K P R G

ENVIRONMENTAL CONSULTATION & REMEDIATION

KPRG and Associates, Inc.

CCR COMPLIANCE
ANNUAL GROUNDWATER MONITORING and CORRECTIVE ACTION REPORT - 2017

Midwest Generation, LLC
Joliet #29 Generating Station
1800 Channahon Road
Joliet, Illinois

Prepared By: KPRG and Associates, Inc.
14665 West Lisbon Road, Suite 2B
Brookfield, WI 53005

January 24, 2017

TABLE OF CONTENTS

FIGURES

TABLES

1.0 INTRODUCTION

The Detection Monitoring requirements in accordance with the Federal Register, Environmental Protection Agency, 40 CFR Parts 257.94, Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities; Final Rule dated April 17, 2015 (CCR Rule) have been completed for the ash pond monitoring wells located at the Midwest Generation, LLC (Midwest Generation) Joliet #29 Generating Station. The wells sampled were selected by Midwest Generation to meet the monitoring requirements of the CCR Rule for Ash Pond 2. The monitoring well network around this pond consists of four monitoring wells (MW-3, MW-4, MW-5 and MW-10 [upgradient]) as shown on Figure 1.

This annual report covers the work performed relative to CCR groundwater monitoring through the end of 2017. It is prepared in accordance with Section 257.90(e)(1-5) and summarizes the sampling procedures used, provides an evaluation of groundwater flow conditions, summarizes the analytical data generated and provides a discussion of the statistical evaluations in the process of being completed as a basis for determining the appropriate next phase of compliance activities.

2.0 FIELD PROCEDURES AND GROUNDWATER FLOW EVALUATION

2.1 Field Procedures

As previously noted, the CCR groundwater monitoring network for Ash Pond 2 consists of four wells (MW-3, MW-4, MW-5 and MW-10) 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). During all sampling events, the wells were in good condition with locked protector casings, and the concrete surface seals were intact.

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. To fulfill initial detection monitoring requirements under Section 257.94(b), the first eight rounds of groundwater sampling included the analysis of all compounds listed in the CCR Rule, Part 257, Appendices III and IV to facilitate development of statistical background water quality. A ninth round and subsequent resample event were also completed for subsequent use in statistical comparisons.

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. These maps are provided as Figures 2 through 11. A review of the maps indicates a consistent southerly groundwater flow direction with some divergence to the south-southeast and south-southwest and a fairly shallow horizontal hydraulic gradient. In accordance with general groundwater sampling requirements under Section 257.93(c), Table 2 provides a summary of the flow direction and an estimated rate of groundwater flow for each sampling event. The flow rate was calculated using the following equation:

$$V_s = \frac{K\,dh}{n_e\,dl}$$, 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 3.896×10^{-3} ft/sec used in Table 2 was obtained from the Hydrogeologic Assessment Report dated February 2011 and prepared by Patrick Engineering. The estimated effective porosity of the aquifer materials (0.35) was obtained from literature (Applied Hydrogeology, Fetter, 1980).

3.0 ANALYTICAL DATA AND STATUS OF EVALUATIONS

The analytical data from the detection monitoring groundwater sampling for Appendix III and IV parameters are provided in Tables 3 and 4, respectively. As previously noted, all of this initial data was collected as part of detection monitoring requirements under 257.94(b). Table 3 (Appendix III) also includes a ninth round and a resample event (dates in italics in table) which is the first formal round of detection monitoring after obtaining the required number of samples for development of statistical background. Both tables include the sample dates and whether the specific well is considered upgradient or downgradient relative to groundwater flow and the regulated unit.

The first eight rounds of Appendix III detection monitoring data from established upgradient well MW-10 are in the process of being statistically evaluated to establish background water quality in accordance with procedures defined in CCR Compliance Statistical Approach for Groundwater Data Evaluation, Midwest Generation #29 Generating Station dated October 10, 2017. This includes outlier testing, spatial/temporal variability testing, distributional testing, and the establishment of Prediction Limits for all Appendix III compounds to which the ninth round of groundwater detection monitoring data will be compared to determine whether there may be a statistically significant increase (SSI) for a specific compound at each well location. The evaluations are being performed with the assistance of the Sanitas™ statistical software package.

4.0 SUMMARY/CONCLUSIONS AND RECOMMENDATIONS

The Detection Monitoring requirements in accordance with the CCR Rule have been successfully met. Eight rounds of groundwater data have been generated for all upgradient and downgradient monitoring wells for Appendix III and Appendix IV parameters. In addition, a ninth round and resample event has also been collected for subsequent use in statistical comparisons.

Based on an evaluation of groundwater flow conditions over the reporting period shows that the flow system has been consistent over time between sampling events. The existing monitoring well network appears to be sufficient for the intended purposes of CCR Rule groundwater monitoring of the regulated unit. No additional monitoring well installations are proposed at this time based on the groundwater flow evaluation.

Development of statistical background for upgradient well MW-10 is in the process of being completed. Once this evaluation is completed a determination will be made whether there may be SSIs in downgradient monitoring wells in accordance with procedures defined in CCR Compliance Statistical Approach for Groundwater Data Evaluation, Midwest Generation #29 Generating Station dated October 10, 2017. Appropriate recommendations will be made once the statistical evaluation is completed regarding whether the site should continue with routine detection monitoring, proceed with an alternate source demonstration or to transition to an assessment monitoring program.

5.0 REFERENCES

- Federal Register, Environmental Protection Agency, 40 CFR Parts 257 and 261, Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals From Electric Utilities; Final Rule. Vol. 80, No. 74, Friday April 17, 2015.

- Patrick Engineering, Inc., Hydrogeologic Assessment Report – Joliet Generating Station No. 29, Joliet, IL. February 2011.

- KPRG and Associates, Inc., CCR Compliance Monitoring, Sampling and Analysis Plan, Midwest Generation, LLC Joliet #29 Generating Station. October 10, 2017.

- KPRG and Associates, Inc., CCR Compliance Statistical Approach for Groundwater Data Evaluation, Midwest Generation, LLC Joliet #29 Generating Station. October 10, 2017.

- C.W. Fetter, Jr., Applied Hydrogeology. Charles E. Merrill Publishing Co., 1980.

FIGURES

NOTE:
BACKGROUND MAP RETRIEVED FROM GOOGLE MAPS 2013

0 100'
APPROXIMATE SCALE

N

ENVIRONMENTAL CONSULTATION & REMEDIATION
K P R G
KPRG and Associates, inc.
414 Plaza Drive, Suite 106 Westmont, Illinois 60559 Telephone 630-325-1300 Facsimile 630-325-1593
14665 West Lisbon Road, Suite 2B Brookfield, Wisconsin 53005 Telephone 262-781-0475 Facsimile 262-781-0478

