



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**

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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 SanitasTM 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.

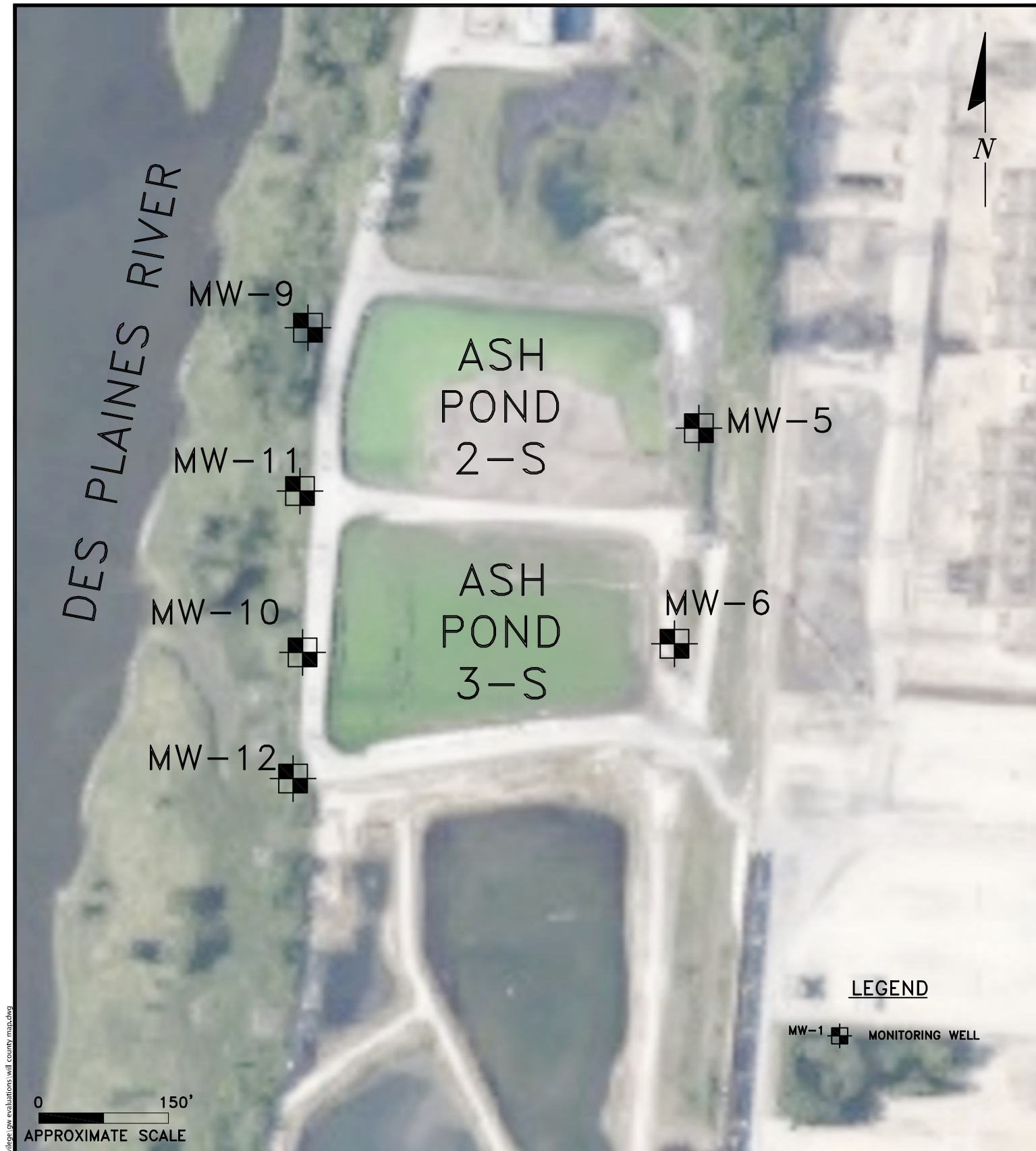
Based on an evaluation of groundwater flow conditions over the reporting period shows that the flow system has been consistent over time between sampling events. The existing monitoring well network appears to be sufficient for the intended purposes of CCR Rule groundwater monitoring of the regulated 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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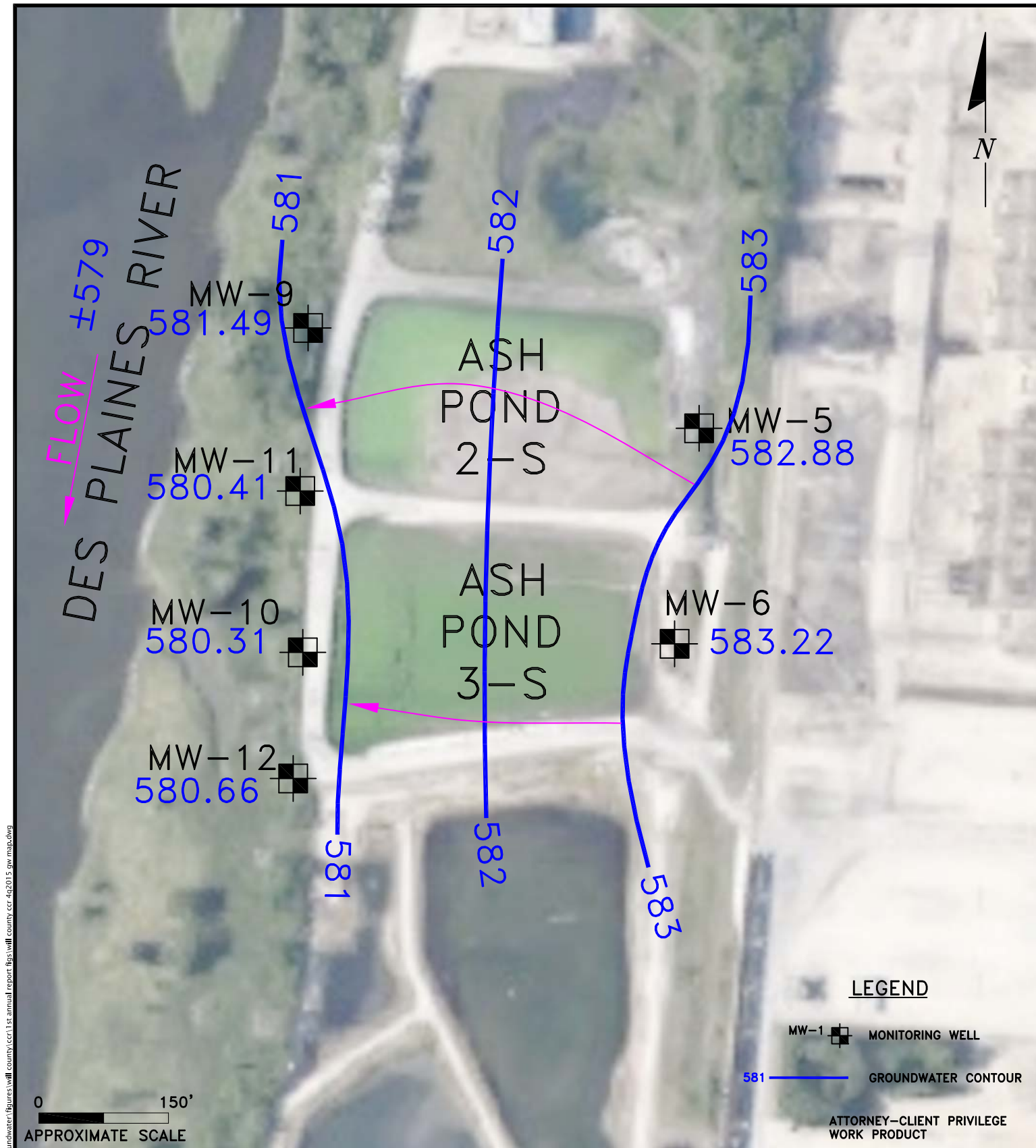
CCR MONITORING WELL SITE MAP

