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# 2021 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT CLOSED GYPSUM POND, CROSS GENERATING STATION CROSS, SOUTH CAROLINA

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for South Carolina Public Service Authority Moncks Corner, South Carolina

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# 1. Annual Groundwater Monitoring Report Summary

Haley & Aldrich, Inc. has prepared this 2021 Annual Groundwater Monitoring Corrective Action Report on behalf of the South Carolina Public Service Authority (Santee Cooper) for the Closed Gypsum Pond at the Cross Generating Station. This 2021 Annual Report was prepared to comply with the United States Environmental Protection Agency (US EPA) Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals (CCR) from Electric Utilities, 40 Code of Federal Regulations (CFR) Part 257, Subpart D dated 17 April 2015 (CCR Rule), specifically subsection § 257.90(e)(1) through (6).

Santee Cooper filed a Notice of Intent with the South Carolina Department of Health and Environmental Control (SCDHEC) on 10 March 2016 to initiate closure of the Gypsum Pond. The SCDHEC-approved closure plan met the requirements of § 257.102(b) and as of 17 October 2016, Santee Cooper had removed all CCR material from the Gypsum Pond. On 22 March 2017, SCDHEC formally certified the closure. As a result of the Gypsum Pond being closed by complete removal of CCR material prior to the deadline to establish a groundwater monitoring system in 257.90(b)(1), Santee Cooper concluded at that time the Gypsum Pond was not subject to the groundwater monitoring and corrective action requirements of the Federal CCR Rule.

Upon further evaluation of the Rule and in consultation with the US EPA, Santee Cooper decided that the groundwater monitoring and corrective action requirements of the Federal CCR Rule do apply to this unit even after closure by removal was completed. To that end, Santee Cooper has moved ahead with development of a groundwater monitoring system around the Closed Gypsum Pond, located in a highly congested and active area of the generating station with multiple simultaneous ongoing operations.

In accordance with § 257.90(e)(6), an overview of the status of groundwater monitoring and corrective action programs for the CCR unit is provided below:

- At the start of the current annual reporting period (1 January 2021), Santee Cooper was evaluating groundwater flow conditions and was in the process of installing additional groundwater monitoring wells to supplement the original monitoring well network constructed in 2020. The additional monitoring wells (CGYP-4, CGYP-5, and CGYP-6) were installed to better characterize groundwater flow and groundwater quality in the vicinity of the closed Unit.
- At the end of the current annual reporting period (31 December 2021), seven rounds of baseline groundwater sampling have been validated for the newly installed wells at the Closed Gypsum Pond. The eighth round of baseline groundwater samples were collected in December 2021, however the analytical results from this sampling round were not received in 2021 and therefore are not included in this annual report. Baseline sampling along with detection monitoring will be completed in the first quarter of 2022 and will be reported in the 2022 annual report.
- Since baseline and detection monitoring were not completed in 2021, the statistical analysis to determine if statistically significant increases of one or more of the Appendix III constituents are present downgradient of the Closed Gypsum Pond was not conducted in 2021.



• Since detection monitoring will not be completed until 2022, an assessment monitoring program, an assessment of corrective measures, a public meeting, remedy selection, and remedial activities were not required to be initiated or completed in 2021 for this unit.

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

## 2. 40 CFR § 257.90 Applicability

### 2.1 40 CFR § 257.90(A)

Except as provided for in § 257.100 for inactive CCR surface impoundments, all CCR landfills, CCR surface impoundments, and lateral expansions of CCR units are subject to the groundwater monitoring and corrective action requirements under § 257.90 through § 257.98.

As stated in Section 1, Santee Cooper is complying with the groundwater monitoring and corrective action requirements described under CFR Title 40 § 257.90 through § 257.98 of the CCR Rule for the Closed Gypsum Pond. This document addresses the requirements outlined in § 257.90(e) for the Owner/Operator to prepare an Annual Groundwater Monitoring and Corrective Action Report.

### 2.2 40 CFR § 257.90(e) – SUMMARY

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).

This Annual Groundwater Monitoring and Corrective Action Report documents the activities completed in 2021 for the Closed Gypsum Pond as required by the CCR Rule. Following installation of the additional monitoring wells (CGYP-4, CGYP-5, and CGPY-6) required to comply with § 257.91, seven rounds of baseline sampling and analysis were completed per the requirements described in § 257.93. While evaluating the baseline sampling results from these new monitoring wells, Santee Cooper concluded that the analytical results from monitoring well CGYP-5 were not representative of groundwater quality associated with the Closed Gypsum Pond and therefore monitoring well CGYP-5



was removed from the network of wells monitoring the Closed Gypsum Pond. Baseline sampling for the original monitoring wells was completed in 2020 prior to the installation of the new monitoring wells for the Closed Gypsum Pond.

### 2.2.1 Status of the Groundwater Monitoring Program

Following collection of eight rounds of baseline and one round of detection monitoring from the original monitoring wells (CGYP-1, CGYP-2 and CGYP-3) in 2020, it was determined that the monitoring network needed to be supplemented with additional monitoring wells to comply with § 257.91(c). One of the three monitoring wells (CGYP-3) was not hydraulically downgradient of the unit and therefore did not monitor potential releases from the Closed Gypsum Pond. Given this finding, the original monitoring network for the Closed Gypsum Pond was supplemented with three additional monitoring wells (CGYP-4, CGYP-5, and CGYP-6) to comply with § 257.91(c).

Seven rounds of baseline sampling were completed for the newly installed monitoring wells in 2021. As previously stated, Santee Cooper concluded that the analytical results from monitoring well CGYP-5 were not representative of groundwater quality associated with the Closed Gypsum Pond and therefore monitoring well CGYP-5 has been removed from the monitoring network. The eighth round of baseline sampling was collected in December 2021. The detection monitoring event will be completed in the first quarter of 2022.

### 2.2.2 Key Actions Completed

The following key actions were completed in 2021:

- In accordance with § 257.91(c), a groundwater monitoring network for the Closed Gypsum Pond has been supplemented with the installation of three additional groundwater monitoring wells CGYP-4, CGYP-5, and CGYP-6. Well installation records are provided in Appendix B.
- In accordance with § 257.94(b), a minimum of eight independent samples were collected from each monitoring well followed by one round of detection monitoring for the original monitoring wells. Seven rounds of baseline sampling were completed for the new monitoring wells (CGYP-4 and CGYP-6). The eighth round of baseline groundwater samples were collected in December 2021, however the validated analytical results from this sampling round were not received in 2021.
- Slug testing was performed on all six groundwater monitoring wells for the Closed Gypsum Pond in November 2021. This data provided additional information on the hydraulic conductivity of the uppermost aquifer in the immediate vicinity of the Closed Gypsum Pond. The findings are summarized in Appendix C.

### 2.2.3 Problems Encountered

As previously stated, while evaluating the baseline sampling results from these new monitoring wells, it was concluded that the analytical results obtained from monitoring well CGYP-5 were not representative of the groundwater quality associated with the Closed Gypsum Pond. The groundwater elevation data, field parameters, and analytical results were atypical compared to the adjacent wells.



### 2.2.4 Actions to Resolve Problems

Monitoring well CGYP-5 was removed from the network of wells monitoring the Closed Gypsum Pond.

### 2.2.5 Project Key Activities for Upcoming Year

Key activities to be completed in 2022 will include the following:

- Re-certify the groundwater monitoring network in accordance with § 257.91(f) after confirming localized groundwater flow direction in the vicinity of the Closed Gypsum Pond;
- Complete baseline and detection monitoring for the newly established monitoring locations in accordance with § 257.94;
- Conduct a statistical analysis to determine if statistically significant increases of one or more of the Appendix III constituents are present downgradient of the Closed Gypsum Pond.
- Prepare the 2022 annual report; place it in the operating record as required by § 257.105(h)(1), notify the Relevant State Director [§ 257.106(d)]; and post to the facility's publicly available CCR website [§ 257.107(d)].

### 2.3 40 CFR § 257.90(E) – INFORMATION

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

### 2.3.1 40 CFR § 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 Closed Gypsum Pond and associated upgradient and downgradient wells is presented as Figure 1.

### 2.3.2 40 CFR § 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, the groundwater monitoring network installed in 2020 and 2021 for the Closed Gypsum Pond consists of two upgradient and three downgradient monitoring wells. Monitoring well construction details are summarized in Table 1 and well installation records are provided in Appendix B. None of the monitoring wells were decommissioned during the previous calendar year. However, as previously stated, while evaluating the baseline sampling results from the new monitoring wells installed in 2021, it was concluded that the analytical results from monitoring well



CGYP-5 were not representative of groundwater quality associated with the Closed Gypsum Pond and therefore monitoring well CGYP-5 has been removed from the network of wells monitoring the Closed Gypsum Pond.

### 2.3.3 40 CFR § 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 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), eight independent baseline samples were collected in 2021 from the newly installed monitoring wells (CGYP-4, CGYP-5, and CGYP-6). The eighth round of baseline sampling was collected in December 2021, however, the analytical results from the eighth round of baseline sampling will be received and validated in January 2022. The detection monitoring event is scheduled to be completed in the first quarter of 2022. A summary of the groundwater monitoring program for the Closed Gypsum Pond, including the analytical results for Appendix III and Appendix IV constituents, is presented in Table 2. Laboratory analytical results, along with field sampling forms, are provided in Appendix A to this report.

### 2.3.4 40 CFR § 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); and

The statistical analysis of the detection monitoring results will be completed after completing the detection monitoring event in 2022, as required by § 257.91 and § 257.94.

### 2.3.5 40 CFR § 257.90(e)(5)

# Other information required to be included in the annual report as specified in § 257.90 through § 257.98.

Slug testing was performed on all six groundwater monitoring wells for the Closed Gypsum Pond in November 2021. This data provided additional information on the hydraulic conductivity of the uppermost aquifer in the immediate vicinity of the Closed Gypsum Pond. The range of hydraulic conductivities from the monitoring wells that were tested were 1.387E-04 (cm/sec) to 4.800E-03 (cm/sec). These results are comparable to the Site Hydrogeologic Characterization Report which reported a range of hydraulic conductivities of 3.357E-04 (cm/sec) to 8.93E-03 (cm/sec) for the shallow aquifer. This range of hydraulic conductivities is typical for the soil types identified and for this depositional setting. This information, combined with the calculated horizontal hydraulic gradients, and an assumed effective porosity of 25 percent will be used to report on groundwater flow direction and rate following each semiannual sampling event as required by § 257.93(c). These findings are provided in Appendix C. Groundwater flow rate and direction are provided as Figures 2 and 3 for each sampling event as specified in § 257.93(c).



TABLES

#### TABLE 1 GROUNDWATER MONITORING WELL LOCATION AND CONSTRUCTION DETAILS **CROSS GENERATING STATION - CLOSED GYPSUM POND** SANTEE COOPER PINEVILLE, SOUTH CAROLINA

Well	CCR Unit <sup>1</sup>	Easting	Northing	Top of Pad Elevation (ft msl)	Top of Riser Elevation (ft msl)	Surface Grout (ft bgs)	Bentonite (ft bgs)	Sand Pack (ft bgs)	Screen Zone (ft bgs)	Screen Length (ft)	Well Radius (in)
Existing Wells											
CBW-1	Background <sup>1</sup>	2268633.71	560527.87	83.17	85.80	0.0 - 8.0	8.0 - 11.0	11.0 - 24.0	14.0 - 24.0	10	2.00
PM-1	Background <sup>1</sup>	2269801.59	558532.71	81.62	83.24	0.0 - 2.0	2.0 - 3.5	3.5 - 24.0	4.0 - 24.0	20	2.25
New Wells											
CGYP-1	Closed Gypsum Pond <sup>1</sup>	2272412.89	559370.06	89.43	91.89	0.0 - 10.0	10.0 - 12.0	12.0 - 24.0	14.0 - 24.0	10	2.00
CGYP-2	Closed Gypsum Pond <sup>1</sup>	2272449.67	559587.80	81.82	81.82	0.0 - 4.0	4.0 - 6.0	6.0 - 18.0	8.0 - 18.0	10	2.00
CGYP-3	Closed Gypsum Pond <sup>1</sup>	2272355.06	559738.32	81.49	81.49	0.0 - 6.0	6.0 - 8.0	8.0 - 20.0	10.0 - 20.0	10	2.00
CGYP-4	Closed Gypsum Pond <sup>1</sup>	2272335.42	559802.64	80.74	83.49	0.0 - 6.0	6.0 - 8.0	8.0 - 20.0	10.0 - 20.0	10	2.00
CGYP-5	Closed Gypsum Pond <sup>1</sup>	2272132.31	559409.05	81.27	84.12	0.0 - 5.0	5.0 - 7.0	7.0 - 19.0	9.0 - 19.0	10	2.00
CGYP-6	Closed Gypsum Pond <sup>1</sup>	2272017.0	559444.43	80.30	83.23	0.0 - 5.0	5.0 - 7.0	7.0 - 19.0	9.0 - 19.0	10	2.00

Notes:

1. The existing monitoring network for the Closed Gypsum Pond was supplemented with three additional wells (CGYP-4, CGYP-5 and CGYP-6) to comply with § 257.91. During baseline sampling from the new wells it was concluded that the analytical results from monitoring well CGYP-5 were not representative of groundwater quality associated with the Closed Gypsum Pond and therefore monitoring well CGYP-5 has been removed from the network of wells monitoring the Closed Gypsum Pond.

bgs = below ground surface ft = feet in = inches msl = mean sea level Datum of Elevations in NAVD 88

#### TABLE 2 SUMMARY OF ANALYTICAL RESULTS - CLOSED GYPSUM POND CROSS GENERATING STATION SANTEE COOPER PINEVILLE, SOUTH CAROLINA

				Chemical Group		Det	ection Monit	oring - EPA	Appendix III C	Constituents						A	ssessment N	Aonitoring - E	EPA Append	ix IV Consti	tuents				
				Chemical Name	Boron,	Calcium,	Chloride	Fluoride	Sulfate	Total Dissolved	pН	Antimony,	Arsenic,	Barium,	Beryllium,	Cadmium,	Chromium,	Cobalt,	Fluoride	Lead,	Lithium,	Mercury,	Molybdenum,	Selenium,	Thallium,
					Total	Total				Solids (TDS)	pri	Total	Total	Total	Total	Total	Total	Total		Total	Total	Total	Total	Total	Total
				Method US EPA MCL/RSL	EPA 6020B	EPA 6020B	EPA 300.0	EPA 300.0	EPA 300.0	SM 2540C		EPA 6020B	EPA 6020B 10	EPA 6020B	EPA 6020B	EPA 6020B 5	EPA 6020B 100	EPA 6020B	EPA 300.0	EPA 6020E 15	3 EPA 6010D 40	EPA 7470 2	EPA 6010D 100	EPA 6020B 50	EPA 6020B
				US EPA MCL/RSL	- ug/L	- mg/L	- mg/L	4 mg/L	- mg/L	- mg/L	- pH units	o ug/L	ug/L	2000 ug/L	4 ug/L	o ug/L	ug/L	ug/L	4 mg/L	ug/L	40 ug/L	∠ ug/L	ug/L	ug/L	∠ ug/L
Location	Sampling	Sample	Sample	Lab Sample ID	ug/L	iiig/L	iiig/L	iiig/L	IIIg/L	IIIg/L	pri units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	iiig/∟	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
	Round	Date	Туре																						
CBW-1	Background	01/26/2021	N	AE94854	18	29.2	3.22	0.15	80.7	138.8	4.31	< 5	< 5	46.6	< 0.5	< 0.5	< 5	0.66	0.15	2.5	< 10	< 0.2	< 10	< 10	< 1
CBW-1	Background	06/21/2021	N	AF07259	< 40	29.9	3.05	0.19	86.6	178.8	4.25	< 5	< 5	42.3	< 0.5	< 0.5	< 5	0.7	0.19	2.6	< 20	< 0.2	< 20	< 10	< 1
CBW-1			Samples		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
PM-1 PM-1	Background	01/26/2021	N N	AE94872	< 15	14.3	11.8	< 0.1	9.98	110	5.03	< 5	< 5	85.7	< 0.5	< 0.5	< 5	1	< 0.1	< 1	< 10	< 0.2	< 10	< 10	< 1
PM-1	Background	06/21/2021	Samples	AF07281	< 15 2	17	12 2	< 0.1	11.9 2	155	<u>5.21</u> 2	< 5 2	< 5 2	87.3 2	< 0.5	< 0.5	< 5	0.94	< 0.1	< 1 2	< 10 2	< 0.2	< 10 2	< 10 2	< 1 2
CGYP-1	Detection	02/10/2021	N	AE94861	14000	353	791	1.69	613	2081	3.8	< 5	45.2	39.7	12.7	< 0.5	< 5	58.7	1.69	16.5	24	< 0.2	< 10	16.3	<1
CGYP-1	Detection	04/07/2021	N	AF00629	11000	276	795	1.31	445	2301	4.1	< 5	33.6	44.8	10.3	< 0.5	< 5	53.6	1.31	8	20	< 0.2	< 20	< 10	< 1
CGYP-1	Detection	07/07/2021	N	AF07267	9400	218	728	0.97	377	1770	4.19	< 5	18.1	52.2	6.1	< 0.5	< 5	36.2	0.97	9.7	14	< 0.2	< 10	< 10	< 1
CGYP-1			Samples	-	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
CGYP-2	Detection	02/10/2021	N	AE94862	960	298	79.5	1.3	957	1538	3.77	< 5	18.4	21	2.5	< 0.5	< 5	19	1.3	19.6	13	< 0.2	< 10	< 10	< 1
CGYP-2	Detection	02/10/2021	FD	AE94863	980	267	79.4	1.26	1035	1526	-	< 5	17.7	21.8	2.6	< 0.5	< 5	19	1.26	18.9	13	< 0.2	< 10	< 10	< 1
CGYP-2 CGYP-2	Detection Detection	04/07/2021 04/07/2021	N FD	AF00630 AF00631	850 890	273 276	55.87 56.4	1.08 1.04	987 986	1536 1670	4.02	< 5 < 5	16.9 17	14.5 14.3	3.1 2.9	< 0.5 < 0.5	< 5 < 5	18.3 18.4	1.08 1.04	17.5 17	14 15	< 0.2 < 0.2	< 10 < 10	< 10 < 10	< 1 < 1
CGYP-2 CGYP-2	Detection	07/07/2021	PD N	AF07268	1300	278	83.1	0.87	900	1618	3.8	< 5	19.4	14.3	2.9	< 0.5	< 5	20.6	0.87	20.8	15	< 0.2	< 10	< 10	< 1
CGYP-2	Detection	07/07/2021	FD	AF07269	1300	263	81.4	0.87	945	1615	-	< 5	18.9	17.9	3.2	< 0.5	< 5	19.6	0.87	20.2	14	< 0.2	< 10	< 10	< 1
CGYP-2		Total	Samples		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
CGYP-3	Detection	02/10/2021	N	AE94864	25000	729	1460	6.22	1010	4090	3.5	< 5	22	40.5	35	0.78	< 5	151	6.22	92	110	< 0.2	< 20	< 10	< 1
CGYP-3	Detection	04/07/2021	N	AF00632	23000	700	1405	3.32	972	4958	3.73	< 5	19.8	38.4	46.5	0.53	6.1	143	3.32	24.8	94	0.21	< 10	< 10	< 1
CGYP-3	Detection	07/07/2021	N	AF07270	17000	495	950	1.88	993	3291	3.56	< 5	18.3	37.8	26.9	< 0.5	7.9	96.7	1.88	29.7	56	< 0.2	< 10	< 10	< 1
CGYP-3	Deseline		Samples	4500000	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
CGYP-4 CGYP-4	Baseline Baseline	04/07/2021 05/13/2021	N N	AF00633 AF03568	7600 8000	348 360	733 683	3.19 2.82	602 598	2178 2078	3.78 3.88	< 5 < 5	10.3 10.5	45.4 37.5	17.4 16.4	< 0.5 < 0.5	< 5 < 5	53.2 49.8	3.19 2.82	11.3 12.2	58 58	< 0.2 < 0.2	< 10 < 10	< 10 < 10	<1 <1
CGYP-4	Baseline	05/13/2021	FD	AF03569	8000	343	719	1.9	632	2195	-	< 5	10.9	38.4	16.1	< 0.5	< 5	52.1	1.9	12.2	59	< 0.2	< 10	< 10	<1
CGYP-4	Baseline	07/08/2021	N	AF07271	7700	324	670	1.85	621	2168	3.65	< 5	11.3	39.5	17.9	< 0.5	< 5	49.4	1.85	12.6	58	< 0.2	< 10	< 10	< 1
CGYP-4	Baseline	09/01/2021	N	AF13773	8000	319	617	1.79	605	2038	3.65	< 5	11.5	36.4	15	< 0.5	< 5	48.7	1.79	14.6	64	< 0.2	< 10	< 10	< 1
CGYP-4	Baseline	09/01/2021	FD	AF13774	7800	318	608	1.79	593	2004	-	< 5	11.6	35.9	14	< 0.5	< 5	48.4	1.79	14.5	63	< 0.2	< 10	< 10	< 1
CGYP-4	Baseline	09/27/2021	N	AF15787	7800	325	574	1.63	584	1749	3.65	< 5	11.8	37.1	15.6	< 0.5	< 5	47.8	1.63	14.7	67	< 0.2	< 10	< 10	< 1
CGYP-4	Baseline	09/27/2021	FD	AF15788	8200	334	683	1.21	705	1846	-	< 5	11.2	36.9	15.1	< 0.5	< 5	46.7	1.21	14.1	67	< 0.2	< 10	< 10	< 1
CGYP-4 CGYP-4	Baseline Baseline	10/26/2021 10/26/2021	N FD	AF18534 AF18535	6800 6900	304 307	553 554	0.83 0.8	611 612	1614 1760	3.66	< 5 < 5	10.4 10.7	33.6 34	15.2 15	< 0.5 < 0.5	< 5 < 5	46.3 48	0.83	14.5 15	53 57	< 0.2 < 0.2	< 10 < 10	< 10 < 10	< 1 < 1
CGYP-4	Baseline	11/17/2021	N N	AF10555 AF20415	7100	310	534	1.53	600	1676	3.54	< 5	11.2	33.3	14.9	< 0.5	< 5	46.1	1.53	14.7	52	< 0.2	< 10	< 10	< 1
CGYP-4	Baseline	11/17/2021	FD	AF20416	7200	304	545	1.45	607	1729	-	< 5	11.6	34	14.5	< 0.5	< 5	45.1	1.45	14.8	53	< 0.2	< 10	< 10	< 1
CGYP-4			Samples		7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
CGYP-5	Baseline	04/07/2021	N	AF00634	3100	195	231	0.31	314	1188	5.36	< 5	< 5	51.9	6.5	< 0.5	< 5	44.8	0.31	1.2	60	< 0.2	< 10	< 10	< 1
CGYP-5	Baseline	05/13/2021	N	AF03570	2900	195	200	0.37	318	1182	5.32	< 5	< 5	39.9	8.3	< 0.5	< 5	44.3	0.37	1.8	59	< 0.2	< 10	< 10	< 1
CGYP-5	Baseline	07/08/2021	N	AF07272	2900	186	210	0.32	322	1094	4.99	< 5	< 5	39.4	8.7	< 0.5	< 5	44.7	0.32	2	58	< 0.2	< 10	< 10	< 1
CGYP-5 CGYP-5	Baseline Baseline	08/31/2021 09/27/2021	N N	AF13775 AF15789	3200 5000	208 225	241 277	0.35 0.25	310 342	1290 1311	5.17 4.92	< 5 < 5	< 5 < 5	47.8 91.9	6.8 10.5	< 0.5 < 0.5	< 5 < 5	48.9 63.2	0.35 0.25	1.5 1.8	62 84	< 0.2 < 0.2	< 10 < 10	< 10 < 10	< 1 < 1
CGYP-5 CGYP-5	Baseline	10/26/2021	N	AF15789 AF18536	4500	225	344	0.25	342 397	1311 1221	4.92 4.93	< 5 < 5	< 5	91.9 107	10.5	< 0.5	< 5	70.6	0.25	1.8	84 76	< 0.2	< 10	< 10	< 1
CGYP-5	Baseline	11/17/2021	N	AF10550 AF20417	4400	225	344	0.21	369	1185	4.95	< 5	< 5	117	11.5	< 0.5	< 5	68.3	0.21	2.3	76	< 0.2	< 10	< 10	<1
CGYP-5			Samples		7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
CGYP-6	Baseline	04/07/2021	N	AF00635	7000	480	1160	1.1	96.3	3952	3.68	< 5	< 5	326	27.7	< 0.5	< 5	163	1.1	13	140	< 0.2	< 10	< 10	< 1
CGYP-6	Baseline	05/13/2021	N	AF03571	6900	468	1090	0.84	83.6	2804	3.7	< 5	< 5	437	23.9	< 0.5	< 5	149	0.84	12.7	130	< 0.2	< 10	< 10	< 1
CGYP-6	Baseline	07/08/2021	N	AF07273	6700	438	1082	0.99	84.3	2851	3.54	< 5	< 5	585	21.2	< 0.5	< 5	147	0.99	13.1	120	< 0.2	< 10	< 10	< 1
CGYP-6	Baseline	08/31/2021	N	AF13776	6900	441	1033	0.75	84.3	2740	3.67	< 5	< 5	564	19.7	< 0.5	< 5	150	0.75	13.6	130	< 0.2	< 10	< 10	< 1
CGYP-6 CGYP-6	Baseline Baseline	09/27/2021 10/26/2021	N	AF15790 AF18537	7300 6700	474 455	1061 1070	0.98 0.42	90.9 92.7	2382 2306	3.62 3.54	< 5 < 5	< 5 < 5	705 529	21.9 21.4	< 0.5 < 0.5	< 5 < 5	157 158	0.98 0.42	13.7 15.8	150 110	< 0.2 < 0.2	< 10 < 10	< 10 < 10	< 1 < 1
CGYP-6	Baseline	11/17/2021	N	AF10537 AF20418	5200	455 396	865	0.42	92.7 67	1899	3.66	< 5	< 5	529 865	19.4	< 0.5	< 5	128	0.42	6.8	110	< 0.2	< 10	< 10	<1
CGYP-6	Edeolinio		Samples	7.1.20110	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
										-															-

#### ABBREVIATIONS AND NOTES:

AbsRet/Initial Analyzed
FD: Field Duplicate
N: Normal
CFR: Code of Federal Regulations
RSL: Regional Screening Level
THQ: Target Hazard Quotient
US EPA: United States Environmental Protection Agency mg/L: milligram per liter ug/L: micrograms per liter uS/cm: microSiemen per centimeter mv: millivolt NTU: Nephelometric Turbidity Units pCi/L: picoCurie per liter Total Samples do not include field duplicates
Criteria used for cobalt, lithium, and molybdenum are RSLs for Tapwater where THQ=1.0 (May 2018)
USEPA. 2016. Final Rule: Disposal of Coal Combustion Residuals from Electric Utilities. July 26. 40 CFR Part 257. https://www.epa.gov/coalash/coal-ash-rule

QUALIFIERS:

<: Not detected, value is the laboratory reporting limit

# TABLE 2 SUMMARY OF ANALYTICAL RESULTS - CLOSED GYPSUM POND CROSS GENERATING STATION SANTEE COOPER PINEVILLE, SOUTH CAROLINA

Unit         Useria         Ratim<22					Chemical Group		Radiological		Field Parameters					
Location         Sample         Sampl					Chemical Name	Radium-226	Radium-228		Conductivity		ORP	рН	Temperature	Turbidity
UNDERCONSTRUCTOR         DepCH         DOL         DOL         USE         Number of the second of the									Conductivity	Oxygen	-	pri	remperature	randiarty
Unite         Sample Location         Sample Location         Sample Lab Sample La						EPA 903.1 Mod	EPA 904.0							
Location         Sample Number         Sample Lab Sample Number 10         Sample Number 10<						-	-		-	-		-	-	-
Round         Daise         Type         -        -        -	Location	Compling	Samula	Comple		pCI/L	pCI/L	pCI/L	us/cm	mg/L	mv	pH units	Deg C	NIU
CBW-1         Background         01/26/2021         N         AF02454         0.436         1.72         1.72         0.71         338         4.31         20.25         2 <th2< th="">         2         2         <t< td=""><td>Location</td><td></td><td></td><td></td><td>Lab Sample ID</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<></th2<>	Location				Lab Sample ID									
CDW-1         Background         062:12021         N         AF07259         0.433         0.12         0.52         2 <th2< th="">         2</th2<>	CBW-1				ΔE94854	0.436	1 29	1 73	192	0.71	338	4 31	20.25	0
CBW-1         International 0         Constrained biology of the second o	-	Ŭ						-	-	-		-		
PM-1         Background Gargeround Decomposition         0.738/2021         N         AFGF27         0.359         2.88         3.44         143         6.12         1         5.03         19.47         4.4           PM-1         Background Gargeround         Coll Samples         Total Samples         2<		Buokground			74 07200									
PH-1         U         Total Samples         Z         2         3		Background			AE94872									
CCVP+1         Delection         Q2/10/2021         N         AE949if         1.22         2.83         3.89         3410         0.6         2.25         3.8         19.84         0           CCVP+1         Detection         Q7/07/2021         N         AF07267         1.17         1.61         2.77         2670         0.77         145         4.19         23.88         0           CCVP-1         Detection         Q2/10/2021         N         AE24482         0.796         2.04         2.83         1710         0.43         271         3.7         19.11         0           CCVP-2         Detection         Q2/10/2021         N         AE24482         0.772         1.44         1.9         -	PM-1	Background	06/21/2021	N	AF07281	0.369	1.73	2.1	169	3.96	45	5.21	26.49	4.3
CCYP-1         Detection         040772021         N         AF00629         1.08         2.81         3.89         2200         0.377         1219         4.11         22.38         0           CGYP-1         Detection         0770201         N         AE94862         0.798         2.04         2.83         <	PM-1		Total	Samples		2	2	2	2	2	2	2	2	2
CCYP-1         Detection         07/07/2021         N         AF07267         1.17         1.61         2.77         2870         0.77         145         4.19         22.16         0.6           CGYP-2         Detection         02/10/2021         N         AE94862         0.786         2.04         2.83         1710         0.43         2.71         3.77         19.11         0           CGYP-2         Detection         04/07/2021         N         AF00630         0.272         3.91         4.18         1660         0.38         247         4.02         21.36         0           CGYP-2         Detection         04/07/201         N         AF00530         0.272         3.91         4.18         1650		Detection								0.6		3.8		0
CGYP-1         Detection         O21/02/21         N         AE94862         0.796         2.044         2.83         1710         0.43         271         3.77         19.11         0           CGYP-2         Detection         02/102/21         FD         AE94863         0.752         1.14         1.9         -														
CCVP-2         Detection         02/10/2021         N         AE64882         0.796         2.04         2.83         1710         0.43         271         3.77         19.11         0           CCVP-2         Detection         04/07/2021         N         AF00630         0.272         3.91         4.48         1650         0.38         247         4.02         21.36         0           CCYP-2         Detection         04/07/2021         N         AF00631         0.29         4.76         5.05         - <td< td=""><td></td><td>Detection</td><td></td><td></td><td>AF07267</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>		Detection			AF07267									
CCYP-2         Detection         0.21/0/221         FD         AE94683         0.752         1.14         1.9         -										-		-	-	÷
CCYP-2         Detection         0.40/7/2021         N         AF00630         0.272         3.91         4.18         1650         0.38         247         4.02         21.38         0           CGYP-2         Detection         0.70/7/2021         N         AF07280         0.578         1.92         2.5         1530         0.67         2.41         3.8         25.39         0.2           CGYP-2         Detection         0.70/7/2021         N         AE07280         0.762         2.311         3.0         3									1710	0.43	271	3.77	19.11	0
CGYP-2       Detection       04/07/2021       FD       AF00288       0.578       1.92       2.5       150       0.67       2.41       3.8									-	-	-	-	-	-
CGYP-2         Detection         0707/2021         N         AF07268         0.78         1.92         2.5         1530         0.67         241         3.8         25.9         0.2           CGYP-2         Detection         0707/2021         N         AF07269         0.762         2.31         3.0         3 <th< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>1650</td><td>0.38</td><td>247</td><td>4.02</td><td>21.36</td><td>U</td></th<>									1650	0.38	247	4.02	21.36	U
CGYP-2         Detection         07/07/02/1         FD         AP0729         0.762         2.31         3.07         -									-	-	-	- 20	-	-
CGYP-2         Detection         Od/10/2021         N         AE48884         1.05         3.63         3										0.07	241	3.8	20.39	0.2
CCVP-3         Detection         02/10/2021         N         AE94864         1.05         3.63         4.69         5700         0.51         328         3.5         19.17         0           CGVP-3         Detection         07/07/2021         N         AF00632         0.433         7.5         7.93         5280         0.32         240         3.73         23.66         24.83         0.3           CGVP-3         Detection         07/07/2021         N         AF00638         0.713         5.66         6.37         3		Detection			AF07209					-	- 3	- 2	-	- 3
CGVP-3         Detection         04/07/2021         N         AF00632         0.433         7,5         7,93         5280         0.32         240         3,73         23.483         0.3           CGVP-3         Total Samples         0         707/2021         N         AF07270         1.24         3,79         5.03         4090         0,72         225         3.56         2.483         0.3           CGVP-4         Baseline         0/17/2021         N         AF00633         0.713         5.66         6.37         3050         0.54         2.46         3.78         22.48         0           CGVP-4         Baseline         05/13/2021         N         AF03569         1.05         2.51         3.56         4.6         - <t< td=""><td></td><td>Detection</td><td></td><td></td><td>AE94864</td><td></td><td></td><td></td><td></td><td></td><td>-</td><td>-</td><td>-</td><td></td></t<>		Detection			AE94864						-	-	-	
CCVP-3         Detection         07/07/2021         N         AF07270         1.24         3.79         5.03         4090         0.72         225         3.56         2.48         0.3           CGVP-4         Baseline         04/07/2021         N         AF00633         0.713         5.66         6.37         3050         0.54         246         3.78         22.48         0           CGVP-4         Baseline         05/13/2021         N         AF03568         1.05         3.55         4.6         -<													-	
CGVP-3         Total Samples         3											-			
CGYP-4       Baseline       04/07/2021       N       AF00333       0.713       5.66       6.37       3050       0.54       246       3.78       22.48       0         CGYP-4       Baseline       05/13/2021       FD       AF03568       1.02       4.82       5.84       290       0.64       122       3.88       22.18       0         CGYP-4       Baseline       05/13/2021       N       AF07271       1.05       3.55       4.66       -<														
CGYP-4         Baseline         05/13/2021         FD         AF03569         1.05         3.55         4.6         -          CGYP-4     Ba		Baseline	04/07/2021	N	AF00633	0.713	5.66	6.37	3050	0.54	246	3.78	22.48	0
GGYP-4         Baseline         07/08/2021         N         AF07271         1.05         2.51         3.56         2940         1.01         1.41         3.65         23.08         0.66           CGYP-4         Baseline         09/01/2021         FD         AF13773         0.669         3.97         4.64         2860         0.67         2.02         3.65         24.12         3.6           CGYP-4         Baseline         09/01/2021         FD         AF15787         1         4.29         5.29         2800         0.65         212         3.65         24.49         0           CGYP-4         Baseline         00/27/2021         FD         AF15788         0.67         3.87         4.54         -<	CGYP-4	Baseline	05/13/2021	N	AF03568	1.02	4.82	5.84	2990	0.64	122	3.88	22.18	0
CGYP-4         Baseline         090/1/2021         N         AF13773         0.69         3.97         4.64         2860         0.87         202         3.65         24.12         3.66           CGYP-4         Baseline         090/1/2021         FD         AF13774         0.773         2.79         3.57         -		Baseline					3.55		-	-	-	-	-	-
CGYP-4         Baseline         09/01/2021         FD         AF13774         0.773         2.79         3.57         -														
CGYP-4         Baseline         09/27/2021         N         AF15787         1         4.29         5.29         2800         0.65         212         3.65         24.49         0           CGYP-4         Baseline         10/26/2021         N         AF15788         0.67         3.87         4.54         -									2860	0.87	202	3.65	24.12	3.6
CGYP-4         Baseline         09/27/2021         FD         AF15788         0.67         3.87         4.54         -										-	-	-	-	-
CGYP-4         Baseline         10/26/2021         N         AF18534         3.94         1.61         5.56         2660         0.4         238         3.66         23.95         0           CGYP-4         Baseline         11//2021         FD         AF18535         4.5         3.92         8.42         -									2800	0.65	212	3.65	24.49	0
CGYP-4         Baseline         10/26/2021         FD         AF18535         4.5         3.92         8.42         -									-	-	-	-	-	-
CGYP-4         Baseline         11/17/2021         N         AF20415         1.18         3.72         4.9         2590         0.47         288         3.54         23.99         0           CGYP-4         Baseline         11/17/2021         FD         AF20416         1.8         0.76         2.56         - <th< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>0.4</td><td>238</td><td>3.00</td><td>23.95</td><td>U</td></th<>										0.4	238	3.00	23.95	U
CGYP-4         Baseline         11/17/2021         FD         AF20416         1.8         0.76         2.56         -										- 0 47	288	3 54	23 99	-
CGYP-4         Total Samples         7										-	-	-	-	-
CGYP-5         Baseline         04/07/2021         N         AF00634         0.506         2.33         2.84         1380         0.39         172         5.36         22.32         1.3           CGYP-5         Baseline         05/13/2021         N         AF03570         0.915         0.581         1.5         1270         0.64         151         5.32         21.86         0           CGYP-5         Baseline         07/08/2021         N         AF03772         0.34         0.366         0.706         1260         0.46         108         4.99         24.29         0           CGYP-5         Baseline         08/31/2021         N         AF15789         0.81         1.95         2.76         1500         0.55         92         5.17         25.44         1.2           CGYP-5         Baseline         09/27/2021         N         AF15789         0.81         1.95         2.76         1500         0.56         1.77         4.93         23.94         0           CGYP-5         Baseline         10/26/2021         N         AF20417         1.31         0.28         1.59         1510         1.53         230         4.95         23.9         0		Dasonito								7	7	7	7	7
CGYP-5         Baseline         05/13/2021         N         AF03570         0.915         0.581         1.5         1270         0.64         151         5.32         21.86         0           CGYP-5         Baseline         07/08/2021         N         AF07272         0.34         0.366         0.706         1260         0.46         108         4.99         24.29         0           CGYP-5         Baseline         08/31/2021         N         AF13775         0.56         1.29         1.85         1420         0.45         92         5.17         25.44         1.2           CGYP-5         Baseline         09/27/201         N         AF18536         4.68         2.39         7.07         1540         0.36         177         4.93         23.94         0           CGYP-5         Baseline         11/17/2021         N         AF20417         1.31         0.28         1.59         1510         1.53         230         4.95         23.94         0           CGYP-5         Baseline         04/07/2021         N         AF20417         1.31         0.28         1.59         1510         1.53         230         4.95         23.94         0           CGYP		Baseline			AF00634									
CGYP-5Baseline07/08/2021NAF072720.340.3660.70612600.461084.9924.290CGYP-5Baseline08/31/2021NAF137750.561.291.8514200.45925.1725.441.2CGYP-5Baseline09/27/2021NAF157890.811.952.7615000.51634.9225.730CGYP-5Baseline10/26/2021NAF185364.682.397.0715400.361774.9323.940CGYP-5Baseline11/17/2021NAF204171.310.281.577777777CGYP-6Baseline04/07/2021NAF006350.852.833.6837000.332763.6823.980CGYP-6Baseline05/13/2021NAF006350.852.833.6837000.332763.6823.980CGYP-6Baseline05/13/2021NAF035711.524.796.3137100.472533.720.670CGYP-6Baseline07/08/2021NAF072731.854.246.0835400.752023.5425.560CGYP-6Baseline09/27/2021NAF137761.494.045.5334600.331323.6727.224.22CGYP-6Baseline <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>-</td><td></td></td<>													-	
CGYP-5         Baseline         09/27/2021         N         AF15789         0.81         1.95         2.76         1500         0.5         163         4.92         25.73         0           CGYP-5         Baseline         10/26/2021         N         AF18536         4.68         2.39         7.07         1540         0.36         177         4.93         23.94         0           CGYP-5         Baseline         11/17/2021         N         AF20417         1.31         0.28         1.59         1510         1.53         230         4.95         23.94         0           CGYP-5         Baseline         04/07/2021         N         AF20417         1.31         0.28         1.59         1510         1.53         230         4.95         23.94         0           CGYP-6         Baseline         04/07/2021         N         AF00635         0.85         2.83         3.68         3700         0.33         276         3.68         23.98         0           CGYP-6         Baseline         05/13/2021         N         AF03571         1.52         4.79         6.31         3710         0.47         253         3.7         20.67         0           CGYP-6 <td></td> <td></td> <td></td> <td>N</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>108</td> <td>4.99</td> <td></td> <td></td>				N							108	4.99		
CGYP-5         Baseline         10/26/2021         N         AF18536         4.68         2.39         7.07         1540         0.36         177         4.93         23.94         0           CGYP-5         Baseline         11/17/2021         N         AF20417         1.31         0.28         1.59         1510         1.53         230         4.95         23.94         0           CGYP-5         Total Samples         7 <td>CGYP-5</td> <td>Baseline</td> <td>08/31/2021</td> <td>N</td> <td>AF13775</td> <td>0.56</td> <td>1.29</td> <td>1.85</td> <td>1420</td> <td>0.45</td> <td>92</td> <td>5.17</td> <td>25.44</td> <td>1.2</td>	CGYP-5	Baseline	08/31/2021	N	AF13775	0.56	1.29	1.85	1420	0.45	92	5.17	25.44	1.2
CGYP-5         Baseline         11/17/2021         N         AF20417         1.31         0.28         1.59         1510         1.53         230         4.95         23.9         0           CGYP-5         Total Samples         7 <th< td=""><td></td><td>Baseline</td><td>09/27/2021</td><td></td><td>AF15789</td><td>0.81</td><td></td><td></td><td>1500</td><td>0.5</td><td>163</td><td>4.92</td><td></td><td>0</td></th<>		Baseline	09/27/2021		AF15789	0.81			1500	0.5	163	4.92		0
CGYP-5         Total Samples         7														
CGYP-6         Baseline         04/07/2021         N         AF00635         0.85         2.83         3.68         3700         0.33         276         3.68         23.98         0           CGYP-6         Baseline         05/13/2021         N         AF03571         1.52         4.79         6.31         3710         0.47         253         3.7         20.67         0           CGYP-6         Baseline         07/08/2021         N         AF07273         1.85         4.24         6.08         3540         0.75         202         3.54         25.56         0           CGYP-6         Baseline         08/31/2021         N         AF13776         1.49         4.04         5.53         3460         0.33         132         3.67         27.22         4.2           CGYP-6         Baseline         09/27/2021         N         AF15790         1.97         5.96         7.93         3520         0.62         222         3.62         27.14         0           CGYP-6         Baseline         10/26/2021         N         AF15790         1.97         5.96         7.93         3520         0.62         222         3.64         24.18         0           CGYP-6		Baseline			AF20417									
CGYP-6         Baseline         05/13/2021         N         AF03571         1.52         4.79         6.31         3710         0.47         253         3.7         20.67         0           CGYP-6         Baseline         07/08/2021         N         AF07273         1.85         4.24         6.08         3540         0.75         202         3.54         25.56         0           CGYP-6         Baseline         08/31/2021         N         AF13776         1.49         4.04         5.53         3460         0.33         132         3.67         27.22         4.2           CGYP-6         Baseline         09/27/2021         N         AF13776         1.97         5.96         7.93         3520         0.62         222         3.62         27.14         0           CGYP-6         Baseline         0/27/2021         N         AF15790         2.54         3.94         6.48         3670         0.34         278         3.54         24.18         0           CGYP-6         Baseline         11/17/2021         N         AF20418         3.82         5.88         9.69         3170         0.53         287         3.66         23.24         0					4500005		-							
CGYP-6         Baseline         07/08/2021         N         AF07273         1.85         4.24         6.08         3540         0.75         202         3.54         25.56         0           CGYP-6         Baseline         08/31/2021         N         AF13776         1.49         4.04         5.53         3460         0.33         132         3.67         27.22         4.2           CGYP-6         Baseline         09/27/2021         N         AF15790         1.97         5.96         7.93         3520         0.62         222         3.62         27.14         0           CGYP-6         Baseline         10/26/2021         N         AF18537         2.54         3.94         6.48         3670         0.34         278         3.54         24.18         0           CGYP-6         Baseline         11/17/2021         N         AF20418         3.82         5.88         9.69         3170         0.53         287         3.66         23.24         0														
CGYP-6         Baseline         08/31/2021         N         AF13776         1.49         4.04         5.53         3460         0.33         132         3.67         27.22         4.2           CGYP-6         Baseline         09/27/2021         N         AF15790         1.97         5.96         7.93         3520         0.62         222         3.62         27.14         0           CGYP-6         Baseline         10/26/2021         N         AF18537         2.54         3.94         6.48         3670         0.34         278         3.54         24.18         0           CGYP-6         Baseline         11/17/2021         N         AF20418         3.82         5.88         9.69         3170         0.53         287         3.66         23.24         0														
CGYP-6         Baseline         09/27/2021         N         AF15790         1.97         5.96         7.93         3520         0.62         222         3.62         27.14         0           CGYP-6         Baseline         10/26/2021         N         AF18537         2.54         3.94         6.48         3670         0.34         278         3.54         24.18         0           CGYP-6         Baseline         11/17/2021         N         AF20418         3.82         5.88         9.69         3170         0.53         287         3.66         23.24         0														
CGYP-6         Baseline         10/26/2021         N         AF18537         2.54         3.94         6.48         3670         0.34         278         3.54         24.18         0           CGYP-6         Baseline         11/17/2021         N         AF20418         3.82         5.88         9.69         3170         0.53         287         3.66         23.24         0														
CGYP-6         Baseline         11/17/2021         N         AF20418         3.82         5.88         9.69         3170         0.53         287         3.66         23.24         0														
	CGYP-6							7	7	7			7	7

#### ABBREVIATIONS AND NOTES:

-: Not Analyzed FD: Field Duplicate N: Normal CFR: Code of Federal Regulations RSL: Regional Screening Level THQ: Target Hazard Quotient US EPA: United States Environmental Protection Agency mg/L: milligram per liter ug/L: micrograms per liter uS/cm: microSiemen per centimeter mv: millivolt NTU: Nephelometric Turbidity Units pCi/L: picoCurie per liter

Total Samples do not include field duplicates
 Criteria used for cobalt, lithium, and molybdenum are RSLs for Tapwater where THQ=1.0 (May 2018)
 USEPA, 2016, Final Rule: Disposal of Coal Combustion Residuals

from Electric Utilities. July 26. 40 CFR Part 257.

https://www.epa.gov/coalash/coal-ash-rule

QUALIFIERS:

<: Not detected, value is the laboratory reporting limit

FIGURE



#### LEGEND



CLOSED GYPSUM POND WELL



BACKGROUND WELL

CLOSED GYPSUM POND

#### NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.

#### 2. AERIAL IMAGERY SOURCE: ESRI



800

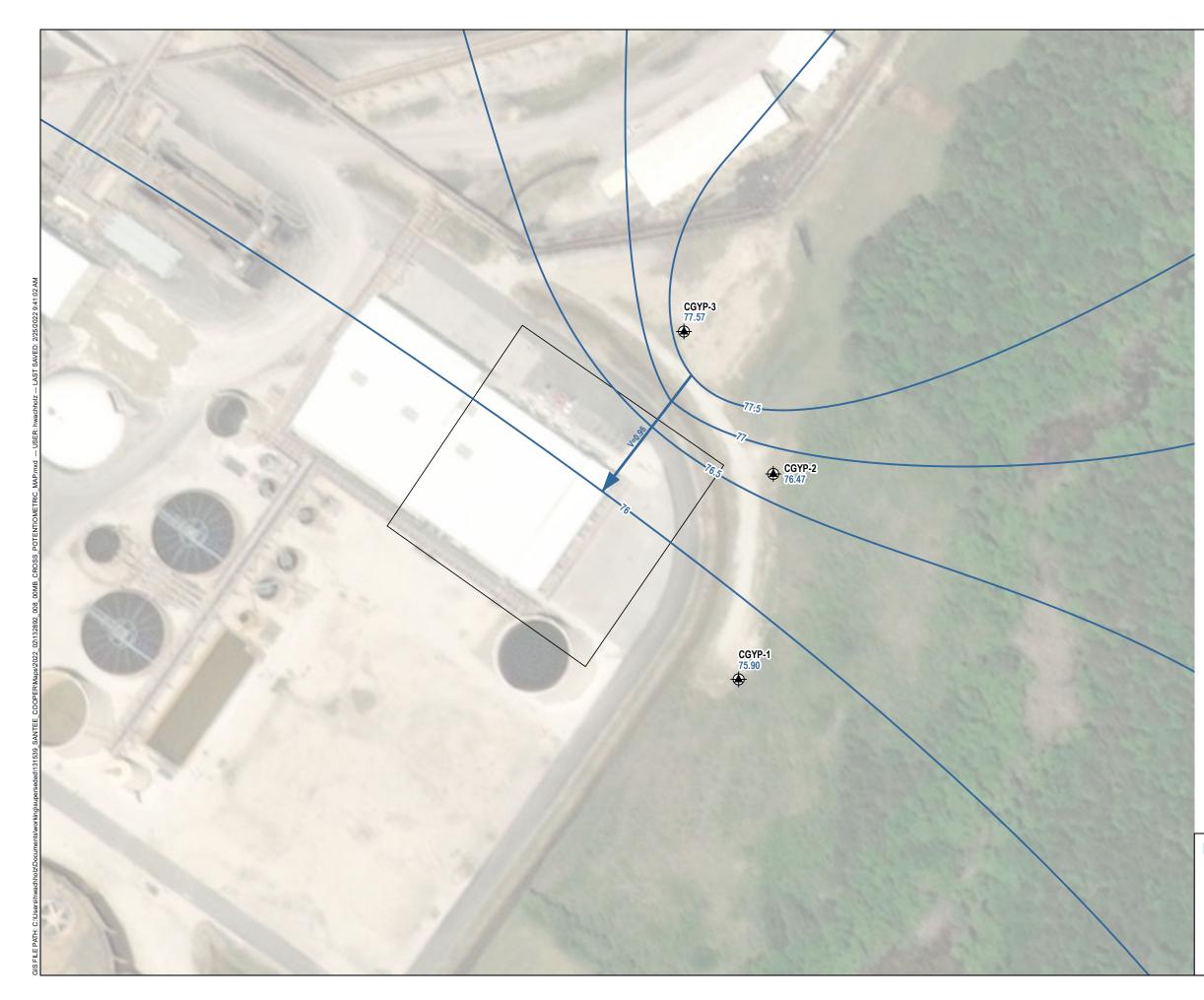
400 SCALE IN FEET

SANTEE COOPER CROSS GENERATING STATION CROSS, SOUTH CAROLINA

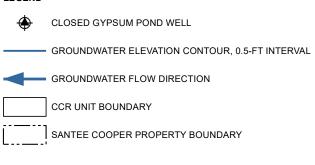
GROUNDWATER MONITORING WELL LOCATIONS FOR COMPLIANCE WITH FEDERAL CCR RULE - CLOSED GYPSUM POND

