



2019 Annual Groundwater Monitoring and Corrective Action Report

Coleta Creek Primary Ash Pond - Fannin, Texas

Prepared for:

Coleta Creek Power, LLC

Submitted by:

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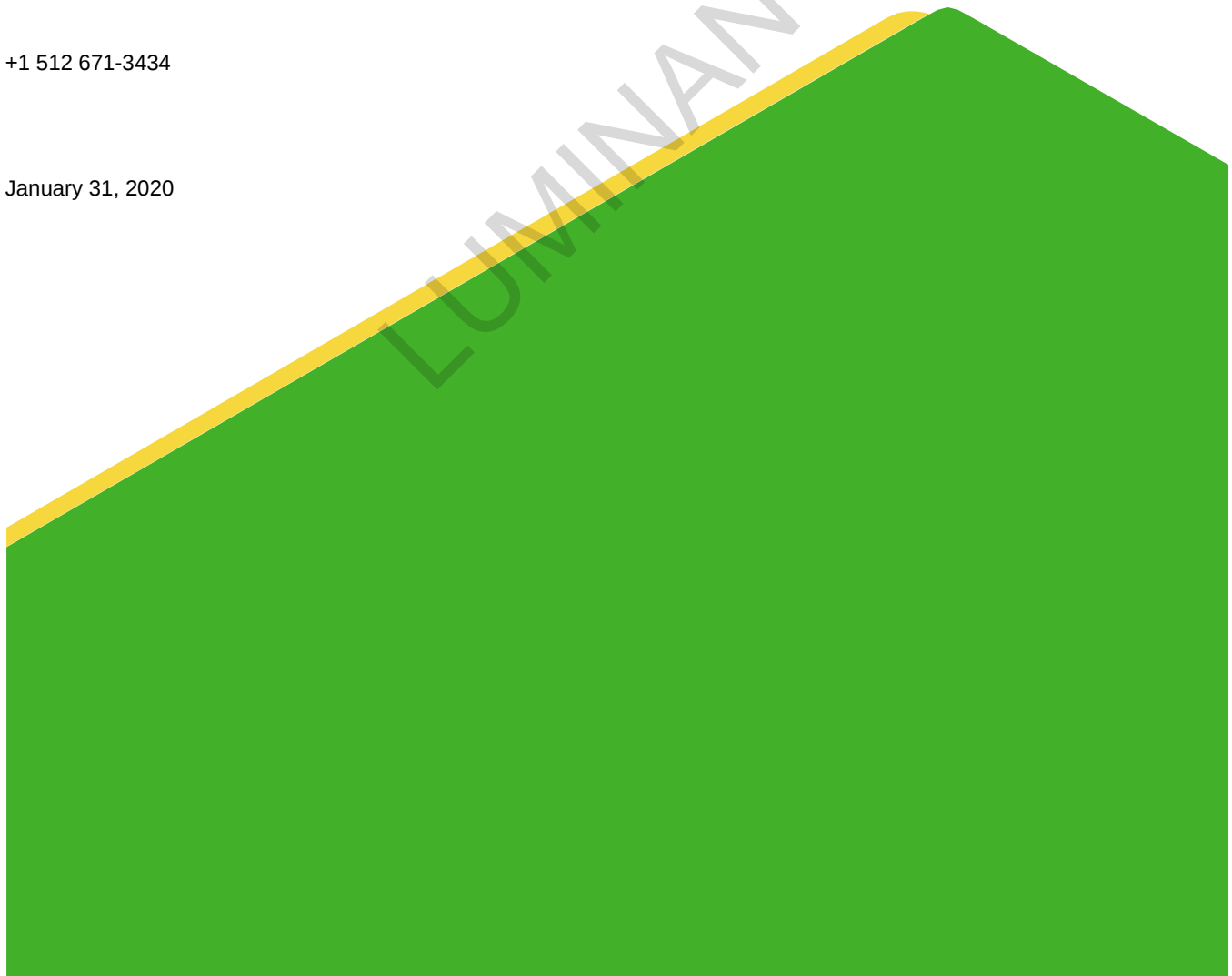


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ACRONYMS AND ABBREVIATIONS

CCR	Coal Combustion Residuals
CFR	Code of Federal Regulations
GWPS	Groundwater Protection Standard
MCL	Maximum Concentration Level
mg/L	Milligrams per Liter
NA	Not Applicable
OBG	O'Brien & Gere Engineers, Inc.
SSI	Statistically Significant Increase
SSL	Statistically Significant Levels
USEPA	United States Environmental Protection Agency

1.0 INTRODUCTION

Golder Associates, Inc. (Golder) has prepared this report on behalf of Coletto Creek Power, LLC to satisfy annual groundwater monitoring and corrective action reporting requirements of the Coal Combustion Residuals (CCR) Rule for the Primary Ash Pond at the Coletto Creek Power Station in Fannin, Texas. The CCR units and CCR monitoring well network are shown on Figure 1.

The CCR Rule (40 CFR 257 Subpart D - *Standards for the Receipt of Coal Combustion Residuals in Landfills and Surface Impoundments*) has been promulgated by the United States Environmental Protection Agency (USEPA) to regulate the management and disposal of CCRs as solid waste under Resource Conservation and Recovery Act (RCRA) Subtitle D. For existing CCR landfills and surface impoundments, the CCR Rule requires that the owner or operator prepare an annual groundwater monitoring and corrective action report to document the status of the groundwater monitoring and corrective action program for the CCR unit for the previous calendar year. Per 40 CFR 257.90(e) of the CCR Rule, the report should 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); and
- (5) Other information required to be included in the annual report as specified in §§ 257.90 through 257.98.

2.0 MONITORING AND CORRECTIVE ACTION PROGRAM STATUS

O'Brien & Gere Engineers, Inc. (OBG) collected the initial Detection Monitoring Program groundwater samples from the Primary Ash Pond CCR monitoring well network in November 2017. OBG completed an evaluation of those data in 2018 to identify statistically significant increases (SSIs) of Appendix III parameters over background concentrations. The Detection Monitoring Program sampling dates and parameters are summarized in the following table:

Detection Monitoring Program Summary

Sampling Dates	Parameters	SSIs	Assessment Monitoring Program Established
November 7-8, 2017	Appendix III	Yes	May 9, 2018

Alternate source evaluations were inconclusive for one or more of the SSIs. Consequently, an Assessment Monitoring Program was initiated and established for the Primary Ash Pond CCR units in 2018 in accordance with 40 CFR § 257.94(e)(2).

