

March 18, 2021

Richard Huggins
Branch Chief, Energy Recovery and Waste Disposal, US EPA
One Potomac Yard
2777 S. Crystal Drive
Arlington, Virginia 22202-3553

RE: Will County Generating Station, Midwest Generation LLC
Alternate Closure Demonstration, 40 CFR Part 257.103

Chief Huggins,

The purpose of this correspondence is to provide supplemental information in regard to our Demonstration for a Site-Specific Alternative Deadline to Initiate Closure documentation submitted to the United States Environmental Protection Agency (USEPS) on November 30, 2020 on behalf of the Will County Generating Station, Midwest Generation LLC (MWG), located on 529 Romeo Road, Romeoville, Illinois 60446.

The station is subject to 40 CFR Part 257 Subpart D "The Federal CCR Rule" and pursuant to 40 CFR 257.103(f)(1)(iv)(A), MWG prepared and submitted its demonstration and workplan detailing its proposed development of alternative disposal capacity and a timeline to replace South Ash Pond 2.

EPA has reviewed our demonstration and requested supplemental information (or clarification) regarding Well Log Boring and Construction information and Appendix IV monitoring data. Our submittal includes the following documentation which will be posted as supplemental information to our Website.

- **Original Demonstration** – For reference, an active link to the original November 30, 2020 has been provided. The original Demonstrations can be found on our NRG Website as well.
- **Supplemental Information**
 - 2017 Annual Report (for Appendix IV Data)
 - Well Logs MW1-MW19

Please note, the unit is in Detection monitoring and post background Appendix IV monitoring data is not available. To satisfy your request, the 2017 Annual Report (which is located on the NRG Website) to provide Appendix IV data collected during the initial eight rounds of background sampling.

We look forward to working with the USEPA and proceeding with our project to establish alternative capacity. Please contact me at (302)-540-0327 or david.bacher@nrgenergy.com to address any questions or concerns regarding this submittal.

Sincerely,



David Bacher
Senior Regional Manager
Environmental Business, NRG Energy, Inc.

CC: Jessica Schumacher (USEPS Region 5)
Anthony Carroll (USEPA Region 5)
Kirsten Hillyer (US EPA)
Frank Behan (USEPA)
W. Stone (NRG), S. Shealey (MWG), W. Shander (MWG)



ENVIRONMENTAL CONSULTATION & REMEDIATION

KPRG and Associates, Inc.

**CCR COMPLIANCE
ANNUAL GROUNDWATER MONITORING and
CORRECTIVE ACTION REPORT - 2017**

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

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

January 24, 2018

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1.0 INTRODUCTION

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

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

All groundwater samples were collected using the low-flow sampling technique from dedicated pumps. The samples were not filtered prior to analysis to provide for total metals concentrations as opposed to dissolved metals concentrations. One duplicate sample was collected from a randomly selected monitoring well per sampling event for quality assurance purposes. To fulfill 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 westerly groundwater flow direction. In accordance with general groundwater sampling requirements under Section 257.93(c), Table 2 provides a summary of the flow direction and an estimated rate of groundwater flow for each sampling event. The flow rate was calculated using the following equation:

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

V_s is seepage velocity (distance/time)

K is hydraulic conductivity (distance/time)

dh/dl is hydraulic gradient (unitless)

n_e is effective porosity (unitless)

The average hydraulic conductivity of 4.32×10^{-4} ft/sec used in Table 2 was obtained from the Hydrogeologic Assessment Report dated February 2011 and prepared by Patrick Engineering. The estimated effective porosity of the aquifer materials (0.20) was obtained from literature (Groundwater, Freeze and Cherry, 1979).

3.0 ANALYTICAL DATA AND STATUS OF EVALUATIONS

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(s).

The first eight rounds of Appendix III detection monitoring data from established upgradient wells MW-05 and MW-06 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 Will County 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. An initial 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.

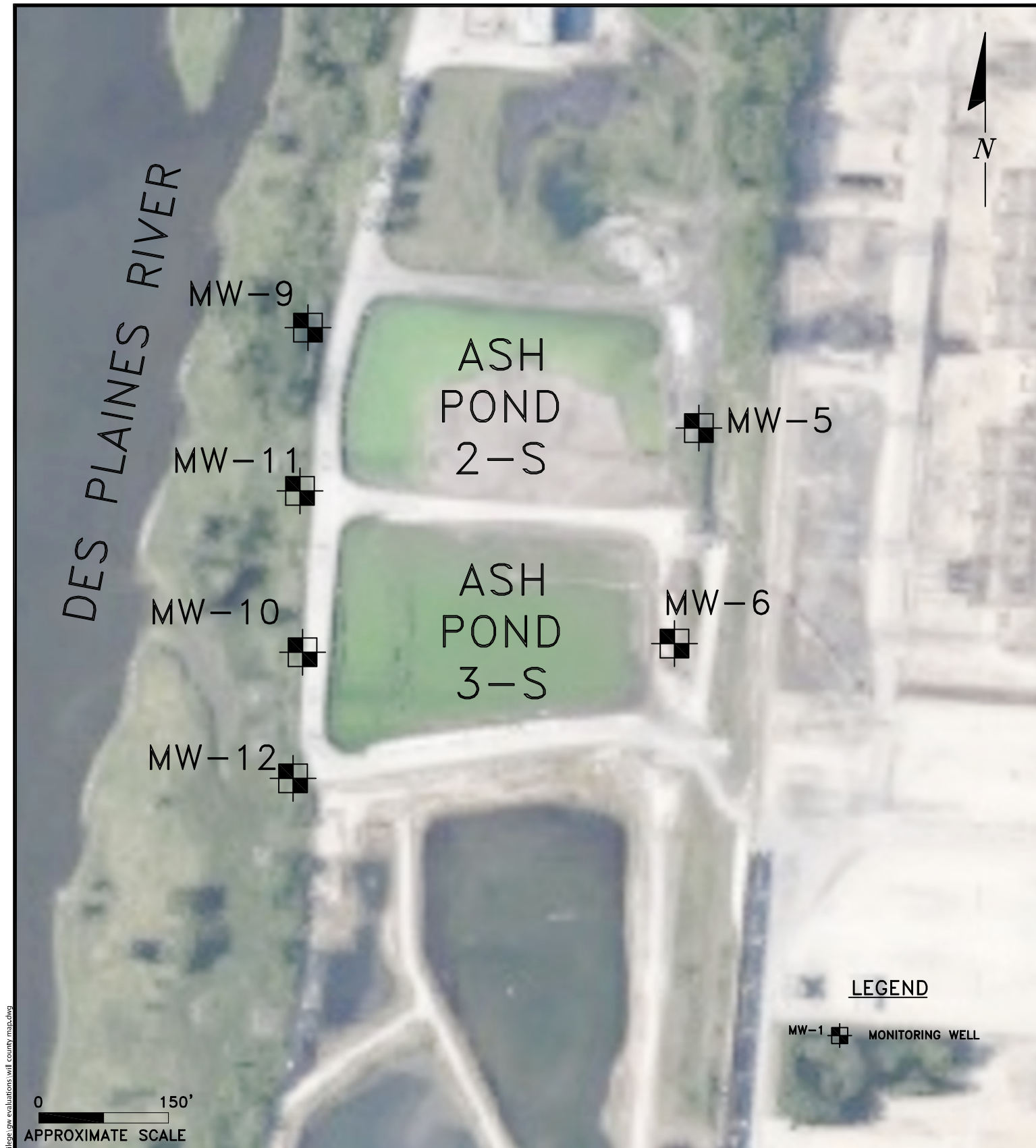
Based on an evaluation of groundwater flow conditions over the reporting period shows that the flow system has been consistent over time between sampling events. The existing monitoring well network appears to be sufficient for the intended purposes of CCR Rule groundwater monitoring of the regulated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

Development of statistical background for upgradient wells MW-05 and MW-06 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 Will County 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 – Will County Generating Station, Romeoville, IL. February 2011.
- KPRG and Associates, Inc., CCR Compliance Monitoring, Sampling and Analysis Plan, Midwest Generation, LLC Will County Generating Station. October 10, 2017.
- KPRG and Associates, Inc., CCR Compliance Statistical Approach for Groundwater Data Evaluation, Midwest Generation, LLC Will County Generating Station. October 10, 2017.
- R.A. Freeze and J.A. Cherry, Groundwater. Prentice-Hall, Inc. Publishing Co., 1979.

