



ENVIRONMENTAL CONSULTATION & REMEDIATION

KPRG and Associates, Inc.

**CCR COMPLIANCE
ANNUAL GROUNDWATER MONITORING and
CORRECTIVE ACTION REPORT - 2019
FORMER ASH BASIN**

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

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January 31, 2020

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	Statistical Evaluation Summary	5
5.0	SUMMARY/CONCLUSIONS AND RECOMMENDATIONS.....	6
6.0	REFERENCES	7

FIGURES

- 1 – CCR Monitoring Wells Site Map
- 2 – CCR Groundwater Contour Map for Former Ash Basin 02/2019
- 3 – CCR Groundwater Contour Map for Former Ash Basin 05/2019
- 4 – CCR Groundwater Contour Map for Former Ash Basin 08/2019

TABLES

- 1 – Groundwater Elevations
- 2 – Groundwater Flow Direction and Estimated Seepage Velocity/Flow Rate for FAB
- 3 – FAB Appendix III Groundwater Analytical Results through 2019
- 4 – FAB Appendix IV Groundwater Analytical Results through 2019

APPENDICES

- A – Analytical Data Packages
- B – Statistical Evaluation Summary – December 10, 2019

1.0 INTRODUCTION

The Detection Monitoring requirements in accordance with the Federal Register, Environmental Protection Agency, 40 CFR Parts 257.94, Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities; Final Rule dated April 17, 2015 (CCR Rule) have been completed for the Former Ash Basin (FAB) monitoring wells located at the Midwest Generation, LLC (Midwest Generation) Powerton Generating Station. 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 By-pass Basin (ABB) and Ash Surge Basin (ASB). Well MW-01 is also part of the FAB CCR monitoring program and it is a well that is also part of the CCR monitoring program for the ABB and ASB. Well MW-01 and MW-10 are upgradient wells and wells MW-02 through MW-05 are downgradient wells.

Based on the results of the initial detection monitoring statistical evaluation performed in December 2019, it was recommended that an Alternate Source Demonstration (ASD) be performed to determine if any statistically significant increases (SSIs) may be attributed to leachate from the regulated unit or to another potential source(s). KPRG is currently in the process of completing the ASD in accordance with 40 CFR 257.94(e)(2).

This annual report covers the work performed relative to CCR groundwater monitoring for the FAB during the calendar year 2019. It does not duplicate information or activities previously reported for 2018. 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 to date and provides a discussion of the statistical evaluations completed. The annual report for the ABB and ASB, which are in assessment monitoring, is provided under separate cover.

2.0 FIELD PROCEDURES AND GROUNDWATER FLOW EVALUATION

2.1 Field Procedures

As previously noted, the CCR groundwater monitoring network around the FAB consists of monitoring wells MW-01 (upgradient), MW-02 through MW-05 (downgradient), and MW-10 (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.

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. To fulfill initial detection monitoring requirements under Section 257.94(b), the first eight rounds of groundwater sampling are to include the analysis of all compounds listed in the CCR Rule, Part 257, Appendices III and IV to facilitate development of statistical background water quality..

2.2 Groundwater Flow Evaluation

Water level data measurements were obtained from each well during each round of groundwater monitoring. A complete round of water levels was collected prior to initiating sampling, and the water level data are summarized in Table 1. Unlike the CCR monitoring network for the ABB/ASB which includes monitoring wells within both a shallow localized clay/silty clay unit and a deeper more extensive sand unit, all wells associated with the FAB monitoring are screened within the extensive sand unit which underlies the area (i.e., the localized shallow clay/silty clay unit does not extend beneath the FAB). Groundwater flow maps from the sampling performed in 2019 relative to the FAB are provided on Figures 2 through 4.

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 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 porosity 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 2019 is provided in Table 3, in accordance with 257.90 (e)(3).

3.2 Data Summary

In accordance with initial detection monitoring requirements, a complete round of CCR well groundwater samples were collected in February, April/May and November 2019, with the exception of wells MW-01 and MW-05. These wells were installed prior to the other FAB CCR wells and had already met the required amount of sampling events for background determination therefore, MW-01 and MW-05 were only sampled during April/May and November sampling events. Wells were analyzed for both Appendix III and previously detected Appendix IV parameters.

The analytical data from the FAB detection monitoring groundwater sampling for Appendix III and IV parameters is provided in Tables 4 and 5, respectively. Table 4 includes Prediction Limits (PLs) for Appendix III parameters, both tables include the sample dates and whether the specific well is considered upgradient or downgradient relative to groundwater flow and the regulated unit. The initial statistical evaluation completed on the Appendix III parameters is discussed in Section 4.1. 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

As noted in Section 4.1, the initial statistical evaluation identified several potential statistically significant increases (SSIs) at downgradient well locations MW-05 and MW-03 and as a result an Alternate Source Demonstration (ASD) was recommended. In accordance with section 257.94(e)(2) of the CCR Rule, an ASD is in the process of being completed to determine whether the noted SSIs at wells MW-03 and MW-05 may be related to the regulated units or whether they may be associated with a source other than the regulated units.

4.0 OTHER REQUIRED SUBMITTALS

4.1 Statistical Evaluation Summary

The first eight rounds of Appendix III detection monitoring data from established upgradient wells MW-01 and MW-10 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 December 10, 2019 was prepared by KPRG and Associates, Inc. The completed initial detection monitoring statistical evaluations determined that there were potential SSIs at MW-03 (fluoride) and MW-05 (chloride, fluoride, sulfate and total dissolved solids). 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.

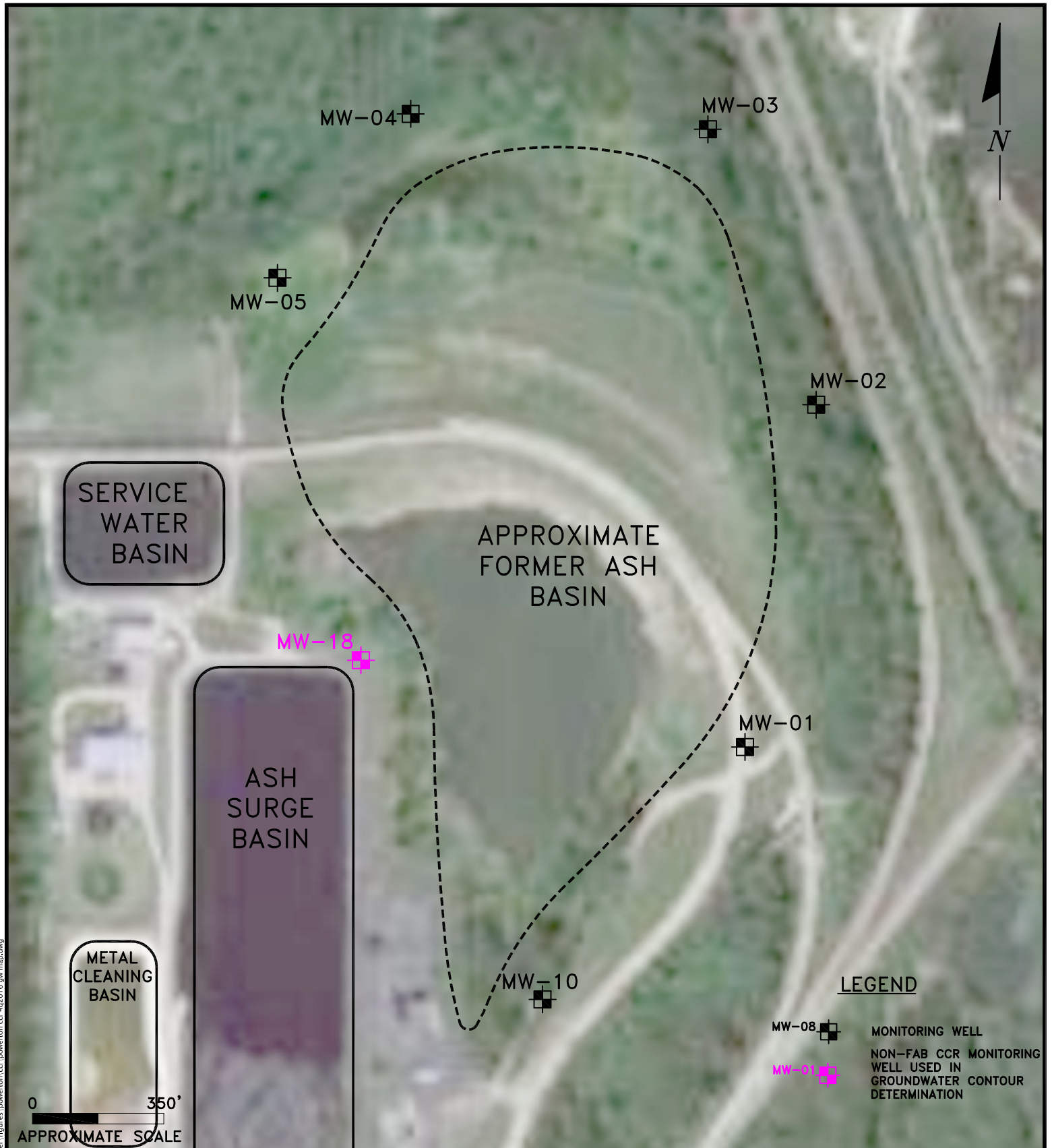
5.0 SUMMARY/CONCLUSIONS AND RECOMMENDATIONS

The FAB detection monitoring in accordance with the CCR Rule. The first eight rounds of groundwater sampling for both Appendix III and Appendix IV parameters were completed in 2019. A ninth round of samples was then collected at which point a statistical evaluation was completed for Appendix III parameters in accordance with the CCR Compliance Statistical Approach for Groundwater Data Evaluation, Midwest Generation Powerton Generating Station dated October 10, 2017. The statistical evaluation showed potential SSIs for various parameters at well locations MW-03 and MW-05. KPRG is currently in the process of completing an ASD in accordance with Section 257.94(e)(2) of the CCR Rule. Once the ASD is completed, further recommendations will be made as to whether or not the regulated unit will remain in detection monitoring or transition to assessment monitoring.

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.
- 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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FORMER ASH BASIN CCR MONITORING WELL SITE MAP

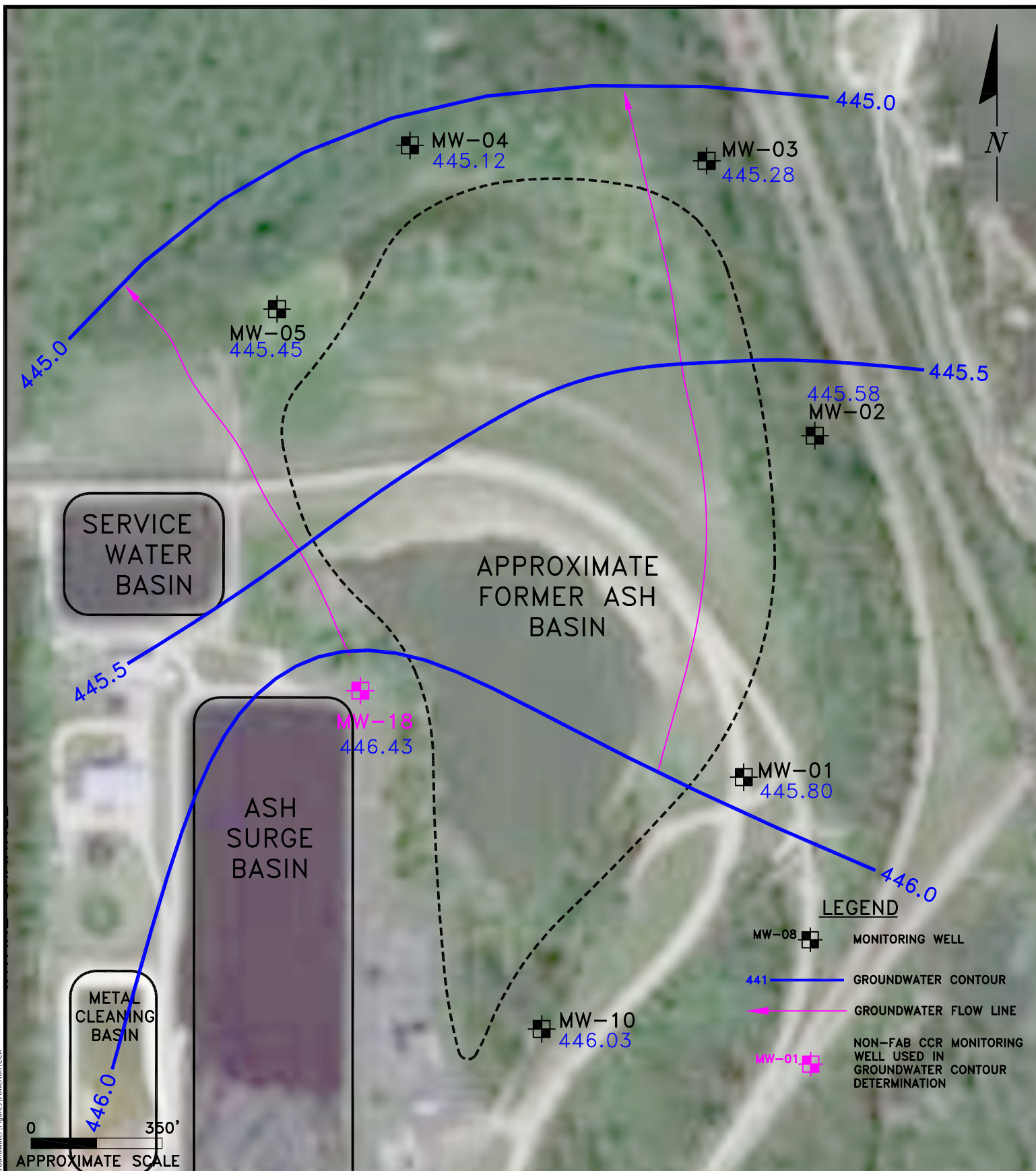
**POWERTON STATION
PEKIN, ILLINOIS**

Scale: 1" = 350'

Date: January 07, 2019

KPRG Project No. 12313.1

FIGURE 1



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CCR GROUNDWATER CONTOUR MAP FOR FORMER ASH BASIN 02/2019

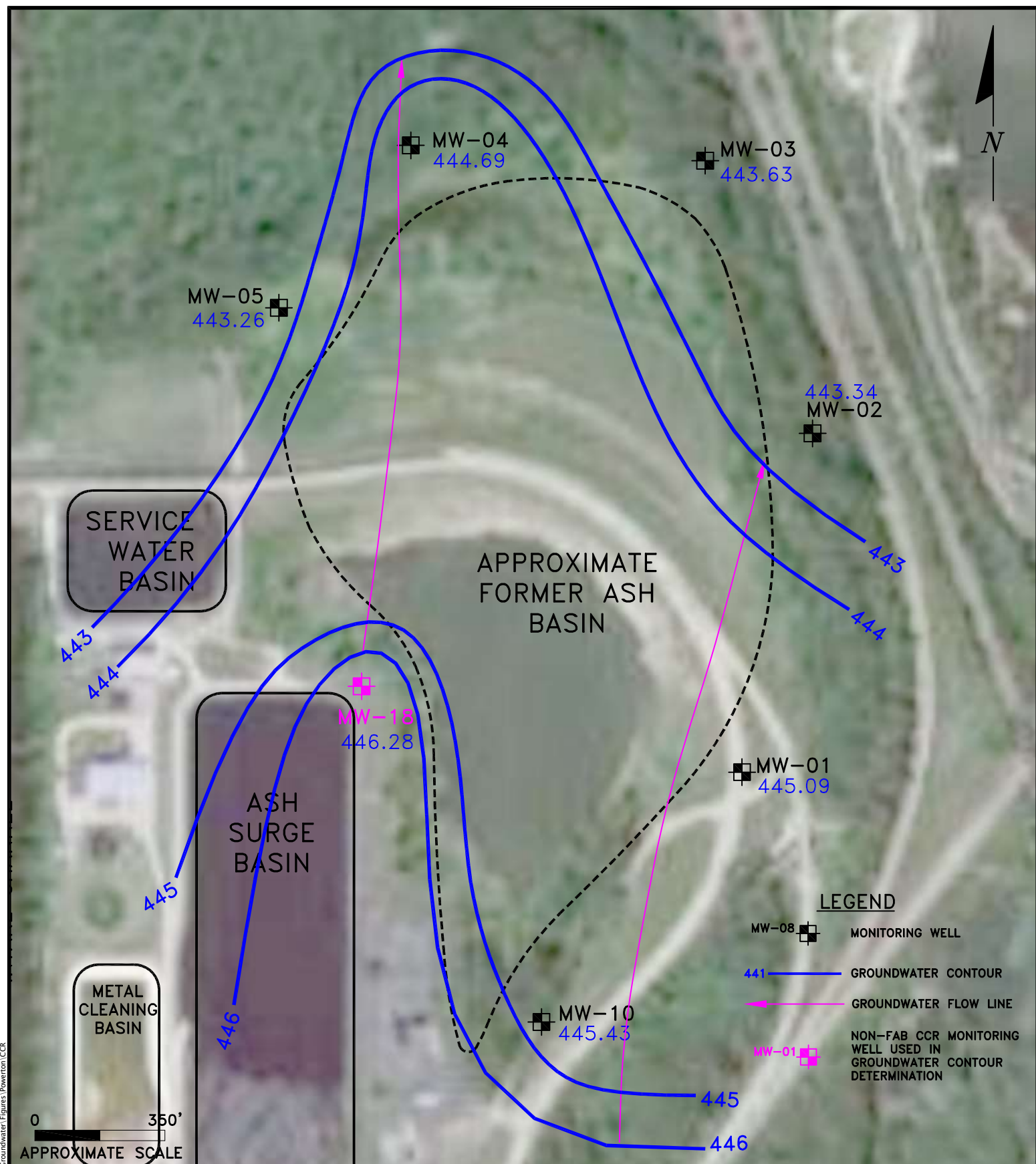
POWERTON STATION
PEKIN, ILLINOIS

Scale: 1" = 350'

Date: April 09, 2019

KPRG Project No. 12313.1

FIGURE 2



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CCR GROUNDWATER CONTOUR MAP FOR FORMER ASH BASIN 05/2019

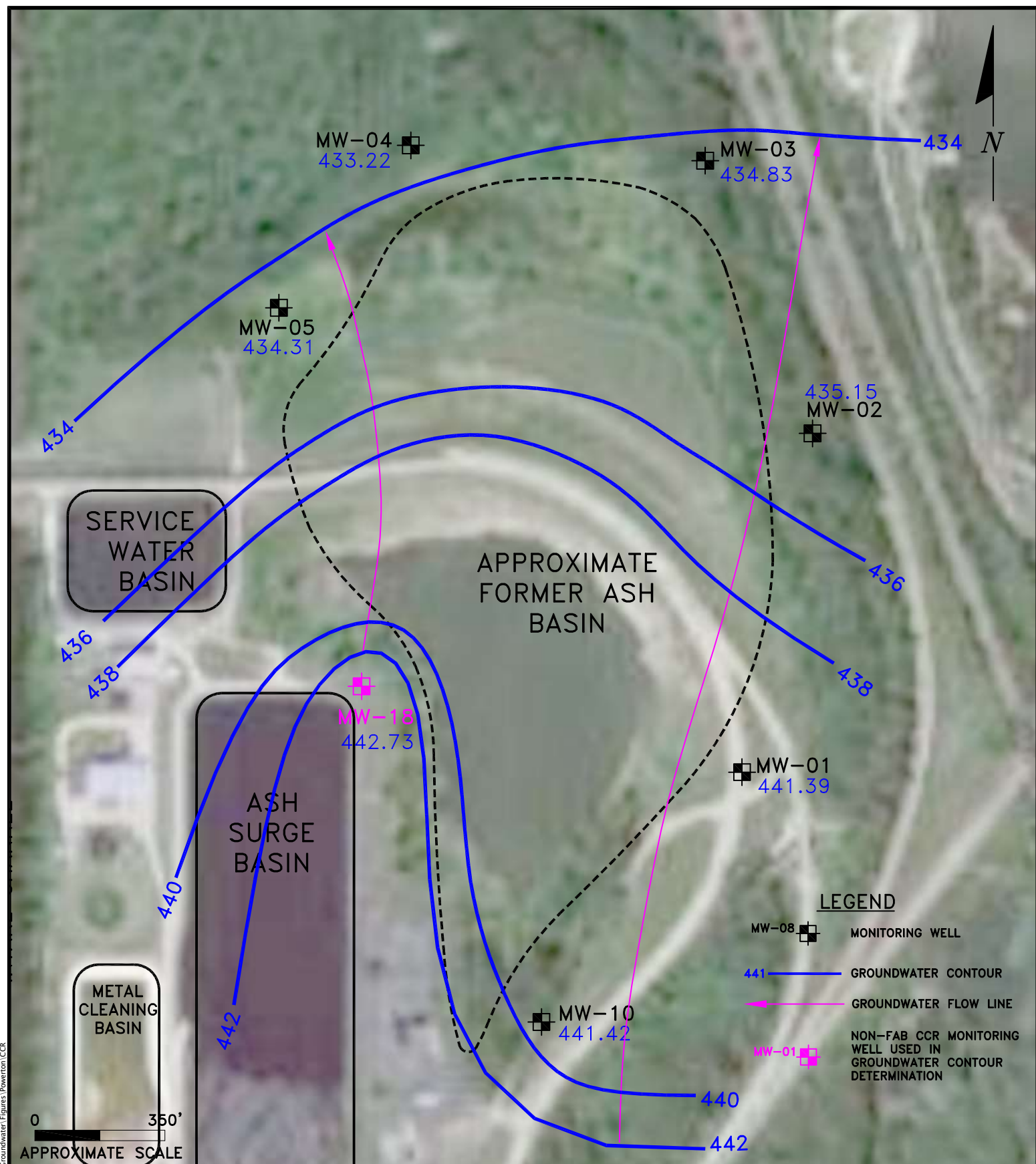
POWERTON STATION
PEKIN, ILLINOIS

Scale: 1" = 350'

Date: June 28, 2019

KPRG Project No. 12313.1

FIGURE 3



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CCR GROUNDWATER CONTOUR MAP FOR FORMER ASH BASIN 08/2019

POWERTON STATION
PEKIN, ILLINOIS

Scale: 1" = 350'

Date: August 30, 2019

KPRG Project No. 12313.1

FIGURE 4

TABLES

Table 1. Groundwater Elevations for FAB Wells- 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
	8/8/2018	465.24	26.05	439.19
	10/30/2018	465.24	24.69	440.55
MW-02	2/25/2019	465.24	19.44	445.80
	4/29/2019	465.24	20.15	445.09
	8/26/2019	465.24	23.85	441.39
	6/20/2017	462.60	22.04	440.56
	8/23/2017	462.60	28.42	434.18
	11/7/2017	462.60	26.08	436.52
	5/17/2018	462.60	23.26	439.34
	8/7/2018	462.60	29.70	432.90
MW-03	10/30/2018	462.60	26.77	435.83
	2/25/2019	462.60	17.02	445.58
	4/29/2019	462.60	19.26	443.34
	8/26/2019	462.60	27.45	435.15
	6/20/2017	462.48	22.31	440.17
	8/23/2017	462.48	28.18	434.30
	11/7/2017	462.48	25.38	437.10
	5/17/2018	462.48	22.62	439.86
MW-04	8/7/2018	462.48	29.17	433.31
	10/30/2018	462.48	24.71	437.77
	2/25/2019	462.48	17.20	445.28
	4/29/2019	462.48	18.85	443.63
	8/26/2019	462.48	27.65	434.83
	6/20/2017	460.57	22.15	438.42
	8/28/2017	460.57	28.49	432.08
	11/7/2017	460.57	25.62	434.95
MW-05	5/17/2018	460.57	24.13	436.44
	8/7/2018	460.57	29.23	431.34
	10/30/2018	460.57	26.58	433.99
	2/25/2019	460.57	15.45	445.12
	4/29/2019	460.57	15.88	444.69
	8/26/2019	460.57	27.35	433.22
	11/16/2015	458.66	26.39	432.19
	2/22/2016	458.66	21.12	437.54
MW-10	5/16/2016	458.66	16.58	442.08
	8/15/2016	458.66	23.59	435.07
	11/14/2016	458.66	22.72	435.94
	2/13/2017	458.66	19.13	439.53
	5/1/2017	458.66	13.09	445.57
	6/20/2017	458.66	19.43	439.15
	8/28/2017	458.66	25.38	433.20
	11/7/2017	458.66	22.91	435.67
	5/17/2018	458.66	21.54	437.04
	8/7/2018	458.66	26.17	432.41
	10/30/2018	458.66	23.97	434.61
	2/25/2019	458.66	13.21	445.45
	4/29/2019	458.66	15.40	443.26
	8/26/2019	458.66	24.35	434.31
	6/22/2017	457.31	13.46	443.85
MW-10	8/24/2017	457.31	16.39	440.92
	11/9/2017	457.31	16.86	440.45
	5/16/2018	457.31	14.88	442.43
	8/8/2018	457.31	17.88	439.43
	10/30/2018	457.31	17.04	440.27
	2/25/2019	457.31	11.28	446.03
	4/29/2019	457.31	11.88	445.43
	8/26/2019	457.31	15.89	441.42

MSL - Mean Sea Level
TOC - Top of Casing

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

DATE	Screened Unit	Groundwater Flow Direction	Kavg (ft/sec)*	Average Hydraulic Gradient (ft/ft)	Porosity (unitless)**	Estimated Seepage Velocity (ft/day)
6/20/2017	Sandy	Northeasterly	3.810E-03	0.0032	0.35	3.01
8/25/2017	Sandy	North-Northwest	3.810E-03	0.0127	0.35	11.94
11/8/2017	Sandy	North-Northwest	3.810E-03	0.0066	0.35	6.21
5/17/2018	Sandy	Northerly (Northwest - Northeast)	3.810E-03	0.0037	0.35	3.48
8/7/2018	Sandy	North-Northwest	3.810E-03	0.0059	0.35	5.55
10/30/2018	Sandy	North-Northwest	3.810E-03	0.0063	0.35	5.93
2/25/2019	Sandy	North	3.810E-03	0.0007	0.35	0.66
4/29/2019	Sandy	Northerly (Northwest - Northeast)	3.810E-03	0.0027	0.35	2.54
8/26/2019	Sandy	Northerly (Northwest - Northeast)	3.810E-03	0.0056	0.35	5.27

* 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 2019 - 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	4/30/2019	D
		8/26/2019	D
MW-10 (Upgradient)	3	2/26/2019	D
		5/1/2019	D
		8/26/2019	D
MW-02 (Downgradient)	3	2/26/2019	D
		4/30/2019	D
		8/26/2019	D
MW-03 (Downgradient)	3	2/26/2019	D
		4/30/2019	D
		8/26/2019	D
MW-04 (Downgradient)	3	2/26/2019	D
		4/30/2019	D
		8/26/2019	D
MW-05 (Downgradient)	2	4/30/2019	D
		8/26/2019	D

Table 4. Detection Monitoring Appendix III Groundwater Analytical Results Thru 2019 - Midwest Generation, LLC, Powerton Station, Pekin, IL. Former Ash Basin.

Well	Date	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	Total Dissolved Solids
MW-01 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
	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	6.70	48	540
	8/8/2018	0.14	86	48	0.13	6.80	43	430
	4/30/2019	0.07	78	54	0.17	7.20	27	450
	Pred. Limit*	0.968	130.7	66.4	0.246	7.75-6.52	89	634.4
MW-10 up-gradient	8/26/2019	0.57	100	39	0.13	7.15	71	550
	6/22/2017	0.5	100	48	0.19	6.81	54	1.0
	8/24/2017	0.3	93	51	0.18	7.14	57	480
	11/9/2017	0.36	98	48	0.18	6.78	64	500
	5/16/2018	0.42	93	44	0.19	7.64	80	530
	8/8/2018	0.39	99	58	0.19	7.10	60	550
	10/30/2018	0.34	110	49	0.22	7.65	49	510
	2/26/2019	0.39	150	48	0.21	6.77	36	540
	5/1/2019	0.35	92	50	0.22	6.81	30	470
	Pred. Limit*	0.499	150	60	0.241	7.65-6.77	95	598
MW-02 down-gradient	8/26/2019	0.30	84	48	0.19	7.09	30	410
	6/20/2017	0.33	90	55	0.19	7.01	47	500
	8/23/2017	V 1.30	86	49	0.19	7.40	61	440
	11/7/2017	3.70	98	46	0.17	7.10	88	550
	5/15/2018	0.22	80	45	0.23	7.71	54	500
	8/7/2018	1.50	89	54	0.15	7.09	51	530
	10/30/2018	0.23	86	43	0.17	7.83	34	480
	2/26/2019	0.07	69	49	0.16	7.82	23	400
	4/30/2019	0.12	79	48	0.16	7.60	30	440
	Pred. Limit	0.77	132	62	0.25	7.69-6.54	85	609
MW-03 down-gradient	8/26/2019	0.51	86	50	0.18	7.13	32	400
	6/20/2017	0.4	76	54	0.29	7.26	49	480
	8/23/2017	0.40	79	52	0.28	7.44	52	430
	11/7/2017	0.31	79	62	0.26	7.04	61	460
	5/15/2018	0.35	87	66	0.27	7.53	77	520
	8/7/2018	0.40	82	67	0.22	6.60	49	500
	10/30/2018	0.20	74	44	0.25	7.84	26	400
	2/26/2019	0.06	74	56	0.24	7.49	25	410
	4/30/2019	0.28	74	49	0.22	7.17	38	390
	Pred. Limit	0.77	132	62	0.25	7.69-6.54	85	609
MW-04 down-gradient	8/26/2019	0.3	75	50	<u>0.26</u>	7.17	14	380
	6/20/2017	0.5	77	55	0.29	7.45	53	480
	8/28/2017	V 0.73	90	89	0.33	7.13	110	680
	11/7/2017	0.60	110	94	0.24	6.80	130	650
	5/15/2018	0.68	87	66	0.27	7.63	100	630
	8/7/2018	0.79	84	71	0.32	6.72	49	510
	10/30/2018	0.54	100	80	0.24	7.55	91	690
	2/26/2019	0.38	79	55	0.25	7.18	52	490
	4/30/2019	0.36	74	48	0.25	7.08	35	380
	Pred. Limit	0.77	132	62	0.25	7.69-6.54	85	609
MW-05 down-gradient	8/26/2019	0.64	91	60	0.24	7.08	14	490
	5/17/2016	0.70	100	85	0.35	7.08	120	660
	8/16/2016	0.69	110	97	0.30	6.85	150	830
	11/15/2016	0.93	94	66	0.23	6.96	77	620
	2/14/2017	0.79	100	100	0.25	7.25	170	760
	5/1/2017	0.70	100	92	0.28	7.60	170	710
	6/20/2017	0.64	89	63	0.28	7.32	78	550
	8/28/2017	0.62	110	120	0.33	7.05	210	870
	11/7/2017	0.51	99	110	0.31	6.87	160	990
	5/15/2018	0.61	130	89	0.29	7.70	210	910
	8/7/2018	0.49	110	120	0.32	6.56	180	890
	4/30/2019	0.56	84	73	0.36	6.96	120	590
	Pred. Limit	0.77	132	62	0.25	7.69-6.54	85	609
	8/26/2019	0.57	110	<u>75</u>	<u>0.29</u>	7.01	<u>110</u>	<u>660</u>

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

Bold - Potential statistically significant increase.

V- Serial dilution exceeds control limits.

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

Table 5. Appendix IV Groundwater Analytical Results Thru 2019 - Midwest Generation, LLC, Powerton Station, Pekin, IL. Former Ash Basin.

Well	Date	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Fluoride	Lead	Lithium	Mercury	Molybdenum	Radium 226 + 228 Combined	Selenium	Thallium
MW-01 up-gradient	11/16/2015	< 0.003	< 0.001	0.057	^ < 0.001	< 0.0005	< 0.005	< 0.001	0.17	* < 0.0005	< 0.01	< 0.0002	< 0.0050	0.744	< 0.0025	* < 0.002
	2/25/2016	< 0.003	0.0025	0.053	< 0.001	< 0.0005	< 0.005	0.0014	0.16	0.0019	< 0.01	< 0.0002	< 0.005	< 0.722	0.0029	< 0.002
	5/20/2016	< 0.003	0.0081	0.062	< 0.001	< 0.0005	0.007	0.0053	0.17	0.011	< 0.01	< 0.0002	< 0.005	< 0.953	< 0.0025	< 0.002
	8/17/2016	< 0.003	0.0014	0.048	< 0.001	< 0.0005	< 0.005	< 0.001	0.25	0.0014	< 0.010	< 0.0002	0.0057	< 0.491	< 0.0025	< 0.002
	11/16/2016	< 0.003	0.0051	0.056	< 0.001	< 0.0005	< 0.005	0.0044	0.21	0.0082	< 0.01	< 0.0002	0.0059	< 0.618	< 0.0025	< 0.002
	2/14/2017	< 0.003	0.0041	0.056	< 0.001	< 0.0005	< 0.005	0.0045	0.17	0.0076	< 0.01	< 0.0002	0.0056	< 0.837	< 0.0025	< 0.002
	5/3/2017	< 0.003	0.0015	0.045	< 0.001	< 0.0005	< 0.005	0.0033	0.16	0.0067	< 0.01	< 0.0002	< 0.005	0.574	< 0.0025	< 0.002
	6/21/2017	< 0.003	< 0.001	0.04	< 0.001	< 0.0005	< 0.005	< 0.001	0.18	< 0.0005	< 0.01	< 0.0002	0.0061	< 0.418	< 0.0025	< 0.002
	8/25/2017	< 0.003	< 0.001	0.049	< 0.001	< 0.0005	< 0.005	< 0.001	0.18	< 0.0005	< 0.01	< 0.0002	0.0059	0.775	< 0.0025	< 0.002
	11/8/2017	< 0.003	< 0.001	0.083	< 0.001	< 0.0005	< 0.005	< 0.001	0.12	< 0.0005	< 0.01	< 0.0002	< 0.005	0.343	< 0.0025	< 0.002
	5/17/2018	< 0.003	< 0.001	0.045	< 0.001	< 0.0005	< 0.005	< 0.001	0.12	0.00068	< 0.01	< 0.0002	< 0.005	< 0.396	< 0.0025	< 0.002
8/8/2018	< 0.003	< 0.001	0.051	<^ 0.001	< 0.0005	< 0.005	< 0.001	0.13	< 0.0005	< 0.01	< 0.0002	< 0.005	0.579	< 0.0025	< 0.002	
4/30/2019	< 0.003	0.0014	0.039	< 0.001	< 0.0005	< 0.005	< 0.001	0.17	0.0017	< 0.01	< 0.0002	< 0.005	< 0.656	< 0.0025	< 0.002	
8/26/2019	< 0.003	< 0.001	0.053	< 0.001	< 0.0005	< 0.005	< 0.001	0.13	< 0.0005	< 0.01	< 0.0002	< 0.005	0.802	< 0.0025	< 0.002	
MW-10 up- gradient	6/22/2017	< 0.003	0.002	0.250	< 0.001	< 0.001	< 0.005	0.008	0.190	0.003	< 0.010	< 0.0002	< 0.005	0.408	0.0042	< 0.002
	8/24/2017	< 0.003	0.002	0.220	< 0.001	< 0.001	< 0.005	0.007	0.180	0.003	< 0.010	< 0.0002	< 0.005	0.564	0.0044	< 0.002
	11/9/2017	< 0.003	< 0.001	0.220	< 0.001	< 0.001	< 0.005	0.004	0.180	< 0.001	< 0.010	< 0.0002	< 0.005	1.020	0.0034	< 0.002
	5/16/2018	< 0.003	0.001	0.220	< 0.001	< 0.001	< 0.005	0.021	0.190	0.001	< 0.010	< 0.0002	< 0.005	1.550	0.0050	< 0.002
	8/8/2018	< 0.003	0.001	0.220	<^ 0.001	< 0.001	< 0.005	0.014	0.190	0.001	< 0.010	< 0.0002	< 0.005	< 0.551	0.0062	< 0.002
	10/30/2018	< 0.003	0.011	0.410	< 0.001	0.001	0.024	0.047	0.220	0.023	0.017	< 0.0002	< 0.005	0.754	0.0046	< 0.002
	2/26/2019	< 0.003	0.022	0.590	< 0.005	0.002	0.063	0.081	0.210	0.036	0.032	< 0.0002	0.007	4.130	0.0041	< 0.002
	5/1/2019	< 0.003	0.002	0.270	< 0.001	< 0.001	< 0.005	0.011	0.220	0.003	< 0.010	< 0.0002	< 0.005	1.330	0.0037	< 0.002
8/26/2019	< 0.003	0.002	0.190	< 0.001	< 0.001	< 0.005	0.007	0.190	0.002	< 0.010	< 0.0002	< 0.005	1.54	0.0050	< 0.002	
MW-02 down-gradient	6/20/2017	< 0.003	0.001	0.075	< 0.001	< 0.0005	< 0.005	< 0.001	0.190	< 0.0005	< 0.01	< 0.0002	< 0.005	< 0.341	< 0.0025	< 0.002
	8/23/2017	< 0.003	< 0.001	0.062	< 0.001	< 0.0005	< 0.005	< 0.001	0.190	< 0.0005	< 0.01	< 0.0002	< 0.005	0.833	< 0.0025	< 0.002
	11/7/2017	< 0.003	0.001	0.091	< 0.001	< 0.0005	< 0.005	< 0.001	0.170	< 0.0005	< 0.01	< 0.0002	< 0.005	< 0.309	0.0027	< 0.002
	5/15/2018	< 0.003	0.001	0.065	< 0.001	< 0.0005	< 0.005	< 0.001	0.230	< 0.0005	< 0.01	0.0004	< 0.005	< 0.408	< 0.0025	< 0.002
	8/7/2018	< 0.003	0.002	0.067	<^ 0.001	< 0.0005	< 0.005	< 0.001	0.150	< 0.0005	< 0.01	< 0.0002	< 0.005	0.622	< 0.0025	< 0.002
	10/30/2018	< 0.003	0.002	0.067	< 0.001	< 0.0005	< 0.005	< 0.001	0.170	< 0.0005	< 0.01	< 0.0002	< 0.005	0.346	< 0.0025	< 0.002
	2/26/2019	< 0.003	0.003	0.041	< 0.001	< 0.0005	< 0.005	< 0.001	0.160	0.0013	< 0.01	< 0.0002	< 0.005	< 0.425	< 0.0025	< 0.002
	4/30/2019	< 0.003	0.001	0.048	< 0.001	< 0.0005	< 0.005	< 0.001	0.160	< 0.0005	< 0.01	< 0.0002	< 0.005	< 0.441	< 0.0025	< 0.002
8/26/2019	< 0.003	0.001	0.065	< 0.001	< 0.0005	< 0.005	< 0.001	0.180	< 0.0005	< 0.01	< 0.0002	< 0.005	1.18	< 0.0025	< 0.002	
MW-03 down-gradient	6/20/2017	< 0.003	0.001	0.066	< 0.001	< 0.0005	< 0.005	< 0.001	0.290	< 0.0005	< 0.010	< 0.0002	< 0.005	< 0.325	< 0.0025	< 0.002
	8/23/2017	< 0.003	0.001	0.066	< 0.001	< 0.0005	< 0.005	< 0.001	0.280	< 0.0005	< 0.010	< 0.0002	< 0.005	1.200	< 0.0025	< 0.002
	11/7/2017	< 0.003	0.001	0.068	< 0.001	< 0.0005	< 0.005	< 0.001	0.260	< 0.0005	< 0.010	< 0.0002	< 0.005	0.588	< 0.0025	< 0.002
	5/15/2018	< 0.003	0.001	0.059	< 0.001	< 0.0005	< 0.005	< 0.001	0.230	< 0.0005	< 0.010	< 0.0002	< 0.005	< 0.489	< 0.0025	< 0.002
	8/7/2018	< 0.003	0.002	0.067	<^ 0.001	< 0.0005	< 0.005	< 0.001	0.220	< 0.0005	< 0.010	< 0.0002	< 0.005	< 0.341	< 0.0025	< 0.002
	10/30/2018	< 0.003	0.001	0.056	< 0.001	< 0.0005	< 0.005	< 0.001	0.250	< 0.0005	< 0.010	< 0.0002	< 0.005	< 0.354	< 0.0025	< 0.002
	2/26/2019	< 0.003	0.001	0.054	< 0.001	< 0.0005	< 0.005	< 0.001	0.240	0.0007	< 0.010	< 0.0002	< 0.005	< 0.399	< 0.0025	< 0.002
	4/30/2019	< 0.003	< 0.001	0.060	< 0.001	< 0.0005	< 0.005	< 0.001	0.220	< 0.0005	< 0.010	< 0.0002	< 0.005	< 0.668	< 0.0025	< 0.002
8/26/2019	< 0.003															

APPENDIX A
Analytical Data Packages

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Chicago

2417 Bond Street

University Park, IL 60484

Tel: (708)534-5200

TestAmerica Job ID: 500-159262-1

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:

3/7/2019 11:26:45 AM

Richard Wright, Senior Project Manager

richard.wright@testamericainc.com

Designee for

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	6
Sample Summary	7
Client Sample Results	8
Definitions	12
QC Association	13
QC Sample Results	16
Chronicle	21
Certification Summary	23
Chain of Custody	24
Receipt Checklists	27



Case Narrative

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

TestAmerica Job ID: 500-159262-1

Job ID: 500-159262-1

Laboratory: TestAmerica Chicago

Narrative

Job Narrative 500-159262-1

Comments

No additional comments.