Assessment Monitoring groundwater samples were collected from the CCR groundwater monitoring network in 2018, as required by the CCR Rule. OBG collected the initial 2018 Assessment Monitoring Program groundwater samples in June 2018. Subsequent Assessment Monitoring Program sampling events have been conducted by Golder on a semi-annual basis, as required by the CCR Rule. All CCR groundwater monitoring wells were sampled for Appendix III and Appendix IV constituents during the first semi-annual sampling events of each year. During the second semi-annual sampling events, the CCR wells were sampled for all Appendix III parameters and for the Appendix IV parameters that were detected during the first semi-annual sampling events in accordance with 40 CFR § 257.95(d)(1). The Assessment Monitoring Program sampling dates and parameters are summarized in the following table:

Assessment Monitoring Program Summary

Sampling Dates	Analytical Data Receipt Date	Parameters Collected	SSL(s)	SSL(s) Determination Date	Corrective Measures Assessment Initiated
June 19-25, 2018	August 7, 2018	Appendix III Appendix IV	No	NA	NA
Sept. 18, 2018	October 12, 2018	Appendix III Appendix IV ¹	No	NA	NA
June 3-5, 2019	July 12, 2019	Appendix III Appendix IV	No	NA	NA
October 2-3, 2019	November 5, 2019	Appendix III Appendix IV	No	NA	NA

Notes:

NA: Not Applicable

1. Groundwater sample analysis was limited to Appendix IV parameters detected in previous events in accordance with 40 CFR § 257.95(d)(1).

The statistical background values and Groundwater Protection Standards (GWPSs) are summarized in Tables 1 and 2, respectively. Appendix III and Appendix IV analytical data are summarized in Tables 3 and 4, respectively. Statistical analysis of the 2019 data was performed in accordance with the Statistical Analysis Plan for CCR Groundwater Monitoring (PBW 2017) and the USEPA Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities-Unified Guidance (USEPA 2009). The statistical analysis included an evaluation of confidence intervals for each of the Appendix IV parameter data sets to evaluate whether constituent concentrations were present at concentrations above GWPSs. Based on the sample data collected in 2019, Appendix IV parameters were not observed at SSLs above GWPSs.

3.0 KEY ACTIONS COMPLETED IN 2019

Assessment Monitoring Program groundwater monitoring events were completed in June and October 2019. The number of groundwater samples that were collected for analysis for each background and downgradient well, the dates the samples were collected, and the analytical results for the groundwater samples are summarized in Table 3 (Appendix III parameters) and Table 4 (Appendix IV parameters). A map showing the CCR units and monitoring wells is provided as Figure 1.

No CCR wells were installed or decommissioned in 2019.

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4.0 PROBLEMS ENCOUNTERED AND ACTIONS TO RESOLVE THE PROBLEMS

No problems were encountered with the CCR groundwater monitoring program in 2019.

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5.0 KEY ACTIVITIES PLANNED FOR 2020

The following key activities are planned for 2020:

- Continue the Assessment Monitoring Program in accordance with 40 CFR § 257.95.
- Complete statistical evaluation of Appendix IV analytical data from the downgradient wells and compare results to GWPSs to determine whether an SSL has occurred.
- If an SSL is identified, notification will be prepared as required under 40 CFR § 257.95(g). The notification will be placed in the operating record per 40 CFR § 257.105(h)(8) and will be subsequently placed on the public website per 40 CFR § 257.107(d). Potential alternate sources (i.e., a source other than the CCR unit caused the SSL or that the SSL resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality) will be evaluated. If an alternate source is identified to be the cause of the SSL, a written demonstration will be completed within 90 days of SSL determination and included in the Annual Groundwater Monitoring and Corrective Action Report.
- If an alternate source is not identified to be the cause of the SSL, the applicable requirements of 40 CFR §§ 257.94 through 257.98 (e.g., assessment of corrective measures) will be met, including associated recordkeeping/notifications required by 40 CFR §§ 257.105 through 257.108.

6.0 REFERENCES

O'Brien and Gere Engineers, Inc. (OBG), 2017. Statistical Analysis Plan, Coletto Creek Power Station.

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Signature Page

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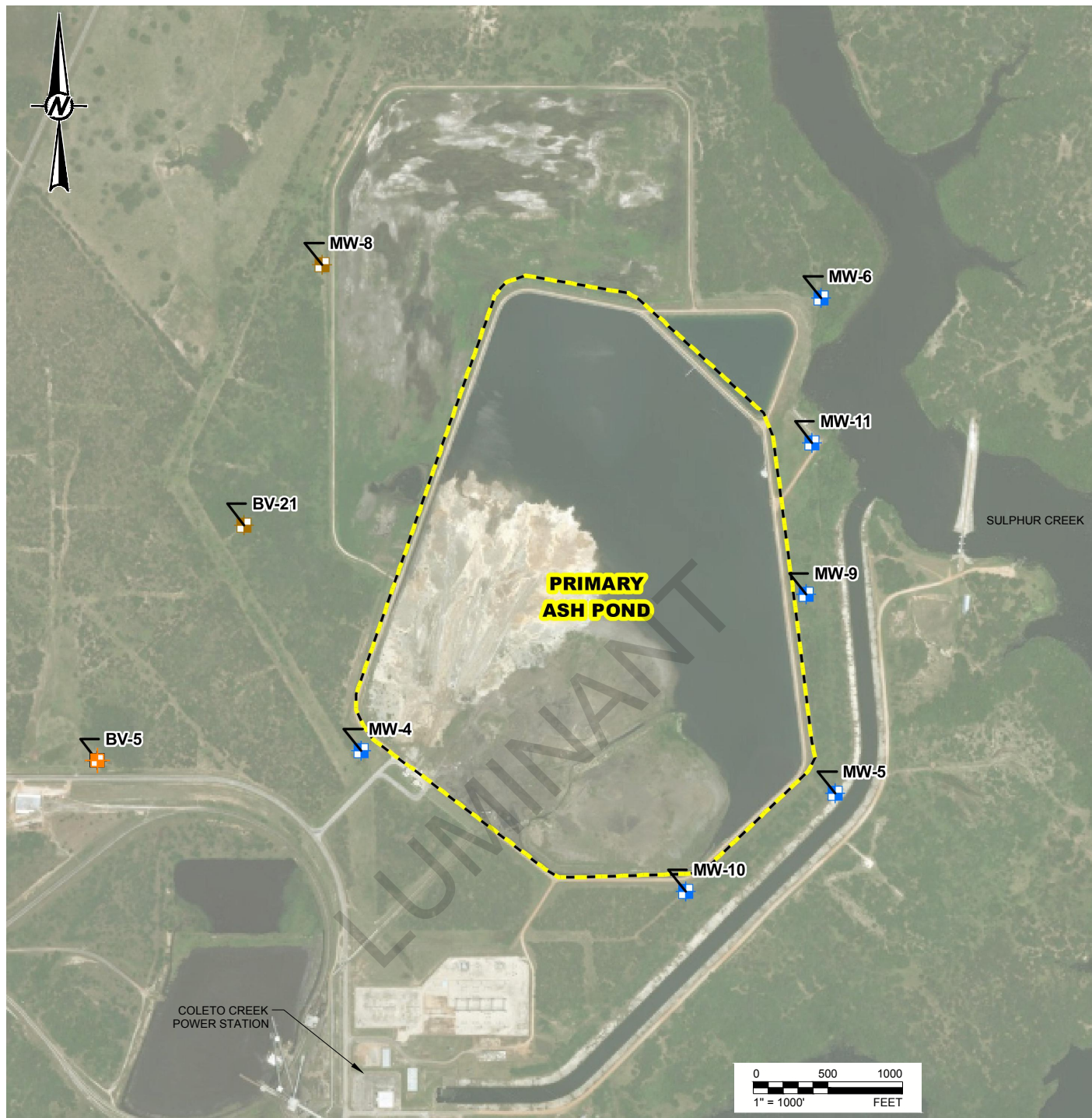


