

OBG

2017 Annual Groundwater Monitoring and Corrective Action Report

Coleto Creek Primary Ash Pond – CCR Unit ID 141

**Coleto Creek Power Station
45 FM 2987 Road
Fannin, Texas 77960**

Coleto Creek Power, LP

January 31, 2018



JANUARY 31, 2018 | PROJECT #67723

2017 Annual Groundwater Monitoring and Corrective Action Report

Coleto Creek Primary Ash Pond – CCR Unit ID 141
Coleto Creek Power Station
Fannin, Texas

Prepared for:
Coleto Creek Power, LP



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ACRONYMS AND ABBREVIATIONS

BBA	Bullock, Bennett & Associates, LLC
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 Coletto Creek Power, LP by O'Brien & Gere Engineers, Inc. (OBG), to provide the information required by Title 40 of the Code of Federal Regulations (CFR) Part 257.90(e) for the Coletto Creek Primary Ash Pond located at Coletto Creek Power Station near Fannin, Texas.

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 Coletto Creek Primary Ash Pond for calendar year 2017.

1.2 MONITORING AND CORRECTIVE ACTION PROGRAM STATUS

The minimum eight independent samples required by 40 CFR 257.94(b) were collected and analyzed from each background and downgradient well in 2017 before October 17.

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

Using the last of the minimum eight samples required to be collected from each well 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 7-8, 2017, for which analytical data was received on December 12, 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

Nine groundwater sampling events were completed in 2017. Subsequent to collection of the minimum eight independent samples from each well required by 40 CFR 257.94(b), 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 Coletto Creek Primary Ash Pond is presented in Figure 1. MW-11 was added to the monitoring system in April 2017 to provide a monitoring point at the northeast corner of the unit. No monitoring wells were decommissioned from the monitoring system in 2017.

Samples were collected and analyzed in accordance with the Sampling and Analysis Plan (BBA, 2017) prepared for the Coletto Creek Primary Ash Pond.

All monitoring data obtained under 40 CFR §§ 257.90 through 257.98 (as applicable) are presented in Tables 1 and 2. Sample collection dates were March 28-30, May 9-11, May 15-17, June 6-8, June 20-22, June 26-28, July 10-12, July 18-20, and November 7-8. Sample collection dates for specific locations are identified in Tables 1 and 2. One ground water sample was collected from each background and downgradient well during each sampling event. Since MW-11 was not installed until after the March sampling event, it was sampled on an accelerated schedule that included sampling on May 18. Field parameters, including pH, were not collected from MW-11 on May 18 because of a probe malfunction.

Statistical evaluation of analytical data from the eight independent samples required to be collected from each well by October 17, 2017 and the first semi-annual detection monitoring event on November 7-8, 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 (March 12, 2018). Statistical evaluation of analytical data is being performed in accordance with the Statistical Analysis Plan, Coletto Creek Power Station, Coletto Creek Power, LP (NRT/OBG, 2017).

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 from each well 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

Bullock, Bennett & Associates, LLC, 2017, Groundwater Sampling and Analysis Plan, Coletto Creek Primary Ash Pond, Coletto Creek Power Station, Fannin, Texas, BBA Project No. 17258, Revision 0, October 17, 2017.

Natural Resource Technology, an OBG Company, 2017, Statistical Analysis Plan, Coletto Creek Power Station, Coletto Creek Power, LP, October 17, 2017.



Tables

Coletto Creek

January 16, 2018

Table 1. Coletto Creek Primary Ash Pond: Appendix III Analytical Results

5:10:08 PM

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
BV-21	3/28/2017	0.6510	6.890	36.00	0.6100	7.090	69.00
	5/9/2017	0.6870	65.20	38.00	0.6100	7.040	55.00
	5/17/2017	0.7090	74.30	39.00	0.5800	7.050	53.00
	6/6/2017	0.6570	69.00	40.00	0.5900	7.110	49.00
	6/20/2017	0.6420	77.00	40.00	0.6100	6.700	45.00
	6/27/2017	0.7270	84.90	40.00	0.6000	6.970	46.00
	7/10/2017	0.6740	90.60	39.00	0.5800	7.220	45.00
	7/18/2017	0.6180	84.40	39.00	0.6000	6.910	44.00
	11/7/2017	0.5150	73.60	42.00	0.6400	7.120	46.00
BV-5	3/29/2017	1.150	90.50	118.0	0.5400	7.010	147.0
	5/11/2017	1.030	81.60	106.0	0.5700	6.890	148.0
	5/16/2017	1.170	99.00	107.0	0.5500	6.900	145.0
	6/7/2017	1.110	88.80	109.0	0.5600	6.640	147.0
	6/20/2017	1.020	90.70	106.0	0.5800	6.540	145.0
	6/27/2017	1.140	100.0	114.0	0.5500	6.760	144.0
	7/12/2017	1.070	96.80	112.0	0.5600	6.880	140.0
	7/18/2017	1.170	143.0	117.0	0.5600	6.680	142.0
	11/7/2017	1.100	94.20	109.0	0.6200	6.960	136.0