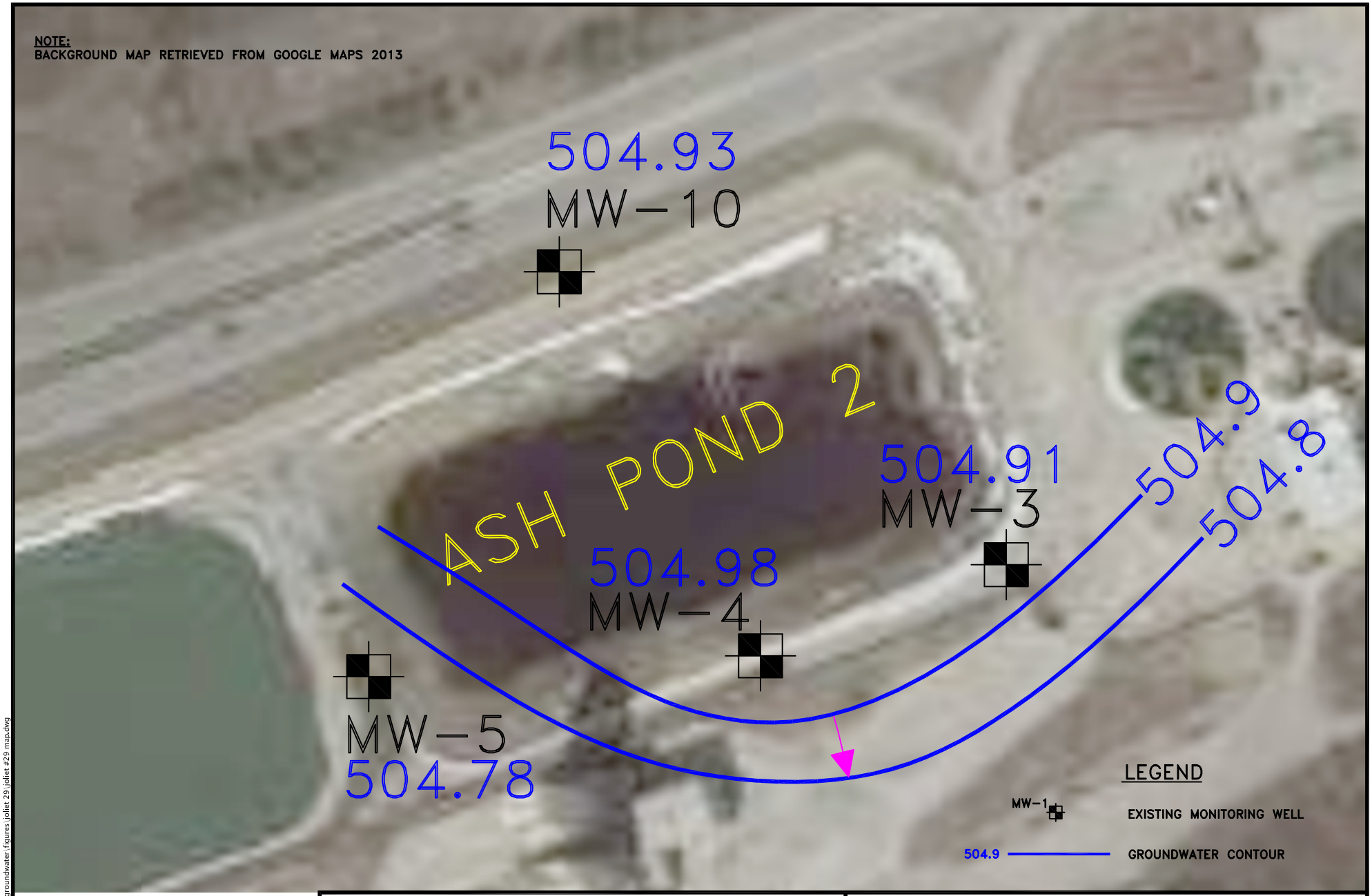
CCR MONITORING WELLS SITE MAP

JOLIET #29 GENERATING STATION
JOLIET, ILLINOIS

Scale: 1" = 100' | Date: December 27, 2017

KPRG Project No. 12313.0 | FIGURE 1

W:\projects\midwest generation attorney-client privilege\gw evaluations\joliet #29 map.dwg



W:\projects\midwest generation\12313 ash pond groundwater\figures\joliet 29\joliet #29 map.dwg

ENVIRONMENTAL CONSULTATION & REMEDIATION

K P R G

KPRG and Associates, inc.

414 Plaza Drive, Suite 106 Westmont, Illinois 60559 Telephone 630-325-1300 Facsimile 630-325-1593

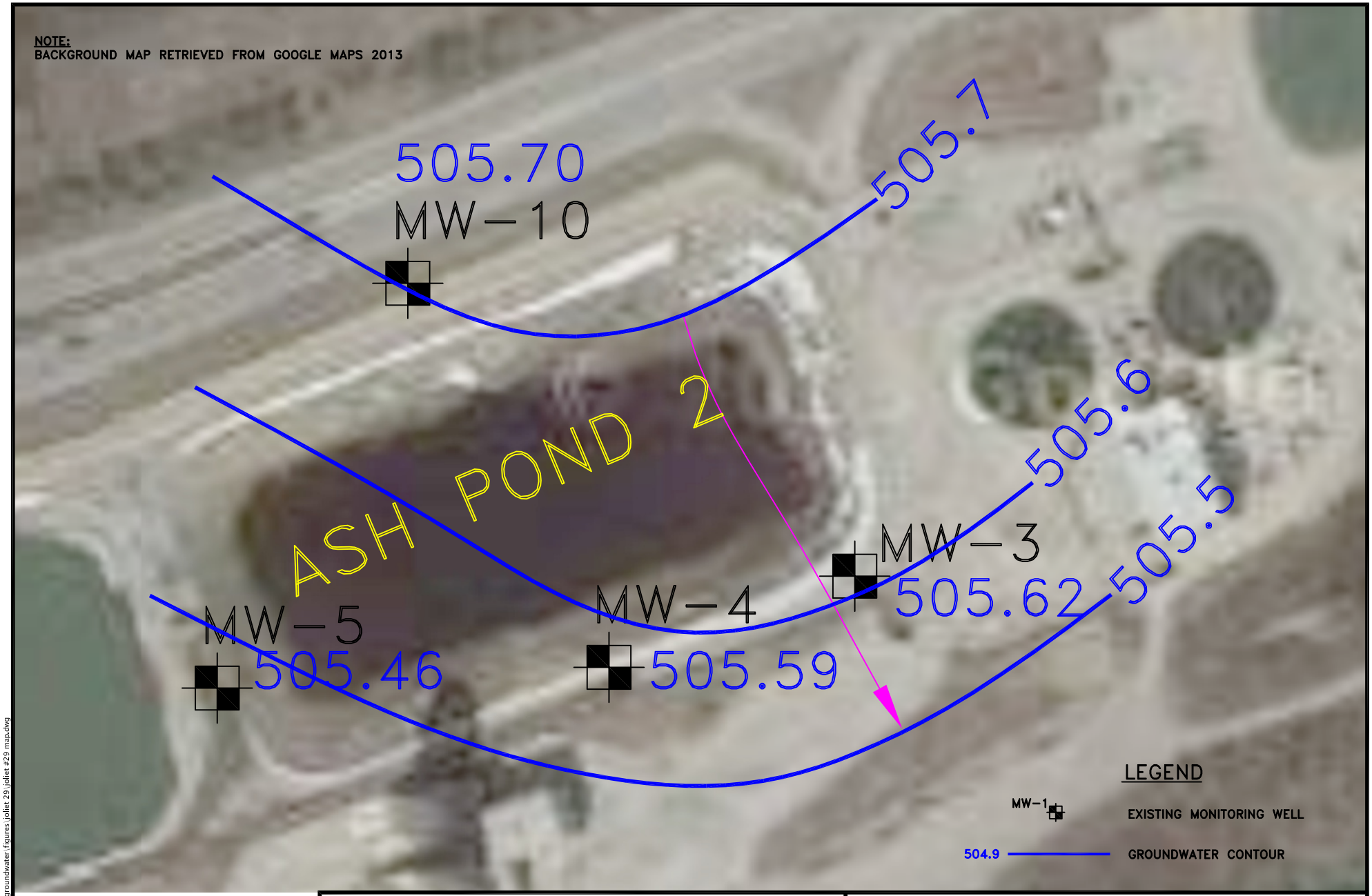
14665 West Lisbon Road, Suite 2B Brookfield, Wisconsin 53005 Telephone 262-781-0475 Facsimile 262-781-0478

CCR GROUNDWATER CONTOUR-10/2015

JOLIET #29 GENERATING STATION
JOLIET, ILLINOIS

Scale: 1" = 100' | Date: February 11, 2016

KPRG Project No. 12313.0 | FIGURE 2



0 100'
APPROXIMATE SCALE

N

ENVIRONMENTAL CONSULTATION & REMEDIATION
KPRG
KPRG and Associates, inc.
414 Plaza Drive, Suite 106 Westmont, Illinois 60559 Telephone 630-325-1300 Facsimile 630-325-1593
14665 West Lisbon Road, Suite 2B Brookfield, Wisconsin 53005 Telephone 262-781-0475 Facsimile 262-781-0478