JANUARY 2022

FIGURE 1







#### NOTES

1. ALL LOCATIONS ARE APPROXIMATE.

2. AVERAGE LINEAR VELOCITY WAS CALCULATED USING:

$$\nu = -\frac{K}{n_e} \frac{\Delta h}{\Delta L}$$

3. ABREVIATIONS: ft/day = FEET PER DAY tiday = FEET PER DAY V = AVERAGE LINEAR VELOCITY (ft/day) K = HORIZONTAL HYDRAULIC CONDUCTIVITY (ft/day) Δh/ΔL = HORIZONTAL GRADIENT (CHANGE IN HYDRAULIC HEAD / LENGTH OF HORIZONTAL HYDRAULIC FLOW PATH) ne = EFFECTIVE POROSITY

4. K = 25 FEET PER DAY (ft/day)

5. n<sub>e</sub> = 0.25

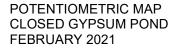
6. WATER LEVELS WERE MEASURED BY SANTEE COOPER ON FEBRUARY 10, 2021

7. AERIAL IMAGERY SOURCE: ESRI



100 SCALE IN FEET

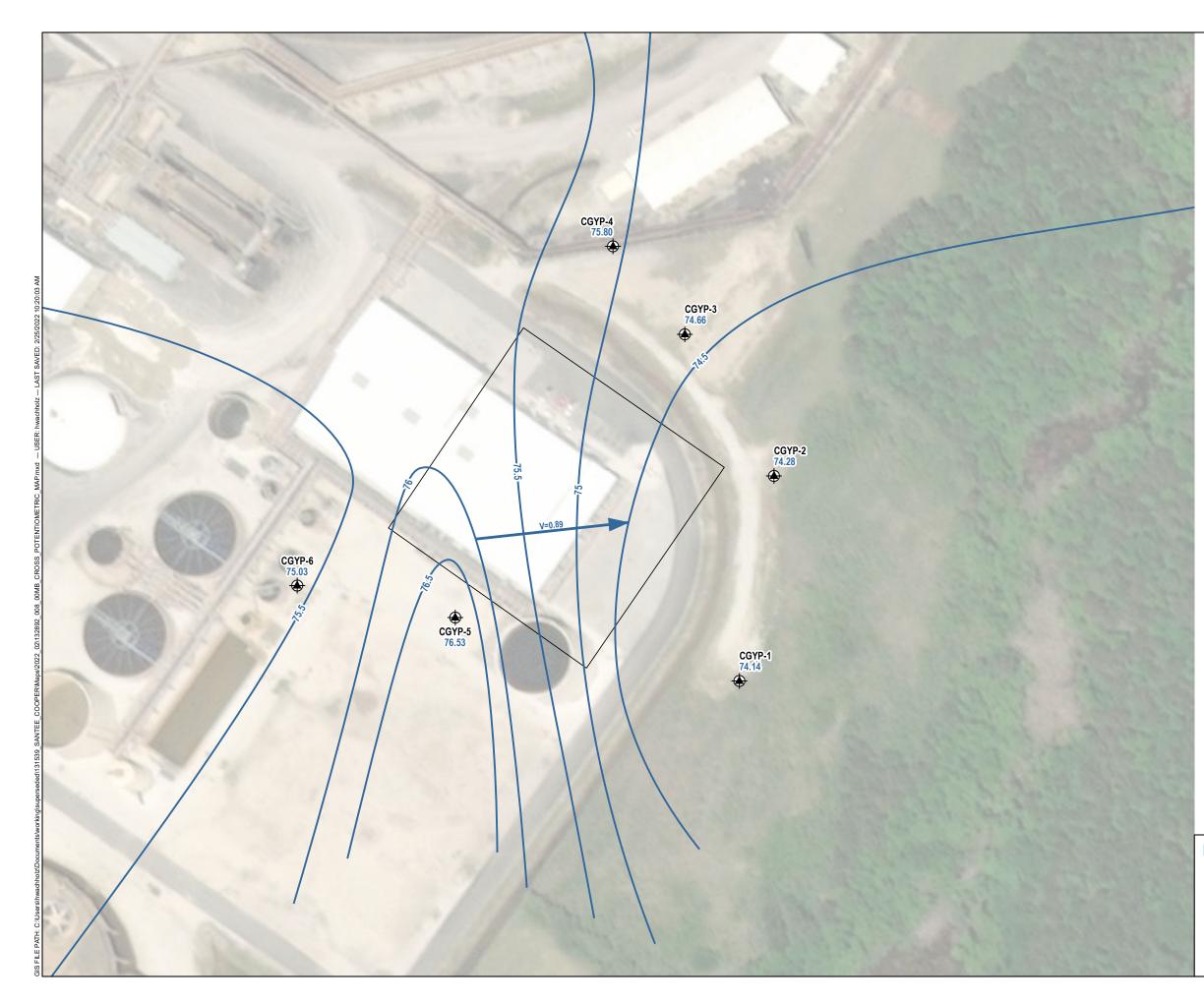
SANTEE COOPER CROSS GENERATING STATION PINEVILLE, SOUTH CAROLINA



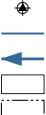
FEBRUARY 2022

FIGURE 2

200



#### LEGEND



CLOSED GYPSUM POND WELL

GROUNDWATER ELEVATION CONTOUR, 0.5-FT INTERVAL

GROUNDWATER FLOW DIRECTION

CCR UNIT BOUNDARY

SANTEE COOPER PROPERTY BOUNDARY

#### NOTES

1. ALL LOCATIONS ARE APPROXIMATE.

2. AVERAGE LINEAR VELOCITY WAS CALCULATED USING:

$$\nu = -\frac{K}{n_e} \frac{\Delta h}{\Delta L}$$

3. ABREVIATIONS: ft/day = FEET PER DAY tiday = FEET PER DAY V = AVERAGE LINEAR VELOCITY (ft/day) K = HORIZONTAL HYDRAULIC CONDUCTIVITY (ft/day) Δh/ΔL = HORIZONTAL GRADIENT (CHANGE IN HYDRAULIC HEAD / LENGTH OF HORIZONTAL HYDRAULIC FLOW PATH) ne = EFFECTIVE POROSITY

4. K = 25 FEET PER DAY (ft/day)

5. n<sub>e</sub> = 0.25

6. WATER LEVELS WERE MEASURED BY SANTEE COOPER FROM JULY 7, 2021 THROUGH JULY 8, 2021

7. MONITORING WELLS CGYP-4, CGYP-5, AND CGYP-6 WERE INSTALLED IN MARCH 2021.

8. AERIAL IMAGERY SOURCE: ESRI



100 200 SCALE IN FEET

SANTEE COOPER CROSS GENERATING STATION PINEVILLE, SOUTH CAROLINA



FEBRUARY 2022

FIGURE 3

Appendix A – Laboratory Analytical Reports



#### SANTEE COOPER ANALYTICAL SERVICES

#### CERTIFICATE OF ANALYSIS

#### LAB CERTIFICATION #08552

Sample #	AE94861 Location:	GW Well CGYP-1		Date: 02/10/2021	Sample Collector:	MDG/DEW
Loc. Code	CGYP-1			<b>Time:</b> 11:16		
	Analysis	Result	Units	Test Date	Analyst	Method
	Arsenic	45.2	ug/L	02/19/2021	SJHATCHE	EPA 6020B
	Barium	39.7	ug/L	02/22/2021	SJHATCHE	EPA 6020B
	Beryllium	12.7	ug/L	02/19/2021	SJHATCHE	EPA 6020B
	Boron	14000	ug/L	02/18/2021	R&C	EPA 6010D
	Calcium	353	mg/L	02/19/2021	SJHATCHE	EPA 6020B
	Cadmium	<0.50	ug/L	02/19/2021	SJHATCHE	EPA 6020B
	Cobalt	58.7	ug/L	02/19/2021	SJHATCHE	EPA 6020B
	Chromium	<5.0	ug/L	02/19/2021	SJHATCHE	EPA 6020B
	Mercury	<0.2	ug/L	02/18/2021	R&C	EPA 7470
	Lithium	24	ug/L	02/18/2021	R&C	EPA 6010D
	Molybdenum	<10	ug/L	02/18/2021	R&C	EPA 6010D
	Lead	16.5	ug/L	02/19/2021	SJHATCHE	EPA 6020B
	Antimony	<5.0	ug/L	02/19/2021	SJHATCHE	EPA 6020B
	Selenium	16.3	ug/L	02/19/2021	SJHATCHE	EPA 6020B
	Thallium	<1.0	ug/L	02/19/2021	SJHATCHE	EPA 6020B
	Radium 226	1.23	pCi/L	02/24/2021	GEL	EPA 903.1 Mod
	Radium 228	2.63	pCi/L	03/01/2021	GEL	EPA 904.0
	Radium 226/228 Combined Calculation	3.86	pCi/L	03/05/2021	GEL	EPA 903.1 Mod
	Chloride	791	mg/L	03/05/2021	KCWELLS	EPA 300.0
	Fluoride	1.69	mg/L	03/05/2021	KCWELLS	EPA 300.0
	Sulfate	613	mg/L	03/05/2021	KCWELLS	EPA 300.0
	Total Dissolved Solids	2081	mg/L	02/16/2021	KCWELLS	SM 2540C
	pH	3.80	SU	02/10/2021	DEW/MDG	
	Spec. Cond.	3410	uS	02/10/2021	DEW/MDG	
	Dissolved Oxygen	0.600	ppm	02/10/2021	DEW/MDG	
	Oxidation Reduction Potential	235	mv	02/10/2021	DEW/MDG	SM2580
	Temp	19.81	С	02/10/2021	DEW/MDG	
	Turbidity	0	NTU	02/10/2021	DEW/MDG	
	Depth	15.99	Feet	02/10/2021	DEW/MDG	
	Elevation	75.90	Feet	02/12/2021	DEWEST	

#### Comments:

Independent Laboratory Results: "GEL" - GEL Laboratories LLC - Lab ID # 10120; "Test America" - TestAmerica Laboratories, Inc. - Lab ID# 98001; "DavisBrown"- Davis & Brown Lab ID # 21117; "Shealy"- Shealy Environmental Services, Inc. - Lab ID# 32010 "ROGERSCALLCO"- Rogers & Callcot, Inc.- Lab ID # 23105001

Analysis Validated:

land



#### SANTEE COOPER ANALYTICAL SERVICES

### CERTIFICATE OF ANALYSIS

### LAB CERTIFICATION #08552

Sample #	AF00629 Location:	GW Well CGYP-1		Date: 04/07/2021	Sample Collector	DEW/MDG
Loc. Code	CGYP-1			<b>Time:</b> 12:16		
	Analysis	Result	Units	Test Date	Analyst	Method
	Arsenic	33.6	ug/L	05/07/2021	SJHATCHE	EPA 6020B
	Barium	44.8	ug/L	05/06/2021	SJHATCHE	EPA 6020B
	Beryllium	10.3	ug/L	05/06/2021	SJHATCHE	EPA 6020B
	Boron	11000	ug/L	04/16/2021	ROGERSNCALLC	EPA 6010D
	Calcium	276	mg/L	05/06/2021	SJHATCHE	EPA 6020B
	Cadmium	<0.50	ug/L	05/06/2021	SJHATCHE	EPA 6020B
	Cobalt	53.6	ug/L	05/07/2021	SJHATCHE	EPA 6020B
	Chromium	<5.0	ug/L	05/06/2021	SJHATCHE	EPA 6020B
	Mercury	<0.20	ug/L	04/16/2021	ROGERSNCALLC	EPA 7470
	Lithium	20	ug/L	04/21/2021	ROGERSNCALLC	EPA 6010D
	Molybdenum	<20	ug/L	04/21/2021	ROGERSNCALLC	EPA 6010D
	Lead	8.0	ug/L	05/06/2021	SJHATCHE	EPA 6020B
	Antimony	<5.0	ug/L	05/06/2021	SJHATCHE	EPA 6020B
	Selenium	<10.0	ug/L	05/06/2021	SJHATCHE	EPA 6020B
	Thallium	<1.0	ug/L	05/06/2021	SJHATCHE	EPA 6020B
	Radium 226	1.08	pCi/L	04/22/2021	GEL	EPA 903.1 Mod
	Radium 228	2.81	pCi/L	04/20/2021	GEL	EPA 904.0
	Radium 226/228 Combined Calculation	3.89	pCi/L	05/05/2021	GEL	EPA 903.1 Mod
	Chloride	795	mg/L	06/03/2021	KCWELLS	EPA 300.0
	Fluoride	1.31	mg/L	06/03/2021	KCWELLS	EPA 300.0
	Sulfate	445	mg/L	06/03/2021	KCWELLS	EPA 300.0
	Total Dissolved Solids	2301	mg/L	04/19/2021	SJBROWN	SM 2540C
	pH	4.10	SU	04/07/2021	DEW/MDG	
	Spec. Cond.	3200	uS	04/07/2021	DEW/MDG	
	Dissolved Oxygen	0.370	ppm	04/07/2021	DEW/MDG	
	Oxidation Reduction Potential	219	mv	04/07/2021	DEW/MDG	SM2580
	Temp	23.58	С	04/07/2021	DEW/MDG	
	Turbidity	0	NTU	04/07/2021	DEW/MDG	
	Depth	16.58	Feet	04/07/2021	DEW/MDG	
	Elevation	75.31	Feet	04/22/2021	DEWEST	

#### Comments:

Independent Laboratory Results: "GEL" - GEL Laboratories LLC - Lab ID # 10120; "Test America" - TestAmerica Laboratories, Inc. - Lab ID# 98001; "DavisBrown"- Davis & Brown Lab ID # 21117; "Shealy"- Shealy Environmental Services, Inc.- Lab ID# 32010 "ROGERSCALLCO"- Rogers & Callcot, Inc.- Lab ID # 23105001

Analysis Validated:

land



#### SANTEE COOPER ANALYTICAL SERVICES

#### CERTIFICATE OF ANALYSIS

#### LAB CERTIFICATION #08552

Sample #	AF03565	Location:	GW Well CGYP-1		Date: 05/13/2021	Sample Collector:	MDG/BWM
Loc. Code	CGYP-1				<b>Time:</b> 14:39		
	An	alysis	Result	Units	Test Date	Analyst	Method
		Depth	16.93	Feet	05/14/2021	MDG/BWM	
		Elevation	74.96	Feet	05/17/2021	MDGOINGS	

Comments:

Independent Laboratory Results: "GEL" - GEL Laboratories LLC - Lab ID # 10120; "Test America" - TestAmerica Laboratories, Inc. - Lab ID# 98001; "DavisBrown"- Davis & Brown Lab ID # 21117; "Shealy"- Shealy Environmental Services, Inc. - Lab ID# 32010 "ROGERSCALLCO"- Rogers & Callcot, Inc.- Lab ID # 23105001

Analysis Validated:

land



#### SANTEE COOPER ANALYTICAL SERVICES

### CERTIFICATE OF ANALYSIS

### LAB CERTIFICATION #08552

Calcium         218         mg/L         08/03/2021         SJHATCHE         EPA 6020B           Cadmium         <0.50         ug/L         08/03/2021         SJHATCHE         EPA 6020B           Cobalt         36.2         ug/L         08/03/2021         SJHATCHE         EPA 6020B           Chromium         <5.0         ug/L         08/03/2021         SJHATCHE         EPA 6020B           Mercury         <0.2         ug/L         07/16/2021         SJHATCHE         EPA 6020B           Mercury         <0.2         ug/L         07/14/2021         R&C         EPA 6010D           Lithium         14.0         ug/L         07/14/2021         R&C         EPA 6020B           Molybdenum         <10         ug/L         07/14/2021         R&C         EPA 6020B           Lead         9.7         ug/L         08/03/2021         SJHATCHE         EPA 6020B           Antimony         <5.0         ug/L         08/03/2021         SJHATCHE         EPA 6020B           Selenium         <10.0         ug/L         08/03/2021         SJHATCHE         EPA 6020B           Thallium         <1.0         ug/L         08/03/2021         SJHATCHE         EPA 6020B           Radium 2	Sample #	AF07267 Location:	GW Well CGYP-1		Date: 07/07/2021	Sample Collector:	BRT/CWS
Arsenic         18.1         ug/L         08/03/2021         SJHATCHE         EPA 6020B           Barium         52.2         ug/L         08/03/2021         SJHATCHE         EPA 6020B           Beryllum         6.1         ug/L         08/03/2021         SJHATCHE         EPA 6020B           Boron         9400         ug/L         07/14/2021         R&C         EPA 6020B           Cadium         218         mg/L         08/03/2021         SJHATCHE         EPA 6020B           Cadmium         <0.50         ug/L         08/03/2021         SJHATCHE         EPA 6020B           Cadmium         <0.50         ug/L         08/03/2021         SJHATCHE         EPA 6020B           Cadmium         <0.50         ug/L         08/03/2021         SJHATCHE         EPA 6020B           Chromium         <5.0         ug/L         07/14/2021         R&C         EPA 6010D           Lead         9.7         ug/L         08/03/2021         SJHATCHE         EPA 6020B           Motydenum         <10         ug/L         08/03/2021         SJHATCHE         EPA 6020B           Selenium         <10.0         ug/L         08/03/2021         SJHATCHE         EPA 6020B           Radium	Loc. Code	CGYP-1			<b>Time:</b> 10:31		
Barium         52.2         ug/L         08/03/2021         SJHATCHE         EPA 6020B           Beryllium         6.1         ug/L         08/03/2021         SJHATCHE         EPA 6020B           Boron         9400         ug/L         08/03/2021         SJHATCHE         EPA 6020B           Calcium         218         mg/L         08/03/2021         SJHATCHE         EPA 6020B           Cadmium         <0.50         ug/L         08/03/2021         SJHATCHE         EPA 6020B           Cadmium         <0.50         ug/L         08/03/2021         SJHATCHE         EPA 6020B           Chromium         <5.0         ug/L         08/03/2021         SJHATCHE         EPA 6020B           Mercury         <0.2         ug/L         07/14/2021         R&C         EPA 6020B           Mercury         <0.2         ug/L         08/03/2021         SJHATCHE         EPA 6020B           Molydenum         <10         ug/L         08/03/2021         SJHATCHE         EPA 6020B           Lead         9.7         ug/L         08/03/2021         SJHATCHE         EPA 6020B           Selenium         <10.0         ug/L         08/03/2021         SJHATCHE         EPA 6020B           R		Analysis	Result	Units	Test Date	Analyst	Method
Beryllium         6.1         ug/L         08/03/2021         SJHATCHE         EPA 6020B           Boron         9400         ug/L         07/14/2021         R&C         EPA 6010D           Calcium         218         mg/L         08/03/2021         SJHATCHE         EPA 6020B           Cadmium         <0.50		Arsenic	18.1	ug/L	08/03/2021	SJHATCHE	EPA 6020B
Boron         9400         'g/L         07/14/2021         R&C         EPA 6010D           Calcium         218         mg/L         08/03/2021         SJHATCHE         EPA 6020B           Cadmium         <0.50		Barium	52.2	ug/L	08/03/2021	SJHATCHE	EPA 6020B
Calcium         218         mg/L         08/03/2021         SJHATCHE         EPA 6020B           Cadmium         <0.50		Beryllium	6.1	ug/L	08/03/2021	SJHATCHE	EPA 6020B
Cadmium         Co.50         ug/L         08/03/2021         SJHATCHE         EPA 6020B           Cobalt         36.2         ug/L         08/03/2021         SJHATCHE         EPA 6020B           Chromium         <5.0		Boron	9400	ug/L	07/14/2021	R&C	EPA 6010D
Cobalt         36.2         ug/L         08/03/2021         SJHATCHE         EPA 6020B           Chromium         <5.0		Calcium	218	mg/L	08/03/2021	SJHATCHE	EPA 6020B
Chromium         <5.0         ug/L         08/03/2021         SJHATCHE         EPA 6020B           Mercury         <0.2		Cadmium	<0.50	ug/L	08/03/2021	SJHATCHE	EPA 6020B
Mercury         <0.2         ug/L         07/16/2021         R&C         EPA 7470           Lithium         14.0         ug/L         07/14/2021         R&C         EPA 6010D           Molybdenum         <10		Cobalt	36.2	ug/L	08/03/2021	SJHATCHE	EPA 6020B
Lithum         14.0         ug/L         07/14/2021         R&C         EPA 6010D           Molybdenum         <10		Chromium	<5.0	ug/L	08/03/2021	SJHATCHE	EPA 6020B
Molybdenum         <10         ug/L         07/14/2021         R&C         EPA 6010D           Lead         9.7         ug/L         08/03/2021         SJHATCHE         EPA 6020B           Antimony         <5.0		Mercury	<0.2	ug/L	07/16/2021	R&C	EPA 7470
Lead         9.7         ug/L         08/03/2021         SJHATCHE         EPA 6020B           Antimony         <5.0		Lithium	14.0	ug/L	07/14/2021	R&C	EPA 6010D
Antimony         <5.0         ug/L         08/03/2021         SJHATCHE         EPA 6020B           Selenium         <10.0		Molybdenum	<10	ug/L	07/14/2021	R&C	EPA 6010D
Selenium         <10.0         ug/L         08/03/2021         SJHATCHE         EPA 6020B           Thallium         <1.0		Lead	9.7	ug/L	08/03/2021	SJHATCHE	EPA 6020B
Thallium         <1.0         ug/L         08/03/2021         SJHATCHE         EPA 6020B           Radium 226         1.17         pCi/L         07/22/2021         GEL         EPA 903.1 Mot           Radium 228         1.61         pCi/L         08/03/2021         GEL         EPA 904.0           Radium 226/228 Combined         2.77         pCi/L         08/05/2021         GEL         EPA 903.1 Mot           Calculation		Antimony	<5.0	ug/L	08/03/2021	SJHATCHE	EPA 6020B
Radium 226         1.17         pCi/L         07/22/2021         GEL         EPA 903.1 Mc           Radium 228         1.61         pCi/L         08/03/2021         GEL         EPA 904.0           Radium 226/228 Combined         2.77         pCi/L         08/05/2021         GEL         EPA 903.1 Mc           Calculation         Calculation         07/09/2021         KCWELLS         EPA 300.0           Fluoride         0.97         mg/L         07/09/2021         KCWELLS         EPA 300.0           Sulfate         377         mg/L         07/07/2021         BRT/CWS         EPA 300.0           Sulfate         377         mg/L         07/07/2021         BRT/CWS         EPA 300.0           Spec. Cond.         2670         uS         07/07/2021         BRT/CWS         EPA 300.0           Dissolved Oxygen         0.770         ppm         07/07/2021         BRT/CWS         SM2580		Selenium	<10.0	ug/L	08/03/2021	SJHATCHE	EPA 6020B
Radium 228         1.61         PCi/L         08/03/2021         GEL         EPA 904.0           Radium 226/228 Combined Calculation         2.77         pCi/L         08/05/2021         GEL         EPA 903.1 Mo           Calculation         2.77         mg/L         07/09/2021         KCWELLS         EPA 903.1 Mo           Chloride         728         mg/L         07/09/2021         KCWELLS         EPA 300.0           Fluoride         0.97         mg/L         07/09/2021         KCWELLS         EPA 300.0           Sulfate         377         mg/L         07/09/2021         KCWELLS         EPA 300.0           Sulfate         377         mg/L         07/09/2021         KCWELLS         EPA 300.0           Sulfate         377         mg/L         07/07/2021         BRT/CWS         EPA 300.0           Sulfate         377         mg/L         07/07/2021         BRT/CWS         SM 2540C           PH         4.19         SU         07/07/2021         BRT/CWS         SM 2540C           Spec. Cond.         2670         uS         07/07/2021         BRT/CWS         SM 2580C           Oxidation Reduction Potential         145         mv         07/07/2021         BRT/CWS         SM 2580C </td <td></td> <td>Thallium</td> <td>&lt;1.0</td> <td>ug/L</td> <td>08/03/2021</td> <td>SJHATCHE</td> <td>EPA 6020B</td>		Thallium	<1.0	ug/L	08/03/2021	SJHATCHE	EPA 6020B
Radium 226/228 Combined Calculation         2.77         pCi/L         08/05/2021         GEL         EPA 903.1 Model EPA 903.1 Model           Chloride         728         mg/L         07/09/2021         KCWELLS         EPA 300.0           Fluoride         0.97         mg/L         07/09/2021         KCWELLS         EPA 300.0           Sulfate         377         mg/L         07/07/2021         SJBROWN         SM 2540C           pH         4.19         SU         07/07/2021         BRT/CWS         SM 2540C           Spec. Cond.         2670         uS         07/07/2021         BRT/CWS         SM 2580           Oxidation Reduction Potential         145         mv         07/07/2021         BRT/CWS         SM 2580           Turbidity         0.600         NTU         07/07/2021         BRT/CWS         SM 2580           Depth         17.75         Feet         07/07/2021         BRT/CWS         SM		Radium 226	1.17	pCi/L	07/22/2021	GEL	EPA 903.1 Mod
Calculation            Chloride         728         mg/L         07/09/2021         KCWELLS         EPA 300.0           Fluoride         0.97         mg/L         07/09/2021         KCWELLS         EPA 300.0           Sulfate         377         mg/L         07/09/2021         KCWELLS         EPA 300.0           Total Dissolved Solids         1770         mg/L         07/15/2021         SJBROWN         SM 2540C           pH         4.19         SU         07/07/2021         BRT/CWS           Spec. Cond.         2670         uS         07/07/2021         BRT/CWS           Dissolved Oxygen         0.770         ppm         07/07/2021         BRT/CWS           Oxidation Reduction Potential         145         mv         07/07/2021         BRT/CWS           Temp         23.16         C         07/07/2021         BRT/CWS         SM2580           Turbidity         0.600         NTU         07/07/2021         BRT/CWS           Depth         17.75         Feet         07/07/2021         BRT/CWS		Radium 228	1.61	pCi/L	08/03/2021	GEL	EPA 904.0
Fluoride         0.97         mg/L         07/09/2021         KCWELLS         EPA 300.0           Sulfate         377         mg/L         07/09/2021         KCWELLS         EPA 300.0           Total Dissolved Solids         1770         mg/L         07/15/2021         SJBROWN         SM 2540C           pH         4.19         SU         07/07/2021         BRT/CWS            Spec. Cond.         2670         uS         07/07/2021         BRT/CWS            Dissolved Oxygen         0.770         ppm         07/07/2021         BRT/CWS         SM2580           Oxidation Reduction Potential         145         mv         07/07/2021         BRT/CWS         SM2580           Temp         23.16         C         07/07/2021         BRT/CWS         SM2580           Depth         17.75         Feet         07/07/2021         BRT/CWS			2.77	pCi/L	08/05/2021	GEL	EPA 903.1 Mod
Sulfate         377         mg/L         07/09/2021         KCWELLS         EPA 300.0           Total Dissolved Solids         1770         mg/L         07/15/2021         SJBROWN         SM 2540C           pH         4.19         SU         07/07/2021         BRT/CWS            Spec. Cond.         2670         uS         07/07/2021         BRT/CWS            Dissolved Oxygen         0.770         ppm         07/07/2021         BRT/CWS         SM2580           Oxidation Reduction Potential         145         mv         07/07/2021         BRT/CWS         SM2580           Temp         23.16         C         07/07/2021         BRT/CWS         SM2580           Turbidity         0.600         NTU         07/07/2021         BRT/CWS           Depth         17.75         Feet         07/07/2021         BRT/CWS		Chloride	728	mg/L	07/09/2021	KCWELLS	EPA 300.0
Total Dissolved Solids         1770         mg/L         07/15/2021         SJBROWN         SM 2540C           pH         4.19         SU         07/07/2021         BRT/CWS           Spec. Cond.         2670         uS         07/07/2021         BRT/CWS           Dissolved Oxygen         0.770         ppm         07/07/2021         BRT/CWS           Oxidation Reduction Potential         145         mv         07/07/2021         BRT/CWS           Temp         23.16         C         07/07/2021         BRT/CWS         SM2580           Turbidity         0.600         NTU         07/07/2021         BRT/CWS           Depth         17.75         Feet         07/07/2021         BRT/CWS		Fluoride	0.97	mg/L	07/09/2021	KCWELLS	EPA 300.0
pH         4.19         SU         07/07/2021         BRT/CWS           Spec. Cond.         2670         uS         07/07/2021         BRT/CWS           Dissolved Oxygen         0.770         ppm         07/07/2021         BRT/CWS           Oxidation Reduction Potential         145         mv         07/07/2021         BRT/CWS           Temp         23.16         C         07/07/2021         BRT/CWS           Turbidity         0.600         NTU         07/07/2021         BRT/CWS           Depth         17.75         Feet         07/07/2021         BRT/CWS		Sulfate	377	mg/L	07/09/2021	KCWELLS	EPA 300.0
Spec. Cond.         2670         uS         07/07/2021         BRT/CWS           Dissolved Oxygen         0.770         ppm         07/07/2021         BRT/CWS           Oxidation Reduction Potential         145         mv         07/07/2021         BRT/CWS           Temp         23.16         C         07/07/2021         BRT/CWS           Turbidity         0.600         NTU         07/07/2021         BRT/CWS           Depth         17.75         Feet         07/07/2021         BRT/CWS		Total Dissolved Solids	1770	mg/L	07/15/2021	SJBROWN	SM 2540C
Dissolved Oxygen         0.770         ppm         07/07/2021         BRT/CWS           Oxidation Reduction Potential         145         mv         07/07/2021         BRT/CWS         SM2580           Temp         23.16         C         07/07/2021         BRT/CWS         SM2580           Turbidity         0.600         NTU         07/07/2021         BRT/CWS           Depth         17.75         Feet         07/07/2021         BRT/CWS		pН	4.19	SU	07/07/2021	BRT/CWS	
Oxidation Reduction Potential         145         mv         07/07/2021         BRT/CWS         SM2580           Temp         23.16         C         07/07/2021         BRT/CWS           Turbidity         0.600         NTU         07/07/2021         BRT/CWS           Depth         17.75         Feet         07/07/2021         BRT/CWS		Spec. Cond.	2670	uS	07/07/2021	BRT/CWS	
Temp         23.16         C         07/07/2021         BRT/CWS           Turbidity         0.600         NTU         07/07/2021         BRT/CWS           Depth         17.75         Feet         07/07/2021         BRT/CWS		Dissolved Oxygen	0.770	ppm	07/07/2021	BRT/CWS	
Turbidity         0.600         NTU         07/07/2021         BRT/CWS           Depth         17.75         Feet         07/07/2021         BRT/CWS		Oxidation Reduction Potential	145	mv	07/07/2021	BRT/CWS	SM2580
Depth17.75Feet07/07/2021BRT/CWS		Temp	23.16	С	07/07/2021	BRT/CWS	
		Turbidity	0.600	NTU	07/07/2021	BRT/CWS	
Elevation 74.14 Feet 07/14/2021 BRTAYLOR		Depth	17.75	Feet	07/07/2021	BRT/CWS	
		Elevation	74.14	Feet	07/14/2021	BRTAYLOR	

#### Comments:

Independent Laboratory Results: "GEL" - GEL Laboratories LLC - Lab ID # 10120; "Test America" - TestAmerica Laboratories, Inc. - Lab ID# 98001; "DavisBrown"- Davis & Brown Lab ID # 21117; "Shealy"- Shealy Environmental Services, Inc.- Lab ID# 32010 "ROGERSCALLCO"-Rogers & Callcot, Inc.- Lab ID # 23105001

Analysis Validated:

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#### SANTEE COOPER ANALYTICAL SERVICES

#### CERTIFICATE OF ANALYSIS

#### LAB CERTIFICATION #08552

Sample #	AE94862 Location:	GW Well CGYP-2		Date: 02/10/2021	Sample Collector:	MDG/DEW
Loc. Code	CGYP-2			Time: 12:23		
	Analysis	Result	Units	Test Date	Analyst	Method
	Arsenic	18.4	ug/L	02/19/2021	SJHATCHE	EPA 6020B
	Barium	21.0	ug/L	02/22/2021	SJHATCHE	EPA 6020B
	Beryllium	2.5	ug/L	02/19/2021	SJHATCHE	EPA 6020B
	Boron	960	ug/L	12/30/1999	R&C	EPA 6010D
	Calcium	298	mg/L	02/19/2021	SJHATCHE	EPA 6020B
	Cadmium	<0.50	ug/L	02/19/2021	SJHATCHE	EPA 6020B
	Cobalt	19.0	ug/L	02/19/2021	SJHATCHE	EPA 6020B
	Chromium	<5.0	ug/L	02/19/2021	SJHATCHE	EPA 6020B
	Mercury	<0.2	ug/L	12/30/1999	R&C	EPA 7470
	Lithium	13.0	ug/L	12/30/1999	R&C	EPA 6010D
	Molybdenum	<10	ug/L	12/30/1999	R&C	EPA 6010D
	Lead	19.6	ug/L	02/19/2021	SJHATCHE	EPA 6020B
	Antimony	<5.0	ug/L	02/19/2021	SJHATCHE	EPA 6020B
	Selenium	<10.0	ug/L	02/19/2021	SJHATCHE	EPA 6020B
	Thallium	<1.0	ug/L	02/19/2021	SJHATCHE	EPA 6020B
	Radium 226	0.796	pCi/L	02/24/2021	GEL	EPA 903.1 Mod
	Radium 228	2.04	pCi/L	03/01/2021	GEL	EPA 904.0
	Radium 226/228 Combined Calculation	2.83	pCi/L	03/05/2021	GEL	EPA 903.1 Mod
	Chloride	79.5	mg/L	02/19/2021	KCWELLS	EPA 300.0
	Fluoride	1.3	mg/L	02/19/2021	KCWELLS	EPA 300.0
	Sulfate	957	mg/L	02/19/2021	KCWELLS	EPA 300.0
	Total Dissolved Solids	1538	mg/L	02/16/2021	KCWELLS	SM 2540C
	pН	3.77	SU	02/10/2021	DEW/MDG	
	Spec. Cond.	1710	uS	02/10/2021	DEW/MDG	
	Dissolved Oxygen	0.430	ppm	02/10/2021	DEW/MDG	
	Oxidation Reduction Potential	271	mv	02/10/2021	DEW/MDG	SM2580
	Temp	19.11	С	02/10/2021	DEW/MDG	
	Turbidity	0	NTU	02/10/2021	DEW/MDG	
	Depth	8.41	Feet	02/10/2021	DEW/MDG	
	Elevation	76.47	Feet	02/12/2021	DEWEST	

#### Comments:

Independent Laboratory Results: "GEL" - GEL Laboratories LLC - Lab ID # 10120; "Test America" - TestAmerica Laboratories, Inc. - Lab ID# 98001; "DavisBrown"- Davis & Brown Lab ID # 21117; "Shealy"- Shealy Environmental Services, Inc. - Lab ID# 32010 "ROGERSCALLCO"- Rogers & Callcot, Inc.- Lab ID # 23105001

Analysis Validated:

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#### SANTEE COOPER ANALYTICAL SERVICES

### CERTIFICATE OF ANALYSIS

#### LAB CERTIFICATION #08552

Sample #	AE94863	Location:	GW Well CGYP-2		Date: 02/10/2021	Sample Collector:	MDG/DEW
Loc. Code	CGYP-2		DUP		<b>Time:</b> 12:28		
	Α	nalysis	Result	Units	Test Date	Analyst	Method
		Arsenic	17.7	ug/L	02/19/2021	SJHATCHE	EPA 6020B
		Barium	21.8	ug/L	02/22/2021	SJHATCHE	EPA 6020B
		Beryllium	2.6	ug/L	02/19/2021	SJHATCHE	EPA 6020B
		Boron	980	ug/L	12/30/1999	R&C	EPA 6010D
		Calcium	267	mg/L	02/19/2021	SJHATCHE	EPA 6020B
		Cadmium	<0.50	ug/L	02/19/2021	SJHATCHE	EPA 6020B
		Cobalt	19.0	ug/L	02/19/2021	SJHATCHE	EPA 6020B
		Chromium	<5.0	ug/L	02/19/2021	SJHATCHE	EPA 6020B
		Mercury	<0.2	ug/L	12/30/1999	R&C	EPA 7470
		Lithium	13.0	ug/L	12/30/1999	R&C	EPA 6010D
		Molybdenum	<10	ug/L	12/30/1999	R&C	EPA 6010D
		Lead	18.9	ug/L	02/19/2021	SJHATCHE	EPA 6020B
		Antimony	<5.0	ug/L	02/19/2021	SJHATCHE	EPA 6020B
		Selenium	<10.0	ug/L	02/19/2021	SJHATCHE	EPA 6020B
		Thallium	<1.0	ug/L	02/19/2021	SJHATCHE	EPA 6020B
		Radium 226	0.752	pCi/L	02/24/2021	GEL	EPA 903.1 Mod
		Radium 228	1.14	pCi/L	03/01/2021	GEL	EPA 904.0
	Radium 226	228 Combined Calculation	1.90	pCi/L	03/05/2021	GEL	EPA 903.1 Mod
		Chloride	79.4	mg/L	03/05/2021	KCWELLS	EPA 300.0
		Fluoride	1.26	mg/L	03/05/2021	KCWELLS	EPA 300.0
		Sulfate	1035	mg/L	03/05/2021	KCWELLS	EPA 300.0
	Total D	Dissolved Solids	1526	mg/L	02/16/2021	KCWELLS	SM 2540C

Comments:

Independent Laboratory Results: "GEL" - GEL Laboratories LLC - Lab ID # 10120; "Test America" - TestAmerica Laboratories, Inc. - Lab ID# 98001; "DavisBrown"- Davis & Brown Lab ID # 21117; "Shealy"- Shealy Environmental Services, Inc.- Lab ID# 32010 "ROGERSCALLCO"- Rogers & Callcot, Inc.- Lab ID # 23105001

Analysis Validated:

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#### SANTEE COOPER ANALYTICAL SERVICES

### CERTIFICATE OF ANALYSIS

### LAB CERTIFICATION #08552

Sample #	AF00630 Location:	GW Well CGYP-2		Date: 04/07/2021	Sample Collector	: DEW/MDG
Loc. Code	CGYP-2			<b>Time:</b> 13:16		
	Analysis	Result	Units	Test Date	Analyst	Method
	Arsenic	16.9	ug/L	05/07/2021	SJHATCHE	EPA 6020B
	Barium	14.5	ug/L	05/06/2021	SJHATCHE	EPA 6020B
	Beryllium	3.1	ug/L	05/06/2021	SJHATCHE	EPA 6020B
	Boron	850	ug/L	04/16/2021	ROGERSNCALLC	EPA 6010D
	Calcium	273	mg/L	05/06/2021	SJHATCHE	EPA 6020B
	Cadmium	<0.50	ug/L	05/06/2021	SJHATCHE	EPA 6020B
	Cobalt	18.3	ug/L	05/07/2021	SJHATCHE	EPA 6020B
	Chromium	<5.0	ug/L	05/06/2021	SJHATCHE	EPA 6020B
	Mercury	<0.20	ug/L	04/16/2021	ROGERSNCALLC	EPA 7470
	Lithium	14	ug/L	04/16/2021	ROGERSNCALLC	EPA 6010D
	Molybdenum	<10	ug/L	04/16/2021	ROGERSNCALLC	EPA 6010D
	Lead	17.5	ug/L	05/06/2021	SJHATCHE	EPA 6020B
	Antimony	<5.0	ug/L	05/06/2021	SJHATCHE	EPA 6020B
	Selenium	<10.0	ug/L	05/06/2021	SJHATCHE	EPA 6020B
	Thallium	<1.0	ug/L	05/06/2021	SJHATCHE	EPA 6020B
	Radium 226	0.272	pCi/L	04/22/2021	GEL	EPA 903.1 Mod
	Radium 228	3.91	pCi/L	04/20/2021	GEL	EPA 904.0
	Radium 226/228 Combined Calculation	4.18	pCi/L	05/05/2021	GEL	EPA 903.1 Mod
	Chloride	55.87	mg/L	04/14/2021	LCWILLIA	EPA 300.0
	Fluoride	1.08	mg/L	04/14/2021	LCWILLIA	EPA 300.0
	Sulfate	987	mg/L	04/14/2021	LCWILLIA	EPA 300.0
	Total Dissolved Solids	1536	mg/L	04/19/2021	SJBROWN	SM 2540C
	pH	4.02	SU	04/07/2021	DEW/MDG	
	Spec. Cond.	1650	uS	04/07/2021	DEW/MDG	
	Dissolved Oxygen	0.380	ppm	04/07/2021	DEW/MDG	
	Oxidation Reduction Potential	247	mv	04/07/2021	DEW/MDG	SM2580
	Temp	21.36	С	04/07/2021	DEW/MDG	
	Turbidity	0	NTU	04/07/2021	DEW/MDG	
	Depth	9.39	Feet	04/07/2021	DEW/MDG	
	Elevation	75.49	Feet	04/22/2021	DEWEST	

#### Comments:

Independent Laboratory Results: "GEL" - GEL Laboratories LLC - Lab ID # 10120; "Test America" - TestAmerica Laboratories, Inc. - Lab ID# 98001; "DavisBrown"- Davis & Brown Lab ID # 21117; "Shealy"- Shealy Environmental Services, Inc.- Lab ID# 32010 "ROGERSCALLCO"- Rogers & Callcot, Inc.- Lab ID # 23105001

Analysis Validated:

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#### SANTEE COOPER ANALYTICAL SERVICES

### CERTIFICATE OF ANALYSIS

### LAB CERTIFICATION #08552

Sample #	AF00631	Location:	GW Well CGYP-2		Date: 04/07/2021	Sample Collector	DEW/MDG
Loc. Code	CGYP-2		DUP		Time: 13:21		
	Ar	nalysis	Result	Units	Test Date	Analyst	Method
		Arsenic	17.0	ug/L	05/07/2021	SJHATCHE	EPA 6020B
		Barium	14.3	ug/L	05/06/2021	SJHATCHE	EPA 6020B
		Beryllium	2.9	ug/L	05/06/2021	SJHATCHE	EPA 6020B
		Boron	890	ug/L	04/16/2021	ROGERSNCALLC	EPA 6010D
		Calcium	276	mg/L	05/06/2021	SJHATCHE	EPA 6020B
		Cadmium	<0.50	ug/L	05/06/2021	SJHATCHE	EPA 6020B
		Cobalt	18.4	ug/L	05/07/2021	SJHATCHE	EPA 6020B
		Chromium	<5.0	ug/L	05/06/2021	SJHATCHE	EPA 6020B
		Mercury	<0.20	ug/L	04/16/2021	ROGERSNCALLC	EPA 7470
		Lithium	15	ug/L	04/16/2021	ROGERSNCALLC	EPA 6010D
		Molybdenum	<10	ug/L	04/16/2021	ROGERSNCALLC	EPA 6010D
		Lead	17.0	ug/L	05/06/2021	SJHATCHE	EPA 6020B
		Antimony	<5.0	ug/L	05/06/2021	SJHATCHE	EPA 6020B
		Selenium	<10.0	ug/L	05/06/2021	SJHATCHE	EPA 6020B
		Thallium	<1.0	ug/L	05/06/2021	SJHATCHE	EPA 6020B
		Radium 226	0.290	pCi/L	04/22/2021	GEL	EPA 903.1 Mod
		Radium 228	4.76	pCi/L	04/20/2021	GEL	EPA 904.0
	Radium 226	/228 Combined Calculation	5.05	pCi/L	05/05/2021	GEL	EPA 903.1 Mod
		Chloride	56.4	mg/L	04/14/2021	LCWILLIA	EPA 300.0
		Fluoride	1.04	mg/L	04/14/2021	LCWILLIA	EPA 300.0
		Sulfate	986	mg/L	04/14/2021	LCWILLIA	EPA 300.0
	Total D	issolved Solids	1670	mg/L	04/19/2021	SJBROWN	SM 2540C

Comments:

Independent Laboratory Results: "GEL" - GEL Laboratories LLC - Lab ID # 10120; "Test America" - TestAmerica Laboratories, Inc. - Lab ID# 98001; "DavisBrown"- Davis & Brown Lab ID # 21117; "Shealy"- Shealy Environmental Services, Inc.- Lab ID# 32010 "ROGERSCALLCO"- Rogers & Callcot, Inc.- Lab ID # 23105001

Analysis Validated:

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#### SANTEE COOPER ANALYTICAL SERVICES

#### CERTIFICATE OF ANALYSIS

#### LAB CERTIFICATION #08552

Sample #	AF03566	Location:	GW Well CGYP-2		Date: 05/13/2021	Sample Collector:	MDG/BWM
Loc. Code	CGYP-2				Time: 14:36		
	An	alysis	Result	Units	Test Date	Analyst	Method
		Depth	9.80	Feet	05/14/2021	MDG/BWM	
		Elevation	75.08	Feet	05/17/2021	MDGOINGS	

Comments:

Independent Laboratory Results: "GEL" - GEL Laboratories LLC - Lab ID # 10120; "Test America" - TestAmerica Laboratories, Inc. - Lab ID# 98001; "DavisBrown"- Davis & Brown Lab ID # 21117; "Shealy"- Shealy Environmental Services, Inc. - Lab ID# 32010 "ROGERSCALLCO"- Rogers & Callcot, Inc.- Lab ID # 23105001

Analysis Validated:

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#### SANTEE COOPER ANALYTICAL SERVICES

### CERTIFICATE OF ANALYSIS

### LAB CERTIFICATION #08552

Sample #	AF07268 Location:	GW Well CGYP-2		Date: 07/07/2021	Sample Collector:	BRT/CWS
Loc. Code	CGYP-2			Time: 11:28		
	Analysis	Result	Units	Test Date	Analyst	Method
	Arsenic	19.4	ug/L	08/03/2021	SJHATCHE	EPA 6020B
	Barium	17.8	ug/L	08/03/2021	SJHATCHE	EPA 6020B
	Beryllium	2.8	ug/L	08/04/2021	SJHATCHE	EPA 6020B
	Boron	1300	ug/L	07/14/2021	R&C	EPA 6010D
	Calcium	253	mg/L	08/03/2021	SJHATCHE	EPA 6020B
	Cadmium	<0.50	ug/L	08/03/2021	SJHATCHE	EPA 6020B
	Cobalt	20.6	ug/L	08/03/2021	SJHATCHE	EPA 6020B
	Chromium	<5.0	ug/L	08/03/2021	SJHATCHE	EPA 6020B
	Mercury	<0.2	ug/L	07/16/2021	R&C	EPA 7470
	Lithium	15.0	ug/L	07/14/2021	R&C	EPA 6010D
	Molybdenum	<10	ug/L	07/14/2021	R&C	EPA 6010D
	Lead	20.8	ug/L	08/03/2021	SJHATCHE	EPA 6020B
	Antimony	<5.0	ug/L	08/03/2021	SJHATCHE	EPA 6020B
	Selenium	<10.0	ug/L	08/03/2021	SJHATCHE	EPA 6020B
	Thallium	<1.0	ug/L	08/03/2021	SJHATCHE	EPA 6020B
	Radium 226	0.578	pCi/L	07/22/2021	GEL	EPA 903.1 Mod
	Radium 228	1.92	pCi/L	08/03/2021	GEL	EPA 904.0
	Radium 226/228 Combined Calculation	2.50	pCi/L	08/05/2021	GEL	EPA 903.1 Mod
	Chloride	83.1	mg/L	07/09/2021	KCWELLS	EPA 300.0
	Fluoride	0.87	mg/L	07/09/2021	KCWELLS	EPA 300.0
	Sulfate	937	mg/L	07/09/2021	KCWELLS	EPA 300.0
	Total Dissolved Solids	1618	mg/L	07/15/2021	SJBROWN	SM 2540C
	pH	3.80	SU	07/07/2021	BRT/CWS	
	Spec. Cond.	1530	uS	07/07/2021	BRT/CWS	
	Dissolved Oxygen	0.670	ppm	07/07/2021	BRT/CWS	
	Oxidation Reduction Potential	241	mv	07/07/2021	BRT/CWS	SM2580
	Temp	25.39	С	07/07/2021	BRT/CWS	
	Turbidity	0.200	NTU	07/07/2021	BRT/CWS	
	Depth	10.60	Feet	07/07/2021	BRT/CWS	
	Elevation	74.28	Feet	07/21/2021	BRTAYLOR	

#### Comments:

Independent Laboratory Results: "GEL" - GEL Laboratories LLC - Lab ID # 10120; "Test America" - TestAmerica Laboratories, Inc. - Lab ID# 98001; "DavisBrown"- Davis & Brown Lab ID # 21117; "Shealy"- Shealy Environmental Services, Inc.- Lab ID# 32010 "ROGERSCALLCO"-Rogers & Callcot, Inc.- Lab ID # 23105001

Analysis Validated:

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#### SANTEE COOPER ANALYTICAL SERVICES