WILL COUNTY STATION
ROMEONVILLE, ILLINOIS

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

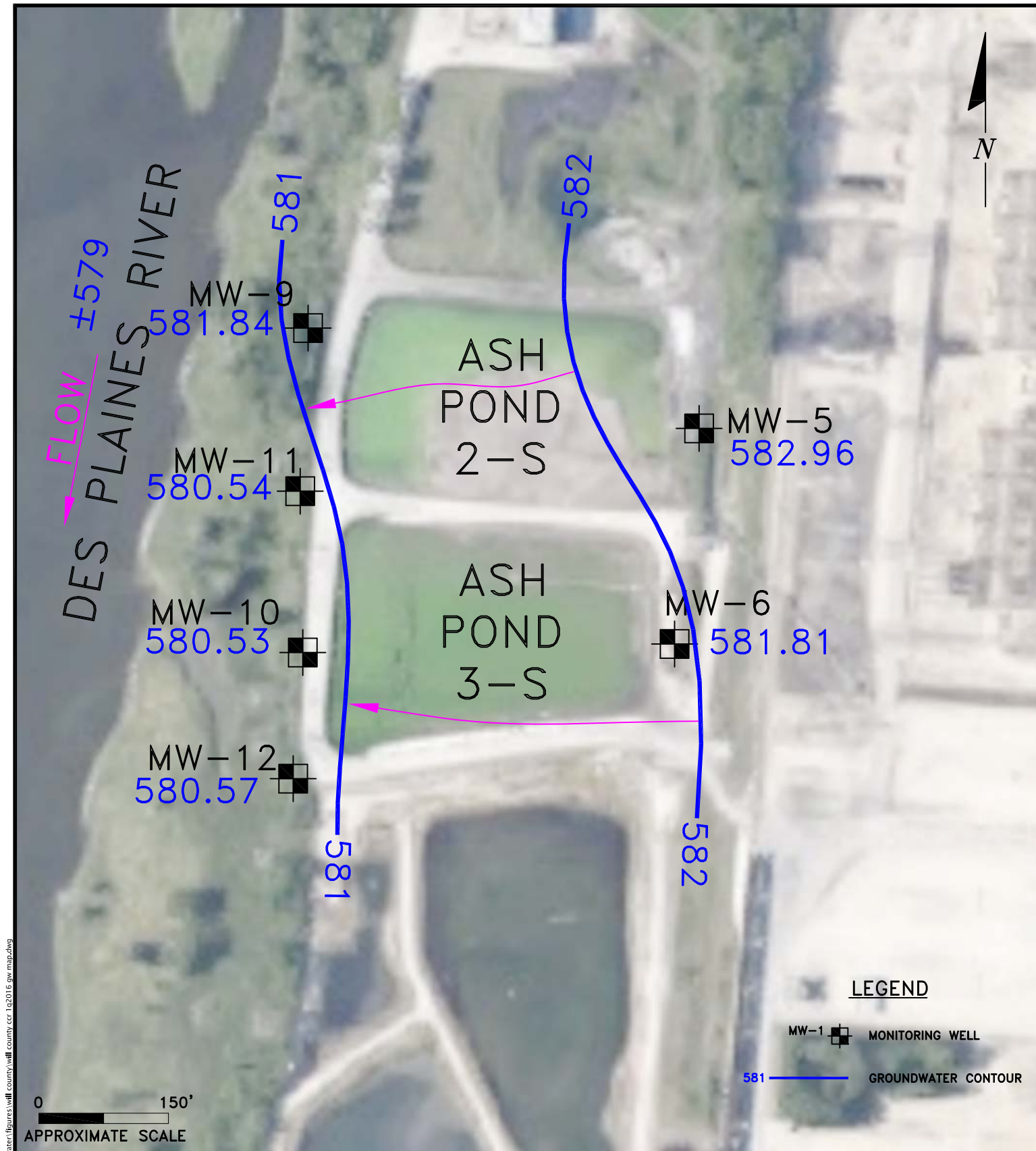
KPRG Project No. 12313.3

FIGURE 1



W:\projects\midwest\generation\12313 ash pond groundwater\figures\will county\cct\1st annual report\figs\will county ccr 4q2015 gw maps.dwg

ENVIRONMENTAL CONSULTATION & REMEDIATION		GROUNDWATER CONTOUR-11/2015	