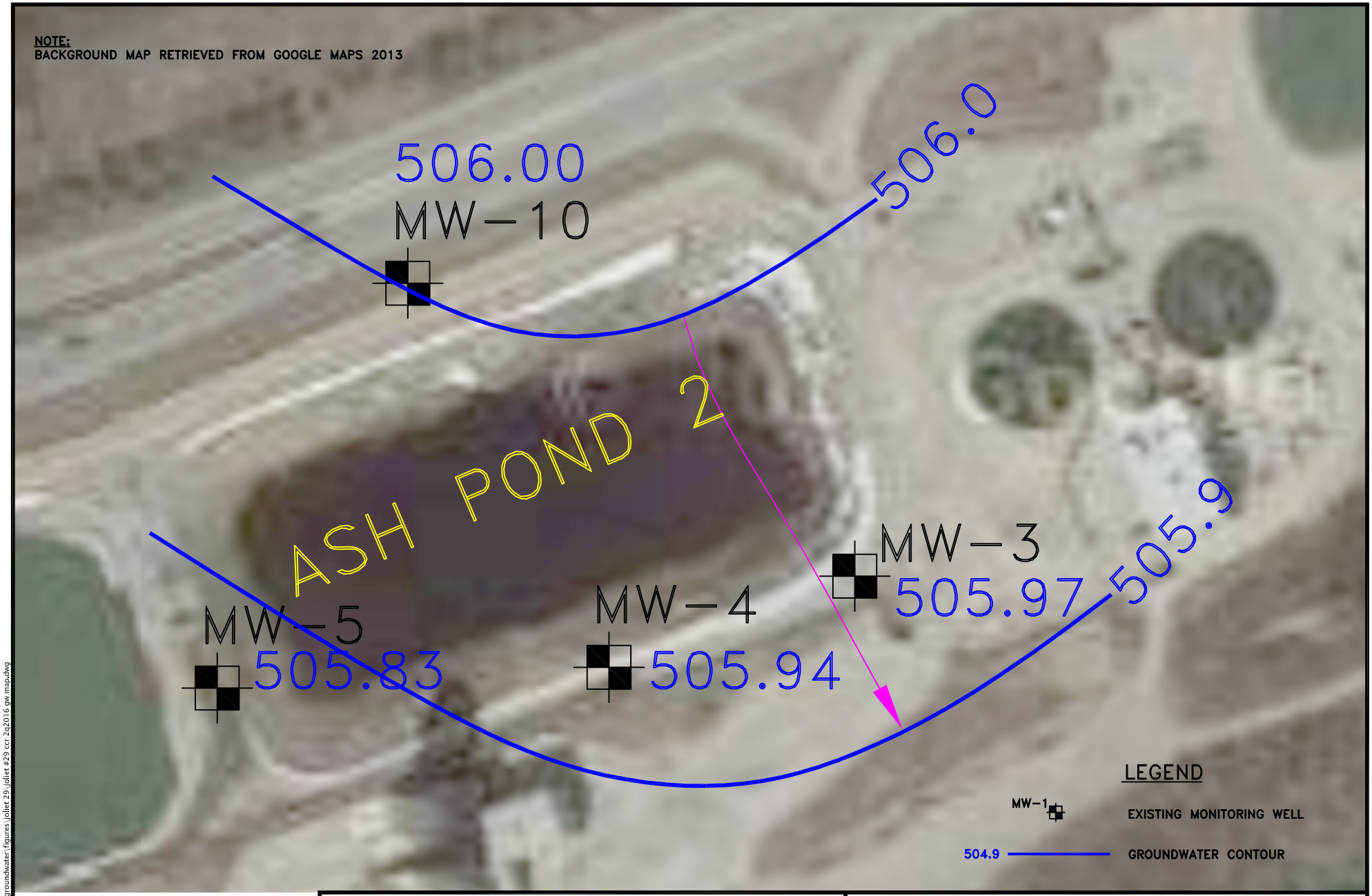
CCR GROUNDWATER CONTOUR-2/2016

JOLIET #29 GENERATING STATION
JOLIET, ILLINOIS

Scale: 1" = 100' | Date: April 19, 2016

KPRG Project No. 12313.0 | FIGURE 3

W:\projects\midwest generation\12313 ash pond groundwater\figures\joliet 29\joliet #29 map.dwg



0 100'
APPROXIMATE SCALE

N

ENVIRONMENTAL CONSULTATION & REMEDIATION

K P R G

KPRG and Associates, inc.

414 Plaza Drive, Suite 106 Westmont, Illinois 60559 Telephone 630-325-1300 Facsimile 630-325-1593

14665 West Lisbon Road, Suite 2B Brookfield, Wisconsin 53005 Telephone 262-781-0475 Facsimile 262-781-0478

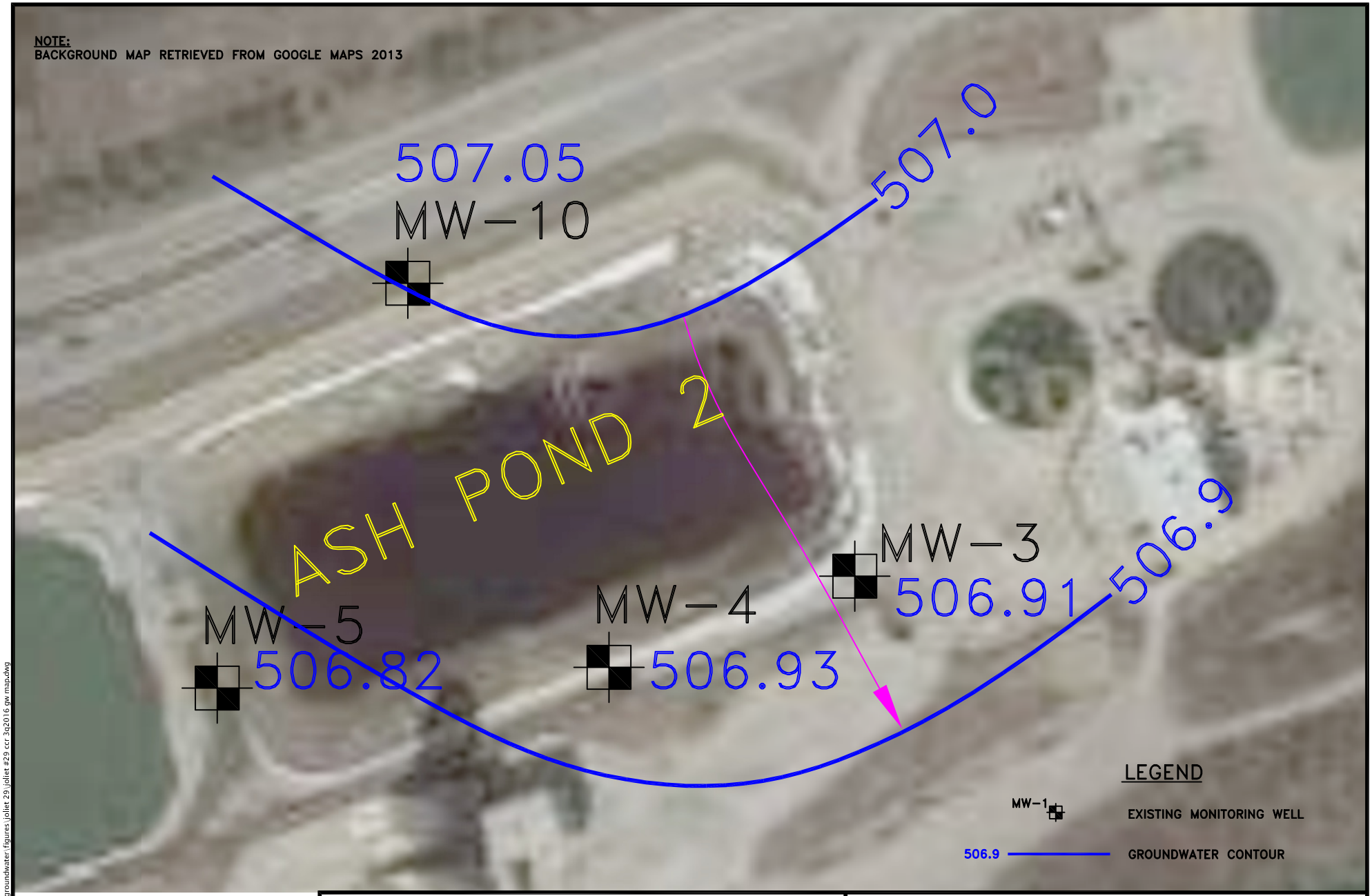
CCR GROUNDWATER CONTOUR-5/2016

JOLIET #29 GENERATING STATION
JOLIET, ILLINOIS

Scale: 1" = 100' | Date: July 8, 2016

KPRG Project No. 12313.0 | FIGURE 4

W:\projects\midwest generation\12313 ash pond groundwater\figures\joliet 29\joliet #29 ccr 2q2016 gw map.dwg



0 100'
APPROXIMATE SCALE

N

ENVIRONMENTAL CONSULTATION & REMEDIATION

K P R G

KPRG and Associates, inc.