Receipt

The samples were received on 2/27/2019 10:20 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 3.4° C and 3.5° C.

Metals

Method(s) 6020A: Due to sample matrix effect on the internal standard (ISTD), a dilution was required for the following sample: MW-10 (500-159262-4).

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

General Chemistry

Method(s) 9038, SM 4500 SO4 E: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-04 (500-159262-3) and MW-10 (500-159262-4). Elevated reporting limits (RLs) are provided.

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

Detection Summary

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

TestAmerica Job ID: 500-159262-1

Client Sample ID: MW-02

Lab Sample ID: 500-159262-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0026		0.0010		mg/L	1		6020A	Total
Barium	0.041		0.0025		mg/L	1		6020A	Recoverable
Boron	0.073		0.050		mg/L	1		6020A	Total
Calcium	69		0.20		mg/L	1		6020A	Recoverable
Lead	0.0013		0.00050		mg/L	1		6020A	Total
Total Dissolved Solids	400		10		mg/L	1		SM 2540C	Recoverable
Chloride	49		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	23		5.0		mg/L	1		SM 4500 SO4 E	Total/NA

Client Sample ID: MW-03

Lab Sample ID: 500-159262-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0013		0.0010		mg/L	1		6020A	Total
Barium	0.054		0.0025		mg/L	1		6020A	Recoverable
Boron	0.056		0.050		mg/L	1		6020A	Total
Calcium	74		0.20		mg/L	1		6020A	Recoverable
Lead	0.00072		0.00050		mg/L	1		6020A	Total
Total Dissolved Solids	410		10		mg/L	1		SM 2540C	Recoverable
Chloride	56		2.0		mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.24		0.10		mg/L	1		SM 4500 F C	Total/NA
Sulfate	25		5.0		mg/L	1		SM 4500 SO4 E	Total/NA

Client Sample ID: MW-04

Lab Sample ID: 500-159262-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0013		0.0010		mg/L	1		6020A	Total
Barium	0.033		0.0025		mg/L	1		6020A	Recoverable
Boron	0.38		0.050		mg/L	1		6020A	Total
Calcium	79		0.20		mg/L	1		6020A	Recoverable
Cobalt	0.0012		0.0010		mg/L	1		6020A	Total
Lead	0.0012		0.00050		mg/L	1		6020A	Recoverable
Total Dissolved Solids	490		10		mg/L	1		SM 2540C	Total
Chloride	55		2.0		mg/L	1		SM 4500 Cl- E	Recoverable
Fluoride	0.25		0.10		mg/L	1		SM 4500 F C	Total/NA
Sulfate	52		10		mg/L	2		SM 4500 SO4 E	Total/NA

Client Sample ID: MW-10

Lab Sample ID: 500-159262-4

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: 500-159262-1

Client Sample ID: MW-10 (Continued)

Lab Sample ID: 500-159262-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lithium	0.032		0.010		mg/L	1		6010C	Total
Arsenic	0.022		0.0010		mg/L	1		6020A	Recoverable
Barium	0.59		0.0025		mg/L	1		6020A	Total
Boron	0.39		0.25		mg/L	5		6020A	Recoverable
Cadmium	0.0015		0.00050		mg/L	1		6020A	Total
Calcium	150		1.0		mg/L	5		6020A	Recoverable
Chromium	0.063		0.025		mg/L	5		6020A	Total
Cobalt	0.081		0.0050		mg/L	5		6020A	Recoverable
Lead	0.036		0.00050		mg/L	1		6020A	Total
Molybdenum	0.0066		0.0050		mg/L	1		6020A	Recoverable
Selenium	0.0041		0.0025		mg/L	1		6020A	Total
Total Dissolved Solids	540		10		mg/L	1		SM 2540C	Recoverable
Chloride	48		2.0		mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.21		0.10		mg/L	1		SM 4500 F C	Total/NA
Sulfate	36		10		mg/L	2		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: 500-159262-1

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 PEN
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

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Sample Summary

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

TestAmerica Job ID: 500-159262-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-159262-1	MW-02	Water	02/26/19 09:20	02/27/19 10:20
500-159262-2	MW-03	Water	02/26/19 10:55	02/27/19 10:20
500-159262-3	MW-04	Water	02/26/19 12:25	02/27/19 10:20
500-159262-4	MW-10	Water	02/26/19 14:45	02/27/19 10:20

Client Sample Results

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

TestAmerica Job ID: 500-159262-1

Client Sample ID: MW-02

Date Collected: 02/26/19 09:20

Date Received: 02/27/19 10:20

Lab Sample ID: 500-159262-1

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		02/28/19 16:21	03/06/19 23:01	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		02/28/19 16:21	03/01/19 10:15	1
Arsenic	0.0026		0.0010		mg/L		02/28/19 16:21	03/01/19 10:15	1
Barium	0.041		0.0025		mg/L		02/28/19 16:21	03/01/19 10:15	1
Beryllium	<0.0010		0.0010		mg/L		02/28/19 16:21	03/01/19 10:15	1
Boron	0.073		0.050		mg/L		02/28/19 16:21	03/01/19 10:15	1
Cadmium	<0.00050		0.00050		mg/L		02/28/19 16:21	03/01/19 10:15	1
Calcium	69		0.20		mg/L		02/28/19 16:21	03/01/19 10:15	1
Chromium	<0.0050		0.0050		mg/L		02/28/19 16:21	03/01/19 10:15	1
Cobalt	<0.0010		0.0010		mg/L		02/28/19 16:21	03/01/19 10:15	1
Lead	0.0013		0.00050		mg/L		02/28/19 16:21	03/01/19 10:15	1
Molybdenum	<0.0050		0.0050		mg/L		02/28/19 16:21	03/01/19 10:15	1
Selenium	<0.0025		0.0025		mg/L		02/28/19 16:21	03/01/19 10:15	1
Thallium	<0.0020		0.0020		mg/L		02/28/19 16:21	03/01/19 10:15	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		03/04/19 10:25	03/05/19 08:18	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	400		10		mg/L			02/28/19 10:48	1
Chloride	49		2.0		mg/L			03/02/19 16:33	1
Fluoride	0.16		0.10		mg/L			03/01/19 21:36	1
Sulfate	23		5.0		mg/L			03/06/19 10:46	1

Client Sample Results

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

TestAmerica Job ID: 500-159262-1

Client Sample ID: MW-03

Date Collected: 02/26/19 10:55

Date Received: 02/27/19 10:20

Lab Sample ID: 500-159262-2

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		02/28/19 16:21	03/06/19 23:30	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		02/28/19 16:21	03/01/19 10:34	1
Arsenic	0.0013		0.0010		mg/L		02/28/19 16:21	03/01/19 10:34	1
Barium	0.054		0.0025		mg/L		02/28/19 16:21	03/01/19 10:34	1
Beryllium	<0.0010		0.0010		mg/L		02/28/19 16:21	03/01/19 10:34	1
Boron	0.056		0.050		mg/L		02/28/19 16:21	03/01/19 10:34	1
Cadmium	<0.00050		0.00050		mg/L		02/28/19 16:21	03/01/19 10:34	1
Calcium	74		0.20		mg/L		02/28/19 16:21	03/01/19 10:34	1
Chromium	<0.0050		0.0050		mg/L		02/28/19 16:21	03/01/19 10:34	1
Cobalt	<0.0010		0.0010		mg/L		02/28/19 16:21	03/01/19 10:34	1
Lead	0.00072		0.00050		mg/L		02/28/19 16:21	03/01/19 10:34	1
Molybdenum	<0.0050		0.0050		mg/L		02/28/19 16:21	03/01/19 10:34	1
Selenium	<0.0025		0.0025		mg/L		02/28/19 16:21	03/01/19 10:34	1
Thallium	<0.0020		0.0020		mg/L		02/28/19 16:21	03/01/19 10:34	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		03/04/19 10:25	03/05/19 08:20	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	410		10		mg/L			02/28/19 10:50	1
Chloride	56		2.0		mg/L			03/04/19 13:43	1
Fluoride	0.24		0.10		mg/L			03/01/19 21:39	1
Sulfate	25		5.0		mg/L			03/06/19 10:46	1

Client Sample Results

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

TestAmerica Job ID: 500-159262-1

Client Sample ID: MW-04

Date Collected: 02/26/19 12:25

Date Received: 02/27/19 10:20

Lab Sample ID: 500-159262-3

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		02/28/19 16:21	03/06/19 23:34	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		02/28/19 16:21	03/01/19 10:38	1
Arsenic	0.0013		0.0010		mg/L		02/28/19 16:21	03/01/19 10:38	1
Barium	0.033		0.0025		mg/L		02/28/19 16:21	03/01/19 10:38	1
Beryllium	<0.0010		0.0010		mg/L		02/28/19 16:21	03/01/19 10:38	1
Boron	0.38		0.050		mg/L		02/28/19 16:21	03/01/19 10:38	1
Cadmium	<0.00050		0.00050		mg/L		02/28/19 16:21	03/01/19 10:38	1
Calcium	79		0.20		mg/L		02/28/19 16:21	03/01/19 10:38	1
Chromium	<0.0050		0.0050		mg/L		02/28/19 16:21	03/01/19 10:38	1
Cobalt	0.0012		0.0010		mg/L		02/28/19 16:21	03/01/19 10:38	1
Lead	0.0012		0.00050		mg/L		02/28/19 16:21	03/01/19 10:38	1
Molybdenum	<0.0050		0.0050		mg/L		02/28/19 16:21	03/01/19 10:38	1
Selenium	<0.0025		0.0025		mg/L		02/28/19 16:21	03/01/19 10:38	1
Thallium	<0.0020		0.0020		mg/L		02/28/19 16:21	03/01/19 10:38	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		03/04/19 10:25	03/05/19 08:30	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	490		10		mg/L			02/28/19 10:51	1
Chloride	55		2.0		mg/L			03/04/19 13:43	1
Fluoride	0.25		0.10		mg/L			03/01/19 21:42	1
Sulfate	52		10		mg/L			03/06/19 10:55	2

Client Sample Results

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

TestAmerica Job ID: 500-159262-1

Client Sample ID: MW-10

Date Collected: 02/26/19 14:45

Date Received: 02/27/19 10:20

Lab Sample ID: 500-159262-4

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.032		0.010		mg/L		02/28/19 16:21	03/06/19 23:38	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		02/28/19 16:21	03/01/19 10:42	1
Arsenic	0.022		0.0010		mg/L		02/28/19 16:21	03/01/19 10:42	1
Barium	0.59		0.0025		mg/L		02/28/19 16:21	03/01/19 10:42	1
Beryllium	<0.0050		0.0050		mg/L		02/28/19 16:21	03/01/19 11:30	5
Boron	0.39		0.25		mg/L		02/28/19 16:21	03/01/19 11:30	5
Cadmium	0.0015		0.00050		mg/L		02/28/19 16:21	03/01/19 10:42	1
Calcium	150		1.0		mg/L		02/28/19 16:21	03/01/19 11:30	5
Chromium	0.063		0.025		mg/L		02/28/19 16:21	03/01/19 11:30	5
Cobalt	0.081		0.0050		mg/L		02/28/19 16:21	03/01/19 11:30	5
Lead	0.036		0.00050		mg/L		02/28/19 16:21	03/01/19 10:42	1
Molybdenum	0.0066		0.0050		mg/L		02/28/19 16:21	03/01/19 10:42	1
Selenium	0.0041		0.0025		mg/L		02/28/19 16:21	03/01/19 10:42	1
Thallium	<0.0020		0.0020		mg/L		02/28/19 16:21	03/01/19 10:42	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		03/04/19 10:25	03/05/19 08:32	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	540		10		mg/L			02/28/19 10:53	1
Chloride	48		2.0		mg/L			03/04/19 13:44	1
Fluoride	0.21		0.10		mg/L			03/01/19 21:45	1
Sulfate	36		10		mg/L			03/06/19 11:11	2

Definitions/Glossary

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

TestAmerica Job ID: 500-159262-1

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: 500-159262-1

Metals

Prep Batch: 474292

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-159262-1	MW-02	Total Recoverable	Water	3005A	
500-159262-2	MW-03	Total Recoverable	Water	3005A	
500-159262-3	MW-04	Total Recoverable	Water	3005A	
500-159262-4	MW-10	Total Recoverable	Water	3005A	
MB 500-474292/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-474292/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
500-159262-1 MS	MW-02	Total Recoverable	Water	3005A	
500-159262-1 MSD	MW-02	Total Recoverable	Water	3005A	
500-159262-1 DU	MW-02	Total Recoverable	Water	3005A	

Analysis Batch: 474590

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-159262-1	MW-02	Total Recoverable	Water	6020A	474292
500-159262-2	MW-03	Total Recoverable	Water	6020A	474292
500-159262-3	MW-04	Total Recoverable	Water	6020A	474292
500-159262-4	MW-10	Total Recoverable	Water	6020A	474292
500-159262-4	MW-10	Total Recoverable	Water	6020A	474292
MB 500-474292/1-A	Method Blank	Total Recoverable	Water	6020A	474292
LCS 500-474292/2-A	Lab Control Sample	Total Recoverable	Water	6020A	474292
500-159262-1 MS	MW-02	Total Recoverable	Water	6020A	474292
500-159262-1 MSD	MW-02	Total Recoverable	Water	6020A	474292
500-159262-1 DU	MW-02	Total Recoverable	Water	6020A	474292

Prep Batch: 474601

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-159262-1	MW-02	Total/NA	Water	7470A	
500-159262-2	MW-03	Total/NA	Water	7470A	
500-159262-3	MW-04	Total/NA	Water	7470A	
500-159262-4	MW-10	Total/NA	Water	7470A	
MB 500-474601/12-A	Method Blank	Total/NA	Water	7470A	
LCS 500-474601/13-A	Lab Control Sample	Total/NA	Water	7470A	
500-159262-2 MS	MW-03	Total/NA	Water	7470A	
500-159262-2 MSD	MW-03	Total/NA	Water	7470A	
500-159262-2 DU	MW-03	Total/NA	Water	7470A	

Analysis Batch: 474768

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-159262-1	MW-02	Total/NA	Water	7470A	474601
500-159262-2	MW-03	Total/NA	Water	7470A	474601
500-159262-3	MW-04	Total/NA	Water	7470A	474601
500-159262-4	MW-10	Total/NA	Water	7470A	474601
MB 500-474601/12-A	Method Blank	Total/NA	Water	7470A	474601
LCS 500-474601/13-A	Lab Control Sample	Total/NA	Water	7470A	474601
500-159262-2 MS	MW-03	Total/NA	Water	7470A	474601
500-159262-2 MSD	MW-03	Total/NA	Water	7470A	474601
500-159262-2 DU	MW-03	Total/NA	Water	7470A	474601

Analysis Batch: 475099

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-159262-1	MW-02	Total Recoverable	Water	6010C	474292
500-159262-2	MW-03	Total Recoverable	Water	6010C	474292

TestAmerica Chicago

QC Association Summary

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

TestAmerica Job ID: 500-159262-1

Metals (Continued)

Analysis Batch: 475099 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-159262-3	MW-04	Total Recoverable	Water	6010C	474292
500-159262-4	MW-10	Total Recoverable	Water	6010C	474292
MB 500-474292/1-A	Method Blank	Total Recoverable	Water	6010C	474292
LCS 500-474292/2-A	Lab Control Sample	Total Recoverable	Water	6010C	474292
500-159262-1 MS	MW-02	Total Recoverable	Water	6010C	474292
500-159262-1 MSD	MW-02	Total Recoverable	Water	6010C	474292
500-159262-1 DU	MW-02	Total Recoverable	Water	6010C	474292

General Chemistry

Analysis Batch: 432314

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-159262-1	MW-02	Total/NA	Water	SM 4500 SO4 E	
500-159262-2	MW-03	Total/NA	Water	SM 4500 SO4 E	
500-159262-3	MW-04	Total/NA	Water	SM 4500 SO4 E	
500-159262-4	MW-10	Total/NA	Water	SM 4500 SO4 E	
MB 400-432314/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-432314/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-432314/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 474186

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-159262-1	MW-02	Total/NA	Water	SM 2540C	
500-159262-2	MW-03	Total/NA	Water	SM 2540C	
500-159262-3	MW-04	Total/NA	Water	SM 2540C	
500-159262-4	MW-10	Total/NA	Water	SM 2540C	
MB 500-474186/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-474186/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 474484

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-159262-1	MW-02	Total/NA	Water	SM 4500 F C	
500-159262-2	MW-03	Total/NA	Water	SM 4500 F C	
500-159262-3	MW-04	Total/NA	Water	SM 4500 F C	
500-159262-4	MW-10	Total/NA	Water	SM 4500 F C	
MB 500-474484/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 500-474484/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	

Analysis Batch: 474498

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-159262-1	MW-02	Total/NA	Water	SM 4500 CI- E	
MB 500-474498/50	Method Blank	Total/NA	Water	SM 4500 CI- E	
LCS 500-474498/51	Lab Control Sample	Total/NA	Water	SM 4500 CI- E	

Analysis Batch: 474641

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-159262-2	MW-03	Total/NA	Water	SM 4500 CI- E	
500-159262-3	MW-04	Total/NA	Water	SM 4500 CI- E	
500-159262-4	MW-10	Total/NA	Water	SM 4500 CI- E	
MB 500-474641/12	Method Blank	Total/NA	Water	SM 4500 CI- E	

TestAmerica Chicago

QC Association Summary

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

TestAmerica Job ID: 500-159262-1

General Chemistry (Continued)

Analysis Batch: 474641 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 500-474641/13	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	

QC Sample Results

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

TestAmerica Job ID: 500-159262-1

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 500-474292/1-A

Matrix: Water

Analysis Batch: 475099

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 474292

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.010		0.010		mg/L		02/28/19 16:21	03/06/19 22:53	1

Lab Sample ID: LCS 500-474292/2-A

Matrix: Water

Analysis Batch: 475099

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 474292

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lithium	0.500	0.504		mg/L		101	80 - 120

Lab Sample ID: 500-159262-1 MS

Matrix: Water

Analysis Batch: 475099

Client Sample ID: MW-02

Prep Type: Total Recoverable

Prep Batch: 474292

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lithium	<0.010		0.500	0.538		mg/L		108	75 - 125

Lab Sample ID: 500-159262-1 MSD

Matrix: Water

Analysis Batch: 475099

Client Sample ID: MW-02

Prep Type: Total Recoverable

Prep Batch: 474292

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Lithium	<0.010		0.500	0.526		mg/L		105	75 - 125	2	20

Lab Sample ID: 500-159262-1 DU

Matrix: Water

Analysis Batch: 475099

Client Sample ID: MW-02

Prep Type: Total Recoverable

Prep Batch: 474292

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

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 500-474292/1-A

Matrix: Water

Analysis Batch: 474590

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 474292

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		02/28/19 16:21	03/01/19 10:07	1
Arsenic	<0.0010		0.0010		mg/L		02/28/19 16:21	03/01/19 10:07	1
Barium	<0.0025		0.0025		mg/L		02/28/19 16:21	03/01/19 10:07	1
Beryllium	<0.0010		0.0010		mg/L		02/28/19 16:21	03/01/19 10:07	1
Boron	<0.050		0.050		mg/L		02/28/19 16:21	03/01/19 10:07	1
Cadmium	<0.00050		0.00050		mg/L		02/28/19 16:21	03/01/19 10:07	1
Calcium	<0.20		0.20		mg/L		02/28/19 16:21	03/01/19 10:07	1
Chromium	<0.0050		0.0050		mg/L		02/28/19 16:21	03/01/19 10:07	1
Cobalt	<0.0010		0.0010		mg/L		02/28/19 16:21	03/01/19 10:07	1
Lead	<0.00050		0.00050		mg/L		02/28/19 16:21	03/01/19 10:07	1
Molybdenum	<0.0050		0.0050		mg/L		02/28/19 16:21	03/01/19 10:07	1
Selenium	<0.0025		0.0025		mg/L		02/28/19 16:21	03/01/19 10:07	1

TestAmerica Chicago

QC Sample Results

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

TestAmerica Job ID: 500-159262-1

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

Lab Sample ID: MB 500-474292/1-A
Matrix: Water
Analysis Batch: 474590

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 474292

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thallium	<0.0020		0.0020		mg/L		02/28/19 16:21	03/01/19 10:07	1

Lab Sample ID: LCS 500-474292/2-A
Matrix: Water
Analysis Batch: 474590

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 474292

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.500	0.476		mg/L		95	80 - 120
Arsenic	0.100	0.0952		mg/L		95	80 - 120
Barium	2.00	1.90		mg/L		95	80 - 120
Beryllium	0.0500	0.0448		mg/L		90	80 - 120
Boron	1.00	0.926		mg/L		93	80 - 120
Cadmium	0.0500	0.0475		mg/L		95	80 - 120
Calcium	10.0	9.25		mg/L		92	80 - 120
Chromium	0.200	0.189		mg/L		94	80 - 120
Cobalt	0.500	0.478		mg/L		96	80 - 120
Lead	0.100	0.102		mg/L		102	80 - 120
Molybdenum	1.00	0.906		mg/L		91	80 - 120
Selenium	0.100	0.0861		mg/L		86	80 - 120
Thallium	0.100	0.0900		mg/L		90	80 - 120

Lab Sample ID: 500-159262-1 MS
Matrix: Water
Analysis Batch: 474590

Client Sample ID: MW-02
Prep Type: Total Recoverable
Prep Batch: 474292

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	<0.0030		0.500	0.486		mg/L		97	75 - 125
Arsenic	0.0026		0.100	0.101		mg/L		98	75 - 125
Barium	0.041		2.00	1.92		mg/L		94	75 - 125
Beryllium	<0.0010		0.0500	0.0436		mg/L		87	75 - 125
Boron	0.073		1.00	0.958		mg/L		89	75 - 125
Cadmium	<0.00050		0.0500	0.0481		mg/L		96	75 - 125
Calcium	69		10.0	75.2	4	mg/L		59	75 - 125
Chromium	<0.0050		0.200	0.180		mg/L		89	75 - 125
Cobalt	<0.0010		0.500	0.446		mg/L		89	75 - 125
Lead	0.0013		0.100	0.101		mg/L		100	75 - 125
Molybdenum	<0.0050		1.00	0.936		mg/L		93	75 - 125
Selenium	<0.0025		0.100	0.0891		mg/L		89	75 - 125
Thallium	<0.0020		0.100	0.0879		mg/L		88	75 - 125

Lab Sample ID: 500-159262-1 MSD
Matrix: Water
Analysis Batch: 474590

Client Sample ID: MW-02
Prep Type: Total Recoverable
Prep Batch: 474292

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Antimony	<0.0030		0.500	0.482		mg/L		96	75 - 125	1	20
Arsenic	0.0026		0.100	0.100		mg/L		98	75 - 125	0	20
Barium	0.041		2.00	1.89		mg/L		92	75 - 125	2	20
Beryllium	<0.0010		0.0500	0.0420		mg/L		84	75 - 125	4	20

TestAmerica Chicago

QC Sample Results

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

TestAmerica Job ID: 500-159262-1

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

Lab Sample ID: 500-159262-1 MSD

Matrix: Water

Analysis Batch: 474590

Client Sample ID: MW-02

Prep Type: Total Recoverable

Prep Batch: 474292

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Boron	0.073		1.00	0.956		mg/L		88	75 - 125	0	20
Cadmium	<0.00050		0.0500	0.0482		mg/L		96	75 - 125	0	20
Calcium	69		10.0	74.7	4	mg/L		54	75 - 125	1	20
Chromium	<0.0050		0.200	0.177		mg/L		88	75 - 125	2	20
Cobalt	<0.0010		0.500	0.439		mg/L		88	75 - 125	2	20
Lead	0.0013		0.100	0.0999		mg/L		99	75 - 125	1	20
Molybdenum	<0.0050		1.00	0.935		mg/L		93	75 - 125	0	20
Selenium	<0.0025		0.100	0.0886		mg/L		89	75 - 125	1	20
Thallium	<0.0020		0.100	0.0874		mg/L		87	75 - 125	1	20

Lab Sample ID: 500-159262-1 DU

Matrix: Water

Analysis Batch: 474590

Client Sample ID: MW-02

Prep Type: Total Recoverable

Prep Batch: 474292

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Antimony	<0.0030		<0.0030		mg/L		NC	20
Arsenic	0.0026		0.00272		mg/L		3	20
Barium	0.041		0.0412		mg/L		0.8	20
Beryllium	<0.0010		<0.0010		mg/L		NC	20
Boron	0.073		0.0651		mg/L		11	20
Cadmium	<0.00050		<0.00050		mg/L		NC	20
Calcium	69		68.3		mg/L		1	20
Chromium	<0.0050		<0.0050		mg/L		NC	20
Cobalt	<0.0010		<0.0010		mg/L		NC	20
Lead	0.0013		0.00124		mg/L		2	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

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 500-474601/12-A

Matrix: Water

Analysis Batch: 474768

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 474601

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		03/04/19 10:25	03/05/19 07:59	1

Lab Sample ID: LCS 500-474601/13-A

Matrix: Water

Analysis Batch: 474768

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 474601

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00200	0.00195		mg/L		98	80 - 120

TestAmerica Chicago

QC Sample Results

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

TestAmerica Job ID: 500-159262-1

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

Lab Sample ID: 500-159262-2 MS

Matrix: Water

Analysis Batch: 474768

Client Sample ID: MW-03

Prep Type: Total/NA

Prep Batch: 474601

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	<0.00020		0.00100	0.000982		mg/L		98	75 - 125

Lab Sample ID: 500-159262-2 MSD

Matrix: Water

Analysis Batch: 474768

Client Sample ID: MW-03

Prep Type: Total/NA

Prep Batch: 474601

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	<0.00020		0.00100	0.000934		mg/L		93	75 - 125	5	20

Lab Sample ID: 500-159262-2 DU

Matrix: Water

Analysis Batch: 474768

Client Sample ID: MW-03

Prep Type: Total/NA

Prep Batch: 474601

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

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

Lab Sample ID: MB 500-474186/1

Matrix: Water

Analysis Batch: 474186

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			02/28/19 10:20	1

Lab Sample ID: LCS 500-474186/2

Matrix: Water

Analysis Batch: 474186

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	286		mg/L		114	80 - 120

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 500-474498/50

Matrix: Water

Analysis Batch: 474498

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			03/02/19 16:11	1

Lab Sample ID: LCS 500-474498/51

Matrix: Water

Analysis Batch: 474498

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	53.0		mg/L		106	85 - 115

TestAmerica Chicago

QC Sample Results

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

TestAmerica Job ID: 500-159262-1

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

Lab Sample ID: MB 500-474641/12

Matrix: Water

Analysis Batch: 474641

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			03/04/19 13:21	1

Lab Sample ID: LCS 500-474641/13

Matrix: Water

Analysis Batch: 474641

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	52.8		mg/L		106	85 - 115

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 500-474484/3

Matrix: Water

Analysis Batch: 474484

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			03/01/19 20:39	1

Lab Sample ID: LCS 500-474484/4

Matrix: Water

Analysis Batch: 474484

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

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

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 400-432314/6

Matrix: Water

Analysis Batch: 432314

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			03/06/19 10:18	1

Lab Sample ID: LCS 400-432314/7

Matrix: Water

Analysis Batch: 432314

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	15.0	13.9		mg/L		92	90 - 110

Lab Sample ID: MRL 400-432314/3

Matrix: Water

Analysis Batch: 432314

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	5.00	<5.0		mg/L		79	50 - 150

TestAmerica Chicago

Lab Chronicle

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

TestAmerica Job ID: 500-159262-1

Client Sample ID: MW-02

Date Collected: 02/26/19 09:20

Date Received: 02/27/19 10:20

Lab Sample ID: 500-159262-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			474292	02/28/19 16:21	BDE	TAL CHI
Total Recoverable	Analysis	6010C		1	475099	03/06/19 23:01	EEN	TAL CHI
Total Recoverable	Prep	3005A			474292	02/28/19 16:21	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	474590	03/01/19 10:15	FXG	TAL CHI
Total/NA	Prep	7470A			474601	03/04/19 10:25	MJG	TAL CHI
Total/NA	Analysis	7470A		1	474768	03/05/19 08:18	MJG	TAL CHI
Total/NA	Analysis	SM 2540C		1	474186	02/28/19 10:48	MTB	TAL CHI
Total/NA	Analysis	SM 4500 CI- E		1	474498	03/02/19 16:33	EAT	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	474484	03/01/19 21:36	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		1	432314	03/06/19 10:46	RRC	TAL PEN

Client Sample ID: MW-03

Date Collected: 02/26/19 10:55

Date Received: 02/27/19 10:20

Lab Sample ID: 500-159262-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			474292	02/28/19 16:21	BDE	TAL CHI
Total Recoverable	Analysis	6010C		1	475099	03/06/19 23:30	EEN	TAL CHI
Total Recoverable	Prep	3005A			474292	02/28/19 16:21	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	474590	03/01/19 10:34	FXG	TAL CHI
Total/NA	Prep	7470A			474601	03/04/19 10:25	MJG	TAL CHI
Total/NA	Analysis	7470A		1	474768	03/05/19 08:20	MJG	TAL CHI
Total/NA	Analysis	SM 2540C		1	474186	02/28/19 10:50	MTB	TAL CHI
Total/NA	Analysis	SM 4500 CI- E		1	474641	03/04/19 13:43	EAT	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	474484	03/01/19 21:39	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		1	432314	03/06/19 10:46	RRC	TAL PEN

Client Sample ID: MW-04

Date Collected: 02/26/19 12:25

Date Received: 02/27/19 10:20

Lab Sample ID: 500-159262-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			474292	02/28/19 16:21	BDE	TAL CHI
Total Recoverable	Analysis	6010C		1	475099	03/06/19 23:34	EEN	TAL CHI
Total Recoverable	Prep	3005A			474292	02/28/19 16:21	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	474590	03/01/19 10:38	FXG	TAL CHI
Total/NA	Prep	7470A			474601	03/04/19 10:25	MJG	TAL CHI
Total/NA	Analysis	7470A		1	474768	03/05/19 08:30	MJG	TAL CHI
Total/NA	Analysis	SM 2540C		1	474186	02/28/19 10:51	MTB	TAL CHI
Total/NA	Analysis	SM 4500 CI- E		1	474641	03/04/19 13:43	EAT	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	474484	03/01/19 21:42	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		2	432314	03/06/19 10:55	RRC	TAL PEN

TestAmerica Chicago

Lab Chronicle

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

TestAmerica Job ID: 500-159262-1

Client Sample ID: MW-10

Date Collected: 02/26/19 14:45

Date Received: 02/27/19 10:20

Lab Sample ID: 500-159262-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			474292	02/28/19 16:21	BDE	TAL CHI
Total Recoverable	Analysis	6010C		1	475099	03/06/19 23:38	EEN	TAL CHI
Total Recoverable	Prep	3005A			474292	02/28/19 16:21	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	474590	03/01/19 10:42	FXG	TAL CHI
Total Recoverable	Prep	3005A			474292	02/28/19 16:21	BDE	TAL CHI
Total Recoverable	Analysis	6020A		5	474590	03/01/19 11:30	FXG	TAL CHI
Total/NA	Prep	7470A			474601	03/04/19 10:25	MJG	TAL CHI
Total/NA	Analysis	7470A		1	474768	03/05/19 08:32	MJG	TAL CHI
Total/NA	Analysis	SM 2540C		1	474186	02/28/19 10:53	MTB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		1	474641	03/04/19 13:44	EAT	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	474484	03/01/19 21:45	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		2	432314	03/06/19 11:11	RRC	TAL PEN

Laboratory References:

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

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Accreditation/Certification Summary

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

TestAmerica Job ID: 500-159262-1

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

Laboratory: TestAmerica Pensacola

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-19
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-20
Arkansas DEQ	State Program	6	88-0689	09-01-19
California	State Program	9	2510	06-30-19
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-19
Iowa	State Program	7	367	08-01-20
Kansas	NELAP	7	E-10253	10-31-19
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-19
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA017	12-31-19
Maryland	State Program	3	233	09-30-19
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-19
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-19
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-20
Rhode Island	State Program	1	LAO00307	12-30-19
South Carolina	State Program	4	96026	06-30-19
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-15	09-30-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-19
Washington	State Program	10	C915	05-15-19
West Virginia DEP	State Program	3	136	07-31-19

2417 Bond Street

Chain of Custody Record

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

University Park, IL 60484-3101
phone 708.534.5200 fax 708.534.5211

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

TestAmerica Laboratories, Inc.

[illegible]

ORIGIN ID:PIAA (000) 000-0000
TEST AMERICA

414 PLAZA DR STE 106

WESTMONT, IL 60559
UNITED STATES US

SHIP DATE: 26FEB19
ACTWGT: 47.00 LB
CAD: 006994779/SSFE1922
DIMS: 24x18x12 IN
BILL THIRD PARTY

Part # 156297-1082/11/18

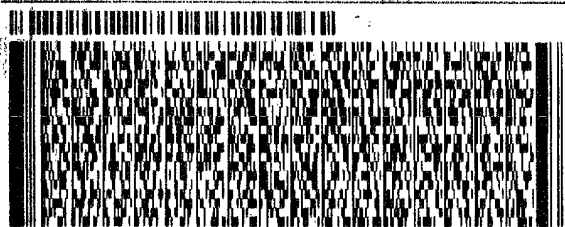
TO: ERIC LANG
TEST AMERICA
2417 BOND ST

UNIVERSITY PARK IL 60484

(700) 634-6200

REF:

DEPT:



FedEx
Express



1 of 3

TRK# 7857 1738 3280
0201

MASTER

XH JOTA

WED - 27 FEB 10:30A
PRIORITY OVERNIGHT

60484
IL-US ORD



500-156262 Wayt

ORIGIN ID:PIAA (000) 000-0000
TEST AMERICA

SHIP DATE: 26FEB19
ACTWGT: 24.00 LB
CAD: 006994779/SSFE1922
DIMS: 18x15x10 IN

Part # 156297

2 of 3
MPS# 7857 1738 3291
0263
Mstr# 7857 1738 3280

XH JOTA

WED - 27 FEB 10:30A
PRIORITY OVERNIGHT

60484
IL-US ORD



3 of 3

MPS# 7857 1738 3306
0263
Mstr# 7857 1738 3280

XH JOTA

WED - 27 FEB 10:30A
PRIORITY OVERNIGHT

60484
IL-US ORD



Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-159262-1

Login Number: 159262

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	3.4, 3.5
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	

Client: KPRG and Associates, Inc.

Job Number: 500-159262-1

Login Number: 159262

List Number: 3

Creator: Perez, Trina M

List Source: TestAmerica Pensacola

List Creation: 02/28/19 05:18 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
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.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.6°C IR-8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Chicago

2417 Bond Street

University Park, IL 60484

Tel: (708)534-5200

TestAmerica Job ID: 500-159262-2

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:

4/2/2019 2:17:40 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
Method Summary	4
Sample Summary	5
Client Sample Results	6
Definitions	10
QC Association	11
QC Sample Results	12
Chronicle	15
Certification Summary	16
Chain of Custody	17
Receipt Checklists	20
Tracer Carrier Summary	22



Case Narrative

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

TestAmerica Job ID: 500-159262-2

Job ID: 500-159262-2

Laboratory: TestAmerica Chicago

Narrative

Job Narrative 500-159262-2

Comments

No additional comments.

Receipt

The samples were received on 2/27/2019 10:20 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 3.4° C and 3.5° C.