FIGURES



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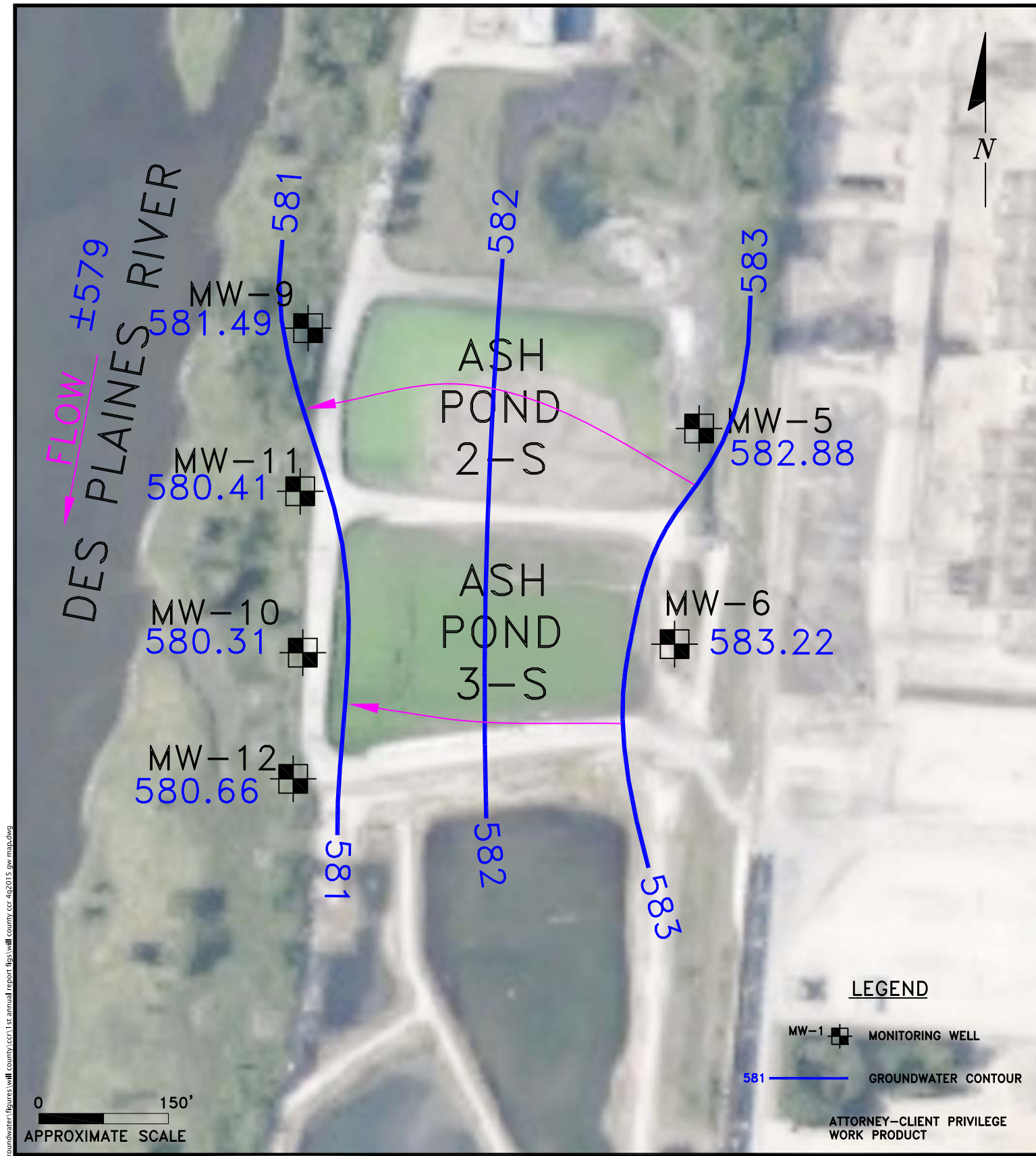
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CCR MONITORING WELL SITE MAP

**WILL COUNTY STATION
ROMEOWILLE, ILLINOIS**

Scale: 1" = 150' Date: December 27, 2017

KPRG Project No. 12313.3 FIGURE 1



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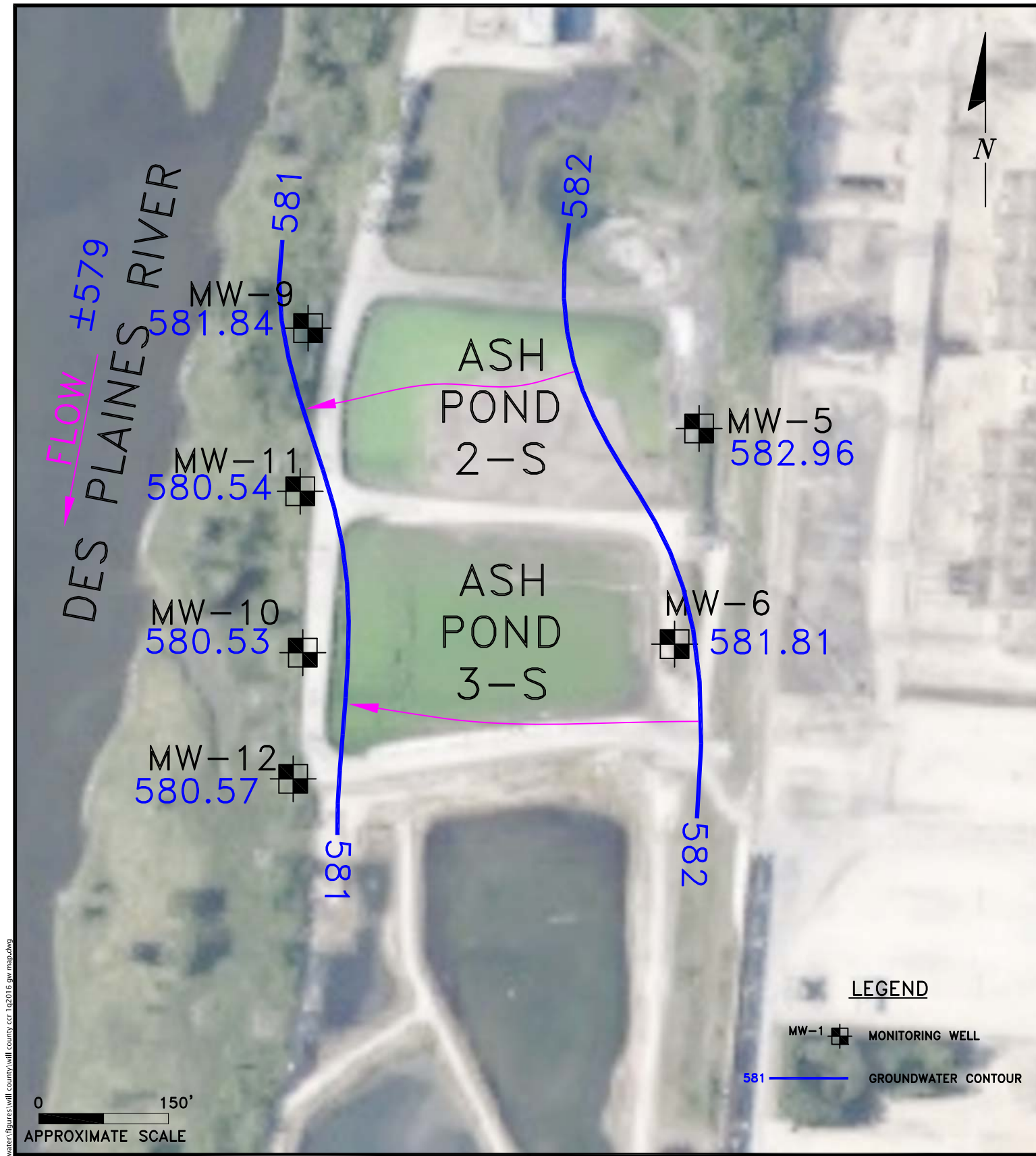
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GROUNDWATER CONTOUR-11/2015

WILL COUNTY STATION
ROMEOWILLE, ILLINOIS

Scale: 1" = 150' | Date: January 27, 2016

KPRG Project No. 12313.3 | **FIGURE 2**



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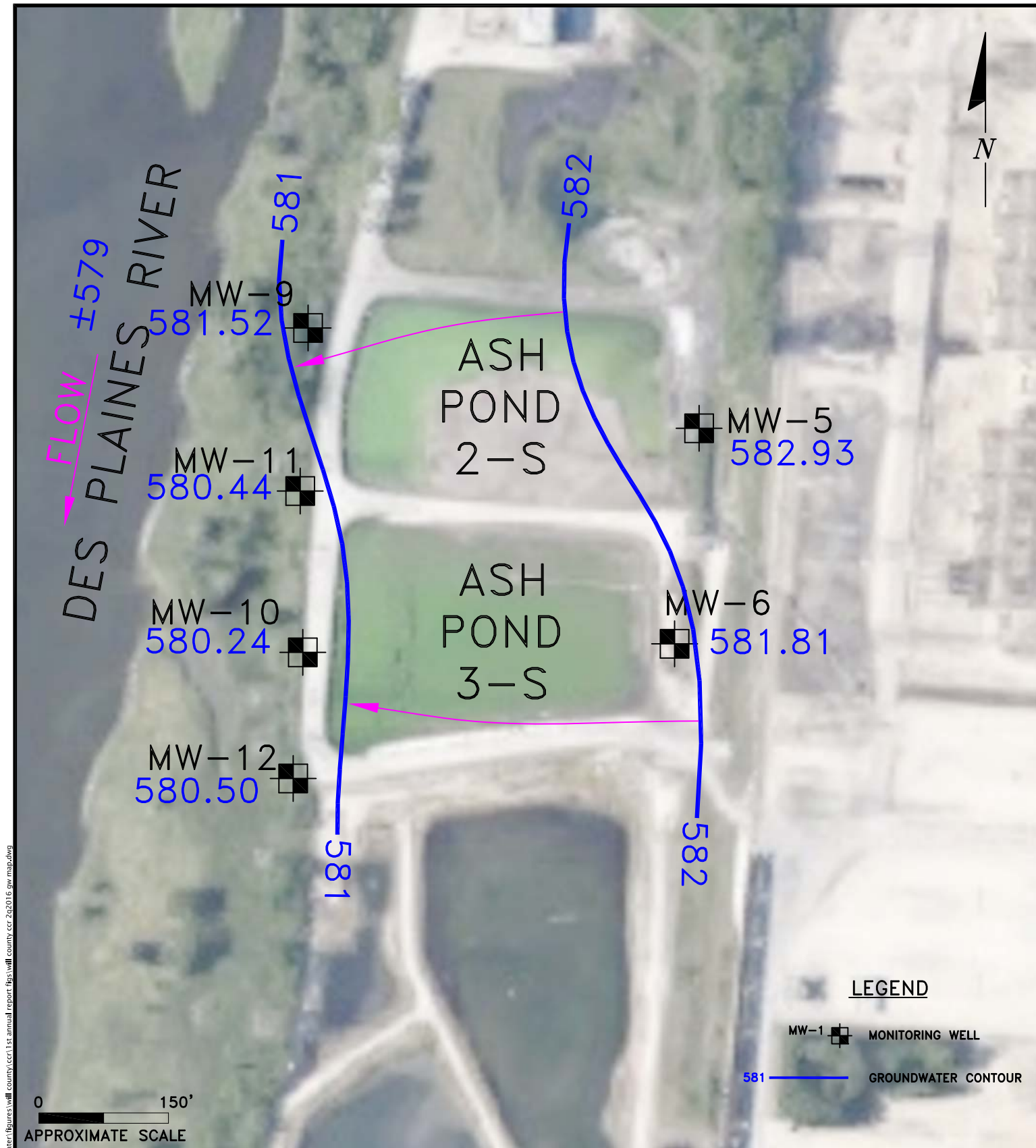
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CCR GROUNDWATER CONTOUR-2/2016

