

2017 Annual Groundwater Monitoring and Corrective Action Report

**Coffeen GMF Recycle Pond – CCR Unit ID 104
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 GMF Recycle Pond – CCR Unit ID 104
Coffeen Power Station
Coffeen, Illinois

Prepared for:
Illinois Power Generating Company



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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 GMF Recycle Pond 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 GMF Recycle 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 October-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 October 25-November 4, 2017, for which analytical data was received on November 16, 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-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 Coffeen GMF Recycle 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 Coffeen GMF Recycle 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 10-17, May 16-20, July 12-18, and October 25-November 4. 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.

Generally, one ground water sample was collected from each background and downgradient well during each sampling event. The sample collected from downgradient monitoring well G279 during the November 2016 sampling event, and sent by the analytical laboratory to its subcontract laboratory for analysis of Radium isotopes 226 and 228, was lost in shipment. An additional sample was collected from G279 on December 7, 2016 for analysis of these parameters.

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-November 4, 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, respectively (February 14, 2018). 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).

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 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

Natural Resource Technology, an OBG Company, 2017a, Sampling and Analysis Plan, Coffeen GMF Recycle Pond, 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

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Table 1. Coffeen GMF Recycle Pond: Appendix III Analytical Results

11:57:24 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
G270	11/20/2015	<0.01000	59.00	12.00	0.3620	6.810	89.00
	2/10/2016	<0.01000	49.00	16.00	0.4720	6.690	77.00
	5/12/2016	<0.01000	57.00	12.00	0.4600	7.040	76.00
	8/1/2016	<0.01000	50.00	15.00	0.3970	7.010	76.00
	11/16/2016	0.01800	48.00	12.00	0.3270	7.130	63.00
	2/10/2017	<0.01000	53.00	11.00	0.3640	7.090	55.00
	5/16/2017	<0.01000	54.00	9.700	0.3580	7.190	50.00
	7/12/2017	<0.01000	52.00	12.00	0.3380	6.990	54.00
	10/25/2017	0.01100	56.00	13.00	0.3380	7.060	55.00
G271	11/23/2015	0.5000	130.0	38.00	0.3470	7.270	420.0
	2/16/2016	0.6100	130.0	38.00	0.4140	7.470	440.0
	5/12/2016	0.9800	170.0	39.00	0.4720	7.190	540.0
	8/5/2016	0.6300	110.0	37.00	0.4140	7.200	440.0
	11/21/2016	0.4000	110.0	29.00	0.4840	7.240	400.0
	2/11/2017	0.7100	100.0	30.00	0.3920	7.220	430.0
	5/20/2017	0.6500	110.0	28.00	<0.2500	7.050	390.0
	7/17/2017	0.5800	110.0	29.00	0.4660	7.060	380.0
	11/4/2017	0.6700	100.0	24.00	0.4260	7.250	360.0

Table 1. Coffeen GMF Recycle Pond: Appendix III Analytical Results

11:57:24 AM

Location ID	Sample Date	TDS, mg/L
G270	11/20/2015	400.0
	2/10/2016	340.0
	5/12/2016	340.0
	8/1/2016	360.0
	11/16/2016	450.0
	2/10/2017	390.0
	5/16/2017	380.0
	7/12/2017	400.0
	10/25/2017	400.0
G271	11/23/2015	860.0
	2/16/2016	1000.
	5/12/2016	940.0
	8/5/2016	840.0
	11/21/2016	910.0
	2/11/2017	1100.
	5/20/2017	870.0
	7/17/2017	950.0
	11/4/2017	820.0

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Table 1. Coffeen GMF Recycle Pond: Appendix III Analytical Results