Pat Behling
Principal Engineer



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FIGURES



LEGEND

-  DOWNGRADIENT MONITORING WELL LOCATION
-  UPGRADEMENT MONITORING WELL LOCATION
-  CCR MONITORING UNIT

CLIENT
 COLETO CREEK POWER LP

PROJECT
 COLETO CREEK POWER STATION
 FANNIN, TEXAS

TITLE
DETAILED SITE PLAN - COLETO CREEK PRIMARY ASH POND

CONSULTANT



YYYY-MM-DD 2019-01-14

DESIGNED AJD

PREPARED AJD

REVIEWED WFF

APPROVED WFF

PROJECT NO.
 18106453

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FIGURE
 1

TABLES

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Table 1
Statistical Background Values
Coletto Creek Primary Ash Pond

Parameter	Statistical Background Value
Boron (mg/L)	1.26
Calcium (mg/L)	143
Chloride (mg/L)	118
Fluoride (mg/L)	0.61
field pH (s.u.)	6.51 7.33
Sulfate (mg/L)	148
Total Dissolved Solids (mg/L)	966

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Table 2
Groundwater Protection Standards
Coletto Creek Primary Ash Pond

Parameter	Groundwater Protection Standard
Antimony (mg/L)	0.006
Arsenic (mg/L)	0.128
Barium (mg/L)	2
Beryllium (mg/L)	0.004
Cadmium (mg/L)	0.005
Chromium (mg/L)	0.10
Cobalt (mg/L)	0.0499
Fluoride (mg/L)	4
Lead (mg/L)	0.015
Lithium (mg/L)	0.04
Mercury (mg/L)	0.002
Molybdenum (mg/L)	0.10
Selenium (mg/L)	0.05
Thallium (mg/L)	0.002
Radium 226+228 (pCi/L)	5

TABLE 3
APPENDIX III ANALYTICAL RESULTS
COLETO CREEK PRIMARY ASH POND

Sample Location	Date Sampled	B	Ca	Cl	FI	field pH	SO ₄	TDS
Upgradient Wells								
BV-5	03/29/17	1.15	90.5	118	0.54	7.01	147	860
	05/11/17	1.03	81.6	106	0.57	6.89	148	862
	05/16/17	1.17	99	107	0.55	6.9	145	832
	06/07/17	1.11	88.8	109	0.56	6.64	147	810
	06/20/17	1.02	90.7	106	0.58	6.54	145	716
	06/27/17	1.14	100	114	0.55	6.76	144	743
	07/12/17	1.07	96.8	112	0.56	6.88	140	430
	07/18/17	1.17	143	117	0.56	6.68	142	817
	11/07/17	1.10	94.2	109	0.62	6.96	136	850
	06/19/18	1.18	56.4	112	0.97	--	147	775
	09/18/18	1.27	86.2	145	0.667	6.53	146	904
	06/05/19	1.26	82.9	123	0.769	6.89	146	828
	10/03/19	1.31	72.2	141	0.753	7.11	145	806
BV-21	03/28/17	0.651	6.89	36	0.61	7.09	69	490
	05/09/17	0.687	65.2	38	0.61	7.04	55	410
	05/17/17	0.709	74.3	39	0.58	7.05	53	454
	06/06/17	0.657	69	40	0.59	7.11	49	452
	06/20/17	0.642	77	40	0.61	6.7	45	356
	06/27/17	0.727	84.9	40	0.6	6.97	46	420
	07/10/17	0.674	90.6	39	0.58	7.22	45	427
	07/18/17	0.618	84.4	39	0.6	6.91	44	380
	11/07/17	0.515	73.6	42	0.64	7.12	46	423
	06/25/18	0.543	69.3	38.4	0.62	--	38.4	380
	09/18/18	0.624	72.1	33.3	0.479	6.64	36.4	416
	06/05/19	0.576	61.3	30.3	0.602	7.1	34.2	379
	10/03/19	0.534	63.4	23.9	0.588	6.82	33.2	342
MW-8	03/28/17	1.2	7.76	79	0.49	7.06	76	626
	05/09/17	1.21	77.5	77	0.44	7.15	79	564
	05/15/17	1.16	81.2	76	0.44	7.01	79	558
	06/06/17	1.26	78.1	72	0.45	6.92	83.5	570
	06/20/17	1.24	86.5	67	0.43	6.7	89	476
	06/27/17	1.23	89.6	66	0.44	6.85	97	533
	07/10/17	1.24	92.6	63	0.44	7.13	97	533
	07/18/17	1.25	92.9	61	0.46	6.91	100	533
	11/07/17	1.21	78.8	61	0.49	7.08	100	540
	06/25/18	1.25	80.3	65.9	0.52	--	95.2	565
	09/18/18	1.29	76.5	53.7	0.402	6.70	94.8	543
	06/05/19	1.11	65.2	51.4	0.497	7.10	79	515
	10/03/19	1.2	76.7	58.3	0.419	6.76	90.1	541