### CERTIFICATE OF ANALYSIS

#### LAB CERTIFICATION #08552

Sample #	AF07269	Location:	GW Well CGYP-2		Date: 07/07/2021	Sample Collector	BRT/CWS
Loc. Code	CGYP-2		DUP		<b>Time:</b> 11:33		
	A	nalysis	Result	Units	Test Date	Analyst	Method
		Arsenic	18.9	ug/L	08/03/2021	SJHATCHE	EPA 6020B
		Barium	17.9	ug/L	08/03/2021	SJHATCHE	EPA 6020B
		Beryllium	3.2	ug/L	08/04/2021	SJHATCHE	EPA 6020B
		Boron	1300	ug/L	07/14/2021	R&C	EPA 6010D
		Calcium	263	mg/L	08/03/2021	SJHATCHE	EPA 6020B
		Cadmium	<0.50	ug/L	08/03/2021	SJHATCHE	EPA 6020B
		Cobalt	19.6	ug/L	08/03/2021	SJHATCHE	EPA 6020B
		Chromium	<5.0	ug/L	08/03/2021	SJHATCHE	EPA 6020B
		Mercury	<0.2	ug/L	07/16/2021	R&C	EPA 7470
		Lithium	14.0	ug/L	07/14/2021	R&C	EPA 6010D
		Molybdenum	<10	ug/L	07/14/2021	R&C	EPA 6010D
		Lead	20.2	ug/L	08/03/2021	SJHATCHE	EPA 6020B
		Antimony	<5.0	ug/L	08/03/2021	SJHATCHE	EPA 6020B
		Selenium	<10.0	ug/L	08/03/2021	SJHATCHE	EPA 6020B
		Thallium	<1.0	ug/L	08/03/2021	SJHATCHE	EPA 6020B
		Radium 226	0.762	pCi/L	07/22/2021	GEL	EPA 903.1 Mod
		Radium 228	2.31	pCi/L	08/03/2021	GEL	EPA 904.0
	Radium 226	/228 Combined Calculation	3.07	pCi/L	08/05/2021	GEL	EPA 903.1 Mod
		Chloride	81.4	mg/L	07/09/2021	KCWELLS	EPA 300.0
		Fluoride	0.87	mg/L	07/09/2021	KCWELLS	EPA 300.0
		Sulfate	945	mg/L	07/09/2021	KCWELLS	EPA 300.0
	Total D	issolved Solids	1615	mg/L	07/15/2021	SJBROWN	SM 2540C

Comments:

Independent Laboratory Results: "GEL" - GEL Laboratories LLC - Lab ID # 10120; "Test America" - TestAmerica Laboratories, Inc. - Lab ID# 98001; "DavisBrown"- Davis & Brown Lab ID # 21117; "Shealy"- Shealy Environmental Services, Inc.- Lab ID# 32010 "ROGERSCALLCO"- Rogers & Callcot, Inc.- Lab ID # 23105001

Analysis Validated:

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#### SANTEE COOPER ANALYTICAL SERVICES

#### CERTIFICATE OF ANALYSIS

#### LAB CERTIFICATION #08552

Sample #	AE94864 Location:	GW Well CGYP-3		Date: 02/10/2021	Sample Collector:	MDG/DEW
Loc. Code	CGYP-3			<b>Time:</b> 13:38		
	Analysis	Result	Units	Test Date	Analyst	Method
	Arsenic	22.0	ug/L	02/19/2021	SJHATCHE	EPA 6020B
	Barium	40.5	ug/L	02/22/2021	SJHATCHE	EPA 6020B
	Beryllium	35.0	ug/L	02/19/2021	SJHATCHE	EPA 6020B
	Boron	25000	ug/L	12/30/1999	R&C	EPA 6010D
	Calcium	729	mg/L	02/19/2021	SJHATCHE	EPA 6020B
	Cadmium	0.78	ug/L	02/19/2021	SJHATCHE	EPA 6020B
	Cobalt	151	ug/L	02/19/2021	SJHATCHE	EPA 6020B
	Chromium	<5.0	ug/L	02/19/2021	SJHATCHE	EPA 6020B
	Mercury	<0.2	ug/L	12/30/1999	R&C	EPA 7470
	Lithium	110	ug/L	12/30/1999	R&C	EPA 6010D
	Molybdenum	<20	ug/L	12/30/1999	R&C	EPA 6010D
	Lead	92.0	ug/L	02/19/2021	SJHATCHE	EPA 6020B
	Antimony	<5.0	ug/L	02/19/2021	SJHATCHE	EPA 6020B
	Selenium	<10.0	ug/L	02/19/2021	SJHATCHE	EPA 6020B
	Thallium	<1.0	ug/L	02/19/2021	SJHATCHE	EPA 6020B
	Radium 226	1.05	pCi/L	02/24/2021	GEL	EPA 903.1 Mod
	Radium 228	3.63	pCi/L	03/01/2021	GEL	EPA 904.0
	Radium 226/228 Combined Calculation	4.69	pCi/L	03/05/2021	GEL	EPA 903.1 Mod
	Chloride	1460	mg/L	02/19/2021	KCWELLS	EPA 300.0
	Fluoride	6.22	mg/L	02/19/2021	KCWELLS	EPA 300.0
	Sulfate	1010	mg/L	02/19/2021	KCWELLS	EPA 300.0
	Total Dissolved Solids	4090	mg/L	02/16/2021	KCWELLS	SM 2540C
	pН	3.50	SU	02/10/2021	DEW/MDG	
	Spec. Cond.	5700	uS	02/10/2021	DEW/MDG	
	Dissolved Oxygen	0.510	ppm	02/10/2021	DEW/MDG	
	Oxidation Reduction Potential	328	mv	02/10/2021	DEW/MDG	SM2580
	Temp	19.17	С	02/10/2021	DEW/MDG	
	Turbidity	0	NTU	02/10/2021	DEW/MDG	
	Depth	6.38	Feet	02/10/2021	DEW/MDG	
	Elevation	77.57	Feet	02/12/2021	DEWEST	

#### Comments:

Independent Laboratory Results: "GEL" - GEL Laboratories LLC - Lab ID # 10120; "Test America" - TestAmerica Laboratories, Inc. - Lab ID# 98001; "DavisBrown"- Davis & Brown Lab ID # 21117; "Shealy"- Shealy Environmental Services, Inc. - Lab ID# 32010 "ROGERSCALLCO"- Rogers & Callcot, Inc.- Lab ID # 23105001

Analysis Validated:

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#### SANTEE COOPER ANALYTICAL SERVICES

### CERTIFICATE OF ANALYSIS

### LAB CERTIFICATION #08552

Sample #	AF00632 Location:	GW Well CGYP-3		Date: 04/07/2021	Sample Collector	: DEW/MDG
Loc. Code	CGYP-3			<b>Time:</b> 14:20		
	Analysis	Result	Units	Test Date	Analyst	Method
	Arsenic	19.8	ug/L	05/07/2021	SJHATCHE	EPA 6020B
	Barium	38.4	ug/L	05/06/2021	SJHATCHE	EPA 6020B
	Beryllium	46.5	ug/L	05/06/2021	SJHATCHE	EPA 6020B
	Boron	23000	ug/L	04/16/2021	ROGERSNCALLC	EPA 6010D
	Calcium	700	mg/L	05/06/2021	SJHATCHE	EPA 6020B
	Cadmium	0.53	ug/L	05/06/2021	SJHATCHE	EPA 6020B
	Cobalt	143	ug/L	05/07/2021	SJHATCHE	EPA 6020B
	Chromium	6.1	ug/L	05/06/2021	SJHATCHE	EPA 6020B
	Mercury	0.21	ug/L	04/16/2021	ROGERSNCALLC	EPA 7470
	Lithium	94	ug/L	04/16/2021	ROGERSNCALLC	EPA 6010D
	Molybdenum	<10	ug/L	04/16/2021	ROGERSNCALLC	EPA 6010D
	Lead	24.8	ug/L	05/06/2021	SJHATCHE	EPA 6020B
	Antimony	<5.0	ug/L	05/06/2021	SJHATCHE	EPA 6020B
	Selenium	<10.0	ug/L	05/06/2021	SJHATCHE	EPA 6020B
	Thallium	<1.0	ug/L	05/06/2021	SJHATCHE	EPA 6020B
	Radium 226	0.433	pCi/L	04/22/2021	GEL	EPA 903.1 Mod
	Radium 228	7.50	pCi/L	04/26/2021	GEL	EPA 904.0
	Radium 226/228 Combined Calculation	7.93	pCi/L	05/05/2021	GEL	EPA 903.1 Mod
	Chloride	1405	mg/L	06/03/2021	KCWELLS	EPA 300.0
	Fluoride	3.32	mg/L	06/03/2021	KCWELLS	EPA 300.0
	Sulfate	972	mg/L	06/03/2021	KCWELLS	EPA 300.0
	Total Dissolved Solids	4958	mg/L	04/19/2021	SJBROWN	SM 2540C
	pH	3.73	SU	04/07/2021	DEW/MDG	
	Spec. Cond.	5280	uS	04/07/2021	DEW/MDG	
	Dissolved Oxygen	0.320	ppm	04/07/2021	DEW/MDG	
	Oxidation Reduction Potential	240	mv	04/07/2021	DEW/MDG	SM2580
	Temp	23.64	С	04/07/2021	DEW/MDG	
	Turbidity	0	NTU	04/07/2021	DEW/MDG	
	Depth	8.27	Feet	04/07/2021	DEW/MDG	
	Elevation	75.68	Feet	04/22/2021	DEWEST	

#### Comments:

Independent Laboratory Results: "GEL" - GEL Laboratories LLC - Lab ID # 10120; "Test America" - TestAmerica Laboratories, Inc. - Lab ID# 98001; "DavisBrown"- Davis & Brown Lab ID # 21117; "Shealy"- Shealy Environmental Services, Inc.- Lab ID# 32010 "ROGERSCALLCO"- Rogers & Callcot, Inc.- Lab ID # 23105001

Analysis Validated:

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#### SANTEE COOPER ANALYTICAL SERVICES

#### CERTIFICATE OF ANALYSIS

#### LAB CERTIFICATION #08552

Sample #	AF03567	Location:	GW Well CGYP-3		Date: 05/13/2021	Sample Collector:	MDG/BWM
Loc. Code	CGYP-3				Time: 14:39		
	An	alysis	Result	Units	Test Date	Analyst	Method
		Depth	8.57	Feet	05/14/2021	MDG/BWM	
		Elevation	75.38	Feet	05/17/2021	MDGOINGS	

Comments:

Independent Laboratory Results: "GEL" - GEL Laboratories LLC - Lab ID # 10120; "Test America" - TestAmerica Laboratories, Inc. - Lab ID# 98001; "DavisBrown"- Davis & Brown Lab ID # 21117; "Shealy"- Shealy Environmental Services, Inc. - Lab ID# 32010 "ROGERSCALLCO"- Rogers & Callcot, Inc.- Lab ID # 23105001

Analysis Validated:

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#### SANTEE COOPER ANALYTICAL SERVICES

### CERTIFICATE OF ANALYSIS

### LAB CERTIFICATION #08552

Loc. Code         CSYP-3         Time:         13:83           Analysis         Result         Units         Test Date         Analysis         Method           Arsenic         18:3         ug/L         08/03/2021         SJHATCHE         EPA 6020B           Barium         37.8         ug/L         08/04/2021         SJHATCHE         EPA 6020B           Beryllium         26.9         ug/L         08/04/2021         SJHATCHE         EPA 6020B           Boron         17/000         ug/L         08/03/2021         SJHATCHE         EPA 6020B           Cadmium         4050         ug/L         08/03/2021         SJHATCHE         EPA 6020B           Cadmium         40.50         ug/L         08/03/2021         SJHATCHE         EPA 6020B           Chomium         7.9         ug/L         08/03/2021         SJHATCHE         EPA 6020B           Metrury         -0.2         ug/L         07/14/2021         R&C         EPA 6020B           Metrury         -0.2         ug/L         07/14/2021         R&C         EPA 6020B           Metrury         -0.0         ug/L         08/03/2021         SJHATCHE         EPA 6020B           Matinony         +5.0         ug/L	Sample #	AF07270 Location:	GW Well CGYP-3		Date: 07/07/2021	Sample Collector:	BRT/CWS
Arsenic         18.3         ug/L         08/03/2021         S.JHATCHE         EPA 6020B           Barium         37.8         ug/L         08/04/2021         S.JHATCHE         EPA 6020B           Beryllium         26.9         ug/L         08/04/2021         S.JHATCHE         EPA 6020B           Boron         17000         ug/L         07/14/2021         R&C         EPA 6020B           Calcium         495         mg/L         08/03/2021         S.JHATCHE         EPA 6020B           Cadmium         <0.50         ug/L         08/03/2021         S.JHATCHE         EPA 6020B           Cadmium         <0.50         ug/L         08/03/2021         S.JHATCHE         EPA 6020B           Cadmium         <0.50         ug/L         08/03/2021         S.JHATCHE         EPA 6020B           Cadmium         <0.2         ug/L         07/14/2021         R&C         EPA 6020B           Mercury         <0.2         ug/L         07/14/2021         R&C         EPA 6020B           Mercury         <0.2         ug/L         07/14/2021         R&C         EPA 6020B           Mercury         <10         ug/L         08/03/2021         S.JHATCHE         EPA 6020B           Lithiu	Loc. Code	CGYP-3			<b>Time:</b> 13:38		
Barium         37.8         ug/L         08/04/2021         SJHATCHE         EPA 6020B           Beryllium         26.9         ug/L         08/04/2021         SJHATCHE         EPA 6020B           Boron         17000         ug/L         08/04/2021         SJHATCHE         EPA 6020B           Calcium         495         mg/L         08/03/2021         SJHATCHE         EPA 6020B           Cadmium         <0.50         ug/L         08/03/2021         SJHATCHE         EPA 6020B           Cadmium         7.9         ug/L         08/03/2021         SJHATCHE         EPA 6020B           Mercury         <0.2         ug/L         07/16/2021         R&C         EPA 6020B           Mercury         <0.2         ug/L         07/14/2021         R&C         EPA 6020B           Mercury         <0.2         ug/L         08/03/2021         SJHATCHE         EPA 6020B           Lead         29.7         ug/L         08/03/2021         SJHATCHE         EPA 6020B           Lead         29.7         ug/L         08/03/2021         SJHATCHE         EPA 6020B           Selenium         <10.0         ug/L         08/03/2021         SJHATCHE         EPA 6020B           Radium 228		Analysis	Result	Units	Test Date	Analyst	Method
Beryllium         26.9         ug/L         08/04/2021         SJHATCHE         EPA 6020B           Boron         17000         ug/L         07/14/2021         R&C         EPA 6010D           Calcium         495         mg/L         08/03/2021         SJHATCHE         EPA 6020B           Cadmium         <0.50		Arsenic	18.3	ug/L	08/03/2021	SJHATCHE	EPA 6020B
Broon         17000         ug/L         07/14/2021         R&C         EPA 6010D           Calcium         495         mg/L         08/03/2021         SJHATCHE         EPA 6020B           Cadmium         <0,50		Barium	37.8	ug/L	08/04/2021	SJHATCHE	EPA 6020B
Calcium         495         mg/L         08/03/2021         SJHATCHE         EPA 6020B           Cadmium         <0.50		Beryllium	26.9	ug/L	08/04/2021	SJHATCHE	EPA 6020B
Cadmium         <0.50         ug/L         08/03/2021         SJHATCHE         EPA 6020B           Cobalt         96.7         ug/L         08/03/2021         SJHATCHE         EPA 6020B           Chromium         7.9         ug/L         08/03/2021         SJHATCHE         EPA 6020B           Mercury         <0.2		Boron	17000	ug/L	07/14/2021	R&C	EPA 6010D
Cobalt         96.7         ug/L         08/03/2021         SJHATCHE         EPA 6020B           Chromium         7.9         ug/L         08/03/2021         SJHATCHE         EPA 6020B           Mercury         <0.2		Calcium	495	mg/L	08/03/2021	SJHATCHE	EPA 6020B
Chromium         7.9         ug/L         08/03/2021         SJHATCHE         EPA 6020 B           Mercury         <0.2		Cadmium	<0.50	ug/L	08/03/2021	SJHATCHE	EPA 6020B
Mercury         <0.2         ug/L         07/16/2021         R&C         EPA 7470           Lithium         56.0         ug/L         07/14/2021         R&C         EPA 6010D           Molybdenum         <10		Cobalt	96.7	ug/L	08/03/2021	SJHATCHE	EPA 6020B
Lithium         56.0         ug/L         07/14/2021         R&C         EPA 6010D           Molybdenum         <10		Chromium	7.9	ug/L	08/03/2021	SJHATCHE	EPA 6020B
Molybdenum         <10         ug/L         07/14/2021         R&C         EPA 6010D           Lead         29.7         ug/L         08/03/2021         SJHATCHE         EPA 6020B           Antimony         <5.0		Mercury	<0.2	ug/L	07/16/2021	R&C	EPA 7470
Lead         29.7         ug/L         08/03/2021         SJHATCHE         EPA 6020 B           Antimony         <5.0		Lithium	56.0	ug/L	07/14/2021	R&C	EPA 6010D
Antimony         <5.0         ug/L         08/03/2021         SJHATCHE         EPA 6020 B           Selenium         <10.0		Molybdenum	<10	ug/L	07/14/2021	R&C	EPA 6010D
Selenium         <10.0         ug/L         08/03/2021         SJHATCHE         EPA 6020B           Thallium         <1.0		Lead	29.7	ug/L	08/03/2021	SJHATCHE	EPA 6020B
Thallium         <1.0         ug/L         08/03/2021         SJHATCHE         EPA 6020B           Radium 226         1.24         pCi/L         07/22/2021         GEL         EPA 903.1 Mod           Radium 228         3.79         pCi/L         08/03/2021         GEL         EPA 904.0           Radium 226/228 Combined Calculation         5.03         pCi/L         08/05/2021         GEL         EPA 903.1 Mod           Chloride         950         mg/L         07/16/2021         KCWELLS         EPA 300.0           Chloride         950         mg/L         07/16/2021         KCWELLS         EPA 300.0           Fluoride         1.88         mg/L         07/16/2021         KCWELLS         EPA 300.0           Sulfate         993         mg/L         07/16/2021         KCWELLS         EPA 300.0           Sulfate         993         mg/L         07/15/2021         SJBROWN         SM 2540C           pH         3.56         SU         07/07/2021         BRT/CWS         SM 2540C           Spec. Cond.         4090         uS         07/07/2021         BRT/CWS         SM 2580           Oxidation Reduction Potential         225         mv         07/07/2021         BRT/CWS         SM 2580 </td <td></td> <td>Antimony</td> <td>&lt;5.0</td> <td>ug/L</td> <td>08/03/2021</td> <td>SJHATCHE</td> <td>EPA 6020B</td>		Antimony	<5.0	ug/L	08/03/2021	SJHATCHE	EPA 6020B
Radium 226         1.24         pCi/L         07/22/2021         GEL         EPA 903.1 Mod           Radium 228         3.79         pCi/L         08/03/2021         GEL         EPA 903.1 Mod           Radium 226/228 Combined Calculation         5.03         pCi/L         08/05/2021         GEL         EPA 903.1 Mod           Chloride         950         mg/L         07/16/2021         KCWELLS         EPA 300.0           Fluoride         1.88         mg/L         07/09/2021         KCWELLS         EPA 300.0           Sulfate         993         mg/L         07/16/2021         KCWELLS         EPA 300.0           Sulfate         993         mg/L         07/17/2021         BRT/CWS         EPA 300.0           Spec. Cond.         4090         uS         07/07/2021         BRT/CWS         SM2540C           Dissolved Oxygen         0.720         ppm         07/07/2021         BRT/CWS         SM2580		Selenium	<10.0	ug/L	08/03/2021	SJHATCHE	EPA 6020B
Radium 228         3.79         pCi/L         08/03/2021         GEL         EPA 904.0           Radium 226/228 Combined Calculation         5.03         pCi/L         08/05/2021         GEL         EPA 903.1 Mod           Chloride         950         mg/L         07/16/2021         KCWELLS         EPA 300.0           Fluoride         1.88         mg/L         07/09/2021         KCWELLS         EPA 300.0           Sulfate         993         mg/L         07/16/2021         KCWELLS         EPA 300.0           Sulfate         993         mg/L         07/07/2021         BRT/CWS         SM 2540C           pH         3.56         SU         07/07/2021         BRT/CWS         SM 2580           Dissolved Oxygen         0.720         ppm         07/07/2021         BRT/CWS         SM 2580           C         07/07/2021         BRT/CWS         M 24.83         C         07/07/2021         BRT/CWS </td <td></td> <td>Thallium</td> <td>&lt;1.0</td> <td>ug/L</td> <td>08/03/2021</td> <td>SJHATCHE</td> <td>EPA 6020B</td>		Thallium	<1.0	ug/L	08/03/2021	SJHATCHE	EPA 6020B
Radium 226/228 Combined Calculation         5.03         pCi/L         08/05/2021         GEL         EPA 903.1 Mod Calculation           Chloride         950         mg/L         07/16/2021         KCWELLS         EPA 300.0           Fluoride         1.88         mg/L         07/09/2021         KCWELLS         EPA 300.0           Sulfate         993         mg/L         07/16/2021         KCWELLS         EPA 300.0           Sulfate         993         mg/L         07/16/2021         KCWELLS         EPA 300.0           Sulfate         993         mg/L         07/16/2021         SJBROWN         SM 2540C           pH         3.56         SU         07/07/2021         BRT/CWS         SM 2540C           Spec. Cond.         4090         uS         07/07/2021         BRT/CWS         SM 2540C           Oxidation Reduction Potential         225         mv         07/07/2021         BRT/CWS         SM 2580           Temp         24.83         C         07/07/2021         BRT/CWS         SM 2580           Turbidity         0.300         NTU         07/07/2021         BRT/CWS         SM 2580           Depth         9.29         Feet         07/07/2021         BRT/CWS         SM 2580		Radium 226	1.24	pCi/L	07/22/2021	GEL	EPA 903.1 Mod
Calculation         ng/L         07/16/2021         KCWELLS         EPA 300.0           Fluoride         1.88         ng/L         07/09/2021         KCWELLS         EPA 300.0           Sulfate         993         ng/L         07/16/2021         KCWELLS         EPA 300.0           Sulfate         993         mg/L         07/16/2021         KCWELLS         EPA 300.0           Total Dissolved Solids         3291         mg/L         07/15/2021         SJBROWN         SM 2540C           pH         3.56         SU         07/07/2021         BRT/CWS         Full           Spec. Cond.         4090         uS         07/07/2021         BRT/CWS         SM 2540C           Dissolved Oxygen         0.720         ppm         07/07/2021         BRT/CWS         SM 2580           Oxidation Reduction Potential         225         mv         07/07/2021         BRT/CWS         SM 2580           Temp         24.83         C         07/07/2021         BRT/CWS         SM 2580           Turbidity         0.300         NTU         07/07/2021         BRT/CWS         SM 2580           Depth         9.29         Feet         07/07/2021         BRT/CWS         SM 2580		Radium 228	3.79	pCi/L	08/03/2021	GEL	EPA 904.0
Fluoride         1.88         mg/L         07/09/2021         KCWELLS         EPA 300.0           Sulfate         993         mg/L         07/16/2021         KCWELLS         EPA 300.0           Total Dissolved Solids         3291         mg/L         07/15/2021         SJBROWN         SM 2540C           pH         3.56         SU         07/07/2021         BRT/CWS             Spec. Cond.         4090         uS         07/07/2021         BRT/CWS             Dissolved Oxygen         0.720         ppm         07/07/2021         BRT/CWS         SM2580           Oxidation Reduction Potential         225         mv         07/07/2021         BRT/CWS         SM2580           Temp         24.83         C         07/07/2021         BRT/CWS         SM2580           Depth         9.29         Feet         07/07/2021         BRT/CWS			5.03	pCi/L	08/05/2021	GEL	EPA 903.1 Mod
Sulfate         993         mg/L         07/16/2021         KCWELLS         EPA 300.0           Total Dissolved Solids         3291         mg/L         07/15/2021         SJBROWN         SM 2540C           pH         3.56         SU         07/07/2021         BRT/CWS            Spec. Cond.         4090         uS         07/07/2021         BRT/CWS            Dissolved Oxygen         0.720         ppm         07/07/2021         BRT/CWS         SM2580           Oxidation Reduction Potential         225         mv         07/07/2021         BRT/CWS         SM2580           Temp         24.83         C         07/07/2021         BRT/CWS         SM2580           Turbidity         0.300         NTU         07/07/2021         BRT/CWS         SM2580           Depth         9.29         Feet         07/07/2021         BRT/CWS         SM2580		Chloride	950	mg/L	07/16/2021	KCWELLS	EPA 300.0
Total Dissolved Solids         3291         mg/L         07/15/2021         SJBROWN         SM 2540C           pH         3.56         SU         07/07/2021         BRT/CWS                                       SM 2540C		Fluoride	1.88	mg/L	07/09/2021	KCWELLS	EPA 300.0
pH         3.56         SU         07/07/2021         BRT/CWS           Spec. Cond.         4090         uS         07/07/2021         BRT/CWS           Dissolved Oxygen         0.720         ppm         07/07/2021         BRT/CWS           Oxidation Reduction Potential         225         mv         07/07/2021         BRT/CWS         SM2580           Temp         24.83         C         07/07/2021         BRT/CWS         SM2580           Turbidity         0.300         NTU         07/07/2021         BRT/CWS         SM2580           Depth         9.29         Feet         07/07/2021         BRT/CWS         SM2580		Sulfate	993	mg/L	07/16/2021	KCWELLS	EPA 300.0
Spec. Cond.         4090         uS         07/07/2021         BRT/CWS           Dissolved Oxygen         0.720         ppm         07/07/2021         BRT/CWS           Oxidation Reduction Potential         225         mv         07/07/2021         BRT/CWS         SM2580           Temp         24.83         C         07/07/2021         BRT/CWS         SM2580           Turbidity         0.300         NTU         07/07/2021         BRT/CWS           Depth         9.29         Feet         07/07/2021         BRT/CWS		Total Dissolved Solids	3291	mg/L	07/15/2021	SJBROWN	SM 2540C
Dissolved Oxygen         0.720         ppm         07/07/2021         BRT/CWS           Oxidation Reduction Potential         225         mv         07/07/2021         BRT/CWS         SM2580           Temp         24.83         C         07/07/2021         BRT/CWS         SM2580           Turbidity         0.300         NTU         07/07/2021         BRT/CWS         SM2580           Depth         9.29         Feet         07/07/2021         BRT/CWS		pН	3.56	SU	07/07/2021	BRT/CWS	
Oxidation Reduction Potential         225         mv         07/07/2021         BRT/CWS         SM2580           Temp         24.83         C         07/07/2021         BRT/CWS         5           Turbidity         0.300         NTU         07/07/2021         BRT/CWS           Depth         9.29         Feet         07/07/2021         BRT/CWS		Spec. Cond.	4090	uS	07/07/2021	BRT/CWS	
Temp         24.83         C         07/07/2021         BRT/CWS           Turbidity         0.300         NTU         07/07/2021         BRT/CWS           Depth         9.29         Feet         07/07/2021         BRT/CWS		Dissolved Oxygen	0.720	ppm	07/07/2021	BRT/CWS	
Turbidity         0.300         NTU         07/07/2021         BRT/CWS           Depth         9.29         Feet         07/07/2021         BRT/CWS		Oxidation Reduction Potential	225	mv	07/07/2021	BRT/CWS	SM2580
Depth9.29Feet07/07/2021BRT/CWS		Temp	24.83	С	07/07/2021	BRT/CWS	
		Turbidity	0.300	NTU	07/07/2021	BRT/CWS	
Elevation 74.66 Feet 07/14/2021 BRTAYLOR		Depth	9.29	Feet	07/07/2021	BRT/CWS	
		Elevation	74.66	Feet	07/14/2021	BRTAYLOR	

#### Comments:

Independent Laboratory Results: "GEL" - GEL Laboratories LLC - Lab ID # 10120; "Test America" - TestAmerica Laboratories, Inc. - Lab ID# 98001; "DavisBrown"- Davis & Brown Lab ID # 21117; "Shealy"- Shealy Environmental Services, Inc.- Lab ID# 32010 "ROGERSCALLCO"-Rogers & Callcot, Inc.- Lab ID # 23105001

Analysis Validated:

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#### SANTEE COOPER ANALYTICAL SERVICES

#### CERTIFICATE OF ANALYSIS

#### LAB CERTIFICATION #08552

Sample #	AF00633 Location:	GW Well CGYP-4		Date: 04/07/2021	Sample Collector	: DEW/MDG
Loc. Code	CGYP-4			<b>Time:</b> 11:06		
	Analysis	Result	Units	Test Date	Analyst	Method
	Arsenic	10.3	ug/L	05/07/2021	SJHATCHE	EPA 6020B
	Barium	45.4	ug/L	05/06/2021	SJHATCHE	EPA 6020B
	Beryllium	17.4	ug/L	05/06/2021	SJHATCHE	EPA 6020B
	Boron	7600	ug/L	04/16/2021	ROGERSNCALLC	EPA 6010D
	Calcium	348	mg/L	05/06/2021	SJHATCHE	EPA 6020B
	Cadmium	<0.50	ug/L	05/06/2021	SJHATCHE	EPA 6020B
	Cobalt	53.2	ug/L	05/07/2021	SJHATCHE	EPA 6020B
	Chromium	<5.0	ug/L	05/06/2021	SJHATCHE	EPA 6020B
	Mercury	<0.20	ug/L	04/16/2021	ROGERSNCALLC	EPA 7470
	Lithium	58	ug/L	04/16/2021	ROGERSNCALLC	EPA 6010D
	Molybdenum	<10	ug/L	04/16/2021	ROGERSNCALLC	EPA 6010D
	Lead	11.3	ug/L	05/06/2021	SJHATCHE	EPA 6020B
	Antimony	<5.0	ug/L	05/06/2021	SJHATCHE	EPA 6020B
	Selenium	<10.0	ug/L	05/06/2021	SJHATCHE	EPA 6020B
	Thallium	<1.0	ug/L	05/06/2021	SJHATCHE	EPA 6020B
	Radium 226	0.713	pCi/L	04/22/2021	GEL	EPA 903.1 Mod
	Radium 228	5.66	pCi/L	04/26/2021	GEL	EPA 904.0
	Radium 226/228 Combined Calculation	6.37	pCi/L	05/05/2021	GEL	EPA 903.1 Mod
	Chloride	733	mg/L	04/14/2021	LCWILLIA	EPA 300.0
	Fluoride	3.19	mg/L	04/14/2021	LCWILLIA	EPA 300.0
	Sulfate	602	mg/L	04/14/2021	LCWILLIA	EPA 300.0
	Total Dissolved Solids	2178	mg/L	04/19/2021	SJBROWN	SM 2540C
	pH	3.78	SU	04/07/2021	DEW/MDG	
	Spec. Cond.	3050	uS	04/07/2021	DEW/MDG	
	Dissolved Oxygen	0.540	ppm	04/07/2021	DEW/MDG	
	Oxidation Reduction Potential	246	mv	04/07/2021	DEW/MDG	SM2580
	Temp	22.48	С	04/07/2021	DEW/MDG	
	Turbidity	0	NTU	04/07/2021	DEW/MDG	
	Depth	7.56	Feet	04/07/2021	DEW/MDG	
	Elevation	75.93	Feet	04/22/2021	DEWEST	

#### Comments:

Independent Laboratory Results: "GEL" - GEL Laboratories LLC - Lab ID # 10120; "Test America" - TestAmerica Laboratories, Inc. - Lab ID# 98001; "DavisBrown"- Davis & Brown Lab ID # 21117; "Shealy"- Shealy Environmental Services, Inc. - Lab ID# 32010 "ROGERSCALLCO"- Rogers & Callcot, Inc.- Lab ID # 23105001

Analysis Validated:

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#### SANTEE COOPER ANALYTICAL SERVICES

### CERTIFICATE OF ANALYSIS

### LAB CERTIFICATION #08552

Sample #	AF03568 Location:	GW Well CGYP-4		Date: 05/13/2021	Sample Collector:	MDG/BWM
Loc. Code	CGYP-4			<b>Time:</b> 14:39		
	Analysis	Result	Units	Test Date	Analyst	Method
	Arsenic	10.5	ug/L	05/19/2021	SJHATCHE	EPA 6020B
	Barium	37.5	ug/L	05/19/2021	SJHATCHE	EPA 6020B
	Beryllium	16.4	ug/L	05/19/2021	SJHATCHE	EPA 6020B
	Boron	8000	ug/L	05/25/2021	R&C	EPA 6010D
	Calcium	360	mg/L	05/19/2021	SJHATCHE	EPA 6020B
	Cadmium	<0.50	ug/L	05/19/2021	SJHATCHE	EPA 6020B
	Cobalt	49.8	ug/L	05/19/2021	SJHATCHE	EPA 6020B
	Chromium	<5.0	ug/L	05/19/2021	SJHATCHE	EPA 6020B
	Mercury	<0.2	ug/L	05/27/2021	R&C	EPA 7470
	Lithium	58.0	ug/L	05/25/2021	R&C	EPA 6010D
	Molybdenum	<10	ug/L	05/25/2021	R&C	EPA 6010D
	Lead	12.2	ug/L	05/19/2021	SJHATCHE	EPA 6020B
	Antimony	<5.0	ug/L	05/19/2021	SJHATCHE	EPA 6020B
	Selenium	<10.0	ug/L	05/19/2021	SJHATCHE	EPA 6020B
	Thallium	<1.0	ug/L	05/19/2021	SJHATCHE	EPA 6020B
	Radium 226	1.02	pCi/L	06/02/2021	GEL	EPA 903.1 Mod
	Radium 228	4.82	pCi/L	06/04/2021	GEL	EPA 904.0
	Radium 226/228 Combined Calculation	5.84	pCi/L	06/11/2021	GEL	EPA 903.1 Mod
	Chloride	683	mg/L	05/18/2021	KCWELLS	EPA 300.0
	Fluoride	2.82	mg/L	05/18/2021	KCWELLS	EPA 300.0
	Sulfate	598	mg/L	05/18/2021	KCWELLS	EPA 300.0
	Total Dissolved Solids	2078	mg/L	05/21/2021	KCWELLS	SM 2540C
	pH	3.88	SU	05/14/2021	MDG/BWM	
	Spec. Cond.	2990	uS	05/14/2021	MDG/BWM	
	Dissolved Oxygen	0.640	ppm	05/14/2021	MDG/BWM	
	Oxidation Reduction Potential	122	mv	05/14/2021	MDG/BWM	SM2580
	Temp	22.18	С	05/14/2021	MDG/BWM	
	Turbidity	0	NTU	05/14/2021	MDG/BWM	
	Depth	7.65	Feet	05/14/2021	MDG/BWM	
	Elevation	75.84	Feet	05/17/2021	MDGOINGS	

#### Comments:

Independent Laboratory Results: "GEL" - GEL Laboratories LLC - Lab ID # 10120; "Test America" - TestAmerica Laboratories, Inc. - Lab ID# 98001; "DavisBrown"- Davis & Brown Lab ID # 21117; "Shealy"- Shealy Environmental Services, Inc.- Lab ID# 32010 "ROGERSCALLCO"-Rogers & Callcot, Inc.- Lab ID # 23105001

Analysis Validated:

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#### SANTEE COOPER ANALYTICAL SERVICES

### CERTIFICATE OF ANALYSIS

#### LAB CERTIFICATION #08552

Sample #	AF03569	Location:	GW Well CGYP-4		Date: 05/13/2021	Sample Collector:	MDG/BWM
Loc. Code	CGYP-4		DUP Time: 14:44				
	An	alysis	Result	Units	Test Date	Analyst	Method
		Arsenic	10.9	ug/L	05/19/2021	SJHATCHE	EPA 6020B
		Barium	38.4	ug/L	05/19/2021	SJHATCHE	EPA 6020B
		Beryllium	16.1	ug/L	05/19/2021	SJHATCHE	EPA 6020B
		Boron	8000	ug/L	05/25/2021	R&C	EPA 6010D
		Calcium	343	mg/L	05/19/2021	SJHATCHE	EPA 6020B
		Cadmium	<0.50	ug/L	05/19/2021	SJHATCHE	EPA 6020B
		Cobalt	52.1	ug/L	05/19/2021	SJHATCHE	EPA 6020B
		Chromium	<5.0	ug/L	05/19/2021	SJHATCHE	EPA 6020B
		Mercury	<0.2	ug/L	05/27/2021	R&C	EPA 7470
		Lithium	59.0	ug/L	05/25/2021	R&C	EPA 6010D
		Molybdenum	<10	ug/L	05/25/2021	R&C	EPA 6010D
		Lead	12.8	ug/L	05/19/2021	SJHATCHE	EPA 6020B
		Antimony	<5.0	ug/L	05/19/2021	SJHATCHE	EPA 6020B
		Selenium	<10.0	ug/L	05/19/2021	SJHATCHE	EPA 6020B
		Thallium	<1.0	ug/L	05/19/2021	SJHATCHE	EPA 6020B
		Radium 226	1.05	pCi/L	06/02/2021	GEL	EPA 903.1 Mod
		Radium 228	3.55	pCi/L	06/04/2021	GEL	EPA 904.0
	Radium 226/	228 Combined Calculation	4.60	pCi/L	06/11/2021	GEL	EPA 903.1 Mod
		Chloride	719	mg/L	05/18/2021	719	EPA 300.0
		Fluoride	1.90	mg/L	05/18/2021	KCWELLS	EPA 300.0
		Sulfate	632	mg/L	05/18/2021	KCWELLS	EPA 300.0
	Total Di	ssolved Solids	2195	mg/L	05/21/2021	KCWELLS	SM 2540C

Comments:

Independent Laboratory Results: "GEL" - GEL Laboratories LLC - Lab ID # 10120; "Test America" - TestAmerica Laboratories, Inc. - Lab ID# 98001; "DavisBrown"- Davis & Brown Lab ID # 21117; "Shealy"- Shealy Environmental Services, Inc.- Lab ID# 32010 "ROGERSCALLCO"- Rogers & Callcot, Inc.- Lab ID # 23105001

Analysis Validated:

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#### SANTEE COOPER ANALYTICAL SERVICES

### CERTIFICATE OF ANALYSIS

### LAB CERTIFICATION #08552

Sample #	AF07271 Location:	GW Well CGYP-4		Date: 07/08/2021	Sample Collector:	MDG/BRT
Loc. Code	CGYP-4			Time: 10:26		
	Analysis	Result	Units	Test Date	Analyst	Method
	Arsenic	11.3	ug/L	08/03/2021	SJHATCHE	EPA 6020B
	Barium	39.5	ug/L	08/04/2021	SJHATCHE	EPA 6020B
	Beryllium	17.9	ug/L	08/04/2021	SJHATCHE	EPA 6020B
	Boron	7700	ug/L	07/14/2021	R&C	EPA 6010D
	Calcium	324	mg/L	08/03/2021	SJHATCHE	EPA 6020B
	Cadmium	<0.50	ug/L	08/03/2021	SJHATCHE	EPA 6020B
	Cobalt	49.4	ug/L	08/03/2021	SJHATCHE	EPA 6020B
	Chromium	<5.0	ug/L	08/03/2021	SJHATCHE	EPA 6020B
	Mercury	<0.2	ug/L	07/16/2021	R&C	EPA 7470
	Lithium	58.0	ug/L	07/14/2021	R&C	EPA 6010D
	Molybdenum	<10	ug/L	07/14/2021	R&C	EPA 6010D
	Lead	12.6	ug/L	08/03/2021	SJHATCHE	EPA 6020B
	Antimony	<5.0	ug/L	08/03/2021	SJHATCHE	EPA 6020B
	Selenium	<10.0	ug/L	08/03/2021	SJHATCHE	EPA 6020B
	Thallium	<1.0	ug/L	08/03/2021	SJHATCHE	EPA 6020B
	Radium 226	1.05	pCi/L	07/22/2021	GEL	EPA 903.1 Mod
	Radium 228	2.51	pCi/L	08/03/2021	GEL	EPA 904.0
	Radium 226/228 Combined Calculation	3.56	pCi/L	08/05/2021	GEL	EPA 903.1 Mod
	Chloride	670	mg/L	07/09/2021	KCWELLS	EPA 300.0
	Fluoride	1.85	mg/L	07/09/2021	KCWELLS	EPA 300.0
	Sulfate	621	mg/L	07/09/2021	KCWELLS	EPA 300.0
	Total Dissolved Solids	2168	mg/L	07/15/2021	SJBROWN	SM 2540C
	рH	3.65	SU	07/08/2021	MDG/BRT	
	Spec. Cond.	2940	uS	07/08/2021	MDG/BRT	
	Dissolved Oxygen	1.01	ppm	07/08/2021	MDG/BRT	
	Oxidation Reduction Potential	141	mv	07/08/2021	MDG/BRT	SM2580
	Temp	23.08	С	07/08/2021	MDG/BRT	
	Turbidity	0.600	NTU	07/08/2021	MDG/BRT	
	Depth	7.69	Feet	07/08/2021	MDG/BRT	
	Elevation	75.80	Feet	07/14/2021	BRTAYLOR	

Comments:

Independent Laboratory Results: "GEL" - GEL Laboratories LLC - Lab ID # 10120; "Test America" - TestAmerica Laboratories, Inc. - Lab ID# 98001; "DavisBrown"- Davis & Brown Lab ID # 21117; "Shealy"- Shealy Environmental Services, Inc.- Lab ID# 32010 "ROGERSCALLCO"- Rogers & Callcot, Inc.- Lab ID # 23105001

Analysis Validated:

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#### SANTEE COOPER ANALYTICAL SERVICES

# CERTIFICATE OF ANALYSIS

## LAB CERTIFICATION #08552

Sample #	AF13773 Location:	GW Well CGYP-4		Date: 09/01/2021	Sample Collector:	DEW/ML
Loc. Code	CGYP-4			<b>Time:</b> 09:04		
	Analysis	Result	Units	Test Date	Analyst	Method
	Arsenic	11.5	ug/L	09/09/2021	SJHATCHE	EPA 6020B
	Barium	36.4	ug/L	09/09/2021	SJHATCHE	EPA 6020B
	Beryllium	15.0	ug/L	09/09/2021	SJHATCHE	EPA 6020B
	Boron	8000	ug/L	09/10/2021	R&C	EPA 6010D
	Calcium	319	mg/L	09/09/2021	SJHATCHE	EPA 6020B
	Cadmium	<0.50	ug/L	09/09/2021	SJHATCHE	EPA 6020B
	Cobalt	48.7	ug/L	09/09/2021	SJHATCHE	EPA 6020B
	Chromium	<5.0	ug/L	09/09/2021	SJHATCHE	EPA 6020B
	Mercury	<0.20	ug/L	09/16/2021	R&C	EPA 7470
	Lithium	64.0	ug/L	09/10/2021	R&C	EPA 6010D
	Molybdenum	<10	ug/L	09/10/2021	R&C	EPA 6010D
	Lead	14.6	ug/L	09/09/2021	SJHATCHE	EPA 6020B
	Antimony	<5.0	ug/L	09/09/2021	SJHATCHE	EPA 6020B
	Selenium	<10.0	ug/L	09/09/2021	SJHATCHE	EPA 6020B
	Thallium	<1.0	ug/L	09/09/2021	SJHATCHE	EPA 6020B
	Radium 226	0.669	pCi/L	09/29/2021	GEL	EPA 903.1 Mod
	Radium 228	3.97	pCi/L	09/29/2021	GEL	EPA 904.0
	Radium 226/228 Combined Calculation	4.64	pCi/L	10/01/2021	GEL	EPA 903.1 Mod
	Chloride	617	mg/L	09/08/2021	KCWELLS	EPA 300.0
	Fluoride	1.79	mg/L	09/08/2021	KCWELLS	EPA 300.0
	Sulfate	605	mg/L	09/08/2021	KCWELLS	EPA 300.0
	Total Dissolved Solids	2038	mg/L	09/09/2021	SJBROWN	SM 2540C
	pH	3.65	SU	09/01/2021	DEW/ML	
	Spec. Cond.	2860	uS	09/01/2021	DEW/ML	
	Dissolved Oxygen	0.870	ppm	09/01/2021	DEW/ML	
	Oxidation Reduction Potential	202	mv	09/01/2021	DEW/ML	SM2580
	Temp	24.12	С	09/01/2021	DEW/ML	
	Turbidity	3.60	NTU	09/01/2021	DEW/ML	
	Depth	7.33	Feet	09/01/2021	DEW/ML	
	Elevation	76.16	Feet	09/02/2021	DEWEST	

#### Comments:

Independent Laboratory Results: "GEL" - GEL Laboratories LLC - Lab ID # 10120; "Test America" - TestAmerica Laboratories, Inc. - Lab ID# 98001; "DavisBrown"- Davis & Brown Lab ID # 21117; "Shealy"- Shealy Environmental Services, Inc.- Lab ID# 32010 "ROGERSCALLCO"-Rogers & Callcot, Inc.- Lab ID # 23105001

Analysis Validated:

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#### SANTEE COOPER ANALYTICAL SERVICES

# CERTIFICATE OF ANALYSIS

## LAB CERTIFICATION #08552

Sample #	AF13774	Location:	GW Well CGYP-4		Date: 09/01/2021	Sample Collector	DEW/ML	
Loc. Code	CGYP-4		DUP		<b>Time:</b> 09:09			
	Α	nalysis	Result	Units	Test Date	Analyst	Method	
		Arsenic	11.6	ug/L	09/09/2021	SJHATCHE	EPA 6020B	
		Barium	35.9	ug/L	09/09/2021	SJHATCHE	EPA 6020B	
		Beryllium	14.0	ug/L	09/09/2021	SJHATCHE	EPA 6020B	
		Boron	7800	ug/L	09/10/2021	R&C	EPA 6010D	
		Calcium	318	mg/L	09/09/2021	SJHATCHE	EPA 6020B	
		Cadmium	<0.50	ug/L	09/09/2021	SJHATCHE	EPA 6020B	
		Cobalt	48.4	ug/L	09/09/2021	SJHATCHE	EPA 6020B	
		Chromium	<5.0	ug/L	09/09/2021	SJHATCHE	EPA 6020B	
		Mercury	<0.20	ug/L	09/16/2021	R&C	EPA 7470	
		Lithium	63.0	ug/L	09/10/2021	R&C	EPA 6010D	
		Molybdenum	<10	ug/L	09/10/2021	R&C	EPA 6010D	
		Lead	14.5	ug/L	09/09/2021	SJHATCHE	EPA 6020B	
		Antimony	<5.0	ug/L	09/09/2021	SJHATCHE	EPA 6020B	
		Selenium	<10.0	ug/L	09/09/2021	SJHATCHE	EPA 6020B	
		Thallium	<1.0	ug/L	09/09/2021	SJHATCHE	EPA 6020B	
		Radium 226	0.773	pCi/L	09/29/2021	GEL	EPA 903.1 Mod	
		Radium 228	2.79	pCi/L	09/29/2021	GEL	EPA 904.0	
	Radium 226	6/228 Combined Calculation	3.57	pCi/L	10/01/2021	GEL	EPA 903.1 Mod	
		Chloride	608	mg/L	09/08/2021	KCWELLS	EPA 300.0	
		Fluoride	1.79	mg/L	09/08/2021	KCWELLS	EPA 300.0	
		Sulfate	593	mg/L	09/08/2021	KCWELLS	EPA 300.0	
	Total D	Dissolved Solids	2004	mg/L	09/09/2021	SJBROWN	SM 2540C	

Comments:

Independent Laboratory Results: "GEL" - GEL Laboratories LLC - Lab ID # 10120; "Test America" - TestAmerica Laboratories, Inc. - Lab ID# 98001; "DavisBrown"- Davis & Brown Lab ID # 21117; "Shealy"- Shealy Environmental Services, Inc.- Lab ID# 32010 "ROGERSCALLCO"- Rogers & Callcot, Inc.- Lab ID # 23105001

Analysis Validated:

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#### SANTEE COOPER ANALYTICAL SERVICES

# CERTIFICATE OF ANALYSIS

## LAB CERTIFICATION #08552

Sample #	AF15787 Location:	GW Well CGYP-4		Date: 09/27/2021	Sample Collector:	DEW/ML
Loc. Code	CGYP-4			<b>Time:</b> 09:38		
	Analysis	Result	Units	Test Date	Analyst	Method
	Arsenic	11.8	ug/L	10/11/2021	SJHATCHE	EPA 6020B
	Barium	37.1	ug/L	10/11/2021	SJHATCHE	EPA 6020B
	Beryllium	15.6	ug/L	10/11/2021	SJHATCHE	EPA 6020B
	Boron	7800	ug/L	10/04/2021	R&C	EPA 6010D
	Calcium	325	mg/L	10/12/2021	SJHATCHE	EPA 6020B
	Cadmium	<0.50	ug/L	10/11/2021	SJHATCHE	EPA 6020B
	Cobalt	47.8	ug/L	10/11/2021	SJHATCHE	EPA 6020B
	Chromium	<5.0	ug/L	10/11/2021	SJHATCHE	EPA 6020B
	Mercury	<0.2	ug/L	10/06/2021	R&C	EPA 7470
	Lithium	67.0	ug/L	10/04/2021	R&C	EPA 6010D
	Molybdenum	<10	ug/L	10/04/2021	R&C	EPA 6010D
	Lead	14.7	ug/L	10/11/2021	SJHATCHE	EPA 6020B
	Antimony	<5.0	ug/L	10/11/2021	SJHATCHE	EPA 6020B
	Selenium	<10.0	ug/L	10/11/2021	SJHATCHE	EPA 6020B
	Thallium	<1.0	ug/L	10/11/2021	SJHATCHE	EPA 6020B
	Radium 226	1.00	pCi/L	10/26/2021	GEL	EPA 903.1 Mod
	Radium 228	4.29	pCi/L	10/13/2021	GEL	EPA 904.0
	Radium 226/228 Combined Calculation	5.29	pCi/L	10/26/2021	GEL	EPA 903.1 Mod
	Chloride	574	mg/L	10/22/2021	KCWELLS	EPA 300.0
	Fluoride	1.63	mg/L	10/25/2021	KCWELLS	EPA 300.0
	Sulfate	584	mg/L	10/22/2021	KCWELLS	EPA 300.0
	Total Dissolved Solids	1749	mg/L	10/04/2021	KCWELLS	SM 2540C
	pH	3.65	SU	09/27/2021	DEW/ML	
	Spec. Cond.	2800	uS	09/27/2021	DEW/ML	
	Dissolved Oxygen	0.650	ppm	09/27/2021	DEW/ML	
	Oxidation Reduction Potential	212	mv	09/27/2021	DEW/ML	SM2580
	Temp	24.49	С	09/27/2021	DEW/ML	
	Turbidity	0	NTU	09/27/2021	DEW/ML	
	Depth	7.04	Feet	09/27/2021	DEW/ML	
	Elevation	76.45	Feet	10/01/2021	DEWEST	