414 Plaza Drive, Suite 106 Westmont, Illinois 60559 Telephone 630-325-1300 Facsimile 630-325-1593

14665 West Lisbon Road, Suite 2B Brookfield, Wisconsin 53005 Telephone 262-781-0475 Facsimile 262-781-0478

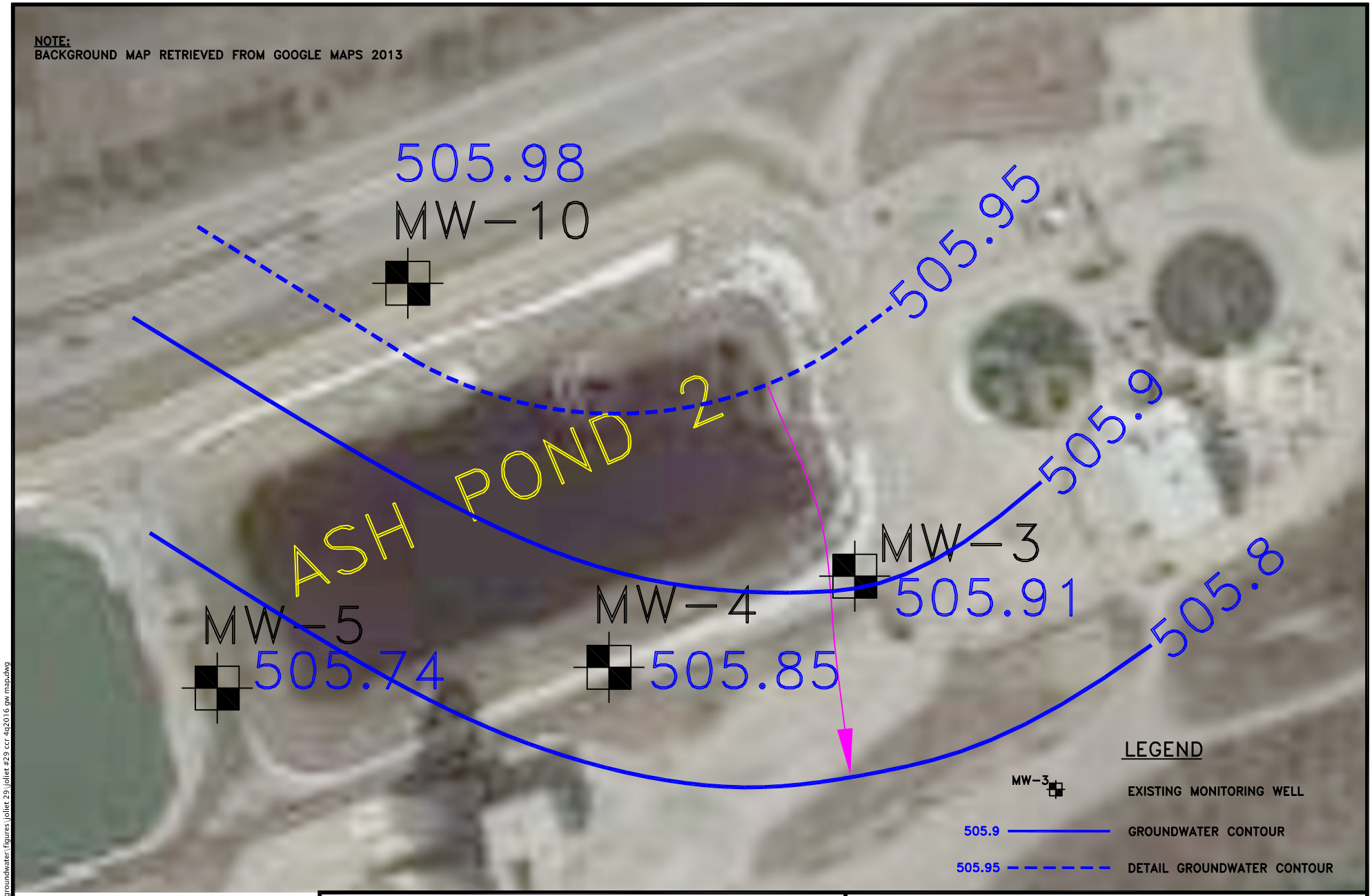
CCR GROUNDWATER CONTOUR-08/2016

JOLIET #29 GENERATING STATION
JOLIET, ILLINOIS

Scale: 1" = 100' | Date: October 10, 2016

KPRG Project No. 12313.0 | FIGURE 5

W:\projects\midwest generation\12313 ash pond groundwater\figures\joliet 29\joliet #29 ccr 3q2016 gw map.dwg



0 100'
APPROXIMATE SCALE

N

ENVIRONMENTAL CONSULTATION & REMEDIATION

K P R G

KPRG and Associates, inc.

414 Plaza Drive, Suite 106 Westmont, Illinois 60559 Telephone 630-325-1300 Facsimile 630-325-1593

14665 West Lisbon Road, Suite 2B Brookfield, Wisconsin 53005 Telephone 262-781-0475 Facsimile 262-781-0478

CCR GROUNDWATER CONTOUR-11/2016

JOLIET #29 GENERATING STATION
JOLIET, ILLINOIS

Scale: 1" = 100' | Date: January 3, 2017

KPRG Project No. 12313.0 | FIGURE 6

W:\projects\midwest generation\12313 ash pond groundwater\figures\joliet 29\joliet #29 ccr 4q2016 gw map.dwg

0 100'
APPROXIMATE SCALE

N

ENVIRONMENTAL CONSULTATION & REMEDIATION

K P R G

KPRG and Associates, inc.