Coletto Creek

January 16, 2018

Table 1. Coletto Creek Primary Ash Pond: Appendix III Analytical Results

5:10:08 PM

Location ID	Sample Date	TDS, mg/L
BV-21	3/28/2017	490.0
	5/9/2017	410.0
	5/17/2017	454.0
	6/6/2017	452.0
	6/20/2017	356.0
	6/27/2017	420.0
	7/10/2017	427.0
	7/18/2017	380.0
	11/7/2017	423.0
BV-5	3/29/2017	860.0
	5/11/2017	862.0
	5/16/2017	832.0
	6/7/2017	810.0
	6/20/2017	716.0
	6/27/2017	743.0
	7/12/2017	430.0
	7/18/2017	817.0
	11/7/2017	850.0

Coletto Creek

January 16, 2018

Table 1. Coletto Creek Primary Ash Pond: Appendix III Analytical Results

5:10:08 PM

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-10	3/30/2017	3.740	92.10	151.0	0.5400	6.990	130.0
	5/10/2017	7.320	56.10	82.00	0.8300	7.230	96.00
	5/16/2017	7.450	62.70	81.00	0.8100	7.280	95.00
	6/8/2017	7.540	58.10	77.00	0.8400	7.230	92.00
	6/21/2017	9.220	60.70	77.00	0.8400	6.970	92.00
	6/26/2017	8.210	63.40	78.00	0.8400	7.140	92.00
	7/11/2017	7.990	49.50	76.00	0.8400	7.400	88.00
	7/19/2017	8.740	56.60	74.00	0.8600	7.250	86.00
	11/8/2017	8.720	77.70	74.00	0.8800	7.350	81.00
MW-11	5/10/2017	1.350	64.10	55.00	0.8200	7.270	61.00
	5/16/2017	1.390	62.30	52.00	0.8500	7.290	58.00
	5/18/2017	1.270	61.60	47.80	0.9400		52.40
	6/7/2017	1.230	59.80	48.00	0.9300	7.250	50.00
	6/21/2017	1.190	73.10	43.70	1.040	7.150	44.00
	6/26/2017	1.150	82.00	44.00	1.000	7.300	43.00
	7/11/2017	1.230	44.70	44.00	1.000	7.550	42.00
	7/19/2017	1.170	48.60	43.00	1.010	7.210	42.00
	11/8/2017	1.130	52.20	43.00	1.020	7.610	56.00

Coletto Creek

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Table 1. Coletto Creek Primary Ash Pond: Appendix III Analytical Results

5:10:08 PM

Location ID	Sample Date	TDS, mg/L
MW-10	3/30/2017	804.0
	5/10/2017	582.0
	5/16/2017	612.0
	6/8/2017	604.0
	6/21/2017	550.0
	6/26/2017	530.0
	7/11/2017	617.0
	7/19/2017	533.0
	11/8/2017	590.0
MW-11	5/10/2017	394.0
	5/16/2017	362.0
	5/18/2017	390.0
	6/7/2017	372.0
	6/21/2017	373.0
	6/26/2017	407.0
	7/11/2017	603.0
	7/19/2017	360.0
	11/8/2017	367.0

Coletto Creek

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Table 1. Coletto Creek Primary Ash Pond: Appendix III Analytical Results

5:10:08 PM

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-4	3/28/2017	0.2870	9.140	102.0	0.6100	9.810	157.0
	5/9/2017	0.3950	88.70	101.0	0.6100	7.270	156.0
	5/15/2017	0.2510	92.10	101.0	0.6000	6.930	157.0
	6/6/2017	0.2430	90.70	101.0	0.6300	7.130	157.0
	6/20/2017	0.2540	99.30	101.0	0.6200	6.710	157.0
	6/27/2017	0.2540	102.0	101.0	0.6300	6.870	157.0
	7/10/2017	0.2710	111.0	101.0	0.6200	7.160	158.0
	7/18/2017	0.2920	108.0	101.0	0.6300	6.820	157.0
	11/7/2017	0.2550	94.50	99.00	0.6200	7.120	155.0
MW-5	3/30/2017	0.1100	110.0	140.0	0.5100	6.850	184.0
	5/10/2017	0.1150	114.0	139.0	0.5400	6.860	183.0
	5/16/2017	0.2150	121.0	139.0	0.5000	6.810	183.0
	6/8/2017	0.1220	118.0	139.0	0.5500	6.800	182.0
	6/21/2017	0.1220	124.0	138.0	0.5300	6.600	182.0
	6/26/2017	0.1210	129.0	139.0	0.5400	6.790	184.0
	7/11/2017	0.1110	120.0	138.0	0.5200	6.910	184.0
	7/19/2017	0.001000	0.005000	137.0	0.5300	6.840	181.0
	11/8/2017	0.1490	116.0	138.0	0.5200	6.920	183.0

