

# 2017 Annual Groundwater Monitoring and Corrective Action Report

Kincaid Ash Pond – CCR Unit ID 141  
Kincaid Power Station  
West Route 104  
Kincaid, Illinois 62540

**Kincaid Generation, L.L.C.**

January 31, 2018



JANUARY 31, 2018 | PROJECT #67720

# 2017 Annual Groundwater Monitoring and Corrective Action Report

Kincaid Ash Pond – CCR Unit ID 141  
Kincaid Power Station  
Kincaid, Illinois

Prepared for:  
*Kincaid Generation, L.L.C.*



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## ACRONYMS AND ABBREVIATIONS

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CCR	Coal Combustion Residuals
CFR	Code of Federal Regulations
mg/L	milligrams per liter
NRT/OBG	Natural Resource Technology, an OBG Company
OBG	O'Brien & Gere Engineers, Inc.
SSI	statistically significant increase
STD	standard units

## 1 INTRODUCTION

### 1.1 OVERVIEW

This report has been prepared on behalf of Kincaid Generation, L.L.C. by O'Brien & Gere Engineers, Inc. (OBG), to provide the information required by 40 CFR 257.90(e) for the Kincaid Ash Pond located at Kincaid Power Station near Kincaid, Illinois.

In accordance with 40 CFR 257.90(e), the owner or operator of an existing CCR unit must prepare an annual groundwater monitoring and corrective action report, for the preceding calendar year, that documents the status of the groundwater monitoring and corrective action program for the CCR unit, summarizes key actions completed, describes any problems encountered, discusses actions to resolve the problems, and projects key activities for the upcoming year. At a minimum, the annual report must contain the following information, to the extent available:

1. A map, aerial image, or diagram showing the CCR unit and all background (or upgradient) and downgradient monitoring wells, to include the well identification numbers, that are part of the groundwater monitoring program for the CCR unit.
2. Identification of any monitoring wells that were installed or decommissioned during the preceding year, along with a narrative description of why those actions were taken.
3. In addition to all the monitoring data obtained under §§ 257.90 through 257.98, a summary including the number of groundwater samples that were collected for analysis for each background and downgradient well, the dates the samples were collected, and whether the sample was required by the detection monitoring or assessment monitoring programs.
4. A narrative discussion of any transition between monitoring programs (*e.g.*, the date and circumstances for transitioning from detection monitoring to assessment monitoring in addition to identifying the constituent(s) detected at a statistically significant increase over background levels).
5. Other information required to be included in the annual report as specified in §§ 257.90 through 257.98.<sup>1</sup>

This report provides the required information for the Kincaid Ash Pond for calendar year 2017.

### 1.2 MONITORING AND CORRECTIVE ACTION PROGRAM STATUS

The final three independent samples of the minimum eight required by 40 CFR 257.94(b) were collected and analyzed from each background and downgradient well in 2017 before October 17. The other five independent samples were collected and analyzed in 2015 and 2016.

The first semi-annual monitoring sample for the Detection Monitoring Program was collected in November 2017 from each well.

Using the last of the minimum eight samples required to be collected by October 17, 2017 to determine whether a statistically significant increase (SSI) of Appendix III parameters over background concentrations has occurred, evaluation of analytical data from the downgradient wells was initiated beginning no later than October 17, 2017 for the initial eight samples. SSI determinations will be completed within 90 days (January 15, 2018). In addition, SSI determinations will be completed within 90 days of completion of analysis for the first semi-annual detection monitoring sample collected on November 6-7, 2017, for which analytical data was received on November 29, 2017.

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<sup>1</sup> For calendar year 2017, corrective action and other information required to be included in the annual report as specified in §§ 257.90 through 257.98 is inapplicable.

## 2 KEY ACTIONS COMPLETED IN 2017

### 2.1 SUMMARY

Three groundwater sampling events were completed in 2017 as part of an effort initiated in 2015 to collect eight independent samples from background and downgradient monitoring wells in accordance with 40 CFR 257.94(b).

Subsequent to collection of the eight independent samples, an additional sampling event was completed in November 2017 for parameters listed in Appendix III, 40 CFR Part 257, to supplement the background data set and as the first semi-annual monitoring sampling event for the Detection Monitoring Program.

A map showing the groundwater monitoring system, including the CCR unit and all background and downgradient monitoring wells with well identification numbers, for the Kincaid Ash Pond is presented in Figure 1. No monitoring wells were installed or decommissioned from the monitoring system in 2017.

Samples were collected and analyzed in accordance with the Sampling and Analysis Plan (NRT/OBG, 2017a) prepared for the Kincaid Ash Pond.

All monitoring data obtained under 40 CFR §§ 257.90 through 257.98 (as applicable) in 2017, as well as monitoring data for the previously collected five independent samples are presented in Tables 1 and 2. Sample collection dates in 2017 were February 13, May 18-19, July 18, and November 6-7. Sample collection dates for previously collected five independent samples are identified in Tables 1 and 2. One ground water sample was collected from each background and downgradient well in each sampling event.

Statistical evaluation of analytical data from the eight independent samples required to be collected by October 17, 2017 and the first semi-annual detection monitoring event on November 6-7, 2017 was initiated and will be completed within 90 days of October 17, 2017 (January 15, 2018) or 90 days from receipt of the data from the first semi-annual detection monitoring event (February 27, 2018), respectively. Statistical evaluation of analytical data is being performed in accordance with the Statistical Analysis Plan, Kincaid Power Station, Kincaid Generation, L.L.C. (NRT/OBG, 2017b).

