



ENVIRONMENTAL CONSULTATION & REMEDIATION

KPRG and Associates, Inc.

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

**Midwest Generation, LLC
Joliet #9 Generating Station
1601 South Patterson Road
Joliet, Illinois**

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January 31, 2019

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1.0 INTRODUCTION

The initial Detection Monitoring requirements in accordance with the Federal Register, Environmental Protection Agency, 40 CFR Parts 257.94, Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities; Final Rule dated April 17, 2015 (CCR Rule) have been completed for the ash pond (Lincoln Stone Quarry [LSQ]) monitoring wells located at the Midwest Generation, LLC (Midwest Generation) Joliet #9 Generating Station. The wells sampled were selected to meet the monitoring requirements of the CCR Rule. The CCR monitoring well network consists of ten monitoring wells (R08S, G20S, G30S, R32S, G44S, G45S, G46S, G47S, G48S and T03S) as shown on Figure 1. Wells T03S and G45S are considered background monitoring wells. It is noted that Figure 1 also includes twelve extraction wells (X101 through X112) along the south side of the LSQ which are part of an interim corrective action which intercepts southward migration of groundwater from the LSQ.

The initial statistical evaluation completed for Appendix III detection monitoring parameters dated January 12, 2018 determined that there were statistically significant increases (SSIs) in downgradient monitoring wells relative to established background for various Appendix III parameters at various downgradient monitoring locations. It was recommended to transition to an assessment monitoring program complying with Section 257.95.

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

In accordance with Section 257.95(d)(1), within 90 days of obtaining the initial assessment results, the CCR wells needed to be resampled for all parameters in Appendix III and all constituents in Appendix IV that were detected in the initial assessment sampling round. For Joliet #9, the detected Appendix IV parameters included arsenic, barium, cobalt, fluoride, lead, lithium, molybdenum, combined radium 226/228 and selenium.

The second round of assessment sampling was completed on May 16 through May 18, 2018 with the final analytical data (radium) being received on July 6, 2018. On October 4, 2018 a Statistical Evaluation Summary – CCR Groundwater Assessment Monitoring Joliet #9 Station was submitted which documented the statistical evaluations performed along with the development of applicable site specific groundwater protection standards (GWPSs).

Another round of assessment sampling was completed in December 2018 which included some additional wells which are not part of the standard CCR monitoring network as part of an evaluation of the potential nature and extent of impacts study in accordance with Section

257.95(g)(1). This additional data was not yet available as of the end of the 2018 reporting period and therefore, not included in this report.

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

2.0 FIELD PROCEDURES AND GROUNDWATER FLOW EVALUATION

2.1 Field Procedures

As previously noted, the CCR groundwater monitoring network around the LSQ at the Joliet #9 facility consists of ten monitoring wells (R08S, G20S, G30S, R32S, G44S, G45S, G46S, G47S, G48S and T03S) 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 good condition with locked protector casings and intact concrete surface seals.

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

2.2 Groundwater Flow Evaluation

Water level data measurements were obtained from each well during each round of groundwater monitoring. A complete round of water levels was collected prior to initiating sampling, and the water level data are summarized in Table 1. The water levels were used to generate a groundwater flow maps for each sampling event which are provided as Figures 2 through 4. It is noted that water levels were also concurrently measured at other monitoring well locations in the area that are not part of the CCR monitoring network. The full set of water levels were used to generate a groundwater flow map for each sampling event. A review of the maps indicates groundwater flow to the north and west from the LSQ. Groundwater moving to the south due to dewatering operations at the nearby Vulcan Quarry is captured by the extraction well system along the southern perimeter of the LSQ and discharged back into the LSQ. In accordance with general groundwater sampling requirements under Section 257.93(c), Table 2 provides a summary of the natural flow direction (i.e., not effected by extraction well or Vulcan Quarry pumping) and an estimated rate of groundwater flow for each sampling event. The flow rate was calculated using the following equation:

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

V_s is seepage velocity (distance/time)

K is hydraulic conductivity (distance/time)

dh/dl is hydraulic gradient (unitless)

n_e is effective porosity (unitless)

The average hydraulic conductivity of 1.38×10^{-5} ft/sec used in Table 2 was obtained from the Revised Groundwater Impact Assessment Lincoln Stone Quarry Landfill – Addendum to IEPA Application Logs 2004-052 and 2009-213 dated March 13, 2013. The estimated effective porosity of the aquifer materials (0.05) was also obtained from the above noted document.

3.0 ANALYTICAL DATA AND STATUS OF EVALUATIONS

3.1 Sampling Summary

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

3.2 Data Summary

As discussed in Section 1.0, this site has been transitioned to assessment monitoring. In accordance with assessment monitoring requirements, a complete round of CCR well groundwater samples were collected in March 2018 and analyzed for the full list of parameters specified in both Appendix III and Appendix IV of the CCR Rule. This initial round of assessment monitoring data was evaluated and summarized in a letter report dated April 12, 2018 (see discussion in Section 4.1).

In accordance with Section 257.95(d)(1), within 90 days of obtaining the initial assessment results, the CCR wells were resampled in May 2018 for all parameters in Appendix III and all constituents in Appendix IV that were detected in the initial assessment sampling round. These parameters included arsenic, barium, cobalt, fluoride, lead, lithium, molybdenum, radium 226/228 and selenium. Another round of assessment monitoring was completed in December 2018.

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

3.3 Current Status

The site continues to be in assessment monitoring. Additional study is being performed for defining the nature and extent of impacts in accordance with Section 257.95(g)(1) and a corrective measures study has been initiated in accordance with Section 257.96.

4.0 OTHER REQUIRED SUBMITTALS

4.1 Initial Statistical Evaluation Summaries

The initial data to establish statistical background was collected as part of detection monitoring requirements under 257.94(b) and completed in 2017. Eight rounds of groundwater data were generated for all upgradient and downgradient monitoring wells for Appendix III and Appendix IV parameters. In addition, a ninth round and resample event was collected for subsequent use in statistical comparisons. The Statistical Evaluation Summary dated January 12, 2018 was prepared by KPRG and Associates, Inc. The work was completed in accordance with the CCR Compliance Statistical Approach for Groundwater Data Evaluation for the Joliet #9 Station dated October 10, 2017 and established PLs for each Appendix III parameter.

The completed initial detection monitoring statistical evaluations determined that there were potential statistically significant increases (SSIs) in various downgradient monitoring wells relative to established background for boron, calcium, fluoride, pH, sulfate and total dissolved solids (TDS). Not all parameters were detected above PLs at individual well locations. It was recommended to transition the site to assessment monitoring in accordance with Section 257.95.

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

The initial eight rounds of CCR sampling included analysis of all Appendix IV parameters for the purposes of establishing background statistics. The first eight rounds of Appendix IV monitoring data from upgradient wells G45S and T03S were statistically evaluated to establish the applicable site specific GWPSs for the ten detected Appendix IV parameters in accordance with procedures defined in CCR Compliance Statistical Approach for Groundwater Data Evaluation, Midwest Generation Joliet #9 Generating Station dated October 10, 2017 and Part 257.95(h)(1-3) of the CCR Rule. This evaluation was summarized in a letter report titled Statistical Evaluation Summary CCR Groundwater Assessment Monitoring Joliet #9 Generating Station dated October 4, 2018.

5.0 SUMMARY/CONCLUSIONS AND RECOMMENDATIONS

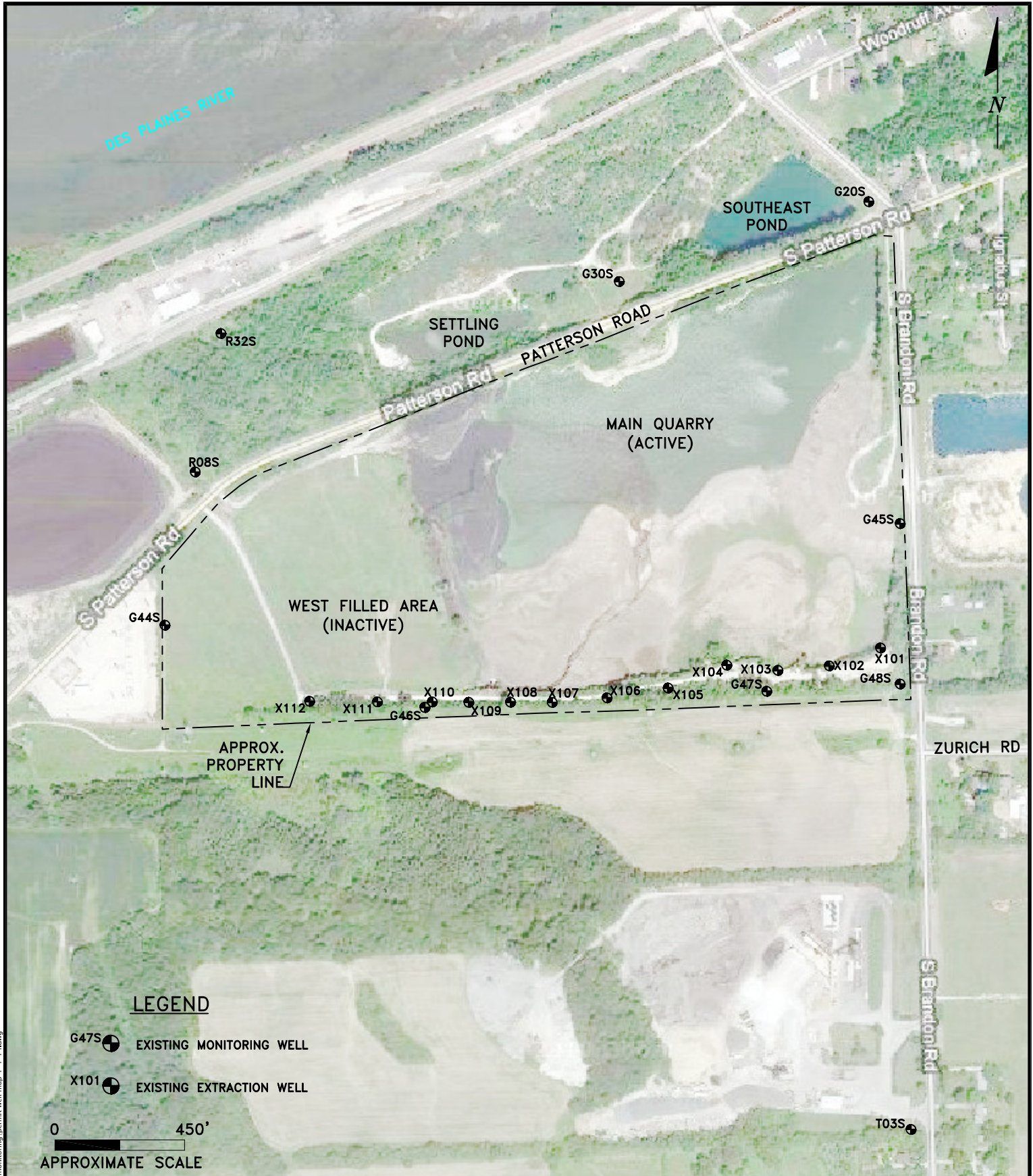
The site has been transitioned to assessment monitoring. The assessment monitoring requirements in accordance with the CCR rule are being successfully met. An initial round of assessment monitoring sampling for all Appendix III and IV for parameters was completed. CCR wells were then resampled for all parameters in Appendix III and all constituents in Appendix IV that were detected in the initial assessment sampling round. The Statistical Evaluation Summary dated October 4, 2018 established GWPSs for the ten detected Appendix IV parameters. Various wells showed concentrations of three Appendix IV parameters above the established GWPSs. Midwest Generation is in the process of evaluating the nature and extent of potential impacts in accordance with Section 257.95 (g)(1) and initiating a Corrective Measures Study in accordance with Section 257.96.

At this time it is recommended to continue with assessment monitoring in accordance with Section 257.95. Additional recommendations will be provided as appropriate with the completion of the nature and extent of potential impacts evaluation and corrective measures study.

6.0 REFERENCES

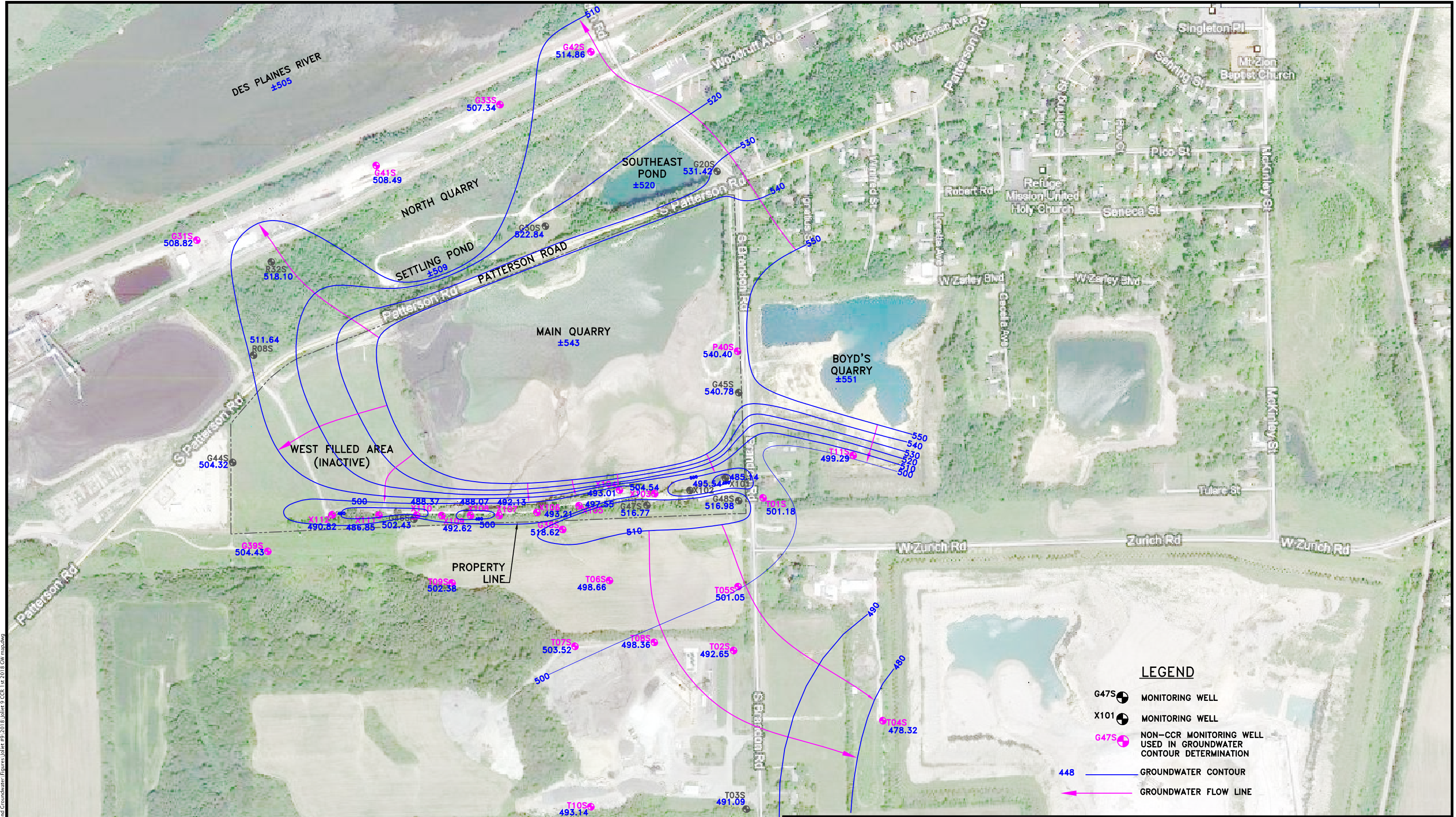
- Federal Register, Environmental Protection Agency, 40 CFR Parts 257 and 261, Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals From Electric Utilities; Final Rule. Vol. 80, No. 74, Friday April 17, 2015.
- KPRG and Associates, Inc. and Geo-Hydro, Inc., Revised Groundwater Impact Assessment Lincoln Stone Quarry Landfill – Addendum to IEPA Application Logs 2004-052 and 2009-213. March 13, 2013.
- KPRG and Associates, Inc., CCR Compliance Monitoring, Sampling and Analysis Plan, Midwest Generation, LLC Joliet #9 Generating Station. October 10, 2017.
- KPRG and Associates, Inc., Statistical Evaluation Summary CCR Groundwater Monitoring Joliet #9 Generating Station. January 12, 2018.
- KPRG and Associates, Inc., Initial Assessment Monitoring Data Evaluation CCR Groundwater Monitoring Joliet #9 Generating Station. April 12, 2018.
- KPRG and Associates, Inc., Statistical Evaluation Summary CCR Groundwater Assessment Monitoring Powerton Generation Station. October 4, 2018; Revised October 18, 2018.
- KPRG and Associates, Inc., CCR Compliance Statistical Approach for Groundwater Data Evaluation, Midwest Generation, LLC Joliet #9 Generating Station. October 10, 2017.

FIGURES



T:\c\projects\midwest generation\lincoln quarry gw monitoring\permit well map 4-4-14.dwg

ENVIRONMENTAL CONSULTATION & REMEDIATION		CCR MONITORING WELL SITE MAP	
KPRG KPRG and Associates, inc.		LINCOLN STONE QUARRY JOLIET, ILLINOIS	
		Scale: 1" = 450'	Date: January 2, 2018
14665 West Lisbon Road, Suite 2B Brookfield, Wisconsin 53005 Telephone 262-781-0475 Facsimile 262-781-0478 414 Plaza Drive, Suite 106 Westmont, Illinois 60559 Telephone 630-325-1300 Facsimile 630-325-1593		KPRG Project No. 21406.12	FIGURE 1



LEGEND

- G47S MONITORING WELL
- X101 MONITORING WELL
- G47S NON-CCR MONITORING WELL USED IN GROUNDWATER CONTOUR DETERMINATION
- GROUNDWATER CONTOUR
- GROUNDWATER FLOW LINE

Note: This map includes water levels from other surrounding wells not within CCR network.



ENVIRONMENTAL CONSULTATION & REMEDIATION		CCR GROUNDWATER CONTOUR FIRST QUARTER 2018	
K P R G KPRG and Associates, Inc. 14665 West Lisbon Road, Suite 1A Brookfield, Wisconsin 53005 Telephone 262-781-0475 Facsimile 262-781-0478 414 Plaza Drive, Suite 106 Westmont, Illinois 60559 Telephone 630-325-1300 Facsimile 630-325-1593		LINCOLN STONE QUARRY JOLIET, ILLINOIS	
		Scale: 1" = 450'	Date: January 9, 2019
KPRG Project No. 21406.12		FIGURE 2	

TABLES

Table 1. Groundwater Elevations, Midwest Generation, LLC, Joliet Station #9

Well ID	Date ¹	Top of Casing Elevation (ft above MSL)	Depth to Groundwater (ft below TOC)	Groundwater Elevation (ft above MSL)
R08S	Nov-2015	578.65	66.74	511.91
	May-2016	578.65	67.02	511.63
	Jun-2016	578.65	67.50	511.15
	Aug-2016	578.65	67.47	511.18
	Nov-2016	578.65	67.84	510.81
	Feb-2017	578.65	69.28	509.37
	May-2017	578.65	67.56	511.09
	Jul-2017	578.65	67.54	511.11
	Sep-2017	578.65	65.72	512.93
	Nov-2017	578.65	64.83	513.82
	Mar-2018	578.65	65.12	513.53
G20S	May-2018	578.65	65.31	513.34
	Oct-2018	578.62	65.48	513.14
	Nov-2015	580.33	55.33	525.00
	May-2016	580.33	51.32	529.01
	Jun-2016	580.33	53.14	527.19
	Aug-2016	580.33	61.32	519.01
	Nov-2016	580.33	54.69	525.64
	Feb-2017	580.33	52.41	527.92
	May-2017	580.33	46.06	534.27
	Jul-2017	580.33	47.85	532.48
	Sep-2017	580.33	49.02	531.31
G30S	Nov-2017	580.33	52.57	527.76
	Mar-2018	580.33	46.65	533.68
	May-2018	580.33	48.83	531.50
	Oct-2018	580.91	49.46	531.45
	Nov-2015	524.40	2.74	521.66
	May-2016	524.40	2.53	521.87
	Jun-2016	524.40	3.54	520.86
	Aug-2016	524.40	2.45	521.95
	Nov-2016	524.40	2.57	521.83
	Feb-2017	524.40	2.13	522.27
	May-2017	524.40	1.69	522.71
R32S	Jul-2017	524.40	1.96	522.44
	Sep-2017	524.40	1.84	522.56
	Nov-2017	524.40	1.48	522.92
	Mar-2018	524.40	1.48	522.92
	May-2018	524.40	1.62	522.78
	Oct-2018	524.70	2.51	522.19
	Nov-2015	536.81	19.99	516.82
	May-2016	536.81	19.72	517.09
	Jun-2016	536.81	20.51	516.30
	Aug-2016	536.81	20.51	516.30
	Nov-2016	536.81	20.24	516.57
G44S	Feb-2017	536.81	21.12	515.69
	May-2017	536.81	19.33	517.48
	Jul-2017	536.81	19.38	517.43
	Sep-2017	536.81	17.91	518.90
	Nov-2017	536.81	16.32	520.49
	Mar-2018	536.81	16.98	519.83
	May-2018	536.81	20.26	516.55
	Oct-2018	536.99	18.32	518.67
	Nov-2015	586.69	80.54	506.15
	May-2016	586.69	80.42	506.27
	Jun-2016	586.69	80.68	506.01
	Aug-2016	586.69	80.65	506.04
	Nov-2016	586.69	80.69	506.00
	Feb-2017	586.69	84.34	502.35
	May-2017	586.69	82.14	504.55
	Jul-2017	586.69	81.13	505.56
	Sep-2017	586.69	80.15	506.54
	Nov-2017	586.69	77.10	509.59
	Mar-2018	586.69	78.74	507.95
	May-2018	586.69	80.17	506.52
	Oct-2018	586.53	78.21	508.32

Table 1. Groundwater Elevations, Midwest Generation, LLC, Joliet Station #9

G45S	Nov-2015	603.31	68.90	534.41
	May-2016	603.31	67.28	536.03
	Jun-2016	603.31	68.88	534.43
	Aug-2016	603.31	68.39	534.92
	Nov-2016	603.31	66.69	536.62
	Feb-2017	603.31	65.34	537.97
	May-2017	603.31	63.07	540.24
	Jul-2017	603.31	63.44	539.87
	Sep-2017	603.31	63.10	540.21
	Nov-2017	603.31	62.28	541.03
	Mar-2018	603.31	61.82	541.49
	May-2018	603.31	68.50	534.81
G46S	Oct-2018	603.90	66.74	537.16
	Nov-2015	601.32	95.78	505.54
	May-2016	601.32	96.74	504.58
	Jun-2016	601.32	97.31	504.01
	Aug-2016	601.32	97.32	504.00
	Nov-2016	601.32	97.50	503.82
	Feb-2017	601.32	98.14	503.18
	May-2017	601.32	98.43	502.89
	Jul-2017	601.32	98.96	502.36
	Sep-2017	601.32	96.61	504.71
	Nov-2017	601.32	95.65	505.67
	Mar-2018	601.32	96.80	504.52
G47S	May-2018	601.32	95.59	505.73
	Oct-2018	601.43	91.34	510.09
	Nov-2015	612.32	99.44	512.88
	May-2016	612.32	95.48	516.84
	Jun-2016	612.32	96.58	515.74
	Aug-2016	612.32	96.79	515.53
	Nov-2016	612.32	88.96	523.36
	Feb-2017	612.32	96.41	515.91
	May-2017	612.32	92.61	519.71
	Jul-2017	612.32	93.53	518.79
	Sep-2017	612.32	93.50	518.82
	Nov-2017	612.32	92.57	519.75
G48S	Mar-2018	612.32	93.63	518.69
	May-2018	612.32	93.51	518.81
	Oct-2018	612.10	96.29	515.81
	Nov-2015	620.77	106.83	513.94
	May-2016	620.77	105.20	515.57
	Jun-2016	620.77	104.95	515.82
	Aug-2016	620.77	104.77	516.00
	Nov-2016	620.77	102.41	518.36
	Feb-2017	620.77	103.05	517.72
	May-2017	620.77	100.06	520.71
	Jul-2017	620.77	102.31	518.46
	Sep-2017	620.77	102.88	517.89
T03S	Nov-2017	620.77	100.83	519.94
	Mar-2018	620.77	99.77	521.00
	May-2018	620.77	100.74	520.03
	Oct-2018	620.78	105.79	514.99
	Nov-2015	629.65	136.30	493.35
	May-2016	629.65	135.24	494.41
	Jun-2016	629.65	134.26	495.39
	Aug-2016	629.65	134.13	495.52
	Nov-2016	629.65	135.03	494.62
	Feb-2017	629.65	134.92	494.73
	May-2017	629.65	131.87	497.78
	Jul-2017	629.65	135.99	493.66
	Sep-2017	629.65	136.40	493.25
	Nov-2017	629.65	133.61	496.04
	Mar-2018	629.65	131.05	498.60
	May-2018	629.65	134.42	495.23
	Oct-2018	629.89	140.03	489.86

MSL - Mean Sea Level

TOC - Top of Casing

¹ - Date of water levels collected at beginning of quarter, actual sample date may vary.

Table 2. Groundwater Flow Direction and Estimated Seepage Velocity/Flow Rate - Joliet #9 Generation Station (Lincoln Stone Quarry).

DATE	Natural Groundwater Flow Direction	Kavg (ft/sec)*	Average Hydraulic Gradient (ft/ft)	Porosity (unitless)**	Estimated Seepage Velocity (ft/day)
11/2015	Northerly and Westerly	1.38E-05	0.0293	0.05	0.70
5/2016	Northerly and Westerly	1.38E-05	0.0289	0.05	0.69
6/2016	Northerly and Westerly	1.38E-05	0.0287	0.05	0.68
8/2016	Northerly and Westerly	1.38E-05	0.0293	0.05	0.70
11/2016	Northerly and Westerly	1.38E-05	0.0301	0.05	0.72
2/2017	Northerly and Westerly	1.38E-05	0.0431	0.05	1.03
5/2017	Northerly and Westerly	1.38E-05	0.0364	0.05	0.87
7/2017	Northerly and Westerly	1.38E-05	0.0378	0.05	0.90
8/2017	Northerly and Westerly	1.38E-05	0.0364	0.05	0.87
11/2017	Northerly and Westerly	1.38E-05	0.0319	0.05	0.76
3/2018	Northerly and Westerly	1.38E-05	0.0384	0.05	0.92
5/2018	Northerly and Westerly	1.38E-05	0.0222	0.05	0.53
12/2018	Northerly and Westerly	1.38E-05	0.0321	0.05	0.77

* Kavg - Average hydraulic conductivity (feet/second) from Revised Groundwater Impacts assessment Lincoln Stone Quarry, 3/13/2013.

** - Porosity estimate from Revised Groundwater Impacts assessment Lincoln Stone Quarry, 3/13/2013.

Table 3. CCR Groundwater Sample Collection Summary for 2018 - Joliet #9 Lincoln Stone Quarry

Well ID	Number of Groundwater Sampling Events	Dates of Groundwater Sampling Events	Detection Monitoring (D) versus Assessment Monitoring (A)
G45S (Upgradient)	3	3/9/2018	A
		5/21/2018	A
		12/7/2018	A
T03S (Upgradient)	3	3/7/2018	A
		5/17/2018	A
		12/11/2018	A
R08S (Downgradient)	3	3/8/2018	A
		5/18/2018	A
		12/13/2018	A
G20S (Downgradient)	3	3/6/2018	A
		5/16/2018	A
		12/7/2018	A
G30S (Downgradient)	3	3/7/2018	A
		5/17/2018	A
		12/15/2018	A
R32S (Downgradient)	3	3/7/2018	A
		5/21/2018	A
		12/13/2018	A
G44S (Downgradient)	3	3/7/2018	A
		5/17/2018	A
		12/10/2018	A
G46S (Downgradient)	3	3/8/2018	A
		5/18/2018	A
		12/11/2018	A
G47S (Downgradient)	3	3/8/2018	A
		5/18/2018	A
		12/11/2018	A
G48S (Downgradient)	3	3/8/2018	A
		5/18/2018	A
		12/11/2018	A

Table 4. Appendix III Groundwater Analytical Results through 2018- Midwest Generation, LLC, Joliet Station #9, Joliet, IL.

Well	Date	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	Total Dissolved Solids
G45S up-gradient	11/20/2015	0.81	120	180	0.35	7.20	360	810
	5/12/2016	0.68	110	140	0.34	7.37	230	860
	6/30/2016	0.48	87	110	0.34	7.50	170	670
	8/25/2016	0.47	94	100	0.35	7.28	170	790
	11/16/2016	0.41	91	90	0.33	7.34	170	620
	2/14/2017	0.43	97	97	0.32	7.36	160	620
	5/23/2017	0.36	85	110	0.35	7.30	150	660
	7/7/2017	0.42	94	120	< 0.1	7.21	150	600
	Pred. Limit*	1.031	133.2	206.7	0.35	7.61-7.03	360	1,007
	9/26/2017	0.43	110	130	0.3	7.21	160	790
	11/21/2017	0.34	96	130	0.33	7.29	180	700
	3/9/2018	0.38	97	110	0.32	7.18	180	710
	5/21/2018	0.76	110	150	0.33	7.00	230	970
	12/7/2018	0.46	91	120	0.33	7.02	100	740
T03S up-gradient	11/19/2015	0.5	110	75	0.22	7.07	250	710
	5/5/2016	0.84	100	100	0.21	7.16	190	820
	6/28/2016	0.98	100	94	0.19	7.30	180	910
	8/25/2016	1.1	110	99	0.20	7.32	180	880
	11/17/2016	1.3	120	100	0.19	7.14	150	860
	2/15/2017	1.0	98	110	0.19	7.36	230	810
	5/22/2017	1.4	110	78	0.23	7.25	160	740
	7/7/2017	1.1	100	F1 71	< 0.1	7.32	180	710
	Pred. Limit*	1.85	129	134	0.26	7.55-6.93	292	1,030
	9/26/2017	1.3	110	80	0.21	7.19	240	790
	11/20/2017	1.7	98	90	0.24	7.13	230	770
	3/7/2018	1.5	110	110	0.23	7.34	250	900
	5/17/2018	1.8	100	82	0.24	7.07	210	890
	12/11/2018	1.8	100	140	0.23	6.96	160	890
R08S down-gradient	11/23/2015	6.9	130	77	0.19	7.80	520	740
	5/6/2016	6.1	120	80	0.19	7.70	380	820
	6/28/2016	6.8	130	89	0.18	7.49	320	960
	8/25/2016	6.3	120	84	0.19	7.54	350	890
	11/21/2016	6.4	120	86	0.17	7.53	280	790
	2/14/2017	5.4	150	220	0.17	7.60	280	1,000
	5/25/2017	12	250	90	0.17	7.56	340	830
	7/6/2017	6.3	140	87	0.17	7.62	350	830
	Pred. Limit	1.01	126**	203	0.35	7.52-7.04**	360**	955
	9/25/2017	7.3	140	81	0.15	7.57	390	840
	11/21/2017	7.3	130	89	0.15	8.05	380	800
	3/8/2018	7.4	150	83	0.14	8.62	420	850
	5/18/2018	7.7	140	82	0.14	8.25	320	920
	12/13/2018	7.7	140	79	0.15	8.11	240	800
G20S down-gradient	11/19/2015	1.2	59	12	0.82	7.73	110	410
	5/11/2016	1.2	53	12	0.81	7.52	77	410
	6/29/2016	1.2	54	12	0.82	7.38	69	460
	8/23/2016	1.3	56	13	0.81	7.41	67	420
	11/17/2016	1.3	59	11	0.74	7.44	55	420
	2/13/2017	1.2	54	13	0.69	7.30	93	400
	5/24/2017	1.3	55	12	0.81	7.45	66	430
	7/5/2017	1.3	61	12	0.76	7.37	70	400
	Pred. Limit	1.01	126**	203	0.35	7.52-7.04**	360**	955
	9/25/2017	1.3	60	12	0.78	7.30	76	440
	11/20/2017	1.3	59	13	0.78	7.06	85	390
	3/6/2018	1.4	63	12	0.76	7.32	88	460
	5/16/2018	1.2	61	12	0.75	7.06	87	410
	12/07/18	1.20	58	12	0.76	7.41	65	480
G30S down-gradient	11/20/2015	5.80	63	190	1.3	7.46	580	1,000
	5/10/2016	5.4	53	190	1.30	7.68	390	1,100
	6/30/2016	5.2	60	F1 180	1.30	7.73	410	990
	8/25/2016	5.7	59	F1 180	1.30	7.70	390	1,100
	11/18/2016	6.4	57	170	1.2	8.04	320	1,100
	2/14/2017	5.4	62	190	1.2	7.70	450	1,000
	5/25/2017	11	110	180	1.4	7.67	430	1,100
	7/7/2017	6.6	54	190	1.3	7.48	410	1,100
	Pred. Limit	1.01	126**	203	0.35	7.52-7.04**	360**	955
	9/26/2017	6.7	62	190	1.3	8.07	460	1,100
	11/20/2017	6.1	52	210	1.3	7.77	440	1,100
	3/7/2018	5.1	56	200	1.3	7.97	470	1,100
	5/17/2018	5.7	55	210	1.2	7.77	540	1,100
	12/15/2018	5.8	57	200	1.2	7.99	200	1100
R32S down-gradient	11/19/2015	1.3	99	88	0.28	7.32	210	640
	5/5/2016	1.9	100	140	0.32	7.38	210	810
	6/29/2016	2.5	110	110	0.35	7.53	280	860
	8/26/2016	3.0	120	100	0.4	7.30	330	850
	11/18/2016	3.3	120	99	0.34	7.38	270	830
	2/16/2017	F1 4.0	120	99	0.34	7.39	340	830
	5/25/2017	8.3	240	88	0.42	7.54	320	850
	7/7/2017	6.2	120	96	0.42	7.61	360	830
	Pred. Limit	1.01	126**	203	0.35	7.52-7.04**	360**	955
	9/28/2017	4.8	140	78	0.36	7.29	290	870
	11/21/2017	5.7	120	97	0.38	7.50	390	900
	3/7/2018	5.8	130	86	0.32	7.57	350	880
	5/21/2018	4.4	120	77	0.29	7.13	310	1,000
	12/13/2018	3.5	120	F1 72	0.26	7.43	280	880

Notes:

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

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

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

Pred. Limit - Prediction Limit

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

** - Based on pooled background from G45S/T03S.

All others based on G45S as background.

Bold - Potential statistically significant increase.

Table 4. Appendix III Groundwater Analytical Results through 2018- Midwest Generation, LLC, Joliet Station #9, Joliet, IL.

Well	Date	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	Total Dissolved Solids
G44S down-gradient	11/20/2015	1.0	120	43	0.21	7.11	220	640
	5/9/2016	0.91	110	37	0.18	7.39	120	690
	6/30/2016	0.69	100	32	0.18	7.59	99	620
	8/26/2016	0.9	120	36	0.19	7.12	110	710
	11/16/2016	0.82	120	26	0.17	7.15	88	530
	2/16/2017	0.86	120	30	0.15	7.38	120	620
	5/24/2017	0.83	120	31	0.19	7.08	95	600
	7/10/2017	0.83	110	30	< 0.1	7.00	110	700
	Pred. Limit	1.01	126**	203	0.35	7.52-7.04**	360**	955
	9/28/2017	0.99	130	30	0.19	7.13	100	730
	11/21/2017	0.79	110	35	0.18	7.06	120	640
	3/7/2018	0.91	120	36	0.18	7.19	110	670
	5/17/2018	0.98	120	35	0.18	7.02	96	780
	12/10/2018	1.1	120	43	0.19	7.41	78	630
G46S down-gradient	11/23/2015	6.0	110	80	0.27	7.32	430	780
	5/9/2016	7.7	100	100	0.28	7.77	360	940
	6/30/2016	7.9	100	99	0.29	8.26	290	880
	8/26/2016	7.2	100	120	0.35	7.48	350	1,000
	11/18/2016	6.5	110	120	0.39	7.56	330	1,000
	2/16/2017	6.1	100	150	0.41	7.94	410	1,000
	5/22/2017	6.8	100	130	0.44	7.37	350	970
	7/6/2017	4.9	100	150	0.41	7.33	290	880
	Pred. Limit	1.01	126**	203	0.35	7.52-7.04**	360**	955
	9/27/2017	4.9	88	160	0.4	7.28	270	890
	11/21/2017	5.3	78	170	0.43	7.73	270	800
	3/8/2018	5.9	110	140	0.41	7.75	350	940
	5/18/2018	5.9	110	120	0.4	7.66	260	1,100
	12/11/2018	7.60	120	110	0.38	7.66	270	1,100
G47S down-gradient	11/23/2015	4.6	11	160	0.45	9.22	480	700
	5/6/2016	5.0	7.8	140	0.72	9.86	410	910
	7/1/2016	6.4	8.4	150	0.68	9.32	340	860
	8/24/2016	9.3	9.2	140	0.67	9.19	300	830
	11/16/2016	15	1.3	F1 150	1.8	10.08	620	1,700
	2/15/2017	7.6	4.4	160	1.1	9.26	540	1,200
	5/23/2017	18	0.93	160	2.2	10.03	720	1,800
	7/10/2017	18	1.2	150	2.1	10.06	780	1,800
	Pred. Limit	1.01	126**	203	0.35	7.52-7.04**	360**	955
	9/27/2017	18	1.1	150	2.0	10.15	750	1,900
	11/22/2017	21	1.1	150	2.1	10.56	710	1,800
	3/8/2018	18	1.1	170	2.1	10.67	780	1,900
	5/18/2018	3.7	1.1	160	1.7	7.79	570	1,800
	12/11/2018	13	2.8	140	1.1	10.14	440	1,300
G48S down-gradient	11/20/2015	11.00	6.9	120	1.5	9.08	760	1,100
	5/5/2016	9.30	5.9	120	1.5	9.53	560	1,200
	7/1/2016	9.50	4.2	120	1.4	9.60	480	1,100
	8/24/2016	10.00	5.5	120	1.4	9.31	420	1,100
	11/16/2016	9.80	10	110	1.4	9.61	340	1,100
	2/15/2017	8.40	8.3	120	1.2	9.63	490	1,100
	5/23/2017	9.20	8.1	120	1.3	9.49	470	1,100
	7/10/2017	7.80	11	110	1.2	8.77	460	1,000
	Pred. Limit	1.01	126**	203	0.35	7.52-7.04**	360**	955
	9/27/2017	7.60	18	100	1.1	8.94	480	1,100
	11/22/2017	8.60	12	120	1.2	9.42	450	1,000
	3/8/2018	5.30	62	100	0.85	8.13	450	1,000
	5/18/2018	5.90	53	100	0.92	7.79	370	1,100
	12/11/2018	7.30	23	110	1.1	8.42	310	1,000

Notes:

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

** - Based on pooled background from G45S/T03S.

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

All others based on G45S as background.

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

Bold - Potential statistically significant increase.

Pred. Limit - Prediction Limit

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

Table 5. Appendix IV Groundwater Analytical Results through 2018 - Midwest Generation, LLC, Joliet Station #9, Joliet, IL

Well	Date	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Fluoride	Lead	Lithium	Mercury	Molybdenum	Radium 226 + 228 Combined	Selenium	Thallium
G45S up-gradient	11/20/2015	< 0.003	0.0081	0.044	^ < 0.001	< 0.0005	< 0.005	< 0.001	0.35	< 0.0005	0.036	< 0.0002	0.0120	1.76	< 0.0025	< 0.002
	5/12/2016	< 0.003	0.0076	0.041	< 0.001	< 0.0005	< 0.005	< 0.001	0.34	< 0.0005	0.036	< 0.0002	0.0100	3.01	< 0.0025	< 0.002
	6/30/2016	< 0.003	0.0075	0.031	< 0.001	< 0.0005	< 0.005	< 0.001	0.34	< 0.0005	0.034	< 0.0002	0.008	2.05	< 0.0025	< 0.002
	8/25/2016	< 0.003	0.0076	0.036	< 0.001	< 0.0005	< 0.005	< 0.001	0.35	< 0.0005	0.031	< 0.0002	0.0086	1.91	< 0.0025	< 0.002
	11/16/2016	< 0.003	0.0079	0.033	< 0.001	< 0.0005	< 0.005	< 0.001	0.33	< 0.0005	0.028	< 0.0002	0.0094	2.04	< 0.0025	< 0.002
	2/14/2017	< 0.003	0.0093	0.037	< 0.001	< 0.0005	< 0.005	< 0.001	0.32	< 0.0005	0.029	< 0.0002	0.0083	1.85	< 0.0025	< 0.002
	5/23/2017	< 0.003	0.0082	0.033	< 0.001	< 0.0005	< 0.005	< 0.001	0.35	< 0.0005	0.027	< 0.0002	0.0093	1.40	< 0.0025	< 0.002
	7/7/2017	< 0.003	0.0086	0.035	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.1	< 0.0005	0.030	< 0.0002	0.007	1.88	< 0.0025	< 0.002
	9/26/2017	< 0.003	0.0096	0.04	< 0.001	< 0.0005	< 0.005	< 0.001	0.3	< 0.0005	0.029	< 0.0002	0.0079	2.14	< 0.0025	< 0.002
	11/21/2017	< 0.003	0.0094	0.038	< 0.001	< 0.0005	< 0.005	< 0.001	0.33	< 0.0005	0.028	< 0.0002	0.0072	8.45	< 0.0025	< 0.002
	3/9/2018	< 0.003	0.0093	0.036	^ < 0.001	< 0.0005	< 0.005	< 0.001	0.32	< 0.0005	0.028	^ < 0.0002	0.008	1.89	< 0.0025	< 0.002
	GWPS	NC	0.01	2.0	NC	NC	NC	0.006	4.0	0.015	0.041	NC	0.10	5	0.05	NC
	5/21/2018	NA	0.0072	0.047	NA	NA	NA	< 0.001	0.33	< 0.0005	0.033	NA	0.013	2.37	< 0.0025	NA
	12/7/2018	NA	0.0090	0.034	NA	NA	NA	< 0.001	0.330	< 0.0005	0.031	NA	0.0100	NYR	< 0.0025	NA
T03S up-gradient	11/19/2015	< 0.003	0.0019	0.063	^ < 0.001	< 0.0005	< 0.005	< 0.001	0.22	< 0.0005	0.019	< 0.0002	0.0260	1.101	< 0.0025	< 0.002
	5/5/2016	< 0.003	0.0013	0.081	< 0.001	< 0.0005	< 0.005	< 0.001	0.21	< 0.0005	0.018	< 0.0002	0.03	1.43	< 0.0025	< 0.002
	6/28/2016	< 0.003	0.0011	0.086	< 0.001	< 0.0005	< 0.005	0.0011	0.19	< 0.0005	0.017	< 0.0002	0.037	1.18	< 0.0025	< 0.002
	8/25/2016	< 0.003	< 0.001	0.086	< 0.001	< 0.0005	< 0.005	< 0.001	0.2	< 0.0005	0.016	< 0.0002	0.043	1.54	< 0.0025	< 0.002
	11/17/2016	< 0.003	0.0012	0.096	< 0.001	< 0.0005	< 0.005	0.0012	0.19	< 0.0005	0.022	< 0.0002	0.14	1.61	< 0.0025	< 0.002
	2/15/2017	< 0.003	0.0011	0.086	< 0.001	< 0.0005	< 0.005	0.0013	0.19	< 0.0005	< 0.05	< 0.0002	0.12	0.938	< 0.0025	< 0.002
	5/22/2017	< 0.003	0.0017	B 0.088	^ < 0.001	< 0.0005	< 0.005	0.0015	0.23	0.0023	0.019	< 0.0002	0.13	1.21	< 0.0025	< 0.002
	7/7/2017	< 0.003	< 0.001	0.078	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.1	< 0.0005	0.019	< 0.0002	0.099	1.11	< 0.0025	< 0.002
	9/26/2017	< 0.003	0.0011	0.086	< 0.001	< 0.0005	< 0.005	0.0013	0.21	< 0.0005	0.018	< 0.0002	0.14	1.33	< 0.0025	< 0.002
	11/20/2017	< 0.003	0.0014	0.087	< 0.001	< 0.0005	< 0.005	< 0.001	0.24	< 0.0005	0.02	< 0.0002	0.2	1.59	< 0.0025	< 0.002
	3/7/2018	< 0.003	0.0023	0.093	< 0.001	< 0.0005	< 0.005	0.0013	0.23	< 0.0005	0.022	< 0.0002	0.26	1.30	< 0.0025	< 0.002
	GWPS	NC	0.01	2.0	NC	NC	NC	0.006	4.0	0.015	0.041	NC	0.10	5	0.05	NC
	5/17/2018	NA	0.001	0.087	NA	NA	NA	0.0013	0.24	< 0.0005	0.021	NA	0.240	1.25	< 0.0025	NA
	12/11/2018	NA	0.0014	0.095	NA	NA	NA	0.0012	0.230	< 0.0005	0.021	NA	0.270	NYR	< 0.0025	NA
R08S down-gradient	11/23/2015	< 0.003	0.0019	0.052	^ < 0.001	< 0.0005	< 0.005	< 0.001	0.19	< 0.0005	0.14	< 0.0002	0.410	1.608	0.0061	< 0.002
	5/6/2016	< 0.003	0.0013	0.052	< 0.001	< 0.0005	< 0.005	< 0.001	0.19	< 0.0005	0.14	< 0.0002	0.390	1.08	0.0079	< 0.002
	6/28/2016	< 0.003	0.0019	0.056	< 0.001	< 0.0005	< 0.005	< 0.001	0.18	< 0.0005	0.14	< 0.0002	0.37	1.87	F1 0.0074	< 0.002
	8/25/2016	< 0.003	0.0015	0.053	< 0.001	< 0.0005	< 0.005	< 0.001	0.19	< 0.0005	0.13	< 0.0002	0.33	1.50	0.0032	< 0.002
	11/21/2016	< 0.003	0.0016	0.052	< 0.001	< 0.0005	< 0.005	< 0.001	0.17	< 0.0005	0.140	< 0.0002	0.36	2.13	0.0037	< 0.002
	2/14/2017	< 0.003	0.002	0.081	< 0.001	< 0.0005	< 0.005	< 0.001	0.17	< 0.0005	0.120	< 0.0002	0.3	2.71	0.0029	< 0.002
	5/25/2017	< 0.006	0.0028	0.092	^ < 0.002	< 0.001	< 0.01	< 0.002	0.17	< 0.001	0.250	< 0.0002	0.64	0.821	0.021	< 0.004
	7/6/2017	< 0.003	0.002	0.052	< 0.001	< 0.0005	< 0.005	< 0.001	0.17	^ < 0.0005	0.140	< 0.0002	0.35	1.15	0.0054	^ < 0.002
	9/25/2017	< 0.003	0.002	0.048	< 0.001	< 0.0005	< 0.005	< 0.001	0.15	0.00067	0.130	< 0.0002	0.38	1.27	0.0079	< 0.002
	11/21/2017	< 0.003	0.0017	0.046	< 0.001	< 0.0005	< 0.005	< 0.001	0.15	< 0.0005	0.140	< 0.0002	0.34	1.09	0.015	< 0.002
	3/8/2018	< 0.003	0.0016	0.05	< 0.001	< 0.0005	< 0.005	< 0.001	0.14	< 0.0005	0.150	< 0.0002	0.37	1.55	0.012	< 0.002
	GWPS	NC	0.01	2.0	NC	NC	NC	0.006	4.0	0.015	0.041	NC	0.10	5	0.05	NC
	5/18/2018	NA	0.0013	0.046	NA	NA	NA	< 0.001	0.14	< 0.0005	0.150	NA	0.35	1.22	0.017	NA
	12/13/2018	NA	0.0012	0.046	NA	NA	NA	< 0.001	0.150	< 0.0005	0.150	NA	0.370	NYR	0.0170	NA
G20S down-gradient	11/19/2015	< 0.003	< 0.001	0.049	^ < 0.001	< 0.0005	< 0.005	< 0.001	0.82	< 0.0005	0.036	< 0.0002	0.0068	2.078	< 0.0025	< 0.002
	5/11/2016	< 0.003	< 0.001	0.049	< 0.001	< 0.0005	< 0.005	< 0.001	0.81	< 0.0005	0.037	0.00027	0.011	2.52	< 0.0025	< 0.002
	6/29/2016	< 0.003	< 0.001	0.051	< 0.001	< 0.0005	< 0.005	0.0011	0.82	< 0.0005	0.04	< 0.0002	0.014	2.79	< 0.0025	< 0.002
	8/23/2016	< 0.003	< 0.001	0.047	< 0.001	< 0.0005	< 0.005	< 0.001	0.81	< 0.0005	0.039	< 0.0002	0.017	3.67	< 0.0025	< 0.002
	11/17/2016	< 0.003	< 0.001	0.056	< 0.001	< 0.0005	< 0.005	0.0018	0.74	< 0.0005	0.042	< 0.0002	0.019	1.98	< 0.0025	< 0.002
	2/13/2017	< 0.003	< 0.001	0.046	< 0.001	< 0.0005	< 0.005	< 0.0010	0.69	< 0.0005	0.04	< 0.0002	0.018	2.44	< 0.0025	< 0.002
	5/24/2017	< 0.003	< 0.001	0.046	^ < 0.001	< 0.0005	< 0.005	< 0.0010	0.81	< 0.0005	0.038	< 0.0002	0.017	2.15	< 0.0025	< 0.002
	7/5/2017	< 0.003	< 0.001	0.054	< 0.001	< 0.0005	< 0.005	0.0021	0.76	^ < 0.0005	0.04	< 0.0002	0.019	1.83	< 0.0025	^ < 0.002
	9/25/2017	< 0.003	< 0.001	0.051	< 0.001	< 0.0005	< 0.005	0.0015	0.78	< 0.0005	0.036	< 0.0002	0.022	2.19	< 0.0025	< 0.002
	11/20/2017	< 0.003	< 0.001	0.051	< 0.001	< 0.0005	< 0.005	0.0022	0.78	< 0.0005	0.041	< 0.0002	0.021	2.50	< 0.0025	< 0.002
	3/6/2018	< 0.003	< 0.001	0.049	^ < 0.001	< 0.0005	< 0.005	< 0.0010	0.76	< 0.0005	0.042	< 0.0002	0.021	2.83	< 0.0025	< 0.002
	GWPS	NC	0.01	2.0	NC	NC	NC	0.006	4.0	0.015	0.041	NC	0.10	5	0.05	NC
	5/16/2018	NA	< 0.001	0.049	NA	NA	NA	0.0024	0.75	^ < 0.0005	0.04	NA	0.019	2.12	< 0.0025	NA
	12/7/2018	NA	< 0.001	0.048	NA	NA	NA	0.0010	0.760	0.0048	0.042	NA	0.0230	NYR	< 0.0025	NA
G30S down-gradient	11/20/2015	< 0.003	0.014	0.041	^ < 0.001	< 0.0005	< 0.005	< 0.001	1.3	< 0.0005	0.022	< 0.0002	0.33	1.484	< 0.0025	< 0.002
	5/10/2016	< 0.003	0.017	0.039	< 0.001	< 0.0005	< 0.005	< 0.001	1.3	< 0.0005	0.021	< 0.0002	0.3	1.41	< 0.0025	< 0.002
	6/30/2016	< 0.003	0.013	0.04	< 0.001	< 0.0005	< 0.005	< 0.001	1.3	< 0.0005	0.023	< 0.0002	0.3	1.17	< 0.0025	< 0.002
	8/25/2016	< 0.003	0.015	0.039	< 0.001	< 0.0005	< 0.005	< 0.001	1.3	< 0.0005	0.02	< 0.0002	0.31	1.87	< 0.0025	< 0.002
	11/18/2016	< 0.003	0.016	0.043	< 0.001	< 0.0005	< 0.005	< 0.001	1.2	< 0.0005	0.023	< 0.0002	0.33	2.36	< 0.0025	< 0.002
	2/14/2017	< 0.003	0.011	0.042	< 0.001	< 0.0005	< 0.005	< 0.001	1.2	< 0.0005	0.021	< 0.0002	0.24	1.84	< 0.0025	< 0.002

Table 5. Appendix IV Groundwater Analytical Results through 2018 - Midwest Generation, LLC, Joliet Station #9, Joliet, IL

Well	Date	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Fluoride	Lead	Lithium	Mercury	Molybdenum	Radium 226 + 228 Combined	Selenium	Thallium
G44S down-gradient	11/20/2015	< 0.003	0.0012	0.053	^ < 0.001	< 0.0005	< 0.005	< 0.001	0.21	< 0.0005	0.017	< 0.0002	0.1000	1.161	< 0.0025	< 0.002
	5/9/2016	< 0.003	< 0.001	0.049	< 0.001	< 0.0005	< 0.005	< 0.001	0.18	< 0.0005	0.015	< 0.0002	0.046	< 0.415	< 0.0025	< 0.002
	6/30/2016	< 0.003	< 0.001	0.044	< 0.001	< 0.0005	< 0.005	< 0.001	0.18	< 0.0005	0.014	< 0.0002	0.025	0.879	< 0.0025	< 0.002
	8/26/2016	< 0.003	< 0.001	0.053	^ < 0.001	< 0.0005	< 0.005	< 0.001	0.19	< 0.0005	0.014	< 0.0002	0.047	0.816	< 0.0025	< 0.002
	11/16/2016	< 0.003	< 0.001	0.048	< 0.001	< 0.0005	< 0.005	< 0.001	0.17	< 0.0005	0.011	< 0.0002	0.041	0.475	< 0.0025	< 0.002
	2/16/2017	< 0.003	< 0.001	0.051	< 0.001	< 0.0005	< 0.005	< 0.001	0.15	< 0.0005	0.014	< 0.0002	0.044	0.729	< 0.0025	< 0.002
	5/24/2017	< 0.003	< 0.001	0.048	^ < 0.001	< 0.0005	< 0.005	< 0.001	0.19	< 0.0005	0.011	< 0.0002	0.031	1.02	< 0.0025	< 0.002
	7/10/2017	< 0.003	< 0.001	0.049	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.1	< 0.0005	0.012	< 0.0002	0.061	0.667	< 0.0025	< 0.002
	9/28/2017	< 0.003	< 0.001	0.048	< 0.001	< 0.0005	< 0.005	< 0.001	0.19	< 0.0005	0.014	< 0.0002	0.081	0.614	< 0.0025	< 0.002
	11/21/2017	< 0.003	< 0.001	0.051	< 0.001	< 0.0005	< 0.005	< 0.001	0.18	< 0.0005	0.016	< 0.0002	0.055	0.913	< 0.0025	< 0.002
	3/7/2018	< 0.003	0.0014	0.053	< 0.001	< 0.0005	< 0.005	< 0.001	0.18	< 0.0005	0.017	< 0.0002	0.049	1.31	< 0.0025	< 0.002
	GWPS	NC	0.01	2.0	NC	NC	NC	0.006	4.0	0.015	0.041	NC	0.10	5	0.05	NC
	5/17/2018	NA	< 0.001	0.054	NA	NA	NA	< 0.001	0.18	< 0.0005	0.016	NA	0.071	0.714	< 0.0025	NA
	12/10/2018	NA	< 0.001	0.057	NA	NA	NA	< 0.001	0.19	< 0.0005	0.019	NA	0.14	NYR	< 0.0025	NA
G46S down-gradient	11/23/2015	< 0.003	0.0033	0.064	^ < 0.001	< 0.0005	< 0.005	< 0.001	0.27	< 0.0005	0.073	< 0.0002	0.5	1.468	< 0.0025	< 0.002
	5/9/2016	< 0.003	0.0018	0.099	< 0.001	< 0.0005	< 0.005	< 0.001	0.28	0.0005	0.11	< 0.0002	0.7	1.85	< 0.0025	< 0.002
	6/30/2016	< 0.003	0.0014	0.098	< 0.001	< 0.0005	< 0.005	< 0.001	0.29	< 0.0005	0.13	< 0.0002	0.71	1.94	< 0.0025	< 0.002
	8/26/2016	< 0.003	0.0027	0.054	^ < 0.001	< 0.0005	< 0.005	< 0.001	0.35	< 0.0005	0.12	< 0.0002	1.2	1.17	< 0.0025	< 0.002
	11/18/2016	< 0.003	0.0025	0.051	< 0.001	< 0.0005	< 0.005	< 0.0010	0.39	< 0.0005	0.13	< 0.0002	1.8	< 0.601	< 0.0025	< 0.002
	2/16/2017	< 0.003	0.0024	0.053	< 0.001	< 0.0005	< 0.005	< 0.0010	0.41	< 0.0005	0.091	< 0.0002	1.4	1.07	< 0.0025	< 0.002
	5/22/2017	< 0.003	0.0033	B 0.046	^ < 0.001	< 0.0005	< 0.005	< 0.0010	0.44	< 0.0005	0.11	< 0.0002	1.4	0.683	< 0.0025	< 0.002
	7/6/2017	< 0.003	0.0034	0.044	< 0.001	< 0.0005	< 0.005	0.0010	0.41	^ < 0.0005	0.076	< 0.0002	0.92	0.709	< 0.0025	^ < 0.002
	9/27/2017	< 0.003	0.0043	0.031	< 0.001	< 0.0005	< 0.005	< 0.0010	0.4	< 0.0005	0.091	< 0.0002	0.63	0.754	< 0.0025	< 0.002
	11/21/2017	< 0.003	0.0055	0.032	< 0.001	< 0.0005	< 0.005	< 0.0010	0.43	< 0.0005	0.11	< 0.0002	0.68	0.776	< 0.0025	< 0.002
	3/8/2018	< 0.003	0.0039	0.049	< 0.001	< 0.0005	< 0.005	< 0.0010	0.41	0.00053	0.093	< 0.0002	0.82	1.29	< 0.0025	< 0.002
	GWPS	NC	0.01	2.0	NC	NC	NC	0.006	4.0	0.015	0.041	NC	0.10	5	0.05	NC
	5/18/2018	NA	0.0028	0.048	NA	NA	NA	< 0.0010	0.4	< 0.0005	0.073	NA	0.84	1.07	< 0.0025	NA
	12/11/2018	NA	0.0023	0.055	NA	NA	NA	< 0.001	0.380	< 0.0005	0.096	NA	1.20	NYR	< 0.0025	NA
G47S down-gradient	11/23/2015	< 0.003	0.018	0.018	^ < 0.001	< 0.0005	< 0.005	< 0.001	0.45	< 0.0005	0.036	< 0.0002	0.32	0.898	0.003	< 0.002
	5/6/2016	< 0.003	0.034	0.017	< 0.001	< 0.0005	< 0.005	< 0.001	0.72	< 0.0005	0.033	< 0.0002	0.41	0.736	0.0033	< 0.002
	7/1/2016	< 0.003	0.022	0.019	< 0.001	^ < 0.0005	< 0.005	< 0.001	0.68	< 0.0005	0.038	< 0.0002	0.53	1.01	< 0.0025	< 0.002
	8/24/2016	< 0.003	0.017	0.023	< 0.001	< 0.0005	< 0.005	< 0.001	0.67	< 0.0005	0.028	< 0.0002	0.41	1.06	< 0.0025	< 0.002
	11/16/2016	< 0.003	0.14	0.0091	< 0.001	< 0.0005	< 0.005	< 0.001	1.8	< 0.0005	0.015	< 0.0002	1.4	< 1.38	0.0038	< 0.002
	2/15/2017	< 0.003	0.059	0.016	< 0.001	< 0.0005	< 0.005	< 0.001	1.1	< 0.0005	< 0.05	< 0.0002	0.57	0.716	0.0035	< 0.002
	5/23/2017	< 0.003	0.18	0.0081	^ < 0.001	< 0.0005	< 0.005	< 0.001	2.2	< 0.0005	0.013	< 0.0002	1.3	< 0.361	0.0025	< 0.002
	7/10/2017	< 0.003	0.17	0.0085	< 0.001	< 0.0005	< 0.005	< 0.001	2.1	< 0.0005	0.013	< 0.0002	1.2	0.733	< 0.0025	< 0.002
	9/27/2017	< 0.003	0.21	0.0085	< 0.001	< 0.0005	< 0.005	< 0.001	2	< 0.0005	0.014	< 0.0002	1.3	0.836	0.0027	< 0.002
	11/22/2017	< 0.003	0.23	0.009	< 0.001	< 0.0005	< 0.005	< 0.001	2.1	< 0.0005	0.012	< 0.0002	1.5	0.692	0.0044	< 0.002
	3/8/2018	< 0.003	0.25	0.009	< 0.001	< 0.0005	< 0.005	< 0.001	2.1	< 0.0005	0.014	< 0.0002	1.4	0.790	0.0042	< 0.002
	GWPS	NC	0.01	2.0	NC	NC	NC	0.006	4.0	0.015	0.041	NC	0.10	5	0.05	NC
	5/18/2018	NA	0.23	0.0087	NA	NA	NA	< 0.001	1.7	< 0.0005	0.015	NA	1.5	1.01	0.0039	NA
	12/11/2018	NA	0.140	0.0110	NA	NA	NA	< 0.001	1.10	< 0.0005	0.023	NA	1.10	NYR	0.0031	NA
G48S down-gradient	11/20/2015	< 0.003	0.03	0.015	^ < 0.001	< 0.0005	< 0.005	< 0.001	1.5	< 0.0005	0.015	< 0.0002	1.4	0.8512	< 0.0025	< 0.002
	5/5/2016	< 0.003	0.046	0.014	< 0.001	< 0.0005	< 0.005	< 0.001	1.5	< 0.0005	0.016	< 0.0002	1.2	0.800	< 0.0025	< 0.002
	7/1/2016	< 0.003	0.038	0.011	< 0.001	^ < 0.0005	< 0.005	< 0.001	1.4	< 0.0005	0.013	< 0.0002	1.2	1.01	< 0.0025	< 0.002
	8/24/2016	< 0.003	0.032	0.014	< 0.001	< 0.0005	< 0.005	< 0.001	1.4	< 0.0005	0.012	< 0.0002	1.1	1.16	< 0.0025	< 0.002
	11/16/2016	< 0.003	0.03	0.018	< 0.001	< 0.0005	< 0.005	< 0.001	1.4	< 0.0005	0.016	< 0.0002	1.1	1.65	< 0.0025	< 0.002
	2/15/2017	< 0.003	0.038	0.015	< 0.001	< 0.0005	< 0.005	< 0.001	1.2	< 0.0005	0.014	< 0.0002	0.79	0.824	< 0.0025	< 0.002
	5/23/2017	< 0.003	0.03	0.014	^ < 0.001	< 0.0005	< 0.005	< 0.001	1.3	< 0.0005	0.016	< 0.0002	0.95	0.661	< 0.0025	< 0.002
	7/10/2017	< 0.003	0.022	0.017	< 0.001	< 0.0005	< 0.005	< 0.001	1.2	< 0.0005	0.016	< 0.0002	0.84	1.39	< 0.0025	< 0.002
	9/27/2017	< 0.003	0.024	0.019	< 0.001	< 0.0005	< 0.005	< 0.001	1.1	< 0.0005	0.019	< 0.0002	0.72	1.32	< 0.0025	< 0.002
	11/22/2017	< 0.003	0.027	0.015	< 0.001	< 0.0005	< 0.005	< 0.001	1.2	< 0.0005	0.016	< 0.0002	0.77	1.27	< 0.0025	< 0.002
	3/8/2018	< 0.003	0.017	0.031	< 0.001	< 0.0005	< 0.005	< 0.001	0.85	< 0.0005	0.023	< 0.0002	0.51	2.30	< 0.0025	< 0.002
	GWPS	NC	0.01	2.0	NC	NC	NC	0.006	4.0	0.015	0.041	NC	0.10	5	0.05	NC
	5/18/2018	NA	0.022	0.023	NA	NA	NA	< 0.001	0.92	< 0.0005	0.023	NA	0.49	0.962	< 0.0025	NA
	12/11/2018	NA	0.023	0.016	NA	NA	NA	< 0.001	1.1	0.0049	0.019	NA	0.79	NYR	< 0.0025	NA

Notes:

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

NC - Not calculated since not detected compound in first round of assessment monitoring.