Table 1. Coletto Creek Primary Ash Pond: Appendix III Analytical Results

5:10:08 PM

Location ID	Sample Date	TDS, mg/L
MW-4	3/28/2017	794.0
	5/9/2017	668.0
	5/15/2017	702.0
	6/6/2017	728.0
	6/20/2017	626.0
	6/27/2017	690.0
	7/10/2017	670.0
	7/18/2017	717.0
	11/7/2017	700.0
MW-5	3/30/2017	830.0
	5/10/2017	900.0
	5/16/2017	848.0
	6/8/2017	862.0
	6/21/2017	813.0
	6/26/2017	900.0
	7/11/2017	797.0
	7/19/2017	857.0
	11/8/2017	883.0

Coletto Creek

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Table 1. Coletto Creek Primary Ash Pond: Appendix III Analytical Results

5:10:08 PM

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-6	3/29/2017	1.670	73.90	69.00	0.3800	7.340	99.00
	5/11/2017	1.940	70.60	70.00	0.3700	7.100	110.0
	5/16/2017	1.840	76.30	70.00	0.3600	7.230	107.0
	6/7/2017	1.800	73.80	70.00	0.3700	6.970	103.0
	6/22/2017	1.970	79.90	69.00	0.3700	7.110	100.0
	6/28/2017	1.740	81.80	69.00	0.3700	7.160	99.00
	7/12/2017	1.760	81.60	69.00	0.3500	7.240	98.00
	7/20/2017	0.005000	0.0002000	69.00	0.3900	6.900	97.00
	11/7/2017	1.720	76.40	69.00	0.3900	7.410	101.0
MW-8	3/28/2017	1.200	7.760	79.00	0.4900	7.060	76.00
	5/9/2017	1.210	77.50	77.00	0.4400	7.150	79.00
	5/15/2017	1.160	81.20	76.00	0.4400	7.010	79.00
	6/6/2017	1.260	78.10	72.00	0.4500	6.920	83.50
	6/20/2017	1.240	86.50	67.00	0.4300	6.700	89.00
	6/27/2017	1.230	89.60	66.00	0.4400	6.850	97.00
	7/10/2017	1.240	92.60	63.00	0.4400	7.130	97.00
	7/18/2017	1.250	92.90	61.00	0.4600	6.910	100.0
	11/7/2017	1.210	78.80	61.00	0.4900	7.080	100.0

Table 1. Coletto Creek Primary Ash Pond: Appendix III Analytical Results

5:10:08 PM

Location ID	Sample Date	TDS, mg/L
MW-6	3/29/2017	510.0
	5/11/2017	490.0
	5/16/2017	506.0
	6/7/2017	492.0
	6/22/2017	510.0
	6/28/2017	570.0
	7/12/2017	557.0
	7/20/2017	530.0
	11/7/2017	483.0
MW-8	3/28/2017	626.0
	5/9/2017	564.0
	5/15/2017	558.0
	6/6/2017	570.0
	6/20/2017	476.0
	6/27/2017	533.0
	7/10/2017	533.0
	7/18/2017	533.0
	11/7/2017	540.0

Coletto Creek

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Table 1. Coletto Creek Primary Ash Pond: Appendix III Analytical Results

5:10:08 PM

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-9	3/30/2017	3.380	54.50	71.00	1.130	7.350	62.00
	5/10/2017	3.160	52.70	66.00	1.290	7.480	59.00
	5/17/2017	3.180	53.30	67.00	1.260	7.340	58.00
	6/7/2017	3.120	52.00	67.00	1.260	7.030	57.00
	6/21/2017	3.440	60.70	66.00	1.390	7.090	60.00
	6/26/2017	3.310	60.60	67.00	1.400	7.230	61.00
	7/11/2017	3.350	52.10	64.00	1.300	7.510	60.00
	7/19/2017	3.400	50.20	63.00	1.400	7.290	62.00
	11/8/2017	2.840	49.40	62.00	1.560	7.540	50.00

Table 1. Coletto Creek Primary Ash Pond: Appendix III Analytical Results

5:10:08 PM

Location ID	Sample Date	TDS, mg/L
MW-9	3/30/2017	406.0
	5/10/2017	410.0
	5/17/2017	440.0
	6/7/2017	380.0
	6/21/2017	393.0
	6/26/2017	407.0
	7/11/2017	927.0
	7/19/2017	407.0
	11/8/2017	397.0

Coletto Creek

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Table 2. Coletto Creek Primary Ash Pond: Appendix IV Analytical Results

5:16:05 PM

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
BV-21	3/28/2017	0.09540	0.09630	<0.001000	<0.001000	0.008300	<0.005000
	5/9/2017	0.1080	0.09720	<0.001000	<0.001000	0.008520	<0.005000
	5/17/2017	0.1170	0.09440	<0.001000	<0.001000	0.008780	<0.005000
	6/6/2017	0.1180	0.09540	<0.001000	<0.001000	0.008060	<0.005000
	6/20/2017	0.1210	0.1010	<0.001000	<0.001000	0.007440	<0.005000
	6/27/2017	0.1280	0.1040	<0.001000	<0.001000	0.008410	<0.005000
	7/10/2017	0.1230	0.1100	<0.001000	<0.001000	0.008600	<0.005000
	7/18/2017	0.1150	0.1010	<0.001000	<0.001000	0.007840	<0.005000
BV-5	3/29/2017	0.008560	0.04510	<0.001000	<0.001000	0.04970	<0.005000
	5/11/2017	0.007860	0.03680	<0.001000	<0.001000	0.04620	<0.005000
	5/16/2017	0.008850	0.04520	<0.001000	<0.001000	0.04950	<0.005000
	6/7/2017	0.008290	0.03760	<0.001000	<0.001000	0.04830	<0.005000
	6/20/2017	0.008410	0.04010	<0.001000	<0.001000	0.04990	<0.005000
	6/27/2017	0.008300	0.04120	<0.001000	<0.001000	0.04600	<0.005000
	7/12/2017	0.008490	0.04160	<0.001000	<0.001000	0.04840	<0.005000
	7/18/2017	0.009510	0.05780	<0.001000	<0.001000	0.04530	0.007390
MW-10	3/30/2017	0.01100	0.08440	<0.001000	<0.001000	<0.005000	<0.005000
	5/10/2017	0.01460	0.05540	<0.001000	<0.001000	<0.005000	0.005330