K P R G KPRG and Associates, Inc.		WILL COUNTY STATION ROMEOVILLE, ILLINOIS	
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		Scale: 1" = 150'	Date: January 27, 2016
KPRG Project No. 12313.3			FIGURE 2



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CCR GROUNDWATER CONTOUR-2/2016

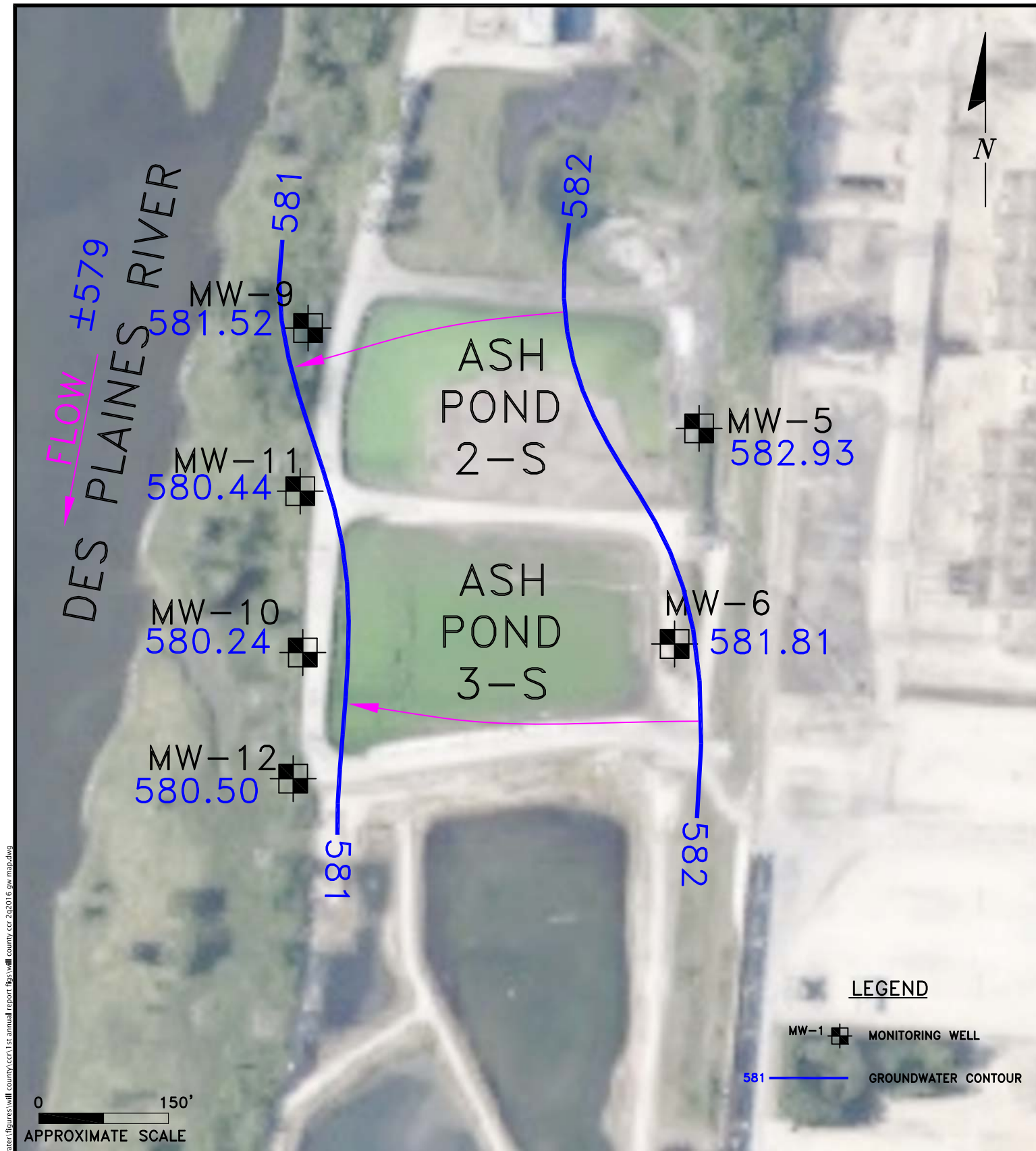
WILL COUNTY STATION
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Scale: 1" = 150'