### 2.2 PROBLEMS ENCOUNTERED AND ACTIONS TO RESOLVE THE PROBLEMS

No problems were encountered with the groundwater monitoring program during 2017. Groundwater samples were collected and analyzed in accordance with the Sampling and Analysis Plan, and all data was accepted.

### 3 KEY ACTIVITIES PLANNED FOR 2018

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#### 3.1 SUMMARY

The following key activities are planned for 2018:

- Continuation of the Detection Monitoring Program with semi-annual sampling scheduled for the 2nd and 4th quarters of 2018.
- Complete evaluation of analytical data from the downgradient wells, using both the eight samples required to be collected by October 17, 2017 and the first semi-annual detection monitoring sample taken in November 2017 to determine whether a SSI of Appendix III parameters over background concentrations has occurred.
- If an SSI is identified, potential alternate sources (*i.e.*, a source other than the CCR unit caused the SSI or that that SSI resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality) will be evaluated. If an alternate source is demonstrated to be the cause of the SSI, a written demonstration will be completed within 90 days of SSI detection and included in the annual groundwater monitoring and corrective action report for 2018.
  - » If an alternate source(s) is not identified to be the cause of the SSI, the applicable requirements of 40 CFR §§ 257.94 through 257.98 (*e.g.*, assessment monitoring) as may apply in 2018 will be met, including associated recordkeeping/notifications required by 40 CFR §§ 257.105 through 257.108.

## REFERENCES

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Natural Resource Technology, an OBG Company, 2017a, Sampling and Analysis Plan, Kincaid Ash Pond, Kincaid Power Station, Kincaid, Illinois, Project No. 2285, Revision 0, October 17, 2017.

Natural Resource Technology, an OBG Company, 2017b, Statistical Analysis Plan, Kincaid Power Station, Kincaid Generation, L.L.C., October 17, 2017.





Tables

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Table 1. Kincaid Ash Pond: Appendix III Analytical Results

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Location ID	Sample Date	B, tot, mg/L	Ca, tot, mg/L	Cl, tot, mg/L	F, tot, mg/L	pH (field), STD	SO4, tot, mg/L
MW-1	12/15/2015	0.2550	58.80	12.00	0.1900	6.570	113.0
	2/29/2016	0.2030	63.90	11.00	0.1600	6.550	117.0
	5/16/2016	0.2290	59.30	10.00	0.1600	6.880	108.0
	8/22/2016	0.2690	61.10	11.00	0.1800	6.810	117.0
	11/15/2016	0.2710	57.60	11.00	0.1800	7.030	109.0
	2/13/2017	0.2280	57.50	10.00	0.1600	6.790	105.0
	5/18/2017	0.2560	57.00	12.00	0.1600	6.650	109.0
	7/18/2017	0.2730	55.60	11.00	0.1800	6.650	101.0
	11/6/2017	0.2810	60.30	11.00	0.1800	6.770	104.0
MW-11	12/15/2015	1.790	130.0	45.00	0.5300	6.890	135.0
	2/29/2016	1.650	135.0	45.00	0.4200	6.920	130.0
	5/16/2016	1.460	125.0	41.00	0.4600	7.130	130.0
	8/22/2016	1.750	121.0	43.00	0.5100	7.300	130.0
	11/15/2016	1.670	123.0	42.00	0.5200	7.390	115.0
	2/13/2017	1.380	117.0	42.00	0.4400	6.940	123.0
	5/18/2017	1.610	121.0	42.00	0.4800	6.950	121.0
	7/18/2017	1.790	133.0	42.00	0.5000	6.970	106.0
	11/6/2017	1.950	125.0	39.00	0.4900	7.000	114.0

Table 1. Kincaid Ash Pond: Appendix III Analytical Results

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Location ID	Sample Date	TDS, mg/L
MW-1	12/15/2015	314.0
	2/29/2016	292.0
	5/16/2016	336.0
	8/22/2016	358.0
	11/15/2016	390.0
	2/13/2017	326.0
	5/18/2017	370.0
	7/18/2017	334.0
	11/6/2017	340.0
MW-11	12/15/2015	660.0
	2/29/2016	624.0
	5/16/2016	670.0
	8/22/2016	664.0
	11/15/2016	678.0
	2/13/2017	660.0
	5/18/2017	670.0
	7/18/2017	664.0
	11/6/2017	646.0

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Table 1. Kincaid Ash Pond: Appendix III Analytical Results

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Location ID	Sample Date	B, tot, mg/L	Ca, tot, mg/L	Cl, tot, mg/L	F, tot, mg/L	pH (field), STD	SO4, tot, mg/L
MW-12	12/15/2015	2.100	197.0	49.00	0.2200	6.900	326.0
	2/29/2016	2.640	220.0	39.00	0.1800	6.750	390.0
	5/16/2016	2.480	205.0	44.00	0.1800	6.950	379.0
	8/22/2016	2.530	198.0	44.00	0.1900	7.240	398.0
	11/15/2016	2.430	200.0	42.00	0.2100	7.220	330.0
	2/13/2017	3.030	199.0	41.00	0.1700	6.670	390.0
	5/18/2017	2.510	199.0	33.00	0.1800	6.720	406.0
	7/18/2017	3.550	235.0	39.00	0.1800	6.870	383.0
	11/6/2017	2.990	212.0	38.00	0.1800	7.090	388.0
MW-2	12/15/2015	0.1100	105.0	16.00	0.4700	7.140	171.0
	2/29/2016	0.08730	104.0	17.00	0.4300	7.170	143.0
	5/16/2016	0.08920	101.0	15.00	0.4500	7.400	159.0
	8/22/2016	0.08080	97.30	14.00	0.4700	7.440	169.0
	11/15/2016	0.1020	101.0	13.00	0.4700	7.530	161.0
	2/13/2017	0.1010	97.50	14.00	0.4400	7.200	173.0
	5/18/2017	0.1060	104.0	14.00	0.4300	7.190	178.0
	7/18/2017	0.1110	99.20	15.00	0.4500	7.300	159.0
	11/6/2017	0.08480	102.0	14.00	0.4400	7.130	159.0