414 Plaza Drive, Suite 106 Westmont, Illinois 60559 Telephone 630-325-1300 Facsimile 630-325-1593

14665 West Lisbon Road, Suite 2B Brookfield, Wisconsin 53005 Telephone 262-781-0475 Facsimile 262-781-0478

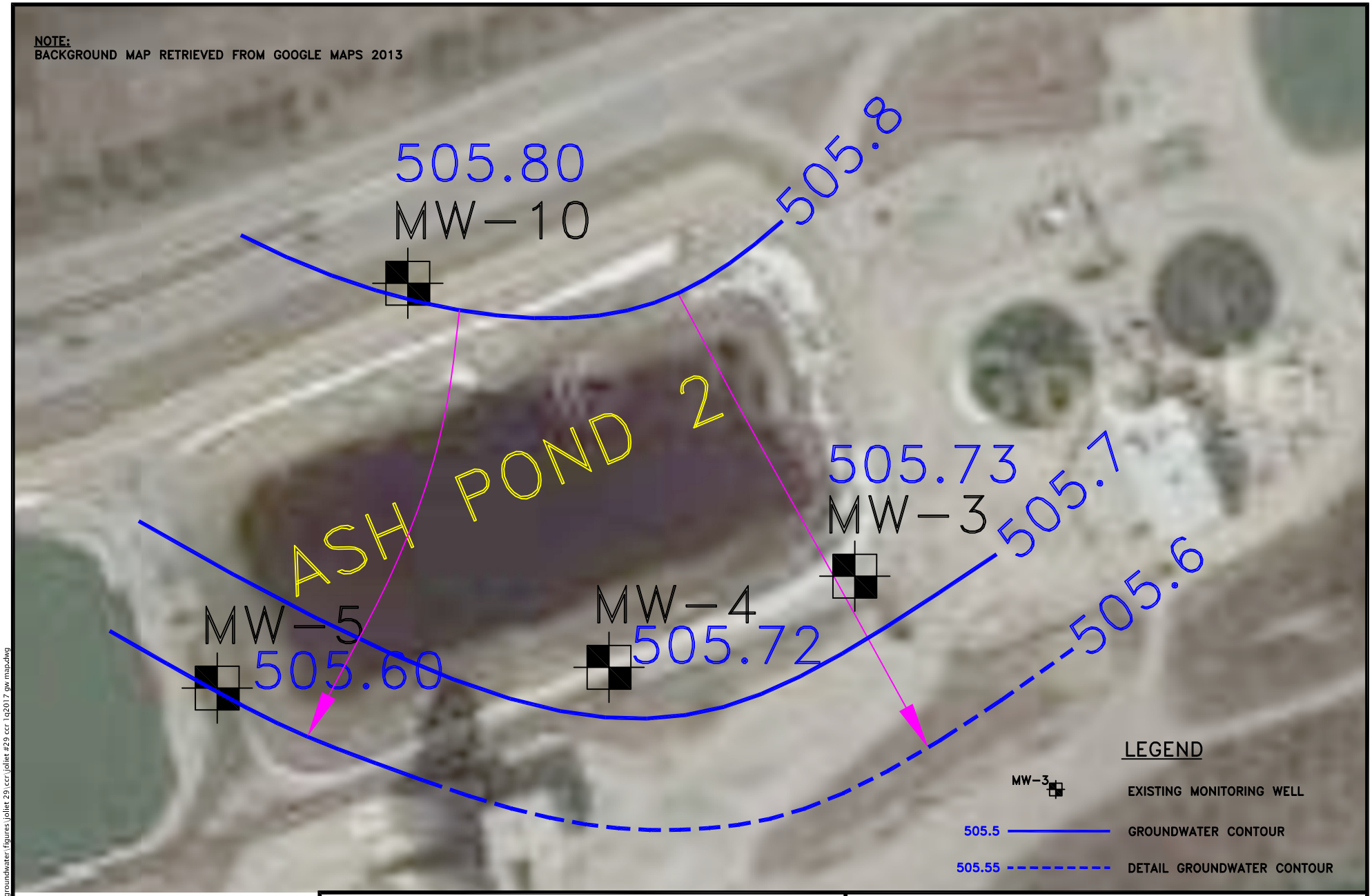
CCR GROUNDWATER CONTOUR-02/2017

JOLIET #29 GENERATING STATION
JOLIET, ILLINOIS

Scale: 1" = 100' | Date: April 4, 2017

KPRG Project No. 12313.0 | FIGURE 7

W:\projects\midwest generation\12313 ash pond groundwater\figures\joliet 29\ccr\joliet #29 ccr 1q2017 gw map.dwg



0 100'
APPROXIMATE SCALE

N

ENVIRONMENTAL CONSULTATION & REMEDIATION

K P R G

KPRG and Associates, inc.

414 Plaza Drive, Suite 106 Westmont, Illinois 60559 Telephone 630-325-1300 Facsimile 630-325-1593

14665 West Lisbon Road, Suite 2B Brookfield, Wisconsin 53005 Telephone 262-781-0475 Facsimile 262-781-0478

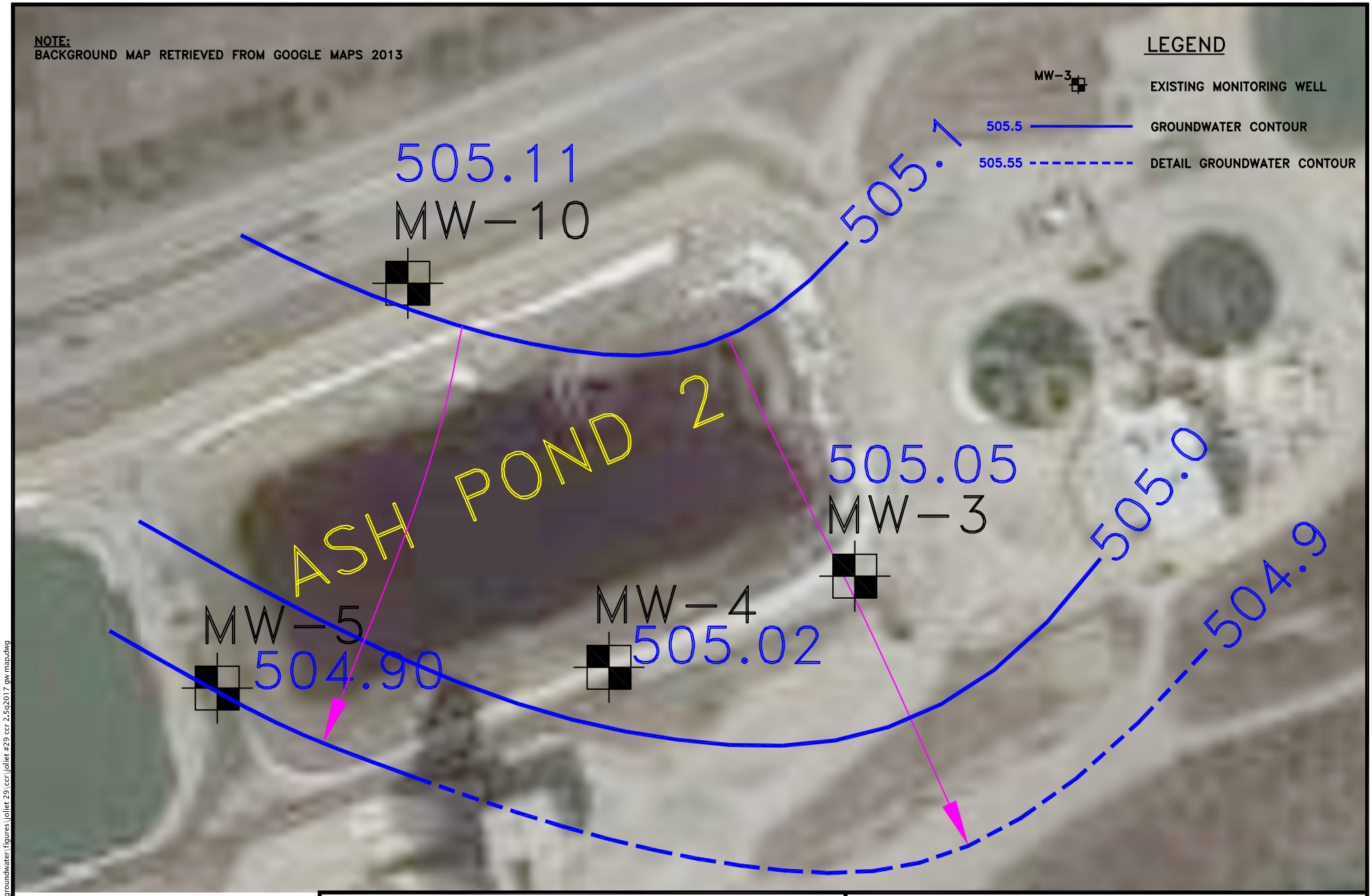
CCR GROUNDWATER CONTOUR-04/2017

JOLIET #29 GENERATING STATION
JOLIET, ILLINOIS

Scale: 1" = 100' | Date: June 22, 2017

KPRG Project No. 12313.0 | FIGURE 8

W:\projects\midwest generation\12313 ash pond groundwater\figures\joliet 29\ccr\joliet #29 ccr 1q2017 gw map.dwg



0 100'
APPROXIMATE SCALE

N

ENVIRONMENTAL CONSULTATION & REMEDIATION
K P R G
KPRG and Associates, inc.
414 Plaza Drive, Suite 106 Westmont, Illinois 60559 Telephone 630-325-1300 Facsimile 630-325-1593
14665 West Lisbon Road, Suite 2B Brookfield, Wisconsin 53005 Telephone 262-781-0475 Facsimile 262-781-0478

