.71
	10/31/2018	471.75	24.92	446.83
	11/16/2015	469.14	26.07	443.07
	2/22/2016	469.14	22.83	446.31
	5/16/2016	469.14	23.06	446.08
	8/15/2016	469.14	24.50	444.64
	11/14/2016	469.14	24.33	444.81
	2/13/2017	469.14	23.43	445.71
	5/1/2017	469.14	20.77	448.37
MW-11	6/20/2017	469.14	22.15	446.99
	8/25/2017	469.14	24.79	444.35
	11/8/2017	469.14	25.74	443.40
	5/16/2018	469.14	23.89	445.25
	8/8/2018	469.14	25.49	443.65
	11/1/2018	469.14	26.02	443.12
	11/16/2015	471.62	31.67	439.95
	2/22/2016	471.62	28.34	443.28
	5/16/2016	471.62	27.11	444.51
	8/15/2016	471.62	29.64	441.98
	11/14/2016	471.62	29.19	442.43
MW-11	2/13/2017	471.62	27.49	444.13
	5/1/2017	471.62	24.34	447.28
	6/20/2017	471.62	26.94	444.68
	8/29/2017	471.62	30.42	441.20
	11/9/2017	471.62	30.27	441.35
	5/16/2018	471.62	28.58	443.04
	8/9/2018	471.62	31.04	440.58
	11/1/2018	471.62	30.82	440.80

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

Well ID	Date	Top of Casing Elevation (ft above MSL)	Depth to Groundwater (ft below TOC)	Groundwater Elevation (ft above MSL)
MW-12	11/16/2015	473.38	24.48	448.90
	2/22/2016	473.38	21.41	451.97
	5/16/2016	473.38	22.94	450.44
	8/15/2016	473.38	23.85	449.53
	11/14/2016	473.38	23.89	449.49
	2/13/2017	473.38	21.93	451.45
	5/1/2017	473.38	22.26	451.12
	6/20/2017	473.38	22.76	450.62
	8/26/2017	473.38	23.92	449.46
	11/10/2017	473.38	24.29	449.09
	5/16/2018	473.38	22.46	450.92
MW-15	8/9/2018	473.38	23.78	449.60
	11/1/2018	473.38	23.74	449.64
	11/16/2015	471.37	25.33	446.04
	2/22/2016	471.37	22.91	448.46
	5/16/2016	471.37	24.71	446.66
	8/15/2016	471.37	23.45	447.92
	11/14/2016	471.37	23.94	447.43
	2/13/2017	471.37	23.73	447.64
	5/1/2017	471.37	23.27	448.10
	6/20/2017	471.37	22.86	448.51
	8/29/2017	471.37	23.13	448.24
MW-17	11/10/2017	471.37	25.13	446.24
	5/17/2018	471.37	23.85	447.52
	8/9/2018	471.37	23.96	447.41
	10/31/2018	471.37	24.55	446.82
	11/16/2015	467.75	26.92	440.83
	2/22/2016	467.75	19.86	447.89
	5/16/2016	467.75	20.42	447.33
	8/15/2016	467.75	21.61	446.14
	11/14/2016	467.75	21.39	446.36
	2/13/2017	467.75	19.66	448.09
	5/1/2017	467.75	18.78	448.97
MW-18	6/20/2017	467.75	19.42	448.33
	8/29/2017	467.75	22.68	445.07
	11/6/2017	467.75	24.66	443.09
	5/14/2018	467.75	19.79	447.96
	8/6/2018	467.75	21.03	446.72
	10/29/2018	467.75	21.98	445.77
	11/16/2015	469.28	28.42	440.86
	2/22/2016	469.28	27.96	441.32
	5/16/2016	469.28	25.57	443.71
	8/15/2016	469.28	27.86	441.42
	11/14/2016	469.28	27.39	441.89
MW-19	2/13/2017	469.28	25.06	444.22
	5/1/2017	469.28	22.49	446.79
	6/20/2017	469.28	24.97	444.31
	8/28/2017	469.28	27.30	441.98
	11/6/2017	469.28	26.33	442.95
	5/14/2018	469.28	24.65	444.63
	8/6/2018	469.28	25.67	443.61
	10/29/2018	469.28	25.79	443.49
	11/14/2016	465.07	22.65	442.42
	2/13/2017	465.07	21.27	443.80
	5/1/2017	465.07	18.39	446.68
MW-19	6/20/2017	465.07	20.44	444.63
	8/28/2017	465.07	23.60	441.47
	11/9/2017	465.07	23.80	441.27
	5/14/2018	465.07	22.08	442.99
	8/6/2018	465.07	24.14	440.93
	10/29/2018	465.07	24.31	440.76

MSL - Mean Sea Level
TOC - Top of Casing

Table 2. Groundwater Flow Direction and Estimated Seepage Velocity/Flow Rate - Powerton Generation Station.

DATE	Screened Unit	Groundwater Flow Direction	Kavg (ft/sec)*	Average Hydraulic Gradient (ft/ft)	Porosity (unitless)**	Estimated Seepage Velocity (ft/day)
11/16/2015	Silt/clay	Westerly	3.280E-07	0.0093	0.4	0.001
11/16/2015	Sandy	North-Northwest	3.810E-03	0.0026	0.35	2.40
2/22/2016	Silt/clay	Westerly	3.280E-07	0.0098	0.4	0.001
2/22/2016	Sandy	North-Northwest	3.810E-03	0.0030	0.35	2.82
5/16/2016	Silt/clay	Westerly	3.280E-07	0.0124	0.4	0.001
5/16/2016	Sandy	North-Northwest	3.810E-03	0.0021	0.35	1.98
8/15/2016	Silt/clay	Westerly	3.280E-07	0.0093	0.4	0.001
8/15/2016	Sandy	North-Northwest	3.810E-03	0.0014	0.35	1.32
11/14/2016	Silt/clay	Westerly	3.280E-07	0.0083	0.4	0.001
11/14/2016	Sandy	North-Northwest	3.810E-03	0.0014	0.35	1.32
2/13/2017	Silt/clay	Westerly	3.280E-07	0.0091	0.4	0.001
2/13/2017	Sandy	Northeasterly - Northwestern	3.810E-03	0.0049	0.35	4.61
5/1/2017	Silt/clay	Westerly	3.280E-07	0.0100	0.4	0.001
5/1/2017	Sandy	Northeasterly - Northwestern	3.810E-03	0.0021	0.35	1.98
6/20/2017	Silt/clay	Westerly	3.280E-07	0.0088	0.4	0.001
6/20/2017	Sandy	Northeasterly - Northwestern	3.810E-03	0.0057	0.35	5.36
8/25/2017	Silt/clay	Westerly	3.280E-07	0.0214	0.4	0.002
8/25/2017	Sandy	North-Northwest	3.810E-03	0.0174	0.35	16.37
11/8/2017	Silt/clay	Westerly	3.280E-07	0.0267	0.4	0.002
11/8/2017	Sandy	North-Northwest	3.810E-03	0.0157	0.35	14.77
5/17/2018	Silt/clay	Westerly	3.280E-07	0.0070	0.4	0.0005
5/17/2018	Sandy	North-Northwest	3.810E-03	0.0042	0.35	3.95
8/7/2018	Silt/clay	Westerly	3.280E-07	0.0263	0.4	0.002
8/7/2018	Sandy	North-Northwest	3.810E-03	0.0037	0.35	3.48

* Kavg - Average hydraulic conductivity for sandy unit (feet/second) from Hydrogeologic Assessment Report, Patrick Engineering, February 2011.
Average hydraulic conductivity for silt/clay unit (feet/second) from Groundwater, Freeze and Cherry, 1979.

** - Porosity estimates from Applied Hydrogeology, Fetter, 1980.

Table 3. CCR Groundwater Sample Collection Summary for 2018 - Powerton Generating Station Ash Bypass Basin & Ash Surge Basin

Well ID	Number of Groundwater Sampling Events	Dates of Groundwater Sampling Events	Detection Monitoring (D) versus Assessment Monitoring (A)
MW-01 (Upgradient)	2	5/17/2018	A
		8/8/2018	A
MW-09 (Upgradient)	2	5/16/2018	A
		8/8/2018	A
MW-19 (Upgradient)	2	5/14/2018	A
		8/6/2018	A
MW-08 (Downgradient)	2	5/17/2018	A
		8/8/2018	A
MW-11 (Downgradient)	2	5/16/2018	A
		8/9/2018	A
MW-12 (Downgradient)	2	5/16/2018	A
		8/9/2018	A
MW-15 (Downgradient)	2	5/17/2018	A
		8/9/2018	A
MW-17 (Downgradient)	2	5/14/2018	A
		8/6/2018	A
MW-18 (Downgradient)	2	5/14/2018	A
		8/6/2018	A

Table 4. ASB/ABB Assessment Monitoring - Appendix III Groundwater Analytical Results through 2018 - Midwest Generation, LLC, Powerton Station, Pekin, IL.

Well	Date	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	Total Dissolved Solids
MW-01 (S) up-gradient	11/16/2015	1.0	98	44	0.17	7.07	93	530
	2/25/2016	0.2	110	42	0.16	7.23	54	460
	5/20/2016	0.34	100	44	0.17	6.95	65	430
	8/17/2016	0.27	78	39	0.25	7.16	50	530
	11/16/2016	0.18	97	39	0.21	7.22	32	500
	2/14/2017	0.18	120	55	0.17	7.30	60	550
	5/3/2017	0.19	86	66	0.16	7.41	45	460
	6/21/2017	0.18	85	58	0.18	7.60	47	540
	Pred. Limit*	1.0	142	81	0.25	7.90-6.58	115	648
	8/25/2017	0.56	86	41	0.18	7.41	63	490
	11/8/2017	0.57	130	38	0.12	6.69	61	640
	5/17/2018	0.15	88	50	0.12	6.7	48	540
	8/8/2018	0.14	86	48	0.13	6.80	43	430
MW-09 (S) up-gradient	11/18/2015	2.0	63	H 31	H 0.19	7.15	H 110	H 440
	2/25/2016	2.3	77	36	0.19	7.34	120	500
	5/19/2016	2.0	73	38	0.17	7.30	100	520
	8/17/2016	2.7	74	39	0.15	7.32	120	750
	11/17/2016	4.5	85	38	0.13	7.37	110	630
	2/15/2017	4.1	84	38	0.13	6.94	160	620
	5/3/2017	3.5	85	38	0.17	7.48	170	680
	6/21/2017	3.3	82	38	0.14	7.63	180	760
	Pred. Limit*	6.19	103	39	0.24	7.99-6.64	236	1000
	8/25/2017	3.8	85	36	0.14	7.30	150	630
	11/8/2017	4	89	37	0.13	6.92	190	650
	5/16/2018	4.1	89	36	0.15	7.83	180	550
	8/8/2018	4.3	86	39	0.14	7.31	180	690
MW-19 [^] (S) up-gradient	11/18/2016	3.8	89	38	0.13	7.34	120	670
	2/15/2017	4.7	88	37	0.13	7.50	180	630
	5/5/2017	3.3	88	38	0.14	7.51	160	640
	6/21/2017	2.3	110	35	0.12	7.30	170	690
	8/28/2017	3.5	97	36	0.16	7.20	160	700
	11/6/2017	4.5	86	35	0.17	7.26	190	640
	5/14/2018	4.1	96	35	0.16	7.92	180	820
	8/6/2018	3.8	100	37	0.13	7.57	170	720
	Pred. Limit*	6.20	121	41	0.20	8.20-6.70	236	890
MW-08 (CL) down-gradient	11/18/2015	1.5	160	H 170	H 0.44	7.61	H 470	H 1300
	2/25/2016	1.7	160	200	0.30	7.00	280	1100
	5/18/2016	1.7	160	140	0.34	7.67	300	1200
	8/17/2016	1.0	150	230	0.35	7.33	360	1400
	11/15/2016	1.2	140	290	0.33	6.90	230	1300
	2/16/2017	1.5	150	460	0.28	7.00	230	1500
	5/2/2017	0.55	140	300	0.33	7.30	320	1300
	6/21/2017	1.2	160	490	0.30	7.27	350	1700
	Pred. Limit	1.0	136	77	0.24**	7.73-6.83**	107	788**
	8/29/2017	<u>1.2</u>	<u>150</u>	<u>360</u>	<u>0.47</u>	7.29	<u>300</u>	<u>1500</u>
	11/8/2017	<u>0.68</u>	130	<u>260</u>	<u>0.45</u>	7.27	<u>270</u>	<u>1200</u>
	5/17/2018	<u>1.2</u>	130	<u>200</u>	<u>0.37</u>	6.79	<u>170</u>	<u>1000</u>
	8/8/2018	<u>1.1</u>	<u>140</u>	<u>270</u>	<u>0.32</u>	6.93	<u>190</u>	<u>1200</u>

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

Pred. Limit - Prediction Limit

(S) - Sandy Unit

(CL) - Silty Clay Unit

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

** - Based on pooled background from MW-01/MW-09. All others based on MW-01 as background.

^ - Recently installed upgradient well. Insufficient rounds of sampling for statistical evaluation at this time.

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

Bold - Potential statistically significant increase.

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

H - Sample was prepped or analyzed beyond the specified holding time.

V - Serial dilution exceeds control limits.

Table 4. ASB/ABB Assessment Monitoring - Appendix III Groundwater Analytical Results through 2018 - Midwest Generation, LLC, Powerton Station, Pekin, IL.

Well	Date	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	Total Dissolved Solids
MW-11 (S) down-gradient	11/18/2015	1.7	110	H 54	H 0.55	7.06	H 160	H 670
	2/26/2016	1.5	140	120	0.55	7.25	220	850
	5/20/2016	1.6	140	120	0.56	7.10	210	920
	8/17/2016	1.0	130	93	0.67	7.08	180	910
	11/17/2016	1.2	140	130	0.44	7.21	240	1100
	2/16/2017	1.6	140	110	0.40	6.62	260	910
	5/3/2017	1.3	160	160	0.42	7.36	440	1300
	6/22/2017	1.2	140	120	0.60	7.21	260	1000
	Pred. Limit	1.0	136	77	0.24**	7.73-6.83**	107	788**
	8/29/2017	<u>2.2</u>	130	<u>83</u>	<u>0.52</u>	7.23	<u>310</u>	<u>1100</u>
	11/9/2017	<u>1.5</u>	<u>140</u>	<u>100</u>	<u>0.59</u>	6.96	<u>230</u>	<u>970</u>
	5/16/2018	<u>2.0</u>	<u>140</u>	<u>88</u>	<u>0.61</u>	<u>7.89</u>	<u>270</u>	<u>1000</u>
	8/9/2018	<u>1.4</u>	<u>160</u>	<u>120</u>	<u>0.65</u>	7.24	<u>220</u>	<u>1000</u>
MW-12 (CL) down-gradient	11/19/2015	0.94	160	H 220	H 0.57	7.12	H 650	H 1400
	2/26/2016	0.42	130	200	0.40	7.96	530	1200
	5/20/2016	0.65	150	200	0.49	7.28	550	1400
	8/18/2016	0.69	170	200	0.49	7.06	620	1600
	11/18/2016	0.83	140	180	0.46	7.34	340	1300
	2/16/2017	0.48	140	190	0.37	7.54	630	1300
	5/3/2017	0.49	120	190	0.37	7.47	500	1200
	6/22/2017	0.50	130	190	0.48	7.36	580	1400
	Pred. Limit	1.0	136	77	0.24**	7.73-6.83**	107	788**
	8/29/2017	0.78	<u>140</u>	<u>180</u>	<u>0.52</u>	7.34	<u>520</u>	<u>1400</u>
	11/10/2017	0.94	<u>130</u>	<u>170</u>	<u>0.48</u>	7.38	<u>370</u>	<u>1200</u>
	5/16/2018	0.46	<u>100</u>	<u>180</u>	<u>0.47</u>	<u>8.12</u>	<u>720</u>	<u>1500</u>
	8/9/2018	0.61	120	<u>190</u>	<u>0.44</u>	7.42	<u>480</u>	<u>1300</u>
MW-15 (CL) down-gradient	11/18/2015	1.5	270	H 210	H 0.53	6.55	H 1400	H 2400
	2/25/2016	2.0	240	110	0.61	6.84	640	1700
	5/19/2016	2.7	320	240	0.53	6.83	1200	2800
	8/18/2016	1.5	200	F1 170	0.54	6.96	660	1900
	11/17/2016	1.3	120	180	0.47	6.91	560	1900
	2/17/2017	1.9	200	190	0.43	7.24	670	1700
	5/4/2017	1.5	180	190	0.57	7.35	670	1700
	6/21/2017	1.6	180	200	0.56	7.30	530	1600
	Pred. Limit	1.0	136	77	0.24**	7.73-6.83**	107	788**
	8/29/2017	<u>2.2</u>	<u>190</u>	<u>200</u>	<u>0.53</u>	6.87	<u>540</u>	<u>1800</u>
	11/10/2017	<u>1.6</u>	<u>170</u>	<u>180</u>	<u>0.63</u>	7.09	<u>530</u>	<u>1500</u>
	5/17/2018	<u>2.3</u>	<u>200</u>	<u>160</u>	<u>0.5</u>	<u>6.75</u>	<u>680</u>	<u>1800</u>
	8/9/2018	<u>2.3</u>	<u>200</u>	<u>200</u>	<u>0.48</u>	7.06	<u>520</u>	<u>1700</u>
MW-17 (CL) down-gradient	11/19/2015	1.6	210	H 230	H 0.43	7.11	H 850	H 1800
	2/22/2016	1.8	290	280	0.55	7.19	960	2100
	5/18/2016	1.4	200	230	0.64	7.02	700	1800
	8/15/2016	1.1	220	220	0.60	7.08	860	2100
	11/14/2016	1.5	200	210	0.56	7.26	560	2000
	2/13/2017	1.6	190	230	0.56	6.84	770	1600
	5/4/2017	1.2	170	210	0.61	7.29	720	1500
	6/22/2017	0.95	150	230	0.72	7.38	580	1600
	Pred. Limit	1.0	136	77	0.24**	7.73-6.83**	107	788**
	8/29/2017	<u>1.4</u>	<u>190</u>	<u>230</u>	<u>0.64</u>	7.19	<u>640</u>	<u>1900</u>
	11/6/2017	<u>1.7</u>	<u>190</u>	<u>240</u>	<u>0.62</u>	7.27	<u>840</u>	<u>1800</u>
	5/14/2018	<u>1.6</u>	<u>170</u>	<u>220</u>	<u>0.6</u>	<u>7.79</u>	<u>800</u>	<u>1700</u>
	8/6/2018	<u>1.3</u>	<u>170</u>	<u>230</u>	<u>0.6</u>	7.12	<u>620</u>	<u>1600</u>
MW-18 (S) down-gradient	11/19/2015	0.80	140	H 220	H 0.66	7.62	H 310	H 1200
	2/22/2016	0.76	150	220	0.68	7.06	310	1200
	5/18/2016	0.72	120	230	0.71	7.68	230	1200
	8/15/2016	0.67	130	210	0.64	7.52	330	1300
	11/18/2016	0.94	130	200	0.58	7.69	250	1300
	2/15/2017	0.56	140	190	0.50	7.81	340	1200
	5/5/2017	0.46	130	180	0.52	8.12	360	1100
	6/21/2017	0.53	120	190	0.51	8.10	320	1200
	Pred. Limit	1.00	136	77	0.24**	7.73-6.83**	107	788**
	8/28/2017	0.65	120	<u>200</u>	<u>0.53</u>	<u>7.81</u>	<u>310</u>	<u>1200</u>
	11/6/2017	0.67	120	<u>190</u>	<u>0.57</u>	<u>7.74</u>	<u>400</u>	<u>1200</u>
	5/14/2018	0.57	130	<u>180</u>	<u>0.59</u>	<u>8.27</u>	<u>440</u>	<u>1200</u>
	8/6/2018	0.58	120	<u>230</u>	<u>0.57</u>	<u>7.88</u>	<u>270</u>	<u>1100</u>

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

Pred. Limit - Prediction Limit

(S) - Sandy Unit

(CL) - Silty Clay Unit

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

** - Based on pooled background from MW-01/MW-09. All others based on MW-01 as background.

^ - Recently installed upgradient well. Insufficient rounds of sampling for statistical evaluation at this time.

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

Bold - Potential statistically significant increase.

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

H - Sample was prepped or analyzed beyond the specified holding time.

V - Serial dilution exceeds control limits.

Table 5. ASB/ABB Assessment Monitoring - Detected Appendix IV Groundwater Analytical Results through 2018 - Midwest Generation, LLC, Powerton Station, Pekin, IL.

Well	Date	Arsenic	Barium	Cadmium	Cobalt	Fluoride	Lead	Lithium	Mercury	Molybdenum	Radium 226 + 228 Combined	Selenium	Thallium
MW-01 up-gradient	11/16/2015	< 0.001	0.057	< 0.0005	< 0.001	0.17	* < 0.0005	< 0.01	< 0.0002	< 0.0050	0.744	< 0.0025	* < 0.002
	2/25/2016	0.0025	0.053	< 0.0005	0.0014	0.16	0.0019	< 0.01	< 0.0002	< 0.005	< 0.722	0.0029	< 0.002
	5/20/2016	0.0081	0.062	< 0.0005	0.0053	0.17	0.011	< 0.01	< 0.0002	< 0.005	< 0.953	< 0.0025	< 0.002
	8/17/2016	0.0014	0.048	< 0.0005	< 0.001	0.25	0.0014	< 0.010	< 0.0002	0.0057	< 0.491	< 0.0025	< 0.002
	11/16/2016	0.0051	0.056	< 0.0005	0.0044	0.21	0.0082	< 0.01	< 0.0002	0.0059	< 0.618	< 0.0025	< 0.002
	2/14/2017	0.0041	0.056	< 0.0005	0.0045	0.17	0.0076	< 0.01	< 0.0002	0.0056	< 0.837	< 0.0025	< 0.002
	5/3/2017	0.0015	0.045	< 0.0005	0.0033	0.16	0.0067	< 0.01	< 0.0002	< 0.005	0.574	< 0.0025	< 0.002
	6/21/2017	< 0.001	0.04	< 0.0005	< 0.001	0.18	< 0.0005	< 0.01	< 0.0002	0.0061	< 0.418	< 0.0025	< 0.002
	GWPS	0.011	2.0	0.005	0.009	4.0	0.018	0.04	0.002	0.10	5.0	0.05	0.002
	8/25/2017	< 0.001	0.049	< 0.0005	< 0.001	0.18	< 0.0005	< 0.01	< 0.0002	0.0059	0.775	< 0.0025	< 0.002
MW-09 up-gradient	11/8/2017	< 0.001	0.083	< 0.0005	< 0.001	0.12	< 0.0005	< 0.01	< 0.0002	< 0.005	0.343	< 0.0025	< 0.002
	5/17/2018	< 0.001	0.045	< 0.0005	< 0.001	0.12	0.00068	< 0.01	< 0.0002	< 0.005	< 0.396	< 0.0025	< 0.002
	8/8/2018	< 0.001	0.051	< 0.0005	< 0.001	0.13	< 0.0005	< 0.01	< 0.0002	< 0.005	< 0.579	< 0.0025	< 0.002
	11/18/2015	< 0.001	0.027	< 0.0005	< 0.001	H 0.19	< 0.0005	< 0.01	H < 0.0002	0.043	< 0.655	< 0.0025	< 0.002
	2/25/2016	0.0042	0.036	< 0.0005	0.0011	0.19	< 0.0005	< 0.01	< 0.0002	0.053	< 0.361	< 0.0025	< 0.002
	5/19/2016	< 0.001	0.029	< 0.0005	< 0.001	0.17	< 0.0005	< 0.01	< 0.0002	0.042	< 0.394	0.0032	< 0.002
	8/17/2016	< 0.001	0.031	< 0.0005	< 0.001	0.15	< 0.0005	< 0.01	< 0.0002	0.036	< 0.498	< 0.0025	< 0.002
	11/17/2016	0.0038	0.039	< 0.0005	< 0.001	0.13	< 0.0005	< 0.010	< 0.0002	0.036	0.646	0.0025	< 0.002
	2/15/2017	0.0032	0.043	< 0.0005	< 0.001	0.13	< 0.0005	< 0.010	< 0.0002	0.035	< 0.377	0.0062	< 0.002
	5/3/2017	0.0012	0.034	< 0.0005	< 0.001	0.17	< 0.0005	< 0.010	< 0.0002	0.034	< 0.445	0.011	< 0.002
MW-19 up-gradient	6/21/2017	< 0.001	0.037	< 0.0005	< 0.001	0.14	< 0.0005	< 0.010	< 0.0002	0.033	< 0.380	0.0072	< 0.002
	GWPS	0.011	2.0	0.005	0.009	4.0	0.018	0.04	0.002	0.10	5.0	0.05	0.002
	8/25/2017	< 0.001	0.044	< 0.0005	< 0.001	0.14	< 0.0005	< 0.010	< 0.0002	0.028	< 0.160	0.0043	< 0.002
	11/8/2017	0.0012	0.048	< 0.0005	< 0.001	0.13	< 0.0005	< 0.010	< 0.0002	0.026	0.344	< 0.0025	< 0.002
	5/16/2018	< 0.001	0.038	< 0.0005	< 0.001	0.15	< 0.0005	< 0.010	0.00029	0.031	< 0.424	0.006	< 0.002
	8/8/2018	< 0.001	0.037	< 0.0005	< 0.001	0.14	< 0.0005	< 0.010	< 0.0002	0.032	0.440	0.0078	< 0.002
	11/18/2016	< 0.001	0.084	< 0.0005	0.001	0.13	0.00068	< 0.01	< 0.0002	0.035	< 0.476	0.0043	< 0.002
	2/15/2017	< 0.001	0.088	< 0.0005	< 0.001	0.13	0.00061	< 0.01	< 0.0002	0.046	< 0.482	0.0063	< 0.002
	5/5/2017	< 0.001	0.076	< 0.0005	0.0013	0.14	0.0012	< 0.01	< 0.0002	0.035	0.923	0.0068	< 0.002
	6/21/2017	< 0.001	0.089	< 0.0005	< 0.001	0.12	< 0.0005	< 0.01	< 0.0002	0.024	< 0.334	0.0028	< 0.002
MW-08 down-gradient	8/28/2017	< 0.001	0.073	< 0.0005	< 0.001	0.16	< 0.0005	< 0.01	< 0.0002	0.041	0.370	0.0035	< 0.002
	11/6/2017	< 0.001	0.071	< 0.0005	< 0.001	0.17	< 0.0005	< 0.01	< 0.0002	0.042	0.360	< 0.0025	< 0.002
	5/14/2018	< 0.001	0.079	< 0.0005	< 0.001	0.16	< 0.0005	< 0.01	< 0.0002	0.043	0.562	0.0044	< 0.002
	8/7/2018	< 0.001	0.078	< 0.0005	< 0.001	0.13	< 0.0005	< 0.01	< 0.0002	0.032	0.835	0.0052	< 0.002
	GWPS	0.011	2.0	0.005	0.009	4.0	0.018	0.04	0.002	0.10	5.0	0.05	0.002
	11/18/2015	0.0029	0.15	< 0.0005	< 0.001	H 0.44	< 0.0005	0.028	H < 0.0002	0.01	< 0.559	< 0.0025	< 0.002
	2/25/2016	0.0018	0.11	0.00052	< 0.001	0.30	0.00072	0.015	< 0.0002	0.02	0.535	< 0.0025	< 0.002
	5/18/2016	0.0029	0.16	< 0.0005	< 0.001	0.34	< 0.0005	0.036	< 0.0002	0.0069	0.417	< 0.0025	< 0.002
	8/17/2016	0.0032	0.15	< 0.0005	< 0.001	0.35	< 0.0005	0.023	< 0.0002	0.013	< 0.519	< 0.0025	< 0.002
	11/15/2016	0.0012	0.076	< 0.0005	< 0.001	0.33	< 0.0005	0.017	< 0.0002	0.016	0.583	< 0.0025	< 0.002
MW-01 up-gradient	2/16/2017	0.003	0.086	< 0.0005	< 0.001	0.28	0.00087	< 0.01	< 0.0002	0.026	< 0.375	< 0.0025	< 0.002
	5/2/2017	0.0029	0.13	< 0.0005	< 0.001	0.33	< 0.0005	0.022	< 0.0002	0.0083	< 0.480	< 0.0025	< 0.002
	6/21/2017	0.0045	0.14	< 0.0005	< 0.001	0.30	< 0.0005	0.017	< 0.0002	0.031	< 0.439	< 0.0025	< 0.002
	GWPS	0.011	2.0	0.005	0.009	4.0	0.018	0.04	0.002	0.10	5.0	0.05	0.002
	8/29/2017	0.0011	0.062	< 0.0005	< 0.001	0.47	< 0.0005	< 0.01	< 0.0002	0.034	0.699	< 0.0025	< 0.002
	11/8/2017	0.0027	0.10	< 0.0005	< 0.001	0.45	< 0.0005	0.019	< 0.0002	0.014	0.806	< 0.0025	< 0.002
	5/17/2018	0.003	0.07	< 0.0005	< 0.001	0.37	< 0.0005	< 0.01	< 0.0002	0.024	0.655	< 0.0025	< 0.002
	8/8/2018	0.0055	0.071	< 0.0005	< 0.001	0.32	< 0.0005	< 0.01	< 0.0002	0.019	< 0.410	< 0.0025	< 0.002

Notes:

All units are in mg/l except Radium is in pCi/L as noted.

Italics - Assessment Monitoring Conducted After Identification of Detected Appendix IV Compounds.

GWPS - Groundwater Protection Standard based on Table 2 and discussion in text

BOLD - Exceeds established GWPS.

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

H - Sample was prepped or analyzed beyond the specified holding time.

* - LCS or LCSD is outside acceptance limits.

^ - Denotes instrument related QC exceeds the control limits

Table 5. ASB/ABB Assessment Monitoring - Detected Appendix IV Groundwater Analytical Results through 2018 - Midwest Generation, LLC, Powerton Station, Pekin, IL.

Well	Date	Arsenic	Barium	Cadmium	Cobalt	Fluoride	Lead	Lithium	Mercury	Molybdenum	Radium 226 + 228 Combined	Selenium	Thallium
MW-11 down-gradient	11/18/2015	0.017	0.18	< 0.0005	0.002	H 0.55	< 0.0005	< 0.01	H < 0.0002	0.0120	0.788	< 0.0025	< 0.002
	2/26/2016	0.023	0.23	< 0.0005	0.0023	0.55	< 0.0005	< 0.01	< 0.0002	0.013	0.562	< 0.0025	< 0.002
	5/20/2016	0.027	0.26	< 0.0005	0.0024	0.56	0.00076	< 0.01	< 0.0002	0.014	0.524	< 0.0025	< 0.002
	8/17/2016	F1 0.29	1.4	< 0.0005	0.0034	0.67	0.001	< 0.010	< 0.0002	0.011	1.130	< 0.0025	< 0.002
	11/17/2016	0.071	0.44	< 0.0005	0.0037	0.44	0.0013	< 0.01	< 0.0002	0.0088	0.734	< 0.0025	< 0.002
	2/16/2017	0.04	0.3	< 0.0005	0.003	0.40	0.00094	< 0.01	< 0.0002	0.013	0.341	< 0.0025	< 0.002
	5/3/2017	0.039	0.26	< 0.0005	0.0035	0.42	0.00093	< 0.01	< 0.0002	0.015	0.662	< 0.0025	< 0.002
	6/22/2017	0.07	0.36	< 0.0005	0.0025	0.60	< 0.0005	< 0.01	< 0.0002	0.014	< 0.418	< 0.0025	< 0.002
	GWPS	0.011	2.0	0.005	0.009	4.0	0.018	0.04	0.002	0.10	5.0	0.05	0.002
	8/29/2017	0.017	0.21	< 0.0005	0.0026	0.52	< 0.0005	< 0.01	< 0.0002	0.016	< 0.313	< 0.0025	< 0.002
	11/9/2017	<u>0.092</u>	0.54	< 0.0005	0.0034	0.59	< 0.0005	< 0.01	< 0.0002	0.014	1.24	< 0.0025	< 0.002
MW-12 down-gradient	5/16/2018	<u>0.089</u>	0.47	< 0.0005	0.0041	0.61	< 0.0005	< 0.01	< 0.0002	0.014	1.12	< 0.0025	< 0.002
	8/9/2018	<u>0.68</u>	<u>3.0</u>	0.00082	0.0053	0.65	0.0012	< 0.01	< 0.0002	0.013	1.48	< 0.0025	< 0.002
	11/19/2015	0.10	0.180	0.00068	< 0.001	H 0.57	0.00063	0.023	H < 0.0002	0.0280	< 0.685	< 0.0025	< 0.002
	2/26/2016	0.077	0.130	0.0016	< 0.001	0.40	0.0014	0.014	< 0.0002	0.0150	1.11	< 0.0025	< 0.002
	5/20/2016	0.065	0.16	0.00077	< 0.001	0.49	0.0016	0.013	< 0.0002	0.028	0.576	< 0.0025	< 0.002
	8/18/2016	0.33	0.88	0.007	0.001	0.49	0.0011	0.015	< 0.0002	0.011	3.68	< 0.0025	< 0.002
	11/18/2016	0.23	0.67	0.0028	< 0.001	0.46	< 0.0005	0.017	< 0.0002	< 0.01	1.86	< 0.0025	< 0.002
	2/16/2017	0.29	0.26	0.0057	0.0013	0.37	0.0042	0.010	< 0.0002	0.015	1.15	< 0.0025	< 0.002
	5/3/2017	0.10	0.17	0.0022	< 0.001	0.37	0.0038	0.011	< 0.0002	0.017	0.518	< 0.0025	< 0.002
	6/22/2017	0.025	0.11	< 0.0005	< 0.001	0.48	0.00096	< 0.010	< 0.0002	0.028	0.376	< 0.0025	< 0.002
	GWPS	0.011	2.0	0.005	0.009	4.0	0.018	0.04	0.002	0.10	5.0	0.05	0.002
MW-15 down-gradient	8/29/2017	<u>0.02</u>	0.095	< 0.0005	< 0.001	0.52	< 0.0005	0.014	< 0.0002	0.024	0.529	< 0.0025	< 0.002
	11/10/2017	<u>0.50</u>	0.45	0.0015	< 0.001	0.48	0.00097	0.018	< 0.0002	0.023	1.67	< 0.0025	< 0.002
	5/16/2018	<u>0.09</u>	0.1	0.00052	< 0.001	0.47	0.00067	0.012	< 0.0002	0.021	0.741	< 0.0025	< 0.002
	8/9/2018	<u>0.12</u>	0.15	0.00084	< 0.001	0.44	0.00072	< 0.010	< 0.0002	0.026	0.735	< 0.0025	< 0.002
	11/18/2015	0.03	0.096	0.00061	< 0.001	H 0.53	< 0.0005	0.042	H < 0.0002	0.023	< 0.599	0.0065	< 0.002
	2/25/2016	0.025	0.083	< 0.0005	< 0.001	0.61	< 0.0005	0.041	< 0.0002	0.035	0.870	0.045	< 0.002
	5/19/2016	0.04	0.097	0.00098	< 0.001	0.53	< 0.0005	0.044	< 0.0002	0.041	< 0.420	0.0067	< 0.002
	8/18/2016	0.13	0.11	0.0041	< 0.001	0.54	< 0.0005	0.028	< 0.0002	0.027	< 0.672	0.0061	< 0.002
	11/17/2016	0.0033	0.031	< 0.0005	< 0.0010	0.47	< 0.0005	0.016	< 0.0002	0.018	< 0.570	0.0078	< 0.002
	2/17/2017	0.02	0.056	< 0.0005	< 0.0010	0.43	< 0.0005	0.025	< 0.0002	0.027	< 0.392	0.0032	< 0.002
	5/4/2017	0.011	0.049	< 0.0005	< 0.0010	0.57	< 0.0005	0.023	< 0.0002	0.023	< 0.456	0.0034	< 0.002
MW-17 down-gradient	6/21/2017	0.0093	0.054	< 0.0005	< 0.0010	0.56	< 0.0005	0.027	< 0.0002	0.03	< 0.347	0.019	< 0.002
	GWPS	0.011	2.0	0.005	0.009	4.0	0.018	0.04	0.002	0.10	5.0	0.05	0.002
	8/29/2017	0.0018	0.044	< 0.0005	< 0.0010	0.53	< 0.0005	0.023	< 0.0002	0.032	0.377	0.0092	< 0.002
	11/10/2017	0.0063	0.046	< 0.0005	< 0.0010	0.63	< 0.0005	0.025	< 0.0002	0.02	< 0.313	0.016	< 0.002
	5/17/2018	0.0081	0.05	< 0.0005	< 0.0010	0.5	< 0.0005	0.029	< 0.0002	0.03	0.397	<u>0.077</u>	< 0.002
	8/9/2018	0.0083	0.048	< 0.0005	< 0.0010	0.48	< 0.0005	0.026	< 0.0002	0.033	0.566	<u>0.06</u>	< 0.002
	11/19/2015	0.0028	0.14	< 0.0005	0.0012	H 0.43	0.0012	0.019	H < 0.0002	0.035	< 0.790	< 0.0025	< 0.002
	2/22/2016	0.021	0.051	< 0.0005	0.0012	0.55	< 0.0005	0.038	< 0.0002	0.093	1.07	< 0.0025	< 0.002
	5/18/2016	0.32	0.12	0.0011	0.0015	0.64	< 0.0005	0.026	< 0.0002	0.12	8.27	< 0.0025	0.0028
	8/15/2016	0.34	0.12	0.001	0.0016	0.6	< 0.0005	0.022	< 0.0002	0.1	0.606	< 0.0025	0.0031
	11/14/2016	0.19	0.073	0.00051	0.0012	0.56	< 0.0005	0.022	< 0.0002	0.042	3.76	< 0.0025	0.0021
MW-18 down-gradient	2/13/2017	0.35	0.16	0.00093	0.0014	0.56	0.00079	0.019	< 0.0002	0.088	2.08	< 0.0025	0.0025
	5/4/2017	0.24	0.39	0.0023	0.0023	0.61	0.00066	0.016	< 0.0002	0.036	1.91	< 0.0025	0.0065
	6/22/2017	0.41	0.13	0.0007	0.0012	0.72	0.0011	0.022	< 0.0002	0.11	1.21	< 0.0025	0.0022
	GWPS	0.011	2.0	0.005	0.009	4.0	0.018	0.04	0.002	0.10	5.0	0.05	0.002
	8/29/2017	<u>0.24</u>	0.092	< 0.0005	< 0.001	0.64	0.00058	0.021	< 0.0002	<u>0.13</u>	3.32	< 0.0025	<u>0.0025</u>
	11/6/2017	<u>0.17</u>	0.38	0.0022	0.0015	0.62	< 0.0005	< 0.01	< 0.0002	0.019	2.54	< 0.0025	<u>0.0075</u>
	5/14/2018	<u>0.42</u>	0.17	0.002	0.0029	0.6	0.0021	0.015	< 0.0002	<u>0.13</u>	2.03	< 0.0025	<u>0.0068</u>
	8/6/2018	<u>0.087</u>	0.055	0.00094	0.0015	0.60	< 0.0005	0.019	< 0.0002	0.084	1.34	< 0.0025	<u>0.0023</u>
	11/19/2015	0.0014	0.14	< 0.0005	< 0.001	H 0.66	< 0.0005	0.017	H < 0.0002	0.0051	< 0.845	< 0.0025	< 0.002
	2/22/2016	0.0012	0.15	< 0.0005	< 0.001	0.68	< 0.0005	0.022	< 0.0002	0.0055	1.88	< 0.0025	< 0.002
	5/18/2016	< 0.001	0.13	< 0.0005	< 0.001	0.71	< 0.0005	0.014	< 0.0002	0.0052	< 0.493	< 0.0025	< 0.002
MW-11 down-gradient	8/15/2016	< 0.001	0.14	< 0.0005	< 0.001	0.64	< 0.0005	0.012	< 0.0002	0.0059	0.836	< 0.0025	< 0.002
	11/18/2016	< 0.001	0.14	< 0.0005	< 0.001	0.58	< 0.0005	0.013	< 0.0002	0.0053	0.488	< 0.0025	< 0.002
	2/15/2017	< 0.001	0.14	< 0.0005	< 0.001	0.5	< 0.0005	0.014	< 0.0002	0.0058	< 0.347	< 0.0025	< 0.002
	5/5/2017	0.0032	0.12	< 0.0005	< 0.001	0.52	0.00057	0.01	< 0.0002	< 0.005	0.612	< 0.0025	< 0.002
	6/21/2017	< 0.001	0.12	< 0.0005	< 0.001	0.51	< 0.0005	0.014	< 0.0002	0.0051	0.629	< 0.0025	< 0.002
	GWPS	0.011	2.0	0.005	0.009	4.0	0.018	0.04	0.002	0.10	5.0	0.05	0.002
	8/28/2017	< 0.001	0.12	< 0.0005	< 0.001	0.53	< 0.0005	0.012	< 0.0002	0.005	0.498	< 0.0025	< 0.002
	11/6/2017	< 0.001	0.12	< 0.0005	< 0.001	0.57	< 0.0005	0.011	< 0.0002	0.0057	0.755	< 0.0025	< 0.002
	5/14/2018	< 0.001	0.13	< 0.0005	< 0.0018	0.59	< 0.0005	0.013	< 0.0002	0.0052	0.641	< 0.0025	< 0.002
	8/6/2018	< 0.001	0.12	< 0.0005	< 0.001	0.57	< 0.0005	0.013	< 0.0002	0.0052	1.02	< 0.0025	< 0.002

Notes:

All units are in mg/l except Radium is in pCi/L as noted.

Italics - Assessment Monitoring Conducted After Identification of Detected Appendix IV Compounds.

GWPS - Groundwater Protection Standard based on Table 2 and discussion in text

BOLD - Exceeds established GWPS.

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

H - Sample was prepped or analyzed beyond the specified holding time.

* - LCS or LCSD is outside acceptance limits.

^ - Denotes instrument related QC exceeds the control limits

Appendix A

Analytical Data Packages from 2018 Assessment Monitoring

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Chicago

2417 Bond Street

University Park, IL 60484

Tel: (708)534-5200

TestAmerica Job ID: 500-145716-1

Client Project/Site: Powerton CCR

For:

KPRG and Associates, Inc.

14665 West Lisbon Road,

Suite 2B

Brookfield, Wisconsin 53005

Attn: Richard Gnat



Authorized for release by:

6/4/2018 4:41:01 PM

Eric Lang, Manager of Project Management

(708)534-5200

eric.lang@testamericainc.com

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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

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

Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Detection Summary	4
Method Summary	10
Sample Summary	11
Client Sample Results	12
Definitions	27
QC Association	28
QC Sample Results	33
Chronicle	40
Certification Summary	47
Chain of Custody	48
Receipt Checklists	50



Case Narrative

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

TestAmerica Job ID: 500-145716-1

Job ID: 500-145716-1

Laboratory: TestAmerica Chicago

Narrative

Job Narrative 500-145716-1

Comments

No additional comments.

Receipt

The samples were received on 5/18/2018 5:20 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 5 coolers at receipt time were 2.1° C, 2.8° C, 3.1° C, 3.9° C and 4.7° C.

Metals

Method(s) 6020A: The low level continuing calibration verification (CCVL) at line 58, associated with batch 500-433393 recovered above the upper control limit for Beryllium. The samples associated with this CCVL were non-detects for the affected analytes; therefore, the data have been reported

Method(s) 6020A: The internal standard Terbium (Tb) was used to report the elements Lead and Thallium in batch 500-433393. This was due to the LCS being spiked with the trace digestion spike which contains Bismuth.

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.

Detection Summary

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

TestAmerica Job ID: 500-145716-1

Client Sample ID: MW-01

Lab Sample ID: 500-145716-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.045		0.0025		mg/L	1		6020A	Total Recoverable
Boron	0.15		0.050		mg/L	1		6020A	Total Recoverable
Calcium	88		0.20		mg/L	1		6020A	Total Recoverable
Lead	0.00068		0.00050		mg/L	1		6020A	Total Recoverable
Total Dissolved Solids	540		10		mg/L	1		SM 2540C	Total/NA
Chloride	50		2.0		mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.12		0.10		mg/L	1		SM 4500 F C	Total/NA
Sulfate	48		20		mg/L	4		SM 4500 SO4 E	Total/NA

Client Sample ID: MW-02

Lab Sample ID: 500-145716-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0013		0.0010		mg/L	1		6020A	Total Recoverable
Barium	0.065		0.0025		mg/L	1		6020A	Total Recoverable
Boron	0.22		0.050		mg/L	1		6020A	Total Recoverable
Calcium	80		0.20		mg/L	1		6020A	Total Recoverable
Mercury	0.00040		0.00020		mg/L	1		7470A	Total/NA
Total Dissolved Solids	500		10		mg/L	1		SM 2540C	Total/NA
Chloride	45		2.0		mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.23		0.10		mg/L	1		SM 4500 F C	Total/NA
Sulfate	54		20		mg/L	4		SM 4500 SO4 E	Total/NA

Client Sample ID: MW-03

Lab Sample ID: 500-145716-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0010		0.0010		mg/L	1		6020A	Total Recoverable
Barium	0.059		0.0025		mg/L	1		6020A	Total Recoverable
Boron	0.35		0.050		mg/L	1		6020A	Total Recoverable
Calcium	77		0.20		mg/L	1		6020A	Total Recoverable
Total Dissolved Solids	520		10		mg/L	1		SM 2540C	Total/NA
Chloride	65		2.0		mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.23		0.10		mg/L	1		SM 4500 F C	Total/NA
Sulfate	77		20		mg/L	4		SM 4500 SO4 E	Total/NA

Client Sample ID: MW-04

Lab Sample ID: 500-145716-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.037		0.0025		mg/L	1		6020A	Total Recoverable
Boron	0.68		0.050		mg/L	1		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

Detection Summary

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

TestAmerica Job ID: 500-145716-1

Client Sample ID: MW-04 (Continued)

Lab Sample ID: 500-145716-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	87		0.20		mg/L	1		6020A	Total Recoverable
Total Dissolved Solids	630		10		mg/L	1		SM 2540C	Total/NA
Chloride	66		2.0		mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.27		0.10		mg/L	1		SM 4500 F C	Total/NA
Sulfate	100		25		mg/L	5		SM 4500 SO4 E	Total/NA

Client Sample ID: MW-05

Lab Sample ID: 500-145716-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.062		0.0025		mg/L	1		6020A	Total Recoverable
Boron	0.61		0.050		mg/L	1		6020A	Total Recoverable
Calcium	130		0.20		mg/L	1		6020A	Total Recoverable
Total Dissolved Solids	910		10		mg/L	1		SM 2540C	Total/NA
Chloride	89		10		mg/L	5		SM 4500 Cl- E	Total/NA
Fluoride	0.29		0.10		mg/L	1		SM 4500 F C	Total/NA
Sulfate	210		50		mg/L	10		SM 4500 SO4 E	Total/NA

Client Sample ID: MW-08

Lab Sample ID: 500-145716-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0030		0.0010		mg/L	1		6020A	Total Recoverable
Barium	0.072		0.0025		mg/L	1		6020A	Total Recoverable
Boron	1.2		0.25		mg/L	5		6020A	Total Recoverable
Calcium	130		0.20		mg/L	1		6020A	Total Recoverable
Molybdenum	0.024		0.0050		mg/L	1		6020A	Total Recoverable
Total Dissolved Solids	1000		10		mg/L	1		SM 2540C	Total/NA
Chloride	200		10		mg/L	5		SM 4500 Cl- E	Total/NA
Fluoride	0.37		0.10		mg/L	1		SM 4500 F C	Total/NA
Sulfate	170		50		mg/L	10		SM 4500 SO4 E	Total/NA

Client Sample ID: MW-09

Lab Sample ID: 500-145716-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.038		0.0025		mg/L	1		6020A	Total Recoverable
Boron	4.1		1.0		mg/L	20		6020A	Total Recoverable
Calcium	89		0.20		mg/L	1		6020A	Total Recoverable
Molybdenum	0.031		0.0050		mg/L	1		6020A	Total Recoverable
Selenium	0.0060		0.0025		mg/L	1		6020A	Total Recoverable
Mercury	0.00029		0.00020		mg/L	1		7470A	Total/NA
Total Dissolved Solids	550		10		mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

Detection Summary

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

TestAmerica Job ID: 500-145716-1

Client Sample ID: MW-09 (Continued)

Lab Sample ID: 500-145716-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	36		2.0		mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.15		0.10		mg/L	1		SM 4500 F C	Total/NA
Sulfate	180		50		mg/L	10		SM 4500 SO4 E	Total/NA

Client Sample ID: MW-10

Lab Sample ID: 500-145716-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0010		0.0010		mg/L	1		6020A	Total Recoverable
Barium	0.22		0.0025		mg/L	1		6020A	Total Recoverable
Boron	0.42		0.050		mg/L	1		6020A	Total Recoverable
Calcium	93		0.20		mg/L	1		6020A	Total Recoverable
Cobalt	0.021		0.0010		mg/L	1		6020A	Total Recoverable
Lead	0.0010		0.00050		mg/L	1		6020A	Total Recoverable
Selenium	0.0050		0.0025		mg/L	1		6020A	Total Recoverable
Total Dissolved Solids	530		10		mg/L	1		SM 2540C	Total/NA
Chloride	44		2.0		mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.19		0.10		mg/L	1		SM 4500 F C	Total/NA
Sulfate	80		20		mg/L	4		SM 4500 SO4 E	Total/NA

Client Sample ID: MW-11

Lab Sample ID: 500-145716-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.089		0.0010		mg/L	1		6020A	Total Recoverable
Barium	0.47		0.0025		mg/L	1		6020A	Total Recoverable
Boron	2.0		0.50		mg/L	10		6020A	Total Recoverable
Calcium	140		0.20		mg/L	1		6020A	Total Recoverable
Cobalt	0.0041		0.0010		mg/L	1		6020A	Total Recoverable
Molybdenum	0.014		0.0050		mg/L	1		6020A	Total Recoverable
Total Dissolved Solids	1000		10		mg/L	1		SM 2540C	Total/NA
Chloride	88		10		mg/L	5		SM 4500 Cl- E	Total/NA
Fluoride	0.61		0.10		mg/L	1		SM 4500 F C	Total/NA
Sulfate	270		50		mg/L	10		SM 4500 SO4 E	Total/NA

Client Sample ID: MW-12

Lab Sample ID: 500-145716-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lithium	0.012		0.010		mg/L	1		6010C	Total Recoverable
Arsenic	0.086		0.0010		mg/L	1		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

Detection Summary

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

TestAmerica Job ID: 500-145716-1

Client Sample ID: MW-12 (Continued)

Lab Sample ID: 500-145716-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Barium	0.10		0.0025		mg/L		1		6020A	Total Recoverable
Boron	0.46		0.050		mg/L		1		6020A	Total Recoverable
Cadmium	0.00052		0.00050		mg/L		1		6020A	Total Recoverable
Calcium	100		0.20		mg/L		1		6020A	Total Recoverable
Lead	0.00067		0.00050		mg/L		1		6020A	Total Recoverable
Molybdenum	0.021		0.0050		mg/L		1		6020A	Total Recoverable
Total Dissolved Solids	1500		10		mg/L		1		SM 2540C	Total/NA
Chloride	180		10		mg/L		5		SM 4500 Cl- E	Total/NA
Fluoride	0.47		0.10		mg/L		1		SM 4500 F C	Total/NA
Sulfate	720		130		mg/L		25		SM 4500 SO4 E	Total/NA

Client Sample ID: MW-15

Lab Sample ID: 500-145716-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Lithium	0.029		0.010		mg/L		1		6010C	Total Recoverable
Arsenic	0.0081		0.0010		mg/L		1		6020A	Total Recoverable
Barium	0.050		0.0025		mg/L		1		6020A	Total Recoverable
Boron	2.3		0.50		mg/L		10		6020A	Total Recoverable
Calcium	200		0.20		mg/L		1		6020A	Total Recoverable
Molybdenum	0.030		0.0050		mg/L		1		6020A	Total Recoverable
Selenium	0.077		0.0025		mg/L		1		6020A	Total Recoverable
Total Dissolved Solids	1800		10		mg/L		1		SM 2540C	Total/NA
Chloride	160		10		mg/L		5		SM 4500 Cl- E	Total/NA
Fluoride	0.50		0.10		mg/L		1		SM 4500 F C	Total/NA
Sulfate	680		130		mg/L		25		SM 4500 SO4 E	Total/NA

Client Sample ID: MW-17

Lab Sample ID: 500-145716-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Lithium	0.015		0.010		mg/L		1		6010C	Total Recoverable
Arsenic	0.42		0.0010		mg/L		1		6020A	Total Recoverable
Barium	0.17		0.0025		mg/L		1		6020A	Total Recoverable
Boron	1.6		0.50		mg/L		10		6020A	Total Recoverable
Cadmium	0.0020		0.00050		mg/L		1		6020A	Total Recoverable
Calcium	170		0.20		mg/L		1		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

Detection Summary

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

TestAmerica Job ID: 500-145716-1

Client Sample ID: MW-17 (Continued)

Lab Sample ID: 500-145716-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cobalt	0.0029		0.0010		mg/L	1		6020A	Total Recoverable
Lead	0.0021		0.00050		mg/L	1		6020A	Total Recoverable
Molybdenum	0.13		0.0050		mg/L	1		6020A	Total Recoverable
Thallium	0.0068		0.0020		mg/L	1		6020A	Total Recoverable
Total Dissolved Solids	1700		10		mg/L	1		SM 2540C	Total/NA
Chloride	220		10		mg/L	5		SM 4500 Cl- E	Total/NA
Fluoride	0.60		0.10		mg/L	1		SM 4500 F C	Total/NA
Sulfate	800		130		mg/L	25		SM 4500 SO4 E	Total/NA

Client Sample ID: MW-18

Lab Sample ID: 500-145716-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lithium	0.013		0.010		mg/L	1		6010C	Total Recoverable
Barium	0.13		0.0025		mg/L	1		6020A	Total Recoverable
Boron	0.57		0.050		mg/L	1		6020A	Total Recoverable
Calcium	130		0.20		mg/L	1		6020A	Total Recoverable
Molybdenum	0.0052		0.0050		mg/L	1		6020A	Total Recoverable
Total Dissolved Solids	1200		10		mg/L	1		SM 2540C	Total/NA
Chloride	180		10		mg/L	5		SM 4500 Cl- E	Total/NA
Fluoride	0.59		0.10		mg/L	1		SM 4500 F C	Total/NA
Sulfate	440		100		mg/L	20		SM 4500 SO4 E	Total/NA

Client Sample ID: MW-19

Lab Sample ID: 500-145716-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.079		0.0025		mg/L	1		6020A	Total Recoverable
Boron	4.1		1.0		mg/L	20		6020A	Total Recoverable
Calcium	96		0.20		mg/L	1		6020A	Total Recoverable
Molybdenum	0.043		0.0050		mg/L	1		6020A	Total Recoverable
Selenium	0.0044		0.0025		mg/L	1		6020A	Total Recoverable
Total Dissolved Solids	820		10		mg/L	1		SM 2540C	Total/NA
Chloride	35		2.0		mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.16		0.10		mg/L	1		SM 4500 F C	Total/NA
Sulfate	180		50		mg/L	10		SM 4500 SO4 E	Total/NA

Client Sample ID: Duplicate

Lab Sample ID: 500-145716-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.077		0.0025		mg/L	1		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

Detection Summary

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

TestAmerica Job ID: 500-145716-1

Client Sample ID: Duplicate (Continued)

Lab Sample ID: 500-145716-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	3.9		1.0		mg/L	20		6020A	Total Recoverable
Calcium	95		0.20		mg/L	1		6020A	Total Recoverable
Molybdenum	0.042		0.0050		mg/L	1		6020A	Total Recoverable
Selenium	0.0040		0.0025		mg/L	1		6020A	Total Recoverable
Total Dissolved Solids	850		10		mg/L	1		SM 2540C	Total/NA
Chloride	36		2.0		mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.15		0.10		mg/L	1		SM 4500 F C	Total/NA
Sulfate	190		50		mg/L	10		SM 4500 SO4 E	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

Method Summary

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

TestAmerica Job ID: 500-145716-1

Method	Method Description	Protocol	Laboratory
6010C	Metals (ICP)	SW846	TAL CHI
6020A	Metals (ICP/MS)	SW846	TAL CHI
7470A	Mercury (CVAA)	SW846	TAL CHI
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL CHI
SM 4500 Cl- E	Chloride, Total	SM	TAL CHI
SM 4500 F C	Fluoride	SM	TAL CHI
SM 4500 SO4 E	Sulfate, Total	SM	TAL CHI
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL CHI
7470A	Preparation, Mercury	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: Powerton CCR

TestAmerica Job ID: 500-145716-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-145716-1	MW-01	Water	05/17/18 15:15	05/18/18 17:20
500-145716-2	MW-02	Water	05/15/18 09:05	05/18/18 17:20
500-145716-3	MW-03	Water	05/15/18 11:00	05/18/18 17:20
500-145716-4	MW-04	Water	05/15/18 12:11	05/18/18 17:20
500-145716-5	MW-05	Water	05/15/18 13:31	05/18/18 17:20
500-145716-6	MW-08	Water	05/17/18 13:29	05/18/18 17:20
500-145716-7	MW-09	Water	05/16/18 10:19	05/18/18 17:20
500-145716-8	MW-10	Water	05/16/18 11:41	05/18/18 17:20
500-145716-9	MW-11	Water	05/16/18 13:01	05/18/18 17:20
500-145716-10	MW-12	Water	05/16/18 14:41	05/18/18 17:20
500-145716-11	MW-15	Water	05/17/18 11:58	05/18/18 17:20
500-145716-12	MW-17	Water	05/14/18 14:51	05/18/18 17:20
500-145716-13	MW-18	Water	05/14/18 16:05	05/18/18 17:20
500-145716-14	MW-19	Water	05/14/18 17:35	05/18/18 17:20
500-145716-15	Duplicate	Water	05/14/18 00:00	05/18/18 17:20