Table 1. Kincaid Ash Pond: Appendix III Analytical Results

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Location ID	Sample Date	TDS, mg/L
MW-12	12/15/2015	1070.
	2/29/2016	1140.
	5/16/2016	1140.
	8/22/2016	1160.
	11/15/2016	1140.
	2/13/2017	1180.
	5/18/2017	1170.
	7/18/2017	1170.
	11/6/2017	1110.
MW-2	12/15/2015	566.0
	2/29/2016	416.0
	5/16/2016	534.0
	8/22/2016	566.0
	11/15/2016	576.0
	2/13/2017	520.0
	5/18/2017	596.0
	7/18/2017	512.0
	11/6/2017	506.0

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Table 1. Kincaid Ash Pond: Appendix III Analytical Results

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Location ID	Sample Date	B, tot, mg/L	Ca, tot, mg/L	Cl, tot, mg/L	F, tot, mg/L	pH (field), STD	SO4, tot, mg/L
MW-5	12/15/2015	0.5730	137.0	41.00	0.1700	6.630	<10.00
	2/29/2016	0.5550	148.0	39.00	0.1500	6.630	<10.00
	5/16/2016	0.5880	133.0	38.00	0.1500	7.030	11.00
	8/22/2016	0.5400	135.0	41.00	0.1600	7.180	11.00
	11/15/2016	0.5070	133.0	41.00	0.1500	7.200	<10.00
	2/13/2017	0.4730	130.0	39.00	0.1500	6.700	<10.00
	5/18/2017	0.5710	136.0	43.00	0.1800	6.650	10.00
	7/18/2017	0.5740	142.0	39.00	0.1600	6.790	<10.00
	11/6/2017	0.5150	141.0	40.00	0.1500	7.080	<10.00
MW-6	12/15/2015	1.580	113.0	7.000	0.1800	6.490	287.0
	2/29/2016	0.8370	101.0	5.000	0.1700	6.670	164.0
	5/16/2016	0.8740	98.60	5.000	0.1900	6.990	167.0
	8/22/2016	1.160	116.0	<5.000	0.2000	6.490	187.0
	11/15/2016	1.540	113.0	7.000	0.1700	6.800	275.0
	2/13/2017	1.040	100.0	<5.000	0.1600	6.640	246.0
	5/18/2017	1.020	96.00	<5.000	0.1900	6.620	153.0
	7/18/2017	1.480	105.0	<5.000	0.1700	6.490	238.0
	11/6/2017	1.910	139.0	11.00	0.1600	6.740	335.0

Table 1. Kincaid Ash Pond: Appendix III Analytical Results

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Location ID	Sample Date	TDS, mg/L
MW-5	12/15/2015	620.0
	2/29/2016	564.0
	5/16/2016	646.0
	8/22/2016	660.0
	11/15/2016	698.0
	2/13/2017	624.0
	5/18/2017	680.0
	7/18/2017	660.0
	11/6/2017	652.0
MW-6	12/15/2015	676.0
	2/29/2016	358.0
	5/16/2016	484.0
	8/22/2016	588.0
	11/15/2016	726.0
	2/13/2017	624.0
	5/18/2017	530.0
	7/18/2017	622.0
	11/6/2017	780.0

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Table 1. Kincaid Ash Pond: Appendix III Analytical Results

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Location ID	Sample Date	B, tot, mg/L	Ca, tot, mg/L	Cl, tot, mg/L	F, tot, mg/L	pH (field), STD	SO4, tot, mg/L
MW-7	12/15/2015	0.1780	145.0	<5.000	0.2500	7.090	439.0
	2/29/2016	0.1030	107.0	<5.000	0.2200	7.290	249.0
	5/16/2016	0.2510	105.0	<5.000	0.2400	7.270	170.0
	8/22/2016	0.2870	115.0	<5.000	0.2700	6.860	177.0
	11/15/2016	0.6480	128.0	<5.000	0.3200	7.310	247.0
	2/13/2017	0.1390	149.0	<5.000	0.2300	7.100	395.0
	5/19/2017	0.2350	105.0	<5.000	0.2600	7.010	158.0
	7/18/2017	0.3600	120.0	<5.000	0.3100	7.100	201.0
	11/7/2017	0.4620	127.0	<5.000	0.3200	6.960	247.0
MW-8	12/15/2015	0.9650	167.0	27.00	0.2200	6.620	316.0
	2/29/2016	1.020	180.0	25.00	0.1900	6.640	336.0
	5/16/2016	0.9970	162.0	24.00	0.2000	6.800	325.0
	8/22/2016	0.9540	159.0	25.00	0.2000	6.540	348.0
	11/15/2016	1.510	162.0	25.00	0.2000	7.040	327.0
	2/13/2017	0.9000	157.0	25.00	0.2100	6.600	324.0
	5/19/2017	1.090	159.0	26.00	0.2000	6.610	311.0
	7/18/2017	1.170	169.0	25.00	0.2000	6.760	273.0
	11/7/2017	1.090	164.0	24.00	0.2000	6.880	285.0