Date: April 19, 2016

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FIGURE 3



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CCR GROUNDWATER CONTOUR-5/2016

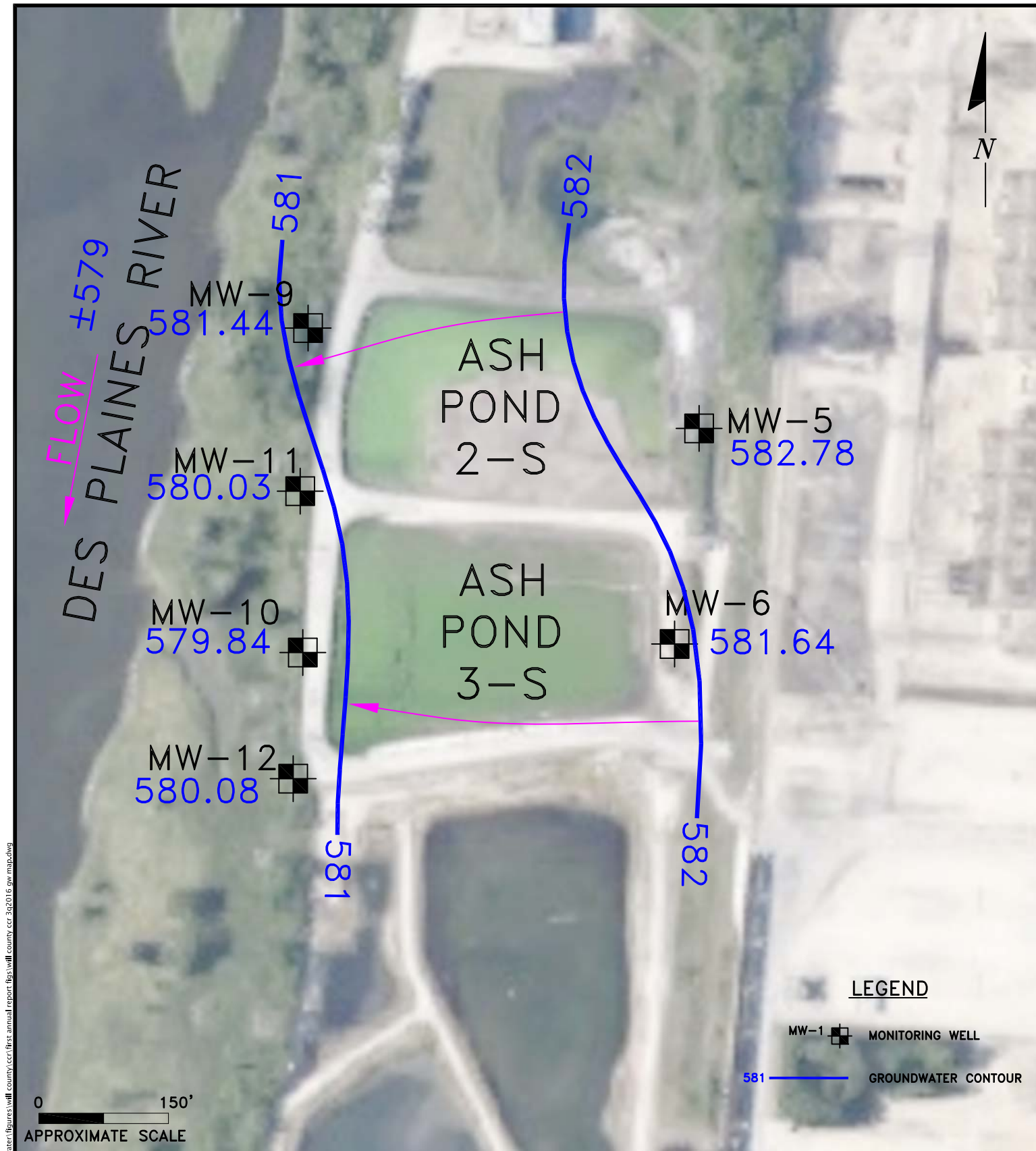
WILL COUNTY STATION
ROMEIOVILLE, ILLINOIS

Scale: 1" = 150'

Date: July 12, 2016

KPRG Project No. 12313.3

FIGURE 4



Will County (Midwest Generation) 12313 ash groundwater figures will county (scr) first annual report figs will county ccr 302016 gw map.dwg