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

B - Compound was found in the blank and sample.

NA- Not Analyzed; non-detect in previous monitoring

^ - Denotes instrument related QC exceeds the control limits

GWPS - Groundwater Protection Standard.

BOLD - Above GWPS.

APPENDIX A
Analytical Data Packages

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Chicago

2417 Bond Street

University Park, IL 60484

Tel: (708)534-5200

TestAmerica Job ID: 500-141794-1

Client Project/Site: Joliet #9 CCR - 1Q18 GW

For:

KPRG and Associates, Inc.

14665 West Lisbon Road,

Suite 2B

Brookfield, Wisconsin 53005

Attn: Richard Gnat



Authorized for release by:

3/23/2018 8:57:12 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.

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Case Narrative

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 1Q18 GW

TestAmerica Job ID: 500-141794-1

Job ID: 500-141794-1

Laboratory: TestAmerica Chicago

Narrative

Job Narrative 500-141794-1

Comments

No additional comments.

Receipt

The samples were received on 3/6/2018 3:55 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.6° C and 2.9° C.

Metals

Method(s) 6020A: The initial low level continuing calibration verification (ICVL) associated with batch 500-422721 recovered above the upper control limit for Beryllium. The samples associated with this ICVL were non-detects for the affected analyte; therefore, the data have been reported.

Method(s) 6020A: The low level continuing calibration verification (CCVL) associated with batch 500-423268, at line 38, recovered above the upper control limit for Beryllium. The samples associated with this CCVL were non-detects for the affected analyte; therefore, the data have been reported.

Method(s) 200.8, 6020A: The internal standard Terbium (Tb) was used to report the elements Lead (Pb) and Thallium (Tl) for batch 423268. This was due to sample being spiked with ICP trace digestion spike which contains the element Bismuth (Bi).

Method(s) 245.1, 7470A: The continuing calibration verification (CCV) associated with batch 423378 recovered above the upper control limit for Hg. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following sample is impacted: G45S (500-141794-11).

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

General Chemistry

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

Method Summary

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 1Q18 GW

TestAmerica Job ID: 500-141794-1

Method	Method Description	Protocol	Laboratory
6010C	Metals (ICP)	SW846	TAL CHI
6020A	Metals (ICP/MS)	SW846	TAL CHI
7470A	Mercury (CVAA)	SW846	TAL CHI
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL CHI
SM 4500 Cl- E	Chloride, Total	SM	TAL CHI
SM 4500 F C	Fluoride	SM	TAL CHI
SM 4500 SO4 E	Sulfate, Total	SM	TAL CHI
Field Sampling	Field Sampling	EPA	TAL CHI

Protocol References:

EPA = US Environmental Protection Agency

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

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

Laboratory References:

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

Sample Summary

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 1Q18 GW

TestAmerica Job ID: 500-141794-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-141794-1	G20S	Water	03/06/18 09:10	03/06/18 15:55
500-141794-2	G20S Dup	Water	03/06/18 09:10	03/06/18 15:55
500-141794-3	G30S	Water	03/07/18 09:23	03/07/18 16:00
500-141794-4	R32S	Water	03/07/18 11:14	03/07/18 16:00
500-141794-5	T03S	Water	03/07/18 13:08	03/07/18 16:00
500-141794-6	G44S	Water	03/07/18 14:14	03/07/18 16:00
500-141794-7	G48S	Water	03/08/18 09:15	03/08/18 15:35
500-141794-8	G47S	Water	03/08/18 10:54	03/08/18 15:35
500-141794-9	G46S	Water	03/08/18 13:20	03/08/18 15:35
500-141794-10	R08S	Water	03/08/18 14:20	03/08/18 15:35
500-141794-11	G45S	Water	03/09/18 09:51	03/09/18 11:28

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 1Q18 GW

TestAmerica Job ID: 500-141794-1

Client Sample ID: G20S

Date Collected: 03/06/18 09:10

Date Received: 03/06/18 15:55

Lab Sample ID: 500-141794-1

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.042		0.010		mg/L		03/07/18 06:47	03/09/18 03:57	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		03/07/18 06:47	03/08/18 12:25	1
Arsenic	<0.0010		0.0010		mg/L		03/07/18 06:47	03/08/18 12:25	1
Barium	0.049		0.0025		mg/L		03/07/18 06:47	03/08/18 12:25	1
Beryllium	<0.0010	^	0.0010		mg/L		03/07/18 06:47	03/08/18 12:25	1
Boron	1.4		0.25		mg/L		03/07/18 06:47	03/08/18 14:23	5
Cadmium	<0.00050		0.00050		mg/L		03/07/18 06:47	03/08/18 12:25	1
Calcium	63		0.20		mg/L		03/07/18 06:47	03/08/18 12:25	1
Chromium	<0.0050		0.0050		mg/L		03/07/18 06:47	03/08/18 12:25	1
Cobalt	<0.0010		0.0010		mg/L		03/07/18 06:47	03/08/18 12:25	1
Lead	<0.00050		0.00050		mg/L		03/07/18 06:47	03/08/18 12:25	1
Molybdenum	0.021		0.0050		mg/L		03/07/18 06:47	03/08/18 12:25	1
Selenium	<0.0025		0.0025		mg/L		03/07/18 06:47	03/08/18 12:25	1
Thallium	<0.0020		0.0020		mg/L		03/07/18 06:47	03/08/18 12:25	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		03/07/18 11:35	03/08/18 08:40	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	460		10		mg/L			03/09/18 16:11	1
Chloride	12		2.0		mg/L			03/09/18 23:58	1
Fluoride	0.76		0.10		mg/L			03/10/18 14:36	1
Sulfate	88		20		mg/L			03/21/18 07:06	4

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	632				umhos/cm			03/06/18 09:10	1
Field Temperature	49.6				Degrees F			03/06/18 09:10	1
Ground Water Elevation	533.68				ft			03/06/18 09:10	1
Field pH	7.32				SU			03/06/18 09:10	1
Well bottom elevation	442.28				ft			03/06/18 09:10	1
Depth to water from land surface	43.87				ft			03/06/18 09:10	1
Depth to Water (ft from MP)	46.65				ft			03/06/18 09:10	1
Elevation of well (ft from MP)	580.33				ft			03/06/18 09:10	1

TestAmerica Chicago

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 1Q18 GW

TestAmerica Job ID: 500-141794-1

Client Sample ID: G20S Dup

Date Collected: 03/06/18 09:10

Date Received: 03/06/18 15:55

Lab Sample ID: 500-141794-2

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.043		0.010		mg/L		03/07/18 06:47	03/09/18 04:10	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		03/07/18 06:47	03/08/18 12:29	1
Arsenic	<0.0010		0.0010		mg/L		03/07/18 06:47	03/08/18 12:29	1
Barium	0.051		0.0025		mg/L		03/07/18 06:47	03/08/18 12:29	1
Beryllium	<0.0010	^	0.0010		mg/L		03/07/18 06:47	03/08/18 12:29	1
Boron	1.3		0.25		mg/L		03/07/18 06:47	03/08/18 14:26	5
Cadmium	<0.00050		0.00050		mg/L		03/07/18 06:47	03/08/18 12:29	1
Calcium	63		0.20		mg/L		03/07/18 06:47	03/08/18 12:29	1
Chromium	<0.0050		0.0050		mg/L		03/07/18 06:47	03/08/18 12:29	1
Cobalt	0.0026		0.0010		mg/L		03/07/18 06:47	03/08/18 12:29	1
Lead	<0.00050		0.00050		mg/L		03/07/18 06:47	03/08/18 12:29	1
Molybdenum	0.020		0.0050		mg/L		03/07/18 06:47	03/08/18 12:29	1
Selenium	<0.0025		0.0025		mg/L		03/07/18 06:47	03/08/18 12:29	1
Thallium	<0.0020		0.0020		mg/L		03/07/18 06:47	03/08/18 12:29	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		03/07/18 11:35	03/08/18 08:47	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	450		10		mg/L			03/09/18 16:15	1
Chloride	12		2.0		mg/L			03/09/18 23:58	1
Fluoride	0.76		0.10		mg/L			03/10/18 14:44	1
Sulfate	83		20		mg/L			03/21/18 07:07	4

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	632				umhos/cm			03/06/18 09:10	1
Field Temperature	49.6				Degrees F			03/06/18 09:10	1
Ground Water Elevation	533.68				ft			03/06/18 09:10	1
Field pH	7.32				SU			03/06/18 09:10	1
Well bottom elevation	442.28				ft			03/06/18 09:10	1
Depth to water from land surface	43.87				ft			03/06/18 09:10	1
Depth to Water (ft from MP)	46.65				ft			03/06/18 09:10	1
Elevation of well (ft from MP)	580.33				ft			03/06/18 09:10	1

TestAmerica Chicago

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 1Q18 GW

TestAmerica Job ID: 500-141794-1

Client Sample ID: G30S

Date Collected: 03/07/18 09:23

Date Received: 03/07/18 16:00

Lab Sample ID: 500-141794-3

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.019		0.010		mg/L		03/09/18 07:03	03/10/18 02:29	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		03/09/18 07:03	03/09/18 20:38	1
Arsenic	0.011		0.0010		mg/L		03/09/18 07:03	03/09/18 20:38	1
Barium	0.043		0.0025		mg/L		03/09/18 07:03	03/09/18 20:38	1
Beryllium	<0.0010		0.0010		mg/L		03/09/18 07:03	03/09/18 20:38	1
Boron	5.1		1.0		mg/L		03/09/18 07:03	03/12/18 11:54	20
Cadmium	<0.00050		0.00050		mg/L		03/09/18 07:03	03/09/18 20:38	1
Calcium	56		0.20		mg/L		03/09/18 07:03	03/09/18 20:38	1
Chromium	<0.0050		0.0050		mg/L		03/09/18 07:03	03/09/18 20:38	1
Cobalt	<0.0010		0.0010		mg/L		03/09/18 07:03	03/09/18 20:38	1
Lead	<0.00050		0.00050		mg/L		03/09/18 07:03	03/09/18 20:38	1
Molybdenum	0.14		0.0050		mg/L		03/09/18 07:03	03/09/18 20:38	1
Selenium	<0.0025		0.0025		mg/L		03/09/18 07:03	03/12/18 17:25	1
Thallium	<0.0020		0.0020		mg/L		03/09/18 07:03	03/09/18 20:38	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		03/09/18 12:10	03/12/18 10:49	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1100		10		mg/L			03/14/18 06:40	1
Chloride	200		10		mg/L			03/10/18 00:20	5
Fluoride	1.3		0.10		mg/L			03/10/18 14:48	1
Sulfate	470		100		mg/L			03/21/18 07:08	20

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	1550				umhos/cm			03/07/18 09:23	1
Field Temperature	43.9				Degrees F			03/07/18 09:23	1
Ground Water Elevation	522.92				ft			03/07/18 09:23	1
Field pH	7.97				SU			03/07/18 09:23	1
Well bottom elevation	462.58				ft			03/07/18 09:23	1
Depth to water from land surface	-0.83				ft			03/07/18 09:23	1
Depth to Water (ft from MP)	1.48				ft			03/07/18 09:23	1
Elevation of well (ft from MP)	524.40				ft			03/07/18 09:23	1

TestAmerica Chicago

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 1Q18 GW

TestAmerica Job ID: 500-141794-1

Client Sample ID: R32S

Date Collected: 03/07/18 11:14

Date Received: 03/07/18 16:00

Lab Sample ID: 500-141794-4

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.11		0.010		mg/L		03/08/18 06:51	03/14/18 05:28	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		03/08/18 06:51	03/08/18 21:30	1
Arsenic	0.0029		0.0010		mg/L		03/08/18 06:51	03/09/18 11:48	1
Barium	0.042		0.0025		mg/L		03/08/18 06:51	03/08/18 21:30	1
Beryllium	<0.0010		0.0010		mg/L		03/08/18 06:51	03/09/18 11:48	1
Boron	5.8		1.0		mg/L		03/08/18 06:51	03/12/18 12:36	20
Cadmium	<0.00050		0.00050		mg/L		03/08/18 06:51	03/08/18 21:30	1
Calcium	130		0.20		mg/L		03/08/18 06:51	03/08/18 21:30	1
Chromium	<0.0050		0.0050		mg/L		03/08/18 06:51	03/08/18 21:30	1
Cobalt	<0.0010		0.0010		mg/L		03/08/18 06:51	03/08/18 21:30	1
Lead	<0.00050		0.00050		mg/L		03/08/18 06:51	03/08/18 21:30	1
Molybdenum	0.67		0.0050		mg/L		03/08/18 06:51	03/08/18 21:30	1
Selenium	<0.0025		0.0025		mg/L		03/08/18 06:51	03/09/18 11:48	1
Thallium	<0.0020		0.0020		mg/L		03/08/18 06:51	03/08/18 21:30	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		03/08/18 11:55	03/09/18 09:48	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	880		10		mg/L			03/14/18 06:45	1
Chloride	86		10		mg/L			03/10/18 00:21	5
Fluoride	0.32		0.10		mg/L			03/10/18 14:50	1
Sulfate	350		100		mg/L			03/21/18 07:09	20

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	1019				umhos/cm			03/07/18 11:14	1
Field Temperature	50.5				Degrees F			03/07/18 11:14	1
Ground Water Elevation	519.83				ft			03/07/18 11:14	1
Field pH	7.57				SU			03/07/18 11:14	1
Well bottom elevation	457.84				ft			03/07/18 11:14	1
Depth to water from land surface	14.95				ft			03/07/18 11:14	1
Depth to Water (ft from MP)	16.98				ft			03/07/18 11:14	1
Elevation of well (ft from MP)	536.81				ft			03/07/18 11:14	1

TestAmerica Chicago

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 1Q18 GW

TestAmerica Job ID: 500-141794-1

Client Sample ID: T03S

Date Collected: 03/07/18 13:08

Date Received: 03/07/18 16:00

Lab Sample ID: 500-141794-5

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.022		0.010		mg/L		03/08/18 06:51	03/14/18 05:33	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		03/08/18 06:51	03/08/18 21:33	1
Arsenic	0.0023		0.0010		mg/L		03/08/18 06:51	03/09/18 11:52	1
Barium	0.093		0.0025		mg/L		03/08/18 06:51	03/08/18 21:33	1
Beryllium	<0.0010		0.0010		mg/L		03/08/18 06:51	03/09/18 11:52	1
Boron	1.5		0.25		mg/L		03/08/18 06:51	03/12/18 12:39	5
Cadmium	<0.00050		0.00050		mg/L		03/08/18 06:51	03/08/18 21:33	1
Calcium	110		0.20		mg/L		03/08/18 06:51	03/08/18 21:33	1
Chromium	<0.0050		0.0050		mg/L		03/08/18 06:51	03/08/18 21:33	1
Cobalt	0.0013		0.0010		mg/L		03/08/18 06:51	03/08/18 21:33	1
Lead	<0.00050		0.00050		mg/L		03/08/18 06:51	03/08/18 21:33	1
Molybdenum	0.26		0.0050		mg/L		03/08/18 06:51	03/08/18 21:33	1
Selenium	<0.0025		0.0025		mg/L		03/08/18 06:51	03/09/18 11:52	1
Thallium	<0.0020		0.0020		mg/L		03/08/18 06:51	03/08/18 21:33	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		03/08/18 11:55	03/09/18 09:49	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	900		10		mg/L			03/14/18 06:48	1
Chloride	110		10		mg/L			03/10/18 00:21	5
Fluoride	0.23		0.10		mg/L			03/10/18 14:53	1
Sulfate	250		100		mg/L			03/21/18 07:10	20

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	1176				umhos/cm			03/07/18 13:08	1
Field Temperature	49.6				Degrees F			03/07/18 13:08	1
Ground Water Elevation	498.60				ft			03/07/18 13:08	1
Field pH	7.34				SU			03/07/18 13:08	1
Well bottom elevation	456.70				ft			03/07/18 13:08	1
Depth to water from land surface	127.97				ft			03/07/18 13:08	1
Depth to Water (ft from MP)	131.05				ft			03/07/18 13:08	1
Elevation of well (ft from MP)	629.65				ft			03/07/18 13:08	1

TestAmerica Chicago

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 1Q18 GW

TestAmerica Job ID: 500-141794-1

Client Sample ID: G44S

Date Collected: 03/07/18 14:14

Date Received: 03/07/18 16:00

Lab Sample ID: 500-141794-6

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.017		0.010		mg/L		03/08/18 06:51	03/14/18 05:37	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		03/08/18 06:51	03/08/18 21:37	1
Arsenic	0.0014		0.0010		mg/L		03/08/18 06:51	03/09/18 11:56	1
Barium	0.053		0.0025		mg/L		03/08/18 06:51	03/08/18 21:37	1
Beryllium	<0.0010		0.0010		mg/L		03/08/18 06:51	03/09/18 11:56	1
Boron	0.91		0.25		mg/L		03/08/18 06:51	03/12/18 12:43	5
Cadmium	<0.00050		0.00050		mg/L		03/08/18 06:51	03/08/18 21:37	1
Calcium	120		0.20		mg/L		03/08/18 06:51	03/08/18 21:37	1
Chromium	<0.0050		0.0050		mg/L		03/08/18 06:51	03/08/18 21:37	1
Cobalt	<0.0010		0.0010		mg/L		03/08/18 06:51	03/08/18 21:37	1
Lead	<0.00050		0.00050		mg/L		03/08/18 06:51	03/08/18 21:37	1
Molybdenum	0.049		0.0050		mg/L		03/08/18 06:51	03/08/18 21:37	1
Selenium	<0.0025		0.0025		mg/L		03/08/18 06:51	03/09/18 11:56	1
Thallium	<0.0020		0.0020		mg/L		03/08/18 06:51	03/08/18 21:37	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		03/08/18 11:55	03/09/18 09:56	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	670		10		mg/L			03/14/18 06:50	1
Chloride	36		2.0		mg/L			03/10/18 00:00	1
Fluoride	0.18		0.10		mg/L			03/10/18 14:56	1
Sulfate	110		50		mg/L			03/21/18 07:11	10

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	884				umhos/cm			03/07/18 14:14	1
Field Temperature	50.0				Degrees F			03/07/18 14:14	1
Ground Water Elevation	507.95				ft			03/07/18 14:14	1
Field pH	7.19				SU			03/07/18 14:14	1
Well bottom elevation	455.11				ft			03/07/18 14:14	1
Depth to water from land surface	76.56				ft			03/07/18 14:14	1
Depth to Water (ft from MP)	78.74				ft			03/07/18 14:14	1
Elevation of well (ft from MP)	586.69				ft			03/07/18 14:14	1

TestAmerica Chicago

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 1Q18 GW

TestAmerica Job ID: 500-141794-1

Client Sample ID: G48S

Date Collected: 03/08/18 09:15

Date Received: 03/08/18 15:35

Lab Sample ID: 500-141794-7

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.023		0.010		mg/L		03/09/18 07:03	03/10/18 02:33	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		03/09/18 07:03	03/09/18 20:41	1
Arsenic	0.017		0.0010		mg/L		03/09/18 07:03	03/09/18 20:41	1
Barium	0.031		0.0025		mg/L		03/09/18 07:03	03/09/18 20:41	1
Beryllium	<0.0010		0.0010		mg/L		03/09/18 07:03	03/09/18 20:41	1
Boron	5.3		1.0		mg/L		03/09/18 07:03	03/12/18 11:58	20
Cadmium	<0.00050		0.00050		mg/L		03/09/18 07:03	03/09/18 20:41	1
Calcium	62		0.20		mg/L		03/09/18 07:03	03/09/18 20:41	1
Chromium	<0.0050		0.0050		mg/L		03/09/18 07:03	03/09/18 20:41	1
Cobalt	<0.0010		0.0010		mg/L		03/09/18 07:03	03/09/18 20:41	1
Lead	<0.00050		0.00050		mg/L		03/09/18 07:03	03/09/18 20:41	1
Molybdenum	0.51		0.0050		mg/L		03/09/18 07:03	03/09/18 20:41	1
Selenium	<0.0025		0.0025		mg/L		03/09/18 07:03	03/12/18 17:29	1
Thallium	<0.0020		0.0020		mg/L		03/09/18 07:03	03/09/18 20:41	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		03/09/18 12:10	03/12/18 10:54	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1000		10		mg/L			03/15/18 05:17	1
Chloride	100		10		mg/L			03/10/18 00:22	5
Fluoride	0.85		0.10		mg/L			03/10/18 15:08	1
Sulfate	450		100		mg/L			03/21/18 07:12	20

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	1493				umhos/cm			03/08/18 09:15	1
Field Temperature	49.1				Degrees F			03/08/18 09:15	1
Ground Water Elevation	521.00				ft			03/08/18 09:15	1
Field pH	8.13				SU			03/08/18 09:15	1
Well bottom elevation	468.32				ft			03/08/18 09:15	1
Depth to water from land surface	97.32				ft			03/08/18 09:15	1
Depth to Water (ft from MP)	99.77				ft			03/08/18 09:15	1
Elevation of well (ft from MP)	620.77				ft			03/08/18 09:15	1

TestAmerica Chicago

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 1Q18 GW

TestAmerica Job ID: 500-141794-1

Client Sample ID: G47S

Date Collected: 03/08/18 10:54

Date Received: 03/08/18 15:35

Lab Sample ID: 500-141794-8

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.014		0.010		mg/L		03/09/18 07:03	03/10/18 02:38	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		03/09/18 07:03	03/09/18 20:45	1
Arsenic	0.25		0.0010		mg/L		03/09/18 07:03	03/09/18 20:45	1
Barium	0.0090		0.0025		mg/L		03/09/18 07:03	03/09/18 20:45	1
Beryllium	<0.0010		0.0010		mg/L		03/09/18 07:03	03/09/18 20:45	1
Boron	18		5.0		mg/L		03/09/18 07:03	03/12/18 12:02	100
Cadmium	<0.00050		0.00050		mg/L		03/09/18 07:03	03/09/18 20:45	1
Calcium	1.1		0.20		mg/L		03/09/18 07:03	03/09/18 20:45	1
Chromium	<0.0050		0.0050		mg/L		03/09/18 07:03	03/09/18 20:45	1
Cobalt	<0.0010		0.0010		mg/L		03/09/18 07:03	03/09/18 20:45	1
Lead	<0.00050		0.00050		mg/L		03/09/18 07:03	03/09/18 20:45	1
Molybdenum	1.4		0.0050		mg/L		03/09/18 07:03	03/09/18 20:45	1
Selenium	0.0042		0.0025		mg/L		03/09/18 07:03	03/12/18 17:32	1
Thallium	<0.0020		0.0020		mg/L		03/09/18 07:03	03/09/18 20:45	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		03/09/18 12:10	03/12/18 10:55	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1900		10		mg/L			03/15/18 05:22	1
Chloride	170		10		mg/L			03/10/18 00:23	5
Fluoride	2.1		0.10		mg/L			03/10/18 15:11	1
Sulfate	780		250		mg/L			03/21/18 07:13	50

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	2560				umhos/cm			03/08/18 10:54	1
Field Temperature	52.0				Degrees F			03/08/18 10:54	1
Ground Water Elevation	518.69				ft			03/08/18 10:54	1
Field pH	10.67				SU			03/08/18 10:54	1
Well bottom elevation	459.84				ft			03/08/18 10:54	1
Depth to water from land surface	91.13				ft			03/08/18 10:54	1
Depth to Water (ft from MP)	93.63				ft			03/08/18 10:54	1
Elevation of well (ft from MP)	612.32				ft			03/08/18 10:54	1

TestAmerica Chicago

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 1Q18 GW

TestAmerica Job ID: 500-141794-1

Client Sample ID: G46S

Date Collected: 03/08/18 13:20

Date Received: 03/08/18 15:35

Lab Sample ID: 500-141794-9

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.093		0.010		mg/L		03/09/18 07:03	03/10/18 02:43	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		03/09/18 07:03	03/09/18 20:49	1
Arsenic	0.0039		0.0010		mg/L		03/09/18 07:03	03/09/18 20:49	1
Barium	0.049		0.0025		mg/L		03/09/18 07:03	03/09/18 20:49	1
Beryllium	<0.0010		0.0010		mg/L		03/09/18 07:03	03/09/18 20:49	1
Boron	5.9		1.0		mg/L		03/09/18 07:03	03/12/18 12:05	20
Cadmium	<0.00050		0.00050		mg/L		03/09/18 07:03	03/09/18 20:49	1
Calcium	110		0.20		mg/L		03/09/18 07:03	03/09/18 20:49	1
Chromium	<0.0050		0.0050		mg/L		03/09/18 07:03	03/09/18 20:49	1
Cobalt	<0.0010		0.0010		mg/L		03/09/18 07:03	03/09/18 20:49	1
Lead	0.00053		0.00050		mg/L		03/09/18 07:03	03/09/18 20:49	1
Molybdenum	0.82		0.0050		mg/L		03/09/18 07:03	03/09/18 20:49	1
Selenium	<0.0025		0.0025		mg/L		03/09/18 07:03	03/12/18 17:36	1
Thallium	<0.0020		0.0020		mg/L		03/09/18 07:03	03/09/18 20:49	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		03/09/18 12:10	03/12/18 10:57	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	940		10		mg/L			03/15/18 05:24	1
Chloride	140		10		mg/L			03/10/18 00:24	5
Fluoride	0.41		0.10		mg/L			03/10/18 15:13	1
Sulfate	350		100		mg/L			03/21/18 07:16	20

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	1263				umhos/cm			03/08/18 13:20	1
Field Temperature	52.9				Degrees F			03/08/18 13:20	1
Ground Water Elevation	504.52				ft			03/08/18 13:20	1
Field pH	7.75				SU			03/08/18 13:20	1
Well bottom elevation	453.62				ft			03/08/18 13:20	1
Depth to water from land surface	94.10				ft			03/08/18 13:20	1
Depth to Water (ft from MP)	96.80				ft			03/08/18 13:20	1
Elevation of well (ft from MP)	601.32				ft			03/08/18 13:20	1

TestAmerica Chicago

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 1Q18 GW

TestAmerica Job ID: 500-141794-1

Client Sample ID: R08S

Date Collected: 03/08/18 14:20

Date Received: 03/08/18 15:35

Lab Sample ID: 500-141794-10

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.15		0.010		mg/L		03/09/18 07:03	03/10/18 02:48	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		03/09/18 07:03	03/09/18 20:53	1
Arsenic	0.0016		0.0010		mg/L		03/09/18 07:03	03/09/18 20:53	1
Barium	0.050		0.0025		mg/L		03/09/18 07:03	03/09/18 20:53	1
Beryllium	<0.0010		0.0010		mg/L		03/09/18 07:03	03/09/18 20:53	1
Boron	7.4		1.0		mg/L		03/09/18 07:03	03/12/18 12:09	20
Cadmium	<0.00050		0.00050		mg/L		03/09/18 07:03	03/09/18 20:53	1
Calcium	150		0.20		mg/L		03/09/18 07:03	03/09/18 20:53	1
Chromium	<0.0050		0.0050		mg/L		03/09/18 07:03	03/09/18 20:53	1
Cobalt	<0.0010		0.0010		mg/L		03/09/18 07:03	03/09/18 20:53	1
Lead	<0.00050		0.00050		mg/L		03/09/18 07:03	03/09/18 20:53	1
Molybdenum	0.37		0.0050		mg/L		03/09/18 07:03	03/09/18 20:53	1
Selenium	0.012		0.0025		mg/L		03/09/18 07:03	03/12/18 17:40	1
Thallium	<0.0020		0.0020		mg/L		03/09/18 07:03	03/09/18 20:53	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		03/09/18 12:10	03/12/18 10:59	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	850		10		mg/L			03/15/18 05:27	1
Chloride	83		10		mg/L			03/10/18 00:24	5
Fluoride	0.14		0.10		mg/L			03/10/18 15:16	1
Sulfate	420		100		mg/L			03/21/18 07:17	20

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	1010				umhos/cm			03/08/18 14:20	1
Field Temperature	52.0				Degrees F			03/08/18 14:20	1
Ground Water Elevation	513.53				ft			03/08/18 14:20	1
Field pH	8.62				SU			03/08/18 14:20	1
Well bottom elevation	453.08				ft			03/08/18 14:20	1
Depth to water from land surface	62.57				ft			03/08/18 14:20	1
Depth to Water (ft from MP)	65.12				ft			03/08/18 14:20	1
Elevation of well (ft from MP)	578.65				ft			03/08/18 14:20	1

TestAmerica Chicago

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 1Q18 GW

TestAmerica Job ID: 500-141794-1

Client Sample ID: G45S

Date Collected: 03/09/18 09:51

Date Received: 03/09/18 11:28

Lab Sample ID: 500-141794-11

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.028		0.010		mg/L		03/10/18 11:36	03/14/18 04:54	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		03/10/18 11:36	03/13/18 00:20	1
Arsenic	0.0093		0.0010		mg/L		03/10/18 11:36	03/13/18 00:20	1
Barium	0.036		0.0025		mg/L		03/10/18 11:36	03/13/18 00:20	1
Beryllium	<0.0010	^	0.0010		mg/L		03/10/18 11:36	03/13/18 00:20	1
Boron	0.38		0.050		mg/L		03/10/18 11:36	03/13/18 00:20	1
Cadmium	<0.00050		0.00050		mg/L		03/10/18 11:36	03/13/18 00:20	1
Calcium	97		0.20		mg/L		03/10/18 11:36	03/13/18 00:20	1
Chromium	<0.0050		0.0050		mg/L		03/10/18 11:36	03/13/18 00:20	1
Cobalt	<0.0010		0.0010		mg/L		03/10/18 11:36	03/13/18 00:20	1
Lead	<0.00050		0.00050		mg/L		03/10/18 11:36	03/13/18 00:20	1
Molybdenum	0.0080		0.0050		mg/L		03/10/18 11:36	03/13/18 00:20	1
Selenium	<0.0025		0.0025		mg/L		03/10/18 11:36	03/13/18 00:20	1
Thallium	<0.0020		0.0020		mg/L		03/10/18 11:36	03/13/18 00:20	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020	^	0.00020		mg/L		03/12/18 12:30	03/13/18 09:14	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	710		10		mg/L			03/15/18 05:30	1
Chloride	110		10		mg/L			03/10/18 00:25	5
Fluoride	0.32		0.10		mg/L			03/10/18 15:18	1
Sulfate	180		50		mg/L			03/21/18 07:18	10

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	967				umhos/cm			03/09/18 09:51	1
Field Temperature	54.5				Degrees F			03/09/18 09:51	1
Ground Water Elevation	541.49				ft			03/09/18 09:51	1
Field pH	7.18				SU			03/09/18 09:51	1
Well bottom elevation	471.05				ft			03/09/18 09:51	1
Depth to water from land surface	58.85				ft			03/09/18 09:51	1
Depth to Water (ft from MP)	61.82				ft			03/09/18 09:51	1
Elevation of well (ft from MP)	603.31				ft			03/09/18 09:51	1

TestAmerica Chicago

Definitions/Glossary

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 1Q18 GW

TestAmerica Job ID: 500-141794-1

Qualifiers

Metals

Qualifier	Qualifier Description
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

Glossary

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

QC Association Summary

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 1Q18 GW

TestAmerica Job ID: 500-141794-1

Metals

Prep Batch: 422468

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-141794-1	G20S	Total Recoverable	Water	3005A	
500-141794-2	G20S Dup	Total Recoverable	Water	3005A	
MB 500-422468/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-422468/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCSD 500-422468/3-A	Lab Control Sample Dup	Total Recoverable	Water	3005A	

Prep Batch: 422527

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-141794-1	G20S	Total/NA	Water	7470A	
500-141794-2	G20S Dup	Total/NA	Water	7470A	
MB 500-422527/12-A	Method Blank	Total/NA	Water	7470A	
LCS 500-422527/13-A	Lab Control Sample	Total/NA	Water	7470A	
500-141794-1 MS	G20S	Total/NA	Water	7470A	
500-141794-1 MSD	G20S	Total/NA	Water	7470A	
500-141794-1 DU	G20S	Total/NA	Water	7470A	

Prep Batch: 422626

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-141794-4	R32S	Total Recoverable	Water	3005A	
500-141794-5	T03S	Total Recoverable	Water	3005A	
500-141794-6	G44S	Total Recoverable	Water	3005A	
MB 500-422626/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-422626/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
500-141794-6 MS	G44S	Total Recoverable	Water	3005A	
500-141794-6 MSD	G44S	Total Recoverable	Water	3005A	
500-141794-6 DU	G44S	Total Recoverable	Water	3005A	

Analysis Batch: 422690

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-141794-1	G20S	Total/NA	Water	7470A	422527
500-141794-2	G20S Dup	Total/NA	Water	7470A	422527
MB 500-422527/12-A	Method Blank	Total/NA	Water	7470A	422527
LCS 500-422527/13-A	Lab Control Sample	Total/NA	Water	7470A	422527
500-141794-1 MS	G20S	Total/NA	Water	7470A	422527
500-141794-1 MSD	G20S	Total/NA	Water	7470A	422527
500-141794-1 DU	G20S	Total/NA	Water	7470A	422527

Prep Batch: 422713

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-141794-4	R32S	Total/NA	Water	7470A	
500-141794-5	T03S	Total/NA	Water	7470A	
500-141794-6	G44S	Total/NA	Water	7470A	
MB 500-422713/12-A	Method Blank	Total/NA	Water	7470A	
LCS 500-422713/13-A	Lab Control Sample	Total/NA	Water	7470A	
500-141794-5 MS	T03S	Total/NA	Water	7470A	
500-141794-5 MSD	T03S	Total/NA	Water	7470A	
500-141794-5 DU	T03S	Total/NA	Water	7470A	

Analysis Batch: 422721

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-141794-1	G20S	Total Recoverable	Water	6020A	422468

TestAmerica Chicago

QC Association Summary

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 1Q18 GW

TestAmerica Job ID: 500-141794-1

Metals (Continued)

Analysis Batch: 422721 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-141794-2	G20S Dup	Total Recoverable	Water	6020A	422468
MB 500-422468/1-A	Method Blank	Total Recoverable	Water	6020A	422468
LCS 500-422468/2-A	Lab Control Sample	Total Recoverable	Water	6020A	422468
LCSD 500-422468/3-A	Lab Control Sample Dup	Total Recoverable	Water	6020A	422468

Prep Batch: 422800

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-141794-3	G30S	Total Recoverable	Water	3005A	
500-141794-7	G48S	Total Recoverable	Water	3005A	
500-141794-8	G47S	Total Recoverable	Water	3005A	
500-141794-9	G46S	Total Recoverable	Water	3005A	
500-141794-10	R08S	Total Recoverable	Water	3005A	
MB 500-422800/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-422800/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 422834

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-141794-1	G20S	Total Recoverable	Water	6010C	422468
500-141794-2	G20S Dup	Total Recoverable	Water	6010C	422468
MB 500-422468/1-A	Method Blank	Total Recoverable	Water	6010C	422468
LCS 500-422468/2-A	Lab Control Sample	Total Recoverable	Water	6010C	422468
LCSD 500-422468/3-A	Lab Control Sample Dup	Total Recoverable	Water	6010C	422468

Analysis Batch: 422844

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-141794-1	G20S	Total Recoverable	Water	6020A	422468
500-141794-2	G20S Dup	Total Recoverable	Water	6020A	422468
500-141794-4	R32S	Total Recoverable	Water	6020A	422626
500-141794-5	T03S	Total Recoverable	Water	6020A	422626
500-141794-6	G44S	Total Recoverable	Water	6020A	422626
MB 500-422468/1-A	Method Blank	Total Recoverable	Water	6020A	422468
MB 500-422626/1-A	Method Blank	Total Recoverable	Water	6020A	422626
LCS 500-422468/2-A	Lab Control Sample	Total Recoverable	Water	6020A	422468
LCS 500-422626/2-A	Lab Control Sample	Total Recoverable	Water	6020A	422626
LCSD 500-422468/3-A	Lab Control Sample Dup	Total Recoverable	Water	6020A	422468
500-141794-6 MS	G44S	Total Recoverable	Water	6020A	422626
500-141794-6 MSD	G44S	Total Recoverable	Water	6020A	422626
500-141794-6 DU	G44S	Total Recoverable	Water	6020A	422626

Analysis Batch: 422884

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-141794-4	R32S	Total/NA	Water	7470A	422713
500-141794-5	T03S	Total/NA	Water	7470A	422713
500-141794-6	G44S	Total/NA	Water	7470A	422713
MB 500-422713/12-A	Method Blank	Total/NA	Water	7470A	422713
LCS 500-422713/13-A	Lab Control Sample	Total/NA	Water	7470A	422713
500-141794-5 MS	T03S	Total/NA	Water	7470A	422713
500-141794-5 MSD	T03S	Total/NA	Water	7470A	422713
500-141794-5 DU	T03S	Total/NA	Water	7470A	422713

TestAmerica Chicago

QC Association Summary

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 1Q18 GW

TestAmerica Job ID: 500-141794-1

Metals (Continued)

Prep Batch: 422891

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-141794-3	G30S	Total/NA	Water	7470A	
500-141794-7	G48S	Total/NA	Water	7470A	
500-141794-8	G47S	Total/NA	Water	7470A	
500-141794-9	G46S	Total/NA	Water	7470A	
500-141794-10	R08S	Total/NA	Water	7470A	
MB 500-422891/12-A	Method Blank	Total/NA	Water	7470A	
LCS 500-422891/13-A	Lab Control Sample	Total/NA	Water	7470A	
500-141794-10 MS	R08S	Total/NA	Water	7470A	
500-141794-10 MSD	R08S	Total/NA	Water	7470A	
500-141794-10 DU	R08S	Total/NA	Water	7470A	

Prep Batch: 422977

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-141794-11	G45S	Total Recoverable	Water	3005A	
MB 500-422977/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-422977/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 423069

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-141794-3	G30S	Total Recoverable	Water	6010C	422800
500-141794-7	G48S	Total Recoverable	Water	6010C	422800
500-141794-8	G47S	Total Recoverable	Water	6010C	422800
500-141794-9	G46S	Total Recoverable	Water	6010C	422800
500-141794-10	R08S	Total Recoverable	Water	6010C	422800
MB 500-422800/1-A	Method Blank	Total Recoverable	Water	6010C	422800
LCS 500-422800/2-A	Lab Control Sample	Total Recoverable	Water	6010C	422800

Analysis Batch: 423103

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-141794-3	G30S	Total Recoverable	Water	6020A	422800
500-141794-7	G48S	Total Recoverable	Water	6020A	422800
500-141794-8	G47S	Total Recoverable	Water	6020A	422800
500-141794-9	G46S	Total Recoverable	Water	6020A	422800
500-141794-10	R08S	Total Recoverable	Water	6020A	422800
MB 500-422800/1-A	Method Blank	Total Recoverable	Water	6020A	422800
LCS 500-422800/2-A	Lab Control Sample	Total Recoverable	Water	6020A	422800

Analysis Batch: 423107

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-141794-4	R32S	Total Recoverable	Water	6020A	422626
500-141794-5	T03S	Total Recoverable	Water	6020A	422626
500-141794-6	G44S	Total Recoverable	Water	6020A	422626
MB 500-422626/1-A	Method Blank	Total Recoverable	Water	6020A	422626
LCS 500-422626/2-A	Lab Control Sample	Total Recoverable	Water	6020A	422626
500-141794-6 MS	G44S	Total Recoverable	Water	6020A	422626
500-141794-6 MSD	G44S	Total Recoverable	Water	6020A	422626
500-141794-6 DU	G44S	Total Recoverable	Water	6020A	422626

Analysis Batch: 423140

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-141794-3	G30S	Total/NA	Water	7470A	422891

TestAmerica Chicago

QC Association Summary

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 1Q18 GW

TestAmerica Job ID: 500-141794-1

Metals (Continued)

Analysis Batch: 423140 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-141794-7	G48S	Total/NA	Water	7470A	422891
500-141794-8	G47S	Total/NA	Water	7470A	422891
500-141794-9	G46S	Total/NA	Water	7470A	422891
500-141794-10	R08S	Total/NA	Water	7470A	422891
MB 500-422891/12-A	Method Blank	Total/NA	Water	7470A	422891
LCS 500-422891/13-A	Lab Control Sample	Total/NA	Water	7470A	422891
500-141794-10 MS	R08S	Total/NA	Water	7470A	422891
500-141794-10 MSD	R08S	Total/NA	Water	7470A	422891
500-141794-10 DU	R08S	Total/NA	Water	7470A	422891

Prep Batch: 423143

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-141794-11	G45S	Total/NA	Water	7470A	
MB 500-423143/12-A	Method Blank	Total/NA	Water	7470A	
LCS 500-423143/13-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 423196

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-141794-3	G30S	Total Recoverable	Water	6020A	422800
500-141794-3	G30S	Total Recoverable	Water	6020A	422800
500-141794-4	R32S	Total Recoverable	Water	6020A	422626
500-141794-5	T03S	Total Recoverable	Water	6020A	422626
500-141794-6	G44S	Total Recoverable	Water	6020A	422626
500-141794-7	G48S	Total Recoverable	Water	6020A	422800
500-141794-7	G48S	Total Recoverable	Water	6020A	422800
500-141794-8	G47S	Total Recoverable	Water	6020A	422800
500-141794-8	G47S	Total Recoverable	Water	6020A	422800
500-141794-9	G46S	Total Recoverable	Water	6020A	422800
500-141794-9	G46S	Total Recoverable	Water	6020A	422800
500-141794-10	R08S	Total Recoverable	Water	6020A	422800
500-141794-10	R08S	Total Recoverable	Water	6020A	422800
MB 500-422626/1-A	Method Blank	Total Recoverable	Water	6020A	422626
MB 500-422800/1-A	Method Blank	Total Recoverable	Water	6020A	422800
LCS 500-422626/2-A	Lab Control Sample	Total Recoverable	Water	6020A	422626
LCS 500-422800/2-A	Lab Control Sample	Total Recoverable	Water	6020A	422800
500-141794-6 MS	G44S	Total Recoverable	Water	6020A	422626
500-141794-6 MSD	G44S	Total Recoverable	Water	6020A	422626
500-141794-6 DU	G44S	Total Recoverable	Water	6020A	422626

Analysis Batch: 423268

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-141794-11	G45S	Total Recoverable	Water	6020A	422977
MB 500-422977/1-A	Method Blank	Total Recoverable	Water	6020A	422977
LCS 500-422977/2-A	Lab Control Sample	Total Recoverable	Water	6020A	422977

Analysis Batch: 423278

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-141794-11	G45S	Total/NA	Water	7470A	423143
MB 500-423143/12-A	Method Blank	Total/NA	Water	7470A	423143
LCS 500-423143/13-A	Lab Control Sample	Total/NA	Water	7470A	423143

TestAmerica Chicago

QC Association Summary

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 1Q18 GW

TestAmerica Job ID: 500-141794-1

Metals (Continued)

Analysis Batch: 423418

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-141794-4	R32S	Total Recoverable	Water	6010C	422626
500-141794-5	T03S	Total Recoverable	Water	6010C	422626
500-141794-6	G44S	Total Recoverable	Water	6010C	422626
500-141794-11	G45S	Total Recoverable	Water	6010C	422977
MB 500-422626/1-A	Method Blank	Total Recoverable	Water	6010C	422626
MB 500-422977/1-A	Method Blank	Total Recoverable	Water	6010C	422977
LCS 500-422626/2-A	Lab Control Sample	Total Recoverable	Water	6010C	422626
LCS 500-422977/2-A	Lab Control Sample	Total Recoverable	Water	6010C	422977
500-141794-6 MS	G44S	Total Recoverable	Water	6010C	422626
500-141794-6 MSD	G44S	Total Recoverable	Water	6010C	422626
500-141794-6 DU	G44S	Total Recoverable	Water	6010C	422626

General Chemistry

Analysis Batch: 422860

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-141794-1	G20S	Total/NA	Water	SM 2540C	
500-141794-2	G20S Dup	Total/NA	Water	SM 2540C	
MB 500-422860/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-422860/2	Lab Control Sample	Total/NA	Water	SM 2540C	
500-141794-1 DU	G20S	Total/NA	Water	SM 2540C	

Analysis Batch: 422970

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-141794-1	G20S	Total/NA	Water	SM 4500 Cl- E	
500-141794-2	G20S Dup	Total/NA	Water	SM 4500 Cl- E	
500-141794-3	G30S	Total/NA	Water	SM 4500 Cl- E	
500-141794-4	R32S	Total/NA	Water	SM 4500 Cl- E	
500-141794-5	T03S	Total/NA	Water	SM 4500 Cl- E	
500-141794-6	G44S	Total/NA	Water	SM 4500 Cl- E	
500-141794-7	G48S	Total/NA	Water	SM 4500 Cl- E	
500-141794-8	G47S	Total/NA	Water	SM 4500 Cl- E	
500-141794-9	G46S	Total/NA	Water	SM 4500 Cl- E	
500-141794-10	R08S	Total/NA	Water	SM 4500 Cl- E	
500-141794-11	G45S	Total/NA	Water	SM 4500 Cl- E	
MB 500-422970/4	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 500-422970/5	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
500-141794-7 MS	G48S	Total/NA	Water	SM 4500 Cl- E	
500-141794-7 MSD	G48S	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 423125

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-141794-1	G20S	Total/NA	Water	SM 4500 F C	
500-141794-2	G20S Dup	Total/NA	Water	SM 4500 F C	
500-141794-3	G30S	Total/NA	Water	SM 4500 F C	
500-141794-4	R32S	Total/NA	Water	SM 4500 F C	
500-141794-5	T03S	Total/NA	Water	SM 4500 F C	
500-141794-6	G44S	Total/NA	Water	SM 4500 F C	
500-141794-7	G48S	Total/NA	Water	SM 4500 F C	
500-141794-8	G47S	Total/NA	Water	SM 4500 F C	

TestAmerica Chicago

QC Association Summary

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 1Q18 GW

TestAmerica Job ID: 500-141794-1

General Chemistry (Continued)

Analysis Batch: 423125 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-141794-9	G46S	Total/NA	Water	SM 4500 F C	
500-141794-10	R08S	Total/NA	Water	SM 4500 F C	
500-141794-11	G45S	Total/NA	Water	SM 4500 F C	
MB 500-423125/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 500-423125/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
500-141794-1 MS	G20S	Total/NA	Water	SM 4500 F C	
500-141794-1 MSD	G20S	Total/NA	Water	SM 4500 F C	

Analysis Batch: 423421

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-141794-3	G30S	Total/NA	Water	SM 2540C	
500-141794-4	R32S	Total/NA	Water	SM 2540C	
500-141794-5	T03S	Total/NA	Water	SM 2540C	
500-141794-6	G44S	Total/NA	Water	SM 2540C	
MB 500-423421/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-423421/2	Lab Control Sample	Total/NA	Water	SM 2540C	
500-141794-3 DU	G30S	Total/NA	Water	SM 2540C	

Analysis Batch: 423562

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-141794-7	G48S	Total/NA	Water	SM 2540C	
500-141794-8	G47S	Total/NA	Water	SM 2540C	
500-141794-9	G46S	Total/NA	Water	SM 2540C	
500-141794-10	R08S	Total/NA	Water	SM 2540C	
500-141794-11	G45S	Total/NA	Water	SM 2540C	
MB 500-423562/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-423562/2	Lab Control Sample	Total/NA	Water	SM 2540C	
500-141794-7 DU	G48S	Total/NA	Water	SM 2540C	

Analysis Batch: 424332

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-141794-1	G20S	Total/NA	Water	SM 4500 SO4 E	
500-141794-2	G20S Dup	Total/NA	Water	SM 4500 SO4 E	
500-141794-3	G30S	Total/NA	Water	SM 4500 SO4 E	
500-141794-4	R32S	Total/NA	Water	SM 4500 SO4 E	
500-141794-5	T03S	Total/NA	Water	SM 4500 SO4 E	
500-141794-6	G44S	Total/NA	Water	SM 4500 SO4 E	
500-141794-7	G48S	Total/NA	Water	SM 4500 SO4 E	
500-141794-8	G47S	Total/NA	Water	SM 4500 SO4 E	
500-141794-9	G46S	Total/NA	Water	SM 4500 SO4 E	
500-141794-10	R08S	Total/NA	Water	SM 4500 SO4 E	
500-141794-11	G45S	Total/NA	Water	SM 4500 SO4 E	
MB 500-424332/3	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 500-424332/4	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
500-141794-11 MS	G45S	Total/NA	Water	SM 4500 SO4 E	
500-141794-11 MSD	G45S	Total/NA	Water	SM 4500 SO4 E	

TestAmerica Chicago

QC Association Summary

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 1Q18 GW

TestAmerica Job ID: 500-141794-1

Field Service / Mobile Lab

Analysis Batch: 423108

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-141794-1	G20S	Total/NA	Water	Field Sampling	
500-141794-2	G20S Dup	Total/NA	Water	Field Sampling	
500-141794-3	G30S	Total/NA	Water	Field Sampling	
500-141794-4	R32S	Total/NA	Water	Field Sampling	
500-141794-5	T03S	Total/NA	Water	Field Sampling	
500-141794-6	G44S	Total/NA	Water	Field Sampling	
500-141794-7	G48S	Total/NA	Water	Field Sampling	
500-141794-8	G47S	Total/NA	Water	Field Sampling	
500-141794-9	G46S	Total/NA	Water	Field Sampling	
500-141794-10	R08S	Total/NA	Water	Field Sampling	
500-141794-11	G45S	Total/NA	Water	Field Sampling	

QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 1Q18 GW

TestAmerica Job ID: 500-141794-1

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 500-422468/1-A
Matrix: Water
Analysis Batch: 422834

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 422468

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.010		0.010		mg/L		03/07/18 06:47	03/09/18 03:45	1

Lab Sample ID: LCS 500-422468/2-A
Matrix: Water
Analysis Batch: 422834

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 422468

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lithium	0.500	0.528		mg/L		106	80 - 120

Lab Sample ID: LCSD 500-422468/3-A
Matrix: Water
Analysis Batch: 422834

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 422468

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lithium	0.500	0.509		mg/L		102	80 - 120	4	20

Lab Sample ID: MB 500-422626/1-A
Matrix: Water
Analysis Batch: 423418

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 422626

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.010		0.010		mg/L		03/08/18 06:51	03/14/18 05:00	1

Lab Sample ID: LCS 500-422626/2-A
Matrix: Water
Analysis Batch: 423418

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 422626

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lithium	0.500	0.508		mg/L		102	80 - 120

Lab Sample ID: 500-141794-6 MS
Matrix: Water
Analysis Batch: 423418

Client Sample ID: G44S
Prep Type: Total Recoverable
Prep Batch: 422626

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lithium	0.017		0.500	0.528		mg/L		102	75 - 125

Lab Sample ID: 500-141794-6 MSD
Matrix: Water
Analysis Batch: 423418

Client Sample ID: G44S
Prep Type: Total Recoverable
Prep Batch: 422626

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lithium	0.017		0.500	0.528		mg/L		102	75 - 125	0	20

Lab Sample ID: 500-141794-6 DU
Matrix: Water
Analysis Batch: 423418

Client Sample ID: G44S
Prep Type: Total Recoverable
Prep Batch: 422626

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Lithium	0.017		0.0159		mg/L		4	20

TestAmerica Chicago

QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 1Q18 GW

TestAmerica Job ID: 500-141794-1

Lab Sample ID: MB 500-422800/1-A
Matrix: Water
Analysis Batch: 423069

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 422800

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.010		0.010		mg/L		03/09/18 07:03	03/10/18 01:46	1

Lab Sample ID: LCS 500-422800/2-A
Matrix: Water
Analysis Batch: 423069

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 422800

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Lithium	0.500	0.499		mg/L		100	80 - 120

Lab Sample ID: MB 500-422977/1-A
Matrix: Water
Analysis Batch: 423418

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 422977

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.010		0.010		mg/L		03/10/18 11:36	03/14/18 04:46	1

Lab Sample ID: LCS 500-422977/2-A
Matrix: Water
Analysis Batch: 423418

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 422977

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Lithium	0.500	0.476		mg/L		95	80 - 120

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 500-422468/1-A
Matrix: Water
Analysis Batch: 422721

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 422468

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		03/07/18 06:47	03/08/18 12:14	1
Arsenic	<0.0010		0.0010		mg/L		03/07/18 06:47	03/08/18 12:14	1
Barium	<0.0025		0.0025		mg/L		03/07/18 06:47	03/08/18 12:14	1
Beryllium	<0.0010	^	0.0010		mg/L		03/07/18 06:47	03/08/18 12:14	1
Cadmium	<0.00050		0.00050		mg/L		03/07/18 06:47	03/08/18 12:14	1
Calcium	<0.20		0.20		mg/L		03/07/18 06:47	03/08/18 12:14	1
Chromium	<0.0050		0.0050		mg/L		03/07/18 06:47	03/08/18 12:14	1
Cobalt	<0.0010		0.0010		mg/L		03/07/18 06:47	03/08/18 12:14	1
Lead	<0.00050		0.00050		mg/L		03/07/18 06:47	03/08/18 12:14	1
Molybdenum	<0.0050		0.0050		mg/L		03/07/18 06:47	03/08/18 12:14	1
Selenium	<0.0025		0.0025		mg/L		03/07/18 06:47	03/08/18 12:14	1
Thallium	<0.0020		0.0020		mg/L		03/07/18 06:47	03/08/18 12:14	1

Lab Sample ID: MB 500-422468/1-A
Matrix: Water
Analysis Batch: 422844

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 422468

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.050		0.050		mg/L		03/07/18 06:47	03/08/18 14:11	1

TestAmerica Chicago

QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 1Q18 GW

TestAmerica Job ID: 500-141794-1

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

Lab Sample ID: LCS 500-422468/2-A
Matrix: Water
Analysis Batch: 422721

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 422468

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.500	0.495		mg/L		99	80 - 120
Arsenic	0.100	0.0970		mg/L		97	80 - 120
Barium	2.00	2.04		mg/L		102	80 - 120
Beryllium	0.0500	0.0499	^	mg/L		100	80 - 120
Cadmium	0.0500	0.0512		mg/L		102	80 - 120
Calcium	10.0	11.9		mg/L		119	80 - 120
Chromium	0.200	0.207		mg/L		104	80 - 120
Cobalt	0.500	0.526		mg/L		105	80 - 120
Lead	0.100	0.108		mg/L		108	80 - 120
Molybdenum	1.00	0.937		mg/L		94	80 - 120
Selenium	0.100	0.0975		mg/L		97	80 - 120
Thallium	0.100	0.105		mg/L		105	80 - 120

Lab Sample ID: LCS 500-422468/2-A
Matrix: Water
Analysis Batch: 422844

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 422468

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1.00	0.998		mg/L		100	80 - 120

Lab Sample ID: LCSD 500-422468/3-A
Matrix: Water
Analysis Batch: 422721

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 422468

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	0.500	0.481		mg/L		96	80 - 120	3	20
Arsenic	0.100	0.0945		mg/L		95	80 - 120	3	20
Barium	2.00	2.00		mg/L		100	80 - 120	2	20
Beryllium	0.0500	0.0506	^	mg/L		101	80 - 120	1	20
Cadmium	0.0500	0.0489		mg/L		98	80 - 120	5	20
Calcium	10.0	11.8		mg/L		118	80 - 120	1	20
Chromium	0.200	0.204		mg/L		102	80 - 120	2	20
Cobalt	0.500	0.515		mg/L		103	80 - 120	2	20
Lead	0.100	0.106		mg/L		106	80 - 120	2	20
Molybdenum	1.00	0.912		mg/L		91	80 - 120	3	20
Selenium	0.100	0.0948		mg/L		95	80 - 120	3	20
Thallium	0.100	0.103		mg/L		103	80 - 120	2	20

Lab Sample ID: LCSD 500-422468/3-A
Matrix: Water
Analysis Batch: 422844

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 422468

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Boron	1.00	0.970		mg/L		97	80 - 120	3	20

TestAmerica Chicago

QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 1Q18 GW

TestAmerica Job ID: 500-141794-1

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

Lab Sample ID: MB 500-422626/1-A

Matrix: Water

Analysis Batch: 422844

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 422626

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		03/08/18 06:51	03/08/18 21:22	1
Barium	<0.0025		0.0025		mg/L		03/08/18 06:51	03/08/18 21:22	1
Cadmium	<0.00050		0.00050		mg/L		03/08/18 06:51	03/08/18 21:22	1
Calcium	<0.20		0.20		mg/L		03/08/18 06:51	03/08/18 21:22	1
Chromium	<0.0050		0.0050		mg/L		03/08/18 06:51	03/08/18 21:22	1
Cobalt	<0.0010		0.0010		mg/L		03/08/18 06:51	03/08/18 21:22	1
Lead	<0.00050		0.00050		mg/L		03/08/18 06:51	03/08/18 21:22	1
Molybdenum	<0.0050		0.0050		mg/L		03/08/18 06:51	03/08/18 21:22	1
Thallium	<0.0020		0.0020		mg/L		03/08/18 06:51	03/08/18 21:22	1

Lab Sample ID: MB 500-422626/1-A

Matrix: Water

Analysis Batch: 423107

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 422626

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.0010		0.0010		mg/L		03/08/18 06:51	03/09/18 11:41	1
Beryllium	<0.0010		0.0010		mg/L		03/08/18 06:51	03/09/18 11:41	1
Selenium	<0.0025		0.0025		mg/L		03/08/18 06:51	03/09/18 11:41	1

Lab Sample ID: MB 500-422626/1-A

Matrix: Water

Analysis Batch: 423196

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 422626

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.050		0.050		mg/L		03/08/18 06:51	03/12/18 12:28	1

Lab Sample ID: LCS 500-422626/2-A

Matrix: Water

Analysis Batch: 422844

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 422626

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.500	0.512		mg/L		102	80 - 120
Barium	2.00	2.06		mg/L		103	80 - 120
Cadmium	0.0500	0.0516		mg/L		103	80 - 120
Calcium	10.0	9.20		mg/L		92	80 - 120
Chromium	0.200	0.202		mg/L		101	80 - 120
Cobalt	0.500	0.514		mg/L		103	80 - 120
Lead	0.100	0.108		mg/L		108	80 - 120
Molybdenum	1.00	0.944		mg/L		94	80 - 120
Thallium	0.100	0.106		mg/L		106	80 - 120

Lab Sample ID: LCS 500-422626/2-A

Matrix: Water

Analysis Batch: 423107

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 422626

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.100	0.100		mg/L		100	80 - 120
Beryllium	0.0500	0.0503		mg/L		101	80 - 120
Selenium	0.100	0.101		mg/L		101	80 - 120

TestAmerica Chicago

QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 1Q18 GW

TestAmerica Job ID: 500-141794-1

Lab Sample ID: LCS 500-422626/2-A
Matrix: Water
Analysis Batch: 423196

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 422626

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

Lab Sample ID: 500-141794-6 MS
Matrix: Water
Analysis Batch: 422844

Client Sample ID: G44S
Prep Type: Total Recoverable
Prep Batch: 422626

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	<0.0030		0.500	0.530		mg/L		106	75 - 125
Barium	0.053		2.00	2.12		mg/L		103	75 - 125
Cadmium	<0.00050		0.0500	0.0528		mg/L		106	75 - 125
Calcium	120		10.0	129	4	mg/L		102	75 - 125
Chromium	<0.0050		0.200	0.198		mg/L		99	75 - 125
Cobalt	<0.0010		0.500	0.494		mg/L		99	75 - 125
Lead	<0.00050		0.100	0.108		mg/L		108	75 - 125
Molybdenum	0.049		1.00	0.957		mg/L		91	75 - 125
Thallium	<0.0020		0.100	0.107		mg/L		107	75 - 125

Lab Sample ID: 500-141794-6 MS
Matrix: Water
Analysis Batch: 423107

Client Sample ID: G44S
Prep Type: Total Recoverable
Prep Batch: 422626

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.0014		0.100	0.106		mg/L		105	75 - 125
Beryllium	<0.0010		0.0500	0.0492		mg/L		98	75 - 125
Selenium	<0.0025		0.100	0.106		mg/L		106	75 - 125

Lab Sample ID: 500-141794-6 MS
Matrix: Water
Analysis Batch: 423196

Client Sample ID: G44S
Prep Type: Total Recoverable
Prep Batch: 422626

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	0.91		1.00	1.93		mg/L		102	75 - 125

Lab Sample ID: 500-141794-6 MSD
Matrix: Water
Analysis Batch: 422844

Client Sample ID: G44S
Prep Type: Total Recoverable
Prep Batch: 422626

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	<0.0030		0.500	0.524		mg/L		105	75 - 125	1	20
Barium	0.053		2.00	2.09		mg/L		102	75 - 125	1	20
Cadmium	<0.00050		0.0500	0.0521		mg/L		104	75 - 125	1	20
Calcium	120		10.0	126	4	mg/L		71	75 - 125	2	20
Chromium	<0.0050		0.200	0.196		mg/L		98	75 - 125	1	20
Cobalt	<0.0010		0.500	0.490		mg/L		98	75 - 125	1	20
Lead	<0.00050		0.100	0.107		mg/L		107	75 - 125	1	20
Molybdenum	0.049		1.00	0.941		mg/L		89	75 - 125	2	20
Thallium	<0.0020		0.100	0.105		mg/L		105	75 - 125	1	20

TestAmerica Chicago

QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 1Q18 GW

TestAmerica Job ID: 500-141794-1

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

Lab Sample ID: 500-141794-6 MSD

Matrix: Water

Analysis Batch: 423107

Client Sample ID: G44S

Prep Type: Total Recoverable

Prep Batch: 422626

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.0014		0.100	0.105		mg/L		103	75 - 125	2	20
Beryllium	<0.0010		0.0500	0.0508		mg/L		102	75 - 125	3	20
Selenium	<0.0025		0.100	0.106		mg/L		106	75 - 125	1	20

Lab Sample ID: 500-141794-6 MSD

Matrix: Water

Analysis Batch: 423196

Client Sample ID: G44S

Prep Type: Total Recoverable

Prep Batch: 422626

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Boron	0.91		1.00	2.00		mg/L		109	75 - 125	4	20

Lab Sample ID: 500-141794-6 DU

Matrix: Water

Analysis Batch: 422844

Client Sample ID: G44S

Prep Type: Total Recoverable

Prep Batch: 422626

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Antimony	<0.0030		<0.0030		mg/L		NC	20
Barium	0.053		0.0525		mg/L		1	20
Cadmium	<0.00050		<0.00050		mg/L		NC	20
Calcium	120		120		mg/L		0.4	20
Chromium	<0.0050		<0.0050		mg/L		NC	20
Cobalt	<0.0010		<0.0010		mg/L		NC	20
Lead	<0.00050		<0.00050		mg/L		NC	20
Molybdenum	0.049		0.0483		mg/L		0.7	20
Thallium	<0.0020		<0.0020		mg/L		NC	20