Coletto Creek

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Table 2. Coletto Creek Primary Ash Pond: Appendix IV Analytical Results

5:16:05 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
BV-21	3/28/2017	0.6100	<0.0002000	<0.01000	<0.005000	<0.001000	1.390
	5/9/2017	0.6100	<0.0002000	<0.01000	<0.005000	<0.001000	0.7460
	5/17/2017	0.5800	<0.0002000	<0.01000	<0.005000	<0.001000	0.9190
	6/6/2017	0.5900	<0.0002000	<0.01000	<0.005000	<0.001000	0.6710
	6/20/2017	0.6100	<0.0002000	<0.01000	<0.005000	<0.001000	1.672
	6/27/2017	0.6000	<0.0002000	<0.01000	<0.005000	0.001120	0.5200
	7/10/2017	0.5800	<0.0002000	<0.01000	<0.005000	<0.001000	0.8050
	7/18/2017	0.6000	<0.0002000	<0.01000	<0.005000	<0.001000	4.812
BV-5	3/29/2017	0.5400	<0.0002000	0.02060	0.009250	<0.001000	1.503
	5/11/2017	0.5700	<0.0002000	0.01800	0.01010	<0.001000	1.555
	5/16/2017	0.5500	<0.0002000	0.01710	0.01020	0.001510	0.7550
	6/7/2017	0.5600	<0.0002000	0.02070	0.01000	<0.001000	1.457
	6/20/2017	0.5800	<0.0002000	0.02080	0.01140	<0.001000	0.4920
	6/27/2017	0.5500	<0.0002000	0.01980	0.009420	<0.001000	2.247
	7/12/2017	0.5600	<0.0002000	0.01880	0.009600	<0.001000	2.139
	7/18/2017	0.5600	<0.0002000	0.02200	0.008300	0.002880	1.260
MW-10	3/30/2017	0.5400	<0.0002000	0.01790	0.03420	<0.001000	1.439
	5/10/2017	0.8300	<0.0002000	0.01220	0.1020	<0.001000	0.8880

Coletto Creek

January 16, 2018

Table 2. Coletto Creek Primary Ash Pond: Appendix IV Analytical Results

5:16:05 PM

Location ID	Sample Date			
		Sb, tot, mg/L	Se, tot, mg/L	Tl, tot, mg/L
BV-21	3/28/2017	<0.002500	<0.005000	<0.001500
	5/9/2017	<0.002500	<0.005000	<0.001500
	5/17/2017	<0.002500	<0.005000	<0.001500
	6/6/2017	<0.002500	<0.005000	<0.001500
	6/20/2017	<0.002500	<0.005000	<0.001500
	6/27/2017	<0.002500	<0.005000	<0.001500
	7/10/2017	<0.002500	<0.005000	<0.001500
	7/18/2017	<0.002500	<0.005000	<0.001500
BV-5	3/29/2017	<0.002500	<0.005000	<0.001500
	5/11/2017	<0.002500	<0.005000	<0.001500
	5/16/2017	<0.002500	<0.005000	<0.001500
	6/7/2017	<0.002500	<0.005000	<0.001500
	6/20/2017	<0.002500	<0.005000	<0.001500
	6/27/2017	<0.002500	<0.005000	<0.001500
	7/12/2017	<0.002500	<0.005000	<0.001500
	7/18/2017	<0.002500	<0.005000	<0.001500
MW-10	3/30/2017	<0.002500	<0.005000	<0.001500
	5/10/2017	<0.002500	<0.005000	<0.001500

