

2017 Annual Groundwater Monitoring and Corrective Action Report

Coffeen Ash Pond No. 1 – CCR Unit ID 101
Coffeen Power Station
134 Cips Lane
Coffeen, Illinois 62017

Illinois Power Generating Company

January 31, 2018



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2017 Annual Groundwater Monitoring and Corrective Action Report

Coffeen Ash Pond No. 1 – CCR Unit ID 101
Coffeen Power Station
Coffeen, Illinois

Prepared for:
Illinois Power Generating Company



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TABLE OF CONTENTS

LIST OF TABLES	i
LIST OF FIGURES	i
ACRONYMS AND ABBREVIATIONS	ii
1 INTRODUCTION	1
1.1 Overview.....	1
1.2 Monitoring and Corrective Action Program Status.....	1
2 KEY ACTIONS COMPLETED IN 2017	2
2.1 Summary.....	2
2.2 Problems Encountered and Actions to Resolve the Problems	2
3 KEY ACTIVITIES PLANNED FOR 2018	3
3.1 Summary.....	3
REFERENCES	4

LIST OF TABLES

Table 1	Coffeen Ash Pond No. 1: Appendix III Analytical Results
Table 2	Coffeen Ash Pond No. 1: Appendix IV Analytical Results

LIST OF FIGURES

Figure 1	Groundwater Sampling Well Location Map
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ACRONYMS AND ABBREVIATIONS

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 Illinois Power Generating Company by O'Brien & Gere Engineers, Inc. (OBG), to provide the information required by 40 CFR § 257.90(e) for the Coffeen Ash Pond No. 1 located at Coffeen Power Station near Coffeen, 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 257.98.¹

This report provides the required information for the Coffeen Ash Pond No. 1 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 October 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 October 25-26, 2017, for which analytical data was received on November 13, 2017.

¹ 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 October 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 Coffeen Ash Pond No. 1 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 Coffeen Ash Pond No. 1.

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 10-19, May 16-17, July 12-13, and October 25-26. 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 October 25-26, 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 11, 2018), respectively. Statistical evaluation of analytical data is being performed in accordance with the Statistical Analysis Plan, Coffeen Power Station, Illinois Power Generating Company (NRT/OBG, 2017b).

Downgradient monitoring well G304 was abandoned on July 26, 2016 due to concerns for proper construction. G307 was installed on July 27, 2016 as a replacement, and monitors the same hydrologic unit, at a similar elevation, as G304. Data from nine total sampling rounds will be pooled between MW304 and MW307 for statistical evaluation.

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

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 October 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

Natural Resource Technology, an OBG Company, 2017a, Sampling and Analysis Plan, Coffeen Ash Pond No. 1, Coffeen Power Station, Coffeen, Illinois, Project No. 2285, Revision 0, October 17, 2017.

Natural Resource Technology, an OBG Company, 2017b, Statistical Analysis Plan, Coffeen Power Station, Newton Power Station, Illinois Power Generating Company, October 17, 2017.



Tables

Coffeen

January 12, 2018

Table 1. Coffeen Ash Pond No. 1: Appendix III Analytical Results

11:38:19 AM

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
G281	11/20/2015	<0.01000	150.0	74.00	0.3490	7.000	300.0
	2/11/2016	0.01000	120.0	55.00	0.4110	7.100	340.0
	5/10/2016	<0.01000	130.0	72.00	0.4050	7.000	370.0
	8/1/2016	0.01200	140.0	70.00	0.3680	6.980	310.0
	11/16/2016	0.02200	110.0	68.00	0.2630	6.880	310.0
	2/10/2017	<0.01000	120.0	67.00	0.2700	6.720	310.0
	5/16/2017	<0.01000	130.0	68.00	0.3080	6.860	330.0
	7/12/2017	<0.01000	130.0	75.00	0.2730	6.990	300.0
	10/25/2017	0.01200	110.0	64.00	0.3510	6.960	300.0
G301	11/20/2015	2.300	140.0	33.00	0.3100	6.880	700.0
	2/23/2016	2.400	140.0	25.00	0.3240	6.630	740.0
	5/20/2016	2.600	130.0	24.00	0.4040	6.430	710.0
	8/15/2016	2.900	140.0	24.00	0.2960	6.760	740.0
	11/17/2016	2.400	120.0	25.00	<0.2500	6.870	800.0
	2/16/2017	2.400	150.0	23.00	<0.2500	7.040	790.0
	5/17/2017	2.100	120.0	21.00	<0.2500	7.130	650.0
	7/12/2017	2.300	120.0	23.00	<0.2500	6.750	760.0
	10/26/2017	2.300	110.0	22.00	0.2800	6.820	680.0

