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BOUNDLESS ENERGYSM

Annual Groundwater Monitoring Report

Indiana Michigan Power Company

Rockport Plant

Bottom Ash Pond CCR Management Units

Rockport, Indiana

January 2018

Prepared by:

American Electric Power Service Corporation

1 Riverside Plaza

Columbus, Ohio 43215

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I. Overview

This *Annual Groundwater Monitoring and Corrective Action Report* (Report) has been prepared to report the status of activities for the year 2017 at the bottom ash pond (BAP) CCR unit at Indiana Michigan Power Company's (I&M) Rockport Plant. The Indiana Michigan Power Company is wholly-owned subsidiary of American Electric Power Company (AEP). The USEPA's CCR rules require that the Annual Groundwater Monitoring and Corrective Action Report covering the previous year's groundwater monitoring activities be posted to the operating record no later than January 31, 2018.

In general, the following activities were completed:

- Monitoring wells were installed and developed to establish a certified groundwater monitoring system around the BAP CCR unit, in accordance with the requirements of 40 CFR 257.91 pursuant AEP's *Groundwater Monitoring Network Evaluation (Amec Foster Wheeler 2017)* ;
- Groundwater samples were collected and analyzed for Appendix III and Appendix IV constituents, as specified in 40 CFR 257.94 *et seq.* and AEP's *Groundwater Sampling and Analysis Plan (Arcadis 2016)*;
- Groundwater data underwent various validation tests, including tests for completeness, valid values, transcription errors, and consistent units;
- Background values for each Appendix III and Appendix IV constituent were established;
- Detection Monitoring sampling was initiated;
- A statistical process in accordance with 40 CFR 257.93 to evaluate groundwater data was prepared, certified, and posted to AEP's CCR website in February 2017. The document was titled *Statistical Analysis Plan – Rockport Plant – Rockport, Indiana (AEP 2017)*. The statistical process was guided by USEPA's *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance* ("Unified Guidance", USEPA, 2009). Statistical analysis of detection monitoring data is underway.

The major components of this annual report, to the extent applicable at this time, are presented in sections that follow:

- A map/aerial photograph showing the BAP CCR management units, all groundwater monitoring wells, and monitoring well identification numbers.
- Identification of any monitoring wells that were installed or decommissioned during the preceding year, along with a statement as to why that happened.
- All of the monitoring data collected, including the rate and direction of groundwater flow, plus a summary showing the number of samples collected per monitoring well, the

dates the samples were collected and whether the sample was collected as part of detection monitoring or assessment monitoring programs.

- A summary of any transition between monitoring programs or an alternate monitoring frequency, for example the date and circumstances for transitioning from detection monitoring to assessment monitoring, in addition to identifying the constituents detected at a statistically significant increase over background concentrations.
- Other information required to be included in the annual report such as alternate source demonstration or assessment of corrective measures, if applicable

In addition, this report summarizes key actions completed, and where applicable, describes any problems encountered and actions taken to resolve those problems. The report includes a projection of key activities for the upcoming year.

II. Groundwater Monitoring Well Locations and Identification Numbers

The figure that follows depicts the PE-certified BAP groundwater monitoring network, the monitoring well locations, and their corresponding identification numbers. Rather than separate groundwater monitoring systems for the East and West bottom ash ponds, the groundwater network monitors both of the bottom ash ponds as a single unit as allowed by 40 CFR 257.91(d). The CCR monitoring wells are listed as follows:

- Six Upgradient Wells: MW 1600 shallow, intermediate, and deep (S, I, D), and MW 1601 S, I, and D.
- Fifteen Downgradient Wells: MW 1002, MW 1602 I,D ; MW 1603 S,I,D ; MW 1604 S,I,D ; MW 1605 S,I,D ; and MW 1606 S,I,D.



III. Monitoring Wells Installed or Decommissioned

There was no new compliance monitoring wells installed or decommissioned in 2017 for the BAP system. The compliance network design, as summarized in the *Groundwater Monitoring Network Design Report (Amec Foster Wheeler, 2017)* and as posted at the CCR web site for Rockport Plant, did not change. That design report, viewable on the AEP CCR web site for the Rockport Plant, discusses the facility location, the hydrogeological setting, the hydrostratigraphic units, the uppermost aquifer, downgradient monitoring well locations, and the upgradient monitoring well locations for the compliance network. The web site is located at [AEP.com/About/Us/Required Internet Postings/CCR Rule Compliance Data and Information/Rockport](http://AEP.com/About/Us/Required%20Internet%20Postings/CCR%20Rule%20Compliance%20Data%20and%20Information/Rockport).

IV. Groundwater Quality Data and Static Water Elevation Data, With Flow Rates and Flow Directions

Appendix I contains tables showing the groundwater quality data collected during the establishment of background quality (Appendix III and Appendix IV parameters to 40 CFR 257) and for the first detection monitoring samples (Appendix III parameters only). Static water elevation data from each monitoring event also are shown in **Appendix I**, along with the groundwater flow rates and flow directions developed after each sampling event.

V. Discussion About Transition Between Monitoring Requirements or Alternate Monitoring Frequency

As of this first annual groundwater report date there has been no transition between detection monitoring and assessment monitoring. Detection monitoring will continue in 2018. The sampling frequency of twice per year will be maintained for the 40 CFR 257 Appendix III parameters (boron, calcium, chloride, fluoride, pH, sulfate, and total dissolved solids).

Regarding defining an alternate monitoring frequency, the groundwater velocity and monitoring well production is high enough at this facility that no modification of the twice-per-year detection monitoring effort is needed.

VI. Other Information Required

At the appropriate time the geochemical analyses, coupled with the statistical analyses of the groundwater quality data, will determine whether an alternate source or alternate sources are affecting groundwater chemistry. Where an alternative source(s) demonstration is made, those analyses and supporting information will be presented as well.

VII. Description of Any Problems Encountered in 2017 and Actions Taken

No significant problems were encountered. The low flow sampling effort went smoothly and the schedule was met to support the 2017 annual groundwater report preparation covering the year 2017 groundwater monitoring activities.

VIII. A Projection of Key Activities for the Upcoming Year

Key activities for 2018 include:

- Evaluation of the first detection monitoring results from a statistical analysis viewpoint, looking for any statistically significant increases, or decreases when pH is considered.
- Alternate source demonstrations or assessment monitoring activities as necessary or required.
- Detection monitoring on a twice per year schedule with required statistical analysis of sample results.
- Responding to any new data received in light of what the CCR rule requires.
- Preparation of the second annual groundwater report.

APPENDIX I

ROCKPORT PLANT CCR BOTTOM ASH PONDS

ANNUAL GW MONITORING REPORT COVERING 2017 ACTIVITIES

**GW QUALITY DATA,
GW DIRECTIONS,
GW FLOW RATES.**

Table 1 - Groundwater Data Summary
Rockport Plant - Bottom Ash Pond

Parameter	Unit	MW-1002								
		6/7/2016	7/18/2016	9/20/2016	11/15/2016	1/9/2017	3/7/2017	5/8/2017	7/17/2017	10/3/2017
		Background								Detection
Antimony	µg/L	0.0500	0.0500	0.0400 J	0.0600	0.0500 J	0.0500	0.0500	0.0400 J	-
Arsenic	µg/L	0.320	0.290	0.240	0.240	0.250	0.200	0.240	0.210	-
Barium	µg/L	12.3	14.2	18.5	23.5	26.9	35.6	26.8	21.4	-
Beryllium	µg/L	<0.005 U	<0.005 U	<0.005 U	0.00600 J	<0.005 U	<0.005 U	0.0200	<0.004 U	-
Boron	mg/L	1.77	1.70	1.57	1.67	1.57	1.32	1.04	1.28	1.63
Cadmium	µg/L	0.0200	0.0300	0.0300	0.150	0.0400	0.0700	0.0500	0.0300	-
Calcium	mg/L	33.2	32.3	40.1	49.4	55.6	76.3	78.1	50.0	36.4
Chloride	mg/L	58.9	57.8	54.0	53.0	59.0	81.1	75.5	59.9	54.4
Chromium	µg/L	0.300	0.700	0.100	0.0750	0.0780	0.331	0.177	0.107	-
Cobalt	µg/L	0.830	0.931	0.699	0.664	0.692	0.568	0.526	0.665	-
Combined Radium	pCi/L	0.112	0.741	1.38	0.686	1.05	0.483	0.234	3.03	-
Fluoride	mg/L	1.05	1.03	0.980	0.870	0.740	0.730	0.730	0.730	0.800
Lead	µg/L	0.0340	0.0260	0.0100 J	0.0310	0.0220	0.163	0.0370	0.0200 J	-
Lithium	mg/L	0.00200	0.0160	0.00400	0.0100	0.00600	0.00300	0.00900	0.00900	-
Mercury	µg/L	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	0.00500	<0.002 U	-
Molybdenum	µg/L	1.92	2.54	3.38	2.47	3.16	2.69	2.69	3.05	-
Selenium	µg/L	0.0800 J	0.100 J	0.100 J	0.0800 J	0.0600 J	0.100 J	0.100	0.0700 J	-
Total Dissolved Solids	mg/L	390	385	399	405	440	503	498	430	403
Sulfate	mg/L	149	154	164	178	190	228	215	184	166
Thallium	µg/L	0.0200 J	0.0300 J	0.0200 J	0.0400 J	0.0300 J	0.0400 J	0.0500	0.0400 J	-
pH	SU	6.95	7.07	6.78	6.52	6.25	6.50	6.70	6.65	7.10

Notes:
µg/L: micrograms per liter
mg/L: milligrams per liter
pCi/L: picocuries per liter
SU: standard unit
U: Non-detect value. Parameters which were not detected are shown as less than the method detection limit (MDL).
J: Estimated value. Parameter was detected in concentrations below the reporting limit.
-: Not sampled
For statistical analysis, parameters which were not detected were replaced with the reporting limit.

Table 1 - Groundwater Data Summary
Rockport Plant - Bottom Ash Pond

Parameter	Unit	MW-1600D								
		6/8/2016	7/19/2016	9/19/2016	11/16/2016	1/10/2017	3/7/2017	5/8/2017	7/17/2017	10/3/2017
		Background								Detection
Antimony	µg/L	0.0100 J	0.0200 J	0.0100 J	<0.01 U	<0.01 U	<0.01 U	0.0500	0.0300 J	-
Arsenic	µg/L	15.4	17.2	15.1	15.8	15.2	16.2	15.9	15.0	-
Barium	µg/L	940	946	910	997	877	986	914	817	-
Beryllium	µg/L	0.00600 J	0.00500 J	<0.005 U	<0.005 U	<0.005 U	<0.005 U	0.0200	0.00400 J	-
Boron	mg/L	0.0160	0.0150	<0.002 U	0.0240	0.0140	0.0360	0.0370	0.0380	0.0400
Cadmium	µg/L	<0.004 U	<0.004 U	<0.004 U	<0.004 U	<0.004 U	<0.004 U	0.0200	<0.005 U	-
Calcium	mg/L	83.5	74.9	85.6	83.1	87.8	84.9	89.1	73.6	78.3
Chloride	mg/L	31.5	32.2	30.9	30.9	31.0	31.6	32.6	31.6	31.5
Chromium	µg/L	0.200	0.200	0.900	0.128	0.115	0.427	0.170	0.180	-
Cobalt	µg/L	0.109	0.0940	0.0710	0.0850	0.100	0.0810	0.0960	0.112	-
Combined Radium	pCi/L	2.15	1.62	1.64	1.40	2.27	1.32	1.10	2.22	-
Fluoride	mg/L	0.200	0.220	0.200	0.170	0.220	0.190	0.210	0.170	0.200
Lead	µg/L	0.0950	0.0210	0.0200	0.0640	0.0530	0.0380	0.0730	0.0760	-
Lithium	mg/L	<0.0002 U	0.0200	0.0110	0.00800	0.00900	0.00800	0.00600	0.00900	-
Mercury	µg/L	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	0.00500	<0.002 U	-
Molybdenum	µg/L	1.94	2.19	1.75	1.79	1.65	1.78	1.64	1.56	-
Selenium	µg/L	<0.03 U	0.0500 J	<0.03 U	0.0400 J	<0.03 U	0.0500 J	0.100	0.0400 J	-
Total Dissolved Solids	mg/L	444	413	385	415	384	374	402	389	398
Sulfate	mg/L	43.9	44.9	38.7	35.9	42.5	39.2	38.4	40.1	40.8
Thallium	µg/L	0.0100 J	0.0540	0.0100 J	<0.01 U	<0.01 U	<0.01 U	0.0500	<0.01 U	-
pH	SU	7.56	7.19	7.13	7.24	7.14	7.04	6.54	6.54	7.25

Notes:
µg/L: micrograms per liter
mg/L: milligrams per liter
pCi/L: picocuries per liter
SU: standard unit
U: Non-detect value. Parameters which were not detected are shown as less than the method detection limit (MDL).
J: Estimated value. Parameter was detected in concentrations below the reporting limit.
-: Not sampled
For statistical analysis, parameters which were not detected were replaced with the reporting limit.

Table 1 - Groundwater Data Summary
Rockport Plant - Bottom Ash Pond

Parameter	Unit	MW-1600I								
		6/8/2016	7/19/2016	9/19/2016	11/16/2016	1/10/2017	3/7/2017	5/8/2017	7/17/2017	10/3/2017
		Background								Detection
Antimony	µg/L	0.0500 J	0.0300 J	0.0300 J	0.0300 J	0.0200 J	0.0200 J	0.0500	0.0200 J	-
Arsenic	µg/L	15.9	17.9	16.0	16.3	16.7	16.8	17.0	16.8	-
Barium	µg/L	832	805	778	801	736	696	762	710	-
Beryllium	µg/L	<0.005 U	<0.005 U	<0.005 U	<0.005 U	<0.005 U	<0.005 U	0.0200	<0.004 U	-
Boron	mg/L	0.0190	0.0190	0.00400 J	0.0310	0.0160	0.0490	0.0330	0.0460	0.0510
Cadmium	µg/L	0.00500 J	<0.004 U	0.0100 J	0.0100 J	<0.004 U	0.0200 J	0.0200	<0.005 U	-
Calcium	mg/L	79.2	76.0	77.6	76.0	76.5	75.5	80.2	71.5	71.1
Chloride	mg/L	33.5	26.7	24.9	24.5	23.7	26.4	25.0	24.4	24.4
Chromium	µg/L	0.400	0.300	0.200	0.0810	0.158	0.270	0.0950	0.397	-
Cobalt	µg/L	1.27	1.38	1.13	1.14	1.20	1.13	1.26	1.27	-
Combined Radium	pCi/L	7.25	1.90	1.55	2.47	0.914	1.62	1.75	2.01	-
Fluoride	mg/L	0.230	0.230	0.210	0.170	0.190	0.200	0.220	0.170	0.210
Lead	µg/L	0.107	0.0990	0.0370	0.0100 J	0.00600 J	0.0540	0.0200	0.108	-
Lithium	mg/L	0.00300	0.0100	0.0100	0.0130	0.00500	0.00500	0.0110	0.0100	-
Mercury	µg/L	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	0.00500	<0.002 U	-
Molybdenum	µg/L	1.68	1.83	1.89	1.63	1.64	1.67	1.54	1.53	-
Selenium	µg/L	<0.03 U	0.0300 J	0.0600 J	<0.03 U	<0.03 U	0.0400 J	0.100	<0.03 U	-
Total Dissolved Solids	mg/L	442	423	404	408	394	392	406	398	400
Sulfate	mg/L	52.2	55.3	48.4	44.5	45.8	49.2	48.5	48.0	50.7
Thallium	µg/L	0.0200 J	<0.01 U	0.0650	0.0200 J	0.0200 J	0.0300 J	0.0500	0.0200 J	-
pH	SU	-	7.33	7.17	7.23	7.09	7.20	6.81	9.29	7.25

Notes:
µg/L: micrograms per liter
mg/L: milligrams per liter
pCi/L: picocuries per liter
SU: standard unit
U: Non-detect value. Parameters which were not detected are shown as less than the method detection limit (MDL).
J: Estimated value. Parameter was detected in concentrations below the reporting limit.
-: Not sampled
For statistical analysis, parameters which were not detected were replaced with the reporting limit.