Client Sample Results

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

TestAmerica Job ID: 500-145716-1

Client Sample ID: MW-01

Date Collected: 05/17/18 15:15

Date Received: 05/18/18 17:20

Lab Sample ID: 500-145716-1

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.010		0.010		mg/L		05/19/18 11:03	05/22/18 19:37	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		05/19/18 11:03	05/21/18 22:46	1
Arsenic	<0.0010		0.0010		mg/L		05/19/18 11:03	05/21/18 22:46	1
Barium	0.045		0.0025		mg/L		05/19/18 11:03	05/21/18 22:46	1
Beryllium	<0.0010		0.0010		mg/L		05/19/18 11:03	05/21/18 22:46	1
Boron	0.15		0.050		mg/L		05/19/18 11:03	05/22/18 17:05	1
Cadmium	<0.00050		0.00050		mg/L		05/19/18 11:03	05/21/18 22:46	1
Calcium	88		0.20		mg/L		05/19/18 11:03	05/21/18 22:46	1
Chromium	<0.0050		0.0050		mg/L		05/19/18 11:03	05/21/18 22:46	1
Cobalt	<0.0010		0.0010		mg/L		05/19/18 11:03	05/21/18 22:46	1
Lead	0.00068		0.00050		mg/L		05/19/18 11:03	05/22/18 17:05	1
Molybdenum	<0.0050		0.0050		mg/L		05/19/18 11:03	05/21/18 22:46	1
Selenium	<0.0025		0.0025		mg/L		05/19/18 11:03	05/21/18 22:46	1
Thallium	<0.0020		0.0020		mg/L		05/19/18 11:03	05/21/18 22:46	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		05/25/18 12:35	05/30/18 16:04	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	540		10		mg/L			05/21/18 04:13	1
Chloride	50		2.0		mg/L			05/28/18 18:53	1
Fluoride	0.12		0.10		mg/L			05/26/18 14:30	1
Sulfate	48		20		mg/L			05/30/18 12:43	4

Client Sample Results

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

TestAmerica Job ID: 500-145716-1

Client Sample ID: MW-02

Date Collected: 05/15/18 09:05

Date Received: 05/18/18 17:20

Lab Sample ID: 500-145716-2

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.010		0.010		mg/L		05/19/18 11:03	05/22/18 19:56	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		05/19/18 11:03	05/21/18 23:12	1
Arsenic	0.0013		0.0010		mg/L		05/19/18 11:03	05/21/18 23:12	1
Barium	0.065		0.0025		mg/L		05/19/18 11:03	05/21/18 23:12	1
Beryllium	<0.0010		0.0010		mg/L		05/19/18 11:03	05/21/18 23:12	1
Boron	0.22		0.050		mg/L		05/19/18 11:03	05/22/18 17:24	1
Cadmium	<0.00050		0.00050		mg/L		05/19/18 11:03	05/21/18 23:12	1
Calcium	80		0.20		mg/L		05/19/18 11:03	05/21/18 23:12	1
Chromium	<0.0050		0.0050		mg/L		05/19/18 11:03	05/21/18 23:12	1
Cobalt	<0.0010		0.0010		mg/L		05/19/18 11:03	05/21/18 23:12	1
Lead	<0.00050		0.00050		mg/L		05/19/18 11:03	05/21/18 23:12	1
Molybdenum	<0.0050		0.0050		mg/L		05/19/18 11:03	05/21/18 23:12	1
Selenium	<0.0025		0.0025		mg/L		05/19/18 11:03	05/21/18 23:12	1
Thallium	<0.0020		0.0020		mg/L		05/19/18 11:03	05/21/18 23:12	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00040		0.00020		mg/L		05/25/18 12:35	05/30/18 16:06	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	500		10		mg/L			05/21/18 04:20	1
Chloride	45		2.0		mg/L			05/28/18 18:54	1
Fluoride	0.23		0.10		mg/L			05/26/18 14:38	1
Sulfate	54		20		mg/L			05/30/18 12:44	4

Client Sample Results

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

TestAmerica Job ID: 500-145716-1

Client Sample ID: MW-03

Date Collected: 05/15/18 11:00

Date Received: 05/18/18 17:20

Lab Sample ID: 500-145716-3

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.010		0.010		mg/L		05/19/18 11:03	05/22/18 20:00	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		05/19/18 11:03	05/21/18 23:16	1
Arsenic	0.0010		0.0010		mg/L		05/19/18 11:03	05/21/18 23:16	1
Barium	0.059		0.0025		mg/L		05/19/18 11:03	05/21/18 23:16	1
Beryllium	<0.0010		0.0010		mg/L		05/19/18 11:03	05/21/18 23:16	1
Boron	0.35		0.050		mg/L		05/19/18 11:03	05/22/18 17:28	1
Cadmium	<0.00050		0.00050		mg/L		05/19/18 11:03	05/21/18 23:16	1
Calcium	77		0.20		mg/L		05/19/18 11:03	05/21/18 23:16	1
Chromium	<0.0050		0.0050		mg/L		05/19/18 11:03	05/21/18 23:16	1
Cobalt	<0.0010		0.0010		mg/L		05/19/18 11:03	05/21/18 23:16	1
Lead	<0.00050		0.00050		mg/L		05/19/18 11:03	05/21/18 23:16	1
Molybdenum	<0.0050		0.0050		mg/L		05/19/18 11:03	05/21/18 23:16	1
Selenium	<0.0025		0.0025		mg/L		05/19/18 11:03	05/21/18 23:16	1
Thallium	<0.0020		0.0020		mg/L		05/19/18 11:03	05/21/18 23:16	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		05/25/18 12:35	05/30/18 16:08	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	520		10		mg/L			05/21/18 04:26	1
Chloride	65		2.0		mg/L			05/28/18 18:55	1
Fluoride	0.23		0.10		mg/L			05/26/18 14:41	1
Sulfate	77		20		mg/L			06/04/18 12:51	4

Client Sample Results

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

TestAmerica Job ID: 500-145716-1

Client Sample ID: MW-04

Date Collected: 05/15/18 12:11

Date Received: 05/18/18 17:20

Lab Sample ID: 500-145716-4

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.010		0.010		mg/L		05/19/18 11:03	05/22/18 20:04	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		05/19/18 11:03	05/21/18 23:20	1
Arsenic	<0.0010		0.0010		mg/L		05/19/18 11:03	05/21/18 23:20	1
Barium	0.037		0.0025		mg/L		05/19/18 11:03	05/21/18 23:20	1
Beryllium	<0.0010		0.0010		mg/L		05/19/18 11:03	05/21/18 23:20	1
Boron	0.68		0.050		mg/L		05/19/18 11:03	05/22/18 17:32	1
Cadmium	<0.00050		0.00050		mg/L		05/19/18 11:03	05/21/18 23:20	1
Calcium	87		0.20		mg/L		05/19/18 11:03	05/21/18 23:20	1
Chromium	<0.0050		0.0050		mg/L		05/19/18 11:03	05/21/18 23:20	1
Cobalt	<0.0010		0.0010		mg/L		05/19/18 11:03	05/21/18 23:20	1
Lead	<0.00050		0.00050		mg/L		05/19/18 11:03	05/21/18 23:20	1
Molybdenum	<0.0050		0.0050		mg/L		05/19/18 11:03	05/21/18 23:20	1
Selenium	<0.0025		0.0025		mg/L		05/19/18 11:03	05/21/18 23:20	1
Thallium	<0.0020		0.0020		mg/L		05/19/18 11:03	05/21/18 23:20	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		05/25/18 12:35	05/30/18 16:10	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	630		10		mg/L			05/21/18 04:28	1
Chloride	66		2.0		mg/L			05/28/18 18:56	1
Fluoride	0.27		0.10		mg/L			05/26/18 14:45	1
Sulfate	100		25		mg/L			06/04/18 12:52	5

Client Sample Results

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

TestAmerica Job ID: 500-145716-1

Client Sample ID: MW-05

Date Collected: 05/15/18 13:31

Date Received: 05/18/18 17:20

Lab Sample ID: 500-145716-5

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.010		0.010		mg/L		05/19/18 11:03	05/22/18 20:08	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		05/19/18 11:03	05/21/18 23:24	1
Arsenic	<0.0010		0.0010		mg/L		05/19/18 11:03	05/21/18 23:24	1
Barium	0.062		0.0025		mg/L		05/19/18 11:03	05/21/18 23:24	1
Beryllium	<0.0010		0.0010		mg/L		05/19/18 11:03	05/21/18 23:24	1
Boron	0.61		0.050		mg/L		05/19/18 11:03	05/22/18 17:44	1
Cadmium	<0.00050		0.00050		mg/L		05/19/18 11:03	05/21/18 23:24	1
Calcium	130		0.20		mg/L		05/19/18 11:03	05/21/18 23:24	1
Chromium	<0.0050		0.0050		mg/L		05/19/18 11:03	05/21/18 23:24	1
Cobalt	<0.0010		0.0010		mg/L		05/19/18 11:03	05/21/18 23:24	1
Lead	<0.00050		0.00050		mg/L		05/19/18 11:03	05/21/18 23:24	1
Molybdenum	<0.0050		0.0050		mg/L		05/19/18 11:03	05/21/18 23:24	1
Selenium	<0.0025		0.0025		mg/L		05/19/18 11:03	05/21/18 23:24	1
Thallium	<0.0020		0.0020		mg/L		05/19/18 11:03	05/21/18 23:24	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		05/25/18 12:35	05/30/18 16:23	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	910		10		mg/L			05/21/18 04:31	1
Chloride	89		10		mg/L			05/28/18 18:57	5
Fluoride	0.29		0.10		mg/L			05/26/18 14:48	1
Sulfate	210		50		mg/L			06/04/18 12:55	10

Client Sample Results

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

TestAmerica Job ID: 500-145716-1

Client Sample ID: MW-08

Date Collected: 05/17/18 13:29

Date Received: 05/18/18 17:20

Lab Sample ID: 500-145716-6

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.010		0.010		mg/L		05/19/18 11:03	05/22/18 20:12	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		05/19/18 11:03	05/21/18 23:27	1
Arsenic	0.0030		0.0010		mg/L		05/19/18 11:03	05/21/18 23:27	1
Barium	0.072		0.0025		mg/L		05/19/18 11:03	05/21/18 23:27	1
Beryllium	<0.0010		0.0010		mg/L		05/19/18 11:03	05/21/18 23:27	1
Boron	1.2		0.25		mg/L		05/19/18 11:03	05/22/18 17:47	5
Cadmium	<0.00050		0.00050		mg/L		05/19/18 11:03	05/21/18 23:27	1
Calcium	130		0.20		mg/L		05/19/18 11:03	05/21/18 23:27	1
Chromium	<0.0050		0.0050		mg/L		05/19/18 11:03	05/21/18 23:27	1
Cobalt	<0.0010		0.0010		mg/L		05/19/18 11:03	05/21/18 23:27	1
Lead	<0.00050		0.00050		mg/L		05/19/18 11:03	05/21/18 23:27	1
Molybdenum	0.024		0.0050		mg/L		05/19/18 11:03	05/21/18 23:27	1
Selenium	<0.0025		0.0025		mg/L		05/19/18 11:03	05/21/18 23:27	1
Thallium	<0.0020		0.0020		mg/L		05/19/18 11:03	05/21/18 23:27	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		05/25/18 12:35	05/30/18 16:26	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1000		10		mg/L			05/21/18 04:33	1
Chloride	200		10		mg/L			05/28/18 18:58	5
Fluoride	0.37		0.10		mg/L			05/26/18 14:51	1
Sulfate	170		50		mg/L			06/04/18 12:56	10

Client Sample Results

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

TestAmerica Job ID: 500-145716-1

Client Sample ID: MW-09

Date Collected: 05/16/18 10:19

Date Received: 05/18/18 17:20

Lab Sample ID: 500-145716-7

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.010		0.010		mg/L		05/19/18 11:03	05/22/18 20:24	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		05/19/18 11:03	05/21/18 23:31	1
Arsenic	<0.0010		0.0010		mg/L		05/19/18 11:03	05/21/18 23:31	1
Barium	0.038		0.0025		mg/L		05/19/18 11:03	05/21/18 23:31	1
Beryllium	<0.0010		0.0010		mg/L		05/19/18 11:03	05/21/18 23:31	1
Boron	4.1		1.0		mg/L		05/19/18 11:03	05/22/18 17:51	20
Cadmium	<0.00050		0.00050		mg/L		05/19/18 11:03	05/21/18 23:31	1
Calcium	89		0.20		mg/L		05/19/18 11:03	05/21/18 23:31	1
Chromium	<0.0050		0.0050		mg/L		05/19/18 11:03	05/21/18 23:31	1
Cobalt	<0.0010		0.0010		mg/L		05/19/18 11:03	05/21/18 23:31	1
Lead	<0.00050		0.00050		mg/L		05/19/18 11:03	05/21/18 23:31	1
Molybdenum	0.031		0.0050		mg/L		05/19/18 11:03	05/21/18 23:31	1
Selenium	0.0060		0.0025		mg/L		05/19/18 11:03	05/21/18 23:31	1
Thallium	<0.0020		0.0020		mg/L		05/19/18 11:03	05/21/18 23:31	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00029		0.00020		mg/L		05/25/18 12:35	05/30/18 16:28	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	550		10		mg/L			05/21/18 04:36	1
Chloride	36		2.0		mg/L			05/28/18 19:01	1
Fluoride	0.15		0.10		mg/L			05/26/18 15:04	1
Sulfate	180		50		mg/L			06/04/18 12:57	10

Client Sample Results

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

TestAmerica Job ID: 500-145716-1

Client Sample ID: MW-10

Date Collected: 05/16/18 11:41

Date Received: 05/18/18 17:20

Lab Sample ID: 500-145716-8

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.010		0.010		mg/L		05/19/18 11:03	05/22/18 20:28	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		05/19/18 11:03	05/21/18 23:35	1
Arsenic	0.0010		0.0010		mg/L		05/19/18 11:03	05/21/18 23:35	1
Barium	0.22		0.0025		mg/L		05/19/18 11:03	05/21/18 23:35	1
Beryllium	<0.0010		0.0010		mg/L		05/19/18 11:03	05/21/18 23:35	1
Boron	0.42		0.050		mg/L		05/19/18 11:03	05/22/18 17:55	1
Cadmium	<0.00050		0.00050		mg/L		05/19/18 11:03	05/21/18 23:35	1
Calcium	93		0.20		mg/L		05/19/18 11:03	05/21/18 23:35	1
Chromium	<0.0050		0.0050		mg/L		05/19/18 11:03	05/21/18 23:35	1
Cobalt	0.021		0.0010		mg/L		05/19/18 11:03	05/21/18 23:35	1
Lead	0.0010		0.00050		mg/L		05/19/18 11:03	05/21/18 23:35	1
Molybdenum	<0.0050		0.0050		mg/L		05/19/18 11:03	05/21/18 23:35	1
Selenium	0.0050		0.0025		mg/L		05/19/18 11:03	05/21/18 23:35	1
Thallium	<0.0020		0.0020		mg/L		05/19/18 11:03	05/21/18 23:35	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		05/25/18 12:35	05/30/18 16:30	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	530		10		mg/L			05/21/18 04:39	1
Chloride	44		2.0		mg/L			05/28/18 19:02	1
Fluoride	0.19		0.10		mg/L			05/26/18 15:07	1
Sulfate	80		20		mg/L			06/04/18 12:58	4

Client Sample Results

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

TestAmerica Job ID: 500-145716-1

Client Sample ID: MW-11

Date Collected: 05/16/18 13:01

Date Received: 05/18/18 17:20

Lab Sample ID: 500-145716-9

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.010		0.010		mg/L		05/19/18 11:03	05/22/18 20:32	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		05/19/18 11:03	05/21/18 23:39	1
Arsenic	0.089		0.0010		mg/L		05/19/18 11:03	05/21/18 23:39	1
Barium	0.47		0.0025		mg/L		05/19/18 11:03	05/21/18 23:39	1
Beryllium	<0.0010		0.0010		mg/L		05/19/18 11:03	05/21/18 23:39	1
Boron	2.0		0.50		mg/L		05/19/18 11:03	05/22/18 17:59	10
Cadmium	<0.00050		0.00050		mg/L		05/19/18 11:03	05/21/18 23:39	1
Calcium	140		0.20		mg/L		05/19/18 11:03	05/21/18 23:39	1
Chromium	<0.0050		0.0050		mg/L		05/19/18 11:03	05/21/18 23:39	1
Cobalt	0.0041		0.0010		mg/L		05/19/18 11:03	05/21/18 23:39	1
Lead	<0.00050		0.00050		mg/L		05/19/18 11:03	05/21/18 23:39	1
Molybdenum	0.014		0.0050		mg/L		05/19/18 11:03	05/21/18 23:39	1
Selenium	<0.0025		0.0025		mg/L		05/19/18 11:03	05/21/18 23:39	1
Thallium	<0.0020		0.0020		mg/L		05/19/18 11:03	05/21/18 23:39	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		05/25/18 12:35	05/30/18 16:33	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1000		10		mg/L			05/21/18 04:41	1
Chloride	88		10		mg/L			05/28/18 19:03	5
Fluoride	0.61		0.10		mg/L			05/26/18 15:10	1
Sulfate	270		50		mg/L			06/04/18 13:01	10

Client Sample Results

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

TestAmerica Job ID: 500-145716-1

Client Sample ID: MW-12

Date Collected: 05/16/18 14:41

Date Received: 05/18/18 17:20

Lab Sample ID: 500-145716-10

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.012		0.010		mg/L		05/19/18 11:03	05/22/18 20:36	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		05/19/18 11:03	05/21/18 23:43	1
Arsenic	0.086		0.0010		mg/L		05/19/18 11:03	05/21/18 23:43	1
Barium	0.10		0.0025		mg/L		05/19/18 11:03	05/21/18 23:43	1
Beryllium	<0.0010		0.0010		mg/L		05/19/18 11:03	05/21/18 23:43	1
Boron	0.46		0.050		mg/L		05/19/18 11:03	05/22/18 18:03	1
Cadmium	0.00052		0.00050		mg/L		05/19/18 11:03	05/21/18 23:43	1
Calcium	100		0.20		mg/L		05/19/18 11:03	05/21/18 23:43	1
Chromium	<0.0050		0.0050		mg/L		05/19/18 11:03	05/21/18 23:43	1
Cobalt	<0.0010		0.0010		mg/L		05/19/18 11:03	05/21/18 23:43	1
Lead	0.00067		0.00050		mg/L		05/19/18 11:03	05/21/18 23:43	1
Molybdenum	0.021		0.0050		mg/L		05/19/18 11:03	05/21/18 23:43	1
Selenium	<0.0025		0.0025		mg/L		05/19/18 11:03	05/21/18 23:43	1
Thallium	<0.0020		0.0020		mg/L		05/19/18 11:03	05/21/18 23:43	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		05/25/18 12:35	05/30/18 16:35	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1500		10		mg/L			05/21/18 04:44	1
Chloride	180		10		mg/L			05/28/18 19:21	5
Fluoride	0.47		0.10		mg/L			05/26/18 15:13	1
Sulfate	720		130		mg/L			06/04/18 13:02	25

Client Sample Results

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

TestAmerica Job ID: 500-145716-1

Client Sample ID: MW-15

Date Collected: 05/17/18 11:58

Date Received: 05/18/18 17:20

Lab Sample ID: 500-145716-11

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.029		0.010		mg/L		05/19/18 11:03	05/22/18 20:40	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		05/19/18 11:03	05/21/18 23:54	1
Arsenic	0.0081		0.0010		mg/L		05/19/18 11:03	05/21/18 23:54	1
Barium	0.050		0.0025		mg/L		05/19/18 11:03	05/21/18 23:54	1
Beryllium	<0.0010		0.0010		mg/L		05/19/18 11:03	05/21/18 23:54	1
Boron	2.3		0.50		mg/L		05/19/18 11:03	05/22/18 18:07	10
Cadmium	<0.00050		0.00050		mg/L		05/19/18 11:03	05/21/18 23:54	1
Calcium	200		0.20		mg/L		05/19/18 11:03	05/21/18 23:54	1
Chromium	<0.0050		0.0050		mg/L		05/19/18 11:03	05/21/18 23:54	1
Cobalt	<0.0010		0.0010		mg/L		05/19/18 11:03	05/21/18 23:54	1
Lead	<0.00050		0.00050		mg/L		05/19/18 11:03	05/21/18 23:54	1
Molybdenum	0.030		0.0050		mg/L		05/19/18 11:03	05/21/18 23:54	1
Selenium	0.077		0.0025		mg/L		05/19/18 11:03	05/21/18 23:54	1
Thallium	<0.0020		0.0020		mg/L		05/19/18 11:03	05/21/18 23:54	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		05/25/18 12:35	05/30/18 16:37	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1800		10		mg/L			05/21/18 04:46	1
Chloride	160		10		mg/L			05/28/18 19:04	5
Fluoride	0.50		0.10		mg/L			05/26/18 15:16	1
Sulfate	680		130		mg/L			06/04/18 13:03	25

Client Sample Results

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

TestAmerica Job ID: 500-145716-1

Client Sample ID: MW-17

Date Collected: 05/14/18 14:51

Date Received: 05/18/18 17:20

Lab Sample ID: 500-145716-12

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.015		0.010		mg/L		05/19/18 11:03	05/22/18 20:44	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		05/19/18 11:03	05/21/18 23:58	1
Arsenic	0.42		0.0010		mg/L		05/19/18 11:03	05/21/18 23:58	1
Barium	0.17		0.0025		mg/L		05/19/18 11:03	05/21/18 23:58	1
Beryllium	<0.0010		0.0010		mg/L		05/19/18 11:03	05/21/18 23:58	1
Boron	1.6		0.50		mg/L		05/19/18 11:03	05/22/18 18:11	10
Cadmium	0.0020		0.00050		mg/L		05/19/18 11:03	05/21/18 23:58	1
Calcium	170		0.20		mg/L		05/19/18 11:03	05/21/18 23:58	1
Chromium	<0.0050		0.0050		mg/L		05/19/18 11:03	05/21/18 23:58	1
Cobalt	0.0029		0.0010		mg/L		05/19/18 11:03	05/21/18 23:58	1
Lead	0.0021		0.00050		mg/L		05/19/18 11:03	05/21/18 23:58	1
Molybdenum	0.13		0.0050		mg/L		05/19/18 11:03	05/21/18 23:58	1
Selenium	<0.0025		0.0025		mg/L		05/19/18 11:03	05/21/18 23:58	1
Thallium	0.0068		0.0020		mg/L		05/19/18 11:03	05/21/18 23:58	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		05/25/18 12:35	05/30/18 16:44	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1700		10		mg/L			05/21/18 04:49	1
Chloride	220		10		mg/L			05/28/18 19:04	5
Fluoride	0.60		0.10		mg/L			05/26/18 15:19	1
Sulfate	800		130		mg/L			06/04/18 13:04	25

Client Sample Results

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

TestAmerica Job ID: 500-145716-1

Client Sample ID: MW-18

Date Collected: 05/14/18 16:05

Date Received: 05/18/18 17:20

Lab Sample ID: 500-145716-13

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.013		0.010		mg/L		05/19/18 11:03	05/22/18 20:48	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		05/19/18 11:03	05/22/18 00:01	1
Arsenic	<0.0010		0.0010		mg/L		05/19/18 11:03	05/22/18 00:01	1
Barium	0.13		0.0025		mg/L		05/19/18 11:03	05/22/18 00:01	1
Beryllium	<0.0010		0.0010		mg/L		05/19/18 11:03	05/22/18 00:01	1
Boron	0.57		0.050		mg/L		05/19/18 11:03	05/22/18 18:15	1
Cadmium	<0.00050		0.00050		mg/L		05/19/18 11:03	05/22/18 00:01	1
Calcium	130		0.20		mg/L		05/19/18 11:03	05/22/18 00:01	1
Chromium	<0.0050		0.0050		mg/L		05/19/18 11:03	05/22/18 00:01	1
Cobalt	<0.0010		0.0010		mg/L		05/19/18 11:03	05/22/18 00:01	1
Lead	<0.00050		0.00050		mg/L		05/19/18 11:03	05/22/18 00:01	1
Molybdenum	0.0052		0.0050		mg/L		05/19/18 11:03	05/22/18 00:01	1
Selenium	<0.0025		0.0025		mg/L		05/19/18 11:03	05/22/18 00:01	1
Thallium	<0.0020		0.0020		mg/L		05/19/18 11:03	05/22/18 00:01	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		05/25/18 12:35	05/30/18 16:46	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1200		10		mg/L			05/21/18 04:51	1
Chloride	180		10		mg/L			05/28/18 19:05	5
Fluoride	0.59		0.10		mg/L			05/26/18 15:22	1
Sulfate	440		100		mg/L			06/04/18 13:05	20

Client Sample Results

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

TestAmerica Job ID: 500-145716-1

Client Sample ID: MW-19

Date Collected: 05/14/18 17:35

Date Received: 05/18/18 17:20

Lab Sample ID: 500-145716-14

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.010		0.010		mg/L		05/19/18 11:03	05/22/18 20:52	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		05/19/18 11:03	05/22/18 00:05	1
Arsenic	<0.0010		0.0010		mg/L		05/19/18 11:03	05/22/18 00:05	1
Barium	0.079		0.0025		mg/L		05/19/18 11:03	05/22/18 00:05	1
Beryllium	<0.0010		0.0010		mg/L		05/19/18 11:03	05/22/18 00:05	1
Boron	4.1		1.0		mg/L		05/19/18 11:03	05/22/18 18:18	20
Cadmium	<0.00050		0.00050		mg/L		05/19/18 11:03	05/22/18 00:05	1
Calcium	96		0.20		mg/L		05/19/18 11:03	05/22/18 00:05	1
Chromium	<0.0050		0.0050		mg/L		05/19/18 11:03	05/22/18 00:05	1
Cobalt	<0.0010		0.0010		mg/L		05/19/18 11:03	05/22/18 00:05	1
Lead	<0.00050		0.00050		mg/L		05/19/18 11:03	05/22/18 00:05	1
Molybdenum	0.043		0.0050		mg/L		05/19/18 11:03	05/22/18 00:05	1
Selenium	0.0044		0.0025		mg/L		05/19/18 11:03	05/22/18 00:05	1
Thallium	<0.0020		0.0020		mg/L		05/19/18 11:03	05/22/18 00:05	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		05/25/18 12:35	05/30/18 16:49	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	820		10		mg/L			05/21/18 04:54	1
Chloride	35		2.0		mg/L			05/28/18 19:07	1
Fluoride	0.16		0.10		mg/L			05/26/18 15:25	1
Sulfate	180		50		mg/L			06/04/18 13:06	10

Client Sample Results

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

TestAmerica Job ID: 500-145716-1

Client Sample ID: Duplicate

Date Collected: 05/14/18 00:00

Date Received: 05/18/18 17:20

Lab Sample ID: 500-145716-15

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.010		0.010		mg/L		05/19/18 11:03	05/22/18 20:57	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		05/19/18 11:03	05/22/18 00:09	1
Arsenic	<0.0010		0.0010		mg/L		05/19/18 11:03	05/22/18 00:09	1
Barium	0.077		0.0025		mg/L		05/19/18 11:03	05/22/18 00:09	1
Beryllium	<0.0010		0.0010		mg/L		05/19/18 11:03	05/22/18 00:09	1
Boron	3.9		1.0		mg/L		05/19/18 11:03	05/22/18 18:33	20
Cadmium	<0.00050		0.00050		mg/L		05/19/18 11:03	05/22/18 00:09	1
Calcium	95		0.20		mg/L		05/19/18 11:03	05/22/18 00:09	1
Chromium	<0.0050		0.0050		mg/L		05/19/18 11:03	05/22/18 00:09	1
Cobalt	<0.0010		0.0010		mg/L		05/19/18 11:03	05/22/18 00:09	1
Lead	<0.00050		0.00050		mg/L		05/19/18 11:03	05/22/18 00:09	1
Molybdenum	0.042		0.0050		mg/L		05/19/18 11:03	05/22/18 00:09	1
Selenium	0.0040		0.0025		mg/L		05/19/18 11:03	05/22/18 00:09	1
Thallium	<0.0020		0.0020		mg/L		05/19/18 11:03	05/22/18 00:09	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		05/25/18 12:35	05/30/18 16:51	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	850		10		mg/L			05/21/18 04:57	1
Chloride	36		2.0		mg/L			05/28/18 19:22	1
Fluoride	0.15		0.10		mg/L			05/26/18 15:29	1
Sulfate	190		50		mg/L			06/04/18 13:07	10

Definitions/Glossary

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

TestAmerica Job ID: 500-145716-1

Qualifiers

Metals

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	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: Powerton CCR

TestAmerica Job ID: 500-145716-1

Metals

Prep Batch: 433097

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-145716-1	MW-01	Total Recoverable	Water	3005A	
500-145716-2	MW-02	Total Recoverable	Water	3005A	
500-145716-3	MW-03	Total Recoverable	Water	3005A	
500-145716-4	MW-04	Total Recoverable	Water	3005A	
500-145716-5	MW-05	Total Recoverable	Water	3005A	
500-145716-6	MW-08	Total Recoverable	Water	3005A	
500-145716-7	MW-09	Total Recoverable	Water	3005A	
500-145716-8	MW-10	Total Recoverable	Water	3005A	
500-145716-9	MW-11	Total Recoverable	Water	3005A	
500-145716-10	MW-12	Total Recoverable	Water	3005A	
500-145716-11	MW-15	Total Recoverable	Water	3005A	
500-145716-12	MW-17	Total Recoverable	Water	3005A	
500-145716-13	MW-18	Total Recoverable	Water	3005A	
500-145716-14	MW-19	Total Recoverable	Water	3005A	
500-145716-15	Duplicate	Total Recoverable	Water	3005A	
MB 500-433097/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-433097/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
500-145716-1 MS	MW-01	Total Recoverable	Water	3005A	
500-145716-1 MSD	MW-01	Total Recoverable	Water	3005A	
500-145716-1 DU	MW-01	Total Recoverable	Water	3005A	

Analysis Batch: 433393

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-145716-1	MW-01	Total Recoverable	Water	6020A	433097
500-145716-2	MW-02	Total Recoverable	Water	6020A	433097
500-145716-3	MW-03	Total Recoverable	Water	6020A	433097
500-145716-4	MW-04	Total Recoverable	Water	6020A	433097
500-145716-5	MW-05	Total Recoverable	Water	6020A	433097
500-145716-6	MW-08	Total Recoverable	Water	6020A	433097
500-145716-7	MW-09	Total Recoverable	Water	6020A	433097
500-145716-8	MW-10	Total Recoverable	Water	6020A	433097
500-145716-9	MW-11	Total Recoverable	Water	6020A	433097
500-145716-10	MW-12	Total Recoverable	Water	6020A	433097
500-145716-11	MW-15	Total Recoverable	Water	6020A	433097
500-145716-12	MW-17	Total Recoverable	Water	6020A	433097
500-145716-13	MW-18	Total Recoverable	Water	6020A	433097
500-145716-14	MW-19	Total Recoverable	Water	6020A	433097
500-145716-15	Duplicate	Total Recoverable	Water	6020A	433097
MB 500-433097/1-A	Method Blank	Total Recoverable	Water	6020A	433097
LCS 500-433097/2-A	Lab Control Sample	Total Recoverable	Water	6020A	433097
500-145716-1 MS	MW-01	Total Recoverable	Water	6020A	433097
500-145716-1 MSD	MW-01	Total Recoverable	Water	6020A	433097
500-145716-1 DU	MW-01	Total Recoverable	Water	6020A	433097

Analysis Batch: 433534

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-145716-1	MW-01	Total Recoverable	Water	6010C	433097
500-145716-2	MW-02	Total Recoverable	Water	6010C	433097
500-145716-3	MW-03	Total Recoverable	Water	6010C	433097
500-145716-4	MW-04	Total Recoverable	Water	6010C	433097
500-145716-5	MW-05	Total Recoverable	Water	6010C	433097

TestAmerica Chicago

QC Association Summary

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

TestAmerica Job ID: 500-145716-1

Metals (Continued)

Analysis Batch: 433534 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-145716-6	MW-08	Total Recoverable	Water	6010C	433097
500-145716-7	MW-09	Total Recoverable	Water	6010C	433097
500-145716-8	MW-10	Total Recoverable	Water	6010C	433097
500-145716-9	MW-11	Total Recoverable	Water	6010C	433097
500-145716-10	MW-12	Total Recoverable	Water	6010C	433097
500-145716-11	MW-15	Total Recoverable	Water	6010C	433097
500-145716-12	MW-17	Total Recoverable	Water	6010C	433097
500-145716-13	MW-18	Total Recoverable	Water	6010C	433097
500-145716-14	MW-19	Total Recoverable	Water	6010C	433097
500-145716-15	Duplicate	Total Recoverable	Water	6010C	433097
MB 500-433097/1-A	Method Blank	Total Recoverable	Water	6010C	433097
LCS 500-433097/2-A	Lab Control Sample	Total Recoverable	Water	6010C	433097
500-145716-1 MS	MW-01	Total Recoverable	Water	6010C	433097
500-145716-1 MSD	MW-01	Total Recoverable	Water	6010C	433097
500-145716-1 DU	MW-01	Total Recoverable	Water	6010C	433097

Analysis Batch: 433604

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-145716-1	MW-01	Total Recoverable	Water	6020A	433097
500-145716-2	MW-02	Total Recoverable	Water	6020A	433097
500-145716-3	MW-03	Total Recoverable	Water	6020A	433097
500-145716-4	MW-04	Total Recoverable	Water	6020A	433097
500-145716-5	MW-05	Total Recoverable	Water	6020A	433097
500-145716-6	MW-08	Total Recoverable	Water	6020A	433097
500-145716-7	MW-09	Total Recoverable	Water	6020A	433097
500-145716-8	MW-10	Total Recoverable	Water	6020A	433097
500-145716-9	MW-11	Total Recoverable	Water	6020A	433097
500-145716-10	MW-12	Total Recoverable	Water	6020A	433097
500-145716-11	MW-15	Total Recoverable	Water	6020A	433097
500-145716-12	MW-17	Total Recoverable	Water	6020A	433097
500-145716-13	MW-18	Total Recoverable	Water	6020A	433097
500-145716-14	MW-19	Total Recoverable	Water	6020A	433097
500-145716-15	Duplicate	Total Recoverable	Water	6020A	433097
MB 500-433097/1-A	Method Blank	Total Recoverable	Water	6020A	433097
LCS 500-433097/2-A	Lab Control Sample	Total Recoverable	Water	6020A	433097
500-145716-1 MS	MW-01	Total Recoverable	Water	6020A	433097
500-145716-1 MSD	MW-01	Total Recoverable	Water	6020A	433097
500-145716-1 DU	MW-01	Total Recoverable	Water	6020A	433097

Prep Batch: 434080

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-145716-1	MW-01	Total/NA	Water	7470A	
500-145716-2	MW-02	Total/NA	Water	7470A	
500-145716-3	MW-03	Total/NA	Water	7470A	
500-145716-4	MW-04	Total/NA	Water	7470A	
500-145716-5	MW-05	Total/NA	Water	7470A	
500-145716-6	MW-08	Total/NA	Water	7470A	
500-145716-7	MW-09	Total/NA	Water	7470A	
500-145716-8	MW-10	Total/NA	Water	7470A	
500-145716-9	MW-11	Total/NA	Water	7470A	
500-145716-10	MW-12	Total/NA	Water	7470A	

TestAmerica Chicago

QC Association Summary

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

TestAmerica Job ID: 500-145716-1

Metals (Continued)

Prep Batch: 434080 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-145716-11	MW-15	Total/NA	Water	7470A	
500-145716-12	MW-17	Total/NA	Water	7470A	
500-145716-13	MW-18	Total/NA	Water	7470A	
500-145716-14	MW-19	Total/NA	Water	7470A	
500-145716-15	Duplicate	Total/NA	Water	7470A	
MB 500-434080/12-A	Method Blank	Total/NA	Water	7470A	
LCS 500-434080/13-A	Lab Control Sample	Total/NA	Water	7470A	
500-145716-4 MS	MW-04	Total/NA	Water	7470A	
500-145716-4 MSD	MW-04	Total/NA	Water	7470A	
500-145716-4 DU	MW-04	Total/NA	Water	7470A	

Analysis Batch: 434677

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-145716-1	MW-01	Total/NA	Water	7470A	434080
500-145716-2	MW-02	Total/NA	Water	7470A	434080
500-145716-3	MW-03	Total/NA	Water	7470A	434080
500-145716-4	MW-04	Total/NA	Water	7470A	434080
500-145716-5	MW-05	Total/NA	Water	7470A	434080
500-145716-6	MW-08	Total/NA	Water	7470A	434080
500-145716-7	MW-09	Total/NA	Water	7470A	434080
500-145716-8	MW-10	Total/NA	Water	7470A	434080
500-145716-9	MW-11	Total/NA	Water	7470A	434080
500-145716-10	MW-12	Total/NA	Water	7470A	434080
500-145716-11	MW-15	Total/NA	Water	7470A	434080
500-145716-12	MW-17	Total/NA	Water	7470A	434080
500-145716-13	MW-18	Total/NA	Water	7470A	434080
500-145716-14	MW-19	Total/NA	Water	7470A	434080
500-145716-15	Duplicate	Total/NA	Water	7470A	434080
MB 500-434080/12-A	Method Blank	Total/NA	Water	7470A	434080
LCS 500-434080/13-A	Lab Control Sample	Total/NA	Water	7470A	434080
500-145716-4 MS	MW-04	Total/NA	Water	7470A	434080
500-145716-4 MSD	MW-04	Total/NA	Water	7470A	434080
500-145716-4 DU	MW-04	Total/NA	Water	7470A	434080

General Chemistry

Analysis Batch: 433168

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-145716-1	MW-01	Total/NA	Water	SM 2540C	
500-145716-2	MW-02	Total/NA	Water	SM 2540C	
500-145716-3	MW-03	Total/NA	Water	SM 2540C	
500-145716-4	MW-04	Total/NA	Water	SM 2540C	
500-145716-5	MW-05	Total/NA	Water	SM 2540C	
500-145716-6	MW-08	Total/NA	Water	SM 2540C	
500-145716-7	MW-09	Total/NA	Water	SM 2540C	
500-145716-8	MW-10	Total/NA	Water	SM 2540C	
500-145716-9	MW-11	Total/NA	Water	SM 2540C	
500-145716-10	MW-12	Total/NA	Water	SM 2540C	
500-145716-11	MW-15	Total/NA	Water	SM 2540C	
500-145716-12	MW-17	Total/NA	Water	SM 2540C	

TestAmerica Chicago

QC Association Summary

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

TestAmerica Job ID: 500-145716-1

General Chemistry (Continued)

Analysis Batch: 433168 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-145716-13	MW-18	Total/NA	Water	SM 2540C	
500-145716-14	MW-19	Total/NA	Water	SM 2540C	
500-145716-15	Duplicate	Total/NA	Water	SM 2540C	
MB 500-433168/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-433168/2	Lab Control Sample	Total/NA	Water	SM 2540C	
500-145716-1 MS	MW-01	Total/NA	Water	SM 2540C	
500-145716-1 DU	MW-01	Total/NA	Water	SM 2540C	
500-145716-2 DU	MW-02	Total/NA	Water	SM 2540C	

Analysis Batch: 434275

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-145716-1	MW-01	Total/NA	Water	SM 4500 F C	
500-145716-2	MW-02	Total/NA	Water	SM 4500 F C	
500-145716-3	MW-03	Total/NA	Water	SM 4500 F C	
500-145716-4	MW-04	Total/NA	Water	SM 4500 F C	
500-145716-5	MW-05	Total/NA	Water	SM 4500 F C	
500-145716-6	MW-08	Total/NA	Water	SM 4500 F C	
500-145716-7	MW-09	Total/NA	Water	SM 4500 F C	
500-145716-8	MW-10	Total/NA	Water	SM 4500 F C	
500-145716-9	MW-11	Total/NA	Water	SM 4500 F C	
500-145716-10	MW-12	Total/NA	Water	SM 4500 F C	
500-145716-11	MW-15	Total/NA	Water	SM 4500 F C	
500-145716-12	MW-17	Total/NA	Water	SM 4500 F C	
500-145716-13	MW-18	Total/NA	Water	SM 4500 F C	
500-145716-14	MW-19	Total/NA	Water	SM 4500 F C	
500-145716-15	Duplicate	Total/NA	Water	SM 4500 F C	
MB 500-434275/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 500-434275/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
500-145716-1 MS	MW-01	Total/NA	Water	SM 4500 F C	
500-145716-1 MSD	MW-01	Total/NA	Water	SM 4500 F C	

Analysis Batch: 434300

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-145716-1	MW-01	Total/NA	Water	SM 4500 Cl- E	
500-145716-2	MW-02	Total/NA	Water	SM 4500 Cl- E	
500-145716-3	MW-03	Total/NA	Water	SM 4500 Cl- E	
500-145716-4	MW-04	Total/NA	Water	SM 4500 Cl- E	
500-145716-5	MW-05	Total/NA	Water	SM 4500 Cl- E	
500-145716-6	MW-08	Total/NA	Water	SM 4500 Cl- E	
500-145716-7	MW-09	Total/NA	Water	SM 4500 Cl- E	
500-145716-8	MW-10	Total/NA	Water	SM 4500 Cl- E	
500-145716-9	MW-11	Total/NA	Water	SM 4500 Cl- E	
500-145716-10	MW-12	Total/NA	Water	SM 4500 Cl- E	
500-145716-11	MW-15	Total/NA	Water	SM 4500 Cl- E	
500-145716-12	MW-17	Total/NA	Water	SM 4500 Cl- E	
500-145716-13	MW-18	Total/NA	Water	SM 4500 Cl- E	
500-145716-14	MW-19	Total/NA	Water	SM 4500 Cl- E	
500-145716-15	Duplicate	Total/NA	Water	SM 4500 Cl- E	
MB 500-434300/4	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 500-434300/5	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
500-145716-7 MS	MW-09	Total/NA	Water	SM 4500 Cl- E	

TestAmerica Chicago

QC Association Summary

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

TestAmerica Job ID: 500-145716-1

General Chemistry (Continued)

Analysis Batch: 434300 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-145716-7 MSD	MW-09	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 434591

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-145716-1	MW-01	Total/NA	Water	SM 4500 SO4 E	
500-145716-2	MW-02	Total/NA	Water	SM 4500 SO4 E	
MB 500-434591/3	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 500-434591/4	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 435221

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-145716-3	MW-03	Total/NA	Water	SM 4500 SO4 E	
500-145716-4	MW-04	Total/NA	Water	SM 4500 SO4 E	
500-145716-5	MW-05	Total/NA	Water	SM 4500 SO4 E	
500-145716-6	MW-08	Total/NA	Water	SM 4500 SO4 E	
500-145716-7	MW-09	Total/NA	Water	SM 4500 SO4 E	
500-145716-8	MW-10	Total/NA	Water	SM 4500 SO4 E	
500-145716-9	MW-11	Total/NA	Water	SM 4500 SO4 E	
500-145716-10	MW-12	Total/NA	Water	SM 4500 SO4 E	
500-145716-11	MW-15	Total/NA	Water	SM 4500 SO4 E	
500-145716-12	MW-17	Total/NA	Water	SM 4500 SO4 E	
500-145716-13	MW-18	Total/NA	Water	SM 4500 SO4 E	
500-145716-14	MW-19	Total/NA	Water	SM 4500 SO4 E	
500-145716-15	Duplicate	Total/NA	Water	SM 4500 SO4 E	
MB 500-435221/3	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 500-435221/4	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
500-145716-4 MS	MW-04	Total/NA	Water	SM 4500 SO4 E	
500-145716-4 MSD	MW-04	Total/NA	Water	SM 4500 SO4 E	

QC Sample Results

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

TestAmerica Job ID: 500-145716-1

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 500-433097/1-A

Matrix: Water

Analysis Batch: 433534

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 433097

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.010		0.010		mg/L		05/19/18 11:03	05/22/18 19:21	1

Lab Sample ID: LCS 500-433097/2-A

Matrix: Water

Analysis Batch: 433534

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 433097

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lithium	0.500	0.515		mg/L		103	80 - 120

Lab Sample ID: 500-145716-1 MS

Matrix: Water

Analysis Batch: 433534

Client Sample ID: MW-01

Prep Type: Total Recoverable

Prep Batch: 433097

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lithium	<0.010		0.500	0.545		mg/L		109	75 - 125

Lab Sample ID: 500-145716-1 MSD

Matrix: Water

Analysis Batch: 433534

Client Sample ID: MW-01

Prep Type: Total Recoverable

Prep Batch: 433097

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lithium	<0.010		0.500	0.541		mg/L		108	75 - 125	1	20

Lab Sample ID: 500-145716-1 DU

Matrix: Water

Analysis Batch: 433534

Client Sample ID: MW-01

Prep Type: Total Recoverable

Prep Batch: 433097

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Lithium	<0.010		<0.010		mg/L		NC	20

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 500-433097/1-A

Matrix: Water

Analysis Batch: 433393

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 433097

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		05/19/18 11:03	05/21/18 22:39	1
Arsenic	<0.0010		0.0010		mg/L		05/19/18 11:03	05/21/18 22:39	1
Barium	<0.0025		0.0025		mg/L		05/19/18 11:03	05/21/18 22:39	1
Beryllium	<0.0010		0.0010		mg/L		05/19/18 11:03	05/21/18 22:39	1
Cadmium	<0.00050		0.00050		mg/L		05/19/18 11:03	05/21/18 22:39	1
Calcium	<0.20		0.20		mg/L		05/19/18 11:03	05/21/18 22:39	1
Chromium	<0.0050		0.0050		mg/L		05/19/18 11:03	05/21/18 22:39	1
Cobalt	<0.0010		0.0010		mg/L		05/19/18 11:03	05/21/18 22:39	1
Molybdenum	<0.0050		0.0050		mg/L		05/19/18 11:03	05/21/18 22:39	1
Selenium	<0.0025		0.0025		mg/L		05/19/18 11:03	05/21/18 22:39	1
Thallium	<0.0020		0.0020		mg/L		05/19/18 11:03	05/21/18 22:39	1

TestAmerica Chicago

QC Sample Results

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

TestAmerica Job ID: 500-145716-1

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

Lab Sample ID: MB 500-433097/1-A
Matrix: Water
Analysis Batch: 433604

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 433097

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.050		0.050		mg/L		05/19/18 11:03	05/22/18 16:57	1
Lead	<0.00050		0.00050		mg/L		05/19/18 11:03	05/22/18 16:57	1

Lab Sample ID: LCS 500-433097/2-A
Matrix: Water
Analysis Batch: 433393

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 433097

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.500	0.508		mg/L		102	80 - 120
Arsenic	0.100	0.0952		mg/L		95	80 - 120
Barium	2.00	2.01		mg/L		100	80 - 120
Beryllium	0.0500	0.0518		mg/L		104	80 - 120
Cadmium	0.0500	0.0511		mg/L		102	80 - 120
Calcium	10.0	9.19		mg/L		92	80 - 120
Chromium	0.200	0.211		mg/L		105	80 - 120
Cobalt	0.500	0.533		mg/L		107	80 - 120
Molybdenum	1.00	0.940		mg/L		94	80 - 120
Selenium	0.100	0.0954		mg/L		95	80 - 120
Thallium	0.100	0.106		mg/L		106	80 - 120

Lab Sample ID: LCS 500-433097/2-A
Matrix: Water
Analysis Batch: 433604

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 433097

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1.00	0.988		mg/L		99	80 - 120
Lead	0.100	0.109		mg/L		109	80 - 120

Lab Sample ID: 500-145716-1 MS
Matrix: Water
Analysis Batch: 433393

Client Sample ID: MW-01
Prep Type: Total Recoverable
Prep Batch: 433097

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	<0.0030		0.500	0.521		mg/L		104	75 - 125
Arsenic	<0.0010		0.100	0.0994		mg/L		99	75 - 125
Barium	0.045		2.00	2.06		mg/L		101	75 - 125
Beryllium	<0.0010		0.0500	0.0503		mg/L		101	75 - 125
Cadmium	<0.00050		0.0500	0.0516		mg/L		103	75 - 125
Calcium	88		10.0	95.5	4	mg/L		78	75 - 125
Chromium	<0.0050		0.200	0.204		mg/L		102	75 - 125
Cobalt	<0.0010		0.500	0.506		mg/L		101	75 - 125
Molybdenum	<0.0050		1.00	0.974		mg/L		97	75 - 125
Selenium	<0.0025		0.100	0.101		mg/L		98	75 - 125
Thallium	<0.0020		0.100	0.105		mg/L		105	75 - 125

TestAmerica Chicago

QC Sample Results

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

TestAmerica Job ID: 500-145716-1

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

Lab Sample ID: 500-145716-1 MS

Matrix: Water

Analysis Batch: 433604

Client Sample ID: MW-01

Prep Type: Total Recoverable

Prep Batch: 433097

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	0.15		1.00	1.14		mg/L		99	75 - 125
Lead	0.00068		0.100	0.107		mg/L		107	75 - 125

Lab Sample ID: 500-145716-1 MSD

Matrix: Water

Analysis Batch: 433393

Client Sample ID: MW-01

Prep Type: Total Recoverable

Prep Batch: 433097

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	<0.0030		0.500	0.523		mg/L		105	75 - 125	0	20
Arsenic	<0.0010		0.100	0.100		mg/L		99	75 - 125	1	20
Barium	0.045		2.00	2.05		mg/L		100	75 - 125	0	20
Beryllium	<0.0010		0.0500	0.0494		mg/L		99	75 - 125	2	20
Cadmium	<0.00050		0.0500	0.0517		mg/L		103	75 - 125	0	20
Calcium	88		10.0	97.1	4	mg/L		94	75 - 125	2	20
Chromium	<0.0050		0.200	0.206		mg/L		103	75 - 125	1	20
Cobalt	<0.0010		0.500	0.511		mg/L		102	75 - 125	1	20
Molybdenum	<0.0050		1.00	0.980		mg/L		98	75 - 125	1	20
Selenium	<0.0025		0.100	0.101		mg/L		99	75 - 125	1	20
Thallium	<0.0020		0.100	0.105		mg/L		105	75 - 125	0	20

Lab Sample ID: 500-145716-1 MSD

Matrix: Water

Analysis Batch: 433604

Client Sample ID: MW-01

Prep Type: Total Recoverable

Prep Batch: 433097

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Boron	0.15		1.00	1.15		mg/L		101	75 - 125	1	20
Lead	0.00068		0.100	0.109		mg/L		109	75 - 125	2	20

Lab Sample ID: 500-145716-1 DU

Matrix: Water

Analysis Batch: 433393

Client Sample ID: MW-01

Prep Type: Total Recoverable

Prep Batch: 433097

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Antimony	<0.0030		<0.0030		mg/L		NC	20
Arsenic	<0.0010		<0.0010		mg/L		NC	20
Barium	0.045		0.0459		mg/L		1	20
Beryllium	<0.0010		<0.0010		mg/L		NC	20
Cadmium	<0.00050		<0.00050		mg/L		NC	20
Calcium	88		89.6		mg/L		2	20
Chromium	<0.0050		<0.0050		mg/L		NC	20
Cobalt	<0.0010		<0.0010		mg/L		NC	20
Molybdenum	<0.0050		<0.0050		mg/L		NC	20
Selenium	<0.0025		<0.0025		mg/L		NC	20
Thallium	<0.0020		<0.0020		mg/L		NC	20

TestAmerica Chicago

QC Sample Results

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

TestAmerica Job ID: 500-145716-1

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

Lab Sample ID: 500-145716-1 DU
Matrix: Water
Analysis Batch: 433604

Client Sample ID: MW-01
Prep Type: Total Recoverable
Prep Batch: 433097

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Boron	0.15		0.141		mg/L		5	20
Lead	0.00068		0.000683		mg/L		1	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 500-434080/12-A
Matrix: Water
Analysis Batch: 434677

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 434080

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		05/25/18 12:35	05/30/18 15:47	1

Lab Sample ID: LCS 500-434080/13-A
Matrix: Water
Analysis Batch: 434677

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 434080

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00200	0.00221		mg/L		111	80 - 120

Lab Sample ID: 500-145716-4 MS
Matrix: Water
Analysis Batch: 434677

Client Sample ID: MW-04
Prep Type: Total/NA
Prep Batch: 434080

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	<0.00020		0.00100	0.00110		mg/L		110	75 - 125

Lab Sample ID: 500-145716-4 MSD
Matrix: Water
Analysis Batch: 434677

Client Sample ID: MW-04
Prep Type: Total/NA
Prep Batch: 434080

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Mercury	<0.00020		0.00100	0.000972		mg/L		97	75 - 125	12	20

Lab Sample ID: 500-145716-4 DU
Matrix: Water
Analysis Batch: 434677

Client Sample ID: MW-04
Prep Type: Total/NA
Prep Batch: 434080

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

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

Lab Sample ID: MB 500-433168/1
Matrix: Water
Analysis Batch: 433168

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			05/21/18 04:08	1

TestAmerica Chicago

QC Sample Results

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

TestAmerica Job ID: 500-145716-1

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

Lab Sample ID: LCS 500-433168/2
Matrix: Water
Analysis Batch: 433168

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	296		mg/L		118	80 - 120

Lab Sample ID: 500-145716-1 MS
Matrix: Water
Analysis Batch: 433168

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	540		250	788		mg/L		98	75 - 125

Lab Sample ID: 500-145716-1 DU
Matrix: Water
Analysis Batch: 433168

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

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	540		554		mg/L		2	5

Lab Sample ID: 500-145716-2 DU
Matrix: Water
Analysis Batch: 433168

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

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	500		508		mg/L		1	5

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 500-434300/4
Matrix: Water
Analysis Batch: 434300

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			05/28/18 18:51	1

Lab Sample ID: LCS 500-434300/5
Matrix: Water
Analysis Batch: 434300

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	49.6		mg/L		99	85 - 115

Lab Sample ID: 500-145716-7 MS
Matrix: Water
Analysis Batch: 434300

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	36		50.0	81.0		mg/L		90	75 - 125

TestAmerica Chicago

QC Sample Results

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

TestAmerica Job ID: 500-145716-1

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

Lab Sample ID: 500-145716-7 MSD

Matrix: Water

Analysis Batch: 434300

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	36		50.0	80.6		mg/L		89	75 - 125	1	20

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 500-434275/3

Matrix: Water

Analysis Batch: 434275

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			05/26/18 14:23	1

Lab Sample ID: LCS 500-434275/4

Matrix: Water

Analysis Batch: 434275

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	10.4		mg/L		104	80 - 120

Lab Sample ID: 500-145716-1 MS

Matrix: Water

Analysis Batch: 434275

Client Sample ID: MW-01

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	0.12		5.00	5.21		mg/L		102	75 - 125

Lab Sample ID: 500-145716-1 MSD

Matrix: Water

Analysis Batch: 434275

Client Sample ID: MW-01

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	0.12		5.00	5.29		mg/L		103	75 - 125	2	20

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 500-434591/3

Matrix: Water

Analysis Batch: 434591

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			05/30/18 12:23	1

Lab Sample ID: LCS 500-434591/4

Matrix: Water

Analysis Batch: 434591

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	20.3		mg/L		102	80 - 120

TestAmerica Chicago

QC Sample Results

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

TestAmerica Job ID: 500-145716-1

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

Lab Sample ID: MB 500-435221/3
Matrix: Water
Analysis Batch: 435221

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			06/04/18 12:49	1

Lab Sample ID: LCS 500-435221/4
Matrix: Water
Analysis Batch: 435221

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	19.6		mg/L		98	80 - 120

Lab Sample ID: 500-145716-4 MS
Matrix: Water
Analysis Batch: 435221

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	100		200	330		mg/L		113	75 - 125

Lab Sample ID: 500-145716-4 MSD
Matrix: Water
Analysis Batch: 435221

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	100		200	285		mg/L		90	75 - 125	15	20

Lab Chronicle

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

TestAmerica Job ID: 500-145716-1

Client Sample ID: MW-01

Date Collected: 05/17/18 15:15

Date Received: 05/18/18 17:20

Lab Sample ID: 500-145716-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			433097	05/19/18 11:03	BDE	TAL CHI
Total Recoverable	Analysis	6010C		1	433534	05/22/18 19:37	PJ1	TAL CHI
Total Recoverable	Prep	3005A			433097	05/19/18 11:03	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	433393	05/21/18 22:46	FXG	TAL CHI
Total Recoverable	Prep	3005A			433097	05/19/18 11:03	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	433604	05/22/18 17:05	FXG	TAL CHI
Total/NA	Prep	7470A			434080	05/25/18 12:35	EEN	TAL CHI
Total/NA	Analysis	7470A		1	434677	05/30/18 16:04	EEN	TAL CHI
Total/NA	Analysis	SM 2540C		1	433168	05/21/18 04:13	CLB	TAL CHI
Total/NA	Analysis	SM 4500 CI- E		1	434300	05/28/18 18:53	HMW	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	434275	05/26/18 14:30	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		4	434591		CLB	TAL CHI
						(Start) 05/30/18 12:43		
						(End) 05/30/18 12:44		

Client Sample ID: MW-02

Date Collected: 05/15/18 09:05

Date Received: 05/18/18 17:20

Lab Sample ID: 500-145716-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			433097	05/19/18 11:03	BDE	TAL CHI
Total Recoverable	Analysis	6010C		1	433534	05/22/18 19:56	PJ1	TAL CHI
Total Recoverable	Prep	3005A			433097	05/19/18 11:03	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	433393	05/21/18 23:12	FXG	TAL CHI
Total Recoverable	Prep	3005A			433097	05/19/18 11:03	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	433604	05/22/18 17:24	FXG	TAL CHI
Total/NA	Prep	7470A			434080	05/25/18 12:35	EEN	TAL CHI
Total/NA	Analysis	7470A		1	434677	05/30/18 16:06	EEN	TAL CHI
Total/NA	Analysis	SM 2540C		1	433168	05/21/18 04:20	CLB	TAL CHI
Total/NA	Analysis	SM 4500 CI- E		1	434300	05/28/18 18:54	HMW	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	434275	05/26/18 14:38	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		4	434591		CLB	TAL CHI
						(Start) 05/30/18 12:44		
						(End) 05/30/18 12:45		