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January 12, 2018

Table 1. Coffeen Ash Pond No. 1: Appendix III Analytical Results

11:38:19 AM

Location ID	Sample Date	TDS, mg/L
G281	11/20/2015	820.0
	2/11/2016	740.0
	5/10/2016	740.0
	8/1/2016	780.0
	11/16/2016	840.0
	2/10/2017	840.0
	5/16/2017	840.0
	7/12/2017	760.0
	10/25/2017	800.0
G301	11/20/2015	1200.
	2/23/2016	1000.
	5/20/2016	1100.
	8/15/2016	1200.
	11/17/2016	1400.
	2/16/2017	1200.
	5/17/2017	1100.
	7/12/2017	1100.
	10/26/2017	1100.

Coffeen

January 12, 2018

Table 1. Coffeen Ash Pond No. 1: Appendix III Analytical Results

11:38:19 AM

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
G302	11/20/2015	2.000	180.0	22.00	0.2670	6.920	480.0
	2/23/2016	2.100	170.0	21.00	0.2880	6.750	530.0
	5/20/2016	2.500	140.0	12.00	0.3900	6.820	440.0
	8/15/2016	1.900	130.0	9.700	0.3040	7.020	360.0
	11/17/2016	1.900	140.0	14.00	<0.2500	7.140	450.0
	2/16/2017	1.400	160.0	14.00	0.2900	7.050	430.0
	5/17/2017	1.100	130.0	6.500	<0.2500	6.950	330.0
	7/12/2017	2.000	160.0	14.00	0.3880	7.010	460.0
	10/26/2017	1.100	180.0	8.300	0.3190	7.090	320.0
G303	11/20/2015	1.500	170.0	32.00	<0.2500	6.910	860.0
	2/23/2016	2.500	170.0	32.00	0.3290	6.960	700.0
	5/20/2016	2.400	160.0	29.00	0.3420	6.910	700.0
	8/15/2016	1.800	170.0	30.00	0.2570	6.940	830.0
	11/17/2016	1.600	180.0	30.00	<0.2500	6.850	870.0
	2/19/2017	1.700	170.0	28.00	0.3000	6.880	860.0
	5/17/2017	1.400	210.0	28.00	0.2770	7.050	780.0
	7/13/2017	1.700	170.0	31.00	0.2770	6.980	860.0
	10/26/2017	2.500	130.0	28.00	0.3110	6.990	600.0

Coffeen

January 12, 2018

Table 1. Coffeen Ash Pond No. 1: Appendix III Analytical Results

11:38:19 AM

Location ID	Sample Date	TDS, mg/L
G302	11/20/2015	1200.
	2/23/2016	1000.
	5/20/2016	1000.
	8/15/2016	910.0
	11/17/2016	1100.
	2/16/2017	1100.
	5/17/2017	820.0
	7/12/2017	1000.
	10/26/2017	840.0
G303	11/20/2015	1700.
	2/23/2016	1400.
	5/20/2016	1400.
	8/15/2016	1600.
	11/17/2016	1900.
	2/19/2017	1700.
	5/17/2017	1900.
	7/13/2017	1500.
	10/26/2017	1300.