#### Comments:

Independent Laboratory Results: "GEL" - GEL Laboratories LLC - Lab ID # 10120; "Test America" - TestAmerica Laboratories, Inc. - Lab ID# 98001; "DavisBrown"- Davis & Brown Lab ID # 21117; "Shealy"- Shealy Environmental Services, Inc.- Lab ID# 32010 "ROGERSCALLCO"-Rogers & Callcot, Inc.- Lab ID # 23105001

Analysis Validated:

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#### SANTEE COOPER ANALYTICAL SERVICES

# CERTIFICATE OF ANALYSIS

## LAB CERTIFICATION #08552

Sample #	AF15788	Location:	GW Well CGYP-4		Date: 09/27/2021	Sample Collector:	DEW/ML
Loc. Code	CGYP-4		DUP		<b>Time:</b> 09:43		
	A	nalysis	Result	Units	Test Date	Analyst	Method
		Arsenic	11.2	ug/L	10/11/2021	SJHATCHE	EPA 6020B
		Barium	36.9	ug/L	10/11/2021	SJHATCHE	EPA 6020B
		Beryllium	15.1	ug/L	10/11/2021	SJHATCHE	EPA 6020B
		Boron	8200	ug/L	10/04/2021	R&C	EPA 6010D
		Calcium	334	mg/L	10/12/2021	SJHATCHE	EPA 6020B
		Cadmium	<0.50	ug/L	10/11/2021	SJHATCHE	EPA 6020B
		Cobalt	46.7	ug/L	10/11/2021	SJHATCHE	EPA 6020B
		Chromium	<5.0	ug/L	10/11/2021	SJHATCHE	EPA 6020B
		Mercury	<0.2	ug/L	10/06/2021	R&C	EPA 7470
		Lithium	67.0	ug/L	10/04/2021	R&C	EPA 6010D
		Molybdenum	<10	ug/L	10/04/2021	R&C	EPA 6010D
		Lead	14.1	ug/L	10/11/2021	SJHATCHE	EPA 6020B
		Antimony	<5.0	ug/L	10/11/2021	SJHATCHE	EPA 6020B
		Selenium	<10.0	ug/L	10/11/2021	SJHATCHE	EPA 6020B
		Thallium	<1.0	ug/L	10/11/2021	SJHATCHE	EPA 6020B
		Radium 226	0.670	pCi/L	10/26/2021	GEL	EPA 903.1 Mod
		Radium 228	3.87	pCi/L	10/13/2021	GEL	EPA 904.0
	Radium 226	6/228 Combined Calculation	4.54	pCi/L	10/26/2021	GEL	EPA 903.1 Mod
		Chloride	683	mg/L	09/30/2021	KCWELLS	EPA 300.0
		Fluoride	1.21	mg/L	09/30/2021	KCWELLS	EPA 300.0
		Sulfate	705	mg/L	09/30/2021	KCWELLS	EPA 300.0
	Total D	Dissolved Solids	1846	mg/L	10/04/2021	KCWELLS	SM 2540C

Comments:

Independent Laboratory Results: "GEL" - GEL Laboratories LLC - Lab ID # 10120; "Test America" - TestAmerica Laboratories, Inc. - Lab ID# 98001; "DavisBrown"- Davis & Brown Lab ID # 21117; "Shealy"- Shealy Environmental Services, Inc.- Lab ID# 32010 "ROGERSCALLCO"- Rogers & Callcot, Inc.- Lab ID # 23105001

Analysis Validated:

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#### SANTEE COOPER ANALYTICAL SERVICES

# CERTIFICATE OF ANALYSIS

## LAB CERTIFICATION #08552

Sample #	AF18534 Location:	GW Well CGYP-4		Date: 10/26/2021	Sample Collector	DEW/ML
Loc. Code	CGYP-4			<b>Time:</b> 10:00		
	Analysis	Result	Units	Test Date	Analyst	Method
	Arsenic	10.4	ug/L	11/02/2021	SJHATCHE	EPA 6020B
	Barium	33.6	ug/L	11/02/2021	SJHATCHE	EPA 6020B
	Beryllium	15.2	ug/L	11/02/2021	SJHATCHE	EPA 6020B
	Boron	6800.0	ug/L	11/04/2021	R&C	EPA 6010D
	Calcium	304	mg/L	11/02/2021	SJHATCHE	EPA 6020B
	Cadmium	<0.50	ug/L	11/02/2021	SJHATCHE	EPA 6020B
	Cobalt	46.3	ug/L	11/02/2021	SJHATCHE	EPA 6020B
	Chromium	<5.0	ug/L	11/02/2021	SJHATCHE	EPA 6020B
	Mercury	<0.2	ug/L	11/09/2021	R&C	EPA 7470
	Lithium	53.0	ug/L	11/04/2021	R&C	EPA 6010D
	Molybdenum	<10	ug/L	11/04/2021	R&C	EPA 6010D
	Lead	14.5	ug/L	11/02/2021	SJHATCHE	EPA 6020B
	Antimony	<5.0	ug/L	11/02/2021	SJHATCHE	EPA 6020B
	Selenium	<10.0	ug/L	11/02/2021	SJHATCHE	EPA 6020B
	Thallium	<1.0	ug/L	11/02/2021	SJHATCHE	EPA 6020B
	Radium 226	3.94	pCi/L	11/05/2021	GEL	EPA 903.1 Mod
	Radium 228	1.61	pCi/L	11/04/2021	GEL	EPA 904.0
	Radium 226/228 Combined Calculation	5.56	pCi/L	11/10/2021	GEL	EPA 903.1 Mod
	Chloride	553	mg/L	11/10/2021	KCWELLS	EPA 300.0
	Fluoride	0.83	mg/L	11/10/2021	KCWELLS	EPA 300.0
	Sulfate	611	mg/L	11/10/2021	KCWELLS	EPA 300.0
	Total Dissolved Solids	1614	mg/L	11/02/2021	KCWELLS	SM 2540C
	pH	3.66	SU	10/26/2021	DEW/ML	
	Spec. Cond.	2660	uS	10/26/2021	DEW/ML	
	Dissolved Oxygen	0.400	ppm	10/26/2021	DEW/ML	
	Oxidation Reduction Potential	238	mv	10/26/2021	DEW/ML	SM2580
	Temp	23.95	С	10/26/2021	DEW/ML	
	Turbidity	0	NTU	10/26/2021	DEW/ML	
	Depth	8.15	Feet	10/26/2021	DEW/ML	
	Elevation	75.34	Feet	10/28/2021	DEWEST	

#### Comments:

Independent Laboratory Results: "GEL" - GEL Laboratories LLC - Lab ID # 10120; "Test America" - TestAmerica Laboratories, Inc. - Lab ID# 98001; "DavisBrown"- Davis & Brown Lab ID # 21117; "Shealy"- Shealy Environmental Services, Inc.- Lab ID# 32010 "ROGERSCALLCO"-Rogers & Callcot, Inc.- Lab ID # 23105001

Analysis Validated:

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#### SANTEE COOPER ANALYTICAL SERVICES

# CERTIFICATE OF ANALYSIS

## LAB CERTIFICATION #08552

Sample #	AF18535	Location:	GW Well CGYP-4		Date: 10/26/2021	Sample Collector:	DEW/ML
Loc. Code	CGYP-4		Dup		<b>Time:</b> 10:05		
	A	nalysis	Result	Units	Test Date	Analyst	Method
		Arsenic	10.7	ug/L	11/02/2021	SJHATCHE	EPA 6020B
		Barium	34.0	ug/L	11/02/2021	SJHATCHE	EPA 6020B
		Beryllium	15.0	ug/L	11/02/2021	SJHATCHE	EPA 6020B
		Boron	6900.0	ug/L	11/04/2021	R&C	EPA 6010D
		Calcium	307	mg/L	11/02/2021	SJHATCHE	EPA 6020B
		Cadmium	<0.50	ug/L	11/02/2021	SJHATCHE	EPA 6020B
		Cobalt	48.0	ug/L	11/02/2021	SJHATCHE	EPA 6020B
		Chromium	<5.0	ug/L	11/02/2021	SJHATCHE	EPA 6020B
		Mercury	<0.2	ug/L	11/09/2021	R&C	EPA 7470
		Lithium	57.0	ug/L	11/04/2021	R&C	EPA 6010D
		Molybdenum	<10	ug/L	11/04/2021	R&C	EPA 6010D
		Lead	15.0	ug/L	11/02/2021	SJHATCHE	EPA 6020B
		Antimony	<5.0	ug/L	11/02/2021	SJHATCHE	EPA 6020B
		Selenium	<10.0	ug/L	11/02/2021	SJHATCHE	EPA 6020B
		Thallium	<1.0	ug/L	11/02/2021	SJHATCHE	EPA 6020B
		Radium 226	4.50	pCi/L	11/05/2021	GEL	EPA 903.1 Mod
		Radium 228	3.92	pCi/L	11/04/2021	GEL	EPA 904.0
	Radium 226	228 Combined Calculation	8.42	pCi/L	11/10/2021	GEL	EPA 903.1 Mod
		Chloride	554	mg/L	11/10/2021	KCWELLS	EPA 300.0
		Fluoride	0.80	mg/L	11/10/2021	KCWELLS	EPA 300.0
		Sulfate	612	mg/L	11/10/2021	KCWELLS	EPA 300.0
	Total D	Dissolved Solids	1760	mg/L	11/02/2021	KCWELLS	SM 2540C

Comments:

Independent Laboratory Results: "GEL" - GEL Laboratories LLC - Lab ID # 10120; "Test America" - TestAmerica Laboratories, Inc. - Lab ID# 98001; "DavisBrown"- Davis & Brown Lab ID # 21117; "Shealy"- Shealy Environmental Services, Inc.- Lab ID# 32010 "ROGERSCALLCO"- Rogers & Callcot, Inc.- Lab ID # 23105001

Analysis Validated:

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#### SANTEE COOPER ANALYTICAL SERVICES

## CERTIFICATE OF ANALYSIS

## LAB CERTIFICATION #08552

Sample #	AF20415 Location:	GW Well CGYP-4		Date: 11/17/2021	Sample Collector:	DEW/ML
Loc. Code	CGYP-4			<b>Time:</b> 10:18		
	Analysis	Result	Units	Test Date	Analyst	Method
	Arsenic	11.2	ug/L	12/08/2021	SJHATCHE	EPA 6020B
	Barium	33.3	ug/L	12/08/2021	SJHATCHE	EPA 6020B
	Beryllium	14.9	ug/L	12/13/2021	SJHATCHE	EPA 6020B
	Boron	7100.0	ug/L	11/24/2021	R&C	EPA 6010D
	Calcium	310	mg/L	12/08/2021	SJHATCHE	EPA 6020B
	Cadmium	<0.50	ug/L	12/08/2021	SJHATCHE	EPA 6020B
	Cobalt	46.1	ug/L	12/13/2021	SJHATCHE	EPA 6020B
	Chromium	<5.0	ug/L	12/08/2021	SJHATCHE	EPA 6020B
	Mercury	<0.2	ug/L	11/29/2021	R&C	EPA 7470
	Lithium	52.0	ug/L	11/24/2021	R&C	EPA 6010D
	Molybdenum	<10	ug/L	11/30/2021	R&C	EPA 6010D
	Lead	14.7	ug/L	12/08/2021	SJHATCHE	EPA 6020B
	Antimony	<5.0	ug/L	12/08/2021	SJHATCHE	EPA 6020B
	Selenium	<10.0	ug/L	12/08/2021	SJHATCHE	EPA 6020B
	Thallium	<1.0	ug/L	12/08/2021	SJHATCHE	EPA 6020B
	Radium 226	1.18	pCi/L	12/03/2021	GEL	EPA 903.1 Mod
	Radium 228	3.72	pCi/L	12/27/2021	GEL	EPA 904.0
	Radium 226/228 Combined Calculation	4.90	pCi/L	12/28/2021	GEL	EPA 903.1 Mod
	Chloride	537	mg/L	12/01/2021	KCWELLS	EPA 300.0
	Fluoride	1.53	mg/L	12/01/2021	KCWELLS	EPA 300.0
	Sulfate	600	mg/L	12/01/2021	KCWELLS	EPA 300.0
	Total Dissolved Solids	1676	mg/L	11/19/2021	KCWELLS	SM 2540C
	pН	3.54	SU	11/17/2021	DEW/ML	
	Spec. Cond.	2590	uS	11/17/2021	DEW/ML	
	Dissolved Oxygen	0.470	ppm	11/17/2021	DEW/ML	
	Oxidation Reduction Potential	288	mv	11/17/2021	DEW/ML	SM2580
	Temp	23.99	С	11/17/2021	DEW/ML	
	Turbidity	0	NTU	11/17/2021	DEW/ML	
	Depth		Feet	11/17/2021	DEW/ML	
	Elevation	74.89	Feet	11/19/2021	DEWEST	

#### Comments:

Independent Laboratory Results: "GEL" - GEL Laboratories LLC - Lab ID # 10120; "Test America" - TestAmerica Laboratories, Inc. - Lab ID# 98001; "DavisBrown"- Davis & Brown Lab ID # 21117; "Shealy"- Shealy Environmental Services, Inc.- Lab ID# 32010 "ROGERSCALLCO"-Rogers & Callcot, Inc.- Lab ID # 23105001

Analysis Validated:

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#### SANTEE COOPER ANALYTICAL SERVICES

## CERTIFICATE OF ANALYSIS

## LAB CERTIFICATION #08552

Sample #	AF20416	Location:	GW Well CGYP-4		Date: 11/17/2021	Sample Collector:	DEW/ML	
Loc. Code	CGYP-4		DUP		<b>Time:</b> 10:23			
	A	nalysis	Result	Units	Test Date	Analyst	Method	
		Arsenic	11.6	ug/L	12/08/2021	SJHATCHE	EPA 6020B	
		Barium	34.0	ug/L	12/08/2021	SJHATCHE	EPA 6020B	
		Beryllium	14.0	ug/L	12/13/2021	SJHATCHE	EPA 6020B	
		Boron	7200.0	ug/L	11/24/2021	R&C	EPA 6010D	
		Calcium	304	mg/L	12/08/2021	SJHATCHE	EPA 6020B	
		Cadmium	<0.50	ug/L	12/08/2021	SJHATCHE	EPA 6020B	
		Cobalt	45.1	ug/L	12/13/2021	SJHATCHE	EPA 6020B	
		Chromium	<5.0	ug/L	12/08/2021	SJHATCHE	EPA 6020B	
		Mercury	<0.2	ug/L	11/29/2021	R&C	EPA 7470	
		Lithium	53.0	ug/L	11/24/2021	R&C	EPA 6010D	
		Molybdenum	<10	ug/L	11/30/2021	R&C	EPA 6010D	
		Lead	14.8	ug/L	12/08/2021	SJHATCHE	EPA 6020B	
		Antimony	<5.0	ug/L	12/08/2021	SJHATCHE	EPA 6020B	
		Selenium	<10.0	ug/L	12/08/2021	SJHATCHE	EPA 6020B	
		Thallium	<1.0	ug/L	12/08/2021	SJHATCHE	EPA 6020B	
		Radium 226	1.80	pCi/L	12/03/2021	GEL	EPA 903.1 Mod	
		Radium 228	0.760	pCi/L	12/27/2021	GEL	EPA 904.0	
	Radium 226	/228 Combined Calculation	2.56	pCi/L	12/28/2021	GEL	EPA 903.1 Mod	
		Chloride	545	mg/L	12/01/2021	KCWELLS	EPA 300.0	
		Fluoride	1.45	mg/L	12/01/2021	KCWELLS	EPA 300.0	
		Sulfate	607	mg/L	12/01/2021	KCWELLS	EPA 300.0	
	Total D	issolved Solids	1729	mg/L	11/19/2021	KCWELLS	SM 2540C	

Comments:

Independent Laboratory Results: "GEL" - GEL Laboratories LLC - Lab ID # 10120; "Test America" - TestAmerica Laboratories, Inc. - Lab ID# 98001; "DavisBrown"- Davis & Brown Lab ID # 21117; "Shealy"- Shealy Environmental Services, Inc.- Lab ID# 32010 "ROGERSCALLCO"- Rogers & Callcot, Inc.- Lab ID # 23105001

Analysis Validated:

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#### SANTEE COOPER ANALYTICAL SERVICES

# CERTIFICATE OF ANALYSIS

## LAB CERTIFICATION #08552

Sample #	AF21736 Location:	GW Well CGYP-4		Date: 12/06/2021	Sample Collector	r: TW ML
Loc. Code	CGYP-4			<b>Time:</b> 09:54		
	Analysis	Result	Units	Test Date	Analyst	Method
	Arsenic	5.8	ug/L	01/19/2022	PACE	EPA 6020B
	Barium	33	ug/L	01/19/2022	PACE	EPA 6020B
	Beryllium	19	ug/L	01/19/2022	PACE	EPA 6020B
	Boron	7500	ug/L	12/20/2021	ROGERSNCALLC	EPA 6010D
	Calcium	310	mg/L	01/19/2022	PACE	EPA 6020B
	Cadmium	<0.50	ug/L	01/19/2022	PACE	EPA 6020B
	Cobalt	43	ug/L	01/19/2022	PACE	EPA 6020B
	Chromium	<5.0	ug/L	01/19/2022	PACE	EPA 6020B
	Mercury	<0.20	ug/L	12/16/2021	ROGERSNCALLC	EPA 7470
	Lithium	76	ug/L	12/20/2021	ROGERSNCALLC	EPA 6010D
	Molybdenum	<10	ug/L	12/17/2021	ROGERSNCALLC	EPA 6010D
	Lead	12	ug/L	01/19/2022	PACE	EPA 6020B
	Antimony	<2.0	ug/L	01/19/2022	PACE	EPA 6020B
	Selenium	15	ug/L	01/19/2022	PACE	EPA 6020B
	Thallium	<0.50	ug/L	01/19/2022	PACE	EPA 6020B
	Radium 226	2.18	pCi/L	01/04/2022	GEL	EPA 903.1 Mod
	Radium 228	2.86	pCi/L	01/05/2022	GEL	EPA 904.0
	Radium 226/228 Combined Calculation	5.03	pCi/L	01/05/2022	GEL	EPA 903.1 Mod
	Chloride	526	mg/L	12/08/2021	KCWELLS	EPA 300.0
	Fluoride	1.48	mg/L	12/08/2021	KCWELLS	EPA 300.0
	Sulfate	601	mg/L	12/08/2021	KCWELLS	EPA 300.0
	Total Dissolved Solids	1671	mg/L	12/13/2021	KCWELLS	SM 2540C
	pH	3.41	SU	12/06/2021	DEW/ML	
	Spec. Cond.	2600	uS	12/06/2021	DEW/ML	
	Dissolved Oxygen	0.860	ppm	12/06/2021	DEW/ML	
	Oxidation Reduction Potential	280	mv	12/06/2021	DEW/ML	SM2580
	Temp	22.60	С	12/06/2021	DEW/ML	
	Turbidity	0	NTU	12/06/2021	DEW/ML	
	Depth	8.80	Feet	12/06/2021	DEW/ML	
	Elevation	74.69	Feet	12/08/2021	DEWEST	

#### Comments:

Independent Laboratory Results: "GEL" - GEL Laboratories LLC - Lab ID # 10120; "Test America" - TestAmerica Laboratories, Inc. - Lab ID# 98001; "DavisBrown"- Davis & Brown Lab ID # 21117; "Shealy"- Shealy Environmental Services, Inc.- Lab ID# 32010 "ROGERSCALLCO"-Rogers & Callcot, Inc.- Lab ID # 23105001

Analysis Validated:

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#### SANTEE COOPER ANALYTICAL SERVICES

## CERTIFICATE OF ANALYSIS

### LAB CERTIFICATION #08552

Sample #	AF21737	Location:	GW Well CGYP-4		Date: 12/06/2021	Sample Collector	: TW ML
Loc. Code	CGYP-4		DUP		<b>Time:</b> 09:59		
	Α	nalysis	Result	Units	Test Date	Analyst	Method
		Arsenic	6.0	ug/L	01/19/2022	PACE	EPA 6020B
		Barium	32	ug/L	01/19/2022	PACE	EPA 6020B
		Beryllium	19	ug/L	01/19/2022	PACE	EPA 6020B
		Boron	7100	ug/L	12/20/2021	ROGERSNCALLC	EPA 6010D
		Calcium	300	mg/L	01/19/2022	PACE	EPA 6020B
		Cadmium	<0.50	ug/L	01/19/2022	PACE	EPA 6020B
		Cobalt	41	ug/L	01/19/2022	PACE	EPA 6020B
		Chromium	<5.0	ug/L	01/19/2022	PACE	EPA 6020B
		Mercury	<0.20	ug/L	12/16/2021	ROGERSNCALLC	EPA 7470
		Lithium	75	ug/L	12/20/2021	ROGERSNCALLC	EPA 6010D
		Molybdenum	<10	ug/L	12/17/2021	ROGERSNCALLC	EPA 6010D
		Lead	12	ug/L	01/19/2022	PACE	EPA 6020B
		Antimony	<2.0	ug/L	01/19/2022	PACE	EPA 6020B
		Selenium	15	ug/L	01/19/2022	PACE	EPA 6020B
		Thallium	<0.50	ug/L	01/19/2022	PACE	EPA 6020B
		Radium 226	0.300	pCi/L	01/04/2022	GEL	EPA 903.1 Mod
		Radium 228	3.00	pCi/L	01/05/2022	GEL	EPA 904.0
	Radium 226	6/228 Combined Calculation	3.30	pCi/L	01/05/2022	GEL	EPA 903.1 Mod
		Chloride	525	mg/L	12/08/2021	KCWELLS	EPA 300.0
		Fluoride	1.41	mg/L	12/08/2021	KCWELLS	EPA 300.0
		Sulfate	600	mg/L	12/08/2021	KCWELLS	EPA 300.0
	Total D	Dissolved Solids	1746	mg/L	12/13/2021	KCWELLS	SM 2540C

Comments:

Independent Laboratory Results: "GEL" - GEL Laboratories LLC - Lab ID # 10120; "Test America" - TestAmerica Laboratories, Inc. - Lab ID# 98001; "DavisBrown"- Davis & Brown Lab ID # 21117; "Shealy"- Shealy Environmental Services, Inc.- Lab ID# 32010 "ROGERSCALLCO"- Rogers & Callcot, Inc.- Lab ID # 23105001

Analysis Validated:

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#### SANTEE COOPER ANALYTICAL SERVICES

#### CERTIFICATE OF ANALYSIS

#### LAB CERTIFICATION #08552

Sample #	AF00634 Location:	GW Well CGYP-5		Date: 04/07/2021	Sample Collector	: DEW/MDG
Loc. Code	CGYP-5			Time: 15:09		
	Analysis	Result	Units	Test Date	Analyst	Method
	Arsenic	<5.0	ug/L	05/07/2021	SJHATCHE	EPA 6020B
	Barium	51.9	ug/L	05/06/2021	SJHATCHE	EPA 6020B
	Beryllium	6.5	ug/L	05/06/2021	SJHATCHE	EPA 6020B
	Boron	3100	ug/L	04/16/2021	ROGERSNCALLC	EPA 6010D
	Calcium	195	mg/L	05/06/2021	SJHATCHE	EPA 6020B
	Cadmium	<0.50	ug/L	05/06/2021	SJHATCHE	EPA 6020B
	Cobalt	44.8	ug/L	05/07/2021	SJHATCHE	EPA 6020B
	Chromium	<5.0	ug/L	05/06/2021	SJHATCHE	EPA 6020B
	Mercury	<0.20	ug/L	04/16/2021	ROGERSNCALLC	EPA 7470
	Lithium	60	ug/L	04/16/2021	ROGERSNCALLC	EPA 6010D
	Molybdenum	<10	ug/L	04/16/2021	ROGERSNCALLC	EPA 6010D
	Lead	1.2	ug/L	05/06/2021	SJHATCHE	EPA 6020B
	Antimony	<5.0	ug/L	05/06/2021	SJHATCHE	EPA 6020B
	Selenium	<10.0	ug/L	05/06/2021	SJHATCHE	EPA 6020B
	Thallium	<1.0	ug/L	05/06/2021	SJHATCHE	EPA 6020B
	Radium 226	0.506	pCi/L	04/22/2021	GEL	EPA 903.1 Mod
	Radium 228	2.33	pCi/L	04/20/2021	GEL	EPA 904.0
	Radium 226/228 Combined Calculation	2.84	pCi/L	05/05/2021	GEL	EPA 903.1 Mod
	Chloride	231	mg/L	04/14/2021	LCWILLIA	EPA 300.0
	Fluoride	0.31	mg/L	04/14/2021	LCWILLIA	EPA 300.0
	Sulfate	314	mg/L	04/14/2021	LCWILLIA	EPA 300.0
	Total Dissolved Solids	1188	mg/L	04/19/2021	SJBROWN	SM 2540C
	рН	5.36	SU	04/07/2021	DEW/MDG	
	Spec. Cond.	1380	uS	04/07/2021	DEW/MDG	
	Dissolved Oxygen	0.390	ppm	04/07/2021	DEW/MDG	
	Oxidation Reduction Potential	172	mv	04/07/2021	DEW/MDG	SM2580
	Temp	22.32	С	04/07/2021	DEW/MDG	
	Turbidity	1.30	NTU	04/07/2021	DEW/MDG	
	Depth	7.68	Feet	04/07/2021	DEW/MDG	
	Elevation	76.44	Feet	04/22/2021	DEWEST	

#### Comments:

Independent Laboratory Results: "GEL" - GEL Laboratories LLC - Lab ID # 10120; "Test America" - TestAmerica Laboratories, Inc. - Lab ID# 98001; "DavisBrown"- Davis & Brown Lab ID # 21117; "Shealy"- Shealy Environmental Services, Inc. - Lab ID# 32010 "ROGERSCALLCO"- Rogers & Callcot, Inc.- Lab ID # 23105001

Analysis Validated:

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#### SANTEE COOPER ANALYTICAL SERVICES

# CERTIFICATE OF ANALYSIS

## LAB CERTIFICATION #08552

Sample #	AF03570 Location:	GW Well CGYP-5		Date: 05/13/2021	Sample Collector:	MDG/BWM
Loc. Code	CGYP-5			<b>Time:</b> 16:00		
	Analysis	Result	Units	Test Date	Analyst	Method
	Arsenic	<5.0	ug/L	05/19/2021	SJHATCHE	EPA 6020B
	Barium	39.9	ug/L	05/19/2021	SJHATCHE	EPA 6020B
	Beryllium	8.3	ug/L	05/19/2021	SJHATCHE	EPA 6020B
	Boron	2900	ug/L	05/25/2021	R&C	EPA 6010D
	Calcium	195	mg/L	05/19/2021	SJHATCHE	EPA 6020B
	Cadmium	<0.50	ug/L	05/19/2021	SJHATCHE	EPA 6020B
	Cobalt	44.3	ug/L	05/19/2021	SJHATCHE	EPA 6020B
	Chromium	<5.0	ug/L	05/19/2021	SJHATCHE	EPA 6020B
	Mercury	<0.2	ug/L	05/27/2021	R&C	EPA 7470
	Lithium	59.0	ug/L	05/25/2021	R&C	EPA 6010D
	Molybdenum	<10	ug/L	05/25/2021	R&C	EPA 6010D
	Lead	1.8	ug/L	05/19/2021	SJHATCHE	EPA 6020B
	Antimony	<5.0	ug/L	05/19/2021	SJHATCHE	EPA 6020B
	Selenium	<10.0	ug/L	05/19/2021	SJHATCHE	EPA 6020B
	Thallium	<1.0	ug/L	05/19/2021	SJHATCHE	EPA 6020B
	Radium 226	0.915	pCi/L	06/02/2021	GEL	EPA 903.1 Mod
	Radium 228	0.581	pCi/L	06/04/2021	GEL	EPA 904.0
	Radium 226/228 Combined Calculation	1.50	pCi/L	06/11/2021	GEL	EPA 903.1 Mod
	Chloride	200	mg/L	05/18/2021	KCWELLS	EPA 300.0
	Fluoride	0.37	mg/L	05/18/2021	KCWELLS	EPA 300.0
	Sulfate	318	mg/L	05/18/2021	KCWELLS	EPA 300.0
	Total Dissolved Solids	1182	mg/L	05/21/2021	KCWELLS	SM 2540C
	pH	5.32	SU	05/14/2021	MDG/BWM	
	Spec. Cond.	1270	uS	05/14/2021	MDG/BWM	
	Dissolved Oxygen	0.640	ppm	05/14/2021	MDG/BWM	
	Oxidation Reduction Potential	151	mv	05/14/2021	MDG/BWM	SM2580
	Temp	21.86	С	05/14/2021	MDG/BWM	
	Turbidity	0	NTU	05/14/2021	MDG/BWM	
	Depth	8.76	Feet	05/14/2021	MDG/BWM	
	Elevation	75.36	Feet	05/17/2021	MDGOINGS	

#### Comments:

Independent Laboratory Results: "GEL" - GEL Laboratories LLC - Lab ID # 10120; "Test America" - TestAmerica Laboratories, Inc. - Lab ID# 98001; "DavisBrown"- Davis & Brown Lab ID # 21117; "Shealy"- Shealy Environmental Services, Inc.- Lab ID# 32010 "ROGERSCALLCO"-Rogers & Callcot, Inc.- Lab ID # 23105001

Analysis Validated:

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#### SANTEE COOPER ANALYTICAL SERVICES

# CERTIFICATE OF ANALYSIS

## LAB CERTIFICATION #08552

Sample #	AF07272 Location:	GW Well CGYP-5		Date: 07/08/2021	Sample Collector:	MDG/BRT
Loc. Code	CGYP-5			<b>Time:</b> 11:24		
	Analysis	Result	Units	Test Date	Analyst	Method
	Arsenic	<5.0	ug/L	08/03/2021	SJHATCHE	EPA 6020B
	Barium	39.4	ug/L	08/04/2021	SJHATCHE	EPA 6020B
	Beryllium	8.7	ug/L	08/04/2021	SJHATCHE	EPA 6020B
	Boron	2900	ug/L	07/14/2021	R&C	EPA 6010D
	Calcium	186	mg/L	08/03/2021	SJHATCHE	EPA 6020B
	Cadmium	<0.50	ug/L	08/03/2021	SJHATCHE	EPA 6020B
	Cobalt	44.7	ug/L	08/03/2021	SJHATCHE	EPA 6020B
	Chromium	<5.0	ug/L	08/03/2021	SJHATCHE	EPA 6020B
	Mercury	<0.2	ug/L	07/16/2021	R&C	EPA 7470
	Lithium	58.0	ug/L	07/14/2021	R&C	EPA 6010D
	Molybdenum	<10	ug/L	07/14/2021	R&C	EPA 6010D
	Lead	2.0	ug/L	08/03/2021	SJHATCHE	EPA 6020B
	Antimony	<5.0	ug/L	08/03/2021	SJHATCHE	EPA 6020B
	Selenium	<10.0	ug/L	08/03/2021	SJHATCHE	EPA 6020B
	Thallium	<1.0	ug/L	08/03/2021	SJHATCHE	EPA 6020B
	Radium 226	0.340	pCi/L	07/22/2021	GEL	EPA 903.1 Mod
	Radium 228	0.366	pCi/L	08/03/2021	GEL	EPA 904.0
	Radium 226/228 Combined Calculation	0.706	pCi/L	08/05/2021	GEL	EPA 903.1 Mod
	Chloride	210	mg/L	07/09/2021	KCWELLS	EPA 300.0
	Fluoride	0.32	mg/L	07/09/2021	KCWELLS	EPA 300.0
	Sulfate	322	mg/L	07/09/2021	KCWELLS	EPA 300.0
	Total Dissolved Solids	1094	mg/L	07/15/2021	SJBROWN	SM 2540C
	pН	4.99	SU	07/08/2021	MDG/BRT	
	Spec. Cond.	1260	uS	07/08/2021	MDG/BRT	
	Dissolved Oxygen	0.460	ppm	07/08/2021	MDG/BRT	
	Oxidation Reduction Potential	108	mv	07/08/2021	MDG/BRT	SM2580
	Temp	24.29	С	07/08/2021	MDG/BRT	
	Turbidity	0	NTU	07/08/2021	MDG/BRT	
	Depth	7.59	Feet	07/08/2021	MDG/BRT	
	Elevation	76.53	Feet	07/14/2021	BRTAYLOR	

#### Comments:

Independent Laboratory Results: "GEL" - GEL Laboratories LLC - Lab ID # 10120; "Test America" - TestAmerica Laboratories, Inc. - Lab ID# 98001; "DavisBrown"- Davis & Brown Lab ID # 21117; "Shealy"- Shealy Environmental Services, Inc.- Lab ID# 32010 "ROGERSCALLCO"-Rogers & Callcot, Inc.- Lab ID # 23105001

Analysis Validated:

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#### SANTEE COOPER ANALYTICAL SERVICES

# CERTIFICATE OF ANALYSIS

## LAB CERTIFICATION #08552

Sample #	AF13775 Location:	GW Well CGYP-5		Date: 08/31/2021	Sample Collector:	DEW/ML
Loc. Code	CGYP-5			<b>Time:</b> 10:01		
	Analysis	Result	Units	Test Date	Analyst	Method
	Arsenic	<5.0	ug/L	09/09/2021	SJHATCHE	EPA 6020B
	Barium	47.8	ug/L	09/09/2021	SJHATCHE	EPA 6020B
	Beryllium	6.8	ug/L	09/09/2021	SJHATCHE	EPA 6020B
	Boron	3200	ug/L	09/10/2021	R&C	EPA 6010D
	Calcium	208	mg/L	09/09/2021	SJHATCHE	EPA 6020B
	Cadmium	<0.50	ug/L	09/09/2021	SJHATCHE	EPA 6020B
	Cobalt	48.9	ug/L	09/09/2021	SJHATCHE	EPA 6020B
	Chromium	<5.0	ug/L	09/09/2021	SJHATCHE	EPA 6020B
	Mercury	<0.20	ug/L	09/16/2021	R&C	EPA 7470
	Lithium	62.0	ug/L	09/10/2021	R&C	EPA 6010D
	Molybdenum	<10	ug/L	09/10/2021	R&C	EPA 6010D
	Lead	1.5	ug/L	09/09/2021	SJHATCHE	EPA 6020B
	Antimony	<5.0	ug/L	09/09/2021	SJHATCHE	EPA 6020B
	Selenium	<10.0	ug/L	09/09/2021	SJHATCHE	EPA 6020B
	Thallium	<1.0	ug/L	09/09/2021	SJHATCHE	EPA 6020B
	Radium 226	0.560	pCi/L	09/29/2021	GEL	EPA 903.1 Mod
	Radium 228	1.29	pCi/L	09/29/2021	GEL	EPA 904.0
	Radium 226/228 Combined Calculation	1.85	pCi/L	10/01/2021	GEL	EPA 903.1 Mod
	Chloride	241	mg/L	09/08/2021	KCWELLS	EPA 300.0
	Fluoride	0.35	mg/L	09/08/2021	KCWELLS	EPA 300.0
	Sulfate	310	mg/L	09/08/2021	KCWELLS	EPA 300.0
	Total Dissolved Solids	1290	mg/L	09/09/2021	SJBROWN	SM 2540C
	pH	5.17	SU	08/31/2021	DEW/ML	
	Spec. Cond.	1420	uS	08/31/2021	DEW/ML	
	Dissolved Oxygen	0.450	ppm	08/31/2021	DEW/ML	
	Oxidation Reduction Potential	92.0	mv	08/31/2021	DEW/ML	SM2580
	Temp	25.44	С	08/31/2021	DEW/ML	
	Turbidity	1.20	NTU	08/31/2021	DEW/ML	
	Depth	7.43	Feet	08/31/2021	DEW/ML	
	Elevation	76.69	Feet	09/02/2021	DEWEST	

#### Comments:

Independent Laboratory Results: "GEL" - GEL Laboratories LLC - Lab ID # 10120; "Test America" - TestAmerica Laboratories, Inc. - Lab ID# 98001; "DavisBrown"- Davis & Brown Lab ID # 21117; "Shealy"- Shealy Environmental Services, Inc.- Lab ID# 32010 "ROGERSCALLCO"-Rogers & Callcot, Inc.- Lab ID # 23105001

Analysis Validated:

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#### SANTEE COOPER ANALYTICAL SERVICES

# CERTIFICATE OF ANALYSIS

## LAB CERTIFICATION #08552

Sample #	AF15789 Location:	GW Well CGYP-5		Date: 09/27/2021	Sample Collector:	DEW/ML
Loc. Code	CGYP-5			Time: 11:17		
	Analysis	Result	Units	Test Date	Analyst	Method
	Arsenic	<5.0	ug/L	10/11/2021	SJHATCHE	EPA 6020B
	Barium	91.9	ug/L	10/11/2021	SJHATCHE	EPA 6020B
	Beryllium	10.5	ug/L	10/11/2021	SJHATCHE	EPA 6020B
	Boron	5000	ug/L	10/04/2021	R&C	EPA 6010D
	Calcium	225	mg/L	10/12/2021	SJHATCHE	EPA 6020B
	Cadmium	<0.50	ug/L	10/11/2021	SJHATCHE	EPA 6020B
	Cobalt	63.2	ug/L	10/11/2021	SJHATCHE	EPA 6020B
	Chromium	<5.0	ug/L	10/11/2021	SJHATCHE	EPA 6020B
	Mercury	<0.2	ug/L	10/06/2021	R&C	EPA 7470
	Lithium	84.0	ug/L	10/04/2021	R&C	EPA 6010D
	Molybdenum	<10	ug/L	10/04/2021	R&C	EPA 6010D
	Lead	1.8	ug/L	10/11/2021	SJHATCHE	EPA 6020B
	Antimony	<5.0	ug/L	10/11/2021	SJHATCHE	EPA 6020B
	Selenium	<10.0	ug/L	10/11/2021	SJHATCHE	EPA 6020B
	Thallium	<1.0	ug/L	10/11/2021	SJHATCHE	EPA 6020B
	Radium 226	0.810	pCi/L	10/26/2021	GEL	EPA 903.1 Mod
	Radium 228	1.95	pCi/L	10/13/2021	GEL	EPA 904.0
	Radium 226/228 Combined Calculation	2.76	pCi/L	10/26/2021	GEL	EPA 903.1 Mod
	Chloride	277	mg/L	09/30/2021	KCWELLS	EPA 300.0
	Fluoride	0.25	mg/L	09/30/2021	KCWELLS	EPA 300.0
	Sulfate	342	mg/L	09/30/2021	KCWELLS	EPA 300.0
	Total Dissolved Solids	1311	mg/L	10/04/2021	KCWELLS	SM 2540C
	pН	4.92	SU	09/27/2021	DEW/ML	
	Spec. Cond.	1500	uS	09/27/2021	DEW/ML	
	Dissolved Oxygen	0.500	ppm	09/27/2021	DEW/ML	
	Oxidation Reduction Potential	163	mv	09/27/2021	DEW/ML	SM2580
	Temp	25.73	С	09/27/2021	DEW/ML	
	Turbidity	0	NTU	09/27/2021	DEW/ML	
	Depth	7.79	Feet	09/27/2021	DEW/ML	
	Elevation	76.33	Feet	10/01/2021	DEWEST	

#### Comments:

Independent Laboratory Results: "GEL" - GEL Laboratories LLC - Lab ID # 10120; "Test America" - TestAmerica Laboratories, Inc. - Lab ID# 98001; "DavisBrown"- Davis & Brown Lab ID # 21117; "Shealy"- Shealy Environmental Services, Inc.- Lab ID# 32010 "ROGERSCALLCO"-Rogers & Callcot, Inc.- Lab ID # 23105001

Analysis Validated:

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#### SANTEE COOPER ANALYTICAL SERVICES

# CERTIFICATE OF ANALYSIS

## LAB CERTIFICATION #08552

Sample #	AF18536 Location:	GW Well CGYP-5		Date: 10/26/2021	Sample Collector:	: DEW/ML
Loc. Code	CGYP-5			<b>Time:</b> 11:55		
	Analysis	Result	Units	Test Date	Analyst	Method
	Arsenic	<5.0	ug/L	11/02/2021	SJHATCHE	EPA 6020B
	Barium	107	ug/L	11/02/2021	SJHATCHE	EPA 6020B
	Beryllium	10.6	ug/L	11/02/2021	SJHATCHE	EPA 6020B
	Boron	4500.0	ug/L	11/04/2021	R&C	EPA 6010D
	Calcium	225	mg/L	11/02/2021	SJHATCHE	EPA 6020B
	Cadmium	<0.50	ug/L	11/02/2021	SJHATCHE	EPA 6020B
	Cobalt	70.6	ug/L	11/02/2021	SJHATCHE	EPA 6020B
	Chromium	<5.0	ug/L	11/02/2021	SJHATCHE	EPA 6020B
	Mercury	<0.2	ug/L	11/09/2021	R&C	EPA 7470
	Lithium	76.0	ug/L	11/04/2021	R&C	EPA 6010D
	Molybdenum	<10	ug/L	11/04/2021	R&C	EPA 6010D
	Lead	1.5	ug/L	11/02/2021	SJHATCHE	EPA 6020B
	Antimony	<5.0	ug/L	11/02/2021	SJHATCHE	EPA 6020B
	Selenium	<10.0	ug/L	11/02/2021	SJHATCHE	EPA 6020B
	Thallium	<1.0	ug/L	11/02/2021	SJHATCHE	EPA 6020B
	Radium 226	4.68	pCi/L	11/05/2021	GEL	EPA 903.1 Mod
	Radium 228	2.39	pCi/L	11/04/2021	GEL	EPA 904.0
	Radium 226/228 Combined Calculation	7.07	pCi/L	11/10/2021	GEL	EPA 903.1 Mod
	Chloride	344	mg/L	11/10/2021	KCWELLS	EPA 300.0
	Fluoride	0.21	mg/L	11/10/2021	KCWELLS	EPA 300.0
	Sulfate	397	mg/L	11/10/2021	KCWELLS	EPA 300.0
	Total Dissolved Solids	1221	mg/L	11/02/2021	KCWELLS	SM 2540C
	pH	4.93	SU	10/26/2021	DEW/ML	
	Spec. Cond.	1540	uS	10/26/2021	DEW/ML	
	Dissolved Oxygen	0.360	ppm	10/26/2021	DEW/ML	
	Oxidation Reduction Potential	177	mv	10/26/2021	DEW/ML	SM2580
	Temp	23.94	С	10/26/2021	DEW/ML	
	Turbidity	0	NTU	10/26/2021	DEW/ML	
	Depth	8.13	Feet	10/26/2021	DEW/ML	
	Elevation	75.99	Feet	10/28/2021	DEWEST	

#### Comments:

Independent Laboratory Results: "GEL" - GEL Laboratories LLC - Lab ID # 10120; "Test America" - TestAmerica Laboratories, Inc. - Lab ID# 98001; "DavisBrown"- Davis & Brown Lab ID # 21117; "Shealy"- Shealy Environmental Services, Inc.- Lab ID# 32010 "ROGERSCALLCO"-Rogers & Callcot, Inc.- Lab ID # 23105001

Analysis Validated:

land



#### SANTEE COOPER ANALYTICAL SERVICES

# CERTIFICATE OF ANALYSIS

## LAB CERTIFICATION #08552

Sample #	AF20417 Location:	GW Well CGYP-5		Date: 11/17/2021	Sample Collector	: DEW/ML
Loc. Code	CGYP-5			<b>Time:</b> 11:51		
	Analysis	Result	Units	Test Date	Analyst	Method
	Arsenic	<5.0	ug/L	12/08/2021	SJHATCHE	EPA 6020B
	Barium	117	ug/L	12/08/2021	SJHATCHE	EPA 6020B
	Beryllium	11.5	ug/L	12/13/2021	SJHATCHE	EPA 6020B
	Boron	4400.0	ug/L	11/24/2021	R&C	EPA 6010D
	Calcium	227	mg/L	12/08/2021	SJHATCHE	EPA 6020B
	Cadmium	<0.50	ug/L	12/08/2021	SJHATCHE	EPA 6020B
	Cobalt	68.3	ug/L	12/13/2021	SJHATCHE	EPA 6020B
	Chromium	<5.0	ug/L	12/08/2021	SJHATCHE	EPA 6020B
	Mercury	<0.2	ug/L	11/29/2021	R&C	EPA 7470
	Lithium	77.0	ug/L	11/24/2021	R&C	EPA 6010D
	Molybdenum	<10	ug/L	11/30/2021	R&C	EPA 6010D
	Lead	2.3	ug/L	12/08/2021	SJHATCHE	EPA 6020B
	Antimony	<5.0	ug/L	12/08/2021	SJHATCHE	EPA 6020B
	Selenium	<10.0	ug/L	12/08/2021	SJHATCHE	EPA 6020B
	Thallium	<1.0	ug/L	12/08/2021	SJHATCHE	EPA 6020B
	Radium 226	1.31	pCi/L	12/03/2021	GEL	EPA 903.1 Mod
	Radium 228	0.280	pCi/L	12/27/2021	GEL	EPA 904.0
	Radium 226/228 Combined Calculation	1.59	pCi/L	12/28/2021	GEL	EPA 903.1 Mod
	Chloride	312	mg/L	12/01/2021	KCWELLS	EPA 300.0
	Fluoride	0.35	mg/L	12/01/2021	KCWELLS	EPA 300.0
	Sulfate	369	mg/L	12/01/2021	KCWELLS	EPA 300.0
	Total Dissolved Solids	1185	mg/L	11/19/2021	KCWELLS	SM 2540C
	pН	4.95	SU	11/17/2021	DEW/ML	
	Spec. Cond.	1510	uS	11/17/2021	DEW/ML	
	Dissolved Oxygen	1.53	ppm	11/17/2021	DEW/ML	
	Oxidation Reduction Potential	230	mv	11/17/2021	DEW/ML	SM2580
	Temp	23.90	С	11/17/2021	DEW/ML	
	Turbidity	0	NTU	11/17/2021	DEW/ML	
	Depth	8.59	Feet	11/17/2021	DEW/ML	
	Elevation	75.53	Feet	11/19/2021	DEWEST	

#### Comments:

Independent Laboratory Results: "GEL" - GEL Laboratories LLC - Lab ID # 10120; "Test America" - TestAmerica Laboratories, Inc. - Lab ID# 98001; "DavisBrown"- Davis & Brown Lab ID # 21117; "Shealy"- Shealy Environmental Services, Inc.- Lab ID# 32010 "ROGERSCALLCO"- Rogers & Callcot, Inc.- Lab ID # 23105001

Analysis Validated:

land



#### SANTEE COOPER ANALYTICAL SERVICES

# CERTIFICATE OF ANALYSIS

## LAB CERTIFICATION #08552

Sample #	AF21738 Location:	GW Well CGYP-5		Date: 12/06/2021	Sample Collector	r: TW ML
Loc. Code	CGYP-5			Time: 11:13		
	Analysis	Result	Units	Test Date	Analyst	Method
	Arsenic	<2.0	ug/L	01/19/2022	PACE	EPA 6020B
	Barium	130	ug/L	01/19/2022	PACE	EPA 6020B
	Beryllium	10	ug/L	01/19/2022	PACE	EPA 6020B
	Boron	4100	ug/L	12/20/2021	ROGERSNCALLC	EPA 6010D
	Calcium	250	mg/L	01/19/2022	PACE	EPA 6020B
	Cadmium	<0.50	ug/L	01/19/2022	PACE	EPA 6020B
	Cobalt	68	ug/L	01/19/2022	PACE	EPA 6020B
	Chromium	<5.0	ug/L	01/19/2022	PACE	EPA 6020B
	Mercury	<0.20	ug/L	12/16/2021	ROGERSNCALLC	EPA 7470
	Lithium	91	ug/L	12/20/2021	ROGERSNCALLC	EPA 6010D
	Molybdenum	<10	ug/L	12/17/2021	ROGERSNCALLC	EPA 6010D
	Lead	<1.0	ug/L	01/19/2022	PACE	EPA 6020B
	Antimony	<2.0	ug/L	01/19/2022	PACE	EPA 6020B
	Selenium	7.2	ug/L	01/19/2022	PACE	EPA 6020B
	Thallium	<0.50	ug/L	01/19/2022	PACE	EPA 6020B
	Radium 226	0.470	pCi/L	01/04/2022	GEL	EPA 903.1 Mod
	Radium 228	2.46	pCi/L	01/05/2022	GEL	EPA 904.0
	Radium 226/228 Combined Calculation	2.92	pCi/L	01/05/2022	GEL	EPA 903.1 Mod
	Chloride	312	mg/L	12/08/2021	KCWELLS	EPA 300.0
	Fluoride	0.26	mg/L	12/08/2021	KCWELLS	EPA 300.0
	Sulfate	301	mg/L	12/08/2021	KCWELLS	EPA 300.0
	Total Dissolved Solids	1326	mg/L	12/13/2021	KCWELLS	SM 2540C
	рH	5.15	SU	12/06/2021	DEW/ML	
	Spec. Cond.	1560	uS	12/06/2021	DEW/ML	
	Dissolved Oxygen	0.980	ppm	12/06/2021	DEW/ML	
	Oxidation Reduction Potential	200	mv	12/06/2021	DEW/ML	SM2580
	Temp	22.94	С	12/06/2021	DEW/ML	
	Turbidity	6.20	NTU	12/06/2021	DEW/ML	
	Depth	8.65	Feet	12/06/2021	DEW/ML	
	Elevation	75.47	Feet	12/08/2021	DEWEST	