TABLE 3
APPENDIX III ANALYTICAL RESULTS
COLETO CREEK PRIMARY ASH POND

Sample Location	Date Sampled	B	Ca	Cl	FI	field pH	SO ₄	TDS
Downgradient Wells								
MW-4	03/28/17	0.287	9.14	102	0.61	9.81	157	794
	05/09/17	0.395	88.7	101	0.61	7.27	156	668
	05/17/17	0.251	92.1	101	0.6	6.93	157	702
	06/06/17	0.243	90.7	101	0.63	7.13	157	728
	06/20/17	0.254	99.3	101	0.62	6.71	157	626
	06/27/17	0.254	102	101	0.63	6.87	157	690
	07/10/17	0.271	111	101	0.62	7.16	158	670
	07/18/17	0.292	108	101	0.63	6.82	157	717
	11/07/17	0.255	94.5	99	0.62	7.12	155	700
	06/21/18	0.267	92.5	104	0.6	--	159	665
	09/18/18	0.28	91.8	102	0.582	6.63	155	720
	06/05/19	0.379	85.3	108	0.67	6.92	161	718
	10/03/19	0.367	93.1	102	0.559	6.7	155	693
MW-5	03/30/17	0.11	110	140	0.51	6.85	184	830
	05/10/17	0.115	114	139	0.54	6.86	183	900
	05/16/17	0.215	121	139	0.5	6.81	183	848
	06/08/17	0.122	118	139	0.55	6.8	182	862
	06/21/17	0.122	124	138	0.53	6.6	182	813
	06/26/17	0.121	129	139	0.54	6.79	184	900
	07/11/17	0.111	120	138	0.52	6.91	184	797
	07/19/17	0.001	0.005	137	0.53	6.84	181	857
	11/08/17	0.149	116	138	0.52	6.92	183	883
	06/25/18	0.119	114	140	0.56	--	183	820
	09/18/18	0.146	114	136	0.493	6.70	183	824
	06/03/19	0.146	113	143	0.596	7.06	187	864
	10/02/19	0.179	111	147	0.543	7.06	202	842
MW-6	03/29/17	1.67	73.9	69	0.38	7.34	99	510
	05/11/17	1.94	70.6	70	0.37	7.1	110	490
	05/16/17	1.84	76.3	70	0.36	7.23	107	506
	06/07/17	1.8	73.8	70	0.37	6.97	103	492
	06/22/17	1.97	79.9	69	0.37	7.11	100	510
	06/28/17	1.74	81.8	69	0.37	7.16	99	570
	07/12/17	1.76	81.6	69	0.35	7.24	98	557
	07/20/17	0.005	0.0002	69	0.39	6.9	97	530
	11/07/17	1.72	76.4	69	0.39	7.41	101	483
	06/22/18	0.0171	76.6	70.7	0.41	--	107	490
	09/18/18	2.09	70.8	72.5	0.353 J	6.97	114	505
	06/03/19	1.9	73.9	73	0.043	7.31	103	514
	10/02/19	1.83	73.6	76.4	0.357 J	7.29	115	507

TABLE 3
APPENDIX III ANALYTICAL RESULTS
COLETO CREEK PRIMARY ASH POND

Sample Location	Date Sampled	B	Ca	Cl	FI	field pH	SO ₄	TDS
MW-9	03/30/17	3.38	54.5	71	1.13	7.35	62	406
	05/10/17	3.16	52.7	66	1.29	7.48	59	410
	05/17/17	3.18	53.3	67	1.26	7.34	58	440
	06/07/17	3.12	52	67	1.26	7.03	57	380
	06/21/17	3.44	60.7	66	1.39	7.09	60	393
	06/26/17	3.31	60.6	67	1.4	7.23	61	407
	07/11/17	3.35	52.1	64	1.3	7.51	60	927
	07/19/17	3.4	50.2	63	1.4	7.29	62	407
	11/08/17	2.84	49.4	62	1.56	7.54	50	397
	06/21/18	2.94	46.9	71.5	1.5	--	35.7	370
	09/18/18	2.79	51.7	71.4	1.1	6.99	49.1	394
	06/05/19	4.26	48	74.7	1.38	7.4	66.3	421
	10/03/19	3.97	71.3	70.9	1.41	7.37	63.6	462
MW-10	03/30/17	3.74	92.1	151	0.54	6.99	130	804
	05/10/17	7.32	56.1	82	0.83	7.23	96	582
	05/16/17	7.45	62.7	81	0.81	7.28	95	612
	06/08/17	7.54	58.1	77	0.84	7.23	92	604
	06/21/17	9.22	60.7	77	0.84	6.97	92	550
	06/26/17	8.21	63.4	78	0.84	7.14	92	530
	07/11/17	7.99	49.5	76	0.84	7.4	88	617
	07/19/17	8.74	56.6	74	0.86	7.25	86	533
	11/08/17	8.72	77.7	74	0.88	7.35	81	590
	06/22/18	8.47	84.4	76.7	0.88	--		550
	09/18/18	8.45	51.9	81.4	0.759	6.98	95.1	577
	06/03/19	8.28	43.1	87.2	0.953	7.52	97.7	587
	10/02/19	8.28	44.2	85.5	0.891	7.46	104	575
MW-11	05/10/17	1.35	64.1	55	0.82	7.27	61	394
	05/16/17	1.39	62.3	52	0.85	7.29	58	362
	05/18/17	1.27	61.6	47.8	0.94		52.4	390
	06/07/17	1.23	59.8	48	0.93	7.25	50	372
	06/21/17	1.19	73.1	43.7	1.04	7.15	44	373
	06/26/17	1.15	82	44	1	7.3	43	407
	07/11/17	1.23	44.7	44	1	7.55	42	603
	07/19/17	1.17	48.6	43	1.01	7.21	42	360
	11/08/17	1.13	52.2	43	1.02	7.61	56	367
	06/21/18	1.07	69.6	44.3	0.96	--	61.4	355
	09/18/18	1.12	39.3	44.6	0.754	7.00	44.4	354
	06/03/19	1.27	43.4	42.2	0.837	7.55	44.8	372
	10/02/19	1.22	43.4	41.4	0.768	7.43	10.8	355

Notes:

1. All concentrations in mg/L. pH in standard units.
2. J - concentration is below sample quantitation limit; result is an estimate.