Coffeen

January 12, 2018

Table 1. Coffeen Ash Pond No. 1: Appendix III Analytical Results

11:38:19 AM

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
G304	11/20/2015	2.300	170.0	27.00	0.3540	7.100	1000.
	2/23/2016	2.400	220.0	27.00	0.4140	7.080	1100.
	5/20/2016	2.600	200.0	27.00	0.4760	7.080	1000.
G306	5/19/2016	2.300	130.0	14.00	0.4260	6.730	350.0
	7/1/2016	2.700	130.0	8.900	0.3440	6.460	330.0
	8/16/2016	2.400	110.0	7.200	0.3080	6.880	320.0
	9/29/2016	2.600	120.0	6.800	0.3260	6.610	320.0
	11/16/2016	2.700	120.0	6.600	<0.2500	6.950	330.0
	2/19/2017	2.700	130.0	6.200	0.2630	7.000	5.900
	5/17/2017	2.500	150.0	5.500	0.3040	7.090	700.0
	7/13/2017	2.900	130.0	8.300	0.3260	7.000	340.0
10/27/2017	3.100	120.0	4.700	0.3320	6.850	350.0	
G307	8/16/2016	2.100	210.0	26.00	0.3700	6.970	1000.
	9/29/2016	2.200	250.0	26.00	0.4160	6.870	1000.
	11/16/2016	2.100	190.0	24.00	0.2630	6.900	1000.
	2/19/2017	2.000	200.0	22.00	0.3230	7.010	1100.
	5/17/2017	1.800	400.0	19.00	0.3640	7.200	940.0
	7/13/2017	2.200	220.0	21.00	0.4950	6.970	1300.

Coffeen

January 12, 2018

Table 1. Coffeen Ash Pond No. 1: Appendix III Analytical Results

11:38:19 AM

Location ID	Sample Date	TDS, mg/L
G304	11/20/2015	1500.
	2/23/2016	1400.
	5/20/2016	1300.
G306	5/19/2016	720.0
	7/1/2016	720.0
	8/16/2016	680.0
	9/29/2016	660.0
	11/16/2016	820.0
	2/19/2017	820.0
	5/17/2017	800.0
	7/13/2017	720.0
10/27/2017	720.0	
G307	8/16/2016	1500.
	9/29/2016	1300.
	11/16/2016	1600.
	2/19/2017	1500.
	5/17/2017	1500.
	7/13/2017	1300.

Coffeen

January 12, 2018

Table 1. Coffeen Ash Pond No. 1: Appendix III Analytical Results

11:38:19 AM

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
G307	10/27/2017	2.100	230.0	18.00	0.4110	7.010	980.0

Table 1. Coffeen Ash Pond No. 1: Appendix III Analytical Results

Location ID	Sample Date	TDS, mg/L
G307	10/27/2017	1400.

Coffeen

January 12, 2018

Table 2. Coffeen Ash Pond No. 1: Appendix IV Analytical Results

11:38:28 AM

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
G281	11/20/2015	0.004300	0.1400	<0.001000	<0.001000	0.005600	0.01100
	2/11/2016	<0.001000	0.06700	<0.001000	<0.001000	<0.002000	<0.004000
	5/10/2016	<0.001000	0.07200	<0.001000	<0.001000	<0.002000	<0.004000
	8/1/2016	<0.001000	0.07800	<0.001000	<0.001000	<0.002000	<0.004000
	11/16/2016	0.001000	0.08100	<0.001000	<0.001000	<0.002000	<0.004000
	2/10/2017	<0.001000	0.08000	<0.001000	<0.001000	<0.002000	<0.004000
	5/16/2017	<0.001000	0.08100	<0.001000	<0.001000	<0.002000	<0.004000
	7/12/2017	0.001000	0.08700	<0.001000	<0.001000	<0.002000	<0.004000
G301	11/20/2015	0.002600	0.07900	<0.001000	<0.001000	0.005300	0.007100
	2/23/2016	<0.001000	0.04100	<0.001000	<0.001000	0.002800	0.004500
	5/20/2016	<0.001000	0.03100	<0.001000	<0.001000	0.002800	<0.004000
	8/15/2016	<0.001000	0.03200	<0.001000	<0.001000	0.002200	<0.004000
	11/17/2016	<0.001000	0.03600	<0.001000	0.001100	0.002400	<0.004000
	2/16/2017	0.001700	0.06300	<0.001000	<0.001000	0.004400	0.006400
	5/17/2017	<0.001000	0.02900	<0.001000	<0.001000	0.002200	<0.004000
	7/12/2017	0.002100	0.05800	<0.001000	<0.001000	0.003100	0.007500
G302	11/20/2015	0.009800	0.06700	<0.001000	<0.001000	0.004000	0.004400
	2/23/2016	0.001400	0.02900	<0.001000	<0.001000	0.002200	<0.004000

