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REPORT ON

2017 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT CROSS GENERATING STATION; CLASS 3 LANDFILL CROSS, SOUTH CAROLINA

by Haley & Aldrich, Inc.
Greenville, South Carolina

for South Carolina Public Service Authority (Santee Cooper)
Moncks Corner, South Carolina

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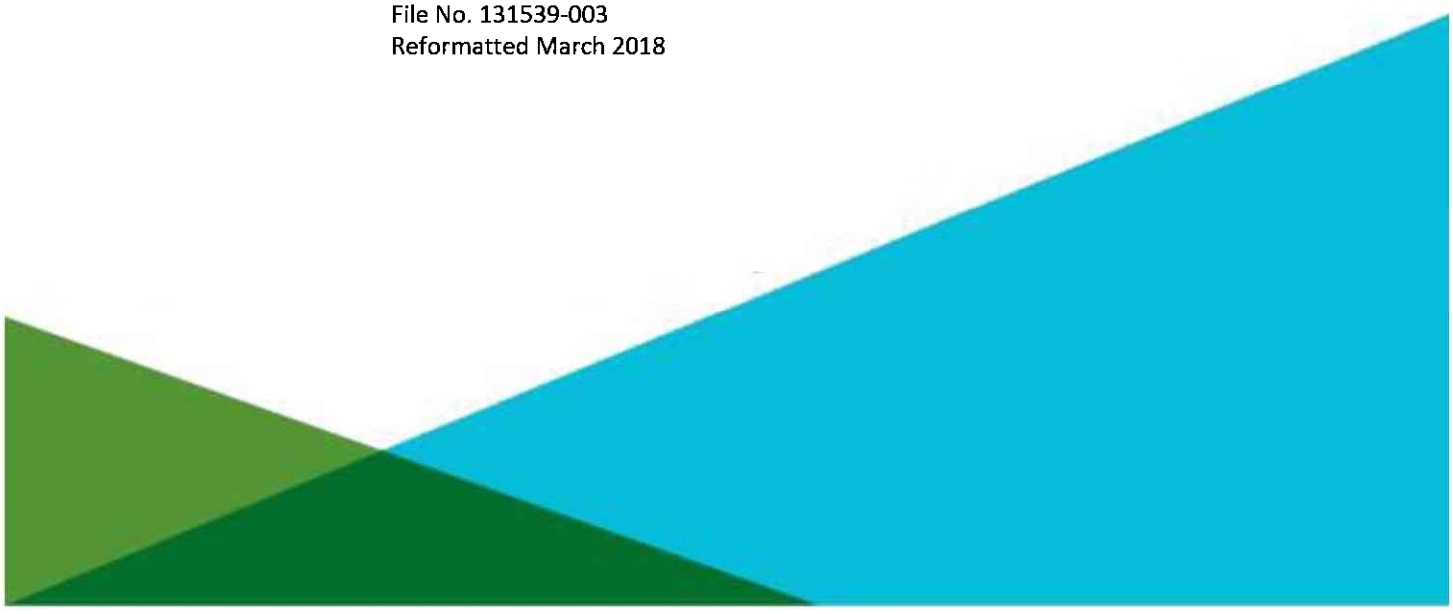

Annual Groundwater Monitoring Report Summary

Haley & Aldrich, Inc. (Haley & Aldrich) has prepared this 2017 Annual Groundwater Monitoring Corrective Action Report for the Cross Generating Station (CGS). This 2017 Annual Report was developed to comply with the United States Environmental Protection Agency (USEPA) Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals (CCR) from Electric Utilities, 40 CFR Part 257, Subpart D dated 17 April 2015 (Rule), specifically subsection §257.90(e)(1) through (5). South Carolina Public Service Authority (Santee Cooper) operates the existing coal combustion residuals (CCR) management unit referred to as the Class 3 Landfill at CGS located in Berkeley County, South Carolina near the community of Cross. This CCR unit is subject to the Rule since it was active as of the effective date of the Rule.

This annual report addresses the CCR management unit, referred to as the Class 3 Landfill, at CGS, as described in the Groundwater Monitoring Program report, which was certified and placed in the facility's operating record on October 17, 2017 as required by §257.105(h)(2) and posted on the facility's website on November 16, 2017 as required by §257.107(h)(2).

To report on the activities conducted during the prior calendar year and document compliance with the Rule, the specific requirements listed in §257.90(e)(1) through (5) are provided below in bold/italic type followed by a short narrative addressing how that specific requirement was met.

§257.90 APPLICABILITY

§257.90(e) Annual groundwater monitoring and corrective action report. For existing CCR landfills and existing CCR surface impoundments, no later than January 31, 2018, and annually thereafter, the owner or operator must prepare an annual groundwater monitoring and corrective action report. For new CCR landfills, new CCR surface impoundments, and all lateral expansions of CCR units, the owner or operator must prepare the initial annual groundwater monitoring and corrective action report no later than January 31 of the year following the calendar year a groundwater monitoring system has been established for such CCR unit as required by this subpart, and annually thereafter. For the preceding calendar year, the annual report must document the status of the groundwater monitoring and corrective action program for the CCR unit, summarize key actions completed, describe any problems encountered, discuss actions to resolve the problems, and project key activities for the upcoming year. For purposes of this section, the owner or operator has prepared the annual report when the report is placed in the facility's operating record as required by §257.105(h)(1).