#### Comments:

Independent Laboratory Results: "GEL" - GEL Laboratories LLC - Lab ID # 10120; "Test America" - TestAmerica Laboratories, Inc. - Lab ID# 98001; "DavisBrown"- Davis & Brown Lab ID # 21117; "Shealy"- Shealy Environmental Services, Inc.- Lab ID# 32010 "ROGERSCALLCO"-Rogers & Callcot, Inc.- Lab ID # 23105001

Analysis Validated:

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#### SANTEE COOPER ANALYTICAL SERVICES

#### CERTIFICATE OF ANALYSIS

#### LAB CERTIFICATION #08552

Sample #	AF00635 Location:	GW Well CGYP-6		Date: 04/07/2021	Sample Collector	: DEW/MDG
Loc. Code	CGYP-6			Time: 16:02		
	Analysis	Result	Units	Test Date	Analyst	Method
	Arsenic	<5.0	ug/L	05/07/2021	SJHATCHE	EPA 6020B
	Barium	326	ug/L	05/06/2021	SJHATCHE	EPA 6020B
	Beryllium	27.7	ug/L	05/06/2021	SJHATCHE	EPA 6020B
	Boron	7000	ug/L	04/16/2021	ROGERSNCALLC	EPA 6010D
	Calcium	480	mg/L	05/06/2021	SJHATCHE	EPA 6020B
	Cadmium	<0.50	ug/L	05/06/2021	SJHATCHE	EPA 6020B
	Cobalt	163	ug/L	05/07/2021	SJHATCHE	EPA 6020B
	Chromium	<5.0	ug/L	05/06/2021	SJHATCHE	EPA 6020B
	Mercury	<0.20	ug/L	04/16/2021	ROGERSNCALLC	EPA 7470
	Lithium	140	ug/L	04/16/2021	ROGERSNCALLC	EPA 6010D
	Molybdenum	<10	ug/L	04/16/2021	ROGERSNCALLC	EPA 6010D
	Lead	13.0	ug/L	05/06/2021	SJHATCHE	EPA 6020B
	Antimony	<5.0	ug/L	05/06/2021	SJHATCHE	EPA 6020B
	Selenium	<10.0	ug/L	05/06/2021	SJHATCHE	EPA 6020B
	Thallium	<1.0	ug/L	05/06/2021	SJHATCHE	EPA 6020B
	Radium 226	0.850	pCi/L	04/22/2021	GEL	EPA 903.1 Mod
	Radium 228	2.83	pCi/L	04/20/2021	GEL	EPA 904.0
	Radium 226/228 Combined Calculation	3.68	pCi/L	05/05/2021	GEL	EPA 903.1 Mod
	Chloride	1160	mg/L	04/14/2021	LCWILLIA	EPA 300.0
	Fluoride	1.10	mg/L	04/14/2021	LCWILLIA	EPA 300.0
	Sulfate	96.3	mg/L	04/14/2021	LCWILLIA	EPA 300.0
	Total Dissolved Solids	3952	mg/L	04/19/2021	SJBROWN	SM 2540C
	pН	3.68	SU	04/07/2021	DEW/MDG	
	Spec. Cond.	3700	uS	04/07/2021	DEW/MDG	
	Dissolved Oxygen	0.330	ppm	04/07/2021	DEW/MDG	
	Oxidation Reduction Potential	276	mv	04/07/2021	DEW/MDG	SM2580
	Temp	23.98	С	04/07/2021	DEW/MDG	
	Turbidity	0	NTU	04/07/2021	DEW/MDG	
	Depth	7.60	Feet	04/07/2021	DEW/MDG	
	Elevation	75.63	Feet	04/22/2021	DEWEST	

#### Comments:

Independent Laboratory Results: "GEL" - GEL Laboratories LLC - Lab ID # 10120; "Test America" - TestAmerica Laboratories, Inc. - Lab ID# 98001; "DavisBrown"- Davis & Brown Lab ID # 21117; "Shealy"- Shealy Environmental Services, Inc. - Lab ID# 32010 "ROGERSCALLCO"- Rogers & Callcot, Inc.- Lab ID # 23105001

Analysis Validated:

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#### SANTEE COOPER ANALYTICAL SERVICES

# CERTIFICATE OF ANALYSIS

## LAB CERTIFICATION #08552

Sample #	AF03571 Location:	GW Well CGYP-6		Date: 05/13/2021	Sample Collector:	MDG/BWM
Loc. Code	CGYP-6			Time: 16:55		
	Analysis	Result	Units	Test Date	Analyst	Method
	Arsenic	<5.0	ug/L	05/19/2021	SJHATCHE	EPA 6020B
	Barium	437	ug/L	05/19/2021	SJHATCHE	EPA 6020B
	Beryllium	23.9	ug/L	05/19/2021	SJHATCHE	EPA 6020B
	Boron	6900	ug/L	05/25/2021	R&C	EPA 6010D
	Calcium	468	mg/L	05/19/2021	SJHATCHE	EPA 6020B
	Cadmium	<0.50	ug/L	05/19/2021	SJHATCHE	EPA 6020B
	Cobalt	149	ug/L	05/19/2021	SJHATCHE	EPA 6020B
	Chromium	<5.0	ug/L	05/19/2021	SJHATCHE	EPA 6020B
	Mercury	<0.2	ug/L	05/27/2021	R&C	EPA 7470
	Lithium	130	ug/L	05/25/2021	R&C	EPA 6010D
	Molybdenum	<10	ug/L	05/25/2021	R&C	EPA 6010D
	Lead	12.7	ug/L	05/19/2021	SJHATCHE	EPA 6020B
	Antimony	<5.0	ug/L	05/19/2021	SJHATCHE	EPA 6020B
	Selenium	<10.0	ug/L	05/19/2021	SJHATCHE	EPA 6020B
	Thallium	<1.0	ug/L	05/19/2021	SJHATCHE	EPA 6020B
	Radium 226	1.52	pCi/L	06/02/2021	GEL	EPA 903.1 Mod
	Radium 228	4.79	pCi/L	06/04/2021	GEL	EPA 904.0
	Radium 226/228 Combined Calculation	6.31	pCi/L	06/11/2021	GEL	EPA 903.1 Mod
	Chloride	1090	mg/L	05/26/2021	KCWELLS	EPA 300.0
	Fluoride	0.84	mg/L	05/18/2021	KCWELLS	EPA 300.0
	Sulfate	83.6	mg/L	05/18/2021	KCWELLS	EPA 300.0
	Total Dissolved Solids	2804	mg/L	05/21/2021	KCWELLS	SM 2540C
	pH	3.70	SU	05/14/2021	MDG/BWM	
	Spec. Cond.	3710	uS	05/14/2021	MDG/BWM	
	Dissolved Oxygen	0.470	ppm	05/14/2021	MDG/BWM	
	Oxidation Reduction Potential	253	mv	05/14/2021	MDG/BWM	SM2580
	Temp	20.67	С	05/14/2021	MDG/BWM	
	Turbidity	0	NTU	05/14/2021	MDG/BWM	
	Depth	7.99	Feet	05/14/2021	MDG/BWM	
	Elevation	75.24	Feet	05/17/2021	MDGOINGS	

#### Comments:

Independent Laboratory Results: "GEL" - GEL Laboratories LLC - Lab ID # 10120; "Test America" - TestAmerica Laboratories, Inc. - Lab ID# 98001; "DavisBrown"- Davis & Brown Lab ID # 21117; "Shealy"- Shealy Environmental Services, Inc.- Lab ID# 32010 "ROGERSCALLCO"-Rogers & Callcot, Inc.- Lab ID # 23105001

Analysis Validated:

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#### SANTEE COOPER ANALYTICAL SERVICES

# CERTIFICATE OF ANALYSIS

## LAB CERTIFICATION #08552

Sample #	AF07273 Location:	GW Well CGYP-6		Date: 07/08/2021	Sample Collector:	MDG/BRT
Loc. Code	CGYP-6			Time: 12:21		
	Analysis	Result	Units	Test Date	Analyst	Method
	Arsenic	<5.0	ug/L	08/03/2021	SJHATCHE	EPA 6020B
	Barium	585	ug/L	08/04/2021	SJHATCHE	EPA 6020B
	Beryllium	21.2	ug/L	08/04/2021	SJHATCHE	EPA 6020B
	Boron	6700	ug/L	07/14/2021	R&C	EPA 6010D
	Calcium	438	mg/L	08/03/2021	SJHATCHE	EPA 6020B
	Cadmium	<0.50	ug/L	08/03/2021	SJHATCHE	EPA 6020B
	Cobalt	147	ug/L	08/04/2021	SJHATCHE	EPA 6020B
	Chromium	<5.0	ug/L	08/03/2021	SJHATCHE	EPA 6020B
	Mercury	<0.2	ug/L	07/16/2021	R&C	EPA 7470
	Lithium	120	ug/L	07/14/2021	R&C	EPA 6010D
	Molybdenum	<10	ug/L	07/14/2021	R&C	EPA 6010D
	Lead	13.1	ug/L	08/03/2021	SJHATCHE	EPA 6020B
	Antimony	<5.0	ug/L	08/03/2021	SJHATCHE	EPA 6020B
	Selenium	<10.0	ug/L	08/03/2021	SJHATCHE	EPA 6020B
	Thallium	<1.0	ug/L	08/03/2021	SJHATCHE	EPA 6020B
	Radium 226	1.85	pCi/L	07/22/2021	GEL	EPA 903.1 Mod
	Radium 228	4.24	pCi/L	08/03/2021	GEL	EPA 904.0
	Radium 226/228 Combined Calculation	6.08	pCi/L	08/05/2021	GEL	EPA 903.1 Mod
	Chloride	1082	mg/L	07/09/2021	KCWELLS	EPA 300.0
	Fluoride	0.99	mg/L	07/09/2021	KCWELLS	EPA 300.0
	Sulfate	84.3	mg/L	07/09/2021	KCWELLS	EPA 300.0
	Total Dissolved Solids	2851	mg/L	07/15/2021	SJBROWN	SM 2540C
	pH	3.54	SU	07/08/2021	MDG/BRT	
	Spec. Cond.	3540	uS	07/08/2021	MDG/BRT	
	Dissolved Oxygen	0.750	ppm	07/08/2021	MDG/BRT	
	Oxidation Reduction Potential	202	mv	07/08/2021	MDG/BRT	SM2580
	Temp	25.56	С	07/08/2021	MDG/BRT	
	Turbidity		NTU	07/08/2021	MDG/BRT	
	Depth	8.20	Feet	07/08/2021	MDG/BRT	
	Elevation	75.03	Feet	07/14/2021	BRTAYLOR	

#### Comments:

Independent Laboratory Results: "GEL" - GEL Laboratories LLC - Lab ID # 10120; "Test America" - TestAmerica Laboratories, Inc. - Lab ID# 98001; "DavisBrown"- Davis & Brown Lab ID # 21117; "Shealy"- Shealy Environmental Services, Inc.- Lab ID# 32010 "ROGERSCALLCO"-Rogers & Callcot, Inc.- Lab ID # 23105001

Analysis Validated:

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#### SANTEE COOPER ANALYTICAL SERVICES

# CERTIFICATE OF ANALYSIS

## LAB CERTIFICATION #08552

Sample #	AF13776 Location:	GW Well CGYP-6		Date: 08/31/2021	Sample Collector:	DEW/ML				
Loc. Code	CGYP-6		<b>Time:</b> 11:02							
	Analysis	Result	Units	Test Date	Analyst	Method				
	Arsenic	<5.0	ug/L	09/09/2021	SJHATCHE	EPA 6020B				
	Barium	564	ug/L	09/09/2021	SJHATCHE	EPA 6020B				
	Beryllium	19.7	ug/L	09/09/2021	SJHATCHE	EPA 6020B				
	Boron	6900	ug/L	09/10/2021	R&C	EPA 6010D				
	Calcium	441	mg/L	09/09/2021	SJHATCHE	EPA 6020B				
	Cadmium	<0.50	ug/L	09/09/2021	SJHATCHE	EPA 6020B				
	Cobalt	150	ug/L	09/09/2021	SJHATCHE	EPA 6020B				
	Chromium	<5.0	ug/L	09/09/2021	SJHATCHE	EPA 6020B				
	Mercury	<0.20	ug/L	09/16/2021	R&C	EPA 7470				
	Lithium	130	ug/L	09/10/2021	R&C	EPA 6010D				
	Molybdenum	<10	ug/L	09/10/2021	R&C	EPA 6010D				
	Lead	13.6	ug/L	09/09/2021	SJHATCHE	EPA 6020B				
	Antimony	<5.0	ug/L	09/09/2021	SJHATCHE	EPA 6020B				
	Selenium	<10.0	ug/L	09/09/2021	SJHATCHE	EPA 6020B				
	Thallium	<1.0	ug/L	09/09/2021	SJHATCHE	EPA 6020B				
	Radium 226	1.49	pCi/L	09/29/2021	GEL	EPA 903.1 Mod				
	Radium 228	4.04	pCi/L	09/29/2021	GEL	EPA 904.0				
	Radium 226/228 Combined Calculation	5.53	pCi/L	10/01/2021	GEL	EPA 903.1 Mod				
	Chloride	1033	mg/L	09/08/2021	KCWELLS	EPA 300.0				
	Fluoride	0.75	mg/L	09/08/2021	KCWELLS	EPA 300.0				
	Sulfate	84.3	mg/L	09/08/2021	KCWELLS	EPA 300.0				
	Total Dissolved Solids	2740	mg/L	09/09/2021	SJBROWN	SM 2540C				
	рH	3.67	SU	08/31/2021	DEW/ML					
	Spec. Cond.	3460	uS	08/31/2021	DEW/ML					
	Dissolved Oxygen	0.330	ppm	08/31/2021	DEW/ML					
	Oxidation Reduction Potential	132	mv	08/31/2021	DEW/ML	SM2580				
	Temp	27.22	С	08/31/2021	DEW/ML					
	Turbidity	4.20	NTU	08/31/2021	DEW/ML					
	Depth	7.57	Feet	08/31/2021	DEW/ML					
	Elevation	75.66	Feet	09/02/2021	DEWEST					

#### Comments:

Independent Laboratory Results: "GEL" - GEL Laboratories LLC - Lab ID # 10120; "Test America" - TestAmerica Laboratories, Inc. - Lab ID# 98001; "DavisBrown"- Davis & Brown Lab ID # 21117; "Shealy"- Shealy Environmental Services, Inc.- Lab ID# 32010 "ROGERSCALLCO"- Rogers & Callcot, Inc.- Lab ID # 23105001

Analysis Validated:

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#### SANTEE COOPER ANALYTICAL SERVICES

## CERTIFICATE OF ANALYSIS

## LAB CERTIFICATION #08552

Sample #	AF15790 Location:	GW Well CGYP-6		Date: 09/27/2021	Sample Collector:	DEW/ML
Loc. Code	CGYP-6			Time: 12:32		
	Analysis	Result	Units	Test Date	Analyst	Method
	Arsenic	<5.0	ug/L	10/11/2021	SJHATCHE	EPA 6020B
	Barium	705	ug/L	10/11/2021	SJHATCHE	EPA 6020B
	Beryllium	21.9	ug/L	10/11/2021	SJHATCHE	EPA 6020B
	Boron	7300	ug/L	10/04/2021	R&C	EPA 6010D
	Calcium	474	mg/L	10/12/2021	SJHATCHE	EPA 6020B
	Cadmium	<0.50	ug/L	10/11/2021	SJHATCHE	EPA 6020B
	Cobalt	157	ug/L	10/11/2021	SJHATCHE	EPA 6020B
	Chromium	<5.0	ug/L	10/11/2021	SJHATCHE	EPA 6020B
	Mercury	<0.2	ug/L	10/06/2021	R&C	EPA 7470
	Lithium	150	ug/L	10/04/2021	R&C	EPA 6010D
	Molybdenum	<10	ug/L	10/04/2021	R&C	EPA 6010D
	Lead	13.7	ug/L	10/11/2021	SJHATCHE	EPA 6020B
	Antimony	<5.0	ug/L	10/11/2021	SJHATCHE	EPA 6020B
	Selenium	<10.0	ug/L	10/11/2021	SJHATCHE	EPA 6020B
	Thallium	<1.0	ug/L	10/11/2021	SJHATCHE	EPA 6020B
	Radium 226	1.97	pCi/L	10/26/2021	GEL	EPA 903.1 Mod
	Radium 228	5.96	pCi/L	10/15/2021	GEL	EPA 904.0
	Radium 226/228 Combined Calculation	7.93	pCi/L	10/26/2021	GEL	EPA 903.1 Mod
	Chloride	1061	mg/L	09/30/2021	KCWELLS	EPA 300.0
	Fluoride	0.98	mg/L	09/30/2021	KCWELLS	EPA 300.0
	Sulfate	90.9	mg/L	09/30/2021	KCWELLS	EPA 300.0
	Total Dissolved Solids	2382	mg/L	10/04/2021	KCWELLS	SM 2540C
	pH	3.62	SU	09/27/2021	DEW/ML	
	Spec. Cond.	3520	uS	09/27/2021	DEW/ML	
	Dissolved Oxygen	0.620	ppm	09/27/2021	DEW/ML	
	Oxidation Reduction Potential	222	mv	09/27/2021	DEW/ML	SM2580
	Temp	27.14	С	09/27/2021	DEW/ML	
	Turbidity	0	NTU	09/27/2021	DEW/ML	
	Depth	7.80	Feet	09/27/2021	DEW/ML	
	Elevation	75.43	Feet	10/01/2021	DEWEST	

#### Comments:

Independent Laboratory Results: "GEL" - GEL Laboratories LLC - Lab ID # 10120; "Test America" - TestAmerica Laboratories, Inc. - Lab ID# 98001; "DavisBrown"- Davis & Brown Lab ID # 21117; "Shealy"- Shealy Environmental Services, Inc.- Lab ID# 32010 "ROGERSCALLCO"-Rogers & Callcot, Inc.- Lab ID # 23105001

Analysis Validated:

land



#### SANTEE COOPER ANALYTICAL SERVICES

# CERTIFICATE OF ANALYSIS

## LAB CERTIFICATION #08552

Sample #	AF18537 Location:	GW Well CGYP-6		Date: 10/26/2021	Sample Collector	DEW/ML
Loc. Code	CGYP-6			<b>Time:</b> 12:54		
	Analysis	Result	Units	Test Date	Analyst	Method
	Arsenic	<5.0	ug/L	11/02/2021	SJHATCHE	EPA 6020B
	Barium	529	ug/L	11/02/2021	SJHATCHE	EPA 6020B
	Beryllium	21.4	ug/L	11/02/2021	SJHATCHE	EPA 6020B
	Boron	6700.0	ug/L	11/04/2021	R&C	EPA 6010D
	Calcium	455	mg/L	11/02/2021	SJHATCHE	EPA 6020B
	Cadmium	<0.50	ug/L	11/02/2021	SJHATCHE	EPA 6020B
	Cobalt	158	ug/L	11/02/2021	SJHATCHE	EPA 6020B
	Chromium	<5.0	ug/L	11/02/2021	SJHATCHE	EPA 6020B
	Mercury	<0.2	ug/L	11/09/2021	R&C	EPA 7470
	Lithium	110	ug/L	11/04/2021	R&C	EPA 6010D
	Molybdenum	<10	ug/L	11/04/2021	R&C	EPA 6010D
	Lead	15.8	ug/L	11/02/2021	SJHATCHE	EPA 6020B
	Antimony	<5.0	ug/L	11/02/2021	SJHATCHE	EPA 6020B
	Selenium	<10.0	ug/L	11/02/2021	SJHATCHE	EPA 6020B
	Thallium	<1.0	ug/L	11/02/2021	SJHATCHE	EPA 6020B
	Radium 226	2.54	pCi/L	11/08/2021	GEL	EPA 903.1 Mod
	Radium 228	3.94	pCi/L	11/04/2021	GEL	EPA 904.0
	Radium 226/228 Combined Calculation	6.48	pCi/L	11/10/2021	GEL	EPA 903.1 Mod
	Chloride	1070	mg/L	11/10/2021	KCWELLS	EPA 300.0
	Fluoride	0.42	mg/L	11/10/2021	KCWELLS	EPA 300.0
	Sulfate	92.7	mg/L	11/10/2021	KCWELLS	EPA 300.0
	Total Dissolved Solids	2306	mg/L	11/02/2021	KCWELLS	SM 2540C
	pH	3.54	SU	10/26/2021	DEW/ML	
	Spec. Cond.	3670	uS	10/26/2021	DEW/ML	
	Dissolved Oxygen	0.340	ppm	10/26/2021	DEW/ML	
	Oxidation Reduction Potential	278	mv	10/26/2021	DEW/ML	SM2580
	Temp	24.18	С	10/26/2021	DEW/ML	
	Turbidity	0	NTU	10/26/2021	DEW/ML	
	Depth	8.65	Feet	10/26/2021	DEW/ML	
	Elevation	74.58	Feet	10/28/2021	DEWEST	

#### Comments:

Independent Laboratory Results: "GEL" - GEL Laboratories LLC - Lab ID # 10120; "Test America" - TestAmerica Laboratories, Inc. - Lab ID# 98001; "DavisBrown"- Davis & Brown Lab ID # 21117; "Shealy"- Shealy Environmental Services, Inc.- Lab ID# 32010 "ROGERSCALLCO"-Rogers & Callcot, Inc.- Lab ID # 23105001

Analysis Validated:

land



#### SANTEE COOPER ANALYTICAL SERVICES

# CERTIFICATE OF ANALYSIS

## LAB CERTIFICATION #08552

Sample #	AF20418 Location:	GW Well CGYP-6		Date: 11/17/2021	Sample Collector:	DEW/ML
Loc. Code	CGYP-6			<b>Time:</b> 13:04		
	Analysis	Analysis Result Units Test Date				Method
	Arsenic	<5.0	ug/L	12/08/2021	SJHATCHE	EPA 6020B
	Barium	865	ug/L	12/08/2021	SJHATCHE	EPA 6020B
	Beryllium	19.4	ug/L	12/13/2021	SJHATCHE	EPA 6020B
	Boron	5200.0	ug/L	11/24/2021	R&C	EPA 6010D
	Calcium	396	mg/L	12/08/2021	SJHATCHE	EPA 6020B
	Cadmium	<0.50	ug/L	12/08/2021	SJHATCHE	EPA 6020B
	Cobalt	128	ug/L	12/13/2021	SJHATCHE	EPA 6020B
	Chromium	<5.0	ug/L	12/08/2021	SJHATCHE	EPA 6020B
	Mercury	<0.2	ug/L	11/29/2021	R&C	EPA 7470
	Lithium	110	ug/L	11/24/2021	R&C	EPA 6010D
	Molybdenum	<10	ug/L	11/30/2021	R&C	EPA 6010D
	Lead	6.8	ug/L	12/08/2021	SJHATCHE	EPA 6020B
	Antimony	<5.0	ug/L	12/08/2021	SJHATCHE	EPA 6020B
	Selenium	<10.0	ug/L	12/08/2021	SJHATCHE	EPA 6020B
	Thallium	<1.0	ug/L	12/08/2021	SJHATCHE	EPA 6020B
	Radium 226	3.82	pCi/L	12/03/2021	GEL	EPA 903.1 Mod
	Radium 228	5.88	pCi/L	12/27/2021	GEL	EPA 904.0
	Radium 226/228 Combined Calculation	9.69	pCi/L	12/28/2021	GEL	EPA 903.1 Mod
	Chloride	865	mg/L	12/01/2021	KCWELLS	EPA 300.0
	Fluoride	0.58	mg/L	12/01/2021	KCWELLS	EPA 300.0
	Sulfate	67.0	mg/L	12/01/2021	KCWELLS	EPA 300.0
	Total Dissolved Solids	1899	mg/L	11/19/2021	KCWELLS	SM 2540C
	рН	3.66	SU	11/17/2021	DEW/ML	
	Spec. Cond.	3170	uS	11/17/2021	DEW/ML	
	Dissolved Oxygen	0.530	ppm	11/17/2021	DEW/ML	
	Oxidation Reduction Potential	287	mv	11/17/2021	DEW/ML	SM2580
	Temp	23.24	С	11/17/2021	DEW/ML	
	Turbidity	0	NTU	11/17/2021	DEW/ML	
	Depth	9.13	Feet	11/17/2021	DEW/ML	
	Elevation	74.10	Feet	11/19/2021	DEWEST	

#### Comments:

Independent Laboratory Results: "GEL" - GEL Laboratories LLC - Lab ID # 10120; "Test America" - TestAmerica Laboratories, Inc. - Lab ID# 98001; "DavisBrown"- Davis & Brown Lab ID # 21117; "Shealy"- Shealy Environmental Services, Inc.- Lab ID# 32010 "ROGERSCALLCO"- Rogers & Callcot, Inc.- Lab ID # 23105001

Analysis Validated:

land



#### SANTEE COOPER ANALYTICAL SERVICES

# CERTIFICATE OF ANALYSIS

## LAB CERTIFICATION #08552

Sample #	AF21739 Location:	GW Well CGYP-6		Date: 12/06/2021 Sample Collector				
Loc. Code	CGYP-6			Time: 12:15				
	Analysis	Result	Units	Test Date	Analyst	Method		
	Arsenic	<2.0	ug/L	01/19/2022	PACE	EPA 6020B		
	Barium	1200	ug/L	01/19/2022	PACE	EPA 6020B		
	Beryllium	25	ug/L	01/19/2022	PACE	EPA 6020B		
	Boron	6200	ug/L	12/20/2021	ROGERSNCALLC	EPA 6010D		
	Calcium	380	mg/L	01/19/2022	PACE	EPA 6020B		
	Cadmium	<0.50	ug/L	01/19/2022	PACE	EPA 6020B		
	Cobalt	100	ug/L	01/19/2022	PACE	EPA 6020B		
	Chromium	<5.0	ug/L	01/19/2022	PACE	EPA 6020B		
	Mercury	<0.20	ug/L	12/16/2021	ROGERSNCALLC	EPA 7470		
	Lithium	150	ug/L	12/20/2021	ROGERSNCALLC	EPA 6010D		
	Molybdenum	<10	ug/L	12/17/2021	ROGERSNCALLC	EPA 6010D		
	Lead	3.9	ug/L	01/19/2022	PACE	EPA 6020B		
	Antimony	<2.0	ug/L	01/19/2022	PACE	EPA 6020B		
	Selenium	10	ug/L	01/19/2022	PACE	EPA 6020B		
	Thallium	<0.50	ug/L	01/19/2022	PACE	EPA 6020B		
	Radium 226	2.74	pCi/L	01/04/2022	GEL	EPA 903.1 Mod		
	Radium 228	2.88	pCi/L	01/05/2022	GEL	EPA 904.0		
	Radium 226/228 Combined Calculation	5.62	pCi/L	01/05/2022	GEL	EPA 903.1 Mod		
	Chloride	862	mg/L	12/08/2021	KCWELLS	EPA 300.0		
	Fluoride	0.74	mg/L	12/08/2021	KCWELLS	EPA 300.0		
	Sulfate	42.7	mg/L	12/08/2021	KCWELLS	EPA 300.0		
	Total Dissolved Solids	2158	mg/L	12/13/2021	KCWELLS	SM 2540C		
	рH	3.46	SU	12/06/2021	DEW/ML			
	Spec. Cond.	2850	uS	12/06/2021	DEW/ML			
	Dissolved Oxygen	2.74	ppm	12/06/2021	DEW/ML			
	Oxidation Reduction Potential	455	mv	12/06/2021	DEW/ML	SM2580		
	Temp	24.15	С	12/06/2021	DEW/ML			
	Turbidity	1.40	NTU	12/06/2021	DEW/ML			
	Depth	9.38	Feet	12/06/2021	DEW/ML			
	Elevation	73.85	Feet	12/08/2021	DEWEST			

#### Comments:

Independent Laboratory Results: "GEL" - GEL Laboratories LLC - Lab ID # 10120; "Test America" - TestAmerica Laboratories, Inc. - Lab ID# 98001; "DavisBrown"- Davis & Brown Lab ID # 21117; "Shealy"- Shealy Environmental Services, Inc.- Lab ID# 32010 "ROGERSCALLCO"-Rogers & Callcot, Inc.- Lab ID # 23105001

Analysis Validated:

land





# Laboratory Services

# **Laboratory Report**

Client

Santee Cooper Linda Williams 1 Riverwood Dr. Moncks Corner, SC 29461 Project: Work Order: Received: Ground Water 1020859 02/16/2021 10:20

Dear Client:

Rogers and Callcott appreciates the opportunity to be of service to you. The attached laboratory services report includes analytical results and chain of custody for samples that were received on February 16, 2021. Rogers and Callcott maintains a formal QA/QC program. Unless otherwise noted, all analyses performed under NELAP certification have complied with all the requirements for the TNI standard. The analyses met the QA/QC confidence interval for each test method unless otherwise qualified. Estimated uncertainty is available upon request.

Privileged / Confidential information may be contained in this report and is intended only for the use of the addressee. If you are not the addressee, or the person responsible for delivering to the person addressed, you may not copy or deliver this message to anyone else. If you receive this message by mistake, please notify Rogers and Callcott immediately.

We strive to provide excellent service to our clients. Please contact Lauren Hollister, your Project Manager, at lhollister@rcenviro.com, (864)-232-1556 if you have any questions about this report.

CC: Jeanette Gilmetti, Sherri Brown, Courtney Ames Watkins

Report Approved By:

Lauren Hollister

Lauren Hollister Project Manager

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# **Certificate of Analysis**

Client



South Carolina Greenville Laboratory Identification 23105 South Carolina Columbia Laboratory Identification 40572 North Carolina Laboratory Certification Number 27 North Carolina Drinking Water Lab Number 45710 NELAP Utah Certificate Number SC000042014-1 Georgia Drinking Water Lab ID 880

Santee Cooper	Project:	Ground Water
Linda Williams	Work Order:	1020859
1 Riverwood Dr.	Received:	02/16/2021 10:20
Moncks Corner, SC 29461		

Sample Number	Sample Description	Matrix	Sampled	Туре
1020859-01	AE94857 CCMAP-3	Ground Water	02/10/21 16:09	Grab
1020859-02	AE94858 CCMAP-3 DUP	Ground Water	02/10/21 16:14	Grab
1020859-03	AE94861 CGYP-1	Ground Water	02/10/21 11:16	Grab
1020859-04	AE94862 CGYP-2	Ground Water	02/10/21 12:23	Grab
1020859-05	AE94863 CGYP-2 DUP	Ground Water	02/10/21 12:28	Grab
1020859-06	AE94864 CGYP-3	Ground Water	02/10/21 13:38	Grab
1020859-07	AE94855 CCMAP-1	Ground Water	02/11/21 12:28	Grab
1020859-08	AE94856 CCMAP-2	Ground Water	02/11/21 13:14	Grab

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Santee Cooper	Project:	Ground Water
1 Riverwood Dr.	Work Order:	1020859
Moneks Corner, SC 29461	Reported:	02/24/21 17:04

#### Sample Data

Sample Number	1020859-01
Sample Description	AE94857 CCMAP-3 collected on 02/10/21 16:09

arameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch
<b>`otal Metals</b> ithium	15	10	ug/L	1.00	02/18/21 17:54	EPA 6010D		MLR	B1B0817
ample Number ample Description	1020859-02 AE94858 CCMAP-3 DUP collec	eted on 02/10/2	21 16:14						
arameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch
<b>Sotal Metals</b>		10	/Т	1.00	02/10/21 10.04				B1B0817
ithium	16	10	ug/L	1.00	02/18/21 19:04	EPA 6010D		MLR	

1020859-03 Sample Number

Sample Description

AE94861 CGYP-1 collected on 02/10/21 11:16

Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	02/23/21 11:06	EPA 7470A	<b>S</b> 7	MLR	B1B1040
Boron	14000	150	ug/L	10.0	02/24/21 15:46	EPA 6010D		MLR	B1B0817
Lithium	ND	100	ug/L	10.0	02/24/21 15:46	EPA 6010D	Z	MLR	B1B0817
Molybdenum	ND	500	ug/L	10.0	02/24/21 15:46	EPA 6010D	Z	MLR	B1B0817

Sample Number

1020859-04

Sample Description AE94862 CGYP-2 collected on 02/10/21 12:23

Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	02/23/21 11:34	EPA 7470A	<b>S</b> 7	MLR	B1B1040
Boron	960	150	ug/L	10.0	02/23/21 18:37	EPA 6010D		MLR	B1B0817
Lithium	13	10	ug/L	1.00	02/18/21 19:12	EPA 6010D		MLR	B1B0817
Molybdenum	ND	10	ug/L	1.00	02/18/21 19:12	EPA 6010D		MLR	B1B0817

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Santee Cooper	Project:	Ground Water
1 Riverwood Dr.	Work Order:	1020859
Moncks Corner, SC 29461	Reported:	02/24/21 17:04

Sample Number 1020859-05 AE94863 CGYP-2 DUP collected on 02/10/21 12:28 **Sample Description** 

Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	02/23/21 11:37	EPA 7470A	<b>S</b> 7	MLR	B1B1040
Boron	980	150	ug/L	10.0	02/23/21 18:41	EPA 6010D		MLR	B1B0817
Lithium	13	10	ug/L	1.00	02/18/21 19:16	EPA 6010D		MLR	B1B0817
Molybdenum	ND	10	ug/L	1.00	02/18/21 19:16	EPA 6010D		MLR	B1B0817

Sample Number

1020859-06 **Sample Description** 

AE94864 CGYP-3 collected on 02/10/21 13:38

AE94855 CCMAP-1 collected on 02/11/21 12:28

Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	02/23/21 11:40	EPA 7470A	<b>S</b> 7	MLR	B1B1040
Boron	25000	150	ug/L	10.0	02/24/21 15:58	EPA 6010D		MLR	B1B0817
Lithium	110	20	ug/L	2.00	02/18/21 18:41	EPA 6010D		MLR	B1B0817
Molybdenum	ND	20	ug/L	2.00	02/18/21 18:41	EPA 6010D		MLR	B1B0817

1020859-07 Sample Number

**Sample Description** 

Reporting Parameter Result Units DF Analyzed Method Flag Analyst Batch Limit **Total Metals** Lithium ug/L EPA 6010D B1B0817 ND 10 1.00 02/18/21 19:24 MLR 1020859-08 Sample Number **Sample Description** AE94856 CCMAP-2 collected on 02/11/21 13:14 Reporting Parameter Result Units DF Analyzed Method Flag Analyst Batch Limit **Total Metals** EPA 6010D Lithium ND 10 ug/L 1.00 02/18/21 19:28 MLR B1B0817

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Santee Cooper	Project:	Ground Water
1 Riverwood Dr.	Work Order:	1020859
Moneks Corner, SC 29461	Reported:	02/24/21 17:04

			Fotal Met Control		ry					
Parameter	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flags
Batch B1B0817 - EPA 3005A										
Blank (B1B0817-BLK1)										
Boron	ND	15	ug/L							
Lithium	ND	10	ug/L							
Molybdenum	ND	10	ug/L							
LCS (B1B0817-BS1)										
Boron	230	15	ug/L	250		93	80-120			
Lithium	249	10	ug/L	250		100	80-120			
Molybdenum	230	10	ug/L	250		92	80-120			
LCS Dup (B1B0817-BSD1)										
Boron	240	15	ug/L	250		96	80-120	3	20	
Lithium	260	10	ug/L	250		104	80-120	4	20	
Molybdenum	240	10	ug/L	250		96	80-120	4	20	
Matrix Spike (B1B0817-MS1)	Source: 1020859-01									
Boron	14000	75	ug/L	250	14000	209	75-125			S5
Lithium	326	10	ug/L	250	15	124	75-125			
Molybdenum	250	10	ug/L	250	ND	98	75-125			
Matrix Spike Dup (B1B0817-MSD1)	Source: 1020859-01									
Boron	14000	75	ug/L	250	14000	120	75-125	2	20	
Lithium	312	10	ug/L	250	15	119	75-125	4	20	
Molybdenum	240	10	ug/L	250	ND	95	75-125	4	20	
Batch B1B1040 - EPA 7470A										
Blank (B1B1040-BLK1)										
Mercury	ND	0.20	ug/L							
LCS (B1B1040-BS1)										
Mercury	5.0	0.20	ug/L	5.00		101	80-120			

LCS Dup (B1B1040-BSD1)								
Mercury	4.9	0.20	ug/L	5.00	98	80-120	2	20

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Santee Cooper	Project:	Ground Water
1 Riverwood Dr.	Work Order:	1020859
Moneks Corner, SC 29461	Reported:	02/24/21 17:04

		-	Fotal Met Control		<b>'y</b>					
Parameter	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flags
Batch B1B1040 - EPA 7470A										
Matrix Spike (B1B1040-MS1)	Source: 1020859-03	i								
Mercury	4.1	0.20	ug/L	5.00	ND	80	75-125			S7
Matrix Spike Dup (B1B1040-MSD1)	Source: 1020859-03	i								
Mercury	4.0	0.20	ug/L	5.00	ND	78	75-125	3	20	S7

#### **Sample Preparation Data**

Parameter	Batch	Sample ID	Prepared	Analyst	
EPA 3005A ICP Digestion					
EPA 3005A	B1B0817	1020859-01	02/17/2021 08:59	MLR	
EPA 3005A	B1B0817	1020859-02	02/17/2021 08:59	MLR	
EPA 3005A	B1B0817	1020859-03	02/17/2021 08:59	MLR	
EPA 3005A	B1B0817	1020859-04	02/17/2021 08:59	MLR	
EPA 3005A	B1B0817	1020859-05	02/17/2021 08:59	MLR	
EPA 3005A	B1B0817	1020859-06	02/17/2021 08:59	MLR	
EPA 3005A	B1B0817	1020859-07	02/17/2021 08:59	MLR	
EPA 3005A	B1B0817	1020859-08	02/17/2021 08:59	MLR	
EPA 7470A Mercury Digestion					
EPA 7470A	B1B1040	1020859-03	02/22/2021 16:38	MLR	
EPA 7470A	B1B1040	1020859-04	02/22/2021 16:38	MLR	
EPA 7470A	B1B1040	1020859-05	02/22/2021 16:38	MLR	
EPA 7470A	B1B1040	1020859-06	02/22/2021 16:38	MLR	

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Santee Cooper	Project:	Ground Water
1 Riverwood Dr.	Work Order:	1020859
Moncks Corner, SC 29461	Reported:	02/24/21 17:04

#### **Data Qualifiers and Definitions**

ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not reported

RPD Relative Percent Difference

- S5 The raw sample concentration was greater than four times the spike concentration. The spike recovery was not evaluated against the control limits.
- S7 Result calculated by Method of Standard Addition due to sample matrix interference and initial spike failures.
- Z Unable to meet the client requested RL for this analyte. Internal Standard (ISTD) was not within QC limits due to sample matrix interference. Therefore, the sample was diluted to reduce matrix & to meet the ISTD requirements for reporting per the method.

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Contract Lab	h Info: 💦	10 0	ontract Lab D	ue Date (Lab	Only):2	1 23		21	_ Sen	d report	to <u>Icw</u>	illia@sonteecc	oper.com	& <u>sibrown@sonteecoop</u>	er.com			
					Cha	in of	Cu	stoc	ły					,	(843)7	Corne 61-800	rwood r, SC 00 Ext	d Driv 2946 t. 514
Customer	r Email/	Report Recipie	ent:	Date	Results N	eeded b	y:		Pi	roject/	Task,	/Unit #:		Rerun reques		ax: (84		
LOWIL	LA	@santeec	ooper.com		/	1		1215	567	1 JM	02.	09.601	1 369	Sco Yes	No			
			,											0859		Analys	is Gro	up
Labworks (internal u only)	States and a second second	Sample Location	n/	Collection Date	Collection Time	Sample Collector	Total # of containers	Bottle type: (Glass- G/Plastic-P)	Grab (G) or Composite (C)	Matrix(see below)	Preservative (see			nments nit e info	а Д	.:	Mo	Hg
AE 948	57	CCMAP-3		2/10/21	1609	NDG	1	P	G	GW	2.	-01				×		
AE948	58	CCMAP-3	DUP		1614	1	ł	L	L	1	L	-02				×		
AE 948	6)	carp-1			116	1	1	1	I	1	1	-03			×	×	×	×
AE9486	2	Gerp-2			1223							-04			×	×	×	×
AE7486	3	CGYP-2 DU	P		1228							-05			×	x	×	x
AE9486	4	CGYP-3		1	1838	1	1	1	1	1	1	-06			×	x	×	×
AE9485	55	CCMAP-1		2/11/21	1228				1	1		-07				x		
AE9485	56	CCMAP-2		1	1314		1	-	1		1	-08				×		
Relinquis		Employee#	Date	Time		ved by:	E	mployee	#	Date	979	Time	Samp TEM	le Receiving (Internal P (°C):∽&	Use Or Initia	ly)		_
Relinquis		35594 Employee#	2/15/21 Date	Time		ved by:	E	mployee		Date	1	Time	Corre	ect pH: Yes No	•			
FGP & Relinquis		Employee#	Date	Time	A ( Receiv	ved by:	E	mployee	# a	2/1(0/ Date	121	1020 Time		rvative Lot#:				
in a second	T ME'	TALS (all )								and and		-	Date/	Time/Init for preser	vative:			
D Ag			State of South	rients		<u>sc.</u>		State of the	psur	<u>n</u>		Coal		Flyash		Oi		
	🗆 Fe	🗆 Se		x	BTEX     Napthal		0		sum(a	u		Ultimate	ture	C Ammonia	0	ans. Ol		
O As	OK		and the second second	TPO4 LTN	□ THM/H □ VOC	AA	-	belon Al	ALC: NOT THE REAL PROPERTY OF			🗆 Ash		🗆 % Carbon				
□ B □ Ba	OLi		E		□ Oil & G □ E. Coli	rease		TO	C	1.		□ Sulfur □ BTUs		Mineral     Analysis		laiseann 17		
🗆 Ba		Country States and States		A CONTRACTOR OF	D Total Co	oliform		Sol	al meta uble M	etals			Matter	O Sieve				
			Br		D pH Dissolve	ed As			rity (Ca Moistur		0	CHN Other Tests:		0 % Moisture		ed Oil Jashpo		
O Cd					D Dissolve	ed Fe		🗆 Sul	fites		C	XRF Scan HGI		NPDES	2.8	As E d.		
	1		I SO	1			10.000	🗆 pH			1 4			20100				A. 100 -

Co

🗆 Cr

🗆 Ni

D Pb

🗆 Hg

C CrVI

□ Rad 228

O PCB

D Sulfur

Chlorides

Particle Size

GOFER

Oil & Grease

As

TSS

D Fineness

D Particulate Matter



# Sample Receipt Verification

Client: Santee Cooper Date Receive	0/	16/21		Work Order:
Carrier Name: Client FedEx UPS 816240672624 Tracking Number:	US Mail		Cou	rier Field Services Other:
Receipt Criteria	Y e s	N o	N A	Comments
Shipping container / cooler intact?	Х			Damaged Leaking Other:
Custody seals intact?			Х	
COC included with samples?	х			
COC signed when relinquished and received?	х			
Sample bottles intact?	х			Damaged Leaking Other:
Sample ID on COC agree with label on bottle(s)?	х			
Date / time on COC agree with label on bottle(s)?	х			
Number of bottles on COC agrees with number of bottles received	l? X			
Samples received within holding time?	х			
Sample volume sufficient for analysis?	х			
VOA vials free of headspace (<6mm bubble)?			Х	
Samples cooled? Temp at receipt recorded on COC Temp measured with IR thermometer - SN: 97050067			х	Ice Cold Packs Dry Ice None
Samples requiring pH preservation at proper pH? Note: Samples for metals analysis may be preserved upon receipt in the lab. Note: Samples for O&G and VOA analysis – preservation checked at bench.	x			
Samples dechlorinated for parameters requiring chlorine removal a the time of sample collection? Note: Chlorine checked at bench for samples requiring Bacterial, VOA, and H. analysis.			Х	
If in-house preserva	tion used	– re	cord	Lot #
UCI		1		

HCL	$H_3PO_4$	
$H_2SO_4$	NaOH	
HNO <sub>3</sub>	Other	

Comments:

Were non-conformance issues noted at sample receipt? Yes or No

Non-Conformance issue other than noted above:





# Laboratory Services

# **Laboratory Report**

Client

Santee Cooper Linda Williams 1 Riverwood Dr. Moncks Corner, SC 29461 **Project:** Work Order: Received:

Ground Water 1040743 04/14/2021 09:20

Dear Client:

Rogers and Callcott appreciates the opportunity to be of service to you. The attached laboratory services report includes analytical results and chain of custody for samples that were received on April 14, 2021. Rogers and Callcott maintains a formal QA/QC program. Unless otherwise noted, all analyses performed under NELAP certification have complied with all the requirements for the TNI standard. The analyses met the QA/QC confidence interval for each test method unless otherwise qualified. Estimated uncertainty is available upon request.

Privileged / Confidential information may be contained in this report and is intended only for the use of the addressee. If you are not the addressee, or the person responsible for delivering to the person addressed, you may not copy or deliver this message to anyone else. If you receive this message by mistake, please notify Rogers and Callcott immediately.

We strive to provide excellent service to our clients. Please contact Lauren Hollister, your Project Manager, at Ihollister@rcenviro.com, (864)-232-1556 if you have any questions about this report.

CC: Jeanette Gilmetti, Sherri Brown, Courtney Ames Watkins

Report Approved By:

Lauren Hollister

Lauren Hollister Project Manager

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### **Certificate of Analysis**

Santee Cooper Linda Williams 1 Riverwood Dr.