Coffeen

January 12, 2018

Table 2. Coffeen Ash Pond No. 1: Appendix IV Analytical Results

11:38:28 AM

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
G281	11/20/2015	0.3490	<0.0002000	0.01300	0.001500	0.006300	1.120
	2/11/2016	0.4110	<0.0002000	<0.01000	<0.001000	<0.001000	0.6220
	5/10/2016	0.4050	<0.0002000	<0.01000	<0.001000	<0.001000	0.2180
	8/1/2016	0.3680	<0.0002000	<0.01000	<0.001000	0.001100	1.490
	11/16/2016	0.2630	<0.0002000	<0.01000	<0.001000	0.001300	0.9400
	2/10/2017	0.2700	<0.0002000	<0.01000	<0.001000	<0.001000	1.630
	5/16/2017	0.3080	<0.0002000	<0.01000	<0.001000	<0.001000	0.4370
	7/12/2017	0.2730	<0.0002000	<0.01000	<0.001000	0.001300	0.3600
G301	11/20/2015	0.3100	<0.0002000	0.01500	<0.001000	0.003800	1.070
	2/23/2016	0.3240	<0.0002000	<0.01000	<0.001000	0.001100	0.3990
	5/20/2016	0.4040	<0.0002000	<0.01000	<0.001000	<0.001000	0.2020
	8/15/2016	0.2960	<0.0002000	0.01100	<0.001000	<0.001000	1.030
	11/17/2016	<0.2500	<0.0002000	<0.01000	<0.001000	0.001700	0.6040
	2/16/2017	<0.2500	<0.0002000	0.01000	<0.001000	0.002800	0.9940
	5/17/2017	<0.2500	<0.0002000	<0.01000	<0.001000	0.001300	2.160
	7/12/2017	<0.2500	0.001000	0.01100	<0.001000	0.003800	0.6740
G302	11/20/2015	0.2670	<0.0002000	0.03200	0.002000	0.002400	0.6720
	2/23/2016	0.2880	<0.0002000	0.01800	0.001500	<0.001000	0.5320

Coffeen

January 12, 2018

Table 2. Coffeen Ash Pond No. 1: Appendix IV Analytical Results

11:38:28 AM

Location ID	Sample Date	Sb, tot, mg/L	Se, tot, mg/L	Tl, tot, mg/L
G281	11/20/2015	<0.003000	<0.001000	<0.001000
	2/11/2016	<0.003000	<0.001000	<0.001000
	5/10/2016	<0.003000	<0.001000	<0.001000
	8/1/2016	<0.003000	<0.001000	<0.001000
	11/16/2016	<0.003000	<0.001000	<0.001000
	2/10/2017	<0.003000	<0.001000	<0.001000
	5/16/2017	<0.003000	<0.001000	<0.001000
	7/12/2017	<0.003000	<0.001000	<0.001000
G301	11/20/2015	<0.003000	<0.001000	<0.001000
	2/23/2016	<0.003000	<0.001000	<0.001000
	5/20/2016	<0.003000	<0.001000	<0.001000
	8/15/2016	<0.003000	<0.001000	<0.001000
	11/17/2016	<0.003000	<0.001000	<0.001000
	2/16/2017	<0.003000	<0.001000	<0.001000
	5/17/2017	<0.003000	<0.001000	<0.001000
	7/12/2017	<0.003000	<0.001000	<0.001000
G302	11/20/2015	<0.003000	<0.001000	<0.001000
	2/23/2016	<0.003000	<0.001000	<0.001000

Coffeen

January 12, 2018

Table 2. Coffeen Ash Pond No. 1: Appendix IV Analytical Results

11:38:28 AM

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
G302	5/20/2016	0.001800	0.02400	<0.001000	<0.001000	<0.002000	<0.004000
	8/15/2016	0.001500	0.02800	<0.001000	<0.001000	0.002000	<0.004000
	11/17/2016	0.003500	0.03700	<0.001000	<0.001000	0.002500	<0.004000
	2/16/2017	0.003600	0.03000	<0.001000	<0.001000	<0.002000	<0.004000
	5/17/2017	<0.001000	0.02000	<0.001000	<0.001000	0.002400	<0.004000
	7/12/2017	0.007200	0.06000	<0.001000	<0.001000	0.004500	0.007500
G303	11/20/2015	0.01300	0.04600	<0.001000	<0.001000	0.006500	0.01000
	2/23/2016	0.002300	0.01400	<0.001000	<0.001000	<0.002000	<0.004000
	5/20/2016	0.003900	0.01600	<0.001000	<0.001000	0.002800	<0.004000
	8/15/2016	0.007400	0.01600	<0.001000	<0.001000	0.004100	<0.004000
	11/17/2016	0.006500	0.01600	<0.001000	<0.001000	0.003200	<0.004000
	2/19/2017	0.01800	0.01600	<0.001000	<0.001000	0.002700	<0.004000
	5/17/2017	0.009200	0.01700	<0.001000	<0.001000	0.003300	<0.004000
	7/13/2017	0.008000	0.01600	<0.001000	<0.001000	0.005300	<0.004000
G304	11/20/2015	0.007800	0.06000	<0.001000	<0.001000	0.01400	0.006500
	2/23/2016	0.001600	0.02900	<0.001000	<0.001000	0.003300	<0.004000
	5/20/2016	0.002300	0.03200	<0.001000	<0.001000	0.004700	0.004900