As required, this annual report documents the status of the groundwater monitoring program for the CCR management unit at CGS and summarizes key actions completed during the prior calendar year.

In 2018, statistical analysis of the groundwater quality data collected under the Detection Monitoring program for constituents in Appendix III will be completed. Detection Monitoring is planned for 2018 unless the analysis indicates that a Statistically Significant Increase (SSI) over background levels for one or more of the Appendix III constituents has been detected at any downgradient well during Detection Monitoring at the waste boundary. If an SSI occurs either Assessment Monitoring or an Alternate Source Demonstration (ASD) would be initiated for the CCR unit.

If an ASD is successful, a report will be completed with results certified by a qualified professional engineer and the CCR unit will continue with Detection Monitoring. If the ASD is not successful or is not completed within 90 days after completing the statistical analysis, the unit would enter Assessment Monitoring.

At a minimum, the annual groundwater monitoring and corrective action report must contain the following information, to the extent available:

§257.90(e)(1) AERIAL IMAGE OF GROUNDWATER MONITORING PROGRAM

§257.90(e)(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;

As required by §257.90(e)(1), a map showing the location of the Class 3 Landfill and associated upgradient and downgradient monitoring wells is included in this report as **Figure 1**. In addition, this information is presented in the Groundwater Monitoring Program report prepared for CGS, which was placed in the facility's operating record on October 17, 2017 as required by §257.105(h)(2).

§257.90(e)(2) ADJUSTMENTS TO GROUNDWATER MONITORING PROGRAM

§257.90(e)(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;

To comply with the requirements of §257.91, a groundwater monitoring network of seven (7) wells (two upgradient and five downgradient) were installed for the Class 3 Landfill at CGS. Details of the design, and construction of the monitoring wells are summarized in the Groundwater Monitoring Program Report which was placed in the facility's operating record on October 17, 2017, as required by §257.105(h)(2). None of the wells installed to monitor groundwater quality upgradient and downgradient of the Class 3 Landfill were installed or decommissioned in 2017.

§257.90(e)(3) SUMMARY OF GROUNDWATER ANALYSIS

§257.90(e)(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 [upgradient] ***and downgradient well, the dates the samples were collected, and whether the sample was required by the detection monitoring or assessment monitoring programs;***

In accordance with §257.94(b), a minimum of eight independent samples from each upgradient and downgradient monitoring well were collected prior to October 17, 2017. A summary of the groundwater monitoring program for the Class 3 Landfill, including the analytical results for the Appendix III and Appendix IV list of constituents, is presented in **Table 1** of this report. All the samples obtained were required by the detection monitoring program.

§257.90(e)(4) CURRENT GROUNDWATER MONITORING PROGRAM

§257.90(e)(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);

Consistent with §257.90(e), the 2017 annual report documents activities conducted during the prior calendar year at the CCR management units subject to the Rule. The statistical analysis of the initial minimum eight rounds of groundwater sampling was not completed in 2017 and therefore is not reported in this Annual Report. 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) will be provided, as appropriate, in subsequent annual reports.

§257.90(e)(5) OTHER REQUIRED INFORMATION

§257.90(e)(5) Other information required to be included in the annual report as specified in §257.90 through §257.98.

This initial Annual Report documents activities conducted to comply with Sections §257.90 through §257.94 of the Rule. There are no applicable requirements from Sections §257.95 through §257.98.

Attachments
Table 1. Summary of Analytical Results
Figure 1. Location of Groundwater Monitoring Wells for CCR Compliance - 2017