Coletto Creek

January 16, 2018

Table 2. Coletto Creek Primary Ash Pond: Appendix IV Analytical Results

5:16:05 PM

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
MW-10	5/16/2017	0.01500	0.05980	<0.001000	<0.001000	<0.005000	<0.005000
	6/8/2017	0.01440	0.05440	<0.001000	<0.001000	<0.005000	<0.005000
	6/21/2017	0.01490	0.05400	<0.001000	<0.001000	<0.005000	<0.005000
	6/26/2017	0.01600	0.05870	<0.001000	<0.001000	<0.005000	0.01770
	7/11/2017	0.01490	0.05080	<0.001000	<0.001000	<0.005000	<0.005000
	7/19/2017	0.01460	0.06330	<0.001000	<0.001000	<0.005000	0.009630
MW-11	5/10/2017	0.01560	0.08990	<0.001000	<0.001000	<0.005000	<0.005000
	5/16/2017	0.01800	0.08690	<0.001000	<0.001000	<0.005000	0.007310
	5/18/2017	0.01880	0.07790	<0.001000	<0.001000	<0.005000	<0.005000
	6/7/2017	0.01750	0.08350	<0.001000	<0.001000	<0.005000	<0.005000
	6/21/2017	0.02030	0.08220	<0.001000	<0.001000	<0.005000	<0.005000
	6/26/2017	0.02370	0.09540	<0.001000	<0.001000	<0.005000	0.01310
	7/11/2017	0.02120	0.07250	<0.001000	<0.001000	<0.005000	<0.005000
	7/19/2017	0.02240	0.07090	<0.001000	<0.001000	<0.005000	0.007620
MW-4	3/28/2017	0.007380	0.05750	<0.001000	<0.001000	0.006700	<0.005000
	5/9/2017	0.007330	0.05760	<0.001000	<0.001000	0.006530	<0.005000
	5/15/2017	0.007940	0.05560	<0.001000	<0.001000	0.006530	<0.005000
	6/6/2017	0.007700	0.05560	<0.001000	<0.001000	0.006880	<0.005000

Coletto Creek

January 16, 2018

Table 2. Coletto Creek Primary Ash Pond: Appendix IV Analytical Results

5:16:05 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-10	5/16/2017	0.8100	<0.0002000	0.01230	0.09870	<0.001000	0.1830
	6/8/2017	0.8400	<0.0002000	0.01150	0.1060	<0.001000	0.06700
	6/21/2017	0.8400	<0.0002000	0.01330	0.1130	<0.001000	0.7090
	6/26/2017	0.8400	<0.0002000	0.01370	0.1160	<0.001000	0.7180
	7/11/2017	0.8400	<0.0002000	0.01190	0.1140	<0.001000	1.713
	7/19/2017	0.8600	<0.0002000	0.01270	0.1210	<0.001000	2.132
MW-11	5/10/2017	0.8200	<0.0002000	0.01250	0.008200	0.002390	0.4560
	5/16/2017	0.8500	<0.0002000	0.01440	0.008410	0.01130	1.418
	5/18/2017	0.9400	<0.0002000	0.01220	0.007810	0.002040	0.6390
	6/7/2017	0.9300	<0.0002000	0.01370	0.007440	0.001710	0.5020
	6/21/2017	1.040	<0.0002000	0.01360	0.006590	0.003220	1.084
	6/26/2017	1.000	<0.0002000	0.01760	0.007960	0.005930	3.067
	7/11/2017	1.000	<0.0002000	0.01200	0.007650	<0.001000	0.7530
	7/19/2017	1.010	<0.0002000	0.01370	0.007830	0.001800	1.551
MW-4	3/28/2017	0.6100	<0.0002000	0.01920	<0.005000	<0.001000	0.4600
	5/9/2017	0.6100	<0.0002000	0.01820	<0.005000	<0.001000	0.6940
	5/15/2017	0.6000	<0.0002000	0.01660	<0.005000	<0.001000	1.451
	6/6/2017	0.6300	<0.0002000	0.01790	<0.005000	<0.001000	0.1740

Coletto Creek

January 16, 2018

Table 2. Coletto Creek Primary Ash Pond: Appendix IV Analytical Results

5:16:05 PM

Location ID	Sample Date			
		Sb, tot, mg/L	Se, tot, mg/L	Tl, tot, mg/L
MW-10	5/16/2017	<0.002500	<0.005000	<0.001500
	6/8/2017	<0.002500	<0.005000	<0.001500
	6/21/2017	<0.002500	<0.005000	<0.001500
	6/26/2017	<0.002500	<0.005000	<0.001500
	7/11/2017	<0.002500	<0.005000	<0.001500
	7/19/2017	<0.002500	<0.005000	<0.001500
MW-11	5/10/2017	<0.002500	<0.005000	<0.001500
	5/16/2017	<0.002500	<0.005000	<0.001500
	5/18/2017	<0.002500	<0.005000	<0.001500
	6/7/2017	<0.002500	<0.005000	<0.001500
	6/21/2017	<0.002500	<0.005000	<0.001500
	6/26/2017	<0.002500	<0.005000	<0.001500
	7/11/2017	<0.002500	<0.005000	<0.001500
	7/19/2017	<0.002500	<0.005000	<0.001500
MW-4	3/28/2017	<0.002500	<0.005000	<0.001500
	5/9/2017	<0.002500	<0.005000	<0.001500
	5/15/2017	<0.002500	<0.005000	<0.001500
	6/6/2017	<0.002500	<0.005000	<0.001500