Coffeen

January 12, 2018

Table 2. Coffeen Ash Pond No. 1: Appendix IV Analytical Results

11:38:28 AM

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
G302	5/20/2016	0.3900	<0.0002000	0.01300	0.001400	<0.001000	0.6810
	8/15/2016	0.3040	0.0005200	0.02200	<0.001000	0.001100	0.8760
	11/17/2016	<0.2500	<0.0002000	0.02300	0.001100	<0.001000	0.3090
	2/16/2017	0.2900	<0.0002000	0.02600	0.001000	<0.001000	0.9760
	5/17/2017	<0.2500	<0.0002000	0.01300	<0.001000	<0.001000	0.8480
	7/12/2017	0.3880	<0.0002000	0.03100	0.001900	0.003500	1.550
G303	11/20/2015	<0.2500	<0.0002000	0.06200	0.003300	0.005300	0.6310
	2/23/2016	0.3290	<0.0002000	0.03100	0.001700	<0.001000	0.4720
	5/20/2016	0.3420	<0.0002000	0.02400	0.001900	<0.001000	0.4320
	8/15/2016	0.2570	0.0009000	0.07600	0.001900	<0.001000	0.6500
	11/17/2016	<0.2500	<0.0002000	0.06400	0.002400	<0.001000	0.4210
	2/19/2017	0.3000	<0.0002000	0.06600	0.002400	<0.001000	1.620
	5/17/2017	0.2770	0.0006700	0.06000	0.002700	<0.001000	0.6590
	7/13/2017	0.2770	<0.0002000	0.05100	0.001800	<0.001000	1.680
G304	11/20/2015	0.3540	<0.0002000	0.01400	0.002300	0.003500	1.930
	2/23/2016	0.4140	0.0002300	0.01200	0.001200	0.001200	0.6110
	5/20/2016	0.4760	<0.0002000	<0.01000	0.001700	0.001700	0.2200

Coffeen

January 12, 2018

Table 2. Coffeen Ash Pond No. 1: Appendix IV Analytical Results

11:38:28 AM

Location ID	Sample Date	Sb, tot, mg/L	Se, tot, mg/L	Tl, tot, mg/L
G302	5/20/2016	<0.003000	<0.001000	<0.001000
	8/15/2016	<0.003000	<0.001000	<0.001000
	11/17/2016	<0.003000	<0.001000	<0.001000
	2/16/2017	<0.003000	<0.001000	<0.001000
	5/17/2017	<0.003000	<0.001000	<0.001000
	7/12/2017	<0.003000	<0.001000	<0.001000
G303	11/20/2015	<0.003000	<0.001000	<0.001000
	2/23/2016	<0.003000	<0.001000	<0.001000
	5/20/2016	<0.003000	<0.001000	<0.001000
	8/15/2016	<0.003000	<0.001000	<0.001000
	11/17/2016	<0.003000	<0.001000	<0.001000
	2/19/2017	<0.003000	<0.001000	<0.001000
	5/17/2017	<0.003000	<0.001000	<0.001000
	7/13/2017	<0.003000	<0.001000	<0.001000
G304	11/20/2015	<0.003000	<0.001000	<0.001000
	2/23/2016	<0.003000	<0.001000	<0.001000
	5/20/2016	<0.003000	<0.001000	<0.001000