Lab Sample ID: 500-141794-6 DU

Matrix: Water

Analysis Batch: 423107

Client Sample ID: G44S

Prep Type: Total Recoverable

Prep Batch: 422626

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	0.0014		0.00162		mg/L		16	20
Beryllium	<0.0010		<0.0010		mg/L		NC	20
Selenium	<0.0025		<0.0025		mg/L		NC	20

Lab Sample ID: 500-141794-6 DU

Matrix: Water

Analysis Batch: 423196

Client Sample ID: G44S

Prep Type: Total Recoverable

Prep Batch: 422626

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Boron	0.91		0.937		mg/L		3	20

Lab Sample ID: MB 500-422800/1-A

Matrix: Water

Analysis Batch: 423103

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 422800

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		03/09/18 07:03	03/09/18 20:19	1
Arsenic	<0.0010		0.0010		mg/L		03/09/18 07:03	03/09/18 20:19	1

TestAmerica Chicago

QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 1Q18 GW

TestAmerica Job ID: 500-141794-1

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

Lab Sample ID: MB 500-422800/1-A

Matrix: Water

Analysis Batch: 423103

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 422800

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	<0.0025		0.0025		mg/L		03/09/18 07:03	03/09/18 20:19	1
Beryllium	<0.0010		0.0010		mg/L		03/09/18 07:03	03/09/18 20:19	1
Cadmium	<0.00050		0.00050		mg/L		03/09/18 07:03	03/09/18 20:19	1
Calcium	<0.20		0.20		mg/L		03/09/18 07:03	03/09/18 20:19	1
Chromium	<0.0050		0.0050		mg/L		03/09/18 07:03	03/09/18 20:19	1
Cobalt	<0.0010		0.0010		mg/L		03/09/18 07:03	03/09/18 20:19	1
Lead	<0.00050		0.00050		mg/L		03/09/18 07:03	03/09/18 20:19	1
Molybdenum	<0.0050		0.0050		mg/L		03/09/18 07:03	03/09/18 20:19	1
Thallium	<0.0020		0.0020		mg/L		03/09/18 07:03	03/09/18 20:19	1

Lab Sample ID: MB 500-422800/1-A

Matrix: Water

Analysis Batch: 423196

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 422800

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.050		0.050		mg/L		03/09/18 07:03	03/12/18 11:35	1
Selenium	<0.0025		0.0025		mg/L		03/09/18 07:03	03/12/18 11:35	1

Lab Sample ID: LCS 500-422800/2-A

Matrix: Water

Analysis Batch: 423103

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 422800

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.500	0.548		mg/L		110	80 - 120
Arsenic	0.100	0.106		mg/L		106	80 - 120
Barium	2.00	2.21		mg/L		110	80 - 120
Beryllium	0.0500	0.0502		mg/L		100	80 - 120
Cadmium	0.0500	0.0534		mg/L		107	80 - 120
Calcium	10.0	10.5		mg/L		105	80 - 120
Chromium	0.200	0.217		mg/L		109	80 - 120
Cobalt	0.500	0.536		mg/L		107	80 - 120
Lead	0.100	0.111		mg/L		111	80 - 120
Molybdenum	1.00	1.02		mg/L		102	80 - 120
Thallium	0.100	0.110		mg/L		110	80 - 120

Lab Sample ID: LCS 500-422800/2-A

Matrix: Water

Analysis Batch: 423196

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 422800

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1.00	0.959		mg/L		96	80 - 120
Selenium	0.100	0.103		mg/L		103	80 - 120

Lab Sample ID: MB 500-422977/1-A

Matrix: Water

Analysis Batch: 423268

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 422977

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030		mg/L		03/10/18 11:36	03/12/18 23:23	1

TestAmerica Chicago

QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 1Q18 GW

TestAmerica Job ID: 500-141794-1

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

Lab Sample ID: MB 500-422977/1-A

Matrix: Water

Analysis Batch: 423268

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 422977

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.0010		0.0010		mg/L		03/10/18 11:36	03/12/18 23:23	1
Barium	<0.0025		0.0025		mg/L		03/10/18 11:36	03/12/18 23:23	1
Beryllium	<0.0010	^	0.0010		mg/L		03/10/18 11:36	03/12/18 23:23	1
Boron	<0.050		0.050		mg/L		03/10/18 11:36	03/12/18 23:23	1
Cadmium	<0.00050		0.00050		mg/L		03/10/18 11:36	03/12/18 23:23	1
Calcium	<0.20		0.20		mg/L		03/10/18 11:36	03/12/18 23:23	1
Chromium	<0.0050		0.0050		mg/L		03/10/18 11:36	03/12/18 23:23	1
Cobalt	<0.0010		0.0010		mg/L		03/10/18 11:36	03/12/18 23:23	1
Lead	<0.00050		0.00050		mg/L		03/10/18 11:36	03/12/18 23:23	1
Molybdenum	<0.0050		0.0050		mg/L		03/10/18 11:36	03/12/18 23:23	1
Selenium	<0.0025		0.0025		mg/L		03/10/18 11:36	03/12/18 23:23	1
Thallium	<0.0020		0.0020		mg/L		03/10/18 11:36	03/12/18 23:23	1

Lab Sample ID: LCS 500-422977/2-A

Matrix: Water

Analysis Batch: 423268

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 422977

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.500	0.514		mg/L		103	80 - 120
Arsenic	0.100	0.0984		mg/L		98	80 - 120
Barium	2.00	2.04		mg/L		102	80 - 120
Beryllium	0.0500	0.0480	^	mg/L		96	80 - 120
Boron	1.00	0.972		mg/L		97	80 - 120
Cadmium	0.0500	0.0528		mg/L		106	80 - 120
Calcium	10.0	9.64		mg/L		96	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	0.105		mg/L		105	80 - 120
Molybdenum	1.00	0.923		mg/L		92	80 - 120
Selenium	0.100	0.100		mg/L		100	80 - 120
Thallium	0.100	0.103		mg/L		103	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 500-422527/12-A

Matrix: Water

Analysis Batch: 422690

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 422527

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		03/07/18 11:35	03/08/18 08:19	1

Lab Sample ID: LCS 500-422527/13-A

Matrix: Water

Analysis Batch: 422690

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 422527

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00200	0.00218		mg/L		109	80 - 120

TestAmerica Chicago

QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 1Q18 GW

TestAmerica Job ID: 500-141794-1

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

Lab Sample ID: 500-141794-1 MS

Matrix: Water

Analysis Batch: 422690

Client Sample ID: G20S

Prep Type: Total/NA

Prep Batch: 422527

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	<0.00020		0.00100	0.00102		mg/L		102	75 - 125

Lab Sample ID: 500-141794-1 MSD

Matrix: Water

Analysis Batch: 422690

Client Sample ID: G20S

Prep Type: Total/NA

Prep Batch: 422527

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Mercury	<0.00020		0.00100	0.00102		mg/L		102	75 - 125	1	20

Lab Sample ID: 500-141794-1 DU

Matrix: Water

Analysis Batch: 422690

Client Sample ID: G20S

Prep Type: Total/NA

Prep Batch: 422527

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

Lab Sample ID: MB 500-422713/12-A

Matrix: Water

Analysis Batch: 422884

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 422713

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		03/08/18 11:55	03/09/18 08:48	1

Lab Sample ID: LCS 500-422713/13-A

Matrix: Water

Analysis Batch: 422884

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 422713

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00200	0.00214		mg/L		107	80 - 120

Lab Sample ID: 500-141794-5 MS

Matrix: Water

Analysis Batch: 422884

Client Sample ID: T03S

Prep Type: Total/NA

Prep Batch: 422713

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	<0.00020		0.00100	0.000990		mg/L		99	75 - 125

Lab Sample ID: 500-141794-5 MSD

Matrix: Water

Analysis Batch: 422884

Client Sample ID: T03S

Prep Type: Total/NA

Prep Batch: 422713

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Mercury	<0.00020		0.00100	0.000950		mg/L		95	75 - 125	4	20

Lab Sample ID: 500-141794-5 DU

Matrix: Water

Analysis Batch: 422884

Client Sample ID: T03S

Prep Type: Total/NA

Prep Batch: 422713

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

TestAmerica Chicago

QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 1Q18 GW

TestAmerica Job ID: 500-141794-1

Lab Sample ID: MB 500-422891/12-A
Matrix: Water
Analysis Batch: 423140

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 422891

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020		mg/L		03/09/18 12:10	03/12/18 10:42	1

Lab Sample ID: LCS 500-422891/13-A
Matrix: Water
Analysis Batch: 423140

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 422891

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00200	0.00212		mg/L		106	80 - 120

Lab Sample ID: 500-141794-10 MS
Matrix: Water
Analysis Batch: 423140

Client Sample ID: R08S
Prep Type: Total/NA
Prep Batch: 422891

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	<0.00020		0.00100	0.000930		mg/L		93	75 - 125

Lab Sample ID: 500-141794-10 MSD
Matrix: Water
Analysis Batch: 423140

Client Sample ID: R08S
Prep Type: Total/NA
Prep Batch: 422891

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	<0.00020		0.00100	0.000956		mg/L		96	75 - 125	3	20

Lab Sample ID: 500-141794-10 DU
Matrix: Water
Analysis Batch: 423140

Client Sample ID: R08S
Prep Type: Total/NA
Prep Batch: 422891

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

Lab Sample ID: MB 500-423143/12-A
Matrix: Water
Analysis Batch: 423278

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 423143

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020	^	0.00020		mg/L		03/12/18 12:30	03/13/18 09:02	1

Lab Sample ID: LCS 500-423143/13-A
Matrix: Water
Analysis Batch: 423278

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 423143

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00200	0.00182	^	mg/L		91	80 - 120

TestAmerica Chicago

QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 1Q18 GW

TestAmerica Job ID: 500-141794-1

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

Lab Sample ID: MB 500-422860/1

Matrix: Water

Analysis Batch: 422860

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			03/09/18 15:50	1

Lab Sample ID: LCS 500-422860/2

Matrix: Water

Analysis Batch: 422860

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	276		mg/L		110	80 - 120

Lab Sample ID: 500-141794-1 DU

Matrix: Water

Analysis Batch: 422860

Client Sample ID: G20S

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	460		442		mg/L		5	5

Lab Sample ID: MB 500-423421/1

Matrix: Water

Analysis Batch: 423421

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			03/14/18 05:54	1

Lab Sample ID: LCS 500-423421/2

Matrix: Water

Analysis Batch: 423421

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	250	296		mg/L		118	80 - 120

Lab Sample ID: 500-141794-3 DU

Matrix: Water

Analysis Batch: 423421

Client Sample ID: G30S

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	1100		1100		mg/L		2	5

Lab Sample ID: MB 500-423562/1

Matrix: Water

Analysis Batch: 423562

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			03/15/18 05:12	1

Lab Sample ID: LCS 500-423562/2

Matrix: Water

Analysis Batch: 423562

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	250	278		mg/L		111	80 - 120

TestAmerica Chicago

QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 1Q18 GW

TestAmerica Job ID: 500-141794-1

Lab Sample ID: 500-141794-7 DU
Matrix: Water
Analysis Batch: 423562

Client Sample ID: G48S
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Dissolved Solids	1000		1080		mg/L		4	5

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 500-422970/4
Matrix: Water
Analysis Batch: 422970

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			03/09/18 23:56	1

Lab Sample ID: LCS 500-422970/5
Matrix: Water
Analysis Batch: 422970

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	50.0	48.8		mg/L		98	85 - 115

Lab Sample ID: 500-141794-7 MS
Matrix: Water
Analysis Batch: 422970

Client Sample ID: G48S
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	100		50.0	141		mg/L		83	75 - 125

Lab Sample ID: 500-141794-7 MSD
Matrix: Water
Analysis Batch: 422970

Client Sample ID: G48S
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Chloride	100		50.0	145		mg/L		90	75 - 125	2	20

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 500-423125/3
Matrix: Water
Analysis Batch: 423125

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			03/10/18 14:30	1

Lab Sample ID: LCS 500-423125/4
Matrix: Water
Analysis Batch: 423125

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

TestAmerica Chicago

QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 1Q18 GW

TestAmerica Job ID: 500-141794-1

Method: SM 4500 F C - Fluoride (Continued)

Lab Sample ID: 500-141794-1 MS

Matrix: Water

Analysis Batch: 423125

Client Sample ID: G20S

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	0.76		5.00	5.83		mg/L		101	75 - 125

Lab Sample ID: 500-141794-1 MSD

Matrix: Water

Analysis Batch: 423125

Client Sample ID: G20S

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	0.76		5.00	5.83		mg/L		101	75 - 125	0	20

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 500-424332/3

Matrix: Water

Analysis Batch: 424332

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			03/21/18 07:04	1

Lab Sample ID: LCS 500-424332/4

Matrix: Water

Analysis Batch: 424332

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	20.0	19.6		mg/L		98	80 - 120

Lab Sample ID: 500-141794-11 MS

Matrix: Water

Analysis Batch: 424332

Client Sample ID: G45S

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	180		400	579		mg/L		99	75 - 125

Lab Sample ID: 500-141794-11 MSD

Matrix: Water

Analysis Batch: 424332

Client Sample ID: G45S

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	180		400	593		mg/L		103	75 - 125	2	20

TestAmerica Chicago

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 #: 500-141794

Chain of Custody Number: _____

Page _____ of _____

Temperature °C of Cooler: 1.1 → 2.6

Client <u>Midwest Generation EME LLC</u>		Client Project #		Preservative <u>3</u>		<u>3</u>		<u>8</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>Joliet #9 CCR - 1Q18 GW</u>		Parameter		<u>Radium 226/228</u>		<u>Total Metals</u>		<u>Cl, F, SO4, TDS</u>													
Project Location/State <u>Joliet, IL</u>		Lab Project #																			
Sampler <u>Noe L., Rob P</u>		Lab PM <u>Eric Long</u>																			
Lab ID	MS/MSD	Sample ID	Sampling Date	Time	# of Containers	Matrix															
<u>1</u>		<u>G205</u>	<u>03/06/18</u>	<u>0910</u>	<u>4</u>	<u>W</u>	<u>—</u>	<u>—</u>	<u>—</u>												
<u>2</u>		<u>G205 Dup</u>	<u>03/06/18</u>	<u>0910</u>	<u>4</u>	<u>W</u>	<u>—</u>	<u>—</u>	<u>—</u>												

Turnaround Time Required (Business Days)

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

Requested Due Date _____

Sample Disposal

☐ Return to Client

☐ Disposal by Lab

☐ Archive for _____ Months

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

Relinquished By <u>[Signature]</u>	Company <u>TAL</u>	Date <u>03/06/18</u>	Time <u>1555</u>	Received By <u>[Signature]</u>	Company <u>TAL</u>	Date <u>03/06/18</u>	Time <u>1555</u>	Lab Courier <u>TA</u>
Relinquished By	Company	Date	Time	Received By	Company	Date	Time	Shipped
Relinquished By	Company	Date	Time	Received By	Company	Date	Time	Hand Delivered

Matrix Key

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

Client Comments

Lab Comments:

TestAmerica

THE LEADER IN ENVIRONMENTAL

2417 Bond Street, University Park, IL 6C
Phone: 708.534.5200 Fax: 708.534



500-141794 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 #: 500-141794

Chain of Custody Number: _____

Page _____ of _____

Temperature °C of Cooler: 14 → 2.9

Client		Client Project #		Preservative		Parameter		Matrix		Comments	
Project Name		Project Location/State		Lab Project #		Lab PM					
Midwest Generation		ENE LLC		3		3		8			
Joint #9 CCR-1018 GW		Sollet, IL									
Noe L., Rob P.		Eric Lang									
Lab ID	MS/MSD	Sample ID	Date	Time	# of Containers	Matrix					
7		G485	03/08/18	0915	5	W	1	1	1		
8		G475	03/08/18	1054	5	W	1	1	1		
9		G465	03/08/18	1320	5	W	1	1	1		
10		R085	03/08/18	1420	5	W	1	1	1		

Turnaround Time Required (Business Days)

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

Requested Due Date _____

Sample Disposal

☐ Return to Client

☐ Disposal by Lab

☐ Archive for _____ Months

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

Relinquished By	Company	Date	Time	Received By	Company	Date	Time
JJ	TA	03/08/18	1535	Shawn Scott	TA-CRT	3/8/18	1535
Relinquished By	Company	Date	Time	Received By	Company	Date	Time
Relinquished By	Company	Date	Time	Received By	Company	Date	Time

Lab Courier

Shipped

Hand Delivered

Matrix Key

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

Client Comments

Lab Comments:

2417 Bond Street, University Park, IL 6041
Phone: 708.534.5200 Fax: 708.534.5201



500-141794 COC

(optional)

Report To

Contact:

Company:

Address:

Address:

Phone:

Fax:

E-Mail:

(optional)

Bill To

Contact:

Company:

Address:

Address:

Phone:

Fax:

PO#/Reference#

Chain of Custody Record

Lab Job #: 500-141794

Chain of Custody Number: _____

Page _____ of _____

Temperature °C of Cooler: $-0.3 \rightarrow 1.$

[illegible]

Turnaround Time Required (Business Days)

____ 1 Day ____ 2 Days ____ 5 Days ____ 7 Days ____ 10 Days ____ 15 Days ____ Other
Requested Due Date

Sample Disposal

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

Relinquished By 92	Company TAL	Date 03/09/18	Time 1128	Received By Shirley Ann-CH	Company CH	Date 3/9/18	Time 1128
Relinquished By	Company	Date	Time	Received By	Company	Date	Time
Relinquished By	Company	Date	Time	Received By	Company	Date	Time

Lab Courier 774

Shipped

Hand Delivered

Matrix Key

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

Client Comments

Lab Comments:

Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-141794-1

Login Number: 141794

List Source: TestAmerica Chicago

List Number: 1

Creator: Sanchez, Ariel M

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.6,2.9,1.2
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 1Q18 GW

TestAmerica Job ID: 500-141794-1

Client Sample ID: G20S

Date Collected: 03/06/18 09:10

Date Received: 03/06/18 15:55

Lab Sample ID: 500-141794-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			422468	03/07/18 06:47	JEF	TAL CHI
Total Recoverable	Analysis	6010C		1	422834	03/09/18 03:57	PJ1	TAL CHI
Total Recoverable	Prep	3005A			422468	03/07/18 06:47	JEF	TAL CHI
Total Recoverable	Analysis	6020A		1	422721	03/08/18 12:25	FXG	TAL CHI
Total Recoverable	Prep	3005A			422468	03/07/18 06:47	JEF	TAL CHI
Total Recoverable	Analysis	6020A		5	422844	03/08/18 14:23	PFK	TAL CHI
Total/NA	Prep	7470A			422527	03/07/18 11:35	EEN	TAL CHI
Total/NA	Analysis	7470A		1	422690	03/08/18 08:40	EEN	TAL CHI
Total/NA	Analysis	SM 2540C		1	422860	03/09/18 16:11	CCK	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		1	422970	03/09/18 23:58	HMW	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	423125	03/10/18 14:36	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		4	424332		CLB	TAL CHI
					(Start)	03/21/18 07:06		
					(End)	03/21/18 07:07		
Total/NA	Analysis	Field Sampling		1	423108	03/06/18 09:10	JVB	TAL CHI

Client Sample ID: G20S Dup

Date Collected: 03/06/18 09:10

Date Received: 03/06/18 15:55

Lab Sample ID: 500-141794-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			422468	03/07/18 06:47	JEF	TAL CHI
Total Recoverable	Analysis	6010C		1	422834	03/09/18 04:10	PJ1	TAL CHI
Total Recoverable	Prep	3005A			422468	03/07/18 06:47	JEF	TAL CHI
Total Recoverable	Analysis	6020A		1	422721	03/08/18 12:29	FXG	TAL CHI
Total Recoverable	Prep	3005A			422468	03/07/18 06:47	JEF	TAL CHI
Total Recoverable	Analysis	6020A		5	422844	03/08/18 14:26	PFK	TAL CHI
Total/NA	Prep	7470A			422527	03/07/18 11:35	EEN	TAL CHI
Total/NA	Analysis	7470A		1	422690	03/08/18 08:47	EEN	TAL CHI
Total/NA	Analysis	SM 2540C		1	422860	03/09/18 16:15	CCK	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		1	422970	03/09/18 23:58	HMW	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	423125	03/10/18 14:44	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		4	424332		CLB	TAL CHI
					(Start)	03/21/18 07:07		
					(End)	03/21/18 07:08		
Total/NA	Analysis	Field Sampling		1	423108	03/06/18 09:10	JVB	TAL CHI

TestAmerica Chicago

Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 1Q18 GW

TestAmerica Job ID: 500-141794-1

Client Sample ID: G30S

Date Collected: 03/07/18 09:23

Date Received: 03/07/18 16:00

Lab Sample ID: 500-141794-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			422800	03/09/18 07:03	JEF	TAL CHI
Total Recoverable	Analysis	6010C		1	423069	03/10/18 02:29	PJ1	TAL CHI
Total Recoverable	Prep	3005A			422800	03/09/18 07:03	JEF	TAL CHI
Total Recoverable	Analysis	6020A		1	423103	03/09/18 20:38	PFK	TAL CHI
Total Recoverable	Prep	3005A			422800	03/09/18 07:03	JEF	TAL CHI
Total Recoverable	Analysis	6020A		20	423196	03/12/18 11:54	FXG	TAL CHI
Total Recoverable	Prep	3005A			422800	03/09/18 07:03	JEF	TAL CHI
Total Recoverable	Analysis	6020A		1	423196	03/12/18 17:25	FXG	TAL CHI
Total/NA	Prep	7470A			422891	03/09/18 12:10	EEN	TAL CHI
Total/NA	Analysis	7470A		1	423140	03/12/18 10:49	EEN	TAL CHI
Total/NA	Analysis	SM 2540C		1	423421	03/14/18 06:40	CLB	TAL CHI
Total/NA	Analysis	SM 4500 CI- E		5	422970	03/10/18 00:20	HMW	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	423125	03/10/18 14:48	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		20	424332		CLB	TAL CHI
					(Start)	03/21/18 07:08		
					(End)	03/21/18 07:09		
Total/NA	Analysis	Field Sampling		1	423108	03/07/18 09:23	JVB	TAL CHI

Client Sample ID: R32S

Date Collected: 03/07/18 11:14

Date Received: 03/07/18 16:00

Lab Sample ID: 500-141794-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			422626	03/08/18 06:51	JEF	TAL CHI
Total Recoverable	Analysis	6010C		1	423418	03/14/18 05:28	PJ1	TAL CHI
Total Recoverable	Prep	3005A			422626	03/08/18 06:51	JEF	TAL CHI
Total Recoverable	Analysis	6020A		1	422844	03/08/18 21:30	PFK	TAL CHI
Total Recoverable	Prep	3005A			422626	03/08/18 06:51	JEF	TAL CHI
Total Recoverable	Analysis	6020A		1	423107	03/09/18 11:48	FXG	TAL CHI
Total Recoverable	Prep	3005A			422626	03/08/18 06:51	JEF	TAL CHI
Total Recoverable	Analysis	6020A		20	423196	03/12/18 12:36	FXG	TAL CHI
Total/NA	Prep	7470A			422713	03/08/18 11:55	EEN	TAL CHI
Total/NA	Analysis	7470A		1	422884	03/09/18 09:48	EEN	TAL CHI
Total/NA	Analysis	SM 2540C		1	423421	03/14/18 06:45	CLB	TAL CHI
Total/NA	Analysis	SM 4500 CI- E		5	422970	03/10/18 00:21	HMW	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	423125	03/10/18 14:50	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		20	424332		CLB	TAL CHI
					(Start)	03/21/18 07:09		
					(End)	03/21/18 07:10		
Total/NA	Analysis	Field Sampling		1	423108	03/07/18 11:14	JVB	TAL CHI

TestAmerica Chicago

Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 1Q18 GW

TestAmerica Job ID: 500-141794-1

Client Sample ID: T03S

Date Collected: 03/07/18 13:08

Date Received: 03/07/18 16:00

Lab Sample ID: 500-141794-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			422626	03/08/18 06:51	JEF	TAL CHI
Total Recoverable	Analysis	6010C		1	423418	03/14/18 05:33	PJ1	TAL CHI
Total Recoverable	Prep	3005A			422626	03/08/18 06:51	JEF	TAL CHI
Total Recoverable	Analysis	6020A		1	422844	03/08/18 21:33	PFK	TAL CHI
Total Recoverable	Prep	3005A			422626	03/08/18 06:51	JEF	TAL CHI
Total Recoverable	Analysis	6020A		1	423107	03/09/18 11:52	FXG	TAL CHI
Total Recoverable	Prep	3005A			422626	03/08/18 06:51	JEF	TAL CHI
Total Recoverable	Analysis	6020A		5	423196	03/12/18 12:39	FXG	TAL CHI
Total/NA	Prep	7470A			422713	03/08/18 11:55	EEN	TAL CHI
Total/NA	Analysis	7470A		1	422884	03/09/18 09:49	EEN	TAL CHI
Total/NA	Analysis	SM 2540C		1	423421	03/14/18 06:48	CLB	TAL CHI
Total/NA	Analysis	SM 4500 CI- E		5	422970	03/10/18 00:21	HMW	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	423125	03/10/18 14:53	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		20	424332		CLB	TAL CHI
					(Start)	03/21/18 07:10		
					(End)	03/21/18 07:11		
Total/NA	Analysis	Field Sampling		1	423108	03/07/18 13:08	JVB	TAL CHI

Client Sample ID: G44S

Date Collected: 03/07/18 14:14

Date Received: 03/07/18 16:00

Lab Sample ID: 500-141794-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			422626	03/08/18 06:51	JEF	TAL CHI
Total Recoverable	Analysis	6010C		1	423418	03/14/18 05:37	PJ1	TAL CHI
Total Recoverable	Prep	3005A			422626	03/08/18 06:51	JEF	TAL CHI
Total Recoverable	Analysis	6020A		1	422844	03/08/18 21:37	PFK	TAL CHI
Total Recoverable	Prep	3005A			422626	03/08/18 06:51	JEF	TAL CHI
Total Recoverable	Analysis	6020A		1	423107	03/09/18 11:56	FXG	TAL CHI
Total Recoverable	Prep	3005A			422626	03/08/18 06:51	JEF	TAL CHI
Total Recoverable	Analysis	6020A		5	423196	03/12/18 12:43	FXG	TAL CHI
Total/NA	Prep	7470A			422713	03/08/18 11:55	EEN	TAL CHI
Total/NA	Analysis	7470A		1	422884	03/09/18 09:56	EEN	TAL CHI
Total/NA	Analysis	SM 2540C		1	423421	03/14/18 06:50	CLB	TAL CHI
Total/NA	Analysis	SM 4500 CI- E		1	422970	03/10/18 00:00	HMW	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	423125	03/10/18 14:56	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		10	424332		CLB	TAL CHI
					(Start)	03/21/18 07:11		
					(End)	03/21/18 07:12		
Total/NA	Analysis	Field Sampling		1	423108	03/07/18 14:14	JVB	TAL CHI

TestAmerica Chicago

Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 1Q18 GW

TestAmerica Job ID: 500-141794-1

Client Sample ID: G48S

Date Collected: 03/08/18 09:15

Date Received: 03/08/18 15:35

Lab Sample ID: 500-141794-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			422800	03/09/18 07:03	JEF	TAL CHI
Total Recoverable	Analysis	6010C		1	423069	03/10/18 02:33	PJ1	TAL CHI
Total Recoverable	Prep	3005A			422800	03/09/18 07:03	JEF	TAL CHI
Total Recoverable	Analysis	6020A		1	423103	03/09/18 20:41	PFK	TAL CHI
Total Recoverable	Prep	3005A			422800	03/09/18 07:03	JEF	TAL CHI
Total Recoverable	Analysis	6020A		20	423196	03/12/18 11:58	FXG	TAL CHI
Total Recoverable	Prep	3005A			422800	03/09/18 07:03	JEF	TAL CHI
Total Recoverable	Analysis	6020A		1	423196	03/12/18 17:29	FXG	TAL CHI
Total/NA	Prep	7470A			422891	03/09/18 12:10	EEN	TAL CHI
Total/NA	Analysis	7470A		1	423140	03/12/18 10:54	EEN	TAL CHI
Total/NA	Analysis	SM 2540C		1	423562	03/15/18 05:17	CLB	TAL CHI
Total/NA	Analysis	SM 4500 CI- E		5	422970	03/10/18 00:22	HMW	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	423125	03/10/18 15:08	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		20	424332		CLB	TAL CHI
					(Start)	03/21/18 07:12		
					(End)	03/21/18 07:13		
Total/NA	Analysis	Field Sampling		1	423108	03/08/18 09:15	JVB	TAL CHI

Client Sample ID: G47S

Date Collected: 03/08/18 10:54

Date Received: 03/08/18 15:35

Lab Sample ID: 500-141794-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			422800	03/09/18 07:03	JEF	TAL CHI
Total Recoverable	Analysis	6010C		1	423069	03/10/18 02:38	PJ1	TAL CHI
Total Recoverable	Prep	3005A			422800	03/09/18 07:03	JEF	TAL CHI
Total Recoverable	Analysis	6020A		1	423103	03/09/18 20:45	PFK	TAL CHI
Total Recoverable	Prep	3005A			422800	03/09/18 07:03	JEF	TAL CHI
Total Recoverable	Analysis	6020A		100	423196	03/12/18 12:02	FXG	TAL CHI
Total Recoverable	Prep	3005A			422800	03/09/18 07:03	JEF	TAL CHI
Total Recoverable	Analysis	6020A		1	423196	03/12/18 17:32	FXG	TAL CHI
Total/NA	Prep	7470A			422891	03/09/18 12:10	EEN	TAL CHI
Total/NA	Analysis	7470A		1	423140	03/12/18 10:55	EEN	TAL CHI
Total/NA	Analysis	SM 2540C		1	423562	03/15/18 05:22	CLB	TAL CHI
Total/NA	Analysis	SM 4500 CI- E		5	422970	03/10/18 00:23	HMW	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	423125	03/10/18 15:11	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		50	424332		CLB	TAL CHI
					(Start)	03/21/18 07:13		
					(End)	03/21/18 07:14		
Total/NA	Analysis	Field Sampling		1	423108	03/08/18 10:54	JVB	TAL CHI

TestAmerica Chicago

Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 1Q18 GW

TestAmerica Job ID: 500-141794-1

Client Sample ID: G46S

Date Collected: 03/08/18 13:20

Date Received: 03/08/18 15:35

Lab Sample ID: 500-141794-9

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			422800	03/09/18 07:03	JEF	TAL CHI
Total Recoverable	Analysis	6010C		1	423069	03/10/18 02:43	PJ1	TAL CHI
Total Recoverable	Prep	3005A			422800	03/09/18 07:03	JEF	TAL CHI
Total Recoverable	Analysis	6020A		1	423103	03/09/18 20:49	PFK	TAL CHI
Total Recoverable	Prep	3005A			422800	03/09/18 07:03	JEF	TAL CHI
Total Recoverable	Analysis	6020A		20	423196	03/12/18 12:05	FXG	TAL CHI
Total Recoverable	Prep	3005A			422800	03/09/18 07:03	JEF	TAL CHI
Total Recoverable	Analysis	6020A		1	423196	03/12/18 17:36	FXG	TAL CHI
Total/NA	Prep	7470A			422891	03/09/18 12:10	EEN	TAL CHI
Total/NA	Analysis	7470A		1	423140	03/12/18 10:57	EEN	TAL CHI
Total/NA	Analysis	SM 2540C		1	423562	03/15/18 05:24	CLB	TAL CHI
Total/NA	Analysis	SM 4500 CI- E		5	422970	03/10/18 00:24	HMW	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	423125	03/10/18 15:13	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		20	424332		CLB	TAL CHI
					(Start)	03/21/18 07:16		
					(End)	03/21/18 07:17		
Total/NA	Analysis	Field Sampling		1	423108	03/08/18 13:20	JVB	TAL CHI

Client Sample ID: R08S

Date Collected: 03/08/18 14:20

Date Received: 03/08/18 15:35

Lab Sample ID: 500-141794-10

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			422800	03/09/18 07:03	JEF	TAL CHI
Total Recoverable	Analysis	6010C		1	423069	03/10/18 02:48	PJ1	TAL CHI
Total Recoverable	Prep	3005A			422800	03/09/18 07:03	JEF	TAL CHI
Total Recoverable	Analysis	6020A		1	423103	03/09/18 20:53	PFK	TAL CHI
Total Recoverable	Prep	3005A			422800	03/09/18 07:03	JEF	TAL CHI
Total Recoverable	Analysis	6020A		20	423196	03/12/18 12:09	FXG	TAL CHI
Total Recoverable	Prep	3005A			422800	03/09/18 07:03	JEF	TAL CHI
Total Recoverable	Analysis	6020A		1	423196	03/12/18 17:40	FXG	TAL CHI
Total/NA	Prep	7470A			422891	03/09/18 12:10	EEN	TAL CHI
Total/NA	Analysis	7470A		1	423140	03/12/18 10:59	EEN	TAL CHI
Total/NA	Analysis	SM 2540C		1	423562	03/15/18 05:27	CLB	TAL CHI
Total/NA	Analysis	SM 4500 CI- E		5	422970	03/10/18 00:24	HMW	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	423125	03/10/18 15:16	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		20	424332		CLB	TAL CHI
					(Start)	03/21/18 07:17		
					(End)	03/21/18 07:18		
Total/NA	Analysis	Field Sampling		1	423108	03/08/18 14:20	JVB	TAL CHI

TestAmerica Chicago

Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 1Q18 GW

TestAmerica Job ID: 500-141794-1

Client Sample ID: G45S

Lab Sample ID: 500-141794-11

Date Collected: 03/09/18 09:51

Matrix: Water

Date Received: 03/09/18 11:28

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			422977	03/10/18 11:36	BDE	TAL CHI
Total Recoverable	Analysis	6010C		1	423418	03/14/18 04:54	PJ1	TAL CHI
Total Recoverable	Prep	3005A			422977	03/10/18 11:36	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	423268	03/13/18 00:20	FXG	TAL CHI
Total/NA	Prep	7470A			423143	03/12/18 12:30	EEN	TAL CHI
Total/NA	Analysis	7470A		1	423278	03/13/18 09:14	EEN	TAL CHI
Total/NA	Analysis	SM 2540C		1	423562	03/15/18 05:30	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		5	422970	03/10/18 00:25	HMW	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	423125	03/10/18 15:18	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		10	424332	03/21/18 07:18 (Start) 03/21/18 07:19 (End)	CLB	TAL CHI
Total/NA	Analysis	Field Sampling		1	423108	03/09/18 09:51	JVB	TAL CHI

Laboratory References:

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

TestAmerica Chicago

2417 Bond St
University Park, IL 60484-3182
Tel: 708 534 5200 Fax: 708 534 5211

Sample ID: G20S
Facility: Midwest Generation-Joliet #9 CCR
Job #: 500-141794-1

Type Sample: Ground Water Surface Water Leachate Other: _____
(circle one)
Equipment Used: Purging _____ Bladder Pump _____ Dedicated ☒ (Y/N)
Sampling _____ Bladder Pump _____ Dedicated ☒ (Y/N)

PURGING INFORMATION

Purge Date: 03/06/18 Start Purge: 0850 End Purge: 0910
(2400 Hr. Clock)
Water Volume in Casing (gallons): N/A Volume Purged (gallons): 0.13

MEASUREMENTS

Well Diameter 2.0 (inches) 1st 2nd Final
Stick Up 2.78 (ft) pH 7.30 7.32 7.32 (std.)
Ref. Measuring Pt. TIC SC 630 632 632 (umhos/cm)
Well Elevation *580.33 (ft./msl) Temp. 9.51 9.77 9.77 (°C)
Water Level 46.65 (ft.) Well Stabilization / Recharge Grid
Ground Water Elev. 533.68 (ft./msl)
Well Bottom Elevation *442.28 (ft./msl)

COMMENTS

Sample Appearance/Odor: Colorless, Clear, Slight Odor
Weather Conditions: 31°F, Cloudy, SE winds 5-10 mph

Other: *Reference Measurement

Depth To Water from L.S. = 46.65 - 2.78 = 43.87 (ft.)

Levels were taken on 03/06/18 @ 0840

Sampler Name (Print): Noe Lopez Signature: [Signature]

TestAmerica Chicago

2417 Bond St
University Park, IL 60484-3182
Tel: 708 534 5200 Fax: 708 534 5211

Sample ID: G20S Dup
Facility: Midwest Generation-Joliet #9 CCR
Job #: 500-141794-2

Type Sample: Ground Water Surface Water Leachate Other: _____
(circle one)
Equipment Used: Purging _____ Bladder Pump _____ Dedicated (Y/N)
Sampling _____ Bladder Pump _____ Dedicated (Y/N)

PURGING INFORMATION

Purge Date: _____ Start Purge: _____ End Purge: _____
(2400 Hr. Clock)
Water Volume in Casing (gallons): N/A Volume Purged (gallons): _____

MEASUREMENTS

Well Diameter 2.0 (inches) 1st 2nd Final
Stick Up 2.78 (ft) pH _____ (std.)
Ref. Measuring Pt. TIC SC _____ (umhos/cm)
Well Elevation *580.33 (ft./msl) Temp. _____ (°C)
Water Level _____ (ft.) Well Stabilization / Recharge Grid
Ground Water Elev. _____ (ft./msl)
Well Bottom Elevation *442.28 (ft./msl)

COMMENTS

Sample Appearance/Odor: _____
Weather Conditions: _____
Other: *Reference Measurement
Depth To Water from L.S. = _____
Levels were taken on _____ @ _____

Sampler Name (Print): Noe Lopez Signature: [Signature]

TestAmerica Chicago

2417 Bond St
University Park, IL 60484-3182
Tel: 708 534 5200 Fax: 708 534 5211

Sample ID: G30S
Facility: Midwest Generation-Joliet #9 CCR
Job #: 500-141794-3

Type Sample: Ground Water Surface Water Leachate Other: _____
(circle one)
Equipment Used: Purging _____ Bladder Pump _____ Dedicated (N)
Sampling _____ Bladder Pump _____ Dedicated (N)

PURGING INFORMATION

Purge Date: 03/07/18 Start Purge: 0905 End Purge: 0923
(2400 Hr. Clock)
Water Volume in Casing (gallons): N/A Volume Purged (gallons): 0.23

MEASUREMENTS

Well Diameter 2.0 (inches) 1st 2nd Final
Stick Up 2.31 (ft) pH 7.98 7.97 7.97 (std.)
Ref. Measuring Pt. TIC SC 1,550 1,550 1,550 (umhos/cm)
Well Elevation *524.40 (ft./msl) Temp. 6.59 6.60 6.60 (°C)
Water Level 1.48 (ft.) Well Stabilization / Recharge Grid
Ground Water Elev. 522.92 (ft./msl)
Well Bottom Elevation *462.58 (ft./msl)

COMMENTS

Sample Appearance/Odor: Colorless, Clear, Moderate Odor
Weather Conditions: 30°F, Mostly Cloudy, NW winds @ 10-15 mph

Other: *Reference Measurement

Depth To Water from L.S. = 1.48 - 2.31 = -0.83 (ft.)

Levels were taken on 03/07/18 @ 0845.

Sampler Name (Print): Noe Lopez Signature: [Signature]

TestAmerica Chicago

2417 Bond St
University Park, IL 60484-3182
Tel: 708 534 5200 Fax: 708 534 5211

Sample ID: R32S
Facility: Midwest Generation-Joliet #9 CCR
Job #: 500-141794-4

Type Sample: Ground Water Surface Water Leachate Other: _____
(circle one)
Equipment Used: Purging _____ Bladder Pump _____ Dedicated (Y/N)
Sampling _____ Bladder Pump _____ Dedicated (Y/N)

PURGING INFORMATION

Purge Date: 03/07/18 Start Purge: 1055 End Purge: 1114
(2400 Hr. Clock)
Water Volume in Casing (gallons): N/A Volume Purged (gallons): 1.23

MEASUREMENTS

Well Diameter 2.0 (inches) 1st 2nd Final
Stick Up 2.03 (ft) pH 7.56 7.57 7.57 (std.)
Ref. Measuring Pt. TIC SC 1023 1019 1019 (umhos/cm)
Well Elevation *536.81 (ft./msl) Temp. 10.33 10.29 10.29 (°C)
Water Level 16.98 (ft.) Well Stabilization / Recharge Grid
Ground Water Elev. 519.83 (ft./msl)
Well Bottom Elevation *457.84 (ft./msl)

COMMENTS

Sample Appearance/Odor: Colorless, clear, No Odor
Weather Conditions: 32°F, Partly Cloudy, NW winds @ 10-15 mph

Other: *Reference Measurement

Depth To Water from L.S. = 16.98 - 2.03 = 14.95 (ft.)

Levels were taken on 03/07/18 @ 1045

Sampler Name (Print): Noe Lopez Signature: [Signature]

TestAmerica Chicago

2417 Bond St
University Park, IL 60484-3182
Tel: 708 534 5200 Fax: 708 534 5211

Sample ID: T03S
Facility: Midwest Generation-Joliet #9 CCR
Job #: 500-141794-5

Type Sample: Ground Water Surface Water Leachate Other: _____
(circle one)
Equipment Used: Purging _____ Bladder Pump _____ Dedicated ☒ (Y/N)
Sampling _____ Bladder Pump _____ Dedicated ☒ (Y/N)

PURGING INFORMATION

Purge Date: 03/07/18 Start Purge: 1250 End Purge: 1308
(2400 Hr. Clock)
Water Volume in Casing (gallons): N/A Volume Purged (gallons): 0.46

MEASUREMENTS

Well Diameter <u>2.0</u> (inches)	1st	2nd	Final																														
Stick Up <u>3.08</u> (ft)	pH <u>7.35</u>	<u>7.34</u>	<u>7.34</u> (std.)																														
Ref. Measuring Pt. <u>TIC</u>	SC <u>1180</u>	<u>1176</u>	<u>1176</u> (umhos/cm)																														
Well Elevation * <u>629.65</u> (ft./msl)	Temp. <u>9.59</u>	<u>9.75</u>	<u>9.75</u> (°C)																														
Water Level <u>131.05</u> (ft.)	Well Stabilization / Recharge Grid																																
Ground Water Elev. <u>498.60</u> (ft./msl)	<table border="1" style="width: 100%; height: 40px;"> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>																																
Well Bottom Elevation * <u>456.70</u> (ft./msl)																																	

COMMENTS

Sample Appearance/Odor: Colorless, Clear, No Odor
Weather Conditions: 33°F, Mostly Cloudy, NW winds @ 10-15 mph

Other: *Reference Measurement

Depth To Water from L.S. = 131.05 - 3.08 = 127.97 (ft.)

Levels were taken on 03/07/18 @ 1240.

* Total Depth = 172.95

Sampler Name (Print): Noe Lopez Signature: [Signature]

TestAmerica Chicago

2417 Bond St
University Park, IL 60484-3182
Tel: 708 534 5200 Fax: 708 534 5211

Sample ID: G44S
Facility: Midwest Generation-Joliet #9 CCR
Job #: 500-141794-6

Type Sample: Ground Water Surface Water Leachate Other: _____
(circle one)
Equipment Used: Purging _____ Bladder Pump _____ Dedicated (Y)
Sampling _____ Bladder Pump _____ Dedicated (Y)

PURGING INFORMATION

Purge Date: 03/07/18 Start Purge: 1400 End Purge: 1414
(2400 Hr. Clock)
Water Volume in Casing (gallons): N/A Volume Purged (gallons): 0.45

MEASUREMENTS

	1st	2nd	Final																					
Well Diameter <u>2.0</u> (inches)																								
Stick Up <u>2.18</u> (ft)	pH <u>7.18</u>	<u>7.19</u>	<u>7.19</u>	(std.)																				
Ref. Measuring Pt. <u>TIC</u>	SC <u>884</u>	<u>884</u>	<u>884</u>	(umhos/cm)																				
Well Elevation <u>*586.69</u> (ft./msl)	Temp. <u>9.86</u>	<u>9.97</u>	<u>9.97</u>	(°C)																				
Water Level <u>78.74</u> (ft.)	Well Stabilization / Recharge Grid																							
Ground Water Elev. <u>507.95</u> (ft./msl)	<table border="1" style="width: 100%; height: 40px;"> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>																							
Well Bottom Elevation <u>*455.11</u> (ft./msl)																								

COMMENTS

Sample Appearance/Odor: Colorless, Clear, No Odor
Weather Conditions: 33°F, Partly Cloudy, NW winds @ 10-15 mph

Other: *Reference Measurement

Depth To Water from L.S. = 78.74 - 2.18 = 76.56 (ft.)

Levels were taken on 03/07/18 @ 1350

Sampler Name (Print): Noe Lopez

Signature: [Signature]

TestAmerica Chicago

2417 Bond St
University Park, IL 60484-3182
Tel: 708 534 5200 Fax: 708 534 5211

Sample ID: G48S
Facility: Midwest Generation-Joliet #9 CCR
Job #: 500-141794-7

Type Sample: Ground Water Surface Water Leachate Other: _____
(circle one)
Equipment Used: Purging _____ Bladder Pump _____ Dedicated ☒ (N)
Sampling _____ Bladder Pump _____ Dedicated ☒ (N)

PURGING INFORMATION

Purge Date: 03/08/18 Start Purge: 0855 End Purge: 0915
(2400 Hr. Clock)
Water Volume in Casing (gallons): N/A Volume Purged (gallons): 0.77

MEASUREMENTS

Well Diameter 4.0 (inches) 1st 2nd Final
Stick Up 2.45 (ft) pH 8.14 8.13 8.13 (std.)
Ref. Measuring Pt. TIC SC 1486 1493 1493 (umhos/cm)
Well Elevation *620.77 (ft./msl) Temp. 9.48 9.50 9.50 (°C)
Water Level 99.77 (ft.) Well Stabilization / Recharge Grid
Ground Water Elev. 521.00 (ft./msl)
Well Bottom Elevation *468.32 (ft./msl)

COMMENTS

Sample Appearance/Odor: Colorless, Clear, Strong Odor
Weather Conditions: 28°F, Sunny, N W winds @ 10-15 mph

Other: *Reference Measurement

Depth To Water from L.S. = 99.77 - 2.45 = 97.32 (ft.)

Levels were taken on 03/08/18 @ 0840

Sampler Name (Print): Noe Lopez

Signature: [Signature]

TestAmerica Chicago

2417 Bond St
University Park, IL 60484-3182
Tel: 708 534 5200 Fax: 708 534 5211

Sample ID: G47S
Facility: Midwest Generation-Joliet #9 CCR
Job #: 500-141794-8

Type Sample: Ground Water Surface Water Leachate Other: _____
(circle one)
Equipment Used: Purging _____ Bladder Pump _____ Dedicated ☒ (Y/N)
Sampling _____ Bladder Pump _____ Dedicated ☒ (Y/N)

PURGING INFORMATION

Purge Date: 03/08/18 Start Purge: 1035 End Purge: 1054
(2400 Hr. Clock)
Water Volume in Casing (gallons): N/A Volume Purged (gallons): 0.61

MEASUREMENTS

Well Diameter 4.0 (Inches) 1st 2nd Final
Stick Up 2.50 (ft) pH 10.66 10.67 10.67 (std.)
Ref. Measuring Pt. TIC SC 2560 2560 2560 (umhos/cm)
Well Elevation *612.32 (ft./msl) Temp. 10.91 11.14 11.14 (°C)
Water Level 93.63 (ft.) Well Stabilization / Recharge Grid
Ground Water Elev. 518.69 (ft./msl)
Well Bottom Elevation *459.84 (ft./msl)

COMMENTS

Sample Appearance/Odor: Colorless, Clear, Slight Odor
Weather Conditions: 31°F, Partly Cloudy, NW winds 10-15 mph

Other: *Reference Measurement

Depth To Water from L.S. = 93.63 - 2.50 = 91.13 (ft.)

Levels were taken on 03/08/18 @ 1025.

Sampler Name (Print): Noe Lopez Signature: [Signature]

TestAmerica Chicago

2417 Bond St
University Park, IL 60484-3182
Tel: 708 534 5200 Fax: 708 534 5211

Sample ID: G46S
Facility: Midwest Generation-Joliet #9 CCR
Job #: 500-141794-9

Type Sample: Ground Water Surface Water Leachate Other: _____
(circle one)
Equipment Used: Purging _____ Bladder Pump _____ Dedicated (Y/N)
Sampling _____ Bladder Pump _____ Dedicated (Y/N)

PURGING INFORMATION

Purge Date: 03/08/18 Start Purge: 1300 End Purge: 1320
(2400 Hr. Clock)
Water Volume in Casing (gallons): N/A Volume Purged (gallons): 0.90

MEASUREMENTS

Well Diameter 4.0 (Inches) 1st 2nd Final
Stick Up 2.70 (ft) pH 7.76 7.75 7.75 (std.)
Ref. Measuring Pt. TIC SC 1253 1263 1263 (umhos/cm)
Well Elevation *601.32 (ft./msl) Temp. 11.64 11.60 11.60 (°C)
Water Level 96.80 (ft.) Well Stabilization / Recharge Grid
Ground Water Elev. 504.52 (ft./msl)
Well Bottom Elevation *453.62 (ft./msl)

COMMENTS

Sample Appearance/Odor: Colorless, Clear, No Odor
Weather Conditions: 32°F, Cloudy, NW winds @ 10-15 mph

Other: *Reference Measurement

Depth To Water from L.S. = 96.80 - 2.70 = 94.10 (ft)

Levels were taken on 03/08/18 @ 1250.

Sampler Name (Print): Noe Lopez Signature: [Signature]

TestAmerica Chicago

2417 Bond St
University Park, IL 60484-3182
Tel: 708 534 5200 Fax: 708 534 5211

Sample ID: R08S
Facility: Midwest Generation-Joliet #9 CCR
Job #: 500-141794-10

Type Sample: Ground Water Surface Water Leachate Other: _____
(circle one)
Equipment Used: Purging _____ Bladder Pump Dedicated ☒ (Y/N)
Sampling _____ Bladder Pump Dedicated ☒ (Y/N)

PURGING INFORMATION

Purge Date: 03/08/18 Start Purge: 1405 End Purge: 1420
(2400 Hr. Clock)
Water Volume in Casing (gallons): N/A Volume Purged (gallons): 0.77

MEASUREMENTS

Well Diameter 2.0 (Inches) 1st 2nd Final
Stick Up 2.55 (ft) pH 8.63 8.62 8.62 (std.)
Ref. Measuring Pt. TIC SC 1015 1010 1010 (umhos/cm)
Well Elevation *578.65 (ft./msl) Temp. 11.09 11.11 11.11 (°C)
Water Level 65.12 (ft.) Well Stabilization / Recharge Grid
Ground Water Elev. 513.53 (ft./msl)
Well Bottom Elevation *453.08 (ft./msl)

COMMENTS

Sample Appearance/Odor: Colorless, Clear, No Odor
Weather Conditions: 32° F, Cloudy, W winds @ 10-15 mph

Other: *Reference Measurement (Well ID updated 11-25-15)

Depth To Water from L.S. = 65.12 - 2.55 = 62.57 (ft.)

Levels were taken on 03/08/18 @ 1355

Sampler Name (Print): Noe Lopez Signature: [Signature]

TestAmerica Chicago

2417 Bond St
University Park, IL 60484-3182
Tel: 708 534 5200 Fax: 708 534 5211

Sample ID: G45S
Facility: Midwest Generation-Joliet #9 CCR
Job #: 500-141794-1

Type Sample: Ground Water Surface Water Leachate Other: _____
(circle one)
Equipment Used: Purging _____ Bladder Pump _____ Dedicated ☒ (Y/N)
Sampling _____ Bladder Pump _____ Dedicated ☒ (Y/N)

PURGING INFORMATION

Purge Date: 03/09/18 Start Purge: 09:35 End Purge: 09:51
(2400 Hr. Clock)

Water Volume in Casing (gallons): N/A Volume Purged (gallons): 1.03

MEASUREMENTS

Well Diameter 2.0 (inches) 1st 2nd Final
Stick Up 2.97 (ft) pH 7.20 7.18 7.18 (std.)
Ref. Measuring Pt. TIC SC 970 967 967 (umhos/cm)
Well Elevation *603.31 (ft./msl) Temp. 12.51 12.50 12.50 (°C)
Water Level 61.82 (ft.) Well Stabilization / Recharge Grid
Ground Water Elev. 541.49 (ft./msl)
Well Bottom Elevation *471.05 (ft./msl)

COMMENTS

Sample Appearance/Odor: Colorless, Clear, Moderate Odor
Weather Conditions: 30°F, Fair, W winds @ 0-5 mph

Other: *Reference Measurement

Depth To Water from L.S. = 61.82 - 2.97 = 58.85 (ft.)

Levels were taken on 03/09/18 @ 0920

Sampler Name (Print): Noe Lopez Signature: [Signature]

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Chicago

2417 Bond Street

University Park, IL 60484

Tel: (708)534-5200

TestAmerica Job ID: 500-141794-2

Client Project/Site: Joliet #9 CCR - 1Q18 GW

For:

KPRG and Associates, Inc.

14665 West Lisbon Road,

Suite 2B

Brookfield, Wisconsin 53005

Attn: Richard Gnat



Authorized for release by:

4/8/2018 8:10:12 AM

Eric Lang, Manager of Project Management

(708)534-5200

eric.lang@testamericainc.com

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www.testamericainc.com

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

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

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Case Narrative

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 1Q18 GW

TestAmerica Job ID: 500-141794-2

Job ID: 500-141794-2

Laboratory: TestAmerica Chicago

Narrative

Job Narrative
500-141794-2

Comments

No additional comments.

Receipt

The samples were received on 3/6/2018 3:55 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.6° C and 2.9° C.

RAD

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

Method Summary

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 1Q18 GW

TestAmerica Job ID: 500-141794-2

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

Protocol References:

EPA = US Environmental Protection Agency

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: Joliet #9 CCR - 1Q18 GW

TestAmerica Job ID: 500-141794-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-141794-1	G20S	Water	03/06/18 09:10	03/06/18 15:55
500-141794-2	G20S Dup	Water	03/06/18 09:10	03/06/18 15:55
500-141794-3	G30S	Water	03/07/18 09:23	03/07/18 16:00
500-141794-4	R32S	Water	03/07/18 11:14	03/07/18 16:00
500-141794-5	T03S	Water	03/07/18 13:08	03/07/18 16:00
500-141794-6	G44S	Water	03/07/18 14:14	03/07/18 16:00
500-141794-7	G48S	Water	03/08/18 09:15	03/08/18 15:35
500-141794-8	G47S	Water	03/08/18 10:54	03/08/18 15:35
500-141794-9	G46S	Water	03/08/18 13:20	03/08/18 15:35
500-141794-10	R08S	Water	03/08/18 14:20	03/08/18 15:35
500-141794-11	G45S	Water	03/09/18 09:51	03/09/18 11:28

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 1Q18 GW

TestAmerica Job ID: 500-141794-2

Client Sample ID: G20S
Date Collected: 03/06/18 09:10
Date Received: 03/06/18 15:55

Lab Sample ID: 500-141794-1
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	1.52		0.210	0.250	1.00	0.0796	pCi/L	03/12/18 09:18	04/04/18 09:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.2		40 - 110					03/12/18 09:18	04/04/18 09:19	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	1.32		0.319	0.341	1.00	0.386	pCi/L	03/12/18 10:23	03/21/18 14:45	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.2		40 - 110					03/12/18 10:23	03/21/18 14:45	1
Y Carrier	92.3		40 - 110					03/12/18 10:23	03/21/18 14:45	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	2.83		0.382	0.423	5.00	0.386	pCi/L		04/04/18 16:12	1

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 1Q18 GW

TestAmerica Job ID: 500-141794-2

Client Sample ID: G20S Dup

Date Collected: 03/06/18 09:10

Date Received: 03/06/18 15:55

Lab Sample ID: 500-141794-2

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	1.29		0.193	0.225	1.00	0.0905	pCi/L	03/12/18 09:18	04/04/18 09:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.6		40 - 110					03/12/18 09:18	04/04/18 09:19	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	1.90		0.339	0.381	1.00	0.341	pCi/L	03/12/18 10:23	03/21/18 14:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.6		40 - 110					03/12/18 10:23	03/21/18 14:46	1
Y Carrier	92.0		40 - 110					03/12/18 10:23	03/21/18 14:46	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	3.18		0.390	0.442	5.00	0.341	pCi/L		04/04/18 16:12	1

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 1Q18 GW

TestAmerica Job ID: 500-141794-2

Client Sample ID: G30S
Date Collected: 03/07/18 09:23
Date Received: 03/07/18 16:00

Lab Sample ID: 500-141794-3
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	0.780		0.150	0.166	1.00	0.0905	pCi/L	03/12/18 09:18	04/04/18 09:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					03/12/18 09:18	04/04/18 09:19	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	1.16		0.322	0.339	1.00	0.419	pCi/L	03/12/18 10:23	03/21/18 14:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					03/12/18 10:23	03/21/18 14:46	1
Y Carrier	89.7		40 - 110					03/12/18 10:23	03/21/18 14:46	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	1.94		0.355	0.377	5.00	0.419	pCi/L		04/04/18 16:12	1

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 1Q18 GW

TestAmerica Job ID: 500-141794-2

Client Sample ID: R32S
Date Collected: 03/07/18 11:14
Date Received: 03/07/18 16:00

Lab Sample ID: 500-141794-4
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	1.32		0.197	0.230	1.00	0.0896	pCi/L	03/12/18 09:18	04/04/18 09:20	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					03/12/18 09:18	04/04/18 09:20	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	1.24		0.288	0.310	1.00	0.339	pCi/L	03/12/18 10:23	03/21/18 14:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					03/12/18 10:23	03/21/18 14:32	1
Y Carrier	90.8		40 - 110					03/12/18 10:23	03/21/18 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	2.56		0.349	0.386	5.00	0.339	pCi/L		04/04/18 16:12	1

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 1Q18 GW

TestAmerica Job ID: 500-141794-2

Client Sample ID: T03S
Date Collected: 03/07/18 13:08
Date Received: 03/07/18 16:00

Lab Sample ID: 500-141794-5
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	0.808		0.161	0.177	1.00	0.0944	pCi/L	03/12/18 09:18	04/04/18 09:20	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.1		40 - 110					03/12/18 09:18	04/04/18 09:20	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	0.488		0.231	0.235	1.00	0.329	pCi/L	03/12/18 10:23	03/21/18 14:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.1		40 - 110					03/12/18 10:23	03/21/18 14:32	1
Y Carrier	90.5		40 - 110					03/12/18 10:23	03/21/18 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	1.30		0.282	0.294	5.00	0.329	pCi/L		04/04/18 16:12	1

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 1Q18 GW

TestAmerica Job ID: 500-141794-2

Client Sample ID: G44S

Date Collected: 03/07/18 14:14

Date Received: 03/07/18 16:00

Lab Sample ID: 500-141794-6

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	0.480		0.126	0.133	1.00	0.0907	pCi/L	03/12/18 09:18	04/04/18 09:20	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.2		40 - 110					03/12/18 09:18	04/04/18 09:20	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	0.825		0.269	0.280	1.00	0.351	pCi/L	03/12/18 10:23	03/21/18 14:33	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.2		40 - 110					03/12/18 10:23	03/21/18 14:33	1
Y Carrier	90.8		40 - 110					03/12/18 10:23	03/21/18 14:33	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	1.31		0.297	0.310	5.00	0.351	pCi/L		04/04/18 16:12	1

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 1Q18 GW

TestAmerica Job ID: 500-141794-2

Client Sample ID: G48S

Date Collected: 03/08/18 09:15

Date Received: 03/08/18 15:35

Lab Sample ID: 500-141794-7

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	1.66		0.225	0.270	1.00	0.0946	pCi/L	03/12/18 09:18	04/04/18 09:20	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.3		40 - 110					03/12/18 09:18	04/04/18 09:20	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	0.640		0.294	0.299	1.00	0.433	pCi/L	03/12/18 10:23	03/21/18 14:33	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.3		40 - 110					03/12/18 10:23	03/21/18 14:33	1
Y Carrier	90.8		40 - 110					03/12/18 10:23	03/21/18 14:33	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	2.30		0.370	0.403	5.00	0.433	pCi/L		04/04/18 16:12	1

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 1Q18 GW

TestAmerica Job ID: 500-141794-2

Client Sample ID: G47S

Date Collected: 03/08/18 10:54

Date Received: 03/08/18 15:35

Lab Sample ID: 500-141794-8

Matrix: Water

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.479		0.121	0.128	1.00	0.0761	pCi/L	03/12/18 09:18	04/04/18 09:20	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.2		40 - 110					03/12/18 09:18	04/04/18 09:20	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	0.311	U	0.235	0.236	1.00	0.369	pCi/L	03/12/18 10:23	03/21/18 14:33	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.2		40 - 110					03/12/18 10:23	03/21/18 14:33	1
Y Carrier	90.8		40 - 110					03/12/18 10:23	03/21/18 14:33	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	0.790		0.264	0.268	5.00	0.369	pCi/L		04/04/18 16:12	1

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 1Q18 GW

TestAmerica Job ID: 500-141794-2

Client Sample ID: G46S
Date Collected: 03/08/18 13:20
Date Received: 03/08/18 15:35

Lab Sample ID: 500-141794-9
Matrix: Water

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.551		0.129	0.138	1.00	0.0842	pCi/L	03/12/18 09:18	04/04/18 09:20	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.6		40 - 110					03/12/18 09:18	04/04/18 09:20	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	0.742		0.268	0.276	1.00	0.364	pCi/L	03/12/18 10:23	03/21/18 14:33	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.6		40 - 110					03/12/18 10:23	03/21/18 14:33	1
Y Carrier	91.2		40 - 110					03/12/18 10:23	03/21/18 14:33	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	1.29		0.297	0.309	5.00	0.364	pCi/L		04/04/18 16:12	1

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 1Q18 GW

TestAmerica Job ID: 500-141794-2

Client Sample ID: R08S
Date Collected: 03/08/18 14:20
Date Received: 03/08/18 15:35

Lab Sample ID: 500-141794-10
Matrix: Water

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.776		0.149	0.165	1.00	0.0789	pCi/L	03/12/18 09:18	04/04/18 09:20	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.8		40 - 110					03/12/18 09:18	04/04/18 09:20	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	0.773		0.282	0.291	1.00	0.395	pCi/L	03/12/18 10:23	03/21/18 14:33	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.8		40 - 110					03/12/18 10:23	03/21/18 14:33	1
Y Carrier	91.2		40 - 110					03/12/18 10:23	03/21/18 14:33	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	1.55		0.319	0.335	5.00	0.395	pCi/L		04/04/18 16:12	1

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 1Q18 GW

TestAmerica Job ID: 500-141794-2

Client Sample ID: G45S

Date Collected: 03/09/18 09:51

Date Received: 03/09/18 11:28

Lab Sample ID: 500-141794-11

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	1.20		0.186	0.216	1.00	0.0593	pCi/L	03/12/18 09:18	04/04/18 09:20	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.4		40 - 110					03/12/18 09:18	04/04/18 09:20	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	0.684		0.272	0.279	1.00	0.381	pCi/L	03/12/18 10:23	03/21/18 14:33	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.4		40 - 110					03/12/18 10:23	03/21/18 14:33	1
Y Carrier	91.2		40 - 110					03/12/18 10:23	03/21/18 14:33	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	1.89		0.330	0.353	5.00	0.381	pCi/L		04/04/18 16:12	1