RAD

Method(s) PrecSep_0: Radium 228 Prep Batch 160-418075:

The following sample was prepared at a reduced volume do to sediment: MW-10 (500-159262-4)

Method(s) PrecSep-21: Radium Prep Batch 160-418074:

The following sample was prepared at a reduced volume do to sediment. MW-10 (500-159262-4)

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

Method Summary

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

TestAmerica Job ID: 500-159262-2

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: 500-159262-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-159262-1	MW-02	Water	02/26/19 09:20	02/27/19 10:20
500-159262-2	MW-03	Water	02/26/19 10:55	02/27/19 10:20
500-159262-3	MW-04	Water	02/26/19 12:25	02/27/19 10:20
500-159262-4	MW-10	Water	02/26/19 14:45	02/27/19 10:20

Client Sample Results

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

TestAmerica Job ID: 500-159262-2

Client Sample ID: MW-02

Date Collected: 02/26/19 09:20

Date Received: 02/27/19 10:20

Lab Sample ID: 500-159262-1

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	0.144		0.0857	0.0867	1.00	0.105	pCi/L	03/06/19 09:41	03/28/19 07:27	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.3		40 - 110					03/06/19 09:41	03/28/19 07:27	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	-0.102	U	0.225	0.226	1.00	0.425	pCi/L	03/06/19 10:16	03/22/19 08:43	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.3		40 - 110					03/06/19 10:16	03/22/19 08:43	1
Y Carrier	80.7		40 - 110					03/06/19 10:16	03/22/19 08:43	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	0.0422	U	0.241	0.242	5.00	0.425	pCi/L		04/02/19 12:53	1

Client Sample Results

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

TestAmerica Job ID: 500-159262-2

Client Sample ID: MW-03

Date Collected: 02/26/19 10:55

Date Received: 02/27/19 10:20

Lab Sample ID: 500-159262-2

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	-0.00820	U	0.0489	0.0489	1.00	0.109	pCi/L	03/07/19 10:46	03/29/19 07:12	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.5		40 - 110					03/07/19 10:46	03/29/19 07:12	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	0.218	U	0.243	0.244	1.00	0.399	pCi/L	03/07/19 11:01	03/21/19 15:35	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.5		40 - 110					03/07/19 11:01	03/21/19 15:35	1
Y Carrier	84.1		40 - 110					03/07/19 11:01	03/21/19 15:35	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	0.210	U	0.248	0.249	5.00	0.399	pCi/L		04/02/19 12:53	1

Client Sample Results

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

TestAmerica Job ID: 500-159262-2

Client Sample ID: MW-04

Date Collected: 02/26/19 12:25

Date Received: 02/27/19 10:20

Lab Sample ID: 500-159262-3

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	0.0873		0.0638	0.0643	1.00	0.0857	pCi/L	03/07/19 10:46	03/29/19 07:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.9		40 - 110					03/07/19 10:46	03/29/19 07:13	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	0.219	0.221	1.00	0.344	pCi/L	03/07/19 11:01	03/21/19 15:35	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.9		40 - 110					03/07/19 11:01	03/21/19 15:35	1
Y Carrier	81.5		40 - 110					03/07/19 11:01	03/21/19 15:35	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	0.366		0.228	0.230	5.00	0.344	pCi/L		04/02/19 12:53	1

Client Sample Results

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

TestAmerica Job ID: 500-159262-2

Client Sample ID: MW-10

Date Collected: 02/26/19 14:45

Date Received: 02/27/19 10:20

Lab Sample ID: 500-159262-4

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	1.56		0.309	0.340	1.00	0.196	pCi/L	03/07/19 10:46	03/29/19 07:13	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					03/07/19 10:46	03/29/19 07:13	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	2.57		0.566	0.614	1.00	0.631	pCi/L	03/07/19 11:01	03/21/19 15:33	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					03/07/19 11:01	03/21/19 15:33	1
Y Carrier	85.2		40 - 110					03/07/19 11:01	03/21/19 15:33	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	4.13		0.645	0.702	5.00	0.631	pCi/L		04/02/19 12:53	1

Definitions/Glossary

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

TestAmerica Job ID: 500-159262-2

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: 500-159262-2

Rad

Prep Batch: 417892

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-159262-1	MW-02	Total/NA	Water	PrecSep-21	
MB 160-417892/23-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-417892/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
500-159262-1 DU	MW-02	Total/NA	Water	PrecSep-21	

Prep Batch: 417898

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-159262-1	MW-02	Total/NA	Water	PrecSep_0	
MB 160-417898/23-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-417898/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
500-159262-1 DU	MW-02	Total/NA	Water	PrecSep_0	

Prep Batch: 418074

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-159262-2	MW-03	Total/NA	Water	PrecSep-21	
500-159262-3	MW-04	Total/NA	Water	PrecSep-21	
500-159262-4	MW-10	Total/NA	Water	PrecSep-21	
MB 160-418074/10-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-418074/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
500-159262-2 DU	MW-03	Total/NA	Water	PrecSep-21	

Prep Batch: 418075

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-159262-2	MW-03	Total/NA	Water	PrecSep_0	
500-159262-3	MW-04	Total/NA	Water	PrecSep_0	
500-159262-4	MW-10	Total/NA	Water	PrecSep_0	
MB 160-418075/10-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-418075/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
500-159262-2 DU	MW-03	Total/NA	Water	PrecSep_0	

QC Sample Results

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

TestAmerica Job ID: 500-159262-2

Method: 903.0 - Radium-226 (GFPC)

Lab Sample ID: MB 160-417892/23-A
Matrix: Water
Analysis Batch: 421605

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 417892

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.07501	U	0.0650	0.0654	1.00	0.0957	pCi/L	03/06/19 09:41	03/28/19 07:27	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.2		40 - 110					03/06/19 09:41	03/28/19 07:27	1

Lab Sample ID: LCS 160-417892/1-A
Matrix: Water
Analysis Batch: 421604

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 417892

Analyte		Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226		11.4	9.220		0.994	1.00	0.0779	pCi/L	81	68 - 137
Carrier	LCS %Yield	LCS Qualifier	Limits							
Ba Carrier	104		40 - 110							

Lab Sample ID: 500-159262-1 DU
Matrix: Water
Analysis Batch: 421605

Client Sample ID: MW-02
Prep Type: Total/NA
Prep Batch: 417892

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-226	0.144		0.07833	U	0.0672	1.00	0.0932	pCi/L	0.43	1
Carrier	DU %Yield	DU Qualifier	Limits							
Ba Carrier	92.9		40 - 110							

Lab Sample ID: MB 160-418074/10-A
Matrix: Water
Analysis Batch: 421795

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 418074

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.03039	U	0.0559	0.0560	1.00	0.0993	pCi/L	03/07/19 10:46	03/29/19 07:14	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	107		40 - 110					03/07/19 10:46	03/29/19 07:14	1

Lab Sample ID: LCS 160-418074/1-A
Matrix: Water
Analysis Batch: 421795

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 418074

Analyte		Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226		11.4	9.222		0.976	1.00	0.0686	pCi/L	81	68 - 137

TestAmerica Chicago

QC Sample Results

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

TestAmerica Job ID: 500-159262-2

Method: 903.0 - Radium-226 (GFPC) (Continued)

Lab Sample ID: LCS 160-418074/1-A
Matrix: Water
Analysis Batch: 421795

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 418074

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	110		40 - 110

Lab Sample ID: 500-159262-2 DU
Matrix: Water
Analysis Batch: 421795

Client Sample ID: MW-03
Prep Type: Total/NA
Prep Batch: 418074

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	Limit
Radium-226	-0.00820	U	0.04205	U	0.0613	1.00	0.105	pCi/L	0.46	1
Carrier	DU %Yield	DU Qualifier	Limits							
Ba Carrier	98.8		40 - 110							

Method: 904.0 - Radium-228 (GFPC)

Lab Sample ID: MB 160-417898/23-A
Matrix: Water
Analysis Batch: 420713

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 417898

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.03310	U	0.173	0.173	1.00	0.318	pCi/L	03/06/19 10:16	03/22/19 08:43	1
Carrier	MB %Yield	MB Qualifier	Limits							
Ba Carrier	98.2		40 - 110							
Y Carrier	92.3		40 - 110							

Lab Sample ID: LCS 160-417898/1-A
Matrix: Water
Analysis Batch: 420716

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 417898

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	9.37	9.437		1.06	1.00	0.301	pCi/L	101	56 - 140
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	104		40 - 110						
Y Carrier	87.1		40 - 110						

Lab Sample ID: 500-159262-1 DU
Matrix: Water
Analysis Batch: 420713

Client Sample ID: MW-02
Prep Type: Total/NA
Prep Batch: 417898

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	Limit
Radium-228	-0.102	U	0.4066	U	0.283	1.00	0.436	pCi/L	1.00	1

TestAmerica Chicago

QC Sample Results

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

TestAmerica Job ID: 500-159262-2

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

Lab Sample ID: 500-159262-1 DU
Matrix: Water
Analysis Batch: 420713

Client Sample ID: MW-02
Prep Type: Total/NA
Prep Batch: 417898

	DU	DU	
Carrier	%Yield	Qualifier	Limits
Ba Carrier	92.9		40 - 110
Y Carrier	81.5		40 - 110

Lab Sample ID: MB 160-418075/10-A
Matrix: Water
Analysis Batch: 420407

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 418075

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.1707	U	0.216	0.217	1.00	0.359	pCi/L	03/07/19 11:01	03/21/19 15:34	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	107		40 - 110					03/07/19 11:01	03/21/19 15:34	1
Y Carrier	74.0		40 - 110					03/07/19 11:01	03/21/19 15:34	1

Lab Sample ID: LCS 160-418075/1-A
Matrix: Water
Analysis Batch: 420408

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 418075

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	9.38	8.623		1.00	1.00	0.344	pCi/L	92	56 - 140
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	110		40 - 110						
Y Carrier	78.5		40 - 110						

Lab Sample ID: 500-159262-2 DU
Matrix: Water
Analysis Batch: 420408

Client Sample ID: MW-03
Prep Type: Total/NA
Prep Batch: 418075

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-228	0.218	U	0.2260	U	0.232	1.00	0.375	pCi/L	0.02	1
Carrier	DU %Yield	DU Qualifier	Limits							
Ba Carrier	98.8		40 - 110							
Y Carrier	83.0		40 - 110							

TestAmerica Chicago

Lab Chronicle

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

TestAmerica Job ID: 500-159262-2

Client Sample ID: MW-02

Date Collected: 02/26/19 09:20

Date Received: 02/27/19 10:20

Lab Sample ID: 500-159262-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			417892	03/06/19 09:41	LTC	TAL SL
Total/NA	Analysis	903.0		1	421605	03/28/19 07:27	CDR	TAL SL
Total/NA	Prep	PrecSep_0			417898	03/06/19 10:16	LTC	TAL SL
Total/NA	Analysis	904.0		1	420713	03/22/19 08:43	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	422405	04/02/19 12:53	ALS	TAL SL

Client Sample ID: MW-03

Date Collected: 02/26/19 10:55

Date Received: 02/27/19 10:20

Lab Sample ID: 500-159262-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			418074	03/07/19 10:46	LTC	TAL SL
Total/NA	Analysis	903.0		1	421795	03/29/19 07:12	KLS	TAL SL
Total/NA	Prep	PrecSep_0			418075	03/07/19 11:01	LTC	TAL SL
Total/NA	Analysis	904.0		1	420408	03/21/19 15:35	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	422405	04/02/19 12:53	ALS	TAL SL

Client Sample ID: MW-04

Date Collected: 02/26/19 12:25

Date Received: 02/27/19 10:20

Lab Sample ID: 500-159262-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			418074	03/07/19 10:46	LTC	TAL SL
Total/NA	Analysis	903.0		1	421795	03/29/19 07:13	KLS	TAL SL
Total/NA	Prep	PrecSep_0			418075	03/07/19 11:01	LTC	TAL SL
Total/NA	Analysis	904.0		1	420408	03/21/19 15:35	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	422405	04/02/19 12:53	ALS	TAL SL

Client Sample ID: MW-10

Date Collected: 02/26/19 14:45

Date Received: 02/27/19 10:20

Lab Sample ID: 500-159262-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			418074	03/07/19 10:46	LTC	TAL SL
Total/NA	Analysis	903.0		1	421795	03/29/19 07:13	KLS	TAL SL
Total/NA	Prep	PrecSep_0			418075	03/07/19 11:01	LTC	TAL SL
Total/NA	Analysis	904.0		1	420407	03/21/19 15:33	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	422405	04/02/19 12:53	ALS	TAL SL

Laboratory References:

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

TestAmerica Chicago

Accreditation/Certification Summary

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

TestAmerica Job ID: 500-159262-2

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	11-30-19

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

2417 Bond Street

Chain of Custody Record

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

University Park, IL 60484-3101
phone 708.534.5200 fax 708.534.5211

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

TestAmerica Laboratories, Inc.

[illegible]

ORIGIN ID:PIAA (000) 000-0000
TEST AMERICA
414 PLAZA DR STE 106
WESTMONT, IL 60559
UNITED STATES US

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ACTWGT: 47.00 LB
CAD: 006994779/SSFE1922
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BILL THIRD PARTY

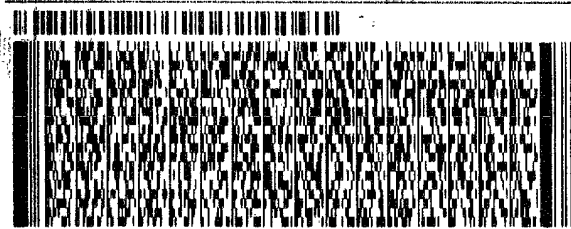
TO: ERIC LANG
TEST AMERICA
2417 BOND ST

UNIVERSITY PARK IL 60484

(700) 634-6200

REF:

DEPT:



FedEx
Express



Part # 156297-1082/11/18

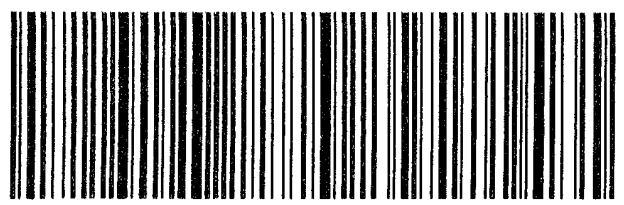
1 of 3
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MASTER

WED - 27 FEB 10:30A
PRIORITY OVERNIGHT

XH JOTA

60484

IL-US ORD



500-156262 Wayt

ORIGIN ID:PIAA (000) 000-0000
TEST AMERICA

SHIP DATE: 26FEB19
ACTWGT: 24.00 LB
CAD: 006994779/SSFE1922
DIMS: 18x15x10 IN

Part # 156297

2 of 3
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Mstr# 7857 1738 3280

XH JOTA

WED - 27 FEB 10:30A
PRIORITY OVERNIGHT

60484

IL-US ORD



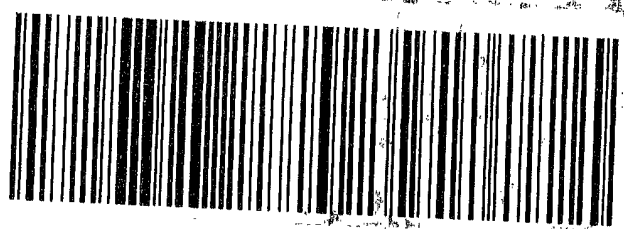
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MPS# 7857 1738 3306
0263
Mstr# 7857 1738 3280

XH JOTA

WED - 27 FEB 10:30A
PRIORITY OVERNIGHT

60484

IL-US ORD



Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-159262-2

Login Number: 159262

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	3.4, 3.5
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: 500-159262-2

Login Number: 159262

List Number: 2

Creator: Hellm, Michael

List Source: TestAmerica St. Louis

List Creation: 02/28/19 04:29 PM

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.	N/A	
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.	N/A	
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: 500-159262-2

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)	
500-159262-1	MW-02	90.3	
500-159262-1 DU	MW-02	92.9	
500-159262-2	MW-03	93.5	
500-159262-2 DU	MW-03	98.8	
500-159262-3	MW-04	95.9	
500-159262-4	MW-10	102	
LCS 160-417892/1-A	Lab Control Sample	104	
LCS 160-418074/1-A	Lab Control Sample	110	
MB 160-417892/23-A	Method Blank	98.2	
MB 160-418074/10-A	Method Blank	107	

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)
500-159262-1	MW-02	90.3	80.7
500-159262-1 DU	MW-02	92.9	81.5
500-159262-2	MW-03	93.5	84.1
500-159262-2 DU	MW-03	98.8	83.0
500-159262-3	MW-04	95.9	81.5
500-159262-4	MW-10	102	85.2
LCS 160-417898/1-A	Lab Control Sample	104	87.1
LCS 160-418075/1-A	Lab Control Sample	110	78.5
MB 160-417898/23-A	Method Blank	98.2	92.3
MB 160-418075/10-A	Method Blank	107	74.0

Tracer/Carrier Legend

Ba Carrier = Ba Carrier

Y Carrier = Y Carrier

ANALYTICAL REPORT

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

Laboratory Job ID: 500-162824-1
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:
5/22/2019 9:30:12 AM

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

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

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

Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Detection Summary	4
Method Summary	9
Sample Summary	10
Client Sample Results	11
Definitions	26
QC Association	27
QC Sample Results	32
Chronicle	40
Certification Summary	47
Chain of Custody	48
Receipt Checklists	54



Case Narrative

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

Job ID: 500-162824-1

Job ID: 500-162824-1

Laboratory: Eurofins TestAmerica, Chicago

Narrative

Job Narrative 500-162824-1

Comments

No additional comments.

Receipt

The samples were received on 5/4/2019 9:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 2.3° C, 3.7° C, 4.7° C and 5.3° C.

Metals

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

General Chemistry

Method(s) 375.4, SM 4500 SO4 E: Due to the concentration of sulfates in the parent sample, the MS/MSD was diluted after the spike. The spike amount was adjusted by the dilution factor.

(500-162824-F-13 MS) and (500-162824-F-13 MSD)

Method(s) 375.4, SM 4500 SO4 E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 400-440971 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) 375.4, SM 4500 SO4 E: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-03 (500-162824-3), MW-05 (500-162824-5), MW-09 (500-162824-7), MW-11 (500-162824-9), MW-12 (500-162824-10), MW-15 (500-162824-11), MW-17 (500-162824-12), MW-18 (500-162824-13), MW-19 (500-162824-14), Duplicate (500-162824-15), (500-162824-F-13 MS) and (500-162824-F-13 MSD). Elevated reporting limits (RLs) are provided.

Method(s) 375.4, SM 4500 SO4 E: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW-08 (500-162824-6). Elevated reporting limits (RLs) are provided.

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

Detection Summary

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

Job ID: 500-162824-1

Client Sample ID: MW-01

Lab Sample ID: 500-162824-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0014		0.0010		mg/L	1		6020A	Total Recoverable
Barium	0.039		0.0025		mg/L	1		6020A	Total Recoverable
Boron	0.070		0.050		mg/L	1		6020A	Total Recoverable
Calcium	78		0.20		mg/L	1		6020A	Total Recoverable
Lead	0.0017		0.00050		mg/L	1		6020A	Total Recoverable
Total Dissolved Solids	450		10		mg/L	1		SM 2540C	Total/NA
Chloride	54		2.0		mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.17		0.10		mg/L	1		SM 4500 F C	Total/NA
Sulfate	27		5.0		mg/L	1		SM 4500 SO4 E	Total/NA

Client Sample ID: MW-02

Lab Sample ID: 500-162824-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0013		0.0010		mg/L	1		6020A	Total Recoverable
Barium	0.048		0.0025		mg/L	1		6020A	Total Recoverable
Boron	0.12		0.050		mg/L	1		6020A	Total Recoverable
Calcium	79		0.20		mg/L	1		6020A	Total Recoverable
Total Dissolved Solids	440		10		mg/L	1		SM 2540C	Total/NA
Chloride	48		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	30		5.0		mg/L	1		SM 4500 SO4 E	Total/NA

Client Sample ID: MW-03

Lab Sample ID: 500-162824-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.060		0.0025		mg/L	1		6020A	Total Recoverable
Boron	0.28		0.050		mg/L	1		6020A	Total Recoverable
Calcium	74		0.20		mg/L	1		6020A	Total Recoverable
Total Dissolved Solids	390		10		mg/L	1		SM 2540C	Total/NA
Chloride	49		2.0		mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.22		0.10		mg/L	1		SM 4500 F C	Total/NA
Sulfate	38		10		mg/L	2		SM 4500 SO4 E	Total/NA

Client Sample ID: MW-04

Lab Sample ID: 500-162824-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.026		0.0025		mg/L	1		6020A	Total Recoverable
Boron	0.36		0.050		mg/L	1		6020A	Total Recoverable
Calcium	74		0.20		mg/L	1		6020A	Total Recoverable
Total Dissolved Solids	380		10		mg/L	1		SM 2540C	Total/NA
Chloride	48		2.0		mg/L	1		SM 4500 Cl- E	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Chicago

Detection Summary

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

Job ID: 500-162824-1

Client Sample ID: MW-04 (Continued)

Lab Sample ID: 500-162824-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.25		0.10		mg/L	1		SM 4500 F C	Total/NA
Sulfate	35		5.0		mg/L	1		SM 4500 SO4 E	Total/NA

Client Sample ID: MW-05

Lab Sample ID: 500-162824-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.041		0.0025		mg/L	1		6020A	Total Recoverable
Boron	0.56		0.050		mg/L	1		6020A	Total Recoverable
Calcium	84		0.20		mg/L	1		6020A	Total Recoverable
Molybdenum	0.0061		0.0050		mg/L	1		6020A	Total Recoverable
Total Dissolved Solids	590		10		mg/L	1		SM 2540C	Total/NA
Chloride	73		2.0		mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.36		0.10		mg/L	1		SM 4500 F C	Total/NA
Sulfate	120		25		mg/L	5		SM 4500 SO4 E	Total/NA

Client Sample ID: MW-08

Lab Sample ID: 500-162824-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lithium	0.021		0.010		mg/L	1		6010C	Total Recoverable
Arsenic	0.0018		0.0010		mg/L	1		6020A	Total Recoverable
Barium	0.068		0.0025		mg/L	1		6020A	Total Recoverable
Boron	0.54		0.050		mg/L	1		6020A	Total Recoverable
Calcium	95		0.20		mg/L	1		6020A	Total Recoverable
Molybdenum	0.0069		0.0050		mg/L	1		6020A	Total Recoverable
Total Dissolved Solids	600		10		mg/L	1		SM 2540C	Total/NA
Chloride	73		2.0		mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.35		0.10		mg/L	1		SM 4500 F C	Total/NA
Sulfate	85		25		mg/L	5		SM 4500 SO4 E	Total/NA

Client Sample ID: MW-09

Lab Sample ID: 500-162824-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.038		0.0025		mg/L	1		6020A	Total Recoverable
Boron	4.6		0.50		mg/L	10		6020A	Total Recoverable
Calcium	79		0.20		mg/L	1		6020A	Total Recoverable
Molybdenum	0.031		0.0050		mg/L	1		6020A	Total Recoverable
Selenium	0.0036		0.0025		mg/L	1		6020A	Total Recoverable
Total Dissolved Solids	640		10		mg/L	1		SM 2540C	Total/NA
Chloride	37		2.0		mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.17		0.10		mg/L	1		SM 4500 F C	Total/NA
Sulfate	170		25		mg/L	5		SM 4500 SO4 E	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Chicago

Detection Summary

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

Job ID: 500-162824-1

Client Sample ID: MW-10

Lab Sample ID: 500-162824-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0023		0.0010		mg/L	1		6020A	Total Recoverable
Barium	0.27		0.0025		mg/L	1		6020A	Total Recoverable
Boron	0.35		0.050		mg/L	1		6020A	Total Recoverable
Calcium	92		0.20		mg/L	1		6020A	Total Recoverable
Cobalt	0.011		0.0010		mg/L	1		6020A	Total Recoverable
Lead	0.0028		0.00050		mg/L	1		6020A	Total Recoverable
Selenium	0.0037		0.0025		mg/L	1		6020A	Total Recoverable
Total Dissolved Solids	470		10		mg/L	1		SM 2540C	Total/NA
Chloride	50		2.0		mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.22		0.10		mg/L	1		SM 4500 F C	Total/NA
Sulfate	30		5.0		mg/L	1		SM 4500 SO4 E	Total/NA

Client Sample ID: MW-11

Lab Sample ID: 500-162824-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.11		0.0010		mg/L	1		6020A	Total Recoverable
Barium	0.60		0.0025		mg/L	1		6020A	Total Recoverable
Boron	2.3		0.25		mg/L	5		6020A	Total Recoverable
Calcium	110		0.20		mg/L	1		6020A	Total Recoverable
Cobalt	0.0026		0.0010		mg/L	1		6020A	Total Recoverable
Lead	0.0011		0.00050		mg/L	1		6020A	Total Recoverable
Molybdenum	0.014		0.0050		mg/L	1		6020A	Total Recoverable
Total Dissolved Solids	730		10		mg/L	1		SM 2540C	Total/NA
Chloride	60		2.0		mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.62		0.10		mg/L	1		SM 4500 F C	Total/NA
Sulfate	200		50		mg/L	10		SM 4500 SO4 E	Total/NA

Client Sample ID: MW-12

Lab Sample ID: 500-162824-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lithium	0.014		0.010		mg/L	1		6010C	Total Recoverable
Arsenic	0.041		0.0010		mg/L	1		6020A	Total Recoverable
Barium	0.13		0.0025		mg/L	1		6020A	Total Recoverable
Boron	0.40		0.050		mg/L	1		6020A	Total Recoverable
Cadmium	0.00054		0.00050		mg/L	1		6020A	Total Recoverable
Calcium	100		0.20		mg/L	1		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Chicago

Detection Summary

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

Job ID: 500-162824-1

Client Sample ID: MW-12 (Continued)

Lab Sample ID: 500-162824-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.0012		0.00050		mg/L	1		6020A	Total Recoverable
Molybdenum	0.011		0.0050		mg/L	1		6020A	Total Recoverable
Total Dissolved Solids	1000		10		mg/L	1		SM 2540C	Total/NA
Chloride	170		10		mg/L	5		SM 4500 Cl- E	Total/NA
Fluoride	0.38		0.10		mg/L	1		SM 4500 F C	Total/NA
Sulfate	330		50		mg/L	10		SM 4500 SO4 E	Total/NA

Client Sample ID: MW-15

Lab Sample ID: 500-162824-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lithium	0.027		0.010		mg/L	1		6010C	Total Recoverable
Arsenic	0.0045		0.0010		mg/L	1		6020A	Total Recoverable
Barium	0.052		0.0025		mg/L	1		6020A	Total Recoverable
Boron	1.5		0.25		mg/L	5		6020A	Total Recoverable
Calcium	180		0.20		mg/L	1		6020A	Total Recoverable
Molybdenum	0.023		0.0050		mg/L	1		6020A	Total Recoverable
Total Dissolved Solids	1500		10		mg/L	1		SM 2540C	Total/NA
Chloride	200		10		mg/L	5		SM 4500 Cl- E	Total/NA
Fluoride	0.52		0.10		mg/L	1		SM 4500 F C	Total/NA
Sulfate	420		150		mg/L	30		SM 4500 SO4 E	Total/NA

Client Sample ID: MW-17

Lab Sample ID: 500-162824-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lithium	0.015		0.010		mg/L	1		6010C	Total Recoverable
Arsenic	0.042		0.0010		mg/L	1		6020A	Total Recoverable
Barium	0.040		0.0025		mg/L	1		6020A	Total Recoverable
Boron	0.98		0.050		mg/L	1		6020A	Total Recoverable
Cadmium	0.00052		0.00050		mg/L	1		6020A	Total Recoverable
Calcium	150		0.20		mg/L	1		6020A	Total Recoverable
Lead	0.00069		0.00050		mg/L	1		6020A	Total Recoverable
Molybdenum	0.060		0.0050		mg/L	1		6020A	Total Recoverable
Total Dissolved Solids	1500		10		mg/L	1		SM 2540C	Total/NA
Chloride	190		10		mg/L	5		SM 4500 Cl- E	Total/NA
Fluoride	0.66		0.10		mg/L	1		SM 4500 F C	Total/NA
Sulfate	660		150		mg/L	30		SM 4500 SO4 E	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Chicago

Detection Summary

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

Job ID: 500-162824-1

Client Sample ID: MW-18

Lab Sample ID: 500-162824-13

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	0.54		0.050		mg/L	1		6020A	Total Recoverable
Calcium	120		0.20		mg/L	1		6020A	Total Recoverable
Total Dissolved Solids	1000		10		mg/L	1		SM 2540C	Total/NA
Chloride	180		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	170		25		mg/L	5		SM 4500 SO4 E	Total/NA

Client Sample ID: MW-19

Lab Sample ID: 500-162824-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.076		0.0025		mg/L	1		6020A	Total Recoverable
Boron	3.7		0.50		mg/L	10		6020A	Total Recoverable
Calcium	100		0.20		mg/L	1		6020A	Total Recoverable
Molybdenum	0.031		0.0050		mg/L	1		6020A	Total Recoverable
Selenium	0.0035		0.0025		mg/L	1		6020A	Total Recoverable
Total Dissolved Solids	700		10		mg/L	1		SM 2540C	Total/NA
Chloride	39		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	160		25		mg/L	5		SM 4500 SO4 E	Total/NA

Client Sample ID: Duplicate

Lab Sample ID: 500-162824-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lithium	0.024		0.010		mg/L	1		6010C	Total Recoverable
Arsenic	0.0021		0.0010		mg/L	1		6020A	Total Recoverable
Barium	0.052		0.0025		mg/L	1		6020A	Total Recoverable
Boron	1.6		0.25		mg/L	5		6020A	Total Recoverable
Calcium	190		0.20		mg/L	1		6020A	Total Recoverable
Molybdenum	0.024		0.0050		mg/L	1		6020A	Total Recoverable
Total Dissolved Solids	1500		10		mg/L	1		SM 2540C	Total/NA
Chloride	200		10		mg/L	5		SM 4500 Cl- E	Total/NA
Fluoride	0.53		0.10		mg/L	1		SM 4500 F C	Total/NA
Sulfate	470		100		mg/L	20		SM 4500 SO4 E	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Chicago

Method Summary

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

Job ID: 500-162824-1

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

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Sample Summary

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

Job ID: 500-162824-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Assest ID
500-162824-1	MW-01	Water	04/30/19 13:25	05/04/19 09:30	
500-162824-2	MW-02	Water	04/30/19 09:45	05/04/19 09:30	
500-162824-3	MW-03	Water	04/30/19 10:50	05/04/19 09:30	
500-162824-4	MW-04	Water	04/30/19 11:40	05/04/19 09:30	
500-162824-5	MW-05	Water	04/30/19 12:30	05/04/19 09:30	
500-162824-6	MW-08	Water	05/01/19 15:35	05/04/19 09:30	
500-162824-7	MW-09	Water	05/01/19 13:15	05/04/19 09:30	
500-162824-8	MW-10	Water	05/01/19 09:30	05/04/19 09:30	
500-162824-9	MW-11	Water	05/01/19 10:25	05/04/19 09:30	
500-162824-10	MW-12	Water	05/01/19 11:55	05/04/19 09:30	
500-162824-11	MW-15	Water	05/02/19 12:15	05/04/19 09:30	
500-162824-12	MW-17	Water	04/29/19 15:20	05/04/19 09:30	
500-162824-13	MW-18	Water	04/29/19 14:25	05/04/19 09:30	
500-162824-14	MW-19	Water	05/02/19 10:30	05/04/19 09:30	
500-162824-15	Duplicate	Water	04/29/19 00:00	05/04/19 09:30	

Client Sample Results

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

Job ID: 500-162824-1

Client Sample ID: MW-01

Lab Sample ID: 500-162824-1

Date Collected: 04/30/19 13:25

Matrix: Water

Date Received: 05/04/19 09:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.010		0.010		mg/L		05/07/19 08:14	05/07/19 18:33	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		05/07/19 08:14	05/10/19 02:37	1
Arsenic	0.0014		0.0010		mg/L		05/07/19 08:14	05/10/19 02:37	1
Barium	0.039		0.0025		mg/L		05/07/19 08:14	05/10/19 02:37	1
Beryllium	<0.0010		0.0010		mg/L		05/07/19 08:14	05/10/19 18:00	1
Boron	0.070		0.050		mg/L		05/07/19 08:14	05/10/19 18:00	1
Cadmium	<0.00050		0.00050		mg/L		05/07/19 08:14	05/10/19 02:37	1
Calcium	78		0.20		mg/L		05/07/19 08:14	05/10/19 02:37	1
Chromium	<0.0050		0.0050		mg/L		05/07/19 08:14	05/10/19 02:37	1
Cobalt	<0.0010		0.0010		mg/L		05/07/19 08:14	05/10/19 02:37	1
Lead	0.0017		0.00050		mg/L		05/07/19 08:14	05/10/19 18:00	1
Molybdenum	<0.0050		0.0050		mg/L		05/07/19 08:14	05/10/19 02:37	1
Selenium	<0.0025		0.0025		mg/L		05/07/19 08:14	05/10/19 02:37	1
Thallium	<0.0020		0.0020		mg/L		05/07/19 08:14	05/10/19 02:37	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		05/15/19 10:20	05/16/19 08:22	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	450		10		mg/L			05/06/19 02:06	1
Chloride	54		2.0		mg/L			05/11/19 09:12	1
Fluoride	0.17		0.10		mg/L			05/11/19 13:06	1
Sulfate	27		5.0		mg/L			05/14/19 12:33	1

Client Sample Results

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

Job ID: 500-162824-1

Client Sample ID: MW-02

Date Collected: 04/30/19 09:45

Date Received: 05/04/19 09:30

Lab Sample ID: 500-162824-2

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		05/07/19 08:14	05/07/19 18:53	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		05/07/19 08:14	05/10/19 03:06	1
Arsenic	0.0013		0.0010		mg/L		05/07/19 08:14	05/10/19 03:06	1
Barium	0.048		0.0025		mg/L		05/07/19 08:14	05/10/19 03:06	1
Beryllium	<0.0010		0.0010		mg/L		05/07/19 08:14	05/10/19 18:30	1
Boron	0.12		0.050		mg/L		05/07/19 08:14	05/10/19 18:30	1
Cadmium	<0.00050		0.00050		mg/L		05/07/19 08:14	05/10/19 03:06	1
Calcium	79		0.20		mg/L		05/07/19 08:14	05/10/19 03:06	1
Chromium	<0.0050		0.0050		mg/L		05/07/19 08:14	05/10/19 03:06	1
Cobalt	<0.0010		0.0010		mg/L		05/07/19 08:14	05/10/19 03:06	1
Lead	<0.00050		0.00050		mg/L		05/07/19 08:14	05/10/19 18:30	1
Molybdenum	<0.0050		0.0050		mg/L		05/07/19 08:14	05/10/19 03:06	1
Selenium	<0.0025		0.0025		mg/L		05/07/19 08:14	05/10/19 03:06	1
Thallium	<0.0020		0.0020		mg/L		05/07/19 08:14	05/10/19 03:06	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		05/15/19 10:20	05/16/19 08:28	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	440		10		mg/L			05/06/19 02:12	1
Chloride	48		2.0		mg/L			05/11/19 09:12	1
Fluoride	0.16		0.10		mg/L			05/13/19 20:22	1
Sulfate	30		5.0		mg/L			05/14/19 12:33	1

Client Sample Results

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

Job ID: 500-162824-1

Client Sample ID: MW-03

Date Collected: 04/30/19 10:50

Date Received: 05/04/19 09:30

Lab Sample ID: 500-162824-3

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		05/07/19 08:14	05/07/19 18:57	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		05/07/19 08:14	05/10/19 03:10	1
Arsenic	<0.0010		0.0010		mg/L		05/07/19 08:14	05/10/19 03:10	1
Barium	0.060		0.0025		mg/L		05/07/19 08:14	05/10/19 03:10	1
Beryllium	<0.0010		0.0010		mg/L		05/07/19 08:14	05/10/19 18:34	1
Boron	0.28		0.050		mg/L		05/07/19 08:14	05/10/19 18:34	1
Cadmium	<0.00050		0.00050		mg/L		05/07/19 08:14	05/10/19 03:10	1
Calcium	74		0.20		mg/L		05/07/19 08:14	05/10/19 03:10	1
Chromium	<0.0050		0.0050		mg/L		05/07/19 08:14	05/10/19 03:10	1
Cobalt	<0.0010		0.0010		mg/L		05/07/19 08:14	05/10/19 03:10	1
Lead	<0.00050		0.00050		mg/L		05/07/19 08:14	05/10/19 18:34	1
Molybdenum	<0.0050		0.0050		mg/L		05/07/19 08:14	05/10/19 03:10	1
Selenium	<0.0025		0.0025		mg/L		05/07/19 08:14	05/10/19 03:10	1
Thallium	<0.0020		0.0020		mg/L		05/07/19 08:14	05/10/19 03:10	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		05/15/19 10:20	05/16/19 08:29	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	390		10		mg/L			05/06/19 02:14	1
Chloride	49		2.0		mg/L			05/17/19 22:02	1
Fluoride	0.22		0.10		mg/L			05/13/19 20:25	1
Sulfate	38		10		mg/L			05/14/19 13:57	2

Client Sample Results

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

Job ID: 500-162824-1

Client Sample ID: MW-04

Date Collected: 04/30/19 11:40

Date Received: 05/04/19 09:30

Lab Sample ID: 500-162824-4

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		05/07/19 08:14	05/07/19 19:01	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		05/07/19 08:14	05/10/19 03:14	1
Arsenic	<0.0010		0.0010		mg/L		05/07/19 08:14	05/10/19 03:14	1
Barium	0.026		0.0025		mg/L		05/07/19 08:14	05/10/19 03:14	1
Beryllium	<0.0010		0.0010		mg/L		05/07/19 08:14	05/10/19 18:38	1
Boron	0.36		0.050		mg/L		05/07/19 08:14	05/10/19 18:38	1
Cadmium	<0.00050		0.00050		mg/L		05/07/19 08:14	05/10/19 03:14	1
Calcium	74		0.20		mg/L		05/07/19 08:14	05/10/19 03:14	1
Chromium	<0.0050		0.0050		mg/L		05/07/19 08:14	05/10/19 03:14	1
Cobalt	<0.0010		0.0010		mg/L		05/07/19 08:14	05/10/19 03:14	1
Lead	<0.00050		0.00050		mg/L		05/07/19 08:14	05/10/19 18:38	1
Molybdenum	<0.0050		0.0050		mg/L		05/07/19 08:14	05/10/19 03:14	1
Selenium	<0.0025		0.0025		mg/L		05/07/19 08:14	05/10/19 03:14	1
Thallium	<0.0020		0.0020		mg/L		05/07/19 08:14	05/10/19 03:14	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		05/15/19 10:20	05/16/19 08:31	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	380		10		mg/L			05/06/19 02:17	1
Chloride	48		2.0		mg/L			05/17/19 22:03	1
Fluoride	0.25		0.10		mg/L			05/13/19 20:28	1
Sulfate	35		5.0		mg/L			05/14/19 12:40	1

Client Sample Results

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

Job ID: 500-162824-1

Client Sample ID: MW-05

Date Collected: 04/30/19 12:30

Date Received: 05/04/19 09:30

Lab Sample ID: 500-162824-5

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		05/07/19 08:14	05/07/19 19:05	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		05/07/19 08:14	05/10/19 03:19	1
Arsenic	<0.0010		0.0010		mg/L		05/07/19 08:14	05/10/19 03:19	1
Barium	0.041		0.0025		mg/L		05/07/19 08:14	05/10/19 03:19	1
Beryllium	<0.0010		0.0010		mg/L		05/07/19 08:14	05/10/19 18:42	1
Boron	0.56		0.050		mg/L		05/07/19 08:14	05/10/19 18:42	1
Cadmium	<0.00050		0.00050		mg/L		05/07/19 08:14	05/10/19 03:19	1
Calcium	84		0.20		mg/L		05/07/19 08:14	05/10/19 03:19	1
Chromium	<0.0050		0.0050		mg/L		05/07/19 08:14	05/10/19 03:19	1
Cobalt	<0.0010		0.0010		mg/L		05/07/19 08:14	05/10/19 03:19	1
Lead	<0.00050		0.00050		mg/L		05/07/19 08:14	05/10/19 18:42	1
Molybdenum	0.0061		0.0050		mg/L		05/07/19 08:14	05/10/19 03:19	1
Selenium	<0.0025		0.0025		mg/L		05/07/19 08:14	05/10/19 03:19	1
Thallium	<0.0020		0.0020		mg/L		05/07/19 08:14	05/10/19 03:19	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		05/15/19 10:20	05/16/19 08:32	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	590		10		mg/L			05/06/19 02:19	1
Chloride	73		2.0		mg/L			05/17/19 22:06	1
Fluoride	0.36		0.10		mg/L			05/13/19 20:31	1
Sulfate	120		25		mg/L			05/14/19 13:57	5

Client Sample Results

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

Job ID: 500-162824-1

Client Sample ID: MW-08

Date Collected: 05/01/19 15:35

Date Received: 05/04/19 09:30

Lab Sample ID: 500-162824-6

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.021		0.010		mg/L		05/07/19 08:14	05/07/19 19:09	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		05/07/19 08:14	05/10/19 03:23	1
Arsenic	0.0018		0.0010		mg/L		05/07/19 08:14	05/10/19 03:23	1
Barium	0.068		0.0025		mg/L		05/07/19 08:14	05/10/19 03:23	1
Beryllium	<0.0010		0.0010		mg/L		05/07/19 08:14	05/10/19 18:45	1
Boron	0.54		0.050		mg/L		05/07/19 08:14	05/10/19 18:45	1
Cadmium	<0.00050		0.00050		mg/L		05/07/19 08:14	05/10/19 03:23	1
Calcium	95		0.20		mg/L		05/07/19 08:14	05/10/19 03:23	1
Chromium	<0.0050		0.0050		mg/L		05/07/19 08:14	05/10/19 03:23	1
Cobalt	<0.0010		0.0010		mg/L		05/07/19 08:14	05/10/19 03:23	1
Lead	<0.00050		0.00050		mg/L		05/07/19 08:14	05/10/19 18:45	1
Molybdenum	0.0069		0.0050		mg/L		05/07/19 08:14	05/10/19 03:23	1
Selenium	<0.0025		0.0025		mg/L		05/07/19 08:14	05/10/19 03:23	1
Thallium	<0.0020		0.0020		mg/L		05/07/19 08:14	05/10/19 03:23	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		05/15/19 10:20	05/16/19 08:34	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	600		10		mg/L			05/06/19 02:22	1
Chloride	73		2.0		mg/L			05/17/19 22:06	1
Fluoride	0.35		0.10		mg/L			05/13/19 20:34	1
Sulfate	85		25		mg/L			05/16/19 11:37	5

Client Sample Results

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

Job ID: 500-162824-1

Client Sample ID: MW-09

Lab Sample ID: 500-162824-7

Date Collected: 05/01/19 13:15

Matrix: Water

Date Received: 05/04/19 09:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.010		0.010		mg/L		05/07/19 08:14	05/07/19 19:21	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		05/07/19 08:14	05/10/19 03:27	1
Arsenic	<0.0010		0.0010		mg/L		05/07/19 08:14	05/10/19 03:27	1
Barium	0.038		0.0025		mg/L		05/07/19 08:14	05/10/19 03:27	1
Beryllium	<0.0010		0.0010		mg/L		05/07/19 08:14	05/10/19 19:42	1
Boron	4.6		0.50		mg/L		05/07/19 08:14	05/10/19 18:49	10
Cadmium	<0.00050		0.00050		mg/L		05/07/19 08:14	05/10/19 03:27	1
Calcium	79		0.20		mg/L		05/07/19 08:14	05/10/19 03:27	1
Chromium	<0.0050		0.0050		mg/L		05/07/19 08:14	05/10/19 03:27	1
Cobalt	<0.0010		0.0010		mg/L		05/07/19 08:14	05/10/19 03:27	1
Lead	<0.00050		0.00050		mg/L		05/07/19 08:14	05/10/19 19:42	1
Molybdenum	0.031		0.0050		mg/L		05/07/19 08:14	05/10/19 03:27	1
Selenium	0.0036		0.0025		mg/L		05/07/19 08:14	05/10/19 03:27	1
Thallium	<0.0020		0.0020		mg/L		05/07/19 08:14	05/10/19 03:27	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		05/15/19 10:20	05/16/19 08:40	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	640		10		mg/L			05/06/19 02:25	1
Chloride	37		2.0		mg/L			05/17/19 20:32	1
Fluoride	0.17		0.10		mg/L			05/13/19 20:38	1
Sulfate	170		25		mg/L			05/14/19 14:02	5