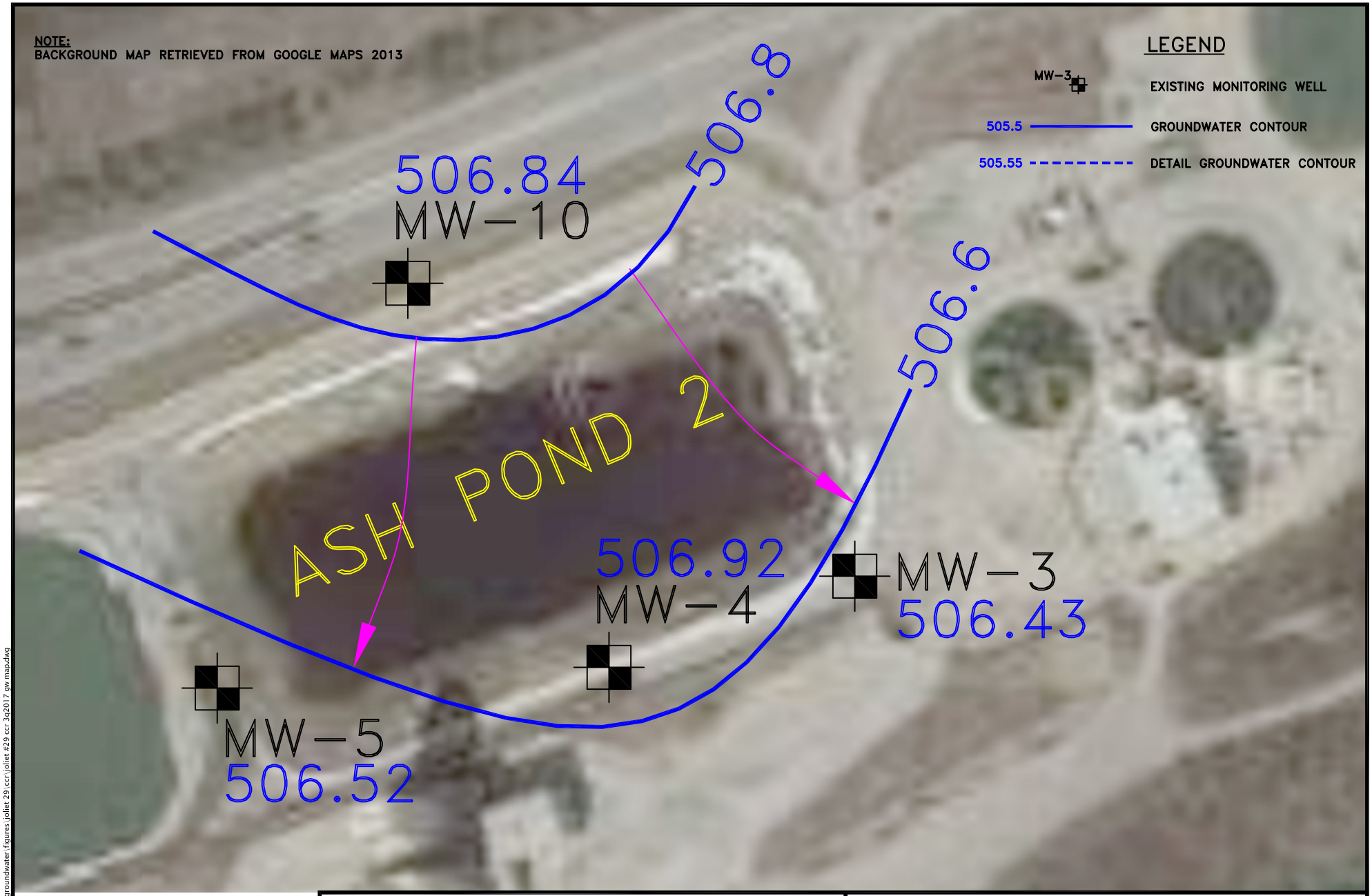
CCR GROUNDWATER CONTOUR-06/2017

JOLIET #29 GENERATING STATION
JOLIET, ILLINOIS

Scale: 1" = 100' | Date: August 9, 2017

KPRG Project No. 12313.0 | FIGURE 9

W:\projects\midwest generation\12313 ash pond groundwater\figures\joliet 29\ccr\joliet #29 ccr 2.5q2017 gw map.dwg



0 100'

APPROXIMATE SCALE

N

ENVIRONMENTAL CONSULTATION & REMEDIATION

K P R G

KPRG and Associates, inc.

414 Plaza Drive, Suite 106 Westmont, Illinois 60559 Telephone 630-325-1300 Facsimile 630-325-1593

14665 West Lisbon Road, Suite 2B Brookfield, Wisconsin 53005 Telephone 262-781-0475 Facsimile 262-781-0478

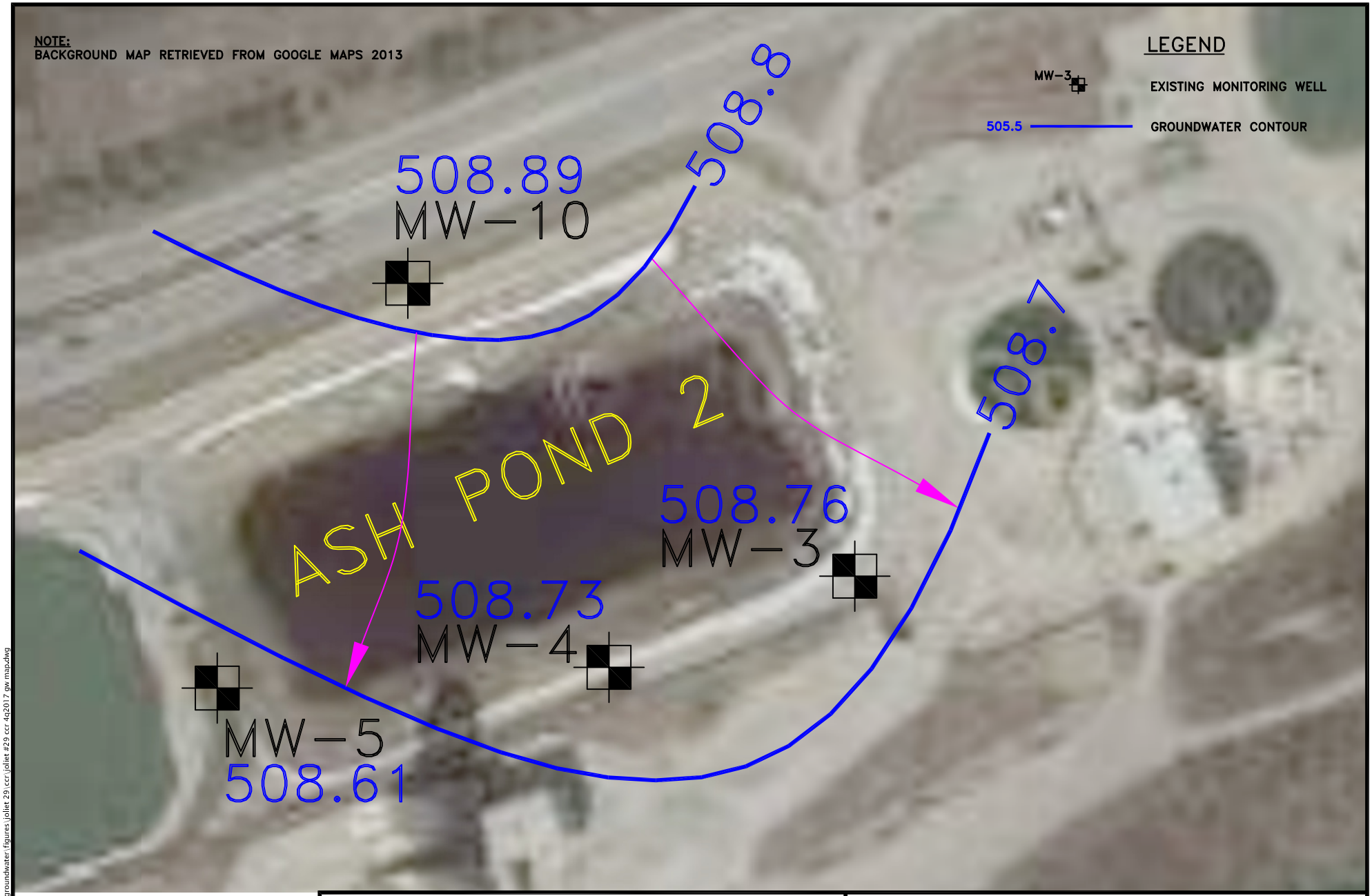
CCR GROUNDWATER CONTOUR-08/2017

JOLIET #29 GENERATING STATION
JOLIET, ILLINOIS

Scale: 1" = 100' | Date: October 18, 2017

KPRG Project No. 12313.0 | FIGURE 10

W:\projects\midwest generation\12313 ash pond groundwater\figures\joliet 29\ccr\joliet #29 ccr 3q2017 gw map.dwg



0 100'
APPROXIMATE SCALE

N

ENVIRONMENTAL CONSULTATION & REMEDIATION

K P R G

KPRG and Associates, inc.