Moncks Corner, SC 29461

Client



South Carolina Greenville Laboratory Identification 23105 South Carolina Columbia Laboratory Identification 40572 North Carolina Laboratory Certification Number 27 North Carolina Drinking Water Lab Number 45710 NELAP Utah Certificate Number SC000042014-1 Georgia Drinking Water Lab ID 880

Project:	Ground Wat	er	
Work Order:	1040743		
Received:	04/14/2021	09:20	

Sample Number	Sample Description	Matrix	Sampled	Туре
1040743-01	AF00633 CGYP-4	Ground Water	04/07/21 11:06	Grab
1040743-02	AF00629 CGYP-1	Ground Water	04/07/21 12:16	Grab
1040743-03	AF00630 CGYP-2	Ground Water	04/07/21 13:16	Grab
1040743-04	AF00631 CGYP-2 DUP	Ground Water	04/07/21 13:21	Grab
1040743-05	AF00632 CGYP-3	Ground Water	04/07/21 14:20	Grab
1040743-06	AF00634 CGYP-5	Ground Water	04/07/21 15:09	Grab
1040743-07	AF00635 CGYP-6	Ground Water	04/07/21 16:02	Grab
1040743-08	AF00697 CCMAP-4	Ground Water	04/08/21 10:32	Grab
1040743-09	AF00698 CCMAP-4 DUP	Ground Water	04/08/21 10:37	Grab
1040743-10	AF00693 WLF-A2-6	Ground Water	04/08/21 15:27	Grab
1040743-11	AF00694 WLF-A2-6 DUP	Ground Water	04/08/21 15:32	Grab
1040743-12	AF00695 WAP-17	Ground Water	04/08/21 13:31	Grab
1040743-13	AF00696 WAP-17 DUP	Ground Water	04/08/21 13:36	Grab



Santee Cooper	Project:	Ground Water
1 Riverwood Dr.	Work Order:	1040743
Moncks Corner, SC 29461	Reported:	04/22/21 14:29

#### Sample Data

Sample Number	1040743-01
Sample Description	AF00633 CGYP-4 collected on 04/07/21 11:06

1040743-02

1040743-03

1040743-04

Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	04/16/21 10:12	EPA 7470A		MLR	B1D0679
Boron	7600	75	ug/L	5.00	04/16/21 14:48	EPA 6010D		MLR	B1D0837
Lithium	58	10	ug/L	1.00	04/16/21 15:58	EPA 6010D		MLR	B1D0590
Molybdenum	ND	10	ug/L	1.00	04/16/21 15:58	EPA 6010D		MLR	B1D0590

Sample Number Sample Description

AF00629 CGYP-1 collected on 04/07/21 12:16

Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	04/16/21 10:24	EPA 7470A		MLR	B1D0679
Boron	11000	75	ug/L	5.00	04/16/21 14:52	EPA 6010D		MLR	B1D0837
Lithium	20	20	ug/L	2.00	04/21/21 16:28	EPA 6010D	Х	MLR	B1D0590
Molybdenum	ND	20	ug/L	2.00	04/21/21 16:28	EPA 6010D	Х	MLR	B1D0590

Sample Number Sample Description

AF00630 CGYP-2 collected on 04/07/21 13:16

Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	04/16/21 10:35	EPA 7470A		MLR	B1D0679
Boron	850	75	ug/L	5.00	04/16/21 12:53	EPA 6010D		MLR	B1D0837
Lithium	14	10	ug/L	1.00	04/16/21 13:12	EPA 6010D		MLR	B1D0590
Molybdenum	ND	10	ug/L	1.00	04/16/21 13:12	EPA 6010D		MLR	B1D0590

Sample Number Sample Description

AF00631 CGYP-2 DUP collected on 04/07/21 13:21

Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	04/16/21 10:38	EPA 7470A		MLR	B1D0679
Boron	890	75	ug/L	5.00	04/16/21 14:56	EPA 6010D		MLR	B1D0837
Lithium	15	10	ug/L	1.00	04/16/21 16:29	EPA 6010D		MLR	B1D0590
Molybdenum	ND	10	ug/L	1.00	04/16/21 16:29	EPA 6010D		MLR	B1D0590

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Santee Cooper	Project:	Ground Water
1 Riverwood Dr.	Work Order:	1040743
Moncks Corner, SC 29461	Reported:	04/22/21 14:29

 Sample Number
 1040743-05

 Sample Description
 AF00632 CGYP-3 collected on 04/07/21 14:20

Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch
Total Metals									
Mercury	0.21	0.20	ug/L	1.00	04/16/21 10:46	EPA 7470A		MLR	B1D0679
Boron	23000	75	ug/L	5.00	04/16/21 15:00	EPA 6010D		MLR	B1D0837
Lithium	94	10	ug/L	1.00	04/16/21 16:33	EPA 6010D		MLR	B1D0590
Molybdenum	ND	10	ug/L	1.00	04/16/21 16:33	EPA 6010D		MLR	B1D0590

Sample Number

**Sample Description** 

1040743-06

AF00634 CGYP-5 collected on 04/07/21 15:09

Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	04/16/21 10:49	EPA 7470A		MLR	B1D0679
Boron	3100	75	ug/L	5.00	04/16/21 15:03	EPA 6010D		MLR	B1D0837
Lithium	60	10	ug/L	1.00	04/16/21 16:36	EPA 6010D		MLR	B1D0590
Molybdenum	ND	10	ug/L	1.00	04/16/21 16:36	EPA 6010D		MLR	B1D0590

Sample Number

er 1040743-07 ption AF00635 CGYP-6 collected on 04/07/21 16:02

1040743-08

**Sample Description** 

Reporting Method Parameter Result Units DF Analyzed Flag Analyst Batch Limit **Total Metals** EPA 7470A Mercury ND 0.20 ug/L 1.00 04/16/21 10:52 MLR B1D0679 EPA 6010D Boron 7000 75 ug/L 5.00 04/16/21 15:07 MLR B1D0837 EPA 6010D Lithium 140 10 ug/L 1.00 04/16/21 16:40 MLR B1D0590 Molybdenum ND 10 ug/L 1.00 04/16/21 16:40 EPA 6010D MLR B1D0590

Sample Number Sample Description

AF00697 CCMAP-4 collected on 04/08/21 10:32

Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch
Total Metals									
Lithium	ND	10	ug/L	1.00	04/16/21 15:49	EPA 6010D		MLR	B1D0590



Santee Cooper	Project:	Ground Water
1 Riverwood Dr.	Work Order:	1040743
Moncks Corner, SC 29461	Reported:	04/22/21 14:29

1040743-09 Sample Number AF00698 CCMAP-4 DUP collected on 04/08/21 10:37 **Sample Description** 

Parameter		Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch
Total Metals										
Lithium		ND	10	ug/L	1.00	04/16/21 15:54	EPA 6010D		MLR	B1D0590
Sample Number	1040743-10									

Sample Number

AF00693 WLF-A2-6 collected on 04/08/21 15:27 **Sample Description** 

Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	04/16/21 10:54	EPA 7470A		MLR	B1D0679
Boron	310	75	ug/L	5.00	04/16/21 15:11	EPA 6010D		MLR	B1D0837
Lithium	24	10	ug/L	1.00	04/16/21 16:44	EPA 6010D		MLR	B1D0590
Molybdenum	ND	10	ug/L	1.00	04/16/21 16:44	EPA 6010D		MLR	B1D0590

Sample Number **Sample Description** 

AF00694 WLF-A2-6 DUP collected on 04/08/21 15:32

1040743-11

Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	04/16/21 10:57	EPA 7470A		MLR	B1D0679
Boron	280	75	ug/L	5.00	04/16/21 15:38	EPA 6010D		MLR	B1D0837
Lithium	32	10	ug/L	1.00	04/16/21 16:48	EPA 6010D		MLR	B1D0590
Molybdenum	ND	10	ug/L	1.00	04/16/21 16:48	EPA 6010D		MLR	B1D0590

Sample Number **Sample Description**  1040743-12

AF00695 WAP-17 collected on 04/08/21 13:31

Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	04/16/21 11:00	EPA 7470A		MLR	B1D0679
Boron	3300	75	ug/L	5.00	04/16/21 13:35	EPA 6010D		MLR	B1D0837
Lithium	130	10	ug/L	1.00	04/16/21 14:01	EPA 6010D		MLR	B1D0590
Molybdenum	59	10	ug/L	1.00	04/16/21 14:01	EPA 6010D		MLR	B1D0590



Santee Cooper	Project:	Ground Water
1 Riverwood Dr.	Work Order:	1040743
Moncks Corner, SC 29461	Reported:	04/22/21 14:29

Sample Number	1040743-13
Sample Description	AF00696 WAP-17 DUP collected on 04/08/21 13:36

Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	04/16/21 11:03	EPA 7470A		MLR	B1D0679
Boron	3300	75	ug/L	5.00	04/16/21 15:42	EPA 6010D		MLR	B1D0837
Lithium	120	10	ug/L	1.00	04/16/21 16:52	EPA 6010D		MLR	B1D0590
Molybdenum	57	10	ug/L	1.00	04/16/21 16:52	EPA 6010D		MLR	B1D0590



Santee Cooper	Project:	Ground Water
1 Riverwood Dr.	Work Order:	1040743
Moncks Corner, SC 29461	Reported:	04/22/21 14:29

	Total Metals Quality Control Summary										
Parameter	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flags	
Batch B1D0590 - EPA 3005A											
Blank (B1D0590-BLK1)											
Lithium	ND	10	ug/L								
Molybdenum	ND	10	ug/L								
LCS (B1D0590-BS1)											
Lithium	256	10	ug/L	250		102	80-120				
Molybdenum	300	10	ug/L	250		120	80-120				
LCS Dup (B1D0590-BSD1)											
Lithium	266	10	ug/L	250		107	80-120	4	20		
Molybdenum	260	10	ug/L	250		105	80-120	14	20		
Matrix Spike (B1D0590-MS1)	Source: 1040743-03	3									
Lithium	260	10	ug/L	250	14	98	75-125				
Molybdenum	200	10	ug/L	250	ND	81	75-125				
Matrix Spike (B1D0590-MS2)	Source: 1040743-12	2									
Lithium	421	10	ug/L	250	126	118	75-125				
Molybdenum	310	10	ug/L	250	59	100	75-125				
Matrix Spike Dup (B1D0590-MSD1)	Source: 1040743-03	3									
Lithium	263	10	ug/L	250	14	100	75-125	1	20		
Molybdenum	210	10	ug/L	250	ND	83	75-125	2	20		
Matrix Spike Dup (B1D0590-MSD2)	Source: 1040743-12	2									
Lithium	412	10	ug/L	250	126	114	75-125	2	20		
Molybdenum	310	10	ug/L	250	59	98	75-125	0.9	20		
Post Spike (B1D0590-PS1)	Source: 1040743-03	3									
Lithium	501	10	ug/L	500	14	97	75-125				
Molybdenum	430	10	ug/L	500	ND	86	75-125				
Post Spike (B1D0590-PS2)	Source: 1040743-12	2									
Lithium	691	10	ug/L	500	126	113	75-125				
Molybdenum	570	10	ug/L	500	59	102	75-125				



Santee Cooper	Project:	Ground Water
1 Riverwood Dr.	Work Order:	1040743
Moncks Corner, SC 29461	Reported:	04/22/21 14:29

			fotal Met Control		ry							
Parameter	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flags		
Batch B1D0679 - EPA 7470A												
Blank (B1D0679-BLK1)												
Mercury	ND	0.20	ug/L									
LCS (B1D0679-BS1)												
Mercury	5.0	0.20	ug/L	5.00		101	80-120					
LCS Dup (B1D0679-BSD1)												
Mercury	5.0	0.20	ug/L	5.00		100	80-120	1	20			
Matrix Spike (B1D0679-MS1)	Source: 1040743-01											
Mercury	4.3	0.20	ug/L	5.00	ND	84	75-125					
Matrix Spike (B1D0679-MS2)	Source: 1040743-02											
Mercury	4.7	0.20	ug/L	5.00	ND	92	75-125					
Matrix Spike Dup (B1D0679-MSD1)	Source: 1040743-01											
Mercury	4.3	0.20	ug/L	5.00	ND	83	75-125	0.9	20			
Matrix Spike Dup (B1D0679-MSD2)	Source: 1040743-02											
Mercury	4.7	0.20	ug/L	5.00	ND	93	75-125	0.7	20			
Post Spike (B1D0679-PS1)	Source: 1040743-01											
Mercury	3.4		ug/L	4.00	ND	82	80-120					
Post Spike (B1D0679-PS2)	Source: 1040743-02											
Mercury	3.6		ug/L	4.00	ND	88	80-120					
Post Spike (B1D0679-PS3)	Source: 1040743-03											
Mercury	3.2		ug/L	4.00	ND	81	80-120					
Post Spike (B1D0679-PS4)	Source: 1040743-04											
Mercury	3.2		ug/L	4.00	ND	80	80-120					
Post Spike (B1D0679-PS5)	Source: 1040743-05											
Mercury	3.8		ug/L	4.00	0.21	89	80-120					



Santee Cooper	Project:	Ground Water
1 Riverwood Dr.	Work Order:	1040743
Moneks Corner, SC 29461	Reported:	04/22/21 14:29

	Total Metals Quality Control Summary									
Parameter	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flags
Batch B1D0679 - EPA 7470A										
Post Spike (B1D0679-PS6)	Source: 1040743-06									
Mercury	3.5		ug/L	4.00	ND	86	80-120			
Post Spike (B1D0679-PS7)	Source: 1040743-07									
Mercury	3.6		ug/L	4.00	ND	89	80-120			
Post Spike (B1D0679-PS8)	Source: 1040743-10									
Mercury	3.9		ug/L	4.00	ND	98	80-120			
Post Spike (B1D0679-PS9)	Source: 1040743-11									
Mercury	3.8		ug/L	4.00	ND	96	80-120			
Post Spike (B1D0679-PSA)	Source: 1040743-12									
Mercury	3.7		ug/L	4.00	ND	91	80-120			
Post Spike (B1D0679-PSB)	Source: 1040743-13									
Mercury	3.8		ug/L	4.00	ND	93	80-120			
Batch B1D0837 - EPA 3005A										
Blank (B1D0837-BLK1)										
Boron	ND	15	ug/L							
LCS (B1D0837-BS1)										
Boron	210	15	ug/L	250		82	80-120			
LCS Dup (B1D0837-BSD1)										
Boron	240	15	ug/L	250		95	80-120	14	20	
Matrix Spike (B1D0837-MS1)	Source: 1040743-03									
Boron	1800	75	ug/L	1250	850	80	75-125			
Matrix Spike (B1D0837-MS2)	Source: 1040743-12									
Boron	4600	75	ug/L	1250	3300	105	75-125			



Santee Cooper	Project:	Ground Water
1 Riverwood Dr.	Work Order:	1040743
Moneks Corner, SC 29461	Reported:	04/22/21 14:29

	Total Metals Quality Control Summary									
Parameter	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flags
Batch B1D0837 - EPA 3005A										
Matrix Spike Dup (B1D0837-MSD1)	Source: 1040743-03	3								
Boron	2000	75	ug/L	1250	850	93	75-125	8	20	
Matrix Spike Dup (B1D0837-MSD2)	Source: 1040743-12	2								
Boron	4600	75	ug/L	1250	3300	102	75-125	0.9	20	
Post Spike (B1D0837-PS1)	Source: 1040743-03	3								
Boron	3200	75	ug/L	2500	850	95	75-125			
Post Spike (B1D0837-PS2)	Source: 1040743-12	2								
Boron	5900	75	ug/L	2500	3300	105	75-125			



Santee Cooper	Project:	Ground Water
1 Riverwood Dr.	Work Order:	1040743
Moncks Corner, SC 29461	Reported:	04/22/21 14:29

#### **Sample Preparation Data**

Parameter	Batch	Sample ID	Prepared	Analyst
EPA 3005A ICP Digestion				
EPA 3005A	B1D0590	1040743-01	04/14/2021 13:25	MTH
EPA 3005A	B1D0837	1040743-01	04/14/2021 13:25	MTH
EPA 3005A	B1D0590	1040743-02	04/14/2021 13:25	MTH
EPA 3005A	B1D0837	1040743-02	04/14/2021 13:25	MTH
EPA 3005A	B1D0590	1040743-03	04/14/2021 13:25	MTH
EPA 3005A	B1D0837	1040743-03	04/14/2021 13:25	MTH
EPA 3005A	B1D0590	1040743-04	04/14/2021 13:25	MTH
EPA 3005A	B1D0837	1040743-04	04/14/2021 13:25	MTH
EPA 3005A	B1D0590	1040743-05	04/14/2021 13:25	MTH
EPA 3005A	B1D0837	1040743-05	04/14/2021 13:25	MTH
EPA 3005A	B1D0590	1040743-06	04/14/2021 13:25	MTH
EPA 3005A	B1D0837	1040743-06	04/14/2021 13:25	MTH
EPA 3005A	B1D0590	1040743-07	04/14/2021 13:25	MTH
EPA 3005A	B1D0837	1040743-07	04/14/2021 13:25	MTH
EPA 3005A	B1D0590	1040743-08	04/14/2021 13:25	MTH
EPA 3005A	B1D0590	1040743-09	04/14/2021 13:25	MTH
EPA 3005A	B1D0590	1040743-10	04/14/2021 13:25	MTH
EPA 3005A	B1D0837	1040743-10	04/14/2021 13:25	MTH
EPA 3005A	B1D0590	1040743-11	04/14/2021 13:25	MTH
EPA 3005A	B1D0837	1040743-11	04/14/2021 13:25	MTH
EPA 3005A	B1D0590	1040743-12	04/14/2021 13:25	MTH
EPA 3005A	B1D0837	1040743-12	04/14/2021 13:25	MTH
EPA 3005A	B1D0590	1040743-13	04/14/2021 13:25	MTH
EPA 3005A	B1D0837	1040743-13	04/14/2021 13:25	MTH
EPA 7470A Mercury Digestion				
EPA 7470A	B1D0679	1040743-01	04/15/2021 13:11	ELN
EPA 7470A	B1D0679	1040743-02	04/15/2021 13:11	ELN
EPA 7470A	B1D0679	1040743-03	04/15/2021 13:11	ELN
EPA 7470A	B1D0679	1040743-04	04/15/2021 13:11	ELN
EPA 7470A	B1D0679	1040743-05	04/15/2021 13:11	ELN
EPA 7470A	B1D0679	1040743-06	04/15/2021 13:11	ELN
EPA 7470A	B1D0679	1040743-07	04/15/2021 13:11	ELN
EPA 7470A	B1D0679	1040743-10	04/15/2021 13:11	ELN
EPA 7470A	B1D0679	1040743-11	04/15/2021 13:11	ELN
EPA 7470A	B1D0679	1040743-12	04/15/2021 13:11	ELN
EPA 7470A	B1D0679	1040743-13	04/15/2021 13:11	ELN



Santee Cooper	Project:	Ground Water
1 Riverwood Dr.	Work Order:	1040743
Moncks Corner, SC 29461	Reported:	04/22/21 14:29

#### **Data Qualifiers and Definitions**

ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not reported

RPD Relative Percent Difference

Х Result subject to sample matrix interference. Reporting limit has been adjusted where applicable.

\_\_\_\_\_\_ Send report to <a href="mailto:lcwillia@santeecooper.com">lcwillia@santeecooper.com</a> sibrown@santeecooper.com

### **Chain of Custody**

1040743

Santee cooper' Santee Cooper One Riverwood Drive Moncks Corner, SC 29461 Phone: (843)761-8000 Ext. 5148 Fav: (843)61-4175

Customer Emai	l/Report Recip	ient:	Dat	Date Results Needed by:				Project/Task/Unit #:					F	Rerun request		for any flagged QC				
LEWILLIA	@santee	cooper.coi	m				[2]	567	J_JN	102.0	9.Gø	1_36	500	_ Yes	No					
1045743																Analys	is Gro	oup		
Labworks ID # (Internal use only)	Sample Locat Description	ion/	Collection Date	Collection Time	Sample Collector	Total # of containers	Bottle type: (Glass- G/Plastic-P)	Grab (G) or Composite (C)	Matrix(see below)	Preservative (see below)	• M • H • M	Cor Aethod # Reporting lin Aisc. sample Any other no	e info	5	DD	Li	Mo	Ha		
AF00633	CGYP-4	-	4/7/	21 1106	DEW	{	P	G	GW	2	8,13	, MO - 6	5010	-01	×	×	X	X		
AFCOG29	CGYP-1			1216			1	1			Hg -	1470A		-00	1	1	1			
AF-00630	CGYP-2			1316										-07						
AF-00631	CGYP-2	DUP		1321										-04						
AF 00632	CGYP-3			1420									~	05						
AF00634	CGYP-5			1507									- (	06						
AF 00635	CGYP-6		1	1602									~ (	07	1	-				
AF 00697	CCMAP-4	-	4/8/2	1 1032									-0	8		x				
AF-00698	CCMAP-4	DUP		1037-		1		1					-00	9		Х				
Relinquished by:												Sampl	- Pasai	ving (Internal U						
Afgroun	Employee#	Date 4/12/21	Time 1200	Receiv Ve de		En	TEMP (°C)				e (°C):	19.2 1	Initial:	y)						
Relinquished by:	Employee#	Date	Time	Receiv		En	nployee #	Comutal			ct pH:	Yes No								
Foder Relinquished by:	Employee#	4/14/21 Date	∂9≥∂ Time	Nehoen Receive	Rose ed by:	En	nployee #	9/14/21		10	9 RD Time	Preser	vative	Lot#:						
						and the second						Date/T	īme/In	it for preservat	tive:					
	TALS (all )	Nut	rients	MIS	c.		Gyp	sum			Coa			lyash	tive:	Oil				
□ Ag □ Cu □ Al □ Fe □ As □ K □ B □ Li	□ Sb □ Se □ Sn □ Sr			BTEX     Napthaler     THM/HA     VOC	ne AA		Gypsum(all below)		board psum(all low)				Itimate % Mois Ash Sulfur		□ An □ LO □ % (	amonia Il Carbon	1) Co	s. Oil ( Moisin	Qual.	
□ Ba □ Mg □ Be □ Mn	O Ti	F Cl NO	2	□ Oil & Gre □ E. Coli □ Total Col □ pH	iform	Total metals Soluble Metals		als		BTUs Volatile CHN	e Matter	O Sie	neral Analysis ve Moisture	0 Die 0 IF1 0 Dis	eetric 8	l Gate				
□ Ca □ Mo □ Cd □ Na	□ V □ Zn	Br NO SO	3	Dissolved  Rad 226  Rad 228			0 % Ma D Sulfit 0 pH	oisture es					Ň	PDES	C Fla C Me (As	shpeu tals in Cd,C	t oil	ъ		
□ Co □ Ni □ Cr □ Pb	Hg     CrVI			□ Rad 228 □ PCB		C	Chlorides Chlorides Chlorides Chlorides Chlorides As			& Grease	Hg D TX GOF									

Matrix codes: GW-groundwater, DW-drinking water, SW-surface water, WW-waste water, BW-boiler water, L-limestone, Oil-oil, S-Soil, SL-solid, C-coal, G-gypsum, FA-flyash, BA-bottom ash, M-misc (describe in comment section) Preservative code- 1=<4°C 2=HNO3 3=H<sub>2</sub>SO<sub>4</sub> 4-HCl 5=Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> 6-Other (S 5=Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> 6-Other (Specify)

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Customer Emai	l/Report Recip	pient:	Dat	e Results Ne	eded by	<i>r</i> :		Project,	/Task/	/Unit #:		Rerun reque	st for a	ny fla	ogge	d C																																					
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(Internal use only)	Sample Locat Description	non/	Collection Date	Collection Time	Sample Collector	Total # of containers	Bottle type: (Glass- G/Plastic-P)	Grab (G) or Composite (C) Matrix(see below)	Preservative (see	Mett     Repo     Misc     Any	Common nod # orting limit sample int other notes	fo	22	Lì	Mo																																						
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Matrix codes: GW-groundwater, DW-drinking water, SW-surface water, WW-waste water, BW-boiler water, L-limestone, Oil-oil, S-Soil, SL-solid, C-coal, G-gypsum, FA-flyash, BA-bottom ash, M-misc (describe in comment section) Preservative code- 1=<4°C 2=HNO3 3=H<sub>2</sub>SO<sub>4</sub> 4-HCl 5=Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> 6-Other (S 5=Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> 6-Other (Specify)

Sulfur

Particle Size

GOFER

UTSS

D Particulate Matter

🗆 Cr

🗆 Pb



#### Sample Receipt Verification

Client: Santee Cooper Date Received:	<u>4/</u>	14/21		Work Order: <u>1040743</u>
Carrier Name: Client FedEx UPS US Tracking Number: 804037735696	Mail		Cou	rrier Field Services Other:
Receipt Criteria	Y e s	N o	N A	Comments
Shipping container / cooler intact?	х			Damaged Leaking Other:
Custody seals intact?			х	
COC included with samples?	Х			
COC signed when relinquished and received?	х			
Sample bottles intact?	х			Damaged Leaking Other:
Sample ID on COC agree with label on bottle(s)?	х			
Date / time on COC agree with label on bottle(s)?	х			
Number of bottles on COC agrees with number of bottles received?	х			
Samples received within holding time?	х			
Sample volume sufficient for analysis?	х			
VOA vials free of headspace (<6mm bubble)?			х	
Samples cooled? Temp at receipt recorded on COC Temp measured with IR thermometer - SN: 97050067			х	Ice Cold Packs Dry Ice None
Samples requiring pH preservation at proper pH? Note: Samples for metals analysis may be preserved upon receipt in the lab. Note: Samples for O&G and VOA analysis – preservation checked at bench.	x			
Samples dechlorinated for parameters requiring chlorine removal at the time of sample collection? Note: Chlorine checked at bench for samples requiring Bacterial, VOA, and HAA analysis.			x	
				<b>x</b>

If in-house preservation used – record Lot #									
HCL		$H_3PO_4$							
$H_2SO_4$		NaOH							
HNO <sub>3</sub>		Other							

Comments:

Were non-conformance issues noted at sample receipt? Yes or No

than than noted above:

Non-Conformance issue other than noted above:





### Laboratory Services

### **Laboratory Report**

Client

Santee Cooper Linda Williams 1 Riverwood Dr. Moncks Corner, SC 29461 Project: Work Order: Received: Ground Water 1051017 05/19/2021 09:10

Dear Client:

Rogers and Callcott appreciates the opportunity to be of service to you. The attached laboratory services report includes analytical results and chain of custody for samples that were received on May 19, 2021. Rogers and Callcott maintains a formal QA/QC program. Unless otherwise noted, all analyses performed under NELAP certification have complied with all the requirements for the TNI standard. The analyses met the QA/QC confidence interval for each test method unless otherwise qualified. Estimated uncertainty is available upon request.

Privileged / Confidential information may be contained in this report and is intended only for the use of the addressee. If you are not the addressee, or the person responsible for delivering to the person addressed, you may not copy or deliver this message to anyone else. If you receive this message by mistake, please notify Rogers and Callcott immediately.

We strive to provide excellent service to our clients. Please contact Lauren Hollister, your Project Manager, at lhollister@rcenviro.com, (864)-232-1556 if you have any questions about this report.

CC: Jeanette Gilmetti, Sherri Brown, Courtney Ames Watkins

Report Approved By:

Lauren Hollister

Lauren Hollister Project Manager

This report may not be reproduced, except in full, without written permission from Rogers & Callcott, Inc.

PO Box 5655 | Greenville, SC 29606 | 426 Fairforest Way | Greenville, SC 29607 | main 864.232.1556 | fax 864.232.6140 rogersandcallcott.com

- an employee-owned company



**Certificate of Analysis** 

Client

# SUPP ACCREONES

South Carolina Greenville Laboratory Identification 23105 South Carolina Columbia Laboratory Identification 40572 North Carolina Laboratory Certification Number 27 North Carolina Drinking Water Lab Number 45710 NELAP Utah Certificate Number SC000042014-1 Georgia Drinking Water Lab ID 880

Santee Cooper	Project:	Ground Water
Linda Williams	Work Order:	1051017
1 Riverwood Dr.	Received:	05/19/2021 09:10
Moncks Corner, SC 29461		00,19,2021 09110

Sample Number	Sample Description	Matrix	Sampled	Туре
1051017-01	AF03568 CGYP-4	Ground Water	05/13/21 14:39	Grab
1051017-02	AF03569 CGYP-4 DUP	Ground Water	05/13/21 14:44	Grab
1051017-03	AF03570 CGYP-5	Ground Water	05/13/21 16:00	Grab
1051017-04	AF03571 CGYP-6	Ground Water	05/13/21 16:55	Grab
1051017-05	AF03572 WLF-A2-6	Ground Water	05/13/21 11:20	Grab
1051017-06	AF03573 WLF-A2-6 DUP	Ground Water	05/13/21 11:25	Grab

PO Box 5655 | Greenville, SC 29606 | 426 Fairforest Way | Greenville, SC 29607 | main 864.232.1556 | fax 864.232.6140 rogersandcallcott.com

an employee-owned company



Santee Cooper	Project:	Ground Water
1 Riverwood Dr.	Work Order:	1051017
Moncks Corner, SC 29461	Reported:	06/01/21 14:19

#### Sample Data

Sample Number	1051017-01
Sample Description	AF03568 CGYP-4 collected on 05/13/21 14:39

Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	05/27/21 11:42	EPA 7470A	<b>S</b> 7	MLR	B1E1218
Boron	8000	75	ug/L	5.00	05/25/21 14:10	EPA 6010D		MLR	B1E0974
Lithium	58	10	ug/L	1.00	05/25/21 15:23	EPA 6010D		MLR	B1E0975
Molybdenum	ND	10	ug/L	1.00	05/25/21 15:23	EPA 6010D		MLR	B1E0975

```
Sample Number
```

Sample Description

1051017-02 AF03569 CGYP-4 DUP collected on 05/13/21 14:44

Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	05/27/21 11:53	EPA 7470A	S7	MLR	B1E1218
Boron	8000	75	ug/L	5.00	05/25/21 14:14	EPA 6010D		MLR	B1E0974
Lithium	59	10	ug/L	1.00	05/25/21 15:26	EPA 6010D		MLR	B1E0975
Molybdenum	ND	10	ug/L	1.00	05/25/21 15:26	EPA 6010D		MLR	B1E0975

Sample Number Sample Description

AF03570 CGYP-5 collected on 05/13/21 16:00

1051017-03

Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	05/27/21 11:56	EPA 7470A	<b>S</b> 7	MLR	B1E1218
Boron	2900	75	ug/L	5.00	05/25/21 13:40	EPA 6010D		MLR	B1E0974
Lithium	59	10	ug/L	1.00	05/25/21 15:07	EPA 6010D		MLR	B1E0975
Molybdenum	ND	10	ug/L	1.00	05/25/21 15:07	EPA 6010D		MLR	B1E0975

Sample Number Sample Description 1051017-04 AF03571 CGYP-6 collected on 05/13/21 16:55

Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	05/27/21 11:59	EPA 7470A	S7	MLR	B1E1218
Boron	6900	75	ug/L	5.00	05/25/21 14:18	EPA 6010D		MLR	B1E0974
Lithium	130	10	ug/L	1.00	05/25/21 15:30	EPA 6010D		MLR	B1E0975
Molybdenum	ND	10	ug/L	1.00	05/25/21 15:30	EPA 6010D		MLR	B1E0975



Santee Cooper	Project:	Ground Water
1 Riverwood Dr.	Work Order:	1051017
Moncks Corner, SC 29461	Reported:	06/01/21 14:19

Sample Number	1051017-05
Sample Description	AF03572 WLF-A2-6 collected on 05/13/21 11:20

Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	05/27/21 12:02	EPA 7470A		MLR	B1E1218
Boron	420	75	ug/L	5.00	05/25/21 14:02	EPA 6010D		MLR	B1E0974
Lithium	32	10	ug/L	1.00	05/25/21 15:34	EPA 6010D		MLR	B1E0975
Molybdenum	ND	10	ug/L	1.00	05/25/21 15:34	EPA 6010D		MLR	B1E0975

Sample Number

1051017-06 Sample Description

AF03573 WLF-A2-6 DUP collected on 05/13/21 11:25

Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	05/27/21 12:04	EPA 7470A		MLR	B1E1218
Boron	410	75	ug/L	5.00	05/25/21 14:06	EPA 6010D		MLR	B1E0974
Lithium	33	10	ug/L	1.00	05/25/21 15:38	EPA 6010D		MLR	B1E0975
Molybdenum	ND	10	ug/L	1.00	05/25/21 15:38	EPA 6010D		MLR	B1E0975



Santee Cooper	Project:	Ground Water
1 Riverwood Dr.	Work Order:	1051017
Moncks Corner, SC 29461	Reported:	06/01/21 14:19

Total Metals Quality Control Summary										
Parameter	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flags
Batch B1E0974 - EPA 3005A										
Blank (B1E0974-BLK1)										
Boron	ND	15	ug/L							
LCS (B1E0974-BS1)										
Boron	250	15	ug/L	250		98	80-120			
Matrix Spike (B1E0974-MS1)	Source: 1051017-03									
Boron	4200	75	ug/L	1250	2900	106	75-125			
Matrix Spike Dup (B1E0974-MSD1)	Source: 1051017-03									
Boron	4200	75	ug/L	1250	2900	103	75-125	1	20	
Post Spike (B1E0974-PS1)	Source: 1051017-03									
Boron	5500	75	ug/L	2500	2900	106	75-125			
Batch B1E0975 - EPA 3005A										
Blank (B1E0975-BLK1)										
Lithium	ND	10	ug/L							
Molybdenum	ND	10	ug/L							
LCS (B1E0975-BS1)										
Lithium	281	10	ug/L	250		113	80-120			
Molybdenum	240	10	ug/L	250		97	80-120			
LCS Dup (B1E0975-BSD1)										
Lithium	280	10	ug/L	250		112	80-120	0.5	20	
Molybdenum	250	10	ug/L	250		98	80-120	1	20	
Matrix Spike (B1E0975-MS1)	Source: 1051017-03									
Lithium	362	10	ug/L	250	59	122	75-125			
Molybdenum	250	10	ug/L	250	ND	98	75-125			
Post Spike (B1E0975-PS1)	Source: 1051017-03									
Lithium	0.597		mg/L	0.500	ND	108	75-125			
Molybdenum	0.49		mg/L	0.500	ND	97	75-125			



Santee Cooper	Project:	Ground Water
1 Riverwood Dr.	Work Order:	1051017
Moncks Corner, SC 29461	Reported:	06/01/21 14:19

Total Metals Quality Control Summary										
Parameter	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flags
Batch B1E1218 - EPA 7470A										
Blank (B1E1218-BLK1)										
Mercury	ND	0.20	ug/L							
LCS (B1E1218-BS1)										
Mercury	5.0	0.20	ug/L	5.00		99	80-120			
LCS Dup (B1E1218-BSD1)										
Mercury	5.1	0.20	ug/L	5.00		101	80-120	2	20	
Matrix Spike (B1E1218-MS1)	Source: 1051017-01									
Mercury	4.1	0.20	ug/L	5.00	ND	82	75-125			
Matrix Spike Dup (B1E1218-MSD1)	Source: 1051017-01									
Mercury	4.1	0.20	ug/L	5.00	ND	83	75-125	1	20	
Post Spike (B1E1218-PS1)	Source: 1051017-01									
Mercury	3.5		ug/L	4.00	ND	87	80-120			<b>S</b> 7
Post Spike (B1E1218-PS2)	Source: 1051017-02									
Mercury	3.1		ug/L	4.00	ND	76	80-120			<b>S</b> 7
Post Spike (B1E1218-PS3)	Source: 1051017-03									
Mercury	2.9		ug/L	4.00	ND	72	80-120			<b>S</b> 7
Post Spike (B1E1218-PS4)	Source: 1051017-04									
Mercury	2.9		ug/L	4.00	ND	71	80-120			<b>S</b> 7
Post Spike (B1E1218-PS5)	Source: 1051017-05									
Mercury	3.4		ug/L	4.00	ND	83	80-120			
Post Spike (B1E1218-PS6)	Source: 1051017-06									
Mercury	3.3		ug/L	4.00	ND	82	80-120			



Santee Cooper	Project:	Ground Water
1 Riverwood Dr.	Work Order:	1051017
Moneks Corner, SC 29461	Reported:	06/01/21 14:19

#### **Sample Preparation Data**

Parameter	Batch	Sample ID	Prepared	Analyst	
EPA 3005A ICP Digestion					
EPA 3005A	B1E0974	1051017-01	05/24/2021 09:36	MTH	
EPA 3005A	B1E0975	1051017-01	05/20/2021 09:49	CAL	
EPA 3005A	B1E0974	1051017-02	05/24/2021 09:36	MTH	
EPA 3005A	B1E0975	1051017-02	05/20/2021 09:49	CAL	
EPA 3005A	B1E0974	1051017-03	05/24/2021 09:36	MTH	
EPA 3005A	B1E0975	1051017-03	05/20/2021 09:49	CAL	
EPA 3005A	B1E0974	1051017-04	05/24/2021 09:36	MTH	
EPA 3005A	B1E0975	1051017-04	05/20/2021 09:49	CAL	
EPA 3005A	B1E0974	1051017-05	05/24/2021 09:36	MTH	
EPA 3005A	B1E0975	1051017-05	05/20/2021 09:49	CAL	
EPA 3005A	B1E0974	1051017-06	05/24/2021 09:36	MTH	
EPA 3005A	B1E0975	1051017-06	05/20/2021 09:49	CAL	
EPA 7470A Mercury Digestion					
EPA 7470A	B1E1218	1051017-01	05/26/2021 13:14	ELN	
EPA 7470A	B1E1218	1051017-02	05/26/2021 13:14	ELN	
EPA 7470A	B1E1218	1051017-03	05/26/2021 13:14	ELN	
EPA 7470A	B1E1218	1051017-04	05/26/2021 13:14	ELN	
EPA 7470A	B1E1218	1051017-05	05/26/2021 13:14	ELN	
EPA 7470A	B1E1218	1051017-06	05/26/2021 13:14	ELN	



Santee Cooper	Project:	Ground Water
1 Riverwood Dr.	Work Order:	1051017
Moncks Corner, SC 29461	Reported:	06/01/21 14:19

#### **Data Qualifiers and Definitions**

ND	Analyte NOT DETECTED at or above the reporting limit

- NR Not reported
- RPD Relative Percent Difference

**S**7 Result calculated by Method of Standard Addition due to sample matrix interference and initial spike failures.

Contract Lab Info:	CHER/C	Contract Lab D	ue Date (Lab	Only):5	26	<u> </u>	21	Sen	d report	to <u>lcwil</u>	lia@santeeco	oper.com_& sibrow	n@santeecooper.	.com			
	:			Chai	n of	Cus	stoc	y,	la	J 5	1017		<b>S</b>	Or	e Rive	COO antee C rwood or, SC	Drive
													Phone: (1	843)	761-80 ?ax: (8	00 Ext 43)761	. 5148 -4175
Customer Emai	l/Report Recipi	ent:	<b>Date</b>	Results Ne	eded by			P	roject/	Task/	Unit #:	R	erun request	for	any fl	aggeo	3 QC
LCWILLIA	@santee	cooper.com	· · · ·	JJ.	<u>.</u>		[2]	567	J. Jn	102.	09. <i>G</i> Ø1	36500	Yes	No			
Labworks ID #	Sample Locatio	on/				~	7	<u>}</u> कट्च				Comments		+		sis Grou	<u>ue</u> 
(Internal use only)	Description		Collection Date	Collection	Sample Collector	Total # of containers	Bottle type: (Glass- G/PlastIc-P)	Grab (G) or Composite (C)	Matrix(see below)	Préservative (see Helow)	• Rep	hod # orting limit sample info other notes		1 - VI - 1			
AF-03568	CGYP-4		5/13/2	1 1437	MDG	{	P	G	Gw	2	-0	1.	48.0° max 1° m m_	X			
A=03567	ССУР-4-	Dup		1444		}					-0.						
AF03570	CGYP-5			1600							~0	)					
AF03571	CGYP-6			(685							- 0	Ŷ					
AF-03572	WLF-A2-	6		1120							- 0.5	<b>.</b> .			<u>  </u>		
AF03573	WLF- A-2-6	bup	<u>i</u>	1125		<u> </u>	1	<u>}</u>	1	1	-0	( 0					
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Relinquished by:	Employee#	Date 5/18/21	: _Time  5∞	AL DE	ed by:	Em	plőyee	1	Date. 11812		Time	Sample Recei TEMP (°C):	ving (Internal U <u>२,[•</u> ð ]	lse ( Initi	n/y)_ al:		- ``
Relinquished by:		Date	Time	Receive	d by:	Em	ployee		Date		Time	Correct pH:					
fcdey- Relinquished by:	Employee#	5/19/2	99 (O	Receive	Hose ed by:	Em	ployee		5/ <i>[1</i> ]2 	-	∂G[∂ Time	Preservative	L0 <b>[#</b> :	\$			
<u>, , , , , , , , , , , , , , , , , , , </u>		<u></u>	<u></u>	r Branna (1975) (Buth Lynn	<u> Antonio (</u>	<u>ты</u> нд	(Odenson Ro	<u>1942   1</u>	<u>, 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 </u>	<u>4</u>	<u> 240-1922 20997)</u>	Date/Time/Ir	lit for preserva	tive		:	
🛛 Ag 🔄 🗍 Cu			rients.	MIS	<u>C.</u>		<u>Gy</u> Vallbo	psur	<u>n</u>		<u>Coal</u>		vash.	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Ō		
□ Al □ Fe □ As □ K			)C /TPO4	□ Napthaler □ THM/HA			Gyp belov	sum(a w)1	11' <sub>7 (</sub>		Ultimate		nnonia Ini Carbon Carbon		1115-00 %[Midl ?Clib7	lQuel fine stang	
□ B □ Li □ Ba □ D I	🗆 Sr		BN.	□ VOC □ Oil & Gre □ E. Coli	ase		i in Al	M C, if			□ Sulfur □ BTUs		aniton Aŭtikytis Võitikytis	1 1 1 1	Aditility Joisson PTF	e Staange	ம்.
🗆 Be 👘 🗆 Mi	i DŢT	÷⊡ NC	2	□ Total Col □ pH			E Sol	ubleiM ity(Ch	etals; SO4);		□ Volatile I □ CHN	- 0%	Moisture	اً <sup>:</sup> افا ت <u>ا</u>	edtor	ත්ලික 	€ <b>0</b>
□ Ca □ Mo	the second s		3	<ul> <li>Dissolved</li> <li>Dissolved</li> <li>Rad 226</li> </ul>			- DiStill	Molsini Mes			t <b>her Tests:</b> XRF Scan HGI	N	PDES	ر. ۹۱ ۱۰	lashpe Aquils AsiCo	dini inofi ICteReli	ЯЪ
□ Co □ Cr	DHg			□ Rad 228 □ PCB			Gi(Chi) MPA	ALC: North	20. 1945 20. 1945	≣~⊡ I	ineness Particulate Ma	1 - C - C - C - C - C - C - C - C - C -		 ( (at	) X NEWR		
				in gin a f			SUITUR							يەت ب		<u></u>	

Matrix codes: GW-groundwater, DW-drinking water, SW-surface water, WW-waste water, BW-boiler water, L-limestone, Oil-oil, S-Soil, SL-solid, C-coal, G-gypsum, FA-flyash, BA-bottom ash, M-misc (describe in comment section) Preservative code- 1=<4°C 2=HNO3 3=H2SO4 4-HCl 5=Na2S2O3 6-Other (Specify)

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#### Sample Receipt Verification

Client: San		Date ceived:	05	/19/2 <sup>.</sup>	1	Work 10510 Order:	17
Carrier Name:	Client FedEx UPS	US N	Mail		Cou	urier Field Services Other:	
	Tracking Number: 81536791514	7					
Receipt Crite	eria		Y e s	N 0	N A	Comments	
Shipping conta	iner / cooler intact?		Х			Damaged Leaking Other:	
Custody seals i	intact?				х		
COC included	with samples?		Х				
COC signed w	hen relinquished and received?		Х				
Sample bottles	intact?		Х			Damaged Leaking Other:	
Sample ID on	COC agree with label on bottle(s)?		Х				
Date / time on	COC agree with label on bottle(s)?		Х				
Number of bot	tles on COC agrees with number of bottles reco	eived?	Х				
Samples receiv	red within holding time?		Х				
Sample volume	e sufficient for analysis?		Х				
VOA vials free	e of headspace (<6mm bubble)?				х		
Samples cooled	d? Temp at receipt recorded on COC Temp measured with IR thermometer - SN: 970:	50067	Х			Ice Cold Packs Dry I	ce None
Note: Samples	ing pH preservation at proper pH? for metals analysis may be preserved upon receipt in the l for O&G and VOA analysis – preservation checked at ber		Х				
the time of sam	prinated for parameters requiring chlorine remonple collection? e checked at bench for samples requiring Bacterial, VOA,				х		
	If in-house pres	servation	used	– re	cord	Lot #	
HCL		H <sub>3</sub> P					
H <sub>2</sub> SO <sub>4</sub>		NaC Oth					
HNO <sub>3</sub>			CI				

Comments:

Were non-conformance issues noted at sample receipt? Yes or No

Non-Conformance issue other than noted above:

LAF





### Laboratory Services

### **Laboratory Report**

Client

Santee Cooper Linda Williams 1 Riverwood Dr. Moncks Corner, SC 29461 **Project:** Work Order: Received:

Ground Water 1070855 07/15/2021 10:00

Dear Client:

Rogers and Callcott appreciates the opportunity to be of service to you. The attached laboratory services report includes analytical results and chain of custody for samples that were received on July 15, 2021. Rogers and Callcott maintains a formal QA/QC program. Unless otherwise noted, all analyses performed under NELAP certification have complied with all the requirements for the TNI standard. The analyses met the QA/QC confidence interval for each test method unless otherwise qualified. Estimated uncertainty is available upon request.

Privileged / Confidential information may be contained in this report and is intended only for the use of the addressee. If you are not the addressee, or the person responsible for delivering to the person addressed, you may not copy or deliver this message to anyone else. If you receive this message by mistake, please notify Rogers and Callcott immediately.

We strive to provide excellent service to our clients. Please contact Lauren Hollister, your Project Manager, at Ihollister@rcenviro.com, (864)-232-1556 if you have any questions about this report.

CC: Jeanette Gilmetti, Sherri Brown, Courtney Ames Watkins

Report Approved By:

Lauren Hollister

Lauren Hollister Project Manager

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an employee-owned company



## Certificate of Analysis

Client



South Carolina Greenville Laboratory Identification 23105 South Carolina Columbia Laboratory Identification 40572 North Carolina Laboratory Certification Number 27 North Carolina Drinking Water Lab Number 45710 NELAP Utah Certificate Number SC000042014-1 Georgia Drinking Water Lab ID 880

Santee Cooper	Project:	Ground Water
Linda Williams	Work Order:	1070855
1 Riverwood Dr.	Received:	07/15/2021 10:00
Moncks Corner, SC 29461		

Sample Number	Sample Description	Matrix	Sampled	Туре
1070855-01	AF07267 CGYP-1	Ground Water	07/07/21 10:31	Grab
1070855-02	AF07268 CGYP-2	Ground Water	07/07/21 11:28	Grab
1070855-03	AF07269 CGYP-2 Dup	Ground Water	07/07/21 11:33	Grab
1070855-04	AF07270 CGYP-3	Ground Water	07/07/21 13:38	Grab
1070855-05	AF07271 CGYP-4	Ground Water	07/08/21 10:26	Grab
1070855-06	AF07272 CGYP-5	Ground Water	07/08/21 11:24	Grab
1070855-07	AF07273 CGYP-6	Ground Water	07/08/21 12:21	Grab



Santee Cooper	Project:	Ground Water
1 Riverwood Dr.	Work Order:	1070855
Moncks Corner, SC 29461	Reported:	07/20/21 12:22

#### Sample Data

Sample Number	1070855-01
Sample Description	AF07267 CGYP-1 collected on 07/07/21 10:31

Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	07/16/21 15:03	EPA 7470A		NAR	B1G0792
Boron	9400	75	ug/L	5.00	07/14/21 17:16	EPA 6010D		MLR	B1G0597
Lithium	14	10	ug/L	1.00	07/14/21 20:24	EPA 6010D		MLR	B1G0595
Molybdenum	ND	10	ug/L	1.00	07/14/21 20:24	EPA 6010D		MLR	B1G0595

```
Sample Number
```

Sample Description AF07268 CGYP-2 collected on 07/07/21 11:28

1070855-02

Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	07/16/21 15:06	EPA 7470A		NAR	B1G0792
Boron	1300	75	ug/L	5.00	07/14/21 17:20	EPA 6010D		MLR	B1G0597
Lithium	15	10	ug/L	1.00	07/14/21 20:28	EPA 6010D		MLR	B1G0595
Molybdenum	ND	10	ug/L	1.00	07/14/21 20:28	EPA 6010D		MLR	B1G0595

Sample Number 1070855-03

Sample Description

AF07269 CGYP-2 Dup collected on 07/07/21 11:33

Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	07/16/21 15:20	EPA 7470A		NAR	B1G0792
Boron	1300	75	ug/L	5.00	07/14/21 17:24	EPA 6010D		MLR	B1G0597
Lithium	14	10	ug/L	1.00	07/14/21 20:32	EPA 6010D		MLR	B1G0595
Molybdenum	ND	10	ug/L	1.00	07/14/21 20:32	EPA 6010D		MLR	B1G0595

Sample Number Sample Description

AF07270 CGYP-3 collected on 07/07/21 13:38

1070855-04

Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	07/16/21 15:23	EPA 7470A		NAR	B1G0792
Boron	17000	75	ug/L	5.00	07/14/21 17:27	EPA 6010D		MLR	B1G0597
Lithium	56	10	ug/L	1.00	07/14/21 20:36	EPA 6010D		MLR	B1G0595
Molybdenum	ND	10	ug/L	1.00	07/14/21 20:36	EPA 6010D		MLR	B1G0595

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Santee Cooper	Project:	Ground Water
1 Riverwood Dr.	Work Order:	1070855
Moncks Corner, SC 29461	Reported:	07/20/21 12:22

Sample Number 1070855-05 AF07271 CGYP-4 collected on 07/08/21 10:26 **Sample Description** 

Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	07/16/21 15:26	EPA 7470A		NAR	B1G0792
Boron	7700	75	ug/L	5.00	07/14/21 17:31	EPA 6010D		MLR	B1G0597
Lithium	58	10	ug/L	1.00	07/14/21 20:40	EPA 6010D		MLR	B1G0595
Molybdenum	ND	10	ug/L	1.00	07/14/21 20:40	EPA 6010D		MLR	B1G0595

Sample Number

**Sample Description** 

1070855-06

AF07272 CGYP-5 collected on 07/08/21 11:24

Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	07/16/21 15:28	EPA 7470A		NAR	B1G0792
Boron	2900	75	ug/L	5.00	07/14/21 16:57	EPA 6010D		MLR	B1G0597
Lithium	58	10	ug/L	1.00	07/14/21 20:05	EPA 6010D		MLR	B1G0595
Molybdenum	ND	10	ug/L	1.00	07/14/21 20:05	EPA 6010D		MLR	B1G0595

Sample Number

1070855-07 AF07273 CGYP-6 collected on 07/08/21 12:21

Sample Description

Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	07/16/21 15:31	EPA 7470A		NAR	B1G0792
Boron	6700	75	ug/L	5.00	07/14/21 17:35	EPA 6010D		MLR	B1G0597
Lithium	120	10	ug/L	1.00	07/14/21 20:43	EPA 6010D		MLR	B1G0595
Molybdenum	ND	10	ug/L	1.00	07/14/21 20:43	EPA 6010D		MLR	B1G0595



Santee Cooper	Project:	Ground Water
1 Riverwood Dr.	Work Order:	1070855
Moneks Corner, SC 29461	Reported:	07/20/21 12:22

			fotal Me Control	tals Summai	ry					
Parameter	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flags
Batch B1G0595 - EPA 200.7 N	Aod									
Blank (B1G0595-BLK1)										
Lithium	ND	10	ug/L							
Molybdenum	ND	10	ug/L							
LCS (B1G0595-BS1)										
Lithium	259	10	ug/L	250		104	80-120			
Molybdenum	240	10	ug/L	250		97	80-120			
LCS Dup (B1G0595-BSD1)										
Lithium	258	10	ug/L	250		103	80-120	0.6	20	
Molybdenum	250	10	ug/L	250		98	80-120	2	20	
Matrix Spike (B1G0595-MS1)	Source: 1070855-06	i								
Lithium	330	10	ug/L	250	58	109	75-125			
Molybdenum	240	10	ug/L	250	ND	96	75-125			
Matrix Spike Dup (B1G0595-MSD1)	Source: 1070855-06	i								
Lithium	340	10	ug/L	250	58	113	75-125	3	20	
Molybdenum	250	10	ug/L	250	ND	99	75-125	3	20	
Post Spike (B1G0595-PS1)	Source: 1070855-06	i								
Lithium	0.589		mg/L	0.500	ND	106	75-125			
Molybdenum	0.50		mg/L	0.500	ND	99	75-125			
Batch B1G0597 - EPA 200.7 N	Aod									
Blank (B1G0597-BLK1)										

Boron	ND	15	ug/L					
LCS (B1G0597-BS1)								
Boron	250	15	ug/L	250	99	80-120		
LCS Dup (B1G0597-BSD1)								
Boron	250	15	ug/L	250	100	80-120	0.6	20



Santee Cooper	Project:	Ground Water
1 Riverwood Dr.	Work Order:	1070855
Moneks Corner, SC 29461	Reported:	07/20/21 12:22