WILL COUNTY STATION
ROMEOWILLE, ILLINOIS

Scale: 1" = 150' | Date: April 19, 2016

KPRG Project No. 12313.3 | **FIGURE 3**



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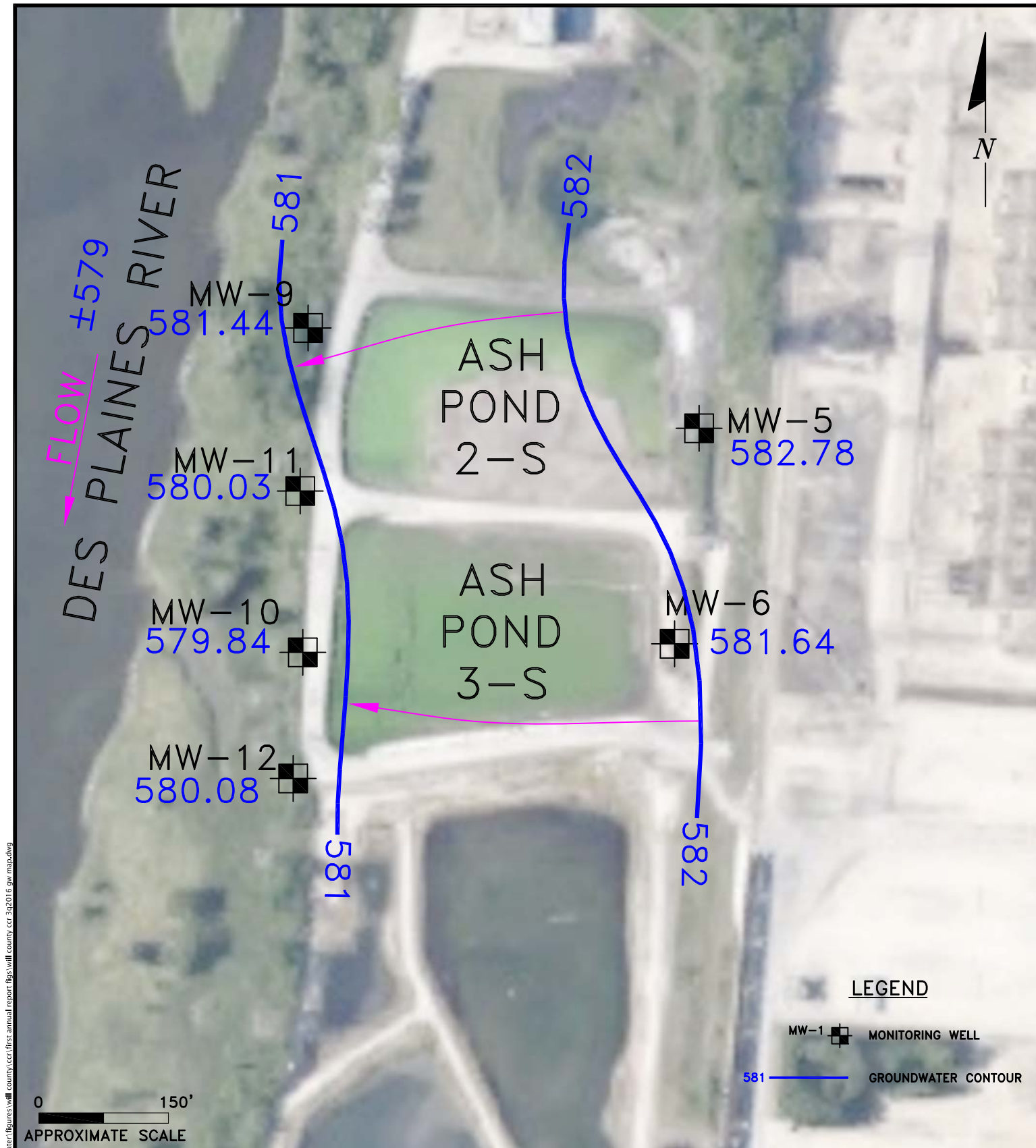
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CCR GROUNDWATER CONTOUR-5/2016

WILL COUNTY STATION
ROMEOWILLE, ILLINOIS

Scale: 1" = 150' | Date: July 12, 2016

KPRG Project No. 12313.3 | **FIGURE 4**



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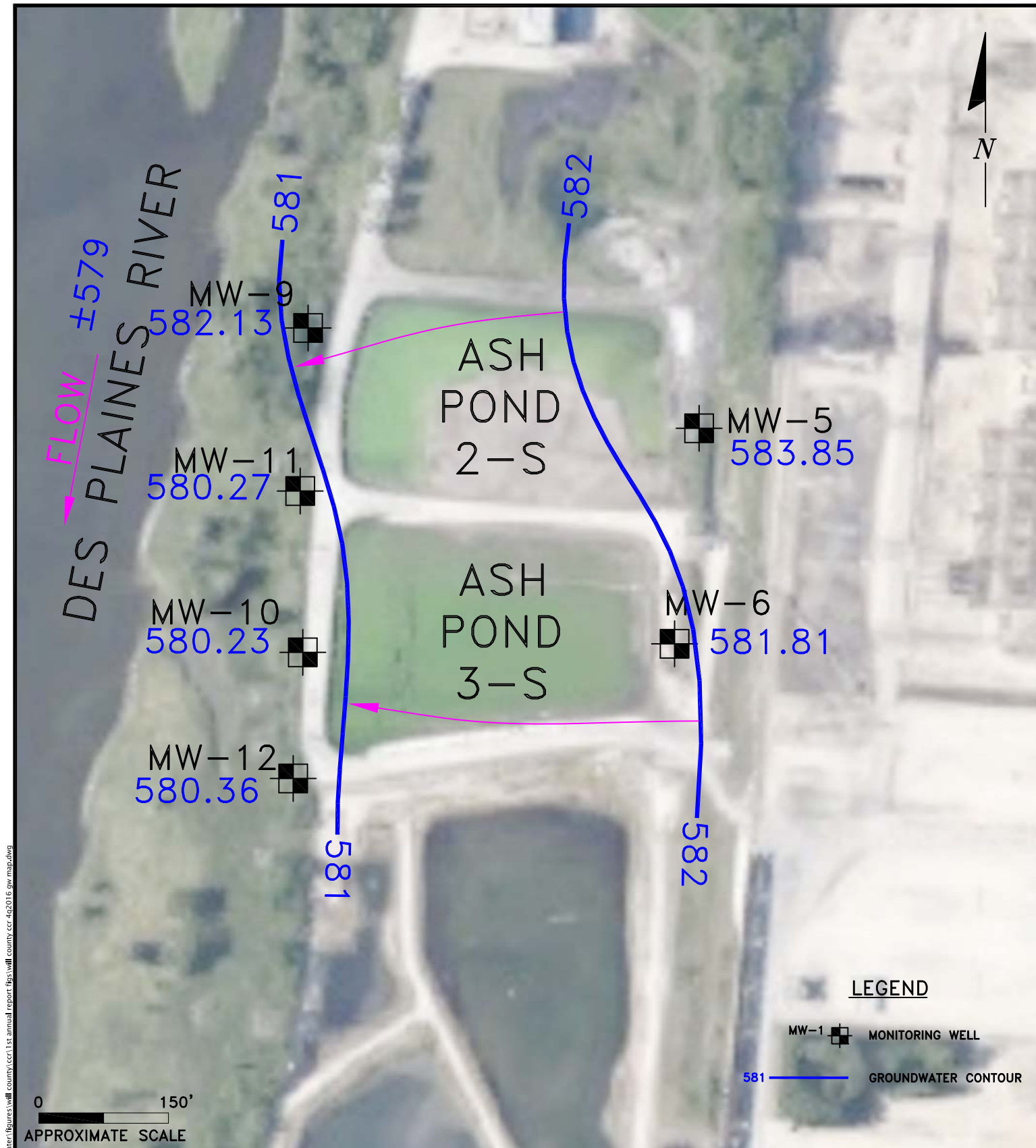
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CCR GROUNDWATER CONTOUR-08/2016

WILL COUNTY STATION
ROMEOWILLE, ILLINOIS

Scale: 1" = 150' | Date: October 10, 2016

KPRG Project No. 12313.3 | FIGURE 5



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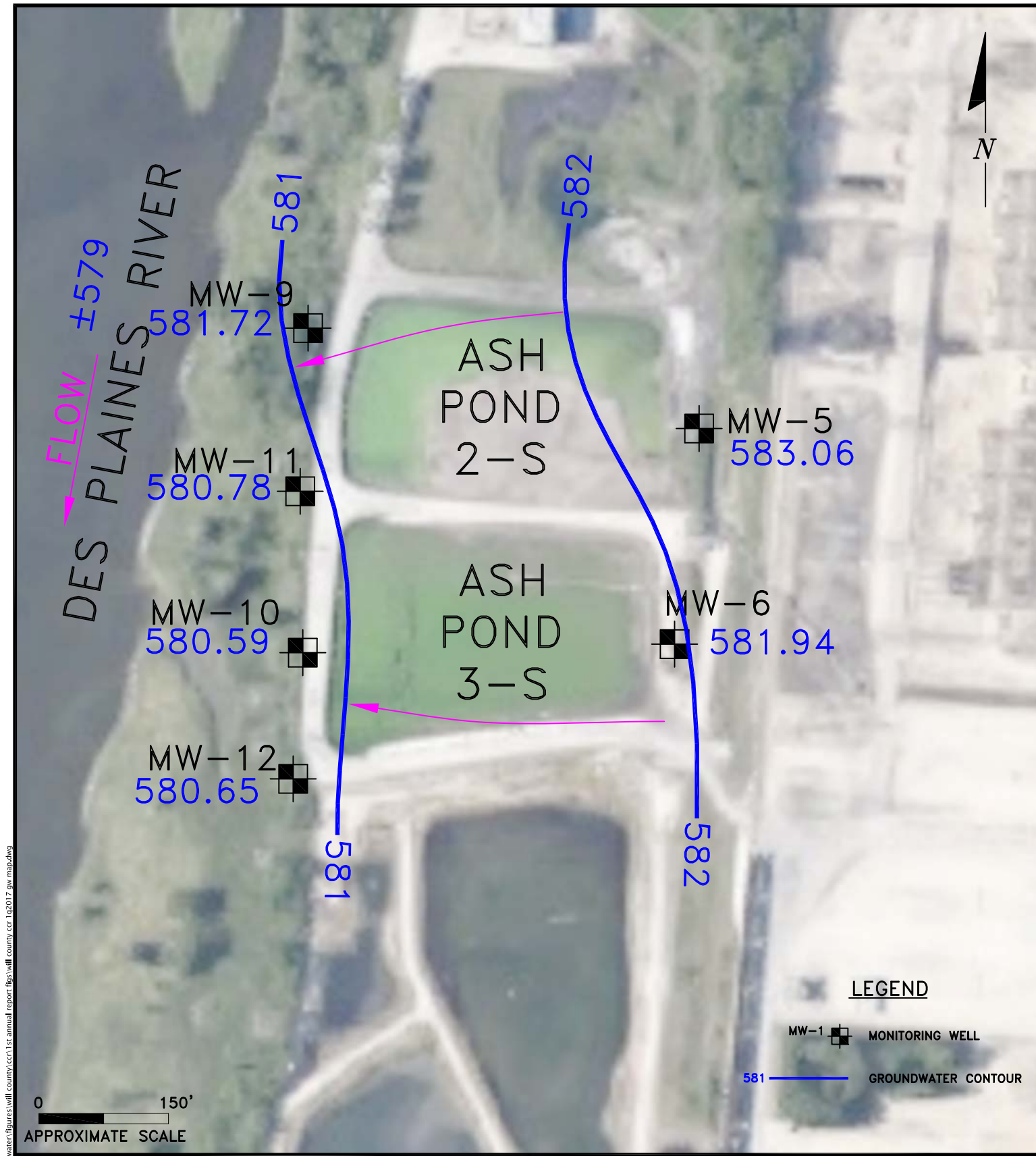
14665 West Lisbon Road, Suite 2B Brookfield, Wisconsin 53005 Telephone 262-781-0475 Facsimile 262-781-0478