11:57:24 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
G273	11/24/2015	0.2000	140.0	41.00	<0.2500	7.080	420.0
	2/16/2016	0.4200	150.0	45.00	0.3880	7.230	550.0
	5/12/2016	0.2900	170.0	44.00	0.5370	7.040	520.0
	8/5/2016	0.1700	120.0	46.00	0.2940	7.140	400.0
	11/21/2016	0.1500	140.0	48.00	0.3900	7.260	440.0
	2/15/2017	0.1800	140.0	47.00	0.2880	6.920	470.0
	5/20/2017	0.1100	130.0	51.00	<0.2500	7.120	390.0
	7/17/2017	0.06600	140.0	48.00	0.3330	7.250	360.0
	11/4/2017	0.07900	120.0	50.00	0.3330	6.950	380.0
G276	11/24/2015	0.04300	120.0	28.00	0.3450	7.300	190.0
	2/16/2016	0.02100	120.0	23.00	0.4560	7.240	230.0
	5/12/2016	<0.01000	130.0	22.00	0.4410	7.090	230.0
	8/3/2016	0.01900	110.0	23.00	0.4430	7.160	19.00
	11/21/2016	<0.01000	120.0	23.00	0.4450	7.070	210.0
	2/17/2017	0.01400	110.0	23.00	0.3580	7.200	200.0
	5/20/2017	0.02000	110.0	22.00	<0.2500	7.030	220.0
	7/18/2017	0.01100	130.0	23.00	0.3950	7.190	220.0
	11/4/2017	0.02300	120.0	20.00	0.4310	7.140	210.0

Table 1. Coffeen GMF Recycle Pond: Appendix III Analytical Results

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Location ID	Sample Date	TDS, mg/L
G273	11/24/2015	890.0
	2/16/2016	1100.
	5/12/2016	980.0
	8/5/2016	840.0
	11/21/2016	900.0
	2/15/2017	990.0
	5/20/2017	890.0
	7/17/2017	920.0
	11/4/2017	820.0
G276	11/24/2015	710.0
	2/16/2016	760.0
	5/12/2016	660.0
	8/3/2016	680.0
	11/21/2016	720.0
	2/17/2017	680.0
	5/20/2017	750.0
	7/18/2017	780.0
	11/4/2017	720.0

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Table 1. Coffeen GMF Recycle Pond: Appendix III Analytical Results

11:57:24 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
G279	11/24/2015	0.6300	140.0	61.00	0.3340	7.210	520.0
	2/16/2016	0.2300	180.0	130.0	0.3860	7.190	610.0
	5/13/2016	0.04200	120.0	18.00	0.6080	6.910	230.0
	8/3/2016	0.2400	210.0	110.0	0.3940	7.110	570.0
	11/22/2016	0.4900	170.0	130.0	0.2720	7.160	720.0
	2/15/2017	0.3500	210.0	120.0	0.2630	7.100	700.0
	5/20/2017	0.1800	150.0	57.00	0.2800	6.950	370.0
	7/18/2017	0.4200	240.0	130.0	0.2820	7.250	730.0
	11/4/2017	0.5700	220.0	170.0	0.5070	7.160	870.0
G280	11/24/2015	0.02900	120.0	54.00	0.3430	7.410	94.00
	2/10/2016	<0.01000	60.00	52.00	0.4660	6.500	84.00
	5/10/2016	<0.01000	63.00	50.00	0.4290	7.220	80.00
	8/3/2016	<0.01000	65.00	46.00	0.3970	7.220	55.00
	11/20/2016	<0.01000	63.00	49.00	0.4730	7.060	67.00
	2/15/2017	<0.01000	64.00	46.00	0.3620	7.020	94.00
	5/20/2017	<0.01000	54.00	44.00	0.3480	7.190	84.00
	7/18/2017	<0.01000	67.00	46.00	0.3780	7.320	58.00
	11/4/2017	0.01300	63.00	48.00	0.4900	7.190	57.00