TABLE 4
APPENDIX IV ANALYTICAL RESULTS
COLETO CREEK PRIMARY ASH POND

Sample Location	Date Sampled	Sb	As	Ba	Be	Cd	Cr	Co	Fl	Pb	Li	Hg	Mo	Se	Tl	Ra 226	Ra 228	Ra 226/228 Combined
Upgradient Wells																		
BV-5	03/29/17	<0.0025	0.00856	0.04510	<0.001	<0.001	<0.005	0.0497	0.540	<0.001	0.0206	<0.0002	0.00925	<0.005	<0.0015	--	--	1.503
	05/11/17	<0.0025	0.00786	0.03680	<0.001	<0.001	<0.005	0.0462	0.570	<0.001	0.018	<0.0002	0.0101	<0.005	<0.0015	--	--	1.555
	05/16/17	<0.0025	0.00885	0.04520	<0.001	<0.001	<0.005	0.0495	0.550	0.00151	0.0171	<0.0002	0.0102	<0.005	<0.0015	--	--	0.7550
	06/07/17	<0.0025	0.00829	0.03760	<0.001	<0.001	<0.005	0.0483	0.560	<0.001	0.0207	<0.0002	0.01	<0.005	<0.0015	--	--	1.457
	06/20/17	<0.0025	0.00841	0.04010	<0.001	<0.001	<0.005	0.0499	0.580	<0.001	0.0208	<0.0002	0.0114	<0.005	<0.0015	--	--	0.4920
	06/27/17	<0.0025	0.0083	0.04120	<0.001	<0.001	<0.005	0.046	0.550	<0.001	0.0198	<0.0002	0.00942	<0.005	<0.0015	--	--	2.247
	07/12/17	<0.0025	0.00849	0.04160	<0.001	<0.001	<0.005	0.0484	0.560	<0.001	0.0188	<0.0002	0.0096	<0.005	<0.0015	--	--	2.139
	07/18/17	<0.0025	0.00951	0.05780	<0.001	<0.001	0.00739	0.0453	0.560	0.00288	0.022	<0.0002	0.0083	<0.005	<0.0015	--	--	1.260
	06/19/18	<0.0025	0.0106	0.0336	<0.001	<0.001	0.0022 J	0.0513 J	0.970	<0.00074 J	0.016	<0.0002	0.0139	<0.005	<0.0015	0.327	<1.680	2.01
	09/18/18	NA	0.00949	0.0436	NA	NA	0.00228 J	0.0487	0.667	0.00039 J	0.0206	NA	0.0102	NA	NA	0.302	<0.608	0.91
BV-21	06/05/19	<0.0008	0.0092	0.042	<0.0003	0.0009 J	<0.002	0.0466	0.769	0.00144	0.0201	<0.00008	0.0109	<0.0020	<0.0005	<0.687	<1.130	<1.82
	10/03/19	<0.0008	0.00941	0.0441	<0.0003	<0.0003	0.00285 J	0.0437	0.753	0.0039	0.0172	<0.00008	0.0122	<0.0020	<0.0005	0.928	1.35	2.28
	03/28/17	<0.0025	0.0954	0.09630	<0.001	<0.001	<0.005	0.0083	0.610	<0.001	<0.010	<0.0002	<0.005	<0.005	<0.0015	--	--	1.390
	05/09/17	<0.0025	0.108	0.09720	<0.001	<0.001	<0.005	0.00852	0.610	<0.001	<0.010	<0.0002	<0.005	<0.005	<0.0015	--	--	0.7460
	05/17/17	<0.0025	0.117	0.09440	<0.001	<0.001	<0.005	0.00878	0.580	<0.001	<0.010	<0.0002	<0.005	<0.005	<0.0015	--	--	0.9190
	06/06/17	<0.0025	0.118	0.09540	<0.001	<0.001	<0.005	0.00806	0.590	<0.001	<0.010	<0.0002	<0.005	<0.005	<0.0015	--	--	0.6710
	06/20/17	<0.0025	0.121	0.1010	<0.001	<0.001	<0.005	0.00744	0.610	<0.001	<0.010	<0.0002	<0.005	<0.005	<0.0015	--	--	1.672
	06/27/17	<0.0025	0.128	0.1040	<0.001	<0.001	<0.005	0.00841	0.600	<0.001	<0.010	<0.0002	<0.005	<0.005	<0.0015	--	--	0.5200
	07/10/17	<0.0025	0.123	0.1100	<0.001	<0.001	<0.005	0.0086	0.580	<0.001	<0.010	<0.0002	<0.005	<0.005	<0.0015	--	--	0.8050
	07/18/17	<0.0025	0.115	0.1010	<0.001	<0.001	<0.005	0.00784	0.600	<0.001	<0.010	<0.0002	<0.005	<0.005	<0.0015	--	--	4.812
MW-8	06/25/18	<0.0025	0.0697	0.104	<0.001	<0.001	<0.005	0.00682	0.620	<0.00074 J	0.00513 J	<0.0002	0.00428 J	<0.005	<0.0015	0.267	<1.417	1.68
	09/18/18	NA	0.0625	0.109	NA	NA	<0.002	0.0064	0.479	0.000555 J	0.00624 J	NA	0.00450 J	NA	NA	<0.31	<0.528	<0.838
	06/05/19	<0.0008	0.0531	0.105	<0.0003	<0.0003	<0.002	0.00574	0.602	0.000354	0.00558 J	<0.00008	0.00685	<0.0020	<0.0005	0.65	<0.687	1.337
	10/03/19	<0.0008	0.049	0.0963	<0.0003	<0.0003	<0.002	0.00542	0.588	0.000333 J	<0.005	<0.00008	0.00784	<0.0020	<0.0005	0.346	1.54	1.89
	03/28/17	<0.0025	0.00839	0.0623	<0.001	<0.001	<0.005	0.0236	0.490	<0.001	0.0111	<0.0002	0.0154	<0.005	<0.0015	--	--	0.4520
	05/09/17	<0.0025	0.00848	0.064	<0.001	<0.001	<0.005	0.0272	0.440	<0.001	0.0111	<0.0002	0.0157	<0.005	<0.0015	--	--	0.4740
	05/15/17	<0.0025	0.00926	0.064	<0.001	<0.001	<0.005	0.0311	0.440	<0.001	0.0112	<0.0002	0.016	<0.005	<0.0015	--	--	0.6140
	06/06/17	<0.0025	0.00912	0.0616	<0.001	<0.001	0.00744	0.0308	0.450	<0.001	0.0107	<0.0002	0.0157	<0.005	<0.0015	--	--	0.1320
	06/20/17	<0.0025	0.00885	0.0669	<0.001	<0.001	<0.005	0.0297	0.430	<0.001	0.0121	<0.0002	0.0171	<0.005	<0.0015	--	--	0.5380
	06/27/17	<0.0025	0.00939	0.0633	<0.001	<0.001	<0.005	0.0314	0.440	<0.001	0.0115	<0.0002	0.0163	<0.005	<0.0015	--	--	0.9390
MW-8	07/10/17	<0.0025	0.00902	0.0631	<0.001	<0.001	<0.005	0.031	0.440	<0.001	0.0112	<0.0002	0.0165	<0.005	<0.0015	--	--	0.8040
	07/18/17	<0.0025	0.00937	0.0635	<0.001	<0.001	<0.005	0.0352	0.460	<0.001	0.0118	<0.0002	0.0185	<0.005	<0.0015	--	--	2.113
	06/25/18	<0.0025	0.0101	0.0632	<0.001	<0.001	<0.005	0.029	0.520	0.0011	0.0107	<0.0002	0.017	<0.005	<0.0015	<0.234	<1.204	<1.44
	09/18/18	NA	0.00896	0.0582	NA	NA	<0.00200	0.0237	0.402	<0.0003	0.0117	NA	0.0178	NA	NA	<0.281	<0.558	<0.84
	06/05/19	<0.0008	0.00946	0.0596	<0.0003	<0.0003	<0.002	0.0217	0.497	0.000355 J	0.011	<0.00008	0.0156	<0.0020	<0.0005	0.528	<0.619	1.147
	10/03/19	<0.0008	0.0083	0.0607	<0.0003	<0.0003	<0.002	0.231	0.419	<0.0003	0.0106	<0.00008	0.0144	<0.0020	<0.0005	0.224	0.241	0.465