Coletto Creek

January 16, 2018

Table 2. Coletto Creek Primary Ash Pond: Appendix IV Analytical Results

5:16:05 PM

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
MW-4	6/20/2017	0.008100	0.05960	<0.001000	<0.001000	0.008430	0.008770
	6/27/2017	0.007860	0.05540	<0.001000	<0.001000	0.007040	<0.005000
	7/10/2017	0.008460	0.05820	<0.001000	<0.001000	0.008500	<0.005000
	7/18/2017	0.008150	0.05490	<0.001000	<0.001000	0.007710	<0.005000
MW-5	3/30/2017	0.009530	0.07480	<0.001000	<0.001000	<0.005000	<0.005000
	5/10/2017	0.009550	0.07060	<0.001000	<0.001000	<0.005000	<0.005000
	5/16/2017	0.009670	0.07080	<0.001000	<0.001000	<0.005000	<0.005000
	6/8/2017	0.009080	0.07010	<0.001000	<0.001000	<0.005000	<0.005000
	6/21/2017	0.009170	0.07670	<0.001000	<0.001000	<0.005000	<0.005000
	6/26/2017	0.009550	0.07350	<0.001000	<0.001000	<0.005000	<0.005000
	7/11/2017	0.009450	0.07120	<0.001000	<0.001000	<0.005000	<0.005000
	7/19/2017	0.009410	0.07350	<0.001000	<0.001000	<0.005000	<0.005000
MW-6	3/29/2017	0.008270	0.09000	<0.001000	<0.001000	<0.005000	<0.005000
	5/11/2017	0.007380	0.07580	<0.001000	<0.001000	<0.005000	<0.005000
	5/16/2017	0.008030	0.07840	<0.001000	<0.001000	<0.005000	<0.005000
	6/7/2017	0.007720	0.07980	<0.001000	<0.001000	<0.005000	<0.005000
	6/22/2017	0.007640	0.08300	<0.001000	<0.001000	<0.005000	<0.005000
	6/28/2017	0.007790	0.08420	<0.001000	<0.001000	<0.005000	<0.005000

Coletto Creek

January 16, 2018

Table 2. Coletto Creek Primary Ash Pond: Appendix IV Analytical Results

5:16:05 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-4	6/20/2017	0.6200	<0.0002000	0.01950	<0.005000	<0.001000	0.5430
	6/27/2017	0.6300	<0.0002000	0.01850	<0.005000	<0.001000	0.6390
	7/10/2017	0.6200	<0.0002000	0.01870	<0.005000	<0.001000	1.069
	7/18/2017	0.6300	<0.0002000	0.01830	<0.005000	<0.001000	0.1910
MW-5	3/30/2017	0.5100	<0.0002000	0.01920	<0.005000	<0.001000	1.443
	5/10/2017	0.5400	<0.0002000	0.01790	<0.005000	<0.001000	0.6150
	5/16/2017	0.5000	<0.0002000	0.01810	<0.005000	<0.001000	0.6410
	6/8/2017	0.5500	<0.0002000	0.02000	<0.005000	<0.001000	0.1790
	6/21/2017	0.5300	<0.0002000	0.01970	<0.005000	<0.001000	0.1060
	6/26/2017	0.5400	<0.0002000	0.02040	<0.005000	<0.001000	1.112
	7/11/2017	0.5200	<0.0002000	0.01830	<0.005000	<0.001000	0.5120
	7/19/2017	0.5300	<0.0002000	0.01860	<0.005000	<0.001000	0.1910
MW-6	3/29/2017	0.3800	<0.0002000	<0.01000	0.007490	<0.001000	1.009
	5/11/2017	0.3700	<0.0002000	0.01010	0.01760	<0.001000	0.8250
	5/16/2017	0.3600	<0.0002000	<0.01000	0.01310	<0.001000	0.7740
	6/7/2017	0.3700	<0.0002000	<0.01000	0.009490	<0.001000	0.6640
	6/22/2017	0.3700	<0.0002000	0.01090	0.008400	<0.001000	0.2150
	6/28/2017	0.3700	<0.0002000	<0.01000	0.008060	<0.001000	1.730

Coletto Creek

January 16, 2018

Table 2. Coletto Creek Primary Ash Pond: Appendix IV Analytical Results

5:16:05 PM

Location ID	Sample Date			
		Sb, tot, mg/L	Se, tot, mg/L	Tl, tot, mg/L
MW-4	6/20/2017	<0.002500	<0.005000	<0.001500
	6/27/2017	<0.002500	<0.005000	<0.001500
	7/10/2017	<0.002500	<0.005000	<0.001500
	7/18/2017	<0.002500	<0.005000	<0.001500
MW-5	3/30/2017	<0.002500	<0.005000	<0.001500
	5/10/2017	<0.002500	<0.005000	<0.001500
	5/16/2017	<0.002500	<0.005000	<0.001500
	6/8/2017	<0.002500	<0.005000	<0.001500
	6/21/2017	<0.002500	<0.005000	<0.001500
	6/26/2017	<0.002500	<0.005000	<0.001500
	7/11/2017	<0.002500	<0.005000	<0.001500
	7/19/2017	<0.002500	<0.005000	<0.001500
MW-6	3/29/2017	<0.002500	<0.005000	<0.001500
	5/11/2017	<0.002500	<0.005000	<0.001500
	5/16/2017	<0.002500	<0.005000	<0.001500
	6/7/2017	<0.002500	<0.005000	<0.001500
	6/22/2017	<0.002500	<0.005000	<0.001500
	6/28/2017	<0.002500	<0.005000	<0.001500