CCR GROUNDWATER CONTOUR-10/2016

WILL COUNTY STATION
ROMEOWILLE, ILLINOIS

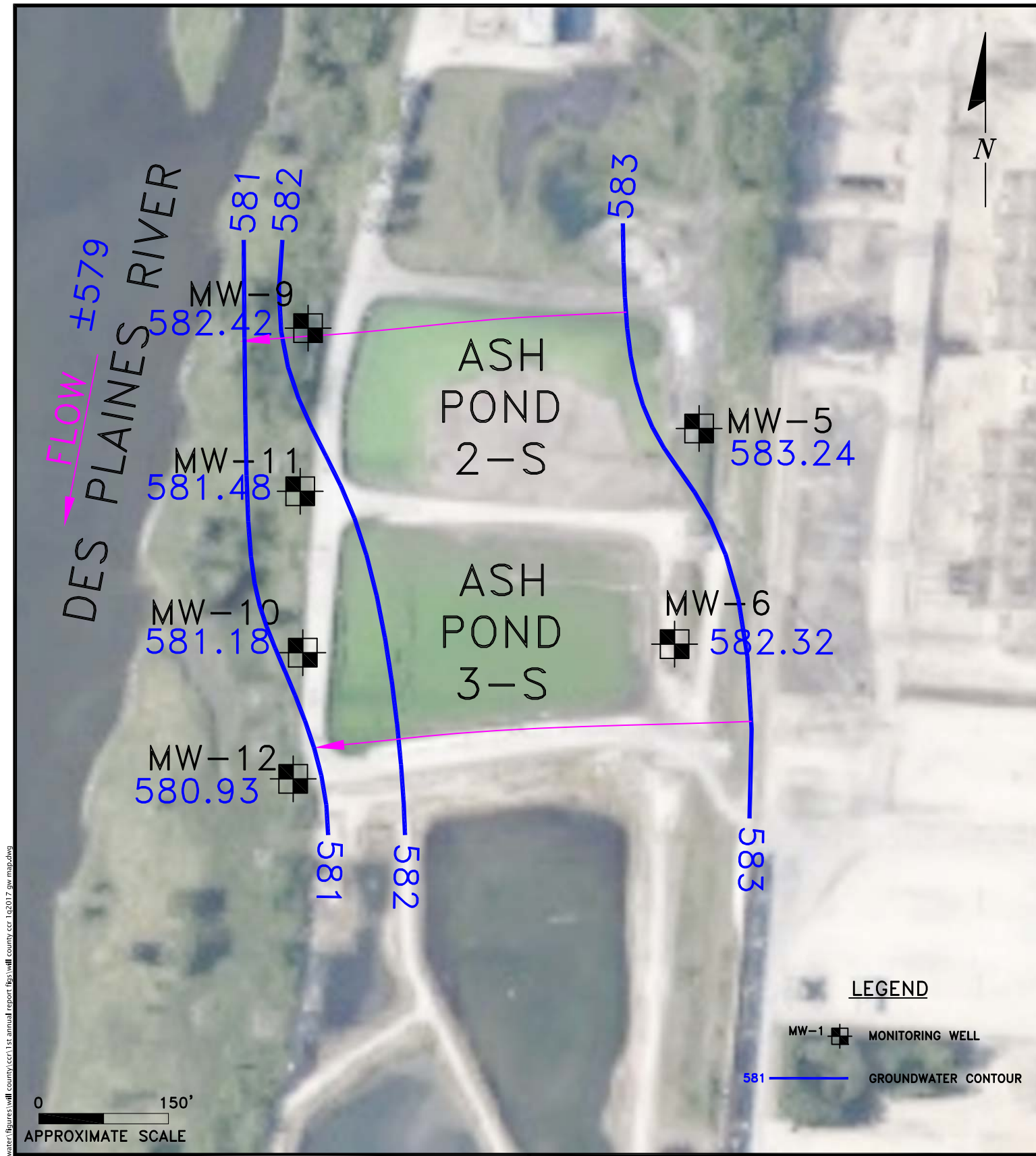
Scale: 1" = 150' | Date: January 3, 2017

KPRG Project No. 12313.3 | FIGURE 6



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414 Plaza Drive, Suite 106 Westmont, Illinois 60559 Telephone 630-325-1300 Facsimile 630-325-1593		Scale: 1" = 150'	Date: April 4, 2017
14665 West Lisbon Road, Suite 2B Brookfield, Wisconsin 53005 Telephone 262-781-0475 Facsimile 262-781-0478		KPRG Project No. 12313.3	FIGURE 7



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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

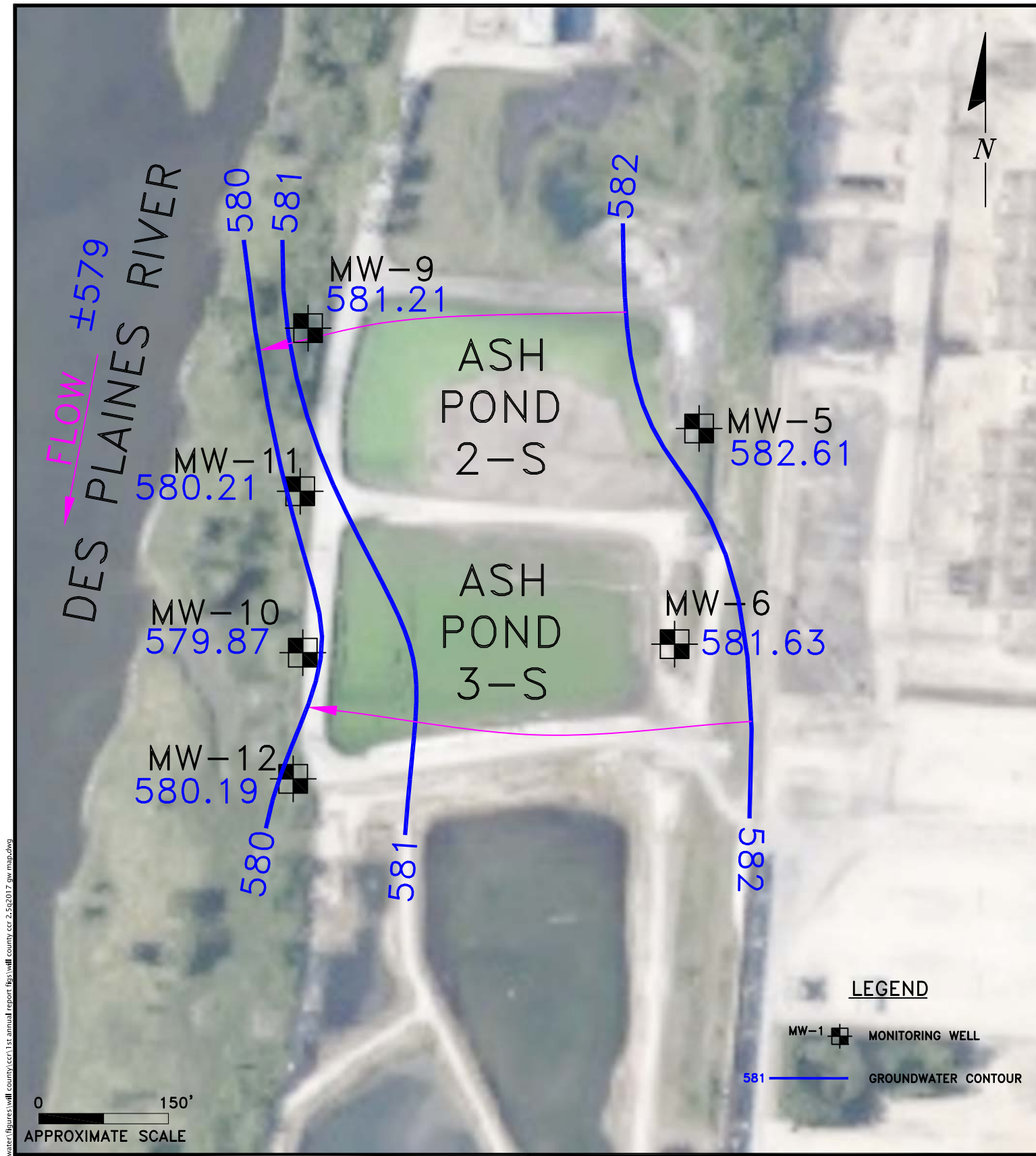
14665 West Lisbon Road, Suite 2B Brookfield, Wisconsin 53005 Telephone 262-781-0475 Facsimile 262-781-0478