Client Sample ID: MW-03

Date Collected: 05/15/18 11:00

Date Received: 05/18/18 17:20

Lab Sample ID: 500-145716-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			433097	05/19/18 11:03	BDE	TAL CHI
Total Recoverable	Analysis	6010C		1	433534	05/22/18 20:00	PJ1	TAL CHI
Total Recoverable	Prep	3005A			433097	05/19/18 11:03	BDE	TAL CHI

TestAmerica Chicago

Lab Chronicle

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

TestAmerica Job ID: 500-145716-1

Client Sample ID: MW-03

Date Collected: 05/15/18 11:00

Date Received: 05/18/18 17:20

Lab Sample ID: 500-145716-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Analysis	6020A		1	433393	05/21/18 23:16	FXG	TAL CHI
Total Recoverable	Prep	3005A			433097	05/19/18 11:03	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	433604	05/22/18 17:28	FXG	TAL CHI
Total/NA	Prep	7470A			434080	05/25/18 12:35	EEN	TAL CHI
Total/NA	Analysis	7470A		1	434677	05/30/18 16:08	EEN	TAL CHI
Total/NA	Analysis	SM 2540C		1	433168	05/21/18 04:26	CLB	TAL CHI
Total/NA	Analysis	SM 4500 CI- E		1	434300	05/28/18 18:55	HMW	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	434275	05/26/18 14:41	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		4	435221		CLB	TAL CHI
						(Start) 06/04/18 12:51		
						(End) 06/04/18 12:52		

Client Sample ID: MW-04

Date Collected: 05/15/18 12:11

Date Received: 05/18/18 17:20

Lab Sample ID: 500-145716-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			433097	05/19/18 11:03	BDE	TAL CHI
Total Recoverable	Analysis	6010C		1	433534	05/22/18 20:04	PJ1	TAL CHI
Total Recoverable	Prep	3005A			433097	05/19/18 11:03	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	433393	05/21/18 23:20	FXG	TAL CHI
Total Recoverable	Prep	3005A			433097	05/19/18 11:03	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	433604	05/22/18 17:32	FXG	TAL CHI
Total/NA	Prep	7470A			434080	05/25/18 12:35	EEN	TAL CHI
Total/NA	Analysis	7470A		1	434677	05/30/18 16:10	EEN	TAL CHI
Total/NA	Analysis	SM 2540C		1	433168	05/21/18 04:28	CLB	TAL CHI
Total/NA	Analysis	SM 4500 CI- E		1	434300	05/28/18 18:56	HMW	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	434275	05/26/18 14:45	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		5	435221		CLB	TAL CHI
						(Start) 06/04/18 12:52		
						(End) 06/04/18 12:53		

Client Sample ID: MW-05

Date Collected: 05/15/18 13:31

Date Received: 05/18/18 17:20

Lab Sample ID: 500-145716-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			433097	05/19/18 11:03	BDE	TAL CHI
Total Recoverable	Analysis	6010C		1	433534	05/22/18 20:08	PJ1	TAL CHI
Total Recoverable	Prep	3005A			433097	05/19/18 11:03	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	433393	05/21/18 23:24	FXG	TAL CHI
Total Recoverable	Prep	3005A			433097	05/19/18 11:03	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	433604	05/22/18 17:44	FXG	TAL CHI

TestAmerica Chicago

Lab Chronicle

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

TestAmerica Job ID: 500-145716-1

Client Sample ID: MW-05

Date Collected: 05/15/18 13:31

Date Received: 05/18/18 17:20

Lab Sample ID: 500-145716-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7470A			434080	05/25/18 12:35	EEN	TAL CHI
Total/NA	Analysis	7470A		1	434677	05/30/18 16:23	EEN	TAL CHI
Total/NA	Analysis	SM 2540C		1	433168	05/21/18 04:31	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		5	434300	05/28/18 18:57	HMW	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	434275	05/26/18 14:48	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		10	435221		CLB	TAL CHI
					(Start)	06/04/18 12:55		
					(End)	06/04/18 12:56		

Client Sample ID: MW-08

Date Collected: 05/17/18 13:29

Date Received: 05/18/18 17:20

Lab Sample ID: 500-145716-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			433097	05/19/18 11:03	BDE	TAL CHI
Total Recoverable	Analysis	6010C		1	433534	05/22/18 20:12	PJ1	TAL CHI
Total Recoverable	Prep	3005A			433097	05/19/18 11:03	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	433393	05/21/18 23:27	FXG	TAL CHI
Total Recoverable	Prep	3005A			433097	05/19/18 11:03	BDE	TAL CHI
Total Recoverable	Analysis	6020A		5	433604	05/22/18 17:47	FXG	TAL CHI
Total/NA	Prep	7470A			434080	05/25/18 12:35	EEN	TAL CHI
Total/NA	Analysis	7470A		1	434677	05/30/18 16:26	EEN	TAL CHI
Total/NA	Analysis	SM 2540C		1	433168	05/21/18 04:33	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		5	434300	05/28/18 18:58	HMW	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	434275	05/26/18 14:51	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		10	435221		CLB	TAL CHI
					(Start)	06/04/18 12:56		
					(End)	06/04/18 12:57		

Client Sample ID: MW-09

Date Collected: 05/16/18 10:19

Date Received: 05/18/18 17:20

Lab Sample ID: 500-145716-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			433097	05/19/18 11:03	BDE	TAL CHI
Total Recoverable	Analysis	6010C		1	433534	05/22/18 20:24	PJ1	TAL CHI
Total Recoverable	Prep	3005A			433097	05/19/18 11:03	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	433393	05/21/18 23:31	FXG	TAL CHI
Total Recoverable	Prep	3005A			433097	05/19/18 11:03	BDE	TAL CHI
Total Recoverable	Analysis	6020A		20	433604	05/22/18 17:51	FXG	TAL CHI
Total/NA	Prep	7470A			434080	05/25/18 12:35	EEN	TAL CHI
Total/NA	Analysis	7470A		1	434677	05/30/18 16:28	EEN	TAL CHI
Total/NA	Analysis	SM 2540C		1	433168	05/21/18 04:36	CLB	TAL CHI

TestAmerica Chicago

Lab Chronicle

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

TestAmerica Job ID: 500-145716-1

Client Sample ID: MW-09

Date Collected: 05/16/18 10:19

Date Received: 05/18/18 17:20

Lab Sample ID: 500-145716-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	434300	05/28/18 19:01	HMW	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	434275	05/26/18 15:04	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		10	435221	(Start) 06/04/18 12:57 (End) 06/04/18 12:58	CLB	TAL CHI

Client Sample ID: MW-10

Date Collected: 05/16/18 11:41

Date Received: 05/18/18 17:20

Lab Sample ID: 500-145716-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			433097	05/19/18 11:03	BDE	TAL CHI
Total Recoverable	Analysis	6010C		1	433534	05/22/18 20:28	PJ1	TAL CHI
Total Recoverable	Prep	3005A			433097	05/19/18 11:03	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	433393	05/21/18 23:35	FXG	TAL CHI
Total Recoverable	Prep	3005A			433097	05/19/18 11:03	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	433604	05/22/18 17:55	FXG	TAL CHI
Total/NA	Prep	7470A			434080	05/25/18 12:35	EEN	TAL CHI
Total/NA	Analysis	7470A		1	434677	05/30/18 16:30	EEN	TAL CHI
Total/NA	Analysis	SM 2540C		1	433168	05/21/18 04:39	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		1	434300	05/28/18 19:02	HMW	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	434275	05/26/18 15:07	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		4	435221	(Start) 06/04/18 12:58 (End) 06/04/18 12:59	CLB	TAL CHI

Client Sample ID: MW-11

Date Collected: 05/16/18 13:01

Date Received: 05/18/18 17:20

Lab Sample ID: 500-145716-9

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			433097	05/19/18 11:03	BDE	TAL CHI
Total Recoverable	Analysis	6010C		1	433534	05/22/18 20:32	PJ1	TAL CHI
Total Recoverable	Prep	3005A			433097	05/19/18 11:03	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	433393	05/21/18 23:39	FXG	TAL CHI
Total Recoverable	Prep	3005A			433097	05/19/18 11:03	BDE	TAL CHI
Total Recoverable	Analysis	6020A		10	433604	05/22/18 17:59	FXG	TAL CHI
Total/NA	Prep	7470A			434080	05/25/18 12:35	EEN	TAL CHI
Total/NA	Analysis	7470A		1	434677	05/30/18 16:33	EEN	TAL CHI
Total/NA	Analysis	SM 2540C		1	433168	05/21/18 04:41	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		5	434300	05/28/18 19:03	HMW	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	434275	05/26/18 15:10	EAT	TAL CHI

TestAmerica Chicago

Lab Chronicle

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

TestAmerica Job ID: 500-145716-1

Client Sample ID: MW-11

Date Collected: 05/16/18 13:01

Date Received: 05/18/18 17:20

Lab Sample ID: 500-145716-9

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	435221		CLB	TAL CHI
					(Start)	06/04/18 13:01		
					(End)	06/04/18 13:02		

Client Sample ID: MW-12

Date Collected: 05/16/18 14:41

Date Received: 05/18/18 17:20

Lab Sample ID: 500-145716-10

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			433097	05/19/18 11:03	BDE	TAL CHI
Total Recoverable	Analysis	6010C		1	433534	05/22/18 20:36	PJ1	TAL CHI
Total Recoverable	Prep	3005A			433097	05/19/18 11:03	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	433393	05/21/18 23:43	FXG	TAL CHI
Total Recoverable	Prep	3005A			433097	05/19/18 11:03	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	433604	05/22/18 18:03	FXG	TAL CHI
Total/NA	Prep	7470A			434080	05/25/18 12:35	EEN	TAL CHI
Total/NA	Analysis	7470A		1	434677	05/30/18 16:35	EEN	TAL CHI
Total/NA	Analysis	SM 2540C		1	433168	05/21/18 04:44	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		5	434300	05/28/18 19:21	HMW	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	434275	05/26/18 15:13	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		25	435221		CLB	TAL CHI
					(Start)	06/04/18 13:02		
					(End)	06/04/18 13:03		

Client Sample ID: MW-15

Date Collected: 05/17/18 11:58

Date Received: 05/18/18 17:20

Lab Sample ID: 500-145716-11

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			433097	05/19/18 11:03	BDE	TAL CHI
Total Recoverable	Analysis	6010C		1	433534	05/22/18 20:40	PJ1	TAL CHI
Total Recoverable	Prep	3005A			433097	05/19/18 11:03	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	433393	05/21/18 23:54	FXG	TAL CHI
Total Recoverable	Prep	3005A			433097	05/19/18 11:03	BDE	TAL CHI
Total Recoverable	Analysis	6020A		10	433604	05/22/18 18:07	FXG	TAL CHI
Total/NA	Prep	7470A			434080	05/25/18 12:35	EEN	TAL CHI
Total/NA	Analysis	7470A		1	434677	05/30/18 16:37	EEN	TAL CHI
Total/NA	Analysis	SM 2540C		1	433168	05/21/18 04:46	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		5	434300	05/28/18 19:04	HMW	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	434275	05/26/18 15:16	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		25	435221		CLB	TAL CHI
					(Start)	06/04/18 13:03		
					(End)	06/04/18 13:04		

TestAmerica Chicago

Lab Chronicle

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

TestAmerica Job ID: 500-145716-1

Client Sample ID: MW-17

Date Collected: 05/14/18 14:51

Date Received: 05/18/18 17:20

Lab Sample ID: 500-145716-12

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			433097	05/19/18 11:03	BDE	TAL CHI
Total Recoverable	Analysis	6010C		1	433534	05/22/18 20:44	PJ1	TAL CHI
Total Recoverable	Prep	3005A			433097	05/19/18 11:03	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	433393	05/21/18 23:58	FXG	TAL CHI
Total Recoverable	Prep	3005A			433097	05/19/18 11:03	BDE	TAL CHI
Total Recoverable	Analysis	6020A		10	433604	05/22/18 18:11	FXG	TAL CHI
Total/NA	Prep	7470A			434080	05/25/18 12:35	EEN	TAL CHI
Total/NA	Analysis	7470A		1	434677	05/30/18 16:44	EEN	TAL CHI
Total/NA	Analysis	SM 2540C		1	433168	05/21/18 04:49	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		5	434300	05/28/18 19:04	HMW	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	434275	05/26/18 15:19	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		25	435221		CLB	TAL CHI
						(Start) 06/04/18 13:04		
						(End) 06/04/18 13:05		

Client Sample ID: MW-18

Date Collected: 05/14/18 16:05

Date Received: 05/18/18 17:20

Lab Sample ID: 500-145716-13

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			433097	05/19/18 11:03	BDE	TAL CHI
Total Recoverable	Analysis	6010C		1	433534	05/22/18 20:48	PJ1	TAL CHI
Total Recoverable	Prep	3005A			433097	05/19/18 11:03	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	433393	05/22/18 00:01	FXG	TAL CHI
Total Recoverable	Prep	3005A			433097	05/19/18 11:03	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	433604	05/22/18 18:15	FXG	TAL CHI
Total/NA	Prep	7470A			434080	05/25/18 12:35	EEN	TAL CHI
Total/NA	Analysis	7470A		1	434677	05/30/18 16:46	EEN	TAL CHI
Total/NA	Analysis	SM 2540C		1	433168	05/21/18 04:51	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		5	434300	05/28/18 19:05	HMW	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	434275	05/26/18 15:22	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		20	435221		CLB	TAL CHI
						(Start) 06/04/18 13:05		
						(End) 06/04/18 13:06		

Client Sample ID: MW-19

Date Collected: 05/14/18 17:35

Date Received: 05/18/18 17:20

Lab Sample ID: 500-145716-14

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			433097	05/19/18 11:03	BDE	TAL CHI
Total Recoverable	Analysis	6010C		1	433534	05/22/18 20:52	PJ1	TAL CHI
Total Recoverable	Prep	3005A			433097	05/19/18 11:03	BDE	TAL CHI

TestAmerica Chicago

Lab Chronicle

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

TestAmerica Job ID: 500-145716-1

Client Sample ID: MW-19

Date Collected: 05/14/18 17:35

Date Received: 05/18/18 17:20

Lab Sample ID: 500-145716-14

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Analysis	6020A		1	433393	05/22/18 00:05	FXG	TAL CHI
Total Recoverable	Prep	3005A			433097	05/19/18 11:03	BDE	TAL CHI
Total Recoverable	Analysis	6020A		20	433604	05/22/18 18:18	FXG	TAL CHI
Total/NA	Prep	7470A			434080	05/25/18 12:35	EEN	TAL CHI
Total/NA	Analysis	7470A		1	434677	05/30/18 16:49	EEN	TAL CHI
Total/NA	Analysis	SM 2540C		1	433168	05/21/18 04:54	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		1	434300	05/28/18 19:07	HMW	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	434275	05/26/18 15:25	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		10	435221		CLB	TAL CHI
						(Start) 06/04/18 13:06		
						(End) 06/04/18 13:07		

Client Sample ID: Duplicate

Date Collected: 05/14/18 00:00

Date Received: 05/18/18 17:20

Lab Sample ID: 500-145716-15

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			433097	05/19/18 11:03	BDE	TAL CHI
Total Recoverable	Analysis	6010C		1	433534	05/22/18 20:57	PJ1	TAL CHI
Total Recoverable	Prep	3005A			433097	05/19/18 11:03	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	433393	05/22/18 00:09	FXG	TAL CHI
Total Recoverable	Prep	3005A			433097	05/19/18 11:03	BDE	TAL CHI
Total Recoverable	Analysis	6020A		20	433604	05/22/18 18:33	FXG	TAL CHI
Total/NA	Prep	7470A			434080	05/25/18 12:35	EEN	TAL CHI
Total/NA	Analysis	7470A		1	434677	05/30/18 16:51	EEN	TAL CHI
Total/NA	Analysis	SM 2540C		1	433168	05/21/18 04:57	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		1	434300	05/28/18 19:22	HMW	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	434275	05/26/18 15:29	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		10	435221		CLB	TAL CHI
						(Start) 06/04/18 13:07		
						(End) 06/04/18 13:08		

Laboratory References:

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

TestAmerica Chicago

Accreditation/Certification Summary

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

TestAmerica Job ID: 500-145716-1

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	04-30-19

- 1
- 2
- 3
- 4
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- 6
- 7
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- 11
- 12
- 13
- 14

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: 500-145716 COC
PO #: _____



Lab Lot # 500-145716

Package Sealed
Yes No
Samples Sealed
Yes No
Received on Ice
Yes No
Samples Intact
Yes No N/A

Temperature °C of Cooler
3.9, 4.7, 3.1, 2.1, 2.8

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

Sampler Name:		COMPANY:		# / Cont.												Within Hold Time		Preserv. Indicated	
Ian John Howieson		KPRG & Associates Inc.		Volume												Yes No		Yes No N/A	
Project Name:		TestAmerica Project Number:		Preserv.												pH Check OK		Res. CL ₂ Check OK	
Quarterly- Powerton CCR		50011612														Yes No		Yes No N/A	
Project Location:		TAT		Matrix	# of Cont											Sample Labels and COC Agree			
Pekin, IL		15 Days														Yes No COC not present			
Lab PM: Eric Lang		eric.lang@testamerica.com																	
Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Sampling Time			903.0, 904.0 Radium 226/228	6010C, 6020A, 7470A - Total Metals	2540C -TDS	4500_F_C - Fluoride	SM4500_Cl_E Chloride	SM4500_SO4_E - Sulfate					Additional Analyses / Remarks		
1		MW-01	5-17-18	15:15	W	5	X	X	X	X	X	X							
2		MW-02	5-15-18	09:05	W	5	X	X	X	X	X	X							
3		MW-03	5-15-18	11:00	W	5	X	X	X	X	X	X							
4		MW-04	5-15-18	12:11	W	5	X	X	X	X	X	X							
5		MW-05	5-15-18	13:31	W	5	X	X	X	X	X	X							
6		MW-08	5-17-18	13:29	W	5	X	X	X	X	X	X							
7		MW-09	5-16-18	10:19	W	5	X	X	X	X	X	X							
8		MW-10	5-16-18	11:41	W	5	X	X	X	X	X	X							
9		MW-11	5-16-18	13:01	W	5	X	X	X	X	X	X							
10		MW-12	5-16-18	14:41	W	5	X	X	X	X	X	X							
11		MW-15	5-17-18	11:58	W	5	X	X	X	X	X	X							

RELINQUISHED BY: IJH	COMPANY: KPRG	DATE: 5-18-18	TIME: 17:20	RECEIVED BY: <i>[Signature]</i>	COMPANY: TA	DATE: 5/18/18	TIME: 1720
RELINQUISHED BY:	COMPANY:	DATE:	TIME:	RECEIVED BY:	COMPANY:	DATE:	TIME:

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

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

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

COMMENTS:

Date
Received 05/18/18
Courier:
Hand Delivered ☒
Bill of Lading:

1 of 2

STL-8208 (0600)

Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-145716-1

Login Number: 145716

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	2.1, 2.8, 3.1, 3.9, 4.7
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	

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: 500-145716-2

Client Project/Site: Powerton CCR

For:

KPRG and Associates, Inc.

14665 West Lisbon Road,

Suite 2B

Brookfield, Wisconsin 53005

Attn: Richard Gnat



Authorized for release by:

6/28/2018 1:30:40 PM

Eric Lang, Manager of Project Management

(708)534-5200

eric.lang@testamericainc.com

LINKS

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www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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.

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



Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Method Summary	4
Sample Summary	5
Client Sample Results	6
Definitions	21
QC Association	22
QC Sample Results	23
Chronicle	25
Certification Summary	29
Chain of Custody	30
Receipt Checklists	34
Tracer Carrier Summary	37

Case Narrative

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

TestAmerica Job ID: 500-145716-2

Job ID: 500-145716-2

Laboratory: TestAmerica Chicago

Narrative

Job Narrative 500-145716-2

Comments

No additional comments.

Receipt

The samples were received on 5/18/2018 5:20 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 5 coolers at receipt time were 2.1° C, 2.8° C, 3.1° C, 3.9° C and 4.7° C.

RAD

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: Powerton CCR

TestAmerica Job ID: 500-145716-2

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

Protocol References:

EPA = US Environmental Protection Agency

None = None

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

Laboratory References:

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

Sample Summary

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

TestAmerica Job ID: 500-145716-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-145716-1	MW-01	Water	05/17/18 15:15	05/18/18 17:20
500-145716-2	MW-02	Water	05/15/18 09:05	05/18/18 17:20
500-145716-3	MW-03	Water	05/15/18 11:00	05/18/18 17:20
500-145716-4	MW-04	Water	05/15/18 12:11	05/18/18 17:20
500-145716-5	MW-05	Water	05/15/18 13:31	05/18/18 17:20
500-145716-6	MW-08	Water	05/17/18 13:29	05/18/18 17:20
500-145716-7	MW-09	Water	05/16/18 10:19	05/18/18 17:20
500-145716-8	MW-10	Water	05/16/18 11:41	05/18/18 17:20
500-145716-9	MW-11	Water	05/16/18 13:01	05/18/18 17:20
500-145716-10	MW-12	Water	05/16/18 14:41	05/18/18 17:20
500-145716-11	MW-15	Water	05/17/18 11:58	05/18/18 17:20
500-145716-12	MW-17	Water	05/14/18 14:51	05/18/18 17:20
500-145716-13	MW-18	Water	05/14/18 16:05	05/18/18 17:20
500-145716-14	MW-19	Water	05/14/18 17:35	05/18/18 17:20
500-145716-15	Duplicate	Water	05/14/18 00:00	05/18/18 17:20

Client Sample Results

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

TestAmerica Job ID: 500-145716-2

Client Sample ID: MW-01

Date Collected: 05/17/18 15:15

Date Received: 05/18/18 17:20

Lab Sample ID: 500-145716-1

Matrix: Water

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.109	U	0.143	0.143	1.00	0.238	pCi/L	05/29/18 11:58	06/20/18 10:42	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.2		40 - 110					05/29/18 11:58	06/20/18 10:42	1

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.244	U	0.243	0.244	1.00	0.396	pCi/L	05/29/18 13:22	06/19/18 10:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.2		40 - 110					05/29/18 13:22	06/19/18 10:52	1
Y Carrier	87.1		40 - 110					05/29/18 13:22	06/19/18 10:52	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.353	U	0.282	0.283	5.00	0.396	pCi/L		06/23/18 19:42	1

Client Sample Results

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

TestAmerica Job ID: 500-145716-2

Client Sample ID: MW-02

Date Collected: 05/15/18 09:05

Date Received: 05/18/18 17:20

Lab Sample ID: 500-145716-2

Matrix: Water

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0490	U	0.132	0.132	1.00	0.244	pCi/L	05/29/18 11:58	06/20/18 10:42	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					05/29/18 11:58	06/20/18 10:42	1

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0624	U	0.224	0.224	1.00	0.408	pCi/L	05/29/18 13:22	06/19/18 10:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					05/29/18 13:22	06/19/18 10:52	1
Y Carrier	84.5		40 - 110					05/29/18 13:22	06/19/18 10:52	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	-0.0134	U	0.260	0.260	5.00	0.408	pCi/L		06/23/18 19:42	1

Client Sample Results

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

TestAmerica Job ID: 500-145716-2

Client Sample ID: MW-03

Date Collected: 05/15/18 11:00

Date Received: 05/18/18 17:20

Lab Sample ID: 500-145716-3

Matrix: Water

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0740	U	0.146	0.146	1.00	0.262	pCi/L	05/29/18 11:58	06/20/18 10:43	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.5		40 - 110					05/29/18 11:58	06/20/18 10:43	1

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.326	U	0.302	0.303	1.00	0.489	pCi/L	05/29/18 13:22	06/19/18 10:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.5		40 - 110					05/29/18 13:22	06/19/18 10:52	1
Y Carrier	80.7		40 - 110					05/29/18 13:22	06/19/18 10:52	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.400	U	0.335	0.336	5.00	0.489	pCi/L		06/23/18 19:42	1

Client Sample Results

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

TestAmerica Job ID: 500-145716-2

Client Sample ID: MW-04

Date Collected: 05/15/18 12:11

Date Received: 05/18/18 17:20

Lab Sample ID: 500-145716-4

Matrix: Water

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.243	U	0.188	0.190	1.00	0.273	pCi/L	05/29/18 11:58	06/20/18 10:43	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.2		40 - 110					05/29/18 11:58	06/20/18 10:43	1

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.418		0.270	0.273	1.00	0.417	pCi/L	05/29/18 13:22	06/19/18 10:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.2		40 - 110					05/29/18 13:22	06/19/18 10:52	1
Y Carrier	81.5		40 - 110					05/29/18 13:22	06/19/18 10:52	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.661		0.329	0.333	5.00	0.417	pCi/L		06/23/18 19:42	1

Client Sample Results

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

TestAmerica Job ID: 500-145716-2

Client Sample ID: MW-05

Date Collected: 05/15/18 13:31

Date Received: 05/18/18 17:20

Lab Sample ID: 500-145716-5

Matrix: Water

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0476	U	0.142	0.142	1.00	0.266	pCi/L	05/29/18 11:58	06/20/18 10:43	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.3		40 - 110					05/29/18 11:58	06/20/18 10:43	1

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.337	U	0.248	0.250	1.00	0.390	pCi/L	05/29/18 13:22	06/19/18 10:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.3		40 - 110					05/29/18 13:22	06/19/18 10:52	1
Y Carrier	86.0		40 - 110					05/29/18 13:22	06/19/18 10:52	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.385	U	0.286	0.288	5.00	0.390	pCi/L		06/23/18 19:42	1

Client Sample Results

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

TestAmerica Job ID: 500-145716-2

Client Sample ID: MW-08

Date Collected: 05/17/18 13:29

Date Received: 05/18/18 17:20

Lab Sample ID: 500-145716-6

Matrix: Water

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.323		0.210	0.212	1.00	0.285	pCi/L	05/29/18 11:58	06/20/18 10:43	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.5		40 - 110					05/29/18 11:58	06/20/18 10:43	1

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.333	U	0.265	0.267	1.00	0.420	pCi/L	05/29/18 13:22	06/19/18 10:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.5		40 - 110					05/29/18 13:22	06/19/18 10:53	1
Y Carrier	87.9		40 - 110					05/29/18 13:22	06/19/18 10:53	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.655		0.338	0.341	5.00	0.420	pCi/L		06/23/18 19:42	1

Client Sample Results

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

TestAmerica Job ID: 500-145716-2

Client Sample ID: MW-09
Date Collected: 05/16/18 10:19
Date Received: 05/18/18 17:20

Lab Sample ID: 500-145716-7
Matrix: Water

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.103	U	0.141	0.142	1.00	0.238	pCi/L	05/29/18 11:58	06/20/18 10:43	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.9		40 - 110					05/29/18 11:58	06/20/18 10:43	1

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.235	U	0.259	0.260	1.00	0.424	pCi/L	05/29/18 13:22	06/19/18 10:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.9		40 - 110					05/29/18 13:22	06/19/18 10:53	1
Y Carrier	87.1		40 - 110					05/29/18 13:22	06/19/18 10:53	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.338	U	0.295	0.296	5.00	0.424	pCi/L		06/23/18 19:42	1

Client Sample Results

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

TestAmerica Job ID: 500-145716-2

Client Sample ID: MW-10

Date Collected: 05/16/18 11:41

Date Received: 05/18/18 17:20

Lab Sample ID: 500-145716-8

Matrix: Water

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.780		0.259	0.268	1.00	0.251	pCi/L	05/29/18 11:58	06/20/18 10:43	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.9		40 - 110					05/29/18 11:58	06/20/18 10:43	1

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.766		0.289	0.297	1.00	0.400	pCi/L	05/29/18 13:22	06/19/18 10:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.9		40 - 110					05/29/18 13:22	06/19/18 10:53	1
Y Carrier	83.0		40 - 110					05/29/18 13:22	06/19/18 10:53	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.55		0.388	0.400	5.00	0.400	pCi/L		06/23/18 19:42	1

TestAmerica Chicago

Client Sample Results

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

TestAmerica Job ID: 500-145716-2

Client Sample ID: MW-11

Date Collected: 05/16/18 13:01

Date Received: 05/18/18 17:20

Lab Sample ID: 500-145716-9

Matrix: Water

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.625		0.234	0.241	1.00	0.235	pCi/L	05/29/18 11:58	06/20/18 10:43	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.0		40 - 110					05/29/18 11:58	06/20/18 10:43	1

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.497		0.263	0.267	1.00	0.395	pCi/L	05/29/18 13:22	06/19/18 10:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.0		40 - 110					05/29/18 13:22	06/19/18 10:53	1
Y Carrier	88.6		40 - 110					05/29/18 13:22	06/19/18 10:53	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.12		0.352	0.360	5.00	0.395	pCi/L		06/23/18 19:42	1

Client Sample Results

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

TestAmerica Job ID: 500-145716-2

Client Sample ID: MW-12

Date Collected: 05/16/18 14:41

Date Received: 05/18/18 17:20

Lab Sample ID: 500-145716-10

Matrix: Water

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.690		0.255	0.263	1.00	0.263	pCi/L	05/29/18 11:58	06/20/18 10:43	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.8		40 - 110					05/29/18 11:58	06/20/18 10:43	1

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0505	U	0.229	0.229	1.00	0.401	pCi/L	05/29/18 13:22	06/19/18 10:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.8		40 - 110					05/29/18 13:22	06/19/18 10:53	1
Y Carrier	88.2		40 - 110					05/29/18 13:22	06/19/18 10:53	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.741		0.343	0.349	5.00	0.401	pCi/L		06/23/18 19:42	1

Client Sample Results

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

TestAmerica Job ID: 500-145716-2

Client Sample ID: MW-15

Date Collected: 05/17/18 11:58

Date Received: 05/18/18 17:20

Lab Sample ID: 500-145716-11

Matrix: Water

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.172	U	0.154	0.154	1.00	0.232	pCi/L	05/29/18 11:58	06/20/18 13:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.6		40 - 110					05/29/18 11:58	06/20/18 13:17	1

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.226	U	0.217	0.218	1.00	0.351	pCi/L	05/29/18 13:22	06/19/18 10:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.6		40 - 110					05/29/18 13:22	06/19/18 10:53	1
Y Carrier	85.6		40 - 110					05/29/18 13:22	06/19/18 10:53	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.397		0.266	0.267	5.00	0.351	pCi/L		06/23/18 19:42	1

Client Sample Results

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

TestAmerica Job ID: 500-145716-2

Client Sample ID: MW-17

Date Collected: 05/14/18 14:51

Date Received: 05/18/18 17:20

Lab Sample ID: 500-145716-12

Matrix: Water

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.27		0.316	0.336	1.00	0.250	pCi/L	05/29/18 11:58	06/20/18 13:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.9		40 - 110					05/29/18 11:58	06/20/18 13:17	1

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.755		0.284	0.292	1.00	0.398	pCi/L	05/29/18 13:22	06/19/18 10:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.9		40 - 110					05/29/18 13:22	06/19/18 10:53	1
Y Carrier	92.3		40 - 110					05/29/18 13:22	06/19/18 10:53	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	2.03		0.425	0.445	5.00	0.398	pCi/L		06/23/18 19:42	1

Client Sample Results

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

TestAmerica Job ID: 500-145716-2

Client Sample ID: MW-18

Date Collected: 05/14/18 16:05

Date Received: 05/18/18 17:20

Lab Sample ID: 500-145716-13

Matrix: Water

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.332		0.189	0.192	1.00	0.244	pCi/L	05/29/18 11:58	06/20/18 12:47	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					05/29/18 11:58	06/20/18 12:47	1

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.309	U	0.206	0.208	1.00	0.317	pCi/L	05/29/18 13:22	06/19/18 10:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					05/29/18 13:22	06/19/18 10:57	1
Y Carrier	87.5		40 - 110					05/29/18 13:22	06/19/18 10:57	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.641		0.280	0.283	5.00	0.317	pCi/L		06/23/18 19:42	1

Client Sample Results

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

TestAmerica Job ID: 500-145716-2

Client Sample ID: MW-19

Date Collected: 05/14/18 17:35

Date Received: 05/18/18 17:20

Lab Sample ID: 500-145716-14

Matrix: Water

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.235	U	0.173	0.174	1.00	0.246	pCi/L	05/29/18 11:58	06/20/18 12:47	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	104		40 - 110					05/29/18 11:58	06/20/18 12:47	1

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.326		0.193	0.195	1.00	0.288	pCi/L	05/29/18 13:22	06/19/18 10:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	104		40 - 110					05/29/18 13:22	06/19/18 10:57	1
Y Carrier	88.2		40 - 110					05/29/18 13:22	06/19/18 10:57	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.562		0.259	0.261	5.00	0.288	pCi/L		06/23/18 19:42	1

Client Sample Results

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

TestAmerica Job ID: 500-145716-2

Client Sample ID: Duplicate

Date Collected: 05/14/18 00:00

Date Received: 05/18/18 17:20

Lab Sample ID: 500-145716-15

Matrix: Water

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.193	U	0.166	0.166	1.00	0.249	pCi/L	05/29/18 11:58	06/20/18 12:47	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					05/29/18 11:58	06/20/18 12:47	1

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.404		0.210	0.213	1.00	0.307	pCi/L	05/29/18 13:22	06/19/18 10:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					05/29/18 13:22	06/19/18 10:57	1
Y Carrier	87.5		40 - 110					05/29/18 13:22	06/19/18 10:57	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.597		0.268	0.270	5.00	0.307	pCi/L		06/23/18 19:42	1

Definitions/Glossary

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

TestAmerica Job ID: 500-145716-2

Qualifiers

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
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: Powerton CCR

TestAmerica Job ID: 500-145716-2

Rad

Prep Batch: 367843

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-145716-1	MW-01	Total/NA	Water	PrecSep-21	
500-145716-2	MW-02	Total/NA	Water	PrecSep-21	
500-145716-3	MW-03	Total/NA	Water	PrecSep-21	
500-145716-4	MW-04	Total/NA	Water	PrecSep-21	
500-145716-5	MW-05	Total/NA	Water	PrecSep-21	
500-145716-6	MW-08	Total/NA	Water	PrecSep-21	
500-145716-7	MW-09	Total/NA	Water	PrecSep-21	
500-145716-8	MW-10	Total/NA	Water	PrecSep-21	
500-145716-9	MW-11	Total/NA	Water	PrecSep-21	
500-145716-10	MW-12	Total/NA	Water	PrecSep-21	
500-145716-11	MW-15	Total/NA	Water	PrecSep-21	
500-145716-12	MW-17	Total/NA	Water	PrecSep-21	
500-145716-13	MW-18	Total/NA	Water	PrecSep-21	
500-145716-14	MW-19	Total/NA	Water	PrecSep-21	
500-145716-15	Duplicate	Total/NA	Water	PrecSep-21	
MB 160-367843/23-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-367843/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
500-145716-10 DU	MW-12	Total/NA	Water	PrecSep-21	

Prep Batch: 367857

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-145716-1	MW-01	Total/NA	Water	PrecSep_0	
500-145716-2	MW-02	Total/NA	Water	PrecSep_0	
500-145716-3	MW-03	Total/NA	Water	PrecSep_0	
500-145716-4	MW-04	Total/NA	Water	PrecSep_0	
500-145716-5	MW-05	Total/NA	Water	PrecSep_0	
500-145716-6	MW-08	Total/NA	Water	PrecSep_0	
500-145716-7	MW-09	Total/NA	Water	PrecSep_0	
500-145716-8	MW-10	Total/NA	Water	PrecSep_0	
500-145716-9	MW-11	Total/NA	Water	PrecSep_0	
500-145716-10	MW-12	Total/NA	Water	PrecSep_0	
500-145716-11	MW-15	Total/NA	Water	PrecSep_0	
500-145716-12	MW-17	Total/NA	Water	PrecSep_0	
500-145716-13	MW-18	Total/NA	Water	PrecSep_0	
500-145716-14	MW-19	Total/NA	Water	PrecSep_0	
500-145716-15	Duplicate	Total/NA	Water	PrecSep_0	
MB 160-367857/23-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-367857/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
500-145716-10 DU	MW-12	Total/NA	Water	PrecSep_0	

QC Sample Results

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

TestAmerica Job ID: 500-145716-2

Method: 903.0 - Radium-226 (GFPC)

Lab Sample ID: MB 160-367843/23-A
Matrix: Water
Analysis Batch: 371317

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 367843

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.1840	U	0.137	0.138	1.00	0.195	pCi/L	05/29/18 11:58	06/20/18 12:44	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					05/29/18 11:58	06/20/18 12:44	1

Lab Sample ID: LCS 160-367843/1-A
Matrix: Water
Analysis Batch: 371320

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 367843

Analyte		Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226		11.8	11.82		1.37	1.00	0.215	pCi/L	100	68 - 137
Carrier	LCS %Yield	LCS Qualifier	Limits							
Ba Carrier	107		40 - 110							

Lab Sample ID: 500-145716-10 DU
Matrix: Water
Analysis Batch: 371320

Client Sample ID: MW-12
Prep Type: Total/NA
Prep Batch: 367843

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-226	0.690		0.4100		0.198	1.00	0.223	pCi/L	0.61	1
Carrier	DU %Yield	DU Qualifier	Limits							
Ba Carrier	97.1		40 - 110							

Method: 904.0 - Radium-228 (GFPC)

Lab Sample ID: MB 160-367857/23-A
Matrix: Water
Analysis Batch: 371107

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 367857

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.05875	U	0.188	0.188	1.00	0.328	pCi/L	05/29/18 13:22	06/19/18 10:59	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	103		40 - 110					05/29/18 13:22	06/19/18 10:59	1
Y Carrier	87.9		40 - 110					05/29/18 13:22	06/19/18 10:59	1

TestAmerica Chicago

QC Sample Results

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

TestAmerica Job ID: 500-145716-2

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

Lab Sample ID: LCS 160-367857/1-A
Matrix: Water
Analysis Batch: 371219

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 367857

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	8.21	7.721		0.925	1.00	0.422	pCi/L	94	56 - 140
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	107		40 - 110						
Y Carrier	84.5		40 - 110						

Lab Sample ID: 500-145716-10 DU
Matrix: Water
Analysis Batch: 371219

Client Sample ID: MW-12
Prep Type: Total/NA
Prep Batch: 367857

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-228	0.0505	U	0.1106	U	0.228	1.00	0.388	pCi/L	0.13	1
Carrier	DU %Yield	DU Qualifier	Limits							
Ba Carrier	97.1		40 - 110							
Y Carrier	82.6		40 - 110							

Lab Chronicle

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

TestAmerica Job ID: 500-145716-2

Client Sample ID: MW-01

Date Collected: 05/17/18 15:15

Date Received: 05/18/18 17:20

Lab Sample ID: 500-145716-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			367843	05/29/18 11:58	TJT	TAL SL
Total/NA	Analysis	903.0		1	371320	06/20/18 10:42	KLS	TAL SL
Total/NA	Prep	PrecSep_0			367857	05/29/18 13:22	TJT	TAL SL
Total/NA	Analysis	904.0		1	371219	06/19/18 10:52	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	372130	06/23/18 19:42	RTM	TAL SL

Client Sample ID: MW-02

Date Collected: 05/15/18 09:05

Date Received: 05/18/18 17:20

Lab Sample ID: 500-145716-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			367843	05/29/18 11:58	TJT	TAL SL
Total/NA	Analysis	903.0		1	371320	06/20/18 10:42	KLS	TAL SL
Total/NA	Prep	PrecSep_0			367857	05/29/18 13:22	TJT	TAL SL
Total/NA	Analysis	904.0		1	371219	06/19/18 10:52	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	372130	06/23/18 19:42	RTM	TAL SL

Client Sample ID: MW-03

Date Collected: 05/15/18 11:00

Date Received: 05/18/18 17:20

Lab Sample ID: 500-145716-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			367843	05/29/18 11:58	TJT	TAL SL
Total/NA	Analysis	903.0		1	371320	06/20/18 10:43	KLS	TAL SL
Total/NA	Prep	PrecSep_0			367857	05/29/18 13:22	TJT	TAL SL
Total/NA	Analysis	904.0		1	371219	06/19/18 10:52	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	372130	06/23/18 19:42	RTM	TAL SL

Client Sample ID: MW-04

Date Collected: 05/15/18 12:11

Date Received: 05/18/18 17:20

Lab Sample ID: 500-145716-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			367843	05/29/18 11:58	TJT	TAL SL
Total/NA	Analysis	903.0		1	371320	06/20/18 10:43	KLS	TAL SL
Total/NA	Prep	PrecSep_0			367857	05/29/18 13:22	TJT	TAL SL
Total/NA	Analysis	904.0		1	371219	06/19/18 10:52	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	372130	06/23/18 19:42	RTM	TAL SL

TestAmerica Chicago

Lab Chronicle

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

TestAmerica Job ID: 500-145716-2

Client Sample ID: MW-05

Date Collected: 05/15/18 13:31

Date Received: 05/18/18 17:20

Lab Sample ID: 500-145716-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			367843	05/29/18 11:58	TJT	TAL SL
Total/NA	Analysis	903.0		1	371320	06/20/18 10:43	KLS	TAL SL
Total/NA	Prep	PrecSep_0			367857	05/29/18 13:22	TJT	TAL SL
Total/NA	Analysis	904.0		1	371219	06/19/18 10:52	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	372130	06/23/18 19:42	RTM	TAL SL

Client Sample ID: MW-08

Date Collected: 05/17/18 13:29

Date Received: 05/18/18 17:20

Lab Sample ID: 500-145716-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			367843	05/29/18 11:58	TJT	TAL SL
Total/NA	Analysis	903.0		1	371320	06/20/18 10:43	KLS	TAL SL
Total/NA	Prep	PrecSep_0			367857	05/29/18 13:22	TJT	TAL SL
Total/NA	Analysis	904.0		1	371219	06/19/18 10:53	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	372130	06/23/18 19:42	RTM	TAL SL

Client Sample ID: MW-09

Date Collected: 05/16/18 10:19

Date Received: 05/18/18 17:20

Lab Sample ID: 500-145716-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			367843	05/29/18 11:58	TJT	TAL SL
Total/NA	Analysis	903.0		1	371320	06/20/18 10:43	KLS	TAL SL
Total/NA	Prep	PrecSep_0			367857	05/29/18 13:22	TJT	TAL SL
Total/NA	Analysis	904.0		1	371219	06/19/18 10:53	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	372130	06/23/18 19:42	RTM	TAL SL

Client Sample ID: MW-10

Date Collected: 05/16/18 11:41

Date Received: 05/18/18 17:20

Lab Sample ID: 500-145716-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			367843	05/29/18 11:58	TJT	TAL SL
Total/NA	Analysis	903.0		1	371320	06/20/18 10:43	KLS	TAL SL
Total/NA	Prep	PrecSep_0			367857	05/29/18 13:22	TJT	TAL SL
Total/NA	Analysis	904.0		1	371219	06/19/18 10:53	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	372130	06/23/18 19:42	RTM	TAL SL

TestAmerica Chicago

Lab Chronicle

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

TestAmerica Job ID: 500-145716-2

Client Sample ID: MW-11

Date Collected: 05/16/18 13:01

Date Received: 05/18/18 17:20

Lab Sample ID: 500-145716-9

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			367843	05/29/18 11:58	TJT	TAL SL
Total/NA	Analysis	903.0		1	371320	06/20/18 10:43	KLS	TAL SL
Total/NA	Prep	PrecSep_0			367857	05/29/18 13:22	TJT	TAL SL
Total/NA	Analysis	904.0		1	371219	06/19/18 10:53	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	372130	06/23/18 19:42	RTM	TAL SL

Client Sample ID: MW-12

Date Collected: 05/16/18 14:41

Date Received: 05/18/18 17:20

Lab Sample ID: 500-145716-10

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			367843	05/29/18 11:58	TJT	TAL SL
Total/NA	Analysis	903.0		1	371320	06/20/18 10:43	KLS	TAL SL
Total/NA	Prep	PrecSep_0			367857	05/29/18 13:22	TJT	TAL SL
Total/NA	Analysis	904.0		1	371219	06/19/18 10:53	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	372130	06/23/18 19:42	RTM	TAL SL

Client Sample ID: MW-15

Date Collected: 05/17/18 11:58

Date Received: 05/18/18 17:20

Lab Sample ID: 500-145716-11

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			367843	05/29/18 11:58	TJT	TAL SL
Total/NA	Analysis	903.0		1	371320	06/20/18 13:17	KLS	TAL SL
Total/NA	Prep	PrecSep_0			367857	05/29/18 13:22	TJT	TAL SL
Total/NA	Analysis	904.0		1	371219	06/19/18 10:53	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	372130	06/23/18 19:42	RTM	TAL SL

Client Sample ID: MW-17

Date Collected: 05/14/18 14:51

Date Received: 05/18/18 17:20

Lab Sample ID: 500-145716-12

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			367843	05/29/18 11:58	TJT	TAL SL
Total/NA	Analysis	903.0		1	371320	06/20/18 13:17	KLS	TAL SL
Total/NA	Prep	PrecSep_0			367857	05/29/18 13:22	TJT	TAL SL
Total/NA	Analysis	904.0		1	371219	06/19/18 10:53	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	372130	06/23/18 19:42	RTM	TAL SL

TestAmerica Chicago

Lab Chronicle

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

TestAmerica Job ID: 500-145716-2

Client Sample ID: MW-18

Date Collected: 05/14/18 16:05

Date Received: 05/18/18 17:20

Lab Sample ID: 500-145716-13

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			367843	05/29/18 11:58	TJT	TAL SL
Total/NA	Analysis	903.0		1	371320	06/20/18 12:47	KLS	TAL SL
Total/NA	Prep	PrecSep_0			367857	05/29/18 13:22	TJT	TAL SL
Total/NA	Analysis	904.0		1	371132	06/19/18 10:57	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	372130	06/23/18 19:42	RTM	TAL SL

Client Sample ID: MW-19

Date Collected: 05/14/18 17:35

Date Received: 05/18/18 17:20

Lab Sample ID: 500-145716-14

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			367843	05/29/18 11:58	TJT	TAL SL
Total/NA	Analysis	903.0		1	371320	06/20/18 12:47	KLS	TAL SL
Total/NA	Prep	PrecSep_0			367857	05/29/18 13:22	TJT	TAL SL
Total/NA	Analysis	904.0		1	371132	06/19/18 10:57	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	372130	06/23/18 19:42	RTM	TAL SL

Client Sample ID: Duplicate

Date Collected: 05/14/18 00:00

Date Received: 05/18/18 17:20

Lab Sample ID: 500-145716-15

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			367843	05/29/18 11:58	TJT	TAL SL
Total/NA	Analysis	903.0		1	371320	06/20/18 12:47	KLS	TAL SL
Total/NA	Prep	PrecSep_0			367857	05/29/18 13:22	TJT	TAL SL
Total/NA	Analysis	904.0		1	371132	06/19/18 10:57	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	372130	06/23/18 19:42	RTM	TAL SL

Laboratory References:

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

Accreditation/Certification Summary

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

TestAmerica Job ID: 500-145716-2

Laboratory: TestAmerica Chicago

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Illinois	NELAP	5	100201	04-30-19

Laboratory: TestAmerica St. Louis

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	200023	11-30-18

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

Analysis Method	Prep Method	Matrix	Analyte
903.0	PrecSep-21	Water	Radium-226
904.0	PrecSep_0	Water	Radium-228
Ra226_Ra228		Water	Combined Radium 226 + 228

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: 500-145716 COC
PO #: _____



Lab Lot # 500-145716

Package Sealed
Yes No
Samples Sealed
Yes No
Received on Ice
Yes No
Samples Intact
Yes No N/A

Temperature °C of Cooler
3.9, 4.7, 3.1, 2.1, 2.8

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

Sampler Name:		COMPANY:		# / Cont.												Within Hold Time		Preserv. Indicated	
Ian John Howieson		KPRG & Associates Inc.		Volume												Yes No		Yes No N/A	
Project Name:		TestAmerica Project Number:		Preserv.												pH Check OK		Res. CL ₂ Check OK	
Quarterly- Powerton CCR		50011612														Yes No		Yes No N/A	
Project Location:		TAT		Matrix	# of Cont											Sample Labels and COC Agree			
Pekin, IL		15 Days														Yes No COC not present			
Lab PM: Eric Lang		eric.lang@testamerica.com																	
Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Sampling Time			903.0, 904.0 Radium 226/228	6010C, 6020A, 7470A - Total Metals	2540C -TDS	4500_F_C - Fluoride	SM4500_Cl_E Chloride	SM4500_SO4_E - Sulfate					Additional Analyses / Remarks		
1		MW-01	5-17-18	15:15	W	5	X	X	X	X	X	X							
2		MW-02	5-15-18	09:05	W	5	X	X	X	X	X	X							
3		MW-03	5-15-18	11:00	W	5	X	X	X	X	X	X							
4		MW-04	5-15-18	12:11	W	5	X	X	X	X	X	X							
5		MW-05	5-15-18	13:31	W	5	X	X	X	X	X	X							
6		MW-08	5-17-18	13:29	W	5	X	X	X	X	X	X							
7		MW-09	5-16-18	10:19	W	5	X	X	X	X	X	X							
8		MW-10	5-16-18	11:41	W	5	X	X	X	X	X	X							
9		MW-11	5-16-18	13:01	W	5	X	X	X	X	X	X							
10		MW-12	5-16-18	14:41	W	5	X	X	X	X	X	X							
11		MW-15	5-17-18	11:58	W	5	X	X	X	X	X	X							

RELINQUISHED BY: IJH	COMPANY: KPRG	DATE: 5-18-18	TIME: 17:20	RECEIVED BY: <i>[Signature]</i>	COMPANY: TA	DATE: 5/18/18	TIME: 1720
RELINQUISHED BY:	COMPANY:	DATE:	TIME:	RECEIVED BY:	COMPANY:	DATE:	TIME:

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

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

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

COMMENTS:

Date
Received 05/18/18
Courier:
Hand Delivered ☒
Bill of Lading:

1 of 2

STL-8208 (0600)

Chain of Custody Record



Client Information (Sub Contract Lab)		Sampler:	Lab PM:	Carrier Tracking No(s):	COC No:						
Client Contact:		Lang, Eric A.	Lang, Eric A.	500-104744.1	500-104744.1						
Shipping/Receiving		Phone:	E-Mail:	State of Origin:	Page:						
Company:			eric.lang@testamericainc.com	Illinois	Page 1 of 2						
TestAmerica Laboratories, Inc.		Accreditations Required (See note):		Job #:	500-145716-2						
Address:		NELAP - Illinois		Preservation Codes:							
City:		Due Date Requested:		Analysis Requested							
13715 Rider Trail North,		6/19/2018									
Earth City		TAT Requested (days):									
State, Zip:											
MO, 63045											
Phone:		PO #:									
314-298-8566(Tel) 314-298-8757(Fax)											
Email:		WO #:									
Project Name:		Project #:									
Powerton CCR		50011612									
Site:		SSOW#:									
MWG - Powerton											
Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=water/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	903.0/PreSep. 21 Standard Target List	904.0/PreSep. 0 Standard Target List	Ra226Ra228_GFPc	Total Number of Containers	Special Instructions/Note:
MW-01 (500-145716-1)	5/17/18	15:15 Central	Water	Water			X	X		3	Full QC needed (dups, etc) Batch QC must be performed (dups, spikes, etc) - no NCMS
MW-02 (500-145716-2)	5/15/18	09:05 Central	Water	Water			X	X		3	Full QC needed (dups, etc) Batch QC must be performed (dups, spikes, etc) - no NCMS
MW-03 (500-145716-3)	5/15/18	11:00 Central	Water	Water			X	X		3	Full QC needed (dups, etc) Batch QC must be performed (dups, spikes, etc) - no NCMS
MW-04 (500-145716-4)	5/15/18	12:11 Central	Water	Water			X	X		3	Full QC needed (dups, etc) Batch QC must be performed (dups, spikes, etc) - no NCMS
MW-05 (500-145716-5)	5/15/18	13:31 Central	Water	Water			X	X		3	Full QC needed (dups, etc) Batch QC must be performed (dups, spikes, etc) - no NCMS
MW-08 (500-145716-6)	5/17/18	13:29 Central	Water	Water			X	X		3	Full QC needed (dups, etc) Batch QC must be performed (dups, spikes, etc) - no NCMS
MW-09 (500-145716-7)	5/16/18	10:19 Central	Water	Water			X	X		3	Full QC needed (dups, etc) Batch QC must be performed (dups, spikes, etc) - no NCMS
MW-10 (500-145716-8)	5/16/18	11:41 Central	Water	Water			X	X		3	Full QC needed (dups, etc) Batch QC must be performed (dups, spikes, etc) - no NCMS
MW-11 (500-145716-9)	5/16/18	13:01 Central	Water	Water			X	X		3	Full QC needed (dups, etc) Batch QC must be performed (dups, spikes, etc) - no NCMS
Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.											
Possible Hazard Identification											
Unconfirmed											
Deliverable Requested: I, II, III, IV, Other (specify)											
Primary Deliverable Rank: 2											
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)											
☐ Return To Client ☐ Disposal By Lab ☐ Archive For Months											
Special Instructions/QC Requirements:											
Empty Kit Relinquished by:											
Date/Time: 5/21/18 13:15											
Relinquished by: [Signature]											
Relinquished by:											
Date/Time:											
Relinquished by:											
Date/Time:											
Custody Seal No.:											
Custody Seal Intact: ☐ Yes ☐ No											
Cooler Temperature(s) °C and Other Remarks:											

[illegible]

Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-145716-2

Login Number: 145716

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	2.1, 2.8, 3.1, 3.9, 4.7
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	

Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-145716-2

Login Number: 145716

List Number: 2

Creator: Press, Nicholas B

List Source: TestAmerica St. Louis

List Creation: 05/22/18 11:08 AM

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	12
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-145716-2

Login Number: 145716

List Number: 3

Creator: Press, Nicholas B

List Source: TestAmerica St. Louis

List Creation: 05/22/18 11:23 AM

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	12
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Tracer/Carrier Summary

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

TestAmerica Job ID: 500-145716-2

Method: 903.0 - Radium-226 (GFPC)

Matrix: Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Ba Carrier (40-110)	
500-145716-1	MW-01	98.2	
500-145716-2	MW-02	100	
500-145716-3	MW-03	96.5	
500-145716-4	MW-04	93.2	
500-145716-5	MW-05	95.3	
500-145716-6	MW-08	85.5	
500-145716-7	MW-09	92.9	
500-145716-8	MW-10	95.9	
500-145716-9	MW-11	95.0	
500-145716-10	MW-12	93.8	
500-145716-10 DU	MW-12	97.1	
500-145716-11	MW-15	97.6	
500-145716-12	MW-17	92.9	
500-145716-13	MW-18	103	
500-145716-14	MW-19	104	
500-145716-15	Duplicate	101	
LCS 160-367843/1-A	Lab Control Sample	107	
MB 160-367843/23-A	Method Blank	103	

Tracer/Carrier Legend

Ba Carrier = Ba Carrier

Method: 904.0 - Radium-228 (GFPC)

Matrix: Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Ba Carrier (40-110)	Y Carrier (40-110)
500-145716-1	MW-01	98.2	87.1
500-145716-2	MW-02	100	84.5
500-145716-3	MW-03	96.5	80.7
500-145716-4	MW-04	93.2	81.5
500-145716-5	MW-05	95.3	86.0
500-145716-6	MW-08	85.5	87.9
500-145716-7	MW-09	92.9	87.1
500-145716-8	MW-10	95.9	83.0
500-145716-9	MW-11	95.0	88.6
500-145716-10	MW-12	93.8	88.2
500-145716-10 DU	MW-12	97.1	82.6
500-145716-11	MW-15	97.6	85.6
500-145716-12	MW-17	92.9	92.3
500-145716-13	MW-18	103	87.5
500-145716-14	MW-19	104	88.2
500-145716-15	Duplicate	101	87.5
LCS 160-367857/1-A	Lab Control Sample	107	84.5
MB 160-367857/23-A	Method Blank	103	87.9

Tracer/Carrier Legend

Ba Carrier = Ba Carrier

Y Carrier = Y Carrier

TestAmerica Chicago

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Chicago

2417 Bond Street

University Park, IL 60484

Tel: (708)534-5200

TestAmerica Job ID: 500-149809-1

Client Project/Site: Powerton CCR

For:

KPRG and Associates, Inc.

14665 West Lisbon Road,

Suite 1A

Brookfield, Wisconsin 53005

Attn: Richard Gnat



Authorized for release by:

8/24/2018 2:41:29 PM

Eric Lang, Manager of Project Management

(708)534-5200

eric.lang@testamericainc.com

LINKS

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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

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

Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Detection Summary	4
Method Summary	10
Sample Summary	11
Client Sample Results	12
Definitions	27
QC Association	28
QC Sample Results	33
Chronicle	38
Certification Summary	45
Chain of Custody	46
Receipt Checklists	48



Case Narrative

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

TestAmerica Job ID: 500-149809-1

Job ID: 500-149809-1

Laboratory: TestAmerica Chicago

Narrative

Job Narrative 500-149809-1

Comments

No additional comments.

Receipt

The samples were received on 8/10/2018 4:50 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 5 coolers at receipt time were 3.6° C, 3.7° C, 5.2° C, 5.4° C and 6.0° C.

Metals

Method(s) 6020A: The internal standard Terbium (Tb) was used to report the elements Lead and Thallium in batch 500-445195. This was due to the LCS being spiked with the trace digestion spike which contains Bismuth

Method(s) 6020A: The CCV at line 63 and CCVL at line 38, associated with batch 500-445195 recovered above the upper control limit for Beryllium. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have 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.