Table 1 - Groundwater Data Summary
Rockport Plant - Bottom Ash Pond

Parameter	Unit	MW-1600S								
		6/8/2016	7/19/2016	9/19/2016	11/16/2016	1/10/2017	3/7/2017	5/8/2017	7/17/2017	10/3/2017
		Background								Detection
Antimony	µg/L	0.0200 J	0.0200 J	0.0200 J	0.0400 J	0.0200 J	0.0300 J	0.0500	0.0200 J	-
Arsenic	µg/L	0.670	0.670	0.580	0.750	0.650	0.700	0.650	0.610	-
Barium	µg/L	36.1	37.9	30.9	32.9	29.3	30.5	26.9	26.1	-
Beryllium	µg/L	<0.005 U	<0.005 U	<0.005 U	0.00800 J	0.00600 J	0.00800 J	0.0200	0.00600 J	-
Boron	mg/L	0.0450	0.0450	0.0260	0.0610	0.0340	0.129	0.0390	0.0680	0.0490
Cadmium	µg/L	0.0200 J	0.0200 J	0.0100 J	0.0300	0.0100 J	0.0200 J	0.0200	0.0200 J	-
Calcium	mg/L	69.8	67.0	63.2	63.5	68.5	63.2	69.0	58.0	61.4
Chloride	mg/L	32.0	29.9	21.3	27.1	23.7	25.0	26.0	18.0	27.8
Chromium	µg/L	0.200	0.400	0.200	0.284	0.892	0.459	0.163	0.302	-
Cobalt	µg/L	0.243	0.0990	0.129	0.690	0.306	0.587	0.398	0.441	-
Combined Radium	pCi/L	0.149	0.528	0.0715	0.505	1.82	1.70	0.305	0.117	-
Fluoride	mg/L	0.330	0.340	0.320	0.280	0.320	0.370	0.400	0.360	0.370
Lead	µg/L	0.118	0.0480	0.0870	0.360	0.151	0.319	0.195	0.233	-
Lithium	mg/L	0.00300	0.0380	0.0190	0.0240	0.0160	0.0130	0.0190	0.0190	-
Mercury	µg/L	0.00200 J	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	0.00500	<0.002 U	-
Molybdenum	µg/L	0.610	0.560	0.560	0.640	0.600	0.660	0.560	0.740	-
Selenium	µg/L	0.500	0.300	0.300	0.400	0.400	0.500	0.500	0.500	-
Total Dissolved Solids	mg/L	491	448	408	426	433	402	427	393	430
Sulfate	mg/L	75.8	76.0	60.8	54.4	53.1	58.5	54.6	41.0	54.9
Thallium	µg/L	<0.01 U	0.0100 J	0.0200 J	0.0400 J	0.0100 J	0.0100 J	0.0500	0.0200 J	-
pH	SU	6.62	6.75	6.43	6.77	6.47	6.80	6.55	9.46	6.76

Notes:
µg/L: micrograms per liter
mg/L: milligrams per liter
pCi/L: picocuries per liter
SU: standard unit
U: Non-detect value. Parameters which were not detected are shown as less than the method detection limit (MDL).
J: Estimated value. Parameter was detected in concentrations below the reporting limit.
-: Not sampled
For statistical analysis, parameters which were not detected were replaced with the reporting limit.

Table 1 - Groundwater Data Summary
Rockport Plant - Bottom Ash Pond

Parameter	Unit	MW-1601D								
		6/27/2016	7/19/2016	9/20/2016	11/16/2016	1/10/2017	3/7/2017	5/9/2017	7/17/2017	10/4/2017
		Background								Detection
Antimony	µg/L	0.0300 J	0.0200 J	0.0100 J	0.0200 J	<0.01 U	<0.01 U	0.0500	<0.01 U	-
Arsenic	µg/L	6.04	8.20	8.59	9.20	8.95	9.32	9.47	9.38	-
Barium	µg/L	491	540	602	616	527	582	583	532	-
Beryllium	µg/L	0.0240	<0.005 U	<0.005 U	<0.005 U	<0.005 U	<0.005 U	0.0200	<0.004 U	-
Boron	mg/L	0.0380	0.0350	0.0260	0.0350	0.0290	0.0550	0.0380	0.0900	0.0440
Cadmium	µg/L	0.120	0.0100 J	<0.004 U	0.0100 J	<0.004 U	<0.004 U	0.0200	0.00600 J	-
Calcium	mg/L	79.7	89.0	87.0	89.5	90.7	85.2	90.8	77.7	86.8
Chloride	mg/L	21.8	18.9	22.6	21.8	19.5	28.7	22.5	21.3	17.9
Chromium	µg/L	0.800	0.400	0.200	0.0890	0.293	0.417	0.121	0.129	-
Cobalt	µg/L	1.36	0.502	0.224	0.174	0.197	0.148	0.152	0.103	-
Combined Radium	pCi/L	1.12	2.25	1.73	0.946	1.93	0.868	0.983	3.14	-
Fluoride	mg/L	0.220	0.220	0.170	0.150	0.190	0.170	0.170	0.170	0.160
Lead	µg/L	1.05	0.0310	0.0100 J	0.0220	0.00600 J	0.0210	0.0260	0.0310	-
Lithium	mg/L	0.00300	0.00500	<0.0002 U	0.0150	0.00400	0.00400	0.00800	0.00600	-
Mercury	µg/L	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	0.00500	<0.002 U	-
Molybdenum	µg/L	2.54	3.96	3.08	3.14	3.10	2.66	2.84	2.67	-
Selenium	µg/L	0.100	0.0700 J	<0.03 U	<0.03 U	<0.03 U	<0.03 U	0.100	<0.03 U	-
Total Dissolved Solids	mg/L	460	412	410	413	407	392	399	393	390
Sulfate	mg/L	21.9	18.9	20.4	18.0	20.3	25.4	21.3	21.4	18.8
Thallium	µg/L	0.0100 J	0.0550	<0.01 U	0.0400 J	<0.01 U	<0.01 U	0.0500	<0.01 U	-
pH	SU	7.47	7.36	7.19	7.35	6.78	7.07	6.70	6.80	7.29

Notes:
µg/L: micrograms per liter
mg/L: milligrams per liter
pCi/L: picocuries per liter
SU: standard unit
U: Non-detect value. Parameters which were not detected are shown as less than the method detection limit (MDL).
J: Estimated value. Parameter was detected in concentrations below the reporting limit.
-: Not sampled
For statistical analysis, parameters which were not detected were replaced with the reporting limit.

Table 1 - Groundwater Data Summary
Rockport Plant - Bottom Ash Pond

Parameter	Unit	MW-1601I								
		6/8/2016	7/19/2016	9/20/2016	11/16/2016	1/10/2017	3/7/2017	5/9/2017	7/17/2017	10/4/2017
		Background								Detection
Antimony	µg/L	0.0200 J	0.0200 J	0.0200 J	0.0200 J	0.0100 J	0.0300 J	0.0500	0.0200 J	-
Arsenic	µg/L	11.4	14.6	14.9	16.2	16.2	16.9	17.9	18.0	-
Barium	µg/L	612	620	681	689	605	650	634	613	-
Beryllium	µg/L	<0.005 U	<0.005 U	<0.005 U	<0.005 U	<0.005 U	<0.005 U	0.0200	<0.004 U	-
Boron	mg/L	0.0240	0.0230	0.0430	0.0260	0.0180	0.0290	0.0790	0.0390	0.0880
Cadmium	µg/L	<0.004 U	<0.004 U	<0.004 U	0.00700 J	<0.004 U	<0.004 U	0.0200	<0.005 U	-
Calcium	mg/L	84.9	84.1	85.2	91.6	92.6	84.0	90.0	82.0	77.5
Chloride	mg/L	26.3	33.3	32.3	31.7	31.3	32.5	33.1	32.0	31.6
Chromium	µg/L	0.100	0.900	0.200	0.110	0.387	0.267	0.156	0.160	-
Cobalt	µg/L	1.84	1.98	1.68	1.68	1.58	1.59	1.69	1.74	-
Combined Radium	pCi/L	1.43	1.04	2.33	1.45	0.993	0.986	1.06	1.28	-
Fluoride	mg/L	0.210	0.250	0.220	0.190	0.190	0.220	0.210	0.190	0.200
Lead	µg/L	0.0420	0.0450	0.0200 J	0.0300	0.0200 J	0.0700	0.0520	0.0420	-
Lithium	mg/L	0.00300	0.00400	0.00800	0.00200	0.00700	0.0100	0.0140	0.0110	-
Mercury	µg/L	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	0.00500	<0.002 U	-
Molybdenum	µg/L	2.80	2.81	2.53	2.36	2.24	2.74	2.23	2.13	-
Selenium	µg/L	<0.03 U	<0.03 U	<0.03 U	<0.03 U	<0.03 U	0.0600 J	0.100	<0.03 U	-
Total Dissolved Solids	mg/L	419	430	432	434	429	427	422	418	428
Sulfate	mg/L	54.0	54.0	49.1	46.7	47.7	48.5	49.1	49.9	51.8
Thallium	µg/L	<0.01 U	<0.01 U	0.0100 J	0.0200 J	0.0200 J	0.0300 J	0.0500	0.0200 J	-
pH	SU	7.44	7.18	7.10	7.20	6.71	7.08	6.83	9.45	6.80

Notes:
µg/L: micrograms per liter
mg/L: milligrams per liter
pCi/L: picocuries per liter
SU: standard unit
U: Non-detect value. Parameters which were not detected are shown as less than the method detection limit (MDL).
J: Estimated value. Parameter was detected in concentrations below the reporting limit.
-: Not sampled
For statistical analysis, parameters which were not detected were replaced with the reporting limit.

Table 1 - Groundwater Data Summary
Rockport Plant - Bottom Ash Pond

Parameter	Unit	MW-1601S								
		6/8/2016	7/19/2016	9/20/2016	11/16/2016	1/10/2017	3/7/2017	5/8/2017	7/17/2017	10/4/2017
		Background								Detection
Antimony	µg/L	0.0200 J	0.0200 J	0.0200 J	0.0300 J	0.0500 J	0.0200 J	0.0500	0.0500	-
Arsenic	µg/L	1.90	2.12	1.99	2.00	2.00	2.25	2.02	2.70	-
Barium	µg/L	49.4	47.7	41.6	39.0	43.5	50.7	42.6	70.0	-
Beryllium	µg/L	0.00600 J	<0.005 U	<0.005 U	<0.005 U	<0.005 U	<0.005 U	0.0200	0.0100 J	-
Boron	mg/L	0.108	0.106	0.0940	0.100	0.113	0.0980	0.0920	0.0770	0.113
Cadmium	µg/L	0.0100 J	0.00700 J	0.00600 J	0.0100 J	0.0300	0.0100 J	0.0200	0.0300	-
Calcium	mg/L	76.9	71.8	74.2	78.2	78.5	79.2	86.7	76.8	73.5
Chloride	mg/L	45.9	46.4	43.5	42.3	42.0	41.1	41.9	41.7	40.9
Chromium	µg/L	0.200	0.600	0.200	0.123	0.279	1.52	0.192	1.05	-
Cobalt	µg/L	0.957	0.478	0.381	0.274	0.520	0.980	0.411	2.67	-
Combined Radium	pCi/L	0.788	1.26	0.467	0.163	0.717	0.197	0.320	1.81	-
Fluoride	mg/L	0.340	0.360	0.330	0.260	0.280	0.300	0.310	0.250	0.290
Lead	µg/L	0.220	0.114	0.127	0.0840	0.247	0.348	0.119	0.807	-
Lithium	mg/L	<0.0002 U	0.0240	0.00500	0.00900	0.00600	0.0100	0.0100	0.0120	-
Mercury	µg/L	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	0.00500	0.00300 J	-
Molybdenum	µg/L	2.17	1.91	1.40	2.17	1.61	1.49	1.24	1.46	-
Selenium	µg/L	1.30	1.30	1.30	1.30	1.40	1.40	1.70	1.80	-
Total Dissolved Solids	mg/L	440	415	442	442	424	413	389	443	441
Sulfate	mg/L	39.2	40.1	37.6	36.4	35.9	42.5	44.0	40.5	41.6
Thallium	µg/L	0.0500 J	<0.01 U	0.0300 J	0.0300 J	0.104	0.0100 J	0.0500	0.0400 J	-
pH	SU	7.55	7.19	7.22	7.21	6.84	7.19	6.75	6.56	7.31

Notes:
µg/L: micrograms per liter
mg/L: milligrams per liter
pCi/L: picocuries per liter
SU: standard unit
U: Non-detect value. Parameters which were not detected are shown as less than the method detection limit (MDL).
J: Estimated value. Parameter was detected in concentrations below the reporting limit.
-: Not sampled
For statistical analysis, parameters which were not detected were replaced with the reporting limit.

Table 1 - Groundwater Data Summary
Rockport Plant - Bottom Ash Pond

Parameter	Unit	MW-1602D								
		6/7/2016	7/18/2016	9/20/2016	11/15/2016	1/9/2017	3/7/2017	5/8/2017	7/17/2017	10/3/2017
		Background								Detection
Antimony	µg/L	0.0200 J	0.0100 J	0.0200 J	0.0300 J	0.0100 J	0.0100 J	0.0500	0.0100 J	-
Arsenic	µg/L	7.35	8.54	8.24	8.32	7.92	8.04	9.08	8.51	-
Barium	µg/L	380	507	487	585	503	458	436	419	-
Beryllium	µg/L	<0.005 U	<0.005 U	<0.005 U	0.0100 J	<0.005 U	<0.005 U	0.0200	0.00500 J	-
Boron	mg/L	0.0580	0.0650	0.0470	0.0780	0.0840	0.0760	0.0730	0.0910	0.0640
Cadmium	µg/L	<0.004 U	<0.004 U	<0.004 U	0.0200	<0.004 U	<0.004 U	0.0700	<0.005 U	-
Calcium	mg/L	69.7	77.6	71.7	78.0	75.3	66.8	71.9	64.6	68.3
Chloride	mg/L	138	166	172	177	178	158	124	112	135
Chromium	µg/L	0.300	0.500	0.200	0.338	0.187	0.395	0.232	0.268	-
Cobalt	µg/L	0.227	0.166	0.116	0.248	0.112	0.106	0.115	0.110	-
Combined Radium	pCi/L	1.15	2.43	1.13	4.20	0.976	0.705	0.588	1.35	-
Fluoride	mg/L	0.360	0.340	0.300	0.330	0.340	0.310	0.310	0.260	0.290
Lead	µg/L	0.0610	0.0200 J	0.0220	0.195	0.0100 J	0.0290	0.0560	0.0360	-
Lithium	mg/L	0.00100	0.0220	0.00700	0.0120	0.00500	0.00400	0.00700	0.00300	-
Mercury	µg/L	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	0.00500	<0.002 U	-
Molybdenum	µg/L	4.69	3.89	3.31	3.31	3.36	3.88	3.93	3.60	-
Selenium	µg/L	0.0300 J	<0.03 U	0.0300 J	0.0500 J	<0.03 U	0.0500 J	0.100	<0.03 U	-
Total Dissolved Solids	mg/L	528	574	580	601	594	586	520	472	518
Sulfate	mg/L	20.5	18.5	12.9	17.4	11.4	14.5	16.1	17.5	16.0
Thallium	µg/L	<0.01 U	<0.01 U	<0.01 U	0.0660	0.0200 J	0.0200 J	0.0500	<0.01 U	-
pH	SU	5.12	8.23	7.78	7.12	7.31	7.33	7.01	6.95	7.35

Notes:
µg/L: micrograms per liter
mg/L: milligrams per liter
pCi/L: picocuries per liter
SU: standard unit
U: Non-detect value. Parameters which were not detected are shown as less than the method detection limit (MDL).
J: Estimated value. Parameter was detected in concentrations below the reporting limit.
-: Not sampled
For statistical analysis, parameters which were not detected were replaced with the reporting limit.