Table 1. Coffeen GMF Recycle Pond: Appendix III Analytical Results

11:57:24 AM

Location ID	Sample Date	TDS, mg/L
G279	11/24/2015	1100.
	2/16/2016	1400.
	5/13/2016	600.0
	8/3/2016	1300.
	11/22/2016	1300.
	2/15/2017	1500.
	5/20/2017	940.0
	7/18/2017	1600.
	11/4/2017	1600.
G280	11/24/2015	460.0
	2/10/2016	400.0
	5/10/2016	350.0
	8/3/2016	350.0
	11/20/2016	430.0
	2/15/2017	440.0
	5/20/2017	420.0
	7/18/2017	400.0
	11/4/2017	350.0

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Table 2. Coffeen GMF Recycle Pond: Appendix IV Analytical Results

11:57:32 AM

Location ID	Sample Date						
		As, tot, mg/L	Ba, tot, mg/L	Bc, tot, mg/L	Cd,tot, mg/L	Co, tot, mg/L	Cr, tot, mg/L
G270	11/20/2015	0.001000	0.04500	<0.001000	<0.001000	<0.002000	<0.004000
	2/10/2016	<0.001000	0.03200	<0.001000	<0.001000	<0.002000	<0.004000
	5/12/2016	<0.001000	0.03400	<0.001000	<0.001000	<0.002000	<0.004000
	8/1/2016	<0.001000	0.03700	<0.001000	<0.001000	<0.002000	<0.004000
	11/16/2016	<0.001000	0.03100	<0.001000	<0.001000	<0.002000	<0.004000
	2/10/2017	<0.001000	0.03600	<0.001000	<0.001000	<0.002000	<0.004000
	5/16/2017	<0.001000	0.03300	<0.001000	<0.001000	<0.002000	<0.004000
	7/12/2017	<0.001000	0.03500	<0.001000	<0.001000	<0.002000	<0.004000
G271	11/23/2015	<0.001000	0.03100	<0.001000	<0.001000	<0.002000	<0.004000
	2/16/2016	<0.001000	0.02800	<0.001000	<0.001000	<0.002000	<0.004000
	5/12/2016	<0.001000	0.02800	<0.001000	<0.001000	<0.002000	<0.004000
	8/5/2016	<0.001000	0.03200	<0.001000	<0.001000	<0.002000	<0.004000
	11/21/2016	<0.001000	0.03100	<0.001000	<0.001000	<0.002000	<0.004000
	2/11/2017	<0.001000	0.02700	<0.001000	<0.001000	<0.002000	<0.004000
	5/20/2017	0.001700	0.02900	0.002100	0.001300	0.002200	0.005300
	7/17/2017	<0.001000	0.02800	<0.001000	<0.001000	<0.002000	<0.004000
G273	11/24/2015	<0.001000	0.04900	<0.001000	<0.001000	<0.002000	<0.004000
	2/16/2016	<0.001000	0.03100	<0.001000	<0.001000	<0.002000	<0.004000

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Table 2. Coffeen GMF Recycle 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
G270	11/20/2015	0.3620	<0.0002000	<0.01000	0.001000	0.001500	0.5220
	2/10/2016	0.4720	<0.0002000	<0.01000	<0.001000	<0.001000	0.7210
	5/12/2016	0.4600	<0.0002000	<0.01000	0.001000	<0.001000	0.4220
	8/1/2016	0.3970	<0.0002000	<0.01000	<0.001000	<0.001000	0.9970
	11/16/2016	0.3270	<0.0002000	<0.01000	<0.001000	<0.001000	0.1090
	2/10/2017	0.3640	<0.0002000	<0.01000	<0.001000	<0.001000	0.6200
	5/16/2017	0.3580	<0.0002000	<0.01000	<0.001000	<0.001000	1.520
	7/12/2017	0.3380	<0.0002000	<0.01000	<0.001000	<0.001000	0.4130
G271	11/23/2015	0.3470	<0.0002000	<0.01000	0.001200	0.001200	0.8890
	2/16/2016	0.4140	<0.0002000	<0.01000	<0.001000	<0.001000	1.020
	5/12/2016	0.4720	<0.0002000	<0.01000	<0.001000	<0.001000	0.2280
	8/5/2016	0.4140	<0.0002000	<0.01000	<0.001000	0.002700	0.2680
	11/21/2016	0.4840	<0.0002000	<0.01000	<0.001000	<0.001000	0.2960
	2/11/2017	0.3920	<0.0002000	<0.01000	<0.001000	<0.001000	0.4810
	5/20/2017	<0.2500	<0.0002000	<0.01000	0.003100	0.002400	0.6520
	7/17/2017	0.4660	<0.0002000	<0.01000	<0.001000	<0.001000	0.7370
G273	11/24/2015	<0.2500	<0.0002000	<0.01000	<0.001000	0.001100	2.060
	2/16/2016	0.3880	<0.0002000	<0.01000	<0.001000	<0.001000	1.510