Table 1. Kincaid Ash Pond: Appendix III Analytical Results

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Location ID	Sample Date	TDS, mg/L
MW-7	12/15/2015	766.0
	2/29/2016	430.0
	5/16/2016	498.0
	8/22/2016	610.0
	11/15/2016	740.0
	2/13/2017	816.0
	5/19/2017	504.0
	7/18/2017	646.0
	11/7/2017	674.0
MW-8	12/15/2015	866.0
	2/29/2016	862.0
	5/16/2016	932.0
	8/22/2016	952.0
	11/15/2016	986.0
	2/13/2017	936.0
	5/19/2017	940.0
	7/18/2017	898.0
	11/7/2017	872.0

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Table 2. Kincaid Ash Pond: Appendix IV Analytical Results

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Location ID	Sample Date	As, tot, mg/L	Ba, tot, mg/L	Be, tot, mg/L	Cd,tot, mg/L	Co, tot, mg/L	Cr, tot, mg/L
MW-1	12/15/2015	<0.001000	0.04580	<0.001000	<0.001000	<0.001000	<0.001000
	2/29/2016	<0.001000	0.04480	<0.001000	<0.001000	<0.001000	<0.001000
	5/16/2016	<0.001000	0.04460	<0.001000	<0.001000	<0.001000	<0.001000
	8/22/2016	<0.001000	0.04650	<0.001000	<0.001000	<0.001000	<0.001000
	11/15/2016	<0.001000	0.04710	<0.001000	<0.001000	<0.001000	<0.001000
	2/13/2017	<0.001000	0.04370	<0.001000	<0.001000	<0.001000	<0.001000
	5/18/2017	<0.001000	0.04650	<0.001000	<0.001000	<0.001000	<0.001000
	7/18/2017	<0.001000	0.04430	<0.001000	<0.001000	<0.001000	0.001800
MW-11	12/15/2015	0.002800	0.1570	<0.001000	<0.001000	<0.001000	<0.001000
	2/29/2016	0.002800	0.1470	<0.001000	<0.001000	<0.001000	<0.001000
	5/16/2016	0.001300	0.1390	<0.001000	<0.001000	<0.001000	<0.001000
	8/22/2016	0.001500	0.1400	<0.001000	<0.001000	<0.001000	<0.001000
	11/15/2016	0.001900	0.1500	<0.001000	<0.001000	<0.001000	<0.001000
	2/13/2017	0.001200	0.1360	<0.001000	<0.001000	<0.001000	<0.001000
	5/18/2017	<0.001000	0.1340	<0.001000	<0.001000	<0.001000	<0.001000
	7/18/2017	0.001600	0.1360	<0.001000	<0.001000	<0.001000	<0.001000
MW-12	12/15/2015	<0.001000	0.1370	<0.001000	<0.001000	<0.001000	<0.001000
	2/29/2016	<0.001000	0.1130	<0.001000	<0.001000	<0.001000	<0.001000

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Table 2. Kincaid Ash Pond: Appendix IV Analytical Results

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Location ID	Sample Date	F, tot, mg/L	Hg, tot, mg/L	Li, tot, mg/L	Mo, tot, mg/L	Pb, tot, mg/L	Ra-226,228, tot, pCi/L
MW-1	12/15/2015	0.1900	<0.0002000	0.001900	<0.001000	<0.001000	0.4700
	2/29/2016	0.1600	<0.0002000	0.001700	<0.001000	<0.001000	0.5370
	5/16/2016	0.1600	<0.0002000	0.001600	<0.001000	<0.001000	0.3400
	8/22/2016	0.1800	<0.0002000	0.001600	<0.001000	<0.001000	1.030
	11/15/2016	0.1800	<0.0002000	0.002100	<0.001000	<0.001000	0.1600
	2/13/2017	0.1600	<0.0002000	0.001500	<0.001000	<0.001000	0.5800
	5/18/2017	0.1600	<0.0002000	0.001700	<0.001000	<0.001000	0.4100
	7/18/2017	0.1800	<0.0002000	0.002000	<0.001000	<0.001000	1.350
MW-11	12/15/2015	0.5300	<0.0002000	0.003000	0.002600	<0.001000	0.1800
	2/29/2016	0.4200	<0.0002000	0.002000	0.002600	<0.001000	0.6400
	5/16/2016	0.4600	<0.0002000	0.002100	0.002500	<0.001000	0.8600
	8/22/2016	0.5100	<0.0002000	0.002200	0.002000	<0.001000	0.5600
	11/15/2016	0.5200	<0.0002000	0.002600	0.002500	<0.001000	1.540
	2/13/2017	0.4400	<0.0002000	0.001900	0.002300	<0.001000	0.3900
	5/18/2017	0.4800	<0.0002000	0.002900	0.002300	<0.001000	1.020
	7/18/2017	0.5000	<0.0002000	0.002500	0.002200	<0.001000	1.220
MW-12	12/15/2015	0.2200	<0.0002000	0.009300	0.001300	<0.001000	0.1300
	2/29/2016	0.1800	<0.0002000	0.008200	<0.001000	<0.001000	0.1900