CCR GROUNDWATER CONTOUR-05/2017

WILL COUNTY STATION
 ROMEOVILLE, ILLINOIS

Scale: 1" = 150' | Date: June 22, 2017

KPRG Project No. 12313.3 | **FIGURE 8**



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ENVIRONMENTAL CONSULTATION & REMEDIATION		CCR GROUNDWATER CONTOUR-06/2017	
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		WILL COUNTY STATION ROMEOWILLE, ILLINOIS	
		Scale: 1" = 150'	Date: August 9, 2017
KPRG Project No. 12313.3		FIGURE 9	



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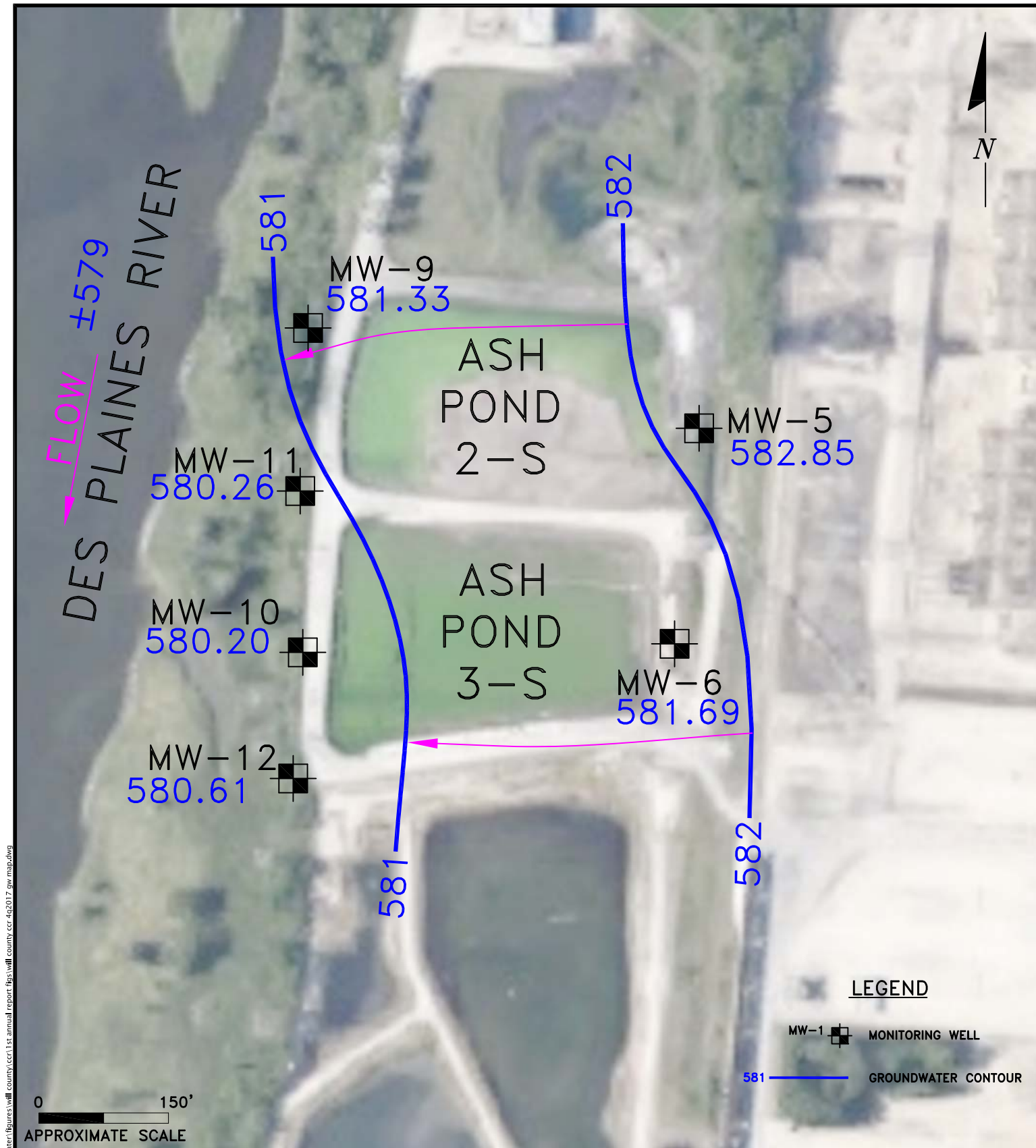
14665 West Lisbon Road, Suite 2B Brookfield, Wisconsin 53005 Telephone 262-781-0475 Facsimile 262-781-0478

CCR GROUNDWATER CONTOUR-09/2017

WILL COUNTY STATION
ROMEOWILLE, ILLINOIS

Scale: 1" = 150' | Date: October 18, 2017

KPRG Project No. 12313.3 | FIGURE 10



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CCR GROUNDWATER CONTOUR-11/2017

WILL COUNTY STATION
ROMEOWILLE, ILLINOIS

Scale: 1" = 150' | Date: December 20, 2017

KPRG Project No. 12313.3 | FIGURE 11

TABLES

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

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

MSL - Mean Sea Level
TOC - Top of Casing

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

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

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

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

Table 3. Detection Monitoring - Appendix III Groundwater Analytical Results through 2017 - Midwest Generation, LLC, Will County Station, Romeoville, IL.

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

Notes:

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

Italics Dates - Data that will be compared against established statistical background.

Table 3. Detection Monitoring - Appendix III Groundwater Analytical Results through 2017 - Midwest Generation, LLC, Will County Station, Romeoville, IL.

Well	Date	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	Total Dissolved Solids
MW-11 down-gradient	11/10/2015	2.6	120	89	0.61	7.60	180	620
	2/16/2016	3.0	100	88	0.68	7.47	170	640
	5/25/2016	2.8	82	98	0.75	7.43	170	640
	8/10/2016	3.1	96	86	0.72	7.57	150	660
	10/26/2016	2.5	110	67	0.53	7.82	120	630
	2/1/2017	3.9	110	72	0.65	7.54	110	600
	5/10/2017	3.1	95	84	0.46	8.37	170	590
	6/27/2017	2.8	87	90	0.59	7.57	150	680
	9/7/2017	2.8	90	94	0.58	7.4	150	730
<i>11/15/2017</i>	2.9	96	100	0.65	7.41	160	750	
MW-12 down-gradient	11/10/2015	2.3	150	160	0.59	7.44	290	1000
	2/16/2016	1.8	130	140	0.52	7.38	220	850
	5/25/2016	1.9	130	150	0.54	7.23	250	890
	8/10/2016	2.4	170	140	0.49	7.20	280	1000
	10/26/2016	2.6	140	120	0.49	7.44	220	980
	2/1/2017	2	160	120	0.48	7.3	150	900
	5/10/2017	2.3	200	240	0.3	7.65	260	1300
	6/27/2017	2.4	180	280	0.44	7.31	260	1300
	9/6/2017	2.6	190	270	0.49	7.26	260	1400
<i>11/15/2017</i>	1.7	55	200	0.47	6.90	250	1200	

Notes:

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

Italics Dates - Data that will be compared against established statistical background.

Table 4. Detection Monitoring - Appendix IV Groundwater Analytical Results through 2017 - Midwest Generation, LLC, Will County Station, Romeoville, IL