Coffeen

January 12, 2018

Table 2. Coffeen Ash Pond No. 1: Appendix IV Analytical Results

11:38:28 AM

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
G306	5/19/2016	0.004100	0.08800	<0.001000	<0.001000	0.006400	0.01200
	7/1/2016	<0.001000	0.06100	<0.001000	<0.001000	0.004300	<0.004000
	8/16/2016	<0.001000	0.06200	<0.001000	<0.001000	0.002500	<0.004000
	9/29/2016	<0.001000	0.05900	<0.001000	<0.001000	0.002500	<0.004000
	11/16/2016	<0.001000	0.07600	<0.001000	<0.001000	<0.002000	<0.004000
	2/19/2017	<0.001000	0.05900	<0.001000	<0.001000	<0.002000	<0.004000
	5/17/2017	<0.001000	0.06600	<0.001000	<0.001000	<0.002000	<0.004000
	7/13/2017	<0.001000	0.08500	<0.001000	<0.001000	<0.002000	<0.004000
G307	8/16/2016	<0.001000	0.03100	<0.001000	<0.001000	0.002900	<0.004000
	9/29/2016	<0.001000	0.02900	<0.001000	<0.001000	0.003400	<0.004000
	11/16/2016	<0.001000	0.03400	<0.001000	<0.001000	0.003800	<0.004000
	2/19/2017	<0.001000	0.03300	<0.001000	<0.001000	0.003900	<0.004000
	5/17/2017	0.04100	0.3800	0.002900	0.001300	0.03400	0.1100
	7/13/2017	0.01200	0.1300	<0.001000	0.001100	0.01200	0.03100

Coffeen

January 12, 2018

Table 2. Coffeen Ash Pond No. 1: Appendix IV Analytical Results

11:38:28 AM

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
G306	5/19/2016	0.4260	<0.0002000	0.01100	0.001900	0.004900	0.7780
	7/1/2016	0.3440	<0.0002000	<0.01000	0.001600	<0.001000	0.5450
	8/16/2016	0.3080	<0.0002000	<0.01000	0.001200	<0.001000	0.8850
	9/29/2016	0.3260	<0.0002000	<0.01000	<0.001000	<0.001000	0.8180
	11/16/2016	<0.2500	<0.0002000	<0.01000	0.001800	<0.001000	0.1430
	2/19/2017	0.2630	<0.0002000	<0.01000	0.001700	<0.001000	0.8640
	5/17/2017	0.3040	<0.0002000	<0.01000	0.001600	<0.001000	1.390
	7/13/2017	0.3260	<0.0002000	<0.01000	0.001900	<0.001000	0.7600
G307	8/16/2016	0.3700	0.0004200	0.01200	0.001300	<0.001000	0.5880
	9/29/2016	0.4160	<0.0002000	<0.01000	0.001100	<0.001000	0.7670
	11/16/2016	0.2630	<0.0002000	0.01100	0.001900	0.001200	0.5290
	2/19/2017	0.3230	<0.0002000	0.01100	0.001300	<0.001000	1.880
	5/17/2017	0.3640	<0.0002000	0.1000	0.005400	0.06800	0.9070
	7/13/2017	0.4950	<0.0002000	0.02800	0.002400	0.02000	0.6760