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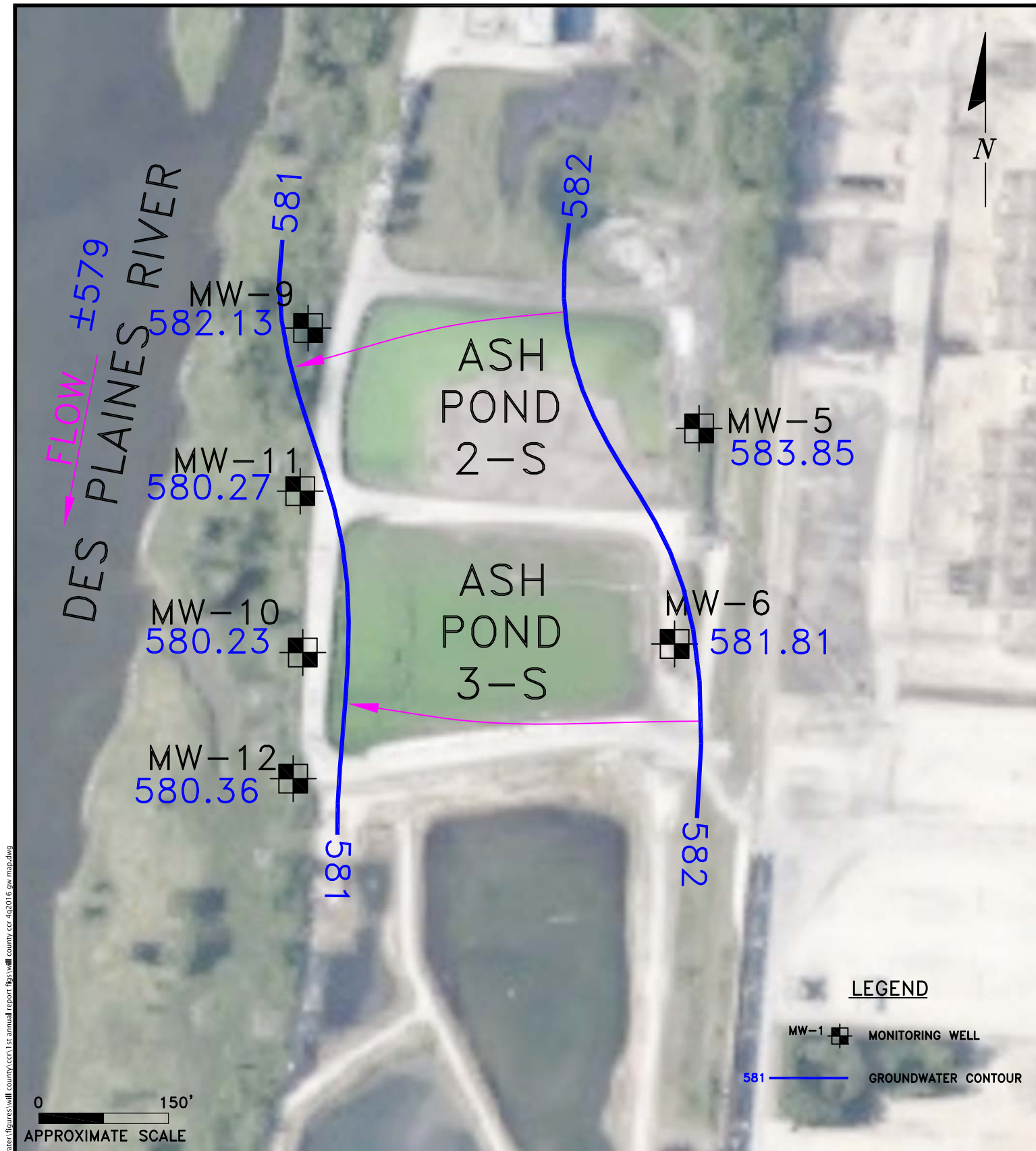
CCR GROUNDWATER CONTOUR-08/2016