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Table 2. Kincaid Ash Pond: Appendix IV Analytical Results

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Location ID	Sample Date	Sb, tot, mg/L	Se, tot, mg/L	Tl, tot, mg/L
MW-1	12/15/2015	<0.001000	<0.001000	<0.001000
	2/29/2016	<0.001000	<0.001000	<0.001000
	5/16/2016	<0.001000	<0.001000	<0.001000
	8/22/2016	<0.001000	<0.001000	<0.001000
	11/15/2016	<0.001000	<0.001000	<0.001000
	2/13/2017	<0.001000	<0.001000	<0.001000
	5/18/2017	<0.001000	<0.001000	<0.001000
	7/18/2017	<0.001000	<0.001000	<0.001000
MW-11	12/15/2015	<0.001000	<0.001000	<0.001000
	2/29/2016	<0.001000	0.001200	<0.001000
	5/16/2016	<0.001000	<0.001000	<0.001000
	8/22/2016	<0.001000	<0.001000	<0.001000
	11/15/2016	<0.001000	<0.001000	<0.001000
	2/13/2017	<0.001000	<0.001000	<0.001000
	5/18/2017	<0.001000	0.001500	<0.001000
	7/18/2017	<0.001000	0.002100	<0.001000
MW-12	12/15/2015	<0.001000	<0.001000	<0.001000
	2/29/2016	<0.001000	<0.001000	<0.001000

Kincaid

January 12, 2018

Table 2. Kincaid Ash Pond: Appendix IV Analytical Results

3:11:59 PM

Location ID	Sample Date	As, tot, mg/L	Ba, tot, mg/L	Be, tot, mg/L	Cd,tot, mg/L	Co, tot, mg/L	Cr, tot, mg/L
MW-12	5/16/2016	<0.001000	0.1190	<0.001000	<0.001000	<0.001000	<0.001000
	8/22/2016	<0.001000	0.1150	<0.001000	<0.001000	<0.001000	<0.001000
	11/15/2016	<0.001000	0.1120	<0.001000	<0.001000	<0.001000	<0.001000
	2/13/2017	<0.001000	0.09410	<0.001000	<0.001000	<0.001000	<0.001000
	5/18/2017	<0.001000	0.1060	<0.001000	<0.001000	<0.001000	<0.001000
	7/18/2017	<0.001000	0.09530	<0.001000	<0.001000	<0.001000	<0.001000
MW-2	12/15/2015	0.002200	0.1270	<0.001000	<0.001000	0.001200	0.002500
	2/29/2016	<0.001000	0.1110	<0.001000	<0.001000	<0.001000	<0.001000
	5/16/2016	0.001100	0.1130	<0.001000	<0.001000	<0.001000	<0.001000
	8/22/2016	<0.001000	0.1140	<0.001000	<0.001000	<0.001000	<0.001000
	11/15/2016	0.001100	0.1130	<0.001000	<0.001000	<0.001000	<0.001000
	2/13/2017	<0.001000	0.1120	<0.001000	<0.001000	<0.001000	<0.001000
	5/18/2017	<0.001000	0.1120	<0.001000	<0.001000	<0.001000	<0.001000
	7/18/2017	0.001500	0.1120	<0.001000	<0.001000	<0.001000	0.001900
MW-5	12/15/2015	<0.001000	0.1410	<0.001000	<0.001000	0.001300	<0.001000
	2/29/2016	<0.001000	0.1430	<0.001000	<0.001000	0.001000	<0.001000
	5/16/2016	<0.001000	0.1410	<0.001000	<0.001000	<0.001000	<0.001000
	8/22/2016	<0.001000	0.1370	<0.001000	<0.001000	<0.001000	<0.001000

## Kincaid

January 12, 2018

Table 2. Kincaid Ash Pond: Appendix IV Analytical Results

3:11:59 PM

Location ID	Sample Date	F, tot, mg/L	Hg, tot, mg/L	Li, tot, mg/L	Mo, tot, mg/L	Pb, tot, mg/L	Ra-226,228, tot, pCi/L
MW-12	5/16/2016	0.1800	<0.0002000	0.008800	<0.001000	<0.001000	1.120
	8/22/2016	0.1900	<0.0002000	0.01020	<0.001000	<0.001000	1.510
	11/15/2016	0.2100	<0.0002000	0.01060	0.001100	<0.001000	0.5600
	2/13/2017	0.1700	<0.0002000	0.008800	<0.001000	<0.001000	0.0
	5/18/2017	0.1800	<0.0002000	0.009000	<0.001000	<0.001000	0.6400
	7/18/2017	0.1800	<0.0002000	0.009700	<0.001000	<0.001000	2.650
MW-2	12/15/2015	0.4700	<0.0002000	0.006800	0.004000	0.001400	0.5800
	2/29/2016	0.4300	<0.0002000	0.006300	0.005300	<0.001000	0.1600
	5/16/2016	0.4500	<0.0002000	0.005600	0.004300	<0.001000	0.8700
	8/22/2016	0.4700	<0.0002000	0.005500	0.003900	<0.001000	1.260
	11/15/2016	0.4700	<0.0002000	0.005700	0.004000	<0.001000	0.01000
	2/13/2017	0.4400	<0.0002000	0.005800	0.004300	<0.001000	0.0
	5/18/2017	0.4300	<0.0002000	0.005100	0.003700	<0.001000	1.160
	7/18/2017	0.4500	<0.0002000	0.005500	0.004200	<0.001000	1.720
MW-5	12/15/2015	0.1700	<0.0002000	0.002900	<0.001000	<0.001000	0.7800
	2/29/2016	0.1500	<0.0002000	0.003000	<0.001000	<0.001000	0.3500
	5/16/2016	0.1500	<0.0002000	0.002900	<0.001000	<0.001000	0.8900
	8/22/2016	0.1600	<0.0002000	0.002700	<0.001000	<0.001000	1.110