Well	Date	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Fluoride	Lead	Lithium	Mercury	Molybdenum	Radium 226 + 228 Combined	Selenium	Thallium
MW-05 up-gradient	11/11/2015	< 0.003	0.0014	0.071	< 0.001	< 0.0005	< 0.005	< 0.001	0.31	< 0.0005	0.013	< 0.0002	0.0750	-0.168	0.031	< 0.002
	2/18/2016	< 0.003	0.0021	0.058	< 0.001	< 0.0005	< 0.005	< 0.001	0.31	< 0.0005	0.017	< 0.0002	0.079	0.468	0.019	< 0.002
	5/26/2016	< 0.003	0.0023	0.055	^ < 0.001	< 0.0005	< 0.005	< 0.001	0.33	< 0.0005	0.011	< 0.0002	0.077	< 0.402	0.019	< 0.002
	8/10/2016	< 0.003	0.0044	0.043	< 0.001	< 0.0005	< 0.005	< 0.001	0.72	< 0.0005	< 0.010	F1 < 0.0002	0.14	< 0.394	0.0049	< 0.002
	10/26/2016	< 0.003	0.0047	0.033	< 0.001	< 0.0005	< 0.005	< 0.001	0.70	< 0.0005	< 0.01	< 0.0002	0.12	0.592	< 0.0025	< 0.002
	2/1/2017	< 0.003	0.0015	0.058	* < 0.001	< 0.0005	< 0.005	< 0.001	0.35	< 0.0005	0.016	^ < 0.0002	0.048	< 0.424	0.029	< 0.002
	5/11/2017	< 0.003	0.0035	0.053	< 0.001	< 0.0005	< 0.005	< 0.001	0.31	< 0.0005	< 0.01	< 0.0002	0.093	< 0.388	< 0.0025	< 0.002
	6/27/2017	< 0.003	0.0037	0.045	< 0.001	< 0.0005	< 0.005	< 0.001	0.53	< 0.0005	< 0.01	< 0.0002	0.11	0.412	< 0.0025	< 0.002
9/8/2017	< 0.003	0.0038	V 0.069	< 0.001	< 0.0005	< 0.005	< 0.001	0.52	< 0.0005	< 0.01	< 0.0002	0.095	0.486	0.0047	< 0.002	
11/16/2017	< 0.003	0.0028	0.065	< 0.001	< 0.0005	< 0.005	< 0.001	0.45	< 0.0005	0.021	< 0.0002	0.064	< 0.379	0.012	< 0.002	
MW-06 up-gradient	11/10/2015	< 0.003	0.0016	0.048	< 0.001	< 0.0005	< 0.005	< 0.001	0.55	< 0.0005	0.011	< 0.0002	0.0670	-0.383	0.0039	< 0.002
	2/18/2016	< 0.003	0.0014	0.068	< 0.001	< 0.0005	< 0.005	< 0.001	0.47	< 0.0005	0.015	< 0.0002	0.0630	0.412	< 0.0025	< 0.002
	5/26/2016	< 0.003	0.002	0.068	^ < 0.001	< 0.0005	< 0.005	< 0.001	0.44	< 0.0005	0.012	< 0.0002	0.042	< 0.422	< 0.0025	< 0.002
	8/11/2016	< 0.003	0.0029	0.086	< 0.001	< 0.0005	< 0.005	< 0.001	0.35	< 0.0005	0.017	< 0.0002	0.038	< 0.339	< 0.0025	< 0.002
	10/26/2016	< 0.003	0.003	0.074	< 0.001	< 0.0005	< 0.005	< 0.001	0.40	< 0.0005	0.013	< 0.0002	0.043	< 0.531	< 0.0025	< 0.002
	2/1/2017	< 0.003	0.0043	0.068	* < 0.001	< 0.0005	< 0.005	< 0.001	0.41	< 0.0005	0.012	^ < 0.0002	0.05	< 0.511	0.0035	< 0.002
	5/11/2017	< 0.003	0.002	0.054	< 0.001	< 0.0005	< 0.005	< 0.001	0.28	0.00054	0.011	< 0.0002	0.054	< 0.388	< 0.0025	< 0.002
	6/27/2017	< 0.003	0.0014	0.069	< 0.001	< 0.0005	< 0.005	< 0.001	0.38	< 0.0005	0.012	< 0.0002	0.046	0.408	< 0.0025	< 0.002
9/7/2017	< 0.003	0.0025	0.077	< 0.001	< 0.0005	< 0.005	< 0.001	0.40	< 0.0005	0.013	< 0.0002	0.044	0.397	< 0.0025	< 0.002	
11/16/2017	< 0.003	0.0028	0.077	< 0.001	< 0.0005	< 0.005	< 0.001	0.39	< 0.0005	0.017	< 0.0002	0.038	0.491	0.012	< 0.002	
MW-09 down-gradient	11/11/2015	< 0.003	0.0047	0.027	< 0.001	< 0.0005	< 0.005	< 0.001	0.55	< 0.0005	< 0.01	< 0.0002	0.14	-0.2208	< 0.0025	< 0.002
	2/17/2016	< 0.003	0.0051	0.027	^ < 0.001	< 0.0005	< 0.005	< 0.001	0.55	0.00065	< 0.01	< 0.0002	0.089	< 0.373	< 0.0025	< 0.002
	5/24/2016	< 0.003	0.0043	0.027	^ < 0.001	< 0.0005	< 0.005	< 0.001	0.51	0.00071	< 0.01	< 0.0002	0.079	0.508	< 0.0025	< 0.002
	8/9/2016	< 0.003	0.0052	0.031	< 0.001	< 0.0005	< 0.005	< 0.001	0.48	< 0.0005	< 0.01	< 0.0002	0.14	0.639	< 0.0025	< 0.002
	10/26/2016	< 0.003	0.0069	0.019	< 0.001	< 0.0005	< 0.005	< 0.0010	0.81	< 0.0005	< 0.01	< 0.0002	0.11	0.608	< 0.0025	< 0.002
	1/31/2017	< 0.003	0.0063	0.038	* < 0.001	< 0.0005	< 0.005	< 0.0010	0.57	0.0014	< 0.01	^ < 0.0002	0.09	< 0.45	< 0.0025	< 0.002
	5/9/2017	< 0.003	0.0052	0.038	< 0.001	< 0.0005	< 0.005	< 0.0010	0.38	0.00054	< 0.01	< 0.0002	0.093	< 0.361	< 0.0025	< 0.002
	6/27/2017	< 0.003	0.0046	0.039	< 0.001	< 0.0005	< 0.005	< 0.0010	0.51	< 0.0005	< 0.01	< 0.0002	0.091	0.638	< 0.0025	< 0.002
9/6/2017	< 0.003	0.0047	0.038	< 0.001	< 0.0005	< 0.005	< 0.0010	0.51	< 0.0005	< 0.01	< 0.0002	0.1	0.454	< 0.0025	< 0.002	
11/14/2017	< 0.003	0.0017	0.11	< 0.001	< 0.0005	< 0.005	< 0.0010	0.51	< 0.0005	0.018	< 0.0002	0.026	< 0.372	0.0061	< 0.002	
MW-10 down-gradient	11/10/2015	< 0.003	0.015	0.096	< 0.001	< 0.0005	< 0.005	< 0.001	0.77	< 0.0005	0.018	< 0.0002	0.068	1.341	< 0.0025	< 0.002
	2/16/2016	< 0.003	0.014	0.098	^ < 0.001	< 0.0005	< 0.005	< 0.001	0.79	< 0.0005	0.021	< 0.0002	0.075	0.952	< 0.0025	< 0.002
	5/25/2016	< 0.003	0.034	0.096	^ < 0.001	< 0.0005	< 0.005	< 0.001	0.83	0.00055	0.016	< 0.0002	0.065	0.51	< 0.0025	< 0.002
	8/10/2016	< 0.003	0.017	0.11	< 0.001	< 0.0005	< 0.005	< 0.001	0.78	< 0.0005	0.021	< 0.0002	0.082	0.864	< 0.0025	< 0.002
	10/26/2016	< 0.003	0.022	0.11	< 0.001	< 0.0005	< 0.005	< 0.001	0.52	< 0.0005	0.021	< 0.0002	0.030	0.458	< 0.0025	< 0.002
	2/2/2017	< 0.003	0.05	0.14	* < 0.001	< 0.0005	< 0.005	< 0.001	0.54	0.0013	0.02	^ < 0.0002	0.031	< 0.464	< 0.0025	< 0.002
	5/10/2017	< 0.003	0.02	0.11	< 0.001	< 0.0005	< 0.005	< 0.001	0.44	< 0.0005	0.015	< 0.0002	0.066	0.882	< 0.0025	< 0.002
	6/27/2017	< 0.003	0.0072	0.096	< 0.001	< 0.0005	< 0.005	< 0.001	0.67	< 0.0005	0.017	< 0.0002	0.080	0.953	< 0.0025	< 0.002
9/7/2017	< 0.003	0.0076	0.086	< 0.001	< 0.0005	< 0.005	< 0.001	0.77	< 0.0005	0.014	0.00058	0.096	0.921	< 0.0025	< 0.002	
11/15/2017	< 0.003	0.015	0.11	< 0.001	< 0.0005	< 0.005	< 0.001	0.77	< 0.0005	0.021	< 0.0002	0.071	0.893	< 0.0025	< 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
* - LCS or LCSD is outside acceptance limits.

Table 4. Detection Monitoring - Appendix IV Groundwater Analytical Results through 2017 - Midwest Generation, LLC, Will County Station, Romeoville, IL

Well	Date	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Fluoride	Lead	Lithium	Mercury	Molybdenum	Radium 226 + 228 Combined	Selenium	Thallium
MW-11 down-gradient	11/10/2015	< 0.003	0.007	0.098	< 0.001	< 0.0005	< 0.005	< 0.001	0.61	0.00064	< 0.01	< 0.0002	0.0600	0.736	< 0.0025	< 0.002
	2/16/2016	< 0.003	0.0059	0.11	^ < 0.001	< 0.0005	< 0.005	< 0.001	0.68	< 0.0005	0.012	< 0.0002	0.078	1.14	< 0.0025	< 0.002
	5/25/2016	< 0.003	0.0073	0.093	^ < 0.001	< 0.0005	< 0.005	< 0.001	0.75	< 0.0005	< 0.01	< 0.0002	0.083	0.775	< 0.0025	< 0.002
	8/10/2016	< 0.003	0.0072	0.12	< 0.001	< 0.0005	< 0.005	< 0.001	0.72	< 0.0005	< 0.010	< 0.0002	0.087	0.807	< 0.0025	< 0.002
	10/26/2016	< 0.003	0.0082	0.096	< 0.001	< 0.0005	< 0.005	< 0.001	0.53	0.00052	< 0.01	< 0.0002	0.043	0.51	< 0.0025	< 0.002
	2/1/2017	< 0.003	0.011	0.15	* < 0.001	< 0.0005	< 0.005	< 0.001	0.65	< 0.0005	< 0.01	< 0.0002	0.076	0.909	< 0.0025	< 0.002
	5/10/2017	< 0.003	0.014	0.14	< 0.001	< 0.0005	< 0.005	< 0.001	0.46	< 0.0005	< 0.01	< 0.0002	0.074	1.03	< 0.0025	< 0.002
	6/27/2017	< 0.003	0.0058	0.11	< 0.001	< 0.0005	< 0.005	< 0.001	0.59	< 0.0005	< 0.01	< 0.0002	0.069	0.692	< 0.0025	< 0.002
	9/7/2017	< 0.003	0.0074	0.11	< 0.001	< 0.0005	< 0.005	< 0.001	0.58	< 0.0005	< 0.01	< 0.0002	0.067	0.676	< 0.0025	< 0.002
11/15/2017	< 0.003	0.0082	0.15	< 0.001	< 0.0005	< 0.005	< 0.001	0.65	< 0.0005	< 0.01	< 0.0002	0.075	1.04	< 0.0025	< 0.002	
MW-12 down-gradient	11/10/2015	< 0.003	0.0016	0.11	< 0.001	< 0.0005	< 0.005	< 0.001	0.59	< 0.0005	0.012	< 0.0002	0.034	0.8139	< 0.0025	< 0.002
	2/16/2016	< 0.003	0.0013	0.084	^ < 0.001	< 0.0005	< 0.005	< 0.001	0.52	< 0.0005	0.015	< 0.0002	0.031	< 0.407	< 0.0025	< 0.002
	5/25/2016	< 0.003	0.0013	0.12	^ < 0.001	< 0.0005	< 0.005	< 0.001	0.54	0.00063	0.014	< 0.0002	0.03	0.41	0.0026	< 0.002
	8/10/2016	< 0.003	0.0017	0.12	< 0.001	< 0.0005	< 0.005	< 0.001	0.49	0.0006	0.017	< 0.0002	0.04	< 0.426	0.0077	< 0.002
	10/26/2016	< 0.003	0.0016	0.11	< 0.001	< 0.0005	0.025	< 0.001	0.49	< 0.0005	0.013	< 0.0002	0.036	< 0.664	< 0.0025	< 0.002
	2/1/2017	< 0.003	0.0017	0.11	* < 0.001	< 0.0005	< 0.005	< 0.001	0.48	0.00065	0.013	< 0.0002	0.023	0.949	< 0.0025	< 0.002
	5/10/2017	< 0.003	0.0013	0.13	< 0.001	< 0.0005	< 0.005	< 0.001	0.3	< 0.0005	0.012	< 0.0002	0.029	< 0.464	0.017	< 0.002
	6/27/2017	< 0.003	0.0014	0.14	< 0.001	< 0.0005	< 0.005	< 0.001	0.44	< 0.0005	0.017	< 0.0002	0.03	0.455	0.0032	< 0.002
	9/6/2017	< 0.003	0.0017	0.13	< 0.001	< 0.0005	< 0.005	< 0.001	0.49	< 0.0005	0.014	< 0.0002	0.032	< 0.317	0.0043	< 0.002
11/15/2017	< 0.003	0.0054	0.034	< 0.001	< 0.0005	< 0.005	< 0.001	0.47	< 0.0005	< 0.01	< 0.0002	0.11	0.434	< 0.0025	< 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
* - LCS or LCSD is outside acceptance limits.