Table 1 - Groundwater Data Summary
Rockport Plant - Bottom Ash Pond

Parameter	Unit	MW-1602I								
		6/7/2016	7/18/2016	9/20/2016	11/15/2016	1/9/2017	3/7/2017	5/8/2017	7/17/2017	10/3/2017
		Background								Detection
Antimony	µg/L	0.0200 J	0.0200 J	0.0200 J	0.0300 J	0.0200 J	0.0300 J	0.140	0.0500	-
Arsenic	µg/L	16.5	18.7	15.5	18.2	18.3	20.0	25.5	27.3	-
Barium	µg/L	135	145	123	136	126	122	123	127	-
Beryllium	µg/L	<0.005 U	<0.005 U	<0.005 U	<0.005 U	<0.005 U	0.00500 J	0.0200	0.00600 J	-
Boron	mg/L	0.0470	0.0430	0.0370	0.0570	0.0390	0.0610	0.108	0.0520	0.0650
Cadmium	µg/L	0.00500 J	0.00600 J	<0.004 U	0.00600 J	<0.004 U	<0.004 U	0.0200	0.00600 J	-
Calcium	mg/L	78.6	81.1	79.9	87.6	80.6	71.1	79.7	68.8	69.2
Chloride	mg/L	33.0	32.3	30.2	28.7	27.8	27.5	27.6	27.1	27.5
Chromium	µg/L	0.200	0.200	0.200	0.0750	0.161	0.484	0.459	0.193	-
Cobalt	µg/L	1.35	1.70	1.34	1.44	1.38	1.43	1.69	1.52	-
Combined Radium	pCi/L	0.983	1.53	1.42	1.19	0.766	0.845	1.02	0.802	-
Fluoride	mg/L	0.320	0.300	0.280	0.290	0.260	0.270	0.280	0.230	0.260
Lead	µg/L	0.0960	0.0740	0.0450	0.0200 J	0.0450	0.178	0.292	0.167	-
Lithium	mg/L	0.00300	0.00600	0.00600	0.0150	0.00300	0.00900	0.00900	0.0100	-
Mercury	µg/L	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	0.00500	<0.002 U	-
Molybdenum	µg/L	2.61	2.68	2.31	2.13	2.23	2.21	2.08	2.01	-
Selenium	µg/L	<0.03 U	0.0300 J	0.0500 J	0.0400 J	<0.03 U	0.0600 J	0.100	<0.03 U	-
Total Dissolved Solids	mg/L	424	452	412	457	420	388	430	421	414
Sulfate	mg/L	84.1	89.4	77.7	85.3	77.6	77.8	78.4	76.3	80.8
Thallium	µg/L	<0.01 U	0.0100 J	0.0100 J	0.0300 J	0.0200 J	0.0200 J	0.0500	0.0400 J	-
pH	SU	7.07	7.38	7.31	7.07	7.36	7.27	6.93	6.93	7.34

Notes:
µg/L: micrograms per liter
mg/L: milligrams per liter
pCi/L: picocuries per liter
SU: standard unit
U: Non-detect value. Parameters which were not detected are shown as less than the method detection limit (MDL).
J: Estimated value. Parameter was detected in concentrations below the reporting limit.
-: Not sampled
For statistical analysis, parameters which were not detected were replaced with the reporting limit.

Table 1 - Groundwater Data Summary
Rockport Plant - Bottom Ash Pond

Parameter	Unit	MW-1603D								
		6/8/2016	7/18/2016	10/10/2016	11/15/2016	1/9/2017	3/7/2017	5/8/2017	7/17/2017	10/3/2017
		Background								Detection
Antimony	µg/L	0.0100 J	0.0200 J	0.0900	0.0300 J	0.0100 J	0.0100 J	0.0500	0.0200 J	-
Arsenic	µg/L	10.2	11.0	9.91	11.3	11.3	11.3	11.3	12.1	-
Barium	µg/L	112	120	122	113	111	108	103	114	-
Beryllium	µg/L	<0.005 U	<0.005 U	0.0490	<0.01 U	<0.005 U	<0.005 U	0.0200	<0.004 U	-
Boron	mg/L	0.0730	0.0740	0.0650	0.0620	0.0550	0.0610	0.0820	0.0800	0.0540
Cadmium	µg/L	<0.004 U	0.00700 J	0.0300	0.0100 J	0.00900 J	<0.004 U	0.0200	<0.005 U	-
Calcium	mg/L	70.8	79.6	81.2	90.5	91.9	86.8	91.1	80.4	79.4
Chloride	mg/L	26.7	26.7	26.0	25.5	25.1	26.1	26.3	25.9	26.2
Chromium	µg/L	0.200	0.300	23.8	0.0800 J	0.143	0.220	0.238	0.112	-
Cobalt	µg/L	1.34	1.30	2.01	0.703	0.584	0.553	0.586	0.525	-
Combined Radium	pCi/L	1.21	0.660	0.954	1.28	0.343	0.838	0.982	1.70	-
Fluoride	mg/L	0.310	0.330	0.320	0.300	0.260	0.290	0.270	0.240	0.260
Lead	µg/L	0.0200 J	0.0100 J	1.38	0.0200 J	0.0290	0.0240	0.0680	0.00600 J	-
Lithium	mg/L	0.00300	0.00800	0.00700	0.0110	0.0120	0.00700	0.00600	0.00800	-
Mercury	µg/L	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	0.00500	<0.002 U	-
Molybdenum	µg/L	6.70	6.39	6.82	5.02	4.98	5.11	4.78	4.68	-
Selenium	µg/L	<0.03 U	0.0400 J	0.300	<0.06 U	<0.03 U	0.0400 J	0.100	<0.03 U	-
Total Dissolved Solids	mg/L	433	430	406	399	401	392	417	400	393
Sulfate	mg/L	59.0	55.3	47.2	50.6	49.7	47.7	47.1	45.9	44.6
Thallium	µg/L	<0.01 U	0.0680	0.0400 J	<0.02 U	<0.01 U	0.0200 J	0.0500	<0.01 U	-
pH	SU	7.10	6.91	7.25	7.13	7.25	7.22	7.16	6.74	7.12

Notes:
µg/L: micrograms per liter
mg/L: milligrams per liter
pCi/L: picocuries per liter
SU: standard unit
U: Non-detect value. Parameters which were not detected are shown as less than the method detection limit (MDL).
J: Estimated value. Parameter was detected in concentrations below the reporting limit.
-: Not sampled
For statistical analysis, parameters which were not detected were replaced with the reporting limit.

Table 1 - Groundwater Data Summary
Rockport Plant - Bottom Ash Pond

Parameter	Unit	MW-1603I								
		6/8/2016	7/18/2016	9/20/2016	11/15/2016	1/9/2017	3/7/2017	5/8/2017	7/17/2017	10/3/2017
		Background								Detection
Antimony	µg/L	0.0500 J	0.0300 J	0.0300 J	0.0400 J	0.0300 J	0.0300 J	0.0500	0.0300 J	-
Arsenic	µg/L	13.0	12.8	12.2	12.2	12.9	12.5	13.0	12.5	-
Barium	µg/L	81.1	83.1	94.2	86.6	84.6	82.5	76.8	85.3	-
Beryllium	µg/L	<0.005 U	<0.005 U	<0.005 U	<0.005 U	<0.005 U	<0.005 U	0.0200	<0.004 U	-
Boron	mg/L	0.151	0.157	0.153	0.173	0.147	0.187	0.187	0.196	0.134
Cadmium	µg/L	0.00400 J	<0.004 U	<0.004 U	0.00700 J	<0.004 U	<0.004 U	0.0200	<0.005 U	-
Calcium	mg/L	89.2	93.9	99.8	101	94.7	85.0	87.2	79.3	80.9
Chloride	mg/L	37.7	38.8	40.1	37.4	34.6	34.7	36.8	35.1	35.6
Chromium	µg/L	0.300	0.800	0.100	0.0740	0.232	0.743	0.145	0.109	-
Cobalt	µg/L	1.36	1.30	1.41	1.17	1.26	1.10	1.24	1.30	-
Combined Radium	pCi/L	0.593	1.82	0.904	1.58	1.42	1.08	0.824	2.75	-
Fluoride	mg/L	0.390	0.430	0.390	0.420	0.380	0.400	0.400	0.350	0.390
Lead	µg/L	0.117	0.0530	0.00800 J	0.0210	0.0660	0.0570	0.174	0.0200 J	-
Lithium	mg/L	<0.0002 U	0.0130	0.00900	0.0150	0.00800	0.00900	0.00900	0.0130	-
Mercury	µg/L	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	0.00500	<0.002 U	-
Molybdenum	µg/L	8.86	9.76	9.85	9.21	9.47	8.79	8.86	8.27	-
Selenium	µg/L	<0.03 U	<0.03 U	0.0400 J	<0.03 U	<0.03 U	0.0500 J	0.100	<0.03 U	-
Total Dissolved Solids	mg/L	465	502	500	481	478	460	452	449	442
Sulfate	mg/L	71.9	83.8	111	88.5	75.3	73.2	71.0	74.9	74.1
Thallium	µg/L	0.0300 J	0.0200 J	0.0400 J	0.0300 J	0.0300 J	0.0500 J	0.0500	0.0500 J	-
pH	SU	7.61	7.15	7.28	7.22	7.22	7.26	7.25	9.78	7.24

Notes:
µg/L: micrograms per liter
mg/L: milligrams per liter
pCi/L: picocuries per liter
SU: standard unit
U: Non-detect value. Parameters which were not detected are shown as less than the method detection limit (MDL).
J: Estimated value. Parameter was detected in concentrations below the reporting limit.
-: Not sampled
For statistical analysis, parameters which were not detected were replaced with the reporting limit.

Table 1 - Groundwater Data Summary
Rockport Plant - Bottom Ash Pond

Parameter	Unit	MW-1603S								
		6/8/2016	7/18/2016	9/20/2016	11/15/2016	1/9/2017	3/7/2017	5/8/2017	7/17/2017	10/3/2017
		Background								Detection
Antimony	µg/L	0.0400 J	0.0500 J	0.0400 J	0.0600	0.0400 J	0.0600	0.0500	0.0400 J	-
Arsenic	µg/L	0.360	0.270	0.210	0.190	0.200	0.180	0.230	0.190	-
Barium	µg/L	13.0	12.5	16.7	18.4	16.2	22.3	16.3	16.2	-
Beryllium	µg/L	<0.005 U	<0.005 U	<0.005 U	0.00800 J	<0.005 U	<0.005 U	0.0200	<0.004 U	-
Boron	mg/L	1.77	1.77	1.83	2.19	2.22	1.72	1.25	1.94	1.84
Cadmium	µg/L	0.0200	0.0200	0.0200 J	0.0300	0.0200 J	0.0600	0.0200	0.0300	-
Calcium	mg/L	49.6	46.4	59.3	71.9	74.8	99.4	81.7	68.1	51.5
Chloride	mg/L	60.3	53.6	57.6	50.9	55.6	67.6	55.1	52.9	20.8
Chromium	µg/L	0.200	0.200	0.300	0.104	0.653	0.530	0.325	0.154	-
Cobalt	µg/L	0.648	0.656	0.310	0.233	0.176	0.0920	0.219	0.349	-
Combined Radium	pCi/L	0.485	1.12	1.37	0.508	0.391	0.200	0.414	2.93	-
Fluoride	mg/L	0.440	0.500	0.390	0.430	0.400	0.330	0.360	0.270	0.170
Lead	µg/L	0.171	0.130	0.0250	0.0720	0.0230	0.0370	0.116	0.0420	-
Lithium	mg/L	<0.0002 U	0.0130	0.00700	0.0130	0.00200	0.00500	0.00600	0.00700	-
Mercury	µg/L	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	0.00500	<0.002 U	-
Molybdenum	µg/L	1.36	0.740	0.500	0.390	0.470	0.230	0.150	0.200	-
Selenium	µg/L	0.0400 J	<0.03 U	0.700	0.200	0.0600 J	0.200	0.200	0.0600 J	-
Total Dissolved Solids	mg/L	480	445	479	469	483	581	466	482	481
Sulfate	mg/L	197	171	197	208	220	261	203	222	75.1
Thallium	µg/L	0.0200 J	0.0200 J	0.0400 J	0.0910	0.0200 J	0.0200 J	0.0500	0.0200 J	-
pH	SU	7.63	7.17	6.95	6.88	6.47	6.74	6.89	9.63	6.92

Notes:
µg/L: micrograms per liter
mg/L: milligrams per liter
pCi/L: picocuries per liter
SU: standard unit
U: Non-detect value. Parameters which were not detected are shown as less than the method detection limit (MDL).
J: Estimated value. Parameter was detected in concentrations below the reporting limit.
-: Not sampled
For statistical analysis, parameters which were not detected were replaced with the reporting limit.