Table 2. Coffeen GMF Recycle Pond: Appendix IV Analytical Results

11:57:32 AM

Location ID	Sample Date			
		Sb, tot, mg/L	Se, tot, mg/L	Tl, tot, mg/L
G270	11/20/2015	<0.003000	<0.001000	<0.001000
	2/10/2016	<0.003000	0.001200	<0.001000
	5/12/2016	<0.003000	0.001200	<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
G271	11/23/2015	<0.003000	0.002400	<0.001000
	2/16/2016	<0.003000	0.001800	<0.001000
	5/12/2016	<0.003000	0.002100	<0.001000
	8/5/2016	<0.003000	0.002200	<0.001000
	11/21/2016	<0.003000	0.002900	<0.001000
	2/11/2017	<0.003000	0.002500	<0.001000
	5/20/2017	<0.003000	0.004400	0.002100
	7/17/2017	<0.003000	0.002300	<0.001000
G273	11/24/2015	<0.003000	<0.001000	<0.001000
	2/16/2016	<0.003000	<0.001000	<0.001000

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Table 2. Coffeen GMF Recycle 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
G273	5/12/2016	0.004500	0.03100	<0.001000	<0.001000	<0.002000	<0.004000
	8/5/2016	<0.001000	0.03200	<0.001000	<0.001000	<0.002000	<0.004000
	11/21/2016	<0.001000	0.03600	<0.001000	<0.001000	<0.002000	<0.004000
	2/15/2017	<0.001000	0.03300	<0.001000	<0.001000	<0.002000	<0.004000
	5/20/2017	<0.001000	0.03200	<0.001000	0.001800	0.002100	<0.004000
	7/17/2017	<0.001000	0.03500	<0.001000	<0.001000	<0.002000	<0.004000
G276	11/24/2015	<0.001000	0.07700	<0.001000	<0.001000	<0.002000	<0.004000
	2/16/2016	<0.001000	0.09000	<0.001000	<0.001000	<0.002000	<0.004000
	5/12/2016	<0.001000	0.07800	<0.001000	<0.001000	<0.002000	<0.004000
	8/3/2016	<0.001000	0.08500	<0.001000	<0.001000	<0.002000	<0.004000
	11/21/2016	<0.001000	0.08100	<0.001000	<0.001000	<0.002000	<0.004000
	2/17/2017	<0.001000	0.08200	<0.001000	<0.001000	<0.002000	<0.004000
	5/20/2017	<0.001000	0.08100	<0.001000	<0.001000	<0.002000	<0.004000
	7/18/2017	<0.001000	0.08400	<0.001000	<0.001000	<0.002000	<0.004000
G279	11/24/2015	<0.001000	0.05300	<0.001000	<0.001000	<0.002000	<0.004000
	2/16/2016	<0.001000	0.07200	<0.001000	<0.001000	<0.002000	<0.004000
	5/13/2016	<0.001000	0.05400	<0.001000	<0.001000	<0.002000	<0.004000
	8/3/2016	<0.001000	0.06900	<0.001000	<0.001000	<0.002000	<0.004000