PATRICK ENGINEERING INC.

BORING NUMBER **B-MW-2-Wi** SHEET **1 OF 1**
 CLIENT **Midwest Generation**
 PROJECT & NO. **21053.070**
 LOCATION **Will County Station**

LOGGED BY **MPG**
 GROUND ELEVATION **590.6**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content					NOTES & TEST RESULTS		
						PL	Unconfined Compressive Strength (TSF) *			LL			
						10	20	30	40	50			
590.6	0.0		Black coal ash, brown gravelly clay, sand, gray silty clay	FILL								Bentonite seal 2.0'-10.0'. Stickup protective cover installed. qu=NT	
			SS-1 1.0-2.5										
			SS-2 3.5-5.0 6"R		9 13 10								
			Rubble		6 7 9								qu=NT
582.1	8.5		Black coal cinders, coal dust, clay fill		5 7 7							qu=NT	
580.6	10.0		Wet									Sand pack 10.0'-22.0' qu=NT	
578.6	12.0		Weathered limestone bedrock		9 50/0"							Set screen (slot 0.010") 12.0'-22.0' Cored bedrock to 22.0'	
			End of Boring at 12.0'										
568.6	22.0												

DRILLING CONTRACTOR **Groff Testing**
 DRILLING METHOD **4.25" I.D. HSA**
 DRILLING EQUIPMENT **CME 550 ATV**
 DRILLING STARTED **10/21/10** ENDED **10/22/10**


REMARKS
Installed 2" diameter PVC monitoring well.

WATER LEVEL (ft.)
 ▽ 10.0
 ▽
 ▽

PATRICK ENGINEERING INC.

BORING NUMBER **B-MW-3-Wi** SHEET **1 OF 1**
 CLIENT **Midwest Generation**
 PROJECT & NO. **21053.070**
 LOCATION **Will County Station**

LOGGED BY **MPG**
 GROUND ELEVATION **590.5**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content					NOTES & TEST RESULTS	
						PL	Unconfined	Compressive	Strength (TSF) *	LL		
						1	2	3	4	5		
590.5	0.0		Black coal ash, gravel, coarse sand, crushed rock, limestone, rubble FILL								qu=NT Bentonite seal 2.0'-6.5'. Stickup protective cover installed. qu=NT	
			SS-1 1.0-2.5 15"R		10 10 12							
			Dry									
			SS-2 3.5-5.0 13"R		6 10 18							
			SS-3 6.0-7.5 14"R		7 15 21							
			GC									
583.5	7.0	▽									qu=NT Sand pack 6.5'-19.5' Set screen (slot 0.010") 7.0'-17.0'	
583.0	7.5											
582.5	8.0	▽	Gray gravel, silt Wet									
				SS-4 8.5-10.0 4"R	3 50/0"						qu=NT	
580.5	10.0		Weathered limestone bedrock End of Boring at 10.0'								Cored bedrock to 19.5'	
571.0	19.5											

DRILLING CONTRACTOR **Groff Testing**
 DRILLING METHOD **4.25" I.D. HSA**
 DRILLING EQUIPMENT **CME 550 ATV**
 DRILLING STARTED **10/20/10** ENDED **10/24/10**




REMARKS
Installed 2" diameter PVC monitoring well.

WATER LEVEL (ft.)
 ▽ **8.0**
 ▽ **7.0**
 ▽

PATRICK ENGINEERING INC.

BORING NUMBER **B-MW-4-WI** SHEET **1 OF 1**
 CLIENT **Midwest Generation**
 PROJECT & NO. **21053.070**
 LOCATION **Will County Station**

LOGGED BY **MPG**
 GROUND ELEVATION **591.2**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY (IN)	BLOW COUNTS	Water Content					NOTES & TEST RESULTS			
						PL	Unconfined Compressive Strength (TSF) *			LL				
						10	20	30	40	50				
591.2	0.0		Brown fine sand, black ash, crushed rock, fine to coarse gravel, ddry FILL	SS-1 1.0-2.5 14"R	9 14 17						qu=NT Bentonite seal 2.0'-8.5'. Stickup protective cover installed. qu=NT			
				SS-2 3.5-5.0 6"R	16 50/3"									
585.2	6.0				Gray silt, weathered limestone, moist to wet	SS-3 6.0-7.5 16"R	4 23 27							qu=NT
						SS-4 8.5-10.0 1"R	50/2"							
582.2	9.0		Saturated Limestone bedrock, weathered								qu=NT Sand pack 8.5'-19.5' Set screen (slot 0.010") 9.5'-19.5'			
571.2	20.0		End of Boring at 20.0'											

DRILLING CONTRACTOR **Groff Testing**
 DRILLING METHOD **4.25" I.D. HSA**
 DRILLING EQUIPMENT **CME 550 ATV**
 DRILLING STARTED **10/18/10** ENDED **10/19/10**

REMARKS
Installed 2" diameter PVC monitoring well.

WATER LEVEL (ft.)
 ▽ **9.0**
 ▽
 ▽

PATRICK ENGINEERING INC.

BORING NUMBER **B-MW-5-Wi** SHEET **1 OF 1**
 CLIENT **Midwest Generation**
 PROJECT & NO. **21053.070**
 LOCATION **Will County Station**

LOGGED BY **MPG**
 GROUND ELEVATION **589.6**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content					NOTES & TEST RESULTS	
						PL	Unconfined Compressive Strength (TSF)			LL		
						1	2	3	4	5		
589.6	0.0		Brown silty clay, fine gravel, coarse gravel, crushed limestone FILL	SS-1 1.0-2.5 14"R	4 6 10						qu=NT Bentonite seal 2.0'-8.0'. Stickup protective cover installed. qu=NT	
			Dry	SS-2 3.5-5.0 14"R	7 10 21							
				SS-3 6.0-7.5 10"R	10 11 15							qu=NT
581.6	8.0		Brown gravel, clay, silt, wet GC	SS-4 8.5-10.0 4"R	8						Sand pack 8.0'-19.0' qu=NT Set screen (slot 0.010") 9.0'-19.0'	
581.1	8.5											
580.6	9.0		Weathered limestone bedrock		50/0"							
569.6	20.0		End of Boring at 20.0'									

DRILLING CONTRACTOR **Groff Testing**
 DRILLING METHOD **4.25" I.D. HSA**
 DRILLING EQUIPMENT **CME 550 ATV**
 DRILLING STARTED **10/20/10** ENDED **10/20/10**




REMARKS
Installed 2" diameter PVC monitoring well.

WATER LEVEL (ft.)
 ▽ 8.5
 ▽
 ▽

PATRICK ENGINEERING INC.

BORING NUMBER **B-MW-6-WI** SHEET **1** OF **1**
 CLIENT **Midwest Generation**
 PROJECT & NO. **21053.070**
 LOCATION **Will County Station**

LOGGED BY **MPG**
 GROUND ELEVATION **589.8**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content					NOTES & TEST RESULTS
						PL	Unconfined Compressive Strength (TSF) *			LL	
						1	2	3	4	5	
589.8	0.0		Crushed stone, brown medium sand, black coal cinders, dry FILL	SS-1 1.0-2.5 10"R	7 11 8						qu=NT Bentonite seal 3.0'-8.0'. Stickup protective cover installed. qu=NT qu=NT
				SS-2 3.5-5.0 10"R	6 14 13						
				SS-3 6.0-7.5 11"R	4 7 16						
581.8	8.0				Gray silty clay, coarse to fine gravel, trace coarse sand, wet CL	SS-4 8.5-10.0 12"R	7 9 18				
580.8	9.0										
579.3	10.5		Weathered limestone bedrock								Set up NX core barrel & cored bedrock to 18.0'
571.8	18.0				End of Boring at 18.0'						

DRILLING CONTRACTOR **Groff Testing**
 DRILLING METHOD **4.25" I.D. HSA**
 DRILLING EQUIPMENT **CME 550 ATV**
 DRILLING STARTED **10/12/10** ENDED **10/12/10**

REMARKS
Installed 2" diameter PVC monitoring well.

WATER LEVEL (ft.)
 ▽ 9.0
 ▽
 ▽

PATRICK ENGINEERING INC.

BORING NUMBER **B-MW-7-WI** SHEET **1 OF 1**
 CLIENT **Midwest Generation**
 PROJECT & NO. **21053.070**
 LOCATION **Will County Station**

LOGGED BY **MPG**
 GROUND ELEVATION **589.6**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content					NOTES & TEST RESULTS	
						PL	Unconfined Compressive Strength (TSF) *			LL		
						10	20	30	40	50		
589.6	0.0		Crushed stone, gravel, silt, sand	FILL								
					SS-1	7						qu=NT
					1.0-2.5	7						
					10"R	4						
			Rock rubble, dry									
					SS-2	6						Bentonite seal
					3.5-5.0	11						3.0'-6.0'. Stickup
				10"R	12						protective cover	
											qu=NT	
582.6	7.0		Brown gravel, silt, coarse sand, saturated									Sand pack 6.0'-18.0'
					SS-3	11						qu=NT
				6.0-7.5	5							
				6"R	5							
581.6	8.0											Set screen (slot
581.1	8.5											0.010") 7.5'-17.5'
			Weathered limestone bedrock									qu=NT
				SS-4	50/2"							Cored bedrock
				8.5-10.0								9.0'-18.0'
				0"R								
571.6	18.0		End of Boring at 18.0'									

DRILLING CONTRACTOR Groff Testing DRILLING METHOD 4.25" I.D. HSA DRILLING EQUIPMENT CME 550 ATV DRILLING STARTED 10/22/10 ENDED 10/22/10	REMARKS Installed 2" diameter PVC monitoring well.	WATER LEVEL (ft.) ▽ 8.0 ▽ ▽
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PATRICK ENGINEERING INC.