414 Plaza Drive, Suite 106 Westmont, Illinois 60559 Telephone 630-325-1300 Facsimile 630-325-1593

14665 West Lisbon Road, Suite 2B Brookfield, Wisconsin 53005 Telephone 262-781-0475 Facsimile 262-781-0478

CCR GROUNDWATER CONTOUR-10/2017

JOLIET #29 GENERATING STATION
JOLIET, ILLINOIS

Scale: 1" = 100' | Date: December 20, 2017

KPRG Project No. 12313.0 | FIGURE 11

W:\projects\midwest generation\12313 ash pond groundwater\figures\joliet 29\ccr\joliet #29 ccr 4q2017 gw map.dwg

TABLES

Table 1. Groundwater Elevations - Midwest Generation, LLC, Joliet Station #29, Joliet, IL

Well ID	Date	Top of Casing Elevation (ft above MSL)	Depth to Groundwater (ft below TOC)	Groundwater Elevation (ft above MSL)
MW-03	10/27/15	538.78	33.87	504.91
	02/09/16	538.79	33.17	505.62
	05/10/16	538.79	32.82	505.97
	08/30/16	538.79	31.88	506.91
	11/01/16	538.79	32.88	505.91
	02/06/17	538.79	33.25	505.54
	04/25/17	538.79	33.06	505.73
	06/14/17	538.79	33.74	505.05
	08/01/17	538.79	32.36	506.43
	10/18/17	538.79	30.03	508.76
MW-04	10/27/15	539.03	34.05	504.98
	02/09/16	539.01	33.42	505.59
	05/10/16	539.01	33.07	505.94
	08/30/16	539.01	32.08	506.93
	11/01/16	539.01	33.16	505.85
	02/06/17	539.01	33.51	505.50
	04/25/17	539.01	33.29	505.72
	06/14/17	539.01	33.99	505.02
	08/01/17	539.01	32.09	506.92
	10/18/17	539.01	30.28	508.73
MW-05	10/27/15	539.69	34.91	504.78
	02/09/16	539.64	34.18	505.46
	05/10/16	539.64	33.81	505.83
	08/30/16	539.64	32.82	506.82
	11/01/16	539.64	33.90	505.74
	02/06/17	539.64	34.23	505.41
	04/25/17	539.64	34.04	505.60
	06/14/17	539.64	34.74	504.90
	08/01/17	539.64	33.12	506.52
	10/18/17	539.64	31.03	508.61
MW-10	10/27/15	540.03	35.10	504.93
	02/09/16	540.02	34.32	505.70
	05/10/16	540.02	34.02	506.00
	08/30/16	540.02	32.97	507.05
	11/01/16	540.02	34.04	505.98
	02/06/17	540.02	34.42	505.60
	04/25/17	540.02	34.22	505.80
	06/14/17	540.02	34.91	505.11
	08/01/17	540.02	33.18	506.84
	10/18/17	540.02	31.13	508.89

MSL - Mean Sea Level
TOC - Top of Casing

Table 2. Groundwater Flow Direction and Estimated Seepage Velocity/Flow Rate - Joliet #29 Generation Station.

DATE	Groundwater Flow Direction	K_{avg} (ft/sec)*	Average Hydraulic Gradient (ft/ft)	Porosity (unitless)**	Estimated Seepage Velocity (ft/day)
10/28/2015	Southerly (SSW-SSE)	3.896E-03	0.0003	0.35	0.26
2/10/2016	Southerly (SSW-SSE)	3.896E-03	0.0007	0.35	0.63
5/12/2016	Southerly (SSW-SSE)	3.896E-03	0.0004	0.35	0.34
8/31/2016	Southerly (SSW-SSE)	3.896E-03	0.0004	0.35	0.34
11/2/2016	Southerly (SSW-SSE)	3.896E-03	0.0007	0.35	0.63
2/6/2017	Southerly (SSW-SSE)	3.896E-03	0.0005	0.35	0.43
4/26/2017	Southerly (SSW-SSE)	3.896E-03	0.0006	0.35	0.58
6/14/2017	Southerly (SSW-SSE)	3.896E-03	0.0006	0.35	0.58
8/2/2017	Southerly (SSW-SSE)	3.896E-03	0.0008	0.35	0.77
10/18/2017	Southerly (SSW-SSE)	3.896E-03	0.0004	0.35	0.38

* K_{avg} - Average hydraulic conductivity (feet/second) from Hydrogeologic Assessment Report, Patrick Engineering, February 2011.
** - Porosity estimate from Applied Hydrogeology, Fetter, 1980.
SSW - South-southwest
SSE - South-southeast

Table 3. Detection Monitroing - Appendix III Groundwater Analytical Results through 2017 - Midwest Generation, LLC, Joliet Station #29, Joliet, IL.

Well	Date	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	Total Dissolved Solids
MW-10 up-gradient	10/28/2015	0.47	100	200	0.41	7.04	84	790
	2/10/2016	0.41	100	210	0.44	7.17	120	820
	5/12/2016	0.29	100	300	0.42	7.02	110	920
	8/31/2016	0.36	89	170	0.46	6.95	100	760
	11/2/2016	0.48	100	130	0.45	6.99	95	720
	2/6/2017	0.44	120	190	0.36	6.99	88	820
	4/26/2017	0.35	120	200	0.35	7.27	87	760
	6/14/2017	0.29	91	160	0.43	7.48	75	690
	8/2/2017	0.45	97	170	0.38	7.23	110	750
	10/18/2017	0.61	120	140	0.41	7.11	130	820
MW-03 down-gradient	10/28/2015	0.34	110	230	0.41	7.11	110	920
	2/10/2016	0.49	100	220	0.44	7.31	130	790
	5/10/2016	0.48	95	240	0.44	7.07	130	800
	8/31/2016	0.49	100	250	0.45	7.18	120	920
	11/2/2016	0.34	87	190	0.44	7.45	94	780
	2/6/2017	0.40	97	140	0.39	7.35	77	720
	4/26/2017	0.54	100	210	0.36	7.03	120	820
	6/14/2017	0.45	88	190	0.44	7.43	75	760
	8/2/2017	0.41	99	200	0.4	7.34	110	850
	10/18/2017	0.35	93	160	0.42	7.11	100	850
MW-04 down-gradient	10/28/2015	0.34	94	F1 200	0.45	7.07	83	740
	2/10/2016	0.32	97	210	0.47	7.22	140	810
	5/10/2016	0.47	100	260	0.46	6.71	150	900
	8/31/2016	0.42	100	210	0.45	7.07	120	890
	11/2/2016	0.32	98	160	0.43	7.25	83	750
	2/6/2017	0.40	110	200	0.37	7.19	98	790
	4/26/2017	0.33	100	220	0.37	7.46	89	770
	6/14/2017	0.37	92	190	0.47	7.45	80	770
	8/2/2017	0.35	93	180	0.43	7.41	100	770
	10/18/2017	0.54	97	140	0.45	7.2	120	790
MW-05 down-gradient	10/28/2015	0.64	100	160	0.39	7.12	120	790
	2/10/2016	0.46	110	220	0.39	7.25	120	790
	5/10/2016	0.8	150	220	0.46	6.88	290	950
	8/31/2016	1.0	140	99	0.56	6.81	260	820
	11/2/2016	0.41	98	130	0.37	7.26	100	700
	2/6/2017	0.48	150	180	0.30	7.22	120	790
	4/26/2017	0.67	110	F1 190	0.37	7.28	170	770
	6/14/2017	0.44	75	150	0.46	7.47	110	670
	8/2/2017	0.28	83	170	0.35	7.3	99	770
	10/18/2017	0.42	110	110	0.38	7.16	95	720

Notes:
All units are in mg/l except pH is in standard units.
Italics Dates - Data that will be compared against establsihed statistical background.
F1 - MS and/or MSD Recovery outside of limits.

Table 4. Detection Monitoring - Appendix IV Groundwater Analytical Results through 2017 - Midwest Generation, LLC, Joliet Station #29, Joliet, IL