Table 1 - Groundwater Data Summary
Rockport Plant - Bottom Ash Pond

Parameter	Unit	MW-1604D								
		6/7/2016	7/18/2016	9/19/2016	11/15/2016	1/9/2017	3/7/2017	5/8/2017	7/18/2017	10/3/2017
		Background								Detection
Antimony	µg/L	0.0200 J	0.0100 J	0.0100 J	0.0300 J	0.0200 J	0.0200 J	0.0500	0.0200 J	-
Arsenic	µg/L	14.6	17.9	16.2	16.7	16.9	18.4	18.1	16.8	-
Barium	µg/L	216	239	234	247	243	267	226	249	-
Beryllium	µg/L	<0.005 U	<0.005 U	<0.005 U	<0.005 U	<0.005 U	<0.005 U	0.0200	<0.004 U	-
Boron	mg/L	0.0320	0.0220	0.0100	0.0250	0.0160	0.0750	0.0500	0.0950	0.0750
Cadmium	µg/L	<0.004 U	<0.004 U	<0.004 U	0.00800 J	0.00700 J	<0.004 U	0.0200	<0.005 U	-
Calcium	mg/L	70.8	67.8	69.8	74.9	72.9	67.2	71.8	63.7	62.7
Chloride	mg/L	19.6	19.3	17.8	18.0	17.1	17.4	17.3	16.9	16.5
Chromium	µg/L	0.200	0.200	0.100	0.117	0.158	0.267	0.128	0.165	-
Cobalt	µg/L	0.119	0.0860	0.0520	0.0470	0.0570	0.0700	0.0910	0.0720	-
Combined Radium	pCi/L	0.374	0.842	0.377	0.454	2.24	0.868	0.744	1.08	-
Fluoride	mg/L	0.300	0.280	0.260	0.270	0.240	0.240	0.260	0.210	0.240
Lead	µg/L	0.0980	0.0220	0.0200 J	0.0200 J	0.0100 J	0.0610	0.0430	0.0200 J	-
Lithium	mg/L	0.00200	0.0100	0.00400	0.00900	<0.0002 U	0.00300	0.00400	0.00200	-
Mercury	µg/L	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	0.00200 J	0.00500	<0.002 U	-
Molybdenum	µg/L	3.96	3.33	2.82	2.80	3.04	3.20	2.90	2.61	-
Selenium	µg/L	<0.03 U	0.0400 J	<0.03 U	<0.03 U	0.0300 J	0.0600 J	0.100	<0.03 U	-
Total Dissolved Solids	mg/L	292	332	280	320	326	290	318	304	318
Sulfate	mg/L	39.1	38.6	31.9	35.0	29.6	30.4	29.2	28.7	28.7
Thallium	µg/L	<0.01 U	<0.01 U	<0.01 U	0.0200 J	0.0950	<0.01 U	0.0500	<0.01 U	-
pH	SU	7.12	6.91	7.33	7.13	7.17	7.30	7.18	7.22	7.34

Notes:
µg/L: micrograms per liter
mg/L: milligrams per liter
pCi/L: picocuries per liter
SU: standard unit
U: Non-detect value. Parameters which were not detected are shown as less than the method detection limit (MDL).
J: Estimated value. Parameter was detected in concentrations below the reporting limit.
-: Not sampled
For statistical analysis, parameters which were not detected were replaced with the reporting limit.

Table 1 - Groundwater Data Summary
Rockport Plant - Bottom Ash Pond

Parameter	Unit	MW-1604I								
		6/7/2016	7/18/2016	9/19/2016	11/15/2016	1/9/2017	3/7/2017	5/9/2017	7/18/2017	10/3/2017
		Background								Detection
Antimony	µg/L	0.0200 J	0.0200 J	0.0300 J	0.0400 J	0.0200 J	0.0200 J	0.0600	0.240	-
Arsenic	µg/L	19.5	19.1	20.4	19.4	20.2	20.0	26.4	19.0	-
Barium	µg/L	124	132	123	123	114	117	125	130	-
Beryllium	µg/L	<0.005 U	<0.005 U	<0.005 U	<0.005 U	<0.005 U	<0.005 U	0.0200	<0.004 U	-
Boron	mg/L	0.111	0.185	0.320	0.368	0.241	0.252	0.363	0.379	0.442
Cadmium	µg/L	0.120	<0.004 U	<0.004 U	0.00900 J	<0.004 U	<0.004 U	0.0200	0.00500 J	-
Calcium	mg/L	76.5	79.7	73.1	78.7	72.4	68.7	81.3	73.5	69.5
Chloride	mg/L	50.4	53.6	46.5	46.2	39.5	41.6	53.4	49.3	45.2
Chromium	µg/L	0.100	0.400	0.400	0.153	0.114	0.573	0.112	0.208	-
Cobalt	µg/L	0.893	0.875	0.742	0.704	0.696	0.743	1.03	0.877	-
Combined Radium	pCi/L	1.12	1.30	0.624	1.66	1.46	0.671	0.844	1.06	-
Fluoride	mg/L	0.340	0.330	0.290	0.320	0.310	0.310	0.340	0.270	0.300
Lead	µg/L	0.0200 J	0.0200 J	0.0200 J	0.0450	0.0100 J	0.0240	0.0430	0.0930	-
Lithium	mg/L	0.00400	0.0110	0.00800	0.0150	0.00300	0.00900	0.0130	0.00900	-
Mercury	µg/L	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	0.00500	<0.002 U	-
Molybdenum	µg/L	2.59	2.48	2.87	2.49	2.84	3.08	3.02	2.75	-
Selenium	µg/L	0.0300 J	<0.03 U	0.0700 J	<0.03 U	<0.03 U	0.0500 J	0.100	<0.03 U	-
Total Dissolved Solids	mg/L	530	548	504	521	456	448	546	522	502
Sulfate	mg/L	138	152	120	130	99.8	104	139	139	129
Thallium	µg/L	0.0100 J	0.0100 J	0.0780	0.0200 J	0.0200 J	0.0200 J	0.0500	0.0200 J	-
pH	SU	7.09	7.42	7.50	7.25	7.54	7.41	7.47	7.33	7.50

Notes:
µg/L: micrograms per liter
mg/L: milligrams per liter
pCi/L: picocuries per liter
SU: standard unit
U: Non-detect value. Parameters which were not detected are shown as less than the method detection limit (MDL).
J: Estimated value. Parameter was detected in concentrations below the reporting limit.
-: Not sampled
For statistical analysis, parameters which were not detected were replaced with the reporting limit.

Table 1 - Groundwater Data Summary
Rockport Plant - Bottom Ash Pond

Parameter	Unit	MW-1604S									
		6/7/2016	7/20/2016	9/19/2016	11/15/2016	1/9/2017	3/7/2017	5/8/2017	5/18/2017	7/17/2017	10/3/2017
		Background									Detection
Antimony	µg/L	0.0600	0.130	0.0600	0.0700	0.0600	0.0500	0.0700	-	0.0700	-
Arsenic	µg/L	0.410	0.760	0.240	0.240	0.310	0.200	0.300	-	0.240	-
Barium	µg/L	19.2	21.7	13.3	18.5	17.3	16.0	18.8	-	20.7	-
Beryllium	µg/L	0.00700 J	0.0590	<0.005 U	0.00500 J	<0.005 U	<0.005 U	0.0200	-	<0.004 U	-
Boron	mg/L	0.653	0.530	0.650	0.736	0.721	0.725	0.554	-	0.473	0.562
Cadmium	µg/L	0.0200	0.0900	0.0100 J	0.0300	0.0200 J	0.0100 J	0.0200	-	0.0200 J	-
Calcium	mg/L	84.5	79.8	68.1	82.9	83.9	79.1	111	-	98.6	67.8
Chloride	mg/L	62.6	60.8	50.3	58.3	63.5	64.1	88.0	-	76.0	55.3
Chromium	µg/L	0.200	0.600	0.500	0.0810	0.701	0.326	0.0790	-	0.136	-
Cobalt	µg/L	0.548	0.955	0.325	0.326	0.338	0.321	0.355	-	0.285	-
Combined Radium	pCi/L	0.344	0.970	1.13	0.377	1.63	0.151	0.579	-	0.731	-
Fluoride	mg/L	0.890	0.880	0.920	0.830	0.910	0.940	0.810	-	0.760	0.870
Lead	µg/L	0.315	0.911	0.0600	0.0450	0.0200 J	0.0270	0.0500	-	0.0640	-
Lithium	mg/L	0.0110	0.00600	0.00800	0.0140	0.0130	0.0130	0.0180	-	0.0140	-
Mercury	µg/L	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	0.00500	-	<0.002 U	-
Molybdenum	µg/L	2.57	2.33	2.51	4.79	2.59	2.61	2.16	-	1.88	-
Selenium	µg/L	0.0700 J	0.200	0.0700 J	0.0500 J	0.0600 J	0.0700 J	0.100	-	0.0300 J	-
Total Dissolved Solids	mg/L	532	526	456	533	535	528	672	-	657	462
Sulfate	mg/L	187	186	141	165	173	170	251	-	234	123
Thallium	µg/L	0.0200 J	0.0570	0.0500 J	0.0960	0.0400 J	0.0300 J	0.0500	-	0.0200 J	-
pH	SU	7.19	7.30	7.52	-	7.41	7.47	7.52	7.32	7.29	7.65

Notes:
µg/L: micrograms per liter
mg/L: milligrams per liter
pCi/L: picocuries per liter
SU: standard unit
U: Non-detect value. Parameters which were not detected are shown as less than the method detection limit (MDL).
J: Estimated value. Parameter was detected in concentrations below the reporting limit.
-: Not sampled
For statistical analysis, parameters which were not detected were replaced with the reporting limit.

Table 1 - Groundwater Data Summary
Rockport Plant - Bottom Ash Pond

Parameter	Unit	MW-1605D									
		6/7/2016	7/18/2016	9/19/2016	11/16/2016	1/10/2017	1/11/2017	3/7/2017	5/9/2017	7/18/2017	10/3/2017
		Background									Detection
Antimony	µg/L	0.0200 J	0.0100 J	0.0100 J	0.0100 J	0.0100 J	-	0.0200 J	0.0500	0.0200 J	-
Arsenic	µg/L	17.5	17.4	18.1	18.6	19.0	-	19.1	18.3	17.9	-
Barium	µg/L	400	434	488	453	430	-	490	420	457	-
Beryllium	µg/L	<0.005 U	<0.005 U	<0.005 U	<0.005 U	<0.005 U	-	<0.005 U	0.0200	<0.004 U	-
Boron	mg/L	0.0270	0.0210	0.00200 J	0.0210	0.0140	-	0.0450	0.0210	0.0250	0.0220
Cadmium	µg/L	<0.004 U	<0.004 U	<0.004 U	<0.004 U	<0.004 U	-	0.00600 J	0.0200	<0.005 U	-
Calcium	mg/L	81.7	85.7	84.2	93.9	89.9	-	88.5	90.1	84.6	83.1
Chloride	mg/L	31.9	31.5	29.8	28.8	27.4	-	29.4	29.2	28.6	26.4
Chromium	µg/L	0.200	0.300	0.300	0.259	0.128	-	0.322	0.131	0.119	-
Cobalt	µg/L	0.284	0.170	0.118	0.0970	0.0860	-	0.107	0.108	0.111	-
Combined Radium	pCi/L	1.09	1.67	0.873	1.37	1.59	-	1.10	0.453	1.66	-
Fluoride	mg/L	0.250	0.220	0.190	0.210	0.210	-	0.190	0.190	0.170	0.180
Lead	µg/L	0.0510	0.0510	0.00900 J	0.00800 J	<0.004 U	-	0.0450	0.0370	0.00900 J	-
Lithium	mg/L	0.00400	0.00500	0.00600	0.00600	0.00400	-	0.00600	0.00300	0.00500	-
Mercury	µg/L	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	-	<0.002 U	0.00500	<0.002 U	-
Molybdenum	µg/L	7.65	3.19	2.72	2.21	2.21	-	2.44	2.08	1.98	-
Selenium	µg/L	0.0300 J	<0.03 U	<0.03 U	<0.03 U	<0.03 U	-	0.0300 J	0.100	<0.03 U	-
Total Dissolved Solids	mg/L	406	408	370	400	794	-	386	400	416	390
Sulfate	mg/L	59.7	61.6	54.1	56.2	55.1	-	58.4	58.5	59.1	56.8
Thallium	µg/L	<0.01 U	<0.01 U	<0.01 U	0.0100 J	<0.01 U	-	<0.01 U	0.0500	0.0300 J	-
pH	SU	7.09	7.20	7.12	7.10	7.25	7.20	7.20	6.87	9.51	7.12

Notes:
µg/L: micrograms per liter
mg/L: milligrams per liter
pCi/L: picocuries per liter
SU: standard unit
U: Non-detect value. Parameters which were not detected are shown as less than the method detection limit (MDL).
J: Estimated value. Parameter was detected in concentrations below the reporting limit.
-: Not sampled
For statistical analysis, parameters which were not detected were replaced with the reporting limit.

Table 1 - Groundwater Data Summary
Rockport Plant - Bottom Ash Pond

Parameter	Unit	MW-1605I								
		6/7/2016	7/19/2016	9/19/2016	11/16/2016	1/10/2017	3/7/2017	5/9/2017	7/18/2017	10/3/2017
		Background								Detection
Antimony	µg/L	0.0200 J	0.0300 J	0.0400 J	0.0400 J	0.0300 J	0.0300 J	0.0500	0.0500 J	-
Arsenic	µg/L	17.3	20.1	19.5	18.0	18.5	18.6	20.1	26.2	-
Barium	µg/L	151	178	180	168	161	156	148	153	-
Beryllium	µg/L	<0.005 U	<0.005 U	<0.005 U	<0.005 U	<0.005 U	<0.005 U	0.0200	<0.004 U	-
Boron	mg/L	0.0270	0.0270	0.0200	0.0340	0.0200	0.0460	0.0430	0.0360	0.0410
Cadmium	µg/L	<0.004 U	<0.004 U	0.00500 J	0.00800 J	<0.004 U	0.00800 J	0.0200	<0.005 U	-
Calcium	mg/L	89.5	92.5	97.9	103	91.3	81.9	93.5	79.9	82.5
Chloride	mg/L	45.6	46.8	45.6	44.4	43.5	44.7	41.8	39.7	40.7
Chromium	µg/L	0.200	1.20	0.200	0.0910	0.110	0.214	0.137	0.104	-
Cobalt	µg/L	1.67	1.79	1.66	1.58	1.52	1.48	1.56	1.49	-
Combined Radium	pCi/L	1.22	2.29	2.17	1.91	1.82	1.72	1.14	2.17	-
Fluoride	mg/L	0.210	0.220	0.180	0.190	0.190	0.170	0.190	0.100 J	0.190
Lead	µg/L	0.122	0.0320	0.160	0.0790	0.0200 J	0.0630	0.0370	0.137	-
Lithium	mg/L	0.00400	0.00500	0.00800	0.0170	0.00400	0.00700	0.0100	0.0100	-
Mercury	µg/L	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	0.00500	<0.002 U	-
Molybdenum	µg/L	1.42	1.39	1.23	1.07	1.43	1.33	1.18	1.16	-
Selenium	µg/L	0.0300 J	0.0700 J	<0.03 U	<0.03 U	0.0400 J	0.0400 J	0.100	<0.03 U	-
Total Dissolved Solids	mg/L	522	544	548	567	534	474	508	488	494
Sulfate	mg/L	130	135	140	140	119	115	115	116	120
Thallium	µg/L	0.0200 J	0.0200 J	0.0300 J	0.0300 J	0.183	0.0300 J	0.0500	0.0300 J	-
pH	SU	6.96	7.34	7.27	7.12	7.23	7.30	6.98	7.01	7.22

Notes:
µg/L: micrograms per liter
mg/L: milligrams per liter
pCi/L: picocuries per liter
SU: standard unit
U: Non-detect value. Parameters which were not detected are shown as less than the method detection limit (MDL).
J: Estimated value. Parameter was detected in concentrations below the reporting limit.
-: Not sampled
For statistical analysis, parameters which were not detected were replaced with the reporting limit.