Kincaid

January 12, 2018

Table 2. Kincaid Ash Pond: Appendix IV Analytical Results

3:11:59 PM

Location ID	Sample Date	Sb, tot, mg/L	Se, tot, mg/L	Tl, tot, mg/L
MW-12	5/16/2016	<0.001000	<0.001000	<0.001000
	8/22/2016	<0.001000	<0.001000	<0.001000
	11/15/2016	<0.001000	<0.001000	<0.001000
	2/13/2017	<0.001000	<0.001000	<0.001000
	5/18/2017	<0.001000	<0.001000	<0.001000
	7/18/2017	<0.001000	<0.001000	<0.001000
MW-2	12/15/2015	<0.001000	0.004800	<0.001000
	2/29/2016	<0.001000	<0.001000	<0.001000
	5/16/2016	<0.001000	0.001600	<0.001000
	8/22/2016	<0.001000	<0.001000	<0.001000
	11/15/2016	<0.001000	<0.001000	<0.001000
	2/13/2017	<0.001000	<0.001000	<0.001000
	5/18/2017	<0.001000	<0.001000	<0.001000
	7/18/2017	<0.001000	<0.001000	<0.001000
MW-5	12/15/2015	<0.001000	<0.001000	<0.001000
	2/29/2016	<0.001000	<0.001000	<0.001000
	5/16/2016	<0.001000	<0.001000	<0.001000
	8/22/2016	<0.001000	<0.001000	<0.001000

Kincaid

January 12, 2018

Table 2. Kincaid Ash Pond: Appendix IV Analytical Results

3:11:59 PM

Location ID	Sample Date	As, tot, mg/L	Ba, tot, mg/L	Be, tot, mg/L	Cd,tot, mg/L	Co, tot, mg/L	Cr, tot, mg/L
MW-5	11/15/2016	<0.001000	0.1390	<0.001000	<0.001000	<0.001000	<0.001000
	2/13/2017	<0.001000	0.1400	<0.001000	<0.001000	<0.001000	<0.001000
	5/18/2017	<0.001000	0.1450	<0.001000	<0.001000	<0.001000	<0.001000
	7/18/2017	<0.001000	0.1430	<0.001000	<0.001000	<0.001000	<0.001000
MW-6	12/15/2015	<0.001000	0.03160	<0.001000	<0.001000	<0.001000	<0.001000
	2/29/2016	<0.001000	0.02740	<0.001000	<0.001000	<0.001000	<0.001000
	5/16/2016	<0.001000	0.02980	<0.001000	<0.001000	<0.001000	<0.001000
	8/22/2016	<0.001000	0.03680	<0.001000	<0.001000	<0.001000	<0.001000
	11/15/2016	<0.001000	0.03430	<0.001000	<0.001000	<0.001000	<0.001000
	2/13/2017	<0.001000	0.02860	<0.001000	<0.001000	<0.001000	<0.001000
	5/18/2017	<0.001000	0.02920	<0.001000	<0.001000	<0.001000	<0.001000
	7/18/2017	<0.001000	0.05970	<0.001000	<0.001000	<0.001000	<0.001000
MW-7	12/15/2015	<0.001000	0.08480	<0.001000	<0.001000	<0.001000	<0.001000
	2/29/2016	<0.001000	0.05150	<0.001000	<0.001000	<0.001000	<0.001000
	5/16/2016	<0.001000	0.05720	<0.001000	<0.001000	<0.001000	<0.001000
	8/22/2016	0.001100	0.06560	<0.001000	<0.001000	<0.001000	<0.001000
	11/15/2016	0.001500	0.06290	<0.001000	<0.001000	<0.001000	0.002400
	2/13/2017	<0.001000	0.06560	<0.001000	<0.001000	<0.001000	<0.001000



## Kincaid

January 12, 2018

Table 2. Kincaid Ash Pond: Appendix IV Analytical Results

3:11:59 PM

Location ID	Sample Date	F, tot, mg/L	Hg, tot, mg/L	Li, tot, mg/L	Mo, tot, mg/L	Pb, tot, mg/L	Ra-226,228, tot, pCi/L
MW-5	11/15/2016	0.1500	<0.0002000	0.002700	<0.001000	<0.001000	1.080
	2/13/2017	0.1500	<0.0002000	0.002900	<0.001000	<0.001000	0.3400
	5/18/2017	0.1800	<0.0002000	0.003100	<0.001000	<0.001000	0.9500
	7/18/2017	0.1600	<0.0002000	0.002900	<0.001000	0.001300	2.410
MW-6	12/15/2015	0.1800	<0.0002000	0.001200	<0.001000	<0.001000	0.4800
	2/29/2016	0.1700	<0.0002000	<0.001000	<0.001000	<0.001000	0.01000
	5/16/2016	0.1900	<0.0002000	<0.001000	<0.001000	<0.001000	0.9100
	8/22/2016	0.2000	<0.0002000	0.001200	<0.001000	<0.001000	1.080
	11/15/2016	0.1700	<0.0002000	0.001200	<0.001000	<0.001000	0.2900
	2/13/2017	0.1600	<0.0002000	<0.001000	<0.001000	<0.001000	0.3500
	5/18/2017	0.1900	<0.0002000	<0.001000	<0.001000	<0.001000	0.2700
	7/18/2017	0.1700	<0.0002000	<0.001000	<0.001000	<0.001000	3.140
MW-7	12/15/2015	0.2500	<0.0002000	0.003400	0.003300	<0.001000	1.290
	2/29/2016	0.2200	<0.0002000	0.002300	0.003300	<0.001000	0.3200
	5/16/2016	0.2400	<0.0002000	0.003000	0.002700	<0.001000	0.9900
	8/22/2016	0.2700	<0.0002000	0.004800	0.003700	<0.001000	1.740
	11/15/2016	0.3200	<0.0002000	0.004000	0.003200	<0.001000	2.160
	2/13/2017	0.2300	<0.0002000	0.003100	0.002100	<0.001000	0.8100