Detection Summary

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

TestAmerica Job ID: 500-149809-1

Client Sample ID: MW-01

Lab Sample ID: 500-149809-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.051		0.0025		mg/L	1		6020A	Total Recoverable
Boron	0.14		0.050		mg/L	1		6020A	Total Recoverable
Calcium	86		0.20		mg/L	1		6020A	Total Recoverable
Total Dissolved Solids	430		10		mg/L	1		SM 2540C	Total/NA
Chloride	48		2.0		mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.13		0.10		mg/L	1		SM 4500 F C	Total/NA
Sulfate	43		10		mg/L	2		SM 4500 SO4 E	Total/NA

Client Sample ID: MW-02

Lab Sample ID: 500-149809-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0016		0.0010		mg/L	1		6020A	Total Recoverable
Barium	0.067		0.0025		mg/L	1		6020A	Total Recoverable
Boron	1.5		0.25		mg/L	5		6020A	Total Recoverable
Calcium	89		0.20		mg/L	1		6020A	Total Recoverable
Total Dissolved Solids	530		10		mg/L	1		SM 2540C	Total/NA
Chloride	54		2.0		mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.15		0.10		mg/L	1		SM 4500 F C	Total/NA
Sulfate	51		25		mg/L	5		SM 4500 SO4 E	Total/NA

Client Sample ID: MW-03

Lab Sample ID: 500-149809-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0015		0.0010		mg/L	1		6020A	Total Recoverable
Barium	0.067		0.0025		mg/L	1		6020A	Total Recoverable
Boron	0.40		0.050		mg/L	1		6020A	Total Recoverable
Calcium	82		0.20		mg/L	1		6020A	Total Recoverable
Total Dissolved Solids	500		10		mg/L	1		SM 2540C	Total/NA
Chloride	67		10		mg/L	5		SM 4500 Cl- E	Total/NA
Fluoride	0.22		0.10		mg/L	1		SM 4500 F C	Total/NA
Sulfate	49		25		mg/L	5		SM 4500 SO4 E	Total/NA

Client Sample ID: MW-04

Lab Sample ID: 500-149809-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0011		0.0010		mg/L	1		6020A	Total Recoverable
Barium	0.031		0.0025		mg/L	1		6020A	Total Recoverable
Boron	0.79		0.050		mg/L	1		6020A	Total Recoverable
Calcium	84		0.20		mg/L	1		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

Detection Summary

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

TestAmerica Job ID: 500-149809-1

Client Sample ID: MW-04 (Continued)

Lab Sample ID: 500-149809-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Molybdenum	0.0060		0.0050		mg/L	1		6020A	Total Recoverable
Total Dissolved Solids	510		10		mg/L	1		SM 2540C	Total/NA
Chloride	71		2.0		mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.32		0.10		mg/L	1		SM 4500 F C	Total/NA
Sulfate	49		25		mg/L	5		SM 4500 SO4 E	Total/NA

Client Sample ID: MW-05

Lab Sample ID: 500-149809-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.054		0.0025		mg/L	1		6020A	Total Recoverable
Boron	0.49		0.050		mg/L	1		6020A	Total Recoverable
Calcium	110		0.20		mg/L	1		6020A	Total Recoverable
Molybdenum	0.0069		0.0050		mg/L	1		6020A	Total Recoverable
Total Dissolved Solids	890		10		mg/L	1		SM 2540C	Total/NA
Chloride	120		10		mg/L	5		SM 4500 Cl- E	Total/NA
Fluoride	0.32		0.10		mg/L	1		SM 4500 F C	Total/NA
Sulfate	180		50		mg/L	10		SM 4500 SO4 E	Total/NA

Client Sample ID: MW-08

Lab Sample ID: 500-149809-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0055		0.0010		mg/L	1		6020A	Total Recoverable
Barium	0.071		0.0025		mg/L	1		6020A	Total Recoverable
Boron	1.1		0.25		mg/L	5		6020A	Total Recoverable
Calcium	140		0.20		mg/L	1		6020A	Total Recoverable
Molybdenum	0.019		0.0050		mg/L	1		6020A	Total Recoverable
Total Dissolved Solids	1200		10		mg/L	1		SM 2540C	Total/NA
Chloride	270		10		mg/L	5		SM 4500 Cl- E	Total/NA
Fluoride	0.32		0.10		mg/L	1		SM 4500 F C	Total/NA
Sulfate	190		50		mg/L	10		SM 4500 SO4 E	Total/NA

Client Sample ID: MW-09

Lab Sample ID: 500-149809-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.037		0.0025		mg/L	1		6020A	Total Recoverable
Boron	4.3		1.0		mg/L	20		6020A	Total Recoverable
Calcium	86		0.20		mg/L	1		6020A	Total Recoverable
Molybdenum	0.032		0.0050		mg/L	1		6020A	Total Recoverable
Selenium	0.0078		0.0025		mg/L	1		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

Detection Summary

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

TestAmerica Job ID: 500-149809-1

Client Sample ID: MW-09 (Continued)

Lab Sample ID: 500-149809-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Dissolved Solids	690		10		mg/L	1		SM 2540C	Total/NA
Chloride	39		2.0		mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.14		0.10		mg/L	1		SM 4500 F C	Total/NA
Sulfate	180		50		mg/L	10		SM 4500 SO4 E	Total/NA

Client Sample ID: MW-10

Lab Sample ID: 500-149809-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0012		0.0010		mg/L	1		6020A	Total Recoverable
Barium	0.22		0.0025		mg/L	1		6020A	Total Recoverable
Boron	0.39		0.050		mg/L	1		6020A	Total Recoverable
Calcium	99		0.20		mg/L	1		6020A	Total Recoverable
Cobalt	0.014		0.0010		mg/L	1		6020A	Total Recoverable
Lead	0.00079		0.00050		mg/L	1		6020A	Total Recoverable
Selenium	0.0062		0.0025		mg/L	1		6020A	Total Recoverable
Total Dissolved Solids	550		10		mg/L	1		SM 2540C	Total/NA
Chloride	58		2.0		mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.19		0.10		mg/L	1		SM 4500 F C	Total/NA
Sulfate	60		20		mg/L	4		SM 4500 SO4 E	Total/NA

Client Sample ID: MW-11

Lab Sample ID: 500-149809-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.68		0.0010		mg/L	1		6020A	Total Recoverable
Barium	3.0		0.0025		mg/L	1		6020A	Total Recoverable
Boron	1.4		0.50		mg/L	10		6020A	Total Recoverable
Cadmium	0.00082		0.00050		mg/L	1		6020A	Total Recoverable
Calcium	160		0.20		mg/L	1		6020A	Total Recoverable
Cobalt	0.0053		0.0010		mg/L	1		6020A	Total Recoverable
Lead	0.0012		0.00050		mg/L	1		6020A	Total Recoverable
Molybdenum	0.013		0.0050		mg/L	1		6020A	Total Recoverable
Total Dissolved Solids	1000		10		mg/L	1		SM 2540C	Total/NA
Chloride	120		10		mg/L	5		SM 4500 Cl- E	Total/NA
Fluoride	0.65		0.10		mg/L	1		SM 4500 F C	Total/NA
Sulfate	220		50		mg/L	10		SM 4500 SO4 E	Total/NA

Client Sample ID: MW-12

Lab Sample ID: 500-149809-10

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

Detection Summary

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

TestAmerica Job ID: 500-149809-1

Client Sample ID: MW-12 (Continued)

Lab Sample ID: 500-149809-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.12		0.0010		mg/L	1		6020A	Total Recoverable
Barium	0.15		0.0025		mg/L	1		6020A	Total Recoverable
Boron	0.61		0.050		mg/L	1		6020A	Total Recoverable
Cadmium	0.00084		0.00050		mg/L	1		6020A	Total Recoverable
Calcium	120		0.20		mg/L	1		6020A	Total Recoverable
Lead	0.00072		0.00050		mg/L	1		6020A	Total Recoverable
Molybdenum	0.026		0.0050		mg/L	1		6020A	Total Recoverable
Total Dissolved Solids	1300		10		mg/L	1		SM 2540C	Total/NA
Chloride	190		10		mg/L	5		SM 4500 Cl- E	Total/NA
Fluoride	0.44		0.10		mg/L	1		SM 4500 F C	Total/NA
Sulfate	480		100		mg/L	20		SM 4500 SO4 E	Total/NA

Client Sample ID: MW-15

Lab Sample ID: 500-149809-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lithium	0.026		0.010		mg/L	1		6010C	Total Recoverable
Arsenic	0.0083		0.0010		mg/L	1		6020A	Total Recoverable
Barium	0.048		0.0025		mg/L	1		6020A	Total Recoverable
Boron	2.3		0.50		mg/L	10		6020A	Total Recoverable
Calcium	200		0.20		mg/L	1		6020A	Total Recoverable
Molybdenum	0.033		0.0050		mg/L	1		6020A	Total Recoverable
Selenium	0.060		0.0025		mg/L	1		6020A	Total Recoverable
Total Dissolved Solids	1700		10		mg/L	1		SM 2540C	Total/NA
Chloride	200		10		mg/L	5		SM 4500 Cl- E	Total/NA
Fluoride	0.48		0.10		mg/L	1		SM 4500 F C	Total/NA
Sulfate	520		130		mg/L	25		SM 4500 SO4 E	Total/NA

Client Sample ID: MW-17

Lab Sample ID: 500-149809-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lithium	0.019		0.010		mg/L	1		6010C	Total Recoverable
Arsenic	0.087		0.0010		mg/L	1		6020A	Total Recoverable
Barium	0.055		0.0025		mg/L	1		6020A	Total Recoverable
Boron	1.3		0.50		mg/L	10		6020A	Total Recoverable
Cadmium	0.00094		0.00050		mg/L	1		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

Detection Summary

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

TestAmerica Job ID: 500-149809-1

Client Sample ID: MW-17 (Continued)

Lab Sample ID: 500-149809-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	170		0.20		mg/L	1		6020A	Total Recoverable
Cobalt	0.0015		0.0010		mg/L	1		6020A	Total Recoverable
Molybdenum	0.084		0.0050		mg/L	1		6020A	Total Recoverable
Thallium	0.0023		0.0020		mg/L	1		6020A	Total Recoverable
Total Dissolved Solids	1600		10		mg/L	1		SM 2540C	Total/NA
Chloride	230		10		mg/L	5		SM 4500 Cl- E	Total/NA
Fluoride	0.60		0.10		mg/L	1		SM 4500 F C	Total/NA
Sulfate	620		250		mg/L	50		SM 4500 SO4 E	Total/NA

Client Sample ID: MW-18

Lab Sample ID: 500-149809-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lithium	0.013		0.010		mg/L	1		6010C	Total Recoverable
Barium	0.12		0.0025		mg/L	1		6020A	Total Recoverable
Boron	0.58		0.050		mg/L	1		6020A	Total Recoverable
Calcium	120		0.20		mg/L	1		6020A	Total Recoverable
Molybdenum	0.0052		0.0050		mg/L	1		6020A	Total Recoverable
Total Dissolved Solids	1100		10		mg/L	1		SM 2540C	Total/NA
Chloride	230		10		mg/L	5		SM 4500 Cl- E	Total/NA
Fluoride	0.57		0.10		mg/L	1		SM 4500 F C	Total/NA
Sulfate	270		50		mg/L	10		SM 4500 SO4 E	Total/NA

Client Sample ID: MW-19

Lab Sample ID: 500-149809-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.078		0.0025		mg/L	1		6020A	Total Recoverable
Boron	3.8		1.0		mg/L	20		6020A	Total Recoverable
Calcium	100		0.20		mg/L	1		6020A	Total Recoverable
Molybdenum	0.032		0.0050		mg/L	1		6020A	Total Recoverable
Selenium	0.0052		0.0025		mg/L	1		6020A	Total Recoverable
Total Dissolved Solids	720		10		mg/L	1		SM 2540C	Total/NA
Chloride	37		2.0		mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.13		0.10		mg/L	1		SM 4500 F C	Total/NA
Sulfate	170		50		mg/L	10		SM 4500 SO4 E	Total/NA

Client Sample ID: Duplicate

Lab Sample ID: 500-149809-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0014		0.0010		mg/L	1		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

Detection Summary

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

TestAmerica Job ID: 500-149809-1

Client Sample ID: Duplicate (Continued)

Lab Sample ID: 500-149809-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.067		0.0025		mg/L	1		6020A	Total Recoverable
Boron	1.6		0.50		mg/L	10		6020A	Total Recoverable
Calcium	91		0.20		mg/L	1		6020A	Total Recoverable
Total Dissolved Solids	560		10		mg/L	1		SM 2540C	Total/NA
Chloride	55		2.0		mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.14		0.10		mg/L	1		SM 4500 F C	Total/NA
Sulfate	70		20		mg/L	4		SM 4500 SO4 E	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

Method Summary

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

TestAmerica Job ID: 500-149809-1

Method	Method Description	Protocol	Laboratory
6010C	Metals (ICP)	SW846	TAL CHI
6020A	Metals (ICP/MS)	SW846	TAL CHI
7470A	Mercury (CVAA)	SW846	TAL CHI
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL CHI
SM 4500 Cl- E	Chloride, Total	SM	TAL CHI
SM 4500 F C	Fluoride	SM	TAL CHI
SM 4500 SO4 E	Sulfate, Total	SM	TAL CHI
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL CHI
7470A	Preparation, Mercury	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: Powerton CCR

TestAmerica Job ID: 500-149809-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-149809-1	MW-01	Water	08/08/18 09:49	08/10/18 16:50
500-149809-2	MW-02	Water	08/07/18 09:30	08/10/18 16:50
500-149809-3	MW-03	Water	08/07/18 10:54	08/10/18 16:50
500-149809-4	MW-04	Water	08/07/18 12:27	08/10/18 16:50
500-149809-5	MW-05	Water	08/07/18 13:30	08/10/18 16:50
500-149809-6	MW-08	Water	08/08/18 11:11	08/10/18 16:50
500-149809-7	MW-09	Water	08/08/18 12:46	08/10/18 16:50
500-149809-8	MW-10	Water	08/08/18 14:44	08/10/18 16:50
500-149809-9	MW-11	Water	08/09/18 14:03	08/10/18 16:50
500-149809-10	MW-12	Water	08/09/18 15:46	08/10/18 16:50
500-149809-11	MW-15	Water	08/09/18 11:42	08/10/18 16:50
500-149809-12	MW-17	Water	08/06/18 14:41	08/10/18 16:50
500-149809-13	MW-18	Water	08/06/18 15:46	08/10/18 16:50
500-149809-14	MW-19	Water	08/06/18 16:48	08/10/18 16:50
500-149809-15	Duplicate	Water	08/07/18 00:00	08/10/18 16:50

Client Sample Results

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

TestAmerica Job ID: 500-149809-1

Client Sample ID: MW-01

Date Collected: 08/08/18 09:49

Date Received: 08/10/18 16:50

Lab Sample ID: 500-149809-1

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.010		0.010		mg/L		08/11/18 12:28	08/13/18 14:08	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		08/11/18 12:28	08/13/18 14:01	1
Arsenic	<0.0010		0.0010		mg/L		08/11/18 12:28	08/13/18 14:01	1
Barium	0.051		0.0025		mg/L		08/11/18 12:28	08/13/18 14:01	1
Beryllium	<0.0010	^	0.0010		mg/L		08/11/18 12:28	08/13/18 14:01	1
Boron	0.14		0.050		mg/L		08/11/18 12:28	08/13/18 16:41	1
Cadmium	<0.00050		0.00050		mg/L		08/11/18 12:28	08/13/18 14:01	1
Calcium	86		0.20		mg/L		08/11/18 12:28	08/13/18 14:01	1
Chromium	<0.0050		0.0050		mg/L		08/11/18 12:28	08/13/18 14:01	1
Cobalt	<0.0010		0.0010		mg/L		08/11/18 12:28	08/13/18 14:01	1
Lead	<0.00050		0.00050		mg/L		08/11/18 12:28	08/13/18 14:01	1
Molybdenum	<0.0050		0.0050		mg/L		08/11/18 12:28	08/13/18 14:01	1
Selenium	<0.0025		0.0025		mg/L		08/11/18 12:28	08/13/18 14:01	1
Thallium	<0.0020		0.0020		mg/L		08/11/18 12:28	08/13/18 14:01	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		08/14/18 11:53	08/15/18 10:30	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	430		10		mg/L			08/12/18 22:38	1
Chloride	48		2.0		mg/L			08/20/18 14:07	1
Fluoride	0.13		0.10		mg/L			08/13/18 18:53	1
Sulfate	43		10		mg/L			08/15/18 05:38	2

Client Sample Results

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

TestAmerica Job ID: 500-149809-1

Client Sample ID: MW-02

Date Collected: 08/07/18 09:30

Date Received: 08/10/18 16:50

Lab Sample ID: 500-149809-2

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.010		0.010		mg/L		08/11/18 12:28	08/13/18 14:12	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		08/11/18 12:28	08/13/18 14:04	1
Arsenic	0.0016		0.0010		mg/L		08/11/18 12:28	08/13/18 14:04	1
Barium	0.067		0.0025		mg/L		08/11/18 12:28	08/13/18 14:04	1
Beryllium	<0.0010	^	0.0010		mg/L		08/11/18 12:28	08/13/18 14:04	1
Boron	1.5		0.25		mg/L		08/11/18 12:28	08/13/18 16:45	5
Cadmium	<0.00050		0.00050		mg/L		08/11/18 12:28	08/13/18 14:04	1
Calcium	89		0.20		mg/L		08/11/18 12:28	08/13/18 14:04	1
Chromium	<0.0050		0.0050		mg/L		08/11/18 12:28	08/13/18 14:04	1
Cobalt	<0.0010		0.0010		mg/L		08/11/18 12:28	08/13/18 14:04	1
Lead	<0.00050		0.00050		mg/L		08/11/18 12:28	08/13/18 14:04	1
Molybdenum	<0.0050		0.0050		mg/L		08/11/18 12:28	08/13/18 14:04	1
Selenium	<0.0025		0.0025		mg/L		08/11/18 12:28	08/13/18 14:04	1
Thallium	<0.0020		0.0020		mg/L		08/11/18 12:28	08/13/18 14:04	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		08/14/18 11:53	08/15/18 10:36	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	530		10		mg/L			08/12/18 22:43	1
Chloride	54		2.0		mg/L			08/20/18 14:08	1
Fluoride	0.15		0.10		mg/L			08/13/18 18:57	1
Sulfate	51		25		mg/L			08/15/18 05:39	5

Client Sample Results

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

TestAmerica Job ID: 500-149809-1

Client Sample ID: MW-03

Date Collected: 08/07/18 10:54

Date Received: 08/10/18 16:50

Lab Sample ID: 500-149809-3

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.010		0.010		mg/L		08/11/18 12:28	08/13/18 14:16	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		08/11/18 12:28	08/13/18 14:08	1
Arsenic	0.0015		0.0010		mg/L		08/11/18 12:28	08/13/18 14:08	1
Barium	0.067		0.0025		mg/L		08/11/18 12:28	08/13/18 14:08	1
Beryllium	<0.0010	^	0.0010		mg/L		08/11/18 12:28	08/13/18 14:08	1
Boron	0.40		0.050		mg/L		08/11/18 12:28	08/13/18 16:48	1
Cadmium	<0.00050		0.00050		mg/L		08/11/18 12:28	08/13/18 14:08	1
Calcium	82		0.20		mg/L		08/11/18 12:28	08/13/18 14:08	1
Chromium	<0.0050		0.0050		mg/L		08/11/18 12:28	08/13/18 14:08	1
Cobalt	<0.0010		0.0010		mg/L		08/11/18 12:28	08/13/18 14:08	1
Lead	<0.00050		0.00050		mg/L		08/11/18 12:28	08/13/18 14:08	1
Molybdenum	<0.0050		0.0050		mg/L		08/11/18 12:28	08/13/18 14:08	1
Selenium	<0.0025		0.0025		mg/L		08/11/18 12:28	08/13/18 14:08	1
Thallium	<0.0020		0.0020		mg/L		08/11/18 12:28	08/13/18 14:08	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		08/14/18 11:53	08/15/18 10:38	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	500		10		mg/L			08/12/18 22:46	1
Chloride	67		10		mg/L			08/20/18 14:42	5
Fluoride	0.22		0.10		mg/L			08/13/18 19:00	1
Sulfate	49		25		mg/L			08/15/18 05:42	5

Client Sample Results

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

TestAmerica Job ID: 500-149809-1

Client Sample ID: MW-04

Date Collected: 08/07/18 12:27

Date Received: 08/10/18 16:50

Lab Sample ID: 500-149809-4

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.010		0.010		mg/L		08/11/18 12:28	08/13/18 14:20	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		08/11/18 12:28	08/13/18 14:12	1
Arsenic	0.0011		0.0010		mg/L		08/11/18 12:28	08/13/18 14:12	1
Barium	0.031		0.0025		mg/L		08/11/18 12:28	08/13/18 14:12	1
Beryllium	<0.0010	^	0.0010		mg/L		08/11/18 12:28	08/13/18 14:12	1
Boron	0.79		0.050		mg/L		08/11/18 12:28	08/13/18 16:52	1
Cadmium	<0.00050		0.00050		mg/L		08/11/18 12:28	08/13/18 14:12	1
Calcium	84		0.20		mg/L		08/11/18 12:28	08/13/18 14:12	1
Chromium	<0.0050		0.0050		mg/L		08/11/18 12:28	08/13/18 14:12	1
Cobalt	<0.0010		0.0010		mg/L		08/11/18 12:28	08/13/18 14:12	1
Lead	<0.00050		0.00050		mg/L		08/11/18 12:28	08/13/18 14:12	1
Molybdenum	0.0060		0.0050		mg/L		08/11/18 12:28	08/13/18 14:12	1
Selenium	<0.0025		0.0025		mg/L		08/11/18 12:28	08/13/18 14:12	1
Thallium	<0.0020		0.0020		mg/L		08/11/18 12:28	08/13/18 14:12	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		08/14/18 11:53	08/15/18 10:39	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	510		10		mg/L			08/12/18 22:48	1
Chloride	71		2.0		mg/L			08/20/18 14:10	1
Fluoride	0.32		0.10		mg/L			08/13/18 19:03	1
Sulfate	49		25		mg/L			08/15/18 05:43	5

Client Sample Results

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

TestAmerica Job ID: 500-149809-1

Client Sample ID: MW-05

Date Collected: 08/07/18 13:30

Date Received: 08/10/18 16:50

Lab Sample ID: 500-149809-5

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.010		0.010		mg/L		08/11/18 12:28	08/13/18 14:23	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		08/11/18 12:28	08/13/18 14:16	1
Arsenic	<0.0010		0.0010		mg/L		08/11/18 12:28	08/13/18 14:16	1
Barium	0.054		0.0025		mg/L		08/11/18 12:28	08/13/18 14:16	1
Beryllium	<0.0010	^	0.0010		mg/L		08/11/18 12:28	08/13/18 14:16	1
Boron	0.49		0.050		mg/L		08/11/18 12:28	08/13/18 16:56	1
Cadmium	<0.00050		0.00050		mg/L		08/11/18 12:28	08/13/18 14:16	1
Calcium	110		0.20		mg/L		08/11/18 12:28	08/13/18 14:16	1
Chromium	<0.0050		0.0050		mg/L		08/11/18 12:28	08/13/18 14:16	1
Cobalt	<0.0010		0.0010		mg/L		08/11/18 12:28	08/13/18 14:16	1
Lead	<0.00050		0.00050		mg/L		08/11/18 12:28	08/13/18 14:16	1
Molybdenum	0.0069		0.0050		mg/L		08/11/18 12:28	08/13/18 14:16	1
Selenium	<0.0025		0.0025		mg/L		08/11/18 12:28	08/13/18 14:16	1
Thallium	<0.0020		0.0020		mg/L		08/11/18 12:28	08/13/18 14:16	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		08/14/18 11:53	08/15/18 10:41	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	890		10		mg/L			08/12/18 22:51	1
Chloride	120		10		mg/L			08/20/18 14:11	5
Fluoride	0.32		0.10		mg/L			08/13/18 19:06	1
Sulfate	180		50		mg/L			08/15/18 05:44	10

Client Sample Results

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

TestAmerica Job ID: 500-149809-1

Client Sample ID: MW-08

Date Collected: 08/08/18 11:11

Date Received: 08/10/18 16:50

Lab Sample ID: 500-149809-6

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.010		0.010		mg/L		08/11/18 12:28	08/13/18 14:27	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		08/11/18 12:28	08/13/18 14:19	1
Arsenic	0.0055		0.0010		mg/L		08/11/18 12:28	08/13/18 14:19	1
Barium	0.071		0.0025		mg/L		08/11/18 12:28	08/13/18 14:19	1
Beryllium	<0.0010	^	0.0010		mg/L		08/11/18 12:28	08/13/18 14:19	1
Boron	1.1		0.25		mg/L		08/11/18 12:28	08/13/18 17:00	5
Cadmium	<0.00050		0.00050		mg/L		08/11/18 12:28	08/13/18 14:19	1
Calcium	140		0.20		mg/L		08/11/18 12:28	08/13/18 14:19	1
Chromium	<0.0050		0.0050		mg/L		08/11/18 12:28	08/13/18 14:19	1
Cobalt	<0.0010		0.0010		mg/L		08/11/18 12:28	08/13/18 14:19	1
Lead	<0.00050		0.00050		mg/L		08/11/18 12:28	08/13/18 14:19	1
Molybdenum	0.019		0.0050		mg/L		08/11/18 12:28	08/13/18 14:19	1
Selenium	<0.0025		0.0025		mg/L		08/11/18 12:28	08/13/18 14:19	1
Thallium	<0.0020		0.0020		mg/L		08/11/18 12:28	08/13/18 14:19	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		08/14/18 11:53	08/15/18 10:43	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1200		10		mg/L			08/12/18 22:54	1
Chloride	270		10		mg/L			08/20/18 14:12	5
Fluoride	0.32		0.10		mg/L			08/13/18 19:10	1
Sulfate	190		50		mg/L			08/15/18 05:45	10

Client Sample Results

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

TestAmerica Job ID: 500-149809-1

Client Sample ID: MW-09

Date Collected: 08/08/18 12:46

Date Received: 08/10/18 16:50

Lab Sample ID: 500-149809-7

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.010		0.010		mg/L		08/11/18 12:28	08/13/18 14:32	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		08/11/18 12:28	08/13/18 14:34	1
Arsenic	<0.0010		0.0010		mg/L		08/11/18 12:28	08/13/18 14:34	1
Barium	0.037		0.0025		mg/L		08/11/18 12:28	08/13/18 14:34	1
Beryllium	<0.0010	^	0.0010		mg/L		08/11/18 12:28	08/13/18 14:34	1
Boron	4.3		1.0		mg/L		08/11/18 12:28	08/13/18 17:03	20
Cadmium	<0.00050		0.00050		mg/L		08/11/18 12:28	08/13/18 14:34	1
Calcium	86		0.20		mg/L		08/11/18 12:28	08/13/18 14:34	1
Chromium	<0.0050		0.0050		mg/L		08/11/18 12:28	08/13/18 14:34	1
Cobalt	<0.0010		0.0010		mg/L		08/11/18 12:28	08/13/18 14:34	1
Lead	<0.00050		0.00050		mg/L		08/11/18 12:28	08/13/18 14:34	1
Molybdenum	0.032		0.0050		mg/L		08/11/18 12:28	08/13/18 14:34	1
Selenium	0.0078		0.0025		mg/L		08/11/18 12:28	08/13/18 14:34	1
Thallium	<0.0020		0.0020		mg/L		08/11/18 12:28	08/13/18 14:34	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		08/14/18 11:53	08/15/18 10:44	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	690		10		mg/L			08/12/18 22:56	1
Chloride	39		2.0		mg/L			08/20/18 14:16	1
Fluoride	0.14		0.10		mg/L			08/13/18 19:13	1
Sulfate	180		50		mg/L			08/15/18 05:46	10

Client Sample Results

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

TestAmerica Job ID: 500-149809-1

Client Sample ID: MW-10

Date Collected: 08/08/18 14:44

Date Received: 08/10/18 16:50

Lab Sample ID: 500-149809-8

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.010		0.010		mg/L		08/11/18 12:28	08/13/18 14:36	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		08/11/18 12:28	08/13/18 14:38	1
Arsenic	0.0012		0.0010		mg/L		08/11/18 12:28	08/13/18 14:38	1
Barium	0.22		0.0025		mg/L		08/11/18 12:28	08/13/18 14:38	1
Beryllium	<0.0010	^	0.0010		mg/L		08/11/18 12:28	08/13/18 14:38	1
Boron	0.39		0.050		mg/L		08/11/18 12:28	08/13/18 17:07	1
Cadmium	<0.00050		0.00050		mg/L		08/11/18 12:28	08/13/18 14:38	1
Calcium	99		0.20		mg/L		08/11/18 12:28	08/13/18 14:38	1
Chromium	<0.0050		0.0050		mg/L		08/11/18 12:28	08/13/18 14:38	1
Cobalt	0.014		0.0010		mg/L		08/11/18 12:28	08/13/18 14:38	1
Lead	0.00079		0.00050		mg/L		08/11/18 12:28	08/13/18 14:38	1
Molybdenum	<0.0050		0.0050		mg/L		08/11/18 12:28	08/13/18 14:38	1
Selenium	0.0062		0.0025		mg/L		08/11/18 12:28	08/13/18 14:38	1
Thallium	<0.0020		0.0020		mg/L		08/11/18 12:28	08/13/18 14:38	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		08/14/18 11:53	08/15/18 10:46	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	550		10		mg/L			08/12/18 22:59	1
Chloride	58		2.0		mg/L			08/20/18 14:18	1
Fluoride	0.19		0.10		mg/L			08/23/18 16:03	1
Sulfate	60		20		mg/L			08/15/18 05:47	4

Client Sample Results

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

TestAmerica Job ID: 500-149809-1

Client Sample ID: MW-11

Date Collected: 08/09/18 14:03

Date Received: 08/10/18 16:50

Lab Sample ID: 500-149809-9

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.010		0.010		mg/L		08/11/18 12:28	08/13/18 14:40	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		08/11/18 12:28	08/13/18 14:42	1
Arsenic	0.68		0.0010		mg/L		08/11/18 12:28	08/13/18 14:42	1
Barium	3.0		0.0025		mg/L		08/11/18 12:28	08/13/18 14:42	1
Beryllium	<0.0010	^	0.0010		mg/L		08/11/18 12:28	08/13/18 14:42	1
Boron	1.4		0.50		mg/L		08/11/18 12:28	08/13/18 17:19	10
Cadmium	0.00082		0.00050		mg/L		08/11/18 12:28	08/13/18 14:42	1
Calcium	160		0.20		mg/L		08/11/18 12:28	08/13/18 14:42	1
Chromium	<0.0050		0.0050		mg/L		08/11/18 12:28	08/13/18 14:42	1
Cobalt	0.0053		0.0010		mg/L		08/11/18 12:28	08/13/18 14:42	1
Lead	0.0012		0.00050		mg/L		08/11/18 12:28	08/13/18 14:42	1
Molybdenum	0.013		0.0050		mg/L		08/11/18 12:28	08/13/18 14:42	1
Selenium	<0.0025		0.0025		mg/L		08/11/18 12:28	08/13/18 14:42	1
Thallium	<0.0020		0.0020		mg/L		08/11/18 12:28	08/13/18 14:42	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		08/14/18 11:53	08/15/18 10:57	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1000		10		mg/L			08/12/18 23:01	1
Chloride	120		10		mg/L			08/20/18 14:19	5
Fluoride	0.65		0.10		mg/L			08/23/18 16:06	1
Sulfate	220		50		mg/L			08/15/18 05:48	10

Client Sample Results

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

TestAmerica Job ID: 500-149809-1

Client Sample ID: MW-12

Date Collected: 08/09/18 15:46

Date Received: 08/10/18 16:50

Lab Sample ID: 500-149809-10

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.010		0.010		mg/L		08/11/18 12:28	08/13/18 14:56	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		08/11/18 12:28	08/13/18 14:46	1
Arsenic	0.12		0.0010		mg/L		08/11/18 12:28	08/13/18 14:46	1
Barium	0.15		0.0025		mg/L		08/11/18 12:28	08/13/18 14:46	1
Beryllium	<0.0010	^	0.0010		mg/L		08/11/18 12:28	08/13/18 14:46	1
Boron	0.61		0.050		mg/L		08/11/18 12:28	08/13/18 17:22	1
Cadmium	0.00084		0.00050		mg/L		08/11/18 12:28	08/13/18 14:46	1
Calcium	120		0.20		mg/L		08/11/18 12:28	08/13/18 14:46	1
Chromium	<0.0050		0.0050		mg/L		08/11/18 12:28	08/13/18 14:46	1
Cobalt	<0.0010		0.0010		mg/L		08/11/18 12:28	08/13/18 14:46	1
Lead	0.00072		0.00050		mg/L		08/11/18 12:28	08/13/18 14:46	1
Molybdenum	0.026		0.0050		mg/L		08/11/18 12:28	08/13/18 14:46	1
Selenium	<0.0025		0.0025		mg/L		08/11/18 12:28	08/13/18 14:46	1
Thallium	<0.0020		0.0020		mg/L		08/11/18 12:28	08/13/18 14:46	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		08/14/18 11:53	08/15/18 10:59	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1300		10		mg/L			08/12/18 23:04	1
Chloride	190		10		mg/L			08/20/18 14:20	5
Fluoride	0.44		0.10		mg/L			08/23/18 16:09	1
Sulfate	480		100		mg/L			08/15/18 05:49	20

Client Sample Results

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

TestAmerica Job ID: 500-149809-1

Client Sample ID: MW-15

Date Collected: 08/09/18 11:42

Date Received: 08/10/18 16:50

Lab Sample ID: 500-149809-11

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.026		0.010		mg/L		08/11/18 12:28	08/13/18 15:00	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		08/11/18 12:28	08/13/18 14:49	1
Arsenic	0.0083		0.0010		mg/L		08/11/18 12:28	08/13/18 14:49	1
Barium	0.048		0.0025		mg/L		08/11/18 12:28	08/13/18 14:49	1
Beryllium	<0.0010	^	0.0010		mg/L		08/11/18 12:28	08/13/18 14:49	1
Boron	2.3		0.50		mg/L		08/11/18 12:28	08/13/18 17:26	10
Cadmium	<0.00050		0.00050		mg/L		08/11/18 12:28	08/13/18 14:49	1
Calcium	200		0.20		mg/L		08/11/18 12:28	08/13/18 14:49	1
Chromium	<0.0050		0.0050		mg/L		08/11/18 12:28	08/13/18 14:49	1
Cobalt	<0.0010		0.0010		mg/L		08/11/18 12:28	08/13/18 14:49	1
Lead	<0.00050		0.00050		mg/L		08/11/18 12:28	08/13/18 14:49	1
Molybdenum	0.033		0.0050		mg/L		08/11/18 12:28	08/13/18 14:49	1
Selenium	0.060		0.0025		mg/L		08/11/18 12:28	08/13/18 14:49	1
Thallium	<0.0020		0.0020		mg/L		08/11/18 12:28	08/13/18 14:49	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		08/14/18 11:53	08/15/18 11:00	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1700		10		mg/L			08/12/18 23:06	1
Chloride	200		10		mg/L			08/20/18 14:20	5
Fluoride	0.48		0.10		mg/L			08/23/18 16:12	1
Sulfate	520		130		mg/L			08/15/18 05:50	25

Client Sample Results

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

TestAmerica Job ID: 500-149809-1

Client Sample ID: MW-17

Date Collected: 08/06/18 14:41

Date Received: 08/10/18 16:50

Lab Sample ID: 500-149809-12

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.019		0.010		mg/L		08/11/18 12:28	08/13/18 15:04	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		08/11/18 12:28	08/13/18 14:53	1
Arsenic	0.087		0.0010		mg/L		08/11/18 12:28	08/13/18 14:53	1
Barium	0.055		0.0025		mg/L		08/11/18 12:28	08/13/18 14:53	1
Beryllium	<0.0010	^	0.0010		mg/L		08/11/18 12:28	08/13/18 14:53	1
Boron	1.3		0.50		mg/L		08/11/18 12:28	08/13/18 17:30	10
Cadmium	0.00094		0.00050		mg/L		08/11/18 12:28	08/13/18 14:53	1
Calcium	170		0.20		mg/L		08/11/18 12:28	08/13/18 14:53	1
Chromium	<0.0050		0.0050		mg/L		08/11/18 12:28	08/13/18 14:53	1
Cobalt	0.0015		0.0010		mg/L		08/11/18 12:28	08/13/18 14:53	1
Lead	<0.00050		0.00050		mg/L		08/11/18 12:28	08/13/18 14:53	1
Molybdenum	0.084		0.0050		mg/L		08/11/18 12:28	08/13/18 14:53	1
Selenium	<0.0025		0.0025		mg/L		08/11/18 12:28	08/13/18 14:53	1
Thallium	0.0023		0.0020		mg/L		08/11/18 12:28	08/13/18 14:53	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		08/14/18 11:53	08/15/18 11:02	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1600		10		mg/L			08/12/18 23:09	1
Chloride	230		10		mg/L			08/20/18 14:21	5
Fluoride	0.60		0.10		mg/L			08/23/18 16:24	1
Sulfate	620		250		mg/L			08/15/18 05:51	50

Client Sample Results

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

TestAmerica Job ID: 500-149809-1

Client Sample ID: MW-18

Date Collected: 08/06/18 15:46

Date Received: 08/10/18 16:50

Lab Sample ID: 500-149809-13

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.013		0.010		mg/L		08/11/18 12:28	08/13/18 15:08	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		08/11/18 12:28	08/13/18 14:57	1
Arsenic	<0.0010		0.0010		mg/L		08/11/18 12:28	08/13/18 14:57	1
Barium	0.12		0.0025		mg/L		08/11/18 12:28	08/13/18 14:57	1
Beryllium	<0.0010	^	0.0010		mg/L		08/11/18 12:28	08/13/18 14:57	1
Boron	0.58		0.050		mg/L		08/11/18 12:28	08/13/18 17:34	1
Cadmium	<0.00050		0.00050		mg/L		08/11/18 12:28	08/13/18 14:57	1
Calcium	120		0.20		mg/L		08/11/18 12:28	08/13/18 14:57	1
Chromium	<0.0050		0.0050		mg/L		08/11/18 12:28	08/13/18 14:57	1
Cobalt	<0.0010		0.0010		mg/L		08/11/18 12:28	08/13/18 14:57	1
Lead	<0.00050		0.00050		mg/L		08/11/18 12:28	08/13/18 14:57	1
Molybdenum	0.0052		0.0050		mg/L		08/11/18 12:28	08/13/18 14:57	1
Selenium	<0.0025		0.0025		mg/L		08/11/18 12:28	08/13/18 14:57	1
Thallium	<0.0020		0.0020		mg/L		08/11/18 12:28	08/13/18 14:57	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		08/14/18 11:53	08/15/18 11:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1100		10		mg/L			08/12/18 23:12	1
Chloride	230		10		mg/L			08/20/18 14:21	5
Fluoride	0.57		0.10		mg/L			08/23/18 16:32	1
Sulfate	270		50		mg/L			08/22/18 05:36	10

Client Sample Results

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

TestAmerica Job ID: 500-149809-1

Client Sample ID: MW-19

Date Collected: 08/06/18 16:48

Date Received: 08/10/18 16:50

Lab Sample ID: 500-149809-14

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.010		0.010		mg/L		08/11/18 12:28	08/13/18 15:12	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		08/11/18 12:28	08/13/18 15:01	1
Arsenic	<0.0010		0.0010		mg/L		08/11/18 12:28	08/13/18 15:01	1
Barium	0.078		0.0025		mg/L		08/11/18 12:28	08/13/18 15:01	1
Beryllium	<0.0010	^	0.0010		mg/L		08/11/18 12:28	08/13/18 15:01	1
Boron	3.8		1.0		mg/L		08/11/18 12:28	08/13/18 17:38	20
Cadmium	<0.00050		0.00050		mg/L		08/11/18 12:28	08/13/18 15:01	1
Calcium	100		0.20		mg/L		08/11/18 12:28	08/13/18 15:01	1
Chromium	<0.0050		0.0050		mg/L		08/11/18 12:28	08/13/18 15:01	1
Cobalt	<0.0010		0.0010		mg/L		08/11/18 12:28	08/13/18 15:01	1
Lead	<0.00050		0.00050		mg/L		08/11/18 12:28	08/13/18 15:01	1
Molybdenum	0.032		0.0050		mg/L		08/11/18 12:28	08/13/18 15:01	1
Selenium	0.0052		0.0025		mg/L		08/11/18 12:28	08/13/18 15:01	1
Thallium	<0.0020		0.0020		mg/L		08/11/18 12:28	08/13/18 15:01	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		08/14/18 11:53	08/15/18 11:05	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	720		10		mg/L			08/12/18 23:14	1
Chloride	37		2.0		mg/L			08/20/18 14:43	1
Fluoride	0.13		0.10		mg/L			08/23/18 16:45	1
Sulfate	170		50		mg/L			08/22/18 05:37	10

Client Sample Results

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

TestAmerica Job ID: 500-149809-1

Client Sample ID: Duplicate

Date Collected: 08/07/18 00:00

Date Received: 08/10/18 16:50

Lab Sample ID: 500-149809-15

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.010		0.010		mg/L		08/11/18 12:28	08/13/18 15:16	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		08/11/18 12:28	08/13/18 15:05	1
Arsenic	0.0014		0.0010		mg/L		08/11/18 12:28	08/13/18 15:05	1
Barium	0.067		0.0025		mg/L		08/11/18 12:28	08/13/18 15:05	1
Beryllium	<0.0010	^	0.0010		mg/L		08/11/18 12:28	08/13/18 15:05	1
Boron	1.6		0.50		mg/L		08/11/18 12:28	08/13/18 17:41	10
Cadmium	<0.00050		0.00050		mg/L		08/11/18 12:28	08/13/18 15:05	1
Calcium	91		0.20		mg/L		08/11/18 12:28	08/13/18 15:05	1
Chromium	<0.0050		0.0050		mg/L		08/11/18 12:28	08/13/18 15:05	1
Cobalt	<0.0010		0.0010		mg/L		08/11/18 12:28	08/13/18 15:05	1
Lead	<0.00050		0.00050		mg/L		08/11/18 12:28	08/13/18 15:05	1
Molybdenum	<0.0050		0.0050		mg/L		08/11/18 12:28	08/13/18 15:05	1
Selenium	<0.0025		0.0025		mg/L		08/11/18 12:28	08/13/18 15:05	1
Thallium	<0.0020		0.0020		mg/L		08/11/18 12:28	08/13/18 15:05	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		08/14/18 11:53	08/15/18 11:06	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	560		10		mg/L			08/12/18 23:17	1
Chloride	55		2.0		mg/L			08/20/18 14:24	1
Fluoride	0.14		0.10		mg/L			08/23/18 16:49	1
Sulfate	70		20		mg/L			08/22/18 05:40	4

Definitions/Glossary

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

TestAmerica Job ID: 500-149809-1

Qualifiers

Metals

Qualifier	Qualifier Description
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.

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: Powerton CCR

TestAmerica Job ID: 500-149809-1

Metals

Prep Batch: 445039

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-149809-1	MW-01	Total Recoverable	Water	3005A	
500-149809-2	MW-02	Total Recoverable	Water	3005A	
500-149809-3	MW-03	Total Recoverable	Water	3005A	
500-149809-4	MW-04	Total Recoverable	Water	3005A	
500-149809-5	MW-05	Total Recoverable	Water	3005A	
500-149809-6	MW-08	Total Recoverable	Water	3005A	
500-149809-7	MW-09	Total Recoverable	Water	3005A	
500-149809-8	MW-10	Total Recoverable	Water	3005A	
500-149809-9	MW-11	Total Recoverable	Water	3005A	
500-149809-10	MW-12	Total Recoverable	Water	3005A	
500-149809-11	MW-15	Total Recoverable	Water	3005A	
500-149809-12	MW-17	Total Recoverable	Water	3005A	
500-149809-13	MW-18	Total Recoverable	Water	3005A	
500-149809-14	MW-19	Total Recoverable	Water	3005A	
500-149809-15	Duplicate	Total Recoverable	Water	3005A	
MB 500-445039/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-445039/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 445195

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-149809-1	MW-01	Total Recoverable	Water	6020A	445039
500-149809-2	MW-02	Total Recoverable	Water	6020A	445039
500-149809-3	MW-03	Total Recoverable	Water	6020A	445039
500-149809-4	MW-04	Total Recoverable	Water	6020A	445039
500-149809-5	MW-05	Total Recoverable	Water	6020A	445039
500-149809-6	MW-08	Total Recoverable	Water	6020A	445039
500-149809-7	MW-09	Total Recoverable	Water	6020A	445039
500-149809-8	MW-10	Total Recoverable	Water	6020A	445039
500-149809-9	MW-11	Total Recoverable	Water	6020A	445039
500-149809-10	MW-12	Total Recoverable	Water	6020A	445039
500-149809-11	MW-15	Total Recoverable	Water	6020A	445039
500-149809-12	MW-17	Total Recoverable	Water	6020A	445039
500-149809-13	MW-18	Total Recoverable	Water	6020A	445039
500-149809-14	MW-19	Total Recoverable	Water	6020A	445039
500-149809-15	Duplicate	Total Recoverable	Water	6020A	445039
MB 500-445039/1-A	Method Blank	Total Recoverable	Water	6020A	445039
LCS 500-445039/2-A	Lab Control Sample	Total Recoverable	Water	6020A	445039

Analysis Batch: 445254

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-149809-1	MW-01	Total Recoverable	Water	6010C	445039
500-149809-2	MW-02	Total Recoverable	Water	6010C	445039
500-149809-3	MW-03	Total Recoverable	Water	6010C	445039
500-149809-4	MW-04	Total Recoverable	Water	6010C	445039
500-149809-5	MW-05	Total Recoverable	Water	6010C	445039
500-149809-6	MW-08	Total Recoverable	Water	6010C	445039
500-149809-7	MW-09	Total Recoverable	Water	6010C	445039
500-149809-8	MW-10	Total Recoverable	Water	6010C	445039
500-149809-9	MW-11	Total Recoverable	Water	6010C	445039
500-149809-10	MW-12	Total Recoverable	Water	6010C	445039
500-149809-11	MW-15	Total Recoverable	Water	6010C	445039

TestAmerica Chicago

QC Association Summary

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

TestAmerica Job ID: 500-149809-1

Metals (Continued)

Analysis Batch: 445254 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-149809-12	MW-17	Total Recoverable	Water	6010C	445039
500-149809-13	MW-18	Total Recoverable	Water	6010C	445039
500-149809-14	MW-19	Total Recoverable	Water	6010C	445039
500-149809-15	Duplicate	Total Recoverable	Water	6010C	445039
MB 500-445039/1-A	Method Blank	Total Recoverable	Water	6010C	445039
LCS 500-445039/2-A	Lab Control Sample	Total Recoverable	Water	6010C	445039

Analysis Batch: 445305

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-149809-1	MW-01	Total Recoverable	Water	6020A	445039
500-149809-2	MW-02	Total Recoverable	Water	6020A	445039
500-149809-3	MW-03	Total Recoverable	Water	6020A	445039
500-149809-4	MW-04	Total Recoverable	Water	6020A	445039
500-149809-5	MW-05	Total Recoverable	Water	6020A	445039
500-149809-6	MW-08	Total Recoverable	Water	6020A	445039
500-149809-7	MW-09	Total Recoverable	Water	6020A	445039
500-149809-8	MW-10	Total Recoverable	Water	6020A	445039
500-149809-9	MW-11	Total Recoverable	Water	6020A	445039
500-149809-10	MW-12	Total Recoverable	Water	6020A	445039
500-149809-11	MW-15	Total Recoverable	Water	6020A	445039
500-149809-12	MW-17	Total Recoverable	Water	6020A	445039
500-149809-13	MW-18	Total Recoverable	Water	6020A	445039
500-149809-14	MW-19	Total Recoverable	Water	6020A	445039
500-149809-15	Duplicate	Total Recoverable	Water	6020A	445039
MB 500-445039/1-A	Method Blank	Total Recoverable	Water	6020A	445039
LCS 500-445039/2-A	Lab Control Sample	Total Recoverable	Water	6020A	445039

Prep Batch: 445342

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-149809-1	MW-01	Total/NA	Water	7470A	
500-149809-2	MW-02	Total/NA	Water	7470A	
500-149809-3	MW-03	Total/NA	Water	7470A	
500-149809-4	MW-04	Total/NA	Water	7470A	
500-149809-5	MW-05	Total/NA	Water	7470A	
500-149809-6	MW-08	Total/NA	Water	7470A	
500-149809-7	MW-09	Total/NA	Water	7470A	
500-149809-8	MW-10	Total/NA	Water	7470A	
500-149809-9	MW-11	Total/NA	Water	7470A	
500-149809-10	MW-12	Total/NA	Water	7470A	
500-149809-11	MW-15	Total/NA	Water	7470A	
500-149809-12	MW-17	Total/NA	Water	7470A	
500-149809-13	MW-18	Total/NA	Water	7470A	
500-149809-14	MW-19	Total/NA	Water	7470A	
500-149809-15	Duplicate	Total/NA	Water	7470A	
MB 500-445342/12-A	Method Blank	Total/NA	Water	7470A	
LCS 500-445342/13-A	Lab Control Sample	Total/NA	Water	7470A	
500-149809-8 MS	MW-10	Total/NA	Water	7470A	
500-149809-8 MSD	MW-10	Total/NA	Water	7470A	
500-149809-8 DU	MW-10	Total/NA	Water	7470A	

TestAmerica Chicago

QC Association Summary

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

TestAmerica Job ID: 500-149809-1

Metals (Continued)

Analysis Batch: 445532

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-149809-1	MW-01	Total/NA	Water	7470A	445342
500-149809-2	MW-02	Total/NA	Water	7470A	445342
500-149809-3	MW-03	Total/NA	Water	7470A	445342
500-149809-4	MW-04	Total/NA	Water	7470A	445342
500-149809-5	MW-05	Total/NA	Water	7470A	445342
500-149809-6	MW-08	Total/NA	Water	7470A	445342
500-149809-7	MW-09	Total/NA	Water	7470A	445342
500-149809-8	MW-10	Total/NA	Water	7470A	445342
500-149809-9	MW-11	Total/NA	Water	7470A	445342
500-149809-10	MW-12	Total/NA	Water	7470A	445342
500-149809-11	MW-15	Total/NA	Water	7470A	445342
500-149809-12	MW-17	Total/NA	Water	7470A	445342
500-149809-13	MW-18	Total/NA	Water	7470A	445342
500-149809-14	MW-19	Total/NA	Water	7470A	445342
500-149809-15	Duplicate	Total/NA	Water	7470A	445342
MB 500-445342/12-A	Method Blank	Total/NA	Water	7470A	445342
LCS 500-445342/13-A	Lab Control Sample	Total/NA	Water	7470A	445342
500-149809-8 MS	MW-10	Total/NA	Water	7470A	445342
500-149809-8 MSD	MW-10	Total/NA	Water	7470A	445342
500-149809-8 DU	MW-10	Total/NA	Water	7470A	445342

General Chemistry

Analysis Batch: 445061

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-149809-1	MW-01	Total/NA	Water	SM 2540C	
500-149809-2	MW-02	Total/NA	Water	SM 2540C	
500-149809-3	MW-03	Total/NA	Water	SM 2540C	
500-149809-4	MW-04	Total/NA	Water	SM 2540C	
500-149809-5	MW-05	Total/NA	Water	SM 2540C	
500-149809-6	MW-08	Total/NA	Water	SM 2540C	
500-149809-7	MW-09	Total/NA	Water	SM 2540C	
500-149809-8	MW-10	Total/NA	Water	SM 2540C	
500-149809-9	MW-11	Total/NA	Water	SM 2540C	
500-149809-10	MW-12	Total/NA	Water	SM 2540C	
500-149809-11	MW-15	Total/NA	Water	SM 2540C	
500-149809-12	MW-17	Total/NA	Water	SM 2540C	
500-149809-13	MW-18	Total/NA	Water	SM 2540C	
500-149809-14	MW-19	Total/NA	Water	SM 2540C	
500-149809-15	Duplicate	Total/NA	Water	SM 2540C	
MB 500-445061/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-445061/2	Lab Control Sample	Total/NA	Water	SM 2540C	
500-149809-1 DU	MW-01	Total/NA	Water	SM 2540C	

Analysis Batch: 445284

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-149809-1	MW-01	Total/NA	Water	SM 4500 F C	
500-149809-2	MW-02	Total/NA	Water	SM 4500 F C	
500-149809-3	MW-03	Total/NA	Water	SM 4500 F C	
500-149809-4	MW-04	Total/NA	Water	SM 4500 F C	

TestAmerica Chicago

QC Association Summary

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

TestAmerica Job ID: 500-149809-1

General Chemistry (Continued)

Analysis Batch: 445284 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-149809-5	MW-05	Total/NA	Water	SM 4500 F C	
500-149809-6	MW-08	Total/NA	Water	SM 4500 F C	
500-149809-7	MW-09	Total/NA	Water	SM 4500 F C	
MB 500-445284/31	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 500-445284/32	Lab Control Sample	Total/NA	Water	SM 4500 F C	

Analysis Batch: 445449

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-149809-1	MW-01	Total/NA	Water	SM 4500 SO4 E	
500-149809-2	MW-02	Total/NA	Water	SM 4500 SO4 E	
500-149809-3	MW-03	Total/NA	Water	SM 4500 SO4 E	
500-149809-4	MW-04	Total/NA	Water	SM 4500 SO4 E	
500-149809-5	MW-05	Total/NA	Water	SM 4500 SO4 E	
500-149809-6	MW-08	Total/NA	Water	SM 4500 SO4 E	
500-149809-7	MW-09	Total/NA	Water	SM 4500 SO4 E	
500-149809-8	MW-10	Total/NA	Water	SM 4500 SO4 E	
500-149809-9	MW-11	Total/NA	Water	SM 4500 SO4 E	
500-149809-10	MW-12	Total/NA	Water	SM 4500 SO4 E	
500-149809-11	MW-15	Total/NA	Water	SM 4500 SO4 E	
500-149809-12	MW-17	Total/NA	Water	SM 4500 SO4 E	
MB 500-445449/3	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 500-445449/4	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 446204

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-149809-1	MW-01	Total/NA	Water	SM 4500 Cl- E	
500-149809-2	MW-02	Total/NA	Water	SM 4500 Cl- E	
500-149809-3	MW-03	Total/NA	Water	SM 4500 Cl- E	
500-149809-4	MW-04	Total/NA	Water	SM 4500 Cl- E	
500-149809-5	MW-05	Total/NA	Water	SM 4500 Cl- E	
500-149809-6	MW-08	Total/NA	Water	SM 4500 Cl- E	
500-149809-7	MW-09	Total/NA	Water	SM 4500 Cl- E	
500-149809-8	MW-10	Total/NA	Water	SM 4500 Cl- E	
500-149809-9	MW-11	Total/NA	Water	SM 4500 Cl- E	
500-149809-10	MW-12	Total/NA	Water	SM 4500 Cl- E	
500-149809-11	MW-15	Total/NA	Water	SM 4500 Cl- E	
500-149809-12	MW-17	Total/NA	Water	SM 4500 Cl- E	
500-149809-13	MW-18	Total/NA	Water	SM 4500 Cl- E	
500-149809-14	MW-19	Total/NA	Water	SM 4500 Cl- E	
500-149809-15	Duplicate	Total/NA	Water	SM 4500 Cl- E	
MB 500-446204/4	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 500-446204/5	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
500-149809-7 MS	MW-09	Total/NA	Water	SM 4500 Cl- E	
500-149809-7 MSD	MW-09	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 446448

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-149809-13	MW-18	Total/NA	Water	SM 4500 SO4 E	
500-149809-14	MW-19	Total/NA	Water	SM 4500 SO4 E	
500-149809-15	Duplicate	Total/NA	Water	SM 4500 SO4 E	
MB 500-446448/3	Method Blank	Total/NA	Water	SM 4500 SO4 E	

TestAmerica Chicago

QC Association Summary

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

TestAmerica Job ID: 500-149809-1

General Chemistry (Continued)

Analysis Batch: 446448 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 500-446448/4	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 446883

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-149809-8	MW-10	Total/NA	Water	SM 4500 F C	
500-149809-9	MW-11	Total/NA	Water	SM 4500 F C	
500-149809-10	MW-12	Total/NA	Water	SM 4500 F C	
500-149809-11	MW-15	Total/NA	Water	SM 4500 F C	
500-149809-12	MW-17	Total/NA	Water	SM 4500 F C	
500-149809-13	MW-18	Total/NA	Water	SM 4500 F C	
500-149809-14	MW-19	Total/NA	Water	SM 4500 F C	
500-149809-15	Duplicate	Total/NA	Water	SM 4500 F C	
MB 500-446883/3	Method Blank	Total/NA	Water	SM 4500 F C	
MB 500-446883/31	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 500-446883/32	Lab Control Sample	Total/NA	Water	SM 4500 F C	
LCS 500-446883/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
500-149809-12 MS	MW-17	Total/NA	Water	SM 4500 F C	
500-149809-12 MSD	MW-17	Total/NA	Water	SM 4500 F C	

QC Sample Results

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

TestAmerica Job ID: 500-149809-1

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 500-445039/1-A
Matrix: Water
Analysis Batch: 445254

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 445039

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.010		0.010		mg/L		08/11/18 12:28	08/13/18 13:52	1

Lab Sample ID: LCS 500-445039/2-A
Matrix: Water
Analysis Batch: 445254

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 445039

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lithium	0.500	0.496		mg/L		99	80 - 120

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 500-445039/1-A
Matrix: Water
Analysis Batch: 445195

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 445039

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		08/11/18 12:28	08/13/18 12:59	1
Arsenic	<0.0010		0.0010		mg/L		08/11/18 12:28	08/13/18 12:59	1
Barium	<0.0025		0.0025		mg/L		08/11/18 12:28	08/13/18 12:59	1
Beryllium	<0.0010	^	0.0010		mg/L		08/11/18 12:28	08/13/18 12:59	1
Cadmium	<0.00050		0.00050		mg/L		08/11/18 12:28	08/13/18 12:59	1
Calcium	<0.20		0.20		mg/L		08/11/18 12:28	08/13/18 12:59	1
Chromium	<0.0050		0.0050		mg/L		08/11/18 12:28	08/13/18 12:59	1
Cobalt	<0.0010		0.0010		mg/L		08/11/18 12:28	08/13/18 12:59	1
Lead	<0.00050		0.00050		mg/L		08/11/18 12:28	08/13/18 12:59	1
Molybdenum	<0.0050		0.0050		mg/L		08/11/18 12:28	08/13/18 12:59	1
Selenium	<0.0025		0.0025		mg/L		08/11/18 12:28	08/13/18 12:59	1
Thallium	<0.0020		0.0020		mg/L		08/11/18 12:28	08/13/18 12:59	1