Table 1 - Groundwater Data Summary
Rockport Plant - Bottom Ash Pond

Parameter	Unit	MW-1605S								
		6/7/2016	7/19/2016	9/19/2016	11/16/2016	1/10/2017	3/7/2017	5/9/2017	7/17/2017	10/3/2017
		Background								Detection
Antimony	µg/L	0.0400 J	0.100	0.0400 J	0.0500	0.0600	0.0400 J	0.0500	0.0400 J	-
Arsenic	µg/L	0.520	0.600	0.420	0.360	0.500	0.390	0.450	0.420	-
Barium	µg/L	8.07	8.65	7.61	7.76	8.33	8.72	8.41	8.55	-
Beryllium	µg/L	<0.005 U	<0.005 U	<0.005 U	<0.005 U	<0.005 U	<0.005 U	0.0200	<0.004 U	-
Boron	mg/L	0.480	0.438	0.482	0.584	0.533	0.608	0.470	0.490	0.539
Cadmium	µg/L	0.0300	0.0400	0.0300	0.0400	0.0400	0.0300	0.0300	0.0300	-
Calcium	mg/L	76.6	72.6	79.1	84.0	78.5	71.2	79.9	68.6	71.6
Chloride	mg/L	51.0	53.1	54.0	49.7	48.2	52.0	50.1	47.5	44.1
Chromium	µg/L	0.200	0.400	0.900	0.108	0.135	0.279	0.247	0.113	-
Cobalt	µg/L	0.471	0.856	0.443	0.355	0.401	0.307	0.370	0.336	-
Combined Radium	pCi/L	0.231	0.390	0.150	0.964	1.62	0.339	0.255	1.25	-
Fluoride	mg/L	0.550	0.550	0.510	0.530	0.430	0.550	0.500	0.430	0.460
Lead	µg/L	0.116	0.223	0.0490	0.0210	0.0200 J	0.0330	0.0200	0.0260	-
Lithium	mg/L	0.130	0.0170	0.0150	0.0210	0.0160	0.0150	0.0130	0.0150	-
Mercury	µg/L	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	0.00500	<0.002 U	-
Molybdenum	µg/L	2.52	2.20	1.83	1.79	2.01	1.85	1.81	1.73	-
Selenium	µg/L	1.30	1.00	1.00	1.10	1.10	0.500	0.900	1.20	-
Total Dissolved Solids	mg/L	576	586	594	599	584	564	606	582	578
Sulfate	mg/L	167	174	179	186	170	180	181	177	175
Thallium	µg/L	0.0200 J	0.0200 J	0.0300 J	0.0300 J	0.0600	0.0300 J	0.0500	0.0300 J	-
pH	SU	7.07	7.21	7.26	7.07	7.19	7.21	7.18	7.13	7.12

Notes:
µg/L: micrograms per liter
mg/L: milligrams per liter
pCi/L: picocuries per liter
SU: standard unit
U: Non-detect value. Parameters which were not detected are shown as less than the method detection limit (MDL).
J: Estimated value. Parameter was detected in concentrations below the reporting limit.
-: Not sampled
For statistical analysis, parameters which were not detected were replaced with the reporting limit.

Table 1 - Groundwater Data Summary
Rockport Plant - Bottom Ash Pond

Parameter	Unit	MW-1606D								
		6/7/2016	7/19/2016	9/19/2016	11/16/2016	1/10/2017	3/6/2017	5/9/2017	7/18/2017	10/3/2017
		Background								Detection
Antimony	µg/L	0.0300 J	0.0200 J	0.0100 J	0.0100 J	0.0300 J	0.0100 J	0.0500	0.0200 J	-
Arsenic	µg/L	11.5	13.7	13.4	14.4	13.9	13.5	14.3	14.8	-
Barium	µg/L	327	372	378	419	383	374	370	401	-
Beryllium	µg/L	0.0100 J	<0.005 U	<0.005 U	<0.005 U	0.0340	<0.005 U	0.0200	<0.004 U	-
Boron	mg/L	0.0200	0.0180	0.0200	0.0170	0.0120	0.0730	0.0340	0.0280	0.0220
Cadmium	µg/L	<0.004 U	<0.004 U	<0.004 U	<0.004 U	0.0200 J	<0.004 U	0.0200	<0.005 U	-
Calcium	mg/L	67.5	69.9	72.3	77.1	75.5	69.9	78.1	69.3	74.4
Chloride	mg/L	21.3	20.8	21.7	22.0	21.6	22.3	22.3	21.6	22.3
Chromium	µg/L	0.500	0.300	0.100	0.138	0.160	0.667	0.153	0.131	-
Cobalt	µg/L	0.508	0.178	0.113	0.102	0.109	0.0980	0.0860	0.0840	-
Combined Radium	pCi/L	0.551	0.464	1.15	0.333	1.61	0.924	2.30	1.58	-
Fluoride	mg/L	0.230	0.200	0.190	0.190	0.160	0.180	0.170	0.150	0.160
Lead	µg/L	0.214	0.0860	<0.004 U	<0.004 U	0.0230	0.0200 J	0.0200	0.0100 J	-
Lithium	mg/L	0.00300	0.00900	0.00200	0.00200	<0.0002 U	0.00700	0.00400	0.00600	-
Mercury	µg/L	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	0.00500	<0.002 U	-
Molybdenum	µg/L	3.82	2.10	2.00	2.21	2.46	2.00	2.07	1.85	-
Selenium	µg/L	0.0600 J	0.0500 J	<0.03 U	<0.03 U	0.0400 J	<0.03 U	0.100	<0.03 U	-
Total Dissolved Solids	mg/L	290	298	290	301	284	325	308	307	308
Sulfate	mg/L	13.9	12.8	13.2	16.4	12.8	8.70	14.4	13.5	17.1
Thallium	µg/L	<0.01 U	<0.01 U	<0.01 U	<0.01 U	0.124	<0.01 U	0.0500	<0.01 U	-
pH	SU	7.14	5.85	7.31	7.18	7.23	7.19	6.88	8.37	7.01

Notes:
µg/L: micrograms per liter
mg/L: milligrams per liter
pCi/L: picocuries per liter
SU: standard unit
U: Non-detect value. Parameters which were not detected are shown as less than the method detection limit (MDL).
J: Estimated value. Parameter was detected in concentrations below the reporting limit.
-: Not sampled
For statistical analysis, parameters which were not detected were replaced with the reporting limit.

Table 1 - Groundwater Data Summary
Rockport Plant - Bottom Ash Pond

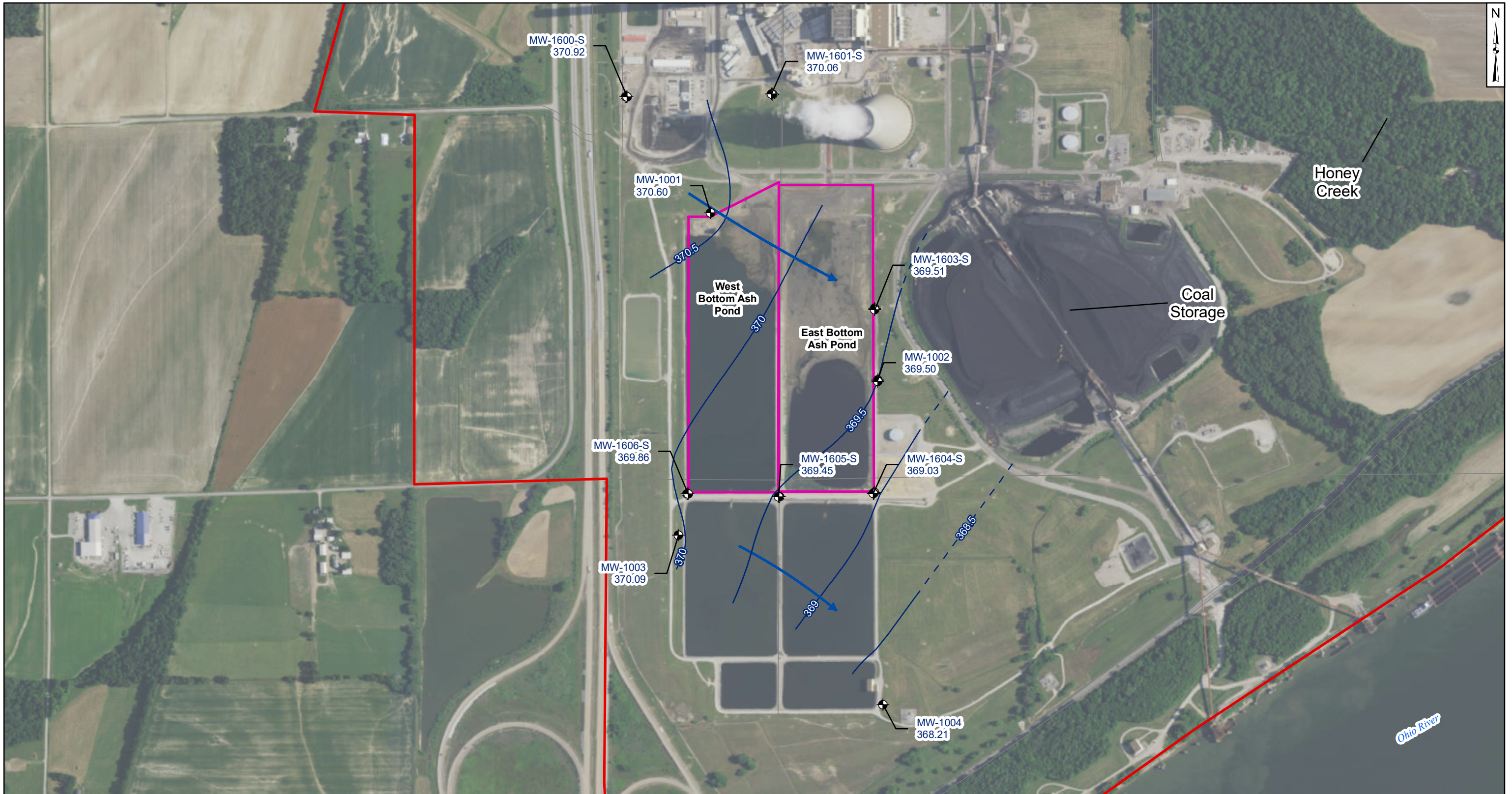
Parameter	Unit	MW-1606I								
		6/7/2016	7/19/2016	9/19/2016	11/16/2016	1/10/2017	3/6/2017	5/9/2017	7/18/2017	10/3/2017
		Background								Detection
Antimony	µg/L	0.0300 J	0.0300 J	0.0200 J	0.0200 J	0.0200 J	0.0200 J	0.0500	0.0200 J	-
Arsenic	µg/L	3.00	3.99	4.99	4.59	5.11	5.07	4.81	4.72	-
Barium	µg/L	49.4	54.0	46.7	48.1	53.6	54.7	49.9	51.1	-
Beryllium	µg/L	<0.005 U	<0.005 U	<0.005 U	<0.005 U	0.00700 J	<0.005 U	0.0200	<0.004 U	-
Boron	mg/L	0.0110	0.0130	<0.002 U	0.0140	0.00700	0.0250	0.0700	0.0230	0.0210
Cadmium	µg/L	0.00400 J	<0.004 U	<0.004 U	<0.004 U	0.0100 J	<0.004 U	0.0200	<0.005 U	-
Calcium	mg/L	66.6	62.0	62.8	70.7	68.0	64.1	67.8	55.5	57.8
Chloride	mg/L	23.9	25.1	24.2	25.0	24.5	23.8	23.0	22.6	23.0
Chromium	µg/L	0.200	0.400	0.100	0.0700	0.138	0.524	0.179	0.0970	-
Cobalt	µg/L	0.929	0.823	0.733	0.700	0.921	0.950	1.26	1.06	-
Combined Radium	pCi/L	1.35	1.29	1.10	0.951	4.28	0.934	0.677	0.813	-
Fluoride	mg/L	0.220	0.210	0.190	0.210	0.170	0.190	0.190	0.170	0.180
Lead	µg/L	0.166	0.0370	0.0200 J	<0.004 U	0.0220	0.0320	0.0710	0.0430	-
Lithium	mg/L	0.00400	0.0130	0.00900	0.00800	0.00500	0.00700	0.00800	0.00800	-
Mercury	µg/L	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	0.00500	<0.002 U	-
Molybdenum	µg/L	1.64	1.57	1.50	1.83	2.12	1.78	1.27	1.11	-
Selenium	µg/L	0.0500 J	<0.03 U	<0.03 U	<0.03 U	<0.03 U	0.0300 J	0.100	<0.03 U	-
Total Dissolved Solids	mg/L	300	350	314	325	326	317	318	304	304
Sulfate	mg/L	42.3	42.9	36.7	42.6	39.3	37.8	36.8	37.1	38.4
Thallium	µg/L	0.0300 J	0.0300 J	0.0300 J	0.0400 J	0.0500 J	0.0400 J	0.0500	0.0400 J	-
pH	SU	7.02	4.98	7.21	7.29	7.40	7.37	7.35	6.73	7.07

Notes:
µg/L: micrograms per liter
mg/L: milligrams per liter
pCi/L: picocuries per liter
SU: standard unit
U: Non-detect value. Parameters which were not detected are shown as less than the method detection limit (MDL).
J: Estimated value. Parameter was detected in concentrations below the reporting limit.
-: Not sampled
For statistical analysis, parameters which were not detected were replaced with the reporting limit.

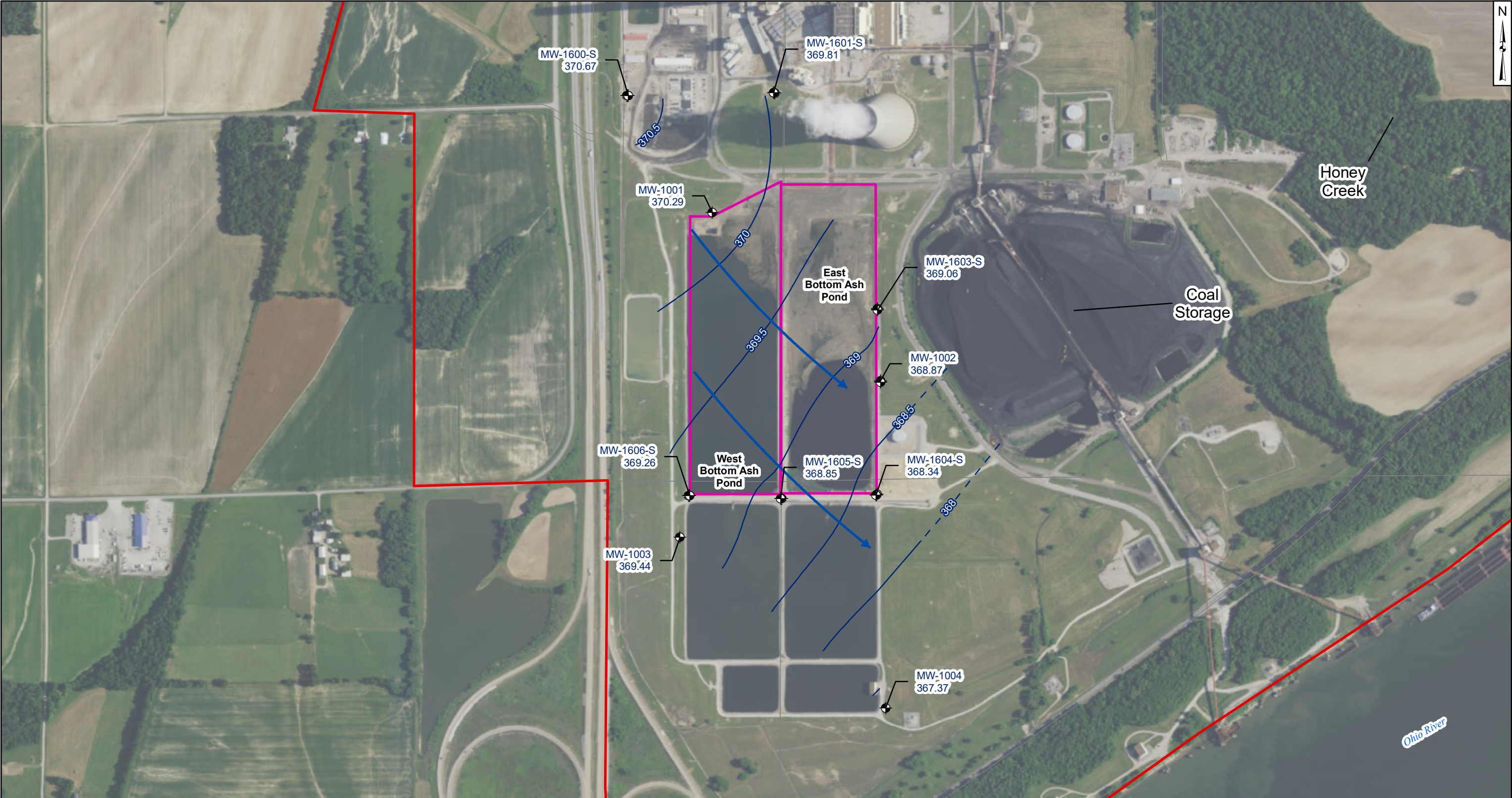
Table 1 - Groundwater Data Summary
Rockport Plant - Bottom Ash Pond