TABLE 1 - Summary of Analytical Results

			Appendix III Constituents									Appexdix IV Constituents																					Field Parameters							
Well ID	Purpose	Date of Sample Event	Boron	Boron	Calcium	Calcium	Chloride	Fluoride	Sulfate	Total Dissolved Solids	pH	Antimony	Arsenic	Barium	Barium	Beryllium	Cadmium	Chromium	Cobalt	Fluoride	Lead	Lithium	Lithium	Mercury	Molybdenum	Radium 226	Radium 228	Selenium	Selenium	Thallium	Depth to Groundwater	Groundwater Elevation	pH	Specific Conductivity	Temperature	Oxidation Reduction Potential	Turbidity	Dissolved Oxygen
		Unit	ug/L	ug/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	SU	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	pCi/L	pCi/L	ug/L	ug/L	ug/L	Feet (btoc)	Feet (msl)	SU	uS	C	mv	NTU	ppm
		Method	EPA 6010D	EPA 6020B	EPA 6010D	EPA 6020B	EPA 300.0	EPA 300.0	EPA 300.0	SM 2540C		EPA 6020B	EPA 6020B	EPA 6010D	EPA 6020B	EPA 6020B	EPA 6020B	EPA 6020B	EPA 6020B	EPA 300.0	EPA 6020B	EPA 6010D	EPA 6020B	EPA 7470	EPA 6010D	EPA 900.1 Mod	EPA 904.0	EPA 6010D	EPA 6020B	EPA 6020B						SM2580		
Site Background Wells																																							
PM-1	Baseline	10/19/2015		17.8	26		12.7	<0.10	26.5	206	5.46	<5.0	4.2		100	<0.50	<0.50	<5.0	1	<0.10	<2.5		<10.0	<0.20	<10	1.59	<3.00	<20		<1.0	7.42	75.82	5.46	295	21.11	22	7.1	1.16
PM-1	Baseline	1/26/2016		<15.0	27		11.3	<0.10	25.5	165	5.2	<5.0	3.5		87	<0.50	<0.50	<5.0	0.9	<0.10	<2.5		<10.0	<1.0	<10	1.31	<3.00	<20		<1.0	7.03	76.21	5.2	275	16.01	65	23.1	1.11
PM-1	Baseline	4/19/2016		<15.0		23.3	12.1	<0.10	20.2	130	5.32	<5.0	<5.0		87.5	<0.5	<0.5	<5.0	0.79	<0.10	<1.0		<10.0	<0.200	<10.0	<1.00	<3.00		<10.0	<1.0	7.62	75.62	5.32	223	18.97	81	0	0.49
PM-1	Baseline	7/18/2016		16.3		18.8	13.2	<0.10	16	124	5.21	<5.0	<5.0	86.8		<0.5	<0.5	<5.0	0.85	<0.10	<1.0		<10.0	<0.200	<10.0	<1.00	<3.00		<10.0	<1.0	8.36	74.88	5.21	2060	24.53	57	0	0.95
PM-1	Baseline	10/11/2016		16.5		16.4	12.8	<0.10	19.3	200	5.04	<5	<5		77	<0.5	<0.50	<5	0.851	<0.10	<1		<10.0	<0.200	<10.0	1.49	<3.00		<10	<1	7.1	76.14	5.04	184	19.96	49	2.4	1.33
PM-1	Baseline	1/23/2017		<15.0		10.4	13.5	<0.10	8.82	138	5	<5.0	<5.0		70.3	<0.50	<0.50	<5.0	0.93	<0.10	<1.0		<10.0	<0.200	<10.0	<1.00	<3.00		<10	<1.0	7.16	76.08	5	141	15.5	87	3.1	0.87
PM-1	Baseline	4/17/2017	19			12.5	12.7	<0.10	9.71	56	5.2	<5.0	<5.0		80.2	<0.50	<0.50	<5.0	0.98	<0.10	<1.0	<10		<0.200	<10.0	<1.00	<3.00		<10	<1.0	7.48	75.76	5.2	149	21.42	86	1.1	0.8
PM-1	Baseline	9/25/2017	18			15.4	13.3	<0.10	8.03	<40	5.26	<5.0	<5.0		75.3	<0.50	<0.50	<5.0	0.91	<0.10	<1.0	<10		<0.20	<10.0	<1.00	<3.00		<10	<1.0	7.81	75.43	5.26	179	24.34	92	0	0.85
PM-1	Detection	10/9/2017	21		17		12.6	<0.10	8.77	80	5.21																				8.42	74.82	5.21	186	24.42	65	0	1.04