Client Sample Results

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

Job ID: 500-162824-1

Client Sample ID: MW-10

Date Collected: 05/01/19 09:30

Date Received: 05/04/19 09:30

Lab Sample ID: 500-162824-8

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		05/07/19 08:14	05/07/19 19:25	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		05/07/19 08:14	05/10/19 03:39	1
Arsenic	0.0023		0.0010		mg/L		05/07/19 08:14	05/10/19 03:39	1
Barium	0.27		0.0025		mg/L		05/07/19 08:14	05/10/19 03:39	1
Beryllium	<0.0010		0.0010		mg/L		05/07/19 08:14	05/10/19 19:00	1
Boron	0.35		0.050		mg/L		05/07/19 08:14	05/10/19 19:00	1
Cadmium	<0.00050		0.00050		mg/L		05/07/19 08:14	05/10/19 03:39	1
Calcium	92		0.20		mg/L		05/07/19 08:14	05/10/19 03:39	1
Chromium	<0.0050		0.0050		mg/L		05/07/19 08:14	05/10/19 03:39	1
Cobalt	0.011		0.0010		mg/L		05/07/19 08:14	05/10/19 03:39	1
Lead	0.0028		0.00050		mg/L		05/07/19 08:14	05/10/19 19:00	1
Molybdenum	<0.0050		0.0050		mg/L		05/07/19 08:14	05/10/19 03:39	1
Selenium	0.0037		0.0025		mg/L		05/07/19 08:14	05/10/19 03:39	1
Thallium	<0.0020		0.0020		mg/L		05/07/19 08:14	05/10/19 03:39	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		05/15/19 10:20	05/16/19 08:42	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	470		10		mg/L			05/06/19 02:27	1
Chloride	50		2.0		mg/L			05/17/19 20:32	1
Fluoride	0.22		0.10		mg/L			05/13/19 20:41	1
Sulfate	30		5.0		mg/L			05/14/19 12:40	1

Client Sample Results

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

Job ID: 500-162824-1

Client Sample ID: MW-11

Lab Sample ID: 500-162824-9

Date Collected: 05/01/19 10:25

Matrix: Water

Date Received: 05/04/19 09:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.010		0.010		mg/L		05/07/19 08:14	05/07/19 19:29	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		05/07/19 08:14	05/10/19 03:44	1
Arsenic	0.11		0.0010		mg/L		05/07/19 08:14	05/10/19 03:44	1
Barium	0.60		0.0025		mg/L		05/07/19 08:14	05/10/19 03:44	1
Beryllium	<0.0010		0.0010		mg/L		05/07/19 08:14	05/10/19 19:46	1
Boron	2.3		0.25		mg/L		05/07/19 08:14	05/10/19 19:04	5
Cadmium	<0.00050		0.00050		mg/L		05/07/19 08:14	05/10/19 03:44	1
Calcium	110		0.20		mg/L		05/07/19 08:14	05/10/19 03:44	1
Chromium	<0.0050		0.0050		mg/L		05/07/19 08:14	05/10/19 03:44	1
Cobalt	0.0026		0.0010		mg/L		05/07/19 08:14	05/10/19 03:44	1
Lead	0.0011		0.00050		mg/L		05/07/19 08:14	05/10/19 19:46	1
Molybdenum	0.014		0.0050		mg/L		05/07/19 08:14	05/10/19 03:44	1
Selenium	<0.0025		0.0025		mg/L		05/07/19 08:14	05/10/19 03:44	1
Thallium	<0.0020		0.0020		mg/L		05/07/19 08:14	05/10/19 03:44	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		05/15/19 10:20	05/16/19 08:48	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	730		10		mg/L			05/06/19 02:30	1
Chloride	60		2.0		mg/L			05/17/19 20:33	1
Fluoride	0.62		0.10		mg/L			05/13/19 20:45	1
Sulfate	200		50		mg/L			05/14/19 14:06	10

Client Sample Results

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

Job ID: 500-162824-1

Client Sample ID: MW-12

Lab Sample ID: 500-162824-10

Date Collected: 05/01/19 11:55

Matrix: Water

Date Received: 05/04/19 09:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.014		0.010		mg/L		05/07/19 08:14	05/07/19 19:33	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		05/07/19 08:14	05/10/19 03:48	1
Arsenic	0.041		0.0010		mg/L		05/07/19 08:14	05/10/19 03:48	1
Barium	0.13		0.0025		mg/L		05/07/19 08:14	05/10/19 03:48	1
Beryllium	<0.0010		0.0010		mg/L		05/07/19 08:14	05/10/19 19:08	1
Boron	0.40		0.050		mg/L		05/07/19 08:14	05/10/19 19:08	1
Cadmium	0.00054		0.00050		mg/L		05/07/19 08:14	05/10/19 03:48	1
Calcium	100		0.20		mg/L		05/07/19 08:14	05/10/19 03:48	1
Chromium	<0.0050		0.0050		mg/L		05/07/19 08:14	05/10/19 03:48	1
Cobalt	<0.0010		0.0010		mg/L		05/07/19 08:14	05/10/19 03:48	1
Lead	0.0012		0.00050		mg/L		05/07/19 08:14	05/10/19 19:08	1
Molybdenum	0.011		0.0050		mg/L		05/07/19 08:14	05/10/19 03:48	1
Selenium	<0.0025		0.0025		mg/L		05/07/19 08:14	05/10/19 03:48	1
Thallium	<0.0020		0.0020		mg/L		05/07/19 08:14	05/10/19 03:48	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		05/15/19 10:20	05/16/19 08:49	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1000		10		mg/L			05/06/19 02:32	1
Chloride	170		10		mg/L			05/17/19 20:57	5
Fluoride	0.38		0.10		mg/L			05/13/19 20:57	1
Sulfate	330		50		mg/L			05/14/19 14:06	10

Client Sample Results

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

Job ID: 500-162824-1

Client Sample ID: MW-15

Lab Sample ID: 500-162824-11

Date Collected: 05/02/19 12:15

Matrix: Water

Date Received: 05/04/19 09:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.027		0.010		mg/L		05/07/19 08:14	05/07/19 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		05/07/19 08:14	05/10/19 03:52	1
Arsenic	0.0045		0.0010		mg/L		05/07/19 08:14	05/10/19 03:52	1
Barium	0.052		0.0025		mg/L		05/07/19 08:14	05/10/19 03:52	1
Beryllium	<0.0010		0.0010		mg/L		05/07/19 08:14	05/10/19 19:49	1
Boron	1.5		0.25		mg/L		05/07/19 08:14	05/10/19 19:12	5
Cadmium	<0.00050		0.00050		mg/L		05/07/19 08:14	05/10/19 03:52	1
Calcium	180		0.20		mg/L		05/07/19 08:14	05/10/19 03:52	1
Chromium	<0.0050		0.0050		mg/L		05/07/19 08:14	05/10/19 03:52	1
Cobalt	<0.0010		0.0010		mg/L		05/07/19 08:14	05/10/19 03:52	1
Lead	<0.00050		0.00050		mg/L		05/07/19 08:14	05/10/19 19:49	1
Molybdenum	0.023		0.0050		mg/L		05/07/19 08:14	05/10/19 03:52	1
Selenium	<0.0025		0.0025		mg/L		05/07/19 08:14	05/10/19 03:52	1
Thallium	<0.0020		0.0020		mg/L		05/07/19 08:14	05/10/19 03:52	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		05/15/19 10:20	05/16/19 08:51	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1500		10		mg/L			05/06/19 02:35	1
Chloride	200		10		mg/L			05/17/19 22:57	5
Fluoride	0.52		0.10		mg/L			05/13/19 21:00	1
Sulfate	420		150		mg/L			05/14/19 17:14	30

Client Sample Results

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

Job ID: 500-162824-1

Client Sample ID: MW-17

Lab Sample ID: 500-162824-12

Date Collected: 04/29/19 15:20

Matrix: Water

Date Received: 05/04/19 09:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.015		0.010		mg/L		05/07/19 08:14	05/07/19 19:42	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		05/07/19 08:14	05/10/19 03:56	1
Arsenic	0.042		0.0010		mg/L		05/07/19 08:14	05/10/19 03:56	1
Barium	0.040		0.0025		mg/L		05/07/19 08:14	05/10/19 03:56	1
Beryllium	<0.0010		0.0010		mg/L		05/07/19 08:14	05/10/19 19:16	1
Boron	0.98		0.050		mg/L		05/07/19 08:14	05/10/19 19:16	1
Cadmium	0.00052		0.00050		mg/L		05/07/19 08:14	05/10/19 03:56	1
Calcium	150		0.20		mg/L		05/07/19 08:14	05/10/19 03:56	1
Chromium	<0.0050		0.0050		mg/L		05/07/19 08:14	05/10/19 03:56	1
Cobalt	<0.0010		0.0010		mg/L		05/07/19 08:14	05/10/19 03:56	1
Lead	0.00069		0.00050		mg/L		05/07/19 08:14	05/10/19 19:16	1
Molybdenum	0.060		0.0050		mg/L		05/07/19 08:14	05/10/19 03:56	1
Selenium	<0.0025		0.0025		mg/L		05/07/19 08:14	05/10/19 03:56	1
Thallium	<0.0020		0.0020		mg/L		05/07/19 08:14	05/10/19 03:56	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		05/15/19 10:20	05/16/19 08:52	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1500		10		mg/L			05/06/19 02:37	1
Chloride	190		10		mg/L			05/17/19 22:57	5
Fluoride	0.66		0.10		mg/L			05/13/19 21:04	1
Sulfate	660		150		mg/L			05/15/19 10:19	30

Client Sample Results

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

Job ID: 500-162824-1

Client Sample ID: MW-18

Date Collected: 04/29/19 14:25

Date Received: 05/04/19 09:30

Lab Sample ID: 500-162824-13

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		05/07/19 08:14	05/07/19 19:46	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		05/07/19 08:14	05/10/19 04:00	1
Arsenic	<0.0010		0.0010		mg/L		05/07/19 08:14	05/10/19 04:00	1
Barium	0.12		0.0025		mg/L		05/07/19 08:14	05/10/19 04:00	1
Beryllium	<0.0010		0.0010		mg/L		05/07/19 08:14	05/10/19 19:19	1
Boron	0.54		0.050		mg/L		05/07/19 08:14	05/10/19 19:19	1
Cadmium	<0.00050		0.00050		mg/L		05/07/19 08:14	05/10/19 04:00	1
Calcium	120		0.20		mg/L		05/07/19 08:14	05/10/19 04:00	1
Chromium	<0.0050		0.0050		mg/L		05/07/19 08:14	05/10/19 04:00	1
Cobalt	<0.0010		0.0010		mg/L		05/07/19 08:14	05/10/19 04:00	1
Lead	<0.00050		0.00050		mg/L		05/07/19 08:14	05/10/19 19:19	1
Molybdenum	<0.0050		0.0050		mg/L		05/07/19 08:14	05/10/19 04:00	1
Selenium	<0.0025		0.0025		mg/L		05/07/19 08:14	05/10/19 04:00	1
Thallium	<0.0020		0.0020		mg/L		05/07/19 08:14	05/10/19 04:00	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		05/15/19 10:20	05/16/19 08:54	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1000		10		mg/L			05/06/19 02:40	1
Chloride	180		10		mg/L			05/17/19 20:56	5
Fluoride	0.61		0.10		mg/L			05/13/19 21:07	1
Sulfate	170		25		mg/L			05/14/19 14:02	5

Client Sample Results

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

Job ID: 500-162824-1

Client Sample ID: MW-19

Lab Sample ID: 500-162824-14

Date Collected: 05/02/19 10:30

Matrix: Water

Date Received: 05/04/19 09:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.010		0.010		mg/L		05/07/19 08:14	05/07/19 19:50	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		05/07/19 08:14	05/10/19 04:04	1
Arsenic	<0.0010		0.0010		mg/L		05/07/19 08:14	05/10/19 04:04	1
Barium	0.076		0.0025		mg/L		05/07/19 08:14	05/10/19 04:04	1
Beryllium	<0.0010		0.0010		mg/L		05/07/19 08:14	05/10/19 19:53	1
Boron	3.7		0.50		mg/L		05/07/19 08:14	05/10/19 19:23	10
Cadmium	<0.00050		0.00050		mg/L		05/07/19 08:14	05/10/19 04:04	1
Calcium	100		0.20		mg/L		05/07/19 08:14	05/10/19 04:04	1
Chromium	<0.0050		0.0050		mg/L		05/07/19 08:14	05/10/19 04:04	1
Cobalt	<0.0010		0.0010		mg/L		05/07/19 08:14	05/10/19 04:04	1
Lead	<0.00050		0.00050		mg/L		05/07/19 08:14	05/10/19 19:53	1
Molybdenum	0.031		0.0050		mg/L		05/07/19 08:14	05/10/19 04:04	1
Selenium	0.0035		0.0025		mg/L		05/07/19 08:14	05/10/19 04:04	1
Thallium	<0.0020		0.0020		mg/L		05/07/19 08:14	05/10/19 04:04	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		05/15/19 10:20	05/16/19 08:55	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	700		10		mg/L			05/06/19 02:43	1
Chloride	39		2.0		mg/L			05/17/19 20:27	1
Fluoride	0.13		0.10		mg/L			05/13/19 21:10	1
Sulfate	160		25		mg/L			05/14/19 14:06	5

Client Sample Results

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

Job ID: 500-162824-1

Client Sample ID: Duplicate

Lab Sample ID: 500-162824-15

Date Collected: 04/29/19 00:00

Matrix: Water

Date Received: 05/04/19 09:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.024		0.010		mg/L		05/07/19 08:14	05/07/19 19:54	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		05/07/19 08:14	05/10/19 04:08	1
Arsenic	0.0021		0.0010		mg/L		05/07/19 08:14	05/10/19 04:08	1
Barium	0.052		0.0025		mg/L		05/07/19 08:14	05/10/19 04:08	1
Beryllium	<0.0010		0.0010		mg/L		05/07/19 08:14	05/10/19 19:57	1
Boron	1.6		0.25		mg/L		05/07/19 08:14	05/10/19 19:27	5
Cadmium	<0.00050		0.00050		mg/L		05/07/19 08:14	05/10/19 04:08	1
Calcium	190		0.20		mg/L		05/07/19 08:14	05/10/19 04:08	1
Chromium	<0.0050		0.0050		mg/L		05/07/19 08:14	05/10/19 04:08	1
Cobalt	<0.0010		0.0010		mg/L		05/07/19 08:14	05/10/19 04:08	1
Lead	<0.00050		0.00050		mg/L		05/07/19 08:14	05/10/19 19:57	1
Molybdenum	0.024		0.0050		mg/L		05/07/19 08:14	05/10/19 04:08	1
Selenium	<0.0025		0.0025		mg/L		05/07/19 08:14	05/10/19 04:08	1
Thallium	<0.0020		0.0020		mg/L		05/07/19 08:14	05/10/19 04:08	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		05/15/19 10:20	05/16/19 08:57	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1500		10		mg/L			05/06/19 02:45	1
Chloride	200		10		mg/L			05/17/19 20:56	5
Fluoride	0.53		0.10		mg/L			05/13/19 21:12	1
Sulfate	470		100		mg/L			05/15/19 10:19	20

Definitions/Glossary

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

Job ID: 500-162824-1

Qualifiers

Metals

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

General Chemistry

Qualifier	Qualifier Description
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

Job ID: 500-162824-1

Metals

Prep Batch: 483975

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-162824-1	MW-01	Total Recoverable	Water	3005A	
500-162824-2	MW-02	Total Recoverable	Water	3005A	
500-162824-3	MW-03	Total Recoverable	Water	3005A	
500-162824-4	MW-04	Total Recoverable	Water	3005A	
500-162824-5	MW-05	Total Recoverable	Water	3005A	
500-162824-6	MW-08	Total Recoverable	Water	3005A	
500-162824-7	MW-09	Total Recoverable	Water	3005A	
500-162824-8	MW-10	Total Recoverable	Water	3005A	
500-162824-9	MW-11	Total Recoverable	Water	3005A	
500-162824-10	MW-12	Total Recoverable	Water	3005A	
500-162824-11	MW-15	Total Recoverable	Water	3005A	
500-162824-12	MW-17	Total Recoverable	Water	3005A	
500-162824-13	MW-18	Total Recoverable	Water	3005A	
500-162824-14	MW-19	Total Recoverable	Water	3005A	
500-162824-15	Duplicate	Total Recoverable	Water	3005A	
MB 500-483975/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-483975/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
500-162824-1 MS	MW-01	Total Recoverable	Water	3005A	
500-162824-1 MSD	MW-01	Total Recoverable	Water	3005A	
500-162824-1 DU	MW-01	Total Recoverable	Water	3005A	

Analysis Batch: 484171

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-162824-1	MW-01	Total Recoverable	Water	6010C	483975
500-162824-2	MW-02	Total Recoverable	Water	6010C	483975
500-162824-3	MW-03	Total Recoverable	Water	6010C	483975
500-162824-4	MW-04	Total Recoverable	Water	6010C	483975
500-162824-5	MW-05	Total Recoverable	Water	6010C	483975
500-162824-6	MW-08	Total Recoverable	Water	6010C	483975
500-162824-7	MW-09	Total Recoverable	Water	6010C	483975
500-162824-8	MW-10	Total Recoverable	Water	6010C	483975
500-162824-9	MW-11	Total Recoverable	Water	6010C	483975
500-162824-10	MW-12	Total Recoverable	Water	6010C	483975
500-162824-11	MW-15	Total Recoverable	Water	6010C	483975
500-162824-12	MW-17	Total Recoverable	Water	6010C	483975
500-162824-13	MW-18	Total Recoverable	Water	6010C	483975
500-162824-14	MW-19	Total Recoverable	Water	6010C	483975
500-162824-15	Duplicate	Total Recoverable	Water	6010C	483975
MB 500-483975/1-A	Method Blank	Total Recoverable	Water	6010C	483975
LCS 500-483975/2-A	Lab Control Sample	Total Recoverable	Water	6010C	483975
500-162824-1 MS	MW-01	Total Recoverable	Water	6010C	483975
500-162824-1 MSD	MW-01	Total Recoverable	Water	6010C	483975
500-162824-1 DU	MW-01	Total Recoverable	Water	6010C	483975

Analysis Batch: 484720

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-162824-1	MW-01	Total Recoverable	Water	6020A	483975
500-162824-2	MW-02	Total Recoverable	Water	6020A	483975
500-162824-3	MW-03	Total Recoverable	Water	6020A	483975
500-162824-4	MW-04	Total Recoverable	Water	6020A	483975
500-162824-5	MW-05	Total Recoverable	Water	6020A	483975

Eurofins TestAmerica, Chicago

QC Association Summary

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

Job ID: 500-162824-1

Metals (Continued)

Analysis Batch: 484720 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-162824-6	MW-08	Total Recoverable	Water	6020A	483975
500-162824-7	MW-09	Total Recoverable	Water	6020A	483975
500-162824-8	MW-10	Total Recoverable	Water	6020A	483975
500-162824-9	MW-11	Total Recoverable	Water	6020A	483975
500-162824-10	MW-12	Total Recoverable	Water	6020A	483975
500-162824-11	MW-15	Total Recoverable	Water	6020A	483975
500-162824-12	MW-17	Total Recoverable	Water	6020A	483975
500-162824-13	MW-18	Total Recoverable	Water	6020A	483975
500-162824-14	MW-19	Total Recoverable	Water	6020A	483975
500-162824-15	Duplicate	Total Recoverable	Water	6020A	483975
MB 500-483975/1-A	Method Blank	Total Recoverable	Water	6020A	483975
LCS 500-483975/2-A	Lab Control Sample	Total Recoverable	Water	6020A	483975
500-162824-1 MS	MW-01	Total Recoverable	Water	6020A	483975
500-162824-1 MSD	MW-01	Total Recoverable	Water	6020A	483975
500-162824-1 DU	MW-01	Total Recoverable	Water	6020A	483975

Analysis Batch: 484965

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-162824-1	MW-01	Total Recoverable	Water	6020A	483975
500-162824-2	MW-02	Total Recoverable	Water	6020A	483975
500-162824-3	MW-03	Total Recoverable	Water	6020A	483975
500-162824-4	MW-04	Total Recoverable	Water	6020A	483975
500-162824-5	MW-05	Total Recoverable	Water	6020A	483975
500-162824-6	MW-08	Total Recoverable	Water	6020A	483975
500-162824-7	MW-09	Total Recoverable	Water	6020A	483975
500-162824-7	MW-09	Total Recoverable	Water	6020A	483975
500-162824-8	MW-10	Total Recoverable	Water	6020A	483975
500-162824-9	MW-11	Total Recoverable	Water	6020A	483975
500-162824-9	MW-11	Total Recoverable	Water	6020A	483975
500-162824-10	MW-12	Total Recoverable	Water	6020A	483975
500-162824-11	MW-15	Total Recoverable	Water	6020A	483975
500-162824-11	MW-15	Total Recoverable	Water	6020A	483975
500-162824-12	MW-17	Total Recoverable	Water	6020A	483975
500-162824-13	MW-18	Total Recoverable	Water	6020A	483975
500-162824-14	MW-19	Total Recoverable	Water	6020A	483975
500-162824-14	MW-19	Total Recoverable	Water	6020A	483975
500-162824-15	Duplicate	Total Recoverable	Water	6020A	483975
500-162824-15	Duplicate	Total Recoverable	Water	6020A	483975
MB 500-483975/1-A	Method Blank	Total Recoverable	Water	6020A	483975
LCS 500-483975/2-A	Lab Control Sample	Total Recoverable	Water	6020A	483975
500-162824-1 MS	MW-01	Total Recoverable	Water	6020A	483975
500-162824-1 MSD	MW-01	Total Recoverable	Water	6020A	483975
500-162824-1 DU	MW-01	Total Recoverable	Water	6020A	483975

Prep Batch: 485450

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-162824-1	MW-01	Total/NA	Water	7470A	
500-162824-2	MW-02	Total/NA	Water	7470A	
500-162824-3	MW-03	Total/NA	Water	7470A	
500-162824-4	MW-04	Total/NA	Water	7470A	
500-162824-5	MW-05	Total/NA	Water	7470A	

Eurofins TestAmerica, Chicago

QC Association Summary

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

Job ID: 500-162824-1

Metals (Continued)

Prep Batch: 485450 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-162824-6	MW-08	Total/NA	Water	7470A	
500-162824-7	MW-09	Total/NA	Water	7470A	
500-162824-8	MW-10	Total/NA	Water	7470A	
500-162824-9	MW-11	Total/NA	Water	7470A	
500-162824-10	MW-12	Total/NA	Water	7470A	
500-162824-11	MW-15	Total/NA	Water	7470A	
500-162824-12	MW-17	Total/NA	Water	7470A	
500-162824-13	MW-18	Total/NA	Water	7470A	
500-162824-14	MW-19	Total/NA	Water	7470A	
500-162824-15	Duplicate	Total/NA	Water	7470A	
MB 500-485450/12-A	Method Blank	Total/NA	Water	7470A	
LCS 500-485450/13-A	Lab Control Sample	Total/NA	Water	7470A	
500-162824-6 MS	MW-08	Total/NA	Water	7470A	
500-162824-6 MSD	MW-08	Total/NA	Water	7470A	
500-162824-6 DU	MW-08	Total/NA	Water	7470A	

Analysis Batch: 485704

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-162824-1	MW-01	Total/NA	Water	7470A	485450
500-162824-2	MW-02	Total/NA	Water	7470A	485450
500-162824-3	MW-03	Total/NA	Water	7470A	485450
500-162824-4	MW-04	Total/NA	Water	7470A	485450
500-162824-5	MW-05	Total/NA	Water	7470A	485450
500-162824-6	MW-08	Total/NA	Water	7470A	485450
500-162824-7	MW-09	Total/NA	Water	7470A	485450
500-162824-8	MW-10	Total/NA	Water	7470A	485450
500-162824-9	MW-11	Total/NA	Water	7470A	485450
500-162824-10	MW-12	Total/NA	Water	7470A	485450
500-162824-11	MW-15	Total/NA	Water	7470A	485450
500-162824-12	MW-17	Total/NA	Water	7470A	485450
500-162824-13	MW-18	Total/NA	Water	7470A	485450
500-162824-14	MW-19	Total/NA	Water	7470A	485450
500-162824-15	Duplicate	Total/NA	Water	7470A	485450
MB 500-485450/12-A	Method Blank	Total/NA	Water	7470A	485450
LCS 500-485450/13-A	Lab Control Sample	Total/NA	Water	7470A	485450
500-162824-6 MS	MW-08	Total/NA	Water	7470A	485450
500-162824-6 MSD	MW-08	Total/NA	Water	7470A	485450
500-162824-6 DU	MW-08	Total/NA	Water	7470A	485450

General Chemistry

Analysis Batch: 440971

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-162824-1	MW-01	Total/NA	Water	SM 4500 SO4 E	
500-162824-2	MW-02	Total/NA	Water	SM 4500 SO4 E	
500-162824-3	MW-03	Total/NA	Water	SM 4500 SO4 E	
500-162824-4	MW-04	Total/NA	Water	SM 4500 SO4 E	
500-162824-5	MW-05	Total/NA	Water	SM 4500 SO4 E	
500-162824-7	MW-09	Total/NA	Water	SM 4500 SO4 E	
500-162824-8	MW-10	Total/NA	Water	SM 4500 SO4 E	
500-162824-9	MW-11	Total/NA	Water	SM 4500 SO4 E	

Eurofins TestAmerica, Chicago

QC Association Summary

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

Job ID: 500-162824-1

General Chemistry (Continued)

Analysis Batch: 440971 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-162824-10	MW-12	Total/NA	Water	SM 4500 SO4 E	
500-162824-11	MW-15	Total/NA	Water	SM 4500 SO4 E	
500-162824-12	MW-17	Total/NA	Water	SM 4500 SO4 E	
500-162824-13	MW-18	Total/NA	Water	SM 4500 SO4 E	
500-162824-14	MW-19	Total/NA	Water	SM 4500 SO4 E	
500-162824-15	Duplicate	Total/NA	Water	SM 4500 SO4 E	
MB 400-440971/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-440971/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-440971/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
500-162824-13 MS	MW-18	Total/NA	Water	SM 4500 SO4 E	
500-162824-13 MSD	MW-18	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 441150

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-162824-6	MW-08	Total/NA	Water	SM 4500 SO4 E	
MB 400-441150/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-441150/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-441150/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 483709

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-162824-1	MW-01	Total/NA	Water	SM 2540C	
500-162824-2	MW-02	Total/NA	Water	SM 2540C	
500-162824-3	MW-03	Total/NA	Water	SM 2540C	
500-162824-4	MW-04	Total/NA	Water	SM 2540C	
500-162824-5	MW-05	Total/NA	Water	SM 2540C	
500-162824-6	MW-08	Total/NA	Water	SM 2540C	
500-162824-7	MW-09	Total/NA	Water	SM 2540C	
500-162824-8	MW-10	Total/NA	Water	SM 2540C	
500-162824-9	MW-11	Total/NA	Water	SM 2540C	
500-162824-10	MW-12	Total/NA	Water	SM 2540C	
500-162824-11	MW-15	Total/NA	Water	SM 2540C	
500-162824-12	MW-17	Total/NA	Water	SM 2540C	
500-162824-13	MW-18	Total/NA	Water	SM 2540C	
500-162824-14	MW-19	Total/NA	Water	SM 2540C	
500-162824-15	Duplicate	Total/NA	Water	SM 2540C	
MB 500-483709/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-483709/2	Lab Control Sample	Total/NA	Water	SM 2540C	
500-162824-1 DU	MW-01	Total/NA	Water	SM 2540C	

Analysis Batch: 484846

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-162824-1	MW-01	Total/NA	Water	SM 4500 Cl- E	
500-162824-2	MW-02	Total/NA	Water	SM 4500 Cl- E	
MB 500-484846/83	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 500-484846/84	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 485004

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-162824-1	MW-01	Total/NA	Water	SM 4500 F C	
MB 500-485004/31	Method Blank	Total/NA	Water	SM 4500 F C	

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QC Association Summary

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

Job ID: 500-162824-1

General Chemistry (Continued)

Analysis Batch: 485004 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 500-485004/32	Lab Control Sample	Total/NA	Water	SM 4500 F C	

Analysis Batch: 485172

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-162824-2	MW-02	Total/NA	Water	SM 4500 F C	
500-162824-3	MW-03	Total/NA	Water	SM 4500 F C	
500-162824-4	MW-04	Total/NA	Water	SM 4500 F C	
500-162824-5	MW-05	Total/NA	Water	SM 4500 F C	
500-162824-6	MW-08	Total/NA	Water	SM 4500 F C	
500-162824-7	MW-09	Total/NA	Water	SM 4500 F C	
500-162824-8	MW-10	Total/NA	Water	SM 4500 F C	
500-162824-9	MW-11	Total/NA	Water	SM 4500 F C	
500-162824-10	MW-12	Total/NA	Water	SM 4500 F C	
500-162824-11	MW-15	Total/NA	Water	SM 4500 F C	
500-162824-12	MW-17	Total/NA	Water	SM 4500 F C	
500-162824-13	MW-18	Total/NA	Water	SM 4500 F C	
500-162824-14	MW-19	Total/NA	Water	SM 4500 F C	
500-162824-15	Duplicate	Total/NA	Water	SM 4500 F C	
MB 500-485172/31	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 500-485172/32	Lab Control Sample	Total/NA	Water	SM 4500 F C	

Analysis Batch: 485974

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-162824-7	MW-09	Total/NA	Water	SM 4500 Cl- E	
500-162824-8	MW-10	Total/NA	Water	SM 4500 Cl- E	
500-162824-9	MW-11	Total/NA	Water	SM 4500 Cl- E	
500-162824-10	MW-12	Total/NA	Water	SM 4500 Cl- E	
500-162824-13	MW-18	Total/NA	Water	SM 4500 Cl- E	
500-162824-14	MW-19	Total/NA	Water	SM 4500 Cl- E	
500-162824-15	Duplicate	Total/NA	Water	SM 4500 Cl- E	
MB 500-485974/4	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 500-485974/5	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 485996

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-162824-3	MW-03	Total/NA	Water	SM 4500 Cl- E	
500-162824-4	MW-04	Total/NA	Water	SM 4500 Cl- E	
500-162824-5	MW-05	Total/NA	Water	SM 4500 Cl- E	
500-162824-6	MW-08	Total/NA	Water	SM 4500 Cl- E	
500-162824-11	MW-15	Total/NA	Water	SM 4500 Cl- E	
500-162824-12	MW-17	Total/NA	Water	SM 4500 Cl- E	
MB 500-485996/9	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 500-485996/10	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
500-162824-4 MS	MW-04	Total/NA	Water	SM 4500 Cl- E	
500-162824-4 MSD	MW-04	Total/NA	Water	SM 4500 Cl- E	
500-162824-12 MS	MW-17	Total/NA	Water	SM 4500 Cl- E	
500-162824-12 MSD	MW-17	Total/NA	Water	SM 4500 Cl- E	

QC Sample Results

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

Job ID: 500-162824-1

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 500-483975/1-A
Matrix: Water
Analysis Batch: 484171

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 483975

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.010		0.010		mg/L		05/07/19 08:14	05/07/19 18:13	1

Lab Sample ID: LCS 500-483975/2-A
Matrix: Water
Analysis Batch: 484171

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 483975

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lithium	0.500	0.544		mg/L		109	80 - 120

Lab Sample ID: 500-162824-1 MS
Matrix: Water
Analysis Batch: 484171

Client Sample ID: MW-01
Prep Type: Total Recoverable
Prep Batch: 483975

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lithium	<0.010		0.500	0.554		mg/L		111	75 - 125

Lab Sample ID: 500-162824-1 MSD
Matrix: Water
Analysis Batch: 484171

Client Sample ID: MW-01
Prep Type: Total Recoverable
Prep Batch: 483975

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Lithium	<0.010		0.500	0.557		mg/L		111	75 - 125	1	20

Lab Sample ID: 500-162824-1 DU
Matrix: Water
Analysis Batch: 484171

Client Sample ID: MW-01
Prep Type: Total Recoverable
Prep Batch: 483975

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

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 500-483975/1-A
Matrix: Water
Analysis Batch: 484720

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 483975

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		05/07/19 08:14	05/10/19 02:29	1
Arsenic	<0.0010		0.0010		mg/L		05/07/19 08:14	05/10/19 02:29	1
Barium	<0.0025		0.0025		mg/L		05/07/19 08:14	05/10/19 02:29	1
Cadmium	<0.00050		0.00050		mg/L		05/07/19 08:14	05/10/19 02:29	1
Calcium	<0.20		0.20		mg/L		05/07/19 08:14	05/10/19 02:29	1
Chromium	<0.0050		0.0050		mg/L		05/07/19 08:14	05/10/19 02:29	1
Cobalt	<0.0010		0.0010		mg/L		05/07/19 08:14	05/10/19 02:29	1
Molybdenum	<0.0050		0.0050		mg/L		05/07/19 08:14	05/10/19 02:29	1
Selenium	<0.0025		0.0025		mg/L		05/07/19 08:14	05/10/19 02:29	1
Thallium	<0.0020		0.0020		mg/L		05/07/19 08:14	05/10/19 02:29	1

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QC Sample Results

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

Job ID: 500-162824-1

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

Lab Sample ID: MB 500-483975/1-A

Matrix: Water

Analysis Batch: 484965

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 483975

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	<0.0010		0.0010		mg/L		05/07/19 08:14	05/10/19 17:53	1
Boron	<0.050		0.050		mg/L		05/07/19 08:14	05/10/19 17:53	1
Lead	<0.00050		0.00050		mg/L		05/07/19 08:14	05/10/19 17:53	1

Lab Sample ID: LCS 500-483975/2-A

Matrix: Water

Analysis Batch: 484720

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 483975

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.500	0.504		mg/L		101	80 - 120
Arsenic	0.100	0.0997		mg/L		100	80 - 120
Barium	2.00	2.02		mg/L		101	80 - 120
Cadmium	0.0500	0.0516		mg/L		103	80 - 120
Calcium	10.0	10.0		mg/L		100	80 - 120
Chromium	0.200	0.195		mg/L		98	80 - 120
Cobalt	0.500	0.498		mg/L		100	80 - 120
Molybdenum	1.00	0.978		mg/L		98	80 - 120
Selenium	0.100	0.0994		mg/L		99	80 - 120
Thallium	0.100	0.0964		mg/L		96	80 - 120

Lab Sample ID: LCS 500-483975/2-A

Matrix: Water

Analysis Batch: 484965

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 483975

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Beryllium	0.0500	0.0520		mg/L		104	80 - 120
Boron	1.00	0.983		mg/L		98	80 - 120
Lead	0.100	0.105		mg/L		105	80 - 120

Lab Sample ID: 500-162824-1 MS

Matrix: Water

Analysis Batch: 484720

Client Sample ID: MW-01

Prep Type: Total Recoverable

Prep Batch: 483975

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	<0.0030		0.500	0.486		mg/L		97	75 - 125
Arsenic	0.0014		0.100	0.0971		mg/L		96	75 - 125
Barium	0.039		2.00	2.02		mg/L		99	75 - 125
Cadmium	<0.00050		0.0500	0.0496		mg/L		99	75 - 125
Calcium	78		10.0	87.8	4	mg/L		93	75 - 125
Chromium	<0.0050		0.200	0.192		mg/L		95	75 - 125
Cobalt	<0.0010		0.500	0.475		mg/L		95	75 - 125
Molybdenum	<0.0050		1.00	0.930		mg/L		93	75 - 125
Selenium	<0.0025		0.100	0.0958		mg/L		96	75 - 125
Thallium	<0.0020		0.100	0.0934		mg/L		93	75 - 125

QC Sample Results

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

Job ID: 500-162824-1

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

Lab Sample ID: 500-162824-1 MS

Matrix: Water

Analysis Batch: 484965

Client Sample ID: MW-01
Prep Type: Total Recoverable
Prep Batch: 483975

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Beryllium	<0.0010		0.0500	0.0467		mg/L		93	75 - 125
Boron	0.070		1.00	0.965		mg/L		90	75 - 125
Lead	0.0017		0.100	0.102		mg/L		100	75 - 125

Lab Sample ID: 500-162824-1 MSD

Matrix: Water

Analysis Batch: 484720

Client Sample ID: MW-01
Prep Type: Total Recoverable
Prep Batch: 483975

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	<0.0030		0.500	0.485		mg/L		97	75 - 125	0	20
Arsenic	0.0014		0.100	0.0931		mg/L		92	75 - 125	4	20
Barium	0.039		2.00	1.97		mg/L		97	75 - 125	2	20
Cadmium	<0.00050		0.0500	0.0494		mg/L		99	75 - 125	0	20
Calcium	78		10.0	85.4	4	mg/L		70	75 - 125	3	20
Chromium	<0.0050		0.200	0.186		mg/L		92	75 - 125	3	20
Cobalt	<0.0010		0.500	0.459		mg/L		92	75 - 125	4	20
Molybdenum	<0.0050		1.00	0.914		mg/L		91	75 - 125	2	20
Selenium	<0.0025		0.100	0.0924		mg/L		92	75 - 125	4	20
Thallium	<0.0020		0.100	0.0910		mg/L		91	75 - 125	3	20

Lab Sample ID: 500-162824-1 MSD

Matrix: Water

Analysis Batch: 484965

Client Sample ID: MW-01
Prep Type: Total Recoverable
Prep Batch: 483975

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Beryllium	<0.0010		0.0500	0.0476		mg/L		95	75 - 125	2	20
Boron	0.070		1.00	0.976		mg/L		91	75 - 125	1	20
Lead	0.0017		0.100	0.103		mg/L		101	75 - 125	1	20

Lab Sample ID: 500-162824-1 DU

Matrix: Water

Analysis Batch: 484720

Client Sample ID: MW-01
Prep Type: Total Recoverable
Prep Batch: 483975

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Antimony	<0.0030		<0.0030		mg/L		NC	20
Arsenic	0.0014		0.00143		mg/L		5	20
Barium	0.039		0.0380		mg/L		3	20
Cadmium	<0.00050		<0.00050		mg/L		NC	20
Calcium	78		76.5		mg/L		3	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

QC Sample Results

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

Job ID: 500-162824-1

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

Lab Sample ID: 500-162824-1 DU
Matrix: Water
Analysis Batch: 484965

Client Sample ID: MW-01
Prep Type: Total Recoverable
Prep Batch: 483975

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Beryllium	<0.0010		<0.0010		mg/L		NC	20
Boron	0.070		0.0576		mg/L		19	20
Lead	0.0017		0.00164		mg/L		4	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 500-485450/12-A
Matrix: Water
Analysis Batch: 485704

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 485450

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		05/15/19 10:20	05/16/19 08:09	1

Lab Sample ID: LCS 500-485450/13-A
Matrix: Water
Analysis Batch: 485704

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 485450

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00200	0.00200		mg/L		100	80 - 120

Lab Sample ID: 500-162824-6 MS
Matrix: Water
Analysis Batch: 485704

Client Sample ID: MW-08
Prep Type: Total/NA
Prep Batch: 485450

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	<0.00020		0.00100	0.00101		mg/L		101	75 - 125

Lab Sample ID: 500-162824-6 MSD
Matrix: Water
Analysis Batch: 485704

Client Sample ID: MW-08
Prep Type: Total/NA
Prep Batch: 485450

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	<0.00020		0.00100	0.000965		mg/L		96	75 - 125	4	20

Lab Sample ID: 500-162824-6 DU
Matrix: Water
Analysis Batch: 485704

Client Sample ID: MW-08
Prep Type: Total/NA
Prep Batch: 485450

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 500-483709/1
Matrix: Water
Analysis Batch: 483709

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			05/06/19 01:54	1

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QC Sample Results

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

Job ID: 500-162824-1

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

Lab Sample ID: LCS 500-483709/2

Matrix: Water

Analysis Batch: 483709

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	274		mg/L		110	80 - 120

Lab Sample ID: 500-162824-1 DU

Matrix: Water

Analysis Batch: 483709

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	450		434		mg/L		3	5

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 500-484846/83

Matrix: Water

Analysis Batch: 484846

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			05/11/19 08:50	1

Lab Sample ID: LCS 500-484846/84

Matrix: Water

Analysis Batch: 484846

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	50.0	50.7		mg/L		101	85 - 115

Lab Sample ID: MB 500-485974/4

Matrix: Water

Analysis Batch: 485974

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			05/17/19 20:11	1

Lab Sample ID: LCS 500-485974/5

Matrix: Water

Analysis Batch: 485974

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	50.0	50.4		mg/L		101	85 - 115

Lab Sample ID: MB 500-485996/9

Matrix: Water

Analysis Batch: 485996

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			05/17/19 21:52	1

QC Sample Results

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

Job ID: 500-162824-1

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

Lab Sample ID: LCS 500-485996/10

Matrix: Water

Analysis Batch: 485996

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	50.0	51.5		mg/L		103	85 - 115

Lab Sample ID: 500-162824-4 MS

Matrix: Water

Analysis Batch: 485996

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
Chloride	48		50.0	90.2		mg/L		84	75 - 125

Lab Sample ID: 500-162824-4 MSD

Matrix: Water

Analysis Batch: 485996

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
Chloride	48		50.0	93.7		mg/L		91	75 - 125	4	20