Lab Sample ID: MB 500-445039/1-A
Matrix: Water
Analysis Batch: 445305

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 445039

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.050		0.050		mg/L		08/11/18 12:28	08/13/18 16:33	1

Lab Sample ID: LCS 500-445039/2-A
Matrix: Water
Analysis Batch: 445195

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 445039

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.500	0.486		mg/L		97	80 - 120
Arsenic	0.100	0.0987		mg/L		99	80 - 120
Barium	2.00	2.09		mg/L		104	80 - 120
Beryllium	0.0500	0.0526	^	mg/L		105	80 - 120
Cadmium	0.0500	0.0499		mg/L		100	80 - 120
Calcium	10.0	9.26		mg/L		93	80 - 120
Chromium	0.200	0.199		mg/L		99	80 - 120
Cobalt	0.500	0.512		mg/L		102	80 - 120

TestAmerica Chicago

QC Sample Results

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

TestAmerica Job ID: 500-149809-1

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

Lab Sample ID: LCS 500-445039/2-A
Matrix: Water
Analysis Batch: 445195

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 445039

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	0.100	0.104		mg/L		104	80 - 120
Molybdenum	1.00	0.962		mg/L		96	80 - 120
Selenium	0.100	0.0975		mg/L		97	80 - 120
Thallium	0.100	0.102		mg/L		102	80 - 120

Lab Sample ID: LCS 500-445039/2-A
Matrix: Water
Analysis Batch: 445305

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 445039

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1.00	0.999		mg/L		100	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 500-445342/12-A
Matrix: Water
Analysis Batch: 445532

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 445342

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		08/14/18 11:53	08/15/18 10:27	1

Lab Sample ID: LCS 500-445342/13-A
Matrix: Water
Analysis Batch: 445532

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 445342

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00200	0.00183		mg/L		91	80 - 120

Lab Sample ID: 500-149809-8 MS
Matrix: Water
Analysis Batch: 445532

Client Sample ID: MW-10
Prep Type: Total/NA
Prep Batch: 445342

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	<0.00020		0.00100	0.00104		mg/L		104	75 - 125

Lab Sample ID: 500-149809-8 MSD
Matrix: Water
Analysis Batch: 445532

Client Sample ID: MW-10
Prep Type: Total/NA
Prep Batch: 445342

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Mercury	<0.00020		0.00100	0.00110		mg/L		110	75 - 125	5	20

Lab Sample ID: 500-149809-8 DU
Matrix: Water
Analysis Batch: 445532

Client Sample ID: MW-10
Prep Type: Total/NA
Prep Batch: 445342

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

TestAmerica Chicago

QC Sample Results

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

TestAmerica Job ID: 500-149809-1

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

Lab Sample ID: MB 500-445061/1

Matrix: Water

Analysis Batch: 445061

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10		mg/L			08/12/18 22:23	1

Lab Sample ID: LCS 500-445061/2

Matrix: Water

Analysis Batch: 445061

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	250	294		mg/L		118	80 - 120

Lab Sample ID: 500-149809-1 DU

Matrix: Water

Analysis Batch: 445061

Client Sample ID: MW-01

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	430		448		mg/L		3	5

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 500-446204/4

Matrix: Water

Analysis Batch: 446204

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<2.0		2.0		mg/L			08/20/18 14:06	1

Lab Sample ID: LCS 500-446204/5

Matrix: Water

Analysis Batch: 446204

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	51.4		mg/L		103	85 - 115

Lab Sample ID: 500-149809-7 MS

Matrix: Water

Analysis Batch: 446204

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	39		50.0	82.0		mg/L		86	75 - 125

Lab Sample ID: 500-149809-7 MSD

Matrix: Water

Analysis Batch: 446204

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	39		50.0	83.5		mg/L		89	75 - 125	2	20

TestAmerica Chicago

QC Sample Results

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

TestAmerica Job ID: 500-149809-1

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 500-445284/31
Matrix: Water
Analysis Batch: 445284

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.10		0.10		mg/L	-		08/13/18 18:24	1

Lab Sample ID: LCS 500-445284/32
Matrix: Water
Analysis Batch: 445284

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

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

Lab Sample ID: MB 500-446883/3
Matrix: Water
Analysis Batch: 446883

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.10		0.10		mg/L	-		08/23/18 14:41	1

Lab Sample ID: MB 500-446883/31
Matrix: Water
Analysis Batch: 446883

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.10		0.10		mg/L	-		08/23/18 16:19	1

Lab Sample ID: LCS 500-446883/32
Matrix: Water
Analysis Batch: 446883

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	10.4		mg/L	-	104	80 - 120

Lab Sample ID: LCS 500-446883/4
Matrix: Water
Analysis Batch: 446883

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	10.5		mg/L	-	105	80 - 120

Lab Sample ID: 500-149809-12 MS
Matrix: Water
Analysis Batch: 446883

Client Sample ID: MW-17
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	0.60		5.00	5.80		mg/L	-	104	75 - 125

Lab Sample ID: 500-149809-12 MSD
Matrix: Water
Analysis Batch: 446883

Client Sample ID: MW-17
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	0.60		5.00	5.69		mg/L	-	102	75 - 125	2	20

TestAmerica Chicago

QC Sample Results

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

TestAmerica Job ID: 500-149809-1

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 500-445449/3

Matrix: Water

Analysis Batch: 445449

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			08/15/18 05:30	1

Lab Sample ID: LCS 500-445449/4

Matrix: Water

Analysis Batch: 445449

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	20.2		mg/L		101	80 - 120

Lab Sample ID: MB 500-446448/3

Matrix: Water

Analysis Batch: 446448

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			08/22/18 05:28	1

Lab Sample ID: LCS 500-446448/4

Matrix: Water

Analysis Batch: 446448

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	20.0	21.8		mg/L		109	80 - 120

Lab Chronicle

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

TestAmerica Job ID: 500-149809-1

Client Sample ID: MW-01

Date Collected: 08/08/18 09:49

Date Received: 08/10/18 16:50

Lab Sample ID: 500-149809-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			445039	08/11/18 12:28	BDE	TAL CHI
Total Recoverable	Analysis	6010C		1	445254	08/13/18 14:08	EEN	TAL CHI
Total Recoverable	Prep	3005A			445039	08/11/18 12:28	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	445195	08/13/18 14:01	FXG	TAL CHI
Total Recoverable	Prep	3005A			445039	08/11/18 12:28	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	445305	08/13/18 16:41	FXG	TAL CHI
Total/NA	Prep	7470A			445342	08/14/18 11:53	MJG	TAL CHI
Total/NA	Analysis	7470A		1	445532	08/15/18 10:30	MJG	TAL CHI
Total/NA	Analysis	SM 2540C		1	445061	08/12/18 22:38	CLB	TAL CHI
Total/NA	Analysis	SM 4500 CI- E		1	446204	08/20/18 14:07	HMW	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	445284	08/13/18 18:53	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		2	445449		CLB	TAL CHI
						(Start) 08/15/18 05:38		
						(End) 08/15/18 05:39		

Client Sample ID: MW-02

Date Collected: 08/07/18 09:30

Date Received: 08/10/18 16:50

Lab Sample ID: 500-149809-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			445039	08/11/18 12:28	BDE	TAL CHI
Total Recoverable	Analysis	6010C		1	445254	08/13/18 14:12	EEN	TAL CHI
Total Recoverable	Prep	3005A			445039	08/11/18 12:28	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	445195	08/13/18 14:04	FXG	TAL CHI
Total Recoverable	Prep	3005A			445039	08/11/18 12:28	BDE	TAL CHI
Total Recoverable	Analysis	6020A		5	445305	08/13/18 16:45	FXG	TAL CHI
Total/NA	Prep	7470A			445342	08/14/18 11:53	MJG	TAL CHI
Total/NA	Analysis	7470A		1	445532	08/15/18 10:36	MJG	TAL CHI
Total/NA	Analysis	SM 2540C		1	445061	08/12/18 22:43	CLB	TAL CHI
Total/NA	Analysis	SM 4500 CI- E		1	446204	08/20/18 14:08	HMW	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	445284	08/13/18 18:57	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		5	445449		CLB	TAL CHI
						(Start) 08/15/18 05:39		
						(End) 08/15/18 05:40		

Client Sample ID: MW-03

Date Collected: 08/07/18 10:54

Date Received: 08/10/18 16:50

Lab Sample ID: 500-149809-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			445039	08/11/18 12:28	BDE	TAL CHI
Total Recoverable	Analysis	6010C		1	445254	08/13/18 14:16	EEN	TAL CHI
Total Recoverable	Prep	3005A			445039	08/11/18 12:28	BDE	TAL CHI

TestAmerica Chicago

Lab Chronicle

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

TestAmerica Job ID: 500-149809-1

Client Sample ID: MW-03

Date Collected: 08/07/18 10:54

Date Received: 08/10/18 16:50

Lab Sample ID: 500-149809-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Analysis	6020A		1	445195	08/13/18 14:08	FXG	TAL CHI
Total Recoverable	Prep	3005A			445039	08/11/18 12:28	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	445305	08/13/18 16:48	FXG	TAL CHI
Total/NA	Prep	7470A			445342	08/14/18 11:53	MJG	TAL CHI
Total/NA	Analysis	7470A		1	445532	08/15/18 10:38	MJG	TAL CHI
Total/NA	Analysis	SM 2540C		1	445061	08/12/18 22:46	CLB	TAL CHI
Total/NA	Analysis	SM 4500 CI- E		5	446204	08/20/18 14:42	HMW	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	445284	08/13/18 19:00	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		5	445449		CLB	TAL CHI
						(Start) 08/15/18 05:42		
						(End) 08/15/18 05:43		

Client Sample ID: MW-04

Date Collected: 08/07/18 12:27

Date Received: 08/10/18 16:50

Lab Sample ID: 500-149809-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			445039	08/11/18 12:28	BDE	TAL CHI
Total Recoverable	Analysis	6010C		1	445254	08/13/18 14:20	EEN	TAL CHI
Total Recoverable	Prep	3005A			445039	08/11/18 12:28	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	445195	08/13/18 14:12	FXG	TAL CHI
Total Recoverable	Prep	3005A			445039	08/11/18 12:28	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	445305	08/13/18 16:52	FXG	TAL CHI
Total/NA	Prep	7470A			445342	08/14/18 11:53	MJG	TAL CHI
Total/NA	Analysis	7470A		1	445532	08/15/18 10:39	MJG	TAL CHI
Total/NA	Analysis	SM 2540C		1	445061	08/12/18 22:48	CLB	TAL CHI
Total/NA	Analysis	SM 4500 CI- E		1	446204	08/20/18 14:10	HMW	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	445284	08/13/18 19:03	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		5	445449		CLB	TAL CHI
						(Start) 08/15/18 05:43		
						(End) 08/15/18 05:44		

Client Sample ID: MW-05

Date Collected: 08/07/18 13:30

Date Received: 08/10/18 16:50

Lab Sample ID: 500-149809-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			445039	08/11/18 12:28	BDE	TAL CHI
Total Recoverable	Analysis	6010C		1	445254	08/13/18 14:23	EEN	TAL CHI
Total Recoverable	Prep	3005A			445039	08/11/18 12:28	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	445195	08/13/18 14:16	FXG	TAL CHI
Total Recoverable	Prep	3005A			445039	08/11/18 12:28	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	445305	08/13/18 16:56	FXG	TAL CHI

TestAmerica Chicago

Lab Chronicle

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

TestAmerica Job ID: 500-149809-1

Client Sample ID: MW-05

Date Collected: 08/07/18 13:30

Date Received: 08/10/18 16:50

Lab Sample ID: 500-149809-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7470A			445342	08/14/18 11:53	MJG	TAL CHI
Total/NA	Analysis	7470A		1	445532	08/15/18 10:41	MJG	TAL CHI
Total/NA	Analysis	SM 2540C		1	445061	08/12/18 22:51	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		5	446204	08/20/18 14:11	HMW	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	445284	08/13/18 19:06	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		10	445449		CLB	TAL CHI
					(Start)	08/15/18 05:44		
					(End)	08/15/18 05:45		

Client Sample ID: MW-08

Date Collected: 08/08/18 11:11

Date Received: 08/10/18 16:50

Lab Sample ID: 500-149809-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			445039	08/11/18 12:28	BDE	TAL CHI
Total Recoverable	Analysis	6010C		1	445254	08/13/18 14:27	EEN	TAL CHI
Total Recoverable	Prep	3005A			445039	08/11/18 12:28	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	445195	08/13/18 14:19	FXG	TAL CHI
Total Recoverable	Prep	3005A			445039	08/11/18 12:28	BDE	TAL CHI
Total Recoverable	Analysis	6020A		5	445305	08/13/18 17:00	FXG	TAL CHI
Total/NA	Prep	7470A			445342	08/14/18 11:53	MJG	TAL CHI
Total/NA	Analysis	7470A		1	445532	08/15/18 10:43	MJG	TAL CHI
Total/NA	Analysis	SM 2540C		1	445061	08/12/18 22:54	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		5	446204	08/20/18 14:12	HMW	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	445284	08/13/18 19:10	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		10	445449		CLB	TAL CHI
					(Start)	08/15/18 05:45		
					(End)	08/15/18 05:46		

Client Sample ID: MW-09

Date Collected: 08/08/18 12:46

Date Received: 08/10/18 16:50

Lab Sample ID: 500-149809-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			445039	08/11/18 12:28	BDE	TAL CHI
Total Recoverable	Analysis	6010C		1	445254	08/13/18 14:32	EEN	TAL CHI
Total Recoverable	Prep	3005A			445039	08/11/18 12:28	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	445195	08/13/18 14:34	FXG	TAL CHI
Total Recoverable	Prep	3005A			445039	08/11/18 12:28	BDE	TAL CHI
Total Recoverable	Analysis	6020A		20	445305	08/13/18 17:03	FXG	TAL CHI
Total/NA	Prep	7470A			445342	08/14/18 11:53	MJG	TAL CHI
Total/NA	Analysis	7470A		1	445532	08/15/18 10:44	MJG	TAL CHI
Total/NA	Analysis	SM 2540C		1	445061	08/12/18 22:56	CLB	TAL CHI

TestAmerica Chicago

Lab Chronicle

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

TestAmerica Job ID: 500-149809-1

Client Sample ID: MW-09

Date Collected: 08/08/18 12:46

Date Received: 08/10/18 16:50

Lab Sample ID: 500-149809-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		1	446204	08/20/18 14:16	HMW	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	445284	08/13/18 19:13	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		10	445449	08/15/18 05:46 (Start) 08/15/18 05:47 (End) 08/15/18 05:47	CLB	TAL CHI

Client Sample ID: MW-10

Date Collected: 08/08/18 14:44

Date Received: 08/10/18 16:50

Lab Sample ID: 500-149809-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			445039	08/11/18 12:28	BDE	TAL CHI
Total Recoverable	Analysis	6010C		1	445254	08/13/18 14:36	EEN	TAL CHI
Total Recoverable	Prep	3005A			445039	08/11/18 12:28	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	445195	08/13/18 14:38	FXG	TAL CHI
Total Recoverable	Prep	3005A			445039	08/11/18 12:28	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	445305	08/13/18 17:07	FXG	TAL CHI
Total/NA	Prep	7470A			445342	08/14/18 11:53	MJG	TAL CHI
Total/NA	Analysis	7470A		1	445532	08/15/18 10:46	MJG	TAL CHI
Total/NA	Analysis	SM 2540C		1	445061	08/12/18 22:59	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		1	446204	08/20/18 14:18	HMW	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	446883	08/23/18 16:03	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		4	445449	08/15/18 05:47 (Start) 08/15/18 05:47 (End) 08/15/18 05:48	CLB	TAL CHI

Client Sample ID: MW-11

Date Collected: 08/09/18 14:03

Date Received: 08/10/18 16:50

Lab Sample ID: 500-149809-9

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			445039	08/11/18 12:28	BDE	TAL CHI
Total Recoverable	Analysis	6010C		1	445254	08/13/18 14:40	EEN	TAL CHI
Total Recoverable	Prep	3005A			445039	08/11/18 12:28	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	445195	08/13/18 14:42	FXG	TAL CHI
Total Recoverable	Prep	3005A			445039	08/11/18 12:28	BDE	TAL CHI
Total Recoverable	Analysis	6020A		10	445305	08/13/18 17:19	FXG	TAL CHI
Total/NA	Prep	7470A			445342	08/14/18 11:53	MJG	TAL CHI
Total/NA	Analysis	7470A		1	445532	08/15/18 10:57	MJG	TAL CHI
Total/NA	Analysis	SM 2540C		1	445061	08/12/18 23:01	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		5	446204	08/20/18 14:19	HMW	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	446883	08/23/18 16:06	EAT	TAL CHI

TestAmerica Chicago

Lab Chronicle

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

TestAmerica Job ID: 500-149809-1

Client Sample ID: MW-11

Date Collected: 08/09/18 14:03

Date Received: 08/10/18 16:50

Lab Sample ID: 500-149809-9

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	445449	08/15/18 05:48 (Start) 08/15/18 05:48 (End) 08/15/18 05:49	CLB	TAL CHI

Client Sample ID: MW-12

Date Collected: 08/09/18 15:46

Date Received: 08/10/18 16:50

Lab Sample ID: 500-149809-10

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			445039	08/11/18 12:28	BDE	TAL CHI
Total Recoverable	Analysis	6010C		1	445254	08/13/18 14:56	EEN	TAL CHI
Total Recoverable	Prep	3005A			445039	08/11/18 12:28	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	445195	08/13/18 14:46	FXG	TAL CHI
Total Recoverable	Prep	3005A			445039	08/11/18 12:28	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	445305	08/13/18 17:22	FXG	TAL CHI
Total/NA	Prep	7470A			445342	08/14/18 11:53	MJG	TAL CHI
Total/NA	Analysis	7470A		1	445532	08/15/18 10:59	MJG	TAL CHI
Total/NA	Analysis	SM 2540C		1	445061	08/12/18 23:04	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		5	446204	08/20/18 14:20	HMW	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	446883	08/23/18 16:09	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		20	445449	08/15/18 05:49 (Start) 08/15/18 05:49 (End) 08/15/18 05:50	CLB	TAL CHI

Client Sample ID: MW-15

Date Collected: 08/09/18 11:42

Date Received: 08/10/18 16:50

Lab Sample ID: 500-149809-11

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			445039	08/11/18 12:28	BDE	TAL CHI
Total Recoverable	Analysis	6010C		1	445254	08/13/18 15:00	EEN	TAL CHI
Total Recoverable	Prep	3005A			445039	08/11/18 12:28	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	445195	08/13/18 14:49	FXG	TAL CHI
Total Recoverable	Prep	3005A			445039	08/11/18 12:28	BDE	TAL CHI
Total Recoverable	Analysis	6020A		10	445305	08/13/18 17:26	FXG	TAL CHI
Total/NA	Prep	7470A			445342	08/14/18 11:53	MJG	TAL CHI
Total/NA	Analysis	7470A		1	445532	08/15/18 11:00	MJG	TAL CHI
Total/NA	Analysis	SM 2540C		1	445061	08/12/18 23:06	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		5	446204	08/20/18 14:20	HMW	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	446883	08/23/18 16:12	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		25	445449	08/15/18 05:50 (Start) 08/15/18 05:50 (End) 08/15/18 05:51	CLB	TAL CHI

TestAmerica Chicago

Lab Chronicle

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

TestAmerica Job ID: 500-149809-1

Client Sample ID: MW-17

Date Collected: 08/06/18 14:41

Date Received: 08/10/18 16:50

Lab Sample ID: 500-149809-12

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			445039	08/11/18 12:28	BDE	TAL CHI
Total Recoverable	Analysis	6010C		1	445254	08/13/18 15:04	EEN	TAL CHI
Total Recoverable	Prep	3005A			445039	08/11/18 12:28	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	445195	08/13/18 14:53	FXG	TAL CHI
Total Recoverable	Prep	3005A			445039	08/11/18 12:28	BDE	TAL CHI
Total Recoverable	Analysis	6020A		10	445305	08/13/18 17:30	FXG	TAL CHI
Total/NA	Prep	7470A			445342	08/14/18 11:53	MJG	TAL CHI
Total/NA	Analysis	7470A		1	445532	08/15/18 11:02	MJG	TAL CHI
Total/NA	Analysis	SM 2540C		1	445061	08/12/18 23:09	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		5	446204	08/20/18 14:21	HMW	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	446883	08/23/18 16:24	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		50	445449		CLB	TAL CHI
						(Start) 08/15/18 05:51		
						(End) 08/15/18 05:52		

Client Sample ID: MW-18

Date Collected: 08/06/18 15:46

Date Received: 08/10/18 16:50

Lab Sample ID: 500-149809-13

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			445039	08/11/18 12:28	BDE	TAL CHI
Total Recoverable	Analysis	6010C		1	445254	08/13/18 15:08	EEN	TAL CHI
Total Recoverable	Prep	3005A			445039	08/11/18 12:28	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	445195	08/13/18 14:57	FXG	TAL CHI
Total Recoverable	Prep	3005A			445039	08/11/18 12:28	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	445305	08/13/18 17:34	FXG	TAL CHI
Total/NA	Prep	7470A			445342	08/14/18 11:53	MJG	TAL CHI
Total/NA	Analysis	7470A		1	445532	08/15/18 11:03	MJG	TAL CHI
Total/NA	Analysis	SM 2540C		1	445061	08/12/18 23:12	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		5	446204	08/20/18 14:21	HMW	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	446883	08/23/18 16:32	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		10	446448		CLB	TAL CHI
						(Start) 08/22/18 05:36		
						(End) 08/22/18 05:37		

Client Sample ID: MW-19

Date Collected: 08/06/18 16:48

Date Received: 08/10/18 16:50

Lab Sample ID: 500-149809-14

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			445039	08/11/18 12:28	BDE	TAL CHI
Total Recoverable	Analysis	6010C		1	445254	08/13/18 15:12	EEN	TAL CHI
Total Recoverable	Prep	3005A			445039	08/11/18 12:28	BDE	TAL CHI

TestAmerica Chicago

Lab Chronicle

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

TestAmerica Job ID: 500-149809-1

Client Sample ID: MW-19

Date Collected: 08/06/18 16:48

Date Received: 08/10/18 16:50

Lab Sample ID: 500-149809-14

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Analysis	6020A		1	445195	08/13/18 15:01	FXG	TAL CHI
Total Recoverable	Prep	3005A			445039	08/11/18 12:28	BDE	TAL CHI
Total Recoverable	Analysis	6020A		20	445305	08/13/18 17:38	FXG	TAL CHI
Total/NA	Prep	7470A			445342	08/14/18 11:53	MJG	TAL CHI
Total/NA	Analysis	7470A		1	445532	08/15/18 11:05	MJG	TAL CHI
Total/NA	Analysis	SM 2540C		1	445061	08/12/18 23:14	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		1	446204	08/20/18 14:43	HMW	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	446883	08/23/18 16:45	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		10	446448		CLB	TAL CHI
						(Start) 08/22/18 05:37		
						(End) 08/22/18 05:38		

Client Sample ID: Duplicate

Date Collected: 08/07/18 00:00

Date Received: 08/10/18 16:50

Lab Sample ID: 500-149809-15

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			445039	08/11/18 12:28	BDE	TAL CHI
Total Recoverable	Analysis	6010C		1	445254	08/13/18 15:16	EEN	TAL CHI
Total Recoverable	Prep	3005A			445039	08/11/18 12:28	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	445195	08/13/18 15:05	FXG	TAL CHI
Total Recoverable	Prep	3005A			445039	08/11/18 12:28	BDE	TAL CHI
Total Recoverable	Analysis	6020A		10	445305	08/13/18 17:41	FXG	TAL CHI
Total/NA	Prep	7470A			445342	08/14/18 11:53	MJG	TAL CHI
Total/NA	Analysis	7470A		1	445532	08/15/18 11:06	MJG	TAL CHI
Total/NA	Analysis	SM 2540C		1	445061	08/12/18 23:17	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		1	446204	08/20/18 14:24	HMW	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	446883	08/23/18 16:49	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		4	446448		CLB	TAL CHI
						(Start) 08/22/18 05:40		
						(End) 08/22/18 05:41		

Laboratory References:

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

TestAmerica Chicago

Accreditation/Certification Summary

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

TestAmerica Job ID: 500-149809-1

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	04-30-19

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TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Chicago

2417 Bond St.

University Park, IL 60484

708-534-5200

Fax: 708-534-5211

Report To:

Contact: 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 #:



500-149809 COC

Lab Lot # 500-149809

Package Sealed
Yes No
Samples Sealed
Yes No

Received on Ice
Yes No
Samples Intact
Yes No N/A

Temperature °C of Cooler
3.6, 3.7, 10.0, 5.2, 5.4

Within Hold Time
Yes No
Preserv. Indicated
Yes No N/A

pH Check OK
Yes No
Res. CL Check OK
Yes No N/A

Sample Labels and COC Agree
Yes No
COC not present

Sampler Name:			COMPANY:			# / Cont.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													

RELINQUISHED BY: IJH	COMPANY: KPRG	DATE: 8-10-18	TIME: 16:50	RECEIVED BY: [Signature]	COMPANY: TA	DATE: 8/10/18	TIME: 16:50
RELINQUISHED BY:	COMPANY:	DATE:	TIME:	RECEIVED BY:	COMPANY:	DATE:	TIME:

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

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

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

COMMENTS:

Date Received 8/10/18
Courier:
Hand Delivered ☒
Bill of Lading:

STL-8208 (0600)

Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-149809-1

Login Number: 149809

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	3.6, 3.7, 5.2, 5.4, 6.0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	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	

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: 500-149809-2

Client Project/Site: Powerton CCR

For:

KPRG and Associates, Inc.

14665 West Lisbon Road,

Suite 1A

Brookfield, Wisconsin 53005

Attn: Richard Gnat



Authorized for release by:

9/26/2018 7:15:47 AM

Eric Lang, Manager of Project Management

(708)534-5200

eric.lang@testamericainc.com

LINKS

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results through

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www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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.

1

2

3

4

5

6

7

8

9

10

11

12

13

14

Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Method Summary	4
Sample Summary	5
Client Sample Results	6
Definitions	21
QC Association	22
QC Sample Results	23
Chronicle	25
Certification Summary	29
Chain of Custody	30
Receipt Checklists	34
Tracer Carrier Summary	36



Case Narrative

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

TestAmerica Job ID: 500-149809-2

Job ID: 500-149809-2

Laboratory: TestAmerica Chicago

Narrative

Job Narrative 500-149809-2

Comments

No additional comments.

Receipt

The samples were received on 8/10/2018 4:50 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 5 coolers at receipt time were 3.6° C, 3.7° C, 5.2° C, 5.4° C and 6.0° C.

RAD

Method(s) PrecSep_0: Radium 228 Prep Batch 160-382531:

Sample aliquot 280-113076-1 reduced due to potential matrix interference. Sample was black, opaque, contained heavy sediment levels, and contained plant material.

Sample aliquots 500-149809-8 and 500-149809-12 reduced due to potential matrix interference. Samples contained heavy levels of black sediment.

Sample aliquot 500-149809-9 reduced due to potential matrix interference. Sample was yellow, murky, and contained sediment.

Sample aliquot 500-149809-10 reduced due to potential matrix interference. Sample contained brown floating debris.

Sample aliquot 500-149809-13 reduced due to potential matrix interference. Sample had a strong odor similar to that of sulfur.

MW-10 (500-149809-8), MW-11 (500-149809-9), MW-12 (500-149809-10), MW-17 (500-149809-12) and MW-18 (500-149809-13)

Method(s) PrecSep-21: Radium 226 Prep Batch 160-382525:

Sample aliquot 280-113076-1 reduced due to potential matrix interference. Sample was black, opaque, contained heavy sediment levels, and contained plant material.

Sample aliquots 500-149809-8 and 500-149809-12 reduced due to potential matrix interference. Samples contained heavy levels of black sediment.

Sample aliquot 500-149809-9 reduced due to potential matrix interference. Sample was yellow, murky, and contained sediment.

Sample aliquot 500-149809-10 reduced due to potential matrix interference. Sample contained brown floating debris.

Sample aliquot 500-149809-13 reduced due to potential matrix interference. Sample had a strong odor similar to that of sulfur.

MW-10 (500-149809-8), MW-11 (500-149809-9), MW-12 (500-149809-10), MW-17 (500-149809-12) and MW-18 (500-149809-13)

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

Method Summary

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

TestAmerica Job ID: 500-149809-2

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

Protocol References:

EPA = US Environmental Protection Agency

None = None

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

Laboratory References:

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

Sample Summary

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

TestAmerica Job ID: 500-149809-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-149809-1	MW-01	Water	08/08/18 09:49	08/10/18 16:50
500-149809-2	MW-02	Water	08/07/18 09:30	08/10/18 16:50
500-149809-3	MW-03	Water	08/07/18 10:54	08/10/18 16:50
500-149809-4	MW-04	Water	08/07/18 12:27	08/10/18 16:50
500-149809-5	MW-05	Water	08/07/18 13:30	08/10/18 16:50
500-149809-6	MW-08	Water	08/08/18 11:11	08/10/18 16:50
500-149809-7	MW-09	Water	08/08/18 12:46	08/10/18 16:50
500-149809-8	MW-10	Water	08/08/18 14:44	08/10/18 16:50
500-149809-9	MW-11	Water	08/09/18 14:03	08/10/18 16:50
500-149809-10	MW-12	Water	08/09/18 15:46	08/10/18 16:50
500-149809-11	MW-15	Water	08/09/18 11:42	08/10/18 16:50
500-149809-12	MW-17	Water	08/06/18 14:41	08/10/18 16:50
500-149809-13	MW-18	Water	08/06/18 15:46	08/10/18 16:50
500-149809-14	MW-19	Water	08/06/18 16:48	08/10/18 16:50
500-149809-15	Duplicate	Water	08/07/18 00:00	08/10/18 16:50

Client Sample Results

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

TestAmerica Job ID: 500-149809-2

Client Sample ID: MW-01

Date Collected: 08/08/18 09:49

Date Received: 08/10/18 16:50

Lab Sample ID: 500-149809-1

Matrix: Water

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.218		0.0846	0.0868	1.00	0.0848	pCi/L	08/15/18 08:57	09/07/18 05:35	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.5		40 - 110					08/15/18 08:57	09/07/18 05:35	1

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.361	U	0.246	0.249	1.00	0.384	pCi/L	08/15/18 10:00	08/22/18 09:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.5		40 - 110					08/15/18 10:00	08/22/18 09:16	1
Y Carrier	93.1		40 - 110					08/15/18 10:00	08/22/18 09:16	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.579		0.260	0.264	5.00	0.384	pCi/L		09/11/18 02:43	1

Client Sample Results

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

TestAmerica Job ID: 500-149809-2

Client Sample ID: MW-02

Date Collected: 08/07/18 09:30

Date Received: 08/10/18 16:50

Lab Sample ID: 500-149809-2

Matrix: Water

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.293		0.0924	0.0961	1.00	0.0714	pCi/L	08/15/18 08:57	09/07/18 05:35	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.1		40 - 110					08/15/18 08:57	09/07/18 05:35	1

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.330	U	0.241	0.243	1.00	0.376	pCi/L	08/15/18 10:00	08/22/18 09:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.1		40 - 110					08/15/18 10:00	08/22/18 09:16	1
Y Carrier	85.6		40 - 110					08/15/18 10:00	08/22/18 09:16	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.622		0.258	0.261	5.00	0.376	pCi/L		09/11/18 02:43	1

Client Sample Results

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

TestAmerica Job ID: 500-149809-2

Client Sample ID: MW-03

Date Collected: 08/07/18 10:54

Date Received: 08/10/18 16:50

Lab Sample ID: 500-149809-3

Matrix: Water

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.214		0.0803	0.0825	1.00	0.0767	pCi/L	08/15/18 08:57	09/07/18 05:35	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					08/15/18 08:57	09/07/18 05:35	1

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0137	U	0.191	0.191	1.00	0.341	pCi/L	08/15/18 10:00	08/22/18 09:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					08/15/18 10:00	08/22/18 09:16	1
Y Carrier	89.3		40 - 110					08/15/18 10:00	08/22/18 09:16	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.227	U	0.207	0.208	5.00	0.341	pCi/L		09/11/18 02:43	1

Client Sample Results

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

TestAmerica Job ID: 500-149809-2

Client Sample ID: MW-04

Date Collected: 08/07/18 12:27

Date Received: 08/10/18 16:50

Lab Sample ID: 500-149809-4

Matrix: Water

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.198		0.0801	0.0821	1.00	0.0789	pCi/L	08/15/18 08:57	09/07/18 05:35	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.2		40 - 110					08/15/18 08:57	09/07/18 05:35	1

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0210	U	0.186	0.186	1.00	0.334	pCi/L	08/15/18 10:00	08/22/18 09:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.2		40 - 110					08/15/18 10:00	08/22/18 09:16	1
Y Carrier	90.1		40 - 110					08/15/18 10:00	08/22/18 09:16	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.219	U	0.203	0.203	5.00	0.334	pCi/L		09/11/18 02:43	1

Client Sample Results

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

TestAmerica Job ID: 500-149809-2

Client Sample ID: MW-05

Date Collected: 08/07/18 13:30

Date Received: 08/10/18 16:50

Lab Sample ID: 500-149809-5

Matrix: Water

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.220		0.0870	0.0892	1.00	0.0905	pCi/L	08/15/18 08:57	09/07/18 05:35	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.0		40 - 110					08/15/18 08:57	09/07/18 05:35	1

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.303	U	0.263	0.265	1.00	0.423	pCi/L	08/15/18 10:00	08/22/18 09:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.0		40 - 110					08/15/18 10:00	08/22/18 09:16	1
Y Carrier	86.4		40 - 110					08/15/18 10:00	08/22/18 09:16	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.523		0.277	0.280	5.00	0.423	pCi/L		09/11/18 02:43	1

Client Sample Results

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

TestAmerica Job ID: 500-149809-2

Client Sample ID: MW-08

Date Collected: 08/08/18 11:11

Date Received: 08/10/18 16:50

Lab Sample ID: 500-149809-6

Matrix: Water

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.309		0.0962	0.100	1.00	0.0786	pCi/L	08/15/18 08:57	09/07/18 05:35	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.0		40 - 110					08/15/18 08:57	09/07/18 05:35	1

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0582	U	0.234	0.234	1.00	0.410	pCi/L	08/15/18 10:00	08/22/18 09:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.0		40 - 110					08/15/18 10:00	08/22/18 09:16	1
Y Carrier	80.4		40 - 110					08/15/18 10:00	08/22/18 09:16	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.367	U	0.253	0.254	5.00	0.410	pCi/L		09/11/18 02:43	1

TestAmerica Chicago

Client Sample Results

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

TestAmerica Job ID: 500-149809-2

Client Sample ID: MW-09

Date Collected: 08/08/18 12:46

Date Received: 08/10/18 16:50

Lab Sample ID: 500-149809-7

Matrix: Water

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.266		0.0889	0.0921	1.00	0.0739	pCi/L	08/15/18 08:57	09/07/18 05:35	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.9		40 - 110					08/15/18 08:57	09/07/18 05:35	1

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.173	U	0.207	0.208	1.00	0.342	pCi/L	08/15/18 10:00	08/22/18 09:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.9		40 - 110					08/15/18 10:00	08/22/18 09:16	1
Y Carrier	88.6		40 - 110					08/15/18 10:00	08/22/18 09:16	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.440		0.225	0.227	5.00	0.342	pCi/L		09/11/18 02:43	1

Client Sample Results

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

TestAmerica Job ID: 500-149809-2

Client Sample ID: MW-10

Date Collected: 08/08/18 14:44

Date Received: 08/10/18 16:50

Lab Sample ID: 500-149809-8

Matrix: Water

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.557		0.149	0.157	1.00	0.121	pCi/L	08/15/18 08:57	09/07/18 05:35	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.0		40 - 110					08/15/18 08:57	09/07/18 05:35	1

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0123	U	0.306	0.306	1.00	0.551	pCi/L	08/15/18 10:00	08/22/18 09:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.0		40 - 110					08/15/18 10:00	08/22/18 09:17	1
Y Carrier	80.0		40 - 110					08/15/18 10:00	08/22/18 09:17	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.545	U	0.340	0.344	5.00	0.551	pCi/L		09/11/18 02:43	1

Client Sample Results

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

TestAmerica Job ID: 500-149809-2

Client Sample ID: MW-11

Date Collected: 08/09/18 14:03

Date Received: 08/10/18 16:50

Lab Sample ID: 500-149809-9

Matrix: Water

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.940		0.187	0.205	1.00	0.108	pCi/L	08/15/18 08:57	09/07/18 05:35	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.8		40 - 110					08/15/18 08:57	09/07/18 05:35	1

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.536		0.332	0.336	1.00	0.507	pCi/L	08/15/18 10:00	08/22/18 09:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.8		40 - 110					08/15/18 10:00	08/22/18 09:17	1
Y Carrier	87.9		40 - 110					08/15/18 10:00	08/22/18 09:17	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.48		0.381	0.394	5.00	0.507	pCi/L		09/11/18 02:43	1

Client Sample Results

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

TestAmerica Job ID: 500-149809-2

Client Sample ID: MW-12

Date Collected: 08/09/18 15:46

Date Received: 08/10/18 16:50

Lab Sample ID: 500-149809-10

Matrix: Water

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.456		0.135	0.141	1.00	0.105	pCi/L	08/15/18 08:57	09/07/18 05:35	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.2		40 - 110					08/15/18 08:57	09/07/18 05:35	1

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.279	U	0.331	0.332	1.00	0.546	pCi/L	08/15/18 10:00	08/22/18 09:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.2		40 - 110					08/15/18 10:00	08/22/18 09:17	1
Y Carrier	81.9		40 - 110					08/15/18 10:00	08/22/18 09:17	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.735		0.357	0.361	5.00	0.546	pCi/L		09/11/18 02:43	1

Client Sample Results

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

TestAmerica Job ID: 500-149809-2

Client Sample ID: MW-15

Date Collected: 08/09/18 11:42

Date Received: 08/10/18 16:50

Lab Sample ID: 500-149809-11

Matrix: Water

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.246		0.0895	0.0922	1.00	0.0884	pCi/L	08/15/18 08:57	09/07/18 05:36	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.6		40 - 110					08/15/18 08:57	09/07/18 05:36	1

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.320	U	0.212	0.214	1.00	0.323	pCi/L	08/15/18 10:00	08/22/18 09:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.6		40 - 110					08/15/18 10:00	08/22/18 09:17	1
Y Carrier	85.2		40 - 110					08/15/18 10:00	08/22/18 09:17	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.566		0.230	0.233	5.00	0.323	pCi/L		09/11/18 02:43	1

Client Sample Results

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

TestAmerica Job ID: 500-149809-2

Client Sample ID: MW-17

Date Collected: 08/06/18 14:41

Date Received: 08/10/18 16:50

Lab Sample ID: 500-149809-12

Matrix: Water

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.619		0.156	0.166	1.00	0.117	pCi/L	08/15/18 08:57	09/07/18 05:36	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.3		40 - 110					08/15/18 08:57	09/07/18 05:36	1

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.720		0.340	0.347	1.00	0.491	pCi/L	08/15/18 10:00	08/22/18 09:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.3		40 - 110					08/15/18 10:00	08/22/18 09:17	1
Y Carrier	84.1		40 - 110					08/15/18 10:00	08/22/18 09:17	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.34		0.374	0.385	5.00	0.491	pCi/L		09/11/18 02:43	1

Client Sample Results

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

TestAmerica Job ID: 500-149809-2

Client Sample ID: MW-18

Date Collected: 08/06/18 15:46

Date Received: 08/10/18 16:50

Lab Sample ID: 500-149809-13

Matrix: Water

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.325		0.112	0.116	1.00	0.0992	pCi/L	08/15/18 08:57	09/07/18 05:37	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.6		40 - 110					08/15/18 08:57	09/07/18 05:37	1

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.695		0.365	0.371	1.00	0.541	pCi/L	08/15/18 10:00	08/22/18 09:18	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.6		40 - 110					08/15/18 10:00	08/22/18 09:18	1
Y Carrier	79.3		40 - 110					08/15/18 10:00	08/22/18 09:18	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.02		0.382	0.389	5.00	0.541	pCi/L		09/11/18 02:43	1

Client Sample Results

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

TestAmerica Job ID: 500-149809-2

Client Sample ID: MW-19

Date Collected: 08/06/18 16:48

Date Received: 08/10/18 16:50

Lab Sample ID: 500-149809-14

Matrix: Water

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.268		0.0900	0.0932	1.00	0.0790	pCi/L	08/15/18 08:57	09/07/18 05:37	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.9		40 - 110					08/15/18 08:57	09/07/18 05:37	1

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.567		0.287	0.292	1.00	0.415	pCi/L	08/15/18 10:00	08/22/18 09:18	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.9		40 - 110					08/15/18 10:00	08/22/18 09:18	1
Y Carrier	74.0		40 - 110					08/15/18 10:00	08/22/18 09:18	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.835		0.301	0.307	5.00	0.415	pCi/L		09/11/18 02:43	1

Client Sample Results

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

TestAmerica Job ID: 500-149809-2

Client Sample ID: Duplicate

Date Collected: 08/07/18 00:00

Date Received: 08/10/18 16:50

Lab Sample ID: 500-149809-15

Matrix: Water

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.206		0.0779	0.0801	1.00	0.0620	pCi/L	08/15/18 08:57	09/07/18 05:38	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.9		40 - 110					08/15/18 08:57	09/07/18 05:38	1

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.204	U	0.282	0.283	1.00	0.471	pCi/L	08/15/18 10:00	08/22/18 09:18	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.9		40 - 110					08/15/18 10:00	08/22/18 09:18	1
Y Carrier	68.8		40 - 110					08/15/18 10:00	08/22/18 09:18	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.410	U	0.293	0.294	5.00	0.471	pCi/L		09/11/18 02:43	1

Definitions/Glossary

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

TestAmerica Job ID: 500-149809-2

Qualifiers

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
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: Powerton CCR

TestAmerica Job ID: 500-149809-2

Rad

Prep Batch: 382525

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-149809-1	MW-01	Total/NA	Water	PrecSep-21	
500-149809-2	MW-02	Total/NA	Water	PrecSep-21	
500-149809-3	MW-03	Total/NA	Water	PrecSep-21	
500-149809-4	MW-04	Total/NA	Water	PrecSep-21	
500-149809-5	MW-05	Total/NA	Water	PrecSep-21	
500-149809-6	MW-08	Total/NA	Water	PrecSep-21	
500-149809-7	MW-09	Total/NA	Water	PrecSep-21	
500-149809-8	MW-10	Total/NA	Water	PrecSep-21	
500-149809-9	MW-11	Total/NA	Water	PrecSep-21	
500-149809-10	MW-12	Total/NA	Water	PrecSep-21	
500-149809-11	MW-15	Total/NA	Water	PrecSep-21	
500-149809-12	MW-17	Total/NA	Water	PrecSep-21	
500-149809-13	MW-18	Total/NA	Water	PrecSep-21	
500-149809-14	MW-19	Total/NA	Water	PrecSep-21	
500-149809-15	Duplicate	Total/NA	Water	PrecSep-21	
MB 160-382525/22-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-382525/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
500-149809-15 DU	Duplicate	Total/NA	Water	PrecSep-21	

Prep Batch: 382531

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-149809-1	MW-01	Total/NA	Water	PrecSep_0	
500-149809-2	MW-02	Total/NA	Water	PrecSep_0	
500-149809-3	MW-03	Total/NA	Water	PrecSep_0	
500-149809-4	MW-04	Total/NA	Water	PrecSep_0	
500-149809-5	MW-05	Total/NA	Water	PrecSep_0	
500-149809-6	MW-08	Total/NA	Water	PrecSep_0	
500-149809-7	MW-09	Total/NA	Water	PrecSep_0	
500-149809-8	MW-10	Total/NA	Water	PrecSep_0	
500-149809-9	MW-11	Total/NA	Water	PrecSep_0	
500-149809-10	MW-12	Total/NA	Water	PrecSep_0	
500-149809-11	MW-15	Total/NA	Water	PrecSep_0	
500-149809-12	MW-17	Total/NA	Water	PrecSep_0	
500-149809-13	MW-18	Total/NA	Water	PrecSep_0	
500-149809-14	MW-19	Total/NA	Water	PrecSep_0	
500-149809-15	Duplicate	Total/NA	Water	PrecSep_0	
MB 160-382531/22-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-382531/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
500-149809-15 DU	Duplicate	Total/NA	Water	PrecSep_0	

QC Sample Results

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

TestAmerica Job ID: 500-149809-2

Method: 903.0 - Radium-226 (GFPC)

Lab Sample ID: MB 160-382525/22-A
Matrix: Water
Analysis Batch: 387770

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 382525

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.1537		0.0721	0.0734	1.00	0.0777	pCi/L	08/15/18 08:57	09/07/18 05:38	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.0		40 - 110					08/15/18 08:57	09/07/18 05:38	1

Lab Sample ID: LCS 160-382525/1-A
Matrix: Water
Analysis Batch: 387769

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 382525

Analyte		Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226		11.4	10.54		1.09	1.00	0.0673	pCi/L	93	68 - 137
Carrier	LCS %Yield	LCS Qualifier	Limits							
Ba Carrier	97.3		40 - 110							

Lab Sample ID: 500-149809-15 DU
Matrix: Water
Analysis Batch: 387770

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 382525

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-226	0.206		0.2069		0.0824	1.00	0.0767	pCi/L	0	1
Carrier	DU %Yield	DU Qualifier	Limits							
Ba Carrier	96.5		40 - 110							

Method: 904.0 - Radium-228 (GFPC)

Lab Sample ID: MB 160-382531/22-A
Matrix: Water
Analysis Batch: 384512

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 382531

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.05685	U	0.219	0.219	1.00	0.386	pCi/L	08/15/18 10:00	08/22/18 09:18	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.0		40 - 110					08/15/18 10:00	08/22/18 09:18	1
Y Carrier	82.2		40 - 110					08/15/18 10:00	08/22/18 09:18	1

TestAmerica Chicago

QC Sample Results

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

TestAmerica Job ID: 500-149809-2

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

Lab Sample ID: LCS 160-382531/1-A

Matrix: Water

Analysis Batch: 384512

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 382531

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	11.1	11.55		1.28	1.00	0.359	pCi/L	104	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	97.3		40 - 110
Y Carrier	88.2		40 - 110

Lab Sample ID: 500-149809-15 DU

Matrix: Water

Analysis Batch: 384512

Client Sample ID: Duplicate

Prep Type: Total/NA

Prep Batch: 382531

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-228	0.204	U	0.07311	U	0.232	1.00	0.402	pCi/L	0.25	1

Carrier	DU %Yield	DU Qualifier	Limits
Ba Carrier	96.5		40 - 110
Y Carrier	85.2		40 - 110

Lab Chronicle

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

TestAmerica Job ID: 500-149809-2

Client Sample ID: MW-01

Date Collected: 08/08/18 09:49

Date Received: 08/10/18 16:50

Lab Sample ID: 500-149809-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			382525	08/15/18 08:57	JLC	TAL SL
Total/NA	Analysis	903.0		1	387769	09/07/18 05:35	KLS	TAL SL
Total/NA	Prep	PrecSep_0			382531	08/15/18 10:00	JLC	TAL SL
Total/NA	Analysis	904.0		1	384512	08/22/18 09:16	MAR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	388346	09/11/18 02:43	MAR	TAL SL

Client Sample ID: MW-02

Date Collected: 08/07/18 09:30

Date Received: 08/10/18 16:50

Lab Sample ID: 500-149809-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			382525	08/15/18 08:57	JLC	TAL SL
Total/NA	Analysis	903.0		1	387769	09/07/18 05:35	KLS	TAL SL
Total/NA	Prep	PrecSep_0			382531	08/15/18 10:00	JLC	TAL SL
Total/NA	Analysis	904.0		1	384512	08/22/18 09:16	MAR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	388346	09/11/18 02:43	MAR	TAL SL

Client Sample ID: MW-03

Date Collected: 08/07/18 10:54

Date Received: 08/10/18 16:50

Lab Sample ID: 500-149809-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			382525	08/15/18 08:57	JLC	TAL SL
Total/NA	Analysis	903.0		1	387769	09/07/18 05:35	KLS	TAL SL
Total/NA	Prep	PrecSep_0			382531	08/15/18 10:00	JLC	TAL SL
Total/NA	Analysis	904.0		1	384512	08/22/18 09:16	MAR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	388346	09/11/18 02:43	MAR	TAL SL

Client Sample ID: MW-04

Date Collected: 08/07/18 12:27

Date Received: 08/10/18 16:50

Lab Sample ID: 500-149809-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			382525	08/15/18 08:57	JLC	TAL SL
Total/NA	Analysis	903.0		1	387769	09/07/18 05:35	KLS	TAL SL
Total/NA	Prep	PrecSep_0			382531	08/15/18 10:00	JLC	TAL SL
Total/NA	Analysis	904.0		1	384512	08/22/18 09:16	MAR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	388346	09/11/18 02:43	MAR	TAL SL

TestAmerica Chicago

Lab Chronicle

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

TestAmerica Job ID: 500-149809-2

Client Sample ID: MW-05

Date Collected: 08/07/18 13:30

Date Received: 08/10/18 16:50

Lab Sample ID: 500-149809-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			382525	08/15/18 08:57	JLC	TAL SL
Total/NA	Analysis	903.0		1	387769	09/07/18 05:35	KLS	TAL SL
Total/NA	Prep	PrecSep_0			382531	08/15/18 10:00	JLC	TAL SL
Total/NA	Analysis	904.0		1	384512	08/22/18 09:16	MAR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	388346	09/11/18 02:43	MAR	TAL SL

Client Sample ID: MW-08

Date Collected: 08/08/18 11:11

Date Received: 08/10/18 16:50

Lab Sample ID: 500-149809-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			382525	08/15/18 08:57	JLC	TAL SL
Total/NA	Analysis	903.0		1	387769	09/07/18 05:35	KLS	TAL SL
Total/NA	Prep	PrecSep_0			382531	08/15/18 10:00	JLC	TAL SL
Total/NA	Analysis	904.0		1	384512	08/22/18 09:16	MAR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	388346	09/11/18 02:43	MAR	TAL SL

Client Sample ID: MW-09

Date Collected: 08/08/18 12:46

Date Received: 08/10/18 16:50

Lab Sample ID: 500-149809-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			382525	08/15/18 08:57	JLC	TAL SL
Total/NA	Analysis	903.0		1	387769	09/07/18 05:35	KLS	TAL SL
Total/NA	Prep	PrecSep_0			382531	08/15/18 10:00	JLC	TAL SL
Total/NA	Analysis	904.0		1	384512	08/22/18 09:16	MAR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	388346	09/11/18 02:43	MAR	TAL SL

Client Sample ID: MW-10

Date Collected: 08/08/18 14:44

Date Received: 08/10/18 16:50

Lab Sample ID: 500-149809-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			382525	08/15/18 08:57	JLC	TAL SL
Total/NA	Analysis	903.0		1	387769	09/07/18 05:35	KLS	TAL SL
Total/NA	Prep	PrecSep_0			382531	08/15/18 10:00	JLC	TAL SL
Total/NA	Analysis	904.0		1	384512	08/22/18 09:17	MAR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	388346	09/11/18 02:43	MAR	TAL SL

TestAmerica Chicago

Lab Chronicle

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

TestAmerica Job ID: 500-149809-2

Client Sample ID: MW-11

Lab Sample ID: 500-149809-9

Date Collected: 08/09/18 14:03

Matrix: Water

Date Received: 08/10/18 16:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			382525	08/15/18 08:57	JLC	TAL SL
Total/NA	Analysis	903.0		1	387769	09/07/18 05:35	KLS	TAL SL
Total/NA	Prep	PrecSep_0			382531	08/15/18 10:00	JLC	TAL SL
Total/NA	Analysis	904.0		1	384512	08/22/18 09:17	MAR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	388346	09/11/18 02:43	MAR	TAL SL

Client Sample ID: MW-12

Lab Sample ID: 500-149809-10

Date Collected: 08/09/18 15:46

Matrix: Water

Date Received: 08/10/18 16:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			382525	08/15/18 08:57	JLC	TAL SL
Total/NA	Analysis	903.0		1	387769	09/07/18 05:35	KLS	TAL SL
Total/NA	Prep	PrecSep_0			382531	08/15/18 10:00	JLC	TAL SL
Total/NA	Analysis	904.0		1	384512	08/22/18 09:17	MAR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	388346	09/11/18 02:43	MAR	TAL SL

Client Sample ID: MW-15

Lab Sample ID: 500-149809-11

Date Collected: 08/09/18 11:42

Matrix: Water

Date Received: 08/10/18 16:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			382525	08/15/18 08:57	JLC	TAL SL
Total/NA	Analysis	903.0		1	387769	09/07/18 05:36	KLS	TAL SL
Total/NA	Prep	PrecSep_0			382531	08/15/18 10:00	JLC	TAL SL
Total/NA	Analysis	904.0		1	384512	08/22/18 09:17	MAR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	388346	09/11/18 02:43	MAR	TAL SL

Client Sample ID: MW-17

Lab Sample ID: 500-149809-12

Date Collected: 08/06/18 14:41

Matrix: Water

Date Received: 08/10/18 16:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			382525	08/15/18 08:57	JLC	TAL SL
Total/NA	Analysis	903.0		1	387769	09/07/18 05:36	KLS	TAL SL
Total/NA	Prep	PrecSep_0			382531	08/15/18 10:00	JLC	TAL SL
Total/NA	Analysis	904.0		1	384512	08/22/18 09:17	MAR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	388346	09/11/18 02:43	MAR	TAL SL

TestAmerica Chicago

Lab Chronicle

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

TestAmerica Job ID: 500-149809-2

Client Sample ID: MW-18

Date Collected: 08/06/18 15:46

Date Received: 08/10/18 16:50

Lab Sample ID: 500-149809-13

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			382525	08/15/18 08:57	JLC	TAL SL
Total/NA	Analysis	903.0		1	387770	09/07/18 05:37	KLS	TAL SL
Total/NA	Prep	PrecSep_0			382531	08/15/18 10:00	JLC	TAL SL
Total/NA	Analysis	904.0		1	384512	08/22/18 09:18	MAR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	388346	09/11/18 02:43	MAR	TAL SL

Client Sample ID: MW-19

Date Collected: 08/06/18 16:48

Date Received: 08/10/18 16:50

Lab Sample ID: 500-149809-14

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			382525	08/15/18 08:57	JLC	TAL SL
Total/NA	Analysis	903.0		1	387770	09/07/18 05:37	KLS	TAL SL
Total/NA	Prep	PrecSep_0			382531	08/15/18 10:00	JLC	TAL SL
Total/NA	Analysis	904.0		1	384512	08/22/18 09:18	MAR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	388346	09/11/18 02:43	MAR	TAL SL

Client Sample ID: Duplicate

Date Collected: 08/07/18 00:00

Date Received: 08/10/18 16:50

Lab Sample ID: 500-149809-15

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			382525	08/15/18 08:57	JLC	TAL SL
Total/NA	Analysis	903.0		1	387770	09/07/18 05:38	KLS	TAL SL
Total/NA	Prep	PrecSep_0			382531	08/15/18 10:00	JLC	TAL SL
Total/NA	Analysis	904.0		1	384512	08/22/18 09:18	MAR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	388346	09/11/18 02:43	MAR	TAL SL

Laboratory References:

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

Accreditation/Certification Summary

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

TestAmerica Job ID: 500-149809-2

Laboratory: TestAmerica Chicago

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Illinois	NELAP	5	100201	04-30-19

Laboratory: TestAmerica St. Louis

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	200023	11-30-18

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
903.0	PrecSep-21	Water	Radium-226
904.0	PrecSep_0	Water	Radium-228
Ra226_Ra228		Water	Combined Radium 226 + 228

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 #:



500-149809 COC

Lab Lot # 500-149809

Package Sealed
Yes No
Samples Sealed
Yes No

Received on Ice
Yes No
Samples Intact
Yes No N/A

Temperature °C of Cooler
3.6, 3.7, 10.0, 5.2, 5.4

Within Hold Time
Yes No
Preserv. Indicated
Yes No N/A

pH Check OK
Yes No
Res. CL Check OK
Yes No N/A

Sample Labels and COC Agree
Yes No
COC not present

Sampler Name:			COMPANY:			# / Cont.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											

RELINQUISHED BY: IJH	COMPANY: KPRG	DATE: 8-10-18	TIME: 16:50	RECEIVED BY: [Signature]	COMPANY: TA	DATE: 8/10/18	TIME: 16:50
RELINQUISHED BY: [Signature]	COMPANY: KPRG	DATE: 8-10-18	TIME: 16:50	RECEIVED BY: [Signature]	COMPANY: TA	DATE: 8/10/18	TIME: 16:50

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

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

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

COMMENTS:

Date Received 8/10/18
Courier:
Hand Delivered ☒
Bill of Lading:

STL-8208 (0600)

Chain of Custody Record



Client Information (Sub Contract Lab)						Lab PM:		Carrier Tracking No(s):		COC No:		
						Lang, Eric A.				500-108777.1		
Shipping/Receiving						E-Mail:		State of Origin:		Page:		
Company:						eric.lang@testamericainc.com		Illinois		Page 1 of 2		
Address:						Accreditations Required (See note):		Job #:				
TestAmerica Laboratories, Inc.						NELAP - Illinois		500-149809-2				
Due Date Requested:						Analysis Requested		Preservation Codes:				
9/10/2018								A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO ₄ F - MeOH G - Anchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA M - Hexane N - None O - AsNaO ₂ P - Na ₂ O ₄ S Q - Na ₂ SO ₃ R - Na ₂ S ₂ O ₃ S - H ₂ SO ₄ T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify) Other:		Total Number of containers		
TAT Requested (days):						Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		Special Instructions/Note:		
						X		X		Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs		
PO #:								90.0/PrecSep_21 Standard Target List		Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs		
WO #:								90.0/PrecSep_20 Standard Target List		Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs		
Project #:								Ra226Ra228_GFPc		Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs		
SSOW#:										Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs		
Sample Identification - Client ID (Lab ID)						Sample Type (C=comp, G=grab)		Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, Air)		Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs		
MW-01 (500-149809-1)						Central		Water		Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs		
MW-02 (500-149809-2)						Central		Water		Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs		
MW-03 (500-149809-3)						Central		Water		Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs		
MW-04 (500-149809-4)						Central		Water		Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs		
MW-05 (500-149809-5)						Central		Water		Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs		
MW-08 (500-149809-6)						Central		Water		Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs		
MW-09 (500-149809-7)						Central		Water		Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs		
MW-10 (500-149809-8)						Central		Water		Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs		
MW-11 (500-149809-9)						Central		Water		Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs		
Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the TestAmerica Laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.												
Possible Hazard Identification												
Unconfirmed												
Deliverable Requested: I, II, III, IV, Other (specify)												
Primary Deliverable Rank: 2												
Empty Kit Relinquished by:												
Relinquished by:												
Date:												
Time:												
Received by:												
Date:												
Time:												
Cooler Temperature(s) °C and Other Remarks:												
Custody Seal Intact: Δ Yes Δ No												
Custody Seal No.:												
Relinquished by:												
Date:												
Time:												
Received by:												
Date:												
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Date:												

Chain of Custody Record

Client Information (Sub Contract Lab)		Sampler: Lab PMT Lang, Eric A.		Carrier Tracking No(s):		COC No: 500-108777.2	
Client Contact: Shipping/Receiving		Phone:		State of Origin: Illinois		Page: Page 2 of 2	
Company: TestAmerica Laboratories, Inc.		E-Mail: eric.lang@testamericainc.com		Accreditations Required (See note): NELAP - Illinois		Job #: 500-149809-2	
Address: 13715 Rider Trail North,		Due Date Requested: 9/10/2018		Analysis Requested		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Anchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)	
City: Earth City		TAT Requested (days):		Total Number of Containers		Other:	
State Zip: MO, 63045		PO #:		903.0/PreSep, 21 Standard Target List		Special Instructions/Note:	
Phone: 314-298-8566(Tel) 314-298-8757(Fax)		WO #:		904.0/PreSep, 0 Standard Target List		Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs	
Email:		Project #: 50011612		Perform MS/MSD (Yes or No)		Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs	
Site: MWG - Powerton		SSOW#:		Field Filtered Sample (Yes or No)		Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs	
Sample Identification - Client ID (Lab ID)		Sample Date		Sample Time		Sample Type (C=Comp, G=grab) BT=Tissue, A=Air	
MW-12 (500-149809-10)		8/9/18		15:46		Water	
MW-15 (500-149809-11)		8/9/18		11:42		Water	
MW-17 (500-149809-12)		8/6/18		14:41		Water	
MW-18 (500-149809-13)		8/6/18		15:46		Water	
MW-19 (500-149809-14)		8/6/18		16:48		Water	
Duplicate (500-149809-15)		8/7/18		Central		Water	
Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. I							
Possible Hazard Identification							
Unconfirmed							
Deliverable Requested: I, II, III, IV, Other (specify)							
Primary Deliverable Rank: 2							
Empty Kit Relinquished by:							
Date:							
Relinquished by:							
Date/Time:							
Relinquished by:							
Date/Time:							
Relinquished by:							
Date/Time:							
Custody Seals Intact: ☐ Yes ☐ No							
Custody Seal No.:							
Cooler Temperature(s) °C and Other Remarks:							
Received by: Michael Heller							
Date/Time: 8-14-18 09:05							
Company: TH SL							
Received by:							
Date/Time:							
Received by:							
Date/Time:							
Method of Shipment:							
Return To Client ☐ Disposal By Lab ☐ Archive For ☐ Months							
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)							
Special Instructions/QC Requirements:							

Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-149809-2

Login Number: 149809

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	3.6, 3.7, 5.2, 5.4, 6.0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	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	

Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-149809-2

Login Number: 149809

List Number: 2

Creator: Hellm, Michael

List Source: TestAmerica St. Louis

List Creation: 08/14/18 11:55 AM

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.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	False	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	16.0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Tracer/Carrier Summary

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

TestAmerica Job ID: 500-149809-2

Method: 903.0 - Radium-226 (GFPC)

Matrix: Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Ba Carrier (40-110)	
500-149809-1	MW-01	93.5	
500-149809-2	MW-02	94.1	
500-149809-3	MW-03	101	
500-149809-4	MW-04	93.2	
500-149809-5	MW-05	95.0	
500-149809-6	MW-08	95.0	
500-149809-7	MW-09	95.9	
500-149809-8	MW-10	95.0	
500-149809-9	MW-11	93.8	
500-149809-10	MW-12	91.2	
500-149809-11	MW-15	95.6	
500-149809-12	MW-17	97.3	
500-149809-13	MW-18	95.6	
500-149809-14	MW-19	92.9	
500-149809-15	Duplicate	90.9	
500-149809-15 DU	Duplicate	96.5	
LCS 160-382525/1-A	Lab Control Sample	97.3	
MB 160-382525/22-A	Method Blank	90.0	
Tracer/Carrier Legend			
Ba Carrier = Ba Carrier			

Method: 904.0 - Radium-228 (GFPC)

Matrix: Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Ba Carrier (40-110)	Y Carrier (40-110)
500-149809-1	MW-01	93.5	93.1
500-149809-2	MW-02	94.1	85.6
500-149809-3	MW-03	101	89.3
500-149809-4	MW-04	93.2	90.1
500-149809-5	MW-05	95.0	86.4
500-149809-6	MW-08	95.0	80.4
500-149809-7	MW-09	95.9	88.6
500-149809-8	MW-10	95.0	80.0
500-149809-9	MW-11	93.8	87.9
500-149809-10	MW-12	91.2	81.9
500-149809-11	MW-15	95.6	85.2
500-149809-12	MW-17	97.3	84.1
500-149809-13	MW-18	95.6	79.3
500-149809-14	MW-19	92.9	74.0
500-149809-15	Duplicate	90.9	68.8
500-149809-15 DU	Duplicate	96.5	85.2
LCS 160-382531/1-A	Lab Control Sample	97.3	88.2
MB 160-382531/22-A	Method Blank	90.0	82.2
Tracer/Carrier Legend			
Ba Carrier = Ba Carrier			
Y Carrier = Y Carrier			

TestAmerica Chicago

Appendix B

Alternate Source Demonstration April 12, 2018



ENVIRONMENTAL CONSULTATION & REMEDIATION

KPRG and Associates, Inc.