PM-1	**total samples**		**3**	**6**	**3**	**6**	**9**	**9**	**9**	**9**	**9**	**8**	**8**	**1**	**7**	**8**	**8**	**8**	**8**	**8**	**8**	**2**	**6**	**8**	**8**	**8**	**8**	**2**	**6**	**8**	**9**	**9**	**9**	**9**	**9**	**9**	**9**	**9**
CBW-1	Baseline	10/19/2015		32	27		3.21	0.25	81.5	150	4.46	<5.0	16		61	0.63	<0.50	14	3.4	0.25	11		<10.0	<0.20	<10	<1.00	<3.00	<20		<1.0	7.78	78.02	4.46	243	21.36	345	285	0.86
CBW-1	Baseline	1/26/2016		21.8	27		2.95	0.3	88.2	120	4.13	<5.0	6.7		44	<0.50	<0.50	<5.0	1.3	0.3	3.6		<10.0	<1.0	<10	<1.00	<3.00	<20		<1.0	8.11	77.69	4.13	240	17.09	350	8.4	0.78
CBW-1	Baseline	4/19/2016		18.3		29.4	2.33	0.29	86	120	4.33	<5.0	<5.0		43.8	<0.5	<0.5	<5.0	1.16	0.29	2.8		<10.0	<0.200	<10.0	<1.00	4.31		<10.0	<1.0	9.13	76.67	4.33	220	18.73	148	0	0.48
CBW-1	Baseline	7/18/2016		21.7		28.7	2.95	0.27	90.1	132	4.39	<5.0	<5.0	37.8		<0.5	<0.5	<5.0	1.15	0.27	3.18		<10.0	<0.200	<10.0	<1.00	<3.00		<10.0	<1.0	10.67	75.13	4.39	2390	22.89	61	0	0.73
CBW-1	Baseline	10/11/2016		30.2		22.7	3	0.28	73.7	151.7	4.15	<5	5.37		47.3	<0.5	<0.50	<5	1.09	0.28	3.75		<10.0	<0.200	<10.0	1.43	<3.00		<10	<1	7.32	78.48	4.15	197	19.9	102	4.6	1.04
CBW-1	Baseline	1/23/2017		24.9		26.2	2.45	0.25	77.7	148	4.32	<5.0	<5.0		42.1	<0.50	<0.50	<5.0	1	0.25	3.1		<10.0	<0.200	<10.0	3.34	<3.00		<10	<1.0	8.33	77.47	4.32	214	16.66	153	2.1	0.78
CBW-1	Baseline	4/17/2017	18			25.6	2.96	0.22	71.2	62	4.26	<5.0	<5.0		41.8	<0.50	<0.50	<5.0	1.1	0.22	2.8	<10		<0.200	<10.0	<1.00	<3.00		<10	<1.0	8.9	76.9	4.26	201	22.56	252	2	0.71
CBW-1	Baseline	9/25/2017	24			21.9	2.51	0.23	74.5	<40	4.34	<5.0	<5.0		44	<0.50	<0.50	<5.0	0.86	0.23	3.2	<10		<0.20	<10.0	<1.00	<3.00		<10	<1.0	8.8	77	4.34	182	25.12	145	0	0.74
CBW-1	Detection	10/9/2017	23		23		2.73	0.22	76.8	115	4.25																				9.73	76.07	4.25	203	25.06	112	0	0.82
CBW-1	**total samples**		**3**	**6**	**3**	**6**	**9**	**9**	**9**	**9**	**9**	**8**	**8**	**1**	**7**	**8**	**8**	**8**	**8**	**8**	**8**	**2**	**6**	**8**	**8**	**8**	**8**	**2**	**6**	**8**	**9**	**9**	**9**	**9**	**9**	**9**	**9**	**9**
Class 3 Landfill Wells																																						
CLF1B-1	Baseline	10/21/2015		<15.0	180		38.7	0.17	123	594	6.49	<5.0	<3.0		230	<0.50	<0.50	<5.0	2.7	0.17	<2.5		<10.0	<0.20	<10	<1.00	<3.00	<20		<1.0	6.67	77.09	6.49	968	21.74	16	0	0.65
CLF1B-1	Baseline	2/1/2016		<15.0	180		39.7	0.12	136	602	6.54	<5.0	<3.0		270	<0.50	<0.50	<5.0	3.6	0.12	<2.5		<10.0	<0.20	<10	1.16	<3.00	<20		<1.0	6.05	77.71	6.54	974	17.13	141	0	0.83
CLF1B-1	Baseline	4/19/2016		<15.0		189	39.2	0.12	136	558.3	6.67	<5.0	<5.0		232	<0.5	<0.5	<5.0	4.11	0.12	<1.0		<10.0	<0.200	<10.0	<1.00	<3.00		<10.0	<1.0	7.81	75.95	6.67	914	18.43	121	0	0.44