Coffeen

January 12, 2018

Table 2. Coffeen GMF Recycle Pond: Appendix IV Analytical Results

11:57:32 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
G273	5/12/2016	0.5370	<0.0002000	<0.01000	<0.001000	<0.001000	0.7740
	8/5/2016	0.2940	<0.0002000	<0.01000	<0.001000	<0.001000	0.6570
	11/21/2016	0.3900	<0.0002000	<0.01000	<0.001000	<0.001000	0.3760
	2/15/2017	0.2880	<0.0002000	<0.01000	<0.001000	<0.001000	0.0
	5/20/2017	<0.2500	<0.0002000	<0.01000	0.001900	0.001000	1.220
	7/17/2017	0.3330	<0.0002000	<0.01000	<0.001000	<0.001000	1.280
G276	11/24/2015	0.3450	<0.0002000	0.01300	0.001700	<0.001000	1.290
	2/16/2016	0.4560	<0.0002000	0.01500	0.001300	0.001400	0.1810
	5/12/2016	0.4410	<0.0002000	0.01200	<0.001000	<0.001000	0.8000
	8/3/2016	0.4430	<0.0002000	<0.01000	<0.001000	<0.001000	1.150
	11/21/2016	0.4450	<0.0002000	0.01100	<0.001000	<0.001000	0.1050
	2/17/2017	0.3580	<0.0002000	0.01400	<0.001000	<0.001000	0.6890
	5/20/2017	<0.2500	<0.0002000	0.01200	0.001300	<0.001000	1.760
	7/18/2017	0.3950	<0.0002000	0.01200	<0.001000	<0.001000	0.9160
G279	11/24/2015	0.3340	<0.0002000	0.01400	<0.001000	0.001500	1.050
	2/16/2016	0.3860	<0.0002000	0.01200	0.04300	<0.001000	1.430
	5/13/2016	0.6080	<0.0002000	<0.01000	0.02400	<0.001000	0.8410
	8/3/2016	0.3940	<0.0002000	<0.01000	<0.001000	<0.001000	1.160

Table 2. Coffeen GMF Recycle Pond: Appendix IV Analytical Results

11:57:32 AM

Location ID	Sample Date			
		Sb, tot, mg/L	Se, tot, mg/L	Tl, tot, mg/L
G273	5/12/2016	<0.003000	0.005100	<0.001000
	8/5/2016	<0.003000	<0.001000	<0.001000
	11/21/2016	<0.003000	<0.001000	<0.001000
	2/15/2017	<0.003000	<0.001000	<0.001000
	5/20/2017	<0.003000	<0.001000	0.001200
	7/17/2017	<0.003000	<0.001000	<0.001000
G276	11/24/2015	<0.003000	<0.001000	<0.001000
	2/16/2016	<0.003000	0.001800	<0.001000
	5/12/2016	<0.003000	0.001700	<0.001000
	8/3/2016	<0.003000	0.001700	<0.001000
	11/21/2016	<0.003000	0.002000	<0.001000
	2/17/2017	<0.003000	0.001400	<0.001000
	5/20/2017	<0.003000	0.002300	<0.001000
	7/18/2017	<0.003000	0.001800	<0.001000
G279	11/24/2015	<0.003000	0.004100	<0.001000
	2/16/2016	<0.003000	0.01700	<0.001000
	5/13/2016	<0.003000	0.002700	<0.001000
	8/3/2016	<0.003000	0.02000	<0.001000