Well	Date	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Fluoride	Lead	Lithium	Mercury	Molybdenum	Radium 226 + 228 Combined	Selenium	Thallium
MW-10 up-gradient	10/28/2015	< 0.003	< 0.001	0.041	^ < 0.001	< 0.0005	< 0.005	< 0.001	0.41	< 0.0005	0.013	< 0.0002	0.0060	0.2981	< 0.0025	< 0.002
	2/10/2016	< 0.003	0.001	0.043	< 0.001	< 0.0005	< 0.005	< 0.001	0.44	< 0.0005	0.011	< 0.0002	0.0067	< 0.438	< 0.0025	< 0.002
	5/12/2016	< 0.003	< 0.001	0.046	< 0.001	< 0.0005	< 0.005	< 0.001	0.42	< 0.0005	0.012	< 0.0002	0.0051	< 0.414	< 0.0025	< 0.002
	8/31/2016	< 0.003	< 0.001	0.039	^ < 0.001	< 0.0005	< 0.005	< 0.001	0.46	< 0.0005	0.010	< 0.0002	0.0077	< 0.394	< 0.0025	< 0.002
	11/2/2016	< 0.003	0.0018	0.035	< 0.001	< 0.0005	< 0.005	< 0.001	0.45	0.0014	0.011	< 0.0002	0.0061	0.626	< 0.0025	< 0.002
	2/6/2017	< 0.003	0.0011	0.048	< 0.001	< 0.0005	< 0.005	< 0.001	0.36	0.00086	0.014	< 0.0002	0.0056	< 0.389	< 0.0025	< 0.002
	4/26/2017	< 0.003	0.0015	0.046	< 0.001	< 0.0005	< 0.005	< 0.001	0.35	0.0012	< 0.01	< 0.0002	0.006	< 0.34	< 0.0025	< 0.002
	6/14/2017	< 0.003	< 0.001	0.034	< 0.001	< 0.0005	< 0.005	< 0.001	0.43	< 0.0005	0.012	< 0.0002	0.0072	< 0.356	< 0.0025	< 0.002
	8/2/2017	< 0.003	0.0011	0.036	< 0.001	< 0.0005	< 0.005	< 0.001	0.38	< 0.0005	0.011	< 0.0002	0.0079	0.429	< 0.0025	< 0.002
	10/18/2017	< 0.003	0.0012	0.04	< ^ 0.001	< 0.0005	< 0.005	< 0.001	0.41	0.00059	0.013	< 0.0002	0.0066	< 0.422	< 0.0025	< ^ 0.002
MW-03 down-gradient	10/28/2015	< 0.003	0.0015	0.100	^ < 0.001	< 0.0005	< 0.005	< 0.001	0.41	< 0.0005	0.013	< 0.0002	< 0.0050	0.41	< 0.0025	< 0.002
	2/10/2016	< 0.003	0.0017	0.100	< 0.001	< 0.0005	< 0.005	< 0.001	0.44	< 0.0005	0.011	< 0.0002	0.0060	< 1.68	0.0045	< 0.002
	5/10/2016	< 0.003	0.0011	0.095	< 0.001	< 0.0005	< 0.005	< 0.001	0.44	< 0.0005	0.012	< 0.0002	0.0062	< 0.326	0.0030	< 0.002
	8/31/2016	< 0.003	0.0013	0.095	^ < 0.001	< 0.0005	< 0.005	< 0.001	0.45	< 0.0005	0.012	< 0.0002	0.0086	< 0.373	0.0051	< 0.002
	11/2/2016	< 0.003	0.0019	0.082	< 0.001	< 0.0005	0.0051	< 0.001	0.44	< 0.0005	< 0.010	< 0.0002	0.0059	0.965	0.0032	< 0.002
	2/6/2017	< 0.003	0.0019	0.093	< 0.001	< 0.0005	< 0.005	< 0.001	0.39	< 0.0005	0.012	< 0.0002	0.0066	< 0.356	0.0028	< 0.002
	4/26/2017	< 0.003	0.0017	0.11	< 0.001	< 0.0005	< 0.005	< 0.001	0.36	< 0.0005	0.010	< 0.0002	0.0088	< 0.411	0.0052	< 0.002
	6/14/2017	< 0.003	0.0014	0.09	< 0.001	< 0.0005	< 0.005	< 0.001	0.44	< 0.0005	0.012	< 0.0002	0.0072	< 0.358	0.0037	< 0.002
	8/2/2017	< 0.003	0.0022	0.1	< 0.001	< 0.0005	< 0.005	< 0.001	0.4	< 0.0005	0.011	< 0.0002	0.0065	0.414	0.005	< 0.002
	10/18/2017	< 0.003	0.0015	0.088	< ^ 0.001	< 0.0005	< 0.005	< 0.001	0.42	< 0.0005	0.012	< 0.0002	0.0055	< 0.417	0.0026	< ^ 0.002
MW-04 down-gradient	10/28/2015	< 0.003	0.0013	0.082	^ < 0.001	< 0.0005	< 0.005	0.0063	0.45	< 0.0005	0.013	< 0.0002	0.0065	0.741	< 0.0025	< 0.002
	2/10/2016	< 0.003	0.0018	0.088	< 0.001	< 0.0005	< 0.005	0.0074	0.47	0.00062	0.011	< 0.0002	0.0063	< 1.52	< 0.0025	< 0.002
	5/10/2016	< 0.003	0.0014	0.088	< 0.001	< 0.0005	< 0.005	0.0086	0.46	< 0.0005	0.012	< 0.0002	0.0088	< 0.365	< 0.0025	< 0.002
	8/31/2016	< 0.003	0.0014	0.086	^ < 0.001	< 0.0005	< 0.005	0.0035	0.45	< 0.0005	0.011	< 0.0002	0.0083	0.432	< 0.0025	< 0.002
	11/2/2016	< 0.003	0.0025	0.079	< 0.001	< 0.0005	< 0.005	0.0100	0.43	0.0012	0.012	< 0.0002	0.007	< 0.463	< 0.0025	< 0.002
	2/6/2017	< 0.003	0.0015	0.100	< 0.001	< 0.0005	< 0.005	0.0160	0.37	< 0.0005	0.013	< 0.0002	0.0071	< 0.356	< 0.0025	< 0.002
	4/26/2017	< 0.003	0.0021	0.095	< 0.001	< 0.0005	< 0.005	0.0078	0.37	0.00055	0.012	< 0.0002	0.0069	< 0.35	< 0.0025	< 0.002
	6/14/2017	< 0.003	0.0013	0.078	< 0.001	< 0.0005	< 0.005	0.0120	0.47	< 0.0005	0.013	< 0.0002	0.0085	< 0.309	< 0.0025	< 0.002
	8/2/2017	< 0.003	0.0013	0.077	< 0.001	< 0.0005	0.04	0.0031	0.43	< 0.0005	0.012	< 0.0002	0.0091	< 0.282	0.0029	< 0.002
	10/18/2017	< 0.003	0.0019	0.082	< ^ 0.001	< 0.0005	< 0.005	0.0046	0.45	0.00077	0.015	< 0.0002	0.0071	0.423	0.003	< ^ 0.002
MW-05 down-gradient	10/28/2015	< 0.003	0.0011	0.057	^ < 0.001	< 0.0005	< 0.005	0.0013	0.39	< 0.0005	0.018	< 0.0002	0.0088	0.6231	0.0031	< 0.002
	2/10/2016	< 0.003	0.0028	0.071	< 0.001	< 0.0005	0.0062	0.0013	0.39	0.0022	< 0.02	< 0.0002	F1 0.0053	1.09	< 0.0025	< 0.002
	5/10/2016	< 0.003	0.0023	0.075	< 0.001	< 0.0005	< 0.005	< 0.001	0.46	0.0022	0.014	< 0.0002	0.008	< 0.40	0.019	< 0.002
	8/31/2016	< 0.003	< 0.001	0.07	^ < 0.001	< 0.0005	< 0.005	< 0.001	0.56	< 0.0005	< 0.01	< 0.0002	0.012	< 0.42	0.02	< 0.002
	11/2/2016	< 0.003	0.0022	0.056	< 0.001	< 0.0005	0.0051	< 0.001	0.37	0.0017	0.015	< 0.0002	0.0061	0.438	< 0.0025	< 0.002
	2/6/2017	< 0.003	0.0016	0.082	< 0.001	< 0.0005	< 0.005	< 0.001	0.30	0.0016	0.021	< 0.0002	< 0.005	0.564	0.0029	< 0.002
	4/26/2017	< 0.003	0.0014	0.063	< 0.001	< 0.0005	< 0.005	< 0.001	0.37	0.0008	< 0.01	< 0.0002	0.0066	< 0.411	0.013	< 0.002
	6/14/2017	< 0.003	0.0012	0.044	< 0.001	< 0.0005	< 0.005	< 0.001	0.46	< 0.0005	0.013	< 0.0002	0.0076	< 0.316	0.0029	< 0.002
	8/2/2017	< 0.003	< 0.001	0.054	< 0.001	< 0.0005	< 0.005	< 0.001	0.35	< 0.0005	0.014	< 0.0002	0.0053	0.659	< 0.0025	< 0.002
	10/18/2017	< 0.003	0.002	0.067	< ^ 0.001	< 0.0005	< 0.005	< 0.001	0.38	0.0023	0.018	< 0.0002	< 0.005	< 0.371	0.0029	< ^ 0.002

Notes:
All units are in mg/l except Radium is in pCi/L as noted.
NS - No Standard
F1 - MS and/or MSD Recovery outside of limits.
^ - Denotes instrument related QC exceeds the control limits