Parameter	Unit	MW-1606S								
		6/7/2016	7/19/2016	9/19/2016	11/16/2016	1/10/2017	3/7/2017	5/9/2017	7/18/2017	10/3/2017
		Background								Detection
Antimony	µg/L	0.0800	0.0600	0.0500 J	0.0500 J	0.0400 J	0.0700	0.0500	0.0500	-
Arsenic	µg/L	0.260	0.230	0.220	0.200	0.240	0.600	0.290	0.320	-
Barium	µg/L	12.5	11.5	9.34	11.1	10.7	16.7	12.0	12.6	-
Beryllium	µg/L	<0.005 U	<0.005 U	<0.005 U	<0.005 U	0.0100 J	0.0240	0.0200	0.0100 J	-
Boron	mg/L	0.0240	0.0190	<0.002 U	0.0200	0.0140	0.0540	0.0200	0.0900	0.0260
Cadmium	µg/L	0.0200	0.0200 J	0.0100 J	0.0200 J	0.0200 J	0.0600	0.0300	0.0300	-
Calcium	mg/L	55.8	46.0	44.4	54.1	48.5	47.2	52.7	44.7	43.4
Chloride	mg/L	30.6	24.0	18.7	26.6	22.1	23.9	24.7	22.8	24.1
Chromium	µg/L	0.100	0.500	0.200	0.148	1.29	1.25	0.277	0.259	-
Cobalt	µg/L	0.0900	0.0520	0.0380	0.0380	0.141	0.883	0.371	0.363	-
Combined Radium	pCi/L	0.787	0.940	0.750	0.574	2.03	1.82	0.193	0.268	-
Fluoride	mg/L	0.460	0.430	0.400	0.400	0.310	0.410	0.380	0.370	0.410
Lead	µg/L	0.145	0.0340	0.0200	0.00400 J	0.0970	1.33	0.355	0.386	-
Lithium	mg/L	0.0120	0.0170	0.0100	0.0130	0.00600	0.0110	0.0100	0.0100	-
Mercury	µg/L	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	<0.002 U	0.00500	<0.002 U	-
Molybdenum	µg/L	1.91	1.56	1.32	1.02	1.11	1.22	0.900	1.08	-
Selenium	µg/L	3.30	4.00	5.70	3.10	4.20	4.50	6.00	4.70	-
Total Dissolved Solids	mg/L	410	386	316	358	351	331	377	367	363
Sulfate	mg/L	47.6	38.1	31.8	40.0	30.5	33.2	37.5	36.8	35.6
Thallium	µg/L	0.0200 J	<0.01 U	0.0100 J	0.0100 J	0.0200 J	0.0300 J	0.0500	0.0200 J	-
pH	SU	6.90	7.14	7.07	6.93	6.68	7.06	7.03	6.88	6.62

Notes:
µg/L: micrograms per liter
mg/L: milligrams per liter
pCi/L: picocuries per liter
SU: standard unit
U: Non-detect value. Parameters which were not detected are shown as less than the method detection limit (MDL).
J: Estimated value. Parameter was detected in concentrations below the reporting limit.
-: Not sampled
For statistical analysis, parameters which were not detected were replaced with the reporting limit.



Legend <ul style="list-style-type: none">Groundwater Monitoring WellApproximate Groundwater Flow DirectionGroundwater Elevation ContourGroundwater Elevation Contour (Inferred)Bottom Ash PondsProperty BoundaryParcel Boundaries	Notes <ul style="list-style-type: none">- Monitoring well coordinates and water level data (collected on June 6, 2016) provided by AEP.- Approximate Ohio River elevation was 359.79 feet at the Rockport Power Plant on June 6, 2016. Elevation calculated by averaging measurements at Cannelton Dam and Newburgh Dam. Data source: USACE.- Site features based on information available in the Groundwater Monitoring Network Evaluation (AMEC, 2016) provided by AEP.- Property and parcel boundaries taken from Spencer County Assessor.- Groundwater and river elevation units are feet above mean sea level.	Potentiometric Surface Map - Uppermost Aquifer June 2016	
		AEP-Rockport Power Plant - Bottom Ash Ponds Rockport, Indiana	
		<div><div>Geosyntec consultants</div><div>Columbus, Ohio2018/01/03</div></div>	
		Figure 1	

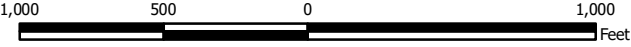


Legend

- Groundwater Monitoring Well
- Approximate Groundwater Flow Direction
- Groundwater Elevation Contour
- Groundwater Elevation Contour (Inferred)
- Bottom Ash Ponds
- Property Boundary
- Parcel Boundaries

Notes

- Monitoring well coordinates and water level data (collected on July 18, 2016) provided by AEP.
- Approximate Ohio River elevation was 358.22 feet at the Rockport Power Plant on July 18, 2016. Elevation calculated by averaging measurements at Cannelton Dam and Newburgh Dam. Data source: USACE.
- Site features based on information available in the Groundwater Monitoring Network Evaluation (AMEC, 2016) provided by AEP.
- Property and parcel boundaries taken from Spencer County Assessor.
- Groundwater and river elevation units are feet above mean sea level.



**Potentiometric Surface Map - Uppermost Aquifer
July 2016**

AEP-Rockport Power Plant - Bottom Ash Ponds
Rockport, Indiana

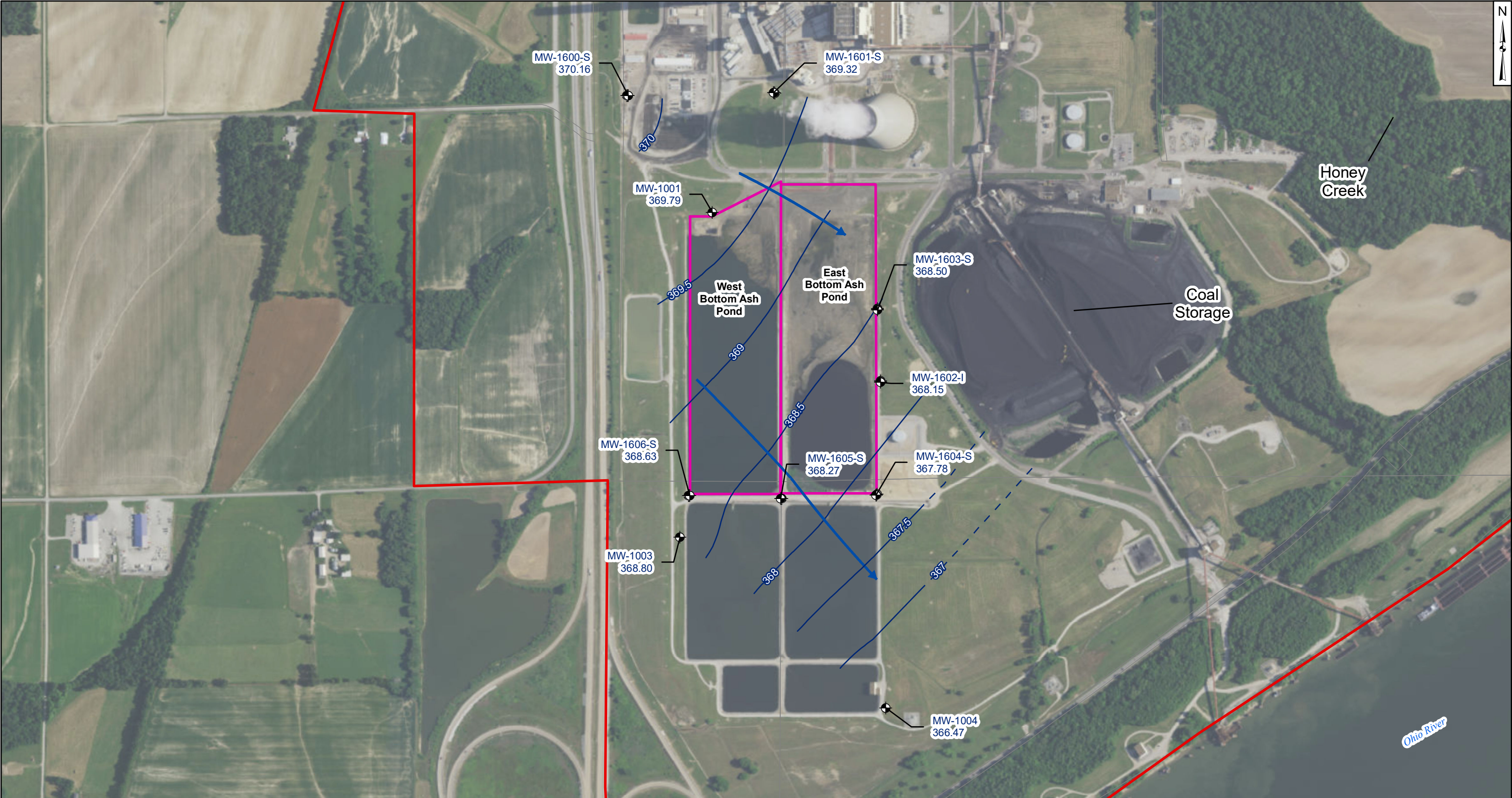
Geosyntec
consultants

Columbus, Ohio

2018/01/03

Figure

2

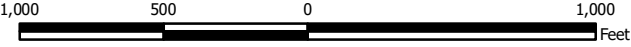


Legend

- Groundwater Monitoring Well
- Approximate Groundwater Flow Direction
- Groundwater Elevation Contour
- Groundwater Elevation Contour (Inferred)
- Bottom Ash Ponds
- Property Boundary
- Parcel Boundaries

Notes

- Monitoring well coordinates and water level data (collected on September 19, 2016) provided by AEP.
- Approximate Ohio River elevation was 355.97 feet at the Rockport Power Plant on September 19, 2016. Elevation calculated by averaging measurements at Cannelton Dam and Newburgh Dam. Data source: USACE.
- Site features based on information available in the Groundwater Monitoring Network Evaluation (AMEC, 2016) provided by AEP.
- Property and parcel boundaries taken from Spencer County Assessor.
- Groundwater and river elevation units are feet above mean sea level.



**Potentiometric Surface Map - Uppermost Aquifer
September 2016**

AEP-Rockport Power Plant - Bottom Ash Ponds
Rockport, Indiana

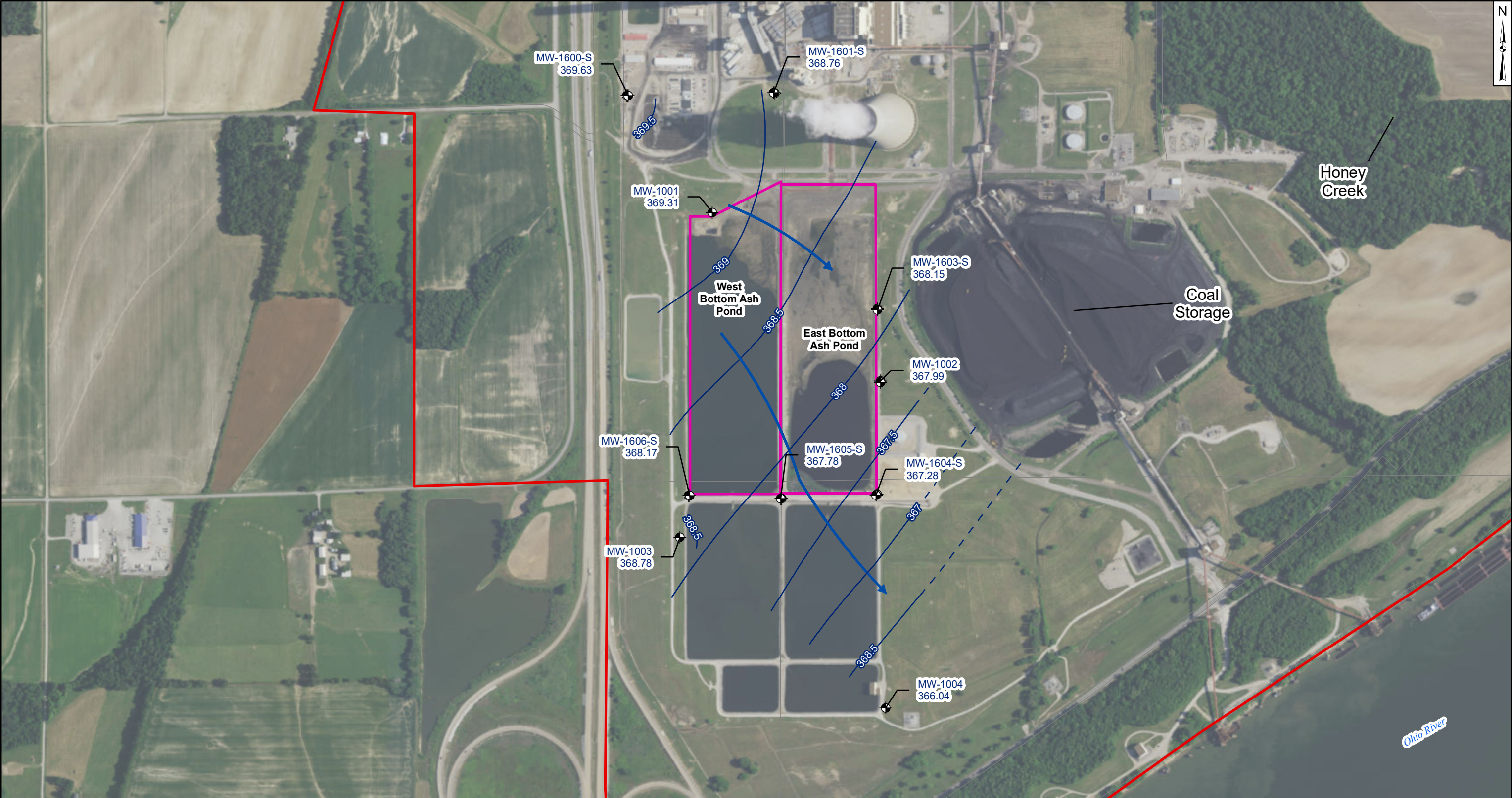
Geosyntec
consultants

Columbus, Ohio

2018/01/03

Figure

3

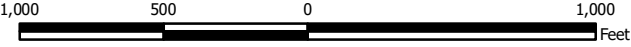


Legend

- Groundwater Monitoring Well
- Approximate Groundwater Flow Direction
- Groundwater Elevation Contour
- Groundwater Elevation Contour (Inferred)
- Bottom Ash Ponds
- Property Boundary
- Parcel Boundaries

Notes

- Monitoring well coordinates and water level data (collected on November 15, 2016) provided by AEP.
- Approximate Ohio River elevation was 356.87 feet at the Rockport Power Plant on November 15, 2016. Elevation calculated by averaging measurements at Cannelton Dam and Newburgh Dam. Data source: USACE.
- Site features based on information available in the Groundwater Monitoring Network Evaluation (AMEC, 2016) provided by AEP.
- Property and parcel boundaries taken from Spencer County Assessor.
- Groundwater and river elevation units are feet above mean sea level.