Coletto Creek

January 16, 2018

Table 2. Coletto Creek Primary Ash Pond: Appendix IV Analytical Results

5:16:05 PM

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
MW-6	7/12/2017	0.007700	0.08190	<0.001000	<0.001000	<0.005000	<0.005000
	7/20/2017	0.001000	0.001000	<0.001000	<0.001000	<0.005000	<0.005000
MW-8	3/28/2017	0.008390	0.06230	<0.001000	<0.001000	0.02360	<0.005000
	5/9/2017	0.008480	0.06400	<0.001000	<0.001000	0.02720	<0.005000
	5/15/2017	0.009260	0.06400	<0.001000	<0.001000	0.03110	<0.005000
	6/6/2017	0.009120	0.06160	<0.001000	<0.001000	0.03080	0.007440
	6/20/2017	0.008850	0.06690	<0.001000	<0.001000	0.02970	<0.005000
	6/27/2017	0.009390	0.06330	<0.001000	<0.001000	0.03140	<0.005000
	7/10/2017	0.009020	0.06310	<0.001000	<0.001000	0.03100	<0.005000
	7/18/2017	0.009370	0.06350	<0.001000	<0.001000	0.03520	<0.005000
MW-9	3/30/2017	0.009090	0.1210	<0.001000	<0.001000	<0.005000	<0.005000
	5/10/2017	0.009960	0.1050	<0.001000	<0.001000	<0.005000	<0.005000
	5/17/2017	0.009580	0.1010	<0.001000	<0.001000	<0.005000	<0.005000
	6/7/2017	0.009300	0.1000	<0.001000	<0.001000	<0.005000	<0.005000
	6/21/2017	0.009370	0.1190	<0.001000	<0.001000	<0.005000	<0.005000
	6/26/2017	0.01070	0.1140	<0.001000	<0.001000	<0.005000	0.01020
	7/11/2017	0.01050	0.1030	<0.001000	<0.001000	<0.005000	0.005660
	7/19/2017	0.01030	0.1010	<0.001000	<0.001000	<0.005000	<0.005000

Coletto Creek

January 16, 2018

Table 2. Coletto Creek Primary Ash Pond: Appendix IV Analytical Results

5:16:05 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-6	7/12/2017	0.3500	<0.0002000	<0.01000	0.007600	<0.001000	1.012
	7/20/2017	0.3900	<0.0002000	<0.01000	0.001000	<0.001000	0.3660
MW-8	3/28/2017	0.4900	<0.0002000	0.01110	0.01540	<0.001000	0.4520
	5/9/2017	0.4400	<0.0002000	0.01110	0.01570	<0.001000	0.4740
	5/15/2017	0.4400	<0.0002000	0.01120	0.01600	<0.001000	0.6140
	6/6/2017	0.4500	<0.0002000	0.01070	0.01570	<0.001000	0.1320
	6/20/2017	0.4300	<0.0002000	0.01210	0.01710	<0.001000	0.5380
	6/27/2017	0.4400	<0.0002000	0.01150	0.01630	<0.001000	0.9390
	7/10/2017	0.4400	<0.0002000	0.01120	0.01650	<0.001000	0.8040
	7/18/2017	0.4600	<0.0002000	0.01180	0.01850	<0.001000	2.113
MW-9	3/30/2017	1.130	<0.0002000	<0.01000	0.07470	0.002170	1.353
	5/10/2017	1.290	<0.0002000	<0.01000	0.09000	0.004330	0.4800
	5/17/2017	1.260	<0.0002000	<0.01000	0.08990	0.003770	0.3600
	6/7/2017	1.260	<0.0002000	<0.01000	0.09260	<0.001000	0.4760
	6/21/2017	1.390	<0.0002000	<0.01000	0.1020	0.001360	1.579
	6/26/2017	1.400	<0.0002000	<0.01000	0.1060	0.002170	1.023
	7/11/2017	1.300	<0.0002000	<0.01000	0.1050	0.001240	0.8630
	7/19/2017	1.400	<0.0002000	<0.01000	0.1130	<0.001000	0.5840