BORING NUMBER **B-MW-8-Wi** SHEET **1** OF **1**
 CLIENT **Midwest Generation**
 PROJECT & NO. **21053.070**
 LOCATION **Will County Station**

LOGGED BY **MPG**
 GROUND ELEVATION **589.6**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content					NOTES & TEST RESULTS
						PL	Unconfined Compressive Strength (TSF) *			LL	
						10	20	30	40	50	
589.6	0.9		Dark brown clayey silt, dry	CL							
			Coarse gravel, crushed rock, dry	FILL	SS-1 1.0-2.5 6"R	4 7 9					qu=NT
			Crushed rock, silty gravel		SS-2 3.5-5.0 10"R	5 13 10					Bentonite seal 3.0'-6.0'. Stickup protective cover installed. qu=NT
582.6	7.0		Moist		SS-3 6.0-7.5 10"R	7 19 22					qu=NT
			Weathered limestone bedrock		SS-4 8.5-10.0 4"R	10 50/1"					Sand pack 7.0'-19.0'
570.6	19.0		End of Boring at 19.0'								

DRILLING CONTRACTOR **Groff Testing**
 DRILLING METHOD **4.25" I.D. HSA**
 DRILLING EQUIPMENT **CME 550 ATV**
 DRILLING STARTED **10/19/10** ENDED **10/19/10**



REMARKS
Installed 2" diameter PVC monitoring well.

WATER LEVEL (ft.)
 ∇
 ∇
 ∇

PATRICK ENGINEERING INC.

BORING NUMBER **B-MW-9-Wi** SHEET **1 OF 1**
 CLIENT **Midwest Generation**
 PROJECT & NO. **21053.070**
 LOCATION **Will County Station**

LOGGED BY **MPG**
 GROUND ELEVATION **589.8**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY(IN)	BLOW COUNTS	Water Content					NOTES & TEST RESULTS	
						PL	Unconfined Compressive Strength (TSF) *			LL		
						10	20	30	40	50		
589.8	0.0		Crushed rock, coarse sand, some silt FILL	SS-1 1.0-2.5 14"R	4 7 9						qu=NT	
			Some brown silty clay	SS-2 3.5-5.0 16"R	3 11 6						Bentonite seal 3.0'-8.0'. Stickup protective cover installed. qu=NT	
583.8	6.0		Gray silty clay, fine and coarse gravel, some coarse sand GC	SS-3 6.0-7.5 16"R	4 11 13						qu=NT	
				Moist	SS-4 8.5-10.0 17"R	4 10 11						Sand pack 8.0'-19.0' qu=NT Set screen (slot 0.010") 9.0'-19.0'
				Clayey gravel								
578.3	11.5			Weather limestone bedrock	SS-5 11.0-12.5 12"R	5 5 50/3"						qu=NT Cored bedrock to 22.0'
570.8	19.0		End of Boring at 19.0'									

DRILLING CONTRACTOR **Groff Testing**
 DRILLING METHOD **4.25" I.D. HSA**
 DRILLING EQUIPMENT **CME 550 ATV**
 DRILLING STARTED **10/19/10** ENDED **10/19/10**




REMARKS
Installed 2" diameter PVC monitoring well.

WATER LEVEL (ft.)
 ▽ 11.5'
 ▽
 ▽

PATRICK ENGINEERING INC.




BORING NUMBER **B-MW-10-Wi** SHEET **1 OF 1**
 CLIENT **Midwest Generation**
 PROJECT & NO. **21053.070**
 LOCATION **Will County Station**

LOGGED BY **MPG**
 GROUND ELEVATION **591.3**

ELEVATION	DEPTH (FT)	STRATA	SOIL/ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY (IN)	BLOW COUNTS	Water Content					NOTES & TEST RESULTS	
						PL	Unconfined Compressive Strength (TSF) *			LL		
						10	20	30	40	50		
						1	2	3	4	5		
591.3	0.0		Crushed limestone, silt, gravel FILL								Bentonite seal 2.0'-8.0'. Flush mount protective cover installed. qu=NT	
				SS-1 1.0-2.5 4"R	7 10 12							
				SS-2 3.5-5.0 14"R	13 18 8							
				SS-3 6.0-7.5 4"R	18 50/5"							
				SS-4 8.5-10.0 4"R	13 17 50/1"							
591.3	10.0		Weathered limestone, clay, sand, gravel GC								Set screen (slot 0.010") (slot 0.010") 10.0'-20.0' qu=NT	
579.3	12.0		Weathered limestone bedrock	SS-5 11.0-12.5 0"R	17 50/0"							
571.3	20.0		End of Boring at 20.0'								-21.0'	

DRILLING CONTRACTOR **Groff Testing**
 DRILLING METHOD **4.25" I.D. HSA**
 DRILLING EQUIPMENT **CME 550 ATV**
 DRILLING STARTED **10/21/10** ENDED **10/21/10**

REMARKS
**Installed 2" diameter PVC
 monitoring well.**

WATER LEVEL (ft.)
 10.0





ENVIRONMENTAL CONSULTATION & REMEDIATION

KPRG and Associates, Inc.

GEOLOGIC LOG OF MW-11

(Page 1 of 2)

Midwest Generation, LLC
Will County Station
Romeoville, Illinois

Project No. 12313

Date Started : 09/14/15
Date Well Set : 09/14/15
Drilling Tools : 8 1/4 HSA
Reaming Tools : None
Drill Rig : Deitrich D-120
Driller Name/Co : J. Luna / Earth Solutions

Total Boring Depth : 28.0 feet
Well Bottom Depth : 20.0 feet
Surface Elev. : xxx feet above MSL
TOC Elev. : xxx feet above MSL
Groundwater Elev. : xxx feet above MSL
Riser Material : 2" Sch 40 PVC
Screen Material : 2" Sch 40 PVC, 0.010 slot
Coordinate N :
Coordinate E :
Logged By : P. Allenstein

Depth in Feet	Surf. Elev. 575	DESCRIPTION	% RQD	% Recovery	Well Diagram:
0	575	Roadway of Sand and Gravel, dry.			
1	574	SAND and GRAVEL, Dark Brown, fine to medium, silty, dry			
2	573	CLAY, brown, with sand and gravel, slightly moist.			
3	572	GRAVEL, limestone/dolomite, dry to slightly moist.			
4	571				
5	570	- some sand			
6	569				
7	568				
8	567	CLAY, dark brown and black, silty, some sand and gravel, moist.			
9	566				
10	565				
11	564				
12	563				
13	562				
14	561	Weathered Bedrock, dolomite.			
15	560				
16	559				
17	558				
18	557				
19	556				
20	555				
21	554				
22					



ENVIRONMENTAL CONSULTATION & REMEDIATION

KPRG and Associates, Inc.

GEOLOGIC LOG OF MW-11

(Page 2 of 2)

Midwest Generation, LLC
Will County Station
Romeoville, Illinois

Project No. 12313

Date Started : 09/14/15
Date Well Set : 09/14/15
Drilling Tools : 8 1/4 HSA
Reaming Tools : None
Drill Rig : Deitrich D-120
Driller Name/Co : J. Luna / Earth Solutions

Total Boring Depth : 28.0 feet
Well Bottom Depth : 20.0 feet
Surface Elev. : xxx feet above MSL
TOC Elev. : xxx feet above MSL
Groundwater Elev. : xxx feet above MSL
Riser Material : 2" Sch 40 PVC
Screen Material : 2" Sch 40 PVC, 0.010 slot
Coordinate N :
Coordinate E :
Logged By : P. Allenstein

Depth in Feet	Surf. Elev. 575	DESCRIPTION	% RQD	% Recovery	Well Diagram:
22	553				
23	552				
24	551				
25	550				
26	549				
27	548				
28	547				
29	546	End of Boring at 28 feet.			
30	545				
31	544				
32	543				
33	542				
34	541				
35	540				
36	539				
37	538				
38	537				
39	536				
40	535				
41	534				
42	533				
43	532				
44					



ENVIRONMENTAL CONSULTATION & REMEDIATION

KPRG and Associates, Inc.

GEOLOGIC LOG OF MW-12

(Page 1 of 1)

Midwest Generation, LLC
Will County Station
Romeoville, Illinois

Project No. 12313

Date Started : 09/15/15
Date Well Set : 09/15/15
Drilling Tools : 8 1/4 HSA
Reaming Tools : None
Drill Rig : Deitrich D-120
Driller Name/Co : J. Luna / Earth Solutions

Total Boring Depth : 20.0 feet
Well Bottom Depth : 20.0 feet
Surface Elev. : xxx feet above MSL
TOC Elev. : xxx feet above MSL
Groundwater Elev. : xxx feet above MSL
Riser Material : 2" Sch 40 PVC
Screen Material : 2" Sch 40 PVC, 0.010 slot
Coordinate N :
Coordinate E :
Logged By : P. Allenstein

Depth in Feet	Surf. Elev. 575	DESCRIPTION	% RQD	% Recovery	Well Diagram:
0	575	Roadway of Sand and Gravel, dry.			<p>Concrete with Flushmount</p> <p>Bentonite Grout</p> <p>Riser 2" Sch 40 PVC</p> <p>Filter Sand</p> <p>Screen, 0.010 slot 2" Sch 40 PVC</p>
1	574	SAND, Black, Brown, fine to medium, silty, dry			
2	573	CLAY, with GRAVEL, slightly moist.			
3	572				
4	571	- gravel layer			
5	570				
6	569				
7	568				
8	567	SILTY SAND, fine to medium, black, moist.			
9	566				
10	565				
11	564				
12	563	SILTY SAND, tan to white, fine to medium, wet.			
13	562	SILTY SAND, brown, medium to coarse, wet.			
14	561	SILT and CLAY, dark gray, trace sand and gravel, very soft wet.			
15	560				
16	559	CLAY, white, light greenish gray, orange mottled, moist.			
17	558				
18	557				
19	556				
20	555				
21	554	End of Boring at 20 feet.			
22					