Lab Sample ID: 500-162824-12 MS

Matrix: Water

Analysis Batch: 485996

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
Chloride	190		50.0	228		mg/L		83	75 - 125

Lab Sample ID: 500-162824-12 MSD

Matrix: Water

Analysis Batch: 485996

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
Chloride	190		50.0	226		mg/L		77	75 - 125	1	20

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 500-485004/31

Matrix: Water

Analysis Batch: 485004

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.10		0.10		mg/L			05/11/19 12:57	1

Lab Sample ID: LCS 500-485004/32

Matrix: Water

Analysis Batch: 485004

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

QC Sample Results

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

Job ID: 500-162824-1

Method: SM 4500 F C - Fluoride (Continued)

Lab Sample ID: MB 500-485172/31

Matrix: Water

Analysis Batch: 485172

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			05/13/19 19:45	1

Lab Sample ID: LCS 500-485172/32

Matrix: Water

Analysis Batch: 485172

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

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 400-440971/6

Matrix: Water

Analysis Batch: 440971

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			05/14/19 12:26	1

Lab Sample ID: LCS 400-440971/7

Matrix: Water

Analysis Batch: 440971

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	15.0	14.4		mg/L		96	90 - 110

Lab Sample ID: MRL 400-440971/3

Matrix: Water

Analysis Batch: 440971

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	5.00	<5.0		mg/L		87	50 - 150

Lab Sample ID: 500-162824-13 MS

Matrix: Water

Analysis Batch: 440971

Client Sample ID: MW-18

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	170		10.0	173	4	mg/L		20	77 - 128

Lab Sample ID: 500-162824-13 MSD

Matrix: Water

Analysis Batch: 440971

Client Sample ID: MW-18

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	170		10.0	172	4	mg/L		12	77 - 128	0	5

QC Sample Results

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

Job ID: 500-162824-1

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

Lab Sample ID: MB 400-441150/6
Matrix: Water
Analysis Batch: 441150

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			05/16/19 11:01	1

Lab Sample ID: LCS 400-441150/7
Matrix: Water
Analysis Batch: 441150

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	15.0	14.3		mg/L		95	90 - 110

Lab Sample ID: MRL 400-441150/3
Matrix: Water
Analysis Batch: 441150

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	5.00	<5.0		mg/L		95	50 - 150

Lab Chronicle

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

Job ID: 500-162824-1

Client Sample ID: MW-01

Date Collected: 04/30/19 13:25

Date Received: 05/04/19 09:30

Lab Sample ID: 500-162824-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			483975	05/07/19 08:14	SAH	TAL CHI
Total Recoverable	Analysis	6010C		1	484171	05/07/19 18:33	EEN	TAL CHI
Total Recoverable	Prep	3005A			483975	05/07/19 08:14	SAH	TAL CHI
Total Recoverable	Analysis	6020A		1	484965	05/10/19 18:00	FXG	TAL CHI
Total Recoverable	Prep	3005A			483975	05/07/19 08:14	SAH	TAL CHI
Total Recoverable	Analysis	6020A		1	484720	05/10/19 02:37	FXG	TAL CHI
Total/NA	Prep	7470A			485450	05/15/19 10:20	MJG	TAL CHI
Total/NA	Analysis	7470A		1	485704	05/16/19 08:22	MJG	TAL CHI
Total/NA	Analysis	SM 2540C		1	483709	05/06/19 02:06	CLB	TAL CHI
Total/NA	Analysis	SM 4500 CI- E		1	484846	05/11/19 09:12	EAT	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	485004	05/11/19 13:06	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		1	440971	05/14/19 12:33	RRC	TAL PEN

Client Sample ID: MW-02

Date Collected: 04/30/19 09:45

Date Received: 05/04/19 09:30

Lab Sample ID: 500-162824-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			483975	05/07/19 08:14	SAH	TAL CHI
Total Recoverable	Analysis	6010C		1	484171	05/07/19 18:53	EEN	TAL CHI
Total Recoverable	Prep	3005A			483975	05/07/19 08:14	SAH	TAL CHI
Total Recoverable	Analysis	6020A		1	484965	05/10/19 18:30	FXG	TAL CHI
Total Recoverable	Prep	3005A			483975	05/07/19 08:14	SAH	TAL CHI
Total Recoverable	Analysis	6020A		1	484720	05/10/19 03:06	FXG	TAL CHI
Total/NA	Prep	7470A			485450	05/15/19 10:20	MJG	TAL CHI
Total/NA	Analysis	7470A		1	485704	05/16/19 08:28	MJG	TAL CHI
Total/NA	Analysis	SM 2540C		1	483709	05/06/19 02:12	CLB	TAL CHI
Total/NA	Analysis	SM 4500 CI- E		1	484846	05/11/19 09:12	EAT	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	485172	05/13/19 20:22	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		1	440971	05/14/19 12:33	RRC	TAL PEN

Client Sample ID: MW-03

Date Collected: 04/30/19 10:50

Date Received: 05/04/19 09:30

Lab Sample ID: 500-162824-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			483975	05/07/19 08:14	SAH	TAL CHI
Total Recoverable	Analysis	6010C		1	484171	05/07/19 18:57	EEN	TAL CHI
Total Recoverable	Prep	3005A			483975	05/07/19 08:14	SAH	TAL CHI
Total Recoverable	Analysis	6020A		1	484965	05/10/19 18:34	FXG	TAL CHI
Total Recoverable	Prep	3005A			483975	05/07/19 08:14	SAH	TAL CHI
Total Recoverable	Analysis	6020A		1	484720	05/10/19 03:10	FXG	TAL CHI
Total/NA	Prep	7470A			485450	05/15/19 10:20	MJG	TAL CHI
Total/NA	Analysis	7470A		1	485704	05/16/19 08:29	MJG	TAL CHI

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Lab Chronicle

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

Job ID: 500-162824-1

Client Sample ID: MW-03

Date Collected: 04/30/19 10:50

Date Received: 05/04/19 09:30

Lab Sample ID: 500-162824-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540C		1	483709	05/06/19 02:14	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		1	485996	05/17/19 22:02	EAT	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	485172	05/13/19 20:25	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		2	440971	05/14/19 13:57	RRC	TAL PEN

Client Sample ID: MW-04

Date Collected: 04/30/19 11:40

Date Received: 05/04/19 09:30

Lab Sample ID: 500-162824-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			483975	05/07/19 08:14	SAH	TAL CHI
Total Recoverable	Analysis	6010C		1	484171	05/07/19 19:01	EEN	TAL CHI
Total Recoverable	Prep	3005A			483975	05/07/19 08:14	SAH	TAL CHI
Total Recoverable	Analysis	6020A		1	484965	05/10/19 18:38	FXG	TAL CHI
Total Recoverable	Prep	3005A			483975	05/07/19 08:14	SAH	TAL CHI
Total Recoverable	Analysis	6020A		1	484720	05/10/19 03:14	FXG	TAL CHI
Total/NA	Prep	7470A			485450	05/15/19 10:20	MJG	TAL CHI
Total/NA	Analysis	7470A		1	485704	05/16/19 08:31	MJG	TAL CHI
Total/NA	Analysis	SM 2540C		1	483709	05/06/19 02:17	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		1	485996	05/17/19 22:03	EAT	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	485172	05/13/19 20:28	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		1	440971	05/14/19 12:40	RRC	TAL PEN

Client Sample ID: MW-05

Date Collected: 04/30/19 12:30

Date Received: 05/04/19 09:30

Lab Sample ID: 500-162824-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			483975	05/07/19 08:14	SAH	TAL CHI
Total Recoverable	Analysis	6010C		1	484171	05/07/19 19:05	EEN	TAL CHI
Total Recoverable	Prep	3005A			483975	05/07/19 08:14	SAH	TAL CHI
Total Recoverable	Analysis	6020A		1	484965	05/10/19 18:42	FXG	TAL CHI
Total Recoverable	Prep	3005A			483975	05/07/19 08:14	SAH	TAL CHI
Total Recoverable	Analysis	6020A		1	484720	05/10/19 03:19	FXG	TAL CHI
Total/NA	Prep	7470A			485450	05/15/19 10:20	MJG	TAL CHI
Total/NA	Analysis	7470A		1	485704	05/16/19 08:32	MJG	TAL CHI
Total/NA	Analysis	SM 2540C		1	483709	05/06/19 02:19	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		1	485996	05/17/19 22:06	EAT	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	485172	05/13/19 20:31	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		5	440971	05/14/19 13:57	RRC	TAL PEN

Lab Chronicle

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

Job ID: 500-162824-1

Client Sample ID: MW-08

Date Collected: 05/01/19 15:35

Date Received: 05/04/19 09:30

Lab Sample ID: 500-162824-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			483975	05/07/19 08:14	SAH	TAL CHI
Total Recoverable	Analysis	6010C		1	484171	05/07/19 19:09	EEN	TAL CHI
Total Recoverable	Prep	3005A			483975	05/07/19 08:14	SAH	TAL CHI
Total Recoverable	Analysis	6020A		1	484965	05/10/19 18:45	FXG	TAL CHI
Total Recoverable	Prep	3005A			483975	05/07/19 08:14	SAH	TAL CHI
Total Recoverable	Analysis	6020A		1	484720	05/10/19 03:23	FXG	TAL CHI
Total/NA	Prep	7470A			485450	05/15/19 10:20	MJG	TAL CHI
Total/NA	Analysis	7470A		1	485704	05/16/19 08:34	MJG	TAL CHI
Total/NA	Analysis	SM 2540C		1	483709	05/06/19 02:22	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		1	485996	05/17/19 22:06	EAT	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	485172	05/13/19 20:34	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		5	441150	05/16/19 11:37	RRC	TAL PEN

Client Sample ID: MW-09

Date Collected: 05/01/19 13:15

Date Received: 05/04/19 09:30

Lab Sample ID: 500-162824-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			483975	05/07/19 08:14	SAH	TAL CHI
Total Recoverable	Analysis	6010C		1	484171	05/07/19 19:21	EEN	TAL CHI
Total Recoverable	Prep	3005A			483975	05/07/19 08:14	SAH	TAL CHI
Total Recoverable	Analysis	6020A		10	484965	05/10/19 18:49	FXG	TAL CHI
Total Recoverable	Prep	3005A			483975	05/07/19 08:14	SAH	TAL CHI
Total Recoverable	Analysis	6020A		1	484965	05/10/19 19:42	FXG	TAL CHI
Total Recoverable	Prep	3005A			483975	05/07/19 08:14	SAH	TAL CHI
Total Recoverable	Analysis	6020A		1	484720	05/10/19 03:27	FXG	TAL CHI
Total/NA	Prep	7470A			485450	05/15/19 10:20	MJG	TAL CHI
Total/NA	Analysis	7470A		1	485704	05/16/19 08:40	MJG	TAL CHI
Total/NA	Analysis	SM 2540C		1	483709	05/06/19 02:25	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		1	485974	05/17/19 20:32	EAT	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	485172	05/13/19 20:38	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		5	440971	05/14/19 14:02	RRC	TAL PEN

Client Sample ID: MW-10

Date Collected: 05/01/19 09:30

Date Received: 05/04/19 09:30

Lab Sample ID: 500-162824-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			483975	05/07/19 08:14	SAH	TAL CHI
Total Recoverable	Analysis	6010C		1	484171	05/07/19 19:25	EEN	TAL CHI
Total Recoverable	Prep	3005A			483975	05/07/19 08:14	SAH	TAL CHI
Total Recoverable	Analysis	6020A		1	484965	05/10/19 19:00	FXG	TAL CHI
Total Recoverable	Prep	3005A			483975	05/07/19 08:14	SAH	TAL CHI
Total Recoverable	Analysis	6020A		1	484720	05/10/19 03:39	FXG	TAL CHI

Eurofins TestAmerica, Chicago

Lab Chronicle

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

Job ID: 500-162824-1

Client Sample ID: MW-10

Date Collected: 05/01/19 09:30

Date Received: 05/04/19 09:30

Lab Sample ID: 500-162824-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7470A			485450	05/15/19 10:20	MJG	TAL CHI
Total/NA	Analysis	7470A		1	485704	05/16/19 08:42	MJG	TAL CHI
Total/NA	Analysis	SM 2540C		1	483709	05/06/19 02:27	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		1	485974	05/17/19 20:32	EAT	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	485172	05/13/19 20:41	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		1	440971	05/14/19 12:40	RRC	TAL PEN

Client Sample ID: MW-11

Date Collected: 05/01/19 10:25

Date Received: 05/04/19 09:30

Lab Sample ID: 500-162824-9

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			483975	05/07/19 08:14	SAH	TAL CHI
Total Recoverable	Analysis	6010C		1	484171	05/07/19 19:29	EEN	TAL CHI
Total Recoverable	Prep	3005A			483975	05/07/19 08:14	SAH	TAL CHI
Total Recoverable	Analysis	6020A		5	484965	05/10/19 19:04	FXG	TAL CHI
Total Recoverable	Prep	3005A			483975	05/07/19 08:14	SAH	TAL CHI
Total Recoverable	Analysis	6020A		1	484965	05/10/19 19:46	FXG	TAL CHI
Total Recoverable	Prep	3005A			483975	05/07/19 08:14	SAH	TAL CHI
Total Recoverable	Analysis	6020A		1	484720	05/10/19 03:44	FXG	TAL CHI
Total/NA	Prep	7470A			485450	05/15/19 10:20	MJG	TAL CHI
Total/NA	Analysis	7470A		1	485704	05/16/19 08:48	MJG	TAL CHI
Total/NA	Analysis	SM 2540C		1	483709	05/06/19 02:30	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		1	485974	05/17/19 20:33	EAT	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	485172	05/13/19 20:45	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		10	440971	05/14/19 14:06	RRC	TAL PEN

Client Sample ID: MW-12

Date Collected: 05/01/19 11:55

Date Received: 05/04/19 09:30

Lab Sample ID: 500-162824-10

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			483975	05/07/19 08:14	SAH	TAL CHI
Total Recoverable	Analysis	6010C		1	484171	05/07/19 19:33	EEN	TAL CHI
Total Recoverable	Prep	3005A			483975	05/07/19 08:14	SAH	TAL CHI
Total Recoverable	Analysis	6020A		1	484965	05/10/19 19:08	FXG	TAL CHI
Total Recoverable	Prep	3005A			483975	05/07/19 08:14	SAH	TAL CHI
Total Recoverable	Analysis	6020A		1	484720	05/10/19 03:48	FXG	TAL CHI
Total/NA	Prep	7470A			485450	05/15/19 10:20	MJG	TAL CHI
Total/NA	Analysis	7470A		1	485704	05/16/19 08:49	MJG	TAL CHI
Total/NA	Analysis	SM 2540C		1	483709	05/06/19 02:32	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		5	485974	05/17/19 20:57	EAT	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	485172	05/13/19 20:57	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		10	440971	05/14/19 14:06	RRC	TAL PEN

Eurofins TestAmerica, Chicago

Lab Chronicle

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

Job ID: 500-162824-1

Client Sample ID: MW-15

Date Collected: 05/02/19 12:15

Date Received: 05/04/19 09:30

Lab Sample ID: 500-162824-11

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			483975	05/07/19 08:14	SAH	TAL CHI
Total Recoverable	Analysis	6010C		1	484171	05/07/19 19:37	EEN	TAL CHI
Total Recoverable	Prep	3005A			483975	05/07/19 08:14	SAH	TAL CHI
Total Recoverable	Analysis	6020A		5	484965	05/10/19 19:12	FXG	TAL CHI
Total Recoverable	Prep	3005A			483975	05/07/19 08:14	SAH	TAL CHI
Total Recoverable	Analysis	6020A		1	484965	05/10/19 19:49	FXG	TAL CHI
Total Recoverable	Prep	3005A			483975	05/07/19 08:14	SAH	TAL CHI
Total Recoverable	Analysis	6020A		1	484720	05/10/19 03:52	FXG	TAL CHI
Total/NA	Prep	7470A			485450	05/15/19 10:20	MJG	TAL CHI
Total/NA	Analysis	7470A		1	485704	05/16/19 08:51	MJG	TAL CHI
Total/NA	Analysis	SM 2540C		1	483709	05/06/19 02:35	CLB	TAL CHI
Total/NA	Analysis	SM 4500 CI- E		5	485996	05/17/19 22:57	EAT	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	485172	05/13/19 21:00	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		30	440971	05/14/19 17:14	RRC	TAL PEN

Client Sample ID: MW-17

Date Collected: 04/29/19 15:20

Date Received: 05/04/19 09:30

Lab Sample ID: 500-162824-12

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			483975	05/07/19 08:14	SAH	TAL CHI
Total Recoverable	Analysis	6010C		1	484171	05/07/19 19:42	EEN	TAL CHI
Total Recoverable	Prep	3005A			483975	05/07/19 08:14	SAH	TAL CHI
Total Recoverable	Analysis	6020A		1	484965	05/10/19 19:16	FXG	TAL CHI
Total Recoverable	Prep	3005A			483975	05/07/19 08:14	SAH	TAL CHI
Total Recoverable	Analysis	6020A		1	484720	05/10/19 03:56	FXG	TAL CHI
Total/NA	Prep	7470A			485450	05/15/19 10:20	MJG	TAL CHI
Total/NA	Analysis	7470A		1	485704	05/16/19 08:52	MJG	TAL CHI
Total/NA	Analysis	SM 2540C		1	483709	05/06/19 02:37	CLB	TAL CHI
Total/NA	Analysis	SM 4500 CI- E		5	485996	05/17/19 22:57	EAT	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	485172	05/13/19 21:04	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		30	440971	05/15/19 10:19	RRC	TAL PEN

Client Sample ID: MW-18

Date Collected: 04/29/19 14:25

Date Received: 05/04/19 09:30

Lab Sample ID: 500-162824-13

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			483975	05/07/19 08:14	SAH	TAL CHI
Total Recoverable	Analysis	6010C		1	484171	05/07/19 19:46	EEN	TAL CHI
Total Recoverable	Prep	3005A			483975	05/07/19 08:14	SAH	TAL CHI
Total Recoverable	Analysis	6020A		1	484965	05/10/19 19:19	FXG	TAL CHI
Total Recoverable	Prep	3005A			483975	05/07/19 08:14	SAH	TAL CHI
Total Recoverable	Analysis	6020A		1	484720	05/10/19 04:00	FXG	TAL CHI

Eurofins TestAmerica, Chicago

Lab Chronicle

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

Job ID: 500-162824-1

Client Sample ID: MW-18

Date Collected: 04/29/19 14:25

Date Received: 05/04/19 09:30

Lab Sample ID: 500-162824-13

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7470A			485450	05/15/19 10:20	MJG	TAL CHI
Total/NA	Analysis	7470A		1	485704	05/16/19 08:54	MJG	TAL CHI
Total/NA	Analysis	SM 2540C		1	483709	05/06/19 02:40	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		5	485974	05/17/19 20:56	EAT	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	485172	05/13/19 21:07	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		5	440971	05/14/19 14:02	RRC	TAL PEN

Client Sample ID: MW-19

Date Collected: 05/02/19 10:30

Date Received: 05/04/19 09:30

Lab Sample ID: 500-162824-14

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			483975	05/07/19 08:14	SAH	TAL CHI
Total Recoverable	Analysis	6010C		1	484171	05/07/19 19:50	EEN	TAL CHI
Total Recoverable	Prep	3005A			483975	05/07/19 08:14	SAH	TAL CHI
Total Recoverable	Analysis	6020A		10	484965	05/10/19 19:23	FXG	TAL CHI
Total Recoverable	Prep	3005A			483975	05/07/19 08:14	SAH	TAL CHI
Total Recoverable	Analysis	6020A		1	484965	05/10/19 19:53	FXG	TAL CHI
Total Recoverable	Prep	3005A			483975	05/07/19 08:14	SAH	TAL CHI
Total Recoverable	Analysis	6020A		1	484720	05/10/19 04:04	FXG	TAL CHI
Total/NA	Prep	7470A			485450	05/15/19 10:20	MJG	TAL CHI
Total/NA	Analysis	7470A		1	485704	05/16/19 08:55	MJG	TAL CHI
Total/NA	Analysis	SM 2540C		1	483709	05/06/19 02:43	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		1	485974	05/17/19 20:27	EAT	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	485172	05/13/19 21:10	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		5	440971	05/14/19 14:06	RRC	TAL PEN

Client Sample ID: Duplicate

Date Collected: 04/29/19 00:00

Date Received: 05/04/19 09:30

Lab Sample ID: 500-162824-15

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			483975	05/07/19 08:14	SAH	TAL CHI
Total Recoverable	Analysis	6010C		1	484171	05/07/19 19:54	EEN	TAL CHI
Total Recoverable	Prep	3005A			483975	05/07/19 08:14	SAH	TAL CHI
Total Recoverable	Analysis	6020A		5	484965	05/10/19 19:27	FXG	TAL CHI
Total Recoverable	Prep	3005A			483975	05/07/19 08:14	SAH	TAL CHI
Total Recoverable	Analysis	6020A		1	484965	05/10/19 19:57	FXG	TAL CHI
Total Recoverable	Prep	3005A			483975	05/07/19 08:14	SAH	TAL CHI
Total Recoverable	Analysis	6020A		1	484720	05/10/19 04:08	FXG	TAL CHI
Total/NA	Prep	7470A			485450	05/15/19 10:20	MJG	TAL CHI
Total/NA	Analysis	7470A		1	485704	05/16/19 08:57	MJG	TAL CHI
Total/NA	Analysis	SM 2540C		1	483709	05/06/19 02:45	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		5	485974	05/17/19 20:56	EAT	TAL CHI

Eurofins TestAmerica, Chicago

Lab Chronicle

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

Job ID: 500-162824-1

Client Sample ID: Duplicate

Lab Sample ID: 500-162824-15

Date Collected: 04/29/19 00:00

Matrix: Water

Date Received: 05/04/19 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 F C		1	485172	05/13/19 21:12	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		20	440971	05/15/19 10:19	RRC	TAL PEN

Laboratory References:

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

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Accreditation/Certification Summary

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

Job ID: 500-162824-1

Laboratory: Eurofins TestAmerica, Chicago

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Illinois	NELAP	5	100201	05-30-19 *

Laboratory: Eurofins TestAmerica, Pensacola

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-19
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-20
Arkansas DEQ	State Program	6	88-0689	09-01-19
California	State Program	9	2510	06-30-19
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-19
Iowa	State Program	7	367	08-01-20
Kansas	NELAP	7	E-10253	10-31-19
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-19
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA017	12-31-19
Maryland	State Program	3	233	09-30-19
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-19
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-19
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-20
Rhode Island	State Program	1	LAO00307	12-30-19
South Carolina	State Program	4	96026	06-30-19
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-15	09-30-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-19
Washington	State Program	10	C915	05-15-20
West Virginia DEP	State Program	3	136	07-31-19

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

Eurofins TestAmerica, Chicago

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL
Phone: 708.534.5200 Fax: 708.534.5201



500-162824 COC

Report To (optional)

Contact: _____
Company: _____
Address: _____
Address: _____
Phone: _____
Fax: _____
E-Mail: _____

Bill To (optional)

Contact: _____
Company: _____
Address: _____
Address: _____
Phone: _____
Fax: _____
PO#/Reference# _____

Chain of Custody Record

Lab Job #: 500-162824

Chain of Custody Number: _____

Page 1 of 2

Temperature °C of Cooler: 3.7, 4.7, 2.3

Client <u>KPRG and Assoc.</u>		Project # <u>12313.1</u>		Preservative <u>3</u>		<u>8</u>		<u>3</u>												Preservative Key 1. HCL, Cool to 4° 2. H2SO4, Cool to 4° 3. HNO3, Cool to 4° 4. NaOH, Cool to 4° 5. NaOH/Zn, Cool to 4° 6. NaHSO4 7. Cool to 4° 8. None 9. Other	
Project Name <u>NRG Powerston CCR</u>				Parameter																	
Project Location/State <u>Pekin, IL</u>				Lab Project #																	
Sampler <u>Mitchel Dolan</u>				Lab PM <u>Eric Lang</u>																	
Lab ID	MS/MSD	Sample ID	Sampling Date Time		# of Containers	Matrix	Total Metals	Cl, F, S, O4, TDS	Rad												Comments
<u>1</u>		<u>MW-01</u>	<u>4/30</u>	<u>1325</u>	<u>5</u>	<u>W</u>	<u>X</u>	<u>X</u>	<u>X</u>												
<u>2</u>		<u>MW-02</u>	<u>4/30</u>	<u>0945</u>																	
<u>3</u>		<u>MW-03</u>	<u>4/30</u>	<u>1050</u>																	
<u>4</u>		<u>MW-04</u>	<u>4/30</u>	<u>1140</u>																	
<u>5</u>		<u>MW-05</u>	<u>4/30</u>	<u>1230</u>																	
<u>6</u>		<u>MW-08</u>	<u>5/1</u>	<u>1535</u>																	
<u>7</u>		<u>MW-09</u>	<u>5/1</u>	<u>1315</u>																	
<u>8</u>		<u>MW-10</u>	<u>5/1</u>	<u>0930</u>																	
<u>9</u>		<u>MW-11</u>	<u>5/1</u>	<u>1025</u>																	
<u>10</u>		<u>MW-12</u>	<u>5/1</u>	<u>1155</u>																	

Turnaround Time Required (Business Days)

1 Day 2 Days 5 Days 7 Days 10 Days 15 Days Other

Sample Disposal

☐ Return to Client

☐ Disposal by Lab

☐ Archive for _____ Months

(A fee may be assessed if samples are retained longer than 1 month)

Relinquished By <u>Mitchel Dolan</u>	Company <u>KPRG</u>	Date <u>5/2/2019</u>	Time <u>1700</u>	Received By <u>FEDEX</u>	Company	Date <u>5/2/2019</u>	Time <u>1700</u>
Relinquished By	Company	Date	Time	Received By <u>Devin Tronchetti</u>	Company <u>TACHS</u>	Date <u>05/10/19</u>	Time <u>0930</u>
Relinquished By	Company	Date	Time	Received By	Company	Date	Time

Lab Courier

Shipped FX Saturday

Hand Delivered

Matrix Key

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

Client Comments

Lab Comments:

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

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

Report To _____ (optional)
Contact: _____
Company: _____
Address: _____
Address: _____
Phone: _____
Fax: _____
E-Mail: _____

Bill To _____ (optional)
Contact: _____
Company: _____
Address: _____
Address: _____
Phone: _____
Fax: _____
PO#/Reference# _____

Chain of Custody Record

Lab Job #: 500-162824

Chain of Custody Number: _____

Page 2 of 2

Temperature °C of Cooler: 37A, 7, 23, 5.3

Client KPRG and Assoc.		Client Project # 12313.1		Preservative 3		8		3														Preservative Key 1. HCL, Cool to 4° 2. H2SO4, Cool to 4° 3. HNO3, Cool to 4° 4. NaOH, Cool to 4° 5. NaOH/Zn, Cool to 4° 6. NaHSO4 7. Cool to 4° 8. None 9. Other	
Project Name IVRG Powerton CCR		Project Location/State Pekin, IL		Lab Project #		Parameter Total Metals		Cl, F, I, SO4, TDS		Rad 226/228													
Sampler Mitchel Dolan		Lab PM Eric Lang																					
Lab ID	MS/MSD	Sample ID	Sampling Date Time		# of Containers	Matrix																	Comments
11		MW-15	5/2	1215	5	W																	
12		MW-17	4/24	1520																			
13		MW-18	4/24	1425																			
14		MW-19	5/2	1030																			
15		DUPLICATE	-	-																			

Turnaround Time Required (Business Days)

☐ 1 Day ☐ 2 Days ☐ 5 Days ☐ 7 Days ☐ 10 Days ☐ 15 Days ☐ Other

Sample Disposal

☐ Return to Client

☐ Disposal by Lab

☐ Archive for _____ Months

(A fee may be assessed if samples are retained longer than 1 month)

Relinquished By Ma On	Company KPRG	Date 5/2/2019	Time 1700	Received By FEDEX	Company FEDEX	Date 5/2/2019	Time 1700
Relinquished By	Company	Date	Time	Received By	Company	Date	Time
Relinquished By	Company	Date	Time	Received By	Company	Date	Time

Lab Courier

Shipped **FX Saturday**

Hand Delivered

Matrix Key

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

Client Comments

Lab Comments:

Part # 156297MB2 75904025EXP 11/19

SHIP DATE: 02MAY19
ACTWGT: 64.10 LB
CAD: 006894780/88FE2002
DIMS: 24" N

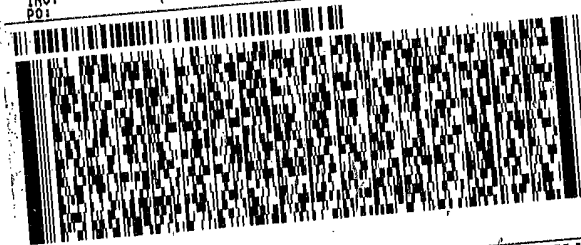
5 16:30
A 7780
05:04

ORIGIN ID:PIAA (262) 622-1143
KPRG
414 PLAZA DR STE 106
WESTMONT, IL 60559
UNITED STATES US

TO ERIC LANG
TEST AMERICA
2417 BOND ST

UNIVERSITY PARK ST 11

(000) 000-0000
REF: DEPT:



FedEx Express
REL# 3785346

SATURDAY 4:30P
** 2DAY **

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TRK# 7870 1648 7780
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MASTER

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...specified a particular location for the work, in addition, TestAmerica reserves the right to subcontract the work to any qualified party. The Client agrees to pay for the work, including materials, labor, and subcontract fees. The Client agrees to pay for the work, including materials, labor, and subcontract fees. The Client agrees to pay for the work, including materials, labor, and subcontract fees.

Part # 156297MB2 75904025EXP 11/19

SHIP DATE: 02MAY19
ACTWGT: 81.40 LB
CAD: 006894780/88FE2002
DIMS: 24x14x14 IN
BILL THIRD PARTY

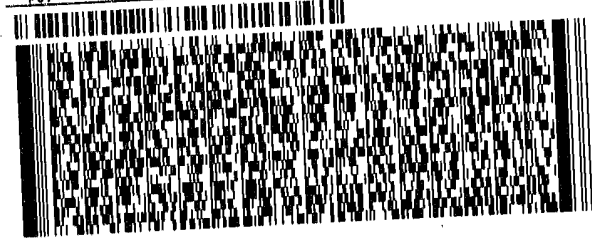
ORIGIN ID:PIAA (262) 622-1143
KPRG
414 PLAZA DR STE 106
WESTMONT, IL 60559
UNITED STATES US

TO ERIC LANG
TEST AMERICA
2417 BOND ST

UNIVERSITY PARK IL 60484

500-162824 Waybill

(000) 000-0000
REF: DEPT:



FedEx Express
REL# 3785346

SATURDAY 4:30P
** 2DAY **

8 of 9
MPS# 7870 1648 7850
0263
Mstr# 7870 1648 7780

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10. Client

...The Client agrees to pay for the work, including materials, labor, and subcontract fees. The Client agrees to pay for the work, including materials, labor, and subcontract fees. The Client agrees to pay for the work, including materials, labor, and subcontract fees.

4.3 TestAmerica warrants that it possesses and maintains all licenses and certifications which are required to perform services under these Terms and Conditions provided that such requirements are specified in writing to TestAmerica in connection with any services performed by TestAmerica or any Results generated from such services, and TestAmerica agrees and makes NO OTHER REPRESENTATION OR WARRANTY OF ANY KIND.

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[illegible]

IL-US ORD

100

It is not clear, however, whether the authors are suggesting that the use of a single, standard, non-validated questionnaire is a suitable for the study of the factors which influence the use of the Internet.

Chain of Custody Record



Client Information (Sub Contract Lab)		Sampler:	Lab PM:	Carrier Tracking No(s):	COC No:				
Client Contact:		Lang, Eric A.			500-120630.1				
Shipping/Receiving		Phone:	E-Mail:	State of Origin:	Page:				
			eric.lang@testamericainc.com	Illinois	Page 1 of 2				
Company:		Accreditations Required (See note):		Job #:					
TestAmerica Laboratories, Inc.		NELAP - Illinois		500-162824-1					
Address:		Due Date Requested:		Preservation Codes:					
3355 McLemore Drive,		5/17/2019		A - HCL 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 L - EDTA Z - other (specify) Other:					
City:		TAT Requested (days):		Analysis Requested					
Pensacola									
State, Zip:									
FL, 32514									
Phone:		PO #:							
850-474-1001(Tel) 850-478-2671(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, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SM4500 - SO4 E	Total Number of containers	Special Instructions/Note:
MW-01 (500-162824-1)	4/30/19	13:25 Central		Water	X	X		1	
MW-02 (500-162824-2)	4/30/19	09:45 Central		Water	X	X		1	
MW-03 (500-162824-3)	4/30/19	10:50 Central		Water	X	X		1	
MW-04 (500-162824-4)	4/30/19	11:40 Central		Water	X	X		1	
MW-05 (500-162824-5)	4/30/19	12:30 Central		Water	X	X		1	
MW-08 (500-162824-6)	5/1/19	15:35 Central		Water	X	X		1	
MW-09 (500-162824-7)	5/1/19	13:15 Central		Water	X	X		1	
MW-10 (500-162824-8)	5/1/19	09:30 Central		Water	X	X		1	
MW-11 (500-162824-9)	5/1/19	10:25 Central		Water	X	X		1	
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. 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									
Empty Kit Relinquished by: _____ Date: _____ Time: _____ Method of Shipment: _____									
Relinquished by: <i>W. L. Davis</i> Date: <i>5/6/19</i> Time: <i>1500</i> Company: <i>TH</i>									
Relinquished by: _____ Date: _____ Time: _____ Company: _____									
Relinquished by: _____ Date: _____ Time: _____ Company: _____									
Custody Seals Intact: ☐ Yes ☐ No Cooler Temperature(s) °C and Other Remarks: <i>0.9 IL 7</i>									

Chain of Custody Record

Client Information (Sub Contract Lab)		Sampler:		Lab PM:		Carrier Tracking No(s):		COC No:	
Client Contact:		Phone:		Lang, Eric A.		State of Origin:		500-120630.2	
Shipping/Receiving				E-Mail:		Illinois		Page:	
Company:				eric.lang@testamericainc.com				Page 2 of 2	
TestAmerica Laboratories, Inc.				Accreditations Required (See note):				Job #:	
Address:				NELAP - Illinois				500-162824-1	
City:				Due Date Requested:				Preservation Codes:	
Pensacola				5/17/2019				A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)	
State, Zip:				TAT Requested (days):					
FL, 32514									
Phone:				PO #:					
850-474-1001(Tel) 850-478-2671(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)	Analysis Requested		Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Total Number of Containers	Special Instructions/Note:
					SM4500_S04_E					
MW-12 (500-162824-10)	5/1/19	11:55 Central	Water	Water			X		1	
MW-15 (500-162824-11)	5/2/19	12:15 Central	Water	Water			X		1	
MW-17 (500-162824-12)	4/29/19	15:20 Central	Water	Water			X		1	
MW-18 (500-162824-13)	4/29/19	14:25 Central	Water	Water			X		1	
MW-19 (500-162824-14)	5/2/19	10:30 Central	Water	Water			X		1	
Duplicate (500-162824-15)	4/29/19	Central	Water	Water			X		1	

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		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)	
Unconfirmed		Return To Client ☐ Archive For ☐ Months	
Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/QC Requirements:	
Primary Deliverable Rank: 2		Method of Shipment:	
Empty Kit Relinquished by:		Time:	
Relinquished by: <i>W. J. Dimp</i>		Date: 5/26/19	
Relinquished by:		Date/Time: 1500	
Relinquished by:		Date/Time:	
Relinquished by:		Date/Time:	
Custody Seals Intact: ☐ Yes ☐ No		Custody Seal No.:	
Cooler Temperature(s) °C and Other Remarks: 0.9°C IAT		Received by: <i>Kathy R. Owen</i>	
		Date/Time: 5-7-19 851	
		Company: <i>TA</i>	
		Company:	
		Company:	

Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-162824-1

Login Number: 162824

List Source: Eurofins 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	3.7,4.7,5.3,2.3
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	

Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-162824-1

Login Number: 162824

List Number: 2

Creator: Avery, Kathy R

List Source: Eurofins TestAmerica, Pensacola

List Creation: 05/07/19 05:40 PM

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	Not Present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.9°C IR 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	

ANALYTICAL REPORT

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

Laboratory Job ID: 500-162824-2
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:
8/15/2019 1:57:27 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
Method Summary	4
Sample Summary	5
Client Sample Results	6
Definitions	21
QC Association	22
QC Sample Results	23
Chronicle	26
Certification Summary	30
Chain of Custody	31
Receipt Checklists	37
Tracer Carrier Summary	39



Case Narrative

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

Job ID: 500-162824-2

Job ID: 500-162824-2

Laboratory: Eurofins TestAmerica, Chicago

Narrative

Job Narrative 500-162824-2

Comments

No additional comments.

Receipt

The samples were received on 5/4/2019 9:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 2.3° C, 3.7° C, 4.7° C and 5.3° C.

RAD

Method(s) 904.0, 9320: Ra-228 Prep Batch 160-430397

The Ra-228 recovery in the LCS was slightly low (72) outside QC limits (75%-125%) indicating a potential slight low bias to the sample results. The barium recovery in the LCS (107%) and the Replicate Error Ratio (RER) were within limits demonstrating acceptable method performance.

MW-01 (500-162824-1), MW-02 (500-162824-2), MW-03 (500-162824-3), MW-04 (500-162824-4), MW-05 (500-162824-5), MW-08 (500-162824-6), MW-09 (500-162824-7), MW-10 (500-162824-8), MW-11 (500-162824-9), (LCS 160-430397/1-A), (MB 160-430397/23-A) and (500-162824-C-1-B DU)

Method(s) PrecSep_0: Radium 228 Prep Batch 160-430139

The following samples had yellow discoloration: MW-12 (500-162824-10), MW-17 (500-162824-12) and MW-18 (500-162824-13). Sample 500-162824-C-10 had brown solids.

Method(s) PrecSep_0: Radium 228 Prep Batch 160-430397

The following samples were prepared at a reduced aliquot due to cloudy discoloration: MW-10 (500-162824-8) and MW-11 (500-162824-9).

Method(s) PrecSep-21: Radium 226 Prep Batch 160-430133

The following samples had white discoloration: MW-12 (500-162824-10), MW-17 (500-162824-12) and MW-18 (500-162824-13). Sample 500-162824-C-10 had brown solids.

Method(s) PrecSep-21: Radium 226 Prep Batch 160-430235

The following samples were prepared at a reduced aliquot due to cloudy discoloration: MW-10 (500-162824-8) and MW-11 (500-162824-9).