TABLE 4
APPENDIX IV ANALYTICAL RESULTS
COLETO CREEK PRIMARY ASH POND

Sample Location	Date Sampled	Sb	As	Ba	Be	Cd	Cr	Co	Fl	Pb	Li	Hg	Mo	Se	Tl	Ra 226	Ra 228	Ra 226/228 Combined
Downgradient Wells																		
MW-4	03/28/17	<0.0025	0.00738	0.0575	<0.001	<0.001	<0.005	0.007	0.610	<0.001	0.0192	<0.0002	<0.005	<0.005	<0.0015	--	--	0.4600
	05/09/17	<0.0025	0.00733	0.0576	<0.001	<0.001	<0.005	0.007	0.610	<0.001	0.0182	<0.0002	<0.005	<0.005	<0.0015	--	--	0.6940
	05/15/17	<0.0025	0.00794	0.0556	<0.001	<0.001	<0.005	0.007	0.600	<0.001	0.0166	<0.0002	<0.005	<0.005	<0.0015	--	--	1.451
	06/06/17	<0.0025	0.0077	0.0556	<0.001	<0.001	<0.005	0.007	0.630	<0.001	0.0179	<0.0002	<0.005	<0.005	<0.0015	--	--	0.1740
	06/20/17	<0.0025	0.0081	0.0596	<0.001	<0.001	0.00877	0.008	0.620	<0.001	0.0195	<0.0002	<0.005	<0.005	<0.0015	--	--	0.5430
	06/27/17	<0.0025	0.00786	0.0554	<0.001	<0.001	<0.005	0.007	0.630	<0.001	0.0185	<0.0002	<0.005	<0.005	<0.0015	--	--	0.6390
	07/10/17	<0.0025	0.00846	0.0582	<0.001	<0.001	<0.005	0.009	0.620	<0.001	0.0187	<0.0002	<0.005	<0.005	<0.0015	--	--	1.069
	07/18/17	<0.0025	0.00815	0.0549	<0.001	<0.001	<0.005	0.008	0.630	<0.001	0.0183	<0.0002	<0.005	<0.005	<0.0015	--	--	0.1910
	06/21/18	<0.0025	0.00843	0.0591	<0.001	<0.001	<0.005	0.00711	0.600	<0.00072 J	0.0175	<0.0002	<0.005	<0.005	<0.0015	0.370	1.705	2.08
	09/18/18	NA	0.00793	0.0577	NA	NA	<0.002	0.00673	0.582	<0.0003	0.019	NA	<0.002	NA	NA	1.610	<0.543	2.15
MW-5	06/05/19	<0.0008	0.0079	0.0571	<0.0003	<0.0003	<0.002	0.00729	0.670	<0.0003	0.0195	<0.00008	<0.002	<0.0020	<0.0005	0.436	<0.547	0.98
	10/03/19	<0.0008	0.00764	0.0532	<0.0003	<0.0003	<0.002	0.00699	0.559	0.00101	0.017	<0.00008	<0.002	<0.002	<0.0005	1.85	-0.102	1.85
	03/30/17	<0.0025	0.00953	0.0748	<0.001	<0.001	<0.005	<0.005	0.510	<0.001	0.0192	<0.0002	<0.005	<0.005	<0.0015	--	--	1.443
	05/10/17	<0.0025	0.00955	0.0706	<0.001	<0.001	<0.005	<0.005	0.540	<0.001	0.0179	<0.0002	<0.005	<0.005	<0.0015	--	--	0.6150
	05/16/17	<0.0025	0.00967	0.0708	<0.001	<0.001	<0.005	<0.005	0.500	<0.001	0.0181	<0.0002	<0.005	<0.005	<0.0015	--	--	0.6410
	06/08/17	<0.0025	0.00908	0.0701	<0.001	<0.001	<0.005	<0.005	0.550	<0.001	0.0200	<0.0002	<0.005	<0.005	<0.0015	--	--	0.1790
	06/21/17	<0.0025	0.00917	0.0767	<0.001	<0.001	<0.005	<0.005	0.530	<0.001	0.0197	<0.0002	<0.005	<0.005	<0.0015	--	--	0.1060
	06/26/17	<0.0025	0.00955	0.0735	<0.001	<0.001	<0.005	<0.005	0.540	<0.001	0.0204	<0.0002	<0.005	<0.005	<0.0015	--	--	1.112
	07/11/17	<0.0025	0.00945	0.0712	<0.001	<0.001	<0.005	<0.005	0.520	<0.001	0.0183	<0.0002	<0.005	<0.005	<0.0015	--	--	0.5120
	07/19/17	<0.0025	0.00941	0.0735	<0.001	<0.001	<0.005	<0.005	0.530	<0.001	0.0186	<0.0002	<0.005	<0.005	<0.0015	--	--	0.1910
MW-6	06/25/18	<0.0025	0.00998	0.0733	<0.001	<0.001	<0.005	<0.005	0.560	<0.001	0.0182	<0.0002	<0.005	<0.005	<0.0015	<0.251	<1.369	<1.62
	09/18/18	NA	0.00945	0.0697	NA	NA	<0.002	<0.003	0.493	<0.0003	0.0195	NA	<0.002	NA	NA	<0.282	<0.606	<0.89
	06/03/19	<0.0008	0.00948	0.0678	<0.0003	<0.0003	<0.002	<0.003	0.596	<0.0003	0.0206	<0.00008	<0.002	<0.002	<0.0005	<0.619	<0.917	<1.54
	10/02/19	<0.0008	0.00918	0.067	<0.0003	<0.0003	<0.002	<0.003	0.543	<0.0003	0.0187	<0.00008	<0.002	<0.002	<0.0005	0.47	0.117	0.587
	03/29/17	<0.0025	0.00827	0.0900	<0.001	<0.001	<0.005	<0.005	0.380	<0.001	<0.010	<0.0002	0.00749	<0.005	<0.0015	--	--	1.009
	05/11/17	<0.0025	0.00738	0.0758	<0.001	<0.001	<0.005	<0.005	0.370	<0.001	0.0101	<0.0002	0.0176	<0.005	<0.0015	--	--	0.8250
	05/16/17	<0.0025	0.00803	0.0784	<0.001	<0.001	<0.005	<0.005	0.360	<0.001	<0.010	<0.0002	0.0131	<0.005	<0.0015	--	--	0.7740
	06/07/17	<0.0025	0.00772	0.0798	<0.001	<0.001	<0.005	<0.005	0.370	<0.001	<0.010	<0.0002	0.00949	<0.005	<0.0015	--	--	0.6640
	06/22/17	<0.0025	0.00764	0.083	<0.001	<0.001	<0.005	<0.005	0.370	<0.001	0.0109	<0.0002	0.0084	<0.005	<0.0015	--	--	0.2150
	06/28/17	<0.0025	0.00779	0.0842	<0.001	<0.001	<0.005	<0.005	0.370	<0.001	<0.010	<0.0002	0.00806	<0.005	<0.0015	--	--	1.730
MW-6	07/12/17	<0.0025	0.0077	0.0819	<0.001	<0.001	<0.005	<0.005	0.350	<0.001	<0.010	<0.0002	0.0076	<0.005	<0.0015	--	--	1.012
	07/20/17	<0.0025	0.001	0.0010	<0.001	<0.001	<0.005	<0.005	0.390	<0.001	<0.010	<0.0002	0.001	<0.005	<0.0015	--	--	0.3660
	06/22/18	<0.0025	0.00861	0.0912	<0.001	<0.001	<0.005	<0.005	0.410	<0.001	0.00924 J	<0.0002	0.00837	<0.005	<0.0015	<0.309	<1.243	<1.55
	09/18/18	NA	0.008	0.0828	NA	NA	<0.002	<0.003	0.353 J	0.000349 J	0.0107	NA	0.0274	NA	NA	<0.196	1.06	1.256
	06/03/19	<0.0008	0.00799	0.0894	<0.0003	<0.0003	<0.002	<0.003	0.438	<0.0003	0.00968 J	<0.00008	0.00884	<0.0020	<0.0005	<0.407	<0.623	<1.03
	10/02/19	<0.0008	0.00775	0.0876	<0.0003	<0.0003	<0.002	<0.003	0.357 J	<0.0003	0.00875 J	<0.00008	0.00875	<0.0020	<0.0005	0.715	1.23	1.94