WILL COUNTY STATION
ROMEIOVILLE, ILLINOIS

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

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FIGURE 5



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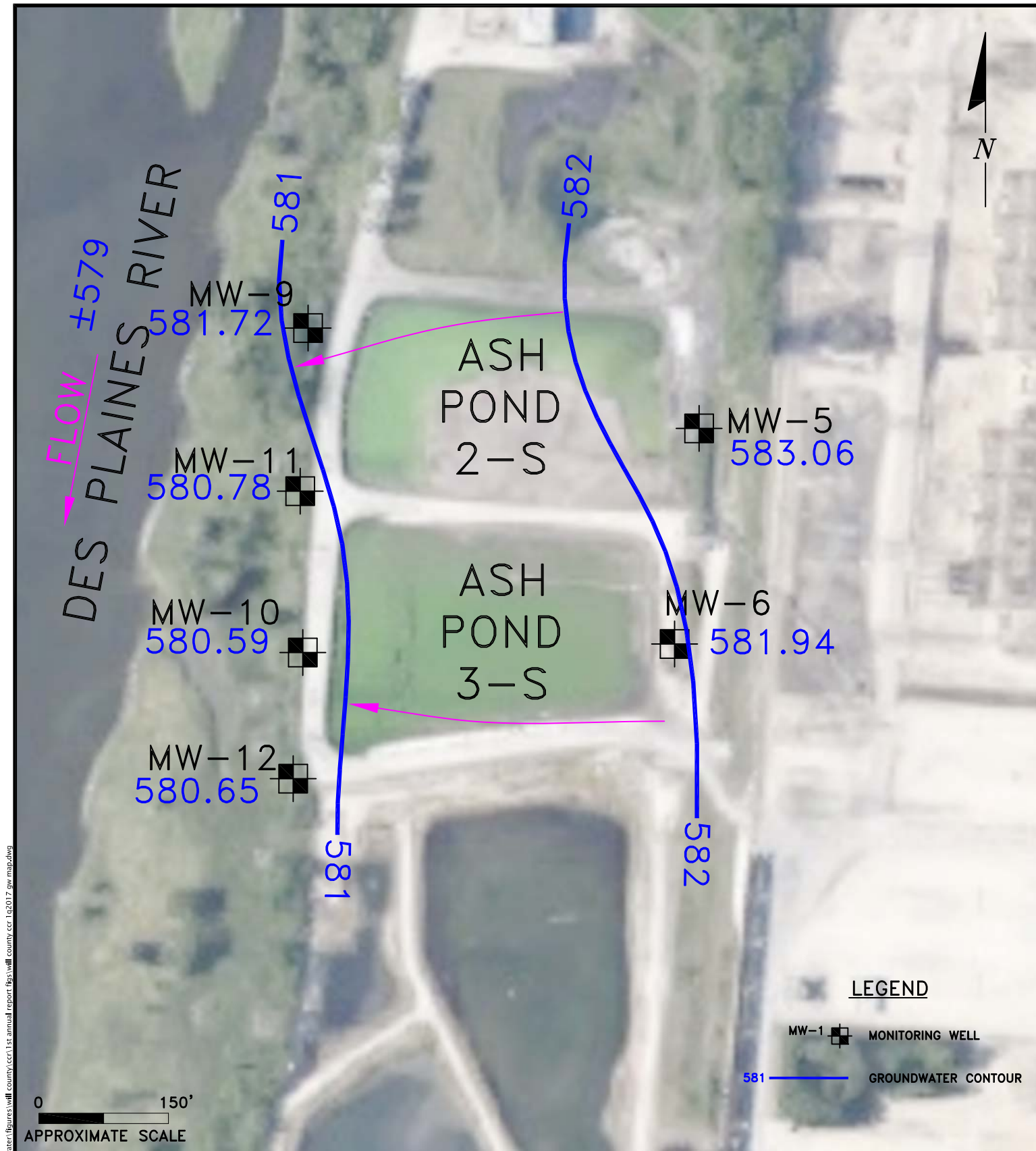
CCR GROUNDWATER CONTOUR-10/2016

WILL COUNTY STATION
ROMEIOVILLE, ILLINOIS

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

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FIGURE 6



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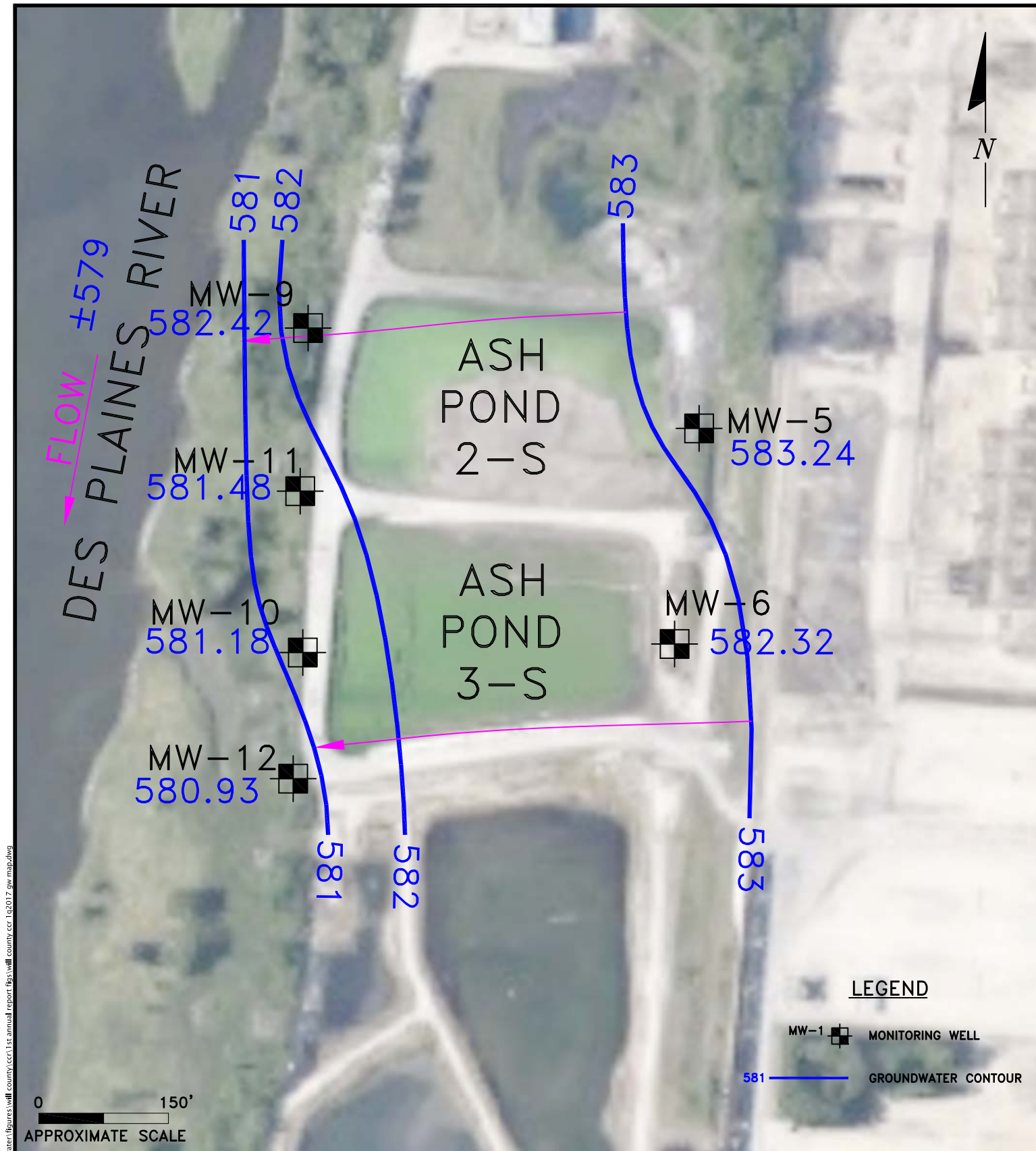
CCR GROUNDWATER CONTOUR-01/2017