Coffeen

January 12, 2018

Table 2. Coffeen Ash Pond No. 1: Appendix IV Analytical Results

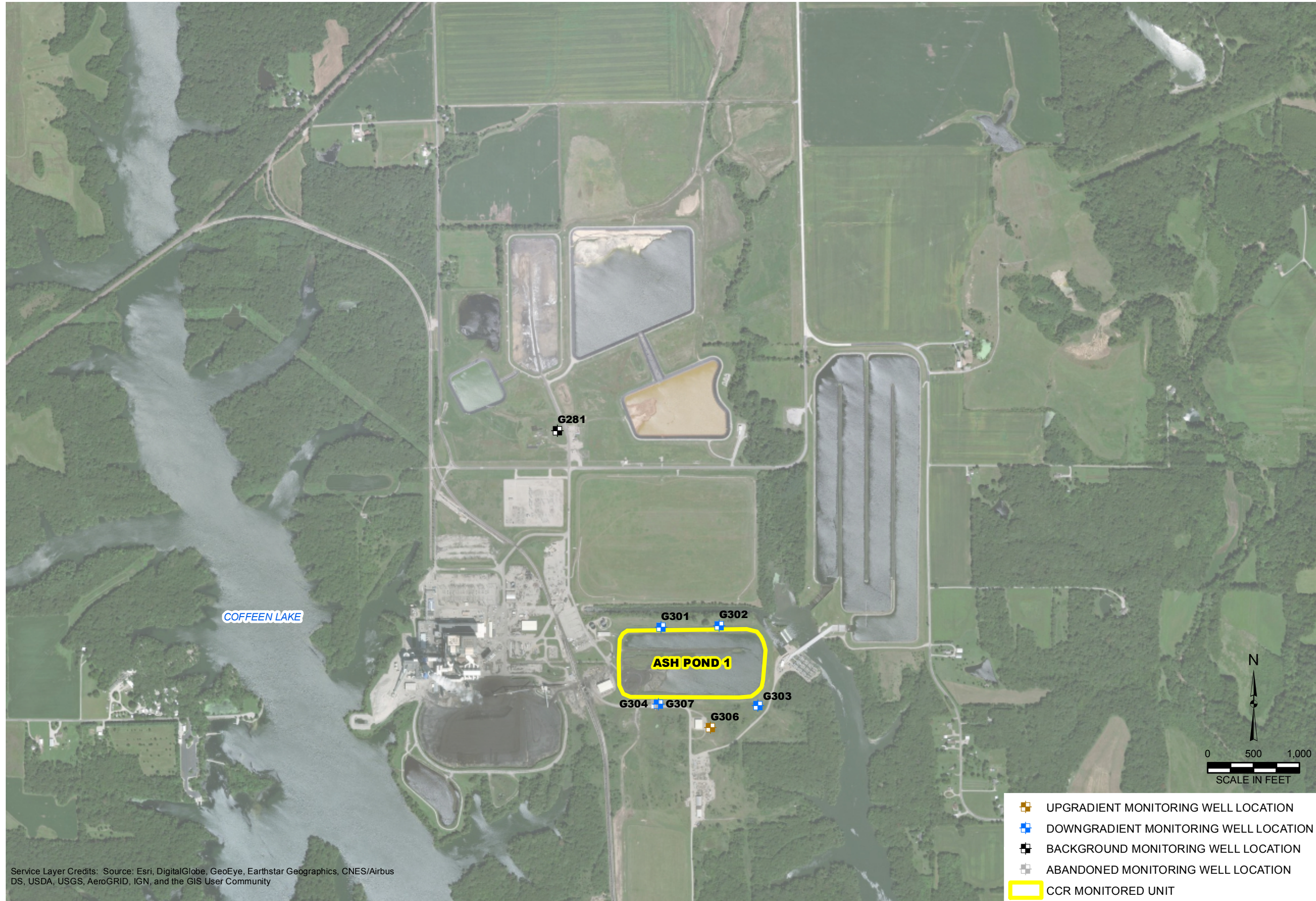
11:38:28 AM

Location ID	Sample Date	Sb, tot, mg/L	Se, tot, mg/L	Tl, tot, mg/L
G306	5/19/2016	<0.003000	<0.001000	<0.001000
	7/1/2016	<0.003000	<0.001000	<0.001000
	8/16/2016	<0.003000	<0.001000	<0.001000
	9/29/2016	<0.003000	0.001100	<0.001000
	11/16/2016	<0.003000	<0.001000	<0.001000
	2/19/2017	<0.003000	<0.001000	<0.001000
	5/17/2017	<0.003000	<0.001000	<0.001000
	7/13/2017	<0.003000	<0.001000	<0.001000
G307	8/16/2016	<0.003000	<0.001000	<0.001000
	9/29/2016	<0.003000	<0.001000	<0.001000
	11/16/2016	<0.003000	<0.001000	<0.001000
	2/19/2017	<0.003000	<0.001000	<0.001000
	5/17/2017	<0.003000	0.003800	<0.001000
	7/13/2017	<0.003000	0.001400	<0.001000



Figures

Y:\Mapping\Projects\222285\MXD\2017_AnnualGWM_CAR\Figure 1_GWS_WellLoc_CoffeenAshPond1.mxd Author: stolzsd Date/Time: 1/29/2018, 3:28:28 PM



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

GROUNDWATER SAMPLING WELL LOCATION MAP
COFFEEN ASH POND NO. 1
UNIT ID: 101

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

PROJECT NO: 67719

FIGURE NO: 1



OBG

THERE'S A WAY