Definitions/Glossary

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 1Q18 GW

TestAmerica Job ID: 500-141794-2

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: Joliet #9 CCR - 1Q18 GW

TestAmerica Job ID: 500-141794-2

Rad

Prep Batch: 355032

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-141794-1	G20S	Total/NA	Water	PrecSep-21	
500-141794-2	G20S Dup	Total/NA	Water	PrecSep-21	
500-141794-3	G30S	Total/NA	Water	PrecSep-21	
500-141794-4	R32S	Total/NA	Water	PrecSep-21	
500-141794-5	T03S	Total/NA	Water	PrecSep-21	
500-141794-6	G44S	Total/NA	Water	PrecSep-21	
500-141794-7	G48S	Total/NA	Water	PrecSep-21	
500-141794-8	G47S	Total/NA	Water	PrecSep-21	
500-141794-9	G46S	Total/NA	Water	PrecSep-21	
500-141794-10	R08S	Total/NA	Water	PrecSep-21	
500-141794-11	G45S	Total/NA	Water	PrecSep-21	
MB 160-355032/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-355032/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
500-141794-3 DU	G30S	Total/NA	Water	PrecSep-21	

Prep Batch: 355050

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-141794-1	G20S	Total/NA	Water	PrecSep_0	
500-141794-2	G20S Dup	Total/NA	Water	PrecSep_0	
500-141794-3	G30S	Total/NA	Water	PrecSep_0	
500-141794-4	R32S	Total/NA	Water	PrecSep_0	
500-141794-5	T03S	Total/NA	Water	PrecSep_0	
500-141794-6	G44S	Total/NA	Water	PrecSep_0	
500-141794-7	G48S	Total/NA	Water	PrecSep_0	
500-141794-8	G47S	Total/NA	Water	PrecSep_0	
500-141794-9	G46S	Total/NA	Water	PrecSep_0	
500-141794-10	R08S	Total/NA	Water	PrecSep_0	
500-141794-11	G45S	Total/NA	Water	PrecSep_0	
MB 160-355050/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-355050/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
500-141794-3 DU	G30S	Total/NA	Water	PrecSep_0	

QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 1Q18 GW

TestAmerica Job ID: 500-141794-2

Method: 903.0 - Radium-226 (GFPC)

Lab Sample ID: MB 160-355032/1-A

Matrix: Water

Analysis Batch: 358771

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 355032

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.005913	U	0.0280	0.0280	1.00	0.0677	pCi/L	03/12/18 09:18	04/04/18 09:14	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	104		40 - 110					03/12/18 09:18	04/04/18 09:14	1

Lab Sample ID: LCS 160-355032/2-A

Matrix: Water

Analysis Batch: 358771

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 355032

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	
Radium-226	11.8	10.24		1.04	1.00	0.0631	pCi/L	87	68 - 137	
Carrier	LCS %Yield	LCS Qualifier	Limits							
Ba Carrier	104		40 - 110							

Lab Sample ID: 500-141794-3 DU

Matrix: Water

Analysis Batch: 358770

Client Sample ID: G30S

Prep Type: Total/NA

Prep Batch: 355032

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-226	0.780		0.7778		0.164	1.00	0.0834	pCi/L	0.01	1
Carrier	DU %Yield	DU Qualifier	Limits							
Ba Carrier	101		40 - 110							

Method: 904.0 - Radium-228 (GFPC)

Lab Sample ID: MB 160-355050/1-A

Matrix: Water

Analysis Batch: 356878

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 355050

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.2317	U	0.200	0.201	1.00	0.318	pCi/L	03/12/18 10:23	03/21/18 14:44	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	104		40 - 110					03/12/18 10:23	03/21/18 14:44	1
Y Carrier	90.8		40 - 110					03/12/18 10:23	03/21/18 14:44	1

TestAmerica Chicago

QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 1Q18 GW

TestAmerica Job ID: 500-141794-2

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

Lab Sample ID: LCS 160-355050/2-A

Matrix: Water

Analysis Batch: 356878

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 355050

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	8.46	9.670		1.10	1.00	0.325	pCi/L	114	56 - 140

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	104		40 - 110
Y Carrier	89.7		40 - 110

Lab Sample ID: 500-141794-3 DU

Matrix: Water

Analysis Batch: 356878

Client Sample ID: G30S

Prep Type: Total/NA

Prep Batch: 355050

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-228	1.16		1.017		0.315	1.00	0.396	pCi/L	0.22	1

Carrier	DU %Yield	DU Qualifier	Limits
Ba Carrier	101		40 - 110
Y Carrier	91.6		40 - 110

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 #: 500-141794

Chain of Custody Number: _____

Page _____ of _____

Temperature °C of Cooler: 1.1 → 2.6

Client <u>Midwest Generation EME LLC</u>		Client Project #		Preservative <u>3</u>		<u>3</u>		<u>8</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>Joliet #9 CCR - 1Q18 GW</u>		Project Location/State <u>Joliet, IL</u>		Lab Project #		Parameter <u>Radium 226/228</u>		<u>Total Metals</u>		<u>Cl, F, SO4, TDS</u>											
Sampler <u>Noe L., Rob P</u>		Lab PM <u>Eric Long</u>																			
Lab ID	MS/MSD	Sample ID	Sampling Date	Time	# of Containers	Matrix															
<u>1</u>		<u>G205</u>	<u>03/06/18</u>	<u>0910</u>	<u>4</u>	<u>W</u>	<u>1</u>	<u>1</u>	<u>1</u>												
<u>2</u>		<u>G205 Dup</u>	<u>03/06/18</u>	<u>0910</u>	<u>4</u>	<u>W</u>	<u>1</u>	<u>1</u>	<u>1</u>												

Turnaround Time Required (Business Days)

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

Requested Due Date _____

Sample Disposal

☐ Return to Client

☐ Disposal by Lab

☐ Archive for _____ Months

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

Relinquished By <u>[Signature]</u>	Company <u>TAL</u>	Date <u>03/06/18</u>	Time <u>1555</u>	Received By <u>[Signature]</u>	Company <u>TAL</u>	Date <u>03/06/18</u>	Time <u>1555</u>	Lab Courier <u>TA</u>
Relinquished By	Company	Date	Time	Received By	Company	Date	Time	Shipped
Relinquished By	Company	Date	Time	Received By	Company	Date	Time	Hand Delivered

Matrix Key

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

Client Comments

Lab Comments:

TestAmerica

THE LEADER IN ENVIRONMENTAL

2417 Bond Street, University Park, IL 60
Phone: 708.534.5200 Fax: 708.534



500-141794 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 #: 500-141794

Chain of Custody Number: _____

Page _____ of _____

Temperature °C of Cooler: 14 → 2.9

Client		Client Project #		Preservative		Parameter		Preservative Key	
Project Name		Project Location/State		Lab Project #		Lab PM			
Midwest Generation		EME LLC		3		3		8	
Joint #9 CCR-1018 GW		Sollet, IL							
Sample		Noe L., Rob P.		Eric Lang					
Lab ID	MS/MSD	Sample ID	Date	Time	# of Containers	Matrix			
7		G485	03/08/18	0915	5	W	1	1	1
8		G475	03/08/18	1054	5	W	1	1	1
9		G465	03/08/18	1320	5	W	1	1	1
10		R085	03/08/18	1420	5	W	1	1	1

Turnaround Time Required (Business Days)

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

Requested Due Date

Sample Disposal

☐ Return to Client

☐ Disposal by Lab

☐ Archive for ___ Months

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

Relinquished By	Company	Date	Time	Received By	Company	Date	Time
JJ	TA	03/08/18	1535	Shawn Scott	TA-CRT	3/8/18	1535
Relinquished By	Company	Date	Time	Received By	Company	Date	Time
Relinquished By	Company	Date	Time	Received By	Company	Date	Time

Lab Courier: TA

Shipped: _____

Hand Delivered: _____

Matrix Key	Client Comments	Lab Comments:
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		

2417 Bond Street, University Park, IL 6041
Phone: 708.534.5200 Fax: 708.534.5201



500-141794 COC

(optional)

Report To

Contact:

Company:

Address:

Address:

Phone:

Fax:

E-Mail:

(optional)

Bill To

Contact:

Company:

Address:

Address:

Phone:

Fax:

PO#/Reference#

Chain of Custody Record

Lab Job #: 500-141794

Chain of Custody Number: _____

Page _____ of _____

Temperature °C of Cooler: $-0.3 \rightarrow 1.$

[illegible]

Turnaround Time Required (Business Days)

____ 1 Day ____ 2 Days ____ 5 Days ____ 7 Days ____ 10 Days ____ 15 Days ____ Other
Requested Due Date

Sample Disposal

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

Relinquished By <i>92</i>	Company <i>TAL</i>	Date <i>07/09/18</i>	Time <i>1128</i>	Received By <i>Shirley Smith</i>	Company <i>MA-CH</i>	Date <i>7/9/18</i>	Time <i>1128</i>	Lab Courier <i>77A</i>
Relinquished By	Company	Date	Time	Received By	Company	Date	Time	Shipped
Relinquished By	Company	Date	Time	Received By	Company	Date	Time	Hand Delivered

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

Client Comments

Lab Comments:

Phone (708) 534-5200 Fax (708) 534-5211

Chain of Custody Record



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)				Carrier Tracking No(s): 500-101500.1	
Lab PM: Lang, Eric A.				State of Origin: Illinois	
Client Contact: Shipping/Receiving				Page: Page 1 of 1	
Company: TestAmerica Laboratories, Inc.				Job #: 500-141794-1	
Address: 13715 Rider Trail North, City: Earth City State, Zip: MO, 63045 Phone: 314-298-8566(Tel) 314-298-8757(Fax) Email: Project Name: Joliet #9 CCR Site: NRG Midwest Generation LSQ Joliet #9 CCR				Accreditations Required (See note): NELAP - Illinois	
Due Date Requested: 3/16/2018				Analysis Requested	
TAT Requested (days):				Total Number of Containers	
PO #: WO #: Project #: 50011504 SSOW#:				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: 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)	
Sample Identification - Client ID (Lab ID)				Special Instructions/Note:	
R32S (500-141794-4)				Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume;	
T03S (500-141794-5)				Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume;	
G44S (500-141794-6)				Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume;	
Sample Date 3/7/18 3/7/18 3/7/18				Field Filtered Sample (Yes or No) 903.0/PreSep_21 Standard Target List 904.0/PreSep_0 Standard Target List Perform MS/MSD (Yes or No) Ra226Ra228_GFPc	
Sample Time 11:14 Central 13:08 Central 14:14 Central				Matrix (W=water, S=solid, O=oil) Water Water Water	
Sample Type (C=Comp, G=grab) Preservation Code:				Special Instructions/Note:	
Sample Date 3/7/18 3/7/18 3/7/18				Field Filtered Sample (Yes or No) 903.0/PreSep_21 Standard Target List 904.0/PreSep_0 Standard Target List Perform MS/MSD (Yes or No) Ra226Ra228_GFPc	
Sample Time 11:14 Central 13:08 Central 14:14 Central				Matrix (W=water, S=solid, O=oil) Water Water Water	
Sample Type (C=Comp, G=grab) Preservation Code:				Special Instructions/Note:	
Sample Date 3/7/18 3/7/18 3/7/18				Field Filtered Sample (Yes or No) 903.0/PreSep_21 Standard Target List 904.0/PreSep_0 Standard Target List Perform MS/MSD (Yes or No) Ra226Ra228_GFPc	
Sample Time 11:14 Central 13:08 Central 14:14 Central				Matrix (W=water, S=solid, O=oil) Water Water Water	
Sample Type (C=Comp, G=grab) Preservation Code:				Special Instructions/Note:	
Sample Date 3/7/18 3/7/18 3/7/18				Field Filtered Sample (Yes or No) 903.0/PreSep_21 Standard Target List 904.0/PreSep_0 Standard Target List Perform MS/MSD (Yes or No) Ra226Ra228_GFPc	
Sample Time 11:14 Central 13:08 Central 14:14 Central				Matrix (W=water, S=solid, O=oil) Water Water Water	
Sample Type (C=Comp, G=grab) Preservation Code:				Special Instructions/Note:	
Sample Date 3/7/18 3/7/18 3/7/18				Field Filtered Sample (Yes or No) 903.0/PreSep_21 Standard Target List 904.0/PreSep_0 Standard Target List Perform MS/MSD (Yes or No) Ra226Ra228_GFPc	
Sample Time 11:14 Central 13:08 Central 14:14 Central				Matrix (W=water, S=solid, O=oil) Water Water Water	
Sample Type (C=Comp, G=grab) Preservation Code:				Special Instructions/Note:	
Sample Date 3/7/18 3/7/18 3/7/18				Field Filtered Sample (Yes or No) 903.0/PreSep_21 Standard Target List 904.0/PreSep_0 Standard Target List Perform MS/MSD (Yes or No) Ra226Ra228_GFPc	
Sample Time 11:14 Central 13:08 Central 14:14 Central				Matrix (W=water, S=solid, O=oil) Water Water Water	
Sample Type (C=Comp, G=grab) Preservation Code:				Special Instructions/Note:	
Sample Date 3/7/18 3/7/18 3/7/18				Field Filtered Sample (Yes or No) 903.0/PreSep_21 Standard Target List 904.0/PreSep_0 Standard Target List Perform MS/MSD (Yes or No) Ra226Ra228_GFPc	
Sample Time 11:14 Central 13:08 Central 14:14 Central				Matrix (W=water, S=solid, O=oil) Water Water Water	
Sample Type (C=Comp, G=grab) Preservation Code:				Special Instructions/Note:	
Sample Date 3/7/18 3/7/18 3/7/18				Field Filtered Sample (Yes or No) 903.0/PreSep_21 Standard Target List 904.0/PreSep_0 Standard Target List Perform MS/MSD (Yes or No) Ra226Ra228_GFPc	
Sample Time 11:14 Central 13:08 Central 14:14 Central				Matrix (W=water, S=solid, O=oil) Water Water Water	
Sample Type (C=Comp, G=grab) Preservation Code:				Special Instructions/Note:	
Sample Date 3/7/18 3/7/18 3/7/18				Field Filtered Sample (Yes or No) 903.0/PreSep_21 Standard Target List 904.0/PreSep_0 Standard Target List Perform MS/MSD (Yes or No) Ra226Ra228_GFPc	
Sample Time 11:14 Central 13:08 Central 14:14 Central				Matrix (W=water, S=solid, O=oil) Water Water Water	
Sample Type (C=Comp, G=grab) Preservation Code:				Special Instructions/Note:	
Sample Date 3/7/18 3/7/18 3/7/18				Field Filtered Sample (Yes or No) 903.0/PreSep_21 Standard Target List 904.0/PreSep_0 Standard Target List Perform MS/MSD (Yes or No) Ra226Ra228_GFPc	
Sample Time 11:14 Central 13:08 Central 14:14 Central				Matrix (W=water, S=solid, O=oil) 	

Chain of Custody Record



Client Information (Sub Contract Lab) Client Contact: Lang, Eric A. Shipping/Receiving: eric.lang@testamericainc.com Company: TestAmerica Laboratories, Inc. Address: 13715 Rider Trail North, City: Earth City State, Zip: MO, 63045 Phone: 314-298-8566(Tel) 314-298-8757(Fax) Email: Project Name: Joliet #9 CCR Site: NRG Midwest Generation LSQ Joliet #9 CCR		Lab PM: Lang, Eric A. E-Mail: eric.lang@testamericainc.com Carrier Tracking No(s): 500-101493-1 State of Origin: Illinois Page 1 of 1 Job #: 500-141794-2 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: 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)	
Due Date Requested: 4/3/2018 TAT Requested (days): PO #: WO #: Project #: 50011504 SSOW#:		Analysis Requested 903.0/PreSep_21 Standard Target List 904.0/PreSep_0 Standard Target List Ra226Ra228 GPPC	
Sample Identification - Client ID (Lab ID) G20S (500-141794-1) G20S Dup (500-141794-2)		Field Filtered Sample (Yes or No) X Perform MS/MSD (Yes or No) X 903.0/PreSep_21 Standard Target List X 904.0/PreSep_0 Standard Target List X Ra226Ra228 GPPC X	
Sample Date 3/6/18 Sample Time 09:10 Central 09:10 Central		Sample Type (C=Comp, G=grab) Water Water Matrix (W=water, S=solid, O=waste/oli, BT=tissue, A=air) Water Water	
Special Instructions/Note: Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume; Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume;		Total Number of containers 2 2	
Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.			
Possible Hazard Identification Unconfirmed Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2			
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months			
Special Instructions/QC Requirements: Method of Shipment:			
Relinquished by: Date/Time: 3/7/18 1510 Company: TA-CHC Received by: Kristone Taylor Date/Time: 3.8.18 1000 Company: TA-CHC		Relinquished by: Date/Time: 3/7/18 1510 Company: TA-CHC Received by: Kristone Taylor Date/Time: 3.8.18 1000 Company: TA-CHC	
Relinquished by: Date/Time: 3/7/18 1510 Company: TA-CHC Received by: Kristone Taylor Date/Time: 3.8.18 1000 Company: TA-CHC		Relinquished by: Date/Time: 3/7/18 1510 Company: TA-CHC Received by: Kristone Taylor Date/Time: 3.8.18 1000 Company: TA-CHC	
Custody Seals Intact: Δ Yes Δ No		Custody Seal No.: Cooler Temperature(s) °C and Other Remarks:	

Chain of Custody Record

[illegible]

Chain of Custody Record



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

[illegible]

Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-141794-2

Login Number: 141794

List Source: TestAmerica Chicago

List Number: 1

Creator: Sanchez, Ariel M

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.6,2.9,1.2
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: 500-141794-2

Login Number: 141794

List Number: 2

Creator: Taylor, Kristene N

List Source: TestAmerica St. Louis

List Creation: 03/08/18 04:06 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	21.0,21.0
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?	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.	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: 500-141794-2

Login Number: 141794

List Number: 3

Creator: Clarke, Jill C

List Source: TestAmerica St. Louis

List Creation: 03/10/18 12:22 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	20.0
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?	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.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 1Q18 GW

TestAmerica Job ID: 500-141794-2

Client Sample ID: G20S

Date Collected: 03/06/18 09:10

Date Received: 03/06/18 15:55

Lab Sample ID: 500-141794-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			355032	03/12/18 09:18	MBC	TAL SL
Total/NA	Analysis	903.0		1	358770	04/04/18 09:19	RTM	TAL SL
Total/NA	Prep	PrecSep_0			355050	03/12/18 10:23	MBC	TAL SL
Total/NA	Analysis	904.0		1	356878	03/21/18 14:45	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	358991	04/04/18 16:12	RTM	TAL SL

Client Sample ID: G20S Dup

Date Collected: 03/06/18 09:10

Date Received: 03/06/18 15:55

Lab Sample ID: 500-141794-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			355032	03/12/18 09:18	MBC	TAL SL
Total/NA	Analysis	903.0		1	358770	04/04/18 09:19	RTM	TAL SL
Total/NA	Prep	PrecSep_0			355050	03/12/18 10:23	MBC	TAL SL
Total/NA	Analysis	904.0		1	356878	03/21/18 14:46	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	358991	04/04/18 16:12	RTM	TAL SL

Client Sample ID: G30S

Date Collected: 03/07/18 09:23

Date Received: 03/07/18 16:00

Lab Sample ID: 500-141794-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			355032	03/12/18 09:18	MBC	TAL SL
Total/NA	Analysis	903.0		1	358770	04/04/18 09:19	RTM	TAL SL
Total/NA	Prep	PrecSep_0			355050	03/12/18 10:23	MBC	TAL SL
Total/NA	Analysis	904.0		1	356878	03/21/18 14:46	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	358991	04/04/18 16:12	RTM	TAL SL

Client Sample ID: R32S

Date Collected: 03/07/18 11:14

Date Received: 03/07/18 16:00

Lab Sample ID: 500-141794-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			355032	03/12/18 09:18	MBC	TAL SL
Total/NA	Analysis	903.0		1	358770	04/04/18 09:20	RTM	TAL SL
Total/NA	Prep	PrecSep_0			355050	03/12/18 10:23	MBC	TAL SL
Total/NA	Analysis	904.0		1	356963	03/21/18 14:32	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	358991	04/04/18 16:12	RTM	TAL SL

TestAmerica Chicago

Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 1Q18 GW

TestAmerica Job ID: 500-141794-2

Client Sample ID: T03S

Date Collected: 03/07/18 13:08

Date Received: 03/07/18 16:00

Lab Sample ID: 500-141794-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			355032	03/12/18 09:18	MBC	TAL SL
Total/NA	Analysis	903.0		1	358770	04/04/18 09:20	RTM	TAL SL
Total/NA	Prep	PrecSep_0			355050	03/12/18 10:23	MBC	TAL SL
Total/NA	Analysis	904.0		1	356963	03/21/18 14:32	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	358991	04/04/18 16:12	RTM	TAL SL

Client Sample ID: G44S

Date Collected: 03/07/18 14:14

Date Received: 03/07/18 16:00

Lab Sample ID: 500-141794-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			355032	03/12/18 09:18	MBC	TAL SL
Total/NA	Analysis	903.0		1	358770	04/04/18 09:20	RTM	TAL SL
Total/NA	Prep	PrecSep_0			355050	03/12/18 10:23	MBC	TAL SL
Total/NA	Analysis	904.0		1	356963	03/21/18 14:33	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	358991	04/04/18 16:12	RTM	TAL SL

Client Sample ID: G48S

Date Collected: 03/08/18 09:15

Date Received: 03/08/18 15:35

Lab Sample ID: 500-141794-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			355032	03/12/18 09:18	MBC	TAL SL
Total/NA	Analysis	903.0		1	358770	04/04/18 09:20	RTM	TAL SL
Total/NA	Prep	PrecSep_0			355050	03/12/18 10:23	MBC	TAL SL
Total/NA	Analysis	904.0		1	356963	03/21/18 14:33	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	358991	04/04/18 16:12	RTM	TAL SL

Client Sample ID: G47S

Date Collected: 03/08/18 10:54

Date Received: 03/08/18 15:35

Lab Sample ID: 500-141794-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			355032	03/12/18 09:18	MBC	TAL SL
Total/NA	Analysis	903.0		1	358770	04/04/18 09:20	RTM	TAL SL
Total/NA	Prep	PrecSep_0			355050	03/12/18 10:23	MBC	TAL SL
Total/NA	Analysis	904.0		1	356963	03/21/18 14:33	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	358991	04/04/18 16:12	RTM	TAL SL

TestAmerica Chicago

Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 1Q18 GW

TestAmerica Job ID: 500-141794-2

Client Sample ID: G46S

Date Collected: 03/08/18 13:20

Date Received: 03/08/18 15:35

Lab Sample ID: 500-141794-9

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			355032	03/12/18 09:18	MBC	TAL SL
Total/NA	Analysis	903.0		1	358770	04/04/18 09:20	RTM	TAL SL
Total/NA	Prep	PrecSep_0			355050	03/12/18 10:23	MBC	TAL SL
Total/NA	Analysis	904.0		1	356963	03/21/18 14:33	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	358991	04/04/18 16:12	RTM	TAL SL

Client Sample ID: R08S

Date Collected: 03/08/18 14:20

Date Received: 03/08/18 15:35

Lab Sample ID: 500-141794-10

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			355032	03/12/18 09:18	MBC	TAL SL
Total/NA	Analysis	903.0		1	358770	04/04/18 09:20	RTM	TAL SL
Total/NA	Prep	PrecSep_0			355050	03/12/18 10:23	MBC	TAL SL
Total/NA	Analysis	904.0		1	356963	03/21/18 14:33	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	358991	04/04/18 16:12	RTM	TAL SL

Client Sample ID: G45S

Date Collected: 03/09/18 09:51

Date Received: 03/09/18 11:28

Lab Sample ID: 500-141794-11

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			355032	03/12/18 09:18	MBC	TAL SL
Total/NA	Analysis	903.0		1	358770	04/04/18 09:20	RTM	TAL SL
Total/NA	Prep	PrecSep_0			355050	03/12/18 10:23	MBC	TAL SL
Total/NA	Analysis	904.0		1	356963	03/21/18 14:33	CDR	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	358991	04/04/18 16:12	RTM	TAL SL

Laboratory References:

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

Tracer/Carrier Summary

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 1Q18 GW

TestAmerica Job ID: 500-141794-2

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)	
500-141794-1	G20S	93.2	
500-141794-2	G20S Dup	97.6	
500-141794-3	G30S	100	
500-141794-3 DU	G30S	101	
500-141794-4	R32S	101	
500-141794-5	T03S	94.1	
500-141794-6	G44S	93.2	
500-141794-7	G48S	95.3	
500-141794-8	G47S	96.2	
500-141794-9	G46S	95.6	
500-141794-10	R08S	98.8	
500-141794-11	G45S	91.4	
LCS 160-355032/2-A	Lab Control Sample	104	
MB 160-355032/1-A	Method Blank	104	
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)
500-141794-1	G20S	93.2	92.3
500-141794-2	G20S Dup	97.6	92.0
500-141794-3	G30S	100	89.7
500-141794-3 DU	G30S	101	91.6
500-141794-4	R32S	101	90.8
500-141794-5	T03S	94.1	90.5
500-141794-6	G44S	93.2	90.8
500-141794-7	G48S	95.3	90.8
500-141794-8	G47S	96.2	90.8
500-141794-9	G46S	95.6	91.2
500-141794-10	R08S	98.8	91.2
500-141794-11	G45S	91.4	91.2
LCS 160-355050/2-A	Lab Control Sample	104	89.7
MB 160-355050/1-A	Method Blank	104	90.8
Tracer/Carrier Legend			
Ba Carrier = Ba Carrier			
Y Carrier = Y Carrier			

TestAmerica Chicago

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Chicago

2417 Bond Street

University Park, IL 60484

Tel: (708)534-5200

TestAmerica Job ID: 500-145553-1

Client Project/Site: Joliet #9 CCR - 2Q18 GW

For:

KPRG and Associates, Inc.

14665 West Lisbon Road,

Suite 2B

Brookfield, Wisconsin 53005

Attn: Richard Gnat



Authorized for release by:

6/5/2018 3:54:52 PM

Eric Lang, Manager of Project Management

(708)534-5200

eric.lang@testamericainc.com

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

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



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Case Narrative

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 2Q18 GW

TestAmerica Job ID: 500-145553-1

Job ID: 500-145553-1

Laboratory: TestAmerica Chicago

Narrative

Job Narrative 500-145553-1

Comments

No additional comments.

Receipt

The samples were received on 5/16/2018 3:10 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 2.6° C, 3.4° C, 3.8° C and 5.4° C.

Metals

Method(s) 6020A: The initial calibration verification low level (ICVL) in AD batch 432940 recovered above the upper control limit for Lead. The samples associated with this QC were non-detects for the affected analytes; therefore, the data have been reported.

Method(s) 6020A: The internal standard Terbium (Tb) was used to report the elements Lead and Thallium in batch 500-433252. This was due to the LCS being spiked with the trace digestion spike which contains Bismuth.

Method(s) 6020A: The internal standard Terbium (Tb) was used to report the elements Lead and Thallium in batch 500-433604. This was due to the LCS being spiked with the trace digestion spike which contains Bismuth.

Method(s) 6020A: The internal standard Terbium (Tb) was used to report the elements Lead and Thallium in batch 500-433664. This was due to the LCS being spiked with the trace digestion spike which contains Bismuth.

Method(s) 6020A: The internal standard Terbium (Tb) was used to report the elements Lead and Thallium in batch 500-434570. This was due to the LCS being spiked with the trace digestion spike which contains Bismuth.

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

General Chemistry

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

Method Summary

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 2Q18 GW

TestAmerica Job ID: 500-145553-1

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

Protocol References:

EPA = US Environmental Protection Agency

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

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

Laboratory References:

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

Sample Summary

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 2Q18 GW

TestAmerica Job ID: 500-145553-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-145553-1	G20S	GW	05/16/18 09:45	05/16/18 15:10
500-145553-2	G30S	GW	05/17/18 09:13	05/17/18 15:35
500-145553-3	DUP	Water	05/17/18 09:13	05/17/18 15:35
500-145553-4	G44S	GW	05/17/18 12:34	05/17/18 15:35
500-145553-5	T03S	GW	05/17/18 13:55	05/17/18 15:35
500-145553-6	G48S	GW	05/18/18 08:45	05/18/18 14:45
500-145553-7	G47S	GW	05/18/18 10:07	05/18/18 14:45
500-145553-8	G46S	GW	05/18/18 12:20	05/18/18 14:45
500-145553-9	R08S	GW	05/18/18 13:20	05/18/18 14:45
500-145553-10	R32S	Water	05/21/18 10:04	05/21/18 12:35
500-145553-11	G45S	Water	05/21/18 11:15	05/21/18 12:35

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 2Q18 GW

TestAmerica Job ID: 500-145553-1

Client Sample ID: G20S

Date Collected: 05/16/18 09:45

Date Received: 05/16/18 15:10

Lab Sample ID: 500-145553-1

Matrix: GW

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.040		0.010		mg/L		05/17/18 07:32	05/18/18 01:55	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.0010		0.0010		mg/L		05/17/18 07:32	05/18/18 01:51	1
Barium	0.049		0.0025		mg/L		05/17/18 07:32	05/18/18 01:51	1
Boron	1.2		0.050		mg/L		05/17/18 07:32	05/18/18 01:51	1
Calcium	61		0.20		mg/L		05/17/18 07:32	05/18/18 01:51	1
Cobalt	0.0024		0.0010		mg/L		05/17/18 07:32	05/18/18 01:51	1
Lead	<0.00050 ^		0.00050		mg/L		05/17/18 07:32	05/18/18 01:51	1
Molybdenum	0.019		0.0050		mg/L		05/17/18 07:32	05/18/18 01:51	1
Selenium	<0.0025		0.0025		mg/L		05/17/18 07:32	05/18/18 01:51	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	410		10		mg/L			05/17/18 04:15	1
Chloride	12		2.0		mg/L			05/20/18 21:14	1
Fluoride	0.75		0.10		mg/L			05/26/18 15:32	1
Sulfate	87		25		mg/L			06/04/18 13:08	5

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Depth to water from land surface	46.05				ft			05/16/18 09:45	1
Depth to Water (ft from MP)	48.83				ft			05/16/18 09:45	1
Elevation of well (ft from MP)	580.33				ft			05/16/18 09:45	1
Field pH	7.06				SU			05/16/18 09:45	1
Field Temperature	76.5				Degrees F			05/16/18 09:45	1
Ground Water Elevation	531.50				ft			05/16/18 09:45	1
Specific Conductance	601				umhos/cm			05/16/18 09:45	1
Well bottom elevation	442.28				ft			05/16/18 09:45	1

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 2Q18 GW

TestAmerica Job ID: 500-145553-1

Client Sample ID: G30S

Date Collected: 05/17/18 09:13

Date Received: 05/17/18 15:35

Lab Sample ID: 500-145553-2

Matrix: GW

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.021		0.010		mg/L		05/18/18 08:00	05/22/18 03:33	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.011		0.0010		mg/L		05/18/18 08:00	05/19/18 00:09	1
Barium	0.043		0.0025		mg/L		05/18/18 08:00	05/19/18 00:09	1
Boron	5.7		1.0		mg/L		05/18/18 08:00	05/21/18 20:08	20
Calcium	55		0.20		mg/L		05/18/18 08:00	05/19/18 00:09	1
Cobalt	<0.0010		0.0010		mg/L		05/18/18 08:00	05/19/18 00:09	1
Lead	<0.00050		0.00050		mg/L		05/18/18 08:00	05/19/18 00:09	1
Molybdenum	0.13		0.0050		mg/L		05/18/18 08:00	05/19/18 00:09	1
Selenium	<0.0025	F1	0.0025		mg/L		05/18/18 08:00	05/19/18 00:09	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1100		10		mg/L			05/22/18 04:45	1
Chloride	210		10		mg/L			05/20/18 22:18	5
Fluoride	1.2		0.10		mg/L			05/26/18 15:45	1
Sulfate	540		100		mg/L			06/04/18 13:09	20

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Depth to water from land surface	-0.69				ft			05/17/18 09:13	1
Depth to Water (ft from MP)	1.62				ft			05/17/18 09:13	1
Elevation of well (ft from MP)	524.40				ft			05/17/18 09:13	1
Field pH	7.77				SU			05/17/18 09:13	1
Field Temperature	55.4				Degrees F			05/17/18 09:13	1
Ground Water Elevation	522.78				ft			05/17/18 09:13	1
Specific Conductance	1490				umhos/cm			05/17/18 09:13	1
Well bottom elevation	462.58				ft			05/17/18 09:13	1

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 2Q18 GW

TestAmerica Job ID: 500-145553-1

Client Sample ID: DUP

Date Collected: 05/17/18 09:13

Date Received: 05/17/18 15:35

Lab Sample ID: 500-145553-3

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		05/18/18 08:00	05/22/18 04:06	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.011		0.0010		mg/L		05/18/18 08:00	05/19/18 00:29	1
Barium	0.041		0.0025		mg/L		05/18/18 08:00	05/19/18 00:29	1
Boron	5.7		1.0		mg/L		05/18/18 08:00	05/21/18 20:34	20
Calcium	53		0.20		mg/L		05/18/18 08:00	05/19/18 00:29	1
Cobalt	<0.0010		0.0010		mg/L		05/18/18 08:00	05/19/18 00:29	1
Lead	<0.00050		0.00050		mg/L		05/18/18 08:00	05/19/18 00:29	1
Molybdenum	0.14		0.0050		mg/L		05/18/18 08:00	05/19/18 00:29	1
Selenium	<0.0025		0.0025		mg/L		05/18/18 08:00	05/19/18 00:29	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1100		10		mg/L			05/22/18 04:50	1
Chloride	210		10		mg/L			05/20/18 22:18	5
Fluoride	1.3		0.10		mg/L			05/26/18 15:48	1
Sulfate	560		100		mg/L			06/04/18 13:10	20

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Depth to water from land surface	-0.69				ft			05/17/18 09:13	1
Depth to Water (ft from MP)	1.62				ft			05/17/18 09:13	1
Elevation of well (ft from MP)	524.40				ft			05/17/18 09:13	1
Field pH	7.77				SU			05/17/18 09:13	1
Field Temperature	55.4				Degrees F			05/17/18 09:13	1
Ground Water Elevation	522.78				ft			05/17/18 09:13	1
Specific Conductance	1490				umhos/cm			05/17/18 09:13	1
Well bottom elevation	462.58				ft			05/17/18 09:13	1

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 2Q18 GW

TestAmerica Job ID: 500-145553-1

Client Sample ID: G44S

Date Collected: 05/17/18 12:34

Date Received: 05/17/18 15:35

Lab Sample ID: 500-145553-4

Matrix: GW

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.016		0.010		mg/L		05/18/18 08:00	05/22/18 04:10	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.0010		0.0010		mg/L		05/18/18 08:00	05/19/18 00:32	1
Barium	0.054		0.0025		mg/L		05/18/18 08:00	05/19/18 00:32	1
Boron	0.98		0.25		mg/L		05/18/18 08:00	05/21/18 20:38	5
Calcium	120		0.20		mg/L		05/18/18 08:00	05/19/18 00:32	1
Cobalt	<0.0010		0.0010		mg/L		05/18/18 08:00	05/19/18 00:32	1
Lead	<0.00050		0.00050		mg/L		05/18/18 08:00	05/19/18 00:32	1
Molybdenum	0.071		0.0050		mg/L		05/18/18 08:00	05/19/18 00:32	1
Selenium	<0.0025		0.0025		mg/L		05/18/18 08:00	05/19/18 00:32	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	780		10		mg/L			05/22/18 04:53	1
Chloride	35		2.0		mg/L			05/20/18 21:17	1
Fluoride	0.18		0.10		mg/L			05/26/18 15:51	1
Sulfate	96		50		mg/L			06/05/18 09:16	10

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Depth to water from land surface	77.99				ft			05/17/18 12:34	1
Depth to Water (ft from MP)	80.17				ft			05/17/18 12:34	1
Elevation of well (ft from MP)	586.69				ft			05/17/18 12:34	1
Field pH	7.02				SU			05/17/18 12:34	1
Field Temperature	59.2				Degrees F			05/17/18 12:34	1
Ground Water Elevation	506.52				ft			05/17/18 12:34	1
Specific Conductance	855				umhos/cm			05/17/18 12:34	1
Well bottom elevation	586.69				ft			05/17/18 12:34	1

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 2Q18 GW

TestAmerica Job ID: 500-145553-1

Client Sample ID: T03S
Date Collected: 05/17/18 13:55
Date Received: 05/17/18 15:35

Lab Sample ID: 500-145553-5
Matrix: GW

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.021		0.010		mg/L		05/18/18 08:00	05/22/18 04:14	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0010		0.0010		mg/L		05/18/18 08:00	05/19/18 00:36	1
Barium	0.087		0.0025		mg/L		05/18/18 08:00	05/19/18 00:36	1
Boron	1.8		0.25		mg/L		05/18/18 08:00	05/21/18 20:42	5
Calcium	100		0.20		mg/L		05/18/18 08:00	05/19/18 00:36	1
Cobalt	0.0013		0.0010		mg/L		05/18/18 08:00	05/19/18 00:36	1
Lead	<0.00050		0.00050		mg/L		05/18/18 08:00	05/19/18 00:36	1
Molybdenum	0.24		0.0050		mg/L		05/18/18 08:00	05/19/18 00:36	1
Selenium	<0.0025		0.0025		mg/L		05/18/18 08:00	05/19/18 00:36	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	890		10		mg/L			05/22/18 04:55	1
Chloride	82		10		mg/L			05/20/18 22:19	5
Fluoride	0.24		0.10		mg/L			05/26/18 15:54	1
Sulfate	210		50		mg/L			06/05/18 09:19	10

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Depth to water from land surface	131.34				ft			05/17/18 13:55	1
Depth to Water (ft from MP)	134.42				ft			05/17/18 13:55	1
Elevation of well (ft from MP)	629.65				ft			05/17/18 13:55	1
Field pH	7.07				SU			05/17/18 13:55	1
Field Temperature	58.5				Degrees F			05/17/18 13:55	1
Ground Water Elevation	495.23				ft			05/17/18 13:55	1
Specific Conductance	1041				umhos/cm			05/17/18 13:55	1
Well bottom elevation	456.70				ft			05/17/18 13:55	1

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 2Q18 GW

TestAmerica Job ID: 500-145553-1

Client Sample ID: G48S

Date Collected: 05/18/18 08:45

Date Received: 05/18/18 14:45

Lab Sample ID: 500-145553-6

Matrix: GW

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.023		0.010		mg/L		05/19/18 11:04	05/21/18 23:58	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.022		0.0010		mg/L		05/19/18 11:04	05/22/18 19:26	1
Barium	0.023		0.0025		mg/L		05/19/18 11:04	05/22/18 19:26	1
Boron	5.9		1.0		mg/L		05/19/18 11:04	05/23/18 11:38	20
Calcium	53		0.20		mg/L		05/19/18 11:04	05/22/18 19:26	1
Cobalt	<0.0010		0.0010		mg/L		05/19/18 11:04	05/22/18 19:26	1
Lead	<0.00050		0.00050		mg/L		05/19/18 11:04	05/22/18 19:26	1
Molybdenum	0.49		0.0050		mg/L		05/19/18 11:04	05/22/18 19:26	1
Selenium	<0.0025		0.0025		mg/L		05/19/18 11:04	05/22/18 19:26	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1100		10		mg/L			05/22/18 04:58	1
Chloride	100		10		mg/L			05/20/18 22:19	5
Fluoride	0.92		0.10		mg/L			05/26/18 16:06	1
Sulfate	370		100		mg/L			06/05/18 09:20	20

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Depth to water from land surface	98.29				ft			05/18/18 08:45	1
Depth to Water (ft from MP)	100.74				ft			05/18/18 08:45	1
Elevation of well (ft from MP)	620.77				ft			05/18/18 08:45	1
Field pH	7.79				SU			05/18/18 08:45	1
Field Temperature	54.9				Degrees F			05/18/18 08:45	1
Ground Water Elevation	520.03				ft			05/18/18 08:45	1
Specific Conductance	1407				umhos/cm			05/18/18 08:45	1
Well bottom elevation	468.32				ft			05/18/18 08:45	1

TestAmerica Chicago

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 2Q18 GW

TestAmerica Job ID: 500-145553-1

Client Sample ID: G47S

Date Collected: 05/18/18 10:07

Date Received: 05/18/18 14:45

Lab Sample ID: 500-145553-7

Matrix: GW

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.015		0.010		mg/L		05/19/18 11:04	05/22/18 00:18	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.23		0.0010		mg/L		05/19/18 11:04	05/22/18 19:45	1
Barium	0.0087		0.0025		mg/L		05/19/18 11:04	05/22/18 19:45	1
Boron	3.7		1.0		mg/L		05/19/18 11:04	05/23/18 11:57	20
Calcium	1.1		0.20		mg/L		05/19/18 11:04	05/22/18 19:45	1
Cobalt	<0.0010		0.0010		mg/L		05/19/18 11:04	05/22/18 19:45	1
Lead	<0.00050		0.00050		mg/L		05/19/18 11:04	05/22/18 19:45	1
Molybdenum	1.5		0.0050		mg/L		05/19/18 11:04	05/22/18 19:45	1
Selenium	0.0039		0.0025		mg/L		05/19/18 11:04	05/22/18 19:45	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1800		10		mg/L			05/22/18 05:01	1
Chloride	160		10		mg/L			05/20/18 22:20	5
Fluoride	1.7		0.10		mg/L			05/26/18 16:15	1
Sulfate	570		250		mg/L			06/05/18 09:21	50

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Depth to water from land surface	91.01				ft			05/18/18 10:07	1
Depth to Water (ft from MP)	93.51				ft			05/18/18 10:07	1
Elevation of well (ft from MP)	612.32				ft			05/18/18 10:07	1
Field pH	10.42				SU			05/18/18 10:07	1
Field Temperature	60.8				Degrees F			05/18/18 10:07	1
Ground Water Elevation	518.81				ft			05/18/18 10:07	1
Specific Conductance	2430				umhos/cm			05/18/18 10:07	1
Well bottom elevation	459.84				ft			05/18/18 10:07	1

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 2Q18 GW

TestAmerica Job ID: 500-145553-1

Client Sample ID: G46S

Date Collected: 05/18/18 12:20

Date Received: 05/18/18 14:45

Lab Sample ID: 500-145553-8

Matrix: GW

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.073		0.010		mg/L		05/19/18 11:04	05/22/18 00:22	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0028		0.0010		mg/L		05/19/18 11:04	05/22/18 19:49	1
Barium	0.048		0.0025		mg/L		05/19/18 11:04	05/22/18 19:49	1
Boron	5.9		1.0		mg/L		05/19/18 11:04	05/23/18 12:01	20
Calcium	110		0.20		mg/L		05/19/18 11:04	05/22/18 19:49	1
Cobalt	<0.0010		0.0010		mg/L		05/19/18 11:04	05/22/18 19:49	1
Lead	<0.00050		0.00050		mg/L		05/19/18 11:04	05/22/18 19:49	1
Molybdenum	0.84		0.0050		mg/L		05/19/18 11:04	05/22/18 19:49	1
Selenium	<0.0025		0.0025		mg/L		05/19/18 11:04	05/22/18 19:49	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1100		10		mg/L			05/22/18 05:03	1
Chloride	120		10		mg/L			05/20/18 22:20	5
Fluoride	0.40		0.10		mg/L			05/26/18 16:27	1
Sulfate	260		100		mg/L			06/05/18 09:22	20

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Depth to water from land surface	92.89				ft			05/18/18 12:20	1
Depth to Water (ft from MP)	95.59				ft			05/18/18 12:20	1
Elevation of well (ft from MP)	601.32				ft			05/18/18 12:20	1
Field pH	7.66				SU			05/18/18 12:20	1
Field Temperature	57.9				Degrees F			05/18/18 12:20	1
Ground Water Elevation	505.73				ft			05/18/18 12:20	1
Specific Conductance	1201				umhos/cm			05/18/18 12:20	1
Well bottom elevation	453.62				ft			05/18/18 12:20	1

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 2Q18 GW

TestAmerica Job ID: 500-145553-1

Client Sample ID: R08S

Date Collected: 05/18/18 13:20

Date Received: 05/18/18 14:45

Lab Sample ID: 500-145553-9

Matrix: GW

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.15		0.010		mg/L		05/19/18 11:04	05/22/18 00:26	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0013		0.0010		mg/L		05/19/18 11:04	05/22/18 19:52	1
Barium	0.046		0.0025		mg/L		05/19/18 11:04	05/22/18 19:52	1
Boron	7.7		1.0		mg/L		05/19/18 11:04	05/23/18 12:05	20
Calcium	140		0.20		mg/L		05/19/18 11:04	05/22/18 19:52	1
Cobalt	<0.0010		0.0010		mg/L		05/19/18 11:04	05/22/18 19:52	1
Lead	<0.00050		0.00050		mg/L		05/19/18 11:04	05/22/18 19:52	1
Molybdenum	0.35		0.0050		mg/L		05/19/18 11:04	05/22/18 19:52	1
Selenium	0.017		0.0025		mg/L		05/19/18 11:04	05/22/18 19:52	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	920		10		mg/L			05/22/18 05:06	1
Chloride	82		10		mg/L			05/20/18 22:21	5
Fluoride	0.14		0.10		mg/L			05/26/18 16:30	1
Sulfate	320		100		mg/L			06/05/18 09:23	20

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Depth to water from land surface	62.76				ft			05/18/18 13:20	1
Depth to Water (ft from MP)	65.31				ft			05/18/18 13:20	1
Elevation of well (ft from MP)	578.65				ft			05/18/18 13:20	1
Field pH	8.25				SU			05/18/18 13:20	1
Field Temperature	57.9				Degrees F			05/18/18 13:20	1
Ground Water Elevation	9613.34				ft			05/18/18 13:20	1
Specific Conductance	965				umhos/cm			05/18/18 13:20	1
Well bottom elevation	453.08				ft			05/18/18 13:20	1

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 2Q18 GW

TestAmerica Job ID: 500-145553-1

Client Sample ID: R32S

Date Collected: 05/21/18 10:04

Date Received: 05/21/18 12:35

Lab Sample ID: 500-145553-10

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.10		0.010		mg/L		05/22/18 15:09	05/23/18 15:40	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0024		0.0010		mg/L		05/22/18 15:09	05/29/18 16:40	1
Barium	0.040		0.0025		mg/L		05/22/18 15:09	05/29/18 16:40	1
Boron	4.4		0.050		mg/L		05/22/18 15:09	05/29/18 16:40	1
Calcium	120		0.20		mg/L		05/22/18 15:09	05/29/18 16:40	1
Cobalt	<0.0010		0.0010		mg/L		05/22/18 15:09	05/29/18 16:40	1
Lead	<0.00050		0.00050		mg/L		05/22/18 15:09	05/29/18 16:40	1
Molybdenum	0.64		0.0050		mg/L		05/22/18 15:09	05/29/18 16:40	1
Selenium	<0.0025		0.0025		mg/L		05/22/18 15:09	05/29/18 16:40	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1000		10		mg/L			05/22/18 05:08	1
Chloride	77		10		mg/L			05/28/18 18:28	5
Fluoride	0.29		0.10		mg/L			05/26/18 16:33	1
Sulfate	310		100		mg/L			06/05/18 10:17	20

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Depth to water from land surface	18.23				ft			05/21/18 10:04	1
Depth to Water (ft from MP)	20.26				ft			05/21/18 10:04	1
Elevation of well (ft from MP)	536.81				ft			05/21/18 10:04	1
Field pH	7.13				SU			05/21/18 10:04	1
Field Temperature	52.7				Degrees F			05/21/18 10:04	1
Ground Water Elevation	516.55				ft			05/21/18 10:04	1
Specific Conductance	962				umhos/cm			05/21/18 10:04	1
Well bottom elevation	457.84				ft			05/21/18 10:04	1

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 2Q18 GW

TestAmerica Job ID: 500-145553-1

Client Sample ID: G45S

Date Collected: 05/21/18 11:15

Date Received: 05/21/18 12:35

Lab Sample ID: 500-145553-11

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.033		0.010		mg/L		05/22/18 15:09	05/23/18 15:44	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0072		0.0010		mg/L		05/22/18 15:09	05/29/18 16:45	1
Barium	0.047		0.0025		mg/L		05/22/18 15:09	05/29/18 16:45	1
Boron	0.76		0.050		mg/L		05/22/18 15:09	05/29/18 16:45	1
Calcium	110		0.20		mg/L		05/22/18 15:09	05/29/18 16:45	1
Cobalt	<0.0010		0.0010		mg/L		05/22/18 15:09	05/29/18 16:45	1
Lead	<0.00050		0.00050		mg/L		05/22/18 15:09	05/29/18 16:45	1
Molybdenum	0.013		0.0050		mg/L		05/22/18 15:09	05/29/18 16:45	1
Selenium	<0.0025		0.0025		mg/L		05/22/18 15:09	05/29/18 16:45	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	970		10		mg/L			05/22/18 05:11	1
Chloride	150		10		mg/L			05/28/18 18:28	5
Fluoride	0.33		0.10		mg/L			05/26/18 16:36	1
Sulfate	230		50		mg/L			06/05/18 10:18	10

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Depth to water from land surface	65.53				ft			05/21/18 11:15	1
Depth to Water (ft from MP)	68.50				ft			05/21/18 11:15	1
Elevation of well (ft from MP)	603.31				ft			05/21/18 11:15	1
Field pH	7.00				SU			05/21/18 11:15	1
Field Temperature	56.3				Degrees F			05/21/18 11:15	1
Ground Water Elevation	534.81				ft			05/21/18 11:15	1
Specific Conductance	1175				umhos/cm			05/21/18 11:15	1
Well bottom elevation	471.05				ft			05/21/18 11:15	1

Definitions/Glossary

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 2Q18 GW

TestAmerica Job ID: 500-145553-1

Qualifiers

Metals

Qualifier	Qualifier Description
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
F1	MS and/or MSD Recovery is outside acceptance limits.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
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: Joliet #9 CCR - 2Q18 GW

TestAmerica Job ID: 500-145553-1

Metals

Prep Batch: 432708

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-145553-1	G20S	Total Recoverable	GW	3005A	
MB 500-432708/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-432708/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 432881

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-145553-1	G20S	Total Recoverable	GW	6010C	432708
MB 500-432708/1-A	Method Blank	Total Recoverable	Water	6010C	432708
LCS 500-432708/2-A	Lab Control Sample	Total Recoverable	Water	6010C	432708

Prep Batch: 432907

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-145553-2	G30S	Total Recoverable	GW	3005A	
500-145553-3	DUP	Total Recoverable	Water	3005A	
500-145553-4	G44S	Total Recoverable	GW	3005A	
500-145553-5	T03S	Total Recoverable	GW	3005A	
MB 500-432907/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-432907/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
500-145553-2 MS	G30S	Total Recoverable	GW	3005A	
500-145553-2 MSD	G30S	Total Recoverable	GW	3005A	
500-145553-2 DU	G30S	Total Recoverable	GW	3005A	

Analysis Batch: 432940

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-145553-1	G20S	Total Recoverable	GW	6020A	432708
MB 500-432708/1-A	Method Blank	Total Recoverable	Water	6020A	432708
LCS 500-432708/2-A	Lab Control Sample	Total Recoverable	Water	6020A	432708

Prep Batch: 433098

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-145553-6	G48S	Total Recoverable	GW	3005A	
500-145553-7	G47S	Total Recoverable	GW	3005A	
500-145553-8	G46S	Total Recoverable	GW	3005A	
500-145553-9	R08S	Total Recoverable	GW	3005A	
MB 500-433098/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-433098/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
500-145553-6 MS	G48S	Total Recoverable	GW	3005A	
500-145553-6 MSD	G48S	Total Recoverable	GW	3005A	
500-145553-6 DU	G48S	Total Recoverable	GW	3005A	

Analysis Batch: 433252

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-145553-2	G30S	Total Recoverable	GW	6020A	432907
500-145553-3	DUP	Total Recoverable	Water	6020A	432907
500-145553-4	G44S	Total Recoverable	GW	6020A	432907
500-145553-5	T03S	Total Recoverable	GW	6020A	432907
MB 500-432907/1-A	Method Blank	Total Recoverable	Water	6020A	432907
LCS 500-432907/2-A	Lab Control Sample	Total Recoverable	Water	6020A	432907
500-145553-2 MS	G30S	Total Recoverable	GW	6020A	432907
500-145553-2 MSD	G30S	Total Recoverable	GW	6020A	432907
500-145553-2 DU	G30S	Total Recoverable	GW	6020A	432907

TestAmerica Chicago

QC Association Summary

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 2Q18 GW

TestAmerica Job ID: 500-145553-1

Analysis Batch: 433345

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-145553-2	G30S	Total Recoverable	GW	6010C	432907
500-145553-3	DUP	Total Recoverable	Water	6010C	432907
500-145553-4	G44S	Total Recoverable	GW	6010C	432907
500-145553-5	T03S	Total Recoverable	GW	6010C	432907
500-145553-6	G48S	Total Recoverable	GW	6010C	433098
500-145553-7	G47S	Total Recoverable	GW	6010C	433098
500-145553-8	G46S	Total Recoverable	GW	6010C	433098
500-145553-9	R08S	Total Recoverable	GW	6010C	433098
MB 500-432907/1-A	Method Blank	Total Recoverable	Water	6010C	432907
MB 500-433098/1-A	Method Blank	Total Recoverable	Water	6010C	433098
LCS 500-432907/2-A	Lab Control Sample	Total Recoverable	Water	6010C	432907
LCS 500-433098/2-A	Lab Control Sample	Total Recoverable	Water	6010C	433098
500-145553-2 MS	G30S	Total Recoverable	GW	6010C	432907
500-145553-2 MSD	G30S	Total Recoverable	GW	6010C	432907
500-145553-6 MS	G48S	Total Recoverable	GW	6010C	433098
500-145553-6 MSD	G48S	Total Recoverable	GW	6010C	433098
500-145553-2 DU	G30S	Total Recoverable	GW	6010C	432907
500-145553-6 DU	G48S	Total Recoverable	GW	6010C	433098

Analysis Batch: 433393

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-145553-2	G30S	Total Recoverable	GW	6020A	432907
500-145553-3	DUP	Total Recoverable	Water	6020A	432907
500-145553-4	G44S	Total Recoverable	GW	6020A	432907
500-145553-5	T03S	Total Recoverable	GW	6020A	432907
MB 500-432907/1-A	Method Blank	Total Recoverable	Water	6020A	432907
LCS 500-432907/2-A	Lab Control Sample	Total Recoverable	Water	6020A	432907
500-145553-2 MS	G30S	Total Recoverable	GW	6020A	432907
500-145553-2 MSD	G30S	Total Recoverable	GW	6020A	432907
500-145553-2 DU	G30S	Total Recoverable	GW	6020A	432907

Prep Batch: 433467

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-145553-10	R32S	Total Recoverable	Water	3005A	
500-145553-11	G45S	Total Recoverable	Water	3005A	
MB 500-433467/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-433467/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 433604

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-145553-6	G48S	Total Recoverable	GW	6020A	433098
500-145553-7	G47S	Total Recoverable	GW	6020A	433098
500-145553-8	G46S	Total Recoverable	GW	6020A	433098
500-145553-9	R08S	Total Recoverable	GW	6020A	433098
MB 500-433098/1-A	Method Blank	Total Recoverable	Water	6020A	433098
LCS 500-433098/2-A	Lab Control Sample	Total Recoverable	Water	6020A	433098
500-145553-6 MS	G48S	Total Recoverable	GW	6020A	433098
500-145553-6 MSD	G48S	Total Recoverable	GW	6020A	433098
500-145553-6 DU	G48S	Total Recoverable	GW	6020A	433098

Analysis Batch: 433664

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-145553-6	G48S	Total Recoverable	GW	6020A	433098

TestAmerica Chicago

QC Association Summary

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 2Q18 GW

TestAmerica Job ID: 500-145553-1

Metals (Continued)

Analysis Batch: 433664 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-145553-7	G47S	Total Recoverable	GW	6020A	433098
500-145553-8	G46S	Total Recoverable	GW	6020A	433098
500-145553-9	R08S	Total Recoverable	GW	6020A	433098
MB 500-433098/1-A	Method Blank	Total Recoverable	Water	6020A	433098
LCS 500-433098/2-A	Lab Control Sample	Total Recoverable	Water	6020A	433098
500-145553-6 MS	G48S	Total Recoverable	GW	6020A	433098
500-145553-6 MSD	G48S	Total Recoverable	GW	6020A	433098
500-145553-6 DU	G48S	Total Recoverable	GW	6020A	433098

Analysis Batch: 433755

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-145553-10	R32S	Total Recoverable	Water	6010C	433467
500-145553-11	G45S	Total Recoverable	Water	6010C	433467
MB 500-433467/1-A	Method Blank	Total Recoverable	Water	6010C	433467
LCS 500-433467/2-A	Lab Control Sample	Total Recoverable	Water	6010C	433467

Analysis Batch: 434570

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-145553-10	R32S	Total Recoverable	Water	6020A	433467
500-145553-11	G45S	Total Recoverable	Water	6020A	433467
MB 500-433467/1-A	Method Blank	Total Recoverable	Water	6020A	433467
LCS 500-433467/2-A	Lab Control Sample	Total Recoverable	Water	6020A	433467

General Chemistry

Analysis Batch: 432683

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-145553-1	G20S	Total/NA	GW	SM 2540C	
MB 500-432683/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-432683/2	Lab Control Sample	Total/NA	Water	SM 2540C	
500-145553-1 MS	G20S	Total/NA	GW	SM 2540C	
500-145553-1 DU	G20S	Total/NA	GW	SM 2540C	

Analysis Batch: 433163

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-145553-1	G20S	Total/NA	GW	SM 4500 Cl- E	
500-145553-2	G30S	Total/NA	GW	SM 4500 Cl- E	
500-145553-3	DUP	Total/NA	Water	SM 4500 Cl- E	
500-145553-4	G44S	Total/NA	GW	SM 4500 Cl- E	
500-145553-5	T03S	Total/NA	GW	SM 4500 Cl- E	
500-145553-6	G48S	Total/NA	GW	SM 4500 Cl- E	
500-145553-7	G47S	Total/NA	GW	SM 4500 Cl- E	
500-145553-8	G46S	Total/NA	GW	SM 4500 Cl- E	
500-145553-9	R08S	Total/NA	GW	SM 4500 Cl- E	
MB 500-433163/4	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 500-433163/5	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
500-145553-4 MS	G44S	Total/NA	GW	SM 4500 Cl- E	
500-145553-4 MSD	G44S	Total/NA	GW	SM 4500 Cl- E	

TestAmerica Chicago

QC Association Summary

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 2Q18 GW

TestAmerica Job ID: 500-145553-1

General Chemistry (Continued)

Analysis Batch: 433338

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-145553-2	G30S	Total/NA	GW	SM 2540C	
500-145553-3	DUP	Total/NA	Water	SM 2540C	
500-145553-4	G44S	Total/NA	GW	SM 2540C	
500-145553-5	T03S	Total/NA	GW	SM 2540C	
500-145553-6	G48S	Total/NA	GW	SM 2540C	
500-145553-7	G47S	Total/NA	GW	SM 2540C	
500-145553-8	G46S	Total/NA	GW	SM 2540C	
500-145553-9	R08S	Total/NA	GW	SM 2540C	
500-145553-10	R32S	Total/NA	Water	SM 2540C	
500-145553-11	G45S	Total/NA	Water	SM 2540C	
MB 500-433338/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-433338/2	Lab Control Sample	Total/NA	Water	SM 2540C	
500-145553-2 DU	G30S	Total/NA	GW	SM 2540C	

Analysis Batch: 434275

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-145553-1	G20S	Total/NA	GW	SM 4500 F C	
500-145553-2	G30S	Total/NA	GW	SM 4500 F C	
500-145553-3	DUP	Total/NA	Water	SM 4500 F C	
500-145553-4	G44S	Total/NA	GW	SM 4500 F C	
500-145553-5	T03S	Total/NA	GW	SM 4500 F C	
500-145553-6	G48S	Total/NA	GW	SM 4500 F C	
500-145553-7	G47S	Total/NA	GW	SM 4500 F C	
500-145553-8	G46S	Total/NA	GW	SM 4500 F C	
500-145553-9	R08S	Total/NA	GW	SM 4500 F C	
500-145553-10	R32S	Total/NA	Water	SM 4500 F C	
500-145553-11	G45S	Total/NA	Water	SM 4500 F C	
MB 500-434275/3	Method Blank	Total/NA	Water	SM 4500 F C	
MB 500-434275/31	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 500-434275/32	Lab Control Sample	Total/NA	Water	SM 4500 F C	
LCS 500-434275/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
500-145553-6 MS	G48S	Total/NA	GW	SM 4500 F C	
500-145553-6 MSD	G48S	Total/NA	GW	SM 4500 F C	

Analysis Batch: 434299

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-145553-10	R32S	Total/NA	Water	SM 4500 Cl- E	
500-145553-11	G45S	Total/NA	Water	SM 4500 Cl- E	
MB 500-434299/12	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 500-434299/13	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 435221

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-145553-1	G20S	Total/NA	GW	SM 4500 SO4 E	
500-145553-2	G30S	Total/NA	GW	SM 4500 SO4 E	
500-145553-3	DUP	Total/NA	Water	SM 4500 SO4 E	
MB 500-435221/3	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 500-435221/4	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	

TestAmerica Chicago

QC Association Summary

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 2Q18 GW

TestAmerica Job ID: 500-145553-1

General Chemistry (Continued)

Analysis Batch: 435373

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-145553-4	G44S	Total/NA	GW	SM 4500 SO4 E	
500-145553-5	T03S	Total/NA	GW	SM 4500 SO4 E	
500-145553-6	G48S	Total/NA	GW	SM 4500 SO4 E	
500-145553-7	G47S	Total/NA	GW	SM 4500 SO4 E	
500-145553-8	G46S	Total/NA	GW	SM 4500 SO4 E	
500-145553-9	R08S	Total/NA	GW	SM 4500 SO4 E	
MB 500-435373/3	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 500-435373/4	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
500-145553-4 MS	G44S	Total/NA	GW	SM 4500 SO4 E	
500-145553-4 MSD	G44S	Total/NA	GW	SM 4500 SO4 E	

Analysis Batch: 435378

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-145553-10	R32S	Total/NA	Water	SM 4500 SO4 E	
500-145553-11	G45S	Total/NA	Water	SM 4500 SO4 E	
MB 500-435378/3	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 500-435378/4	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
500-145553-11 MS	G45S	Total/NA	Water	SM 4500 SO4 E	
500-145553-11 MSD	G45S	Total/NA	Water	SM 4500 SO4 E	

Field Service / Mobile Lab

Analysis Batch: 433645

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-145553-1	G20S	Total/NA	GW	Field Sampling	
500-145553-2	G30S	Total/NA	GW	Field Sampling	
500-145553-3	DUP	Total/NA	Water	Field Sampling	
500-145553-4	G44S	Total/NA	GW	Field Sampling	
500-145553-5	T03S	Total/NA	GW	Field Sampling	
500-145553-6	G48S	Total/NA	GW	Field Sampling	
500-145553-7	G47S	Total/NA	GW	Field Sampling	
500-145553-8	G46S	Total/NA	GW	Field Sampling	
500-145553-9	R08S	Total/NA	GW	Field Sampling	
500-145553-10	R32S	Total/NA	Water	Field Sampling	
500-145553-11	G45S	Total/NA	Water	Field Sampling	

QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 2Q18 GW

TestAmerica Job ID: 500-145553-1

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 500-432708/1-A
Matrix: Water
Analysis Batch: 432881

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 432708

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.010		0.010		mg/L		05/17/18 07:32	05/18/18 01:46	1

Lab Sample ID: LCS 500-432708/2-A
Matrix: Water
Analysis Batch: 432881

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 432708

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lithium	0.100	0.110		mg/L		110	80 - 120

Lab Sample ID: MB 500-432907/1-A
Matrix: Water
Analysis Batch: 433345

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 432907

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.010		0.010		mg/L		05/18/18 08:00	05/22/18 03:25	1

Lab Sample ID: LCS 500-432907/2-A
Matrix: Water
Analysis Batch: 433345

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 432907

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lithium	0.500	0.530		mg/L		106	80 - 120

Lab Sample ID: 500-145553-2 MS
Matrix: GW
Analysis Batch: 433345

Client Sample ID: G30S
Prep Type: Total Recoverable
Prep Batch: 432907

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lithium	0.021		0.500	0.539		mg/L		103	75 - 125

Lab Sample ID: 500-145553-2 MSD
Matrix: GW
Analysis Batch: 433345

Client Sample ID: G30S
Prep Type: Total Recoverable
Prep Batch: 432907

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lithium	0.021		0.500	0.541		mg/L		104	75 - 125	0	20

Lab Sample ID: 500-145553-2 DU
Matrix: GW
Analysis Batch: 433345

Client Sample ID: G30S
Prep Type: Total Recoverable
Prep Batch: 432907

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Lithium	0.021		0.0216		mg/L		2	20

Lab Sample ID: MB 500-433098/1-A
Matrix: Water
Analysis Batch: 433345

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 433098

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.010		0.010		mg/L		05/19/18 11:04	05/21/18 23:50	1

TestAmerica Chicago

QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 2Q18 GW

TestAmerica Job ID: 500-145553-1

Lab Sample ID: LCS 500-433098/2-A
Matrix: Water
Analysis Batch: 433345

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 433098

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lithium	0.500	0.533		mg/L		107	80 - 120

Lab Sample ID: 500-145553-6 MS
Matrix: GW
Analysis Batch: 433345

Client Sample ID: G48S
Prep Type: Total Recoverable
Prep Batch: 433098

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lithium	0.023		0.500	0.534		mg/L		102	75 - 125

Lab Sample ID: 500-145553-6 MSD
Matrix: GW
Analysis Batch: 433345

Client Sample ID: G48S
Prep Type: Total Recoverable
Prep Batch: 433098

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lithium	0.023		0.500	0.540		mg/L		103	75 - 125	1	20

Lab Sample ID: 500-145553-6 DU
Matrix: GW
Analysis Batch: 433345

Client Sample ID: G48S
Prep Type: Total Recoverable
Prep Batch: 433098

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Lithium	0.023		0.0231		mg/L		2	20

Lab Sample ID: MB 500-433467/1-A
Matrix: Water
Analysis Batch: 433755

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 433467

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.010		0.010		mg/L		05/22/18 15:09	05/23/18 15:32	1

Lab Sample ID: LCS 500-433467/2-A
Matrix: Water
Analysis Batch: 433755

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 433467

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lithium	0.500	0.524		mg/L		105	80 - 120

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 500-432708/1-A
Matrix: Water
Analysis Batch: 432940

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 432708

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.0010		0.0010		mg/L		05/17/18 07:32	05/18/18 00:41	1
Barium	<0.0025		0.0025		mg/L		05/17/18 07:32	05/18/18 00:41	1
Boron	<0.050		0.050		mg/L		05/17/18 07:32	05/18/18 00:41	1
Calcium	<0.20		0.20		mg/L		05/17/18 07:32	05/18/18 00:41	1
Cobalt	<0.0010		0.0010		mg/L		05/17/18 07:32	05/18/18 00:41	1
Lead	<0.00050	^	0.00050		mg/L		05/17/18 07:32	05/18/18 00:41	1
Molybdenum	<0.0050		0.0050		mg/L		05/17/18 07:32	05/18/18 00:41	1

TestAmerica Chicago

QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 2Q18 GW

TestAmerica Job ID: 500-145553-1

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

Lab Sample ID: MB 500-432708/1-A
Matrix: Water
Analysis Batch: 432940

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 432708

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	<0.0025		0.0025		mg/L		05/17/18 07:32	05/18/18 00:41	1

Lab Sample ID: LCS 500-432708/2-A
Matrix: Water
Analysis Batch: 432940

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 432708

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.100	0.0945		mg/L		94	80 - 120
Barium	0.500	0.500		mg/L		100	80 - 120
Boron	1.00	0.979		mg/L		98	80 - 120
Calcium	10.0	11.5		mg/L		115	80 - 120
Cobalt	0.500	0.532		mg/L		106	80 - 120
Lead	0.100	0.111 ^		mg/L		111	80 - 120
Molybdenum	1.00	0.964		mg/L		96	80 - 120
Selenium	0.100	0.0962		mg/L		96	80 - 120

Lab Sample ID: MB 500-432907/1-A
Matrix: Water
Analysis Batch: 433252

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 432907

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.0010		0.0010		mg/L		05/18/18 08:00	05/18/18 23:19	1
Barium	<0.0025		0.0025		mg/L		05/18/18 08:00	05/18/18 23:19	1
Calcium	<0.20		0.20		mg/L		05/18/18 08:00	05/18/18 23:19	1
Cobalt	<0.0010		0.0010		mg/L		05/18/18 08:00	05/18/18 23:19	1
Lead	<0.00050		0.00050		mg/L		05/18/18 08:00	05/18/18 23:19	1
Molybdenum	<0.0050		0.0050		mg/L		05/18/18 08:00	05/18/18 23:19	1
Selenium	<0.0025		0.0025		mg/L		05/18/18 08:00	05/18/18 23:19	1

Lab Sample ID: MB 500-432907/1-A
Matrix: Water
Analysis Batch: 433393

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 432907

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.050		0.050		mg/L		05/18/18 08:00	05/21/18 19:53	1

Lab Sample ID: LCS 500-432907/2-A
Matrix: Water
Analysis Batch: 433252

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 432907

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.100	0.0997		mg/L		100	80 - 120
Barium	2.00	2.02		mg/L		101	80 - 120
Calcium	10.0	9.81		mg/L		98	80 - 120
Cobalt	0.500	0.501		mg/L		100	80 - 120
Lead	0.100	0.105		mg/L		105	80 - 120
Molybdenum	1.00	0.955		mg/L		96	80 - 120
Selenium	0.100	0.102		mg/L		102	80 - 120

TestAmerica Chicago

QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 2Q18 GW

TestAmerica Job ID: 500-145553-1

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

Lab Sample ID: LCS 500-432907/2-A
Matrix: Water
Analysis Batch: 433393

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 432907

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Boron	1.00	1.03		mg/L		103	80 - 120

Lab Sample ID: 500-145553-2 MS
Matrix: GW
Analysis Batch: 433252

Client Sample ID: G30S
Prep Type: Total Recoverable
Prep Batch: 432907

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Arsenic	0.011		0.100	0.132		mg/L		121	75 - 125
Barium	0.043		2.00	2.37		mg/L		116	75 - 125
Calcium	55		10.0	70.5	4	mg/L		154	75 - 125
Cobalt	<0.0010		0.500	0.510		mg/L		102	75 - 125
Lead	<0.00050		0.100	0.111		mg/L		111	75 - 125
Molybdenum	0.13		1.00	1.25		mg/L		113	75 - 125
Selenium	<0.0025	F1	0.100	0.0875		mg/L		86	75 - 125

Lab Sample ID: 500-145553-2 MS
Matrix: GW
Analysis Batch: 433393

Client Sample ID: G30S
Prep Type: Total Recoverable
Prep Batch: 432907

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Boron	5.7		1.00	6.81	4	mg/L		109	75 - 125

Lab Sample ID: 500-145553-2 MSD
Matrix: GW
Analysis Batch: 433252

Client Sample ID: G30S
Prep Type: Total Recoverable
Prep Batch: 432907

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Arsenic	0.011		0.100	0.117		mg/L		106	75 - 125	12	20
Barium	0.043		2.00	2.09		mg/L		102	75 - 125	13	20
Calcium	55		10.0	63.8	4	mg/L		87	75 - 125	10	20
Cobalt	<0.0010		0.500	0.467		mg/L		93	75 - 125	9	20
Lead	<0.00050		0.100	0.100		mg/L		100	75 - 125	10	20
Molybdenum	0.13		1.00	1.12		mg/L		99	75 - 125	11	20
Selenium	<0.0025	F1	0.100	0.0745	F1	mg/L		73	75 - 125	16	20

Lab Sample ID: 500-145553-2 MSD
Matrix: GW
Analysis Batch: 433393

Client Sample ID: G30S
Prep Type: Total Recoverable
Prep Batch: 432907

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Boron	5.7		1.00	6.95	4	mg/L		123	75 - 125	2	20

Lab Sample ID: 500-145553-2 DU
Matrix: GW
Analysis Batch: 433252

Client Sample ID: G30S
Prep Type: Total Recoverable
Prep Batch: 432907

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Arsenic	0.011		0.0115		mg/L		1	20
Barium	0.043		0.0432		mg/L		0.7	20

TestAmerica Chicago

QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 2Q18 GW

TestAmerica Job ID: 500-145553-1

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

Lab Sample ID: 500-145553-2 DU

Matrix: GW

Analysis Batch: 433252

Client Sample ID: G30S
Prep Type: Total Recoverable
Prep Batch: 432907

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Calcium	55		55.4		mg/L		0.6	20
Cobalt	<0.0010		<0.0010		mg/L		NC	20
Lead	<0.00050		<0.00050		mg/L		NC	20
Molybdenum	0.13		0.131		mg/L		3	20
Selenium	<0.0025	F1	<0.0025		mg/L		NC	20

Lab Sample ID: 500-145553-2 DU

Matrix: GW

Analysis Batch: 433393

Client Sample ID: G30S
Prep Type: Total Recoverable
Prep Batch: 432907

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Boron	5.7		5.77		mg/L		0.9	20

Lab Sample ID: MB 500-433098/1-A

Matrix: Water

Analysis Batch: 433604

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 433098

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.0010		0.0010		mg/L		05/19/18 11:04	05/22/18 19:19	1
Barium	<0.0025		0.0025		mg/L		05/19/18 11:04	05/22/18 19:19	1
Calcium	<0.20		0.20		mg/L		05/19/18 11:04	05/22/18 19:19	1
Cobalt	<0.0010		0.0010		mg/L		05/19/18 11:04	05/22/18 19:19	1
Lead	<0.00050		0.00050		mg/L		05/19/18 11:04	05/22/18 19:19	1
Molybdenum	<0.0050		0.0050		mg/L		05/19/18 11:04	05/22/18 19:19	1
Selenium	<0.0025		0.0025		mg/L		05/19/18 11:04	05/22/18 19:19	1

Lab Sample ID: MB 500-433098/1-A

Matrix: Water

Analysis Batch: 433664

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 433098

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.050		0.050		mg/L		05/19/18 11:04	05/23/18 11:31	1

Lab Sample ID: LCS 500-433098/2-A

Matrix: Water

Analysis Batch: 433604

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 433098

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.100	0.101		mg/L		101	80 - 120
Barium	2.00	2.14		mg/L		107	80 - 120
Calcium	10.0	9.65		mg/L		97	80 - 120
Cobalt	0.500	0.524		mg/L		105	80 - 120
Lead	0.100	0.113		mg/L		113	80 - 120
Molybdenum	1.00	0.983		mg/L		98	80 - 120
Selenium	0.100	0.102		mg/L		102	80 - 120

TestAmerica Chicago

QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 2Q18 GW

TestAmerica Job ID: 500-145553-1

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

Lab Sample ID: LCS 500-433098/2-A
Matrix: Water
Analysis Batch: 433664

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 433098

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1.00	1.04		mg/L		104	80 - 120

Lab Sample ID: 500-145553-6 MS
Matrix: GW
Analysis Batch: 433604

Client Sample ID: G48S
Prep Type: Total Recoverable
Prep Batch: 433098

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.022		0.100	0.128		mg/L		106	75 - 125
Barium	0.023		2.00	2.10		mg/L		104	75 - 125
Calcium	53		10.0	62.4	4	mg/L		92	75 - 125
Cobalt	<0.0010		0.500	0.488		mg/L		98	75 - 125
Lead	<0.00050		0.100	0.105		mg/L		105	75 - 125
Molybdenum	0.49		1.00	1.49		mg/L		100	75 - 125
Selenium	<0.0025		0.100	0.0816		mg/L		82	75 - 125

Lab Sample ID: 500-145553-6 MS
Matrix: GW
Analysis Batch: 433664

Client Sample ID: G48S
Prep Type: Total Recoverable
Prep Batch: 433098

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	5.9		1.00	6.98	4	mg/L		106	75 - 125

Lab Sample ID: 500-145553-6 MSD
Matrix: GW
Analysis Batch: 433604

Client Sample ID: G48S
Prep Type: Total Recoverable
Prep Batch: 433098

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Arsenic	0.022		0.100	0.127		mg/L		105	75 - 125	1	20
Barium	0.023		2.00	2.08		mg/L		103	75 - 125	1	20
Calcium	53		10.0	61.6	4	mg/L		84	75 - 125	1	20
Cobalt	<0.0010		0.500	0.485		mg/L		97	75 - 125	1	20
Lead	<0.00050		0.100	0.104		mg/L		104	75 - 125	1	20
Molybdenum	0.49		1.00	1.48		mg/L		99	75 - 125	1	20
Selenium	<0.0025		0.100	0.0824		mg/L		82	75 - 125	1	20

Lab Sample ID: 500-145553-6 MSD
Matrix: GW
Analysis Batch: 433664

Client Sample ID: G48S
Prep Type: Total Recoverable
Prep Batch: 433098

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Boron	5.9		1.00	6.55	4	mg/L		64	75 - 125	6	20

Lab Sample ID: 500-145553-6 DU
Matrix: GW
Analysis Batch: 433604

Client Sample ID: G48S
Prep Type: Total Recoverable
Prep Batch: 433098

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Arsenic	0.022		0.0227		mg/L		3	20
Barium	0.023		0.0231		mg/L		0.5	20

TestAmerica Chicago

QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 2Q18 GW

TestAmerica Job ID: 500-145553-1

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

Lab Sample ID: 500-145553-6 DU
Matrix: GW
Analysis Batch: 433604

Client Sample ID: G48S
Prep Type: Total Recoverable
Prep Batch: 433098

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Calcium	53		54.6		mg/L		3	20
Cobalt	<0.0010		<0.0010		mg/L		NC	20
Lead	<0.00050		<0.00050		mg/L		NC	20
Molybdenum	0.49		0.501		mg/L		2	20
Selenium	<0.0025		<0.0025		mg/L		NC	20

Lab Sample ID: 500-145553-6 DU
Matrix: GW
Analysis Batch: 433664

Client Sample ID: G48S
Prep Type: Total Recoverable
Prep Batch: 433098

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Boron	5.9		5.71		mg/L		4	20

Lab Sample ID: MB 500-433467/1-A
Matrix: Water
Analysis Batch: 434570

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 433467

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.0010		0.0010		mg/L		05/22/18 15:09	05/29/18 16:32	1
Barium	<0.0025		0.0025		mg/L		05/22/18 15:09	05/29/18 16:32	1
Boron	<0.050		0.050		mg/L		05/22/18 15:09	05/29/18 16:32	1
Calcium	<0.20		0.20		mg/L		05/22/18 15:09	05/29/18 16:32	1
Cobalt	<0.0010		0.0010		mg/L		05/22/18 15:09	05/29/18 16:32	1
Lead	<0.00050		0.00050		mg/L		05/22/18 15:09	05/29/18 16:32	1
Molybdenum	<0.0050		0.0050		mg/L		05/22/18 15:09	05/29/18 16:32	1
Selenium	<0.0025		0.0025		mg/L		05/22/18 15:09	05/29/18 16:32	1

Lab Sample ID: LCS 500-433467/2-A
Matrix: Water
Analysis Batch: 434570

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 433467

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.100	0.0959		mg/L		96	80 - 120
Barium	2.00	2.01		mg/L		101	80 - 120
Boron	1.00	0.944		mg/L		94	80 - 120
Calcium	10.0	9.35		mg/L		94	80 - 120
Cobalt	0.500	0.503		mg/L		101	80 - 120
Lead	0.100	0.106		mg/L		106	80 - 120
Molybdenum	1.00	0.947		mg/L		95	80 - 120
Selenium	0.100	0.0979		mg/L		98	80 - 120

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

Lab Sample ID: MB 500-432683/1
Matrix: Water
Analysis Batch: 432683

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			05/17/18 03:42	1

TestAmerica Chicago

QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 2Q18 GW

TestAmerica Job ID: 500-145553-1

Lab Sample ID: LCS 500-432683/2
Matrix: Water
Analysis Batch: 432683

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	298		mg/L		119	80 - 120

Lab Sample ID: 500-145553-1 MS
Matrix: GW
Analysis Batch: 432683

Client Sample ID: G20S
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	410		250	710		mg/L		118	75 - 125

Lab Sample ID: 500-145553-1 DU
Matrix: GW
Analysis Batch: 432683

Client Sample ID: G20S
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	410		434		mg/L		5	5

Lab Sample ID: MB 500-433338/1
Matrix: Water
Analysis Batch: 433338

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10		mg/L			05/22/18 04:12	1

Lab Sample ID: LCS 500-433338/2
Matrix: Water
Analysis Batch: 433338

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	290		mg/L		116	80 - 120

Lab Sample ID: 500-145553-2 DU
Matrix: GW
Analysis Batch: 433338

Client Sample ID: G30S
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	1100		1130		mg/L		1	5

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 500-433163/4
Matrix: Water
Analysis Batch: 433163

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			05/20/18 21:12	1

Lab Sample ID: LCS 500-433163/5
Matrix: Water
Analysis Batch: 433163

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	50.6		mg/L		101	85 - 115

TestAmerica Chicago

QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 2Q18 GW

TestAmerica Job ID: 500-145553-1

Lab Sample ID: 500-145553-4 MS
Matrix: GW
Analysis Batch: 433163

Client Sample ID: G44S
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	35		50.0	78.4		mg/L		86	75 - 125

Lab Sample ID: 500-145553-4 MSD
Matrix: GW
Analysis Batch: 433163

Client Sample ID: G44S
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	35		50.0	78.0		mg/L		85	75 - 125	1	20

Lab Sample ID: MB 500-434299/12
Matrix: Water
Analysis Batch: 434299

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<2.0		2.0		mg/L			05/28/18 17:42	1

Lab Sample ID: LCS 500-434299/13
Matrix: Water
Analysis Batch: 434299

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	50.1		mg/L		100	85 - 115

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 500-434275/3
Matrix: Water
Analysis Batch: 434275

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.10		0.10		mg/L			05/26/18 14:23	1

Lab Sample ID: MB 500-434275/31
Matrix: Water
Analysis Batch: 434275

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.10		0.10		mg/L			05/26/18 16:00	1

Lab Sample ID: LCS 500-434275/32
Matrix: Water
Analysis Batch: 434275

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	10.0	10.5		mg/L		105	80 - 120

TestAmerica Chicago

QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 2Q18 GW

TestAmerica Job ID: 500-145553-1

Method: SM 4500 F C - Fluoride (Continued)

Lab Sample ID: LCS 500-434275/4

Matrix: Water

Analysis Batch: 434275

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	10.0	10.4		mg/L		104	80 - 120

Lab Sample ID: 500-145553-6 MS

Matrix: GW

Analysis Batch: 434275

Client Sample ID: G48S

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	0.92		5.00	6.09		mg/L		103	75 - 125

Lab Sample ID: 500-145553-6 MSD

Matrix: GW

Analysis Batch: 434275

Client Sample ID: G48S

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	0.92		5.00	6.00		mg/L		102	75 - 125	1	20

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 500-435221/3

Matrix: Water

Analysis Batch: 435221

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	<5.0		5.0		mg/L			06/04/18 12:49	1

Lab Sample ID: LCS 500-435221/4

Matrix: Water

Analysis Batch: 435221

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	20.0	19.6		mg/L		98	80 - 120

Lab Sample ID: MB 500-435373/3

Matrix: Water

Analysis Batch: 435373

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	<5.0		5.0		mg/L			06/05/18 09:04	1

Lab Sample ID: LCS 500-435373/4

Matrix: Water

Analysis Batch: 435373

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	20.0	20.8		mg/L		104	80 - 120

TestAmerica Chicago

QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 2Q18 GW

TestAmerica Job ID: 500-145553-1

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

Lab Sample ID: 500-145553-4 MS

Matrix: GW

Analysis Batch: 435373

Client Sample ID: G44S

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	96		400	473		mg/L		94	75 - 125

Lab Sample ID: 500-145553-4 MSD

Matrix: GW

Analysis Batch: 435373

Client Sample ID: G44S

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	96		400	450		mg/L		89	75 - 125	5	20

Lab Sample ID: MB 500-435378/3

Matrix: Water

Analysis Batch: 435378

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	<5.0		5.0		mg/L			06/05/18 10:15	1

Lab Sample ID: LCS 500-435378/4

Matrix: Water

Analysis Batch: 435378

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	20.0	19.5		mg/L		97	80 - 120

Lab Sample ID: 500-145553-11 MS

Matrix: Water

Analysis Batch: 435378

Client Sample ID: G45S

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	230		400	599		mg/L		93	75 - 125

Lab Sample ID: 500-145553-11 MSD

Matrix: Water

Analysis Batch: 435378

Client Sample ID: G45S

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	230		400	630		mg/L		101	75 - 125	5	20

TestAmerica Chicago

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 #: 500-145553

Chain of Custody Number: _____

Page _____ of _____

500-145553 COC

Temperature °C of Cooler: 2.6



Client <u>Midwest Generation EME LLC</u>		Client Project # <u>CCR Joliet #9 - 2018 GW</u>		Preservative <u>3</u>		<u>3</u>		<u>8</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>CCR Joliet #9 - 2018 GW</u>		Project Location/State <u>Joliet, IL</u>		Lab Project # <u>Eric Lang</u>		Parameter <u>Radium 226/228</u>		<u>Total Metals</u>		<u>Cl, F, SO4, TDS</u>													
Sample <u>Nor L, Rob P.</u>		Lab PM <u>Eric Lang</u>																					
Lab ID	MS/MSD	Sample ID	Sampling Date	Time	# of Containers	Matrix																	Comments
<u>2</u>		<u>G305</u>	<u>05/17/18</u>	<u>0913</u>	<u>5</u>	<u>W</u>	<u>1</u>	<u>1</u>	<u>1</u>														
<u>3</u>		<u>DUP</u>	<u>05/17/18</u>	<u>0913</u>	<u>5</u>	<u>W</u>	<u>1</u>	<u>1</u>	<u>1</u>														<u>DUP of G305</u>
<u>4</u>		<u>G445</u>	<u>05/17/18</u>	<u>1234</u>	<u>5</u>	<u>W</u>	<u>1</u>	<u>1</u>	<u>1</u>														
<u>5</u>		<u>T035</u>	<u>05/17/18</u>	<u>1355</u>	<u>5</u>	<u>W</u>	<u>1</u>	<u>1</u>	<u>1</u>														

Turnaround Time Required (Business Days)

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

Requested Due Date _____

Sample Disposal

☐ Return to Client

☐ Disposal by Lab

☐ Archive for _____ Months

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

Relinquished By <u>THC</u>	Company <u>THC</u>	Date <u>05/17/18</u>	Time <u>1535</u>	Received By <u>TA</u>	Company <u>TA</u>	Date <u>05/17/18</u>	Time <u>1535</u>	Lab Courier <u>TA</u>
Relinquished By	Company	Date	Time	Received By	Company	Date	Time	Shipped
Relinquished By	Company	Date	Time	Received By	Company	Date	Time	Hand Delivered ☒

Matrix Key

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

Client Comments

Lab Comments:

TestAmerica

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 #: 500-145553

Chain of Custody Number: _____

Page _____ of _____

Temperature °C of Cooler: 3.8

Client <u>Midwest Generation EME LLC</u>		Client Project # <u>CCR Joliet #9 - 2Q18 G-4</u>		Preservative <u>3</u>		<u>3</u>		<u>8</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>CCR Joliet #9 - 2Q18 G-4</u>		Project Location/State <u>Joliet, IL</u>		Lab Project # <u></u>		Parameter <u>Radium 226/228</u>		<u>Total Metals</u>		<u>Cl, F, I, SO4, TDS</u>													
Sampler <u>Noc L, Rob P.</u>		Lab PM <u>Eric Lang</u>																					
Lab ID	MS/MSD	Sample ID	Date	Time	# of Containers	Matrix																	Comments
<u>6</u>		<u>G48S</u>	<u>05/18/18</u>	<u>0845</u>	<u>5</u>	<u>W</u>	<u>1</u>	<u>1</u>	<u>1</u>														
<u>7</u>		<u>G47S</u>	<u>05/18/18</u>	<u>1007</u>	<u>5</u>	<u>W</u>	<u>1</u>	<u>1</u>	<u>1</u>														
<u>8</u>		<u>G46S</u>	<u>05/18/18</u>	<u>1220</u>	<u>5</u>	<u>W</u>	<u>1</u>	<u>1</u>	<u>1</u>														
<u>9</u>		<u>RO8S</u>	<u>05/18/18</u>	<u>1320</u>	<u>5</u>	<u>W</u>	<u>1</u>	<u>1</u>	<u>1</u>														



500-145553 COC

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

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

Relinquished By <u>SL</u>	Company <u>YDL</u>	Date <u>05/18/18</u>	Time <u>1445</u>	Received By <u>Devin Samuel</u>	Company <u>TAHKE</u>	Date <u>05/18/18</u>	Time <u>1445</u>
Relinquished By	Company	Date	Time	Received By	Company	Date	Time
Relinquished By	Company	Date	Time	Received By	Company	Date	Time

Lab Courier: TA
 Shipped: _____
 Hand Delivered: _____

Matrix Key WW - Wastewater SE - Sediment W - Water SO - Soil S - Soil L - Leachate SL - Sludge Wt - Wipe MS - Miscellaneous DW - Drinking Water OL - Oil O - Other A - Air	Client Comments	Lab Comments:

2417 Bond Street, University Park, IL 60
Phone: 708.534.5200 Fax: 708.534



500-145553 COC

Report To _____ (optional)

Contact: _____

Company: _____

Address: _____

Address: _____

Phone: _____

Fax: _____

E-Mail: _____

(optional)

Bill To _____

Contact: _____

Company: _____

Address: _____

Address: _____

Phone: _____

Fax: _____

PO#/Reference# _____

Chain of Custody Record

Lab Job #: 500-145553

Chain of Custody Number:

Page _____ of _____

Temperature °C of Cooler: 5.4

[illegible]

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	Company	Date	Time
22	TOR	05/24/10	1235
Relinquished By	Company	Date	Time
Relinquished By	Company	Date	Time

Received By	Company	Date	Time
Shirley Scott	TA-CAT	5/21/18	1236
Received By	Company	Date	Time
Received By	Company	Date	Time

Lab Courier 

Shipped	

Hand Delivered	

Matrix Key

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

Client Comments

Lab Comments:

TestAmerica Chicago

2417 Bond St
University Park, IL 60484-3182
Tel: 708 534 5200 Fax: 708 534 5211

Sample ID: G20S
Facility: Midwest Generation-Joliet #9 CCR
Job #: 500-145553-1

Type Sample: Ground Water Surface Water Leachate Other: _____
(circle one)
Equipment Used: Purging _____ Bladder Pump _____ Dedicated (Y/N)
Sampling _____ Bladder Pump _____ Dedicated (Y/N)

PURGING INFORMATION

Purge Date: 05/16/18 Start Purge: 0925 End Purge: 0945
(2400 Hr. Clock)
Water Volume In Casing (gallons): N/A Volume Purged (gallons): 0.13

MEASUREMENTS

Well Diameter 2.0 (Inches) 1st 2nd Final
Stick Up 2.78 (ft) pH 7.07 7.06 7.06 (std.)
Ref. Measuring Pt. TIC SC 603 601 601 (umhos/cm)
Well Elevation *580.33 (ft./msl) Temp. 24.70 24.68 24.68 (°C)
Water Level 48.83 (ft.) - Well Stabilization / Recharge Grid
Ground Water Elev. 531.50 (ft./msl)
Well Bottom Elevation *442.28 (ft./msl)

COMMENTS

Sample Appearance/Odor: Colorless, Clear, Slight Odor
Weather Conditions: 71°F, Sunny, NE winds 0-5 mph

Other: *Reference Measurement

Depth To Water from L.S. = 48.83 - 2.78 = 46.05 (ft.)

Levels were taken on 05/16/18 @ 0915

Sampler Name (Print): Noe Lopez Signature: [Signature]

TestAmerica Chicago

2417 Bond St
University Park, IL 60484-3182
Tel: 708 534 5200 Fax: 708 534 5211

Sample ID: G30S
Facility: Midwest Generation-Joliet #9 CCR
Job #: 500-145552-2

Type Sample: Ground Water Surface Water Leachate Other: _____
(circle one)
Equipment Used: Purging _____ Bladder Pump _____ Dedicated ☒ (Y/N)
Sampling _____ Bladder Pump _____ Dedicated ☒ (Y/N)

PURGING INFORMATION

Purge Date: 05/17/18 Start Purge: 0855 End Purge: 0913
(2400 Hr. Clock)
Water Volume in Casing (gallons): N/A Volume Purged (gallons): 0.23

MEASUREMENTS

Well Diameter	<u>2.0</u>	(Inches)	1st	2nd	Final																					
Stick Up	<u>2.31</u>	(ft)	pH	<u>7.75</u>	<u>7.77</u>	<u>7.77</u> (std.)																				
Ref. Measuring Pt.	<u>TIC</u>		SC	<u>1490</u>	<u>1490</u>	<u>1490</u> (umhos/cm)																				
Well Elevation	<u>*524.40</u>	(ft./msl)	Temp.	<u>12.90</u>	<u>12.98</u>	<u>12.98</u> (°C)																				
Water Level	<u>1.62</u>	(ft.)	Well Stabilization / Recharge Grid																							
Ground Water Elev.	<u>522.78</u>	(ft./msl)	<table border="1" style="width: 100%; height: 40px;"> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>																							
Well Bottom Elevation	<u>*462.58</u>	(ft./msl)																								

COMMENTS

Sample Appearance/Odor: Colorless, Clear, Moderate Odor
Weather Conditions: 75°F, Sunny, NE winds @ 0-5 mph

Other: *Reference Measurement

Depth To Water from L.S. = 1.62 - 2.31 = -0.69 (ft.)

Levels were taken on 05/17/18 @ 0845

Sampler Name (Print): Noe Lopez

Signature: [Signature]

TestAmerica Chicago

2417 Bond St
University Park, IL 60484-3182
Tel: 708 534 5200 Fax: 708 534 5211

Sample ID: G30S Dup
Facility: Midwest Generation-Joliet #9 CCR
Job #: 500-145553-3

Type Sample: Ground Water Surface Water Leachate Other: _____
(circle one)
Equipment Used: Purging _____ Bladder Pump _____ Dedicated (Y/N) _____
Sampling _____ Bladder Pump _____ Dedicated (Y/N) _____

PURGING INFORMATION

Purge Date: _____ Start Purge: _____ End Purge: _____
(2400 Hr. Clock)
Water Volume in Casing (gallons): N/A Volume Purged (gallons): _____

MEASUREMENTS

Well Diameter 2.0 (inches) 1st 2nd Final
Stick Up 2.31 (ft) pH _____ (std.)
Ref. Measuring Pt. TIC SC _____ (umhos/cm)
Well Elevation *524.40 (ft./msl) Temp. _____ (°C)
Water Level _____ (ft.) Well Stabilization / Recharge Grid
Ground Water Elev. _____ (ft./msl)
Well Bottom Elevation *462.58 (ft./msl)

COMMENTS

Sample Appearance/Odor: _____
Weather Conditions: _____
Other: *Reference Measurement
Depth To Water from L.S. = _____
Levels were taken on _____ @ _____

Sampler Name (Print): Noe Lopez

Signature: [Signature]

TestAmerica Chicago

2417 Bond St
University Park, IL 60484-3182
Tel: 708 534 5200 Fax: 708 534 5211

Sample ID: G44S
Facility: Midwest Generation-Joliet #9 CCR
Job #: 500-145553-4

Type Sample: Ground Water Surface Water Leachate Other: _____
(circle one)
Equipment Used: Purging _____ Bladder Pump _____ Dedicated ☒ (Y/N)
Sampling _____ Bladder Pump _____ Dedicated ☒ (Y/N)

PURGING INFORMATION

Purge Date: 05/17/18 Start Purge: 1220 End Purge: 1234
(2400 Hr. Clock)
Water Volume in Casing (gallons): N/A Volume Purged (gallons): 0.45

MEASUREMENTS

			1st	2nd	Final																					
Well Diameter	<u>2.0</u>	(inches)																								
Stick Up	<u>2.18</u>	(ft)	pH <u>7.03</u>	<u>7.02</u>	<u>7.02</u>	(std.)																				
Ref. Measuring Pt.	<u>TIC</u>		SC <u>856</u>	<u>855</u>	<u>855</u>	(umhos/cm)																				
Well Elevation	<u>*586.69</u>	(ft./msl)	Temp. <u>15.11</u>	<u>15.12</u>	<u>15.12</u>	(°C)																				
Water Level	<u>80.17</u>	(ft.)	Well Stabilization / Recharge Grid																							
Ground Water Elev.	<u>506.52</u>	(ft./msl)	<table border="1"> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>																							
Well Bottom Elevation	<u>*455.11</u>	(ft./msl)																								

COMMENTS

Sample Appearance/Odor: Colorless, Clear, No Odor
Weather Conditions: 79°F, Sunny, NE winds @ 5-10 mph

Other: *Reference Measurement

Depth To Water from L.S. = 80.17 - 2.18 = 77.99 (ft.)

Levels were taken on 05/17/18 @ 1215

Sampler Name (Print): Noe Lopez Signature: [Signature]

TestAmerica Chicago

2417 Bond St
University Park, IL 60484-3182
Tel: 708 534 5200 Fax: 708 534 5211

Sample ID: T03S
Facility: Midwest Generation-Joliet #9 CCR
Job #: 500-14553-5

Type Sample: Ground Water Surface Water Leachate Other: _____
(circle one)
Equipment Used: Purging _____ Bladder Pump _____ Dedicated ☒ (Y/N)
Sampling _____ Bladder Pump _____ Dedicated ☒ (Y/N)

PURGING INFORMATION

Purge Date: 05/17/18 Start Purge: 1340 End Purge: 1355
(2400 Hr. Clock)
Water Volume in Casing (gallons): N/A Volume Purged (gallons): 0.39

MEASUREMENTS

	1st	2nd	Final																					
Well Diameter <u>2.0</u> (inches)																								
Stick Up <u>3.08</u> (ft)	pH <u>7.06</u>	<u>7.07</u>	<u>7.07</u>	(std.)																				
Ref. Measuring Pt. <u>TIC</u>	SC <u>1035</u>	<u>1041</u>	<u>1041</u>	(umhos/cm)																				
Well Elevation * <u>629.65</u> (ft./msl)	Temp. <u>14.69</u>	<u>14.72</u>	<u>14.72</u>	(°C)																				
Water Level <u>134.42</u> (ft.)	Well Stabilization / Recharge Grid																							
Ground Water Elev. <u>495.23</u> (ft./msl)	<table border="1" style="width: 100%; height: 40px;"> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>																							
Well Bottom Elevation * <u>456.70</u> (ft./msl)																								

COMMENTS

Sample Appearance/Odor: Colorless, Slight Turbidity, No Odor
Weather Conditions: 79°F, Sunny, NE winds @ 10-15 mph

Other: *Reference Measurement

Depth To Water from L.S. = 134.42 - 3.08 = 131.34

Levels were taken on 05/17/18 @ 1330.

* Total Depth = 172.95

Sampler Name (Print): Noe Lopez Signature: [Signature]

TestAmerica Chicago

2417 Bond St
University Park, IL 60484-3182
Tel: 708 534 5200 Fax: 708 534 5211

Sample ID: G48S
Facility: Midwest Generation-Joliet #9 CCR
Job #: 500-14553-6

Type Sample: Ground Water Surface Water Leachate Other: _____
(circle one)
Equipment Used: Purging _____ Bladder Pump _____ Dedicated (Y/N)
Sampling _____ Bladder Pump _____ Dedicated (Y/N)

PURGING INFORMATION

Purge Date: 05/18/18 Start Purge: 0825 End Purge: 0845
(2400 Hr. Clock)
Water Volume in Casing (gallons): N/A Volume Purged (gallons): 0.77

MEASUREMENTS

	1st	2nd	Final																															
Well Diameter <u>4.0</u> (Inches)																																		
Stick Up <u>2.45</u> (ft)	pH <u>7.78</u>	<u>7.79</u>	<u>7.79</u>	(std.)																														
Ref. Measuring Pt. <u>TIC</u>	SC <u>1404</u>	<u>1407</u>	<u>1407</u>	(umhos/cm)																														
Well Elevation <u>*620.77</u> (ft./msl)	Temp. <u>12.68</u>	<u>12.68</u>	<u>12.68</u>	(°C)																														
Water Level <u>100.74</u> (ft.)	Well Stabilization / Recharge Grid																																	
Ground Water Elev. <u>520.03</u> (ft./msl)	<table border="1" style="width: 100%; height: 40px;"> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>																																	
Well Bottom Elevation <u>*468.32</u> (ft./msl)																																		

COMMENTS

Sample Appearance/Odor: Colorless, Clear, Strong Odor
Weather Conditions: 65°F, Fair, E winds @ 10-15 mph

Other: *Reference Measurement

Depth To Water from L.S. = 100.74 - 2.45 = 98.29 (ft.)

Levels were taken on 05/18/18 @ 0815.

Sampler Name (Print): Noe Lopez

Signature: [Signature]

TestAmerica Chicago

2417 Bond St
University Park, IL 60484-3182
Tel: 708 534 5200 Fax: 708 534 5211

Sample ID: G47S
Facility: Midwest Generation-Joliet #9 CCR
Job #: 500-14553-7

Type Sample: Ground Water Surface Water Leachate Other: _____
(circle one)
Equipment Used: Purging _____ Bladder Pump _____ Dedicated ☒ (Y/N)
Sampling _____ Bladder Pump _____ Dedicated ☒ (Y/N)

PURGING INFORMATION

Purge Date: 05/18/18 Start Purge: 0950 End Purge: 1007
(2400 Hr. Clock)
Water Volume in Casing (gallons): N/A Volume Purged (gallons): 0.66

MEASUREMENTS

Well Diameter	4.0	(Inches)	1st	2nd	Final																					
Stick Up	2.50	(ft)	pH	<u>10.42</u>	<u>10.42</u>	<u>10.42</u> (std.)																				
Ref. Measuring Pt.	TIC		SC	<u>2440</u>	<u>2430</u>	<u>2430</u> (umhos/cm)																				
Well Elevation	*612.32	(ft./msl)	Temp.	<u>15.90</u>	<u>15.97</u>	<u>15.97</u> (°C)																				
Water Level	<u>93.51</u>	(ft.)	Well Stabilization / Recharge Grid																							
Ground Water Elev.	<u>518.81</u>	(ft./msl)	<table border="1"> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>																							
Well Bottom Elevation	*459.84	(ft./msl)																								

COMMENTS

Sample Appearance/Odor: Colorless, Clear, slight Odor
Weather Conditions: 68°F, Sunny, NE wind @ 10-15 mph

Other: *Reference Measurement

Depth To Water from L.S. = 93.51 - 2.50 = 91.01 (ft.)

Levels were taken on 05/18/18 @ 0945

Sampler Name (Print): Noe Lopez Signature: [Signature]

TestAmerica Chicago

2417 Bond St
University Park, IL 60484-3182
Tel: 708 534 5200 Fax: 708 534 5211

Sample ID: G46S
Facility: Midwest Generation-Joliet #9 CCR
Job #: 500-14553-8

Type Sample: Ground Water Surface Water Leachate Other: _____
(circle one)
Equipment Used: Purging _____ Bladder Pump Dedicated (N)
Sampling _____ Bladder Pump Dedicated (N)

PURGING INFORMATION

Purge Date: 05/18/18 Start Purge: 1200 End Purge: 1220
(2400 Hr. Clock)
Water Volume in Casing (gallons): N/A Volume Purged (gallons): 0.77

MEASUREMENTS

Well Diameter 4.0 (Inches) 1st 2nd Final
Stick Up 2.70 (ft) pH 7.67 7.66 7.66 (std.)
Ref. Measuring Pt. TIC SC 1200 1201 1201 (umhos/cm)
Well Elevation *601.32 (ft./msl) Temp. 14.48 14.44 14.44 (°C)
Water Level 95.59 (ft.) Well Stabilization / Recharge Grid
Ground Water Elev. 505.73 (ft./msl)
Well Bottom Elevation *453.62 (ft./msl)

COMMENTS

Sample Appearance/Odor: Colorless, Clear, No Odor
Weather Conditions: 73°F, Sunny, NE winds @ 10-15 mph

Other: *Reference Measurement

Depth To Water from L.S. = 95.59 - 2.70 = 92.89 (ft.)

Levels were taken on 05/18/18 @ 1155

Sampler Name (Print): Noc Lopez

Signature: [Signature]

TestAmerica Chicago

2417 Bond St
University Park, IL 60484-3182
Tel: 708 534 5200 Fax: 708 534 5211

Sample ID: R08S
Facility: Midwest Generation-Joliet #9 CCR
Job #: 500-14853-9

Type Sample: Ground Water Surface Water Leachate Other: _____
(circle one)
Equipment Used: Purging _____ Bladder Pump _____ Dedicated ☒ (N)
Sampling _____ Bladder Pump _____ Dedicated ☒ (N)

PURGING INFORMATION

Purge Date: 05/18/18 Start Purge: 1305 End Purge: 1320
(2400 Hr. Clock)
Water Volume in Casing (gallons): N/A Volume Purged (gallons): 0.77

MEASUREMENTS

Well Diameter	2.0	(Inches)	1st	2nd	Final																															
Stick Up	2.55	(ft)	pH	8.23	8.25	8.25 (std.)																														
Ref. Measuring Pt.	TIC		SC	960	965	965 (umhos/cm)																														
Well Elevation	*578.65	(ft./msl)	Temp.	14.42	14.41	14.41 (°C)																														
Water Level	65.31	(ft.)	Well Stabilization / Recharge Grid																																	
Ground Water Elev.	513.34	(ft./msl)	<table border="1" style="width: 100%; height: 40px;"> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>																																	
Well Bottom Elevation	*453.08	(ft./msl)																																		

COMMENTS

Sample Appearance/Odor: Colorless, Clear, No Odor
Weather Conditions: 73°F, Fair, NE winds @ 10-15 mph

Other: *Reference Measurement (Well ID updated 11-25-15)

Depth To Water from L.S. = 65.31 - 2.55 = 62.76 (ft.)

Levels were taken on 05/18/18 @ 1255

Sampler Name (Print): Noe Lopez

Signature: [Signature]

TestAmerica Chicago

2417 Bond St
University Park, IL 60484-3182
Tel: 708 534 5200 Fax: 708 534 5211

Sample ID: R32S
Facility: Midwest Generation-Joliet #9 CCR
Job #: 500-145553-10

Type Sample: Ground Water Surface Water Leachate Other: _____
(circle one)
Equipment Used: Purging _____ Bladder Pump _____ Dedicated ☒ (Y/N)
Sampling _____ Bladder Pump _____ Dedicated ☒ (Y/N)

PURGING INFORMATION

Purge Date: 05/21/18 Start Purge: 0945 End Purge: 1004
(2400 Hr. Clock)
Water Volume in Casing (gallons): N/A Volume Purged (gallons): 1.23

MEASUREMENTS

Well Diameter	<u>2.0</u>	(inches)	1st	2nd	Final																															
Stick Up	<u>2.03</u>	(ft)	pH	<u>7.12</u>	<u>7.13</u>	<u>7.13</u> (std.)																														
Ref. Measuring Pt.	<u>TIC</u>		SC	<u>957</u>	<u>962</u>	<u>962</u> (umhos/cm)																														
Well Elevation	<u>*536.81</u>	(ft./msl)	Temp.	<u>11.39</u>	<u>11.46</u>	<u>11.46</u> (°C)																														
Water Level	<u>20.26</u>	(ft.)	Well Stabilization / Recharge Grid																																	
Ground Water Elev.	<u>516.55</u>	(ft./msl)	<table border="1"> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>																																	
Well Bottom Elevation	<u>*457.84</u>	(ft./msl)																																		

COMMENTS

Sample Appearance/Odor: Colorless, Clear, No Odor
Weather Conditions: 60°F, Rain Shower, SE winds @ 10-15 mph

Other: *Reference Measurement

Depth To Water from L.S. = 20.26 - 2.03 = 18.23 (ft)

Levels were taken on 05/21/18 @ 0930

Sampler Name (Print): Noe Lopez

Signature: [Signature]

TestAmerica Chicago

2417 Bond St
University Park, IL 60484-3182
Tel: 708 534 5200 Fax: 708 534 5211

Sample ID: G45S
Facility: Midwest Generation-Joliet #9 CCR
Job #: 500-145553-11

Type Sample: Ground Water Surface Water Leachate Other: _____
(circle one)
Equipment Used: Purging _____ Bladder Pump _____ Dedicated ☒ (Y/N)
Sampling _____ Bladder Pump _____ Dedicated ☒ (Y/N)

PURGING INFORMATION

Purge Date: 05/21/18 Start Purge: 1100 End Purge: 1115
(2400 Hr. Clock)
Water Volume in Casing (gallons): N/A Volume Purged (gallons): 0.97

MEASUREMENTS

Well Diameter	2.0	(inches)	1st	2nd	Final																					
Stick Up	2.97	(ft)	pH <u>7.01</u>	<u>7.00</u>	<u>7.00</u>	(std.)																				
Ref. Measuring Pt.	TIC		SC <u>1164</u>	<u>1175</u>	<u>1175</u>	(umhos/cm)																				
Well Elevation	*603.31	(ft./msl)	Temp. <u>13.48</u>	<u>13.48</u>	<u>13.48</u>	(°C)																				
Water Level	<u>68.50</u>	(ft.)	Well Stabilization / Recharge Grid																							
Ground Water Elev.	<u>534.81</u>	(ft./msl)	<table border="1" style="width: 100%; height: 40px;"> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>																							
Well Bottom Elevation	*471.05	(ft./msl)																								

COMMENTS

Sample Appearance/Odor: Colorless, Clear, Moderate Odor
Weather Conditions: 63° F, Rain, E windse 5-10 mph

Other: *Reference Measurement

Depth To Water from L.S. = 68.50 - 2.97 = 65.53 (ft.)

Levels were taken on 05/21/18 @ 1050

Sampler Name (Print): Noe Lopez Signature: 92

Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-145553-1

Login Number: 145553

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	3.4,2.6c, 3.8,5.4
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 2Q18 GW

TestAmerica Job ID: 500-145553-1

Client Sample ID: G20S

Date Collected: 05/16/18 09:45

Date Received: 05/16/18 15:10

Lab Sample ID: 500-145553-1

Matrix: GW

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			432708	05/17/18 07:32	SAH	TAL CHI
Total Recoverable	Analysis	6010C		1	432881	05/18/18 01:55	PJ1	TAL CHI
Total Recoverable	Prep	3005A			432708	05/17/18 07:32	SAH	TAL CHI
Total Recoverable	Analysis	6020A		1	432940	05/18/18 01:51	FXG	TAL CHI
Total/NA	Analysis	SM 2540C		1	432683	05/17/18 04:15	CLB	TAL CHI
Total/NA	Analysis	SM 4500 CI- E		1	433163	05/20/18 21:14	HMW	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	434275	05/26/18 15:32	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		5	435221		CLB	TAL CHI
					(Start)	06/04/18 13:08		
					(End)	06/04/18 13:09		
Total/NA	Analysis	Field Sampling		1	433645	05/16/18 09:45	JVB	TAL CHI

Client Sample ID: G30S

Date Collected: 05/17/18 09:13

Date Received: 05/17/18 15:35

Lab Sample ID: 500-145553-2

Matrix: GW

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			432907	05/18/18 08:00	SAH	TAL CHI
Total Recoverable	Analysis	6010C		1	433345	05/22/18 03:33	PJ1	TAL CHI
Total Recoverable	Prep	3005A			432907	05/18/18 08:00	SAH	TAL CHI
Total Recoverable	Analysis	6020A		1	433252	05/19/18 00:09	FXG	TAL CHI
Total Recoverable	Prep	3005A			432907	05/18/18 08:00	SAH	TAL CHI
Total Recoverable	Analysis	6020A		20	433393	05/21/18 20:08	FXG	TAL CHI
Total/NA	Analysis	SM 2540C		1	433338	05/22/18 04:45	CLB	TAL CHI
Total/NA	Analysis	SM 4500 CI- E		5	433163	05/20/18 22:18	HMW	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	434275	05/26/18 15:45	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		20	435221		CLB	TAL CHI
					(Start)	06/04/18 13:09		
					(End)	06/04/18 13:10		
Total/NA	Analysis	Field Sampling		1	433645	05/17/18 09:13	JVB	TAL CHI

Client Sample ID: DUP

Date Collected: 05/17/18 09:13

Date Received: 05/17/18 15:35

Lab Sample ID: 500-145553-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			432907	05/18/18 08:00	SAH	TAL CHI
Total Recoverable	Analysis	6010C		1	433345	05/22/18 04:06	PJ1	TAL CHI
Total Recoverable	Prep	3005A			432907	05/18/18 08:00	SAH	TAL CHI
Total Recoverable	Analysis	6020A		1	433252	05/19/18 00:29	FXG	TAL CHI
Total Recoverable	Prep	3005A			432907	05/18/18 08:00	SAH	TAL CHI
Total Recoverable	Analysis	6020A		20	433393	05/21/18 20:34	FXG	TAL CHI

TestAmerica Chicago

Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 2Q18 GW

TestAmerica Job ID: 500-145553-1

Client Sample ID: DUP

Date Collected: 05/17/18 09:13

Date Received: 05/17/18 15:35

Lab Sample ID: 500-145553-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540C		1	433338	05/22/18 04:50	CLB	TAL CHI
Total/NA	Analysis	SM 4500 CI- E		5	433163	05/20/18 22:18	HMW	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	434275	05/26/18 15:48	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		20	435221	(Start) 06/04/18 13:10 (End) 06/04/18 13:11	CLB	TAL CHI
Total/NA	Analysis	Field Sampling		1	433645	05/17/18 09:13	JVB	TAL CHI

Client Sample ID: G44S

Date Collected: 05/17/18 12:34

Date Received: 05/17/18 15:35

Lab Sample ID: 500-145553-4

Matrix: GW

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			432907	05/18/18 08:00	SAH	TAL CHI
Total Recoverable	Analysis	6010C		1	433345	05/22/18 04:10	PJ1	TAL CHI
Total Recoverable	Prep	3005A			432907	05/18/18 08:00	SAH	TAL CHI
Total Recoverable	Analysis	6020A		1	433252	05/19/18 00:32	FXG	TAL CHI
Total Recoverable	Prep	3005A			432907	05/18/18 08:00	SAH	TAL CHI
Total Recoverable	Analysis	6020A		5	433393	05/21/18 20:38	FXG	TAL CHI
Total/NA	Analysis	SM 2540C		1	433338	05/22/18 04:53	CLB	TAL CHI
Total/NA	Analysis	SM 4500 CI- E		1	433163	05/20/18 21:17	HMW	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	434275	05/26/18 15:51	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		10	435373	(Start) 06/05/18 09:16 (End) 06/05/18 09:17	CLB	TAL CHI
Total/NA	Analysis	Field Sampling		1	433645	05/17/18 12:34	JVB	TAL CHI

Client Sample ID: T03S

Date Collected: 05/17/18 13:55

Date Received: 05/17/18 15:35

Lab Sample ID: 500-145553-5

Matrix: GW

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			432907	05/18/18 08:00	SAH	TAL CHI
Total Recoverable	Analysis	6010C		1	433345	05/22/18 04:14	PJ1	TAL CHI
Total Recoverable	Prep	3005A			432907	05/18/18 08:00	SAH	TAL CHI
Total Recoverable	Analysis	6020A		1	433252	05/19/18 00:36	FXG	TAL CHI
Total Recoverable	Prep	3005A			432907	05/18/18 08:00	SAH	TAL CHI
Total Recoverable	Analysis	6020A		5	433393	05/21/18 20:42	FXG	TAL CHI
Total/NA	Analysis	SM 2540C		1	433338	05/22/18 04:55	CLB	TAL CHI
Total/NA	Analysis	SM 4500 CI- E		5	433163	05/20/18 22:19	HMW	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	434275	05/26/18 15:54	EAT	TAL CHI

TestAmerica Chicago

Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 2Q18 GW

TestAmerica Job ID: 500-145553-1

Client Sample ID: T03S

Date Collected: 05/17/18 13:55

Date Received: 05/17/18 15:35

Lab Sample ID: 500-145553-5

Matrix: GW

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 SO4 E		10	435373	(Start) 06/05/18 09:19 (End) 06/05/18 09:20	CLB	TAL CHI
Total/NA	Analysis	Field Sampling		1	433645	05/17/18 13:55	JVB	TAL CHI

Client Sample ID: G48S

Date Collected: 05/18/18 08:45

Date Received: 05/18/18 14:45

Lab Sample ID: 500-145553-6

Matrix: GW

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			433098	05/19/18 11:04	BDE	TAL CHI
Total Recoverable	Analysis	6010C		1	433345	05/21/18 23:58	PJ1	TAL CHI
Total Recoverable	Prep	3005A			433098	05/19/18 11:04	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	433604	05/22/18 19:26	FXG	TAL CHI
Total Recoverable	Prep	3005A			433098	05/19/18 11:04	BDE	TAL CHI
Total Recoverable	Analysis	6020A		20	433664	05/23/18 11:38	FXG	TAL CHI
Total/NA	Analysis	SM 2540C		1	433338	05/22/18 04:58	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		5	433163	05/20/18 22:19	HMW	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	434275	05/26/18 16:06	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		20	435373	(Start) 06/05/18 09:20 (End) 06/05/18 09:21	CLB	TAL CHI
Total/NA	Analysis	Field Sampling		1	433645	05/18/18 08:45	JVB	TAL CHI

Client Sample ID: G47S

Date Collected: 05/18/18 10:07

Date Received: 05/18/18 14:45

Lab Sample ID: 500-145553-7

Matrix: GW

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			433098	05/19/18 11:04	BDE	TAL CHI
Total Recoverable	Analysis	6010C		1	433345	05/22/18 00:18	PJ1	TAL CHI
Total Recoverable	Prep	3005A			433098	05/19/18 11:04	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	433604	05/22/18 19:45	FXG	TAL CHI
Total Recoverable	Prep	3005A			433098	05/19/18 11:04	BDE	TAL CHI
Total Recoverable	Analysis	6020A		20	433664	05/23/18 11:57	FXG	TAL CHI
Total/NA	Analysis	SM 2540C		1	433338	05/22/18 05:01	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		5	433163	05/20/18 22:20	HMW	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	434275	05/26/18 16:15	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		50	435373	(Start) 06/05/18 09:21 (End) 06/05/18 09:22	CLB	TAL CHI
Total/NA	Analysis	Field Sampling		1	433645	05/18/18 10:07	JVB	TAL CHI

TestAmerica Chicago

Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 2Q18 GW

TestAmerica Job ID: 500-145553-1

Client Sample ID: G46S

Date Collected: 05/18/18 12:20

Date Received: 05/18/18 14:45

Lab Sample ID: 500-145553-8

Matrix: GW

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			433098	05/19/18 11:04	BDE	TAL CHI
Total Recoverable	Analysis	6010C		1	433345	05/22/18 00:22	PJ1	TAL CHI
Total Recoverable	Prep	3005A			433098	05/19/18 11:04	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	433604	05/22/18 19:49	FXG	TAL CHI
Total Recoverable	Prep	3005A			433098	05/19/18 11:04	BDE	TAL CHI
Total Recoverable	Analysis	6020A		20	433664	05/23/18 12:01	FXG	TAL CHI
Total/NA	Analysis	SM 2540C		1	433338	05/22/18 05:03	CLB	TAL CHI
Total/NA	Analysis	SM 4500 CI- E		5	433163	05/20/18 22:20	HMW	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	434275	05/26/18 16:27	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		20	435373		CLB	TAL CHI
					(Start)	06/05/18 09:22		
					(End)	06/05/18 09:23		
Total/NA	Analysis	Field Sampling		1	433645	05/18/18 12:20	JVB	TAL CHI

Client Sample ID: R08S

Date Collected: 05/18/18 13:20

Date Received: 05/18/18 14:45

Lab Sample ID: 500-145553-9

Matrix: GW

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			433098	05/19/18 11:04	BDE	TAL CHI
Total Recoverable	Analysis	6010C		1	433345	05/22/18 00:26	PJ1	TAL CHI
Total Recoverable	Prep	3005A			433098	05/19/18 11:04	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	433604	05/22/18 19:52	FXG	TAL CHI
Total Recoverable	Prep	3005A			433098	05/19/18 11:04	BDE	TAL CHI
Total Recoverable	Analysis	6020A		20	433664	05/23/18 12:05	FXG	TAL CHI
Total/NA	Analysis	SM 2540C		1	433338	05/22/18 05:06	CLB	TAL CHI
Total/NA	Analysis	SM 4500 CI- E		5	433163	05/20/18 22:21	HMW	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	434275	05/26/18 16:30	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		20	435373		CLB	TAL CHI
					(Start)	06/05/18 09:23		
					(End)	06/05/18 09:24		
Total/NA	Analysis	Field Sampling		1	433645	05/18/18 13:20	JVB	TAL CHI

Client Sample ID: R32S

Date Collected: 05/21/18 10:04

Date Received: 05/21/18 12:35

Lab Sample ID: 500-145553-10

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			433467	05/22/18 15:09	BDE	TAL CHI
Total Recoverable	Analysis	6010C		1	433755	05/23/18 15:40	PJ1	TAL CHI
Total Recoverable	Prep	3005A			433467	05/22/18 15:09	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	434570	05/29/18 16:40	FXG	TAL CHI
Total/NA	Analysis	SM 2540C		1	433338	05/22/18 05:08	CLB	TAL CHI

TestAmerica Chicago

Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 2Q18 GW

TestAmerica Job ID: 500-145553-1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		5	434299	05/28/18 18:28	HMW	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	434275	05/26/18 16:33	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		20	435378	(Start) 06/05/18 10:17 (End) 06/05/18 10:18	CLB	TAL CHI
Total/NA	Analysis	Field Sampling		1	433645	05/21/18 10:04	JVB	TAL CHI

Client Sample ID: G45S

Lab Sample ID: 500-145553-11

Date Collected: 05/21/18 11:15

Matrix: Water

Date Received: 05/21/18 12:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			433467	05/22/18 15:09	BDE	TAL CHI
Total Recoverable	Analysis	6010C		1	433755	05/23/18 15:44	PJ1	TAL CHI
Total Recoverable	Prep	3005A			433467	05/22/18 15:09	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	434570	05/29/18 16:45	FXG	TAL CHI
Total/NA	Analysis	SM 2540C		1	433338	05/22/18 05:11	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		5	434299	05/28/18 18:28	HMW	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	434275	05/26/18 16:36	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		10	435378	(Start) 06/05/18 10:18 (End) 06/05/18 10:19	CLB	TAL CHI
Total/NA	Analysis	Field Sampling		1	433645	05/21/18 11:15	JVB	TAL CHI

Laboratory References:

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

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Chicago

2417 Bond Street

University Park, IL 60484

Tel: (708)534-5200

TestAmerica Job ID: 500-145553-2

Client Project/Site: Joliet #9 CCR - 2Q18 GW

For:

KPRG and Associates, Inc.

14665 West Lisbon Road,

Suite 2B

Brookfield, Wisconsin 53005

Attn: Richard Gnat



Authorized for release by:

7/6/2018 2:06:15 PM

Eric Lang, Manager of Project Management

(708)534-5200

eric.lang@testamericainc.com

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

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

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Case Narrative

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 2Q18 GW

TestAmerica Job ID: 500-145553-2

Job ID: 500-145553-2

Laboratory: TestAmerica Chicago

Narrative

Job Narrative 500-145553-2

Comments

No additional comments.

Receipt

The samples were received on 5/16/2018 3:10 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 2.6° C, 3.4° C, 3.8° C and 5.4° C.

RAD

Method(s) PrecSep_0: Radium-228 Prep Batch 160-367072:

The following sample was prepared at a reduced aliquot: G47S (500-145553-7). Samples 240-95601-1, 240-95677-1, and 240-95679-1 had limited volume. Sample 500-145553-7 is dark yellow and has a strong sulfur smell.

Method(s) PrecSep-21: Radium Prep Batch 160-367066:

The following sample was prepared at a reduced aliquot: G47S (500-145553-7). Samples 240-95601-1, 240-95677-1, 240-95679-1, and 160-28440-1 had limited volume. Sample 500-145553-7 is dark yellow and has a strong sulfur smell. Samples 160-28441-1 and 160-28442-1 were yellow and had sediment.