TABLE 4
APPENDIX IV ANALYTICAL RESULTS
COLETO CREEK PRIMARY ASH POND

Sample Location	Date Sampled	Sb	As	Ba	Be	Cd	Cr	Co	Fl	Pb	Li	Hg	Mo	Se	Tl	Ra 226	Ra 228	Ra 226/228 Combined
MW-9	03/30/17	<0.0025	0.00909	0.121	<0.001	<0.001	<0.005	<0.005	1.130	0.00217	<0.010	<0.0002	0.0747	<0.005	<0.0015	--	--	1.353
	05/10/17	<0.0025	0.00996	0.105	<0.001	<0.001	<0.005	<0.005	1.290	0.00433	<0.010	<0.0002	0.0900	<0.005	<0.0015	--	--	0.4800
	05/17/17	<0.0025	0.00958	0.101	<0.001	<0.001	<0.005	<0.005	1.260	0.00377	<0.010	<0.0002	0.0899	<0.005	<0.0015	--	--	0.3600
	06/07/17	<0.0025	0.0093	0.100	<0.001	<0.001	<0.005	<0.005	1.260	<0.001000	<0.010	<0.0002	0.0926	<0.005	<0.0015	--	--	0.4760
	06/21/17	<0.0025	0.00937	0.119	<0.001	<0.001	<0.005	<0.005	1.390	0.00136	<0.010	<0.0002	0.1020	<0.005	<0.0015	--	--	1.579
	06/26/17	<0.0025	0.0107	0.114	<0.001	<0.001	0.0102	<0.005	1.400	0.00217	<0.010	<0.0002	0.1060	<0.005	<0.0015	--	--	1.023
	07/11/17	<0.0025	0.0105	0.103	<0.001	<0.001	0.00566	<0.005	1.300	0.00124	<0.010	<0.0002	0.1050	<0.005	<0.0015	--	--	0.8630
	07/19/17	<0.0025	0.0103	0.101	<0.001	<0.001	<0.005	<0.005	1.400	<0.001000	<0.010	<0.0002	0.1130	<0.005	<0.0015	--	--	0.5840
	06/21/18	<0.0025	0.0104	0.100	<0.001	<0.001	<0.005	<0.005	1.500	<0.00072 J	<0.01	<0.0002	0.0617	<0.005	<0.0015	0.608	<1.303	1.91
	09/18/18	NA	0.0103	0.0985	NA	NA	<0.002	<0.003	1.100	<0.000300	0.00639 J	NA	0.0502	NA	NA	0.618	<0.638	1.26
MW-10	06/05/19	<0.0008	0.0109	0.102	<0.0003	<0.0003	<0.002	<0.003	1.380	<0.0003	0.00545 J	<0.00008	0.0683	<0.002	<0.0005	<0.402	<0.683	<1.085
	10/03/19	<0.0008	0.0109	0.128	0.000689 J	<0.0003	<0.002	0.00337 J	1.410	0.00876	0.0064 J	<0.00008	0.0507	0.0041 J	<0.0005	0.577	0.747	1.32
	03/30/17	<0.0025	0.0110	0.0844	<0.001	<0.001	<0.005	<0.005	0.540	<0.001	0.0179	<0.0002	0.0342	<0.005	<0.0015	--	--	1.439
	05/10/17	<0.0025	0.0146	0.0554	<0.001	<0.001	0.00533	<0.005	0.830	<0.001	0.0122	<0.0002	0.102	<0.005	<0.0015	--	--	0.8880
	05/16/17	<0.0025	0.0150	0.0598	<0.001	<0.001	<0.005	<0.005	0.810	<0.001	0.0123	<0.0002	0.0987	<0.005	<0.0015	--	--	0.1830
	06/08/17	<0.0025	0.0144	0.0544	<0.001	<0.001	<0.005	<0.005	0.840	<0.001	0.0115	<0.0002	0.1060	<0.005	<0.0015	--	--	0.06700
	06/21/17	<0.0025	0.0149	0.054	<0.001	<0.001	<0.005	<0.005	0.840	<0.001	0.0133	<0.0002	0.1130	<0.005	<0.0015	--	--	0.7090
	06/26/17	<0.0025	0.0160	0.0587	<0.001	<0.001	0.0177	<0.005	0.840	<0.001	0.0137	<0.0002	0.1160	<0.005	<0.0015	--	--	0.7180
	07/11/17	<0.0025	0.0149	0.0508	<0.001	<0.001	<0.005	<0.005	0.840	<0.001	0.0119	<0.0002	0.1140	<0.005	<0.0015	--	--	1.713