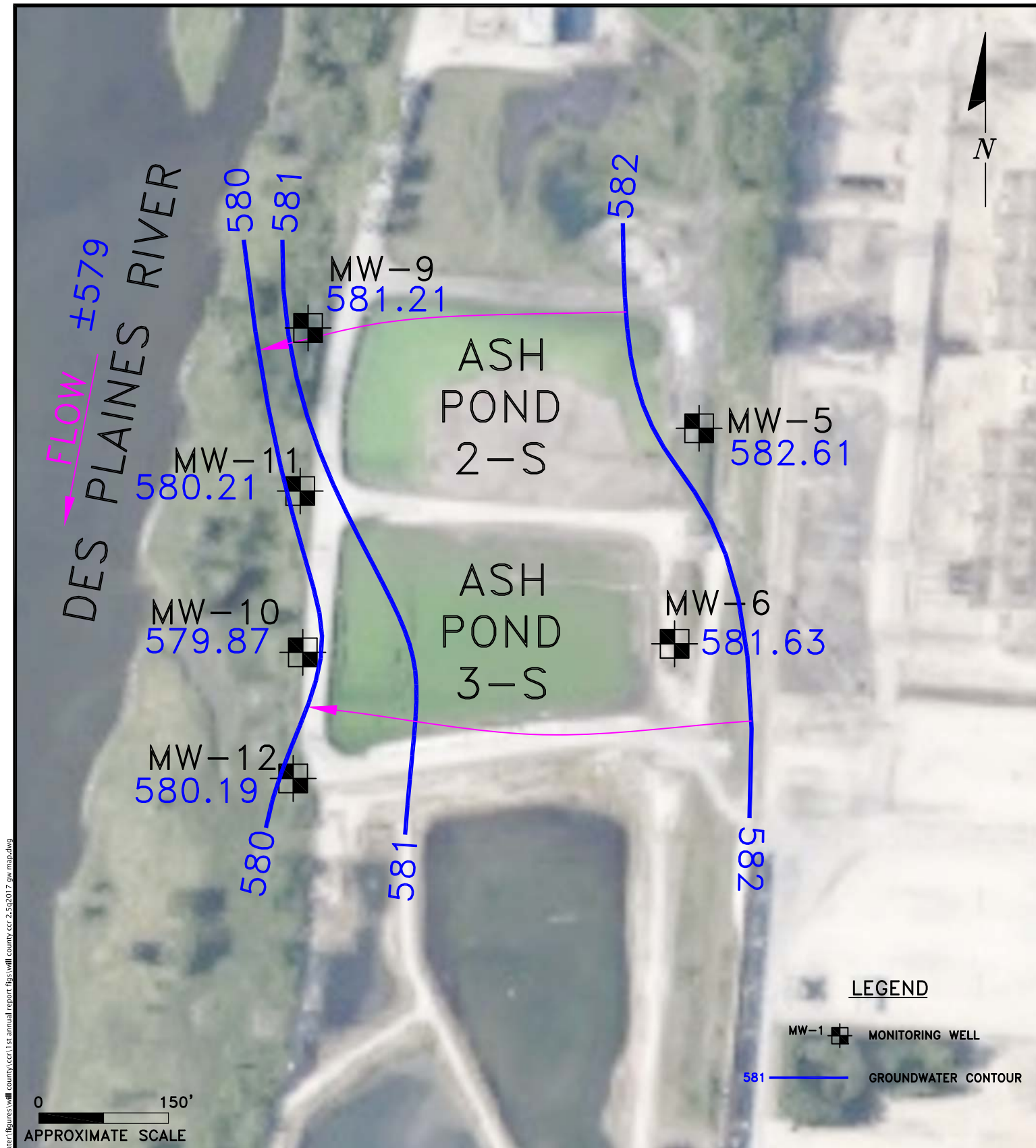
WILL COUNTY STATION
ROMEOVILLE, ILLINOIS