CLF1B-1	DUPLICATE	4/19/2016		<15.0		188	38.9	0.18	136	555		<5.0	<5.0		241	<0.5	<0.5	<5.0	3.76	0.18	<1.0		10.1	<0.200	<10.0	<1.00	<3.00		<10.0	<1.0								
CLF1B-1	Baseline	7/18/2016		<15.0		181	41.5	0.12	134	574	6.52	<5.0	<5.0	198		<0.5	<0.5	<5.0	3.66	0.12	<1.0		<10.0	<0.200	<10.0	<1.00	<3.00		<10.0	<1.0	9.07	74.69	6.52	8690	24.61	73	0	0.96
CLF1B-1	DUPLICATE	7/18/2016		<15.0		181	40.8	0.12	135	596		<5.0	<5.0	203		<0.5	<0.5	<5.0	3.7	0.12	<1.0		<10.0	<0.200	<10.0	<1.00	<3.00		<10.0	<1.0								
CLF1B-1	Baseline	10/13/2016		<15.0		175	41	<0.10	153	651.7	6.56	<5	<5		206	<0.5	<0.50	<5	3.49	<0.10	<1		<10.0	<0.200	<10.0	4.29	<3.00		<10	<1	5.85	77.91	6.56	900	22.22	19	0	0.91
CLF1B-1	DUPLICATE	10/13/2016		<15.0		175	40.2	<0.10	149	496.7		<5	<5		202	<0.5	<0.50	<5	3.32	<0.10	<1		<10.0	<0.200	<10.0	<1.00	<3.00		<10	<1								
CLF1B-1	Baseline	1/30/2017		<15.0		171	38.7	0.13	153	602	6.66	<5.0	<5.0		182	<0.50	<0.50	<5.0	2.4	0.13	<1.0		11.5	<0.200	<10.0	<1.00	<3.00		<10	<1.0	6.51	77.25	6.66	972	12.84	169	2.6	1.21
CLF1B-1	DUPLICATE	1/30/2017		<15.0		175	38.6	0.13	151	578		<5.0	<5.0		198	<0.50	<0.50	<5.0	2.6	0.13	<1.0		10.9	<0.200	<10.0	<1.00	<3.00		<10	<1.0								
CLF1B-1	Resample Hg	3/1/2017																						<0.200							6.99	76.77	6.82	964	20.42	226	1.1	1.79
CLF1B-1	DUPLICATE for Resample Hg	3/1/2017																						<0.200														
CLF1B-1	Baseline	4/17/2017	16			191	34.2	0.14	150	556	6.57	<5.0	<5.0		184	<0.50	<0.50	<5.0	3.2	0.14	<1.0	10		<0.200	<10.0	<1.00	<3.00		<10	<1.0	6.58	77.18	6.57	909	21.99	173	0	0.71
CLF1B-1	DUPLICATE	4/17/2017	<15	<15		185	33.9	0.15	154	696		<5.0	<5.0		181	<0.50	<0.50	<5.0	3.2	0.15	<1.0	11	11	<0.200	<10.0	<1.00	0.935		<10	<1.0								
CLF1B-1	Baseline	9/25/2017	<15			167	38.9	<0.10	135	498	6.67	<5.0	<5.0		158	<0.50	<0.50	<5.0	3.5	<0.10	<1.0	10		<0.20	<10.0	<1.00	<3.00		<10	<1.0	6.71	77.05	6.67	942	23.58	79	0	0.83
CLF1B-1	DUPLICATE	9/25/2017	<15			169	38.7	0.11	136	548		<5.0	<5.0		162	<0.50	<0.50	<5.0	3.5	0.11	<1.0	10		<0.20	<10.0	1.63	<3.00		<10	<1.0								
CLF1B-1	Detection	10/10/2017	15		170		37.4	0.13	131	581.7	6.28																				7.79	75.97	6.28	990	22.56	62	0	0.63
CLF1B-1	DUPLICATE	10/10/2017	15		180		36.9	0.13	130	650																												
CLF1B-1	**total samples**		**6**	**11**	**4**	**12**	**16**	**16**	**16**	**16**	**9**	**14**	**14**	**2**	**12**	**14**	**14**	**14**	**14**	**14**	**14**	**4**	**11**	**16**	**14**	**14**	**14**	**2**	**12**	**14**	**10**	**10**	**10**	**10**	**10**	**10**	**10**	**10**
CLF1B-2	Baseline	10/21/2015		18.6	210		62.7	0.16	22.4	472	7.09	<5.0	<3.0		160	<0.50	<0.50	<5.0	2.5	0.16	<2.5		<10.0	<0.20	<10	<1.00	<3.00	<20		<1.0	5.1	76.94	7.09	711	21.89	-39	0	0.63