	07/19/17	<0.0025	0.0146	0.0633	<0.001	<0.001	0.00963	<0.005	0.860	<0.001	0.0127	<0.0002	0.1210	<0.005	<0.0015	--	--	2.132
MW-11	06/22/18	<0.0025	0.0154	0.0692	<0.001	<0.001	<0.005	<0.005	0.88	<0.00095 J	0.0122	<0.0002	0.134	<0.005	<0.0015	<0.212	<1.192	<1.40
	09/18/18	NA	0.0140	0.0446	NA	NA	<0.002	<0.003	0.759	<0.0003	0.0141	NA	0.125	NA	NA	0.151	<0.848	0.999
	06/03/19	<0.0008	0.0142	0.0420	<0.0003	<0.0003	<0.002	<0.003	0.953	<0.0003	0.0139	<0.00008	0.109	<0.002	<0.0005	<0.203	0.814	1.017
	10/02/19	<0.0008	0.0139	0.0406	<0.0003	<0.0003	<0.002	<0.003	0.891	<0.0003	0.0127	<0.00008	0.106	<0.002	<0.0005	<0.0288	0.901	0.901
	05/10/17	<0.0025	0.0156	0.0899	<0.001	<0.001	<0.005	<0.005	0.82	0.00239	0.0125	<0.0002	0.0082	<0.005	<0.0015	--	--	0.4560
	05/16/17	<0.0025	0.018	0.0869	<0.001	<0.001	0.00731	<0.005	0.85	0.0113	0.0144	<0.0002	0.00841	<0.005	<0.0015	--	--	1.418
	05/18/17	<0.0025	0.0188	0.0779	<0.001	<0.001	<0.005	<0.005	0.94	0.00204	0.0122	<0.0002	0.00781	<0.005	<0.0015	--	--	0.6390
	06/07/17	<0.0025	0.0175	0.0835	<0.001	<0.001	<0.005	<0.005	0.93	0.00171	0.0137	<0.0002	0.00744	<0.005	<0.0015	--	--	0.5020
	06/21/17	<0.0025	0.0203	0.0822	<0.001	<0.001	<0.005	<0.005	1.04	0.00322	0.0136	<0.0002	0.00659	<0.005	<0.0015	--	--	1.084
	06/26/17	<0.0025	0.0237	0.0954	<0.001	<0.001	0.0131	<0.005	1.00	0.00593	0.0176	<0.0002	0.00796	<0.005	<0.0015	--	--	3.067
MW-11	07/11/17	<0.0025	0.0212	0.0725	<0.001	<0.001	<0.005	<0.005	1.00	<0.001	0.012	<0.0002	0.00765	<0.005	<0.0015	--	--	0.7530
	07/19/17	<0.0025	0.0224	0.0709	<0.001	<0.001	0.00762	<0.005	1.01	0.0018	0.0137	<0.0002	0.00783	<0.005	<0.0015	--	--	1.551
	06/21/18	<0.0025	0.0367	0.0805	<0.001	<0.001	<0.005	<0.005	0.96	0.00241	0.0135	<0.0002	0.00465	<0.005	<0.0015	<0.234	<1.312	<1.55
	09/18/18	NA	0.0382	0.0645	NA	NA	<0.002	<0.003	0.754	<0.0003	0.0139	NA	0.00445 J	NA	NA	<0.188	0.597	0.785
	06/03/19	<0.0008	0.0379	0.0834	<0.0003	<0.0003	<0.002	<0.003	0.0837	<0.0003	0.0154	<0.00008	0.00316 J	<0.002	<0.0005	<0.481	0.991	1.472
	10/02/19	<0.0008	0.0379	0.0744	<0.0003	<0.0003	<0.002	<0.003	0.768	0.000391 J	0.014	<0.00008	0.00259 J	<0.002	<0.0005	1.57	0.478	2.040

Notes:

1. All concentrations in mg/L. Ra 226/228 Combined in pCi/L.
2. J - concentration is below sample quantitation limit; result is an estimate.
3. Non-detect Ra isotope results were assigned a value equal to the minimum detectable concentration.
4. NA = Not analyzed.

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