Scale: 1" = 150' Date: April 4, 2017

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FIGURE 7





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CCR GROUNDWATER CONTOUR-06/2017

WILL COUNTY STATION
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Scale: 1" = 150' | Date: August 9, 2017

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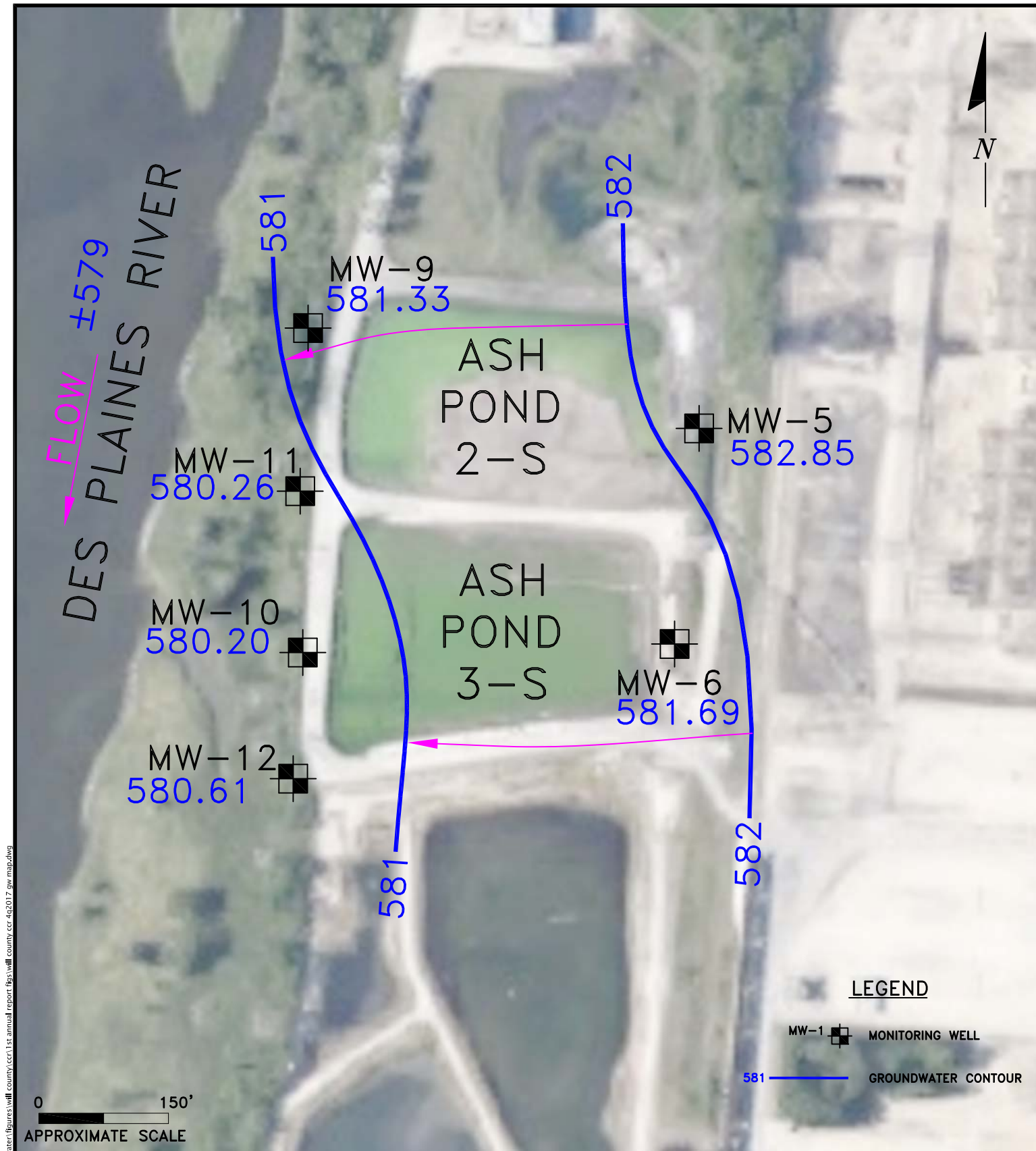
CCR GROUNDWATER CONTOUR-09/2017

WILL COUNTY STATION
ROMEOVILLE, ILLINOIS

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

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FIGURE 10



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CCR GROUNDWATER CONTOUR-11/2017

WILL COUNTY STATION
ROMEOVILLE, 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
MW-06	11/16/2017	592.87	10.02	582.85
	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
MW-09	9/6/2017	593.18	11.77	581.41
	11/16/2017	593.18	11.49	581.69
	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
MW-10	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
	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
MW-11	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
	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
MW-12	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
	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	Kavg (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

* Kavg - 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
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
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
MW-10 down-gradient	11/14/2017	2.6	160	270	0.51	8.1	290	910
	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
	11/15/2017	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
	11/15/2017	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
	11/15/2017	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:
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* - LCS or LCSD is outside acceptance limits.