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

Job ID: 500-162824-2

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 = Eurofins 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

Job ID: 500-162824-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
500-162824-1	MW-01	Water	04/30/19 13:25	05/04/19 09:30	
500-162824-2	MW-02	Water	04/30/19 09:45	05/04/19 09:30	
500-162824-3	MW-03	Water	04/30/19 10:50	05/04/19 09:30	
500-162824-4	MW-04	Water	04/30/19 11:40	05/04/19 09:30	
500-162824-5	MW-05	Water	04/30/19 12:30	05/04/19 09:30	
500-162824-6	MW-08	Water	05/01/19 15:35	05/04/19 09:30	
500-162824-7	MW-09	Water	05/01/19 13:15	05/04/19 09:30	
500-162824-8	MW-10	Water	05/01/19 09:30	05/04/19 09:30	
500-162824-9	MW-11	Water	05/01/19 10:25	05/04/19 09:30	
500-162824-10	MW-12	Water	05/01/19 11:55	05/04/19 09:30	
500-162824-11	MW-15	Water	05/02/19 12:15	05/04/19 09:30	
500-162824-12	MW-17	Water	04/29/19 15:20	05/04/19 09:30	
500-162824-13	MW-18	Water	04/29/19 14:25	05/04/19 09:30	
500-162824-14	MW-19	Water	05/02/19 10:30	05/04/19 09:30	
500-162824-15	Duplicate	Water	04/29/19 00:00	05/04/19 09:30	

Client Sample Results

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

Job ID: 500-162824-2

Client Sample ID: MW-01

Date Collected: 04/30/19 13:25

Date Received: 05/04/19 09:30

Lab Sample ID: 500-162824-1

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	-0.0249	U	0.0545	0.0545	1.00	0.121	pCi/L	05/30/19 10:35	08/13/19 21:10	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	79.1		40 - 110					05/30/19 10:35	08/13/19 21:10	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	0.000	U *	0.369	0.369	1.00	0.656	pCi/L	05/31/19 10:52	07/23/19 14:24	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	79.1		40 - 110					05/31/19 10:52	07/23/19 14:24	1
Y Carrier	75.5		40 - 110					05/31/19 10:52	07/23/19 14:24	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	-0.0249	U	0.373	0.373	5.00	0.656	pCi/L		08/15/19 09:45	1

Client Sample Results

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

Job ID: 500-162824-2

Client Sample ID: MW-02

Date Collected: 04/30/19 09:45

Date Received: 05/04/19 09:30

Lab Sample ID: 500-162824-2

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	0.0445	U	0.0705	0.0707	1.00	0.121	pCi/L	05/30/19 10:35	08/13/19 21:10	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.5		40 - 110					05/30/19 10:35	08/13/19 21:10	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	0.171	U *	0.262	0.262	1.00	0.441	pCi/L	05/31/19 10:52	07/23/19 14:25	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.5		40 - 110					05/31/19 10:52	07/23/19 14:25	1
Y Carrier	76.6		40 - 110					05/31/19 10:52	07/23/19 14:25	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	0.215	U	0.271	0.271	5.00	0.441	pCi/L		08/15/19 09:45	1

Client Sample Results

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

Job ID: 500-162824-2

Client Sample ID: MW-03

Date Collected: 04/30/19 10:50

Date Received: 05/04/19 09:30

Lab Sample ID: 500-162824-3

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	0.0298	U	0.0613	0.0613	1.00	0.111	pCi/L	05/30/19 10:35	08/13/19 21:11	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	74.0		40 - 110					05/30/19 10:35	08/13/19 21:11	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	-0.0589	U *	0.366	0.366	1.00	0.668	pCi/L	05/31/19 10:52	07/23/19 14:25	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	74.0		40 - 110					05/31/19 10:52	07/23/19 14:25	1
Y Carrier	73.3		40 - 110					05/31/19 10:52	07/23/19 14:25	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	-0.0291	U	0.371	0.371	5.00	0.668	pCi/L		08/15/19 09:45	1

Client Sample Results

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

Job ID: 500-162824-2

Client Sample ID: MW-04

Date Collected: 04/30/19 11:40

Date Received: 05/04/19 09:30

Lab Sample ID: 500-162824-4

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	-0.0600	U	0.0531	0.0534	1.00	0.130	pCi/L	05/30/19 10:35	08/14/19 06:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.6		40 - 110					05/30/19 10:35	08/14/19 06:57	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	0.260	U *	0.408	0.409	1.00	0.684	pCi/L	05/31/19 10:52	07/23/19 14:29	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.6		40 - 110					05/31/19 10:52	07/23/19 14:29	1
Y Carrier	80.4		40 - 110					05/31/19 10:52	07/23/19 14:29	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	0.200	U	0.411	0.412	5.00	0.684	pCi/L		08/15/19 09:45	1

Client Sample Results

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

Job ID: 500-162824-2

Client Sample ID: MW-05

Date Collected: 04/30/19 12:30

Date Received: 05/04/19 09:30

Lab Sample ID: 500-162824-5

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	-0.115	U	0.0338	0.0354	1.00	0.136	pCi/L	05/30/19 10:35	08/13/19 21:11	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	73.7		40 - 110					05/30/19 10:35	08/13/19 21:11	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	0.325	U *	0.427	0.428	1.00	0.709	pCi/L	05/31/19 10:52	07/23/19 14:29	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	73.7		40 - 110					05/31/19 10:52	07/23/19 14:29	1
Y Carrier	77.8		40 - 110					05/31/19 10:52	07/23/19 14:29	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	0.209	U	0.428	0.429	5.00	0.709	pCi/L		08/15/19 09:45	1

Client Sample Results

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

Job ID: 500-162824-2

Client Sample ID: MW-08

Date Collected: 05/01/19 15:35

Date Received: 05/04/19 09:30

Lab Sample ID: 500-162824-6

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	0.0735	U	0.0635	0.0638	1.00	0.0942	pCi/L	05/30/19 10:35	08/13/19 21:11	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.1		40 - 110					05/30/19 10:35	08/13/19 21:11	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	0.819	*	0.427	0.433	1.00	0.639	pCi/L	05/31/19 10:52	07/23/19 14:29	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.1		40 - 110					05/31/19 10:52	07/23/19 14:29	1
Y Carrier	74.4		40 - 110					05/31/19 10:52	07/23/19 14:29	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	0.892		0.432	0.438	5.00	0.639	pCi/L		08/15/19 09:45	1

Client Sample Results

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

Job ID: 500-162824-2

Client Sample ID: MW-09

Date Collected: 05/01/19 13:15

Date Received: 05/04/19 09:30

Lab Sample ID: 500-162824-7

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	-0.0249	U	0.0422	0.0422	1.00	0.108	pCi/L	05/30/19 10:35	08/13/19 21:11	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	76.0		40 - 110					05/30/19 10:35	08/13/19 21:11	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	0.606	U *	0.422	0.426	1.00	0.660	pCi/L	05/31/19 10:52	07/23/19 14:29	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	76.0		40 - 110					05/31/19 10:52	07/23/19 14:29	1
Y Carrier	78.1		40 - 110					05/31/19 10:52	07/23/19 14:29	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	0.581	U	0.424	0.428	5.00	0.660	pCi/L		08/15/19 09:45	1

Client Sample Results

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

Job ID: 500-162824-2

Client Sample ID: MW-10

Lab Sample ID: 500-162824-8

Date Collected: 05/01/19 09:30

Matrix: Water

Date Received: 05/04/19 09:30

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.491		0.142	0.148	1.00	0.131	pCi/L	05/30/19 10:35	08/13/19 21:11	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.1		40 - 110					05/30/19 10:35	08/13/19 21:11	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	0.834	*	0.468	0.474	1.00	0.706	pCi/L	05/31/19 10:52	07/23/19 14:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.1		40 - 110					05/31/19 10:52	07/23/19 14:32	1
Y Carrier	74.0		40 - 110					05/31/19 10:52	07/23/19 14:32	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	1.33		0.489	0.497	5.00	0.706	pCi/L		08/15/19 09:45	1

Client Sample Results

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

Job ID: 500-162824-2

Client Sample ID: MW-11

Lab Sample ID: 500-162824-9

Date Collected: 05/01/19 10:25

Matrix: Water

Date Received: 05/04/19 09:30

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.679		0.171	0.182	1.00	0.137	pCi/L	05/30/19 10:35	08/13/19 21:11	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.0		40 - 110					05/30/19 10:35	08/13/19 21:11	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	0.906	*	0.490	0.497	1.00	0.733	pCi/L	05/31/19 10:52	07/23/19 14:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.0		40 - 110					05/31/19 10:52	07/23/19 14:32	1
Y Carrier	76.3		40 - 110					05/31/19 10:52	07/23/19 14:32	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	1.59		0.519	0.529	5.00	0.733	pCi/L		08/15/19 09:45	1

Client Sample Results

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

Job ID: 500-162824-2

Client Sample ID: MW-12

Lab Sample ID: 500-162824-10

Date Collected: 05/01/19 11:55

Matrix: Water

Date Received: 05/04/19 09:30

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		0.0978	0.102	1.00	0.0781	pCi/L	05/29/19 11:23	08/03/19 12:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.7		40 - 110					05/29/19 11:23	08/03/19 12:56	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	0.358	U	0.277	0.279	1.00	0.439	pCi/L	05/29/19 12:41	07/17/19 08:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.7		40 - 110					05/29/19 12:41	07/17/19 08:46	1
Y Carrier	86.4		40 - 110					05/29/19 12:41	07/17/19 08:46	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	0.666		0.294	0.297	5.00	0.439	pCi/L		08/06/19 11:03	1

Client Sample Results

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

Job ID: 500-162824-2

Client Sample ID: MW-15

Date Collected: 05/02/19 12:15

Date Received: 05/04/19 09:30

Lab Sample ID: 500-162824-11

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	0.0738	U	0.0681	0.0684	1.00	0.105	pCi/L	05/29/19 11:23	08/03/19 12:56	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.1		40 - 110					05/29/19 11:23	08/03/19 12:56	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	0.256	0.257	1.00	0.424	pCi/L	05/29/19 12:41	07/17/19 08:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.1		40 - 110					05/29/19 12:41	07/17/19 08:46	1
Y Carrier	88.6		40 - 110					05/29/19 12:41	07/17/19 08:46	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	0.278	U	0.265	0.266	5.00	0.424	pCi/L		08/06/19 11:03	1

Client Sample Results

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

Job ID: 500-162824-2

Client Sample ID: MW-17

Lab Sample ID: 500-162824-12

Date Collected: 04/29/19 15:20

Matrix: Water

Date Received: 05/04/19 09:30

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.120		0.0667	0.0675	1.00	0.0798	pCi/L	05/29/19 11:23	08/03/19 13:00	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.8		40 - 110					05/29/19 11:23	08/03/19 13:00	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	0.397	U	0.265	0.267	1.00	0.411	pCi/L	05/29/19 12:41	07/17/19 08:47	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.8		40 - 110					05/29/19 12:41	07/17/19 08:47	1
Y Carrier	89.7		40 - 110					05/29/19 12:41	07/17/19 08:47	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	0.517		0.273	0.275	5.00	0.411	pCi/L		08/06/19 11:03	1

Client Sample Results

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

Job ID: 500-162824-2

Client Sample ID: MW-18

Date Collected: 04/29/19 14:25

Date Received: 05/04/19 09:30

Lab Sample ID: 500-162824-13

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	0.220		0.0987	0.101	1.00	0.112	pCi/L	05/29/19 11:23	08/03/19 13:00	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.4		40 - 110					05/29/19 11:23	08/03/19 13:00	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	0.122	U	0.261	0.261	1.00	0.445	pCi/L	05/29/19 12:41	07/17/19 08:47	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.4		40 - 110					05/29/19 12:41	07/17/19 08:47	1
Y Carrier	89.7		40 - 110					05/29/19 12:41	07/17/19 08:47	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	0.342	U	0.279	0.280	5.00	0.445	pCi/L		08/06/19 11:03	1

Client Sample Results

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

Job ID: 500-162824-2

Client Sample ID: MW-19

Lab Sample ID: 500-162824-14

Date Collected: 05/02/19 10:30

Matrix: Water

Date Received: 05/04/19 09:30

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.129		0.0694	0.0704	1.00	0.0795	pCi/L	05/29/19 11:23	08/03/19 14:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.7		40 - 110					05/29/19 11:23	08/03/19 14:52	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	0.175	U	0.257	0.257	1.00	0.431	pCi/L	05/29/19 12:41	07/17/19 08:47	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.7		40 - 110					05/29/19 12:41	07/17/19 08:47	1
Y Carrier	88.2		40 - 110					05/29/19 12:41	07/17/19 08:47	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	0.304	U	0.266	0.266	5.00	0.431	pCi/L		08/06/19 11:03	1

Client Sample Results

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

Job ID: 500-162824-2

Client Sample ID: Duplicate

Lab Sample ID: 500-162824-15

Date Collected: 04/29/19 00:00

Matrix: Water

Date Received: 05/04/19 09:30

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.165		0.0830	0.0843	1.00	0.103	pCi/L	05/29/19 11:23	08/03/19 14:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.7		40 - 110					05/29/19 11:23	08/03/19 14:52	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	0.134	U	0.230	0.230	1.00	0.390	pCi/L	05/29/19 12:41	07/17/19 08:47	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.7		40 - 110					05/29/19 12:41	07/17/19 08:47	1
Y Carrier	87.9		40 - 110					05/29/19 12:41	07/17/19 08:47	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	0.298	U	0.245	0.245	5.00	0.390	pCi/L		08/06/19 11:04	1

Definitions/Glossary

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

Job ID: 500-162824-2

Qualifiers

Rad

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
U	Result is less than the sample detection limit.

Glossary

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

QC Association Summary

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

Job ID: 500-162824-2

Rad

Prep Batch: 430133

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-162824-10	MW-12	Total/NA	Water	PrecSep-21	
500-162824-11	MW-15	Total/NA	Water	PrecSep-21	
500-162824-12	MW-17	Total/NA	Water	PrecSep-21	
500-162824-13	MW-18	Total/NA	Water	PrecSep-21	
500-162824-14	MW-19	Total/NA	Water	PrecSep-21	
500-162824-15	Duplicate	Total/NA	Water	PrecSep-21	
MB 160-430133/23-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-430133/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	

Prep Batch: 430139

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-162824-10	MW-12	Total/NA	Water	PrecSep_0	
500-162824-11	MW-15	Total/NA	Water	PrecSep_0	
500-162824-12	MW-17	Total/NA	Water	PrecSep_0	
500-162824-13	MW-18	Total/NA	Water	PrecSep_0	
500-162824-14	MW-19	Total/NA	Water	PrecSep_0	
500-162824-15	Duplicate	Total/NA	Water	PrecSep_0	
MB 160-430139/23-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-430139/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	

Prep Batch: 430235

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-162824-1	MW-01	Total/NA	Water	PrecSep-21	
500-162824-2	MW-02	Total/NA	Water	PrecSep-21	
500-162824-3	MW-03	Total/NA	Water	PrecSep-21	
500-162824-4	MW-04	Total/NA	Water	PrecSep-21	
500-162824-5	MW-05	Total/NA	Water	PrecSep-21	
500-162824-6	MW-08	Total/NA	Water	PrecSep-21	
500-162824-7	MW-09	Total/NA	Water	PrecSep-21	
500-162824-8	MW-10	Total/NA	Water	PrecSep-21	
500-162824-9	MW-11	Total/NA	Water	PrecSep-21	
MB 160-430235/23-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-430235/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
500-162824-1 DU	MW-01	Total/NA	Water	PrecSep-21	

Prep Batch: 430397

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-162824-1	MW-01	Total/NA	Water	PrecSep_0	
500-162824-2	MW-02	Total/NA	Water	PrecSep_0	
500-162824-3	MW-03	Total/NA	Water	PrecSep_0	
500-162824-4	MW-04	Total/NA	Water	PrecSep_0	
500-162824-5	MW-05	Total/NA	Water	PrecSep_0	
500-162824-6	MW-08	Total/NA	Water	PrecSep_0	
500-162824-7	MW-09	Total/NA	Water	PrecSep_0	
500-162824-8	MW-10	Total/NA	Water	PrecSep_0	
500-162824-9	MW-11	Total/NA	Water	PrecSep_0	
MB 160-430397/23-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-430397/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
500-162824-1 DU	MW-01	Total/NA	Water	PrecSep_0	

QC Sample Results

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

Job ID: 500-162824-2

Method: 903.0 - Radium-226 (GFPC)

Lab Sample ID: MB 160-430133/23-A
Matrix: Water
Analysis Batch: 438092

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 430133

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.03041	U	0.0531	0.0531	1.00	0.120	pCi/L	05/29/19 11:23	08/04/19 21:19	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					05/29/19 11:23	08/04/19 21:19	1

Lab Sample ID: LCS 160-430133/1-A
Matrix: Water
Analysis Batch: 437770

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 430133

Analyte		Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226		11.4	8.842		0.939	1.00	0.103	pCi/L	78	75 - 125
Carrier	LCS %Yield	LCS Qualifier	Limits							
Ba Carrier	103		40 - 110							

Lab Sample ID: MB 160-430235/23-A
Matrix: Water
Analysis Batch: 439426

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 430235

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.005455	U	0.0525	0.0525	1.00	0.107	pCi/L	05/30/19 10:35	08/13/19 23:00	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.9		40 - 110					05/30/19 10:35	08/13/19 23:00	1

Lab Sample ID: LCS 160-430235/1-A
Matrix: Water
Analysis Batch: 439308

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 430235

Analyte		Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226		11.4	8.579		0.902	1.00	0.103	pCi/L	76	75 - 125
Carrier	LCS %Yield	LCS Qualifier	Limits							
Ba Carrier	95.2		40 - 110							

Lab Sample ID: 500-162824-1 DU
Matrix: Water
Analysis Batch: 439426

Client Sample ID: MW-01
Prep Type: Total/NA
Prep Batch: 430235

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-226	-0.0249	U	0.02744	U	0.0559	1.00	0.100	pCi/L	0.47	1

Eurofins TestAmerica, Chicago

QC Sample Results

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

Job ID: 500-162824-2

Method: 903.0 - Radium-226 (GFPC) (Continued)

Lab Sample ID: 500-162824-1 DU
Matrix: Water
Analysis Batch: 439426

Client Sample ID: MW-01
Prep Type: Total/NA
Prep Batch: 430235

Carrier	DU %Yield	DU Qualifier	Limits
Ba Carrier	88.7		40 - 110

Method: 904.0 - Radium-228 (GFPC)

Lab Sample ID: MB 160-430139/23-A
Matrix: Water
Analysis Batch: 435082

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 430139

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.3048	U	0.265	0.267	1.00	0.426	pCi/L	05/29/19 12:41	07/17/19 08:57	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	102		40 - 110					05/29/19 12:41	07/17/19 08:57	1
Y Carrier	82.6		40 - 110					05/29/19 12:41	07/17/19 08:57	1

Lab Sample ID: LCS 160-430139/1-A
Matrix: Water
Analysis Batch: 435081

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 430139

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	9.02	8.352		0.988	1.00	0.440	pCi/L	93	75 - 125
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	103		40 - 110						
Y Carrier	87.1		40 - 110						

Lab Sample ID: MB 160-430397/23-A
Matrix: Water
Analysis Batch: 435974

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 430397

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.03968	U	0.302	0.302	1.00	0.553	pCi/L	05/31/19 10:52	07/23/19 14:34	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.9		40 - 110					05/31/19 10:52	07/23/19 14:34	1
Y Carrier	62.8		40 - 110					05/31/19 10:52	07/23/19 14:34	1

Lab Sample ID: LCS 160-430397/1-A
Matrix: Water
Analysis Batch: 436112

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 430397

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	9.00	6.483	*	0.923	1.00	0.554	pCi/L	72	75 - 125

Eurofins TestAmerica, Chicago

QC Sample Results

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

Job ID: 500-162824-2

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

Lab Sample ID: LCS 160-430397/1-A
Matrix: Water
Analysis Batch: 436112

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 430397

	LCS	LCS	
Carrier	%Yield	Qualifier	Limits
Ba Carrier	95.2		40 - 110
Y Carrier	65.8		40 - 110

Lab Sample ID: 500-162824-1 DU
Matrix: Water
Analysis Batch: 436112

Client Sample ID: MW-01
Prep Type: Total/NA
Prep Batch: 430397

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-228	0.000	U *	-0.07644	U *	0.300	1.00	0.550	pCi/L	0.11	1

	DU	DU	
Carrier	%Yield	Qualifier	Limits
Ba Carrier	88.7		40 - 110
Y Carrier	75.5		40 - 110

Lab Chronicle

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

Job ID: 500-162824-2

Client Sample ID: MW-01

Date Collected: 04/30/19 13:25

Date Received: 05/04/19 09:30

Lab Sample ID: 500-162824-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			430235	05/30/19 10:35	ORM	TAL SL
Total/NA	Analysis	903.0		1	439426	08/13/19 21:10	CDR	TAL SL
Total/NA	Prep	PrecSep_0			430397	05/31/19 10:52	ORM	TAL SL
Total/NA	Analysis	904.0		1	436112	07/23/19 14:24	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	439616	08/15/19 09:45	SMP	TAL SL

Client Sample ID: MW-02

Date Collected: 04/30/19 09:45

Date Received: 05/04/19 09:30

Lab Sample ID: 500-162824-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			430235	05/30/19 10:35	ORM	TAL SL
Total/NA	Analysis	903.0		1	439426	08/13/19 21:10	CDR	TAL SL
Total/NA	Prep	PrecSep_0			430397	05/31/19 10:52	ORM	TAL SL
Total/NA	Analysis	904.0		1	436112	07/23/19 14:25	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	439616	08/15/19 09:45	SMP	TAL SL

Client Sample ID: MW-03

Date Collected: 04/30/19 10:50

Date Received: 05/04/19 09:30

Lab Sample ID: 500-162824-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			430235	05/30/19 10:35	ORM	TAL SL
Total/NA	Analysis	903.0		1	439426	08/13/19 21:11	CDR	TAL SL
Total/NA	Prep	PrecSep_0			430397	05/31/19 10:52	ORM	TAL SL
Total/NA	Analysis	904.0		1	436112	07/23/19 14:25	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	439616	08/15/19 09:45	SMP	TAL SL

Client Sample ID: MW-04

Date Collected: 04/30/19 11:40

Date Received: 05/04/19 09:30

Lab Sample ID: 500-162824-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			430235	05/30/19 10:35	ORM	TAL SL
Total/NA	Analysis	903.0		1	439521	08/14/19 06:57	KLS	TAL SL
Total/NA	Prep	PrecSep_0			430397	05/31/19 10:52	ORM	TAL SL
Total/NA	Analysis	904.0		1	436097	07/23/19 14:29	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	439616	08/15/19 09:45	SMP	TAL SL

Lab Chronicle

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

Job ID: 500-162824-2

Client Sample ID: MW-05

Date Collected: 04/30/19 12:30

Date Received: 05/04/19 09:30

Lab Sample ID: 500-162824-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			430235	05/30/19 10:35	ORM	TAL SL
Total/NA	Analysis	903.0		1	439426	08/13/19 21:11	CDR	TAL SL
Total/NA	Prep	PrecSep_0			430397	05/31/19 10:52	ORM	TAL SL
Total/NA	Analysis	904.0		1	436097	07/23/19 14:29	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	439616	08/15/19 09:45	SMP	TAL SL

Client Sample ID: MW-08

Date Collected: 05/01/19 15:35

Date Received: 05/04/19 09:30

Lab Sample ID: 500-162824-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			430235	05/30/19 10:35	ORM	TAL SL
Total/NA	Analysis	903.0		1	439426	08/13/19 21:11	CDR	TAL SL
Total/NA	Prep	PrecSep_0			430397	05/31/19 10:52	ORM	TAL SL
Total/NA	Analysis	904.0		1	436097	07/23/19 14:29	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	439616	08/15/19 09:45	SMP	TAL SL

Client Sample ID: MW-09

Date Collected: 05/01/19 13:15

Date Received: 05/04/19 09:30

Lab Sample ID: 500-162824-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			430235	05/30/19 10:35	ORM	TAL SL
Total/NA	Analysis	903.0		1	439426	08/13/19 21:11	CDR	TAL SL
Total/NA	Prep	PrecSep_0			430397	05/31/19 10:52	ORM	TAL SL
Total/NA	Analysis	904.0		1	436097	07/23/19 14:29	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	439616	08/15/19 09:45	SMP	TAL SL

Client Sample ID: MW-10

Date Collected: 05/01/19 09:30

Date Received: 05/04/19 09:30

Lab Sample ID: 500-162824-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			430235	05/30/19 10:35	ORM	TAL SL
Total/NA	Analysis	903.0		1	439426	08/13/19 21:11	CDR	TAL SL
Total/NA	Prep	PrecSep_0			430397	05/31/19 10:52	ORM	TAL SL
Total/NA	Analysis	904.0		1	435974	07/23/19 14:32	AMJ	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	439616	08/15/19 09:45	SMP	TAL SL

Lab Chronicle

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

Job ID: 500-162824-2

Client Sample ID: MW-11

Date Collected: 05/01/19 10:25

Date Received: 05/04/19 09:30

Lab Sample ID: 500-162824-9

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			430235	05/30/19 10:35	ORM	TAL SL
Total/NA	Analysis	903.0		1	439426	08/13/19 21:11	CDR	TAL SL
Total/NA	Prep	PrecSep_0			430397	05/31/19 10:52	ORM	TAL SL
Total/NA	Analysis	904.0		1	435974	07/23/19 14:32	AMJ	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	439616	08/15/19 09:45	SMP	TAL SL

Client Sample ID: MW-12

Date Collected: 05/01/19 11:55

Date Received: 05/04/19 09:30

Lab Sample ID: 500-162824-10

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			430133	05/29/19 11:23	ORM	TAL SL
Total/NA	Analysis	903.0		1	437844	08/03/19 12:56	KLS	TAL SL
Total/NA	Prep	PrecSep_0			430139	05/29/19 12:41	ORM	TAL SL
Total/NA	Analysis	904.0		1	435081	07/17/19 08:46	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	438275	08/06/19 11:03	SMP	TAL SL

Client Sample ID: MW-15

Date Collected: 05/02/19 12:15

Date Received: 05/04/19 09:30

Lab Sample ID: 500-162824-11

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			430133	05/29/19 11:23	ORM	TAL SL
Total/NA	Analysis	903.0		1	437844	08/03/19 12:56	KLS	TAL SL
Total/NA	Prep	PrecSep_0			430139	05/29/19 12:41	ORM	TAL SL
Total/NA	Analysis	904.0		1	435081	07/17/19 08:46	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	438275	08/06/19 11:03	SMP	TAL SL

Client Sample ID: MW-17

Date Collected: 04/29/19 15:20

Date Received: 05/04/19 09:30

Lab Sample ID: 500-162824-12

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			430133	05/29/19 11:23	ORM	TAL SL
Total/NA	Analysis	903.0		1	437902	08/03/19 13:00	KLS	TAL SL
Total/NA	Prep	PrecSep_0			430139	05/29/19 12:41	ORM	TAL SL
Total/NA	Analysis	904.0		1	435081	07/17/19 08:47	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	438275	08/06/19 11:03	SMP	TAL SL

Lab Chronicle

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

Job ID: 500-162824-2

Client Sample ID: MW-18

Date Collected: 04/29/19 14:25

Date Received: 05/04/19 09:30

Lab Sample ID: 500-162824-13

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			430133	05/29/19 11:23	ORM	TAL SL
Total/NA	Analysis	903.0		1	437902	08/03/19 13:00	KLS	TAL SL
Total/NA	Prep	PrecSep_0			430139	05/29/19 12:41	ORM	TAL SL
Total/NA	Analysis	904.0		1	435081	07/17/19 08:47	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	438275	08/06/19 11:03	SMP	TAL SL

Client Sample ID: MW-19

Date Collected: 05/02/19 10:30

Date Received: 05/04/19 09:30

Lab Sample ID: 500-162824-14

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			430133	05/29/19 11:23	ORM	TAL SL
Total/NA	Analysis	903.0		1	437844	08/03/19 14:52	KLS	TAL SL
Total/NA	Prep	PrecSep_0			430139	05/29/19 12:41	ORM	TAL SL
Total/NA	Analysis	904.0		1	435081	07/17/19 08:47	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	438275	08/06/19 11:03	SMP	TAL SL

Client Sample ID: Duplicate

Date Collected: 04/29/19 00:00

Date Received: 05/04/19 09:30

Lab Sample ID: 500-162824-15

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			430133	05/29/19 11:23	ORM	TAL SL
Total/NA	Analysis	903.0		1	437844	08/03/19 14:52	KLS	TAL SL
Total/NA	Prep	PrecSep_0			430139	05/29/19 12:41	ORM	TAL SL
Total/NA	Analysis	904.0		1	435081	07/17/19 08:47	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	438275	08/06/19 11:04	SMP	TAL SL

Laboratory References:

TAL SL = Eurofins 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

Job ID: 500-162824-2

Laboratory: Eurofins TestAmerica, Chicago

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Illinois	NELAP	5	100201	04-30-20

Laboratory: Eurofins 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	11-30-19

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

2417 Bond Street, University Park, IL
Phone: 708.534.5200 Fax: 708.1



500-162824 COC

Report To (optional)

Contact: _____
Company: _____
Address: _____
Address: _____
Phone: _____
Fax: _____
E-Mail: _____

Bill To (optional)

Contact: _____
Company: _____
Address: _____
Address: _____
Phone: _____
Fax: _____
PO#/Reference# _____

Chain of Custody Record

Lab Job #: 500-162824

Chain of Custody Number: _____

Page 1 of 2

Temperature °C of Cooler: 3.7, 4.7, 2.3

Client <u>KPRG and Assoc.</u>		Project # <u>12313.1</u>		Preservative <u>3</u>		<u>8</u>		<u>3</u>												Preservative Key 1. HCL, Cool to 4° 2. H2SO4, Cool to 4° 3. HNO3, Cool to 4° 4. NaOH, Cool to 4° 5. NaOH/Zn, Cool to 4° 6. NaHSO4 7. Cool to 4° 8. None 9. Other	
Project Name <u>NRG Powerston CCR</u>		Lab Project # _____		Parameter																	
Project Location/State <u>Pekin, IL</u>		Lab Project # _____																			
Sampler <u>Mitchel Dolan</u>		Lab PM <u>Eric Lang</u>																			
Lab ID	MS/MSD	Sample ID	Date	Time	# of Containers	Matrix	Total Metals	Cl, F, S, O4, TDS	Rad												Comments
<u>1</u>		<u>MW-01</u>	<u>4/30</u>	<u>1325</u>	<u>5</u>	<u>W</u>	<u>X</u>	<u>X</u>	<u>X</u>												
<u>2</u>		<u>MW-02</u>	<u>4/30</u>	<u>0945</u>																	
<u>3</u>		<u>MW-03</u>	<u>4/30</u>	<u>1050</u>																	
<u>4</u>		<u>MW-04</u>	<u>4/30</u>	<u>1140</u>																	
<u>5</u>		<u>MW-05</u>	<u>4/30</u>	<u>1230</u>																	
<u>6</u>		<u>MW-08</u>	<u>5/1</u>	<u>1535</u>																	
<u>7</u>		<u>MW-09</u>	<u>5/1</u>	<u>1315</u>																	
<u>8</u>		<u>MW-10</u>	<u>5/1</u>	<u>0930</u>																	
<u>9</u>		<u>MW-11</u>	<u>5/1</u>	<u>1025</u>																	
<u>10</u>		<u>MW-12</u>	<u>5/1</u>	<u>1155</u>																	

Turnaround Time Required (Business Days)

___ 1 Day ___ 2 Days ___ 5 Days ___ 7 Days ___ 10 Days ___ 15 Days ___ Other

Sample Disposal

☐ Return to Client

☐ Disposal by Lab

☐ Archive for ___ Months

(A fee may be assessed if samples are retained longer than 1 month)

Relinquished By <u>Mitchel Dolan</u>	Company <u>KPRG</u>	Date <u>5/2/2019</u>	Time <u>1700</u>	Received By <u>FEDEX</u>	Company _____	Date <u>5/2/2019</u>	Time <u>1700</u>
Relinquished By _____	Company _____	Date _____	Time _____	Received By <u>Devin Tronchetti</u>	Company <u>TACHS</u>	Date <u>05/10/19</u>	Time <u>0930</u>
Relinquished By _____	Company _____	Date _____	Time _____	Received By _____	Company _____	Date _____	Time _____

Lab Courier _____

Shipped FX Saturday

Hand Delivered _____

Matrix Key

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

Client Comments

Lab Comments:

The following information was obtained from the review of the records of the Department of Social Services, Division of Child Welfare, dated 10/1/78:

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Dr. The M. Lynn (Houghton)
1000 Adams Street, New York
City, New York

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1961, 1962, 1963

Chain of Custody Record



Environmental Testing
 TestAmerica

Client Information (Sub Contract Lab)		Sampler: Lab PM: Lang, Eric A.		Carrier Tracking No(s): 500-120636.2	
Client Contact: Shipping/Receiving		Phone: E-Mail: eric.lang@testamericainc.com		State of Origin: Illinois	
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): NELAP - Illinois		Page: Page 2 of 2	
Address: 13715 Rider Trail North,		Due Date Requested: 6/4/2019		Job #: 500-162824-2	
City: Earth City		TAT Requested (days):		Preservation Codes:	
State, Zip: MO, 63045		PO #:		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)	
Phone: 314-298-8566(Tel) 314-298-8757(Fax)		WO #:		Other:	
Email:		Project #:			
Powertron CCR		50011612			
Site: MWG - Powerton		SSOW#:			

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=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-12 (500-162824-10)	5/1/19	11:55 Central	Water	Water	X	X	X	X	X	3	Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs
MW-15 (500-162824-11)	5/2/19	12:15 Central	Water	Water	X	X	X	X	X	3	Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs
MW-17 (500-162824-12)	4/29/19	15:20 Central	Water	Water	X	X	X	X	X	3	Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs
MW-18 (500-162824-13)	4/29/19	14:25 Central	Water	Water	X	X	X	X	X	3	Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs
MW-19 (500-162824-14)	5/2/19	10:30 Central	Water	Water	X	X	X	X	X	3	Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs
Duplicate (500-162824-15)	4/29/19	Central	Water	Water	X	X	X	X	X	3	Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs

500-162824 Chain of Custody

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	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Deliverable Requested: I, II, III, IV, Other (specify)	Return To Client ☐ Disposal By Lab ☐ Archive For ☐ Months
Primary Deliverable Rank: 2	Special Instructions/QC Requirements:
Relinquished by: <i>[Signature]</i>	Relinquished by: <i>[Signature]</i>
Date: 5/16/19	Date: 5-7-19
Time: 1500	Time: 09:00
Company: <i>[Signature]</i>	Company: <i>[Signature]</i>
Relinquished by:	Relinquished by:
Date/Time:	Date/Time:
Company:	Company:
Custody Seals Intact: ☐ Yes ☐ No	Cooler Temperature(s) °C and Other Remarks:

Chain of Custody Record



Client Information (Sub Contract Lab)				Sampler: Lab PM Lang, Eric A.		Carrier Tracking No(s):		COC No: 500-120636.1	
Client Contact: Shipping/Receiving				Phone:		State of Origin: Illinois		Page: Page 1 of 2	
Company: TestAmerica Laboratories, Inc.				E-Mail: eric.lang@testamericainc.com		Accreditations Required (See note): NELAP - Illinois		Job #: 500-162824-2	
Address: 13715 Rider Trail North,				Due Date Requested: 6/4/2019		Analysis Requested		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:	
City: Earth City				TAT Requested (days):		Perform MS/MSD (Yes or No)		Total Number of Containers	
State, Zip: MO, 63045				PO #:		903.0/PreSep_21 Standard Target List		Ra226Ra228_GFPc	
Phone: 314-298-8566(Tel) 314-298-8757(Fax)				WO #:		904.0/PreSep_0 Standard Target List			
Email:				Project #: 50011612		Field Filtered Sample (Yes or No)			
Site: MWG - Powerton				SSOW#:		Preservation Code:			
Sample Date				Sample Time		Sample Type (C=Comp, G=grab)		Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	
Sample Identification - Client ID (Lab ID)				Sample Date		Sample Time		Sample Type (C=Comp, G=grab)	
MW-01 (500-162824-1)				4/30/19		13:25 Central		Water	
MW-02 (500-162824-2)				4/30/19		09:45 Central		Water	
MW-03 (500-162824-3)				4/30/19		10:50 Central		Water	
MW-04 (500-162824-4)				4/30/19		11:40 Central		Water	
MW-05 (500-162824-5)				4/30/19		12:30 Central		Water	
MW-08 (500-162824-6)				5/1/19		15:35 Central		Water	
MW-09 (500-162824-7)				5/1/19		13:15 Central		Water	
MW-10 (500-162824-8)				5/1/19		09:30 Central		Water	
MW-11 (500-162824-9)				5/1/19		10:25 Central		Water	
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: <i>[Signature]</i> Date: <i>5/6/19</i>									
Relinquished by: <i>[Signature]</i> Date: <i>5/6/19</i>									
Relinquished by: <i>[Signature]</i> Date: <i>5/6/19</i>									
Custody Seals Intact: <i>[Signature]</i> Date: <i>5/6/19</i>									
Custody Seal No.: <i>1503</i>									
Cooler Temperature(s) °C and Other Remarks:									
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:									

Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-162824-2

Login Number: 162824

List Source: Eurofins 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	3.7,4.7,5.3,2.3
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	

Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-162824-2

Login Number: 162824

List Number: 3

Creator: Hellm, Michael

List Source: Eurofins TestAmerica, St. Louis

List Creation: 05/09/19 11:00 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.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	18.0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	N/A	
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

Job ID: 500-162824-2

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)					
500-162824-1	MW-01	79.1					
500-162824-1 DU	MW-01	88.7					
500-162824-2	MW-02	91.5					
500-162824-3	MW-03	74.0					
500-162824-4	MW-04	83.6					
500-162824-5	MW-05	73.7					
500-162824-6	MW-08	83.1					
500-162824-7	MW-09	76.0					
500-162824-8	MW-10	94.1					
500-162824-9	MW-11	89.0					
500-162824-10	MW-12	88.7					
500-162824-11	MW-15	88.1					
500-162824-12	MW-17	89.8					
500-162824-13	MW-18	88.4					
500-162824-14	MW-19	86.7					
500-162824-15	Duplicate	90.7					
LCS 160-430133/1-A	Lab Control Sample	103					
LCS 160-430235/1-A	Lab Control Sample	95.2					
MB 160-430133/23-A	Method Blank	102					
MB 160-430235/23-A	Method Blank	98.9					

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)				
500-162824-1	MW-01	79.1	75.5				
500-162824-1 DU	MW-01	88.7	75.5				
500-162824-2	MW-02	91.5	76.6				
500-162824-3	MW-03	74.0	73.3				
500-162824-4	MW-04	83.6	80.4				
500-162824-5	MW-05	73.7	77.8				
500-162824-6	MW-08	83.1	74.4				
500-162824-7	MW-09	76.0	78.1				
500-162824-8	MW-10	94.1	74.0				
500-162824-9	MW-11	89.0	76.3				
500-162824-10	MW-12	88.7	86.4				
500-162824-11	MW-15	88.1	88.6				
500-162824-12	MW-17	89.8	89.7				
500-162824-13	MW-18	88.4	89.7				
500-162824-14	MW-19	86.7	88.2				
500-162824-15	Duplicate	90.7	87.9				
LCS 160-430139/1-A	Lab Control Sample	103	87.1				
LCS 160-430397/1-A	Lab Control Sample	95.2	65.8				
MB 160-430139/23-A	Method Blank	102	82.6				
MB 160-430397/23-A	Method Blank	98.9	62.8				

Eurofins TestAmerica, Chicago

Tracer/Carrier Summary

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

Job ID: 500-162824-2

Tracer/Carrier Legend

Ba Carrier = Ba Carrier

Y Carrier = Y Carrier

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ANALYTICAL REPORT

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

Laboratory Job ID: 500-169046-1
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:
9/11/2019 6:45:20 AM

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

LINKS

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results through
TotalAccess

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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.

Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Detection Summary	4
Method Summary	6
Sample Summary	7
Client Sample Results	8
Definitions	15
QC Association	16
QC Sample Results	19
Chronicle	22
Certification Summary	25
Chain of Custody	26
Receipt Checklists	29



Case Narrative

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

Job ID: 500-169046-1

Job ID: 500-169046-1

Laboratory: Eurofins TestAmerica, Chicago

Narrative

Job Narrative
500-169046-1

Comments

No additional comments.

Receipt

The samples were received on 8/27/2019 10:20 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.7° C and 5.6° C.

Metals

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

General Chemistry

Method(s) SM 4500 Cl- E: The CCB at line 46 in analytical batch 500-502812 contained chloride above the reporting limit (RL). Associated samples were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the CCB.MW-05 (500-169046-6) and Duplicate (500-169046-7)

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

Detection Summary

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

Job ID: 500-169046-1

Client Sample ID: MW-02

Lab Sample ID: 500-169046-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0011		0.0010		mg/L	1		6020A	Total Recoverable
Barium	0.065		0.0025		mg/L	1		6020A	Total Recoverable
Boron	0.51		0.050		mg/L	1		6020A	Total Recoverable
Calcium	86		0.20		mg/L	1		6020A	Total Recoverable
Total Dissolved Solids	400		10		mg/L	1		SM 2540C	Total/NA
Chloride	50		2.0		mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.18		0.10		mg/L	1		SM 4500 F C	Total/NA
Sulfate	32		10		mg/L	2		SM 4500 SO4 E	Total/NA

Client Sample ID: MW-03

Lab Sample ID: 500-169046-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0014		0.0010		mg/L	1		6020A	Total Recoverable
Barium	0.069		0.0025		mg/L	1		6020A	Total Recoverable
Boron	0.31		0.050		mg/L	1		6020A	Total Recoverable
Calcium	75		0.20		mg/L	1		6020A	Total Recoverable
Total Dissolved Solids	380		10		mg/L	1		SM 2540C	Total/NA
Chloride	50		2.0		mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.26		0.10		mg/L	1		SM 4500 F C	Total/NA
Sulfate	14		5.0		mg/L	1		SM 4500 SO4 E	Total/NA

Client Sample ID: MW-04

Lab Sample ID: 500-169046-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.032		0.0025		mg/L	1		6020A	Total Recoverable
Boron	0.64		0.050		mg/L	1		6020A	Total Recoverable
Calcium	91		0.20		mg/L	1		6020A	Total Recoverable
Molybdenum	0.0080		0.0050		mg/L	1		6020A	Total Recoverable
Total Dissolved Solids	490		10		mg/L	1		SM 2540C	Total/NA
Chloride	60		2.0		mg/L	1		SM 4500 Cl- E	Total/NA
Fluoride	0.24		0.10		mg/L	1		SM 4500 F C	Total/NA
Sulfate	14		5.0		mg/L	1		SM 4500 SO4 E	Total/NA

Client Sample ID: MW-10

Lab Sample ID: 500-169046-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0017		0.0010		mg/L	1		6020A	Total Recoverable
Barium	0.19		0.0025		mg/L	1		6020A	Total Recoverable
Boron	0.30		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.