Total Metals Quality Control Summary										
Parameter	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flags
Batch B1G0597 - EPA 200.7 N	Aod									
Matrix Spike (B1G0597-MS1)	Source: 1070855-06									
Boron	4100	75	ug/L	1250	2900	97	75-125			
Matrix Spike Dup (B1G0597-MSD1)	Source: 1070855-06									
Boron	4100	75	ug/L	1250	2900	96	75-125	0.06	20	
Post Spike (B1G0597-PS1)	Source: 1070855-06									
Boron	5400	75	ug/L	2500	2900	102	75-125			
Batch B1G0792 - EPA 7470A										
Blank (B1G0792-BLK1)										
Mercury	ND	0.20	ug/L							
LCS (B1G0792-BS1)										
Mercury	4.8	0.20	ug/L	5.00		96	80-120			
LCS Dup (B1G0792-BSD1)										
Mercury	4.9	0.20	ug/L	5.00		97	80-120	1	20	
Matrix Spike (B1G0792-MS1)	Source: 1070855-02									
Mercury	4.2	0.20	ug/L	5.00	ND	85	75-125			
Post Spike (B1G0792-PS1)	Source: 1070855-02									
Mercury	3.2		ug/L	4.00	ND	80	80-120			



Santee Cooper	Project:	Ground Water
1 Riverwood Dr.	Work Order:	1070855
Moncks Corner, SC 29461	Reported:	07/20/21 12:22

#### **Sample Preparation Data**

Parameter	Batch	Sample ID	Prepared	Analyst
EPA 200.7 M Digestion				
EPA 200.7 Mod	B1G0595	1070855-01	07/14/2021 11:39	MTH
EPA 200.7 Mod	B1G0597	1070855-01	07/14/2021 11:39	MTH
EPA 200.7 Mod	B1G0595	1070855-02	07/14/2021 11:39	MTH
EPA 200.7 Mod	B1G0597	1070855-02	07/14/2021 11:39	MTH
EPA 200.7 Mod	B1G0595	1070855-03	07/14/2021 11:39	MTH
EPA 200.7 Mod	B1G0597	1070855-03	07/14/2021 11:39	MTH
EPA 200.7 Mod	B1G0595	1070855-04	07/14/2021 11:39	MTH
EPA 200.7 Mod	B1G0597	1070855-04	07/14/2021 11:39	MTH
EPA 200.7 Mod	B1G0595	1070855-05	07/14/2021 11:39	MTH
EPA 200.7 Mod	B1G0597	1070855-05	07/14/2021 11:39	MTH
EPA 200.7 Mod	B1G0595	1070855-06	07/14/2021 11:39	MTH
EPA 200.7 Mod	B1G0597	1070855-06	07/14/2021 11:39	MTH
EPA 200.7 Mod	B1G0595	1070855-07	07/14/2021 11:39	MTH
EPA 200.7 Mod	B1G0597	1070855-07	07/14/2021 11:39	MTH
EPA 7470A Mercury Digestion				
EPA 7470A	B1G0792	1070855-01	07/15/2021 12:40	CAL
EPA 7470A	B1G0792	1070855-02	07/15/2021 12:40	CAL
EPA 7470A	B1G0792	1070855-03	07/15/2021 12:40	CAL
EPA 7470A	B1G0792	1070855-04	07/15/2021 12:40	CAL
EPA 7470A	B1G0792	1070855-05	07/15/2021 12:40	CAL
EPA 7470A	B1G0792	1070855-06	07/15/2021 12:40	CAL
EPA 7470A	B1G0792	1070855-07	07/15/2021 12:40	CAL



Santee Cooper	Project:	Ground Water
1 Riverwood Dr.	Work Order:	1070855
Moncks Corner, SC 29461	Reported:	07/20/21 12:22

#### **Data Qualifiers and Definitions**

it
i

- NR Not reported
- RPD Relative Percent Difference

Send report to Icwillia@santeecooper.com & sibrown@santeecooper.com

### **Chain of Custody**

121

Santee cooper Santee Cooper One Riverwood Drive Moneks Corner, SC 29461 Phone: (843)761-8000 Ext. 5148

Labworks II			cooper.con		/	/		121	567	J_JM	02.04	9.GØ1		500 Yes	No	
Labworks II											۱	070	855		A	nalysis Grou
(internal usi only)	CALL ST.	Sample Location	on/	Collection Date	Collection Time	Sample Collector	Total # of containers	Bottle type: (Glass- G/Plastic-P)	Grab (G) or Composite (C)	Matrix(see below)	Preservative (see below)	• M • F • M • A	Con Method # Reporting li Misc. sampl Any other no	e info	B, Li, Mo, Hg	
F0726	7 .	CGYP-1		7/7/21	150	BRI	l	P	G	GW	2				×	
F0726	8 0	CGYP-2		1	1128			1	1	1	1				1	
F0726	9 0	CGYP-2 DX	JP		1133											
F07270		CGYP-3			(338		-	1	1		1				L	
F07291		CGYP-4		7/8/21	1026	MDS			1	1					X	
F07272		COMP-5		1	1124	1									1	
F07273		GYP-6			1221			1								
											-					
Relinquishe	d by:	Employee#	Date	Time	Receiv	red by:	Err	ployee #		Date		Time	Samp	le Receiving (Internal	Use Onl	v)
Announ		35594	7/13/21	1500									- TEM	P (°C):	Initial:	
Relinquishe	d by:	Employee#	Date	Time	Receiv	ed by:	Em	ployee #		Date		Time		ect pH: Yes No		
Relinguishe	i by:	Employee#	Date	Time	Receiv	ed by:	Em	ployee #		Date		Time	Prese	rvative Lot#:		
				in the second				propee #		Dutt			Date/	Time/Init for preserv	ative:	
		ALS (all )	Nut	rients	MIS	sc.	1	Gur	sum			C			and the second s	
	Cu	Sb	- Into	Contraction of the second second	D BTEX	~	-	Wallboa	in the second second			Coa Itimate	<u>u</u>	Flyash	-	Oil
and the second second	Fe		DC	C	O Napthale			Gypsi	um(all		and the second second	3% Moi	isture	C Ammonia		x. Oil Qual Moissare
						M		below,			A DESCRIPTION OF	Ash		🗆 % Carbon	D Ca	lar idity
		□ Sr	DF		□ Oil & Gr □ E. Coli	ease						□ Sulfur □ BTUs		Mineral     Analysis		
and the second second second	Mg	O Ti	DCI		D Total Col	liform		C Total			A CONTRACTOR		e Matter	D Sieve		solved Ga
	Mn	ITO	Br		□ pH □ Dissolved	i Ac		D Purit	Cast		1 Date of the states	CHN		🗅 % Moisture	D User	I Oil
	Mo	O V		3	Dissolved			O Sulfi				er Tests RF Scan	•	NPDES	ti fia O Me	shpoint tals in oil
	] Na		10 SO		□ Rad 226 □ Rad 228			[] pH				3I		NPDES		Cd.Cr.Ni.
	I Ni I Pb	Hg     CrVI			D PCB			Chlor Partic				neness rticulate N	Matter	D Os & Grease		

Matrix codes: GW-groundwater, DW-drinking water, SW-surface water, WW-waste water, BW-boiler water, L-limestone, Oil-oil, S-Soil, SL-solid, C-coal, G-gypsum, FA-flyash, BA-bottom ash, M-misc (describe in comment section) Preservative code- 1=<4°C 2=HNO3 3=H2SO4 4-HCl 5=Na2S2O3 6-Other (S 6-Other (Specify)



#### Sample Receipt Verification

Client: Santee Cooper Received	l: 07	//13/2	021	Work Order: 1070855
	S Mail		Cou	rier Field Services Other:
Receipt Criteria	Y e s	N o	N A	Comments
Shipping container / cooler intact?	х			Damaged Leaking Other:
Custody seals intact?			х	
COC included with samples?	Х			
COC signed when relinquished and received?	х			
Sample bottles intact?	х			Damaged Leaking Other:
Sample ID on COC agree with label on bottle(s)?	х			
Date / time on COC agree with label on bottle(s)?	х			
Number of bottles on COC agrees with number of bottles received?	Х			
Samples received within holding time?	х			
Sample volume sufficient for analysis?	Х			
VOA vials free of headspace (<6mm bubble)?			х	
Samples cooled? Temp at receipt recorded on COC Temp measured with IR thermometer - SN: 97050067	Х			Ice Cold Packs Dry Ice None
Samples requiring pH preservation at proper pH? Note: Samples for metals analysis may be preserved upon receipt in the lab. Note: Samples for O&G and VOA analysis – preservation checked at bench.	x			
Samples dechlorinated for parameters requiring chlorine removal at the time of sample collection? Note: Chlorine checked at bench for samples requiring Bacterial, VOA, and HAA analysis.	X			
	1		1	<b>T</b>

If in-house preservation used – record Lot #								
HCL		$H_3PO_4$						
$H_2SO_4$		NaOH						
HNO <sub>3</sub>	P104104	Other						

Comments:

Were non-conformance issues noted at sample receipt? Yes or No

Non-Conformance issue other than noted above:





### Laboratory Services

### **Laboratory Report**

Client

Santee Cooper Linda Williams 1 Riverwood Dr. Moncks Corner, SC 29461 Project: Work Order: Received: Ground Water 1090593 09/09/2021 10:30

Dear Client:

Rogers and Callcott appreciates the opportunity to be of service to you. The attached laboratory services report includes analytical results and chain of custody for samples that were received on September 09, 2021. Rogers and Callcott maintains a formal QA/QC program. Unless otherwise noted, all analyses performed under NELAP certification have complied with all the requirements for the TNI standard. The analyses met the QA/QC confidence interval for each test method unless otherwise qualified. Estimated uncertainty is available upon request.

Privileged / Confidential information may be contained in this report and is intended only for the use of the addressee. If you are not the addressee, or the person responsible for delivering to the person addressed, you may not copy or deliver this message to anyone else. If you receive this message by mistake, please notify Rogers and Callcott immediately.

We strive to provide excellent service to our clients. Please contact Lauren Hollister, your Project Manager, at lhollister@rcenviro.com, (864)-232-1556 if you have any questions about this report.

CC: Jeanette Gilmetti, Sherri Brown, Courtney Ames Watkins

Report Approved By:

Lauren Hollister

Lauren Hollister Project Manager

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**Certificate of Analysis** 

Client

#### SUPPACCREORES TNI HIBORATORI

South Carolina Greenville Laboratory Identification 23105 South Carolina Columbia Laboratory Identification 40572 North Carolina Laboratory Certification Number 27 North Carolina Drinking Water Lab Number 45710 NELAP Utah Certificate Number SC000042014-1 Georgia Drinking Water Lab ID 880

Santee Cooper	Project:	Ground Water
Linda Williams	Work Order:	1090593
1 Riverwood Dr.	Received:	09/09/2021 10:30
Moncks Corner, SC 29461	10001,000	09/09/2021 10:00

Sample Number	Sample Description	Matrix	Sampled	Туре
1090593-01	AF13775 CGYP-5	Ground Water	08/31/21 10:01	Grab
1090593-02	AF13776 CGYP-6	Ground Water	08/31/21 11:02	Grab
1090593-03	AF13777 WLF-A2-6	Ground Water	09/01/21 12:40	Grab
1090593-04	AF13778 WLF-A2-6 Dup	Ground Water	09/01/21 12:45	Grab
1090593-05	AF13773 CGYP-4	Ground Water	09/01/21 09:04	Grab
1090593-06	AF13774 CGYP-4 Dup	Ground Water	09/01/21 09:09	Grab

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Santee Cooper	Project:	Ground Water
1 Riverwood Dr.	Work Order:	1090593
Moncks Corner, SC 29461	Reported:	09/24/21 14:05

## Sample Data

Sample Number	1090593-01
Sample Description	AF13775 CGYP-5 collected on 08/31/21 10:01

1090593-02

1090593-03

Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	09/16/21 10:10	EPA 7470A	<b>S</b> 7	ICP	B1I0534
Boron	3200	15	ug/L	1.00	09/10/21 19:43	EPA 6010D		MTH	B1I0438
Lithium	62	10	ug/L	1.00	09/10/21 19:43	EPA 6010D		MTH	B1I0438
Molybdenum	ND	10	ug/L	1.00	09/10/21 19:43	EPA 6010D		MTH	B1I0438

```
Sample Number
Sample Description
```

AF13776 CGYP-6 collected on 08/31/21 11:02

Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	09/16/21 10:32	EPA 7470A	<b>S</b> 7	ICP	B1I0534
Boron	6900	75	ug/L	5.00	09/10/21 20:13	EPA 6010D		MTH	B1I0438
Lithium	130	10	ug/L	1.00	09/10/21 20:48	EPA 6010D		MTH	B1I0438
Molybdenum	ND	10	ug/L	1.00	09/10/21 20:48	EPA 6010D		MTH	B1I0438

Sample Number Sample Description

AF13777 WLF-A2-6 collected on 09/01/21 12:40

Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	09/16/21 09:53	EPA 7470A		ICP	B1I0534
Boron	370	40	ug/L	1.00	09/10/21 20:40	EPA 6010D		MTH	B1I0438
Lithium	41	10	ug/L	1.00	09/10/21 20:40	EPA 6010D		MTH	B1I0438
Molybdenum	ND	10	ug/L	1.00	09/10/21 20:40	EPA 6010D		MTH	B1I0438

Sample Number Sample Description 1090593-04 AF13778 WLF-A2-6 Dup collected on 09/01/21 12:45

Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	09/16/21 10:04	EPA 7470A		ICP	B1I0534
Boron	380	40	ug/L	1.00	09/10/21 20:44	EPA 6010D		MTH	B1I0438
Lithium	43	10	ug/L	1.00	09/10/21 20:44	EPA 6010D		MTH	B1I0438
Molybdenum	ND	10	ug/L	1.00	09/10/21 20:44	EPA 6010D		MTH	B1I0438

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Santee Cooper	Project:	Ground Water
1 Riverwood Dr.	Work Order:	1090593
Moncks Corner, SC 29461	Reported:	09/24/21 14:05

Sample Number	1090593-05
Sample Description	AF13773 CGYP-4 collected on 09/01/21 09:04

Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	09/16/21 10:49	EPA 7470A	<b>S</b> 7	ICP	B1I0534
Boron	8000	75	ug/L	5.00	09/10/21 20:17	EPA 6010D		MTH	B1I0438
Lithium	64	10	ug/L	1.00	09/10/21 20:52	EPA 6010D		MTH	B1I0438
Molybdenum	ND	10	ug/L	1.00	09/10/21 20:52	EPA 6010D		MTH	B1I0438

Sample Number

1090593-06 **Sample Description** 

AF13774 CGYP-4 Dup collected on 09/01/21 09:09

Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	09/16/21 11:11	EPA 7470A	<b>S</b> 7	ICP	B1I0534
Boron	7800	75	ug/L	5.00	09/10/21 20:21	EPA 6010D		MTH	B1I0438
Lithium	63	10	ug/L	1.00	09/10/21 20:56	EPA 6010D		MTH	B1I0438
Molybdenum	ND	10	ug/L	1.00	09/10/21 20:56	EPA 6010D		MTH	B1I0438



Santee Cooper	Project:	Ground Water
1 Riverwood Dr.	Work Order:	1090593
Moneks Corner, SC 29461	Reported:	09/24/21 14:05

	Total Metals Quality Control Summary										
Parameter	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flags	
Batch B1I0438 - EPA 3005A											
Blank (B1I0438-BLK1)											
Boron	ND	15	ug/L								
Lithium	ND	10	ug/L								
Molybdenum	ND	10	ug/L								
LCS (B110438-BS1)											
Boron	500	15	ug/L	500		100	80-120				
Lithium	511	10	ug/L	500		102	80-120				
Molybdenum	480	10	ug/L	500		96	80-120				
Duplicate (B1I0438-DUP1)	Source: 1090593-0	1									
Boron	3300	15	ug/L		3200			2	20		
Lithium	62	10	ug/L		62			0.1	20		
Molybdenum	ND	10	ug/L		ND				20		
Matrix Spike (B1I0438-MS1)	Source: 1090593-0	1									
Boron	3700	15	ug/L	500	3200	101	75-125				
Lithium	590	10	ug/L	500	62	106	75-125				
Molybdenum	460	10	ug/L	500	ND	92	75-125				
Post Spike (B1I0438-PS1)	Source: 1090593-0	1									
Boron	3.6		mg/L	0.500	ND	92	75-125				
Lithium	0.582		mg/L	0.500	ND	104	75-125				
Molybdenum	0.46		mg/L	0.500	ND	93	75-125				
Batch B1I0534 - EPA 7470A											
Blank (B110534-BLK1)											
		0.00	17								

Mercury	ND	0.20	ug/L					 
LCS (B1I0534-BS1)								
Mercury	4.9	0.20	ug/L	5.00		97	80-120	 
Matrix Spike (B1I0534-MS1)	Source: 1090593-03							
Mercury	5.0	0.20	ug/L	5.00	ND	99	75-125	 



Santee Cooper	Project:	Ground Water
1 Riverwood Dr.	Work Order:	1090593
Moneks Corner, SC 29461	Reported:	09/24/21 14:05

Total Metals Quality Control Summary										
Parameter	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flags
Batch B110534 - EPA 7470A										
Matrix Spike Dup (B1I0534-MSD1)	Source: 1090593-03									
Mercury	4.9	0.20	ug/L	5.00	ND	98	75-125	1	20	
Post Spike (B1I0534-PS1)	Source: 1090593-03									
Mercury	3.9		ug/L	3.75	ND	103	80-120			
Post Spike (B1I0534-PS2)	Source: 1090593-04									
Mercury	3.9		ug/L	3.75	ND	104	80-120			
Post Spike (B1I0534-PS3)	Source: 1090593-01									
Mercury	3.7		ug/L	3.75	ND	98	80-120			
Post Spike (B1I0534-PS4)	Source: 1090593-02									
Mercury	3.6		ug/L	3.75	ND	94	80-120			
Post Spike (B1I0534-PS5)	Source: 1090593-05									
Mercury	3.6		ug/L	3.75	ND	96	80-120			
Post Spike (B1I0534-PS6)	Source: 1090593-06									
Mercury	3.5		ug/L	3.75	ND	93	80-120			

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Santee Cooper	Project:	Ground Water
1 Riverwood Dr.	Work Order:	1090593
Moncks Corner, SC 29461	Reported:	09/24/21 14:05

#### **Sample Preparation Data**

Parameter	Batch	Sample ID	Prepared	Analyst
EPA 3005A ICP Digestion				
EPA 3005A	B1I0438	1090593-01	09/10/2021 11:29	CAL
EPA 3005A	B1I0438	1090593-02	09/10/2021 11:29	CAL
EPA 3005A	B1I0438	1090593-03	09/10/2021 11:29	CAL
EPA 3005A	B1I0438	1090593-04	09/10/2021 11:29	CAL
EPA 3005A	B1I0438	1090593-05	09/10/2021 11:29	CAL
EPA 3005A	B1I0438	1090593-06	09/10/2021 11:29	CAL
EPA 7470A Mercury Digestion				
EPA 7470A	B1I0534	1090593-01	09/13/2021 12:00	NAR
EPA 7470A	B1I0534	1090593-02	09/13/2021 12:00	NAR
EPA 7470A	B1I0534	1090593-03	09/13/2021 12:00	NAR
EPA 7470A	B1I0534	1090593-04	09/13/2021 12:00	NAR
EPA 7470A	B1I0534	1090593-05	09/13/2021 12:00	NAR
EPA 7470A	B1I0534	1090593-06	09/13/2021 12:00	NAR



Santee Cooper	Project:	Ground Water
1 Riverwood Dr.	Work Order:	1090593
Moncks Corner, SC 29461	Reported:	09/24/21 14:05

#### **Data Qualifiers and Definitions**

ND	Analyte NOT DETECTED at or above the reporting limit

- NR Not reported
- RPD Relative Percent Difference

**S**7 Result calculated by Method of Standard Addition due to sample matrix interference and initial spike failures.

					Chai	n of	Cu	stod	ly					A Phone:	One Ioneks (843)70	Sa River Corne 61-800	ntee C wood	Cooper Drive 29461
Customer Em	ail/Re	eport Recipi	ent:	Date R	esults Ne	eded by	y:		Pr	oject/	Task/I	Unit #:		Rerun reques	t for a	ny fla	gged	l QC
LOWILLIA		_@santeed	cooper.com	/	/			1215	567	/	102.0	9.601		500 Yes	No			
												-	10	90543	1	Analys	is Grou	סנ
Labworks ID # (Internal use only)		ample Locatio	on/	Collection Date	Collection Time	Sample Collector	Total # of containers	Bottle type: (Glass- G/Plastic-P)	Grab (G) or Composite (C)	Matrix(see below)	Preservative (see below)	Repo     Misc	Con nod # orting lin e. sample other no	info	B. Li. Mo. Ha	11		
AF13775		CGYP-5	U DEL MURINE NERRI	8/31/21	1001	DEW/ML	ı	P	G	GW	2				X			
AF13776	4	CGYP-6		1	1102	1	Ι	1	1	1	1				1			
AF13777		NLF-A2-6	2	9/1/21	1240	1		1.	1		1							
AF 13778	W	1LF -A2-6	DUP		1245													
A+13773	0	GYP-4			0904													
AF13774	c	GYP-4 D	ЧР	1	0909	1		1	]		1		1		1			
		a series of		2.4												1		
		and and a		Derive ter					- 10				61 1980 1					
													ownee &					
Relinquished	by:	Employee#	Date	Time	approximate and a second second	ed by:	E	mployee	#	Date		Time	Sampi TEM	le Receiving (Internal P (°C): <u>23-2</u>	Use Or Initia			_
Relinquished	by:	35594 Employee#	9/8/2/ Date	1500 Time	Fede	ed by:	E	mployee	#	Date		Time	Corre	ect pH: Yes No	,			
Fed EX Relinquished	by:	Employee#	G-9-JJ Date	1030 Time	Receiv	コン ed by:	E	mployee		9-9; Date	2)	1030 Time		rvative Lot#: Time/Init for preserv	vative:			
	MET	ALS (all )	Nutr	ients	MIS	:C		GV	psun	1		Coal	Juic,			Oi		
Ag CAl C	Cu Fe K	□ Sb □ Se □ Sn		C C TPO4	BTEX Napthale THM/H	ne		Wallbo Gyps below	ard sum( <i>al</i> v)		0	Ultimate % Moistr Ash	isture		ns. Ol Mois	l Qual aure		
🗆 Ba 🛛	Li Mg	□ Sr □ Ti		DHN	□ VOC □ Oil & Gi □ E. Coli □ Total Co			D Sel	C al meta uble Mé	tals		□ Sulfur □ BTUs □ Volatile	Matter	Mineral Analysis Sieve	0 D 9 4 9 4	FT Disselv	ed Gas	
🗆 Ca 🛛	Mn Mo			3	<ul> <li>pH</li> <li>Dissolve</li> <li>Dissolve</li> </ul>			D Par D % M E Suf	ity (Cas doisture fites	(04)	U U	CHN ther Tests: XRF Scan		Moisture NPDES	OF.	ed Oi lashpo Actals	in oil	
□ <b>Co</b> □	Na Ni Pb	Zn     Hg     CrVI	C SO4	Al Alter	□ Rad 226 □ Rad 228 □ PCB				orides ticle Siz	e		HGI Fineness Particulate Mat	tter	0 Oil & Grease D As D TSS	4	Any is	Cr.Ni	10

Page 9 of 10



## Sample Receipt Verification

~		Date				Work Order: 1090593
Client:	Santee Cooper	Received:	09	9/09/2	2021	Order: <sup>1090593</sup>
Carrier Name:	Client FedEx UPS	S US I	Mail		Cou	rrier Field Services Other:
	Tracking Number: <u>8153679</u>	15467				_
Receipt Crite	eria		Y e s	N 0	N A	Comments
Shipping conta	ainer / cooler intact?		Х			Damaged Leaking Other:
Custody seals	intact?				х	
COC included	with samples?		Х			
COC signed w	hen relinquished and received?		Х			
Sample bottles	s intact?		х			Damaged Leaking Other:
Sample ID on	COC agree with label on bottle(s)?		Х			
Date / time on	COC agree with label on bottle(s)?		Х			
Number of bot	ttles on COC agrees with number of bottles	s received?	Х			
Samples receiv	ved within holding time?		х			
Sample volume	e sufficient for analysis?		Х			
VOA vials free	e of headspace (<6mm bubble)?				х	
Samples coole	d? Temp at receipt recorded on COC Temp measured with IR thermometer - SN	: 97050067	Х			Ice Cold Packs Dry Ice None
Samples requiring pH preservation at proper pH? Note: Samples for metals analysis may be preserved upon receipt in the lab. Note: Samples for O&G and VOA analysis – preservation checked at bench.						
Samples dechlorinated for parameters requiring chlorine removal at the time of sample collection? Note: Chlorine checked at bench for samples requiring Bacterial, VOA, and HAA analysis.					x	
	If in-house	e preservation	used	– re	cord	Lot #
HCL		H <sub>3</sub> P				
$H_2SO_4$		NaC	ЭH			

Other

HNO<sub>3</sub>

Were non-conformance issues noted at sample receipt? Yes or (No)

Non-Conformance issue other than noted above:





## Laboratory Services

## **Laboratory Report**

Client

Santee Cooper Linda Williams 1 Riverwood Dr. Moncks Corner, SC 29461 Project: Work Order: Received: Ground Water 1091488 09/30/2021 09:50

Dear Client:

Rogers and Callcott appreciates the opportunity to be of service to you. The attached laboratory services report includes analytical results and chain of custody for samples that were received on September 30, 2021. Rogers and Callcott maintains a formal QA/QC program. Unless otherwise noted, all analyses performed under NELAP certification have complied with all the requirements for the TNI standard. The analyses met the QA/QC confidence interval for each test method unless otherwise qualified. Estimated uncertainty is available upon request.

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We strive to provide excellent service to our clients. Please contact Tina Restivo, your Project Manager, at trestivo@rcenviro.com, (864)-232-1556 if you have any questions about this report.

CC: Jeanette Gilmetti, Sherri Brown, Courtney Ames Watkins

Report Approved By:

Tina Restures

Tina Restivo Project Manager

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**Certificate of Analysis** 

Client

## TNI HBORATON

South Carolina Greenville Laboratory Identification 23105 South Carolina Columbia Laboratory Identification 40572 North Carolina Laboratory Certification Number 27 North Carolina Drinking Water Lab Number 45710 NELAP Utah Certificate Number SC000042014-1 Georgia Drinking Water Lab ID 880

		~
Santee Cooper	Project:	Ground Water
Linda Williams	Work Order:	1091488
1 Riverwood Dr.	Received:	09/30/2021 09:50
Moncks Corner, SC 29461		0,00,2021 0,000

Sample Number	Sample Description	Matrix	Sampled	Туре
1091488-01	AF15787 CGYP-4	Ground Water	09/27/21 09:38	Grab
1091488-02	AF15788 CGYP-4 Dup	Ground Water	09/27/21 09:43	Grab
1091488-03	AF15789 CGYP-5	Ground Water	09/27/21 11:17	Grab
1091488-04	AF15790 CGYP-6	Ground Water	09/27/21 12:32	Grab
1091488-05	AF15791 WLF-A2-6	Ground Water	09/28/21 10:21	Grab
1091488-06	AF15792 WLF-A2-6 Dup	Ground Water	09/28/21 10:26	Grab

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Santee Cooper	Project:	Ground Water
1 Riverwood Dr.	Work Order:	1091488
Moncks Corner, SC 29461	Reported:	10/07/21 14:09

## Sample Data

Sample Number	1091488-01
Sample Description	AF15787 CGYP-4 collected on 09/27/21 09:38

Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	10/06/21 11:18	EPA 7470A		NAR	B1J0187
Boron	7800	75	ug/L	5.00	10/04/21 16:26	EPA 6010D		MTH	B1J0040
Lithium	67	10	ug/L	1.00	10/04/21 17:08	EPA 6010D		MTH	B1J0040
Molybdenum	ND	10	ug/L	1.00	10/04/21 17:08	EPA 6010D		MTH	B1J0040

```
Sample Number
```

Sample Description

1091488-02 AF15788 CGYP-4 Dup collected on 09/27/21 09:43

Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	10/06/21 11:21	EPA 7470A		NAR	B1J0187
Boron	8200	75	ug/L	5.00	10/04/21 16:29	EPA 6010D		MTH	B1J0040
Lithium	67	10	ug/L	1.00	10/04/21 17:12	EPA 6010D		MTH	B1J0040
Molybdenum	ND	10	ug/L	1.00	10/04/21 17:12	EPA 6010D		MTH	B1J0040

Sample Number Sample Description

AF15789 CGYP-5 collected on 09/27/21 11:17

1091488-03

Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	10/06/21 11:24	EPA 7470A		NAR	B1J0187
Boron	5000	75	ug/L	5.00	10/04/21 16:33	EPA 6010D		MTH	B1J0040
Lithium	84	10	ug/L	1.00	10/04/21 17:16	EPA 6010D		MTH	B1J0040
Molybdenum	ND	10	ug/L	1.00	10/04/21 17:16	EPA 6010D		MTH	B1J0040

Sample Number Sample Description 1091488-04 AF15790 CGYP-6 collected on 09/27/21 12:32

Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	10/06/21 11:27	EPA 7470A		NAR	B1J0187
Boron	7300	75	ug/L	5.00	10/04/21 16:37	EPA 6010D		MTH	B1J0040
Lithium	150	10	ug/L	1.00	10/04/21 17:20	EPA 6010D		MTH	B1J0040
Molybdenum	ND	10	ug/L	1.00	10/04/21 17:20	EPA 6010D		MTH	B1J0040

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Santee Cooper	Project:	Ground Water
1 Riverwood Dr.	Work Order:	1091488
Moncks Corner, SC 29461	Reported:	10/07/21 14:09

Sample Number	1091488-05
Sample Description	AF15791 WLF-A2-6 collected on 09/28/21 10:21

Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	10/06/21 11:30	EPA 7470A		NAR	B1J0187
Boron	360	15	ug/L	1.00	10/06/21 20:30	EPA 6010D		MTH	B1J0193
Lithium	31	10	ug/L	1.00	10/04/21 16:02	EPA 6010D		MTH	B1J0040
Molybdenum	ND	10	ug/L	1.00	10/06/21 20:30	EPA 6010D		MTH	B1J0193

Sample Number

1091488-06

AF15792 WLF-A2-6 Dup collected on 09/28/21 10:26 **Sample Description** 

Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	10/06/21 11:07	EPA 7470A		NAR	B1J0187
Boron	340	15	ug/L	1.00	10/04/21 17:04	EPA 6010D		MTH	B1J0040
Lithium	29	10	ug/L	1.00	10/04/21 17:04	EPA 6010D		MTH	B1J0040
Molybdenum	ND	10	ug/L	1.00	10/04/21 17:04	EPA 6010D		MTH	B1J0040



Santee Cooper	Project:	Ground Water
1 Riverwood Dr.	Work Order:	1091488
Moncks Corner, SC 29461	Reported:	10/07/21 14:09

	Total Metals Quality Control Summary										
Parameter	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flags	
Batch B1J0040 - EPA 3005A											
Blank (B1J0040-BLK1)											
Boron	ND	15	ug/L								
Lithium	ND	10	ug/L								
Molybdenum	ND	10	ug/L								
LCS (B1J0040-BS1)											
Boron	530	15	ug/L	500		106	80-120				
Lithium	525	10	ug/L	500		105	80-120				
Molybdenum	530	10	ug/L	500		106	80-120				
Matrix Spike (B1J0040-MS1)	Source: 1091488-05										
Lithium	568	10	ug/L	500	31	107	75-125				
Matrix Spike Dup (B1J0040-MSD1)	Source: 1091488-05										
Lithium	562	10	ug/L	500	31	106	75-125	1	20		
Post Spike (B1J0040-PS1)	Source: 1091488-05										
Lithium	561	10	ug/L	500	31	106	75-125				
Batch B1J0187 - EPA 7470A											
Blank (B1J0187-BLK1)											
Mercury	ND	0.20	ug/L								
LCS (B1J0187-BS1)											
Mercury	5.0	0.20	ug/L	5.00		100	80-120				
Matrix Spike (B1J0187-MS1)	Source: 1091488-06										
Mercury	4.9	0.20	ug/L	5.00	ND	98	75-125				
Matrix Spike Dup (B1J0187-MSD1)	Source: 1091488-06										
Mercury	5.0	0.20	ug/L	5.00	ND	101	75-125	3	20		
Post Spike (B1J0187-PS1)	Source: 1091488-06										

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ug/L

4.00

ND

97

80-120

3.9

Mercury



Santee Cooper	Project:	Ground Water
1 Riverwood Dr.	Work Order:	1091488
Moneks Corner, SC 29461	Reported:	10/07/21 14:09

Total Metals Quality Control Summary										
Reporting         Spike         Source         %REC         RPD           Parameter         Result         Limit         Units         Level         Result         %REC         Limit         Flags								Flore		
Batch B1J0193 - EPA 3005A	Kesun		Units	Level	Kesuit	/IKEC		KI D	Limit	T lags
Blank (B1J0193-BLK1)										
Boron	ND	15	ug/L							
Molybdenum	ND	10	ug/L							
LCS (B1J0193-BS1)										
Boron	520	15	ug/L	500		104	80-120			
Molybdenum	500	10	ug/L	500		99	80-120			
Matrix Spike (B1J0193-MS1)	Source: 1091488-05	i								
Boron	890	15	ug/L	500	360	106	75-125			
Molybdenum	510	10	ug/L	500	ND	102	75-125			
Matrix Spike Dup (B1J0193-MSD1)	Source: 1091488-05	i								
Boron	890	15	ug/L	500	360	106	75-125	0.3	20	
Molybdenum	510	10	ug/L	500	ND	103	75-125	1	20	
Post Spike (B1J0193-PS1)	Source: 1091488-05	;								
Boron	900	15	ug/L	500	360	108	75-125			
Molybdenum	530	10	ug/L	500	ND	107	75-125			



Santee Cooper	Project:	Ground Water
1 Riverwood Dr.	Work Order:	1091488
Moncks Corner, SC 29461	Reported:	10/07/21 14:09

#### **Sample Preparation Data**

Parameter	Batch	Sample ID	Prepared	Analyst
EPA 3005A ICP Digestion				
EPA 3005A	B1J0040	1091488-01	10/04/2021 08:11	MTH
EPA 3005A	B1J0040	1091488-02	10/04/2021 08:11	MTH
EPA 3005A	B1J0040	1091488-03	10/04/2021 08:11	MTH
EPA 3005A	B1J0040	1091488-04	10/04/2021 08:11	MTH
EPA 3005A	B1J0040	1091488-05	10/04/2021 08:11	MTH
EPA 3005A	B1J0193	1091488-05	10/06/2021 09:28	MLR
EPA 3005A	B1J0040	1091488-06	10/04/2021 08:11	MTH
EPA 7470A Mercury Digestion				
EPA 7470A	B1J0187	1091488-01	10/06/2021 08:54	NAR
EPA 7470A	B1J0187	1091488-02	10/06/2021 08:54	NAR
EPA 7470A	B1J0187	1091488-03	10/06/2021 08:54	NAR
EPA 7470A	B1J0187	1091488-04	10/06/2021 08:54	NAR
EPA 7470A	B1J0187	1091488-05	10/06/2021 08:54	NAR
EPA 7470A	B1J0187	1091488-06	10/06/2021 08:54	NAR



Santee Cooper	Project:	Ground Water
1 Riverwood Dr.	Work Order:	1091488
Moncks Corner, SC 29461	Reported:	10/07/21 14:09

#### **Data Qualifiers and Definitions**

CTED at or above the reporting limit
CTED at or above the reporting limi

- NR Not reported
- RPD Relative Percent Difference

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Customer Ema	il/Report Recip	lent:	Date	Results N	eeded b	y:		Pr	oject/	/Task/	Unit #:		Rerun reque			
LOWILLIA	@santee	cooper.coi	n				121	567	<u> </u>	02.0	9.GØ1	36	Sco Yes	No		
Labworks ID # (Internal use only)	Sample Locat Description	ion/	Collection Date	Collection Time	Sample Collector	Total # of containers	Bottle type: (Glass- G/Plastic-P)	Grab (G) or Composite (C)	Matrix(see below)	Preservative (see below!	• Re	Cor ethod # porting lin sc. sampl y other no	c info	B, Li,Mo, Hg	nalysis Gro	
4F15787	CGYP-4		9/27/	21 0938	DEN	I	P	G	GW	2	-01			×		t
HE15788	CGYP-4 1	Щ₽	1	0943	1	1	1	1	1	1	-02			0		t
#15789	CGYP-5			1117							-03					t
F15790	CGYP-6			1232					1		-04		N.N		+	t
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Algroun	35594	9/29/21	Time	Receive	FFel		ployee #		Date		Time	TEM	P (°C):	Initial:		_
Relinquished by:	Employee#	Date	Time	Receive	ed by:	Em	ployee #	-	Date		Time	Corre	ct pH: Yes No	•		
UPS Fe	dEx	9/30/21	0950	Alla	est	ZA		91	30/1	110	0950	Preser	vative Lot#:			
Relinquished by:	Employee#	Date	Time	Receive	d by:	Em	ployee #		Date		Time					
												Date/1	lime/Init for presen	ative:		
	TALS (all )	and the second second	rients	MIS	<u>c.</u>		Gyp	sum			Coal		Flyash		Oil	
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As CK			TPO4	□ THM/HA. □ VOC	A		below,	1			🗆 Ash		D % Carbon			
B Li Ba Mg	□ Sr	DE		□ Oil & Gre □ E. Coli	ase		D TOC			1 2 2 2	□ Sulfur □ BTUs		Mineral     Analysis			
Be IM				D Total Coli	form		C Total	metals ble Meta	ls	[	Volatile 1	Matter	C Steve			
Ca 🗆 Mo	1.1.1	Br		D pH Dissolved	As		D Purity		4)	10.000	CHN er Tests:		C % Moisture	L Used	Oil	
Cd 🗆 Na				□ Dissolved □ Rad 226			C Sulfi				RF Scan		NPDES	Mala		
Co 🗆 Ni	□ Hg			□ Rad 228		N. S.	Chlor				neness		O Oil & Grease	Hg)		
		and the second se	CONTRACTOR OF THE OWNER.	DPCB		The Local Division of	Partic			and the second second	rticulate Mat		DAs			

Page 9 of 10



## **Sample Receipt Verification**

Clinete Sout	too Cooper D	Date	00	12010	0004	Work
Client: Sant	K	eceived:	- 09	/30/2	2021	Order: 1091488
Carrier Name:	Client FedEx UPS	US N	Mail		Cou	rier Field Services Other:
	Tracking Number: 8167 0204 20	076				_
Receipt Crite	eria		Y e s	N 0	N A	Comments
Shipping conta	ainer / cooler intact?		Х			Damaged Leaking Other:
Custody seals	intact?				х	
COC included	with samples?		Х			
COC signed w	when relinquished and received?		Х			
Sample bottles intact?						Damaged Leaking Other:
Sample ID on	COC agree with label on bottle(s)?		Х			
Date / time on	COC agree with label on bottle(s)?		Х			
Number of bot	ttles on COC agrees with number of bottles re	ceived?	Х			
Samples receiv	ved within holding time?		Х			
Sample volume	e sufficient for analysis?		Х			
VOA vials free	e of headspace (<6mm bubble)?				х	
Samples coole	ed? Temp at receipt recorded on COC Temp measured with IR thermometer - SN: 97	'050067	Х			Ice Cold Packs Dry Ice None
Note: Samples	ring pH preservation at proper pH? s for metals analysis may be preserved upon receipt in the s for O&G and VOA analysis – preservation checked at b		х			
the time of san	lorinated for parameters requiring chlorine ren nple collection? he checked at bench for samples requiring Bacterial, VOA				x	
	If in-house pr	eservation	used	– re	ecord	Lot #
HCL		H <sub>3</sub> P				
$H_2SO_4$		NaC	DH			

Other

HNO<sub>3</sub>

Were non-conformance issues noted at sample receipt? Yes or No

Non-Conformance issue other than noted above:





## Laboratory Services

## **Laboratory Report**

Client

Santee Cooper Linda Williams 1 Riverwood Dr. Moncks Corner, SC 29461

**Project:** Work Order: Received:

Ground Water 1110388 11/03/2021 09:35

Dear Client:

Rogers and Callcott appreciates the opportunity to be of service to you. The attached laboratory services report includes analytical results and chain of custody for samples that were received on November 03, 2021. Rogers and Callcott maintains a formal QA/QC program. Unless otherwise noted, all analyses performed under NELAP certification have complied with all the requirements for the TNI standard. The analyses met the QA/QC confidence interval for each test method unless otherwise qualified. Estimated uncertainty is available upon request.

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We strive to provide excellent service to our clients. Please contact Lauren Hollister, your Project Manager, at Ihollister@rcenviro.com, (864)-232-1556 if you have any questions about this report.

CC: Jeanette Gilmetti, Sherri Brown, Courtney Ames Watkins

Report Approved By:

Lauren Hollister

Lauren Hollister Project Manager

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**Certificate of Analysis** 

Client

# SUPP ACCREONES

South Carolina Greenville Laboratory Identification 23105 South Carolina Columbia Laboratory Identification 40572 North Carolina Laboratory Certification Number 27 North Carolina Drinking Water Lab Number 45710 NELAP Utah Certificate Number SC000042014-1 Georgia Drinking Water Lab ID 880

Santee Cooper	Project:	Ground Water
Linda Williams	Work Order:	1110388
1 Riverwood Dr.	Received:	11/03/2021 09:35
Moncks Corner, SC 29461	100000000	11/03/2021 09:55

Sample Number	Sample Description	Matrix	Sampled	Туре
1110388-01	AF18534 CGYP-4	Ground Water	10/26/21 10:00	Grab
1110388-02	AF18535 CGYP-4 Dup	Ground Water	10/26/21 10:05	Grab
1110388-03	AF18536 CGYP-5	Ground Water	10/26/21 11:55	Grab
1110388-04	AF18537 CGYP-6	Ground Water	10/26/21 12:54	Grab
1110388-05	AF18539 WLF-A2-6	Ground Water	10/27/21 10:27	Grab
1110388-06	AF18540 WLF-A2-6 Dup	Ground Water	10/27/21 10:32	Grab



Santee Cooper	Project:	Ground Water
1 Riverwood Dr.	Work Order:	1110388
Moncks Corner, SC 29461	Reported:	11/12/21 08:22

## Sample Data

Sample Number	1110388-01
Sample Description	AF18534 CGYP-4 collected on 10/26/21 10:00

Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	11/09/21 12:34	EPA 7470A	<b>S</b> 7	MLR	B1K0469
Boron	6800	75	ug/L	5.00	11/04/21 17:20	EPA 6010D		MTH	B1K0301
Lithium	53	10	ug/L	1.00	11/04/21 17:50	EPA 6010D		MTH	B1K0301
Molybdenum	ND	10	ug/L	1.00	11/04/21 17:50	EPA 6010D		MTH	B1K0301

```
Sample Number
```

Sample Description

1110388-02 AF18535 CGYP-4 Dup collected on 10/26/21 10:05

Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	11/09/21 12:45	EPA 7470A	<b>S</b> 7	MLR	B1K0469
Boron	6900	75	ug/L	5.00	11/04/21 17:23	EPA 6010D		MTH	B1K0301
Lithium	57	10	ug/L	1.00	11/04/21 17:54	EPA 6010D		MTH	B1K0301
Molybdenum	ND	10	ug/L	1.00	11/04/21 17:54	EPA 6010D		MTH	B1K0301

Sample Number Sample Description

AF18536 CGYP-5 collected on 10/26/21 11:55

1110388-03

1110388-04

Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	11/09/21 12:54	EPA 7470A	S7	MLR	B1K0469
Boron	4500	15	ug/L	1.00	11/04/21 17:57	EPA 6010D		MTH	B1K0301
Lithium	76	10	ug/L	1.00	11/04/21 17:57	EPA 6010D		MTH	B1K0301
Molybdenum	ND	10	ug/L	1.00	11/04/21 17:57	EPA 6010D		MTH	B1K0301

Sample Number Sample Description

AF18537 CGYP-6 collected on 10/26/21 12:54

Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	11/09/21 12:57	EPA 7470A	<b>S</b> 7	MLR	B1K0469
Boron	6700	75	ug/L	5.00	11/04/21 17:32	EPA 6010D		MTH	B1K0301
Lithium	110	10	ug/L	1.00	11/04/21 18:00	EPA 6010D		MTH	B1K0301
Molybdenum	ND	10	ug/L	1.00	11/04/21 18:00	EPA 6010D		MTH	B1K0301

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Santee Cooper	Project:	Ground Water
1 Riverwood Dr.	Work Order:	1110388
Moncks Corner, SC 29461	Reported:	11/12/21 08:22

Sample Number	1110388-05
Sample Description	AF18539 WLF-A2-6 collected on 10/27/21 10:27

1110388-06

Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	11/09/21 12:59	EPA 7470A		MLR	B1K0469
Boron	420	15	ug/L	1.00	11/04/21 18:03	EPA 6010D		MTH	B1K0301
Lithium	36	10	ug/L	1.00	11/04/21 18:03	EPA 6010D		MTH	B1K0301
Molybdenum	ND	10	ug/L	1.00	11/04/21 18:03	EPA 6010D		MTH	B1K0301

Sample Number

AF18540 WLF-A2-6 Dup collected on 10/27/21 10:32 Sample Description

Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	11/09/21 13:02	EPA 7470A		MLR	B1K0469
Boron	360	15	ug/L	1.00	11/04/21 17:02	EPA 6010D		MTH	B1K0301
Lithium	36	10	ug/L	1.00	11/04/21 17:02	EPA 6010D		MTH	B1K0301
Molybdenum	ND	10	ug/L	1.00	11/04/21 17:02	EPA 6010D		MTH	B1K0301



Santee Cooper	Project:	Ground Water
1 Riverwood Dr.	Work Order:	1110388
Moneks Corner, SC 29461	Reported:	11/12/21 08:22

Total Metals Quality Control Summary										
Parameter	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flags
Batch B1K0301 - EPA 3005A										
Blank (B1K0301-BLK1)										
Boron	ND	15	ug/L							
Lithium	ND	10	ug/L							
Molybdenum	ND	10	ug/L							
LCS (B1K0301-BS1)										
Boron	470	15	ug/L	500		94	80-120			
Lithium	508	10	ug/L	500		102	80-120			
Molybdenum	480	10	ug/L	500		97	80-120			
Matrix Spike (B1K0301-MS1)	Source: 1110388-06									
Boron	840	15	ug/L	500	360	94	75-125			
Lithium	552	10	ug/L	500	36	103	75-125			
Molybdenum	500	10	ug/L	500	ND	100	75-125			
Matrix Spike Dup (B1K0301-MSD1)	Source: 1110388-06									
Boron	800	15	ug/L	500	360	87	75-125	4	20	
Lithium	520	10	ug/L	500	36	97	75-125	6	20	
Molybdenum	480	10	ug/L	500	ND	96	75-125	4	20	
Post Spike (B1K0301-PS1)	Source: 1110388-06									
Boron	0.92		mg/L	0.500	ND	112	75-125			
Lithium	0.416		mg/L	0.500	ND	76	75-125			
Molybdenum	0.58		mg/L	0.500	ND	116	75-125			
Batch B1K0469 - EPA 7470A										
Blank (B1K0469-BLK1)										
Mercury	ND	0.20	ug/L							
LCS (B1K0469-BS1)										
Mercury	4.9	0.20	ug/L	5.00		98	80-120			



Santee Cooper	Project:	Ground Water
1 Riverwood Dr.	Work Order:	1110388
Moncks Corner, SC 29461	Reported:	11/12/21 08:22

Total Metals Quality Control Summary										
Parameter	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flags
Batch B1K0469 - EPA 7470A										
Matrix Spike Dup (B1K0469-MSD1)	Source: 1110388-01									
Mercury	4.4	0.20	ug/L	5.00	ND	87	75-125	2	20	<b>S</b> 7
Post Spike (B1K0469-PS1)	Source: 1110388-01									
Mercury	3.7		ug/L	4.00	ND	91	80-120			S7
Post Spike (B1K0469-PS2)	Source: 1110388-02									
Mercury	3.6		ug/L	4.00	ND	89	80-120			S7
Post Spike (B1K0469-PS3)	Source: 1110388-03									
Mercury	3.4		ug/L	4.00	ND	84	80-120			S7
Post Spike (B1K0469-PS4)	Source: 1110388-04									
Mercury	3.6		ug/L	4.00	ND	88	80-120			S7
Post Spike (B1K0469-PS5)	Source: 1110388-05									
Mercury	4.1		ug/L	4.00	ND	101	80-120			
Post Spike (B1K0469-PS6)	Source: 1110388-06									
Mercury	4.1		ug/L	4.00	ND	104	80-120			



Santee Cooper	Project:	Ground Water
1 Riverwood Dr.	Work Order:	1110388
Moncks Corner, SC 29461	Reported:	11/12/21 08:22

#### **Sample Preparation Data**

Parameter	Batch	Sample ID	Prepared	Analyst
EPA 3005A ICP Digestion				
EPA 3005A	B1K0301	1110388-01	11/04/2021 10:01	MTH
EPA 3005A	B1K0301	1110388-02	11/04/2021 10:01	MTH
EPA 3005A	B1K0301	1110388-03	11/04/2021 10:01	MTH
EPA 3005A	B1K0301	1110388-04	11/04/2021 10:01	MTH
EPA 3005A	B1K0301	1110388-05	11/04/2021 10:01	MTH
EPA 3005A	B1K0301	1110388-06	11/04/2021 10:01	MTH
EPA 7470A Mercury Digestion				
EPA 7470A	B1K0469	1110388-01	11/08/2021 15:00	MLR
EPA 7470A	B1K0469	1110388-02	11/08/2021 15:00	MLR
EPA 7470A	B1K0469	1110388-03	11/08/2021 15:00	MLR
EPA 7470A	B1K0469	1110388-04	11/08/2021 15:00	MLR
EPA 7470A	B1K0469	1110388-05	11/08/2021 15:00	MLR
EPA 7470A	B1K0469	1110388-06	11/08/2021 15:00	MLR



Santee Cooper	Project:	Ground Water
1 Riverwood Dr.	Work Order:	1110388
Moncks Corner, SC 29461	Reported:	11/12/21 08:22

#### **Data Qualifiers and Definitions**

ND	Analyte NOT DETECTED at or above the reporting limit

- NR Not reported
- RPD Relative Percent Difference

**S**7 Result calculated by Method of Standard Addition due to sample matrix interference and initial spike failures.

						Chai	n of	Cu	stod	у					(843)7	San River Corne	ntee C wood r, SC : 0 Ext.	29 29
	ner Email		ort Recipie @santeeco		Date Re	esults Ne	eded b	y:	1215				Unit #: ୦୨. କେଷ	Rerun reques	t for a No	ny fla	gged	10
			wsumeer	opencom					-						1.10000000	Analysi	s Grou	up
Labwo (Interni only)	rks ID # al use	<ol> <li>1,257(250/2</li> </ol>	ple Location	7/	Collection Date	Collection Time	Sample Collector	Total # of containers	Bottle type: (Glass- G/Plastic-P)	Grab (G) or Composite (C)	Matrix(see below)	Preservative (see below)	Rep     Mise	Comments hod # orting limit o. sample info other notes	B, Li, Mo Ha	-		
	8		-TB	-	10/2/21	0859	DEN.	1	Р	G	GW	2	BIN	10 = 6010	×		1	t
AF18	538	GAT	-		10/26/21	0857	ML	<u> </u>				-		10 - 6010	1	+		t
AF18	534	CG	YP-4			1000				-			Hg-74	70	++-	-		┝
AF18	535	ce	1P-4 D	IP		1005									11			Ļ
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AFL 8	540	WL	=-A2-6	DUP		1032	1	-	-		1	-						
		- 																
	quished by:		Employee#	Date	Time	a la se de la section de la	red by:	E	mployee	#	Date		Time	Sample Receiving (International TEMP (°C): 18.2	l Use C Initi		Las	1
Symptotum     35594     11/2/21       Relinquished by:     Employee#     Date       FECTEX     11.3.21       Relinquished by:     Employee#     Date		1800 Time		EX .	T. Serie	mnlovee	# 100	Date		Time	Correct pH: Yes N	0						
			A ALE AND DESCRIPTION	Pres			Preservative Lot#:											
		C935 Time	Receiv	red by:	E	mployee		Date		C935 Time	Date/Time/Init for preser	vative	vative:					
		rients	M	SC.		Gy	psur	n		Coal	Flyash		0	F	E LESS			
			□ Sb □ Se		C	D BTEX	TEX Wallbeard Ultimat		Ultimate		T	ans. O		1.				
As	ПК	To agenting	□ Sn	D TF	TPO4	□ THM/H □ VOC			belo	HT).			🗆 Ash	Carbon		Color		
□B			□ Sr	TE	13-N	🗆 Oil & G	rease		TOTC	C.			Sulfur     BTUs	C Mineral Analysis	in the	Delect		1
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□ Ca □ Cd		1				Dissolve			D Su D pH			COURSE DESCRIPTION	XRF Scan HGI	NPDES		Metals (As,Co		
000		10-10-17	□ Hg	130	2.10	□ Rad 228 □ PCB			a Ch	lorides ticle Si			Fineness Particulate M	I Oil & Grease		Hg) TX		111 - 11 - 11 - 11 - 11 - 11 - 11 - 11
🗆 Co				THE R. LEWIS CO., LANSING, MICH.	And in case of the local division of the loc			I BLAND	and the state of t		COLUMN TWO IS NOT	and a state of the	second statement of the local division of th	TSS	CONTRACTOR OF THE	OFER		

Matrix codes: GW-groundwater, DW-drinking water, SW-surface water, WW-waste water, BW-boiler water, L-limestone, Oil-oil, S-Soil, SL-solid, C-coal, G-gypsum, FA-flyash, BA-bottom ash, M-misc (describe in comment section) Preservative code-  $1 = <4^{\circ}C$   $2 = HNO_3$   $3 = H_2SO_4$  4 - HCl  $5 = Na_2S_2O_3$  6 - Other (Specify)



## Sample Receipt Verification

Date				Work
Client: Santee Cooper Receive	:d: <u>1</u>	1/03/2	2021	Order: 1110388
Carrier Name: Client FedEx UPS UPS U Tracking Number: 815367913946	US Mail		Cοι	rier Field Services Other:
Receipt Criteria	Y e s	N o	N A	Comments
Shipping container / cooler intact?	х			Damaged Leaking Other:
Custody seals intact?	х			
COC included with samples?	х			
COC signed when relinquished and received?	х			
Sample bottles intact?	х			Damaged Leaking Other:
Sample ID on COC agree with label on bottle(s)?	х			
Date / time on COC agree with label on bottle(s)?	х			
Number of bottles on COC agrees with number of bottles received?	? X			
Samples received within holding time?	х			
Sample volume sufficient for analysis?	Х			
VOA vials free of headspace (<6mm bubble)?			Х	
Samples cooled? Temp at receipt recorded on COC Temp measured with IR thermometer - SN: 97050067	х			Ice Cold Packs Dry Ice None
Samples requiring pH preservation at proper pH? Note: Samples for metals analysis may be preserved upon receipt in the lab. Note: Samples for O&G and VOA analysis – preservation checked at bench.	х			
Samples dechlorinated for parameters requiring chlorine removal at the time of sample collection? Note: Chlorine checked at bench for samples requiring Bacterial, VOA, and HA analysis.			x	
If in house amount				Т - с - Щ

If in-house preservation used – record Lot #							
HCL		$H_3PO_4$					
$H_2SO_4$		NaOH					
HNO <sub>3</sub>		Other					

Comments:

Were non-conformance issues noted at sample receipt? (Yes) or No

Non-Conformance issue other than noted above:





## Laboratory Services

## **Laboratory Report**

Client

Santee Cooper Linda Williams 1 Riverwood Dr. Moncks Corner, SC 29461 Project: Work Order: Received: Ground Water 1111325 11/23/2021 10:20

Dear Client:

Rogers and Callcott appreciates the opportunity to be of service to you. The attached laboratory services report includes analytical results and chain of custody for samples that were received on November 23, 2021. Rogers and Callcott maintains a formal QA/QC program. Unless otherwise noted, all analyses performed under NELAP certification have complied with all the requirements for the TNI standard. The analyses met the QA/QC confidence interval for each test method unless otherwise qualified. Estimated uncertainty is available upon request.