ALTERNATE SOURCE DEMONSTRATION
CCR GROUNDWATER MONITORING
POWERTON 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
Powerton Generating Station – Ash Basins

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) Powerton Generating Station. The wells sampled were selected by Midwest Generation to meet the monitoring requirements of the CCR Rule for the Ash Surge Basin and the Ash By-pass Basin. The monitoring well network around these ponds consists of ten monitoring wells (MW-01 [upgradient], MW-08, MW-09 [upgradient], MW-11, MW-12, MW-15, MW-17, MW-18 and MW-19 [upgradient]) as shown on Figure 1. It is noted that upgradient monitoring well, MW-19 was more recently installed (October 2016) and is still in the process of having the first full eight rounds of detection monitoring data being collected. Since it is an upgradient well, it was not included in the statistical comparisons but the data is considered in evaluations provided within this report as appropriate.

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 Powerton 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 Sanitas™ statistical software package and provided in the Statistical Evaluation Summary – 2017 CCR Groundwater Monitoring Powerton 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 various Appendix III parameters, depending on well location. 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 Powerton Generating Station Ash Surge Basin (ASB) and Ash By-pass Basin (ABB). 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 basin water and ash samples were collected. One water sample was collected from the ASB and one water sample was collected from the ABB. The water samples were collected 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. Analytical data package is provided in Attachment 2.

One composite ash sample was collected for each of the two basins (ASB and ABB). The composite samples consisted of a series of equivalent grab samples from across the length of the basin, 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 larger fine fraction near outfall). The individual grab samples were thoroughly mixed to form a single composite sample for each basin. The composite samples were 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 provided 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 8.5 in the ASB to 8.8 in the ABB. Both of these are slightly higher than the pH values from the corresponding pond water samples (8.2 to 8.4, respectively). This suggests that the pond water samples may not be fully representative of equilibrium conditions of expected pore water within the ash sediment but fairly close. Based on this observation, the focus of this analysis will rely mostly on the results of the LEAF Test data and in particular the data from the “Natural pH” samples, although the pond water data may be brought into consideration as necessary.

The remaining analytical constituent LEAF Test data are illustrated in graphical form on Figures 2 through 9 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 August 2017 sampling event (the initial detection monitoring event which was compared to established statistical background). For values reported as not-detected, one-half of the detection limit was used on the curves. In general, the following observations are made:

- Boron – The LEAF Test curves for boron vary between the ABB and the ASB in two ways. First, the ABB ash consistently shows higher boron concentrations across all pH ranges. Second, The ABB ash curve indicates a decrease in boron concentration with increasing pH to a pH level of 8 after which point there appears to be a slight increase in boron concentration. The ASB ash curve indicates a continual decrease in boron concentration with increasing pH. The Natural pH sample data for both the ABB and ASB plot close to where it would be expected on the specific LEAF Test curves. The boron concentrations at all downgradient monitoring wells plot lower than the boron concentration noted for the Natural pH test analysis for the ABB but above the Natural pH test analysis for the ASB.
- Sulfate – The LEAF Test curves for sulfate vary between the ABB and the ASB in two ways. First, the ABB ash consistently shows higher sulfate concentrations across all pH ranges. Second, the ABB ash curve indicates an overall decreasing trend in sulfate concentration with increasing pH. The ASB curve indicates no general correlation between pH and sulfate concentrations. The Natural pH samples for each basin plot close to the expected range for sulfate based on their pH as compared to the two LEAF Test curves. The monitoring well data sulfate concentrations generally plot (except for upgradient/side-gradient well MW-01) between the ASB and ABB concentrations.
- 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 corresponds well with the LEAF Test curve. The upgradient monitoring well data plot slightly above the curves and all downgradient well data show elevated chloride levels relative to the LEAF Test data.
- Fluoride – 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 LEAF Test curves for the ABB and ASB vary with the ABB showing a correlation of fluoride with pH and the ASB curve indicating no correlation. The Natural pH test data plot on or close to the respective LEAF Test curves. The upgradient and downgradient monitoring well data all plot within a cluster with a narrow range of concentrations.
 - Calcium – The calcium leachate concentration is a function of pH with decreasing concentrations with increasing pH. The Natural pH sample data for both basins plot close to where it would be expected on the LEAF Test curve with calcium concentrations ranging from 35 to 130 mg/l. Monitoring well concentrations of calcium range from 85 to 190 mg/l, with higher concentrations in upgradient wells.
 - 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 basins plot closely with their respective ash leachate curves. There is a wide range of ORP in monitoring wells within a narrow pH range.
 - 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 sample both plot close to, but slightly below, their respective LEAF Test curves. The specific conductivity values in both the up- and downgradient monitoring wells plots below the Natural pH test data.
 - 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 near, but slightly below, their respective LEAF Test curves. The TDS concentrations in the upgradient wells generally plotted within or above the range of Natural pH sample concentrations.

ALTERNATE SOURCE EVALUATION OF THE SSI PARAMETERS

Boron and sulfate are both conservative compounds once in dissolved phase and are accepted indicator parameters of coal ash leachate. Based on the discussions above, the ABB and the ABS have slightly different boron and sulfate profiles, with the ABB consistently showing higher concentrations of both constituents. Therefore, the subsequent data evaluations will focus on basin specific monitoring wells.

Ash By-pass Basin (ABB)

Relative to the ABB, monitoring wells MW-09 and MW-19 are considered local upgradient monitoring points and wells MW-11 and MW-12 are the immediate downgradient monitoring points. It is noted that all of these monitoring wells are completed within areas of historical fill material placement which includes ash. For statistical evaluation purposes, well MW-01 was also considered for representation of background. This well is located to the east and north (mostly side-gradient) within an area that did not include historic ash placement. Downgradient monitoring well MW-11 is screened within the gravelly sand unit and indicated potential SSIs in the August 2017 sampling for boron, sulfate, chloride, fluoride, and TDS. Downgradient well MW-12 is screened within a silty clay unit and indicated potential SSIs in the August 2017 sampling for sulfate, chloride, calcium, fluoride and TDS.

Boron

Relative to the noted potential boron exceedance at MW-11, the measured concentration in the monitoring well was 2.2 mg/l. This is above the established background PL of 1 mg/l based on background data from well MW-01. However, the boron concentrations in the more local upgradient wells MW-09 and MW-19 ranged from 3.5 to 3.8 mg/l (it is noted that these wells are screened within an area that contains some historic fill mixed with ash). The boron concentration in the Natural pH test sample for the ABB was 3.7. Since the local upgradient monitoring well and the ABB ash leachate boron concentrations are basically the same, KPRG used an Illinois Environmental Protection Agency (IEPA) recognized, two-dimensional analytical model identified within the Tiered Approach to Corrective Action Objectives (TACO) for simple advection-dispersion based constituent transport. A starting boron concentration of 3.65 mg/l (average of MW-09 and MW-19 concentrations) was assumed starting at a point between the two upgradient wells. The estimated boron concentration at well MW-11 was 0.18 mg/l based on this calculation (see Attachment 3). It is noted that this calculation conservatively assumes that the constituent is migrating from the upgradient wells to the downgradient wells through a “clean/unimpacted” zone of aquifer which does not contain any other source of boron. If this residual estimated concentration of boron is mixed with Natural pH test leachate from the ABB a resulting concentration estimate of boron would be 1.94 mg/l. Therefore, there appears to be some additional source of boron is affecting the downgradient wells, however, some potential contribution from the ABB cannot be ruled out at this time.

Sulfate

Both downgradient monitoring wells MW-11 and MW-12 had potential SSIs for sulfate with a PL based on side-gradient well MW-01 of 107 mg/l. The range of sulfate concentration in more local upgradient monitoring wells (MW-09 and MW-19) was 150 to 160 mg/l and in the ABB ash

Natural pH test it was 910 mg/l. The downgradient monitoring well sulfate concentrations were 310 and 520 mg/l. Using the same two-dimensional advection dispersion model noted above with a starting sulfate concentration of 155 mg/l at a point between the two local upgradient monitoring wells would project an estimated sulfate concentration at the downgradient monitoring wells of approximately 7.42 mg/l. As noted above, this calculation conservatively assumes that the constituent is migrating from the upgradient wells to the downgradient wells through a “clean/unimpacted” zone of aquifer which does not contain any additional source of sulfate. If this residual estimated concentration of sulfate is mixed with Natural pH test leachate from the ABB a resulting concentration estimate of sulfate would be approximately 459 mg/l which is within the range of concentrations detected within the downgradient monitoring wells. Based on this distribution of concentrations, a potential contribution of sulfate from the ABB cannot be ruled out at this time.

Chloride

Both downgradient monitoring wells MW-11 and MW-12 had potential SSIs for chloride with a PL based on side-gradient well MW-01 of 136 mg/l. The chloride concentration in both local upgradient monitoring wells (MW-09 and MW-19) was 36 mg/l and in the ABB ash Natural pH test it was 27 mg/l. The downgradient monitoring well chloride concentrations were 83 and 180 mg/l. Based on this distribution of concentrations, the ABB does not appear to be the source of elevated chloride in downgradient monitoring wells.

Calcium

Downgradient monitoring well MW-12 had a potential SSI for calcium with a PL based on side-gradient well MW-01 of 136 mg/l. The range of calcium concentration in the more local upgradient monitoring wells was 85 to 97 mg/l and in the ABB ash Natural pH test it was 130 mg/l. The downgradient monitoring well MW-12 calcium concentrations was 140 (just above the PL). Based on this distribution of concentrations, the ABB does not appear to be the source of elevated calcium in well MW-12.

Fluoride

Both downgradient monitoring wells MW-11 and MW-12 had potential SSIs for fluoride with a pooled PL (using data from wells MW-01 and MW-09) of 0.24 mg/l. The range of fluoride concentration in just the local upgradient monitoring wells was 0.14 to 0.16 mg/l and in the ABB ash Natural pH test it was 2.8 mg/l. The two downgradient monitoring well fluoride concentrations were both 0.52 mg/l. Based on this distribution of concentrations, a potential contribution of fluoride from the ABB cannot be ruled out at this time.

TDS

Both downgradient monitoring wells MW-11 and MW-12 had potential SSIs for TDS with a pooled PL (using data from wells MW-01 and MW-09) of 788 mg/l. The range of TDS concentration in just the local upgradient monitoring wells was 630 to 700 mg/l and in the ABB ash Natural pH test it was 1,500 mg/l. The downgradient monitoring well TDS concentrations were 1,100 and 1,400 mg/l. Based on this distribution of concentrations, a potential contribution of TDS from the ABB cannot be ruled out at this time.

Although some of the evaluations provided above suggest that the ABB leachate may be contributing to some elevated detections of various compounds, it must also be considered that the ABB (as well as the ASB) was just recently relined in 2015 and that some residual impacts may still be present within the aquifer from past operations prior to relining. This is supported by the observed distribution of pH measurements. The measured pH in local upgradient monitoring wells ranged from 7.2 to 7.3 and in the ABB Natural pH test it was 8.8. The pH in the downgradient wells ranged from 7.23 to 7.24 which is basically unchanged from the upgradient well measurements. If the current ABB is in fact contributing over time to elevated concentrations of other indicator parameters, it would be expected to see some consistent increase in the pH in the downgradient wells associated with an ongoing contribution of additional hydroxyl ion. This is not evident in the data, however, pH alone cannot be the determining factor in this analysis.

Discussions with Powerton Station personnel indicate that a tear in the liner was identified by maintenance personnel on August 31, 2018. It is believed the tear occurred sometime in the first part of August, however, the exact time of occurrence cannot be determined. This tear has been subsequently repaired by the liner installation contractor (see picture of repair in Attachment 4). The monitoring event which detected the potential SSIs being discussed above was completed during the last week of August 2018, prior to the repair of the tear. The data are therefore consistent with site events suggesting that a release may have been detected as a result of the tear and it is expected that SSI parameter concentrations at the downgradient well locations will return to historical level trends within the wells.

Ash Surge Basin (ASB)

Relative to the ASB, monitoring wells MW-09 and MW-19 are upgradient, however, wells MW-11 and MW-12 may also be considered upgradient of the basin (they are downgradient wells for the ABB and located generally between the two basins). Wells MW-11 and MW-12 are considered the “more local” upgradient wells in the discussions below. Wells MW-8, MW-15, MW-17 and MW-18 are the immediate downgradient monitoring wells. It is noted that all of these monitoring wells are completed within areas of historical fill mixed with ash placement. For statistical evaluation purposes, well MW-01 was also considered for representation of background. Downgradient monitoring well MW-18 is screened through the silty clay unit and into the sandy gravel unit and for the August 2017 sampling indicated

potential SSIs for sulfate, chloride, fluoride, TDS and pH. The remaining three downgradient monitoring wells are screened within the silty clay unit and for the August 2017 sampling had potential SSIs of boron, sulfate, chloride, calcium, fluoride and TDS.

Boron

Relative to the noted potential boron SSIs at wells MW-08, MW-15 and MW-17 the range of boron concentrations was 1.2 to 2.2 mg/l. This is above the established background PL of 1 mg/l based on background data from well MW-01. The boron concentrations in local upgradient wells MW-11 and MW-12 ranged from 0.78 to 2.2 mg/l suggesting little to no change in the downgradient concentrations. The boron concentration in the Natural pH test sample for the ASB was 0.36 mg/l. Based on the distribution of boron concentrations, the elevated boron in downgradient monitoring wells is not likely to be associated with potential leakage from the ASB and therefore, reflect an alternate source particularly when considered in conjunction with the discussions below for the other SSI exceedances.

Sulfate

All downgradient monitoring wells had potential SSIs for sulfate with a PL based on side-gradient well MW-01 of 107 mg/l. The range of sulfate concentration in more local upgradient monitoring wells was 310 to 520 mg/l and in the ASB ash Natural pH test it was 87 mg/l. The downgradient monitoring well sulfate concentrations ranged from 300 to 640 mg/l. Based on the distribution of sulfate concentrations, the elevated sulfate in downgradient monitoring wells are not attributed to potential leakage from the ASB and therefore, are reflective of an alternate source.

Chloride

All downgradient monitoring wells had potential SSIs for chloride with a PL based on side-gradient well MW-01 of 136 mg/l. The range of chloride concentration in both local upgradient monitoring wells was 83 to 180 mg/l and in the ASB ash Natural pH test it was 6.5 mg/l. The downgradient monitoring well chloride concentrations ranged from 200 to 360 mg/l. Based on the distribution of chloride concentrations, the elevated chloride in downgradient monitoring wells are not attributed to potential leakage from the ASB and therefore, are reflective of an alternate source.

Calcium

Downgradient monitoring wells MW-08, MW-15 and MW-17 had potential SSIs for calcium with a PL based on side-gradient well MW-01 of 136 mg/l. The range of calcium concentration in more local upgradient monitoring wells was 130 to 140 mg/l and in the ASB ash Natural pH test it was 35 mg/l. The downgradient monitoring well calcium concentrations ranged from 150 to 190 mg/l. Based on the distribution of calcium concentrations, the elevated calcium in downgradient monitoring wells are not associated

with potential leakage from the ASB and therefore, are reflective of an alternate source.

Fluoride

All downgradient monitoring wells had potential SSIs for fluoride with a pooled PL (using data from wells MW-01 and MW-09) of 0.24 mg/l. The fluoride concentration in both of the local upgradient monitoring wells was 0.52 mg/l and in the ASB ash Natural pH test it was 0.21 mg/l. The downgradient monitoring well fluoride concentrations ranged from 0.47 to 0.64 mg/l. Based on the distribution of fluoride concentrations, the elevated fluoride in downgradient monitoring wells are not associated with potential leakage from the ASB and therefore, are reflective of an alternate source.

TDS

All downgradient monitoring wells had potential SSIs for TDS with a pooled PL (using data from wells MW-01 and MW-09) of 788 mg/l. The range of TDS concentration in just the local upgradient monitoring wells was 1,100 to 1,400 mg/l and in the ASB ash Natural pH test it was 200 mg/l. The downgradient monitoring well TDS concentrations ranged from 1,200 to 1,900 mg/l. Based on the distribution of fluoride concentrations, the elevated fluoride in downgradient monitoring wells are not associated with potential leakage from the ASB and therefore, are reflective of an alternate source.

pH

Downgradient monitoring well MW-18 had a potential SSI for pH with a pooled PL (using data from wells MW-01 and MW-09) of 7.73 to 6.63. The pH at local upgradient monitoring wells ranged from 7.23 to 7.34 and in the ASB ash Natural pH test it was 8.5. The pH at downgradient well MW-18 was 7.81. A pH of 7.81 is fairly neutral and within a general expected range of natural groundwater. In addition, based on the discussions provided above, there is no definitive indication from the other indicator parameters that there may be leakage from the ASB. Therefore, the slightly elevated pH at well location MW-18 is likely a natural anomaly..

CONCLUSIONS/RECOMMENDATIONS

Based on the discussions provided above, it is not believed that the ASB is the source of downgradient monitoring well SSIs and that there is an alternate source(s) of impacts. However, the data relative to the ABB is not as definitive and when all the observations for boron, sulfate, fluoride and TDS relative to the ABB are combined, potential contribution of leachate from the ABB to the local downgradient groundwater impacts cannot be ruled out at this time, particularly when considering the identification of a tear in the liner at the end of August 2018 (which has subsequently been repaired). Since the monitoring well network for the ABB and the ASB are somewhat integrated, it is

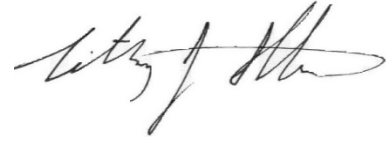
recommended that this site be shifted from detection monitoring into assessment monitoring in accordance with Section 257.95 of the CCR Rule.

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
Mark Kelly, Midwest Generation
Joseph Kotas, Midwest Generation

CERTIFICATION

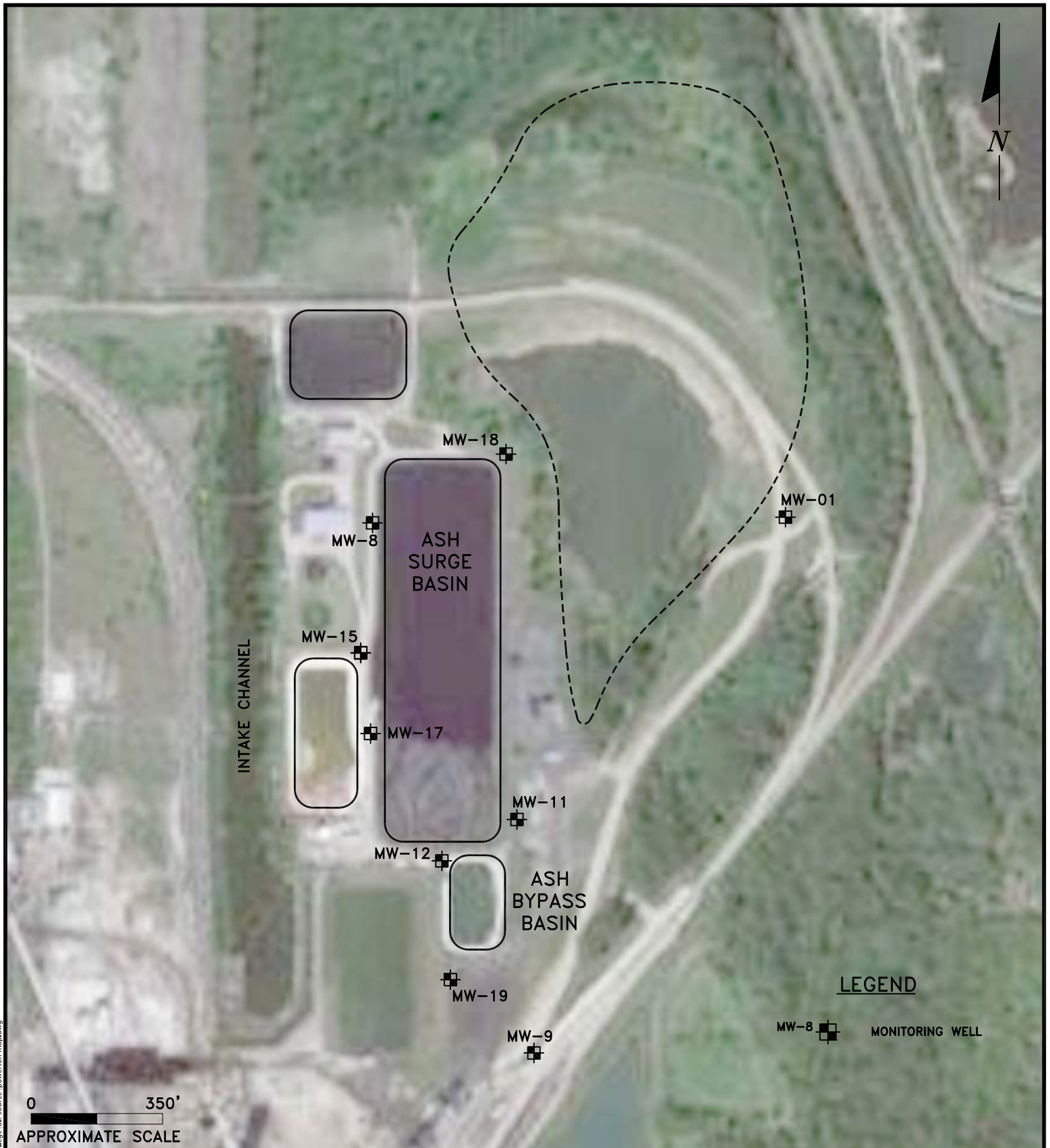
In accordance with Section 257.94(e)(2) of the CCR Rule, I hereby certify based on a review of the information contained within this CCR Alternate Source Demonstration dated April 12, 2018, that the information contained in this report is accurate to the best of my knowledge.



Certified by:
Date: April 12, 2018

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

FIGURES



ENVIRONMENTAL CONSULTATION & REMEDIATION

K P R G

KPRG and Associates, inc.

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

14665 West Lisbon Road, Suite 2B Brookfield, Wisconsin 53005 Telephone 262-781-0475 Facsimile 262-781-0478

ABB AND ASB CCR MONITORING WELL SITE MAP

POWERTON STATION
PEKIN, ILLINOIS

Scale: 1" = 350'

Date: April 11, 2018

KPRG Project No. 23517

FIGURE 1

Figure 2. Boron Concentration vs. pH Value - Powerton Station

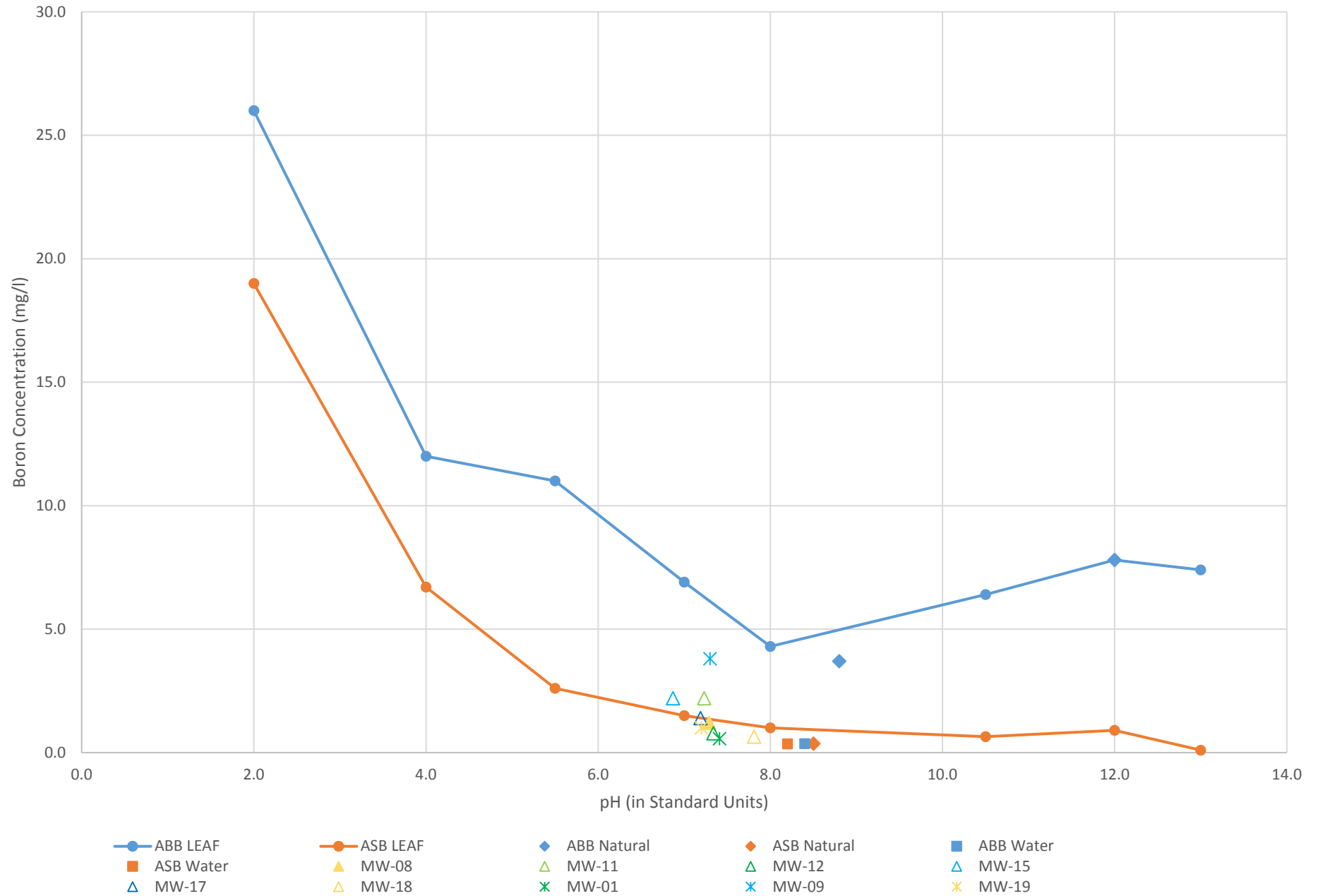


Figure 3. Sulfate Concentration vs. pH Value - Powerton Station

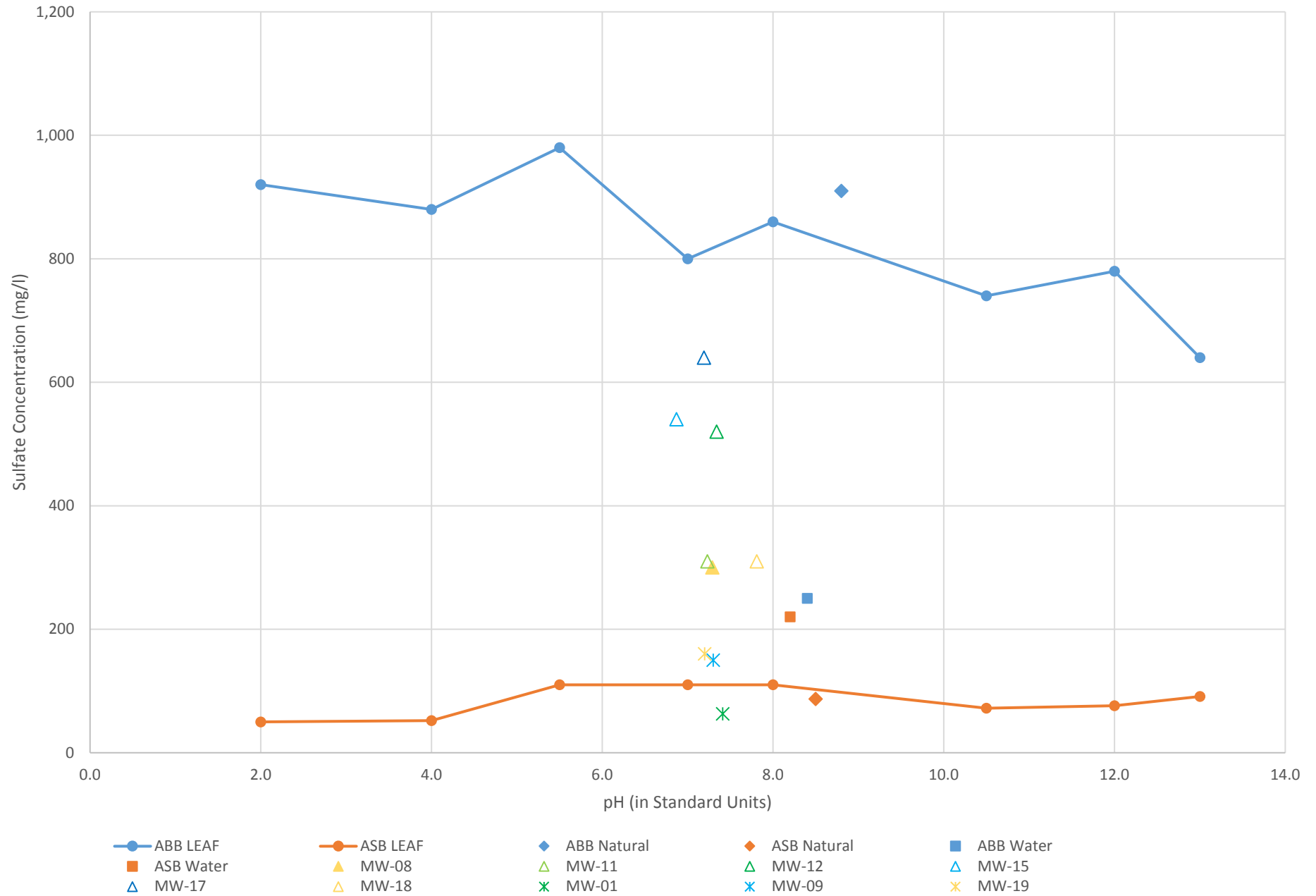


Figure 4. Chloride Concentration vs. pH Value - Powerton Station

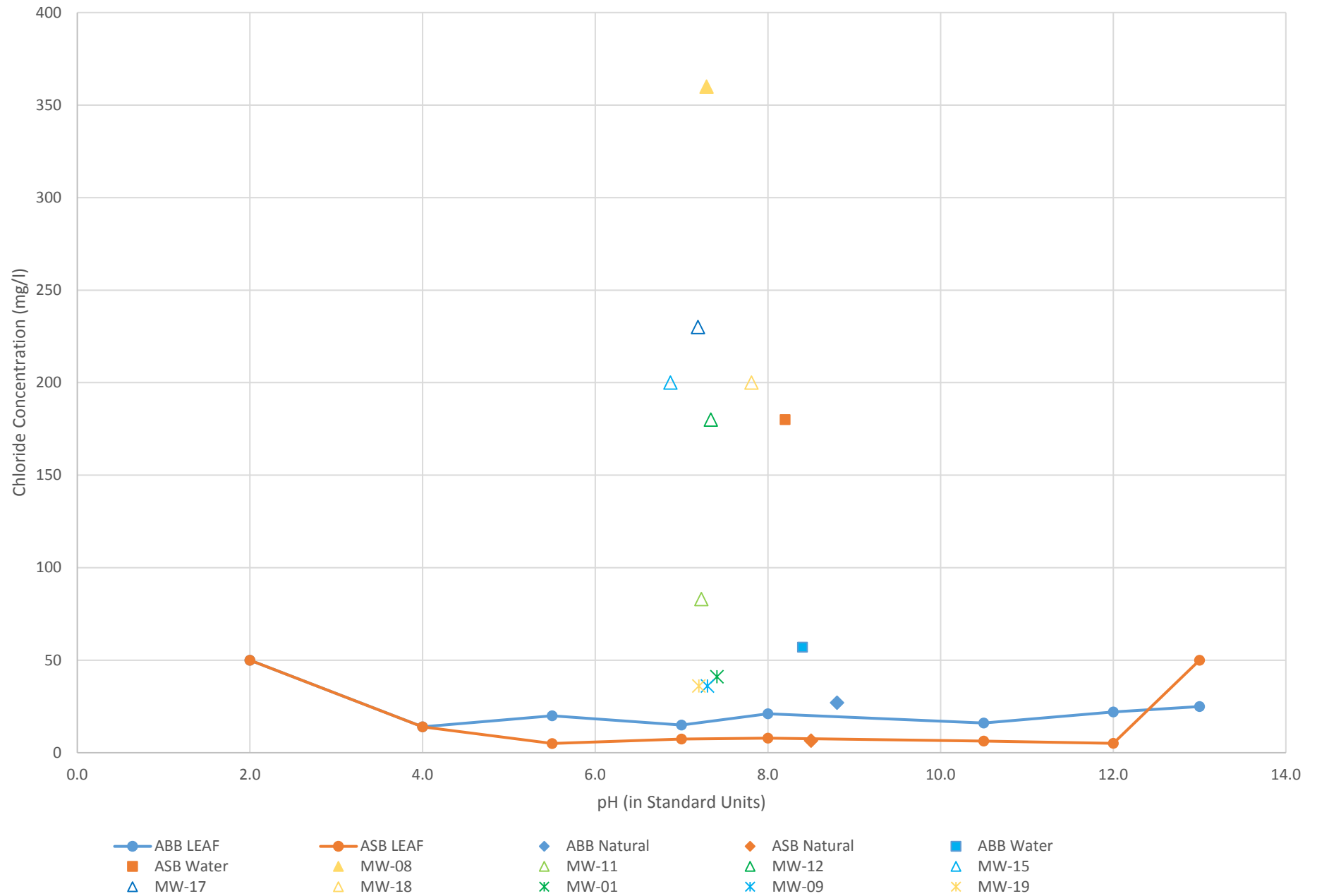


Figure 5. Flouride Concentration vs. pH Value - Powerton Station

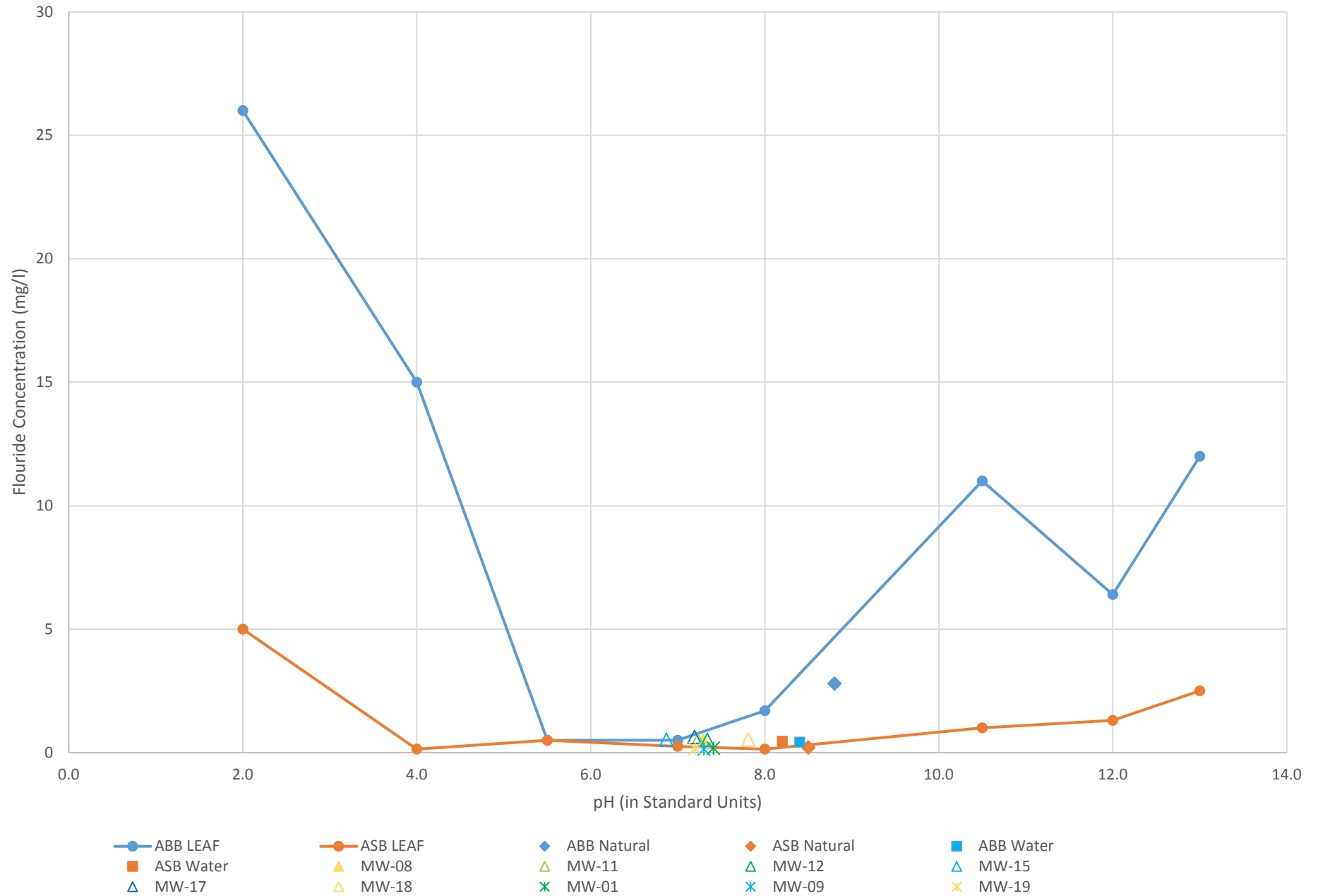


Figure 6. Calcium Concentration vs. pH Value - Powerton Station

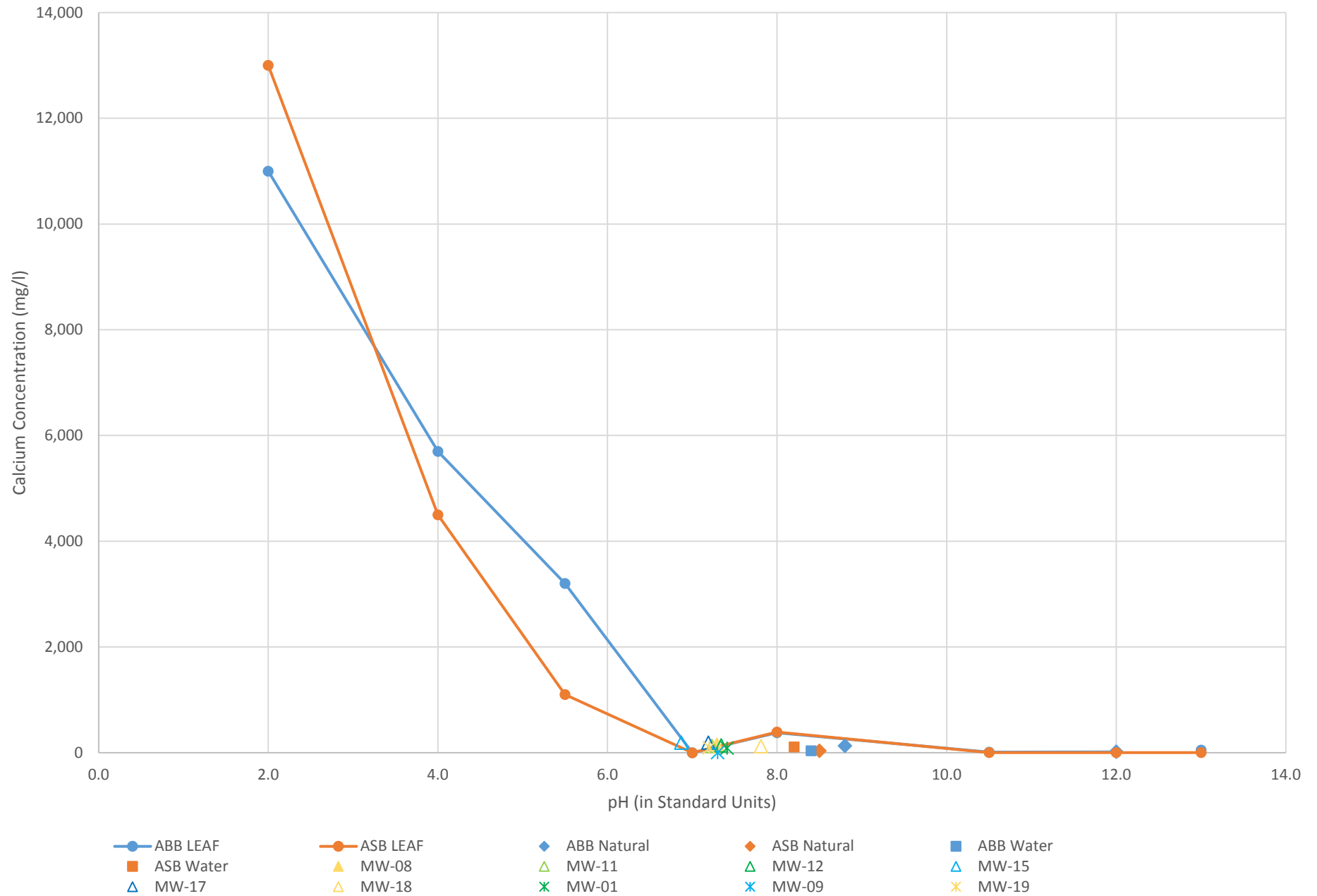


Figure 7. ORP Concentration vs. pH Value - Powerton Station

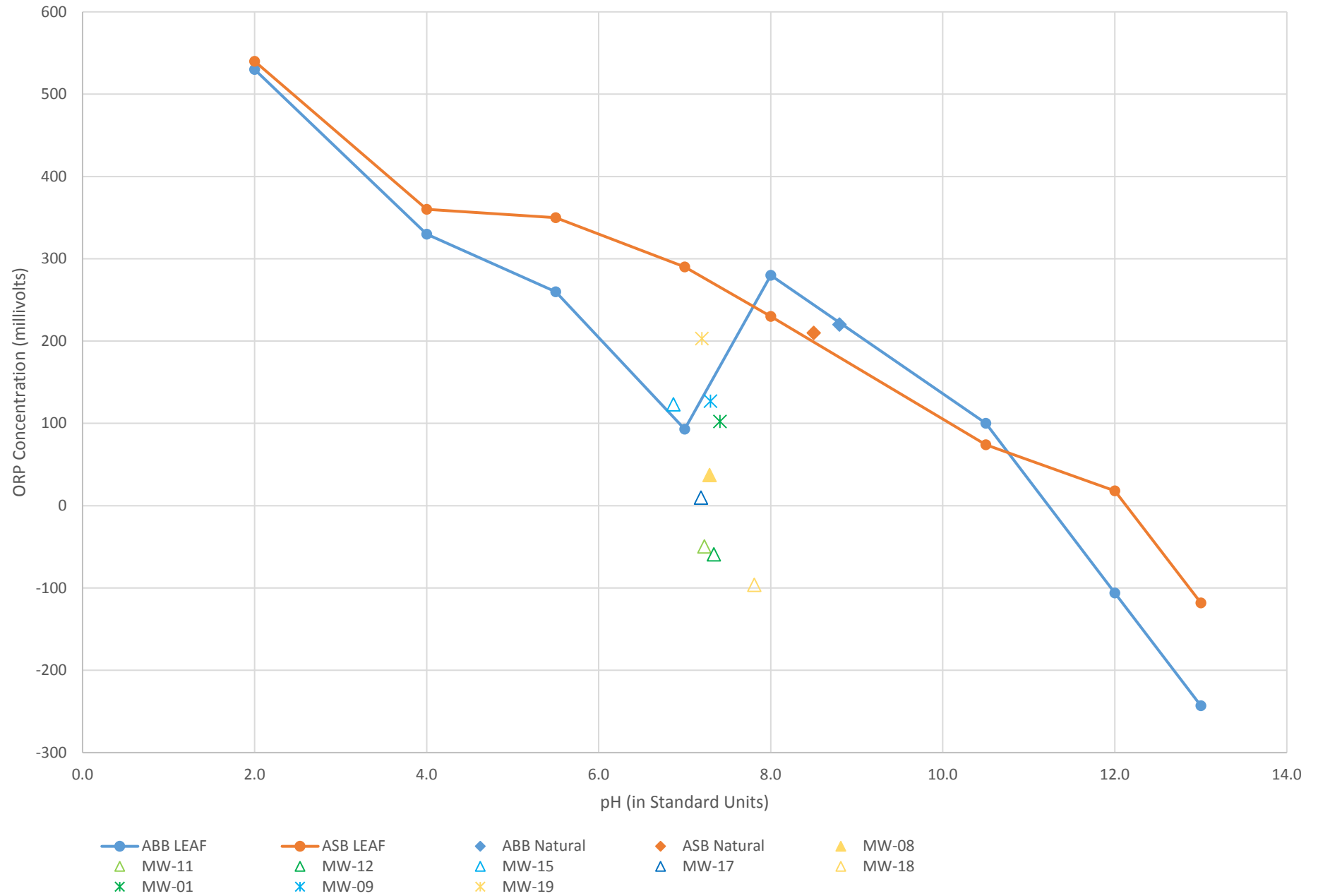


Figure 8. Specific Conductivity vs. pH Value - Powerton Station

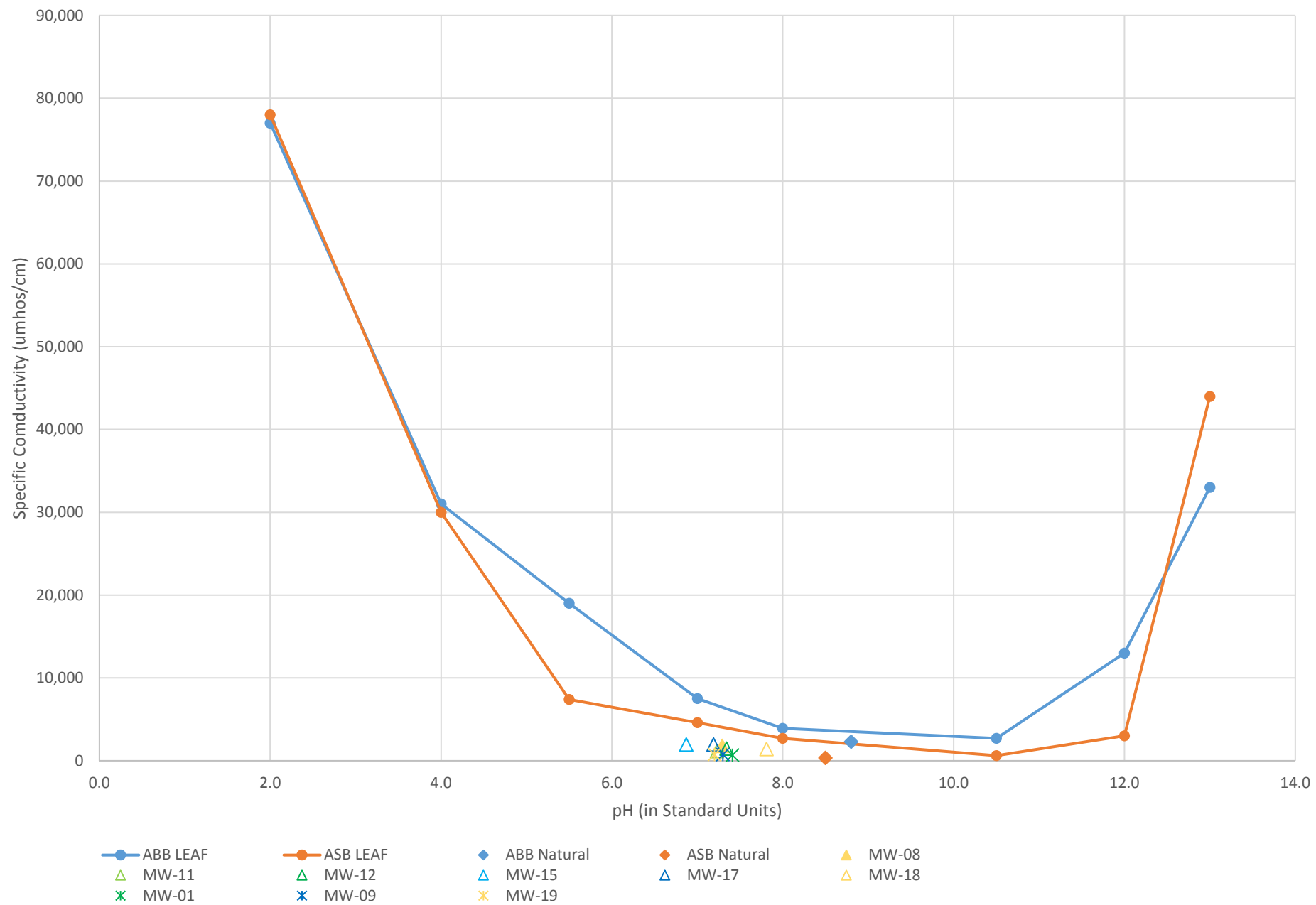
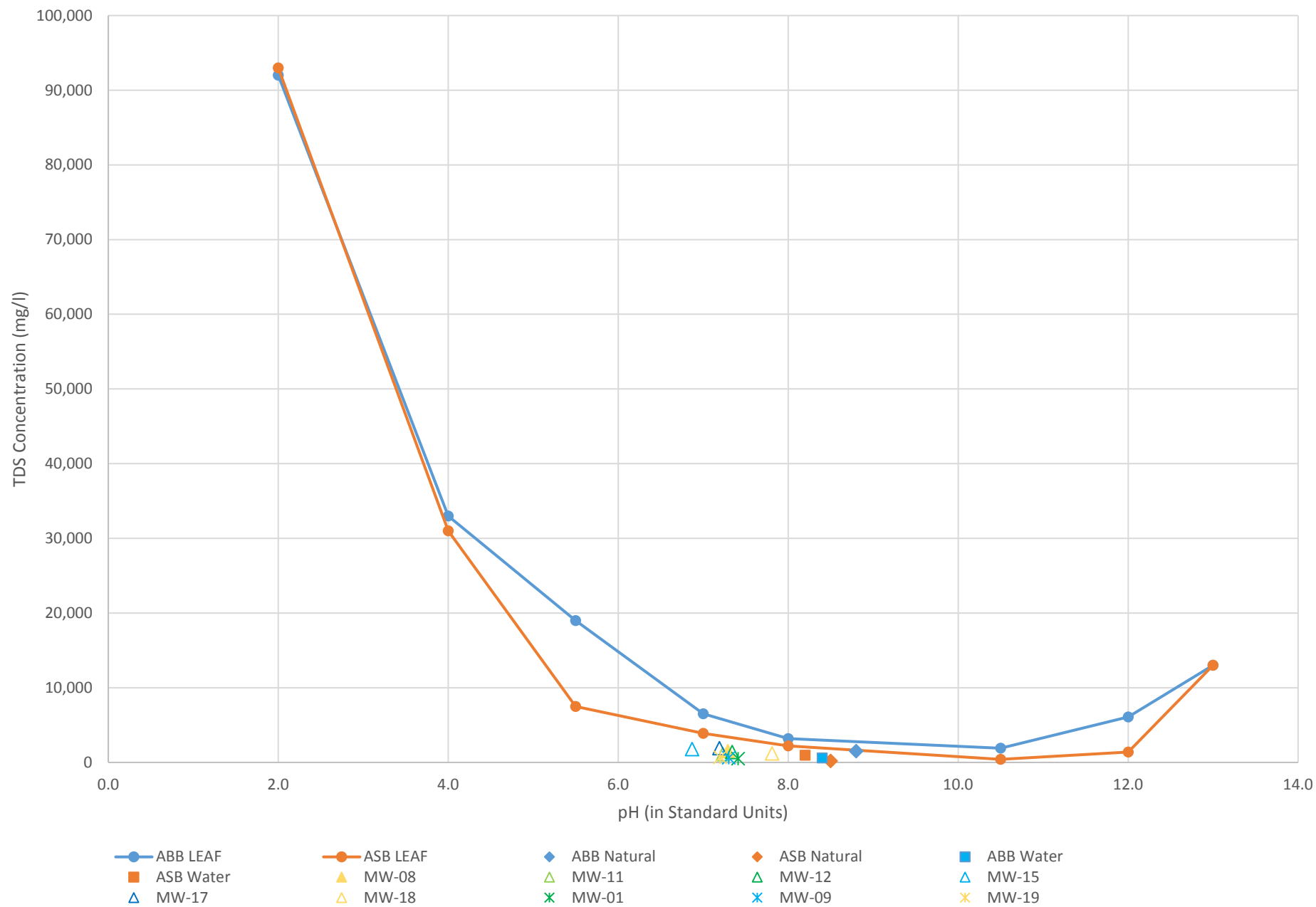


Figure 9. TDS Concentration vs. pH Value - Powerton Station



TABLES

Table 1. Pond Water Results - Midwest Generation Powerton Station, Pekin, Illinois

Sample:		Ash Bypass	Ash Surge
PARAMETER	UNITS	Basin (ABB) Water	Basin (ASB) Water
Boron	mg/L	0.36	0.35
Calcium	mg/L	36	110
Chloride	mg/L	57	180
Fluoride	mg/L	0.43	0.46
pH	SU	8.4	8.2
Sulfate	mg/L	250	220
TDS	mg/L	590	950

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

Table 2. LEAF Test Results from Ash Samples - Midwest Generation Powerton Station, Pekin, Illinois

Sample: ABB ASH		LEAF TEST TARGETED pH VALUES								
PARAMETER	UNITS	13.0	12.0	10.5	8.0	7.0	5.5	4.0	2.0	Natural*
Boron	mg/L	7.4	7.8	6.4	4.3	6.9	11	12	26	3.7
Calcium	mg/L	48	17	10	380	<0.5	3,200	5,700	11,000	130
Chloride	mg/L	<50	22	16	21	15	20	<25	<100	27
Fluoride	mg/L	12	6.4	11	1.7	<1.0	<1.0	15	26	2.8
ORP	millivolts	-243	-106	100	280	93	260	330	530	220
pH	SU	12.7	12.5	10.5	8.0	7.2	5.9	4.3	2.3	8.8
Spec Cond	umhos/cm	33,000	13,000	2,700	3,900	7,500	19,000	31,000	77,000	2,300
Sulfate	mg/L	640	780	740	860	800	980	880	920	910
TDS	mg/L	13,000	6,100	1,900	3,200	6,500	19,000	33,000	92,000	1,500

Sample: ASB ASH		LEAF TEST TARGETED pH VALUES								
PARAMETER	UNITS	13.0	12.0	10.5	8.0	7.0	5.5	4.0	2.0	Natural*
Boron	mg/L	0.10	0.90	0.65	1.0	1.5	2.6	6.7	19	0.36
Calcium	mg/L	3.0	1.3	2.6	390	<0.5	1,100	4,500	13,000	35
Chloride	mg/L	<50	5.1	6.3	7.9	7.4	<10	<25	<100	6.5
Fluoride	mg/L	<5.0	1.3	1.0	<0.25	<0.50	<1.0	<2.5	<10	0.21
ORP	millivolts	-118	18	74	230	290	350	360	540	210
pH	SU	12.7	11.9	10.3	7.6	6.7	5.2	3.8	2.8 H	8.5
Spec Cond	umhos/cm	44,000	3,000	620	2,700	4,600	7,400	30,000	78,000	340
Sulfate	mg/L	91	76	72	110	110	110	52	<100	87 F1
TDS	mg/L	13,000	1,400	410	2,200	3,900	7,500	31,000	93,000	200

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.