Eurofins TestAmerica, Chicago

Detection Summary

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

Job ID: 500-169046-1

Client Sample ID: MW-10 (Continued)

Lab Sample ID: 500-169046-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cobalt	0.0066		0.0010		mg/L	1		6020A	Total
Lead	0.0016		0.00050		mg/L	1		6020A	Recoverable
Selenium	0.0050		0.0025		mg/L	1		6020A	Total
Total Dissolved Solids	410		10		mg/L	1		SM 2540C	Recoverable
Chloride	48		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	30		5.0		mg/L	1		SM 4500 SO4 E	Total/NA

Client Sample ID: MW-01

Lab Sample ID: 500-169046-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.053		0.0025		mg/L	1		6020A	Total
Boron	0.57		0.050		mg/L	1		6020A	Recoverable
Calcium	100		0.20		mg/L	1		6020A	Total
Total Dissolved Solids	550		10		mg/L	1		SM 2540C	Recoverable
Chloride	39		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	71		25		mg/L	5		SM 4500 SO4 E	Total/NA

Client Sample ID: MW-05

Lab Sample ID: 500-169046-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.050		0.0025		mg/L	1		6020A	Total
Boron	0.57		0.050		mg/L	1		6020A	Recoverable
Calcium	110		0.20		mg/L	1		6020A	Total
Molybdenum	0.0067		0.0050		mg/L	1		6020A	Recoverable
Total Dissolved Solids	660		10		mg/L	1		SM 2540C	Total
Chloride	75 ^		10		mg/L	5		SM 4500 Cl- E	Recoverable
Fluoride	0.29		0.10		mg/L	1		SM 4500 F C	Total/NA
Sulfate	110		50		mg/L	10		SM 4500 SO4 E	Total/NA

Client Sample ID: Duplicate

Lab Sample ID: 500-169046-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.050		0.0025		mg/L	1		6020A	Total
Boron	0.55		0.050		mg/L	1		6020A	Recoverable
Calcium	110		0.20		mg/L	1		6020A	Total
Molybdenum	0.0066		0.0050		mg/L	1		6020A	Recoverable
Total Dissolved Solids	660		10		mg/L	1		SM 2540C	Total
Chloride	85 ^		10		mg/L	5		SM 4500 Cl- E	Recoverable
Fluoride	0.29		0.10		mg/L	1		SM 4500 F C	Total/NA
Sulfate	110		50		mg/L	10		SM 4500 SO4 E	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Chicago

Method Summary

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

Job ID: 500-169046-1

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

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Sample Summary

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

Job ID: 500-169046-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
500-169046-1	MW-02	Water	08/26/19 12:40	08/27/19 10:20	
500-169046-2	MW-03	Water	08/26/19 11:25	08/27/19 10:20	
500-169046-3	MW-04	Water	08/26/19 10:20	08/27/19 10:20	
500-169046-4	MW-10	Water	08/26/19 00:00	08/27/19 10:20	
500-169046-5	MW-01	Water	08/26/19 13:20	08/27/19 10:20	
500-169046-6	MW-05	Water	08/26/19 08:45	08/27/19 10:20	
500-169046-7	Duplicate	Water	08/26/19 00:00	08/27/19 10:20	

Client Sample Results

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

Job ID: 500-169046-1

Client Sample ID: MW-02

Date Collected: 08/26/19 12:40

Date Received: 08/27/19 10:20

Lab Sample ID: 500-169046-1

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		08/28/19 16:05	08/30/19 23:25	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		08/27/19 15:36	08/28/19 13:58	1
Arsenic	0.0011		0.0010		mg/L		08/27/19 15:36	08/28/19 13:58	1
Barium	0.065		0.0025		mg/L		08/27/19 15:36	08/28/19 13:58	1
Beryllium	<0.0010		0.0010		mg/L		08/27/19 15:36	08/29/19 17:49	1
Boron	0.51		0.050		mg/L		08/27/19 15:36	08/28/19 13:58	1
Cadmium	<0.00050		0.00050		mg/L		08/27/19 15:36	08/28/19 13:58	1
Calcium	86		0.20		mg/L		08/27/19 15:36	08/28/19 13:58	1
Chromium	<0.0050		0.0050		mg/L		08/27/19 15:36	08/28/19 13:58	1
Cobalt	<0.0010		0.0010		mg/L		08/27/19 15:36	08/28/19 13:58	1
Lead	<0.00050		0.00050		mg/L		08/27/19 15:36	08/28/19 13:58	1
Molybdenum	<0.0050		0.0050		mg/L		08/27/19 15:36	08/28/19 13:58	1
Selenium	<0.0025		0.0025		mg/L		08/27/19 15:36	08/28/19 13:58	1
Thallium	<0.0020		0.0020		mg/L		08/27/19 15:36	08/28/19 13:58	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		09/05/19 14:45	09/06/19 09:17	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	400		10		mg/L			08/28/19 05:41	1
Chloride	50		2.0		mg/L			09/02/19 19:21	1
Fluoride	0.18		0.10		mg/L			09/02/19 15:53	1
Sulfate	32		10		mg/L			09/07/19 09:42	2

Client Sample Results

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

Job ID: 500-169046-1

Client Sample ID: MW-03

Date Collected: 08/26/19 11:25

Date Received: 08/27/19 10:20

Lab Sample ID: 500-169046-2

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		08/28/19 16:05	08/30/19 23:29	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		08/27/19 15:36	08/28/19 14:01	1
Arsenic	0.0014		0.0010		mg/L		08/27/19 15:36	08/28/19 14:01	1
Barium	0.069		0.0025		mg/L		08/27/19 15:36	08/28/19 14:01	1
Beryllium	<0.0010		0.0010		mg/L		08/27/19 15:36	08/29/19 17:53	1
Boron	0.31		0.050		mg/L		08/27/19 15:36	08/28/19 14:01	1
Cadmium	<0.00050		0.00050		mg/L		08/27/19 15:36	08/28/19 14:01	1
Calcium	75		0.20		mg/L		08/27/19 15:36	08/28/19 14:01	1
Chromium	<0.0050		0.0050		mg/L		08/27/19 15:36	08/28/19 14:01	1
Cobalt	<0.0010		0.0010		mg/L		08/27/19 15:36	08/28/19 14:01	1
Lead	<0.00050		0.00050		mg/L		08/27/19 15:36	08/28/19 14:01	1
Molybdenum	<0.0050		0.0050		mg/L		08/27/19 15:36	08/28/19 14:01	1
Selenium	<0.0025		0.0025		mg/L		08/27/19 15:36	08/28/19 14:01	1
Thallium	<0.0020		0.0020		mg/L		08/27/19 15:36	08/28/19 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		09/05/19 14:45	09/06/19 09:19	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	380		10		mg/L			08/28/19 05:44	1
Chloride	50		2.0		mg/L			09/02/19 19:22	1
Fluoride	0.26		0.10		mg/L			09/02/19 15:57	1
Sulfate	14		5.0		mg/L			09/07/19 09:20	1

Client Sample Results

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

Job ID: 500-169046-1

Client Sample ID: MW-04

Date Collected: 08/26/19 10:20

Date Received: 08/27/19 10:20

Lab Sample ID: 500-169046-3

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		08/28/19 16:05	08/30/19 23:33	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		08/27/19 15:36	08/28/19 14:05	1
Arsenic	<0.0010		0.0010		mg/L		08/27/19 15:36	08/28/19 14:05	1
Barium	0.032		0.0025		mg/L		08/27/19 15:36	08/28/19 14:05	1
Beryllium	<0.0010		0.0010		mg/L		08/27/19 15:36	08/29/19 17:56	1
Boron	0.64		0.050		mg/L		08/27/19 15:36	08/28/19 14:05	1
Cadmium	<0.00050		0.00050		mg/L		08/27/19 15:36	08/28/19 14:05	1
Calcium	91		0.20		mg/L		08/27/19 15:36	08/28/19 14:05	1
Chromium	<0.0050		0.0050		mg/L		08/27/19 15:36	08/28/19 14:05	1
Cobalt	<0.0010		0.0010		mg/L		08/27/19 15:36	08/28/19 14:05	1
Lead	<0.00050		0.00050		mg/L		08/27/19 15:36	08/28/19 14:05	1
Molybdenum	0.0080		0.0050		mg/L		08/27/19 15:36	08/28/19 14:05	1
Selenium	<0.0025		0.0025		mg/L		08/27/19 15:36	08/28/19 14:05	1
Thallium	<0.0020		0.0020		mg/L		08/27/19 15:36	08/28/19 14:05	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		09/05/19 14:45	09/06/19 09:21	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	490		10		mg/L			08/28/19 05:46	1
Chloride	60		2.0		mg/L			09/02/19 19:22	1
Fluoride	0.24		0.10		mg/L			09/02/19 16:00	1
Sulfate	14		5.0		mg/L			09/07/19 09:20	1

Client Sample Results

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

Job ID: 500-169046-1

Client Sample ID: MW-10

Date Collected: 08/26/19 00:00

Date Received: 08/27/19 10:20

Lab Sample ID: 500-169046-4

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		08/28/19 16:05	08/30/19 23:49	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		08/27/19 15:36	08/28/19 14:09	1
Arsenic	0.0017		0.0010		mg/L		08/27/19 15:36	08/28/19 14:09	1
Barium	0.19		0.0025		mg/L		08/27/19 15:36	08/28/19 14:09	1
Beryllium	<0.0010		0.0010		mg/L		08/27/19 15:36	08/29/19 18:00	1
Boron	0.30		0.050		mg/L		08/27/19 15:36	08/28/19 14:09	1
Cadmium	<0.00050		0.00050		mg/L		08/27/19 15:36	08/28/19 14:09	1
Calcium	84		0.20		mg/L		08/27/19 15:36	08/28/19 14:09	1
Chromium	<0.0050		0.0050		mg/L		08/27/19 15:36	08/28/19 14:09	1
Cobalt	0.0066		0.0010		mg/L		08/27/19 15:36	08/28/19 14:09	1
Lead	0.0016		0.00050		mg/L		08/27/19 15:36	08/28/19 14:09	1
Molybdenum	<0.0050		0.0050		mg/L		08/27/19 15:36	08/28/19 14:09	1
Selenium	0.0050		0.0025		mg/L		08/27/19 15:36	08/28/19 14:09	1
Thallium	<0.0020		0.0020		mg/L		08/27/19 15:36	08/28/19 14:09	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		09/05/19 14:45	09/06/19 09:22	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	410		10		mg/L			08/28/19 05:49	1
Chloride	48		2.0		mg/L			09/02/19 19:24	1
Fluoride	0.19		0.10		mg/L			09/02/19 16:04	1
Sulfate	30		5.0		mg/L			09/07/19 09:20	1

Client Sample Results

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

Job ID: 500-169046-1

Client Sample ID: MW-01

Date Collected: 08/26/19 13:20

Date Received: 08/27/19 10:20

Lab Sample ID: 500-169046-5

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		08/28/19 16:05	08/30/19 23:53	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		08/27/19 15:36	08/28/19 14:13	1
Arsenic	<0.0010		0.0010		mg/L		08/27/19 15:36	08/28/19 14:13	1
Barium	0.053		0.0025		mg/L		08/27/19 15:36	08/28/19 14:13	1
Beryllium	<0.0010		0.0010		mg/L		08/27/19 15:36	08/29/19 18:04	1
Boron	0.57		0.050		mg/L		08/27/19 15:36	08/28/19 14:13	1
Cadmium	<0.00050		0.00050		mg/L		08/27/19 15:36	08/28/19 14:13	1
Calcium	100		0.20		mg/L		08/27/19 15:36	08/28/19 14:13	1
Chromium	<0.0050		0.0050		mg/L		08/27/19 15:36	08/28/19 14:13	1
Cobalt	<0.0010		0.0010		mg/L		08/27/19 15:36	08/28/19 14:13	1
Lead	<0.00050		0.00050		mg/L		08/27/19 15:36	08/28/19 14:13	1
Molybdenum	<0.0050		0.0050		mg/L		08/27/19 15:36	08/28/19 14:13	1
Selenium	<0.0025		0.0025		mg/L		08/27/19 15:36	08/28/19 14:13	1
Thallium	<0.0020		0.0020		mg/L		08/27/19 15:36	08/28/19 14:13	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		09/05/19 14:45	09/06/19 09:24	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	550		10		mg/L			08/28/19 05:52	1
Chloride	39		2.0		mg/L			09/02/19 19:25	1
Fluoride	0.13		0.10		mg/L			09/02/19 16:08	1
Sulfate	71		25		mg/L			09/07/19 09:42	5

Client Sample Results

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

Job ID: 500-169046-1

Client Sample ID: MW-05

Date Collected: 08/26/19 08:45

Date Received: 08/27/19 10:20

Lab Sample ID: 500-169046-6

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		08/28/19 16:05	08/30/19 23:57	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		08/27/19 15:36	08/28/19 14:16	1
Arsenic	<0.0010		0.0010		mg/L		08/27/19 15:36	08/28/19 14:16	1
Barium	0.050		0.0025		mg/L		08/27/19 15:36	08/28/19 14:16	1
Beryllium	<0.0010		0.0010		mg/L		08/27/19 15:36	08/29/19 18:08	1
Boron	0.57		0.050		mg/L		08/27/19 15:36	08/28/19 14:16	1
Cadmium	<0.00050		0.00050		mg/L		08/27/19 15:36	08/28/19 14:16	1
Calcium	110		0.20		mg/L		08/27/19 15:36	08/28/19 14:16	1
Chromium	<0.0050		0.0050		mg/L		08/27/19 15:36	08/28/19 14:16	1
Cobalt	<0.0010		0.0010		mg/L		08/27/19 15:36	08/28/19 14:16	1
Lead	<0.00050		0.00050		mg/L		08/27/19 15:36	08/28/19 14:16	1
Molybdenum	0.0067		0.0050		mg/L		08/27/19 15:36	08/28/19 14:16	1
Selenium	<0.0025		0.0025		mg/L		08/27/19 15:36	08/28/19 14:16	1
Thallium	<0.0020		0.0020		mg/L		08/27/19 15:36	08/28/19 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		09/05/19 14:45	09/06/19 09:25	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	660		10		mg/L			08/28/19 05:54	1
Chloride	75	^	10		mg/L			09/02/19 19:53	5
Fluoride	0.29		0.10		mg/L			09/02/19 16:21	1
Sulfate	110		50		mg/L			09/07/19 09:42	10

Client Sample Results

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

Job ID: 500-169046-1

Client Sample ID: Duplicate

Lab Sample ID: 500-169046-7

Date Collected: 08/26/19 00:00

Matrix: Water

Date Received: 08/27/19 10:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.010		0.010		mg/L		08/28/19 16:05	08/31/19 00:01	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		08/27/19 15:36	08/28/19 14:20	1
Arsenic	<0.0010		0.0010		mg/L		08/27/19 15:36	08/28/19 14:20	1
Barium	0.050		0.0025		mg/L		08/27/19 15:36	08/28/19 14:20	1
Beryllium	<0.0010		0.0010		mg/L		08/27/19 15:36	08/29/19 18:11	1
Boron	0.55		0.050		mg/L		08/27/19 15:36	08/28/19 14:20	1
Cadmium	<0.00050		0.00050		mg/L		08/27/19 15:36	08/28/19 14:20	1
Calcium	110		0.20		mg/L		08/27/19 15:36	08/28/19 14:20	1
Chromium	<0.0050		0.0050		mg/L		08/27/19 15:36	08/28/19 14:20	1
Cobalt	<0.0010		0.0010		mg/L		08/27/19 15:36	08/28/19 14:20	1
Lead	<0.00050		0.00050		mg/L		08/27/19 15:36	08/28/19 14:20	1
Molybdenum	0.0066		0.0050		mg/L		08/27/19 15:36	08/28/19 14:20	1
Selenium	<0.0025		0.0025		mg/L		08/27/19 15:36	08/28/19 14:20	1
Thallium	<0.0020		0.0020		mg/L		08/27/19 15:36	08/28/19 14:20	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		09/05/19 14:45	09/06/19 09:27	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	660		10		mg/L			08/28/19 05:57	1
Chloride	85	^	10		mg/L			09/02/19 19:54	5
Fluoride	0.29		0.10		mg/L			09/02/19 16:25	1
Sulfate	110		50		mg/L			09/07/19 09:45	10

Definitions/Glossary

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

Job ID: 500-169046-1

Qualifiers

General Chemistry

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.
□	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

Job ID: 500-169046-1

Metals

Prep Batch: 501913

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-169046-1	MW-02	Total Recoverable	Water	3005A	
500-169046-2	MW-03	Total Recoverable	Water	3005A	
500-169046-3	MW-04	Total Recoverable	Water	3005A	
500-169046-4	MW-10	Total Recoverable	Water	3005A	
500-169046-5	MW-01	Total Recoverable	Water	3005A	
500-169046-6	MW-05	Total Recoverable	Water	3005A	
500-169046-7	Duplicate	Total Recoverable	Water	3005A	
MB 500-501913/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-501913/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 502147

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-169046-1	MW-02	Total Recoverable	Water	3005A	
500-169046-2	MW-03	Total Recoverable	Water	3005A	
500-169046-3	MW-04	Total Recoverable	Water	3005A	
500-169046-4	MW-10	Total Recoverable	Water	3005A	
500-169046-5	MW-01	Total Recoverable	Water	3005A	
500-169046-6	MW-05	Total Recoverable	Water	3005A	
500-169046-7	Duplicate	Total Recoverable	Water	3005A	
MB 500-502147/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-502147/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 502276

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-169046-1	MW-02	Total Recoverable	Water	6020A	501913
500-169046-2	MW-03	Total Recoverable	Water	6020A	501913
500-169046-3	MW-04	Total Recoverable	Water	6020A	501913
500-169046-4	MW-10	Total Recoverable	Water	6020A	501913
500-169046-5	MW-01	Total Recoverable	Water	6020A	501913
500-169046-6	MW-05	Total Recoverable	Water	6020A	501913
500-169046-7	Duplicate	Total Recoverable	Water	6020A	501913
MB 500-501913/1-A	Method Blank	Total Recoverable	Water	6020A	501913
LCS 500-501913/2-A	Lab Control Sample	Total Recoverable	Water	6020A	501913

Analysis Batch: 502543

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-169046-1	MW-02	Total Recoverable	Water	6020A	501913
500-169046-2	MW-03	Total Recoverable	Water	6020A	501913
500-169046-3	MW-04	Total Recoverable	Water	6020A	501913
500-169046-4	MW-10	Total Recoverable	Water	6020A	501913
500-169046-5	MW-01	Total Recoverable	Water	6020A	501913
500-169046-6	MW-05	Total Recoverable	Water	6020A	501913
500-169046-7	Duplicate	Total Recoverable	Water	6020A	501913
MB 500-501913/1-A	Method Blank	Total Recoverable	Water	6020A	501913
LCS 500-501913/2-A	Lab Control Sample	Total Recoverable	Water	6020A	501913

Analysis Batch: 502796

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-169046-1	MW-02	Total Recoverable	Water	6010C	502147
500-169046-2	MW-03	Total Recoverable	Water	6010C	502147
500-169046-3	MW-04	Total Recoverable	Water	6010C	502147

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QC Association Summary

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

Job ID: 500-169046-1

Metals (Continued)

Analysis Batch: 502796 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-169046-4	MW-10	Total Recoverable	Water	6010C	502147
500-169046-5	MW-01	Total Recoverable	Water	6010C	502147
500-169046-6	MW-05	Total Recoverable	Water	6010C	502147
500-169046-7	Duplicate	Total Recoverable	Water	6010C	502147
MB 500-502147/1-A	Method Blank	Total Recoverable	Water	6010C	502147
LCS 500-502147/2-A	Lab Control Sample	Total Recoverable	Water	6010C	502147

Prep Batch: 503373

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-169046-1	MW-02	Total/NA	Water	7470A	
500-169046-2	MW-03	Total/NA	Water	7470A	
500-169046-3	MW-04	Total/NA	Water	7470A	
500-169046-4	MW-10	Total/NA	Water	7470A	
500-169046-5	MW-01	Total/NA	Water	7470A	
500-169046-6	MW-05	Total/NA	Water	7470A	
500-169046-7	Duplicate	Total/NA	Water	7470A	
MB 500-503373/12-A	Method Blank	Total/NA	Water	7470A	
LCS 500-503373/13-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 503526

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-169046-1	MW-02	Total/NA	Water	7470A	503373
500-169046-2	MW-03	Total/NA	Water	7470A	503373
500-169046-3	MW-04	Total/NA	Water	7470A	503373
500-169046-4	MW-10	Total/NA	Water	7470A	503373
500-169046-5	MW-01	Total/NA	Water	7470A	503373
500-169046-6	MW-05	Total/NA	Water	7470A	503373
500-169046-7	Duplicate	Total/NA	Water	7470A	503373
MB 500-503373/12-A	Method Blank	Total/NA	Water	7470A	503373
LCS 500-503373/13-A	Lab Control Sample	Total/NA	Water	7470A	503373

General Chemistry

Analysis Batch: 455869

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-169046-1	MW-02	Total/NA	Water	SM 4500 SO4 E	
500-169046-2	MW-03	Total/NA	Water	SM 4500 SO4 E	
500-169046-3	MW-04	Total/NA	Water	SM 4500 SO4 E	
500-169046-4	MW-10	Total/NA	Water	SM 4500 SO4 E	
500-169046-5	MW-01	Total/NA	Water	SM 4500 SO4 E	
500-169046-6	MW-05	Total/NA	Water	SM 4500 SO4 E	
500-169046-7	Duplicate	Total/NA	Water	SM 4500 SO4 E	
MB 400-455869/17	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-455869/18	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-455869/14	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 501976

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-169046-1	MW-02	Total/NA	Water	SM 2540C	
500-169046-2	MW-03	Total/NA	Water	SM 2540C	
500-169046-3	MW-04	Total/NA	Water	SM 2540C	

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QC Association Summary

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

Job ID: 500-169046-1

General Chemistry (Continued)

Analysis Batch: 501976 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-169046-4	MW-10	Total/NA	Water	SM 2540C	
500-169046-5	MW-01	Total/NA	Water	SM 2540C	
500-169046-6	MW-05	Total/NA	Water	SM 2540C	
500-169046-7	Duplicate	Total/NA	Water	SM 2540C	
MB 500-501976/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-501976/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 502773

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-169046-1	MW-02	Total/NA	Water	SM 4500 F C	
500-169046-2	MW-03	Total/NA	Water	SM 4500 F C	
500-169046-3	MW-04	Total/NA	Water	SM 4500 F C	
500-169046-4	MW-10	Total/NA	Water	SM 4500 F C	
500-169046-5	MW-01	Total/NA	Water	SM 4500 F C	
500-169046-6	MW-05	Total/NA	Water	SM 4500 F C	
500-169046-7	Duplicate	Total/NA	Water	SM 4500 F C	
MB 500-502773/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 500-502773/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	

Analysis Batch: 502812

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-169046-1	MW-02	Total/NA	Water	SM 4500 Cl- E	
500-169046-2	MW-03	Total/NA	Water	SM 4500 Cl- E	
500-169046-3	MW-04	Total/NA	Water	SM 4500 Cl- E	
500-169046-4	MW-10	Total/NA	Water	SM 4500 Cl- E	
500-169046-5	MW-01	Total/NA	Water	SM 4500 Cl- E	
500-169046-6	MW-05	Total/NA	Water	SM 4500 Cl- E	
500-169046-7	Duplicate	Total/NA	Water	SM 4500 Cl- E	
MB 500-502812/4	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 500-502812/5	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	

QC Sample Results

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

Job ID: 500-169046-1

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 500-502147/1-A
Matrix: Water
Analysis Batch: 502796

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 502147

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.010		0.010		mg/L		08/28/19 16:05	08/30/19 23:17	1

Lab Sample ID: LCS 500-502147/2-A
Matrix: Water
Analysis Batch: 502796

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 502147

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Lithium	0.500	0.548		mg/L		110	80 - 120

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 500-501913/1-A
Matrix: Water
Analysis Batch: 502276

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 501913

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		08/27/19 15:36	08/28/19 13:05	1
Arsenic	<0.0010		0.0010		mg/L		08/27/19 15:36	08/28/19 13:05	1
Barium	<0.0025		0.0025		mg/L		08/27/19 15:36	08/28/19 13:05	1
Boron	<0.050		0.050		mg/L		08/27/19 15:36	08/28/19 13:05	1
Cadmium	<0.00050		0.00050		mg/L		08/27/19 15:36	08/28/19 13:05	1
Calcium	<0.20		0.20		mg/L		08/27/19 15:36	08/28/19 13:05	1
Chromium	<0.0050		0.0050		mg/L		08/27/19 15:36	08/28/19 13:05	1
Cobalt	<0.0010		0.0010		mg/L		08/27/19 15:36	08/28/19 13:05	1
Lead	<0.00050		0.00050		mg/L		08/27/19 15:36	08/28/19 13:05	1
Molybdenum	<0.0050		0.0050		mg/L		08/27/19 15:36	08/28/19 13:05	1
Selenium	<0.0025		0.0025		mg/L		08/27/19 15:36	08/28/19 13:05	1
Thallium	<0.0020		0.0020		mg/L		08/27/19 15:36	08/28/19 13:05	1

Lab Sample ID: MB 500-501913/1-A
Matrix: Water
Analysis Batch: 502543

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 501913

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	<0.0010		0.0010		mg/L		08/27/19 15:36	08/29/19 17:41	1

Lab Sample ID: LCS 500-501913/2-A
Matrix: Water
Analysis Batch: 502276

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 501913

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Antimony	0.500	0.512		mg/L		102	80 - 120
Arsenic	0.100	0.0942		mg/L		94	80 - 120
Barium	0.500	0.482		mg/L		96	80 - 120
Boron	1.00	1.04		mg/L		104	80 - 120
Cadmium	0.0500	0.0498		mg/L		100	80 - 120
Calcium	10.0	8.40		mg/L		84	80 - 120
Chromium	0.200	0.198		mg/L		99	80 - 120
Cobalt	0.500	0.499		mg/L		100	80 - 120
Lead	0.100	0.100		mg/L		100	80 - 120

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QC Sample Results

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

Job ID: 500-169046-1

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

Lab Sample ID: LCS 500-501913/2-A

Matrix: Water

Analysis Batch: 502276

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 501913

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Molybdenum	1.00	0.961		mg/L		96	80 - 120
Selenium	0.100	0.0942		mg/L		94	80 - 120
Thallium	0.100	0.0991		mg/L		99	80 - 120

Lab Sample ID: LCS 500-501913/2-A

Matrix: Water

Analysis Batch: 502543

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 501913

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Beryllium	0.0500	0.0567		mg/L		113	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 500-503373/12-A

Matrix: Water

Analysis Batch: 503526

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 503373

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		09/05/19 14:45	09/06/19 09:14	1

Lab Sample ID: LCS 500-503373/13-A

Matrix: Water

Analysis Batch: 503526

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 503373

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00200	0.00194		mg/L		97	80 - 120

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

Lab Sample ID: MB 500-501976/1

Matrix: Water

Analysis Batch: 501976

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			08/28/19 05:03	1

Lab Sample ID: LCS 500-501976/2

Matrix: Water

Analysis Batch: 501976

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	282		mg/L		113	80 - 120

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 500-502812/4

Matrix: Water

Analysis Batch: 502812

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			09/02/19 19:06	1

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QC Sample Results

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

Job ID: 500-169046-1

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: LCS 500-502812/5

Matrix: Water

Analysis Batch: 502812

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	85 - 115

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 500-502773/3

Matrix: Water

Analysis Batch: 502773

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			09/02/19 15:37	1

Lab Sample ID: LCS 500-502773/4

Matrix: Water

Analysis Batch: 502773

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

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

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 400-455869/17

Matrix: Water

Analysis Batch: 455869

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			09/07/19 08:48	1

Lab Sample ID: LCS 400-455869/18

Matrix: Water

Analysis Batch: 455869

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	15.0	13.7		mg/L		91	90 - 110

Lab Sample ID: MRL 400-455869/14

Matrix: Water

Analysis Batch: 455869

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	5.00	<5.0		mg/L		99	50 - 150

Lab Chronicle

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

Job ID: 500-169046-1

Client Sample ID: MW-02

Date Collected: 08/26/19 12:40

Date Received: 08/27/19 10:20

Lab Sample ID: 500-169046-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			502147	08/28/19 16:05	BDE	TAL CHI
Total Recoverable	Analysis	6010C		1	502796	08/30/19 23:25	JEF	TAL CHI
Total Recoverable	Prep	3005A			501913	08/27/19 15:36	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	502276	08/28/19 13:58	ASF	TAL CHI
Total Recoverable	Prep	3005A			501913	08/27/19 15:36	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	502543	08/29/19 17:49	FXG	TAL CHI
Total/NA	Prep	7470A			503373	09/05/19 14:45	MJG	TAL CHI
Total/NA	Analysis	7470A		1	503526	09/06/19 09:17	MJG	TAL CHI
Total/NA	Analysis	SM 2540C		1	501976	08/28/19 05:41	CLB	TAL CHI
Total/NA	Analysis	SM 4500 CI- E		1	502812	09/02/19 19:21	EAT	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	502773	09/02/19 15:53	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		2	455869	09/07/19 09:42	RRC	TAL PEN

Client Sample ID: MW-03

Date Collected: 08/26/19 11:25

Date Received: 08/27/19 10:20

Lab Sample ID: 500-169046-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			502147	08/28/19 16:05	BDE	TAL CHI
Total Recoverable	Analysis	6010C		1	502796	08/30/19 23:29	JEF	TAL CHI
Total Recoverable	Prep	3005A			501913	08/27/19 15:36	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	502276	08/28/19 14:01	ASF	TAL CHI
Total Recoverable	Prep	3005A			501913	08/27/19 15:36	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	502543	08/29/19 17:53	FXG	TAL CHI
Total/NA	Prep	7470A			503373	09/05/19 14:45	MJG	TAL CHI
Total/NA	Analysis	7470A		1	503526	09/06/19 09:19	MJG	TAL CHI
Total/NA	Analysis	SM 2540C		1	501976	08/28/19 05:44	CLB	TAL CHI
Total/NA	Analysis	SM 4500 CI- E		1	502812	09/02/19 19:22	EAT	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	502773	09/02/19 15:57	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		1	455869	09/07/19 09:20	RRC	TAL PEN

Client Sample ID: MW-04

Date Collected: 08/26/19 10:20

Date Received: 08/27/19 10:20

Lab Sample ID: 500-169046-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			502147	08/28/19 16:05	BDE	TAL CHI
Total Recoverable	Analysis	6010C		1	502796	08/30/19 23:33	JEF	TAL CHI
Total Recoverable	Prep	3005A			501913	08/27/19 15:36	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	502276	08/28/19 14:05	ASF	TAL CHI
Total Recoverable	Prep	3005A			501913	08/27/19 15:36	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	502543	08/29/19 17:56	FXG	TAL CHI
Total/NA	Prep	7470A			503373	09/05/19 14:45	MJG	TAL CHI
Total/NA	Analysis	7470A		1	503526	09/06/19 09:21	MJG	TAL CHI

Eurofins TestAmerica, Chicago

Lab Chronicle

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

Job ID: 500-169046-1

Client Sample ID: MW-04

Date Collected: 08/26/19 10:20

Date Received: 08/27/19 10:20

Lab Sample ID: 500-169046-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540C		1	501976	08/28/19 05:46	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		1	502812	09/02/19 19:22	EAT	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	502773	09/02/19 16:00	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		1	455869	09/07/19 09:20	RRC	TAL PEN

Client Sample ID: MW-10

Date Collected: 08/26/19 00:00

Date Received: 08/27/19 10:20

Lab Sample ID: 500-169046-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			502147	08/28/19 16:05	BDE	TAL CHI
Total Recoverable	Analysis	6010C		1	502796	08/30/19 23:49	JEF	TAL CHI
Total Recoverable	Prep	3005A			501913	08/27/19 15:36	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	502276	08/28/19 14:09	ASF	TAL CHI
Total Recoverable	Prep	3005A			501913	08/27/19 15:36	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	502543	08/29/19 18:00	FXG	TAL CHI
Total/NA	Prep	7470A			503373	09/05/19 14:45	MJG	TAL CHI
Total/NA	Analysis	7470A		1	503526	09/06/19 09:22	MJG	TAL CHI
Total/NA	Analysis	SM 2540C		1	501976	08/28/19 05:49	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		1	502812	09/02/19 19:24	EAT	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	502773	09/02/19 16:04	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		1	455869	09/07/19 09:20	RRC	TAL PEN

Client Sample ID: MW-01

Date Collected: 08/26/19 13:20

Date Received: 08/27/19 10:20

Lab Sample ID: 500-169046-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			502147	08/28/19 16:05	BDE	TAL CHI
Total Recoverable	Analysis	6010C		1	502796	08/30/19 23:53	JEF	TAL CHI
Total Recoverable	Prep	3005A			501913	08/27/19 15:36	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	502276	08/28/19 14:13	ASF	TAL CHI
Total Recoverable	Prep	3005A			501913	08/27/19 15:36	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	502543	08/29/19 18:04	FXG	TAL CHI
Total/NA	Prep	7470A			503373	09/05/19 14:45	MJG	TAL CHI
Total/NA	Analysis	7470A		1	503526	09/06/19 09:24	MJG	TAL CHI
Total/NA	Analysis	SM 2540C		1	501976	08/28/19 05:52	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		1	502812	09/02/19 19:25	EAT	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	502773	09/02/19 16:08	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		5	455869	09/07/19 09:42	RRC	TAL PEN

Lab Chronicle

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

Job ID: 500-169046-1

Client Sample ID: MW-05

Date Collected: 08/26/19 08:45

Date Received: 08/27/19 10:20

Lab Sample ID: 500-169046-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			502147	08/28/19 16:05	BDE	TAL CHI
Total Recoverable	Analysis	6010C		1	502796	08/30/19 23:57	JEF	TAL CHI
Total Recoverable	Prep	3005A			501913	08/27/19 15:36	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	502276	08/28/19 14:16	ASF	TAL CHI
Total Recoverable	Prep	3005A			501913	08/27/19 15:36	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	502543	08/29/19 18:08	FXG	TAL CHI
Total/NA	Prep	7470A			503373	09/05/19 14:45	MJG	TAL CHI
Total/NA	Analysis	7470A		1	503526	09/06/19 09:25	MJG	TAL CHI
Total/NA	Analysis	SM 2540C		1	501976	08/28/19 05:54	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		5	502812	09/02/19 19:53	EAT	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	502773	09/02/19 16:21	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		10	455869	09/07/19 09:42	RRC	TAL PEN

Client Sample ID: Duplicate

Date Collected: 08/26/19 00:00

Date Received: 08/27/19 10:20

Lab Sample ID: 500-169046-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			502147	08/28/19 16:05	BDE	TAL CHI
Total Recoverable	Analysis	6010C		1	502796	08/31/19 00:01	JEF	TAL CHI
Total Recoverable	Prep	3005A			501913	08/27/19 15:36	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	502276	08/28/19 14:20	ASF	TAL CHI
Total Recoverable	Prep	3005A			501913	08/27/19 15:36	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	502543	08/29/19 18:11	FXG	TAL CHI
Total/NA	Prep	7470A			503373	09/05/19 14:45	MJG	TAL CHI
Total/NA	Analysis	7470A		1	503526	09/06/19 09:27	MJG	TAL CHI
Total/NA	Analysis	SM 2540C		1	501976	08/28/19 05:57	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		5	502812	09/02/19 19:54	EAT	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	502773	09/02/19 16:25	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		10	455869	09/07/19 09:45	RRC	TAL PEN

Laboratory References:

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

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Accreditation/Certification Summary

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

Job ID: 500-169046-1

Laboratory: Eurofins TestAmerica, Chicago

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

Authority	Program	Identification Number	Expiration Date
Illinois	NELAP	100201	04-30-20

Laboratory: Eurofins TestAmerica, Pensacola

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

Authority	Program	Identification Number	Expiration Date
Alabama	State	40150	07-01-20
Alabama	State Program	40150	06-30-20
ANAB	ISO/IEC 17025	L2471	02-22-20
ANAB	ISO/IEC 17025	L2471	02-22-20
Arizona	State	AZ0710	01-12-20
Arizona	State Program	AZ0710	01-12-20
Arkansas DEQ	State Program	88-0689	09-01-20
California	State Program	2510	06-30-20
Florida	NELAP	E81010	06-30-20
Florida	NELAP	E81010	06-30-20
Georgia	State Program	E81010 (FL)	06-30-20
Illinois	NELAP	200041	10-09-19
Illinois	NELAP	004586	10-09-19
Iowa	State Program	367	08-01-20
Kansas	NELAP	E-10253	10-31-19
Kentucky (UST)	State Program	53	06-30-20
Kentucky (WW)	State Program	98030	12-31-19
Louisiana	NELAP	30976	06-30-20
Louisiana (DW)	NELAP	LA017	12-31-19
Maryland	State Program	233	09-30-20
Massachusetts	State Program	M-FL094	06-30-20
Michigan	State	9912	05-06-20
Michigan	State Program	9912	05-06-20
Minnesota	NELAP	012-999-481	12-31-19
Minnesota	NELAP	012-999-481	12-31-19
New Jersey	NELAP	FL006	06-30-20
New Jersey	NELAP	FL006	07-30-20
North Carolina (WW/SW)	State Program	314	12-31-19
Oklahoma	State Program	9810	08-31-20
Pennsylvania	NELAP	68-00467	01-31-20
Pennsylvania	NELAP	68-00467	01-31-20
Rhode Island	State Program	LAO00307	12-30-19
South Carolina	State Program	96026	06-30-20
Tennessee	State	TN02907	06-30-20
Tennessee	State Program	TN02907	06-30-20
Texas	NELAP	T104704286-18-15	09-30-19
Texas	NELAP	T104704286	09-30-19
US Fish & Wildlife	Federal	LE058448-0	07-31-20
USDA	Federal	P330-18-00148	05-17-21
Virginia	NELAP	460166	06-14-20
Washington	State	C915	05-15-20
Washington	State Program	C915	05-15-20
West Virginia DEP	State Program	136	09-30-19

Eurofins TestAmerica, Chicago

TestAmerica Chicago

2417 Bond Street

University Park, IL 60484-3101
phone 708.534.5200 fax 708.534.5211

Chain of Custody Record

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact		Project Manager: Rich Gnat		Site Contact: Mitchel Dolan		Date: 8/26/19		COC No:					
KPRG and Associates, Inc.		Tel/Fax: (262) 781-0475		Lab Contact: Eric Lang		Carrier: FedEx		of COCs					
14665 West Lisbon Road, Suite 1A		Analysis Turnaround Time						Sampler:					
Brookfield, WI 53154		☐ CALENDAR DAYS ☐ WORKING DAYS						For Lab Use Only:					
(262) 781-0475 Phone		TAT if different from Below						Walk-in Client:					
(262) 781-0478 FAX		☐ 2 weeks						Lab Sampling:					
Project Name: Powerton CCR		☐ 1 week											
Site: Powerton Station - Pekin, IL		☐ 2 days						Job / SDG No.:					
P O # 12313.1		☐ 1 day						500-169046					
Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	Total Metals	Cl, Fl, SO4, TDS	Radium 226/228	Sample Specific Notes:	
MW-02	8-26	1240	G	W	5	N	N	X	X	X			
MW-03		1125	G	W	5	N	N	X	X	X			
MW-04		1020	G	W	5	N	N	X	X	X			
MW-10			G	W	5	N	N	X	X	X			
MW-01		1320	G	W	5	N	N	X	X	X			
MW-05		0845	G	W	5	N	N	X	X	X			
DUPLICATE		-											
Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other							4 1 4						
Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.							Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)						
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown							☐ Return to Client ☐ Disposal by Lab ☐ Archive for Months						
Special Instructions/QC Requirements & Comments:													
5.6, 2.7													
Custody Seals Intact: ☐ Yes ☐ No		Custody Seal No.:		Cooler Temp. (°C): Obs'd:		Corr'd:		Therm ID No.:					
Relinquished by: Mitchel Dolan		Company: KPRG		Date/Time: 8-26-19/1200		Received by: FEDEX		Company:					
Relinquished by:		Company:		Date/Time:		Received by:		Company:					
Relinquished by:		Company:		Date/Time:		Received in Laboratory by: [Signature]		Company: [Signature]					

Form No. CA-C-WI-002, Rev. 4.18, dated 9/5/2018

ORIGIN ID:PIAA (262) 622-1143
MITCHEL DOLAN

414 PLAZA DR STE 106

WESTMONT, IL 60559
UNITED STATES US

SHIP DATE: 26AUG19
ACTWGT: 58.10 LB
CAD: 006994779/SSFE2021
DIMS: 24x13x14 IN

BILL THIRD PARTY

TO **TEST AMERICA**

2415 BOND ST

UNIVERSITY PARK IL 60484

500-169046 Waybill

(000) 000-0000

REF:

DEPT:

FedEx
Express



1 of 3

TUE - 27 AUG 10:30A

PRIORITY OVERNIGHT

TRK# 7893 8896 3043

0201
MASTER

XH JOTA

AHS

60484

IL-US ORD

ORIGIN ID:PIAA (262) 622-1143
MITCHEL DOLAN

414 PLAZA DR STE 106

WESTMONT, IL 60559
UNITED STATES US

SHIP DATE: 26AUG19
ACTWGT: 64.90 LB
CAD: 006994779/SSFE2021
DIMS: 24x13x14 IN

BILL THIRD PARTY

TO **TEST AMERICA**

2415 BOND ST

UNIVERSITY PARK IL 60484

(000) 000-0000

REF:

DEPT:

FedEx
Express



2 of 3

TUE - 27 AUG 10:30A

PRIORITY OVERNIGHT

MPS# 7893 8896 3054

0263
Metr# 7893 8896 3043

0201

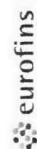
XH JOTA

AHS

60484

IL-US ORD

Chain of Custody Record

Environment Testing
TestAmerica

Client Information (Sub Contract Lab)		Sampler:	Lab PM:	Carrier Tracking No(s):	COC No:					
Client Contact:		Phone:	Lang, Eric A.		500-125096.1					
Shipping/Receiving		E-Mail:	eric.lang@testamericainc.com	State of Origin:	Page: 1 of 1					
Company:		TestAmerica Laboratories, Inc.		Accreditations Required (See note):	Job #:					
Address:		3355 McLemore Drive,		NELAP - Illinois	500-169046-1					
City:	Pensacola	Due Date Requested:		Analysis Requested						
State:	FL, 32514	9/10/2019		A - HCL						
Phone:	850-474-1001(Tel) 850-478-2671(Fax)	TAT Requested (days):		B - NaOH						
Email:				C - Zn Acetate						
Project Name:	Powerton CCR	PO #:		D - Nitric Acid						
Site:	MWG - Powerton	WO #:		E - NaHSO4						
		Project #:		F - MeOH						
		50011612		G - Amchlor						
		SSOW#:		H - Ascorbic Acid						
				I - Ice						
				J - DI Water						
				K - EDTA						
				L - EDA						
				Other:						
				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)						
Sample Identification - Client ID (Lab ID)		Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=wasteoil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SM4500_S04_E	Total Number of Containers	Special Instructions/Note:
MW-02 (500-169046-1)	8/26/19	12:40	Central	Water		X		1		
MW-03 (500-169046-2)	8/26/19	11:25	Central	Water		X		1		
MW-04 (500-169046-3)	8/26/19	10:20	Central	Water		X		1		
MW-10 (500-169046-4)	8/26/19	Central	Central	Water		X		1		
MW-01 (500-169046-5)	8/26/19	13:20	Central	Water		X		1		
MW-05 (500-169046-6)	8/26/19	08:45	Central	Water		X		1		
Duplicate (500-169046-7)	8/26/19	Central	Central	Water		X		1		
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. 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 ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months										
Deliverable Requested: I, II, III, IV, Other (specify) _____ Primary Deliverable Rank: 2										
Empty Kit Relinquished by: _____ Date: _____ Time: _____ Method of Shipment: _____										
Relinquished by: <i>Adrian Smith</i> Date: 8/27/19 Time: 15:05 Company: <i>TH-04</i> Received by: _____ Date: _____ Time: _____ Company: _____										
Relinquished by: _____ Date: _____ Time: _____ Company: _____ Received by: _____ Date: _____ Time: _____ Company: _____										
Custody Seal No.: _____ Cooler Temperature(s) °C and Other Remarks: <i>0.6°C</i>										

Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-169046-1

Login Number: 169046

List Source: Eurofins 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	5.6,2.7
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: 500-169046-1

Login Number: 169046

List Number: 2

Creator: Perez, Trina M

List Source: Eurofins TestAmerica, Pensacola

List Creation: 08/28/19 05:45 PM

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
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.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.6°C IR-8
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

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

Laboratory Job ID: 500-169046-2
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:
9/27/2019 2:44:01 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
Method Summary	4
Sample Summary	5
Client Sample Results	6
Definitions	13
QC Association	14
QC Sample Results	15
Chronicle	16
Certification Summary	18
Chain of Custody	19
Receipt Checklists	22
Tracer Carrier Summary	24



Case Narrative

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

Job ID: 500-169046-2

Job ID: 500-169046-2

Laboratory: Eurofins TestAmerica, Chicago

Narrative

Job Narrative
500-169046-2

Comments

No additional comments.