Coletto Creek

January 16, 2018

Table 2. Coletto Creek Primary Ash Pond: Appendix IV Analytical Results

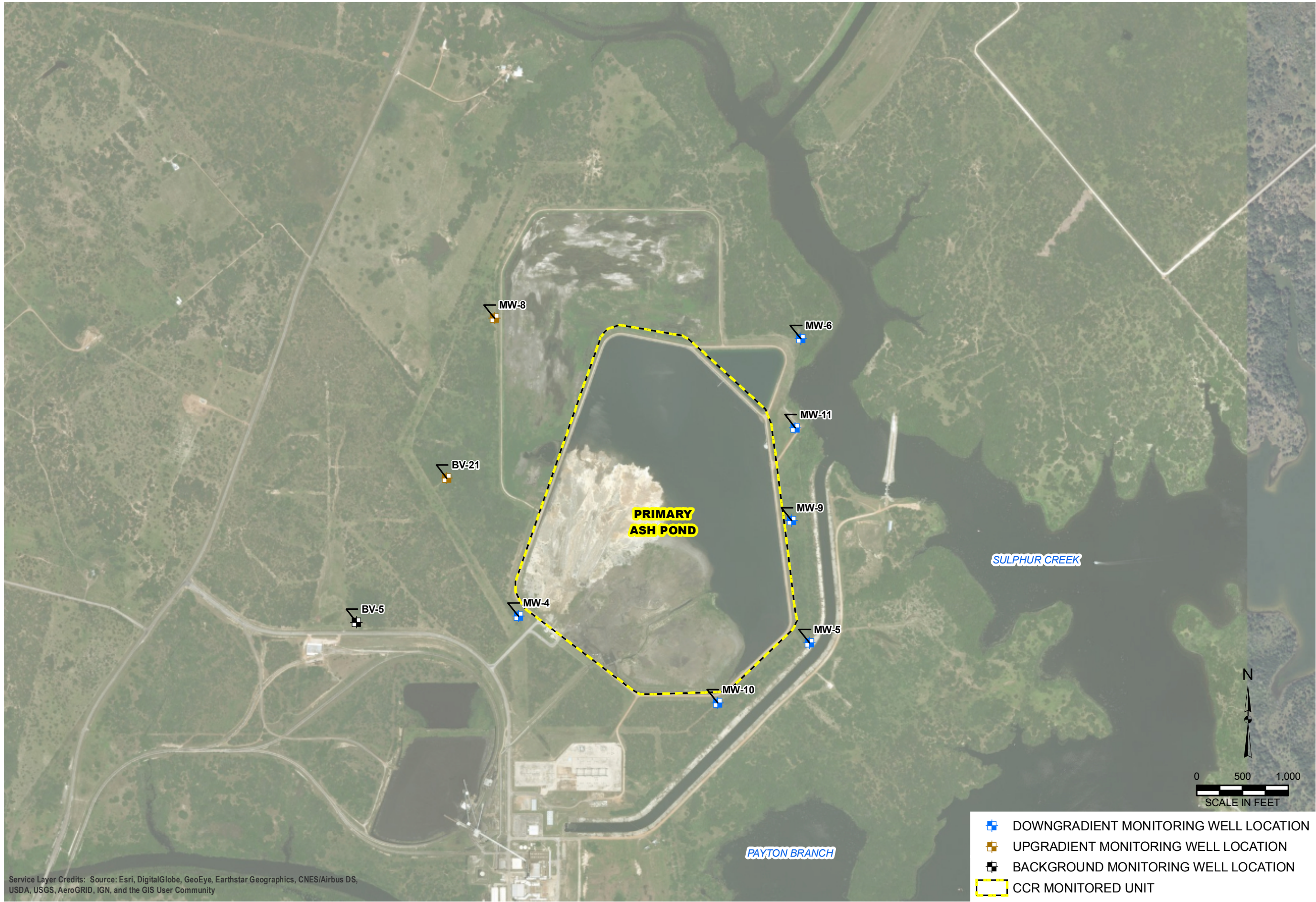
5:16:05 PM

Location ID	Sample Date	Sb, tot, mg/L	Se, tot, mg/L	Tl, tot, mg/L
MW-6	7/12/2017	<0.002500	<0.005000	<0.001500
	7/20/2017	<0.002500	<0.005000	<0.001500
MW-8	3/28/2017	<0.002500	<0.005000	<0.001500
	5/9/2017	<0.002500	<0.005000	<0.001500
	5/15/2017	<0.002500	<0.005000	<0.001500
	6/6/2017	<0.002500	<0.005000	<0.001500
	6/20/2017	<0.002500	<0.005000	<0.001500
	6/27/2017	<0.002500	<0.005000	<0.001500
	7/10/2017	<0.002500	<0.005000	<0.001500
	7/18/2017	<0.002500	<0.005000	<0.001500
MW-9	3/30/2017	<0.002500	<0.005000	<0.001500
	5/10/2017	<0.002500	<0.005000	<0.001500
	5/17/2017	<0.002500	<0.005000	<0.001500
	6/7/2017	<0.002500	<0.005000	<0.001500
	6/21/2017	<0.002500	<0.005000	<0.001500
	6/26/2017	<0.002500	<0.005000	<0.001500
	7/11/2017	<0.002500	<0.005000	<0.001500
	7/19/2017	<0.002500	<0.005000	<0.001500



Figures

Y:\Mapping\Projects\222285MXD\2017_AnnualGWM_CAR\Figure 1_GWS_WellLoc_ColetoCreek.mxd Author: stolzsd Date/Time: 1/29/2018 3:34:47 PM



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

GROUNDWATER SAMPLING WELL LOCATION MAP
COLETO CREEK PRIMARY ASH POND
UNIT ID: 141
2017 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
DYNEGY CCR RULE GROUNDWATER MONITORING
COLETO CREEK POWER STATION
FANNIN, TEXAS

PROJECT NO: 67723

FIGURE NO: 1



OBG

THERE'S A WAY