Kincaid

January 12, 2018

Table 2. Kincaid Ash Pond: Appendix IV Analytical Results

3:11:59 PM

Location ID	Sample Date	Sb, tot, mg/L	Se, tot, mg/L	Tl, tot, mg/L
MW-5	11/15/2016	<0.001000	<0.001000	<0.001000
	2/13/2017	<0.001000	<0.001000	<0.001000
	5/18/2017	<0.001000	<0.001000	<0.001000
	7/18/2017	<0.001000	<0.001000	<0.001000
MW-6	12/15/2015	<0.001000	<0.001000	<0.001000
	2/29/2016	<0.001000	<0.001000	<0.001000
	5/16/2016	<0.001000	<0.001000	<0.001000
	8/22/2016	<0.001000	<0.001000	<0.001000
	11/15/2016	<0.001000	<0.001000	<0.001000
	2/13/2017	<0.001000	<0.001000	<0.001000
	5/18/2017	<0.001000	<0.001000	<0.001000
	7/18/2017	<0.001000	<0.001000	<0.001000
MW-7	12/15/2015	<0.001000	<0.001000	<0.001000
	2/29/2016	<0.001000	<0.001000	<0.001000
	5/16/2016	<0.001000	<0.001000	<0.001000
	8/22/2016	<0.001000	<0.001000	<0.001000
	11/15/2016	<0.001000	<0.001000	<0.001000
	2/13/2017	<0.001000	<0.001000	<0.001000

Kincaid

January 12, 2018

Table 2. Kincaid Ash Pond: Appendix IV Analytical Results

3:11:59 PM

Location ID	Sample Date	As, tot, mg/L	Ba, tot, mg/L	Be, tot, mg/L	Cd,tot, mg/L	Co, tot, mg/L	Cr, tot, mg/L
MW-7	5/19/2017	<0.001000	0.05050	<0.001000	<0.001000	<0.001000	<0.001000
	7/18/2017	<0.001000	0.05160	<0.001000	<0.001000	<0.001000	<0.001000
MW-8	12/15/2015	<0.001000	0.03640	<0.001000	<0.001000	0.002000	<0.001000
	2/29/2016	<0.001000	0.03290	<0.001000	<0.001000	0.001300	<0.001000
	5/16/2016	<0.001000	0.03280	<0.001000	<0.001000	0.001400	<0.001000
	8/22/2016	<0.001000	0.03350	<0.001000	<0.001000	0.001600	<0.001000
	11/15/2016	<0.001000	0.03590	<0.001000	<0.001000	0.001900	<0.001000
	2/13/2017	<0.001000	0.02960	<0.001000	<0.001000	0.001300	<0.001000
	5/19/2017	<0.001000	0.03220	<0.001000	<0.001000	0.001300	<0.001000
	7/18/2017	<0.001000	0.03260	<0.001000	<0.001000	0.001600	<0.001000

Kincaid

January 12, 2018

Table 2. Kincaid Ash Pond: Appendix IV Analytical Results

3:11:59 PM

Location ID	Sample Date	F, tot, mg/L	Hg, tot, mg/L	Li, tot, mg/L	Mo, tot, mg/L	Pb, tot, mg/L	Ra-226,228, tot, pCi/L
MW-7	5/19/2017	0.2600	<0.0002000	0.003300	0.002800	<0.001000	0.6400
	7/18/2017	0.3100	<0.0002000	0.002900	0.003300	<0.001000	1.760
MW-8	12/15/2015	0.2200	<0.0002000	0.001900	<0.001000	<0.001000	2.080
	2/29/2016	0.1900	<0.0002000	0.001900	<0.001000	<0.001000	0.1500
	5/16/2016	0.2000	<0.0002000	0.002000	<0.001000	<0.001000	0.7000
	8/22/2016	0.2000	<0.0002000	0.001600	<0.001000	<0.001000	2.110
	11/15/2016	0.2000	<0.0002000	0.002200	<0.001000	<0.001000	0.0
	2/13/2017	0.2100	<0.0002000	0.002000	<0.001000	<0.001000	0.3100
	5/19/2017	0.2000	<0.0002000	0.002000	<0.001000	<0.001000	0.6600
	7/18/2017	0.2000	<0.0002000	0.002100	<0.001000	<0.001000	2.320