**Potentiometric Surface Map - Uppermost Aquifer
November 2016**

AEP-Rockport Power Plant - Bottom Ash Ponds
Rockport, Indiana

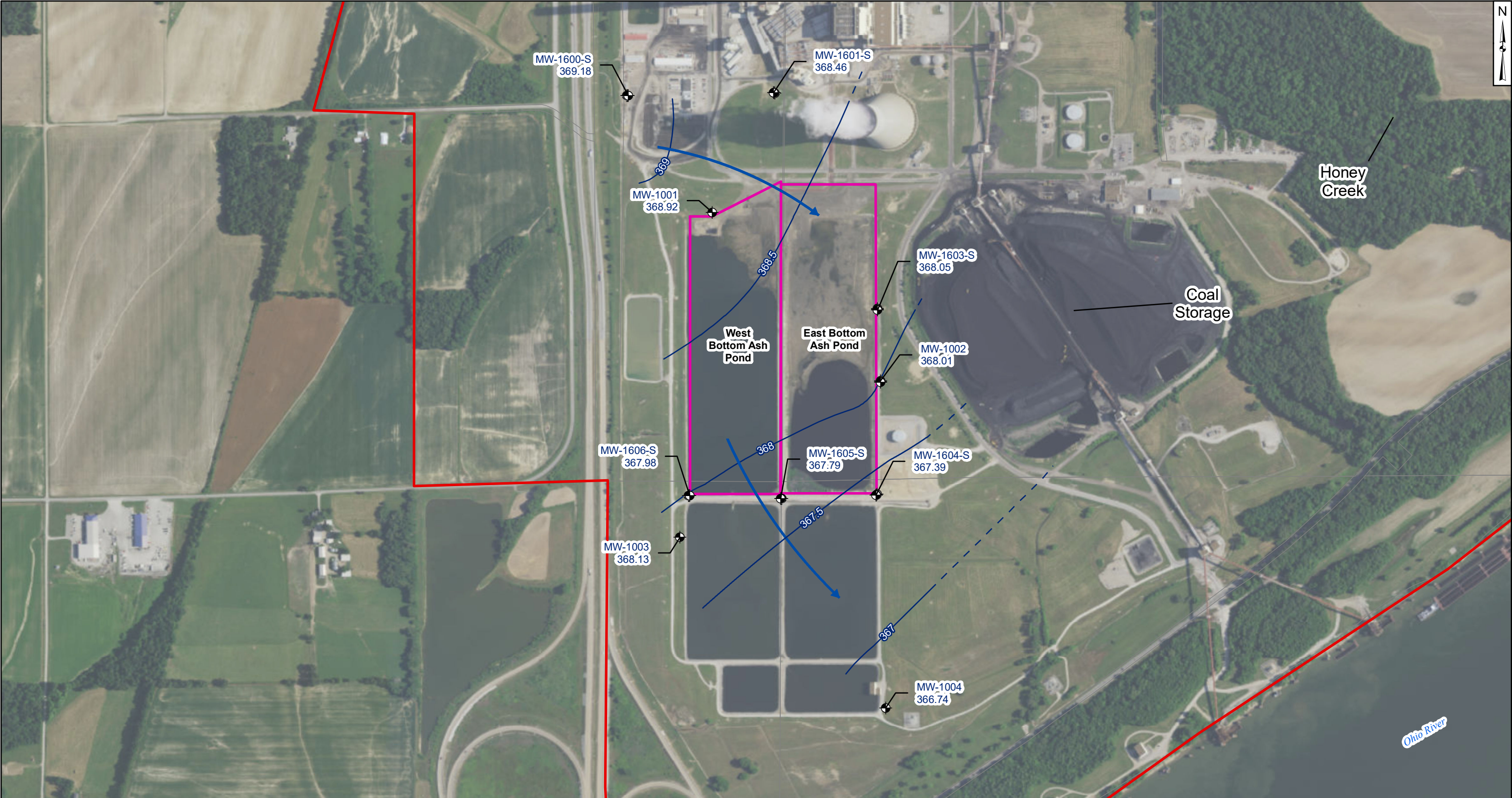
Geosyntec
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2018/01/03

Figure

4

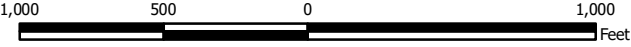


Legend

- Groundwater Monitoring Well
- Approximate Groundwater Flow Direction
- Groundwater Elevation Contour
- Groundwater Elevation Contour (Inferred)
- Bottom Ash Ponds
- Property Boundary
- Parcel Boundaries

Notes

- Monitoring well coordinates and water level data (collected on January 9, 2017) provided by AEP.
- Approximate Ohio River elevation was 376.45 feet at the Rockport Power Plant on January 9, 2017. Elevation calculated by averaging measurements at Cannelton Dam and Newburgh Dam. Data source: USACE.
- Site features based on information available in the Groundwater Monitoring Network Evaluation (AMEC, 2016) provided by AEP.
- Property and parcel boundaries taken from Spencer County Assessor.
- Groundwater and river elevation units are feet above mean sea level.



**Potentiometric Surface Map - Uppermost Aquifer
January 2017**

AEP-Rockport Power Plant - Bottom Ash Ponds
Rockport, Indiana

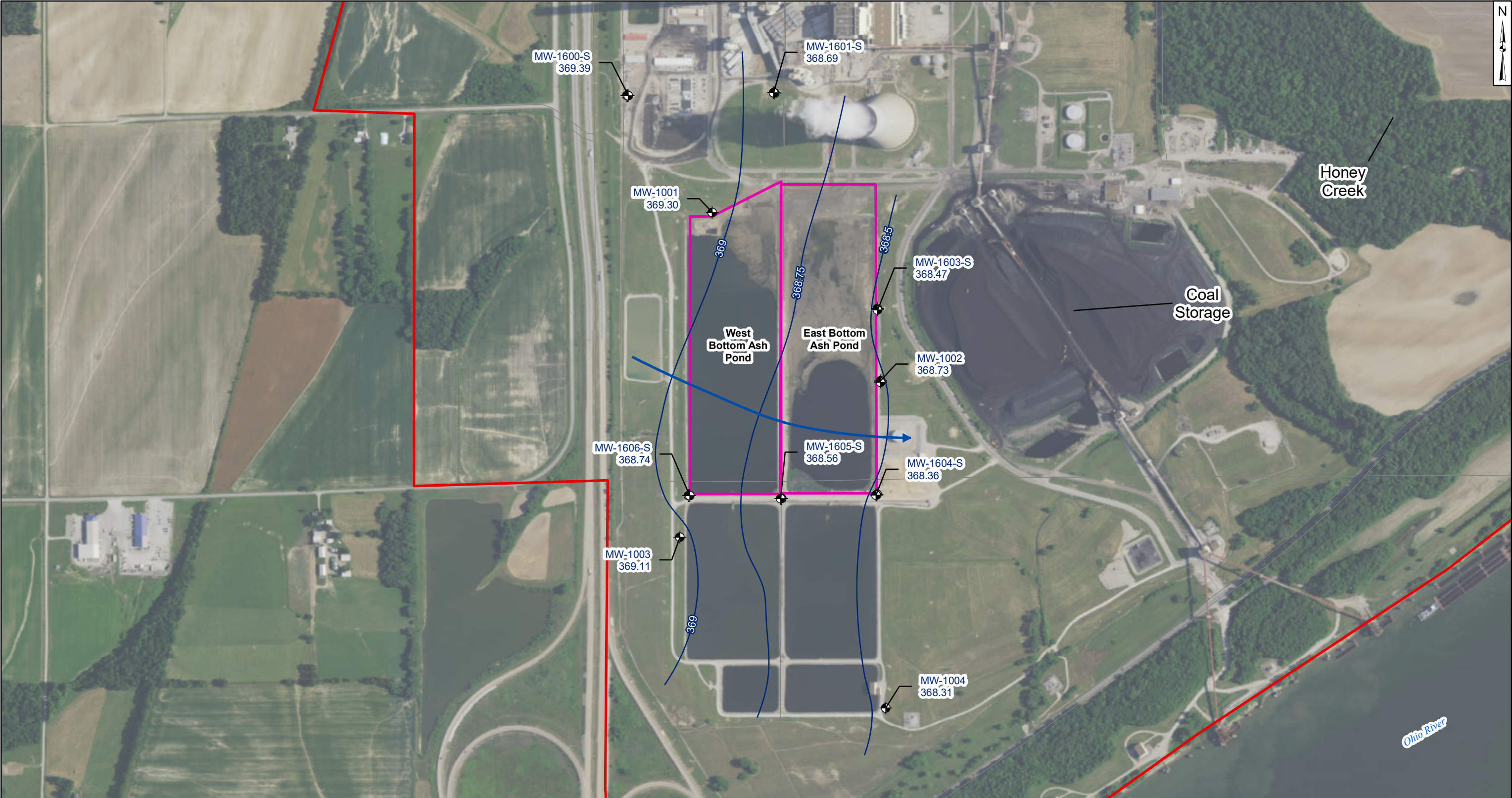
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2017/10/06

Figure

5

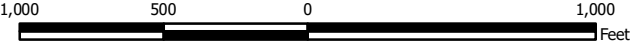


Legend

- Groundwater Monitoring Well
- Approximate Groundwater Flow Direction
- Groundwater Elevation Contour
- Groundwater Elevation Contour (Inferred)
- Bottom Ash Ponds
- Property Boundary
- Parcel Boundaries

Notes

- Monitoring well coordinates and water level data (collected on March 6, 2017) provided by AEP.
- Site features based on information available in the Groundwater Monitoring Network Evaluation (AMEC, 2016) provided by AEP.
- Property and parcel boundaries taken from Spencer County Assessor.
- Groundwater and river elevation units are feet above mean sea level.



**Potentiometric Surface Map - Uppermost Aquifer
March 2017**

AEP-Rockport Power Plant - Bottom Ash Ponds
Rockport, Indiana

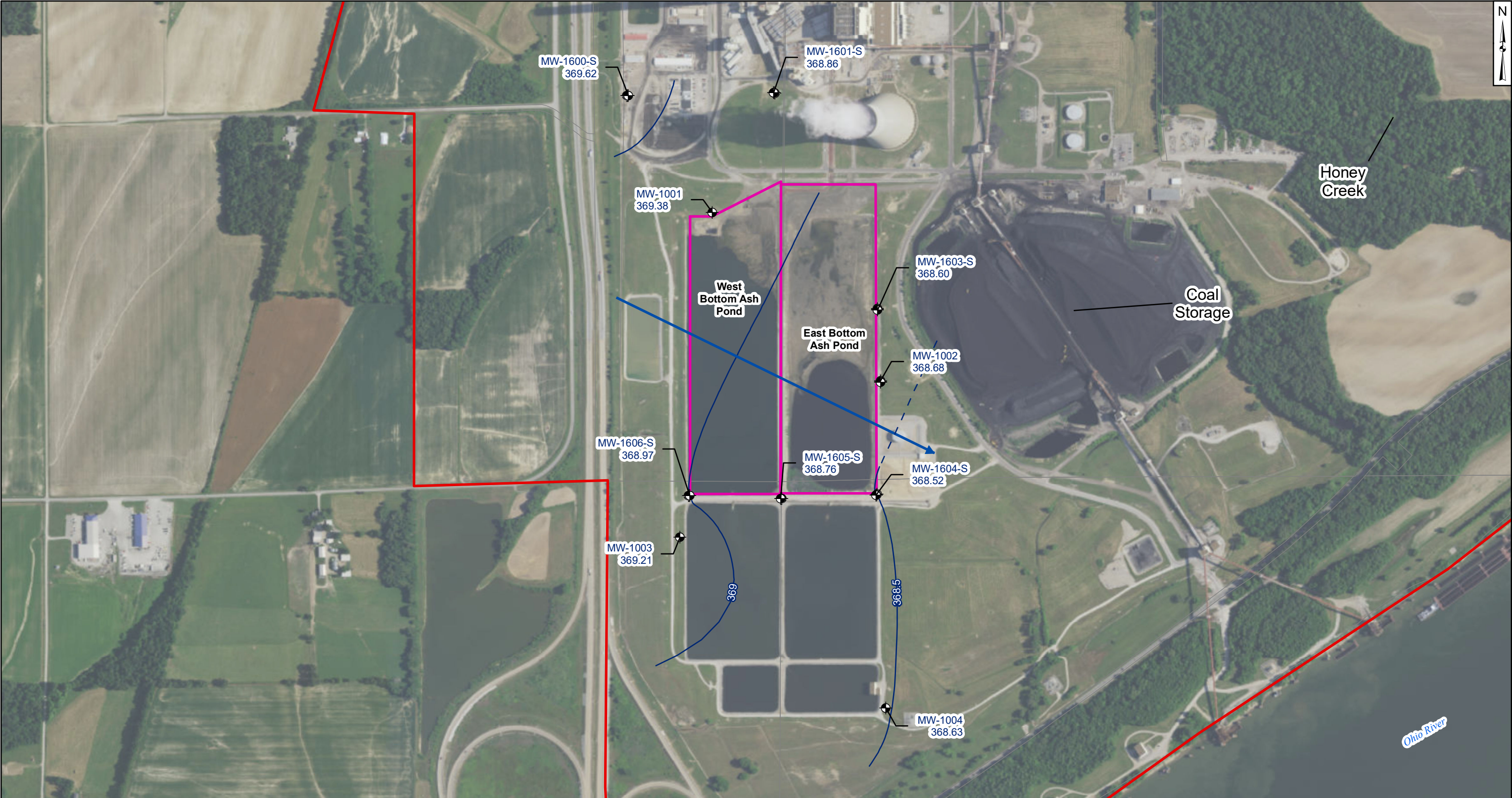
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2018/01/03

Figure

6

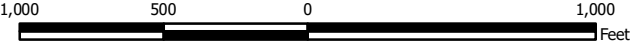


Legend

- Groundwater Monitoring Well
- Approximate Groundwater Flow Direction
- Groundwater Elevation Contour
- Groundwater Elevation Contour (Inferred)
- Bottom Ash Ponds
- Property Boundary
- Parcel Boundaries

Notes

- Monitoring well coordinates and water level data (collected on May 8, 2017) provided by AEP.
- Site features based on information available in the Groundwater Monitoring Network Evaluation (AMEC, 2016) provided by AEP.
- Property and parcel boundaries taken from Spencer County Assessor.
- Groundwater and river elevation units are feet above mean sea level.