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: Joliet #9 CCR - 2Q18 GW

TestAmerica Job ID: 500-145553-2

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: Joliet #9 CCR - 2Q18 GW

TestAmerica Job ID: 500-145553-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-145553-1	G20S	GW	05/16/18 09:45	05/16/18 15:10
500-145553-2	G30S	GW	05/17/18 09:13	05/17/18 15:35
500-145553-3	DUP	Water	05/17/18 09:13	05/17/18 15:35
500-145553-4	G44S	GW	05/17/18 12:34	05/17/18 15:35
500-145553-5	T03S	GW	05/17/18 13:55	05/17/18 15:35
500-145553-6	G48S	GW	05/18/18 08:45	05/18/18 14:45
500-145553-7	G47S	GW	05/18/18 10:07	05/18/18 14:45
500-145553-8	G46S	GW	05/18/18 12:20	05/18/18 14:45
500-145553-9	R08S	GW	05/18/18 13:20	05/18/18 14:45
500-145553-10	R32S	Water	05/21/18 10:04	05/21/18 12:35
500-145553-11	G45S	Water	05/21/18 11:15	05/21/18 12:35

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 2Q18 GW

TestAmerica Job ID: 500-145553-2

Client Sample ID: G20S
Date Collected: 05/16/18 09:45
Date Received: 05/16/18 15:10

Lab Sample ID: 500-145553-1
Matrix: GW

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.21		0.179	0.210	1.00	0.0899	pCi/L	05/21/18 14:42	06/18/18 18:25	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.7		40 - 110					05/21/18 14:42	06/18/18 18:25	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	0.907		0.273	0.285	1.00	0.346	pCi/L	05/21/18 15:44	05/31/18 14:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.7		40 - 110					05/21/18 15:44	05/31/18 14:51	1
Y Carrier	92.7		40 - 110					05/21/18 15:44	05/31/18 14:51	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	2.12		0.326	0.354	5.00	0.346	pCi/L		06/23/18 19:42	1

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 2Q18 GW

TestAmerica Job ID: 500-145553-2

Client Sample ID: G30S
Date Collected: 05/17/18 09:13
Date Received: 05/17/18 15:35

Lab Sample ID: 500-145553-2
Matrix: GW

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.659		0.129	0.142	1.00	0.0754	pCi/L	05/21/18 14:42	06/18/18 18:26	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					05/21/18 14:42	06/18/18 18:26	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	0.909		0.268	0.280	1.00	0.346	pCi/L	05/21/18 15:44	05/31/18 14:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	100		40 - 110					05/21/18 15:44	05/31/18 14:51	1
Y Carrier	96.1		40 - 110					05/21/18 15:44	05/31/18 14:51	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	1.57		0.297	0.314	5.00	0.346	pCi/L		06/23/18 19:42	1

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 2Q18 GW

TestAmerica Job ID: 500-145553-2

Client Sample ID: DUP

Date Collected: 05/17/18 09:13

Date Received: 05/17/18 15:35

Lab Sample ID: 500-145553-3

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	0.796		0.149	0.166	1.00	0.0898	pCi/L	05/21/18 14:42	06/18/18 19:07	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.9		40 - 110					05/21/18 14:42	06/18/18 19:07	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	0.736		0.254	0.263	1.00	0.340	pCi/L	05/21/18 15:44	05/31/18 14:51	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.9		40 - 110					05/21/18 15:44	05/31/18 14:51	1
Y Carrier	93.5		40 - 110					05/21/18 15:44	05/31/18 14:51	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	1.53		0.294	0.311	5.00	0.340	pCi/L		06/23/18 19:42	1

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 2Q18 GW

TestAmerica Job ID: 500-145553-2

Client Sample ID: G44S
Date Collected: 05/17/18 12:34
Date Received: 05/17/18 15:35

Lab Sample ID: 500-145553-4
Matrix: GW

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.435		0.114	0.120	1.00	0.0862	pCi/L	05/21/18 14:42	06/18/18 19:07	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.3		40 - 110					05/21/18 14:42	06/18/18 19:07	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	0.244	0.245	1.00	0.390	pCi/L	05/21/18 15:44	05/31/18 14:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.3		40 - 110					05/21/18 15:44	05/31/18 14:52	1
Y Carrier	92.0		40 - 110					05/21/18 15:44	05/31/18 14:52	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	0.714		0.269	0.273	5.00	0.390	pCi/L		06/23/18 19:42	1

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 2Q18 GW

TestAmerica Job ID: 500-145553-2

Client Sample ID: T03S
Date Collected: 05/17/18 13:55
Date Received: 05/17/18 15:35

Lab Sample ID: 500-145553-5
Matrix: GW

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.879		0.170	0.187	1.00	0.0983	pCi/L	05/21/18 14:42	06/18/18 19:08	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.5		40 - 110					05/21/18 14:42	06/18/18 19:08	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	0.373	U	0.246	0.249	1.00	0.380	pCi/L	05/21/18 15:44	05/31/18 14:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.5		40 - 110					05/21/18 15:44	05/31/18 14:52	1
Y Carrier	91.6		40 - 110					05/21/18 15:44	05/31/18 14:52	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.25		0.299	0.311	5.00	0.380	pCi/L		06/23/18 19:42	1

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 2Q18 GW

TestAmerica Job ID: 500-145553-2

Client Sample ID: G48S
Date Collected: 05/18/18 08:45
Date Received: 05/18/18 14:45

Lab Sample ID: 500-145553-6
Matrix: GW

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.547		0.121	0.131	1.00	0.0807	pCi/L	05/22/18 15:55	06/19/18 12:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.0		40 - 110					05/22/18 15:55	06/19/18 12:05	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	0.415		0.237	0.240	1.00	0.359	pCi/L	05/22/18 16:29	06/01/18 15:23	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.0		40 - 110					05/22/18 16:29	06/01/18 15:23	1
Y Carrier	92.0		40 - 110					05/22/18 16:29	06/01/18 15:23	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	0.962		0.266	0.273	5.00	0.359	pCi/L		06/23/18 19:42	1

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 2Q18 GW

TestAmerica Job ID: 500-145553-2

Client Sample ID: G47S
Date Collected: 05/18/18 10:07
Date Received: 05/18/18 14:45

Lab Sample ID: 500-145553-7
Matrix: GW

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.452		0.134	0.140	1.00	0.121	pCi/L	05/22/18 15:55	06/19/18 12:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.2		40 - 110					05/22/18 15:55	06/19/18 12:05	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	0.561		0.334	0.338	1.00	0.510	pCi/L	05/22/18 16:29	06/01/18 15:23	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.2		40 - 110					05/22/18 16:29	06/01/18 15:23	1
Y Carrier	87.1		40 - 110					05/22/18 16:29	06/01/18 15:23	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	1.01		0.360	0.366	5.00	0.510	pCi/L		06/23/18 19:42	1

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 2Q18 GW

TestAmerica Job ID: 500-145553-2

Client Sample ID: G46S
Date Collected: 05/18/18 12:20
Date Received: 05/18/18 14:45

Lab Sample ID: 500-145553-8
Matrix: GW

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.478		0.114	0.122	1.00	0.0856	pCi/L	05/22/18 15:55	06/19/18 12:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.6		40 - 110					05/22/18 15:55	06/19/18 12:05	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	0.587		0.254	0.259	1.00	0.363	pCi/L	05/22/18 16:29	06/01/18 15:23	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.6		40 - 110					05/22/18 16:29	06/01/18 15:23	1
Y Carrier	87.1		40 - 110					05/22/18 16:29	06/01/18 15:23	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	1.07		0.278	0.286	5.00	0.363	pCi/L		06/23/18 19:42	1

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 2Q18 GW

TestAmerica Job ID: 500-145553-2

Client Sample ID: R08S
Date Collected: 05/18/18 13:20
Date Received: 05/18/18 14:45

Lab Sample ID: 500-145553-9
Matrix: GW

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.739		0.141	0.156	1.00	0.0882	pCi/L	05/22/18 15:55	06/19/18 12:05	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.3		40 - 110					05/22/18 15:55	06/19/18 12:05	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	0.479		0.226	0.230	1.00	0.326	pCi/L	05/22/18 16:29	06/01/18 15:24	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.3		40 - 110					05/22/18 16:29	06/01/18 15:24	1
Y Carrier	91.2		40 - 110					05/22/18 16:29	06/01/18 15:24	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	1.22		0.266	0.278	5.00	0.326	pCi/L		06/23/18 19:42	1

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 2Q18 GW

TestAmerica Job ID: 500-145553-2

Client Sample ID: R32S
Date Collected: 05/21/18 10:04
Date Received: 05/21/18 12:35

Lab Sample ID: 500-145553-10
Matrix: Water

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.42		0.324	0.348	1.00	0.216	pCi/L	05/29/18 10:36	06/20/18 05:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					05/29/18 10:36	06/20/18 05:52	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	0.795		0.309	0.317	1.00	0.440	pCi/L	05/29/18 11:26	06/19/18 16:14	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					05/29/18 11:26	06/19/18 16:14	1
Y Carrier	89.3		40 - 110					05/29/18 11:26	06/19/18 16:14	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	2.22		0.448	0.471	5.00	0.440	pCi/L		06/23/18 19:42	1

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 2Q18 GW

TestAmerica Job ID: 500-145553-2

Client Sample ID: G45S

Date Collected: 05/21/18 11:15

Date Received: 05/21/18 12:35

Lab Sample ID: 500-145553-11

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	1.77		0.356	0.390	1.00	0.219	pCi/L	05/29/18 10:36	06/20/18 05:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	104		40 - 110					05/29/18 10:36	06/20/18 05:52	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	0.602		0.235	0.242	1.00	0.320	pCi/L	05/29/18 11:26	06/19/18 16:14	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	104		40 - 110					05/29/18 11:26	06/19/18 16:14	1
Y Carrier	93.1		40 - 110					05/29/18 11:26	06/19/18 16:14	1

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	2.37		0.427	0.459	5.00	0.320	pCi/L		06/23/18 19:42	1

Definitions/Glossary

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 2Q18 GW

TestAmerica Job ID: 500-145553-2

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: Joliet #9 CCR - 2Q18 GW

TestAmerica Job ID: 500-145553-2

Rad

Prep Batch: 366803

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-145553-1	G20S	Total/NA	GW	PrecSep-21	
500-145553-2	G30S	Total/NA	GW	PrecSep-21	
500-145553-3	DUP	Total/NA	Water	PrecSep-21	
500-145553-4	G44S	Total/NA	GW	PrecSep-21	
500-145553-5	T03S	Total/NA	GW	PrecSep-21	
MB 160-366803/23-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-366803/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
500-145553-2 DU	G30S	Total/NA	GW	PrecSep-21	

Prep Batch: 366811

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-145553-1	G20S	Total/NA	GW	PrecSep_0	
500-145553-2	G30S	Total/NA	GW	PrecSep_0	
500-145553-3	DUP	Total/NA	Water	PrecSep_0	
500-145553-4	G44S	Total/NA	GW	PrecSep_0	
500-145553-5	T03S	Total/NA	GW	PrecSep_0	
MB 160-366811/23-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-366811/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
500-145553-2 DU	G30S	Total/NA	GW	PrecSep_0	

Prep Batch: 367066

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-145553-6	G48S	Total/NA	GW	PrecSep-21	
500-145553-7	G47S	Total/NA	GW	PrecSep-21	
500-145553-8	G46S	Total/NA	GW	PrecSep-21	
500-145553-9	R08S	Total/NA	GW	PrecSep-21	
MB 160-367066/23-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-367066/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
500-145553-6 DU	G48S	Total/NA	GW	PrecSep-21	

Prep Batch: 367072

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-145553-6	G48S	Total/NA	GW	PrecSep_0	
500-145553-7	G47S	Total/NA	GW	PrecSep_0	
500-145553-8	G46S	Total/NA	GW	PrecSep_0	
500-145553-9	R08S	Total/NA	GW	PrecSep_0	
MB 160-367072/23-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-367072/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
500-145553-6 DU	G48S	Total/NA	GW	PrecSep_0	

Prep Batch: 367824

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-145553-10	R32S	Total/NA	Water	PrecSep-21	
500-145553-11	G45S	Total/NA	Water	PrecSep-21	
MB 160-367824/21-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-367824/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
500-145553-11 DU	G45S	Total/NA	Water	PrecSep-21	

Prep Batch: 367837

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-145553-10	R32S	Total/NA	Water	PrecSep_0	

TestAmerica Chicago

QC Association Summary

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 2Q18 GW

TestAmerica Job ID: 500-145553-2

Rad (Continued)

Prep Batch: 367837 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-145553-11	G45S	Total/NA	Water	PrecSep_0	
MB 160-367837/21-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-367837/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
500-145553-11 DU	G45S	Total/NA	Water	PrecSep_0	

QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 2Q18 GW

TestAmerica Job ID: 500-145553-2

Method: 903.0 - Radium-226 (GFPC)

Lab Sample ID: MB 160-366803/23-A
Matrix: Water
Analysis Batch: 370841

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 366803

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.03636	U	0.0475	0.0476	1.00	0.0792	pCi/L	05/21/18 14:42	06/18/18 19:08	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					05/21/18 14:42	06/18/18 19:08	1

Lab Sample ID: LCS 160-366803/1-A
Matrix: Water
Analysis Batch: 371107

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 366803

Analyte		Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226		11.8	10.86		1.10	1.00	0.0819	pCi/L	92	68 - 137
Carrier	LCS %Yield	LCS Qualifier	Limits							
Ba Carrier	95.3		40 - 110							

Lab Sample ID: 500-145553-2 DU
Matrix: GW
Analysis Batch: 370841

Client Sample ID: G30S
Prep Type: Total/NA
Prep Batch: 366803

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-226	0.659		0.7123		0.155	1.00	0.0874	pCi/L	0.18	1
Carrier	DU %Yield	DU Qualifier	Limits							
Ba Carrier	99.1		40 - 110							

Lab Sample ID: MB 160-367066/23-A
Matrix: Water
Analysis Batch: 371130

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 367066

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.04352	U	0.0427	0.0429	1.00	0.0638	pCi/L	05/22/18 15:55	06/19/18 13:49	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.2		40 - 110					05/22/18 15:55	06/19/18 13:49	1

Lab Sample ID: LCS 160-367066/1-A
Matrix: Water
Analysis Batch: 371130

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 367066

Analyte		Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226		11.8	10.64		1.09	1.00	0.0820	pCi/L	90	68 - 137

TestAmerica Chicago

QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 2Q18 GW

TestAmerica Job ID: 500-145553-2

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

Lab Sample ID: LCS 160-367066/1-A
Matrix: Water
Analysis Batch: 371130

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 367066

	LCS	LCS	
Carrier	%Yield	Qualifier	Limits
Ba Carrier	96.2		40 - 110

Lab Sample ID: 500-145553-6 DU
Matrix: GW
Analysis Batch: 371132

Client Sample ID: G48S
Prep Type: Total/NA
Prep Batch: 367066

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	Limit
Radium-226	0.547		0.6919		0.152	1.00	0.0949	pCi/L	0.51	1
Carrier	%Yield	Qualifier	Limits							
Ba Carrier	93.5		40 - 110							

Lab Sample ID: MB 160-367824/21-A
Matrix: Water
Analysis Batch: 371317

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 367824

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.006720	U	0.112	0.112	1.00	0.237	pCi/L	05/29/18 10:36	06/20/18 05:53	1
Carrier	%Yield	Qualifier	Limits							
Ba Carrier	103		40 - 110							

Lab Sample ID: LCS 160-367824/1-A
Matrix: Water
Analysis Batch: 371315

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 367824

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226	11.8	10.81		1.31	1.00	0.236	pCi/L	92	68 - 137
Carrier	%Yield	Qualifier	Limits						
Ba Carrier	110		40 - 110						

Lab Sample ID: 500-145553-11 DU
Matrix: Water
Analysis Batch: 371317

Client Sample ID: G45S
Prep Type: Total/NA
Prep Batch: 367824

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	Limit
Radium-226	1.77		1.506		0.368	1.00	0.259	pCi/L	0.34	1
Carrier	%Yield	Qualifier	Limits							
Ba Carrier	101		40 - 110							

TestAmerica Chicago

QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 2Q18 GW

TestAmerica Job ID: 500-145553-2

Method: 904.0 - Radium-228 (GFPC)

Lab Sample ID: MB 160-366811/23-A

Matrix: Water

Analysis Batch: 368174

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 366811

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.5847		0.239	0.245	1.00	0.335	pCi/L	05/21/18 15:44	05/31/18 14:47	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	101		40 - 110					05/21/18 15:44	05/31/18 14:47	1
Y Carrier	93.1		40 - 110					05/21/18 15:44	05/31/18 14:47	1

Lab Sample ID: LCS 160-366811/1-A

Matrix: Water

Analysis Batch: 368163

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 366811

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	8.27	9.362		1.07	1.00	0.347	pCi/L	113	56 - 140
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	95.3		40 - 110						
Y Carrier	96.1		40 - 110						

Lab Sample ID: 500-145553-2 DU

Matrix: GW

Analysis Batch: 368163

Client Sample ID: G30S

Prep Type: Total/NA

Prep Batch: 366811

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-228	0.909		0.8519		0.275	1.00	0.342	pCi/L	0.10	1
Carrier	DU %Yield	DU Qualifier	Limits							
Ba Carrier	99.1		40 - 110							
Y Carrier	94.2		40 - 110							

Lab Sample ID: MB 160-367072/23-A

Matrix: Water

Analysis Batch: 368339

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 367072

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.4396		0.253	0.257	1.00	0.385	pCi/L	05/22/18 16:29	06/01/18 15:20	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.2		40 - 110					05/22/18 16:29	06/01/18 15:20	1
Y Carrier	86.4		40 - 110					05/22/18 16:29	06/01/18 15:20	1

TestAmerica Chicago

QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 2Q18 GW

TestAmerica Job ID: 500-145553-2

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

Lab Sample ID: LCS 160-367072/1-A
Matrix: Water
Analysis Batch: 368359

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 367072

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	8.26	9.930		1.13	1.00	0.342	pCi/L	120	56 - 140
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	96.2		40 - 110						
Y Carrier	87.9		40 - 110						

Lab Sample ID: 500-145553-6 DU
Matrix: GW
Analysis Batch: 368359

Client Sample ID: G48S
Prep Type: Total/NA
Prep Batch: 367072

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-228	0.415		0.5582		0.245	1.00	0.336	pCi/L	0.29	1
Carrier	DU %Yield	DU Qualifier	Limits							
Ba Carrier	93.5		40 - 110							
Y Carrier	89.7		40 - 110							

Lab Sample ID: MB 160-367837/21-A
Matrix: Water
Analysis Batch: 371107

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 367837

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.08757	U	0.220	0.220	1.00	0.406	pCi/L	05/29/18 11:26	06/19/18 16:08	1
Carrier	MB %Yield	MB Qualifier	Limits							
Ba Carrier	103		40 - 110							
Y Carrier	92.7		40 - 110							

Lab Sample ID: LCS 160-367837/1-A
Matrix: Water
Analysis Batch: 371132

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 367837

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-228	8.21	8.771		1.02	1.00	0.353	pCi/L	107	56 - 140
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	110		40 - 110						
Y Carrier	89.7		40 - 110						

TestAmerica Chicago

QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 2Q18 GW

TestAmerica Job ID: 500-145553-2

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

Lab Sample ID: 500-145553-11 DU

Matrix: Water

Analysis Batch: 371132

Client Sample ID: G45S

Prep Type: Total/NA

Prep Batch: 367837

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-228	0.602		0.5148		0.245	1.00	0.344	pCi/L	0.18	1
Carrier	DU %Yield	DU Qualifier	Limits							
Ba Carrier	101		40 - 110							
Y Carrier	92.3		40 - 110							

TestAmerica

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

Chain of Custody Record

Lab Job #: 500-145553

Chain of Custody Number: _____

Page _____ of _____

500-145553 COC

Temperature °C of Cooler: 2.6



Client <u>Midwest Generation EME LLC</u>		Client Project # <u>CCR Joliet #9 - 2018 GW</u>		Preservative <u>3</u>		<u>3</u>		<u>8</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>CCR Joliet #9 - 2018 GW</u>		Project Location/State <u>Joliet, IL</u>		Lab Project # <u>Eric Lang</u>		Parameter <u>Radium 226/228</u>		<u>Total Metals</u>		<u>Cl, F, SO4, TDS</u>													
Sample <u>Nor L, Rob P.</u>		Lab PM <u>Eric Lang</u>																					
Lab ID	MS/MSD	Sample ID	Sampling Date	Time	# of Containers	Matrix																	Comments
<u>2</u>		<u>G305</u>	<u>05/17/18</u>	<u>0913</u>	<u>5</u>	<u>W</u>	<u>1</u>	<u>1</u>	<u>1</u>														
<u>3</u>		<u>DUP</u>	<u>05/17/18</u>	<u>0913</u>	<u>5</u>	<u>W</u>	<u>1</u>	<u>1</u>	<u>1</u>														<u>DUP of G305</u>
<u>4</u>		<u>G445</u>	<u>05/17/18</u>	<u>1234</u>	<u>5</u>	<u>W</u>	<u>1</u>	<u>1</u>	<u>1</u>														
<u>5</u>		<u>T035</u>	<u>05/17/18</u>	<u>1355</u>	<u>5</u>	<u>W</u>	<u>1</u>	<u>1</u>	<u>1</u>														

Turnaround Time Required (Business Days)

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

Requested Due Date _____

Sample Disposal

☐ Return to Client

☐ Disposal by Lab

☐ Archive for _____ Months

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

Relinquished By <u>THC</u>	Company <u>THC</u>	Date <u>05/17/18</u>	Time <u>1535</u>	Received By <u>[Signature]</u>	Company <u>TA</u>	Date <u>05/17/18</u>	Time <u>1535</u>	Lab Courier ☐
Relinquished By	Company	Date	Time	Received By	Company	Date	Time	Shipped ☐
Relinquished By	Company	Date	Time	Received By	Company	Date	Time	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:

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 #: 500-145553

Chain of Custody Number: _____

Page _____ of _____

Temperature °C of Cooler: 3.8

Client <u>Midwest Generation EME LLC</u>		Client Project # <u>CCR Joliet #9 - 2Q18 G-4</u>		Preservative <u>3</u>		<u>3</u>		<u>8</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>Joliet, IL</u>		Lab Project # <u>Eric Lang</u>		Parameter <u>Radium 226/228</u>		<u>Total Metals</u>		<u>Cl, F, I, SO4, TD</u>															
Project Location/State <u>Joliet, IL</u>		Lab PM <u>Eric Lang</u>																					
Sampler <u>Noc L, Rob P.</u>																							
Lab ID	MS/MSD	Sample ID	Date	Time	# of Containers	Matrix																	Comments
6		G48S	05/18/18	0845	5	W	-	-	-														
7		G47S	05/18/18	1007	5	W	-	-	-														
8		G46S	05/18/18	1220	5	W	-	-	-														
9		RO8S	05/18/18	1320	5	W	-	-	-														



500-145553 COC

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

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

Relinquished By <u>SL</u>	Company <u>YBL</u>	Date <u>05/18/18</u>	Time <u>1445</u>	Received By <u>Devin Samuel</u>	Company <u>TAHKE</u>	Date <u>05/18/18</u>	Time <u>1445</u>
Relinquished By	Company	Date	Time	Received By	Company	Date	Time
Relinquished By	Company	Date	Time	Received By	Company	Date	Time

Lab Courier: TA
 Shipped: _____
 Hand Delivered: _____

Matrix Key WW - Wastewater SE - Sediment W - Water SO - Soil S - Soil L - Leachate SL - Sludge Wt - Wipe MS - Miscellaneous DW - Drinking Water OL - Oil O - Other A - Air	Client Comments	Lab Comments:



500-145553 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 #: 500-145553

Chain of Custody Number: _____

Page _____ of _____

Temperature °C of Cooler: 5.4

Client <u>Midwest Generation EME LLC</u>		Client Project # <u>Project #9 CCR - 2Q18 GUS</u>		Preservative <u>3</u>		<u>3</u>		<u>8</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>Joliet #9 CCR - 2Q18 GUS</u>		Lab Project # <u>Joliet #9</u>		Parameter <u>Radium 226/228</u>		<u>Total Metals</u>		<u>Cl, F, SO4, TDS</u>													
Project Location/State <u>Joliet, IL</u>		Lab PM <u>Eric Lang</u>																			
Sample <u>Noe L, Rob P</u>																					
Lab ID	MS/MSD	Sample ID	Sampling Date Time		# of Containers	Matrix															Comments
<u>10</u>		<u>R325</u>	<u>05/21/18</u>	<u>1004</u>	<u>5</u>	<u>W</u>	<u>1</u>	<u>1</u>	<u>1</u>												
<u>11</u>		<u>G455</u>	<u>05/21/18</u>	<u>1115</u>	<u>5</u>	<u>W</u>	<u>1</u>	<u>1</u>	<u>1</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>5/22</u>	Company <u>TA</u>	Date <u>05/21/18</u>	Time <u>1235</u>	Received By <u>John Smith</u>	Company <u>TA-CR</u>	Date <u>5/21/18</u>	Time <u>1235</u>	Lab Courier <u>TA</u>
Relinquished By	Company	Date	Time	Received By	Company	Date	Time	Shipped
Relinquished By	Company	Date	Time	Received By	Company	Date	Time	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:

Phone (708) 534-5200 Fax (708) 534-5211

Chain of Custody Record



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

[illegible]

Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-145553-2

Login Number: 145553

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	3.4,2.6c, 3.8,5.4
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: 500-145553-2

Login Number: 145553

List Number: 2

Creator: Press, Nicholas B

List Source: TestAmerica St. Louis

List Creation: 05/18/18 09:48 AM

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	19
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").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-145553-2

Login Number: 145553

List Number: 3

Creator: Press, Nicholas B

List Source: TestAmerica St. Louis

List Creation: 05/19/18 12:15 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.	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	20
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").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-145553-2

Login Number: 145553

List Number: 4

Creator: Press, Nicholas B

List Source: TestAmerica St. Louis

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

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

Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 2Q18 GW

TestAmerica Job ID: 500-145553-2

Client Sample ID: G20S

Date Collected: 05/16/18 09:45

Date Received: 05/16/18 15:10

Lab Sample ID: 500-145553-1

Matrix: GW

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			366803	05/21/18 14:42	TJT	TAL SL
Total/NA	Analysis	903.0		1	370840	06/18/18 18:25	ALS	TAL SL
Total/NA	Prep	PrecSep_0			366811	05/21/18 15:44	TJT	TAL SL
Total/NA	Analysis	904.0		1	368163	05/31/18 14:51	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	372130	06/23/18 19:42	RTM	TAL SL

Client Sample ID: G30S

Date Collected: 05/17/18 09:13

Date Received: 05/17/18 15:35

Lab Sample ID: 500-145553-2

Matrix: GW

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			366803	05/21/18 14:42	TJT	TAL SL
Total/NA	Analysis	903.0		1	370840	06/18/18 18:26	ALS	TAL SL
Total/NA	Prep	PrecSep_0			366811	05/21/18 15:44	TJT	TAL SL
Total/NA	Analysis	904.0		1	368163	05/31/18 14:51	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	372130	06/23/18 19:42	RTM	TAL SL

Client Sample ID: DUP

Date Collected: 05/17/18 09:13

Date Received: 05/17/18 15:35

Lab Sample ID: 500-145553-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			366803	05/21/18 14:42	TJT	TAL SL
Total/NA	Analysis	903.0		1	370841	06/18/18 19:07	ALS	TAL SL
Total/NA	Prep	PrecSep_0			366811	05/21/18 15:44	TJT	TAL SL
Total/NA	Analysis	904.0		1	368163	05/31/18 14:51	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	372130	06/23/18 19:42	RTM	TAL SL

Client Sample ID: G44S

Date Collected: 05/17/18 12:34

Date Received: 05/17/18 15:35

Lab Sample ID: 500-145553-4

Matrix: GW

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			366803	05/21/18 14:42	TJT	TAL SL
Total/NA	Analysis	903.0		1	370841	06/18/18 19:07	ALS	TAL SL
Total/NA	Prep	PrecSep_0			366811	05/21/18 15:44	TJT	TAL SL
Total/NA	Analysis	904.0		1	368163	05/31/18 14:52	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	372130	06/23/18 19:42	RTM	TAL SL

TestAmerica Chicago

Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 2Q18 GW

TestAmerica Job ID: 500-145553-2

Client Sample ID: T03S

Date Collected: 05/17/18 13:55

Date Received: 05/17/18 15:35

Lab Sample ID: 500-145553-5

Matrix: GW

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			366803	05/21/18 14:42	TJT	TAL SL
Total/NA	Analysis	903.0		1	370841	06/18/18 19:08	ALS	TAL SL
Total/NA	Prep	PrecSep_0			366811	05/21/18 15:44	TJT	TAL SL
Total/NA	Analysis	904.0		1	368163	05/31/18 14:52	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	372130	06/23/18 19:42	RTM	TAL SL

Client Sample ID: G48S

Date Collected: 05/18/18 08:45

Date Received: 05/18/18 14:45

Lab Sample ID: 500-145553-6

Matrix: GW

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			367066	05/22/18 15:55	CMM	TAL SL
Total/NA	Analysis	903.0		1	371132	06/19/18 12:05	RTM	TAL SL
Total/NA	Prep	PrecSep_0			367072	05/22/18 16:29	CMM	TAL SL
Total/NA	Analysis	904.0		1	368359	06/01/18 15:23	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	372130	06/23/18 19:42	RTM	TAL SL

Client Sample ID: G47S

Date Collected: 05/18/18 10:07

Date Received: 05/18/18 14:45

Lab Sample ID: 500-145553-7

Matrix: GW

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			367066	05/22/18 15:55	CMM	TAL SL
Total/NA	Analysis	903.0		1	371132	06/19/18 12:05	RTM	TAL SL
Total/NA	Prep	PrecSep_0			367072	05/22/18 16:29	CMM	TAL SL
Total/NA	Analysis	904.0		1	368359	06/01/18 15:23	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	372130	06/23/18 19:42	RTM	TAL SL

Client Sample ID: G46S

Date Collected: 05/18/18 12:20

Date Received: 05/18/18 14:45

Lab Sample ID: 500-145553-8

Matrix: GW

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			367066	05/22/18 15:55	CMM	TAL SL
Total/NA	Analysis	903.0		1	371132	06/19/18 12:05	RTM	TAL SL
Total/NA	Prep	PrecSep_0			367072	05/22/18 16:29	CMM	TAL SL
Total/NA	Analysis	904.0		1	368359	06/01/18 15:23	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	372130	06/23/18 19:42	RTM	TAL SL

TestAmerica Chicago

Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 2Q18 GW

TestAmerica Job ID: 500-145553-2

Client Sample ID: R08S

Date Collected: 05/18/18 13:20

Date Received: 05/18/18 14:45

Lab Sample ID: 500-145553-9

Matrix: GW

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			367066	05/22/18 15:55	CMM	TAL SL
Total/NA	Analysis	903.0		1	371132	06/19/18 12:05	RTM	TAL SL
Total/NA	Prep	PrecSep_0			367072	05/22/18 16:29	CMM	TAL SL
Total/NA	Analysis	904.0		1	368359	06/01/18 15:24	ALS	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	372130	06/23/18 19:42	RTM	TAL SL

Client Sample ID: R32S

Date Collected: 05/21/18 10:04

Date Received: 05/21/18 12:35

Lab Sample ID: 500-145553-10

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			367824	05/29/18 10:36	TJT	TAL SL
Total/NA	Analysis	903.0		1	371317	06/20/18 05:52	RTM	TAL SL
Total/NA	Prep	PrecSep_0			367837	05/29/18 11:26	TJT	TAL SL
Total/NA	Analysis	904.0		1	371132	06/19/18 16:14	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	372130	06/23/18 19:42	RTM	TAL SL

Client Sample ID: G45S

Date Collected: 05/21/18 11:15

Date Received: 05/21/18 12:35

Lab Sample ID: 500-145553-11

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			367824	05/29/18 10:36	TJT	TAL SL
Total/NA	Analysis	903.0		1	371317	06/20/18 05:52	RTM	TAL SL
Total/NA	Prep	PrecSep_0			367837	05/29/18 11:26	TJT	TAL SL
Total/NA	Analysis	904.0		1	371132	06/19/18 16:14	RTM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	372130	06/23/18 19:42	RTM	TAL SL

Laboratory References:

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

Tracer/Carrier Summary

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 2Q18 GW

TestAmerica Job ID: 500-145553-2

Method: 903.0 - Radium-226 (GFPC)

Matrix: GW

Prep Type: Total/NA

Percent Yield (Acceptance Limits)

Lab Sample ID	Client Sample ID	Ba Carrier (40-110)
500-145553-1	G20S	94.7
500-145553-2	G30S	100
500-145553-2 DU	G30S	99.1
500-145553-4	G44S	92.3
500-145553-5	T03S	93.5
500-145553-6	G48S	95.0
500-145553-6 DU	G48S	93.5
500-145553-7	G47S	96.2
500-145553-8	G46S	97.6
500-145553-9	R08S	97.3

Tracer/Carrier Legend

Ba Carrier = Ba Carrier

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)
500-145553-3	DUP	97.9
500-145553-10	R32S	101
500-145553-11	G45S	104
500-145553-11 DU	G45S	101
LCS 160-366803/1-A	Lab Control Sample	95.3
LCS 160-367066/1-A	Lab Control Sample	96.2
LCS 160-367824/1-A	Lab Control Sample	110
MB 160-366803/23-A	Method Blank	101
MB 160-367066/23-A	Method Blank	98.2
MB 160-367824/21-A	Method Blank	103

Tracer/Carrier Legend

Ba Carrier = Ba Carrier

Method: 904.0 - Radium-228 (GFPC)

Matrix: GW

Prep Type: Total/NA

Percent Yield (Acceptance Limits)

Lab Sample ID	Client Sample ID	Ba Carrier (40-110)	Y Carrier (40-110)
500-145553-1	G20S	94.7	92.7
500-145553-2	G30S	100	96.1
500-145553-2 DU	G30S	99.1	94.2
500-145553-4	G44S	92.3	92.0
500-145553-5	T03S	93.5	91.6
500-145553-6	G48S	95.0	92.0
500-145553-6 DU	G48S	93.5	89.7
500-145553-7	G47S	96.2	87.1
500-145553-8	G46S	97.6	87.1
500-145553-9	R08S	97.3	91.2

TestAmerica Chicago

Tracer/Carrier Summary

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 2Q18 GW

TestAmerica Job ID: 500-145553-2

Tracer/Carrier Legend

Ba Carrier = Ba Carrier

Y Carrier = Y 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)
500-145553-3	DUP	97.9	93.5
500-145553-10	R32S	101	89.3
500-145553-11	G45S	104	93.1
500-145553-11 DU	G45S	101	92.3
LCS 160-366811/1-A	Lab Control Sample	95.3	96.1
LCS 160-367072/1-A	Lab Control Sample	96.2	87.9
LCS 160-367837/1-A	Lab Control Sample	110	89.7
MB 160-366811/23-A	Method Blank	101	93.1
MB 160-367072/23-A	Method Blank	98.2	86.4
MB 160-367837/21-A	Method Blank	103	92.7

Tracer/Carrier Legend

Ba Carrier = Ba Carrier

Y Carrier = Y Carrier

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Chicago

2417 Bond Street

University Park, IL 60484

Tel: (708)534-5200

TestAmerica Job ID: 500-155886-1

Client Project/Site: Joliet #9 CCR - 4Q18 GW

For:

KPRG and Associates, Inc.

14665 West Lisbon Road,

Suite 1A

Brookfield, Wisconsin 53005

Attn: Richard Gnat



Authorized for release by:

1/4/2019 1:59:32 PM

Eric Lang, Manager of Project Management

(708)534-5200

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

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

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Case Narrative

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 4Q18 GW

TestAmerica Job ID: 500-155886-1

Job ID: 500-155886-1

Laboratory: TestAmerica Chicago

Narrative

Job Narrative 500-155886-1

Comments

No additional comments.

Receipt

The samples were received on 12/7/2018 4:00 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 9 coolers at receipt time were 2.2° C, 2.2° C, 2.3° C, 2.3° C, 2.5° C, 2.6° C, 3.0° C, 4.1° C and 4.1° C.

Metals

Method(s) 6020A: The internal standard Terbium (Tb) was used to report the element Lead in batch 500-464134. This was due to the LCS being spiked with the trace digestion spike which contains Bismuth.

Method(s) 6020A: The internal standard Terbium (Tb) was used to report the elements Lead and Thallium in batch 500-464840. This was due to the LCS being spiked with the trace digestion spike which contains Bismuth.

Method(s) 6020A: The internal standard Terbium (Tb) was used to report the elements Lead and Thallium in batch 500-465410. This was due to the LCS being spiked with the trace digestion spike which contains Bismuth.

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

General Chemistry

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

Method Summary

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 4Q18 GW

TestAmerica Job ID: 500-155886-1

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

Protocol References:

EPA = US Environmental Protection Agency

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

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

Laboratory References:

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

Sample Summary

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 4Q18 GW

TestAmerica Job ID: 500-155886-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-155886-1	G45S	Water	12/07/18 10:06	12/07/18 16:00
500-155886-2	G20S	Water	12/07/18 11:25	12/07/18 16:00
500-155886-3	G31S	Water	12/10/18 10:30	12/10/18 15:40
500-155886-4	G33S	Water	12/10/18 12:32	12/10/18 15:40
500-155886-5	G44S	Water	12/10/18 14:21	12/10/18 15:40
500-155886-6	T03S	Water	12/11/18 09:38	12/11/18 15:40
500-155886-7	G48S	Water	12/11/18 11:02	12/11/18 15:40
500-155886-8	G47S	Water	12/11/18 13:11	12/11/18 15:40
500-155886-9	G46S	Water	12/11/18 14:25	12/11/18 15:40
500-155886-10	T08S	Water	12/12/18 09:46	12/12/18 11:45
500-155886-11	T01S	Water	12/13/18 09:25	12/13/18 15:45
500-155886-12	R32S	Water	12/13/18 13:39	12/13/18 15:45
500-155886-13	R08S	Water	12/13/18 14:30	12/13/18 15:45
500-155886-14	T02S	Water	12/14/18 09:44	12/14/18 15:40
500-155886-15	DUP	Water	12/14/18 09:44	12/14/18 15:40
500-155886-16	G30S	Water	12/14/18 14:03	12/14/18 15:40
500-155886-17	T09S	Water	12/18/18 11:08	12/18/18 15:50
500-155886-18	T06S	Water	12/18/18 13:20	12/18/18 15:50
500-155886-19	T05S	Water	12/19/18 09:27	12/19/18 15:22
500-155886-20	T04S	Water	12/19/18 12:25	12/19/18 15:22

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 4Q18 GW

TestAmerica Job ID: 500-155886-1

Client Sample ID: G45S

Date Collected: 12/07/18 10:06

Date Received: 12/07/18 16:00

Lab Sample ID: 500-155886-1

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.031		0.010		mg/L		12/10/18 07:56	12/10/18 21:14	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0090		0.0010		mg/L		12/10/18 07:56	12/11/18 01:46	1
Barium	0.034		0.0025		mg/L		12/10/18 07:56	12/11/18 01:46	1
Boron	0.46		0.050		mg/L		12/10/18 07:56	12/11/18 01:46	1
Calcium	91		0.20		mg/L		12/10/18 07:56	12/11/18 01:46	1
Cobalt	<0.0010		0.0010		mg/L		12/10/18 07:56	12/11/18 01:46	1
Lead	<0.00050		0.00050		mg/L		12/10/18 07:56	12/11/18 13:12	1
Molybdenum	0.010		0.0050		mg/L		12/10/18 07:56	12/11/18 01:46	1
Selenium	<0.0025		0.0025		mg/L		12/10/18 07:56	12/11/18 01:46	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	740		10		mg/L			12/08/18 13:48	1
Chloride	120		10		mg/L			12/28/18 13:19	5
Fluoride	0.33		0.10		mg/L			12/15/18 17:24	1
Sulfate	100		50		mg/L			12/20/18 14:19	10

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Depth to water from land surface	63.77				ft			12/07/18 10:06	1
Depth to Water (ft from MP)	66.74				ft			12/07/18 10:06	1
Elevation of well (ft from MP)	603.90				ft			12/07/18 10:06	1
Field pH	7.02				SU			12/07/18 10:06	1
Field Temperature	49.8				Degrees F			12/07/18 10:06	1
Ground Water Elevation	537.16				ft			12/07/18 10:06	1
Specific Conductance	877				umhos/cm			12/07/18 10:06	1
Well bottom elevation	471.05				ft			12/07/18 10:06	1

TestAmerica Chicago

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 4Q18 GW

TestAmerica Job ID: 500-155886-1

Client Sample ID: G20S

Date Collected: 12/07/18 11:25

Date Received: 12/07/18 16:00

Lab Sample ID: 500-155886-2

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.042		0.010		mg/L		12/10/18 07:56	12/10/18 21:18	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.0010		0.0010		mg/L		12/10/18 07:56	12/11/18 01:50	1
Barium	0.048		0.0025		mg/L		12/10/18 07:56	12/11/18 01:50	1
Boron	1.2		0.050		mg/L		12/10/18 07:56	12/11/18 01:50	1
Calcium	58		0.20		mg/L		12/10/18 07:56	12/11/18 01:50	1
Cobalt	0.0010		0.0010		mg/L		12/10/18 07:56	12/11/18 01:50	1
Lead	0.0048		0.00050		mg/L		12/10/18 07:56	12/11/18 13:13	1
Molybdenum	0.023		0.0050		mg/L		12/10/18 07:56	12/11/18 01:50	1
Selenium	<0.0025		0.0025		mg/L		12/10/18 07:56	12/11/18 01:50	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	480		10		mg/L			12/08/18 13:51	1
Chloride	12		2.0		mg/L			12/27/18 15:31	1
Fluoride	0.76		0.10		mg/L			12/15/18 17:36	1
Sulfate	65		20		mg/L			12/20/18 14:20	4

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Depth to water from land surface	46.68				ft			12/07/18 11:25	1
Depth to Water (ft from MP)	49.46				ft			12/07/18 11:25	1
Elevation of well (ft from MP)	580.91				ft			12/07/18 11:25	1
Field pH	7.41				SU			12/07/18 11:25	1
Field Temperature	40.8				Degrees F			12/07/18 11:25	1
Ground Water Elevation	531.45				ft			12/07/18 11:25	1
Specific Conductance	562				umhos/cm			12/07/18 11:25	1
Well bottom elevation	442.28				ft			12/07/18 11:25	1

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 4Q18 GW

TestAmerica Job ID: 500-155886-1

Client Sample ID: G31S

Date Collected: 12/10/18 10:30

Date Received: 12/10/18 15:40

Lab Sample ID: 500-155886-3

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.11		0.010		mg/L		12/11/18 16:45	12/12/18 21:00	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0051		0.0010		mg/L		12/11/18 16:45	12/12/18 17:34	1
Barium	0.051		0.0025		mg/L		12/11/18 16:45	12/12/18 17:34	1
Boron	4.4		0.050		mg/L		12/11/18 16:45	12/12/18 17:34	1
Calcium	130		0.20		mg/L		12/11/18 16:45	12/12/18 17:34	1
Cobalt	<0.0010		0.0010		mg/L		12/11/18 16:45	12/12/18 17:34	1
Lead	0.0012		0.00050		mg/L		12/11/18 16:45	12/12/18 17:34	1
Molybdenum	0.72		0.0050		mg/L		12/11/18 16:45	12/12/18 17:34	1
Selenium	<0.0025		0.0025		mg/L		12/11/18 16:45	12/12/18 17:34	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1000		10		mg/L			12/12/18 02:36	1
Chloride	170		10		mg/L			12/28/18 15:05	5
Fluoride	0.26		0.10		mg/L			12/15/18 17:39	1
Sulfate	290		100		mg/L			12/20/18 14:21	20

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Depth to water from land surface	23.16				ft			12/10/18 10:30	1
Depth to Water (ft from MP)	25.74				ft			12/10/18 10:30	1
Elevation of well (ft from MP)	535.78				ft			12/10/18 10:30	1
Field pH	7.17				SU			12/10/18 10:30	1
Field Temperature	54.9				Degrees F			12/10/18 10:30	1
Ground Water Elevation	510.04				ft			12/10/18 10:30	1
Specific Conductance	1282				umhos/cm			12/10/18 10:30	1
Well bottom elevation	453.36				ft			12/10/18 10:30	1

TestAmerica Chicago

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 4Q18 GW

TestAmerica Job ID: 500-155886-1

Client Sample ID: G33S

Date Collected: 12/10/18 12:32

Date Received: 12/10/18 15:40

Lab Sample ID: 500-155886-4

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.038		0.010		mg/L		12/11/18 16:45	12/12/18 21:12	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0029		0.0010		mg/L		12/11/18 16:45	12/12/18 17:38	1
Barium	0.45		0.0025		mg/L		12/11/18 16:45	12/12/18 17:38	1
Boron	0.59		0.050		mg/L		12/11/18 16:45	12/12/18 17:38	1
Calcium	36		0.20		mg/L		12/11/18 16:45	12/12/18 17:38	1
Cobalt	<0.0010		0.0010		mg/L		12/11/18 16:45	12/12/18 17:38	1
Lead	0.016		0.00050		mg/L		12/11/18 16:45	12/12/18 17:38	1
Molybdenum	<0.0050		0.0050		mg/L		12/11/18 16:45	12/12/18 17:38	1
Selenium	<0.0025		0.0025		mg/L		12/11/18 16:45	12/12/18 17:38	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	410		10		mg/L			12/12/18 02:39	1
Chloride	6.3		2.0		mg/L			12/27/18 15:37	1
Fluoride	0.98		0.10		mg/L			12/15/18 17:42	1
Sulfate	50		20		mg/L			12/20/18 14:22	4

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Depth to water from land surface	25.57				ft			12/10/18 12:32	1
Depth to Water (ft from MP)	27.30				ft			12/10/18 12:32	1
Elevation of well (ft from MP)	535.66				ft			12/10/18 12:32	1
Field pH	7.41				SU			12/10/18 12:32	1
Field Temperature	52.2				Degrees F			12/10/18 12:32	1
Ground Water Elevation	508.36				ft			12/10/18 12:32	1
Specific Conductance	461				umhos/cm			12/10/18 12:32	1
Well bottom elevation	452.72				ft			12/10/18 12:32	1

TestAmerica Chicago

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 4Q18 GW

TestAmerica Job ID: 500-155886-1

Client Sample ID: G44S

Date Collected: 12/10/18 14:21

Date Received: 12/10/18 15:40

Lab Sample ID: 500-155886-5

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.019		0.010		mg/L		12/11/18 16:45	12/12/18 21:16	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.0010		0.0010		mg/L		12/11/18 16:45	12/12/18 17:42	1
Barium	0.057		0.0025		mg/L		12/11/18 16:45	12/12/18 17:42	1
Boron	1.1		0.050		mg/L		12/11/18 16:45	12/12/18 17:42	1
Calcium	120		0.20		mg/L		12/11/18 16:45	12/12/18 17:42	1
Cobalt	<0.0010		0.0010		mg/L		12/11/18 16:45	12/12/18 17:42	1
Lead	<0.00050		0.00050		mg/L		12/11/18 16:45	12/12/18 17:42	1
Molybdenum	0.14		0.0050		mg/L		12/11/18 16:45	12/12/18 17:42	1
Selenium	<0.0025		0.0025		mg/L		12/11/18 16:45	12/12/18 17:42	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	630		10		mg/L			12/12/18 02:41	1
Chloride	43		2.0		mg/L			12/27/18 15:40	1
Fluoride	0.19		0.10		mg/L			12/15/18 17:45	1
Sulfate	78		50		mg/L			12/20/18 14:23	10

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Depth to water from land surface	77.00				ft			12/10/18 14:21	1
Depth to Water (ft from MP)	79.18				ft			12/10/18 14:21	1
Elevation of well (ft from MP)	586.53				ft			12/10/18 14:21	1
Field pH	6.98				SU			12/10/18 14:21	1
Field Temperature	50.5				Degrees F			12/10/18 14:21	1
Ground Water Elevation	507.35				ft			12/10/18 14:21	1
Specific Conductance	852				umhos/cm			12/10/18 14:21	1
Well bottom elevation	455.11				ft			12/10/18 14:21	1

TestAmerica Chicago

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 4Q18 GW

TestAmerica Job ID: 500-155886-1

Client Sample ID: T03S
Date Collected: 12/11/18 09:38
Date Received: 12/11/18 15:40

Lab Sample ID: 500-155886-6
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		12/12/18 07:20	12/12/18 21:29	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0014		0.0010		mg/L		12/12/18 07:20	12/12/18 18:05	1
Barium	0.095		0.0025		mg/L		12/12/18 07:20	12/12/18 18:05	1
Boron	1.8		0.050		mg/L		12/12/18 07:20	12/12/18 18:05	1
Calcium	100		0.20		mg/L		12/12/18 07:20	12/12/18 18:05	1
Cobalt	0.0012		0.0010		mg/L		12/12/18 07:20	12/12/18 18:05	1
Lead	<0.00050		0.00050		mg/L		12/12/18 07:20	12/12/18 18:05	1
Molybdenum	0.27		0.0050		mg/L		12/12/18 07:20	12/12/18 18:05	1
Selenium	<0.0025		0.0025		mg/L		12/12/18 07:20	12/12/18 18:05	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	890		10		mg/L			12/12/18 02:44	1
Chloride	140		10		mg/L			12/28/18 15:06	5
Fluoride	0.23		0.10		mg/L			12/15/18 17:48	1
Sulfate	160		50		mg/L			12/20/18 14:26	10

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Depth to water from land surface	136.95				ft			12/11/18 09:38	1
Depth to Water (ft from MP)	140.03				ft			12/11/18 09:38	1
Elevation of well (ft from MP)	629.89				ft			12/11/18 09:38	1
Field pH	6.96				SU			12/11/18 09:38	1
Field Temperature	50.4				Degrees F			12/11/18 09:38	1
Ground Water Elevation	489.86				ft			12/11/18 09:38	1
Specific Conductance	1131				umhos/cm			12/11/18 09:38	1
Well bottom elevation	456.70				ft			12/11/18 09:38	1

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 4Q18 GW

TestAmerica Job ID: 500-155886-1

Client Sample ID: G48S

Date Collected: 12/11/18 11:02

Date Received: 12/11/18 15:40

Lab Sample ID: 500-155886-7

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.019		0.010		mg/L		12/12/18 07:20	12/12/18 21:33	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.023		0.0010		mg/L		12/12/18 07:20	12/12/18 18:09	1
Barium	0.016		0.0025		mg/L		12/12/18 07:20	12/12/18 18:09	1
Boron	7.3		1.0		mg/L		12/12/18 07:20	12/13/18 10:48	20
Calcium	23		0.20		mg/L		12/12/18 07:20	12/12/18 18:09	1
Cobalt	<0.0010		0.0010		mg/L		12/12/18 07:20	12/12/18 18:09	1
Lead	0.0049		0.00050		mg/L		12/12/18 07:20	12/12/18 18:09	1
Molybdenum	0.79		0.0050		mg/L		12/12/18 07:20	12/12/18 18:09	1
Selenium	<0.0025		0.0025		mg/L		12/12/18 07:20	12/12/18 18:09	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1000		10		mg/L			12/12/18 02:46	1
Chloride	110		10		mg/L			12/28/18 15:07	5
Fluoride	1.1		0.10		mg/L			12/15/18 17:51	1
Sulfate	310		100		mg/L			12/20/18 14:29	20

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Depth to water from land surface	103.34				ft			12/11/18 11:02	1
Depth to Water (ft from MP)	105.79				ft			12/11/18 11:02	1
Elevation of well (ft from MP)	620.78				ft			12/11/18 11:02	1
Field pH	8.42				SU			12/11/18 11:02	1
Field Temperature	49.5				Degrees F			12/11/18 11:02	1
Ground Water Elevation	514.99				ft			12/11/18 11:02	1
Specific Conductance	1323				umhos/cm			12/11/18 11:02	1
Well bottom elevation	468.32				ft			12/11/18 11:02	1

TestAmerica Chicago

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 4Q18 GW

TestAmerica Job ID: 500-155886-1

Client Sample ID: G47S

Date Collected: 12/11/18 13:11

Date Received: 12/11/18 15:40

Lab Sample ID: 500-155886-8

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.023		0.010		mg/L		12/12/18 07:20	12/12/18 21:37	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.14		0.0010		mg/L		12/12/18 07:20	12/12/18 18:13	1
Barium	0.011		0.0025		mg/L		12/12/18 07:20	12/12/18 18:13	1
Boron	13		2.5		mg/L		12/12/18 07:20	12/13/18 10:52	50
Calcium	2.8		0.20		mg/L		12/12/18 07:20	12/12/18 18:13	1
Cobalt	<0.0010		0.0010		mg/L		12/12/18 07:20	12/12/18 18:13	1
Lead	<0.00050		0.00050		mg/L		12/12/18 07:20	12/12/18 18:13	1
Molybdenum	1.1		0.0050		mg/L		12/12/18 07:20	12/12/18 18:13	1
Selenium	0.0031		0.0025		mg/L		12/12/18 07:20	12/12/18 18:13	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1300		10		mg/L			12/12/18 02:49	1
Chloride	140		10		mg/L			12/28/18 15:08	5
Fluoride	1.1		0.10		mg/L			12/15/18 17:54	1
Sulfate	440		100		mg/L			12/20/18 14:30	20

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Depth to water from land surface	93.79				ft			12/11/18 13:11	1
Depth to Water (ft from MP)	96.29				ft			12/11/18 13:11	1
Elevation of well (ft from MP)	612.10				ft			12/11/18 13:11	1
Field pH	10.14				SU			12/11/18 13:11	1
Field Temperature	51.8				Degrees F			12/11/18 13:11	1
Ground Water Elevation	515.81				ft			12/11/18 13:11	1
Specific Conductance	1850				umhos/cm			12/11/18 13:11	1
Well bottom elevation	459.84				ft			12/11/18 13:11	1

TestAmerica Chicago

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 4Q18 GW

TestAmerica Job ID: 500-155886-1

Client Sample ID: G46S

Date Collected: 12/11/18 14:25

Date Received: 12/11/18 15:40

Lab Sample ID: 500-155886-9

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.096		0.010		mg/L		12/12/18 07:20	12/12/18 21:41	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0023		0.0010		mg/L		12/12/18 07:20	12/12/18 18:16	1
Barium	0.055		0.0025		mg/L		12/12/18 07:20	12/12/18 18:16	1
Boron	7.6		1.0		mg/L		12/12/18 07:20	12/13/18 10:56	20
Calcium	120		0.20		mg/L		12/12/18 07:20	12/12/18 18:16	1
Cobalt	<0.0010		0.0010		mg/L		12/12/18 07:20	12/12/18 18:16	1
Lead	<0.00050		0.00050		mg/L		12/12/18 07:20	12/12/18 18:16	1
Molybdenum	1.2		0.0050		mg/L		12/12/18 07:20	12/12/18 18:16	1
Selenium	<0.0025		0.0025		mg/L		12/12/18 07:20	12/12/18 18:16	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1100		10		mg/L			12/12/18 02:51	1
Chloride	110		10		mg/L			12/28/18 15:46	5
Fluoride	0.38		0.10		mg/L			12/15/18 17:57	1
Sulfate	270		100		mg/L			12/20/18 14:31	20

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Depth to water from land surface	88.64				ft			12/11/18 14:25	1
Depth to Water (ft from MP)	91.34				ft			12/11/18 14:25	1
Elevation of well (ft from MP)	601.43				ft			12/11/18 14:25	1
Field pH	7.66				SU			12/11/18 14:25	1
Field Temperature	54.0				Degrees F			12/11/18 14:25	1
Ground Water Elevation	510.09				ft			12/11/18 14:25	1
Specific Conductance	1252				umhos/cm			12/11/18 14:25	1
Well bottom elevation	453.62				ft			12/11/18 14:25	1

TestAmerica Chicago

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 4Q18 GW

TestAmerica Job ID: 500-155886-1

Client Sample ID: T08S

Date Collected: 12/12/18 09:46

Date Received: 12/12/18 11:45

Lab Sample ID: 500-155886-10

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.026		0.010		mg/L		12/13/18 08:43	12/13/18 17:47	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.015		0.0010		mg/L		12/13/18 08:43	12/13/18 21:45	1
Barium	0.041		0.0025		mg/L		12/13/18 08:43	12/13/18 21:45	1
Boron	7.5		1.0		mg/L		12/13/18 08:43	12/14/18 12:32	20
Calcium	33		0.20		mg/L		12/13/18 08:43	12/13/18 21:45	1
Cobalt	<0.0010		0.0010		mg/L		12/13/18 08:43	12/13/18 21:45	1
Lead	<0.00050		0.00050		mg/L		12/13/18 08:43	12/14/18 12:59	1
Molybdenum	0.88		0.0050		mg/L		12/13/18 08:43	12/13/18 21:45	1
Selenium	<0.0025		0.0025		mg/L		12/13/18 08:43	12/13/18 21:45	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	950		10		mg/L			12/13/18 06:23	1
Chloride	120		10		mg/L			12/28/18 15:46	5
Fluoride	0.89		0.10		mg/L			12/15/18 18:00	1
Sulfate	260		100		mg/L			12/20/18 14:32	20

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Depth to water from land surface	128.72				ft			12/12/18 09:46	1
Depth to Water (ft from MP)	131.10				ft			12/12/18 09:46	1
Elevation of well (ft from MP)	627.39				ft			12/12/18 09:46	1
Field pH	8.21				SU			12/12/18 09:46	1
Field Temperature	49.1				Degrees F			12/12/18 09:46	1
Ground Water Elevation	496.29				ft			12/12/18 09:46	1
Specific Conductance	1197				umhos/cm			12/12/18 09:46	1
Well bottom elevation	447.38				ft			12/12/18 09:46	1

TestAmerica Chicago

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 4Q18 GW

TestAmerica Job ID: 500-155886-1

Client Sample ID: T01S
Date Collected: 12/13/18 09:25
Date Received: 12/13/18 15:45

Lab Sample ID: 500-155886-11
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.018		0.010		mg/L		12/14/18 16:39	12/17/18 12:00	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.016		0.0010		mg/L		12/14/18 16:39	12/17/18 20:17	1
Barium	0.084		0.0025		mg/L		12/14/18 16:39	12/17/18 20:17	1
Boron	3.3	F1	0.050		mg/L		12/14/18 16:39	12/17/18 20:17	1
Calcium	56		0.20		mg/L		12/14/18 16:39	12/17/18 20:17	1
Cobalt	0.0037		0.0010		mg/L		12/14/18 16:39	12/17/18 20:17	1
Lead	0.0053		0.00050		mg/L		12/14/18 16:39	12/17/18 20:17	1
Molybdenum	0.30		0.0050		mg/L		12/14/18 16:39	12/17/18 20:17	1
Selenium	<0.0025		0.0025		mg/L		12/14/18 16:39	12/17/18 20:17	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	900		10		mg/L			12/14/18 07:07	1
Chloride	110		10		mg/L			12/28/18 15:50	5
Fluoride	1.1		0.10		mg/L			12/15/18 18:03	1
Sulfate	240		100		mg/L			12/20/18 14:33	20

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Depth to water from land surface	122.19				ft			12/13/18 09:25	1
Depth to Water (ft from MP)	124.67				ft			12/13/18 09:25	1
Elevation of well (ft from MP)	621.78				ft			12/13/18 09:25	1
Field pH	7.37				SU			12/13/18 09:25	1
Field Temperature	44.2				Degrees F			12/13/18 09:25	1
Ground Water Elevation	497.11				ft			12/13/18 09:25	1
Specific Conductance	1180				umhos/cm			12/13/18 09:25	1
Well bottom elevation	451.46				ft			12/13/18 09:25	1

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 4Q18 GW

TestAmerica Job ID: 500-155886-1

Client Sample ID: R32S

Date Collected: 12/13/18 13:39

Date Received: 12/13/18 15:45

Lab Sample ID: 500-155886-12

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.080		0.010		mg/L		12/14/18 16:39	12/17/18 12:28	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0019		0.0010		mg/L		12/14/18 16:39	12/17/18 20:36	1
Barium	0.043		0.0025		mg/L		12/14/18 16:39	12/17/18 20:36	1
Boron	3.5		0.050		mg/L		12/14/18 16:39	12/17/18 20:36	1
Calcium	120		0.20		mg/L		12/14/18 16:39	12/17/18 20:36	1
Cobalt	<0.0010		0.0010		mg/L		12/14/18 16:39	12/17/18 20:36	1
Lead	0.0017		0.00050		mg/L		12/14/18 16:39	12/17/18 20:36	1
Molybdenum	0.56		0.0050		mg/L		12/14/18 16:39	12/17/18 20:36	1
Selenium	<0.0025		0.0025		mg/L		12/14/18 16:39	12/17/18 20:36	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	880		10		mg/L			12/14/18 07:14	1
Chloride	72	F1	2.0		mg/L			12/28/18 15:16	1
Fluoride	0.26		0.10		mg/L			12/15/18 18:15	1
Sulfate	280		100		mg/L			12/20/18 14:34	20

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Depth to water from land surface	16.29				ft			12/13/18 13:39	1
Depth to Water (ft from MP)	18.32				ft			12/13/18 13:39	1
Elevation of well (ft from MP)	536.99				ft			12/13/18 13:39	1
Field pH	7.43				SU			12/13/18 13:39	1
Field Temperature	52.7				Degrees F			12/13/18 13:39	1
Ground Water Elevation	518.67				ft			12/13/18 13:39	1
Specific Conductance	854				umhos/cm			12/13/18 13:39	1
Well bottom elevation	457.84				ft			12/13/18 13:39	1

TestAmerica Chicago

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 4Q18 GW

TestAmerica Job ID: 500-155886-1

Client Sample ID: R08S

Date Collected: 12/13/18 14:30

Date Received: 12/13/18 15:45

Lab Sample ID: 500-155886-13

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.15		0.010		mg/L		12/14/18 16:39	12/17/18 12:32	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0012		0.0010		mg/L		12/14/18 16:39	12/17/18 20:40	1
Barium	0.046		0.0025		mg/L		12/14/18 16:39	12/17/18 20:40	1
Boron	7.7		0.50		mg/L		12/14/18 16:39	12/18/18 11:59	10
Calcium	140		0.20		mg/L		12/14/18 16:39	12/17/18 20:40	1
Cobalt	<0.0010		0.0010		mg/L		12/14/18 16:39	12/17/18 20:40	1
Lead	<0.00050		0.00050		mg/L		12/14/18 16:39	12/17/18 20:40	1
Molybdenum	0.37		0.0050		mg/L		12/14/18 16:39	12/17/18 20:40	1
Selenium	0.017		0.0025		mg/L		12/14/18 16:39	12/17/18 20:40	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	800		10		mg/L			12/14/18 07:17	1
Chloride	79		10		mg/L			12/28/18 16:20	5
Fluoride	0.15		0.10		mg/L			12/15/18 18:18	1
Sulfate	240		100		mg/L			12/20/18 14:35	20

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Depth to water from land surface	62.93				ft			12/13/18 14:30	1
Depth to Water (ft from MP)	65.48				ft			12/13/18 14:30	1
Elevation of well (ft from MP)	578.62				ft			12/13/18 14:30	1
Field pH	8.11				SU			12/13/18 14:30	1
Field Temperature	53.8				Degrees F			12/13/18 14:30	1
Ground Water Elevation	513.14				ft			12/13/18 14:30	1
Specific Conductance	916				umhos/cm			12/13/18 14:30	1
Well bottom elevation	453.08				ft			12/13/18 14:30	1

TestAmerica Chicago

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 4Q18 GW

TestAmerica Job ID: 500-155886-1

Client Sample ID: T02S

Date Collected: 12/14/18 09:44

Date Received: 12/14/18 15:40

Lab Sample ID: 500-155886-14

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.027		0.010		mg/L		12/18/18 07:45	12/18/18 20:57	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0086		0.0010		mg/L		12/18/18 07:45	12/18/18 20:27	1
Barium	0.063		0.0025		mg/L		12/18/18 07:45	12/18/18 20:27	1
Boron	4.9		0.50		mg/L		12/18/18 07:45	12/19/18 12:23	10
Calcium	53		0.20		mg/L		12/18/18 07:45	12/18/18 20:27	1
Cobalt	0.0016		0.0010		mg/L		12/18/18 07:45	12/18/18 20:27	1
Lead	0.0070		0.00050		mg/L		12/18/18 07:45	12/18/18 20:27	1
Molybdenum	0.50		0.0050		mg/L		12/18/18 07:45	12/18/18 20:27	1
Selenium	<0.0025		0.0025		mg/L		12/18/18 07:45	12/18/18 20:27	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	870		10		mg/L			12/17/18 05:20	1
Chloride	110		10		mg/L			12/28/18 15:51	5
Fluoride	0.47		0.10		mg/L			12/15/18 18:22	1
Sulfate	210		100		mg/L			12/21/18 11:24	20

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Depth to water from land surface	133.85				ft			12/14/18 09:44	1
Depth to Water (ft from MP)	136.18				ft			12/14/18 09:44	1
Elevation of well (ft from MP)	626.16				ft			12/14/18 09:44	1
Field pH	7.55				SU			12/14/18 09:44	1
Field Temperature	46.8				Degrees F			12/14/18 09:44	1
Ground Water Elevation	489.98				ft			12/14/18 09:44	1
Specific Conductance	1098				umhos/cm			12/14/18 09:44	1
Well bottom elevation	453.40				ft			12/14/18 09:44	1