Table 2. Kincaid Ash Pond: Appendix IV Analytical Results

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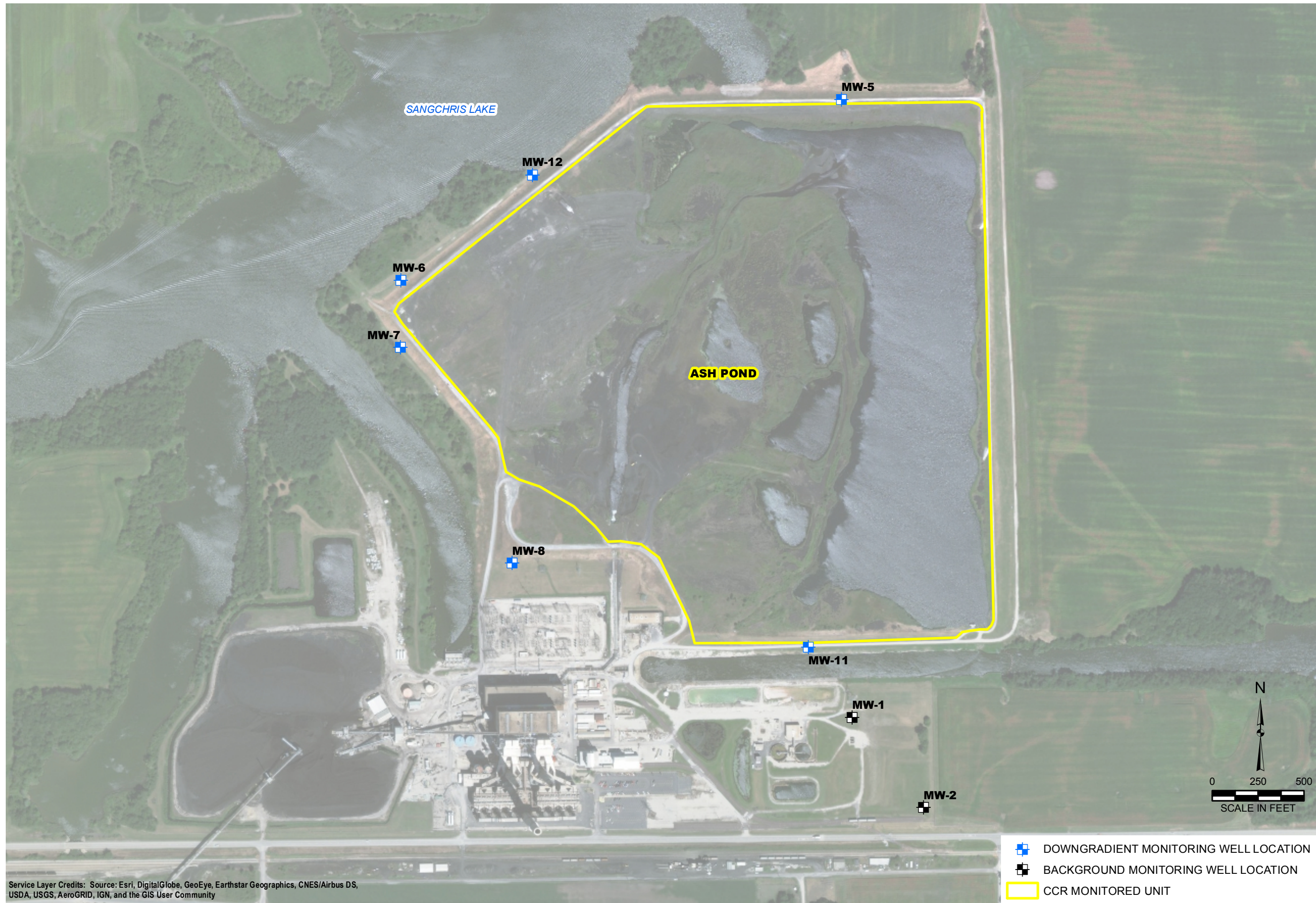
Location ID	Sample Date	Sb, tot, mg/L	Se, tot, mg/L	Tl, tot, mg/L
MW-7	5/19/2017	<0.001000	<0.001000	<0.001000
	7/18/2017	<0.001000	<0.001000	<0.001000
MW-8	12/15/2015	<0.001000	<0.001000	<0.001000
	2/29/2016	<0.001000	<0.001000	<0.001000
	5/16/2016	<0.001000	<0.001000	<0.001000
	8/22/2016	<0.001000	<0.001000	<0.001000
	11/15/2016	<0.001000	<0.001000	<0.001000
	2/13/2017	<0.001000	<0.001000	<0.001000
	5/19/2017	<0.001000	<0.001000	<0.001000
	7/18/2017	<0.001000	<0.001000	<0.001000



## Figures



Y:\Mapping\Projects\222285\MXD\2017\_AnnualGWM\_CAR\Figure 1\_GWS\_WellLoc\_Kincaid.mxd Author: slolzd Date/Time: 12/29/2018, 4:08:09 PM



Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

DRAWN BY/DATE:  
SDS 12/11/17  
REVIEWED BY/DATE:  
KLT 12/11/17  
APPROVED BY/DATE:  
SJC 1/24/18

GROUNDWATER SAMPLING WELL LOCATION MAP  
KINCAID ASH POND  
UNIT ID: 141

2017 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT  
DYNEGY CCR RULE GROUNDWATER MONITORING  
KINCAID POWER STATION  
KINCAID, ILLINOIS

PROJECT NO: 67720

FIGURE NO: 1





**OBG**

THERE'S A WAY