CLF1B-2	DUPLICATE	10/21/2015		19.1	160		62.3	0.15	21.5	470		<5.0	<3.0		160	<0.50	<0.50	<5.0	1.3	0.15	<2.5		<10.0	<0.20	<10	1.16	<3.00	<20		<1.0								
CLF1B-2	Baseline	2/1/2016		<15.0	120		64.6	0.11	19.6	433	6.79	<5.0	<3.0		170	<0.50	<0.50	<5.0	1.2	0.11	<2.5		<10.0	<0.20	<10	<1.00	<3.00	<20		<1.0	4.38	77.66	6.79	682	18.25	24	0	0.6
CLF1B-2	Baseline	4/19/2016		15.2		130	66.6	<0.10	16.3	415	6.92	<5.0	<5.0		157	<0.5	<0.5	<5.0	0.86	<0.10	<1.0		<10.0	<0.200	<10.0	<1.00	<3.00		<10.0	<1.0	5.17	76.87	6.92	642	19.39	31	0	0.44
CLF1B-2	Baseline	7/19/2016		39.8		131	70.9	<0.10	13.7	512	6.94	<5.0	<5.0	147		<0.5	<0.5	<5.0	1.39	<0.10	<1.0		<10.0	<0.200	<10.0	<1.00	<3.00		<10.0	<1.0	7.4	74.64	6.94	6570	22.65	9	0	0.68
CLF1B-2	Baseline	10/13/2016		15.7		121	69	<0.10	13.3	486.7	6.87	<5	<5		153	<0.5	<0.50	<5	1.25	<0.10	<1		<10.0	<0.200	<10.0	<1.00	<3.00		<10	<1	4.22	77.82	6.87	643	24.46	-31	0	0.5
CLF1B-2	Baseline	1/30/2017		16.2		124	70.4	<0.10	13	462	6.85	<5.0	<5.0		157	<0.50	<0.50	<5.0	1	<0.10	<1.0		<10.0	<0.200	<10.0	<1.00	<3.00		<10	<1.0	4.8	77.24	6.85	702	13.53	95	0	0.69
CLF1B-2	Resample Hg	3/1/2017																						<0.200							5.22	77.82	6.94	697	19.76	84	2.7	0.85
CLF1B-2	Baseline	4/17/2017	18			131	69.7	0.12	16.4	390	6.92	<5.0	<5.0		149	<0.50	<0.50	<5.0	1.4	0.12	<1.0	<10		<0.200	<10.0	<1.00	<3.00		<10	<1.0	4.95	77.09	6.92	673	21.22	97	0	0.62
CLF1B-2	Baseline	9/25/2017	16			127	76	<0.10	12.5	398	6.97	<5.0	<5.0		153	<0.5	<0.50	<5.0	1.5	<0.10	<1.0	<10		<0.20	<10.0	<1.00	<3.00		<10	<1.0	5.1	76.94	6.97	710	23.4	38	0	0.69
CLF1B-2	Detection	10/11/2017	17		140		74.1	0.11	12.9	396.7	7.07																				6.08	75.96	7.07	712	26.35	-75	0.3	0.67
CLF1B-2	**total samples**		**3**	**7**	**4**	**6**	**10**	**10**	**10**	**10**	**9**	**9**	**9**	**1**	**8**	**9**	**9**	**9**	**9**	**9**	**9**	**2**	**7**	**10**	**9**	**9**	**9**	**3**	**6**	**9**	**10**	**10**	**10**	**10**	**10**	**10**	**10**	**10**
CLF1B-3	Baseline	10/22/2015		17.2	100		26.8	0.12	33	326	6.94	<5.0	<3.0		110	<0.50	<0.50	<5.0	<0.50	0.12	<2.5		<10.0	<0.20	<10	1.42	<3.00	<20		<1.0	5.63	77.12	6.94	551	19.69	173	0.7	0.68
CLF1B-3	DUPLICATE	10/22/2015		17.4	100		27.2	0.12	35.4	320		<5.0	<3.0		110	<0.50	<0.50	<5.0	<0.50	0.12	<2.5		<10.0	<0.20	<10	<1.00	<3.00	<20		<1.0								
CLF1B-3	Baseline	2/1/2016		18.9	140		22.4	0.13	107	447	6.7	<5.0	<3.0		120	<0.50	<0.50	<5.0	0.86	0.13	<2.5		<10.0	<0.20	<10	1.29	<3.00	<20		<1.0	5.04	77.71	6.7	699	18.81	54	0	0.66
CLF1B-3	Baseline	4/19/2016		24.6		167	22.1	0.12	116	5355	6.82	<5.0	<5.0		107	<0.5	<0.5	<5.0	2.7	0.12	<1.0		<10.0	<0.200	<10.0	<1.00	<3.00		<10.0	<1.0	5.97	76.76	6.82	771	19.89	23	0	0.35
CLF1B-3	Baseline	7/19/2016		41.7		207	23.5	<0.10	203	686	6.59	<5.0	<5.0	118		<0.5	<0.5	<5.0	5.6	<0.10	<1.0		<10.0	<0.200	<10.0	<1.00	<3.00		<10.0	<1.0	8.32	74.43	6.59	9760	23.18	-3	0	0.67