TestAmerica Chicago

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 4Q18 GW

TestAmerica Job ID: 500-155886-1

Client Sample ID: DUP

Date Collected: 12/14/18 09:44

Date Received: 12/14/18 15:40

Lab Sample ID: 500-155886-15

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.028		0.010		mg/L		12/18/18 07:45	12/18/18 21:01	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0086		0.0010		mg/L		12/18/18 07:45	12/18/18 20:31	1
Barium	0.064		0.0025		mg/L		12/18/18 07:45	12/18/18 20:31	1
Boron	4.9		0.50		mg/L		12/18/18 07:45	12/19/18 12:27	10
Calcium	56		0.20		mg/L		12/18/18 07:45	12/18/18 20:31	1
Cobalt	0.0010		0.0010		mg/L		12/18/18 07:45	12/18/18 20:31	1
Lead	0.00089		0.00050		mg/L		12/18/18 07:45	12/18/18 20:31	1
Molybdenum	0.52		0.0050		mg/L		12/18/18 07:45	12/18/18 20:31	1
Selenium	<0.0025		0.0025		mg/L		12/18/18 07:45	12/18/18 20:31	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	900		10		mg/L			12/17/18 05:25	1
Chloride	110		10		mg/L			12/28/18 15:52	5
Fluoride	0.47		0.10		mg/L			12/15/18 18:25	1
Sulfate	170		100		mg/L			12/21/18 11:25	20

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Depth to water from land surface	133.85				ft			12/14/18 09:44	1
Depth to Water (ft from MP)	136.18				ft			12/14/18 09:44	1
Elevation of well (ft from MP)	626.16				ft			12/14/18 09:44	1
Field pH	7.55				SU			12/14/18 09:44	1
Field Temperature	46.8				Degrees F			12/14/18 09:44	1
Ground Water Elevation	489.98				ft			12/14/18 09:44	1
Specific Conductance	1098				umhos/cm			12/14/18 09:44	1
Well bottom elevation	453.40				ft			12/14/18 09:44	1

TestAmerica Chicago

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 4Q18 GW

TestAmerica Job ID: 500-155886-1

Client Sample ID: G30S

Date Collected: 12/14/18 14:03

Date Received: 12/14/18 15:40

Lab Sample ID: 500-155886-16

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.022		0.010		mg/L		12/18/18 07:45	12/18/18 21:05	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0069		0.0010		mg/L		12/18/18 07:45	12/18/18 20:35	1
Barium	0.041		0.0025		mg/L		12/18/18 07:45	12/18/18 20:35	1
Boron	5.8		0.50		mg/L		12/18/18 07:45	12/19/18 12:31	10
Calcium	57		0.20		mg/L		12/18/18 07:45	12/18/18 20:35	1
Cobalt	<0.0010		0.0010		mg/L		12/18/18 07:45	12/18/18 20:35	1
Lead	<0.00050		0.00050		mg/L		12/18/18 07:45	12/18/18 20:35	1
Molybdenum	0.065		0.0050		mg/L		12/18/18 07:45	12/18/18 20:35	1
Selenium	<0.0025		0.0025		mg/L		12/18/18 07:45	12/18/18 20:35	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1100		10		mg/L			12/17/18 05:28	1
Chloride	200		10		mg/L			12/28/18 15:54	5
Fluoride	1.2		0.10		mg/L			12/15/18 18:37	1
Sulfate	200		100		mg/L			12/21/18 11:26	20

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Depth to water from land surface	0.20				ft			12/14/18 14:03	1
Depth to Water (ft from MP)	2.51				ft			12/14/18 14:03	1
Elevation of well (ft from MP)	524.70				ft			12/14/18 14:03	1
Field pH	7.99				SU			12/14/18 14:03	1
Field Temperature	49.6				Degrees F			12/14/18 14:03	1
Ground Water Elevation	522.19				ft			12/14/18 14:03	1
Specific Conductance	1422				umhos/cm			12/14/18 14:03	1
Well bottom elevation	462.58				ft			12/14/18 14:03	1

TestAmerica Chicago

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 4Q18 GW

TestAmerica Job ID: 500-155886-1

Client Sample ID: T09S

Date Collected: 12/18/18 11:08

Date Received: 12/18/18 15:50

Lab Sample ID: 500-155886-17

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.097		0.010		mg/L		12/19/18 07:35	12/19/18 13:39	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0027		0.0010		mg/L		12/19/18 07:35	12/19/18 16:52	1
Barium	0.093		0.0025		mg/L		12/19/18 07:35	12/19/18 16:52	1
Boron	6.6		0.50		mg/L		12/19/18 07:35	12/20/18 17:51	10
Calcium	120		0.20		mg/L		12/19/18 07:35	12/19/18 16:52	1
Cobalt	0.0011		0.0010		mg/L		12/19/18 07:35	12/19/18 16:52	1
Lead	0.0017		0.00050		mg/L		12/19/18 07:35	12/19/18 16:52	1
Molybdenum	1.0		0.0050		mg/L		12/19/18 07:35	12/19/18 16:52	1
Selenium	<0.0025		0.0025		mg/L		12/19/18 07:35	12/19/18 16:52	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1000		10		mg/L			12/19/18 06:23	1
Chloride	120		10		mg/L			12/28/18 15:54	5
Fluoride	0.35		0.10		mg/L			12/20/18 13:08	1
Sulfate	270		100		mg/L			12/31/18 00:34	20

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Depth to water from land surface	93.23				ft			12/18/18 11:08	1
Depth to Water (ft from MP)	95.63				ft			12/18/18 11:08	1
Elevation of well (ft from MP)	603.74				ft			12/18/18 11:08	1
Field pH	7.54				SU			12/18/18 11:08	1
Field Temperature	46.0				Degrees F			12/18/18 11:08	1
Ground Water Elevation	508.11				ft			12/18/18 11:08	1
Specific Conductance	1189				umhos/cm			12/18/18 11:08	1
Well bottom elevation	444.80				ft			12/18/18 11:08	1

TestAmerica Chicago

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 4Q18 GW

TestAmerica Job ID: 500-155886-1

Client Sample ID: T06S
Date Collected: 12/18/18 13:20
Date Received: 12/18/18 15:50

Lab Sample ID: 500-155886-18
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.028		0.010		mg/L		12/19/18 07:35	12/19/18 13:43	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.0010		0.0010		mg/L		12/19/18 07:35	12/19/18 16:56	1
Barium	0.035		0.0025		mg/L		12/19/18 07:35	12/19/18 16:56	1
Boron	0.72		0.050		mg/L		12/19/18 07:35	12/19/18 16:56	1
Calcium	88		0.20		mg/L		12/19/18 07:35	12/19/18 16:56	1
Cobalt	<0.0010		0.0010		mg/L		12/19/18 07:35	12/19/18 16:56	1
Lead	<0.00050		0.00050		mg/L		12/19/18 07:35	12/19/18 16:56	1
Molybdenum	0.0085		0.0050		mg/L		12/19/18 07:35	12/19/18 16:56	1
Selenium	<0.0025		0.0025		mg/L		12/19/18 07:35	12/19/18 16:56	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	530		10		mg/L			12/19/18 06:28	1
Chloride	18		2.0		mg/L			12/28/18 15:23	1
Fluoride	0.38		0.10		mg/L			12/20/18 13:11	1
Sulfate	66		25		mg/L			12/31/18 00:35	5

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Depth to water from land surface	113.35				ft			12/18/18 13:20	1
Depth to Water (ft from MP)	115.65				ft			12/18/18 13:20	1
Elevation of well (ft from MP)	621.02				ft			12/18/18 13:20	1
Field pH	7.36				SU			12/18/18 13:20	1
Field Temperature	50.0				Degrees F			12/18/18 13:20	1
Ground Water Elevation	505.37				ft			12/18/18 13:20	1
Specific Conductance	658				umhos/cm			12/18/18 13:20	1
Well bottom elevation	447.94				ft			12/18/18 13:20	1

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 4Q18 GW

TestAmerica Job ID: 500-155886-1

Client Sample ID: T05S

Date Collected: 12/19/18 09:27

Date Received: 12/19/18 15:22

Lab Sample ID: 500-155886-19

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.015		0.010		mg/L		12/20/18 16:20	12/21/18 20:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.14		0.0010		mg/L		12/20/18 16:20	12/24/18 19:59	1
Barium	0.010		0.0025		mg/L		12/20/18 16:20	12/24/18 19:59	1
Boron	13		5.0		mg/L		12/20/18 16:20	12/26/18 13:13	100
Calcium	1.4		0.20		mg/L		12/20/18 16:20	12/24/18 19:59	1
Cobalt	<0.0010		0.0010		mg/L		12/20/18 16:20	12/24/18 19:59	1
Lead	<0.00050		0.00050		mg/L		12/20/18 16:20	12/24/18 19:59	1
Molybdenum	1.0		0.0050		mg/L		12/20/18 16:20	12/24/18 19:59	1
Selenium	0.0026		0.0025		mg/L		12/20/18 16:20	12/24/18 19:59	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1600		10		mg/L			12/20/18 07:20	1
Chloride	150		10		mg/L			12/28/18 15:55	5
Fluoride	1.8		0.10		mg/L			12/20/18 13:15	1
Sulfate	410		250		mg/L			12/31/18 00:36	50

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Depth to water from land surface	123.19				ft			12/19/18 09:27	1
Depth to Water (ft from MP)	125.59				ft			12/19/18 09:27	1
Elevation of well (ft from MP)	623.45				ft			12/19/18 09:27	1
Field pH	10.37				SU			12/19/18 09:27	1
Field Temperature	47.8				Degrees F			12/19/18 09:27	1
Ground Water Elevation	497.86				ft			12/19/18 09:27	1
Specific Conductance	2010				umhos/cm			12/19/18 09:27	1
Well bottom elevation	448.35				ft			12/19/18 09:27	1

Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 4Q18 GW

TestAmerica Job ID: 500-155886-1

Client Sample ID: T04S

Date Collected: 12/19/18 12:25

Date Received: 12/19/18 15:22

Lab Sample ID: 500-155886-20

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	0.027		0.010		mg/L		12/20/18 16:20	12/21/18 20:42	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.0010		0.0010		mg/L		12/20/18 16:20	12/24/18 20:03	1
Barium	0.056		0.0025		mg/L		12/20/18 16:20	12/24/18 20:03	1
Boron	0.24		0.050		mg/L		12/20/18 16:20	12/26/18 13:17	1
Calcium	93		0.20		mg/L		12/20/18 16:20	12/24/18 20:03	1
Cobalt	<0.0010		0.0010		mg/L		12/20/18 16:20	12/24/18 20:03	1
Lead	0.0018		0.00050		mg/L		12/20/18 16:20	12/24/18 20:03	1
Molybdenum	0.012		0.0050		mg/L		12/20/18 16:20	12/24/18 20:03	1
Selenium	<0.0025		0.0025		mg/L		12/20/18 16:20	12/24/18 20:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	510		10		mg/L			12/20/18 07:25	1
Chloride	8.7		2.0		mg/L			12/28/18 15:24	1
Fluoride	0.24		0.10		mg/L			12/20/18 13:18	1
Sulfate	67		25		mg/L			12/31/18 00:37	5

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Depth to water from land surface	156.10				ft			12/19/18 12:25	1
Depth to Water (ft from MP)	158.52				ft			12/19/18 12:25	1
Elevation of well (ft from MP)	631.35				ft			12/19/18 12:25	1
Field pH	7.89				SU			12/19/18 12:25	1
Field Temperature	54.3				Degrees F			12/19/18 12:25	1
Ground Water Elevation	472.83				ft			12/19/18 12:25	1
Specific Conductance	662				umhos/cm			12/19/18 12:25	1
Well bottom elevation	458.07				ft			12/19/18 12:25	1

TestAmerica Chicago

Definitions/Glossary

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 4Q18 GW

TestAmerica Job ID: 500-155886-1

Qualifiers

Metals

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

General Chemistry

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.

Glossary

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

QC Association Summary

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 4Q18 GW

TestAmerica Job ID: 500-155886-1

Metals

Prep Batch: 463829

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-155886-1	G45S	Total Recoverable	Water	3005A	
500-155886-2	G20S	Total Recoverable	Water	3005A	
MB 500-463829/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-463829/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 464008

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-155886-1	G45S	Total Recoverable	Water	6010C	463829
500-155886-2	G20S	Total Recoverable	Water	6010C	463829
MB 500-463829/1-A	Method Blank	Total Recoverable	Water	6010C	463829
LCS 500-463829/2-A	Lab Control Sample	Total Recoverable	Water	6010C	463829

Analysis Batch: 464030

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-155886-1	G45S	Total Recoverable	Water	6020A	463829
500-155886-2	G20S	Total Recoverable	Water	6020A	463829
MB 500-463829/1-A	Method Blank	Total Recoverable	Water	6020A	463829
LCS 500-463829/2-A	Lab Control Sample	Total Recoverable	Water	6020A	463829

Analysis Batch: 464134

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-155886-1	G45S	Total Recoverable	Water	6020A	463829
500-155886-2	G20S	Total Recoverable	Water	6020A	463829
MB 500-463829/1-A	Method Blank	Total Recoverable	Water	6020A	463829
LCS 500-463829/2-A	Lab Control Sample	Total Recoverable	Water	6020A	463829

Prep Batch: 464173

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-155886-3	G31S	Total Recoverable	Water	3005A	
500-155886-4	G33S	Total Recoverable	Water	3005A	
500-155886-5	G44S	Total Recoverable	Water	3005A	
MB 500-464173/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-464173/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 464229

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-155886-6	T03S	Total Recoverable	Water	3005A	
500-155886-7	G48S	Total Recoverable	Water	3005A	
500-155886-8	G47S	Total Recoverable	Water	3005A	
500-155886-9	G46S	Total Recoverable	Water	3005A	
MB 500-464229/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-464229/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 464449

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-155886-3	G31S	Total Recoverable	Water	6010C	464173
500-155886-4	G33S	Total Recoverable	Water	6010C	464173
500-155886-5	G44S	Total Recoverable	Water	6010C	464173
500-155886-6	T03S	Total Recoverable	Water	6010C	464229
500-155886-7	G48S	Total Recoverable	Water	6010C	464229
500-155886-8	G47S	Total Recoverable	Water	6010C	464229

TestAmerica Chicago

QC Association Summary

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 4Q18 GW

TestAmerica Job ID: 500-155886-1

Metals (Continued)

Analysis Batch: 464449 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-155886-9	G46S	Total Recoverable	Water	6010C	464229
MB 500-464173/1-A	Method Blank	Total Recoverable	Water	6010C	464173
MB 500-464229/1-A	Method Blank	Total Recoverable	Water	6010C	464229
LCS 500-464173/2-A	Lab Control Sample	Total Recoverable	Water	6010C	464173
LCS 500-464229/2-A	Lab Control Sample	Total Recoverable	Water	6010C	464229

Prep Batch: 464470

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-155886-10	T08S	Total Recoverable	Water	3005A	
MB 500-464470/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-464470/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 464479

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-155886-3	G31S	Total Recoverable	Water	6020A	464173
500-155886-4	G33S	Total Recoverable	Water	6020A	464173
500-155886-5	G44S	Total Recoverable	Water	6020A	464173
500-155886-6	T03S	Total Recoverable	Water	6020A	464229
500-155886-7	G48S	Total Recoverable	Water	6020A	464229
500-155886-8	G47S	Total Recoverable	Water	6020A	464229
500-155886-9	G46S	Total Recoverable	Water	6020A	464229
MB 500-464173/1-A	Method Blank	Total Recoverable	Water	6020A	464173
MB 500-464229/1-A	Method Blank	Total Recoverable	Water	6020A	464229
LCS 500-464173/2-A	Lab Control Sample	Total Recoverable	Water	6020A	464173
LCS 500-464229/2-A	Lab Control Sample	Total Recoverable	Water	6020A	464229

Analysis Batch: 464675

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-155886-10	T08S	Total Recoverable	Water	6010C	464470
MB 500-464470/1-A	Method Blank	Total Recoverable	Water	6010C	464470
LCS 500-464470/2-A	Lab Control Sample	Total Recoverable	Water	6010C	464470

Analysis Batch: 464726

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-155886-7	G48S	Total Recoverable	Water	6020A	464229
500-155886-8	G47S	Total Recoverable	Water	6020A	464229
500-155886-9	G46S	Total Recoverable	Water	6020A	464229
500-155886-10	T08S	Total Recoverable	Water	6020A	464470
MB 500-464470/1-A	Method Blank	Total Recoverable	Water	6020A	464470
LCS 500-464470/2-A	Lab Control Sample	Total Recoverable	Water	6020A	464470

Analysis Batch: 464840

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-155886-10	T08S	Total Recoverable	Water	6020A	464470
500-155886-10	T08S	Total Recoverable	Water	6020A	464470
MB 500-464470/1-A	Method Blank	Total Recoverable	Water	6020A	464470
LCS 500-464470/2-A	Lab Control Sample	Total Recoverable	Water	6020A	464470

Prep Batch: 464864

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-155886-11	T01S	Total Recoverable	Water	3005A	

TestAmerica Chicago

QC Association Summary

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 4Q18 GW

TestAmerica Job ID: 500-155886-1

Metals (Continued)

Prep Batch: 464864 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-155886-12	R32S	Total Recoverable	Water	3005A	
500-155886-13	R08S	Total Recoverable	Water	3005A	
MB 500-464864/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-464864/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
500-155886-11 MS	T01S	Total Recoverable	Water	3005A	
500-155886-11 MSD	T01S	Total Recoverable	Water	3005A	
500-155886-11 DU	T01S	Total Recoverable	Water	3005A	

Analysis Batch: 465058

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-155886-11	T01S	Total Recoverable	Water	6010C	464864
500-155886-12	R32S	Total Recoverable	Water	6010C	464864
500-155886-13	R08S	Total Recoverable	Water	6010C	464864
MB 500-464864/1-A	Method Blank	Total Recoverable	Water	6010C	464864
LCS 500-464864/2-A	Lab Control Sample	Total Recoverable	Water	6010C	464864
500-155886-11 MS	T01S	Total Recoverable	Water	6010C	464864
500-155886-11 MSD	T01S	Total Recoverable	Water	6010C	464864
500-155886-11 DU	T01S	Total Recoverable	Water	6010C	464864

Prep Batch: 465177

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-155886-14	T02S	Total Recoverable	Water	3005A	
500-155886-15	DUP	Total Recoverable	Water	3005A	
500-155886-16	G30S	Total Recoverable	Water	3005A	
MB 500-465177/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-465177/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 465210

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-155886-11	T01S	Total Recoverable	Water	6020A	464864
500-155886-12	R32S	Total Recoverable	Water	6020A	464864
500-155886-13	R08S	Total Recoverable	Water	6020A	464864
MB 500-464864/1-A	Method Blank	Total Recoverable	Water	6020A	464864
LCS 500-464864/2-A	Lab Control Sample	Total Recoverable	Water	6020A	464864
500-155886-11 MS	T01S	Total Recoverable	Water	6020A	464864
500-155886-11 MSD	T01S	Total Recoverable	Water	6020A	464864
500-155886-11 DU	T01S	Total Recoverable	Water	6020A	464864

Analysis Batch: 465309

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-155886-13	R08S	Total Recoverable	Water	6020A	464864

Analysis Batch: 465374

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-155886-14	T02S	Total Recoverable	Water	6010C	465177
500-155886-15	DUP	Total Recoverable	Water	6010C	465177
500-155886-16	G30S	Total Recoverable	Water	6010C	465177
MB 500-465177/1-A	Method Blank	Total Recoverable	Water	6010C	465177
LCS 500-465177/2-A	Lab Control Sample	Total Recoverable	Water	6010C	465177

TestAmerica Chicago

QC Association Summary

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 4Q18 GW

TestAmerica Job ID: 500-155886-1

Metals (Continued)

Prep Batch: 465384

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-155886-17	T09S	Total Recoverable	Water	3005A	
500-155886-18	T06S	Total Recoverable	Water	3005A	
MB 500-465384/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-465384/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 465410

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-155886-14	T02S	Total Recoverable	Water	6020A	465177
500-155886-15	DUP	Total Recoverable	Water	6020A	465177
500-155886-16	G30S	Total Recoverable	Water	6020A	465177
MB 500-465177/1-A	Method Blank	Total Recoverable	Water	6020A	465177
LCS 500-465177/2-A	Lab Control Sample	Total Recoverable	Water	6020A	465177

Analysis Batch: 465552

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-155886-14	T02S	Total Recoverable	Water	6020A	465177
500-155886-15	DUP	Total Recoverable	Water	6020A	465177
500-155886-16	G30S	Total Recoverable	Water	6020A	465177
MB 500-465177/1-A	Method Blank	Total Recoverable	Water	6020A	465177
LCS 500-465177/2-A	Lab Control Sample	Total Recoverable	Water	6020A	465177

Analysis Batch: 465562

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-155886-17	T09S	Total Recoverable	Water	6010C	465384
500-155886-18	T06S	Total Recoverable	Water	6010C	465384
MB 500-465384/1-A	Method Blank	Total Recoverable	Water	6010C	465384
LCS 500-465384/2-A	Lab Control Sample	Total Recoverable	Water	6010C	465384

Analysis Batch: 465688

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-155886-17	T09S	Total Recoverable	Water	6020A	465384
500-155886-18	T06S	Total Recoverable	Water	6020A	465384
MB 500-465384/1-A	Method Blank	Total Recoverable	Water	6020A	465384
LCS 500-465384/2-A	Lab Control Sample	Total Recoverable	Water	6020A	465384

Prep Batch: 465795

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-155886-19	T05S	Total Recoverable	Water	3005A	
500-155886-20	T04S	Total Recoverable	Water	3005A	
MB 500-465795/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-465795/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 466123

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-155886-19	T05S	Total Recoverable	Water	6010C	465795
500-155886-20	T04S	Total Recoverable	Water	6010C	465795
MB 500-465795/1-A	Method Blank	Total Recoverable	Water	6010C	465795
LCS 500-465795/2-A	Lab Control Sample	Total Recoverable	Water	6010C	465795

TestAmerica Chicago

QC Association Summary

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 4Q18 GW

TestAmerica Job ID: 500-155886-1

Metals (Continued)

Analysis Batch: 466171

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-155886-17	T09S	Total Recoverable	Water	6020A	465384

Analysis Batch: 466297

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-155886-19	T05S	Total Recoverable	Water	6020A	465795
500-155886-20	T04S	Total Recoverable	Water	6020A	465795
MB 500-465795/1-A	Method Blank	Total Recoverable	Water	6020A	465795
LCS 500-465795/2-A	Lab Control Sample	Total Recoverable	Water	6020A	465795

Analysis Batch: 466417

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-155886-19	T05S	Total Recoverable	Water	6020A	465795
500-155886-20	T04S	Total Recoverable	Water	6020A	465795

General Chemistry

Analysis Batch: 463760

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-155886-1	G45S	Total/NA	Water	SM 2540C	
500-155886-2	G20S	Total/NA	Water	SM 2540C	
MB 500-463760/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-463760/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 464216

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-155886-3	G31S	Total/NA	Water	SM 2540C	
500-155886-4	G33S	Total/NA	Water	SM 2540C	
500-155886-5	G44S	Total/NA	Water	SM 2540C	
500-155886-6	T03S	Total/NA	Water	SM 2540C	
500-155886-7	G48S	Total/NA	Water	SM 2540C	
500-155886-8	G47S	Total/NA	Water	SM 2540C	
500-155886-9	G46S	Total/NA	Water	SM 2540C	
MB 500-464216/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-464216/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 464440

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-155886-10	T08S	Total/NA	Water	SM 2540C	
MB 500-464440/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-464440/2	Lab Control Sample	Total/NA	Water	SM 2540C	
500-155886-10 MS	T08S	Total/NA	Water	SM 2540C	
500-155886-10 DU	T08S	Total/NA	Water	SM 2540C	

Analysis Batch: 464670

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-155886-11	T01S	Total/NA	Water	SM 2540C	
500-155886-12	R32S	Total/NA	Water	SM 2540C	
500-155886-13	R08S	Total/NA	Water	SM 2540C	
MB 500-464670/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-464670/2	Lab Control Sample	Total/NA	Water	SM 2540C	

TestAmerica Chicago

QC Association Summary

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 4Q18 GW

TestAmerica Job ID: 500-155886-1

General Chemistry (Continued)

Analysis Batch: 464670 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-155886-11 MS	T01S	Total/NA	Water	SM 2540C	
500-155886-11 DU	T01S	Total/NA	Water	SM 2540C	

Analysis Batch: 464947

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-155886-14	T02S	Total/NA	Water	SM 2540C	
500-155886-15	DUP	Total/NA	Water	SM 2540C	
500-155886-16	G30S	Total/NA	Water	SM 2540C	
MB 500-464947/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-464947/2	Lab Control Sample	Total/NA	Water	SM 2540C	
500-155886-14 DU	T02S	Total/NA	Water	SM 2540C	

Analysis Batch: 465004

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-155886-1	G45S	Total/NA	Water	SM 4500 F C	
500-155886-2	G20S	Total/NA	Water	SM 4500 F C	
500-155886-3	G31S	Total/NA	Water	SM 4500 F C	
500-155886-4	G33S	Total/NA	Water	SM 4500 F C	
500-155886-5	G44S	Total/NA	Water	SM 4500 F C	
500-155886-6	T03S	Total/NA	Water	SM 4500 F C	
500-155886-7	G48S	Total/NA	Water	SM 4500 F C	
500-155886-8	G47S	Total/NA	Water	SM 4500 F C	
500-155886-9	G46S	Total/NA	Water	SM 4500 F C	
500-155886-10	T08S	Total/NA	Water	SM 4500 F C	
500-155886-11	T01S	Total/NA	Water	SM 4500 F C	
500-155886-12	R32S	Total/NA	Water	SM 4500 F C	
500-155886-13	R08S	Total/NA	Water	SM 4500 F C	
500-155886-14	T02S	Total/NA	Water	SM 4500 F C	
500-155886-15	DUP	Total/NA	Water	SM 4500 F C	
500-155886-16	G30S	Total/NA	Water	SM 4500 F C	
MB 500-465004/3	Method Blank	Total/NA	Water	SM 4500 F C	
MB 500-465004/31	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 500-465004/32	Lab Control Sample	Total/NA	Water	SM 4500 F C	
LCS 500-465004/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
500-155886-16 MS	G30S	Total/NA	Water	SM 4500 F C	
500-155886-16 MSD	G30S	Total/NA	Water	SM 4500 F C	

Analysis Batch: 465381

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-155886-17	T09S	Total/NA	Water	SM 2540C	
500-155886-18	T06S	Total/NA	Water	SM 2540C	
MB 500-465381/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-465381/2	Lab Control Sample	Total/NA	Water	SM 2540C	
500-155886-17 DU	T09S	Total/NA	Water	SM 2540C	

Analysis Batch: 465648

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-155886-19	T05S	Total/NA	Water	SM 2540C	
500-155886-20	T04S	Total/NA	Water	SM 2540C	
MB 500-465648/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 500-465648/2	Lab Control Sample	Total/NA	Water	SM 2540C	

TestAmerica Chicago

QC Association Summary

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 4Q18 GW

TestAmerica Job ID: 500-155886-1

General Chemistry (Continued)

Analysis Batch: 465648 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-155886-19 DU	T05S	Total/NA	Water	SM 2540C	

Analysis Batch: 465757

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-155886-1	G45S	Total/NA	Water	SM 4500 SO4 E	
500-155886-2	G20S	Total/NA	Water	SM 4500 SO4 E	
500-155886-3	G31S	Total/NA	Water	SM 4500 SO4 E	
500-155886-4	G33S	Total/NA	Water	SM 4500 SO4 E	
500-155886-5	G44S	Total/NA	Water	SM 4500 SO4 E	
500-155886-6	T03S	Total/NA	Water	SM 4500 SO4 E	
500-155886-7	G48S	Total/NA	Water	SM 4500 SO4 E	
500-155886-8	G47S	Total/NA	Water	SM 4500 SO4 E	
500-155886-9	G46S	Total/NA	Water	SM 4500 SO4 E	
500-155886-10	T08S	Total/NA	Water	SM 4500 SO4 E	
500-155886-11	T01S	Total/NA	Water	SM 4500 SO4 E	
500-155886-12	R32S	Total/NA	Water	SM 4500 SO4 E	
500-155886-13	R08S	Total/NA	Water	SM 4500 SO4 E	
MB 500-465757/3	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 500-465757/4	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
500-155886-6 MS	T03S	Total/NA	Water	SM 4500 SO4 E	
500-155886-6 MSD	T03S	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 465801

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-155886-17	T09S	Total/NA	Water	SM 4500 F C	
500-155886-18	T06S	Total/NA	Water	SM 4500 F C	
500-155886-19	T05S	Total/NA	Water	SM 4500 F C	
500-155886-20	T04S	Total/NA	Water	SM 4500 F C	
MB 500-465801/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 500-465801/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	

Analysis Batch: 465929

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-155886-14	T02S	Total/NA	Water	SM 4500 SO4 E	
500-155886-15	DUP	Total/NA	Water	SM 4500 SO4 E	
500-155886-16	G30S	Total/NA	Water	SM 4500 SO4 E	
MB 500-465929/3	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 500-465929/4	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 466663

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-155886-2	G20S	Total/NA	Water	SM 4500 Cl- E	
500-155886-4	G33S	Total/NA	Water	SM 4500 Cl- E	
500-155886-5	G44S	Total/NA	Water	SM 4500 Cl- E	
MB 500-466663/19	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 500-466663/20	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
500-155886-2 MS	G20S	Total/NA	Water	SM 4500 Cl- E	
500-155886-2 MSD	G20S	Total/NA	Water	SM 4500 Cl- E	
500-155886-4 MS	G33S	Total/NA	Water	SM 4500 Cl- E	
500-155886-4 MSD	G33S	Total/NA	Water	SM 4500 Cl- E	

TestAmerica Chicago

QC Association Summary

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 4Q18 GW

TestAmerica Job ID: 500-155886-1

General Chemistry (Continued)

Analysis Batch: 466833

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-155886-1	G45S	Total/NA	Water	SM 4500 Cl- E	
MB 500-466833/12	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 500-466833/13	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 466873

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-155886-3	G31S	Total/NA	Water	SM 4500 Cl- E	
500-155886-6	T03S	Total/NA	Water	SM 4500 Cl- E	
500-155886-7	G48S	Total/NA	Water	SM 4500 Cl- E	
500-155886-8	G47S	Total/NA	Water	SM 4500 Cl- E	
500-155886-9	G46S	Total/NA	Water	SM 4500 Cl- E	
500-155886-10	T08S	Total/NA	Water	SM 4500 Cl- E	
500-155886-11	T01S	Total/NA	Water	SM 4500 Cl- E	
500-155886-12	R32S	Total/NA	Water	SM 4500 Cl- E	
500-155886-13	R08S	Total/NA	Water	SM 4500 Cl- E	
500-155886-14	T02S	Total/NA	Water	SM 4500 Cl- E	
500-155886-15	DUP	Total/NA	Water	SM 4500 Cl- E	
500-155886-16	G30S	Total/NA	Water	SM 4500 Cl- E	
500-155886-17	T09S	Total/NA	Water	SM 4500 Cl- E	
500-155886-18	T06S	Total/NA	Water	SM 4500 Cl- E	
500-155886-19	T05S	Total/NA	Water	SM 4500 Cl- E	
500-155886-20	T04S	Total/NA	Water	SM 4500 Cl- E	
MB 500-466873/24	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 500-466873/25	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
500-155886-11 MS	T01S	Total/NA	Water	SM 4500 Cl- E	
500-155886-11 MSD	T01S	Total/NA	Water	SM 4500 Cl- E	
500-155886-12 MS	R32S	Total/NA	Water	SM 4500 Cl- E	
500-155886-12 MSD	R32S	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 467017

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-155886-17	T09S	Total/NA	Water	SM 4500 SO4 E	
500-155886-18	T06S	Total/NA	Water	SM 4500 SO4 E	
500-155886-19	T05S	Total/NA	Water	SM 4500 SO4 E	
500-155886-20	T04S	Total/NA	Water	SM 4500 SO4 E	
MB 500-467017/3	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 500-467017/4	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	

Field Service / Mobile Lab

Analysis Batch: 467138

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-155886-1	G45S	Total/NA	Water	Field Sampling	
500-155886-2	G20S	Total/NA	Water	Field Sampling	
500-155886-3	G31S	Total/NA	Water	Field Sampling	
500-155886-4	G33S	Total/NA	Water	Field Sampling	
500-155886-5	G44S	Total/NA	Water	Field Sampling	
500-155886-6	T03S	Total/NA	Water	Field Sampling	
500-155886-7	G48S	Total/NA	Water	Field Sampling	
500-155886-8	G47S	Total/NA	Water	Field Sampling	

TestAmerica Chicago

QC Association Summary

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 4Q18 GW

TestAmerica Job ID: 500-155886-1

Field Service / Mobile Lab (Continued)

Analysis Batch: 467138 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-155886-9	G46S	Total/NA	Water	Field Sampling	
500-155886-10	T08S	Total/NA	Water	Field Sampling	
500-155886-11	T01S	Total/NA	Water	Field Sampling	
500-155886-12	R32S	Total/NA	Water	Field Sampling	
500-155886-13	R08S	Total/NA	Water	Field Sampling	
500-155886-14	T02S	Total/NA	Water	Field Sampling	
500-155886-15	DUP	Total/NA	Water	Field Sampling	
500-155886-16	G30S	Total/NA	Water	Field Sampling	
500-155886-17	T09S	Total/NA	Water	Field Sampling	
500-155886-18	T06S	Total/NA	Water	Field Sampling	
500-155886-19	T05S	Total/NA	Water	Field Sampling	
500-155886-20	T04S	Total/NA	Water	Field Sampling	

QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 4Q18 GW

TestAmerica Job ID: 500-155886-1

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 500-463829/1-A
Matrix: Water
Analysis Batch: 464008

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 463829

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.010		0.010		mg/L		12/10/18 07:56	12/10/18 21:06	1

Lab Sample ID: LCS 500-463829/2-A
Matrix: Water
Analysis Batch: 464008

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 463829

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lithium	0.500	0.525		mg/L		105	80 - 120

Lab Sample ID: MB 500-464173/1-A
Matrix: Water
Analysis Batch: 464449

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 464173

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.010		0.010		mg/L		12/11/18 16:45	12/12/18 20:52	1

Lab Sample ID: LCS 500-464173/2-A
Matrix: Water
Analysis Batch: 464449

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 464173

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lithium	0.500	0.481		mg/L		96	80 - 120

Lab Sample ID: MB 500-464229/1-A
Matrix: Water
Analysis Batch: 464449

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 464229

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.010		0.010		mg/L		12/12/18 07:20	12/12/18 21:21	1

Lab Sample ID: LCS 500-464229/2-A
Matrix: Water
Analysis Batch: 464449

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 464229

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lithium	0.500	0.491		mg/L		98	80 - 120

Lab Sample ID: MB 500-464470/1-A
Matrix: Water
Analysis Batch: 464675

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 464470

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.010		0.010		mg/L		12/13/18 08:43	12/13/18 17:39	1

Lab Sample ID: LCS 500-464470/2-A
Matrix: Water
Analysis Batch: 464675

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 464470

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

TestAmerica Chicago

QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 4Q18 GW

TestAmerica Job ID: 500-155886-1

Lab Sample ID: MB 500-464864/1-A
Matrix: Water
Analysis Batch: 465058

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 464864

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.010		0.010		mg/L		12/14/18 16:39	12/17/18 11:52	1

Lab Sample ID: LCS 500-464864/2-A
Matrix: Water
Analysis Batch: 465058

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 464864

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lithium	0.500	0.517		mg/L		103	80 - 120

Lab Sample ID: 500-155886-11 MS
Matrix: Water
Analysis Batch: 465058

Client Sample ID: T01S
Prep Type: Total Recoverable
Prep Batch: 464864

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lithium	0.018		0.500	0.518		mg/L		100	75 - 125

Lab Sample ID: 500-155886-11 MSD
Matrix: Water
Analysis Batch: 465058

Client Sample ID: T01S
Prep Type: Total Recoverable
Prep Batch: 464864

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lithium	0.018		0.500	0.519		mg/L		100	75 - 125	0	20

Lab Sample ID: 500-155886-11 DU
Matrix: Water
Analysis Batch: 465058

Client Sample ID: T01S
Prep Type: Total Recoverable
Prep Batch: 464864

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Lithium	0.018		0.0187		mg/L		2	20

Lab Sample ID: MB 500-465177/1-A
Matrix: Water
Analysis Batch: 465374

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 465177

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.010		0.010		mg/L		12/18/18 07:45	12/18/18 20:49	1

Lab Sample ID: LCS 500-465177/2-A
Matrix: Water
Analysis Batch: 465374

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 465177

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lithium	0.500	0.499		mg/L		100	80 - 120

Lab Sample ID: MB 500-465384/1-A
Matrix: Water
Analysis Batch: 465562

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 465384

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.010		0.010		mg/L		12/19/18 07:35	12/19/18 13:31	1

TestAmerica Chicago

QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 4Q18 GW

TestAmerica Job ID: 500-155886-1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: LCS 500-465384/2-A
Matrix: Water
Analysis Batch: 465562

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 465384

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Lithium	0.500	0.521		mg/L		104	80 - 120

Lab Sample ID: MB 500-465795/1-A
Matrix: Water
Analysis Batch: 466123

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 465795

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.010		0.010		mg/L		12/20/18 16:20	12/21/18 20:30	1

Lab Sample ID: LCS 500-465795/2-A
Matrix: Water
Analysis Batch: 466123

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 465795

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Lithium	0.500	0.476		mg/L		95	80 - 120

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 500-463829/1-A
Matrix: Water
Analysis Batch: 464030

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 463829

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.0010		0.0010		mg/L		12/10/18 07:56	12/11/18 00:17	1
Barium	<0.0025		0.0025		mg/L		12/10/18 07:56	12/11/18 00:17	1
Boron	<0.050		0.050		mg/L		12/10/18 07:56	12/11/18 00:17	1
Calcium	<0.20		0.20		mg/L		12/10/18 07:56	12/11/18 00:17	1
Cobalt	<0.0010		0.0010		mg/L		12/10/18 07:56	12/11/18 00:17	1
Molybdenum	<0.0050		0.0050		mg/L		12/10/18 07:56	12/11/18 00:17	1
Selenium	<0.0025		0.0025		mg/L		12/10/18 07:56	12/11/18 00:17	1

Lab Sample ID: MB 500-463829/1-A
Matrix: Water
Analysis Batch: 464134

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 463829

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	<0.00050		0.00050		mg/L		12/10/18 07:56	12/11/18 12:50	1

Lab Sample ID: LCS 500-463829/2-A
Matrix: Water
Analysis Batch: 464030

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 463829

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Arsenic	0.100	0.0934		mg/L		93	80 - 120
Barium	2.00	2.02		mg/L		101	80 - 120
Boron	1.00	0.919		mg/L		92	80 - 120
Calcium	10.0	9.25		mg/L		92	80 - 120
Cobalt	0.500	0.493		mg/L		99	80 - 120
Molybdenum	1.00	0.943		mg/L		94	80 - 120

TestAmerica Chicago

QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 4Q18 GW

TestAmerica Job ID: 500-155886-1

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

Lab Sample ID: LCS 500-463829/2-A
Matrix: Water
Analysis Batch: 464030

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 463829

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Selenium	0.100	0.0946		mg/L		95	80 - 120

Lab Sample ID: LCS 500-463829/2-A
Matrix: Water
Analysis Batch: 464134

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 463829

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	0.100	0.108		mg/L		108	80 - 120

Lab Sample ID: MB 500-464173/1-A
Matrix: Water
Analysis Batch: 464479

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 464173

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.0010		0.0010		mg/L		12/11/18 16:45	12/12/18 15:39	1
Barium	<0.0025		0.0025		mg/L		12/11/18 16:45	12/12/18 15:39	1
Boron	<0.050		0.050		mg/L		12/11/18 16:45	12/12/18 15:39	1
Calcium	<0.20		0.20		mg/L		12/11/18 16:45	12/12/18 15:39	1
Cobalt	<0.0010		0.0010		mg/L		12/11/18 16:45	12/12/18 15:39	1
Lead	<0.00050		0.00050		mg/L		12/11/18 16:45	12/12/18 15:39	1
Molybdenum	<0.0050		0.0050		mg/L		12/11/18 16:45	12/12/18 15:39	1
Selenium	<0.0025		0.0025		mg/L		12/11/18 16:45	12/12/18 15:39	1

Lab Sample ID: LCS 500-464173/2-A
Matrix: Water
Analysis Batch: 464479

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 464173

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.100	0.0935		mg/L		94	80 - 120
Barium	2.00	2.00		mg/L		100	80 - 120
Boron	1.00	0.902		mg/L		90	80 - 120
Calcium	10.0	8.73		mg/L		87	80 - 120
Cobalt	0.500	0.498		mg/L		100	80 - 120
Lead	0.100	0.103		mg/L		103	80 - 120
Molybdenum	1.00	0.954		mg/L		95	80 - 120
Selenium	0.100	0.0919		mg/L		92	80 - 120

Lab Sample ID: MB 500-464229/1-A
Matrix: Water
Analysis Batch: 464479

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 464229

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.0010		0.0010		mg/L		12/12/18 07:20	12/12/18 17:57	1
Barium	<0.0025		0.0025		mg/L		12/12/18 07:20	12/12/18 17:57	1
Boron	<0.050		0.050		mg/L		12/12/18 07:20	12/12/18 17:57	1
Calcium	<0.20		0.20		mg/L		12/12/18 07:20	12/12/18 17:57	1
Cobalt	<0.0010		0.0010		mg/L		12/12/18 07:20	12/12/18 17:57	1
Lead	<0.00050		0.00050		mg/L		12/12/18 07:20	12/12/18 17:57	1
Molybdenum	<0.0050		0.0050		mg/L		12/12/18 07:20	12/12/18 17:57	1

TestAmerica Chicago

QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 4Q18 GW

TestAmerica Job ID: 500-155886-1

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

Lab Sample ID: MB 500-464229/1-A

Matrix: Water

Analysis Batch: 464479

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 464229

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	<0.0025		0.0025		mg/L		12/12/18 07:20	12/12/18 17:57	1

Lab Sample ID: LCS 500-464229/2-A

Matrix: Water

Analysis Batch: 464479

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 464229

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.100	0.0963		mg/L		96	80 - 120
Barium	2.00	2.15		mg/L		108	80 - 120
Boron	1.00	0.971		mg/L		97	80 - 120
Calcium	10.0	9.28		mg/L		93	80 - 120
Cobalt	0.500	0.539		mg/L		108	80 - 120
Lead	0.100	0.110		mg/L		110	80 - 120
Molybdenum	1.00	0.991		mg/L		99	80 - 120
Selenium	0.100	0.0944		mg/L		94	80 - 120

Lab Sample ID: MB 500-464470/1-A

Matrix: Water

Analysis Batch: 464726

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 464470

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.0010		0.0010		mg/L		12/13/18 08:43	12/13/18 20:05	1
Barium	<0.0025		0.0025		mg/L		12/13/18 08:43	12/13/18 20:05	1
Calcium	<0.20		0.20		mg/L		12/13/18 08:43	12/13/18 20:05	1
Cobalt	<0.0010		0.0010		mg/L		12/13/18 08:43	12/13/18 20:05	1
Molybdenum	<0.0050		0.0050		mg/L		12/13/18 08:43	12/13/18 20:05	1
Selenium	<0.0025		0.0025		mg/L		12/13/18 08:43	12/13/18 20:05	1

Lab Sample ID: MB 500-464470/1-A

Matrix: Water

Analysis Batch: 464840

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 464470

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.050		0.050		mg/L		12/13/18 08:43	12/14/18 12:25	1
Lead	<0.00050		0.00050		mg/L		12/13/18 08:43	12/14/18 12:25	1

Lab Sample ID: LCS 500-464470/2-A

Matrix: Water

Analysis Batch: 464726

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 464470

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.100	0.0942		mg/L		94	80 - 120
Barium	2.00	2.06		mg/L		103	80 - 120
Calcium	10.0	8.83		mg/L		88	80 - 120
Cobalt	0.500	0.500		mg/L		100	80 - 120
Molybdenum	1.00	0.965		mg/L		96	80 - 120
Selenium	0.100	0.0944		mg/L		94	80 - 120

TestAmerica Chicago

QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 4Q18 GW

TestAmerica Job ID: 500-155886-1

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

Lab Sample ID: LCS 500-464470/2-A

Matrix: Water

Analysis Batch: 464840

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 464470

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1.00	0.997		mg/L		100	80 - 120
Lead	0.100	0.105		mg/L		105	80 - 120

Lab Sample ID: MB 500-464864/1-A

Matrix: Water

Analysis Batch: 465210

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 464864

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.0010		0.0010		mg/L		12/14/18 16:39	12/17/18 20:10	1
Barium	<0.0025		0.0025		mg/L		12/14/18 16:39	12/17/18 20:10	1
Boron	<0.050		0.050		mg/L		12/14/18 16:39	12/17/18 20:10	1
Calcium	<0.20		0.20		mg/L		12/14/18 16:39	12/17/18 20:10	1
Cobalt	<0.0010		0.0010		mg/L		12/14/18 16:39	12/17/18 20:10	1
Lead	<0.00050		0.00050		mg/L		12/14/18 16:39	12/17/18 20:10	1
Molybdenum	<0.0050		0.0050		mg/L		12/14/18 16:39	12/17/18 20:10	1
Selenium	<0.0025		0.0025		mg/L		12/14/18 16:39	12/17/18 20:10	1

Lab Sample ID: LCS 500-464864/2-A

Matrix: Water

Analysis Batch: 465210

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 464864

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.100	0.0962		mg/L		96	80 - 120
Barium	2.00	2.05		mg/L		103	80 - 120
Boron	1.00	0.894		mg/L		89	80 - 120
Calcium	10.0	9.68		mg/L		97	80 - 120
Cobalt	0.500	0.491		mg/L		98	80 - 120
Lead	0.100	0.105		mg/L		105	80 - 120
Molybdenum	1.00	0.956		mg/L		96	80 - 120
Selenium	0.100	0.0916		mg/L		92	80 - 120

Lab Sample ID: 500-155886-11 MS

Matrix: Water

Analysis Batch: 465210

Client Sample ID: T01S

Prep Type: Total Recoverable

Prep Batch: 464864

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.016		0.100	0.120		mg/L		103	75 - 125
Barium	0.084		2.00	2.08		mg/L		100	75 - 125
Boron	3.3	F1	1.00	3.94	F1	mg/L		63	75 - 125
Calcium	56		10.0	62.6	4	mg/L		64	75 - 125
Cobalt	0.0037		0.500	0.407		mg/L		81	75 - 125
Lead	0.0053		0.100	0.104		mg/L		99	75 - 125
Molybdenum	0.30		1.00	1.27		mg/L		98	75 - 125
Selenium	<0.0025		0.100	0.0930		mg/L		92	75 - 125

TestAmerica Chicago

QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 4Q18 GW

TestAmerica Job ID: 500-155886-1

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

Lab Sample ID: 500-155886-11 MSD

Matrix: Water

Analysis Batch: 465210

Client Sample ID: T01S

Prep Type: Total Recoverable

Prep Batch: 464864

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Arsenic	0.016		0.100	0.116		mg/L		100	75 - 125	3	20
Barium	0.084		2.00	2.02		mg/L		97	75 - 125	3	20
Boron	3.3	F1	1.00	3.88	F1	mg/L		57	75 - 125	2	20
Calcium	56		10.0	61.5	4	mg/L		53	75 - 125	2	20
Cobalt	0.0037		0.500	0.401		mg/L		79	75 - 125	2	20
Lead	0.0053		0.100	0.101		mg/L		96	75 - 125	3	20
Molybdenum	0.30		1.00	1.24		mg/L		94	75 - 125	3	20
Selenium	<0.0025		0.100	0.0908		mg/L		90	75 - 125	2	20

Lab Sample ID: 500-155886-11 DU

Matrix: Water

Analysis Batch: 465210

Client Sample ID: T01S

Prep Type: Total Recoverable

Prep Batch: 464864

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Arsenic	0.016		0.0161		mg/L		1	20
Barium	0.084		0.0829		mg/L		2	20
Boron	3.3	F1	3.44		mg/L		4	20
Calcium	56		57.6		mg/L		2	20
Cobalt	0.0037		0.00378		mg/L		1	20
Lead	0.0053		0.00523		mg/L		2	20
Molybdenum	0.30		0.298		mg/L		0.2	20
Selenium	<0.0025		<0.0025		mg/L		NC	20

Lab Sample ID: MB 500-465177/1-A

Matrix: Water

Analysis Batch: 465410

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 465177

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.0010		0.0010		mg/L		12/18/18 07:45	12/18/18 20:20	1
Barium	<0.0025		0.0025		mg/L		12/18/18 07:45	12/18/18 20:20	1
Calcium	<0.20		0.20		mg/L		12/18/18 07:45	12/18/18 20:20	1
Cobalt	<0.0010		0.0010		mg/L		12/18/18 07:45	12/18/18 20:20	1
Lead	<0.00050		0.00050		mg/L		12/18/18 07:45	12/18/18 20:20	1
Molybdenum	<0.0050		0.0050		mg/L		12/18/18 07:45	12/18/18 20:20	1
Selenium	<0.0025		0.0025		mg/L		12/18/18 07:45	12/18/18 20:20	1

Lab Sample ID: MB 500-465177/1-A

Matrix: Water

Analysis Batch: 465552

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 465177

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.050		0.050		mg/L		12/18/18 07:45	12/19/18 12:15	1

Lab Sample ID: LCS 500-465177/2-A

Matrix: Water

Analysis Batch: 465410

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 465177

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Arsenic	0.100	0.0944		mg/L		94	80 - 120

TestAmerica Chicago

QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 4Q18 GW

TestAmerica Job ID: 500-155886-1

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

Lab Sample ID: LCS 500-465177/2-A

Matrix: Water

Analysis Batch: 465410

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 465177

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Barium	2.00	2.01		mg/L		101	80 - 120
Calcium	10.0	9.51		mg/L		95	80 - 120
Cobalt	0.500	0.501		mg/L		100	80 - 120
Lead	0.100	0.107		mg/L		107	80 - 120
Molybdenum	1.00	0.959		mg/L		96	80 - 120
Selenium	0.100	0.0954		mg/L		95	80 - 120

Lab Sample ID: LCS 500-465177/2-A

Matrix: Water

Analysis Batch: 465552

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 465177

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1.00	0.950		mg/L		95	80 - 120

Lab Sample ID: MB 500-465384/1-A

Matrix: Water

Analysis Batch: 465688

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 465384

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.0010		0.0010		mg/L		12/19/18 07:35	12/19/18 16:44	1
Barium	<0.0025		0.0025		mg/L		12/19/18 07:35	12/19/18 16:44	1
Boron	<0.050		0.050		mg/L		12/19/18 07:35	12/19/18 16:44	1
Calcium	<0.20		0.20		mg/L		12/19/18 07:35	12/19/18 16:44	1
Cobalt	<0.0010		0.0010		mg/L		12/19/18 07:35	12/19/18 16:44	1
Lead	<0.00050		0.00050		mg/L		12/19/18 07:35	12/19/18 16:44	1
Molybdenum	<0.0050		0.0050		mg/L		12/19/18 07:35	12/19/18 16:44	1
Selenium	<0.0025		0.0025		mg/L		12/19/18 07:35	12/19/18 16:44	1

Lab Sample ID: LCS 500-465384/2-A

Matrix: Water

Analysis Batch: 465688

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 465384

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.100	0.0916		mg/L		92	80 - 120
Barium	2.00	1.92		mg/L		96	80 - 120
Boron	1.00	0.941		mg/L		94	80 - 120
Calcium	10.0	9.00		mg/L		90	80 - 120
Cobalt	0.500	0.480		mg/L		96	80 - 120
Lead	0.100	0.102		mg/L		102	80 - 120
Molybdenum	1.00	0.933		mg/L		93	80 - 120
Selenium	0.100	0.0908		mg/L		91	80 - 120

Lab Sample ID: MB 500-465795/1-A

Matrix: Water

Analysis Batch: 466297

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 465795

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.0010		0.0010		mg/L		12/20/18 16:20	12/24/18 19:13	1
Barium	<0.0025		0.0025		mg/L		12/20/18 16:20	12/24/18 19:13	1

TestAmerica Chicago

QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 4Q18 GW

TestAmerica Job ID: 500-155886-1

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

Lab Sample ID: MB 500-465795/1-A

Matrix: Water

Analysis Batch: 466297

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 465795

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.050		0.050		mg/L		12/20/18 16:20	12/24/18 19:13	1
Calcium	<0.20		0.20		mg/L		12/20/18 16:20	12/24/18 19:13	1
Cobalt	<0.0010		0.0010		mg/L		12/20/18 16:20	12/24/18 19:13	1
Lead	<0.00050		0.00050		mg/L		12/20/18 16:20	12/24/18 19:13	1
Molybdenum	<0.0050		0.0050		mg/L		12/20/18 16:20	12/24/18 19:13	1
Selenium	<0.0025		0.0025		mg/L		12/20/18 16:20	12/24/18 19:13	1

Lab Sample ID: LCS 500-465795/2-A

Matrix: Water

Analysis Batch: 466297

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 465795

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.100	0.0955		mg/L		95	80 - 120
Barium	2.00	2.07		mg/L		103	80 - 120
Boron	1.00	1.03		mg/L		103	80 - 120
Calcium	10.0	8.98		mg/L		90	80 - 120
Cobalt	0.500	0.531		mg/L		106	80 - 120
Lead	0.100	0.109		mg/L		109	80 - 120
Molybdenum	1.00	0.953		mg/L		95	80 - 120
Selenium	0.100	0.0942		mg/L		94	80 - 120

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

Lab Sample ID: MB 500-463760/1

Matrix: Water

Analysis Batch: 463760

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10		mg/L			12/08/18 13:02	1

Lab Sample ID: LCS 500-463760/2

Matrix: Water

Analysis Batch: 463760

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	284		mg/L		114	80 - 120

Lab Sample ID: MB 500-464216/1

Matrix: Water

Analysis Batch: 464216

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10		mg/L			12/12/18 02:08	1

TestAmerica Chicago

QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 4Q18 GW

TestAmerica Job ID: 500-155886-1

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

Lab Sample ID: LCS 500-464216/2

Matrix: Water

Analysis Batch: 464216

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	244		mg/L		98	80 - 120

Lab Sample ID: MB 500-464440/1

Matrix: Water

Analysis Batch: 464440

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10		mg/L			12/13/18 06:19	1

Lab Sample ID: LCS 500-464440/2

Matrix: Water

Analysis Batch: 464440

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	266		mg/L		106	80 - 120

Lab Sample ID: 500-155886-10 MS

Matrix: Water

Analysis Batch: 464440

Client Sample ID: T08S

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	950		250	1230		mg/L		113	75 - 125

Lab Sample ID: 500-155886-10 DU

Matrix: Water

Analysis Batch: 464440

Client Sample ID: T08S

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	950		956		mg/L		1	5

Lab Sample ID: MB 500-464670/1

Matrix: Water

Analysis Batch: 464670

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10		mg/L			12/14/18 07:02	1

Lab Sample ID: LCS 500-464670/2

Matrix: Water

Analysis Batch: 464670

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	272		mg/L		109	80 - 120

Lab Sample ID: 500-155886-11 MS

Matrix: Water

Analysis Batch: 464670

Client Sample ID: T01S

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	900		250	1170		mg/L		105	75 - 125

TestAmerica Chicago

QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 4Q18 GW

TestAmerica Job ID: 500-155886-1

Lab Sample ID: 500-155886-11 DU
Matrix: Water
Analysis Batch: 464670

Client Sample ID: T01S
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Dissolved Solids	900		922		mg/L		2	5

Lab Sample ID: MB 500-464947/1
Matrix: Water
Analysis Batch: 464947

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10		mg/L			12/17/18 04:57	1

Lab Sample ID: LCS 500-464947/2
Matrix: Water
Analysis Batch: 464947

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	268		mg/L		107	80 - 120

Lab Sample ID: 500-155886-14 DU
Matrix: Water
Analysis Batch: 464947

Client Sample ID: T02S
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Dissolved Solids	870		860		mg/L		1	5

Lab Sample ID: MB 500-465381/1
Matrix: Water
Analysis Batch: 465381

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10		mg/L			12/19/18 06:00	1

Lab Sample ID: LCS 500-465381/2
Matrix: Water
Analysis Batch: 465381

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	280		mg/L		112	80 - 120

Lab Sample ID: 500-155886-17 DU
Matrix: Water
Analysis Batch: 465381

Client Sample ID: T09S
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Dissolved Solids	1000		994		mg/L		3	5

Lab Sample ID: MB 500-465648/1
Matrix: Water
Analysis Batch: 465648

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10		mg/L			12/20/18 07:15	1

TestAmerica Chicago

QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 4Q18 GW

TestAmerica Job ID: 500-155886-1

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

Lab Sample ID: LCS 500-465648/2

Matrix: Water

Analysis Batch: 465648

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	264		mg/L		106	80 - 120

Lab Sample ID: 500-155886-19 DU

Matrix: Water

Analysis Batch: 465648

Client Sample ID: T05S

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	1600		1560		mg/L		1	5

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 500-466663/19

Matrix: Water

Analysis Batch: 466663

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<2.0		2.0		mg/L			12/27/18 15:27	1

Lab Sample ID: LCS 500-466663/20

Matrix: Water

Analysis Batch: 466663

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	51.2		mg/L		102	85 - 115

Lab Sample ID: 500-155886-2 MS

Matrix: Water

Analysis Batch: 466663

Client Sample ID: G20S

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	12		50.0	58.6		mg/L		92	75 - 125

Lab Sample ID: 500-155886-2 MSD

Matrix: Water

Analysis Batch: 466663

Client Sample ID: G20S

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	12		50.0	58.7		mg/L		92	75 - 125	0	20

Lab Sample ID: 500-155886-4 MS

Matrix: Water

Analysis Batch: 466663

Client Sample ID: G33S

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	6.3		50.0	45.0		mg/L		77	75 - 125

TestAmerica Chicago

QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 4Q18 GW

TestAmerica Job ID: 500-155886-1

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

Lab Sample ID: 500-155886-4 MSD

Matrix: Water

Analysis Batch: 466663

Client Sample ID: G33S

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	6.3		50.0	45.9		mg/L		79	75 - 125	2	20

Lab Sample ID: MB 500-466833/12

Matrix: Water

Analysis Batch: 466833

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<2.0		2.0		mg/L			12/28/18 13:05	1

Lab Sample ID: LCS 500-466833/13

Matrix: Water

Analysis Batch: 466833

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	50.0	52.5		mg/L		105	85 - 115

Lab Sample ID: MB 500-466873/24

Matrix: Water

Analysis Batch: 466873

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<2.0		2.0		mg/L			12/28/18 15:03	1

Lab Sample ID: LCS 500-466873/25

Matrix: Water

Analysis Batch: 466873

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	51.6		mg/L		103	85 - 115

Lab Sample ID: 500-155886-11 MS

Matrix: Water

Analysis Batch: 466873

Client Sample ID: T01S

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	110		50.0	152		mg/L		91	75 - 125

Lab Sample ID: 500-155886-11 MSD

Matrix: Water

Analysis Batch: 466873

Client Sample ID: T01S

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	110		50.0	160		mg/L		107	75 - 125	5	20

Lab Sample ID: 500-155886-12 MS

Matrix: Water

Analysis Batch: 466873

Client Sample ID: R32S

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	72	F1	50.0	104	F1	mg/L		64	75 - 125

TestAmerica Chicago

QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 4Q18 GW

TestAmerica Job ID: 500-155886-1

Lab Sample ID: 500-155886-12 MSD

Matrix: Water

Analysis Batch: 466873

Client Sample ID: R32S

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	72	F1	50.0	102	F1	mg/L		60	75 - 125	2	20

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 500-465004/3

Matrix: Water

Analysis Batch: 465004

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.10		0.10		mg/L			12/15/18 16:52	1

Lab Sample ID: MB 500-465004/31

Matrix: Water

Analysis Batch: 465004

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.10		0.10		mg/L			12/15/18 18:32	1

Lab Sample ID: LCS 500-465004/32

Matrix: Water

Analysis Batch: 465004

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	10.0	10.8		mg/L		108	80 - 120

Lab Sample ID: LCS 500-465004/4

Matrix: Water

Analysis Batch: 465004

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	10.0	10.5		mg/L		105	80 - 120

Lab Sample ID: 500-155886-16 MS

Matrix: Water

Analysis Batch: 465004

Client Sample ID: G30S

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	1.2		5.00	6.51		mg/L		107	75 - 125

Lab Sample ID: 500-155886-16 MSD

Matrix: Water

Analysis Batch: 465004

Client Sample ID: G30S

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	1.2		5.00	6.54		mg/L		107	75 - 125	0	20

TestAmerica Chicago

QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 4Q18 GW

TestAmerica Job ID: 500-155886-1

Method: SM 4500 F C - Fluoride (Continued)

Lab Sample ID: MB 500-465801/3

Matrix: Water

Analysis Batch: 465801

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.10		0.10		mg/L			12/20/18 12:19	1

Lab Sample ID: LCS 500-465801/4

Matrix: Water

Analysis Batch: 465801

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

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 500-465757/3

Matrix: Water

Analysis Batch: 465757

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	<5.0		5.0		mg/L			12/20/18 14:14	1

Lab Sample ID: LCS 500-465757/4

Matrix: Water

Analysis Batch: 465757

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	20.0	20.1		mg/L		101	80 - 120

Lab Sample ID: 500-155886-6 MS

Matrix: Water

Analysis Batch: 465757

Client Sample ID: T03S

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	160		400	514		mg/L		88	75 - 125

Lab Sample ID: 500-155886-6 MSD

Matrix: Water

Analysis Batch: 465757

Client Sample ID: T03S

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	160		400	579		mg/L		104	75 - 125	12	20

Lab Sample ID: MB 500-465929/3

Matrix: Water

Analysis Batch: 465929

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	<5.0		5.0		mg/L			12/21/18 11:22	1

TestAmerica Chicago

QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 4Q18 GW

TestAmerica Job ID: 500-155886-1

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

Lab Sample ID: LCS 500-465929/4

Matrix: Water

Analysis Batch: 465929

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	20.0	19.3		mg/L		97	80 - 120

Lab Sample ID: MB 500-467017/3

Matrix: Water

Analysis Batch: 467017

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	<5.0		5.0		mg/L			12/31/18 00:18	1

Lab Sample ID: LCS 500-467017/4

Matrix: Water

Analysis Batch: 467017

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	20.0	20.9		mg/L		104	80 - 120

TestAmerica

THE LEADER IN ENVIRONMENTAL

2417 Bond Street, University Park, IL 604
Phone: 708.534.5200 Fax: 708.534.5



500-155886 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 #: 500-155886

Chain of Custody Number: _____

Page _____ of _____

Temperature °C of Cooler: 1.9 → 4.1

48 qt.