Coffeen

January 12, 2018

Table 2. Coffeen GMF Recycle Pond: Appendix IV Analytical Results

11:57:32 AM

Location ID	Sample Date						
		As, tot, mg/L	Ba, tot, mg/L	Bc, tot, mg/L	Cd,tot, mg/L	Co, tot, mg/L	Cr, tot, mg/L
G279	11/22/2016	<0.001000	0.05700	<0.001000	<0.001000	<0.002000	<0.004000
	12/7/2016						
	2/15/2017	<0.001000	0.05300	<0.001000	<0.001000	<0.002000	<0.004000
	5/20/2017	<0.001000	0.08900	<0.001000	<0.001000	<0.002000	<0.004000
	7/18/2017	<0.001000	0.05400	<0.001000	<0.001000	<0.002000	<0.004000
G280	11/24/2015	0.006600	0.1100	<0.001000	<0.001000	0.005900	0.01900
	2/10/2016	<0.001000	0.04500	<0.001000	<0.001000	<0.002000	<0.004000
	5/10/2016	<0.001000	0.04500	<0.001000	<0.001000	<0.002000	<0.004000
	8/3/2016	<0.001000	0.04500	<0.001000	<0.001000	<0.002000	<0.004000
	11/20/2016	<0.001000	0.04400	<0.001000	<0.001000	<0.002000	<0.004000
	2/15/2017	0.001700	0.05200	<0.001000	<0.001000	<0.002000	0.005400
	5/20/2017	<0.001000	0.04200	<0.001000	<0.001000	<0.002000	<0.004000
	7/18/2017	<0.001000	0.04100	<0.001000	<0.001000	<0.002000	<0.004000

Coffeen

January 12, 2018

Table 2. Coffeen GMF Recycle Pond: Appendix IV Analytical Results

11:57:32 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
G279	11/22/2016	0.2720	<0.0002000	0.01100	<0.001000	<0.001000	
	12/7/2016						0.7640
	2/15/2017	0.2630	<0.0002000	0.01300	<0.001000	<0.001000	0.6720
	5/20/2017	0.2800	<0.0002000	<0.01000	<0.001000	<0.001000	0.9130
	7/18/2017	0.2820	<0.0002000	0.01200	<0.001000	<0.001000	1.270
G280	11/24/2015	0.3430	<0.0002000	0.01900	0.004500	0.01200	1.390
	2/10/2016	0.4660	<0.0002000	<0.01000	0.001500	0.001100	0.7450
	5/10/2016	0.4290	<0.0002000	<0.01000	0.001400	<0.001000	0.6660
	8/3/2016	0.3970	<0.0002000	<0.01000	0.001600	0.001400	1.750
	11/20/2016	0.4730	<0.0002000	<0.01000	0.001400	<0.001000	0.6130
	2/15/2017	0.3620	<0.0002000	<0.01000	0.001700	0.002400	0.8980
	5/20/2017	0.3480	<0.0002000	<0.01000	0.001300	<0.001000	1.100
	7/18/2017	0.3780	<0.0002000	<0.01000	0.001200	<0.001000	0.5720

Table 2. Coffeen GMF Recycle Pond: Appendix IV Analytical Results

11:57:32 AM

Location ID	Sample Date			
		Sb, tot, mg/L	Se, tot, mg/L	Tl, tot, mg/L
G279	11/22/2016	<0.003000	0.01700	<0.001000
	12/7/2016			
	2/15/2017	<0.003000	0.01300	<0.001000
	5/20/2017	<0.003000	0.005500	<0.001000
	7/18/2017	<0.003000	0.01400	<0.001000
G280	11/24/2015	<0.003000	0.003200	<0.001000
	2/10/2016	<0.003000	0.002900	<0.001000
	5/10/2016	<0.003000	0.004400	<0.001000
	8/3/2016	<0.003000	0.004800	<0.001000
	11/20/2016	<0.003000	0.003400	<0.001000
	2/15/2017	<0.003000	0.002100	<0.001000
	5/20/2017	<0.003000	0.002600	<0.001000
	7/18/2017	<0.003000	0.003400	<0.001000



Figures

Y:\Mapping\Projects\22\2285\MXD\2017_AnnualGWM_CAR\Figure 1_GWS_WellLoc_CoffeenGMF_RP.mxd Author: stolzsd; Date/Time: 1/29/2018, 3:31:23 PM



DRAWN BY/DATE:
SDS 12/11/17
REVIEWED BY/DATE:
KLT 12/11/17
APPROVED BY/DATE:
SJC 1/25/18

GROUNDWATER SAMPLING WELL LOCATION MAP
COFFEEN GMF RECYCLE POND
UNIT ID: 104
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