H - Sample was prepped or analyzed beyond the specified holding time
 F1 - MS and/or MSD Recovery is outside acceptable limits
 ABB - Ash By-pass Basin
 ASB - Ash Surge Basin

ATTACHMENT 1

Statistical Data Evaluation Tables – January 12, 2018

Table 1. Detection Monitoring Appendix III Groundwater Analytical Results - 3rd Quarter 2017 and Resample - Midwest Generation, LLC, Powerton Station, Pekin, IL.

Well	Date	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	Total Dissolved Solids
MW-01 (S) up-gradient	11/16/2015	1.0	98	44	0.17	7.07	93	530
	2/25/2016	0.2	110	42	0.16	7.23	54	460
	5/20/2016	0.34	100	44	0.17	6.95	65	430
	8/17/2016	0.27	78	39	0.25	7.16	50	530
	11/16/2016	0.18	97	39	0.21	7.22	32	500
	2/14/2017	0.18	120	55	0.17	7.30	60	550
	5/3/2017	0.19	86	66	0.16	7.41	45	460
	6/21/2017	0.18	85	58	0.18	7.60	47	540
	Pred. Limit*	1.0	142	81	0.25	7.90-6.58	115	648
	8/25/2017	0.56	86	41	0.18	7.41	63	490
	11/8/2017	0.57	130	38	0.12	6.69	61	640
MW-09 (S) up-gradient	11/18/2015	2.0	63	H 31	H 0.19	7.15	H 110	H 440
	2/25/2016	2.3	77	36	0.19	7.34	120	500
	5/19/2016	2.0	73	38	0.17	7.30	100	520
	8/17/2016	2.7	74	39	0.15	7.32	120	750
	11/17/2016	4.5	85	38	0.13	7.37	110	630
	2/15/2017	4.1	84	38	0.13	6.94	160	620
	5/3/2017	3.5	85	38	0.17	7.48	170	680
	6/21/2017	3.3	82	38	0.14	7.63	180	760
	Pred. Limit*	6.19	103	39	0.24	7.99-6.64	236	1000
	8/25/2017	3.8	85	36	0.14	7.3	150	630
	11/8/2017	4	89	37	0.13	6.92	190	650
MW-19 [^] (S) up-gradient	11/18/2016	3.8	89	38	0.13	7.34	120	670
	2/15/2017	4.7	88	37	0.13	7.50	180	630
	5/5/2017	3.3	88	38	0.14	7.51	160	640
	6/21/2017	2.3	110	35	0.12	7.30	170	690
	8/28/2017	3.5	97	36	0.16	7.20	160	700
	11/6/2017	4.5	86	35	0.17	7.26	190	640
MW-08 (CL) down-gradient	11/18/2015	1.5	160	H 170	H 0.44	7.61	H 470	H 1300
	2/25/2016	1.7	160	200	0.30	7.00	280	1100
	5/18/2016	1.7	160	140	0.34	7.67	300	1200
	8/17/2016	1.0	150	230	0.35	7.33	360	1400
	11/15/2016	1.2	140	290	0.33	6.90	230	1300
	2/16/2017	1.5	150	460	0.28	7.00	230	1500
	5/2/2017	0.55	140	300	0.33	7.30	320	1300
	6/21/2017	1.2	160	490	0.3	7.27	350	1700
	Pred. Limit	1.0	136	77	0.24**	7.73-6.83**	107	788**
	8/29/2017	1.2	150	360	0.47	7.29	300	1500
	11/8/2017	0.68	130	260	0.45	7.27	270	1200

Notes:

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

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

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

Pred. Limit - Prediction Limit

H - Sample was prepped or analyzed beyond the specified holding time.

[^] - Recently installed upgradient well. Insufficient rounds of sampling for statistical evaluation at this time.*Italics Date* - First round of Detection Monitoring and resample after statistical background establishment.

S - Sandy Unit

CL - Silty Clay Unit

** - Based on pooled background from MW-01/MW-09.

All others based on MW-01 as background.

Bold - Potential statistically significant increase.

V - Serial dilution exceeds control limits.

Table 1. Detection Monitoring Appendix III Groundwater Analytical Results - 3rd Quarter 2017 and Resample - Midwest Generation, LLC, Powerton Station, Pekin, IL.

Well	Date	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	Total Dissolved Solids
MW-11 (S) down-gradient	11/18/2015	1.7	110	H 54	H 0.55	7.06	H 160	H 670
	2/26/2016	1.5	140	120	0.55	7.25	220	850
	5/20/2016	1.6	140	120	0.56	7.10	210	920
	8/17/2016	1.0	130	93	0.67	7.08	180	910
	11/17/2016	1.2	140	130	0.44	7.21	240	1100
	2/16/2017	1.6	140	110	0.40	6.62	260	910
	5/3/2017	1.3	160	160	0.42	7.36	440	1300
	6/22/2017	1.2	140	120	0.60	7.21	260	1000
	Pred. Limit	1.0	136	77	0.24**	7.73-6.83**	107	788**
	8/29/2017	<u>2.2</u>	130	<u>83</u>	<u>0.52</u>	7.23	<u>310</u>	<u>1100</u>
MW-12 (CL) down-gradient	11/19/2015	0.94	160	H 220	H 0.57	7.12	H 650	H 1400
	2/26/2016	0.42	130	200	0.40	7.96	530	1200
	5/20/2016	0.65	150	200	0.49	7.28	550	1400
	8/18/2016	0.69	170	200	0.49	7.06	620	1600
	11/18/2016	0.83	140	180	0.46	7.34	340	1300
	2/16/2017	0.48	140	190	0.37	7.54	630	1300
	5/3/2017	0.49	120	190	0.37	7.47	500	1200
	6/22/2017	0.5	130	190	0.48	7.36	580	1400
	Pred. Limit	1.0	136	77	0.24**	7.73-6.83**	107	788**
	8/29/2017	0.78	<u>140</u>	<u>180</u>	<u>0.52</u>	7.34	<u>520</u>	<u>1400</u>
MW-15 (CL) down-gradient	11/18/2015	1.5	270	H 210	H 0.53	6.55	H 1400	H 2400
	2/25/2016	2.0	240	110	0.61	6.84	640	1700
	5/19/2016	2.7	320	240	0.53	6.83	1200	2800
	8/18/2016	1.5	200	F1 170	0.54	6.96	660	1900
	11/17/2016	1.3	120	180	0.47	6.91	560	1900
	2/17/2017	1.9	200	190	0.43	7.24	670	1700
	5/4/2017	1.5	180	190	0.57	7.35	670	1700
	6/21/2017	1.6	180	200	0.56	7.3	530	1600
	Pred. Limit	1.0	136	77	0.24**	7.73-6.83**	107	788**
	8/29/2017	<u>2.2</u>	<u>190</u>	<u>200</u>	<u>0.53</u>	6.87	<u>540</u>	<u>1800</u>
MW-17 (CL) down-gradient	11/19/2015	1.6	210	H 230	H 0.43	7.11	H 850	H 1800
	2/22/2016	1.8	290	280	0.55	7.19	960	2100
	5/18/2016	1.4	200	230	0.64	7.02	700	1800
	8/15/2016	1.1	220	220	0.60	7.08	860	2100
	11/14/2016	1.5	200	210	0.56	7.26	560	2000
	2/13/2017	1.6	190	230	0.56	6.84	770	1600
	5/4/2017	1.2	170	210	0.61	7.29	720	1500
	6/22/2017	0.95	150	230	0.72	7.38	580	1600
	Pred. Limit	1.0	136	77	0.24**	7.73-6.83**	107	788**
	8/29/2017	<u>1.4</u>	<u>190</u>	<u>230</u>	<u>0.64</u>	7.19	<u>640</u>	<u>1900</u>
MW-18 (S) down-gradient	11/19/2015	0.80	140	H 220	H 0.66	7.62	H 310	H 1200
	2/22/2016	0.76	150	220	0.68	7.06	310	1200
	5/18/2016	0.72	120	230	0.71	7.68	230	1200
	8/15/2016	0.67	130	210	0.64	7.52	330	1300
	11/18/2016	0.94	130	200	0.58	7.69	250	1300
	2/15/2017	0.56	140	190	0.50	7.81	340	1200
	5/5/2017	0.46	130	180	0.52	8.12	360	1100
	6/21/2017	0.53	120	190	0.51	8.1	320	1200
	Pred. Limit	1.0	136	77	0.24**	7.73-6.83**	107	788**
	8/28/2017	0.65	120	<u>200</u>	<u>0.53</u>	<u>7.81</u>	<u>310</u>	<u>1200</u>
MW-18 (S) down-gradient	11/6/2017	0.67	120	<u>190</u>	<u>0.57</u>	<u>7.74</u>	<u>400</u>	<u>1200</u>

Notes:

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

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

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

Pred. Limit - Prediction Limit

H - Sample was prepped or analyzed beyond the specified holding time.

^ - Recently installed upgradient well. Insufficient rounds of sampling for statistical evaluation at this time.

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

S - Sandy Unit

CL - Silty Clay Unit

** - Based on pooled background from MW-01/MW-09.

All others based on MW-01 as background.

Bold - Potential statistically significant increase.

V - Serial dilution exceeds control limits.

ATTACHMENT 2
Analytical Data Packages

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Chicago

2417 Bond Street

University Park, IL 60484

Tel: (708)534-5200

TestAmerica Job ID: 500-139619-1

Client Project/Site: Powerton 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 2:21:05 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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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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

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

Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Detection Summary	4
Method Summary	5
Sample Summary	6
Client Sample Results	7
Definitions	9
QC Association	10
QC Sample Results	11
Chronicle	14
Certification Summary	15
Chain of Custody	16
Receipt Checklists	17



Case Narrative

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

TestAmerica Job ID: 500-139619-1

Job ID: 500-139619-1

Laboratory: TestAmerica Chicago

Narrative

Job Narrative
500-139619-1

Comments

No additional comments.

Receipt

The samples were received on 1/12/2018 9:40 AM; the samples 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.

Detection Summary

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

TestAmerica Job ID: 500-139619-1

Client Sample ID: ABB

Lab Sample ID: 500-139619-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.36		0.050		mg/L	1		6020A	Total
Calcium	36		0.20		mg/L	1		6020A	Recoverable Total
pH	8.4	HF	0.2		SU	1		9040C	Recoverable Total/NA
Total Dissolved Solids	590		10		mg/L	1		SM 2540C	Total/NA
Chloride	57		2.0		mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.43		0.10		mg/L	1		SM 4500 F C	Total/NA
Sulfate	250		50		mg/L	10		SM 4500 SO4 E	Total/NA

Client Sample ID: ASB

Lab Sample ID: 500-139619-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	0.35		0.050		mg/L	1		6020A	Total
Calcium	110		0.20		mg/L	1		6020A	Recoverable Total
pH	8.2	HF	0.2		SU	1		9040C	Recoverable Total/NA
Total Dissolved Solids	950		10		mg/L	1		SM 2540C	Total/NA
Chloride	180		10		mg/L	5		SM 4500 Cl- E	Total/NA
Fluoride	0.46		0.10		mg/L	1		SM 4500 F C	Total/NA
Sulfate	220		50		mg/L	10		SM 4500 SO4 E	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

Method Summary

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

TestAmerica Job ID: 500-139619-1

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: Powerton CCR

TestAmerica Job ID: 500-139619-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-139619-1	ABB	Water	01/11/18 09:35	01/12/18 09:40
500-139619-2	ASB	Water	01/11/18 09:50	01/12/18 09:40

Client Sample Results

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

TestAmerica Job ID: 500-139619-1

Client Sample ID: ABB

Date Collected: 01/11/18 09:35

Date Received: 01/12/18 09:40

Lab Sample ID: 500-139619-1

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.36		0.050		mg/L		01/12/18 14:46	01/15/18 13:24	1
Calcium	36		0.20		mg/L		01/12/18 14:46	01/15/18 13:24	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.4	HF	0.2		SU			01/12/18 16:00	1
Total Dissolved Solids	590		10		mg/L			01/14/18 23:52	1
Chloride	57		2.0		mg/L			01/18/18 21:46	1
Fluoride	0.43		0.10		mg/L			01/25/18 11:33	1
Sulfate	250		50		mg/L			01/18/18 07:16	10

Client Sample Results

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

TestAmerica Job ID: 500-139619-1

Client Sample ID: ASB

Date Collected: 01/11/18 09:50

Date Received: 01/12/18 09:40

Lab Sample ID: 500-139619-2

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.35		0.050		mg/L		01/12/18 14:46	01/15/18 13:27	1
Calcium	110		0.20		mg/L		01/12/18 14:46	01/15/18 13:27	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.2	HF	0.2		SU			01/12/18 16:04	1
Total Dissolved Solids	950		10		mg/L			01/14/18 23:55	1
Chloride	180		10		mg/L			01/18/18 22:24	5
Fluoride	0.46		0.10		mg/L			01/25/18 11:36	1
Sulfate	220		50		mg/L			01/18/18 07:19	10

Definitions/Glossary

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

TestAmerica Job ID: 500-139619-1

Qualifiers

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: Powerton CCR

TestAmerica Job ID: 500-139619-1

Metals

Prep Batch: 416709

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-139619-1	ABB	Total Recoverable	Water	3005A	
500-139619-2	ASB	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	

Analysis Batch: 416965

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-139619-1	ABB	Total Recoverable	Water	6020A	416709
500-139619-2	ASB	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

General Chemistry

Analysis Batch: 416763

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-139619-1	ABB	Total/NA	Water	SM 2540C	
500-139619-2	ASB	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: 416975

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-139619-1	ABB	Total/NA	Water	9040C	
500-139619-2	ASB	Total/NA	Water	9040C	
500-139619-1 DU	ABB	Total/NA	Water	9040C	
500-139619-2 DU	ASB	Total/NA	Water	9040C	

Analysis Batch: 417213

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-139619-1	ABB	Total/NA	Water	SM 4500 SO4 E	
500-139619-2	ASB	Total/NA	Water	SM 4500 SO4 E	
MB 500-417213/3	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 500-417213/4	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
500-139619-1 MS	ABB	Total/NA	Water	SM 4500 SO4 E	
500-139619-1 MSD	ABB	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 417327

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-139619-1	ABB	Total/NA	Water	SM 4500 CI- E	
500-139619-2	ASB	Total/NA	Water	SM 4500 CI- E	
MB 500-417327/12	Method Blank	Total/NA	Water	SM 4500 CI- E	
LCS 500-417327/13	Lab Control Sample	Total/NA	Water	SM 4500 CI- E	

Analysis Batch: 418006

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-139619-1	ABB	Total/NA	Water	SM 4500 F C	
500-139619-2	ASB	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	

TestAmerica Chicago

QC Sample Results

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

TestAmerica Job ID: 500-139619-1

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

Method: 9040C - pH

Lab Sample ID: 500-139619-1 DU

Matrix: Water

Analysis Batch: 416975

Client Sample ID: ABB

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	8.4	HF	8.4		SU		0.2	

Lab Sample ID: 500-139619-2 DU

Matrix: Water

Analysis Batch: 416975

Client Sample ID: ASB

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	8.2	HF	8.3		SU		0.4	

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

TestAmerica Chicago

QC Sample Results

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

TestAmerica Job ID: 500-139619-1

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 500-417327/12

Matrix: Water

Analysis Batch: 417327

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			01/18/18 21:40	1

Lab Sample ID: LCS 500-417327/13

Matrix: Water

Analysis Batch: 417327

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	51.3		mg/L		103	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

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 500-417213/3

Matrix: Water

Analysis Batch: 417213

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			01/18/18 07:10	1

Lab Sample ID: LCS 500-417213/4

Matrix: Water

Analysis Batch: 417213

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	20.6		mg/L		103	80 - 120

Lab Sample ID: 500-139619-1 MS

Matrix: Water

Analysis Batch: 417213

Client Sample ID: ABB

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	250		400	671		mg/L		106	75 - 125

TestAmerica Chicago

QC Sample Results

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

TestAmerica Job ID: 500-139619-1

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

Lab Sample ID: 500-139619-1 MSD

Matrix: Water

Analysis Batch: 417213

Client Sample ID: ABB

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	250		400	602		mg/L	—	89	75 - 125	11	20

Lab Chronicle

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

TestAmerica Job ID: 500-139619-1

Client Sample ID: ABB

Date Collected: 01/11/18 09:35

Date Received: 01/12/18 09:40

Lab Sample ID: 500-139619-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			416709	01/12/18 14:46	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	416965	01/15/18 13:24	FXG	TAL CHI
Total/NA	Analysis	9040C		1	416975	(Start) 01/12/18 16:00 (End) 01/12/18 16:02	SMO	TAL CHI
Total/NA	Analysis	SM 2540C		1	416763	01/14/18 23:52	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		1	417327	01/18/18 21:46	HMW	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	418006	01/25/18 11:33	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		10	417213	(Start) 01/18/18 07:16 (End) 01/18/18 07:17	CLB	TAL CHI

Client Sample ID: ASB

Date Collected: 01/11/18 09:50

Date Received: 01/12/18 09:40

Lab Sample ID: 500-139619-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			416709	01/12/18 14:46	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	416965	01/15/18 13:27	FXG	TAL CHI
Total/NA	Analysis	9040C		1	416975	(Start) 01/12/18 16:04 (End) 01/12/18 16:06	SMO	TAL CHI
Total/NA	Analysis	SM 2540C		1	416763	01/14/18 23:55	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		5	417327	01/18/18 22:24	HMW	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	418006	01/25/18 11:36	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		10	417213	(Start) 01/18/18 07:19 (End) 01/18/18 07:20	CLB	TAL CHI

Laboratory References:

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

Accreditation/Certification Summary

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

TestAmerica Job ID: 500-139619-1

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
- 13
- 14

Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-139619-1

Login Number: 139619

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	

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pittsburgh

301 Alpha Drive

RIDC Park

Pittsburgh, PA 15238

Tel: (412)963-7058

TestAmerica Job ID: 180-74121-1

Client Project/Site: Midwest Generation

For:

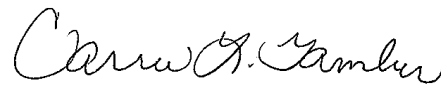
KPRG and Associates, Inc.

14665 West Lisbon Road,

Suite 2B

Brookfield, Wisconsin 53005

Attn: Richard Gnat



Authorized for release by:

3/5/2018 1:48:28 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.

Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Definitions/Glossary	4
Certification Summary	5
Sample Summary	6
Method Summary	7
Lab Chronicle	8
Client Sample Results	23
QC Sample Results	33
QC Association Summary	50
Chain of Custody	63
Receipt Checklists	65



Case Narrative

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

TestAmerica Job ID: 180-74121-1

Job ID: 180-74121-1

Laboratory: TestAmerica Pittsburgh

Narrative

CASE NARRATIVE

Client: KPRG and Associates, Inc.

Project: Midwest Generation

Report Number: 180-74121-1

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. The dilutions were dependent on conductivity pre-screen of the samples.

Sulfate failed the recovery criteria low for the MS/MSD of sample ASB - NATURAL (180-74121-22) in batch 180-236373.

METALS

The following sample were digested at a diluted level due to the nature of the sample matrix: ABB - PH 13.0 (180-74121-2), ABB - PH 12.0 (180-74121-3), ABB - PH 2.0 (180-74121-10). Elevated reporting limits (RLs) are provided.

Several samples were diluted due to the nature of the sample matrix and/or to bring the concentration of boron and calcium within the linear range. 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.

The Conductivity of the sample was greater than that of what the instrument could detect. The sample result was reported as >100000 umhos/cm (>100 MS) , since the method states that for conductivity the sample can not be diluted. B02 (180-74121-24).

The pH for the following sample was outside the instrument calibration range of pH 2 to pH 13 . The sample results was < 0 pH SU units therefore the result was reported as <1.00: B02 (180-74121-24).

Definitions/Glossary

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

TestAmerica Job ID: 180-74121-1

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.

General Chemistry

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time

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: 180-74121-1

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: 180-74121-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-74121-1	ABB - PRETEST	Solid	01/11/18 09:40	01/12/18 09:10
180-74121-2	ABB - PH 13.0	Solid	01/11/18 09:40	01/12/18 09:10
180-74121-3	ABB - PH 12.0	Solid	01/11/18 09:40	01/12/18 09:10
180-74121-4	ABB - PH 10.5	Solid	01/11/18 09:40	01/12/18 09:10
180-74121-6	ABB - PH 8.0	Solid	01/11/18 09:40	01/12/18 09:10
180-74121-7	ABB - PH 7.0	Solid	01/11/18 09:40	01/12/18 09:10
180-74121-8	ABB - PH 5.5	Solid	01/11/18 09:40	01/12/18 09:10
180-74121-9	ABB - PH 4.0	Solid	01/11/18 09:40	01/12/18 09:10
180-74121-10	ABB - PH 2.0	Solid	01/11/18 09:40	01/12/18 09:10
180-74121-11	ABB- NATURAL	Solid	01/11/18 09:40	01/12/18 09:10
180-74121-12	ASB - PRETEST	Solid	01/11/18 09:55	01/12/18 09:10
180-74121-13	ASB - PH 13.0	Solid	01/11/18 09:55	01/12/18 09:10
180-74121-14	ASB - PH 12.0	Solid	01/11/18 09:55	01/12/18 09:10
180-74121-15	ASB - PH 10.5	Solid	01/11/18 09:55	01/12/18 09:10
180-74121-17	ASB - PH 8.0	Solid	01/11/18 09:55	01/12/18 09:10
180-74121-18	ASB - PH 7.0	Solid	01/11/18 09:55	01/12/18 09:10
180-74121-19	ASB - PH 5.5	Solid	01/11/18 09:55	01/12/18 09:10
180-74121-20	ASB - PH 4.0	Solid	01/11/18 09:55	01/12/18 09:10
180-74121-21	ASB - PH 2.0	Solid	01/11/18 09:55	01/12/18 09:10
180-74121-22	ASB - NATURAL	Solid	01/11/18 09:55	01/12/18 09:10
180-74121-23	B01	Solid	01/11/18 00:00	01/12/18 09:10
180-74121-24	B02	Solid	01/11/18 00:00	01/12/18 09:10
180-74121-25	B03	Solid	01/11/18 00:00	01/12/18 09:10
180-74121-26	ABB - AIR DRIED	Solid	01/11/18 09:40	01/12/18 09:10
180-74121-27	ASB - AIR DRIED	Solid	01/11/18 09:55	01/12/18 09:10

TestAmerica Pittsburgh

Method Summary

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

TestAmerica Job ID: 180-74121-1

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: 180-74121-1

Client Sample ID: ABB - PRETEST

Date Collected: 01/11/18 09:40

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74121-1

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			42.3 g	950 mL	237107	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			237380	02/12/18 13:38	MTW	TAL PIT
	Instrument ID: NOEQUIP									
Leach	Leach	1313			42.3 g	950 mL	237107	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			237380	02/12/18 13:44	MTW	TAL PIT
	Instrument ID: NOEQUIP									
Leach	Leach	1313			42.3 g	950 mL	237107	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			237380	02/12/18 13:50	MTW	TAL PIT
	Instrument ID: NOEQUIP									
Leach	Leach	1313			42.3 g	400 mL	237733	02/14/18 08:00	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			237737	02/16/18 12:32	MTW	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: ABB - PH 13.0

Date Collected: 01/11/18 09:40

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74121-2

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			42.3 g	400 mL	236165	02/05/18 11:30	LWM	TAL PIT
Leach	Analysis	EPA 9056A		50			236553	02/09/18 20:54	CMR	TAL PIT
	Instrument ID: CHICS2000									
Leach	Leach	1313			42.3 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 00:22	WTR	TAL PIT
	Instrument ID: A									
Leach	Leach	1313			42.3 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 03:15	WTR	TAL PIT
	Instrument ID: M									
Leach	Leach	1313			42.3 g	400 mL	236165	02/05/18 11:30	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			236465	02/07/18 12:01	MTW	TAL PIT
	Instrument ID: NOEQUIP									
Leach	Leach	1313			42.3 g	400 mL	236165	02/05/18 11:30	LWM	TAL PIT
Leach	Analysis	SM 2510B		1			236475	02/07/18 11:39	MTW	TAL PIT
	Instrument ID: NOEQUIP									
Leach	Leach	1313			42.3 g	400 mL	236165	02/05/18 11:30	LWM	TAL PIT
Leach	Analysis	SM 2540C		1	4 mL	100 mL	237078	02/15/18 14:59	KXW	TAL PIT
	Instrument ID: NOEQUIP									
Leach	Leach	1313			42.3 g	400 mL	236165	02/05/18 11:30	LWM	TAL PIT
Leach	Analysis	SM 2580B		1			236472	02/07/18 11:37	MTW	TAL PIT
	Instrument ID: NOEQUIP									

TestAmerica Pittsburgh

Lab Chronicle

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

TestAmerica Job ID: 180-74121-1

Client Sample ID: ABB - PH 12.0

Date Collected: 01/11/18 09:40

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74121-3

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			42.3 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	EPA 9056A		10			236732	02/13/18 06:23	MJH	TAL PIT
		Instrument ID: CHIC2100A								
Leach	Leach	1313			42.3 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT
Leach	Prep	3010A			5 mL	50 mL	236807	02/13/18 13:38	KA	TAL PIT
Leach	Analysis	EPA 6020A		1			237198	02/15/18 22:06	WTR	TAL PIT
		Instrument ID: M								
Leach	Leach	1313			42.3 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			237380	02/12/18 13:47	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			42.3 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	SM 2510B		1			237425	02/12/18 13:26	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			42.3 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	SM 2540C		1	10 mL	100 mL	237078	02/15/18 14:59	KXW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			42.3 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	SM 2580B		1			237422	02/12/18 13:25	MTW	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: ABB - PH 10.5

Date Collected: 01/11/18 09:40

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74121-4

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			42.3 g	400 mL	237165	02/14/18 08:00	LWM	TAL PIT
Leach	Analysis	EPA 9056A		5			237859	02/26/18 15:10	MJH	TAL PIT
		Instrument ID: CHICS2000								
Leach	Leach	1313			42.3 g	400 mL	237165	02/14/18 08:00	LWM	TAL PIT
Leach	Analysis	EPA 9056A		50			237859	02/26/18 15:26	MJH	TAL PIT
		Instrument ID: CHICS2000								
Leach	Leach	1313			42.3 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 01:08	WTR	TAL PIT
		Instrument ID: A								
Leach	Leach	1313			42.3 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 04:12	WTR	TAL PIT
		Instrument ID: M								
Leach	Leach	1313			42.3 g	400 mL	237165	02/14/18 08:00	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			237737	02/16/18 12:27	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			42.3 g	400 mL	237165	02/14/18 08:00	LWM	TAL PIT
Leach	Analysis	SM 2510B		1			237752	02/16/18 12:33	MTW	TAL PIT
		Instrument ID: NOEQUIP								

TestAmerica Pittsburgh

Lab Chronicle

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

TestAmerica Job ID: 180-74121-1

Client Sample ID: ABB - PH 10.5

Date Collected: 01/11/18 09:40

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74121-4

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			42.3 g	400 mL	237165	02/14/18 08:00	LWM	TAL PIT
Leach	Analysis	SM 2540C		1	50 mL	100 mL	237329	02/19/18 15:41	KXW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			42.3 g	400 mL	237165	02/14/18 08:00	LWM	TAL PIT
Leach	Analysis	SM 2580B		1			237751	02/16/18 12:36	MTW	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: ABB - PH 8.0

Date Collected: 01/11/18 09:40

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74121-6

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			42.3 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	EPA 9056A		2.5			236732	02/13/18 06:39	MJH	TAL PIT
		Instrument ID: CHIC2100A								
Leach	Leach	1313			42.3 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	EPA 9056A		25			236732	02/13/18 06:54	MJH	TAL PIT
		Instrument ID: CHIC2100A								
Leach	Leach	1313			42.3 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 22:02	WTR	TAL PIT
		Instrument ID: M								
Leach	Leach	1313			42.3 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			237380	02/12/18 13:41	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			42.3 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	SM 2510B		1			237425	02/12/18 13:21	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			42.3 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			42.3 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	SM 2580B		1			237422	02/12/18 13:19	MTW	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: ABB - PH 7.0

Date Collected: 01/11/18 09:40

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74121-7

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			42.3 g	400 mL	237761	02/21/18 10:00	LWM	TAL PIT
Leach	Analysis	EPA 9056A		10			237859	02/26/18 08:41	MJH	TAL PIT
		Instrument ID: CHICS2000								
Leach	Leach	1313			42.3 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: 180-74121-1

Client Sample ID: ABB - PH 7.0

Date Collected: 01/11/18 09:40

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74121-7

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		100			237859	02/26/18 10:34	MJH	TAL PIT
		Instrument ID: CHICS2000								
Leach	Leach	1313			42.3 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		1			237942	02/24/18 17:22	WTR	TAL PIT
		Instrument ID: A								
Leach	Leach	1313			42.3 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 09:55	WTR	TAL PIT
		Instrument ID: M								
Leach	Leach	1313			42.3 g	400 mL	237761	02/21/18 10:00	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			237772	02/23/18 10:06	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			42.3 g	400 mL	237761	02/21/18 10:00	LWM	TAL PIT
Leach	Analysis	SM 2510B		1			237776	02/23/18 10:08	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			42.3 g	400 mL	237761	02/21/18 10:00	LWM	TAL PIT
Leach	Analysis	SM 2540C		1	25 mL	100 mL	238055	02/27/18 15:07	KXW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			42.3 g	400 mL	237761	02/21/18 10:00	LWM	TAL PIT
Leach	Analysis	SM 2580B		1			237774	02/23/18 10:06	MTW	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: ABB - PH 5.5

Date Collected: 01/11/18 09:40

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74121-8

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			42.3 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	EPA 9056A		10			236732	02/13/18 07:09	MJH	TAL PIT
		Instrument ID: CHIC2100A								
Leach	Leach	1313			42.3 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 20:24	WTR	TAL PIT
		Instrument ID: M								
Leach	Leach	1313			42.3 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			237380	02/12/18 13:53	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			42.3 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	SM 2510B		1			237425	02/12/18 13:31	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			42.3 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	SM 2540C		1	10 mL	100 mL	237078	02/15/18 14:59	KXW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			42.3 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: 180-74121-1

Client Sample ID: ABB - PH 5.5

Date Collected: 01/11/18 09:40

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74121-8

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Leach	Analysis	SM 2580B		1			237422	02/12/18 13:32	MTW	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: ABB - PH 4.0

Date Collected: 01/11/18 09:40

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74121-9

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			42.3 g	400 mL	236165	02/05/18 11:30	LWM	TAL PIT
Leach	Analysis	EPA 9056A		25			236377	02/08/18 19:08	MJH	TAL PIT
		Instrument ID: CHIC2100A								
Leach	Leach	1313			42.3 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		10			236828	02/13/18 03:19	WTR	TAL PIT
		Instrument ID: M								
Leach	Leach	1313			42.3 g	400 mL	236165	02/05/18 11:30	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			236465	02/07/18 12:16	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			42.3 g	400 mL	236165	02/05/18 11:30	LWM	TAL PIT
Leach	Analysis	SM 2510B		1			236475	02/07/18 12:05	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			42.3 g	400 mL	236165	02/05/18 11:30	LWM	TAL PIT
Leach	Analysis	SM 2540C		1	5 mL	100 mL	236785	02/13/18 10:45	KXW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			42.3 g	400 mL	236165	02/05/18 11:30	LWM	TAL PIT
Leach	Analysis	SM 2580B		1			236472	02/07/18 11:58	MTW	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: ABB - PH 2.0

Date Collected: 01/11/18 09:40

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74121-10

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			42.3 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 11:00	MJH	TAL PIT
		Instrument ID: CHICS2000								
Leach	Leach	1313			42.3 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 17:11	WTR	TAL PIT
		Instrument ID: A								
Leach	Leach	1313			42.3 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 09:41	WTR	TAL PIT
		Instrument ID: M								

TestAmerica Pittsburgh

Lab Chronicle

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

TestAmerica Job ID: 180-74121-1

Client Sample ID: ABB - PH 2.0

Date Collected: 01/11/18 09:40

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74121-10

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			42.3 g	400 mL	237381	02/17/18 10:00	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			237531	02/19/18 10:25	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			42.3 g	400 mL	237381	02/17/18 10:00	LWM	TAL PIT
Leach	Analysis	SM 2510B		1			237553	02/19/18 10:30	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			42.3 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			42.3 g	400 mL	237381	02/17/18 10:00	LWM	TAL PIT
Leach	Analysis	SM 2580B		1			237550	02/19/18 10:27	MTW	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: ABB- NATURAL

Date Collected: 01/11/18 09:40

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74121-11

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			42.3 g	400 mL	236165	02/05/18 11:30	LWM	TAL PIT
Leach	Analysis	EPA 9056A		1			236373	02/08/18 08:53	MJH	TAL PIT
		Instrument ID: CHICS2100B								
Leach	Leach	1313			42.3 g	400 mL	236165	02/05/18 11:30	LWM	TAL PIT
Leach	Analysis	EPA 9056A		10			236373	02/08/18 09:08	MJH	TAL PIT
		Instrument ID: CHICS2100B								
Leach	Leach	1313			42.3 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 22:54	WTR	TAL PIT
		Instrument ID: A								
Leach	Leach	1313			42.3 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 00:44	WTR	TAL PIT
		Instrument ID: M								
Leach	Leach	1313			42.3 g	400 mL	236165	02/05/18 11:30	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			236465	02/07/18 12:19	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			42.3 g	400 mL	236165	02/05/18 11:30	LWM	TAL PIT
Leach	Analysis	SM 2510B		1			236475	02/07/18 12:09	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			42.3 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			42.3 g	400 mL	236165	02/05/18 11:30	LWM	TAL PIT
Leach	Analysis	SM 2580B		1			236472	02/07/18 12:03	MTW	TAL PIT
		Instrument ID: NOEQUIP								

TestAmerica Pittsburgh

Lab Chronicle

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

TestAmerica Job ID: 180-74121-1

Client Sample ID: ASB - PRETEST

Lab Sample ID: 180-74121-12

Date Collected: 01/11/18 09:55

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			40.4 g	950 mL	237107	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			237380	02/12/18 13:59	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.4 g	950 mL	237107	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			237380	02/12/18 14:03	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.4 g	950 mL	237107	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			237380	02/12/18 14:12	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.4 g	950 mL	237107	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			237380	02/12/18 14:15	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.4 g	400 mL	237733	02/14/18 08:00	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			237737	02/16/18 12:43	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.4 g	400 mL	237733	02/14/18 08:00	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			237737	02/16/18 12:49	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.4 g	400 mL	237381	02/17/18 10:00	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			237531	02/19/18 10:31	MTW	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: ASB - PH 13.0

Lab Sample ID: 180-74121-13

Date Collected: 01/11/18 09:55

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			40.4 g	400 mL	236165	02/05/18 11:30	LWM	TAL PIT
Leach	Analysis	EPA 9056A		50			236553	02/09/18 21:26	CMR	TAL PIT
		Instrument ID: CHICS2000								
Leach	Leach	1313			40.4 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 00:27	WTR	TAL PIT
		Instrument ID: A								
Leach	Leach	1313			40.4 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 03:24	WTR	TAL PIT
		Instrument ID: M								
Leach	Leach	1313			40.4 g	400 mL	236165	02/05/18 11:30	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			236465	02/07/18 11:52	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.4 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: 180-74121-1

Client Sample ID: ASB - PH 13.0

Lab Sample ID: 180-74121-13

Date Collected: 01/11/18 09:55

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 11:32	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.4 g	400 mL	236165	02/05/18 11:30	LWM	TAL PIT
Leach	Analysis	SM 2540C		1	3 mL	100 mL	236825	02/13/18 15:26	KXW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.4 g	400 mL	236165	02/05/18 11:30	LWM	TAL PIT
Leach	Analysis	SM 2580B		1			236472	02/07/18 11:29	MTW	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: ASB - PH 12.0

Lab Sample ID: 180-74121-14

Date Collected: 01/11/18 09:55

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			40.4 g	400 mL	237165	02/14/18 08:00	LWM	TAL PIT
Leach	Analysis	EPA 9056A		5			237859	02/26/18 15:42	MJH	TAL PIT
		Instrument ID: CHICS2000								
Leach	Leach	1313			40.4 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 01:11	WTR	TAL PIT
		Instrument ID: A								
Leach	Leach	1313			40.4 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 04:16	WTR	TAL PIT
		Instrument ID: M								
Leach	Leach	1313			40.4 g	400 mL	237165	02/14/18 08:00	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			237737	02/16/18 12:38	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.4 g	400 mL	237165	02/14/18 08:00	LWM	TAL PIT
Leach	Analysis	SM 2510B		1			237752	02/16/18 12:40	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.4 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			40.4 g	400 mL	237165	02/14/18 08:00	LWM	TAL PIT
Leach	Analysis	SM 2580B		1			237751	02/16/18 12:44	MTW	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: ASB - PH 10.5

Lab Sample ID: 180-74121-15

Date Collected: 01/11/18 09:55

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			40.4 g	400 mL	237381	02/17/18 10:00	LWM	TAL PIT

TestAmerica Pittsburgh

Lab Chronicle

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

TestAmerica Job ID: 180-74121-1

Client Sample ID: ASB - PH 10.5

Lab Sample ID: 180-74121-15

Date Collected: 01/11/18 09:55

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 9056A		1	1 mL	1.0 mL	237598	02/22/18 13:55	MJH	TAL PIT
		Instrument ID: CHICS2000								
Leach	Leach	1313			40.4 g	400 mL	237381	02/17/18 10:00	LWM	TAL PIT
Leach	Analysis	EPA 9056A		5	1 mL	1.0 mL	237598	02/22/18 14:11	MJH	TAL PIT
		Instrument ID: CHICS2000								
Leach	Leach	1313			40.4 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 11:37	RSK	TAL PIT
		Instrument ID: A								
Leach	Leach	1313			40.4 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 21:24	WTR	TAL PIT
		Instrument ID: M								
Leach	Leach	1313			40.4 g	400 mL	237381	02/17/18 10:00	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			237531	02/19/18 10:06	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.4 g	400 mL	237381	02/17/18 10:00	LWM	TAL PIT
Leach	Analysis	SM 2510B		1			237553	02/19/18 10:12	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.4 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			40.4 g	400 mL	237381	02/17/18 10:00	LWM	TAL PIT
Leach	Analysis	SM 2580B		1			237550	02/19/18 10:06	MTW	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: ASB - PH 8.0

Lab Sample ID: 180-74121-17

Date Collected: 01/11/18 09:55

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			40.4 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	EPA 9056A		2.5			236732	02/13/18 07:40	MJH	TAL PIT
		Instrument ID: CHIC2100A								
Leach	Leach	1313			40.4 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 22:16	WTR	TAL PIT
		Instrument ID: M								
Leach	Leach	1313			40.4 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			237380	02/12/18 14:09	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.4 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	SM 2510B		1			237425	02/12/18 13:52	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.4 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: 180-74121-1

Client Sample ID: ASB - PH 8.0

Lab Sample ID: 180-74121-17

Date Collected: 01/11/18 09:55

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	50 mL	100 mL	237078	02/15/18 14:59	KXW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.4 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	SM 2580B		1			237422	02/12/18 13:51	MTW	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: ASB - PH 7.0

Lab Sample ID: 180-74121-18

Date Collected: 01/11/18 09:55

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			40.4 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	EPA 9056A		2.5			236732	02/13/18 10:28	MJH	TAL PIT
		Instrument ID: CHIC2100A								
Leach	Leach	1313			40.4 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	EPA 9056A		5			236891	02/14/18 14:01	MJH	TAL PIT
		Instrument ID: CHICS2000								
Leach	Leach	1313			40.4 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 22:20	WTR	TAL PIT
		Instrument ID: M								
Leach	Leach	1313			40.4 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			237380	02/12/18 14:06	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.4 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	SM 2510B		1			237425	02/12/18 13:47	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.4 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			40.4 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	SM 2580B		1			237422	02/12/18 13:44	MTW	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: ASB - PH 5.5

Lab Sample ID: 180-74121-19

Date Collected: 01/11/18 09:55

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			40.4 g	400 mL	238030	02/26/18 10:00	LWM	TAL PIT
Leach	Analysis	EPA 9056A		10			238212	03/01/18 08:38	MJH	TAL PIT
		Instrument ID: CHICS2000								
Leach	Leach	1313			40.4 g	400 mL	238030	02/26/18 10:00	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	238166	02/28/18 13:51	KA	TAL PIT

TestAmerica Pittsburgh

Lab Chronicle

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

TestAmerica Job ID: 180-74121-1

Client Sample ID: ASB - PH 5.5

Lab Sample ID: 180-74121-19

Date Collected: 01/11/18 09:55

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			238310	03/01/18 01:11	WTR	TAL PIT
	Instrument ID: M									
Leach	Leach	1313			40.4 g	400 mL	238030	02/26/18 10:00	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			238129	02/28/18 09:00	MTW	TAL PIT
	Instrument ID: NOEQUIP									
Leach	Leach	1313			40.4 g	400 mL	238030	02/26/18 10:00	LWM	TAL PIT
Leach	Analysis	SM 2510B		1			238130	02/28/18 09:00	MTW	TAL PIT
	Instrument ID: NOEQUIP									
Leach	Leach	1313			40.4 g	400 mL	238030	02/26/18 10:00	LWM	TAL PIT
Leach	Analysis	SM 2540C		1	25 mL	100 mL	238132	02/28/18 10:41	KXW	TAL PIT
	Instrument ID: NOEQUIP									
Leach	Leach	1313			40.4 g	400 mL	238030	02/26/18 10:00	LWM	TAL PIT
Leach	Analysis	SM 2580B		1			238131	02/28/18 09:00	MTW	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: ASB - PH 4.0

Lab Sample ID: 180-74121-20

Date Collected: 01/11/18 09:55

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			40.4 g	400 mL	236165	02/05/18 11:30	LWM	TAL PIT
Leach	Analysis	EPA 9056A		25			236377	02/08/18 19:38	MJH	TAL PIT
	Instrument ID: CHIC2100A									
Leach	Leach	1313			40.4 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		10			236828	02/13/18 03:29	WTR	TAL PIT
	Instrument ID: M									
Leach	Leach	1313			40.4 g	400 mL	236165	02/05/18 11:30	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			236465	02/07/18 11:46	MTW	TAL PIT
	Instrument ID: NOEQUIP									
Leach	Leach	1313			40.4 g	400 mL	236165	02/05/18 11:30	LWM	TAL PIT
Leach	Analysis	SM 2510B		1			236475	02/07/18 11:29	MTW	TAL PIT
	Instrument ID: NOEQUIP									
Leach	Leach	1313			40.4 g	400 mL	236165	02/05/18 11:30	LWM	TAL PIT
Leach	Analysis	SM 2540C		1	5 mL	100 mL	236785	02/13/18 10:45	KXW	TAL PIT
	Instrument ID: NOEQUIP									
Leach	Leach	1313			40.4 g	400 mL	236165	02/05/18 11:30	LWM	TAL PIT
Leach	Analysis	SM 2580B		1			236472	02/07/18 11:25	MTW	TAL PIT
	Instrument ID: NOEQUIP									

TestAmerica Pittsburgh

Lab Chronicle

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

TestAmerica Job ID: 180-74121-1

Client Sample ID: ASB - PH 2.0

Lab Sample ID: 180-74121-21

Date Collected: 01/11/18 09:55

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			40.4 g	400 mL	237539	02/19/18 08:30	LWM	TAL PIT
Leach	Analysis	EPA 9056A		100			237721	02/23/18 10:54	MJH	TAL PIT
		Instrument ID: CHICS2000								
Leach	Leach	1313			40.4 g	400 mL	237539	02/19/18 08:30	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	237582	02/21/18 15:34	KA	TAL PIT
Leach	Analysis	EPA 6020A		50			237942	02/24/18 17:19	WTR	TAL PIT
		Instrument ID: A								
Leach	Leach	1313			40.4 g	400 mL	237539	02/19/18 08:30	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	237582	02/21/18 15:34	KA	TAL PIT
Leach	Analysis	EPA 6020A		50			238052	02/26/18 22:37	WTR	TAL PIT
		Instrument ID: M								
Leach	Leach	1313			40.4 g	400 mL	237539	02/19/18 08:30	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			237560	02/21/18 10:17	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.4 g	400 mL	237539	02/19/18 08:30	LWM	TAL PIT
Leach	Analysis	SM 2510B		1			237563	02/21/18 10:17	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.4 g	400 mL	237539	02/19/18 08:30	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			40.4 g	400 mL	237539	02/19/18 08:30	LWM	TAL PIT
Leach	Analysis	SM 2580B		1			237562	02/21/18 10:17	MTW	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: ASB - NATURAL

Lab Sample ID: 180-74121-22

Date Collected: 01/11/18 09:55

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			40.4 g	400 mL	236165	02/05/18 11:30	LWM	TAL PIT
Leach	Analysis	EPA 9056A		1			236373	02/08/18 09:56	MJH	TAL PIT
		Instrument ID: CHICS2100B								
Leach	Leach	1313			40.4 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 22:57	WTR	TAL PIT
		Instrument ID: A								
Leach	Leach	1313			40.4 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 01:01	WTR	TAL PIT
		Instrument ID: M								
Leach	Leach	1313			40.4 g	400 mL	236165	02/05/18 11:30	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			236465	02/07/18 12:23	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.4 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: 180-74121-1

Client Sample ID: ASB - NATURAL

Lab Sample ID: 180-74121-22

Date Collected: 01/11/18 09:55

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 12:12	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			40.4 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			40.4 g	400 mL	236165	02/05/18 11:30	LWM	TAL PIT
Leach	Analysis	SM 2580B		1			236472	02/07/18 12:07	MTW	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: B01

Lab Sample ID: 180-74121-23

Date Collected: 01/11/18 00:00

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			1.0 g	2000 mL	236165	02/05/18 11:30	LWM	TAL PIT
Leach	Analysis	EPA 9056A		1			236373	02/08/18 08:37	MJH	TAL PIT
		Instrument ID: CHICS2100B								
Leach	Leach	1313			1.0 g	2000 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 22:51	WTR	TAL PIT
		Instrument ID: A								
Leach	Leach	1313			1.0 g	2000 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 00:39	WTR	TAL PIT
		Instrument ID: M								
Leach	Leach	1313			1.0 g	2000 mL	236165	02/05/18 11:30	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			236465	02/07/18 13:39	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			1.0 g	2000 mL	236165	02/05/18 11:30	LWM	TAL PIT
Leach	Analysis	SM 2510B		1			236475	02/07/18 13:54	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			1.0 g	2000 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			1.0 g	2000 mL	236165	02/05/18 11:30	LWM	TAL PIT
Leach	Analysis	SM 2580B		1			236472	02/07/18 13:52	MTW	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: B02

Lab Sample ID: 180-74121-24

Date Collected: 01/11/18 00:00

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			1.0 g	400 mL	237539	02/19/18 08:30	LWM	TAL PIT

TestAmerica Pittsburgh

Lab Chronicle

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

TestAmerica Job ID: 180-74121-1

Client Sample ID: B02

Date Collected: 01/11/18 00:00

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74121-24

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		250			237721	02/23/18 11:25	MJH	TAL PIT
		Instrument ID: CHICS2000								
Leach	Leach	1313			1.0 g	400 mL	237539	02/19/18 08:30	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	237582	02/21/18 15:34	KA	TAL PIT
Leach	Analysis	EPA 6020A		1			237821	02/23/18 12:33	RSK	TAL PIT
		Instrument ID: A								
Leach	Leach	1313			1.0 g	400 mL	237539	02/19/18 08:30	LWM	TAL PIT
Leach	Prep	3010A			50 mL	50 mL	237582	02/21/18 15:34	KA	TAL PIT
Leach	Analysis	EPA 6020A		1			238052	02/26/18 22:42	WTR	TAL PIT
		Instrument ID: M								
Leach	Leach	1313			1.0 g	400 mL	237539	02/19/18 08:30	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			237560	02/21/18 10:23	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			1.0 g	400 mL	237539	02/19/18 08:30	LWM	TAL PIT
Leach	Analysis	SM 2510B		1			237563	02/21/18 10:21	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			1.0 g	400 mL	237539	02/19/18 08:30	LWM	TAL PIT
Leach	Analysis	SM 2540C		1	1 mL	100 mL	237940	02/26/18 14:33	KXW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			1.0 g	400 mL	237539	02/19/18 08:30	LWM	TAL PIT
Leach	Analysis	SM 2580B		1			237562	02/21/18 10:23	MTW	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: B03

Date Collected: 01/11/18 00:00

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74121-25

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			1.0 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	EPA 9056A		50			236732	02/13/18 10:59	MJH	TAL PIT
		Instrument ID: CHIC2100A								
Leach	Leach	1313			1.0 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	EPA 9056A		100			236891	02/14/18 14:17	MJH	TAL PIT
		Instrument ID: CHICS2000								
Leach	Leach	1313			1.0 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 21:57	WTR	TAL PIT
		Instrument ID: M								
Leach	Leach	1313			1.0 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	EPA 9040C		1			237380	02/12/18 15:47	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			1.0 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	SM 2510B		1			237425	02/12/18 15:44	MTW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			1.0 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: 180-74121-1

Client Sample ID: B03

Lab Sample ID: 180-74121-25

Date Collected: 01/11/18 00:00

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	3 mL	100 mL	237078	02/15/18 14:59	KXW	TAL PIT
		Instrument ID: NOEQUIP								
Leach	Leach	1313			1.0 g	400 mL	236722	02/10/18 08:30	LWM	TAL PIT
Leach	Analysis	SM 2580B		1			237422	02/12/18 15:47	MTW	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: ABB - AIR DRIED

Lab Sample ID: 180-74121-26

Date Collected: 01/11/18 09:40

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			235778	02/01/18 13:28	RMA	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: ASB - AIR DRIED

Lab Sample ID: 180-74121-27

Date Collected: 01/11/18 09:55

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			235778	02/01/18 13:28	RMA	TAL PIT
		Instrument ID: NOEQUIP								

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

CMR = Carl Reagle

KXW = Kaitlyn White

MJH = Matthew Hartman

MTW = Michael Wesoloski

RMA = Rachel Aguiar

RSK = Robert Kurtz

WTR = Bill Reinheimer

TestAmerica Pittsburgh

Client Sample Results

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

TestAmerica Job ID: 180-74121-1

Client Sample ID: ABB - PRETEST

Date Collected: 01/11/18 09:40

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74121-1

Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	46.7		0.1		%			01/24/18 06:29	1
Percent Solids	53.3		0.1		%			01/24/18 06:29	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.5		0.1		SU			02/12/18 13:38	1
pH	12.6		0.1		SU			02/12/18 13:44	1
pH	3.8		0.1		SU			02/12/18 13:50	1
pH	4.0		0.1		SU			02/16/18 12:32	1

Client Sample ID: ABB - PH 13.0

Date Collected: 01/11/18 09:40

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74121-2

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			02/09/18 20:54	50
Fluoride	12		5.0		mg/L			02/09/18 20:54	50
Sulfate	640		50		mg/L			02/09/18 20:54	50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	7400		800		ug/L		02/08/18 11:28	02/13/18 03:15	1
Calcium	48000		5000		ug/L		02/08/18 11:28	02/10/18 00:22	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	12.7		0.1		SU			02/07/18 12:01	1
Specific Conductance	33000		1.0		umhos/cm			02/07/18 11:39	1
Total Dissolved Solids	13000		250		mg/L			02/15/18 14:59	1
Oxidation Reduction Potential	- 243		10		millivolts			02/07/18 11:37	1

Client Sample ID: ABB - PH 12.0

Date Collected: 01/11/18 09:40

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74121-3

Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	22		10		mg/L			02/13/18 06:23	10
Fluoride	6.4		1.0		mg/L			02/13/18 06:23	10
Sulfate	780		10		mg/L			02/13/18 06:23	10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	7800		800		ug/L		02/13/18 13:38	02/15/18 22:06	1
Calcium	17000		5000		ug/L		02/13/18 13:38	02/15/18 22:06	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	12.5		0.1		SU			02/12/18 13:47	1
Specific Conductance	13000		1.0		umhos/cm			02/12/18 13:26	1

TestAmerica Pittsburgh

Client Sample Results

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

TestAmerica Job ID: 180-74121-1

Client Sample ID: ABB - PH 12.0

Date Collected: 01/11/18 09:40

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74121-3

Matrix: Solid

General Chemistry - Leach (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	6100		100		mg/L			02/15/18 14:59	1
Oxidation Reduction Potential	- 106		10		millivolts			02/12/18 13:25	1

Client Sample ID: ABB - PH 10.5

Date Collected: 01/11/18 09:40

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74121-4

Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	16		5.0		mg/L			02/26/18 15:10	5
Fluoride	11		0.50		mg/L			02/26/18 15:10	5
Sulfate	740		50		mg/L			02/26/18 15:26	50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	6400		80		ug/L		02/19/18 13:03	02/22/18 04:12	1
Calcium	10000		500		ug/L		02/19/18 13:03	02/21/18 01:08	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	10.5		0.1		SU			02/16/18 12:27	1
Specific Conductance	2700		1.0		umhos/cm			02/16/18 12:33	1
Total Dissolved Solids	1900		20		mg/L			02/19/18 15:41	1
Oxidation Reduction Potential	100		10		millivolts			02/16/18 12:36	1

Client Sample ID: ABB - PH 8.0

Date Collected: 01/11/18 09:40

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74121-6

Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	21		2.5		mg/L			02/13/18 06:39	2.5
Fluoride	1.7		0.25		mg/L			02/13/18 06:39	2.5
Sulfate	860		25		mg/L			02/13/18 06:54	25

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	4300		80		ug/L		02/13/18 13:38	02/15/18 22:02	1
Calcium	380000		500		ug/L		02/13/18 13:38	02/15/18 22:02	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.0		0.1		SU			02/12/18 13:41	1
Specific Conductance	3900		1.0		umhos/cm			02/12/18 13:21	1
Total Dissolved Solids	3200		40		mg/L			02/15/18 14:59	1
Oxidation Reduction Potential	280		10		millivolts			02/12/18 13:19	1

TestAmerica Pittsburgh

Client Sample Results

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

TestAmerica Job ID: 180-74121-1

Client Sample ID: ABB - PH 7.0

Lab Sample ID: 180-74121-7

Date Collected: 01/11/18 09:40

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	15		10		mg/L			02/26/18 08:41	10
Fluoride	<1.0		1.0		mg/L			02/26/18 08:41	10
Sulfate	800		100		mg/L			02/26/18 10:34	100