Client		Client Project #		Preservative		Parameter		Sample ID		Sampling		# of Containers		Matrix		Comments	
Lab ID	MS/MSD	Sample ID	Date	Time	# of Containers	Matrix	Parameter	Sample ID	Date	Time	# of Containers	Matrix	Parameter	Sample ID	Date	Time	Comments
3		G315	12/10/18	1030	5	U	Radon 226/228										
4		G335	12/10/18	1232	5	W	Cl, F, SO4, TDS										
5		G445	12/10/18	1421	5	W	Total Metals B, Ca, Ar, Ba, Co, Pb, Li, Mo, Se										

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	Company	Date	Time	Received By	Company	Date	Time
<u>[Signature]</u>	<u>TAL</u>	<u>12/10/18</u>	<u>1540</u>	<u>[Signature]</u>	<u>TAL</u>	<u>12/10/18</u>	<u>1540</u>
Relinquished By	Company	Date	Time	Received By	Company	Date	Time
Relinquished By	Company	Date	Time	Received By	Company	Date	Time

Lab Courier	<u>TAL</u>
Shipped	
Hand Delivered	

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

Client Comments

Lab Comments:

TestAmerica

THE LEADER IN ENVIRONMENTAL

2417 Bond Street, University Park, IL 6
Phone: 708.534.5200 Fax: 708.53



500-155886 COC

Report To (optional)

Contact: _____

Company: _____

Address: _____

Address: _____

Phone: _____

Fax: _____

E-Mail: _____

(optional)

Bill To

Contact: _____

Company: _____

Address: _____

Address: _____

Phone: _____

Fax: _____

PO#/Reference# _____

Chain of Custody Record

Lab Job #: 500-155886

Chain of Custody Number: _____

Page _____ of _____

Temperature °C of Cooler: 22.23

Client <u>Midwest Generation EAF LLC</u>		Client Project # _____		Preservative <u>3</u>		<u>3</u>		<u>8</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>Solet #9 CCR - 4018 G-5</u>				Parameter <u>Radium 226/228</u>																							
Project Location/State <u>Solet, IL</u>				Lab Project # _____																							
Sample <u>Noe L, Rob P.</u>				Lab PM <u>Eric Long</u>																							
Lab ID	MS/MSD	Sample ID	Date	Time	# of Containers	Matrix																	Comments				
<u>6</u>		<u>T03 S</u>	<u>12/11/18</u>	<u>0938</u>	<u>5</u>	<u>W</u>	<u>1</u>	<u>1</u>	<u>1</u>																		
<u>7</u>		<u>G48 S</u>	<u>12/11/18</u>	<u>1102</u>	<u>5</u>	<u>W</u>	<u>1</u>	<u>1</u>	<u>1</u>																		
<u>8</u>		<u>G47 S</u>	<u>12/11/18</u>	<u>1311</u>	<u>5</u>	<u>W</u>	<u>1</u>	<u>1</u>	<u>1</u>																		
<u>9</u>		<u>G46 S</u>	<u>12/11/18</u>	<u>1425</u>	<u>5</u>	<u>W</u>	<u>1</u>	<u>1</u>	<u>1</u>																		

Turnaround Time Required (Business Days)

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

Requested Due Date _____

Sample Disposal

☐ Return to Client

☐ Disposal by Lab

☐ Archive for _____ Months

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

Relinquished By <u>[Signature]</u>	Company <u>TA</u>	Date <u>12/11/18</u>	Time <u>1540</u>	Received By <u>[Signature]</u>	Company <u>TA-CR</u>	Date <u>12/11/18</u>	Time <u>1540</u>
Relinquished By	Company	Date	Time	Received By	Company	Date	Time
Relinquished By	Company	Date	Time	Received By	Company	Date	Time

Lab Courier TA

Shipped _____

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

2417 Bond Street, University Park, IL 6
Phone: 708.534.5200 Fax: 708.534.5201



500-155886 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 #: 500-155886

Chain of Custody Number: _____

Page _____ of _____

Temperature °C of Cooler: 1.9 → 4.1

Client		Client Project #		Preservative		Parameter		Sample ID		Sampling		# of Containers		Matrix		Comments	
Midwest Generation EME LLC		Solut #9 CCR - 4Q18 GV		3		3		A									
Project Name		Project Location/State		Lab Project #		Lab PM											
Solut, IL						Eric Lang											
Sample																	
Noe L., Rob P.																	
Lab ID	MS/MSD	Sample ID		Date	Time	# of Containers	Matrix										
11		TOIS		12/13/18	0925	5	W	Radium 226/228		Total Metals		B, Ca, As, Ba, Co, Pb, Li, Mo, Se		Cl, F, SO4, TDS			
12		R325		12/13/18	1339	5	W	-		-		-					
13		R085		12/13/18	1430	5	W	-		-		-					

- 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

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	Company	Date	Time	Received By	Company	Date	Time
<u>[Signature]</u>	<u>TA2</u>	<u>12/13/18</u>	<u>1545</u>	<u>[Signature]</u>	<u>TA-ORT</u>	<u>12/13/18</u>	<u>1545</u>
Relinquished By	Company	Date	Time	Received By	Company	Date	Time
Relinquished By	Company	Date	Time	Received By	Company	Date	Time

Lab Courier: TA

Shipped: _____

Hand Delivered: _____

Matrix Key

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

Client Comments

Lab Comments:

TestAmerica

THE LEADER IN ENVIRONMENTAL

2417 Bond Street, University Park, IL 6
Phone: 708.534.5200 Fax: 708.53



500-155886 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 #: 500-155886
Chain of Custody Number: _____
Page _____ of _____
Temperature °C of Cooler: 22.6

Client <u>Midwest Generation</u>		Client Project # <u>EME LLC</u>		Preservative <u>3</u>		<u>3</u>		<u>2</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>Solet #9 CCR - 4018 G5</u>				Parameter <u>Radium 226/228</u>				<u>Total Metals</u>															
Project Location/State <u>Solet, IL</u>				Lab Project #																			
Sampler <u>Noc L, Rob P</u>				Lab PM <u>Eric Lang</u>																			
Lab ID	MS/MSD	Sample ID	Date	Time	# of Containers	Matrix														Comments			
<u>14</u>		<u>T025</u>	<u>12/14/18</u>	<u>0944</u>	<u>5</u>	<u>W</u>	<u>—</u>	<u>—</u>	<u>—</u>														
<u>15</u>		<u>DUP (of T025)</u>	<u>12/14/18</u>	<u>0944</u>	<u>5</u>	<u>W</u>	<u>—</u>	<u>—</u>	<u>—</u>														
<u>16</u>		<u>G305</u>	<u>12/14/18</u>	<u>1403</u>	<u>5</u>	<u>W</u>	<u>—</u>	<u>—</u>	<u>—</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>SV</u>	Company <u>TOL</u>	Date <u>12/14/18</u>	Time <u>1540</u>	Received By <u>Shawn Scott</u>	Company <u>TOL</u>	Date <u>12/14/18</u>	Time <u>1540</u>
Relinquished By	Company	Date	Time	Received By	Company	Date	Time
Relinquished By	Company	Date	Time	Received By	Company	Date	Time

Lab Courier 4A
Shipped _____
Hand Delivered _____

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

Client Comments

Lab Comments:

Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-155886-1

Login Number: 155886

List Source: TestAmerica Chicago

List Number: 1

Creator: Sanchez, Ariel M

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.2,4.1,2.2,2.3, 3.0,4.1, 2.5,2.3
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	

Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 4Q18 GW

TestAmerica Job ID: 500-155886-1

Client Sample ID: G45S

Date Collected: 12/07/18 10:06

Date Received: 12/07/18 16:00

Lab Sample ID: 500-155886-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			463829	12/10/18 07:56	SAH	TAL CHI
Total Recoverable	Analysis	6010C		1	464008	12/10/18 21:14	EEN	TAL CHI
Total Recoverable	Prep	3005A			463829	12/10/18 07:56	SAH	TAL CHI
Total Recoverable	Analysis	6020A		1	464134	12/11/18 13:12	FXG	TAL CHI
Total Recoverable	Prep	3005A			463829	12/10/18 07:56	SAH	TAL CHI
Total Recoverable	Analysis	6020A		1	464030	12/11/18 01:46	PFK	TAL CHI
Total/NA	Analysis	SM 2540C		1	463760	12/08/18 13:48	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		5	466833	12/28/18 13:19	EAT	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	465004	12/15/18 17:24	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		10	465757		CLB	TAL CHI
					(Start)	12/20/18 14:19		
					(End)	12/20/18 14:20		
Total/NA	Analysis	Field Sampling		1	467138	12/07/18 10:06	JVB	TAL CHI

Client Sample ID: G20S

Date Collected: 12/07/18 11:25

Date Received: 12/07/18 16:00

Lab Sample ID: 500-155886-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			463829	12/10/18 07:56	SAH	TAL CHI
Total Recoverable	Analysis	6010C		1	464008	12/10/18 21:18	EEN	TAL CHI
Total Recoverable	Prep	3005A			463829	12/10/18 07:56	SAH	TAL CHI
Total Recoverable	Analysis	6020A		1	464134	12/11/18 13:13	FXG	TAL CHI
Total Recoverable	Prep	3005A			463829	12/10/18 07:56	SAH	TAL CHI
Total Recoverable	Analysis	6020A		1	464030	12/11/18 01:50	PFK	TAL CHI
Total/NA	Analysis	SM 2540C		1	463760	12/08/18 13:51	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		1	466663	12/27/18 15:31	EAT	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	465004	12/15/18 17:36	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		4	465757		CLB	TAL CHI
					(Start)	12/20/18 14:20		
					(End)	12/20/18 14:21		
Total/NA	Analysis	Field Sampling		1	467138	12/07/18 11:25	JVB	TAL CHI

Client Sample ID: G31S

Date Collected: 12/10/18 10:30

Date Received: 12/10/18 15:40

Lab Sample ID: 500-155886-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			464173	12/11/18 16:45	BDE	TAL CHI
Total Recoverable	Analysis	6010C		1	464449	12/12/18 21:00	EEN	TAL CHI
Total Recoverable	Prep	3005A			464173	12/11/18 16:45	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	464479	12/12/18 17:34	FXG	TAL CHI

TestAmerica Chicago

Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 4Q18 GW

TestAmerica Job ID: 500-155886-1

Client Sample ID: G31S

Date Collected: 12/10/18 10:30

Date Received: 12/10/18 15:40

Lab Sample ID: 500-155886-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540C		1	464216	12/12/18 02:36	CLB	TAL CHI
Total/NA	Analysis	SM 4500 CI- E		5	466873	12/28/18 15:05	EAT	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	465004	12/15/18 17:39	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		20	465757	12/20/18 14:21 (Start) 12/20/18 14:22 (End)	CLB	TAL CHI
Total/NA	Analysis	Field Sampling		1	467138	12/10/18 10:30	JVB	TAL CHI

Client Sample ID: G33S

Date Collected: 12/10/18 12:32

Date Received: 12/10/18 15:40

Lab Sample ID: 500-155886-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			464173	12/11/18 16:45	BDE	TAL CHI
Total Recoverable	Analysis	6010C		1	464449	12/12/18 21:12	EEN	TAL CHI
Total Recoverable	Prep	3005A			464173	12/11/18 16:45	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	464479	12/12/18 17:38	FXG	TAL CHI
Total/NA	Analysis	SM 2540C		1	464216	12/12/18 02:39	CLB	TAL CHI
Total/NA	Analysis	SM 4500 CI- E		1	466663	12/27/18 15:37	EAT	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	465004	12/15/18 17:42	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		4	465757	12/20/18 14:22 (Start) 12/20/18 14:23 (End)	CLB	TAL CHI
Total/NA	Analysis	Field Sampling		1	467138	12/10/18 12:32	JVB	TAL CHI

Client Sample ID: G44S

Date Collected: 12/10/18 14:21

Date Received: 12/10/18 15:40

Lab Sample ID: 500-155886-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			464173	12/11/18 16:45	BDE	TAL CHI
Total Recoverable	Analysis	6010C		1	464449	12/12/18 21:16	EEN	TAL CHI
Total Recoverable	Prep	3005A			464173	12/11/18 16:45	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	464479	12/12/18 17:42	FXG	TAL CHI
Total/NA	Analysis	SM 2540C		1	464216	12/12/18 02:41	CLB	TAL CHI
Total/NA	Analysis	SM 4500 CI- E		1	466663	12/27/18 15:40	EAT	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	465004	12/15/18 17:45	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		10	465757	12/20/18 14:23 (Start) 12/20/18 14:24 (End)	CLB	TAL CHI
Total/NA	Analysis	Field Sampling		1	467138	12/10/18 14:21	JVB	TAL CHI

TestAmerica Chicago

Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 4Q18 GW

TestAmerica Job ID: 500-155886-1

Client Sample ID: T03S

Date Collected: 12/11/18 09:38

Date Received: 12/11/18 15:40

Lab Sample ID: 500-155886-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			464229	12/12/18 07:20	SAH	TAL CHI
Total Recoverable	Analysis	6010C		1	464449	12/12/18 21:29	EEN	TAL CHI
Total Recoverable	Prep	3005A			464229	12/12/18 07:20	SAH	TAL CHI
Total Recoverable	Analysis	6020A		1	464479	12/12/18 18:05	FXG	TAL CHI
Total/NA	Analysis	SM 2540C		1	464216	12/12/18 02:44	CLB	TAL CHI
Total/NA	Analysis	SM 4500 CI- E		5	466873	12/28/18 15:06	EAT	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	465004	12/15/18 17:48	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		10	465757		CLB	TAL CHI
					(Start)	12/20/18 14:26		
					(End)	12/20/18 14:27		
Total/NA	Analysis	Field Sampling		1	467138	12/11/18 09:38	JVB	TAL CHI

Client Sample ID: G48S

Date Collected: 12/11/18 11:02

Date Received: 12/11/18 15:40

Lab Sample ID: 500-155886-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			464229	12/12/18 07:20	SAH	TAL CHI
Total Recoverable	Analysis	6010C		1	464449	12/12/18 21:33	EEN	TAL CHI
Total Recoverable	Prep	3005A			464229	12/12/18 07:20	SAH	TAL CHI
Total Recoverable	Analysis	6020A		1	464479	12/12/18 18:09	FXG	TAL CHI
Total Recoverable	Prep	3005A			464229	12/12/18 07:20	SAH	TAL CHI
Total Recoverable	Analysis	6020A		20	464726	12/13/18 10:48	FXG	TAL CHI
Total/NA	Analysis	SM 2540C		1	464216	12/12/18 02:46	CLB	TAL CHI
Total/NA	Analysis	SM 4500 CI- E		5	466873	12/28/18 15:07	EAT	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	465004	12/15/18 17:51	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		20	465757		CLB	TAL CHI
					(Start)	12/20/18 14:29		
					(End)	12/20/18 14:30		
Total/NA	Analysis	Field Sampling		1	467138	12/11/18 11:02	JVB	TAL CHI

Client Sample ID: G47S

Date Collected: 12/11/18 13:11

Date Received: 12/11/18 15:40

Lab Sample ID: 500-155886-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			464229	12/12/18 07:20	SAH	TAL CHI
Total Recoverable	Analysis	6010C		1	464449	12/12/18 21:37	EEN	TAL CHI
Total Recoverable	Prep	3005A			464229	12/12/18 07:20	SAH	TAL CHI
Total Recoverable	Analysis	6020A		1	464479	12/12/18 18:13	FXG	TAL CHI
Total Recoverable	Prep	3005A			464229	12/12/18 07:20	SAH	TAL CHI
Total Recoverable	Analysis	6020A		50	464726	12/13/18 10:52	FXG	TAL CHI
Total/NA	Analysis	SM 2540C		1	464216	12/12/18 02:49	CLB	TAL CHI

TestAmerica Chicago

Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 4Q18 GW

TestAmerica Job ID: 500-155886-1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 Cl- E		5	466873	12/28/18 15:08	EAT	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	465004	12/15/18 17:54	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		20	465757	12/20/18 14:30 (Start) 12/20/18 14:31 (End)	CLB	TAL CHI
Total/NA	Analysis	Field Sampling		1	467138	12/11/18 13:11	JVB	TAL CHI

Client Sample ID: G46S

Lab Sample ID: 500-155886-9

Date Collected: 12/11/18 14:25

Matrix: Water

Date Received: 12/11/18 15:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			464229	12/12/18 07:20	SAH	TAL CHI
Total Recoverable	Analysis	6010C		1	464449	12/12/18 21:41	EEN	TAL CHI
Total Recoverable	Prep	3005A			464229	12/12/18 07:20	SAH	TAL CHI
Total Recoverable	Analysis	6020A		1	464479	12/12/18 18:16	FXG	TAL CHI
Total Recoverable	Prep	3005A			464229	12/12/18 07:20	SAH	TAL CHI
Total Recoverable	Analysis	6020A		20	464726	12/13/18 10:56	FXG	TAL CHI
Total/NA	Analysis	SM 2540C		1	464216	12/12/18 02:51	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		5	466873	12/28/18 15:46	EAT	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	465004	12/15/18 17:57	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		20	465757	12/20/18 14:31 (Start) 12/20/18 14:32 (End)	CLB	TAL CHI
Total/NA	Analysis	Field Sampling		1	467138	12/11/18 14:25	JVB	TAL CHI

Client Sample ID: T08S

Lab Sample ID: 500-155886-10

Date Collected: 12/12/18 09:46

Matrix: Water

Date Received: 12/12/18 11:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			464470	12/13/18 08:43	SAH	TAL CHI
Total Recoverable	Analysis	6010C		1	464675	12/13/18 17:47	JEF	TAL CHI
Total Recoverable	Prep	3005A			464470	12/13/18 08:43	SAH	TAL CHI
Total Recoverable	Analysis	6020A		1	464726	12/13/18 21:45	FXG	TAL CHI
Total Recoverable	Prep	3005A			464470	12/13/18 08:43	SAH	TAL CHI
Total Recoverable	Analysis	6020A		20	464840	12/14/18 12:32	FXG	TAL CHI
Total Recoverable	Prep	3005A			464470	12/13/18 08:43	SAH	TAL CHI
Total Recoverable	Analysis	6020A		1	464840	12/14/18 12:59	FXG	TAL CHI
Total/NA	Analysis	SM 2540C		1	464440	12/13/18 06:23	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		5	466873	12/28/18 15:46	EAT	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	465004	12/15/18 18:00	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		20	465757	12/20/18 14:32 (Start) 12/20/18 14:33 (End)	CLB	TAL CHI
Total/NA	Analysis	Field Sampling		1	467138	12/12/18 09:46	JVB	TAL CHI

TestAmerica Chicago

Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 4Q18 GW

TestAmerica Job ID: 500-155886-1

Client Sample ID: T01S

Date Collected: 12/13/18 09:25

Date Received: 12/13/18 15:45

Lab Sample ID: 500-155886-11

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			464864	12/14/18 16:39	BDE	TAL CHI
Total Recoverable	Analysis	6010C		1	465058	12/17/18 12:00	JEF	TAL CHI
Total Recoverable	Prep	3005A			464864	12/14/18 16:39	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	465210	12/17/18 20:17	FXG	TAL CHI
Total/NA	Analysis	SM 2540C		1	464670	12/14/18 07:07	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		5	466873	12/28/18 15:50	EAT	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	465004	12/15/18 18:03	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		20	465757		CLB	TAL CHI
					(Start)	12/20/18 14:33		
					(End)	12/20/18 14:34		
Total/NA	Analysis	Field Sampling		1	467138	12/13/18 09:25	JVB	TAL CHI

Client Sample ID: R32S

Date Collected: 12/13/18 13:39

Date Received: 12/13/18 15:45

Lab Sample ID: 500-155886-12

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			464864	12/14/18 16:39	BDE	TAL CHI
Total Recoverable	Analysis	6010C		1	465058	12/17/18 12:28	JEF	TAL CHI
Total Recoverable	Prep	3005A			464864	12/14/18 16:39	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	465210	12/17/18 20:36	FXG	TAL CHI
Total/NA	Analysis	SM 2540C		1	464670	12/14/18 07:14	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		1	466873	12/28/18 15:16	EAT	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	465004	12/15/18 18:15	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		20	465757		CLB	TAL CHI
					(Start)	12/20/18 14:34		
					(End)	12/20/18 14:35		
Total/NA	Analysis	Field Sampling		1	467138	12/13/18 13:39	JVB	TAL CHI

Client Sample ID: R08S

Date Collected: 12/13/18 14:30

Date Received: 12/13/18 15:45

Lab Sample ID: 500-155886-13

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			464864	12/14/18 16:39	BDE	TAL CHI
Total Recoverable	Analysis	6010C		1	465058	12/17/18 12:32	JEF	TAL CHI
Total Recoverable	Prep	3005A			464864	12/14/18 16:39	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	465210	12/17/18 20:40	FXG	TAL CHI
Total Recoverable	Prep	3005A			464864	12/14/18 16:39	BDE	TAL CHI
Total Recoverable	Analysis	6020A		10	465309	12/18/18 11:59	FXG	TAL CHI
Total/NA	Analysis	SM 2540C		1	464670	12/14/18 07:17	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		5	466873	12/28/18 16:20	EAT	TAL CHI

TestAmerica Chicago

Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 4Q18 GW

TestAmerica Job ID: 500-155886-1

Client Sample ID: R08S

Date Collected: 12/13/18 14:30

Date Received: 12/13/18 15:45

Lab Sample ID: 500-155886-13

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 F C		1	465004	12/15/18 18:18	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		20	465757	12/20/18 14:35 (Start) 12/20/18 14:35 (End) 12/20/18 14:36	CLB	TAL CHI
Total/NA	Analysis	Field Sampling		1	467138	12/13/18 14:30	JVB	TAL CHI

Client Sample ID: T02S

Date Collected: 12/14/18 09:44

Date Received: 12/14/18 15:40

Lab Sample ID: 500-155886-14

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			465177	12/18/18 07:45	SAH	TAL CHI
Total Recoverable	Analysis	6010C		1	465374	12/18/18 20:57	EEN	TAL CHI
Total Recoverable	Prep	3005A			465177	12/18/18 07:45	SAH	TAL CHI
Total Recoverable	Analysis	6020A		1	465410	12/18/18 20:27	FXG	TAL CHI
Total Recoverable	Prep	3005A			465177	12/18/18 07:45	SAH	TAL CHI
Total Recoverable	Analysis	6020A		10	465552	12/19/18 12:23	FXG	TAL CHI
Total/NA	Analysis	SM 2540C		1	464947	12/17/18 05:20	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		5	466873	12/28/18 15:51	EAT	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	465004	12/15/18 18:22	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		20	465929	12/21/18 11:24 (Start) 12/21/18 11:24 (End) 12/21/18 11:25	CLB	TAL CHI
Total/NA	Analysis	Field Sampling		1	467138	12/14/18 09:44	JVB	TAL CHI

Client Sample ID: DUP

Date Collected: 12/14/18 09:44

Date Received: 12/14/18 15:40

Lab Sample ID: 500-155886-15

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			465177	12/18/18 07:45	SAH	TAL CHI
Total Recoverable	Analysis	6010C		1	465374	12/18/18 21:01	EEN	TAL CHI
Total Recoverable	Prep	3005A			465177	12/18/18 07:45	SAH	TAL CHI
Total Recoverable	Analysis	6020A		1	465410	12/18/18 20:31	FXG	TAL CHI
Total Recoverable	Prep	3005A			465177	12/18/18 07:45	SAH	TAL CHI
Total Recoverable	Analysis	6020A		10	465552	12/19/18 12:27	FXG	TAL CHI
Total/NA	Analysis	SM 2540C		1	464947	12/17/18 05:25	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		5	466873	12/28/18 15:52	EAT	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	465004	12/15/18 18:25	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		20	465929	12/21/18 11:25 (Start) 12/21/18 11:25 (End) 12/21/18 11:26	CLB	TAL CHI
Total/NA	Analysis	Field Sampling		1	467138	12/14/18 09:44	JVB	TAL CHI

TestAmerica Chicago

Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 4Q18 GW

TestAmerica Job ID: 500-155886-1

Client Sample ID: G30S

Date Collected: 12/14/18 14:03

Date Received: 12/14/18 15:40

Lab Sample ID: 500-155886-16

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			465177	12/18/18 07:45	SAH	TAL CHI
Total Recoverable	Analysis	6010C		1	465374	12/18/18 21:05	EEN	TAL CHI
Total Recoverable	Prep	3005A			465177	12/18/18 07:45	SAH	TAL CHI
Total Recoverable	Analysis	6020A		1	465410	12/18/18 20:35	FXG	TAL CHI
Total Recoverable	Prep	3005A			465177	12/18/18 07:45	SAH	TAL CHI
Total Recoverable	Analysis	6020A		10	465552	12/19/18 12:31	FXG	TAL CHI
Total/NA	Analysis	SM 2540C		1	464947	12/17/18 05:28	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		5	466873	12/28/18 15:54	EAT	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	465004	12/15/18 18:37	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		20	465929		CLB	TAL CHI
					(Start)	12/21/18 11:26		
					(End)	12/21/18 11:27		
Total/NA	Analysis	Field Sampling		1	467138	12/14/18 14:03	JVB	TAL CHI

Client Sample ID: T09S

Date Collected: 12/18/18 11:08

Date Received: 12/18/18 15:50

Lab Sample ID: 500-155886-17

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			465384	12/19/18 07:35	SAH	TAL CHI
Total Recoverable	Analysis	6010C		1	465562	12/19/18 13:39	JEF	TAL CHI
Total Recoverable	Prep	3005A			465384	12/19/18 07:35	SAH	TAL CHI
Total Recoverable	Analysis	6020A		1	465688	12/19/18 16:52	FXG	TAL CHI
Total Recoverable	Prep	3005A			465384	12/19/18 07:35	SAH	TAL CHI
Total Recoverable	Analysis	6020A		10	466171	12/20/18 17:51	FXG	TAL CHI
Total/NA	Analysis	SM 2540C		1	465381	12/19/18 06:23	CLB	TAL CHI
Total/NA	Analysis	SM 4500 Cl- E		5	466873	12/28/18 15:54	EAT	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	465801	12/20/18 13:08	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		20	467017		CLB	TAL CHI
					(Start)	12/31/18 00:34		
					(End)	12/31/18 00:35		
Total/NA	Analysis	Field Sampling		1	467138	12/18/18 11:08	JVB	TAL CHI

Client Sample ID: T06S

Date Collected: 12/18/18 13:20

Date Received: 12/18/18 15:50

Lab Sample ID: 500-155886-18

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			465384	12/19/18 07:35	SAH	TAL CHI
Total Recoverable	Analysis	6010C		1	465562	12/19/18 13:43	JEF	TAL CHI
Total Recoverable	Prep	3005A			465384	12/19/18 07:35	SAH	TAL CHI
Total Recoverable	Analysis	6020A		1	465688	12/19/18 16:56	FXG	TAL CHI

TestAmerica Chicago

Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 4Q18 GW

TestAmerica Job ID: 500-155886-1

Client Sample ID: T06S

Date Collected: 12/18/18 13:20

Date Received: 12/18/18 15:50

Lab Sample ID: 500-155886-18

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540C		1	465381	12/19/18 06:28	CLB	TAL CHI
Total/NA	Analysis	SM 4500 CI- E		1	466873	12/28/18 15:23	EAT	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	465801	12/20/18 13:11	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		5	467017	(Start) 12/31/18 00:35 (End) 12/31/18 00:36	CLB	TAL CHI
Total/NA	Analysis	Field Sampling		1	467138	12/18/18 13:20	JVB	TAL CHI

Client Sample ID: T05S

Date Collected: 12/19/18 09:27

Date Received: 12/19/18 15:22

Lab Sample ID: 500-155886-19

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			465795	12/20/18 16:20	BDE	TAL CHI
Total Recoverable	Analysis	6010C		1	466123	12/21/18 20:38	JEF	TAL CHI
Total Recoverable	Prep	3005A			465795	12/20/18 16:20	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	466297	12/24/18 19:59	FXG	TAL CHI
Total Recoverable	Prep	3005A			465795	12/20/18 16:20	BDE	TAL CHI
Total Recoverable	Analysis	6020A		100	466417	12/26/18 13:13	FXG	TAL CHI
Total/NA	Analysis	SM 2540C		1	465648	12/20/18 07:20	CLB	TAL CHI
Total/NA	Analysis	SM 4500 CI- E		5	466873	12/28/18 15:55	EAT	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	465801	12/20/18 13:15	EAT	TAL CHI
Total/NA	Analysis	SM 4500 SO4 E		50	467017	(Start) 12/31/18 00:36 (End) 12/31/18 00:37	CLB	TAL CHI
Total/NA	Analysis	Field Sampling		1	467138	12/19/18 09:27	JVB	TAL CHI

Client Sample ID: T04S

Date Collected: 12/19/18 12:25

Date Received: 12/19/18 15:22

Lab Sample ID: 500-155886-20

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			465795	12/20/18 16:20	BDE	TAL CHI
Total Recoverable	Analysis	6010C		1	466123	12/21/18 20:42	JEF	TAL CHI
Total Recoverable	Prep	3005A			465795	12/20/18 16:20	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	466297	12/24/18 20:03	FXG	TAL CHI
Total Recoverable	Prep	3005A			465795	12/20/18 16:20	BDE	TAL CHI
Total Recoverable	Analysis	6020A		1	466417	12/26/18 13:17	FXG	TAL CHI
Total/NA	Analysis	SM 2540C		1	465648	12/20/18 07:25	CLB	TAL CHI
Total/NA	Analysis	SM 4500 CI- E		1	466873	12/28/18 15:24	EAT	TAL CHI
Total/NA	Analysis	SM 4500 F C		1	465801	12/20/18 13:18	EAT	TAL CHI

TestAmerica Chicago

Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Joliet #9 CCR - 4Q18 GW

TestAmerica Job ID: 500-155886-1

Client Sample ID: T04S

Date Collected: 12/19/18 12:25

Date Received: 12/19/18 15:22

Lab Sample ID: 500-155886-20

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 SO4 E		5	467017	(Start) 12/31/18 00:37 (End) 12/31/18 00:38	CLB	TAL CHI
Total/NA	Analysis	Field Sampling		1	467138	12/19/18 12:25	JVB	TAL CHI

Laboratory References:

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

TestAmerica Chicago

2417 Bond St
University Park, IL 60484-3182
Tel: 708 534 5200 Fax: 708 534 5211

Sample ID: G45S
Facility: Midwest Generation-Joliet Quarry #9 CCR
Job #: 500-155886-1

Type Sample: Ground Water Surface Water Leachate Other: _____
(circle one)
Equipment Used: Purging _____ Bladder Pump _____ Dedicated (Y)
Sampling _____ Bladder Pump _____ Dedicated (Y)

PURGING INFORMATION

Purge Date: 12/07/18 Start Purge: 0950 End Purge: 1006
(2400 Hr. Clock)
Water Volume in Casing (gallons): N/A Volume Purged (gallons): 1.03

MEASUREMENTS

Well Diameter 2.0 (inches) 1st 2nd Final
Stick Up 2.97 (ft) pH 7.00 7.02 7.02 (std.)
Ref. Measuring Pt. TIC SC 877 877 877 (umhos/cm)
Well Elevation *603.90 (ft./msl) Temp. 9.89 9.88 9.88 (°C)
Water Level 66.74 (ft.) Well Stabilization / Recharge Grid
Ground Water Elev. 537.16 (ft./msl)
Well Bottom Elevation *471.05 (ft./msl)

COMMENTS

Sample Appearance/Odor: Colorless, Clear, Moderate Odor
Weather Conditions: 25°F, Sunny, SW winds @ 5-10 mph

Other: *Reference Measurement

Depth To Water from L.S. = 66.74 - 2.97 = 63.77 (ft.)

Levels were taken on 12/07/18 @ 0940

(Updated: 10-10-2018)

Sampler Name (Print): Noe Lopez Signature: [Signature]

TestAmerica Chicago

2417 Bond St
University Park, IL 60484-3182
Tel: 708 534 5200 Fax: 708 534 5211

Sample ID: G20S
Facility: Midwest Generation-Joliet Quarry #9 CCR
Job #: 500-155886-2

Type Sample: (circle one) Ground Water Surface Water Leachate Other: _____
Equipment Used: Purging _____ Bladder Pump _____ Dedicated (Y/N)
Sampling _____ Bladder Pump _____ Dedicated (Y/N)

PURGING INFORMATION

Purge Date: 12/07/18 Start Purge: 1105 End Purge: 1125
(2400 Hr. Clock)
Water Volume in Casing (gallons): N/A Volume Purged (gallons): 0.13

MEASUREMENTS

Well Diameter 2.0 (inches) 1st 2nd Final
Stick Up 2.78 (ft) pH 7.43 7.41 7.44 (std.)
Ref. Measuring Pt. TIC SC 563 562 562 (umhos/cm)
Well Elevation *580.91 (ft./msl) Temp. 4.89 4.89 4.89 (°C)
Water Level 49.46 (ft.) Well Stabilization / Recharge Grid
Ground Water Elev. 531.45 (ft./msl)
Well Bottom Elevation *442.28 (ft./msl)

COMMENTS

Sample Appearance/Odor: Colorless, Clear, Slight Odor
Weather Conditions: 25°F, Partly Cloudy, SW winds @ 10-15 mph

Other: *Reference Measurement

Depth To Water from L.S. = 49.46 - 2.78 = 46.68 (ft.)

Levels were taken on 12/07/18 @ 1055.

(Updated: 10-10-2018)

Sampler Name (Print): Noe Lopez Signature: [Signature]

TestAmerica Chicago

2417 Bond St
University Park, IL 60484-3182
Tel: 708 534 5200 Fax: 708 534 5211

Sample ID: G31S
Facility: Midwest Generation-Joliet Quarry #9 CCR
Job #: 500-155886-3

Type Sample: Ground Water Surface Water Leachate Other: _____
(circle one)
Equipment Used: Purging _____ Bladder Pump Dedicated ☒ (Y/N)
Sampling _____ Bladder Pump Dedicated ☒ (Y/N)

PURGING INFORMATION

Purge Date: 12/10/18 Start Purge: 1010 End Purge: 1030
(2400 Hr. Clock)
Water Volume in Casing (gallons): N/A Volume Purged (gallons): 0.90

MEASUREMENTS

Well Diameter 2.0 (inches) 1st 2nd Final
Stick Up 2.58 (ft) pH 7.15 7.17 7.17 (std.)
Ref. Measuring Pt. TIC SC 1287 1282 1282 (umhos/cm)
Well Elevation *535.78 (ft./msl) Temp. 12.66 12.68 12.68 (°C)
Water Level 25.74 (ft.) Well Stabilization / Recharge Grid
Ground Water Elev. 510.04 (ft./msl)
Well Bottom Elevation *453.36 (ft./msl)

COMMENTS

Sample Appearance/Odor: Colorless, Clear, Slight Odor
Weather Conditions: 21°F, Partly Cloudy, SW winds 0-5 mph

Other: *Reference Measurement

Depth To Water from L.S. = 25.74 - 2.58 = 23.16 (ft.)

Levels were taken on 12/10/18 @ 1000

(Updated: 10-10-2018)

Sampler Name (Print): Noe Lopez Signature: [Signature]

TestAmerica Chicago

2417 Bond St
University Park, IL 60484-3182
Tel: 708 534 5200 Fax: 708 534 5211

Sample ID: G33S
Facility: Midwest Generation-Joliet Quarry #9 CCR
Job #: 500-155886-4

Type Sample: Ground Water Surface Water Leachate Other: _____
(circle one)
Equipment Used: Purging _____ Bladder Pump _____ Dedicated ☒ (Y/N)
Sampling _____ Bladder Pump _____ Dedicated ☒ (Y/N)

PURGING INFORMATION

Purge Date: 12/10/18 Start Purge: 1210 End Purge: 1232
(2400 Hr. Clock)
Water Volume in Casing (gallons): N/A Volume Purged (gallons): 0.57

MEASUREMENTS

Well Diameter 2.0 (inches) 1st 2nd Final
Stick Up 1.73 (ft) pH 7.42 7.41 7.41 (std.)
Ref. Measuring Pt. TIC SC 473 461 461 (umhos/cm)
Well Elevation *535.66 (ft./msl) Temp. 11.10 11.15 11.15 (°C)
Water Level 27.30 (ft.) Well Stabilization / Recharge Grid
Ground Water Elev. 508.36 (ft./msl)
Well Bottom Elevation *452.72 (ft./msl)

COMMENTS

Sample Appearance/Odor: Gray, Slight Turbidity, No Odor
Weather Conditions: 28°F, Partly Cloudy, SW winds 0-5 mph

Other: *Reference Measurement

Depth To Water from L.S. = 27.30 - 1.73 = 25.57 (ft.)

Levels were taken on 12/10/18 @ 1200

(Updated: 10-10-2018)

Sampler Name (Print): Noe Lopez Signature: [Signature]

TestAmerica Chicago

2417 Bond St
University Park, IL 60484-3182
Tel: 708 534 5200 Fax: 708 534 5211

Sample ID: G44S
Facility: Midwest Generation-Joliet Quarry #9 CCR
Job #: 500-155886.5

Type Sample: Ground Water Surface Water Leachate Other: _____
(circle one)
Equipment Used: Purging _____ Bladder Pump Dedicated ☒ (N)
Sampling _____ Bladder Pump Dedicated ☒ (N)

PURGING INFORMATION

Purge Date: 12/10/18 Start Purge: 1400 End Purge: 1421
(2400 Hr. Clock)
Water Volume in Casing (gallons): N/A Volume Purged (gallons): 0.68

MEASUREMENTS

Well Diameter 2.0 (inches) 1st 2nd Final
Stick Up 2.18 (ft) pH 6.99 6.98 6.98 (std.)
Ref. Measuring Pt. TIC SC 860 852 852 (umhos/cm)
Well Elevation *586.53 (ft./msl) Temp. 10.24 10.28 10.28 (°C)
Water Level 79.18 (ft.) Well Stabilization / Recharge Grid
Ground Water Elev. 507.35 (ft./msl)
Well Bottom Elevation *455.11 (ft./msl)

COMMENTS

Sample Appearance/Odor: Colorless, Clear, No Odor
Weather Conditions: 29°F, Partly Cloudy, SW winds 5-10 mph

Other: *Reference Measurement

Depth To Water from L.S. = 79.18 - 2.18 = 77.00 (ft.)

Levels were taken on 12/10/18 @ 1350

(Updated: 10-10-2018)

Sampler Name (Print): Noe Lopez Signature: [Signature]

TestAmerica Chicago

2417 Bond St
University Park, IL 60484-3182
Tel: 708 534 5200 Fax: 708 534 5211

Sample ID: T03S
Facility: Midwest Generation-Joliet #9 CCR
Job #: 500-155886-6

Type Sample: Ground Water Surface Water Leachate Other: _____
(circle one)
Equipment Used: Purging _____ Bladder Pump Dedicated (Y/N)
Sampling _____ Bladder Pump Dedicated (Y/N)

PURGING INFORMATION

Purge Date: 12/11/18 Start Purge: 0920 End Purge: 0938
(2400 Hr. Clock)
Water Volume in Casing (gallons): N/A Volume Purged (gallons): 0.46

MEASUREMENTS

Well Diameter 2.0 (inches) 1st 2nd Final
Stick Up 3.08 (ft) pH 6.96 6.96 6.96 (std.)
Ref. Measuring Pt. TIC SC 1,130 1,131 1,131 (umhos/cm)
Well Elevation * 629.89 (ft./msl) Temp. 10.14 10.15 10.15 (°C)
Water Level 140.03 (ft) Well Stabilization / Recharge Grid
Ground Water Elev. 489.86 (ft./msl)
Well Bottom Elevation * 456.70 (ft./msl)

COMMENTS

Sample Appearance/Odor: Colorless, slight turbidity, No Odor
Weather Conditions: 31°F, Sunny, SW Winds @ 5-10 mph

Other: *Reference Measurement

Depth To Water from L.S. = 140.03 - 3.08 = 136.95 (ft)

Levels were taken on 12/11/18 @ 0910

* Total Depth = 172.95

(Updated 10-10-2018)

Sampler Name (Print): Noe Lopez Signature: 12/11/18 92

12/24/18
qb

TestAmerica Chicago

2417 Bond St
University Park, IL 60484-3182
Tel: 708 534 5200 Fax: 708 534 5211

Sample ID: G48S
Facility: Midwest Generation-Joliet #9 CCR
Job #: 500-155886-7

Type Sample: Ground Water Surface Water Leachate Other: _____
(circle one)
Equipment Used: Purging _____ Bladder Pump _____ Dedicated (Y/N)
Sampling _____ Bladder Pump _____ Dedicated (Y/N)

PURGING INFORMATION

Purge Date: 12/11/18 Start Purge: 1040 End Purge: 1102
(2400 Hr. Clock)
Water Volume in Casing (gallons): N/A Volume Purged (gallons): 0.85

MEASUREMENTS

Well Diameter 4.0 (inches) 1st 2nd Final
Stick Up 2.45 (ft) pH 8.40 8.42 8.42 (std.)
Ref. Measuring Pt. TIC SC 1,321 1,323 1,323 (umhos/cm)
Well Elevation *620.78 (ft./msl) Temp. 9.68 9.67 9.67 (°C)
Water Level 105.79 (ft.) Well Stabilization / Recharge Grid
Ground Water Elev. 514.99 (ft./msl)
Well Bottom Elevation *468.32 (ft./msl)

COMMENTS

Sample Appearance/Odor: Colorless, clear, no odor
Weather Conditions: 35°F, Partly cloudy, W Winds @ 5-10 mph

Other: *Reference Measurement

Depth To Water from L.S. = 105.79 - 2.45 = 103.34 (ft)

Levels were taken on 12/11/18 @ 1020

(Updated 10-10-2018)

Sampler Name (Print): Noe Lopez Signature: 12/11/18 [Signature]

FIELD FORM 1

12/24/18
[Signature]

TestAmerica Chicago

2417 Bond St
University Park, IL 60484-3182
Tel: 708 534 5200 Fax: 708 534 5211

Sample ID: G47S
Facility: Midwest Generation-Joliet #9 CCR
Job #: 500-155880-S

Type Sample: Ground Water Surface Water Leachate Other: _____
(circle one)
Equipment Used: Purging _____ Bladder Pump _____ Dedicated (Y/N)
Sampling _____ Bladder Pump _____ Dedicated (Y/N)

PURGING INFORMATION

Purge Date: 12/11/18 Start Purge: 1250 End Purge: 1311
(2400 Hr. Clock)
Water Volume in Casing (gallons): N/A Volume Purged (gallons): 0.68

MEASUREMENTS

Well Diameter 4.0 (inches) 1st 2nd Final
Stick Up 2.50 (ft) pH 10.15 10.14 10.14 (std.)
Ref. Measuring Pt. TIC SC 1,850 1,850 1,850 (umhos/cm)
Well Elevation *612.10 (ft./msl) Temp. 10.93 10.95 10.95 (°C)
Water Level 96.29 (ft.) Well Stabilization / Recharge Grid
Ground Water Elev. 515.81 (ft./msl)
Well Bottom Elevation *459.84 (ft./msl)

COMMENTS

Sample Appearance/Odor: Colorless, clear, slight odor
Weather Conditions: 39°F, Sunny, W winds @ 5-10 mph

Other: *Reference Measurement

Depth To Water from L.S. = 96.29 - 2.50 = 93.79 (ft)

Levels were taken on 12/11/18 @ 1245.

(Updated 10-10-2018)

Sampler Name (Print): Noe Lopez Signature: 12/11/18 [Signature]

FIELD FORM 1

12/11/18
QA

TestAmerica Chicago

2417 Bond St
University Park, IL 60484-3182
Tel: 708 534 5200 Fax: 708 534 5211

Sample ID: G46S
Facility: Midwest Generation-Joliet #9 CCR
Job #: 500-155886-9

Type Sample: Ground Water Surface Water Leachate Other: _____
(circle one)
Equipment Used: Purging _____ Bladder Pump _____ Dedicated (Y/N)
Sampling _____ Bladder Pump _____ Dedicated (Y/N)

PURGING INFORMATION

Purge Date: 12/11/18 Start Purge: 1405 End Purge: 1425
(2400 Hr. Clock)
Water Volume in Casing (gallons): N/A Volume Purged (gallons): 0.90

MEASUREMENTS

Well Diameter 4.0 (inches) 1st 2nd Final
Stick Up 2.70 (ft) pH 7.167 7.166 7.166 (std.)
Ref. Measuring Pt. TIC SC 1,245 1,252 1,252 (umhos/cm)
Well Elevation *601.43 (ft./msl) Temp. 12.23 12.19 12.19 (°C)
Water Level 91.34 (ft.) Well Stabilization / Recharge Grid
Ground Water Elev. 510.09 (ft./msl)
Well Bottom Elevation *453.62 (ft./msl)

COMMENTS

Sample Appearance/Odor: Colorless, Clear, no odor
Weather Conditions: 39°F, Partly Cloudy, SW Winds @ 0-5 mph

Other: *Reference Measurement

Depth To Water from L.S. = 91.34 - 2.70 = 88.64 (ft)

Levels were taken on 12/11/18 @ 1400.

(Updated: 10-10-2018)

Sampler Name (Print): Noe Lopez Signature: 12/11/18 [Signature]

FIELD FORM 1

TestAmerica Chicago

2417 Bond St
University Park, IL 60484-3182
Tel: 708 534 5200 Fax: 708 534 5211

Sample ID: T08S
Facility: Midwest Generation-Joliet #9 CCR
Job #: 500-155886-10

Type Sample: Ground Water Surface Water Leachate Other: _____
(circle one)
Equipment Used: Purging _____ Bladder Pump _____ Dedicated (Y/N) (N)
Sampling _____ Bladder Pump _____ Dedicated (Y/N) (N)

PURGING INFORMATION

Purge Date: 12/12/18 Start Purge: 0930 End Purge: 0946
(2400 Hr. Clock)
Water Volume in Casing (gallons): N/A Volume Purged (gallons): 0.41

MEASUREMENTS

Well Diameter 2.0 (inches) 1st 2nd Final
Stick Up 2.38 (ft) pH 8.18 8.21 8.21 (std.)
Ref. Measuring Pt. TIC SC 1194 1197 1197 (umhos/cm)
Well Elevation * 627.39 (ft./msl) Temp. 9.57 9.50 9.50 (°C)
Water Level 131.10 (ft.) Well Stabilization / Recharge Grid
Ground Water Elev. 496.29 (ft./msl)
Well Bottom Elevation * 447.38 (ft./msl)

COMMENTS

Sample Appearance/Odor: Colorless, Slight Turbidity, No Odor
Weather Conditions: 41°F, Partly Cloudy, SW winds @ 10-15 mph

Other: *Reference Measurement

Depth To Water from L.S. = 131.10 - 2.38 = 128.72 (ft.)

Levels were taken on 12/12/18 @ 0910

* Total Deth = 180.00

(Updated: 12-11-2018)

Sampler Name (Print): Noe Lopez Signature: [Signature]

TestAmerica Chicago

2417 Bond St
University Park, IL 60484-3182
Tel: 708 534 5200 Fax: 708 534 5211

Sample ID: T01S
Facility: Midwest Generation-Joliet #9 CCR
Job #: 500-155886-11

Type Sample: Ground Water Surface Water Leachate Other: _____
(circle one)
Equipment Used: Purging _____ Bladder Pump Dedicated (Y/N) (N)
Sampling _____ Bladder Pump Dedicated (Y/N) (N)

PURGING INFORMATION

Purge Date: 12/13/18 Start Purge: 0910 End Purge: 0925
(2400 Hr. Clock)
Water Volume in Casing (gallons): N/A Volume Purged (gallons): 0.19

MEASUREMENTS

Well Diameter 2.0 (inches) 1st 2nd Final
Stick Up 2.48 (ft) pH 7.35 7.37 7.37 (std.)
Ref. Measuring Pt. TIC SC 1170 1180 1180 (umhos/cm)
Well Elevation * 621.78 (ft./msl) Temp. 6.80 6.85 6.85 (°C)
Water Level 124.67 (ft.) Well Stabilization / Recharge Grid
Ground Water Elev. 497.11 (ft./msl)
Well Bottom Elevation * 451.46 (ft./msl)

COMMENTS

Sample Appearance/Odor: Tan, High Turbidity, Slight Odor
Weather Conditions: 35°F, Partly Cloudy, SE winds @ 5-10 mph

Other: *Reference Measurement

Depth To Water from L.S. = 124.67 - 2.48 = 122.19 (ft.)

Levels were taken on 12/13/18 @ 0845

* Total Depth = 170.00

(Updated 12-11-2018)

Sampler Name (Print): Noe Lopez

Signature: [Signature]

TestAmerica Chicago

2417 Bond St
University Park, IL 60484-3182
Tel: 708 534 5200 Fax: 708 534 5211

Sample ID: R32S
Facility: Midwest Generation-Joliet #9 CCR
Job #: 500-155886-12

Type Sample: Ground Water Surface Water Leachate Other: _____
(circle one)
Equipment Used: Purging _____ Bladder Pump _____ Dedicated (Y/N)
Sampling _____ Bladder Pump _____ Dedicated (Y/N)

PURGING INFORMATION

Purge Date: 12/13/18 Start Purge: 1320 End Purge: 1339
(2400 Hr. Clock)
Water Volume in Casing (gallons): N/A Volume Purged (gallons): 0.98

MEASUREMENTS

Well Diameter 2.0 (inches) 1st 2nd Final
Stick Up 2.03 (ft) pH 7.44 7.43 7.43 (std.)
Ref. Measuring Pt. TIC SC 858 854 854 (umhos/cm)
Well Elevation *536.99 (ft./msl) Temp. 11.44 11.46 11.46 (°C)
Water Level 18.32 (ft.) Well Stabilization / Recharge Grid
Ground Water Elev. 518.67 (ft./msl)
Well Bottom Elevation *457.84 (ft./msl)

COMMENTS

Sample Appearance/Odor: Colorless, clear, no odor
Weather Conditions: 42°F, cloudy, E winds @ 5-10 mph

Other: *Reference Measurement

Depth To Water from L.S. = 18.32 - 2.03 = 16.29 (ft)

Levels were taken on 12/13/18 @ 1310

(Updated 10-10-2018)

Sampler Name (Print): Noe Lopez Signature: 12/13/18 [Signature]

FIELD FORM 1

12/14/18
98

TestAmerica Chicago

2417 Bond St
University Park, IL 60484-3182
Tel: 708 534 5200 Fax: 708 534 5211

Sample ID: R08S
Facility: Midwest Generation-Joliet #9 CCR
Job #: 500-155886-13

Type Sample: Ground Water Surface Water Leachate Other: _____
(circle one)
Equipment Used: Purging _____ Bladder Pump _____ Dedicated (Y/N)
Sampling _____ Bladder Pump _____ Dedicated (Y/N)

PURGING INFORMATION

Purge Date: 12/13/18 Start Purge: 1215 End Purge: 1430
(2400 Hr. Clock)
Water Volume in Casing (gallons): N/A Volume Purged (gallons): 0.77

MEASUREMENTS

Well Diameter 2.0 (inches) 1st 2nd Final
Stick Up 2.55 (ft) pH 8.12 8.11 8.11 (std.)
Ref. Measuring Pt. TIC SC 925 916 916 (umhos/cm)
Well Elevation *578.62 (ft./msl) Temp. 12.10 12.06 12.06 (°C)
Water Level 65.48 (ft.) Well Stabilization / Recharge Grid
Ground Water Elev. 513.14 (ft./msl)
Well Bottom Elevation *453.08 (ft./msl)

COMMENTS

Sample Appearance/Odor: Colorless, clear, no odor
Weather Conditions: 43°F, cloudy, NE winds @ 5-10 mph

Other: *Reference Measurement (Well ID updated 11-25-15)

Depth To Water from L.S. = 65.48 - 2.55 = 62.93 (ft)

Levels were taken on 12/13/18 @ 1410

(Updated 10-10-2018)

Sampler Name (Print): Noe Lopez Signature: 12/13/18 [Signature]

FIELD FORM 1

12/13/18
[Signature]

TestAmerica Chicago

2417 Bond St
University Park, IL 60484-3182
Tel: 708 534 5200 Fax: 708 534 5211

Sample ID: T02S
Facility: Midwest Generation-Joliet #9 CCR
Job #: 500-155886-14

Type Sample: Ground Water Surface Water Leachate Other: _____
(circle one)
Equipment Used: Purging _____ Bladder Pump _____ Dedicated (Y/N) (N)
Sampling _____ Bladder Pump _____ Dedicated (Y/N) (N)

PURGING INFORMATION

Purge Date: 12/14/18 Start Purge: 0925 End Purge: 0944
(2400 Hr. Clock)
Water Volume in Casing (gallons): N/A Volume Purged (gallons): 0.49

MEASUREMENTS

Well Diameter 2.0 (inches) 1st 2nd Final
Stick Up 2.33 (ft) pH 7.54 7.55 7.55 (std.)
Ref. Measuring Pt. TIC SC 1074 1098 1098 (umhos/cm)
Well Elevation * 626.16 (ft./msl) Temp. 8.15 8.16 8.16 (°C)
Water Level 136.18 (ft.) Well Stabilization / Recharge Grid
Ground Water Elev. 489.98 (ft./msl)
Well Bottom Elevation * 453.40 (ft./msl)

COMMENTS

Sample Appearance/Odor: Colorless, Clear, No Odor
Weather Conditions: 41°F, Cloudy, NE winds 5-10 mph

Other: *Reference Measurement

Depth To Water from L.S. = 136.18 - 2.33 = 133.85 (ft.)

Levels were taken on 12/14/18 @ 0910

* Total Depth = 172.75

(Updated: 12-11-2018))

Sampler Name (Print): Noe Lopez Signature: [Signature]

TestAmerica Chicago

2417 Bond St
University Park, IL 60484-3182
Tel: 708 534 5200 Fax: 708 534 5211

Sample ID: T02S_Dup
Facility: Midwest Generation-Joliet #9 CCR
Job #: 500-155886-15

Type Sample: Ground Water Surface Water Leachate Other: _____
(circle one)
Equipment Used: Purging _____ Bladder Pump _____ Dedicated (Y/N)
Sampling _____ Bladder Pump _____ Dedicated (Y/N)

PURGING INFORMATION

Purge Date: _____ Start Purge: _____ End Purge: _____
(2400 Hr. Clock)
Water Volume in Casing (gallons): N/A Volume Purged (gallons): _____

MEASUREMENTS

Well Diameter 2.0 (inches) 1st 2nd Final
Stick Up _____ (ft) pH _____ (std.)
Ref. Measuring Pt. TIC SC _____ (umhos/cm)
Well Elevation * 626.16 (ft./msl) Temp. _____ (°C)
Water Level _____ (ft.) Well Stabilization / Recharge Grid
Ground Water Elev. _____ (ft./msl)
Well Bottom Elevation * 453.40 (ft./msl)

COMMENTS

Sample Appearance/Odor: _____
Weather Conditions: _____
Other: *Reference Measurement
Depth To Water from L.S. = _____
Levels were taken on _____ @ _____
* Total Depth = 172.75
* Sampled on 12/14/18 @ 0744
(Updated: 12-11-2018))

Sampler Name (Print): Noe Lopez Signature: [Signature]

TestAmerica Chicago

2417 Bond St
University Park, IL 60484-3182
Tel: 708 534 5200 Fax: 708 534 5211

Sample ID: G30S
Facility: Midwest Generation-Joliet #9 CCR
Job #: 500-155880-16

Type Sample: Ground Water Surface Water Leachate Other: _____
(circle one)
Equipment Used: Purging _____ Bladder Pump _____ Dedicated (Y/N)
Sampling _____ Bladder Pump _____ Dedicated (Y/N)

PURGING INFORMATION

Purge Date: 12/14/18 Start Purge: 1345 End Purge: 1403
(2400 Hr. Clock)

Water Volume in Casing (gallons): N/A Volume Purged (gallons): 0.23

MEASUREMENTS

Well Diameter 2.0 (inches) 1st 2nd Final
Stick Up 2.31 (ft) pH 7.94 7.99 7.99 (std.)
Ref. Measuring Pt. TIC SC 1,420 1,422 1,422 (umhos/cm)
Well Elevation *524.70 (ft./msl) Temp. 9.82 9.81 9.81 (°C)
Water Level 2.51 (ft.) Well Stabilization / Recharge Grid
Ground Water Elev. 522.19 (ft./msl)
Well Bottom Elevation *462.58 (ft./msl)

COMMENTS

Sample Appearance/Odor: Colorless, clear, moderate odor

Weather Conditions: 42°F, Fog, NE winds @ 5-10 mph

Other: *Reference Measurement

Depth To Water from L.S. = 2.51 - 2.31 = 0.20 (ft)

Levels were taken on 12/14/18 @ 1340

(Updated 10-10-2018)

Sampler Name (Print): Noe Lopez Signature: 12/14/18

FIELD FORM 1

TestAmerica Chicago

2417 Bond St
University Park, IL 60484-3182
Tel: 708 534 5200 Fax: 708 534 5211

Sample ID: T09S
Facility: Midwest Generation-Joliet #9 CCR
Job #: 500-155886-17

Type Sample: Ground Water Surface Water Leachate Other: _____
(circle one)
Equipment Used: Purging _____ Bladder Pump Dedicated (Y/N) (N)
Sampling _____ Bladder Pump Dedicated (Y/N) (N)

PURGING INFORMATION

Purge Date: 12/18/18 Start Purge: 1050 End Purge: 1108
(2400 Hr. Clock)
Water Volume in Casing (gallons): N/A Volume Purged (gallons): 0.58

MEASUREMENTS

Well Diameter 2.0 (inches) 1st 2nd Final
Stick Up 2.40 (ft) pH 7.54 7.54 7.54 (std.)
Ref. Measuring Pt. TIC SC 1200 1189 1189 (umhos/cm)
Well Elevation * 603.74 (ft./msl) Temp. 7.76 7.77 7.77 (°C)
Water Level 95.63 (ft.) Well Stabilization / Recharge Grid
Ground Water Elev. 508.11 (ft./msl)
Well Bottom Elevation * 444.80 (ft./msl)

COMMENTS

Sample Appearance/Odor: Colorless, Clear, No Odor
Weather Conditions: 42°F, Sunny, S winds @ 5-10 mph

Other: *Reference Measurement (updated 02/19/14)

Depth To Water from L.S. = 95.63 - 2.40 = 93.23 (ft)

Levels were taken on 12/18/18 @ 10:35

*Total Depth: 158.59

(Updated: 12-11-2018)

Sampler Name (Print): Noe Lopez Signature: [Signature]

TestAmerica Chicago

2417 Bond St
University Park, IL 60484-3182
Tel: 708 534 5200 Fax: 708 534 5211

Sample ID: T06S
Facility: Midwest Generation-Joliet #9 CCR
Job #: 500-155880-18

Type Sample: (circle one) Ground Water Surface Water Leachate Other: _____
Equipment Used: Purging _____ Bladder Pump _____ Dedicated (Y/N) (N)
Sampling _____ Bladder Pump _____ Dedicated (Y/N) (N)

PURGING INFORMATION

Purge Date: 12/18/18 Start Purge: 1300 End Purge: 1320
(2400 Hr. Clock)
Water Volume in Casing (gallons): N/A Volume Purged (gallons): 0.39

MEASUREMENTS

Well Diameter 2.0 (inches) 1st 2nd Final
Stick Up 2.30 (ft) pH 7.37 7.36 7.36 (std.)
Ref. Measuring Pt. TIC SC 657 658 658 (umhos/cm)
Well Elevation * 621.02 (ft./msl) Temp. 9.95 9.97 9.97 (°C)
Water Level 115.65 (ft.) Well Stabilization / Recharge Grid
Ground Water Elev. 505.37 (ft./msl)
Well Bottom Elevation * 447.94 (ft./msl)

COMMENTS

Sample Appearance/Odor: Colorless, Clear, No Odor
Weather Conditions: 43°F, Sunny, S winds e 5-10 mph

Other: *Reference Measurement

Depth To Water from L.S. = 115.65 - 2.30 = 113.35 (ft)

Levels were taken on 12/18/18 @ 1240.

* Total Deth = 173.00

(Updated: 12-11-2018)

Sampler Name (Print): Noe Lopez Signature: [Signature]

TestAmerica Chicago

2417 Bond St
University Park, IL 60484-3182
Tel: 708 534 5200 Fax: 708 534 5211

Sample ID: T05S
Facility: Midwest Generation-Joliet #9 CCR
Job #: 500-155886-19

Type Sample: Ground Water Surface Water Leachate Other: _____
(circle one)
Equipment Used: Purging _____ Bladder Pump Dedicated (Y/N) (N)
Sampling _____ Bladder Pump Dedicated (Y/N) (N)

PURGING INFORMATION

Purge Date: 12/19/18 Start Purge: 0905 End Purge: 0927
(2400 Hr. Clock)
Water Volume in Casing (gallons): N/A Volume Purged (gallons): 0.71

MEASUREMENTS

Well Diameter 2.0 (inches) 1st 2nd Final
Stick Up 2.40 (ft) pH 10.35 10.37 10.37 (std.)
Ref. Measuring Pt. TIC SC 2,000 2,010 2,010 (umhos/cm)
Well Elevation * 623.45 (ft./msl) Temp. 8.92 8.85 8.85 (°C)
Water Level 125.59 (ft.) Well Stabilization / Recharge Grid
Ground Water Elev. 497.86 (ft./msl)
Well Bottom Elevation * 448.35 (ft./msl)

COMMENTS

Sample Appearance/Odor: Colorless, Clear, Slight Odor
Weather Conditions: 38°F, Partly Cloudy, S winds E 5-10 mph

Other: *Reference Measurement

Depth To Water from L.S. = 125.59 - 2.40 = 123.19 (ft.)

Levels were taken on 12/19/18 @ 0845

* Total Deth = 175.00

(Updated: 12-11-2018)

Sampler Name (Print): Noe Lopez

Signature: [Signature]

TestAmerica Chicago

2417 Bond St
University Park, IL 60484-3182
Tel: 708 534 5200 Fax: 708 534 5211

Sample ID: T04S
Facility: Midwest Generation-Joliet #9 CCR
Job #: 500-155886-20

Type Sample: (circle one) Ground Water Surface Water Leachate Other: _____
Equipment Used: Purging _____ Bladder Pump _____ Dedicated (Y/N) (N)
Sampling _____ Bladder Pump _____ Dedicated (Y/N) (N)

PURGING INFORMATION

Purge Date: 12/19/18 Start Purge: 1205 End Purge: 1225
(2400 Hr. Clock)
Water Volume in Casing (gallons): N/A Volume Purged (gallons): 0.65

MEASUREMENTS

Well Diameter 2.0 (inches) 1st 2nd Final
Stick Up 2.42 (ft) pH 7.91 7.89 7.89 (std.)
Ref. Measuring Pt. TIC SC 667 662 662 (umhos/cm)
Well Elevation * 631.35 (ft./msl) Temp. 12.41 12.40 12.40 (°C)
Water Level 158.52 (ft.) Well Stabilization / Recharge Grid
Ground Water Elev. 472.83 (ft./msl)
Well Bottom Elevation * 458.07 (ft./msl)

COMMENTS

Sample Appearance/Odor: Colorless, Clear, Slight Odor
Weather Conditions: 48°F, Sunny, S wind SE 10-15 mph

Other: *Reference Measurement

Depth To Water from L.S. = 158.52 - 2.42 = 156.10 (ft.)

Levels were taken on 12/19/18 @ 1145

* Total Deth = 173.00

(Updated: 12-11-2018)

Sampler Name (Print): Noe Lopez

Signature: [Signature]