Receipt

The samples were received on 8/27/2019 10:20 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.7° C and 5.6° C.

RAD

No 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

Job ID: 500-169046-2

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 = Eurofins 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

Job ID: 500-169046-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
500-169046-1	MW-02	Water	08/26/19 12:40	08/27/19 10:20	
500-169046-2	MW-03	Water	08/26/19 11:25	08/27/19 10:20	
500-169046-3	MW-04	Water	08/26/19 10:20	08/27/19 10:20	
500-169046-4	MW-10	Water	08/26/19 00:00	08/27/19 10:20	
500-169046-5	MW-01	Water	08/26/19 13:20	08/27/19 10:20	
500-169046-6	MW-05	Water	08/26/19 08:45	08/27/19 10:20	
500-169046-7	Duplicate	Water	08/26/19 00:00	08/27/19 10:20	

Client Sample Results

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

Job ID: 500-169046-2

Client Sample ID: MW-02

Date Collected: 08/26/19 12:40

Date Received: 08/27/19 10:20

Lab Sample ID: 500-169046-1

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	-0.0901	U	0.0606	0.0611	1.00	0.160	pCi/L	09/03/19 13:37	09/25/19 06:11	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.2		40 - 110					09/03/19 13:37	09/25/19 06:11	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	1.27		0.331	0.351	1.00	0.413	pCi/L	09/03/19 15:11	09/19/19 09:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.2		40 - 110					09/03/19 15:11	09/19/19 09:17	1
Y Carrier	87.9		40 - 110					09/03/19 15:11	09/19/19 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	1.18		0.337	0.356	5.00	0.413	pCi/L		09/27/19 13:12	1

Client Sample Results

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

Job ID: 500-169046-2

Client Sample ID: MW-03

Date Collected: 08/26/19 11:25

Date Received: 08/27/19 10:20

Lab Sample ID: 500-169046-2

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	-0.0333	U	0.0696	0.0697	1.00	0.154	pCi/L	09/03/19 13:37	09/25/19 06:12	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.3		40 - 110					09/03/19 13:37	09/25/19 06:12	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	0.443	U	0.288	0.291	1.00	0.444	pCi/L	09/03/19 15:11	09/19/19 09:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.3		40 - 110					09/03/19 15:11	09/19/19 09:17	1
Y Carrier	81.5		40 - 110					09/03/19 15:11	09/19/19 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	0.410	U	0.296	0.299	5.00	0.444	pCi/L		09/27/19 13:12	1

Client Sample Results

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

Job ID: 500-169046-2

Client Sample ID: MW-04

Date Collected: 08/26/19 10:20

Date Received: 08/27/19 10:20

Lab Sample ID: 500-169046-3

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	-0.0536	U	0.0579	0.0581	1.00	0.146	pCi/L	09/03/19 13:37	09/25/19 06:12	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.9		40 - 110					09/03/19 13:37	09/25/19 06:12	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	1.14		0.354	0.369	1.00	0.466	pCi/L	09/03/19 15:11	09/19/19 09:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.9		40 - 110					09/03/19 15:11	09/19/19 09:17	1
Y Carrier	80.7		40 - 110					09/03/19 15:11	09/19/19 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	1.09		0.359	0.374	5.00	0.466	pCi/L		09/27/19 13:12	1

Client Sample Results

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

Job ID: 500-169046-2

Client Sample ID: MW-10

Date Collected: 08/26/19 00:00

Date Received: 08/27/19 10:20

Lab Sample ID: 500-169046-4

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	0.257		0.113	0.115	1.00	0.133	pCi/L	09/03/19 13:37	09/25/19 06:12	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.3		40 - 110					09/03/19 13:37	09/25/19 06:12	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	1.28		0.341	0.361	1.00	0.427	pCi/L	09/03/19 15:11	09/19/19 09:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.3		40 - 110					09/03/19 15:11	09/19/19 09:17	1
Y Carrier	80.7		40 - 110					09/03/19 15:11	09/19/19 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	1.54		0.359	0.379	5.00	0.427	pCi/L		09/27/19 13:12	1

Client Sample Results

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

Job ID: 500-169046-2

Client Sample ID: MW-01

Date Collected: 08/26/19 13:20

Date Received: 08/27/19 10:20

Lab Sample ID: 500-169046-5

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	-0.0887	U	0.0603	0.0608	1.00	0.161	pCi/L	09/03/19 13:37	09/25/19 06:12	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.0		40 - 110					09/03/19 13:37	09/25/19 06:12	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	0.891		0.323	0.333	1.00	0.444	pCi/L	09/03/19 15:11	09/19/19 09:18	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.0		40 - 110					09/03/19 15:11	09/19/19 09:18	1
Y Carrier	83.4		40 - 110					09/03/19 15:11	09/19/19 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	0.802		0.329	0.339	5.00	0.444	pCi/L		09/27/19 13:12	1

Client Sample Results

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

Job ID: 500-169046-2

Client Sample ID: MW-05

Date Collected: 08/26/19 08:45

Date Received: 08/27/19 10:20

Lab Sample ID: 500-169046-6

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	0.0298	U	0.0729	0.0730	1.00	0.133	pCi/L	09/03/19 13:37	09/25/19 06:12	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.4		40 - 110					09/03/19 13:37	09/25/19 06:12	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	0.621		0.278	0.284	1.00	0.394	pCi/L	09/03/19 15:11	09/19/19 09:18	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.4		40 - 110					09/03/19 15:11	09/19/19 09:18	1
Y Carrier	81.1		40 - 110					09/03/19 15:11	09/19/19 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	0.651		0.287	0.293	5.00	0.394	pCi/L		09/27/19 13:12	1

Client Sample Results

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

Job ID: 500-169046-2

Client Sample ID: Duplicate

Lab Sample ID: 500-169046-7

Date Collected: 08/26/19 00:00

Matrix: Water

Date Received: 08/27/19 10:20

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0458	U	0.0795	0.0796	1.00	0.139	pCi/L	09/03/19 13:37	09/25/19 06:12	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.9		40 - 110					09/03/19 13:37	09/25/19 06:12	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	1.08		0.330	0.345	1.00	0.429	pCi/L	09/03/19 15:11	09/19/19 09:18	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.9		40 - 110					09/03/19 15:11	09/19/19 09:18	1
Y Carrier	86.0		40 - 110					09/03/19 15:11	09/19/19 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	1.13		0.339	0.354	5.00	0.429	pCi/L		09/27/19 13:12	1

Definitions/Glossary

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

Job ID: 500-169046-2

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.
□	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

Job ID: 500-169046-2

Rad

Prep Batch: 441645

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-169046-1	MW-02	Total/NA	Water	PrecSep-21	
500-169046-2	MW-03	Total/NA	Water	PrecSep-21	
500-169046-3	MW-04	Total/NA	Water	PrecSep-21	
500-169046-4	MW-10	Total/NA	Water	PrecSep-21	
500-169046-5	MW-01	Total/NA	Water	PrecSep-21	
500-169046-6	MW-05	Total/NA	Water	PrecSep-21	
500-169046-7	Duplicate	Total/NA	Water	PrecSep-21	
MB 160-441645/26-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-441645/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	

Prep Batch: 441652

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-169046-1	MW-02	Total/NA	Water	PrecSep_0	
500-169046-2	MW-03	Total/NA	Water	PrecSep_0	
500-169046-3	MW-04	Total/NA	Water	PrecSep_0	
500-169046-4	MW-10	Total/NA	Water	PrecSep_0	
500-169046-5	MW-01	Total/NA	Water	PrecSep_0	
500-169046-6	MW-05	Total/NA	Water	PrecSep_0	
500-169046-7	Duplicate	Total/NA	Water	PrecSep_0	
MB 160-441652/26-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-441652/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	

QC Sample Results

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

Job ID: 500-169046-2

Method: 903.0 - Radium-226 (GFPC)

Lab Sample ID: MB 160-441645/26-A

Matrix: Water

Analysis Batch: 444138

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 441645

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.02560	U	0.0642	0.0642	1.00	0.119	pCi/L	09/03/19 13:37	09/25/19 09:25	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.2		40 - 110					09/03/19 13:37	09/25/19 09:25	1

Lab Sample ID: LCS 160-441645/1-A

Matrix: Water

Analysis Batch: 444128

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 441645

Analyte		Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226		11.4	10.53		1.12	1.00	0.144	pCi/L	93	75 - 125
Carrier	LCS %Yield	LCS Qualifier	Limits							
Ba Carrier	92.7		40 - 110							

Method: 904.0 - Radium-228 (GFPC)

Lab Sample ID: MB 160-441652/26-A

Matrix: Water

Analysis Batch: 443457

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 441652

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.8575		0.329	0.339	1.00	0.464	pCi/L	09/03/19 15:11	09/19/19 09:22	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.2		40 - 110					09/03/19 15:11	09/19/19 09:22	1
Y Carrier	78.9		40 - 110					09/03/19 15:11	09/19/19 09:22	1

Lab Sample ID: LCS 160-441652/1-A

Matrix: Water

Analysis Batch: 443363

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 441652

Analyte		Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228		9.57	10.69		1.23	1.00	0.424	pCi/L	112	75 - 125
Carrier	LCS %Yield	LCS Qualifier	Limits							
Ba Carrier	92.7		40 - 110							
Y Carrier	81.1		40 - 110							

Lab Chronicle

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

Job ID: 500-169046-2

Client Sample ID: MW-02

Date Collected: 08/26/19 12:40

Date Received: 08/27/19 10:20

Lab Sample ID: 500-169046-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			441645	09/03/19 13:37	ORM	TAL SL
Total/NA	Analysis	903.0		1	444138	09/25/19 06:11	KLS	TAL SL
Total/NA	Prep	PrecSep_0			441652	09/03/19 15:11	ORM	TAL SL
Total/NA	Analysis	904.0		1	443363	09/19/19 09:17	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	444474	09/27/19 13:12	SMP	TAL SL

Client Sample ID: MW-03

Date Collected: 08/26/19 11:25

Date Received: 08/27/19 10:20

Lab Sample ID: 500-169046-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			441645	09/03/19 13:37	ORM	TAL SL
Total/NA	Analysis	903.0		1	444138	09/25/19 06:12	KLS	TAL SL
Total/NA	Prep	PrecSep_0			441652	09/03/19 15:11	ORM	TAL SL
Total/NA	Analysis	904.0		1	443363	09/19/19 09:17	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	444474	09/27/19 13:12	SMP	TAL SL

Client Sample ID: MW-04

Date Collected: 08/26/19 10:20

Date Received: 08/27/19 10:20

Lab Sample ID: 500-169046-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			441645	09/03/19 13:37	ORM	TAL SL
Total/NA	Analysis	903.0		1	444138	09/25/19 06:12	KLS	TAL SL
Total/NA	Prep	PrecSep_0			441652	09/03/19 15:11	ORM	TAL SL
Total/NA	Analysis	904.0		1	443363	09/19/19 09:17	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	444474	09/27/19 13:12	SMP	TAL SL

Client Sample ID: MW-10

Date Collected: 08/26/19 00:00

Date Received: 08/27/19 10:20

Lab Sample ID: 500-169046-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			441645	09/03/19 13:37	ORM	TAL SL
Total/NA	Analysis	903.0		1	444138	09/25/19 06:12	KLS	TAL SL
Total/NA	Prep	PrecSep_0			441652	09/03/19 15:11	ORM	TAL SL
Total/NA	Analysis	904.0		1	443363	09/19/19 09:17	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	444474	09/27/19 13:12	SMP	TAL SL

Lab Chronicle

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

Job ID: 500-169046-2

Client Sample ID: MW-01

Date Collected: 08/26/19 13:20

Date Received: 08/27/19 10:20

Lab Sample ID: 500-169046-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			441645	09/03/19 13:37	ORM	TAL SL
Total/NA	Analysis	903.0		1	444138	09/25/19 06:12	KLS	TAL SL
Total/NA	Prep	PrecSep_0			441652	09/03/19 15:11	ORM	TAL SL
Total/NA	Analysis	904.0		1	443363	09/19/19 09:18	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	444474	09/27/19 13:12	SMP	TAL SL

Client Sample ID: MW-05

Date Collected: 08/26/19 08:45

Date Received: 08/27/19 10:20

Lab Sample ID: 500-169046-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			441645	09/03/19 13:37	ORM	TAL SL
Total/NA	Analysis	903.0		1	444138	09/25/19 06:12	KLS	TAL SL
Total/NA	Prep	PrecSep_0			441652	09/03/19 15:11	ORM	TAL SL
Total/NA	Analysis	904.0		1	443363	09/19/19 09:18	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	444474	09/27/19 13:12	SMP	TAL SL

Client Sample ID: Duplicate

Date Collected: 08/26/19 00:00

Date Received: 08/27/19 10:20

Lab Sample ID: 500-169046-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			441645	09/03/19 13:37	ORM	TAL SL
Total/NA	Analysis	903.0		1	444138	09/25/19 06:12	KLS	TAL SL
Total/NA	Prep	PrecSep_0			441652	09/03/19 15:11	ORM	TAL SL
Total/NA	Analysis	904.0		1	443363	09/19/19 09:18	KLS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	444474	09/27/19 13:12	SMP	TAL SL

Laboratory References:

TAL SL = Eurofins 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

Job ID: 500-169046-2

Laboratory: Eurofins TestAmerica, Chicago

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

Authority	Program	Identification Number	Expiration Date
Illinois	NELAP	100201	04-30-20

Laboratory: Eurofins TestAmerica, St. Louis

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

Authority	Program	Identification Number	Expiration Date
Illinois	NELAP	200023	11-30-19

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

2417 Bond Street

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact		Project Manager: Rich Gnat		Site Manager: Mitchel Dolan		Date: 8/26/19		COC No:					
KPRG and Associates, Inc.		Tel/Fax: (262) 781-0475		Lab Contact: Eric Lang		Carrier: FedEx		of COCs					
14665 West Lisbon Road, Suite 1A		Analysis Turnaround Time						Sampler:					
Brookfield, WI 53154		☐ CALENDAR DAYS ☐ WORKING DAYS						For Lab Use Only:					
(262) 781-0475 Phone		TAT if different from Below						Walk-in Client:					
(262) 781-0478 FAX		☐ 2 weeks						Lab Sampling:					
Project Name: Powerton CCR		☐ 1 week											
Site: Powerton Station - Pekin, IL		☐ 2 days						Job / SDG No.:					
P O # 12313.1		☐ 1 day						500-169046					
Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	Total Metals	Cl, F, SO4, TDS	Radium 226/228	Sample Specific Notes:	
MW-02	826	1240	G	W	5	N	N	X	X	X			
MW-03		1125	G	W	5	N	N	X	X	X			
MW-04		1020	G	W	5	N	N	X	X	X			
MW-10			G	W	5	N	N	X	X	X			
MW-01		1320	G	W	5	N	N	X	X	X			
MW-05		0845	G	W	5	N	N	X	X	X			
DUPLICATE		-											
Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other							4	1	4				
Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.							Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)						
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown							☐ Return to Client ☐ Disposal by Lab ☐ Archive for Months						
Special Instructions/QC Requirements & Comments:													
Custody Seals Intact: ☐ Yes ☐ No													
Custody Seal No.:													
Cooler Temp. (°C): Obs'd: Corr'd: Therm ID No.:													
Relinquished by: Mitchel Dolan		Company: KPRG		Date/Time: 8-26-19 1700		Received by: FEDEX		Company:		Date/Time: 8-26/19 11200			
Relinquished by:		Company:		Date/Time:		Received by:		Company:		Date/Time:			
Relinquished by:		Company:		Date/Time:		Received by: John Smith		Company: T4-CHI		Date/Time: 8/27/19 1020			

Form No. CA-C-WI-002, Rev. 4.18, dated 9/5/2018

ORIGIN ID:PIAA (262) 622-1143
MITCHEL DOLAN

414 PLAZA DR STE 106

WESTMONT, IL 60559
UNITED STATES US

SHIP DATE: 26AUG19
ACTWGT: 58.10 LB
CAD: 006994779/SSFE2021
DIMS: 24x13x14 IN

BILL THIRD PARTY

TO **TEST AMERICA**

2415 BOND ST

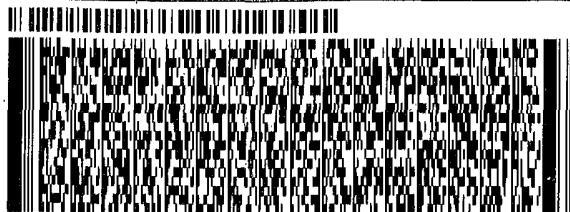
UNIVERSITY PARK IL 60484

500-169046 Waybill

(000) 000-0000
INVT
P01

REF:

DEPT:



FedEx
Express



1 of 3

TRK# 7893 8896 3043
0201

MASTER

XH JOTA

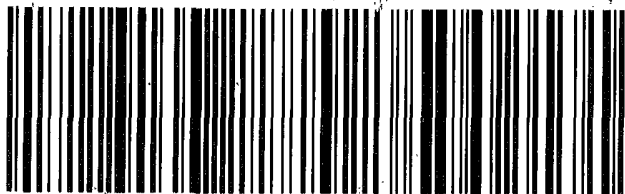
TUE - 27 AUG 10:30A

PRIORITY OVERNIGHT

AHS

60484

IL-US ORD



ORIGIN ID:PIAA (262) 622-1143
MITCHEL DOLAN

414 PLAZA DR STE 106

WESTMONT, IL 60559
UNITED STATES US

SHIP DATE: 26AUG19
ACTWGT: 64.90 LB
CAD: 006994779/SSFE2021
DIMS: 24x13x14 IN

BILL THIRD PARTY

TO **TEST AMERICA**

2415 BOND ST

UNIVERSITY PARK IL 60484

(000) 000-0000
INVT
P01

REF:

DEPT:



FedEx
Express



2 of 3

MPS# 7893 8896 3054
0263

Metr# 7893 8896 3043

0201

XH JOTA

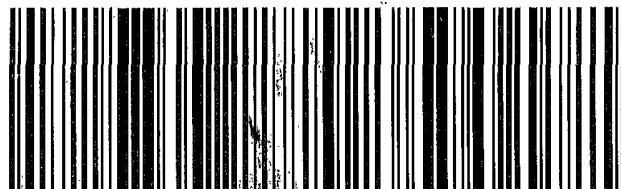
TUE - 27 AUG 10:30A

PRIORITY OVERNIGHT

AHS

60484

IL-US ORD



Chain of Custody Record



Client Information (Sub Contract Lab)		Sampler:		Lab PM:		Carrier Tracking No(s):		COC No:	
Client Contact: Shipping/Receiving		Phone:		Lang, Eric A.				500-125098.1	
Company: TestAmerica Laboratories, Inc.		E-Mail: eric.lang@testamericainc.com		State of Origin: Illinois				Page: Page 1 of 1	
Address: 13715 Rider Trail North,		Accreditations Required (See note): NELAP - Illinois						Job #: 500-169046-2	
City: Earth City		Due Date Requested: 9/25/2019							
State, Zip: MO, 63045		TAT Requested (days):							
Phone: 314-298-8566(Tel) 314-298-8757(Fax)		PO #:							
Email:		WO #:							
Project Name: Powerton CCR		Project #: 50011612							
Site: MWG - Powerton		SSOW#:							

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=wastewater, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	903.0/PreSep, 0 Standard Target List	904.0/PreSep, 0 Standard Target List	Ra226Ra228, GPPC	Total Number of containers	Special Instructions/Note:
MW-02 (500-169046-1)	8/26/19	12:40 Central		Water			X	X		3	Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs
MW-03 (500-169046-2)	8/26/19	11:25 Central		Water			X	X		3	Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs
MW-04 (500-169046-3)	8/26/19	10:20 Central		Water			X	X		3	Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs
MW-10 (500-169046-4)	8/26/19	Central		Water			X	X		3	Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs
MW-01 (500-169046-5)	8/26/19	13:20 Central		Water			X	X		3	Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs
MW-05 (500-169046-6)	8/26/19	08:45 Central		Water			X	X		3	Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs
Duplicate (500-169046-7)	8/26/19	Central		Water			X	X		3	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		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)	
Unconfirmed		Return To Client ☐ Disposal By Lab ☐ Archive For ☐ Months	
Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/QC Requirements:	
Primary Deliverable Rank: 2		Method of Shipment:	
Empty Kit Relinquished by:		Date:	
Relinquished by: <i>John Scott</i>		Date/Time: 8/27/19 15:05	
Relinquished by:		Date/Time:	
Relinquished by:		Date/Time:	
Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:	
Δ Yes Δ No			

Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-169046-2

Login Number: 169046

List Source: Eurofins 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	5.6,2.7
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: 500-169046-2

Login Number: 169046

List Number: 3

Creator: Harris, Lorin C

List Source: Eurofins TestAmerica, St. Louis

List Creation: 08/29/19 11:12 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.	False	
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?	False	
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.	N/A	
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

Job ID: 500-169046-2

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)					
500-169046-1	MW-02	91.2					
500-169046-2	MW-03	87.3					
500-169046-3	MW-04	87.9					
500-169046-4	MW-10	96.3					
500-169046-5	MW-01	89.0					
500-169046-6	MW-05	90.4					
500-169046-7	Duplicate	87.9					
LCS 160-441645/1-A	Lab Control Sample	92.7					
MB 160-441645/26-A	Method Blank	99.2					
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)				
500-169046-1	MW-02	91.2	87.9				
500-169046-2	MW-03	87.3	81.5				
500-169046-3	MW-04	87.9	80.7				
500-169046-4	MW-10	96.3	80.7				
500-169046-5	MW-01	89.0	83.4				
500-169046-6	MW-05	90.4	81.1				
500-169046-7	Duplicate	87.9	86.0				
LCS 160-441652/1-A	Lab Control Sample	92.7	81.1				
MB 160-441652/26-A	Method Blank	99.2	78.9				
Tracer/Carrier Legend							
Ba Carrier = Ba Carrier							
Y Carrier = Y Carrier							

APPENDIX B

Statistical Evaluation Summary – December 10, 2019



ENVIRONMENTAL CONSULTATION & REMEDIATION

KPRG and Associates, Inc.

STATISTICAL EVALUATION SUMMARY - 2019
CCR GROUNDWATER MONITORING
FORMER ASH BASIN - POWERTON GENERATING STATION

December 10, 2019

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

VIA E-MAIL

Re: CCR Groundwater Monitoring Results – Initial Statistical Evaluation Summary –
2019 Powerton Generating Station – Former Ash Basin

Dear Ms. Shealey:

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 Coal Combustion Residuals (CCR) units that would require monitoring. 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 FAB 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 FAB. The monitoring well network around the FAB consists of six monitoring wells. Wells MW-01 and MW-10 are upgradient wells and wells MW-02, MW-03, MW-04 and MW-05 are the downgradient wells as shown on Figure 1.

Analytical Data and Initial Statistical Evaluation

The analytical data from the initial detection monitoring includes a minimum eight rounds of background dataset collection for statistical background development. This was followed by another round of detection monitoring, collected in August 2019, which is compared to the statistically established background from the initial rounds of background sampling. It is noted that upgradient monitoring well MW-01 has actually 13 rounds of analyses prior to the comparison sample collection round since it is also part of the CCR sampling network for the Ash By-pass Basin (ABB) and Ash Surge Basin (ASB) for which

sampling started under the regulations prior to having to include the FAB into the CCR monitoring program. `

Table 1 summarizes the Appendix III detection monitoring data along with the statistical comparison of downgradient monitoring well data to the established statistical background. A brief discussion of the statistical evaluations performed is provided below.

The initial Appendix III detection monitoring data from upgradient wells MW-01 and MW-10 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 round of groundwater detection monitoring data collected in August 2019 were compared to determine whether there may be a potential statistically significant increase (SSI) for a specific compound at each well location. The evaluations were performed with the assistance of the SanitasTM statistical software package.

Outlier Testing

The presence of potential outliers was evaluated for upgradient wells MW-01 and MW-10 for each Appendix III parameter. Upgradient well MW-01 had two outliers for fluoride associated with the August and November 2016 sampling events (0.25 mg/l and 0.21 mg/l, respectively) relative to the initial eight rounds of sampling at this location. However, if also considering and including the additional five rounds of sampling at this location which occurred during the development of background for well MW-10, the two noted fluoride outlier concentrations are no longer considered outliers relative to the expanded background database for this location (i.e, a more robust and representative background dataset). There were no other outliers noted for Appendix III constituents at this well location.

Upgradient well MW-10 had potential high and low end outliers identified for chloride associated with the 58 and 44 mg/l concentrations measured in August 2018 and May 2018, respectively. In addition, there was a high end calcium outlier at 150 mg/l during the February 2019 sampling event. There were no other outliers noted for Appendix III constituents at this well location. Since the outliers cannot be attributed to either lab error, transcription error or field sampling error, the outlier values were not removed from the datasets at this time but may be considered during subsequent data evaluations.

Temporal Variability Testing

Temporal variability testing was performed to determine whether there may be a seasonal effect on the background data set. The results of the evaluation determined that the existing eight rounds of background sampling for upgradient well MW-10 are still not sufficient to determine whether there may be a seasonal effect. Therefore, the existing background data set for MW-10 was not adjusted for potential seasonal effects. As noted above, the background dataset for MW-01 is

slightly larger at this point and includes 13 rounds of data. This is a sufficient number of samples for completing this analysis, the results indicating that there was no statistically significant seasonal variation within the data set; therefore, there is no required adjustment for seasonal variation.

Spatial Variability Testing

To determine whether the background data sets from upgradient wells MW-01 and MW-10 can be pooled to establish a representative statistical background, spatial variability testing was performed on the two datasets using an analysis of variance (ANOVA). This analysis was done for each of the seven Appendix III parameters. The results of the testing indicated that there was no statistically significant spatial variation between the datasets for both wells except for fluoride. Therefore, for all parameters except fluoride, the datasets from both upgradient wells was pooled to calculate a statistical background. However, for fluoride the ANOVA indicated that there was spatial variability above the acceptable 5% statistical significance level. Therefore, for this parameter, the background data sets were not pooled. It was decided to use the data from the sampling of monitoring well MW-01 to calculate statistical background due to its larger background database and consistency with previous statistical evaluation decisions made for the ABB and ASB data evaluations.

Test of Normality

The Shapiro-Wilk Normality Test with an alpha (α) value of 0.05 (or 95%) was used to evaluate the distribution of the background data set for each Appendix III parameter. A Test of Ladders was also run to evaluate other potential underlying transformational distributions in the case that the non-transformed data was found not to be normally distributed. The pooled background datasets for boron, calcium, chloride, pH, sulfate and TDS were found to be normal with no transformations or with log-normal transformation. The background dataset for well MW-01 for fluoride was found to be normal without any transformations.

Prediction Limits

Based on the pooling of background datasets from upgradient monitoring wells MW-01 and MW-10 for boron, calcium, chloride, pH, sulfate and TDS, and the background dataset for fluoride for upgradient well MW-01, interwell Prediction Limits (PLs) were calculated for comparison of the downgradient monitoring well data from the August 2019 sampling event. The results of the evaluation are summarized in Table 1. A review of this table indicates that there were potential SSIs in downgradient monitoring well MW-05 for chloride, fluoride, sulfate and TDS and in well MW-03 for fluoride.

Recommendations for Continued Monitoring Compliance

The completed detection monitoring statistical evaluations have determined that there are potential 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 potential SSIs may be associated with an actual release from the regulated unit 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.

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

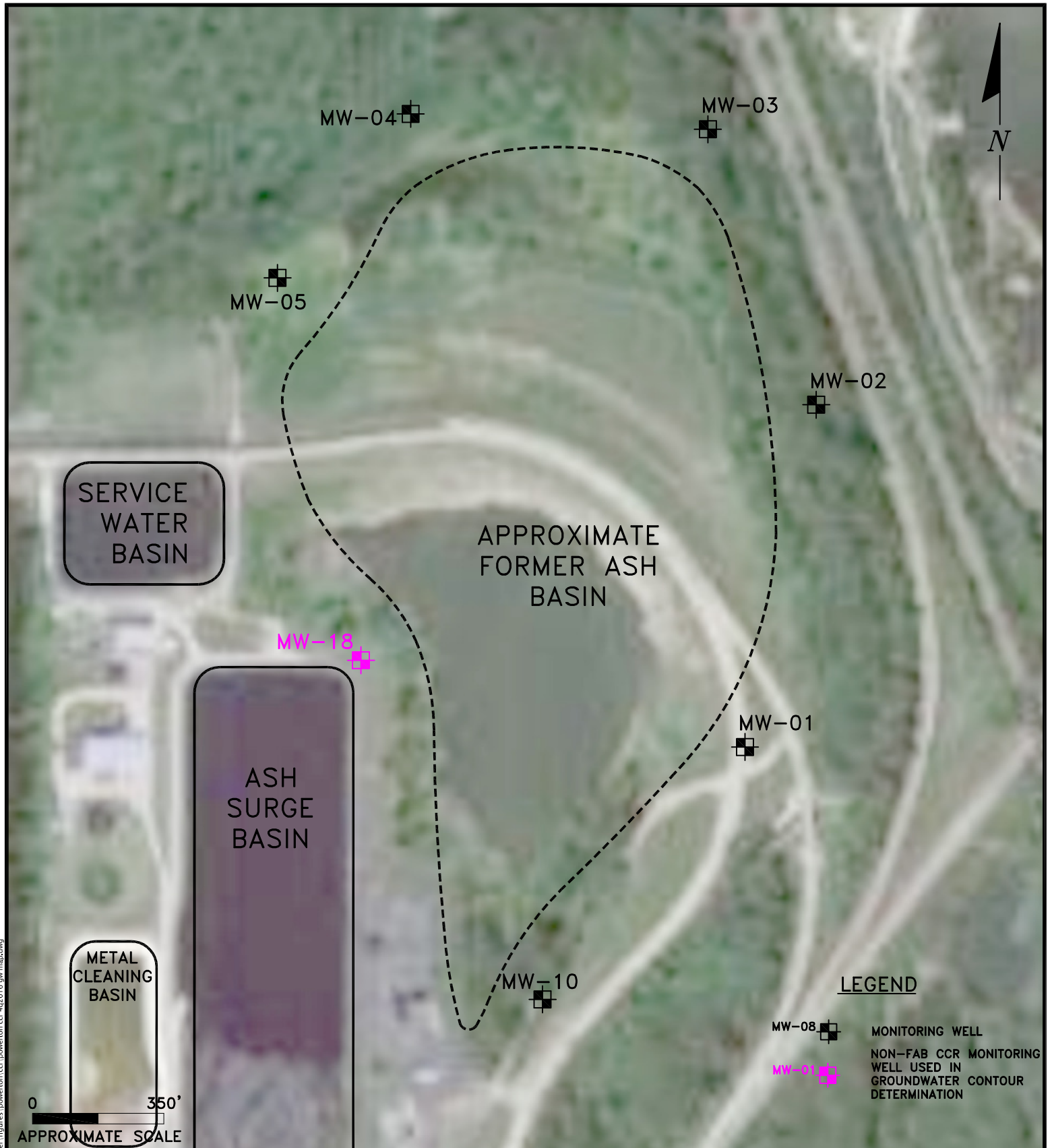
Sincerely,
KPRG and Associates, Inc.



Richard R. Gnat, P.G.
Principal

cc: Joseph Kotas, Midwest Generation

FIGURE



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

FORMER ASH BASIN CCR MONITORING WELL SITE MAP

POWERTON STATION
PEKIN, ILLINOIS

Scale: 1" = 350'

Date: January 07, 2019

KPRG Project No. 12313.1

FIGURE 1

TABLE

Table 1. Detection Monitoring Appendix III Groundwater Analytical Results - 3rd Quarter 2019 - Midwest Generation, LLC, Powerton Station, Pekin, IL.

Well	Date	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	Total Dissolved Solids
MW-01 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
	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	6.70	48	540
	8/8/2018	0.14	86	48	0.13	6.80	43	430
	4/30/2019	0.07	78	54	0.17	7.20	27	450
	Pred. Limit*	0.968	130.7	66.4	0.246	7.75-6.52	89	634.4
	8/26/2019	0.57	100	39	0.13	7.15	71	550
MW-10 up-gradient	6/22/2017	0.5	100	48	0.19	6.81	54	1.0
	8/24/2017	0.3	93	51	0.18	7.14	57	480
	11/9/2017	0.36	98	48	0.18	6.78	64	500
	5/16/2018	0.42	93	44	0.19	7.64	80	530
	8/8/2018	0.39	99	58	0.19	7.10	60	550
	10/30/2018	0.34	110	49	0.22	7.65	49	510
	2/26/2019	0.39	150	48	0.21	6.77	36	540
	5/1/2019	0.35	92	50	0.22	6.81	30	470
	Pred. Limit*	0.499	150	60	0.241	7.65-6.77	95	598
	8/26/2019	0.30	84	48	0.19	7.09	30	410
MW-02 down-gradient	6/20/2017	0.33	90	55	0.19	7.01	47	500
	8/23/2017	V	1.30	86	0.19	7.40	61	440
	11/7/2017	3.70	98	46	0.17	7.10	88	550
	5/15/2018	0.22	80	45	0.23	7.71	54	500
	8/7/2018	1.50	89	54	0.15	7.09	51	530
	10/30/2018	0.23	86	43	0.17	7.83	34	480
	2/26/2019	0.07	69	49	0.16	7.82	23	400
	4/30/2019	0.12	79	48	0.16	7.60	30	440
	Pred. Limit	0.77	132	62	0.25	7.69-6.54	85	609
	8/26/2019	0.51	86	50	0.18	7.13	32	400
MW-03 down-gradient	6/20/2017	0.4	76	54	0.29	7.26	49	480
	8/23/2017	0.40	79	52	0.28	7.44	52	430
	11/7/2017	0.31	79	62	0.26	7.04	61	460
	5/15/2018	0.35	87	66	0.27	7.53	77	520
	8/7/2018	0.40	82	67	0.22	6.60	49	500
	10/30/2018	0.20	74	44	0.25	7.84	26	400
	2/26/2019	0.06	74	56	0.24	7.49	25	410
	4/30/2019	0.28	74	49	0.22	7.17	38	390
	Pred. Limit	0.77	132	62	0.25	7.69-6.54	85	609
	8/26/2019	0.3	75	50	0.26	7.17	14	380
MW-04 down-gradient	6/20/2017	0.5	77	55	0.29	7.45	53	480
	8/28/2017	V	0.73	90	0.33	7.13	110	680
	11/7/2017	0.60	110	94	0.24	6.80	130	650
	5/15/2018	0.68	87	66	0.27	7.63	100	630
	8/7/2018	0.79	84	71	0.32	6.72	49	510
	10/30/2018	0.54	100	80	0.24	7.55	91	690
	2/26/2019	0.38	79	55	0.25	7.18	52	490
	4/30/2019	0.36	74	48	0.25	7.08	35	380
	Pred. Limit	0.77	132	62	0.25	7.69-6.54	85	609
	8/26/2019	0.64	91	60	0.24	7.08	14	490
MW-05 down-gradient	5/17/2016	0.70	100	85	0.35	7.08	120	660
	8/16/2016	0.69	110	97	0.30	6.85	150	830
	11/15/2016	0.93	94	66	0.23	6.96	77	620
	2/14/2017	0.79	100	100	0.25	7.25	170	760
	5/1/2017	0.70	100	92	0.28	7.60	170	710
	6/20/2017	0.64	89	63	0.28	7.32	78	550
	8/28/2017	0.62	110	120	0.33	7.05	210	870
	11/7/2017	0.51	99	110	0.31	6.87	160	990
	5/15/2018	0.61	130	89	0.29	7.70	210	910
	8/7/2018	0.49	110	120	0.32	6.56	180	890
	4/30/2019	0.56	84	73	0.36	6.96	120	590
	Pred. Limit	0.77	132	62	0.25	7.69-6.54	85	609
	8/26/2019	0.57	110	75	0.29	7.01	110	660

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

Bold - Potential statistically significant increase.

V- Serial dilution exceeds control limits.

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