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	6900		800		ug/L		02/23/18 12:01	02/27/18 09:55	10
Calcium	<500		500		ug/L		02/23/18 12:01	02/24/18 17:22	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.2		0.1		SU			02/23/18 10:06	1
Specific Conductance	7500		1.0		umhos/cm			02/23/18 10:08	1
Total Dissolved Solids	6500		40		mg/L			02/27/18 15:07	1
Oxidation Reduction Potential	93		10		millivolts			02/23/18 10:06	1

Client Sample ID: ABB - PH 5.5

Lab Sample ID: 180-74121-8

Date Collected: 01/11/18 09:40

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	20		10		mg/L			02/13/18 07:09	10
Fluoride	<1.0		1.0		mg/L			02/13/18 07:09	10
Sulfate	980		10		mg/L			02/13/18 07:09	10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	11000		800		ug/L		02/13/18 13:38	02/16/18 20:24	10
Calcium	3200000		5000		ug/L		02/13/18 13:38	02/16/18 20:24	10

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	5.9		0.1		SU			02/12/18 13:53	1
Specific Conductance	19000		1.0		umhos/cm			02/12/18 13:31	1
Total Dissolved Solids	19000		100		mg/L			02/15/18 14:59	1
Oxidation Reduction Potential	260		10		millivolts			02/12/18 13:32	1

Client Sample ID: ABB - PH 4.0

Lab Sample ID: 180-74121-9

Date Collected: 01/11/18 09:40

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	<25		25		mg/L			02/08/18 19:08	25
Fluoride	15		2.5		mg/L			02/08/18 19:08	25
Sulfate	880		25		mg/L			02/08/18 19:08	25

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	12000		800		ug/L		02/08/18 11:28	02/13/18 03:19	10

TestAmerica Pittsburgh

Client Sample Results

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

TestAmerica Job ID: 180-74121-1

Client Sample ID: ABB - PH 4.0

Date Collected: 01/11/18 09:40

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74121-9

Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	5700000		5000		ug/L		02/08/18 11:28	02/13/18 03:19	10

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	4.3		0.1		SU			02/07/18 12:16	1
Specific Conductance	31000		1.0		umhos/cm			02/07/18 12:05	1
Total Dissolved Solids	33000		200		mg/L			02/13/18 10:45	1
Oxidation Reduction Potential	330		10		millivolts			02/07/18 11:58	1

Client Sample ID: ABB - PH 2.0

Date Collected: 01/11/18 09:40

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74121-10

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 11:00	100
Fluoride	26		10		mg/L			02/22/18 11:00	100
Sulfate	920		100		mg/L			02/22/18 11:00	100

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	26000		8000		ug/L		02/23/18 12:01	02/27/18 09:41	10
Calcium	11000000		50000		ug/L		02/23/18 12:01	02/24/18 17:11	10

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	2.3		0.1		SU			02/19/18 10:25	1
Specific Conductance	77000		1.0		umhos/cm			02/19/18 10:30	1
Total Dissolved Solids	92000		500		mg/L			02/26/18 14:33	1
Oxidation Reduction Potential	530		10		millivolts			02/19/18 10:27	1

Client Sample ID: ABB- NATURAL

Date Collected: 01/11/18 09:40

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74121-11

Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	27		1.0		mg/L			02/08/18 08:53	1
Fluoride	2.8		0.10		mg/L			02/08/18 08:53	1
Sulfate	910		10		mg/L			02/08/18 09:08	10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	3700		80		ug/L		02/08/18 11:22	02/13/18 00:44	1
Calcium	130000		500		ug/L		02/08/18 11:22	02/09/18 22:54	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.8		0.1		SU			02/07/18 12:19	1
Specific Conductance	2300		1.0		umhos/cm			02/07/18 12:09	1
Total Dissolved Solids	1500		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: 180-74121-1

Client Sample ID: ABB- NATURAL

Date Collected: 01/11/18 09:40

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74121-11

Matrix: Solid

General Chemistry - Leach (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Oxidation Reduction Potential	220		10		millivolts			02/07/18 12:03	1

Client Sample ID: ASB - PRETEST

Date Collected: 01/11/18 09:55

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74121-12

Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	35.7		0.1		%			01/24/18 06:29	1
Percent Solids	64.3		0.1		%			01/24/18 06:29	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	12.8		0.1		SU			02/12/18 13:59	1
pH	3.8		0.1		SU			02/12/18 14:03	1
pH	3.9		0.1		SU			02/12/18 14:12	1
pH	12.6		0.1		SU			02/12/18 14:15	1
pH	12.4		0.1		SU			02/16/18 12:43	1
pH	3.5		0.1		SU			02/16/18 12:49	1
pH	3.1		0.1		SU			02/19/18 10:31	1

Client Sample ID: ASB - PH 13.0

Date Collected: 01/11/18 09:55

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74121-13

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			02/09/18 21:26	50
Fluoride	<5.0		5.0		mg/L			02/09/18 21:26	50
Sulfate	91		50		mg/L			02/09/18 21:26	50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	100		80		ug/L		02/08/18 11:28	02/13/18 03:24	1
Calcium	3000		500		ug/L		02/08/18 11:28	02/10/18 00:27	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	12.7		0.1		SU			02/07/18 11:52	1
Specific Conductance	44000		1.0		umhos/cm			02/07/18 11:32	1
Total Dissolved Solids	13000		330		mg/L			02/13/18 15:26	1
Oxidation Reduction Potential	- 118		10		millivolts			02/07/18 11:29	1

Client Sample ID: ASB- PH 12.0

Date Collected: 01/11/18 09:55

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74121-14

Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.1		5.0		mg/L			02/26/18 15:42	5
Fluoride	1.3		0.50		mg/L			02/26/18 15:42	5

TestAmerica Pittsburgh

Client Sample Results

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

TestAmerica Job ID: 180-74121-1

Client Sample ID: ASB- PH 12.0

Date Collected: 01/11/18 09:55

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74121-14

Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	76		5.0		mg/L			02/26/18 15:42	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	900		80		ug/L		02/19/18 13:03	02/22/18 04:16	1
Calcium	1300		500		ug/L		02/19/18 13:03	02/21/18 01:11	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	11.9		0.1		SU			02/16/18 12:38	1
Specific Conductance	3000		1.0		umhos/cm			02/16/18 12:40	1
Total Dissolved Solids	1400		40		mg/L			02/19/18 15:41	1
Oxidation Reduction Potential	18		10		millivolts			02/16/18 12:44	1

Client Sample ID: ASB - PH 10.5

Date Collected: 01/11/18 09:55

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74121-15

Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.3		1.0		mg/L			02/22/18 13:55	1
Fluoride	1.0		0.10		mg/L			02/22/18 13:55	1
Sulfate	72		5.0		mg/L			02/22/18 14:11	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	650		80		ug/L		02/21/18 11:22	02/26/18 21:24	1
Calcium	2600		500		ug/L		02/21/18 11:22	02/23/18 11:37	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	10.3		0.1		SU			02/19/18 10:06	1
Specific Conductance	620		1.0		umhos/cm			02/19/18 10:12	1
Total Dissolved Solids	410		10		mg/L			02/26/18 14:33	1
Oxidation Reduction Potential	74		10		millivolts			02/19/18 10:06	1

Client Sample ID: ASB - PH 8.0

Date Collected: 01/11/18 09:55

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74121-17

Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.9		2.5		mg/L			02/13/18 07:40	2.5
Fluoride	<0.25		0.25		mg/L			02/13/18 07:40	2.5
Sulfate	110		2.5		mg/L			02/13/18 07:40	2.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1000		80		ug/L		02/13/18 13:38	02/15/18 22:16	1
Calcium	390000		500		ug/L		02/13/18 13:38	02/15/18 22:16	1

TestAmerica Pittsburgh

Client Sample Results

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

TestAmerica Job ID: 180-74121-1

Client Sample ID: ASB - PH 8.0

Date Collected: 01/11/18 09:55

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74121-17

Matrix: Solid

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.6		0.1		SU			02/12/18 14:09	1
Specific Conductance	2700		1.0		umhos/cm			02/12/18 13:52	1
Total Dissolved Solids	2200		20		mg/L			02/15/18 14:59	1
Oxidation Reduction Potential	230		10		millivolts			02/12/18 13:51	1

Client Sample ID: ASB - PH 7.0

Date Collected: 01/11/18 09:55

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74121-18

Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.4		2.5		mg/L			02/13/18 10:28	2.5
Fluoride	<0.50		0.50		mg/L			02/14/18 14:01	5
Sulfate	110		2.5		mg/L			02/13/18 10:28	2.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1500		80		ug/L		02/13/18 13:38	02/15/18 22:20	1
Calcium	680000		500		ug/L		02/13/18 13:38	02/15/18 22:20	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	6.7		0.1		SU			02/12/18 14:06	1
Specific Conductance	4600		1.0		umhos/cm			02/12/18 13:47	1
Total Dissolved Solids	3900		40		mg/L			02/15/18 14:59	1
Oxidation Reduction Potential	290		10		millivolts			02/12/18 13:44	1

Client Sample ID: ASB - PH 5.5

Date Collected: 01/11/18 09:55

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74121-19

Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<10		10		mg/L			03/01/18 08:38	10
Fluoride	<1.0		1.0		mg/L			03/01/18 08:38	10
Sulfate	110		10		mg/L			03/01/18 08:38	10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2600		800		ug/L		02/28/18 13:51	03/01/18 01:11	10
Calcium	1100000		5000		ug/L		02/28/18 13:51	03/01/18 01:11	10

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	5.2		0.1		SU			02/28/18 09:00	1
Specific Conductance	7400		1.0		umhos/cm			02/28/18 09:00	1
Total Dissolved Solids	7500		40		mg/L			02/28/18 10:41	1
Oxidation Reduction Potential	350		10		millivolts			02/28/18 09:00	1

TestAmerica Pittsburgh

Client Sample Results

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

TestAmerica Job ID: 180-74121-1

Client Sample ID: ASB - PH 4.0

Lab Sample ID: 180-74121-20

Date Collected: 01/11/18 09:55

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	<25		25		mg/L			02/08/18 19:38	25
Fluoride	<2.5		2.5		mg/L			02/08/18 19:38	25
Sulfate	52		25		mg/L			02/08/18 19:38	25

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	6700		800		ug/L		02/08/18 11:28	02/13/18 03:29	10
Calcium	4500000		5000		ug/L		02/08/18 11:28	02/13/18 03:29	10

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	3.8		0.1		SU			02/07/18 11:46	1
Specific Conductance	30000		1.0		umhos/cm			02/07/18 11:29	1
Total Dissolved Solids	31000		200		mg/L			02/13/18 10:45	1
Oxidation Reduction Potential	360		10		millivolts			02/07/18 11:25	1

Client Sample ID: ASB - PH 2.0

Lab Sample ID: 180-74121-21

Date Collected: 01/11/18 09:55

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	<100		100		mg/L			02/23/18 10:54	100
Fluoride	<10		10		mg/L			02/23/18 10:54	100
Sulfate	<100		100		mg/L			02/23/18 10:54	100

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	19000		4000		ug/L		02/21/18 15:34	02/26/18 22:37	50
Calcium	13000000		25000		ug/L		02/21/18 15:34	02/24/18 17:19	50

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	2.8	H	0.1		SU			02/21/18 10:17	1
Specific Conductance	78000		1.0		umhos/cm			02/21/18 10:17	1
Total Dissolved Solids	93000		500		mg/L			02/26/18 14:33	1
Oxidation Reduction Potential	540		10		millivolts			02/21/18 10:17	1

Client Sample ID: ASB - NATURAL

Lab Sample ID: 180-74121-22

Date Collected: 01/11/18 09:55

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	6.5		1.0		mg/L			02/08/18 09:56	1
Fluoride	0.21		0.10		mg/L			02/08/18 09:56	1
Sulfate	87	F1	1.0		mg/L			02/08/18 09:56	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	360		80		ug/L		02/08/18 11:22	02/13/18 01:01	1

TestAmerica Pittsburgh

Client Sample Results

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

TestAmerica Job ID: 180-74121-1

Client Sample ID: ASB - NATURAL

Date Collected: 01/11/18 09:55

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74121-22

Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	35000		500		ug/L		02/08/18 11:22	02/09/18 22:57	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.5		0.1		SU			02/07/18 12:23	1
Specific Conductance	340		1.0		umhos/cm			02/07/18 12:12	1
Total Dissolved Solids	200		10		mg/L			02/13/18 10:45	1
Oxidation Reduction Potential	210		10		millivolts			02/07/18 12:07	1

Client Sample ID: B01

Date Collected: 01/11/18 00:00

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74121-23

Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<1.0		1.0		mg/L			02/08/18 08:37	1
Fluoride	<0.10		0.10		mg/L			02/08/18 08:37	1
Sulfate	<1.0		1.0		mg/L			02/08/18 08:37	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<80		80		ug/L		02/08/18 11:22	02/13/18 00:39	1
Calcium	<500		500		ug/L		02/08/18 11:22	02/09/18 22:51	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	5.9		0.1		SU			02/07/18 13:39	1
Specific Conductance	1.7		1.0		umhos/cm			02/07/18 13:54	1
Total Dissolved Solids	19		10		mg/L			02/13/18 10:45	1
Oxidation Reduction Potential	400		10		millivolts			02/07/18 13:52	1

Client Sample ID: B02

Date Collected: 01/11/18 00:00

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74121-24

Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<250		250		mg/L			02/23/18 11:25	250
Fluoride	<25		25		mg/L			02/23/18 11:25	250
Sulfate	<250		250		mg/L			02/23/18 11:25	250

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<80		80		ug/L		02/21/18 15:34	02/26/18 22:42	1
Calcium	1200		500		ug/L		02/21/18 15:34	02/23/18 12:33	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	<0.1	H	0.1		SU			02/21/18 10:23	1
Specific Conductance	> 100000		1.0		umhos/cm			02/21/18 10:21	1
Total Dissolved Solids	3400		1000		mg/L			02/26/18 14:33	1

TestAmerica Pittsburgh

Client Sample Results

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

TestAmerica Job ID: 180-74121-1

Client Sample ID: B02

Date Collected: 01/11/18 00:00

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74121-24

Matrix: Solid

General Chemistry - Leach (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Oxidation Reduction Potential	580		10		millivolts			02/21/18 10:23	1

Client Sample ID: B03

Date Collected: 01/11/18 00:00

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74121-25

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 10:59	50
Fluoride	<10		10		mg/L			02/14/18 14:17	100
Sulfate	<50		50		mg/L			02/13/18 10:59	50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<80		80		ug/L		02/13/18 13:38	02/15/18 21:57	1
Calcium	<500		500		ug/L		02/13/18 13:38	02/15/18 21:57	1

General Chemistry - Leach

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	12.9		0.1		SU			02/12/18 15:47	1
Specific Conductance	41000		1.0		umhos/cm			02/12/18 15:44	1
Total Dissolved Solids	10000		330		mg/L			02/15/18 14:59	1
Oxidation Reduction Potential	- 22		10		millivolts			02/12/18 15:47	1

Client Sample ID: ABB - AIR DRIED

Date Collected: 01/11/18 09:40

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74121-26

Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	5.4		0.1		%			02/01/18 13:28	1
Percent Solids	94.6		0.1		%			02/01/18 13:28	1

Client Sample ID: ASB - AIR DRIED

Date Collected: 01/11/18 09:55

Date Received: 01/12/18 09:10

Lab Sample ID: 180-74121-27

Matrix: Solid

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	1.1		0.1		%			02/01/18 13:28	1
Percent Solids	98.9		0.1		%			02/01/18 13:28	1

QC Sample Results

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

TestAmerica Job ID: 180-74121-1

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 180-236553/16

Matrix: Solid

Analysis Batch: 236553

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			02/09/18 16:56	1
Fluoride	<0.10		0.10		mg/L			02/09/18 16:56	1
Sulfate	<1.0		1.0		mg/L			02/09/18 16:56	1

Lab Sample ID: LCS 180-236553/15

Matrix: Solid

Analysis Batch: 236553

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
Fluoride	1.25	1.20		mg/L		96	80 - 120
Sulfate	25.0	22.0		mg/L		88	80 - 120

TestAmerica Pittsburgh

QC Sample Results

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

TestAmerica Job ID: 180-74121-1

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

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
Fluoride	<0.10		0.10		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
Fluoride	1.25	1.25		mg/L		100	80 - 120
Sulfate	25.0	25.1		mg/L		100	80 - 120

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

TestAmerica Pittsburgh

QC Sample Results

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

TestAmerica Job ID: 180-74121-1

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

Lab Sample ID: MB 180-237721/6

Matrix: Solid

Analysis Batch: 237721

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			02/23/18 07:16	1
Fluoride	<0.10		0.10		mg/L			02/23/18 07:16	1
Sulfate	<1.0		1.0		mg/L			02/23/18 07:16	1

Lab Sample ID: LCS 180-237721/5

Matrix: Solid

Analysis Batch: 237721

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	26.0		mg/L		104	80 - 120
Fluoride	1.25	1.24		mg/L		100	80 - 120
Sulfate	25.0	21.9		mg/L		87	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

Lab Sample ID: MB 180-238212/6

Matrix: Solid

Analysis Batch: 238212

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			03/01/18 06:47	1
Fluoride	<0.10		0.10		mg/L			03/01/18 06:47	1
Sulfate	<1.0		1.0		mg/L			03/01/18 06:47	1

Lab Sample ID: LCS 180-238212/5

Matrix: Solid

Analysis Batch: 238212

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	52.6		mg/L		105	80 - 120
Fluoride	2.50	2.55		mg/L		102	80 - 120
Sulfate	50.0	49.8		mg/L		100	80 - 120

TestAmerica Pittsburgh

QC Sample Results

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

TestAmerica Job ID: 180-74121-1

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

Lab Sample ID: 180-74121-22 MS

Matrix: Solid

Analysis Batch: 236373

Client Sample ID: ASB - NATURAL

Prep Type: Leach

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	6.5		25.0	31.7		mg/L		101	80 - 120
Fluoride	0.21		1.25	1.44		mg/L		98	80 - 120
Sulfate	87	F1	25.0	107	F1	mg/L		78	80 - 120

Lab Sample ID: 180-74121-22 MSD

Matrix: Solid

Analysis Batch: 236373

Client Sample ID: ASB - NATURAL

Prep Type: Leach

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	6.5		25.0	31.5		mg/L		100	80 - 120	0	15
Fluoride	0.21		1.25	1.44		mg/L		98	80 - 120	0	15
Sulfate	87	F1	25.0	106	F1	mg/L		76	80 - 120	1	15

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

TestAmerica Pittsburgh

QC Sample Results

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

TestAmerica Job ID: 180-74121-1

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

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

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

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

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	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

TestAmerica Pittsburgh

QC Sample Results

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

TestAmerica Job ID: 180-74121-1

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

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
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

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

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

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

TestAmerica Pittsburgh

QC Sample Results

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

TestAmerica Job ID: 180-74121-1

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

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

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	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

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

TestAmerica Pittsburgh

QC Sample Results

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

TestAmerica Job ID: 180-74121-1

Lab Sample ID: MB 180-237582/1-A
Matrix: Solid
Analysis Batch: 237821

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 237582

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	<500		500		ug/L		02/21/18 15:34	02/23/18 12:07	1

Lab Sample ID: MB 180-237582/1-A
Matrix: Solid
Analysis Batch: 238052

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 237582

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<80		80		ug/L		02/21/18 15:34	02/26/18 22:14	1

Lab Sample ID: LCS 180-237582/2-A
Matrix: Solid
Analysis Batch: 237821

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 237582

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	50000	54400		ug/L		109	80 - 120

Lab Sample ID: LCS 180-237582/2-A
Matrix: Solid
Analysis Batch: 238052

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 237582

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1000	992		ug/L		99	80 - 120

Lab Sample ID: LCSD 180-237582/3-A
Matrix: Solid
Analysis Batch: 237821

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 237582

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Calcium	50000	54900		ug/L		110	80 - 120	1	20

Lab Sample ID: LCSD 180-237582/3-A
Matrix: Solid
Analysis Batch: 238052

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 237582

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Boron	1000	1000		ug/L		100	80 - 120	1	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

TestAmerica Pittsburgh

QC Sample Results

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

TestAmerica Job ID: 180-74121-1

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

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

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

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

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	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	Limit
Boron	1000	1000		ug/L		100	80 - 120	3	20

Lab Sample ID: MB 180-238166/1-A
Matrix: Solid
Analysis Batch: 238310

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 238166

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<80		80		ug/L		02/28/18 13:51	03/01/18 01:20	1
Calcium	<500		500		ug/L		02/28/18 13:51	03/01/18 01:20	1

Lab Sample ID: LCS 180-238166/2-A
Matrix: Solid
Analysis Batch: 238310

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 238166

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1000	1130		ug/L		113	80 - 120
Calcium	50000	48700		ug/L		97	80 - 120

Lab Sample ID: LCSD 180-238166/3-A
Matrix: Solid
Analysis Batch: 238310

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 238166

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Boron	1000	1100		ug/L		110	80 - 120	3	20
Calcium	50000	47900		ug/L		96	80 - 120	2	20

TestAmerica Pittsburgh

QC Sample Results

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

TestAmerica Job ID: 180-74121-1

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 180-236465/24
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

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 180-237560/1
Matrix: Solid
Analysis Batch: 237560

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

TestAmerica Pittsburgh

QC Sample Results

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

TestAmerica Job ID: 180-74121-1

Lab Sample ID: LCS 180-238129/1
Matrix: Solid
Analysis Batch: 238129

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 180-236475/17
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 11:58	1

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 180-236475/16
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	85.0		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

TestAmerica Pittsburgh

QC Sample Results

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

TestAmerica Job ID: 180-74121-1

Method: SM 2510B - Conductivity, Specific Conductance (Continued)

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

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 180-237563/2

Matrix: Solid

Analysis Batch: 237563

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			02/21/18 10:04	1

Lab Sample ID: LCS 180-237563/1

Matrix: Solid

Analysis Batch: 237563

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	79.9		umhos/cm		95	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

TestAmerica Pittsburgh

QC Sample Results

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

TestAmerica Job ID: 180-74121-1

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

Lab Sample ID: MB 180-238130/2
Matrix: Solid
Analysis Batch: 238130

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			02/28/18 09:00	1

Lab Sample ID: LCS 180-238130/1
Matrix: Solid
Analysis Batch: 238130

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	89.5		umhos/cm		107	90 - 110

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 180-236825/2
Matrix: Solid
Analysis Batch: 236825

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 15:26	1

TestAmerica Pittsburgh

QC Sample Results

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

TestAmerica Job ID: 180-74121-1

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

Lab Sample ID: LCS 180-236825/1

Matrix: Solid

Analysis Batch: 236825

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	364		mg/L		107	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

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

TestAmerica Pittsburgh

QC Sample Results

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

TestAmerica Job ID: 180-74121-1

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: MB 180-238132/2
Matrix: Solid
Analysis Batch: 238132

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			02/28/18 10:41	1

Lab Sample ID: LCS 180-238132/1
Matrix: Solid
Analysis Batch: 238132

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	366		mg/L		108	80 - 120

Lab Sample ID: 180-74121-9 DU
Matrix: Solid
Analysis Batch: 236785

Client Sample ID: ABB - PH 4.0
Prep Type: Leach

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	33000		32500		mg/L		1	10

Lab Sample ID: 180-74121-20 DU
Matrix: Solid
Analysis Batch: 236785

Client Sample ID: ASB - PH 4.0
Prep Type: Leach

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	31000		31200		mg/L		2	10

Lab Sample ID: 180-74121-13 DU
Matrix: Solid
Analysis Batch: 236825

Client Sample ID: ASB - PH 13.0
Prep Type: Leach

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	13000		13900		mg/L		4	10

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

TestAmerica Pittsburgh

QC Sample Results

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

TestAmerica Job ID: 180-74121-1

Method: SM 2580B - Reduction-Oxidation (REDOX) Potential (Continued)

Lab Sample ID: LCS 180-236472/13

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	465		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 180-237562/1

Matrix: Solid

Analysis Batch: 237562

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	472		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

Lab Sample ID: LCS 180-238131/1

Matrix: Solid

Analysis Batch: 238131

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	468		millivolts		99	90 - 110

TestAmerica Pittsburgh

QC Sample Results

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

TestAmerica Job ID: 180-74121-1

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QC Association Summary

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

TestAmerica Job ID: 180-74121-1

HPLC/IC

Leach Batch: 236165

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74121-2	ABB - PH 13.0	Leach	Solid	1313	
180-74121-9	ABB - PH 4.0	Leach	Solid	1313	
180-74121-11	ABB- NATURAL	Leach	Solid	1313	
180-74121-13	ASB - PH 13.0	Leach	Solid	1313	
180-74121-20	ASB - PH 4.0	Leach	Solid	1313	
180-74121-22	ASB - NATURAL	Leach	Solid	1313	
180-74121-23	B01	Leach	Solid	1313	
180-74121-22 MS	ASB - NATURAL	Leach	Solid	1313	
180-74121-22 MSD	ASB - NATURAL	Leach	Solid	1313	

Analysis Batch: 236373

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74121-11	ABB- NATURAL	Leach	Solid	EPA 9056A	236165
180-74121-11	ABB- NATURAL	Leach	Solid	EPA 9056A	236165
180-74121-22	ASB - NATURAL	Leach	Solid	EPA 9056A	236165
180-74121-23	B01	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	
180-74121-22 MS	ASB - NATURAL	Leach	Solid	EPA 9056A	236165
180-74121-22 MSD	ASB - NATURAL	Leach	Solid	EPA 9056A	236165

Analysis Batch: 236377

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74121-9	ABB - PH 4.0	Leach	Solid	EPA 9056A	236165
180-74121-20	ASB - PH 4.0	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	

Analysis Batch: 236553

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74121-2	ABB - PH 13.0	Leach	Solid	EPA 9056A	236165
180-74121-13	ASB - PH 13.0	Leach	Solid	EPA 9056A	236165
MB 180-236553/16	Method Blank	Total/NA	Solid	EPA 9056A	
LCS 180-236553/15	Lab Control Sample	Total/NA	Solid	EPA 9056A	

Leach Batch: 236722

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74121-3	ABB - PH 12.0	Leach	Solid	1313	
180-74121-6	ABB - PH 8.0	Leach	Solid	1313	
180-74121-8	ABB - PH 5.5	Leach	Solid	1313	
180-74121-17	ASB - PH 8.0	Leach	Solid	1313	
180-74121-18	ASB - PH 7.0	Leach	Solid	1313	
180-74121-25	B03	Leach	Solid	1313	

Analysis Batch: 236732

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74121-3	ABB - PH 12.0	Leach	Solid	EPA 9056A	236722
180-74121-6	ABB - PH 8.0	Leach	Solid	EPA 9056A	236722
180-74121-6	ABB - PH 8.0	Leach	Solid	EPA 9056A	236722
180-74121-8	ABB - PH 5.5	Leach	Solid	EPA 9056A	236722
180-74121-17	ASB - PH 8.0	Leach	Solid	EPA 9056A	236722

TestAmerica Pittsburgh

QC Association Summary

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

TestAmerica Job ID: 180-74121-1

HPLC/IC (Continued)

Analysis Batch: 236732 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74121-18	ASB - PH 7.0	Leach	Solid	EPA 9056A	236722
180-74121-25	B03	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
180-74121-18	ASB - PH 7.0	Leach	Solid	EPA 9056A	236722
180-74121-25	B03	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	

Leach Batch: 237165

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74121-4	ABB - PH 10.5	Leach	Solid	1313	
180-74121-14	ASB- PH 12.0	Leach	Solid	1313	

Leach Batch: 237381

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74121-10	ABB - PH 2.0	Leach	Solid	1313	
180-74121-15	ASB - PH 10.5	Leach	Solid	1313	

Leach Batch: 237539

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74121-21	ASB - PH 2.0	Leach	Solid	1313	
180-74121-24	B02	Leach	Solid	1313	

Analysis Batch: 237598

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74121-10	ABB - PH 2.0	Leach	Solid	EPA 9056A	237381
180-74121-15	ASB - PH 10.5	Leach	Solid	EPA 9056A	237381
180-74121-15	ASB - PH 10.5	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	

Analysis Batch: 237721

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74121-21	ASB - PH 2.0	Leach	Solid	EPA 9056A	237539
180-74121-24	B02	Leach	Solid	EPA 9056A	237539
MB 180-237721/6	Method Blank	Total/NA	Solid	EPA 9056A	
LCS 180-237721/5	Lab Control Sample	Total/NA	Solid	EPA 9056A	

Leach Batch: 237761

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74121-7	ABB - PH 7.0	Leach	Solid	1313	

Analysis Batch: 237859

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74121-4	ABB - PH 10.5	Leach	Solid	EPA 9056A	237165
180-74121-4	ABB - PH 10.5	Leach	Solid	EPA 9056A	237165
180-74121-7	ABB - PH 7.0	Leach	Solid	EPA 9056A	237761

TestAmerica Pittsburgh

QC Association Summary

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

TestAmerica Job ID: 180-74121-1

HPLC/IC (Continued)

Analysis Batch: 237859 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74121-7	ABB - PH 7.0	Leach	Solid	EPA 9056A	237761
180-74121-14	ASB - PH 12.0	Leach	Solid	EPA 9056A	237165
MB 180-237859/6	Method Blank	Total/NA	Solid	EPA 9056A	
LCS 180-237859/5	Lab Control Sample	Total/NA	Solid	EPA 9056A	

Leach Batch: 238030

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74121-19	ASB - PH 5.5	Leach	Solid	1313	

Analysis Batch: 238212

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74121-19	ASB - PH 5.5	Leach	Solid	EPA 9056A	238030
MB 180-238212/6	Method Blank	Total/NA	Solid	EPA 9056A	
LCS 180-238212/5	Lab Control Sample	Total/NA	Solid	EPA 9056A	

Metals

Leach Batch: 236165

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74121-2	ABB - PH 13.0	Leach	Solid	1313	
180-74121-9	ABB - PH 4.0	Leach	Solid	1313	
180-74121-11	ABB - NATURAL	Leach	Solid	1313	
180-74121-13	ASB - PH 13.0	Leach	Solid	1313	
180-74121-20	ASB - PH 4.0	Leach	Solid	1313	
180-74121-22	ASB - NATURAL	Leach	Solid	1313	
180-74121-23	B01	Leach	Solid	1313	

Prep Batch: 236437

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74121-11	ABB - NATURAL	Leach	Solid	3010A	236165
180-74121-22	ASB - NATURAL	Leach	Solid	3010A	236165
180-74121-23	B01	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	

Prep Batch: 236440

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74121-2	ABB - PH 13.0	Leach	Solid	3010A	236165
180-74121-9	ABB - PH 4.0	Leach	Solid	3010A	236165
180-74121-13	ASB - PH 13.0	Leach	Solid	3010A	236165
180-74121-20	ASB - PH 4.0	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
180-74121-3	ABB - PH 12.0	Leach	Solid	1313	
180-74121-6	ABB - PH 8.0	Leach	Solid	1313	

TestAmerica Pittsburgh

QC Association Summary

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

TestAmerica Job ID: 180-74121-1

Metals (Continued)

Leach Batch: 236722 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74121-8	ABB - PH 5.5	Leach	Solid	1313	
180-74121-17	ASB - PH 8.0	Leach	Solid	1313	
180-74121-18	ASB - PH 7.0	Leach	Solid	1313	
180-74121-25	B03	Leach	Solid	1313	

Analysis Batch: 236729

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74121-2	ABB - PH 13.0	Leach	Solid	EPA 6020A	236440
180-74121-11	ABB- NATURAL	Leach	Solid	EPA 6020A	236437
180-74121-13	ASB - PH 13.0	Leach	Solid	EPA 6020A	236440
180-74121-22	ASB - NATURAL	Leach	Solid	EPA 6020A	236437
180-74121-23	B01	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
180-74121-3	ABB - PH 12.0	Leach	Solid	3010A	236722
180-74121-6	ABB - PH 8.0	Leach	Solid	3010A	236722
180-74121-8	ABB - PH 5.5	Leach	Solid	3010A	236722
180-74121-17	ASB - PH 8.0	Leach	Solid	3010A	236722
180-74121-18	ASB - PH 7.0	Leach	Solid	3010A	236722
180-74121-25	B03	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
180-74121-2	ABB - PH 13.0	Leach	Solid	EPA 6020A	236440
180-74121-9	ABB - PH 4.0	Leach	Solid	EPA 6020A	236440
180-74121-11	ABB- NATURAL	Leach	Solid	EPA 6020A	236437
180-74121-13	ASB - PH 13.0	Leach	Solid	EPA 6020A	236440
180-74121-20	ASB - PH 4.0	Leach	Solid	EPA 6020A	236440
180-74121-22	ASB - NATURAL	Leach	Solid	EPA 6020A	236437
180-74121-23	B01	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

Leach Batch: 237165

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74121-4	ABB - PH 10.5	Leach	Solid	1313	
180-74121-14	ASB - PH 12.0	Leach	Solid	1313	

TestAmerica Pittsburgh

QC Association Summary

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

TestAmerica Job ID: 180-74121-1

Analysis Batch: 237198

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74121-3	ABB - PH 12.0	Leach	Solid	EPA 6020A	236807
180-74121-6	ABB - PH 8.0	Leach	Solid	EPA 6020A	236807
180-74121-17	ASB - PH 8.0	Leach	Solid	EPA 6020A	236807
180-74121-18	ASB - PH 7.0	Leach	Solid	EPA 6020A	236807
180-74121-25	B03	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
180-74121-4	ABB - PH 10.5	Leach	Solid	3010A	237165
180-74121-14	ASB - 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
180-74121-8	ABB - PH 5.5	Leach	Solid	EPA 6020A	236807

Leach Batch: 237381

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74121-10	ABB - PH 2.0	Leach	Solid	1313	
180-74121-15	ASB - PH 10.5	Leach	Solid	1313	

Prep Batch: 237537

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74121-15	ASB - 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	

Leach Batch: 237539

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74121-21	ASB - PH 2.0	Leach	Solid	1313	
180-74121-24	B02	Leach	Solid	1313	

Prep Batch: 237582

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74121-21	ASB - PH 2.0	Leach	Solid	3010A	237539
180-74121-24	B02	Leach	Solid	3010A	237539
MB 180-237582/1-A	Method Blank	Total/NA	Solid	3010A	
LCS 180-237582/2-A	Lab Control Sample	Total/NA	Solid	3010A	
LCSD 180-237582/3-A	Lab Control Sample Dup	Total/NA	Solid	3010A	

Analysis Batch: 237590

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74121-4	ABB - PH 10.5	Leach	Solid	EPA 6020A	237311
180-74121-14	ASB - 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

TestAmerica Pittsburgh

QC Association Summary

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

TestAmerica Job ID: 180-74121-1

Analysis Batch: 237713

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74121-4	ABB - PH 10.5	Leach	Solid	EPA 6020A	237311
180-74121-14	ASB- 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
180-74121-7	ABB - PH 7.0	Leach	Solid	1313	

Prep Batch: 237767

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74121-7	ABB - PH 7.0	Leach	Solid	3010A	237761
180-74121-10	ABB - 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
180-74121-15	ASB - PH 10.5	Leach	Solid	EPA 6020A	237537
180-74121-24	B02	Leach	Solid	EPA 6020A	237582
MB 180-237537/1-A	Method Blank	Total/NA	Solid	EPA 6020A	237537
MB 180-237582/1-A	Method Blank	Total/NA	Solid	EPA 6020A	237582
LCS 180-237537/2-A	Lab Control Sample	Total/NA	Solid	EPA 6020A	237537
LCS 180-237582/2-A	Lab Control Sample	Total/NA	Solid	EPA 6020A	237582
LCSD 180-237537/3-A	Lab Control Sample Dup	Total/NA	Solid	EPA 6020A	237537
LCSD 180-237582/3-A	Lab Control Sample Dup	Total/NA	Solid	EPA 6020A	237582

Analysis Batch: 237942

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74121-7	ABB - PH 7.0	Leach	Solid	EPA 6020A	237767
180-74121-10	ABB - PH 2.0	Leach	Solid	EPA 6020A	237767
180-74121-21	ASB - PH 2.0	Leach	Solid	EPA 6020A	237582
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

Leach Batch: 238030

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74121-19	ASB - PH 5.5	Leach	Solid	1313	

Analysis Batch: 238052

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74121-7	ABB - PH 7.0	Leach	Solid	EPA 6020A	237767
180-74121-10	ABB - PH 2.0	Leach	Solid	EPA 6020A	237767
180-74121-15	ASB - PH 10.5	Leach	Solid	EPA 6020A	237537
180-74121-21	ASB - PH 2.0	Leach	Solid	EPA 6020A	237582
180-74121-24	B02	Leach	Solid	EPA 6020A	237582
MB 180-237537/1-A	Method Blank	Total/NA	Solid	EPA 6020A	237537
MB 180-237582/1-A	Method Blank	Total/NA	Solid	EPA 6020A	237582
MB 180-237767/1-A	Method Blank	Total/NA	Solid	EPA 6020A	237767
LCS 180-237537/2-A	Lab Control Sample	Total/NA	Solid	EPA 6020A	237537

TestAmerica Pittsburgh

QC Association Summary

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

TestAmerica Job ID: 180-74121-1

Metals (Continued)

Analysis Batch: 238052 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 180-237582/2-A	Lab Control Sample	Total/NA	Solid	EPA 6020A	237582
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 180-237582/3-A	Lab Control Sample Dup	Total/NA	Solid	EPA 6020A	237582
LCSD 180-237767/3-A	Lab Control Sample Dup	Total/NA	Solid	EPA 6020A	237767

Prep Batch: 238166

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74121-19	ASB - PH 5.5	Leach	Solid	3010A	238030
MB 180-238166/1-A	Method Blank	Total/NA	Solid	3010A	
LCS 180-238166/2-A	Lab Control Sample	Total/NA	Solid	3010A	
LCSD 180-238166/3-A	Lab Control Sample Dup	Total/NA	Solid	3010A	

Analysis Batch: 238310

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74121-19	ASB - PH 5.5	Leach	Solid	EPA 6020A	238166
MB 180-238166/1-A	Method Blank	Total/NA	Solid	EPA 6020A	238166
LCS 180-238166/2-A	Lab Control Sample	Total/NA	Solid	EPA 6020A	238166
LCSD 180-238166/3-A	Lab Control Sample Dup	Total/NA	Solid	EPA 6020A	238166

General Chemistry

Analysis Batch: 234952

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74121-1	ABB - PRETEST	Total/NA	Solid	2540G	
180-74121-12	ASB - PRETEST	Total/NA	Solid	2540G	

Analysis Batch: 235778

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74121-26	ABB - AIR DRIED	Total/NA	Solid	2540G	
180-74121-27	ASB - AIR DRIED	Total/NA	Solid	2540G	

Leach Batch: 236165

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74121-2	ABB - PH 13.0	Leach	Solid	1313	
180-74121-9	ABB - PH 4.0	Leach	Solid	1313	
180-74121-11	ABB- NATURAL	Leach	Solid	1313	
180-74121-13	ASB - PH 13.0	Leach	Solid	1313	
180-74121-20	ASB - PH 4.0	Leach	Solid	1313	
180-74121-22	ASB - NATURAL	Leach	Solid	1313	
180-74121-23	B01	Leach	Solid	1313	
180-74121-9 DU	ABB - PH 4.0	Leach	Solid	1313	
180-74121-13 DU	ASB - PH 13.0	Leach	Solid	1313	
180-74121-20 DU	ASB - PH 4.0	Leach	Solid	1313	

Analysis Batch: 236465

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74121-2	ABB - PH 13.0	Leach	Solid	EPA 9040C	236165
180-74121-9	ABB - PH 4.0	Leach	Solid	EPA 9040C	236165
180-74121-11	ABB- NATURAL	Leach	Solid	EPA 9040C	236165

TestAmerica Pittsburgh

QC Association Summary

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

TestAmerica Job ID: 180-74121-1

General Chemistry (Continued)

Analysis Batch: 236465 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74121-13	ASB - PH 13.0	Leach	Solid	EPA 9040C	236165
180-74121-20	ASB - PH 4.0	Leach	Solid	EPA 9040C	236165
180-74121-22	ASB - NATURAL	Leach	Solid	EPA 9040C	236165
180-74121-23	B01	Leach	Solid	EPA 9040C	236165
LCS 180-236465/1	Lab Control Sample	Total/NA	Solid	EPA 9040C	
LCS 180-236465/24	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
180-74121-2	ABB - PH 13.0	Leach	Solid	SM 2580B	236165
180-74121-9	ABB - PH 4.0	Leach	Solid	SM 2580B	236165
180-74121-11	ABB- NATURAL	Leach	Solid	SM 2580B	236165
180-74121-13	ASB - PH 13.0	Leach	Solid	SM 2580B	236165
180-74121-20	ASB - PH 4.0	Leach	Solid	SM 2580B	236165
180-74121-22	ASB - NATURAL	Leach	Solid	SM 2580B	236165
180-74121-23	B01	Leach	Solid	SM 2580B	236165
LCS 180-236472/1	Lab Control Sample	Total/NA	Solid	SM 2580B	
LCS 180-236472/13	Lab Control Sample	Total/NA	Solid	SM 2580B	
LCS 180-236472/36	Lab Control Sample	Total/NA	Solid	SM 2580B	

Analysis Batch: 236475

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74121-2	ABB - PH 13.0	Leach	Solid	SM 2510B	236165
180-74121-9	ABB - PH 4.0	Leach	Solid	SM 2510B	236165
180-74121-11	ABB- NATURAL	Leach	Solid	SM 2510B	236165
180-74121-13	ASB - PH 13.0	Leach	Solid	SM 2510B	236165
180-74121-20	ASB - PH 4.0	Leach	Solid	SM 2510B	236165
180-74121-22	ASB - NATURAL	Leach	Solid	SM 2510B	236165
180-74121-23	B01	Leach	Solid	SM 2510B	236165
MB 180-236475/17	Method Blank	Total/NA	Solid	SM 2510B	
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 180-236475/16	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
180-74121-3	ABB - PH 12.0	Leach	Solid	1313	
180-74121-6	ABB - PH 8.0	Leach	Solid	1313	
180-74121-8	ABB - PH 5.5	Leach	Solid	1313	
180-74121-17	ASB - PH 8.0	Leach	Solid	1313	
180-74121-18	ASB - PH 7.0	Leach	Solid	1313	
180-74121-25	B03	Leach	Solid	1313	

Analysis Batch: 236785

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74121-9	ABB - PH 4.0	Leach	Solid	SM 2540C	236165
180-74121-11	ABB- NATURAL	Leach	Solid	SM 2540C	236165
180-74121-20	ASB - PH 4.0	Leach	Solid	SM 2540C	236165

TestAmerica Pittsburgh

QC Association Summary

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

TestAmerica Job ID: 180-74121-1

General Chemistry (Continued)

Analysis Batch: 236785 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74121-22	ASB - NATURAL	Leach	Solid	SM 2540C	236165
180-74121-23	B01	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	
180-74121-9 DU	ABB - PH 4.0	Leach	Solid	SM 2540C	236165
180-74121-20 DU	ASB - PH 4.0	Leach	Solid	SM 2540C	236165

Analysis Batch: 236825

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74121-13	ASB - PH 13.0	Leach	Solid	SM 2540C	236165
MB 180-236825/2	Method Blank	Total/NA	Solid	SM 2540C	
LCS 180-236825/1	Lab Control Sample	Total/NA	Solid	SM 2540C	
180-74121-13 DU	ASB - PH 13.0	Leach	Solid	SM 2540C	236165

Analysis Batch: 237078

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74121-2	ABB - PH 13.0	Leach	Solid	SM 2540C	236165
180-74121-3	ABB - PH 12.0	Leach	Solid	SM 2540C	236722
180-74121-6	ABB - PH 8.0	Leach	Solid	SM 2540C	236722
180-74121-8	ABB - PH 5.5	Leach	Solid	SM 2540C	236722
180-74121-17	ASB - PH 8.0	Leach	Solid	SM 2540C	236722
180-74121-18	ASB - PH 7.0	Leach	Solid	SM 2540C	236722
180-74121-25	B03	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	

Leach Batch: 237107

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74121-1	ABB - PRETEST	Leach	Solid	1313	
180-74121-1	ABB - PRETEST	Leach	Solid	1313	
180-74121-1	ABB - PRETEST	Leach	Solid	1313	
180-74121-12	ASB - PRETEST	Leach	Solid	1313	
180-74121-12	ASB - PRETEST	Leach	Solid	1313	
180-74121-12	ASB - PRETEST	Leach	Solid	1313	
180-74121-12	ASB - PRETEST	Leach	Solid	1313	

Leach Batch: 237165

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74121-4	ABB - PH 10.5	Leach	Solid	1313	
180-74121-14	ASB- PH 12.0	Leach	Solid	1313	

Analysis Batch: 237329

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74121-4	ABB - PH 10.5	Leach	Solid	SM 2540C	237165
180-74121-14	ASB- 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
180-74121-1	ABB - PRETEST	Leach	Solid	EPA 9040C	237107

TestAmerica Pittsburgh

QC Association Summary

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

TestAmerica Job ID: 180-74121-1

General Chemistry (Continued)

Analysis Batch: 237380 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74121-1	ABB - PRETEST	Leach	Solid	EPA 9040C	237107
180-74121-1	ABB - PRETEST	Leach	Solid	EPA 9040C	237107
180-74121-3	ABB - PH 12.0	Leach	Solid	EPA 9040C	236722
180-74121-6	ABB - PH 8.0	Leach	Solid	EPA 9040C	236722
180-74121-8	ABB - PH 5.5	Leach	Solid	EPA 9040C	236722
180-74121-12	ASB - PRETEST	Leach	Solid	EPA 9040C	237107
180-74121-12	ASB - PRETEST	Leach	Solid	EPA 9040C	237107
180-74121-12	ASB - PRETEST	Leach	Solid	EPA 9040C	237107
180-74121-12	ASB - PRETEST	Leach	Solid	EPA 9040C	237107
180-74121-17	ASB - PH 8.0	Leach	Solid	EPA 9040C	236722
180-74121-18	ASB - PH 7.0	Leach	Solid	EPA 9040C	236722
180-74121-25	B03	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
180-74121-10	ABB - PH 2.0	Leach	Solid	1313	
180-74121-12	ASB - PRETEST	Leach	Solid	1313	
180-74121-15	ASB - PH 10.5	Leach	Solid	1313	

Analysis Batch: 237422

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74121-3	ABB - PH 12.0	Leach	Solid	SM 2580B	236722
180-74121-6	ABB - PH 8.0	Leach	Solid	SM 2580B	236722
180-74121-8	ABB - PH 5.5	Leach	Solid	SM 2580B	236722
180-74121-17	ASB - PH 8.0	Leach	Solid	SM 2580B	236722
180-74121-18	ASB - PH 7.0	Leach	Solid	SM 2580B	236722
180-74121-25	B03	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
180-74121-3	ABB - PH 12.0	Leach	Solid	SM 2510B	236722
180-74121-6	ABB - PH 8.0	Leach	Solid	SM 2510B	236722
180-74121-8	ABB - PH 5.5	Leach	Solid	SM 2510B	236722
180-74121-17	ASB - PH 8.0	Leach	Solid	SM 2510B	236722
180-74121-18	ASB - PH 7.0	Leach	Solid	SM 2510B	236722
180-74121-25	B03	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
180-74121-10	ABB - PH 2.0	Leach	Solid	EPA 9040C	237381
180-74121-12	ASB - PRETEST	Leach	Solid	EPA 9040C	237381
180-74121-15	ASB - PH 10.5	Leach	Solid	EPA 9040C	237381
LCS 180-237531/1	Lab Control Sample	Total/NA	Solid	EPA 9040C	

Leach Batch: 237539

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74121-21	ASB - PH 2.0	Leach	Solid	1313	

TestAmerica Pittsburgh

QC Association Summary

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

TestAmerica Job ID: 180-74121-1

General Chemistry (Continued)

Leach Batch: 237539 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74121-24	B02	Leach	Solid	1313	

Analysis Batch: 237550

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74121-10	ABB - PH 2.0	Leach	Solid	SM 2580B	237381
180-74121-15	ASB - PH 10.5	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
180-74121-10	ABB - PH 2.0	Leach	Solid	SM 2510B	237381
180-74121-15	ASB - PH 10.5	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	

Analysis Batch: 237560

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74121-21	ASB - PH 2.0	Leach	Solid	EPA 9040C	237539
180-74121-24	B02	Leach	Solid	EPA 9040C	237539
LCS 180-237560/1	Lab Control Sample	Total/NA	Solid	EPA 9040C	

Analysis Batch: 237562

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74121-21	ASB - PH 2.0	Leach	Solid	SM 2580B	237539
180-74121-24	B02	Leach	Solid	SM 2580B	237539
LCS 180-237562/1	Lab Control Sample	Total/NA	Solid	SM 2580B	

Analysis Batch: 237563

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74121-21	ASB - PH 2.0	Leach	Solid	SM 2510B	237539
180-74121-24	B02	Leach	Solid	SM 2510B	237539
MB 180-237563/2	Method Blank	Total/NA	Solid	SM 2510B	
LCS 180-237563/1	Lab Control Sample	Total/NA	Solid	SM 2510B	

Leach Batch: 237733

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74121-1	ABB - PRETEST	Leach	Solid	1313	
180-74121-12	ASB - PRETEST	Leach	Solid	1313	
180-74121-12	ASB - PRETEST	Leach	Solid	1313	

Analysis Batch: 237737

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74121-1	ABB - PRETEST	Leach	Solid	EPA 9040C	237733
180-74121-4	ABB - PH 10.5	Leach	Solid	EPA 9040C	237165
180-74121-12	ASB - PRETEST	Leach	Solid	EPA 9040C	237733
180-74121-12	ASB - PRETEST	Leach	Solid	EPA 9040C	237733
180-74121-14	ASB - PH 12.0	Leach	Solid	EPA 9040C	237165
LCS 180-237737/1	Lab Control Sample	Total/NA	Solid	EPA 9040C	

TestAmerica Pittsburgh

QC Association Summary

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

TestAmerica Job ID: 180-74121-1

General Chemistry (Continued)

Analysis Batch: 237751

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74121-4	ABB - PH 10.5	Leach	Solid	SM 2580B	237165
180-74121-14	ASB - 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
180-74121-4	ABB - PH 10.5	Leach	Solid	SM 2510B	237165
180-74121-14	ASB - 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
180-74121-7	ABB - PH 7.0	Leach	Solid	1313	

Analysis Batch: 237772

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74121-7	ABB - PH 7.0	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
180-74121-7	ABB - PH 7.0	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
180-74121-7	ABB - PH 7.0	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
180-74121-10	ABB - PH 2.0	Leach	Solid	SM 2540C	237381
180-74121-15	ASB - PH 10.5	Leach	Solid	SM 2540C	237381
180-74121-21	ASB - PH 2.0	Leach	Solid	SM 2540C	237539
180-74121-24	B02	Leach	Solid	SM 2540C	237539
MB 180-237940/2	Method Blank	Total/NA	Solid	SM 2540C	
LCS 180-237940/1	Lab Control Sample	Total/NA	Solid	SM 2540C	

Leach Batch: 238030

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74121-19	ASB - PH 5.5	Leach	Solid	1313	

Analysis Batch: 238055

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74121-7	ABB - PH 7.0	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	

TestAmerica Pittsburgh

QC Association Summary

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

TestAmerica Job ID: 180-74121-1

General Chemistry (Continued)

Analysis Batch: 238129

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74121-19	ASB - PH 5.5	Leach	Solid	EPA 9040C	238030
LCS 180-238129/1	Lab Control Sample	Total/NA	Solid	EPA 9040C	

Analysis Batch: 238130

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74121-19	ASB - PH 5.5	Leach	Solid	SM 2510B	238030
MB 180-238130/2	Method Blank	Total/NA	Solid	SM 2510B	
LCS 180-238130/1	Lab Control Sample	Total/NA	Solid	SM 2510B	

Analysis Batch: 238131

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74121-19	ASB - PH 5.5	Leach	Solid	SM 2580B	238030
LCS 180-238131/1	Lab Control Sample	Total/NA	Solid	SM 2580B	

Analysis Batch: 238132

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-74121-19	ASB - PH 5.5	Leach	Solid	SM 2540C	238030
MB 180-238132/2	Method Blank	Total/NA	Solid	SM 2540C	
LCS 180-238132/1	Lab Control Sample	Total/NA	Solid	SM 2540C	

THE LEADER IN ENVIRONMENTAL TESTING

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

(optional)

Bill To _____
Contact: _____
Company: _____
Address: _____
Address: _____
Phone: _____
Fax: _____
PO#/Reference# _____

PO#/Reference#

(optional)

Report To _____
Contact: _____
Company: _____
Address: _____
Address: _____
Phone: _____
Fax: _____
E-Mail: _____

E-Mail:

[illegible]

Page 63 of 65

Turnaround Time Required (Business Days)

☐ 1 Day ☐ 2 Days ☐ 5 Days ☐ 7 Days ☐ 10 Days ☐ 15 Days ☐ Other _____
 Generated Due Date _____
 Return to Client ☐ Disposal by Lab ☒ Archive for _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Sample Disposal

Return to Client

Disposal by Lab

Archive for _____ Months

(A fee may be assessed if sale

an 1 month)

Relinquished By	Company	Date	Time	Received By	Company	Date	Time
<i>Greg Rabe</i>	KPRG	11-18	1630	<i>Greg Rabe</i>	A	1-11-18	430
Relinquished By	Company	Date	Time	Received By	Company	Date	Time
<i>Barbara</i>	TA	1-11-18	1645	<i>Barbara</i>	TA	11/2/18	0110
Relinquished By	Company	Date	Time	Received By	Company	Date	Time

Matrix Kev

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

Client Comments

CEAF Method 1313 CCR Appendix 3
→ B, Ca, Cl, Fl, pH, Sulfate, TDS

Lab Comments:

ORIGIN ID: NALA
SHIPPING
TESTAMERICA
4125 N 124TH ST

BROOKFIELD, WI 53005
UNITED STATES US

SHIP DATE: 11/13
ACTWGT: 41.65
CAD: 525155/CA

BILL RECIPIENT

10 **SAMPLE RECEIPT**
TESTAMERICA
301 ALPHA DR.

PITTSBURGH PA 15001



180-74121 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 1 -0.5

Initials

TS

P1-WI-SR-001 effective 7/26/13

Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 180-74121-1

Login Number: 74121

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	

ATTACHMENT 3
Analytical Model Calculations

SITE NAME: Powerton Station

ADDRESS: 13082 E Manito Rd.
Pekin, IL 61554

LPC NUMBER:

LOCATION: Ash Pond Well

**RISK-BASED CORRECTIVE ACTION (RBCA) GROUNDWATER COMPONENT OF THE GROUNDWATER
INGESTION EXPOSURE ROUTE TIER 2 EVALUATION**

CONTAMINANT:

			Boron-525 silt clay	Boron-525 sand	Sulfate-525 SC	Sulfate-525 sand
		dist along centerline of plume in gw flow dir to N property boundary				
	X (cm)		16002	16002	16002	16002
R16	ALPHA _x (cm)	longitudinal dispersivity	1600.2	1600.2	1600.2	1600.2
R17	ALPHA _y (cm)	transverse dispersivity	533.4	533.4	533.4	533.4
R18	ALPHA _z (cm)	vertical dispersivity	80.01	80.01	80.01	80.01
	LAMBDA (1/d)	first order degradation constant*	0	0	0	0
R19	U (cm/d)	specific discharge	0.058	450.075	0.058	450.075
	K (cm/d)	hydraulic conductivity (site specific)	0.863778816	10033.52832	0.863778816	10033.52832
	i (cm/cm)	hydraulic gradient (site specific), 11/8/17	0.0267	0.0157	0.0267	0.0157
	THETA _t (cm ³ /cm ³)	total soil porosity (site specific)	0.4	0.35	0.4	0.35
	THETA _{as} (cm ³ /cm ³)	volumetric air content (surface soil <1 m)	0.14	0.14	0.14	0.14
	THETA _{ws} (cm ³ /cm ³)	volumetric water content (surface soil <1 m)	0.18	0.18	0.18	0.18
		source width perpendicular to gw flow dir in horiz plane-				
	S _w (cm)		5334	5334	5334	5334
		source width perpendicular to gw flow dir in vertical plane (default)				
	S _g (cm)		200	200	200	200
	BETA _y	R15 input	0.456	0.456	0.456	0.456
	BETA _z	R15 input	0.088	0.088	0.088	0.088
		steady-state attenuation along centerline of dissolve plume				
R15	C _x /C _{source}		4.79E-02	4.79E-02	4.79E-02	4.79E-02
	RHO _s (g/cm ³)	soil bulk density (default)	1.5	1.5	1.5	1.5
R20	k _s (cm ³ /g)	soil water sorption coefficient	1.1	1.1	1.1	1.1
	K _{oc} (cm ³ /g)	organic carbon partition coefficient	0	0	0	0
		organic carbon content of soil (subsurface default)				
	f _{oc} (g/g)		0.002	0.002	0.002	0.002
	H ⁺	Henry's Law constant	0	0	0	0
R24	U _{gw} (cm/yr)	groundwater Darcy velocity	8.42	57497.13	8.42	57497.13
	DELTA _{gw} (cm)	gw mixing zone thickness (default)	200	200	200	200
	W (cm)	width of source area parallel to dir gw-	3048	3048	3048	3048
	I (cm/yr)	infiltration rate	30	30	30	30
R14	LF _{sw} (kg _{soil} /L _{water})	leaching factor	0.8048532	0.0064664	0.8048532	0.0064664
		greatest potential concentration of contaminant at source				
	C _{source} (mg/L)		3.65	3.65	155	155
	GW _{comp} (mg/L)	gw objective at compliance point (Class I)	2	2		
	GW _{comp} (mg/L)	gw objective at compliance point (Class II)	2	2		
R26	C _x (mg/L)	dissolved concentration along centerline at property boundary	1.7477E-01	1.7477E-01	7.4216E+00	7.4216E+00
	C _s (mg/kg)	Soil source concentration				
	X (feet)	Distance to POC	525	525	525	525

ATTACHMENT 4

**Photo-documentation of Repaired Tear in the Ash By-Pass
Basin**