CLF1B-3	Baseline	10/13/2016		25.8		113	25.2	<0.10	63.9	276.7	6.63	<5	<5		97.9	<0.5	<0.50	<5	4.05	<0.10	<1		<10.0	<0.200	<10.0	<1.00	<3.00		<10	<1	4.68	78.07	6.63	576	25.47	21	0	0.5
CLF1B-3	Baseline	1/30/2017		25		128	23	0.12	84.4	430	6.81	<5.0	<5.0		93.6	<0.50	<0.50	<5.0	3.2	0.12	<1.0		<10.0	<0.200	<10.0	<1.00	<3.00		<10	<1.0	5.36	77.39	6.81	655	14.23	90	0	0.6
CLF1B-3	Resample Hg	3/1/2017																						<0.200							5.91	76.84	6.73	982	19.72	67	1.4	0.64
CLF1B-3	Baseline	4/17/2017	27			177	20.8	0.13	159	452	6.77	<5.0	<5.0		123	<0.50	<0.50	<5.0	5.8	0.13	<1.0	<10		<0.200	<10.0	<1.00	<3.00		<10	<1.0	5.66	77.09	6.77	794	22.56	74	7.1	0.66
CLF1B-3	Baseline	9/25/2017	50			183	22.7	<0.10	174	530	6.74	<5.0	<5.0		126	<0.50	<0.50	<5.0	8.5	<0.10	<1.0	<10		<0.20	<10.0	<1.00	<3.00		<10	<1.0	5.82	76.93	6.74	947	23.62	17	0	0.58
CLF1B-3	Detection	10/11/2017	64		220		24.8	0.15	226	621.7	6.67																				6.77	75.96	6.67	1050	24.93	-13	0	0.63
CLF1B-3	**total samples**		**3**	**7**	**4**	**6**	**10**	**10**	**10**	**10**	**9**	**9**	**9**	**1**	**8**	**9**	**9**	**9**	**9**	**9**	**9**	**2**	**7**	**10**	**9**	**9**	**9**	**3**	**6**	**9**	**10**	**10**	**10**	**10**	**10**	**10**	**10**	**10**
CLF1B-4	Baseline	10/22/2015		27.2	110		51.1	0.12	34.3	350	7.17	<5.0	<3.0		45	<0.50	<0.50	<5.0	<0.50	0.12	<2.5		<10.0	<0.20	<10	<1.00	<3.00	<20		<1.0	5.56	77.18	7.17	610	19.92	60	44	0.63
CLF1B-4	Baseline	1/27/2016		29.2	67		51.1	0.13	31.1	375	7.37	<5.0	<3.0		55	<0.50	<0.50	<5.0	<0.50	0.13	<2.5		<10.0	<1.0	<10	<1.00	<3.00	<20		<1.0	5.04	77.7	7.37	471	15.57	25	19.7	2.62
CLF1B-4	Baseline	4/19/2016		18.2		94.5	50.9	<0.10	22.4	290	7.17	<5.0	<5.0		49.7	<0.5	<0.5	<5.0	<0.5	<0.10	<1.0		<10.0	<0.200	<10.0	<1.00	<3.00		<10.0	<1.0	6.06	76.66	7.17	528	19.16	74	0	0.63
CLF1B-4	Baseline	7/19/2016		20.4		97.3	52.7	<0.10	17.4	384	7.16	<5.0	<5.0	44.6		<0.5	<0.5	<5.0	<0.5	<0.10	<1.0		<10.0	<0.200	<10.0	<1.00	<3.00		<10.0	<1.0	8.84	73.9	7.16	5100	23.37	26	0	0.46
CLF1B-4	Baseline	10/13/2016		21.4		180	50.7	<0.10	15.3	360	6.98	<5	<5		51.4	<0.5	<0.50	<5	0.229	<0.10	<1		<10.0	<0.200	<10.0	<1.00	<3.00		<10	<1	4.36	78.38	6.98	487	25.56	15	0	0.46
CLF1B-4	Baseline	1/30/2017		21.7		88.1	49.1	<0.10	16.3	344	7.23	<5.0	<5.0		48.4	<0.50	<0.50	<5.0	<0.50	<0.10	<1.0		<10.0	<0.200	<10.0	<1.00	<3.00		<10	<1.0	5.27	77.47	7.23	524	16.02	104	0	1.95
CLF1B-4	Resample Hg	3/1/2017																						<0.200							5.93	76.81	7.21	529	19.76	346	6	0.87
CLF1B-4	Baseline	4/17/2017	19			92.9	47.4	0.11	16.1	278	7.24	<5.0	<5.0		54	<0.50	<0.50	<5.0	<0.50	0.11	<1.0	<10		<0.200	<10.0	<1.00	<3.00		<10	<1.0	5.7	77.04	7.24	519	25.38	81	0	1.27