**Potentiometric Surface Map - Uppermost Aquifer
May 2017**

AEP-Rockport Power Plant - Bottom Ash Ponds
Rockport, Indiana

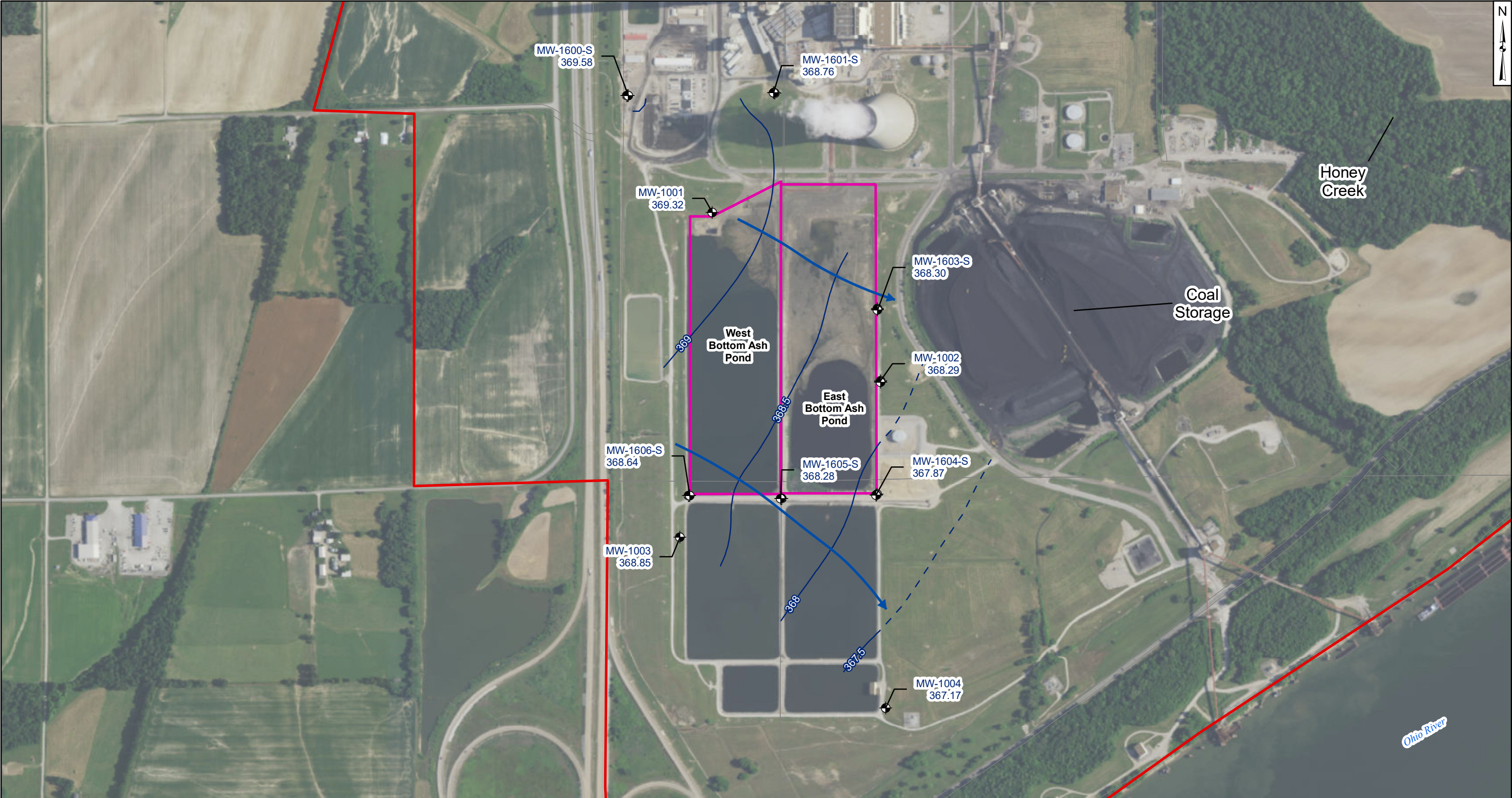
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Columbus, Ohio

2018/01/03

Figure

7

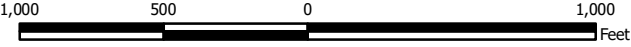


Legend

- Groundwater Monitoring Well
- Approximate Groundwater Flow Direction
- Groundwater Elevation Contour
- Groundwater Elevation Contour (Inferred)
- Bottom Ash Ponds
- Property Boundary
- Parcel Boundaries

Notes

- Monitoring well coordinates and water level data (collected on May 8, 2017) provided by AEP.
- Site features based on information available in the Groundwater Monitoring Network Evaluation (AMEC, 2016) provided by AEP.
- Property and parcel boundaries taken from Spencer County Assessor.
- Groundwater and river elevation units are feet above mean sea level.



**Potentiometric Surface Map - Uppermost Aquifer
July 2017**

AEP-Rockport Power Plant - Bottom Ash Ponds
Rockport, Indiana

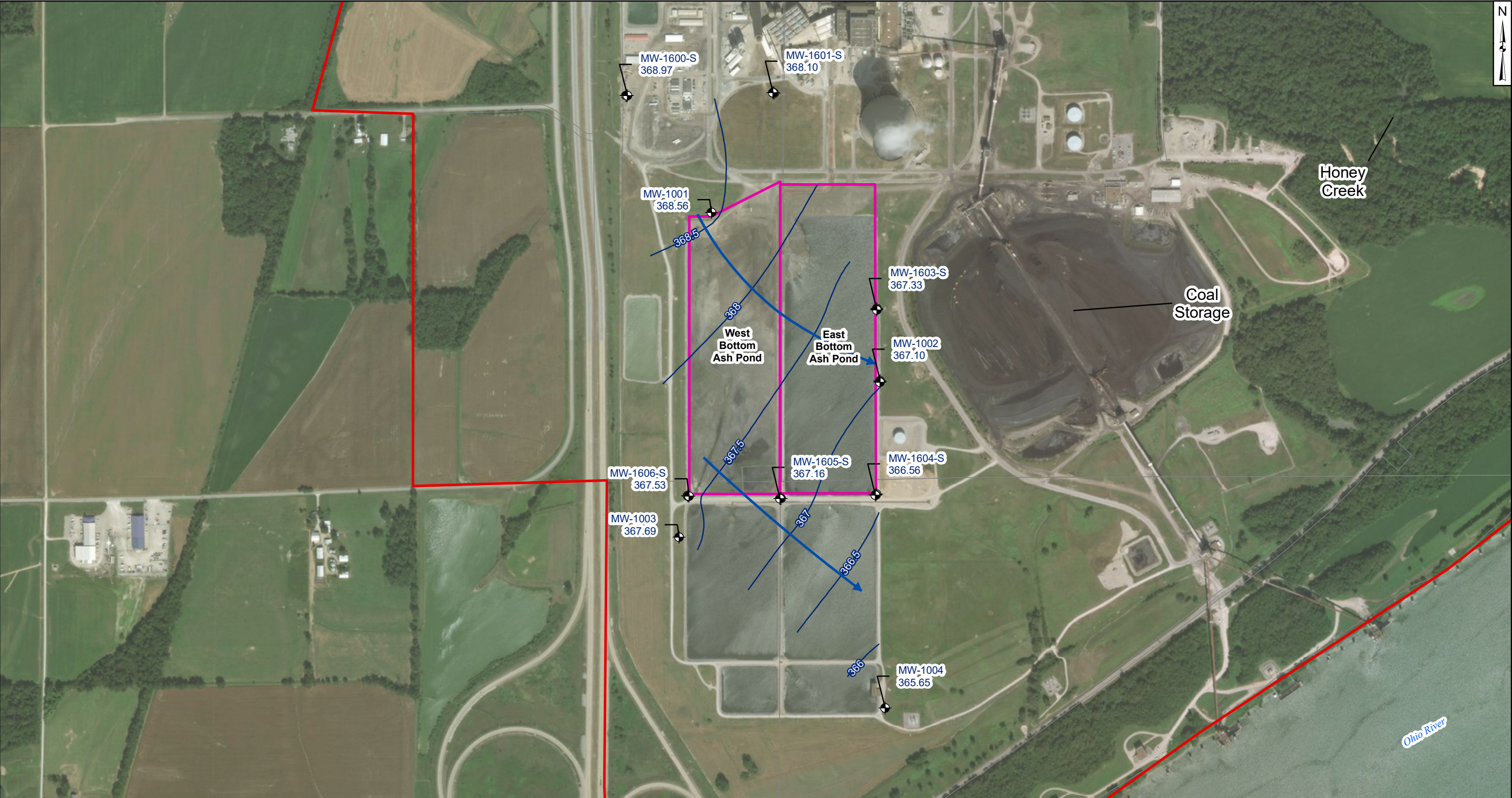
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Columbus, Ohio

2018/01/03

Figure

8

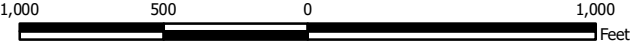


Legend

- Groundwater Monitoring Well
- Approximate Groundwater Flow Direction
- Groundwater Elevation Contour
- Groundwater Elevation Contour (Inferred)
- Bottom Ash Ponds
- Property Boundary
- Parcel Boundaries

Notes

- Monitoring well coordinates and water level data (collected on October 3, 2017) provided by AEP.
- Site features based on information available in the Groundwater Monitoring Network Evaluation (AMEC, 2016) provided by AEP.
- Property and parcel boundaries taken from Spencer County Assessor.
- Only shallow screened wells were used for generating groundwater contours.
- Groundwater elevation units are feet above mean sea level.



**Potentiometric Surface Map - Uppermost Aquifer
October 2017**

AEP-Rockport Power Plant - Bottom Ash Ponds
Rockport, Indiana

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2018/01/27

Figure

9

**Table 1: Residence Time Calculation Summary
Rockport - Bottom Ash Ponds**

Geosyntec Consultants, Inc.

CCR Management Unit	Monitoring Well	Well Diameter (inches)	2016-06		2016-07		2016-09		2016-11	
			Groundwater Velocity (ft/year)	Groundwater Residence Time (days)	Groundwater Velocity (ft/year)	Groundwater Residence Time (days)	Groundwater Velocity (ft/year)	Groundwater Residence Time (days)	Groundwater Velocity (ft/year)	Groundwater Residence Time (days)
Bottom Ash Ponds	MW-1600D ^[1]	2.0	119	0.51	21.6	2.8	110	0.56	106	0.57
	MW-1600I ^[1]	2.0	369	0.16	259	0.23	285	0.21	186	0.33
	MW-1600S ^[1]	2.0	239	0.25	367	0.17	351	0.17	346	0.18
	MW-1601D ^[1]	2.0	338	0.18	503	0.12	360	0.17	439	0.14
	MW-1601I ^[1]	2.0	240	0.25	401	0.15	83	0.73	362	0.17
	MW-1601S ^[1]	2.0	53	1.1	244	0.25	499	0.12	200	0.30
	MW-1002 ^[2]	2.0	715	0.09	865	0.07	759	0.08	1,058	0.06
	MW-1602D ^[2]	2.0	329	0.19	234	0.26	45	1.4	216	0.28
	MW-1602I ^[2]	2.0	429	0.14	491	0.12	335	0.18	691	0.09
	MW-1603D ^[2]	2.0	769	0.08	269	0.23	155	0.39	1,138	0.05
	MW-1603I ^[2]	2.0	96	0.63	528	0.12	494	0.12	650	0.09
	MW-1603S ^[2]	2.0	48	1.3	538	0.11	484	0.13	813	0.07
	MW-1604D ^[2]	2.0	441	0.14	376	0.16	378	0.16	442	0.14
	MW-1604I ^[2]	2.0	486	0.13	474	0.13	318	0.19	596	0.10
	MW-1604S ^[2]	2.0	477	0.13	474	0.13	556	0.11	618	0.10
	MW-1605D ^[2]	2.0	617	0.10	713	0.09	750	0.08	711	0.09
	MW-1605I ^[2]	2.0	372	0.16	370	0.16	300	0.20	339	0.18
	MW-1605S ^[2]	2.0	408	0.15	480	0.13	506	0.12	452	0.13
	MW-1606D ^[2]	2.0	417	0.15	464	0.13	431	0.14	386	0.16
	MW-1606I ^[2]	2.0	427	0.14	464	0.13	453	0.13	405	0.15
	MW-1606S ^[2]	2.0	385	0.16	377	0.16	295	0.21	313	0.19

**Table 1: Residence Time Calculation Summary
Rockport - Bottom Ash Ponds**

Geosyntec Consultants, Inc.

CCR Management Unit	Monitoring Well	Well Diameter (inches)	2017-01		2017-03		2017-05		2017-07		2017-10	
			Groundwater Velocity (ft/year)	Groundwater Residence Time (days)	Groundwater Velocity (ft/year)	Groundwater Residence Time (days)	Groundwater Velocity (ft/year)	Groundwater Residence Time (days)	Groundwater Velocity (ft/year)	Groundwater Residence Time (days)	Groundwater Velocity (ft/year)	Groundwater Residence Time (days)
Bottom Ash Ponds	MW-1600D ^[1]	2.0	50	1.2	176	0.35	93	0.66	228	0.27	293	0.21
	MW-1600I ^[1]	2.0	199	0.31	257	0.24	23.2	2.6	282	0.22	414	0.15
	MW-1600S ^[1]	2.0	299	0.20	286	0.21	278	0.22	315	0.19	475	0.13
	MW-1601D ^[1]	2.0	328	0.19	178	0.34	237	0.26	311	0.20	146	0.42
	MW-1601I ^[1]	2.0	202	0.30	190	0.32	75	0.81	292	0.21	379	0.16
	MW-1601S ^[1]	2.0	50	1.2	71	0.85	151	0.40	165	0.37	583	0.10
	MW-1002 ^[2]	2.0	826	0.07	16.4	3.7	451	0.13	860	0.07	40,365	0.002
	MW-1602D ^[2]	2.0	535	0.11	287	0.21	100	0.61	89	0.68	5,175	0.01
	MW-1602I ^[2]	2.0	616	0.10	296	0.21	50	1.2	415	0.15	518	0.12
	MW-1603D ^[2]	2.0	660	0.09	1,630	0.04	13.5	4.5	538	0.11	734	0.08
	MW-1603I ^[2]	2.0	406	0.15	210	0.29	162	0.38	293	0.21	286	0.21
	MW-1603S ^[2]	2.0	127	0.48	294	0.21	135	0.45	326	0.19	304	0.20
	MW-1604D ^[2]	2.0	283	0.21	293	0.21	241	0.25	600	0.10	155	0.39
	MW-1604I ^[2]	2.0	324	0.19	108	0.56	232	0.26	423	0.14	465	0.13
	MW-1604S ^[2]	2.0	315	0.19	249	0.24	218	0.28	459	0.13	465	0.13
	MW-1605D ^[2]	2.0	1,261	0.05	406	0.15	443	0.14	622	0.10	749	0.08
	MW-1605I ^[2]	2.0	578	0.11	102	0.60	159	0.38	266	0.23	657	0.09
	MW-1605S ^[2]	2.0	762	0.08	61	1.0	230	0.26	355	0.17	461	0.13
	MW-1606D ^[2]	2.0	509	0.12	171	0.36	228	0.27	370	0.16	654	0.09
	MW-1606I ^[2]	2.0	519	0.12	156	0.39	237	0.26	409	0.15	654	0.09
	MW-1606S ^[2]	2.0	453	0.13	15.6	3.9	210	0.29	273	0.22	218	0.28

Notes:

[1] - Upgradient Well

[2] - Downgradient Well