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				Appendix III Constituents									Appexdix IV Constituents																			Field Parameters							
Well ID	Purpose	Date of Sample Event		Boron	Boron	Calcium	Calcium	Chloride	Fluoride	Sulfate	Total Dissolved Solids	pH	Antimony	Arsenic	Barium	Barium	Beryllium	Cadmium	Chromium	Cobalt	Fluoride	Lead	Lithium	Lithium	Mercury	Molybdenum	Radium 226	Radium 228	Selenium	Selenium	Thallium	Depth to Groundwater	Groundwater Elevation	pH	Specific Conductivity	Temperature	Oxidation Reduction Potential	Turbidity	Dissolved Oxygen
			Unit	ug/L	ug/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	SU	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	pCi/L	pCi/L	ug/L	ug/L	ug/L	Feet (btoc)	Feet (msl)	SU	uS	C	mv	NTU	ppm
			Method	EPA 6010D	EPA 6020B	EPA 6010D	EPA 6020B	EPA 300.0	EPA 300.0	EPA 300.0	SM 2540C		EPA 6020B	EPA 6020B	EPA 6010D	EPA 6020B	EPA 6020B	EPA 6020B	EPA 6020B	EPA 6020B	EPA 300.0	EPA 6020B	EPA 6010D	EPA 6020B	EPA 7470	EPA 6010D	EPA 900.1 Mod	EPA 904.0	EPA 6010D	EPA 6020B	EPA 6020B						SM2580		
CLF1B-4	Baseline	9/26/2017		17			92.6	53.1	<0.10	14.3	286	7.25	<5.0	<5.0		52	<0.50	<0.50	<5.0	<0.50	<0.10	<1.0	<10		<0.20	<10.0	<1.00	<3.00		<10	<1.0	5.96	76.78	7.25	556	25.58	-15	0	0.5
CLF1B-4	Detection	10/11/2017		20		92		49.9	<0.10	13.7	256.7	7.21																				6.85	75.89	7.21	535	23.85	-6	0	0.71
CLF1B-4	**total samples**			**3**	**6**	**3**	**6**	**9**	**9**	**9**	**9**	**9**	**8**	**8**	**1**	**7**	**8**	**8**	**8**	**8**	**8**	**8**	**2**	**6**	**9**	**8**	**8**	**8**	**2**	**6**	**8**	**10**	**10**	**10**	**10**	**10**	**10**	**10**	**10**
CLF1B-5	Baseline	10/22/2015			15.8	160		69.5	0.11	24.2	528	6.83	<5.0	<3.0		78	<0.50	<0.50	<5.0	2.9	0.11	<2.5		<10.0	<0.20	<10	2.09	<3.00	<20		<1.0	4.08	77.01	6.83	829	23.47	-72	60.8	0.61
CLF1B-5	Baseline	1/27/2016			15.5	160		90.9	<0.10	44.4	662.5	6.76	<5.0	<3.0		85	<0.50	<0.50	<5.0	3.6	<0.10	<2.5		<10.0	<1.0	<10	<1.00	<3.00	<20		<1.0	3.51	77.58	6.76	936	15.98	43	11.1	1.01
CLF1B-5	DUPLICATE	1/28/2016			<15.0	160		90.7	0.12	43.8	675		<5.0	<3.0		84	<0.50	<0.50	<5.0	3.6	0.12	<2.5		<10.0	<1.0	<10	<1.00	<3.00	<20		<1.0								
CLF1B-5	Baseline	4/25/2016			<15.0		192	99.8	<0.10	63.6	755	6.68	<5.0	<5.0		85.6	<0.5	<0.5	<5.0	2.33	<0.10	<1.0		<10.0	<0.200	<10.0	<1.00	<3.00		<10.0	<1.0	4.65	76.44	6.68	909	21.23	-2	1.9	0.51
CLF1B-5	Baseline	7/19/2016			<15.0		202	113	<0.10	87.3	848	6.62	<5.0	<5.0	92		<0.5	<0.5	<5.0	2.44	<0.10	<1.0		<10.0	<0.200	<10.0	<1.00	<3.00		<10.0	<1.0	7.52	73.57	6.62	9060	31.62	-47	9	0.77
CLF1B-5	Baseline	10/14/2016			<15.0		196	109	<0.10	110	763.3	6.51	<5	<5		97.4	<0.5	<0.50	<5	2.55	<0.10	<1		<10.0	<0.200	<10.0	<1.00	<3.00		<10	<1	3.31	77.78	6.51	1040	20.56	2	0.2	0.69
CLF1B-5	Baseline	1/24/2017			15.3		205	110	<0.10	112	758	6.74	<5.0	<5.0		111	<0.50	<0.50	<5.0	4.2	<0.10	<1.0		<10.0	<0.200	<10.0	<1.00	3.55		<10	<1.0	3.31	77.78	6.74	1100	16.98	-6	0	0.88
CLF1B-5	Baseline	4/18/2017		<15			223	114	<0.10	130	756	6.61	<5.0	<5.0		102	<0.50	<0.50	<5.0	3.4	<0.10	<1.0	<10		<0.200	<10.0	<1.00	<3.00		<10	<1.0	4.32	76.77	6.61	1140	20.83	54	0	0.85
CLF1B-5	Baseline	9/26/2017		15			224	119	<0.10	165	812	6.77	<5.0	<5.0		109	<0.50	<0.50	<5.0	3.1	<0.10	<1.0	<10		<0.20	<10.0	<1.00	<3.00		<10	<1.0	4.5	76.59	6.77	1250	27.13	-42	0	0.52
CLF1B-5	Detection	10/11/2017		19		220		117	<0.10	177	776.7	6.72																				5.24	75.85	6.72	1210	24.85	-8	0	0.76
CLF1B-5	**total samples**			**3**	**7**	**4**	**6**	**10**	**10**	**10**	**10**	**9**	**9**	**9**	**1**	**8**	**9**	**9**	**9**	**9**	**9**	**9**	**2**	**7**	**9**	**9**	**9**	**9**	**3**	**6**	**9**	**9**	**9**	**9**	**9**	**9**	**9**	**9**	**9**

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LEGEND

BACKGROUND WELLS
EXISTING

CLASS 2 LANDFILL WELLS
EXISTING

CLASS 3 LANDFILL AREA B WELLS
EXISTING

ASH POND WELLS
EXISTING

NOTE:

IMAGE SOURCE: GOOGLE EARTH (DIGITAL GLOBE) 2015

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SCALE IN FEET

HALEY ALDRICH

SANTEE COOPER
CROSS GENERATING STATION
CROSS, SOUTH CAROLINA

LOCATION OF GROUNDWATER MONITORING WELLS FOR CCR COMPLIANCE - 2017

FIGURE 1

GIS FILE PATH: G:\Projects\42122_Santee_Cooper\Global\GIS\Map_Projects\Cross\2015_08\42122_000_01Alt_MW_Location_submittal.mxd — USER: gcarson — LAST SAVED: 9/3/2015 11:21:06 AM