Privileged / Confidential information may be contained in this report and is intended only for the use of the addressee. If you are not the addressee, or the person responsible for delivering to the person addressed, you may not copy or deliver this message to anyone else. If you receive this message by mistake, please notify Rogers and Callcott immediately.

We strive to provide excellent service to our clients. Please contact Elisabeth Noblet, your Project Manager, at enoblet@rcenviro.com, (864)-232-1556 if you have any questions about this report.

CC: Jeanette Gilmetti, Sherri Brown, Courtney Ames Watkins

Report Approved By:

Elisabeth Noblet

Elisabeth Noblet Project Manager

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PO Box 5655 | Greenville, SC 29606 | 426 Fairforest Way | Greenville, SC 29607 | main 864.232.1556 | fax 864.232.6140 rogersandcallcott.com



**Certificate of Analysis** 



South Carolina Greenville Laboratory Identification 23105 South Carolina Columbia Laboratory Identification 40572 North Carolina Laboratory Certification Number 27 North Carolina Drinking Water Lab Number 45710 NELAP Utah Certificate Number SC000042014-1 Georgia Drinking Water Lab ID 880

Client	Santee Cooper	Project:	Ground Water		
	Linda Williams	Work Order:	1111325		
	1 Riverwood Dr.	Received:	11/23/2021 10:20		
	Moncks Corner, SC 29461		11,20,2021 10,20		

Sample Number	Sample Description	Matrix	Sampled	Туре
1111325-01	AF20415 CGYP-4	Ground Water	11/17/21 10:18	Grab
1111325-02	AF20416 CGYP-4 DUP	Ground Water	11/17/21 10:23	Grab
1111325-03	AF20417 CGYP-5	Ground Water	11/17/21 11:51	Grab
1111325-04	AF20418 CGYP-6	Ground Water	11/17/21 13:04	Grab
1111325-05	AF20419 WLF-A2-6	Ground Water	11/18/21 11:27	Grab
1111325-06	AF20420 WLF-A2-6 DUP	Ground Water	11/18/21 11:32	Grab

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Santee Cooper	Project:	Ground Water
1 Riverwood Dr.	Work Order:	1111325
Moncks Corner, SC 29461	Reported:	12/02/21 17:23

## Sample Data

Sample Number	1111325-01
Sample Description	AF20415 CGYP-4 collected on 11/17/21 10:18

Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	11/29/21 18:32	EPA 7470A		ELN	B1K1244
Boron	7100	75	ug/L	5.00	11/24/21 15:38	EPA 6010D		MLR	B1K1218
Lithium	52	10	ug/L	1.00	11/24/21 16:09	EPA 6010D		MLR	B1K1218
Molybdenum	ND	10	ug/L	1.00	11/30/21 16:41	EPA 6010D		MLR	B1K1218

```
Sample Number
Sample Description
```

AF20416 CGYP-4 DUP collected on 11/17/21 10:23

1111325-02

Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	11/29/21 18:40	EPA 7470A		ELN	B1K1244
Boron	7200	75	ug/L	5.00	11/24/21 15:41	EPA 6010D		MLR	B1K1218
Lithium	53	10	ug/L	1.00	11/24/21 16:12	EPA 6010D		MLR	B1K1218
Molybdenum	ND	10	ug/L	1.00	11/30/21 16:44	EPA 6010D		MLR	B1K1218

Sample Number Sample Description

1111325-03 AF20417 CGYP-5 collected on 11/17/21 11:51

Parameter	Result	Reporting Limit	Units	DF	Analyzed	Analyzed Method		Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	11/29/21 18:43	EPA 7470A		ELN	B1K1244
Boron	4400	75	ug/L	5.00	11/24/21 15:44	EPA 6010D		MLR	B1K1218
Lithium	77	10	ug/L	1.00	11/24/21 16:15	EPA 6010D		MLR	B1K1218
Molybdenum	ND	10	ug/L	1.00	11/30/21 16:47	EPA 6010D		MLR	B1K1218

Sample Number Sample Description 1111325-04 AF20418 CGYP-6 collected on 11/17/21 13:04

Parameter	Result	Reporting Limit	Units	DF	Analyzed	zed Method		Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	11/29/21 18:46	EPA 7470A		ELN	B1K1244
Boron	5200	75	ug/L	5.00	11/24/21 15:47	EPA 6010D		MLR	B1K1218
Lithium	110	10	ug/L	1.00	11/24/21 16:18	EPA 6010D		MLR	B1K1218
Molybdenum	ND	10	ug/L	1.00	11/30/21 16:50	EPA 6010D		MLR	B1K1218

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Santee Cooper	Project:	Ground Water
1 Riverwood Dr.	Work Order:	1111325
Moncks Corner, SC 29461	Reported:	12/02/21 17:23

Sample Number	1111325-05
Sample Description	AF20419 WLF-A2-6 collected on 11/18/21 11:27

Parameter	Result	Reporting Limit	Units	DF Analyzed		Method	Flag	Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	11/29/21 18:49	EPA 7470A		ELN	B1K1244
Boron	410	15	ug/L	1.00	11/24/21 15:20	EPA 6010D		MLR	B1K1218
Lithium	41	10	ug/L	1.00	11/24/21 15:20	EPA 6010D		MLR	B1K1218
Molybdenum	ND	10	ug/L	1.00	11/30/21 16:26	EPA 6010D		MLR	B1K1218

Sample Number

1111325-06 **Sample Description** 

AF20420 WLF-A2-6 DUP collected on 11/18/21 11:32

Parameter	Result	Reporting Limit	Units	DF	Analyzed	lyzed Method		Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	11/29/21 17:59	EPA 7470A		ELN	B1K1244
Boron	480	15	ug/L	1.00	11/24/21 16:21	EPA 6010D		MLR	B1K1218
Lithium	40	10	ug/L	1.00	11/24/21 16:21	EPA 6010D		MLR	B1K1218
Molybdenum	ND	10	ug/L	1.00	11/30/21 16:53	EPA 6010D		MLR	B1K1218



Santee Cooper	Project:	Ground Water
1 Riverwood Dr.	Work Order:	1111325
Moneks Corner, SC 29461	Reported:	12/02/21 17:23

			Fotal Me Control		ry					
Parameter	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flags
Batch B1K1218 - EPA 3005A										
Blank (B1K1218-BLK1)										
Boron	ND	15	ug/L							
Lithium	ND	10	ug/L							
Molybdenum	ND	10	ug/L							
LCS (B1K1218-BS1)										
Boron	500	15	ug/L	500		100	80-120			
Lithium	518	10	ug/L	500		104	80-120			
Molybdenum	500	10	ug/L	500		101	80-120			
Matrix Spike (B1K1218-MS1)	Source: 1111325-05									
Boron	920	15	ug/L	500	410	101	75-125			
Lithium	574	10	ug/L	500	41	107	75-125			
Molybdenum	530	10	ug/L	500	ND	106	75-125			
Matrix Spike Dup (B1K1218-MSD1)	Source: 1111325-05									
Boron	900	15	ug/L	500	410	97	75-125	2	20	
Lithium	558	10	ug/L	500	41	104	75-125	3	20	
Molybdenum	530	10	ug/L	500	ND	105	75-125	0.5	20	
Post Spike (B1K1218-PS1)	Source: 1111325-05									
Boron	0.89		mg/L	0.500	ND	95	75-125			
Lithium	0.523		mg/L	0.500	ND	96	75-125			
Molybdenum	0.50		mg/L	0.500	ND	99	75-125			
Batch B1K1244 - EPA 7470A										
Blank (B1K1244-BLK1)										
Mercury	ND	0.20	ug/L							

Mercury	5.0	0.20	ug/L	5.00	ND	100	75-125		
Matrix Spike (B1K1244-MS1)	Source: 1111325-06								
Mercury	4.8	0.20	ug/L	5.00		96	80-120		
LCS (B1K1244-BS1)									
Mercury	ND	0.20	ug/L						



Santee Cooper	Project:	Ground Water
1 Riverwood Dr.	Work Order:	1111325
Moncks Corner, SC 29461	Reported:	12/02/21 17:23

Total Metals
<b>Quality Control Summary</b>

Parameter	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flags
Batch B1K1244 - EPA 7470A										
Matrix Spike Dup (B1K1244-MSD1)	Source: 1111325-06									

	Mercury	5.0	0.20	ug/L	5.00	ND	101	75-125	0.2	20
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#### **Sample Preparation Data**

Parameter	Batch	Sample ID	Prepared	Analyst
EPA 3005A ICP Digestion				
EPA 3005A	B1K1218	1111325-01	11/24/2021 10:24	MLR
EPA 3005A	B1K1218	1111325-02	11/24/2021 10:24	MLR
EPA 3005A	B1K1218	1111325-03	11/24/2021 10:24	MLR
EPA 3005A	B1K1218	1111325-04	11/24/2021 10:24	MLR
EPA 3005A	B1K1218	1111325-05	11/24/2021 10:24	MLR
EPA 3005A	B1K1218	1111325-06	11/24/2021 10:24	MLR
EPA 7470A Mercury Digestion				
EPA 7470A	B1K1244	1111325-01	11/24/2021 15:37	MTH
EPA 7470A	B1K1244	1111325-02	11/24/2021 15:37	MTH
EPA 7470A	B1K1244	1111325-03	11/24/2021 15:37	MTH
EPA 7470A	B1K1244	1111325-04	11/24/2021 15:37	MTH
EPA 7470A	B1K1244	1111325-05	11/24/2021 15:37	MTH
EPA 7470A	B1K1244	1111325-06	11/24/2021 15:37	MTH



Santee Cooper	Project:	Ground Water
1 Riverwood Dr.	Work Order:	1111325
Moncks Corner, SC 29461	Reported:	12/02/21 17:23

#### **Data Qualifiers and Definitions**

CTED at or above the reporting limit
CTED at or above the reporting limi

- NR Not reported
- RPD Relative Percent Difference

	1	Contract Lab Du	le Date (Lab L	Jniy):				Sen	d report	to <u>Icwilli</u>	ia@santeecooper.cor	n & sibrown@santeecoop	er.com				
													Santee Cooper Santee Cooper Onc Riverwood Drive Moneks Comer, SC 29461				
Customer Email/Report Recipient: Date Results Needed by						y:		Pr	oject/	Task/l	) \   Jnit #:	1325 Phone: Rerun reques	(843)76 Fa	1-8000 Ext x: (843)761	1-4175		
@santeecooper.com							215	567	J_JM	102.0	09.601 J 30	Sec Yes	No				
Labworks ID # (Internal use only)	Sample Location	on/	Collection Date	Collection Time	Sample Collector	Total # of containers	Bottle type: (Glass- G/Plastic-P)	Grab (G) or Composite (C)	Matrix(see below)	Preservative (see below)	Co Method # Reporting I Misc. samp Any other r	ole info	B, Li, M°, Hg	nalysis Grou			
AF20415	CGYP-4		11/17/21	1018	DEW	1	P	G	GW	2	B, Li, Mo-6	s0{0	×				
16	CGYP-4	DUP	1	1023				1		1	Hg 7470		1				
רו	CGYP-5			1151													
18	CGYP-6		11	1304							_						
19	WLF - 42-6		11/18/21	1127													
20			1	(132	1			1									
									_	_			-				
	-														$\square$		
						_									_		
			I								Sam	ole Receiving (Internal					
Relinquished by: SAMoun	Employee#	Date	Time (200				nployee (		Date	050	TEN		Initial:		-		
Relinquished by:	Employee#	11/22/21 Date	Time	and the second second					1 01 0 001 11		Time Cori	arrot nH+ Vac					
FedEX		11/23/21	10:20	Jana	WA	Alis	the 1	11/23/2		0:20 Pres	ervative Lot#:						
Relinquished by:	Employee#	Date	Time 4	Receive	ed by:	En	nployee t	and the Party of the local division of the l	Date		Time						
- 345	TATO ( 1)										Date	/Time/Init for preserv	ative:		-		
□ Ag □ Cu □ Al □ Fe	TALS (all )           □ Sb           □ Se			MISC. D BTEX Napthalene		0	Gypsum Wallboard Gypsum(all		Coal Ultimate		Flyash Ammonia		Oil c. Oil Qual. Moissure				
Image: AsImage: KImage: BImage: Li	□ Sn □ Sr	II TP/I	I-N	□ voc	□ THM/HAA □ VOC □ Oil & Grease □ E. Coli		□ THM/HAA □ VOC □ Oil & Grease □ E. Coli		Below All	1			□ Ash □ Sulfur	© % Carbon			
□Ba □Mg			Dil & Grease TOC						E. Coli		l metals	netals		🗆 BTUs	Analysis		
🗆 Be 🗆 Mn		T1 Total Coliform Soluble Metals				Total Coliform			4) CHN Swiewe				aalved Gass I Oil	<b>8</b> 5.			
		Br NO3	Contraction of the local division of the loc	Dissolved				oisture		000000000000000000000000000000000000000	ner Tests: RF Scan	NDDEC					
	🗆 Zn	Zn SO4 CRad 226 pH CHGI		GI	NPDES Oil & Grease		at a Capital	196									
Co Ni Cr Pb	C Hg			D PCB				cle Size			articulate Matter	D As D TSS	TX COF				

 Matrix codes: GW-groundwater, DW-drinking water, SW-surface water, WW-waste water, BW-boiler water, L-limestone, Oil-oil, S-Soil, SL-solid,

 C-coal, G-gypsum, FA-flyash, BA-bottom ash, M-misc (describe in comment section)

 Preservative code- 1=<4°C</td>
 2=HNO3, 3=H2SO4

 4-HC1
 5=Na2S2O3
 6-Other (Specify)

Page 8 of 9



# Sample Receipt Verification

Client: Sar	Client: Santee Cooper Date Receive				2021	Work Order: 1111325
Carrier Name:		S US M 5267815	Aail		Cou	rrier Field Services Other:
Receipt Crite	eria		Y e s	N 0	N A	Comments
Shipping conta	ainer / cooler intact?		Х			Damaged Leaking Other:
Custody seals i	intact?		Х			
COC included	with samples?		Х			
COC signed w	hen relinquished and received?		Х			
Sample bottles	s intact?		Х			Damaged Leaking Other:
Sample ID on	COC agree with label on bottle(s)?		Х			
Date / time on	COC agree with label on bottle(s)?		Х			
Number of bot	ttles on COC agrees with number of bottle	es received?	Х			
Samples receiv	ved within holding time?		Х			
Sample volume	e sufficient for analysis?		Х			
VOA vials free	e of headspace (<6mm bubble)?				х	
Samples cooled	d? Temp at receipt recorded on COC Temp measured with IR thermometer - SN	N: 97050067	х			Ice Cold Packs Dry Ice None
Note: Samples Note: Samples	ring pH preservation at proper pH? s for metals analysis may be preserved upon receipt i s for O&G and VOA analysis – preservation checked	l at bench.	х			
the time of sam	orinated for parameters requiring chlorine nple collection? he checked at bench for samples requiring Bacterial,				x	
	If in-hous	e preservation u	used	– re	cord	Lot #
HCI		H <sub>2</sub> P(	$0^{-}$			

HCL	H <sub>3</sub> PO <sub>4</sub>	
$H_2SO_4$	NaOH	
HNO <sub>3</sub>	Other	

Comments:

Were non-conformance issues noted at sample receipt? Yes or No

Non-Conformance issue other than noted above:



# **Report of Analysis**

Santee Cooper – ABS Lab One Riverwood Drive Moncks Corner, SC 29461 Attention: Sherri Brown

Lot Number:**XA14014** Date Completed:01/20/2022

Garo Mag

01/20/2022 4:06 PM Approved and released by: Project Manager I: **Blaire M. Gagne** 





The electronic signature above is the equivalent of a handwritten signature. This report shall not be reproduced, except in its entirety, without the written approval of Pace Analytical Services, LLC.

#### Case Narrative Santee Cooper – ABS Lab Lot Number: XA14014

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report. Where sampling is conducted by the client, results relate to the accuracy of the information provided, and as the samples are received.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved The NELAC Institute (TNI) standards, the Pace Analytical Services, LLC ("Pace") Laboratory Quality Manual, standard operating procedures (SOPs), and Pace policies. Any exceptions to the TNI standards, the Laboratory Quality Manual, SOPs or policies are qualified on the results page or discussed below.

Pace is a TNI accredited laboratory; however, the following analyses are currently not listed on our TNI scope of accreditation: Drinking Water: VOC (excluding BTEX, MTBE, Naphthalene, & 1,2-dichloroethane) EPA 524.2, E. coli and Total coliforms SM 9223 B-2004, Solid Chemical Material: TOC Walkley-Black, Biological Tissue: All, Non-Potable Water: SGT-HEM EPA 1664B, Silica EPA 200.7, Boron, Calcium, Silicon, Strontium EPA 200.8, Bicarbonate, Carbonate, and Hydroxide Alkalinity SM 2320 B-2011, SM 9221 C E-2006 & SM 9222D-2006, Strontium SW-846 6010D, VOC SM 6200 B-2011, Fecal Coliform Colilert-18.

If you have any questions regarding this report, please contact the Pace Project Manager listed on the cover page.

## Sample Summary Santee Cooper – ABS Lab Lot Number: XA14014 Project Name: Project Number:

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	AF21736	Aqueous	12/06/2021 0954	01/14/2022
002	AF21737	Aqueous	12/06/2021 0959	01/14/2022
003	AF21738	Aqueous	12/06/2021 1113	01/14/2022
004	AF21739	Aqueous	12/06/2021 1215	01/14/2022
005	AF21740	Aqueous	12/07/2021 1036	01/14/2022
006	AF21741	Aqueous	12/07/2021 1041	01/14/2022

(6 samples)

#### **Detection Summary**

Santee Cooper – ABS Lab

Lot Number: XA14014

**Project Name:** 

**Project Number:** 

Sampl	e Sample ID	Matrix	Parameter	Method	Result	Q Units	Page
001	AF21736	Aqueous	Arsenic	6020B	5.8	ug/L	5
001	AF21736	Aqueous	Barium	6020B	33	ug/L	5
001	AF21736	Aqueous	Beryllium	6020B	19	ug/L	5
001	AF21736	Aqueous	Calcium	6020B	310000	ug/L	5
001	AF21736	Aqueous	Cobalt	6020B	43	ug/L	5
001	AF21736	Aqueous	Lead	6020B	12	ug/L	5
001	AF21736	Aqueous	Selenium	6020B	15	ug/L	5
002	AF21737	Aqueous	Arsenic	6020B	6.0	ug/L	6
002	AF21737	Aqueous	Barium	6020B	32	ug/L	6
002	AF21737	Aqueous	Beryllium	6020B	19	ug/L	6
002	AF21737	Aqueous	Calcium	6020B	300000	ug/L	6
002	AF21737	Aqueous	Cobalt	6020B	41	ug/L	6
002	AF21737	Aqueous	Lead	6020B	12	ug/L	6
002	AF21737	Aqueous	Selenium	6020B	15	ug/L	6
003	AF21738	Aqueous	Barium	6020B	130	ug/L	7
003	AF21738	Aqueous	Beryllium	6020B	10	ug/L	7
003	AF21738	Aqueous	Calcium	6020B	250000	ug/L	7
003	AF21738	Aqueous	Cobalt	6020B	68	ug/L	7
003	AF21738	Aqueous	Selenium	6020B	7.2	ug/L	7
004	AF21739	Aqueous	Barium	6020B	1200	ug/L	8
004	AF21739	Aqueous	Beryllium	6020B	25	ug/L	8
004	AF21739	Aqueous	Calcium	6020B	380000	ug/L	8
004	AF21739	Aqueous	Cobalt	6020B	100	ug/L	8
004	AF21739	Aqueous	Lead	6020B	3.9	ug/L	8
004	AF21739	Aqueous	Selenium	6020B	10	ug/L	8
005	AF21740	Aqueous	Arsenic	6020B	12	ug/L	9
005	AF21740	Aqueous	Barium	6020B	44	ug/L	9
005	AF21740	Aqueous	Calcium	6020B	130000	ug/L	9
006	AF21741	Aqueous	Arsenic	6020B	10	ug/L	10
006	AF21741	Aqueous	Barium	6020B	43	ug/L	10
006	AF21741	Aqueous	Calcium	6020B	140000	ug/L	10

(31 detections)

Client: Santee Cooper – ABS La	b				Laboratory ID: XA14014-	001	
Description: AF21736					Matrix: Aqueous		
Date Sampled:12/06/2021 0954	Project	Name:					
Date Received: 01/14/2022	Project N	umber:					
Run Prep Method Analy	tical Method Dilution	n Analy	sis Date Analyst	Prep Date	Batch		
1 3005A	6020B 1	01/18/2	2022 1716 BNW	01/18/2022	0842 28629		
2 3005A	6020B 20	01/19/2	2022 0946 BNW	01/18/2022	0842 28629		
Parameter	Nu	CAS Imber	Analytical Method	Result Q	LOQ	Units	Run
Antimony	7440	)-36-0	6020B	ND	2.0	ug/L	1
Arsenic	7440	)-38-2	6020B	5.8	2.0	ug/L	1
Barium	7440	)-39-3	6020B	33	5.0	ug/L	1
Beryllium	7440	)-41-7	6020B	19	0.40	ug/L	1
Cadmium	7440	)-43-9	6020B	ND	0.50	ug/L	1
Calcium	7440	)-70-2	6020B	310000	8000	ug/L	2
Chromium	7440	)-47-3	6020B	ND	5.0	ug/L	1
Cobalt	7440	)-48-4	6020B	43	5.0	ug/L	1
Lead	7439	9-92-1	6020B	12	1.0	ug/L	1
Selenium	7782	2-49-2	6020B	15	5.0	ug/L	1
Thallium	7440	)-28-0	6020B	ND	0.50	ug/L	1

LOQ = Limit of Quantitation	B = Detected in the method blank	E = Quantitation of compound exceeded the calibration range	Q = Surrogate failure
ND = Not detected at or above the LOQ	N = Recovery is out of criteria	P = The RPD between two GC columns exceeds 40%	L = LCS/LCSD failure
H = Out of holding time	W = Reported on wet weight basis		S = MS/MSD failure

Client: Santee Cooper -	ABS Lab					Laboratory ID: XA	14014-002	
Description: AF21737						Matrix: Aq	lueous	
Date Sampled:12/06/2021 0959		Project N	lame:					
Date Received: 01/14/2022	F	Project Nu	mber:					
Run Prep Method	Analytical Method	Dilution	Anal	ysis Date Analyst	Prep	Date Batch		
1 3005A	6020B	1	01/18	/2022 1719 BNW	01/18/2	022 0842 28629		
2 3005A	6020B	20	01/19	/2022 0949 BNW	01/18/2	022 0842 28629		
Parameter			CAS nber	Analytical Method	Result	Q LOQ	Units	Run
Antimony		7440-	36-0	6020B	ND	2.0	ug/L	1
Arsenic		7440-	38-2	6020B	6.0	2.0	ug/L	1
Barium		7440-	39-3	6020B	32	5.0	ug/L	1
Beryllium		7440-	41-7	6020B	19	0.40	ug/L	1
Cadmium		7440-	43-9	6020B	ND	0.50	ug/L	1
Calcium		7440-	70-2	6020B	300000	8000	ug/L	2
Chromium		7440-	47-3	6020B	ND	5.0	ug/L	1
Cobalt		7440-	48-4	6020B	41	5.0	ug/L	1
Lead		7439-	92-1	6020B	12	1.0	ug/L	1
Selenium		7782-	49-2	6020B	15	5.0	ug/L	1
Thallium		7440-2	28-0	6020B	ND	0.50	ug/L	1

LOQ = Limit of Quantitation	B = Detected in the method blank	E = Quantitation of compound exceeded the calibration range	Q = Surrogate failure
ND = Not detected at or above the LOQ	N = Recovery is out of criteria	P = The RPD between two GC columns exceeds 40%	L = LCS/LCSD failure
H = Out of holding time	W = Reported on wet weight basis		S = MS/MSD failure

Client: Santee Cooper – ABS Lab Laboratory ID: XA14014-003						4-003			
Description: AF21738							Matrix: Aqueou	S	
Date Sampled:12/06/2021 1113		Project N	lame:						
Date Received: 01/14/2022	F	Project Nur	mber:						
Run Prep Method	Analytical Method	Dilution	Anal	ysis Date Analyst	Prep	Date	Batch		
1 3005A	6020B	1	01/18	/2022 1723 BNW	01/18/2	022 084	42 28629		
2 3005A	6020B	20	01/19	/2022 0953 BNW	01/18/2	022 084	42 28629		
Parameter			CAS nber	Analytical Method	Result	Q	LOQ	Units	Run
Antimony		7440-3	36-0	6020B	ND		2.0	ug/L	1
Arsenic		7440-3	38-2	6020B	ND		2.0	ug/L	1
Barium		7440-3	39-3	6020B	130		5.0	ug/L	1
Beryllium		7440-4	41-7	6020B	10		0.40	ug/L	1
Cadmium		7440-4	43-9	6020B	ND		0.50	ug/L	1
Calcium		7440-	70-2	6020B	250000		8000	ug/L	2
Chromium		7440-4	47-3	6020B	ND		5.0	ug/L	1
Cobalt		7440-4	48-4	6020B	68		5.0	ug/L	1
Lead		7439-9	92-1	6020B	ND		1.0	ug/L	1
Selenium		7782-4	49-2	6020B	7.2		5.0	ug/L	1
Thallium		7440-2	28-0	6020B	ND		0.50	ug/L	1

LOQ = Limit of Quantitation	B = Detected in the method blank	E = Quantitation of compound exceeded the calibration range	Q = Surrogate failure
ND = Not detected at or above the LOQ	N = Recovery is out of criteria	P = The RPD between two GC columns exceeds 40%	L = LCS/LCSD failure
H = Out of holding time	W = Reported on wet weight basis		S = MS/MSD failure

Client: Santee Cooper – A	BS Lab					Laboratory	/ ID: XA14014-0	04	
Description: AF21739						Ма	trix: Aqueous		
Date Sampled:12/06/2021 1215		Project N	ame:						
Date Received: 01/14/2022	F	Project Nu	nber:						
Run Prep Method	Analytical Method	Dilution	Anal	ysis Date Analyst	Prep	Date Batch			
1 3005A	6020B	1	01/18	/2022 1734 BNW	01/18/2	022 0842 28629			
2 3005A	6020B	20	01/19	/2022 0957 BNW	01/18/2	022 0842 28629			
Parameter			CAS nber	Analytical Method	Result	Q LO	DQ	Units	Run
Antimony		7440-	36-0	6020B	ND		2.0	ug/L	1
Arsenic		7440-	38-2	6020B	ND		2.0	ug/L	1
Barium		7440-	39-3	6020B	1200		5.0	ug/L	1
Beryllium		7440-	41-7	6020B	25	C	.40	ug/L	1
Cadmium		7440-	43-9	6020B	ND	C	0.50	ug/L	1
Calcium		7440-	70-2	6020B	380000	80	000	ug/L	2
Chromium		7440-	47-3	6020B	ND		5.0	ug/L	1
Cobalt		7440-	48-4	6020B	100		5.0	ug/L	1
Lead		7439-	92-1	6020B	3.9		1.0	ug/L	1
Selenium		7782-	49-2	6020B	10		5.0	ug/L	1
Thallium		7440-2	28-0	6020B	ND	C	).50	ug/L	1

LOQ = Limit of Quantitation	B = Detected in the method blank	E = Quantitation of compound exceeded the calibration range	Q = Surrogate failure
ND = Not detected at or above the LOQ	N = Recovery is out of criteria	P = The RPD between two GC columns exceeds 40%	L = LCS/LCSD failure
H = Out of holding time	W = Reported on wet weight basis		S = MS/MSD failure

Client: Santee Cooper –		Laboratory ID: XA14014-005						
Description: AF21740	Matrix: Aqueous							
Date Sampled:12/07/2021 1036		Project N	lame:					
Date Received: 01/14/2022	I	Project Nu	mber:					
Run Prep Method	Analytical Method	Dilution	Anal	ysis Date Analyst	Prep Date	Batch		
1 3005A	6020B	1	01/18	/2022 1738 BNW	01/18/2022 08	42 28629		
2 3005A	6020B	10	01/19	/2022 1001 BNW	01/18/2022 08	42 28629		
			CAS	Analytical				
Parameter		Nur	nber	Method	Result Q	LOQ	Units	Run
Antimony		7440-	36-0	6020B	ND	2.0	ug/L	1
Arsenic		7440-	38-2	6020B	12	2.0	ug/L	1
Barium		7440-	39-3	6020B	44	5.0	ug/L	1
Beryllium		7440-	41-7	6020B	ND	0.40	ug/L	1
Cadmium		7440-	43-9	6020B	ND	0.50	ug/L	1
Calcium		7440-	70-2	6020B	130000	4000	ug/L	2
Chromium		7440-	47-3	6020B	ND	5.0	ug/L	1
Cobalt		7440-	48-4	6020B	ND	5.0	ug/L	1
Lead		7439-	92-1	6020B	ND	1.0	ug/L	1
Selenium		7782-	49-2	6020B	ND	5.0	ug/L	1
				_				

6020B

ND

0.50

ug/L

1

7440-28-0

LOQ = Limit of Quantitation	B = Detected in the method blank	E = Quantitation of compound exceeded the calibration range	Q = Surrogate failure
ND = Not detected at or above the LOQ	N = Recovery is out of criteria	P = The RPD between two GC columns exceeds 40%	L = LCS/LCSD failure
H = Out of holding time	W = Reported on wet weight basis		S = MS/MSD failure

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Thallium

	Client: Santee Cooper – ABS Lab						Laboratory ID: XA140	14-006	
De	Description: AF21741						Matrix: Aqueo	us	
Date	Sampled:12/07/2021 1041		Project I	Name:					
Date	Received: 01/14/2022	I	Project Nu	umber:					
Run	Prep Method	Analytical Method	Dilution	Anal	ysis Date Analyst	Prep Date	Batch		
1	3005A	6020B	1	01/18	/2022 1742 BNW	01/18/2022 0	842 28629		
2	3005A	6020B	10	01/19	/2022 1004 BNW	01/18/2022 0	842 28629		
Bara	ameter		NI	CAS mber	Analytical Method	Result Q	LOQ	Units	Run
	nony		7440		6020B	ND	2.0	ug/L	1
Arse	,		7440		6020B	10	2.0	ug/L	1
Bari			7440		6020B	43	5.0	ug/L	1
Bery	llium		7440	-41-7	6020B	ND	0.40	ug/L	1
Cadr	nium		7440	-43-9	6020B	ND	0.50	ug/L	1
Calc	ium		7440	-70-2	6020B	140000	4000	ug/L	2
Chro	mium		7440	-47-3	6020B	ND	5.0	ug/L	1
Coba	alt		7440	-48-4	6020B	ND	5.0	ug/L	1
Lead	l		7439	-92-1	6020B	ND	1.0	ug/L	1
Sele	nium		7782	-49-2	6020B	ND	5.0	ug/L	1

6020B

ND

0.50

ug/L

1

7440-28-0

LOQ = Limit of Quantitation	B = Detected in the method blank	E = Quantitation of compound exceeded the calibration range	Q = Surrogate failure
ND = Not detected at or above the LOQ	N = Recovery is out of criteria	P = The RPD between two GC columns exceeds 40%	L = LCS/LCSD failure
H = Out of holding time	W = Reported on wet weight basis		S = MS/MSD failure

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Thallium

**QC Summary** 

#### **ICP-MS Metals - MB**

Sample ID: XQ28629-001 Batch: 28629 Analytical Method: 6020B 
 Matrix:
 Aqueous

 Prep Method:
 3005A

 Prep Date:
 01/18/2022
 0842

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Antimony	ND		1	2.0	ug/L	01/18/2022 1604
Arsenic	ND		1	2.0	ug/L	01/18/2022 1604
Barium	ND		1	5.0	ug/L	01/18/2022 1604
Beryllium	ND		1	0.40	ug/L	01/18/2022 1604
Cadmium	ND		1	0.50	ug/L	01/18/2022 1604
Calcium	ND		1	400	ug/L	01/18/2022 1604
Chromium	ND		1	5.0	ug/L	01/18/2022 1604
Cobalt	ND		1	5.0	ug/L	01/18/2022 1604
Lead	ND		1	1.0	ug/L	01/18/2022 1604
Selenium	ND		1	5.0	ug/L	01/18/2022 1604
Thallium	ND		1	0.50	ug/L	01/18/2022 1604

 LOQ = Limit of Quantitation
 ND = Not detected at or above the LOQ
 N = Recovery is out of criteria

 P = The RPD between two GC columns exceeds 40%

 \* = RSD is out of criteria
 + = RPD is out of criteria

 Note: Calculations are performed before rounding to avoid round-off errors in calculated results

 Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
 QC Data for Lot Number: XA14014

 106 Vantage Point Drive
 West Columbia, SC 29172 (803) 791-9700
 Fax (803) 791-9111

#### **ICP-MS Metals - LCS**

Sample ID: XQ28629-00 Batch: 28629 Analytical Method: 6020B		Pr	ep Method:	Aqueous 3005A 01/18/2022 08	42		
Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	%Rec Limit	Analysis Date
Antimony	100	97		1	97	80-120	01/18/2022 1608
Arsenic	100	98		1	98	80-120	01/18/2022 1608
Barium	100	96		1	96	80-120	01/18/2022 1608
Beryllium	100	96		1	96	80-120	01/18/2022 1608
Cadmium	100	98		1	98	80-120	01/18/2022 1608
Calcium	1000	850		1	85	80-120	01/18/2022 1608
Chromium	100	100		1	100	80-120	01/18/2022 1608
Cobalt	100	95		1	95	80-120	01/18/2022 1608
Lead	100	94		1	94	80-120	01/18/2022 1608
Selenium	100	98		1	98	80-120	01/18/2022 1608
Thallium	100	96		1	96	80-120	01/18/2022 1608

LOQ = Limit of Quantitation ND = Not detected at or above the LOQ N = Recovery is out of criteria P = The RPD between two GC columns exceeds 40% \* = RSD is out of criteria + = RPD is out of criteria Note: Calculations are performed before rounding to avoid round-off errors in calculated results Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.) 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

QC Data for Lot Number: XA14014

# Chain of Custody and Miscellaneous Documents

# PACE ANALYTICAL SERVICES, LLC

Contract Lab Info: 1	ACE-COLA	Contract tob C	hie Date (Lo	in Only); l		2.8	24	Seri	d report	to <u>lowi</u>	No <u>pèsante</u>	conper com	& <u>strown@sonts</u>	W Ooper	.00.71		
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													P.	Ma Decare: (4	Oge Pocka 4	Revenue Comer, S	C Cooper and Drive No. 29461 Dr. 5142 751-4124
Customer Email	/Report Recip	lent:	Dəte	Results N	eded	by:		Pa	roject/	'Task/I	Unit #:		Rerun re	quest			
TOMITON-	@santee	cooper.com					1219	567	/ JM	c2.0	8. GAI	1 43			~		
						-								Yes	60)		
Labworks ID #	Sample Locat	ion/			1		12.00.0	1.250	5.55	W.A.	1. Carlos	Care	ments		A	nalysis G	TOUR
(internol use only)	Description		Collection Date	Collection Time	Sample Collector	Total B of containers	Bonte type: (Glass- G/Plastic-P)	Grab [6] or Composite [C]	Matrix(see be/ow)	Preservative (see below)	• M • R • M • A	con leihod # cponing lin lisc. sample ny other no	où into		TOTA-CMERALS -STAP BELOW		
AF21736	CGYP-4		(2/5/2	( 0954	The .	1	P.	G	GAN	2		0 60208		-	*	-	11
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39	CGYP-L			12/55	1				{						Π		
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<u>र</u> स	WLF-A2-1	6 DQP	12/2/21	1041	1	1	1	1	1	L					Ì	1	
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SAMUTUM Relinguished by://	35574 Employeef	1/13/21 Date	1560 Nimé	Received	166223	1000	playse #	10 1960) 10 1960)	in a sub-			Y	pH: Yes	 No		121	
feder	e enseennees	1/14/22	0910	mta	APR NO.	35566			Dates		Tina or		ative Lot#:				
Relinquished by:	Employeet	Date	Time	A Mecelver	iby (	- Steine	ployee #	CO. N	U Z- Váte	13.245 107.75	1910 Time						ĺ
								in page 2		3427 (440)	Tiower, Mar	Date/Ti	ne/init for pres	ervativ	e:		
	ALS (all )	Nutri	ents	MISC	QC 22		1	suid		1221	Coal	<b>UNSER</b>		-	1993		1.1.5.6
D Ag D Cu D Al D Fe	M 86			HBIZX	1.25	16	Calling.	100000000000000000000000000000000000000		S. in	timate .	See.	<u>Shyash</u>		603.5	難	
¢∕As ⊡ K	D Sa	- DOC O DOC		D Nepilaiene D'HM/HAA			de pro delate		34	1.1	"s Moist	un 🕴	al fañare de f	1	C.C.S		簫
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Co CI Ni	gil C D CiVI			C Rad 228 C PCB		17	it. Thing	1		LI Pla	ntesa Sullate Mor		The activities				

Matrix codes: GW-groundwater, DW-drinking water, SW-surface water, WW-waste water, BW-bollar water, L-limestone, Oil-oil, S-Soil, SL-solid, C-ccal, G-gypsum, FA-fiyash, BA-bottom ash, M-mise (describe in comment section) Preservative code- I=<4°C = 2=HNO1 = 3=USC = 4=FC = 5=Na/S-C = 6 Other (feature)

Client:         Sample Receipt Checklist (SRC)           Cooler Inspected by/dote:         / 01/3023         Lot #: XA140/4           Means of receipt:         Pace         Client:         UPS         Check         Check           Means of receipt:         Pace         Client:         UPS         Check         Check           Means of receipt:         Pace         Client:         Other         Check         Check           Main of receipt:         Pace         Check         Check         Check         Check           Mathed:         Temperature upon receipt:         Pace         Mone         Tested by: Check         Check           Mathed:         Temperature Blank         Chage         An /MA = C         RG un Correction Factor:         Pace           Mathed:         Temperature Blank         Chage         Dry teo         None         Pace         None           Yes:         No         DNA         1: three commercial counter's packing sitp attuched to this form?         Pace         Pace         Pace           Yes:         No         6.         Wear sample ID's lised on atl sample continers?         Pace         Pace         Pace         Pace         Pace         Pace         Pace         Pace         Pace         Pace<		Samples Receipt Checklist (SRC) (ME0018C-15) Issuing Authority: Pace ENV - WCOL	Revised:9/29/2
Client:       SAMUE       Cooler Impacted by/date: MEI / 01/14020       Lot # SAMUE         Means of receipt:       Pace       Client:       Differ:         Mysic       No.d       [] Watz or substy sals present on the cooleg?         Mysic       No.d       [] No.d       [] Restrict or substy sals present on the cooleg?         Mysic       No.d       [] No.d       [] No.d       [] No.d         At 144       Cooler frequency sals were present, were they innet and unbroken?       [] No.d       [] No.d         Mission       Control frequency sals were present on the cooleg?       [] No.d       [] No.d       [] No.d         Mission       Control frequency sals were present on the cooleg?       [] No.d       [] No.d       [] No.d       [] No.d         Method of coolant:       Weit Sals       [] No.d			Page 1
Means of receipt:       Pace       Dilent       UPS \[ Felds \] Other:       To lik \( X) Mol44         Yes       No       [1] Were custody sails present on the cooler?       Tested by: SM         PH Strip ID: 21452       Chlorine Strip ID: Mo       Tested by: SM       Tested by: SM         PH Strip ID: 21452       Chlorine Strip ID: Mo       Tested by: SM       Tested by: SM         Method:       Temperature Blank [//Against Bettles IIR Clan ID: S       IR Gun Correction Factor; 0       *C         Method:       Temperature Blank [//Against Bettles IIR Clan ID: S       IR Gun Correction Factor; 0       *C         Method:       Temperature of any cooler executed 6.0°C; 0 was Project Manager Notified?       **C         Yes       No       NA [4]: If temperature of any cooler executed 6.0°C; 0 was Project Manager Notified?         Yes       No       NA [4]: If the commercial contrier's packtased to this form?         Yes       No       NA [4]: If the commercial contrier's packtased to this form?         Yes       No       6. Were sample IDs listed on ant Sample containers?         Yes       No       7. Were sample IDs listed on the COC?         Yes       No       10: Did al connainer abet faited on all sample containers?         Yes       No       11: Were reasons be performed listed on the COC?         Yes	Client: SANTEE		
Yes       No       1. Were coulded seals present on the cooles?         H Strip ID: 7482       Choire Sirp ID: 76       Tested by: 139         Original temperature opon receipt / Concreted temperature upon receipt / Solid Snap-Cup ID: 74       7144 / 144 @C N / NA @C N / NA @C NA / NA @C			A14014
□Yes       No       ZNA 2: If custody tools were present, were they intact and unbroken?         pH Strip ID: 21-83			
Diff Sing D2       Tested by: 5%       Tested by: 5%         Original temperature upon receipt / Derived Corrected) temperature upon receipt       %Solid Snap-Cap D2: NA         134_144_C_NA_/NA_OC_NA_/NA_OC_NA_/NA_OC_NA_NA_OC       MA_SOLE         Method: Temperature Black Z/Against Battles       IR Gun D2.5       IR Gun Correction Factor: 0OC         Method: Temperature Black Z/Against Battles       IR Gun D2.5       IR Gun Correction Factor: 0OC         Method: Temperature of any tooler essecued 6.6°CC, was Project Manager Netified?       PM_was Notified by: phone Camuil_2/Ace-to-face (circle one).         Z/Yes       No       NA_4       Is the commercial courier's packing sitp attactor to this form?         Z/Yes       No       5. Were sample ID5 lised on the COC?       Yes         Z/Yes       No       7. Were sample ID5 lised on the COC?       Zes         Z/Yes       No       9. Was collection date & time listed on the COC?       Zes         Z/Yes       No       10. Did all consister fabs information (ID, date, time) agree with the COC?         Z/Yes       No       11. Were tests to be performed listed on the COC?         Z/Yes       No       11. Were tests to be performed listed in the COC?         Z/Yes       No       11. Were tests to be performed listed on the COC?         Z/Yes       No       11. Were tests to be Performed l		2. If custody seals present on the cooler?	
Original temperature upon receipt       Tested by: B*         144       /144       C       NA       YAA       YAAA       YAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	nH Strin ID: 21-852		
Method:       Temperature Black [Against Bottes IR Gun ID 5       IR Gun Correction Factor:	Otiginal temperature mon	rested by.	
Method of coolant:       Wei Yee       IR Gun D 5       IR Gun Correction Factor:       **C         Method of coolant:       Wei Yee       Ice Packs       Dry Kee       None       **C         [2] Yes       No       NA       3: If temperature of any cooler sexceded 6.0*C, was Project Manager NotiFled?         [2] Yes       No       NA       4: If the commercial courier's packing slip stutuched to this form?         [2] Yes       No       6: Were proper custody procedures (relinquished/received) followed?         [2] Yes       No       6: Were sample IDs lised on all sample containers?         [2] Yes       No       6: Were sample IDs lised on all sample containers?         [2] Yes       No       6: Were sample IDs lised on the COC?         [2] Yes       No       7: Wes scale to blig lised on all sample containers?         [2] Yes       No       10: Did all constainer fabst information (D) dats, time) agree with the CDC?         [2] Yes       No       11: Were tests to be performed listed on the COC?         [2] Yes       No       12: Did all samples arrive in the proper containers for each ust and/or in good condition (Gubrocke, lids on, etc.??         [2] Yes       No       13: Was adequate sample volume available?         [2] Yes       No       13: Ware adi samples received widin ½ to hobding time or 48 hours, whichever comes first?	14.4 / 14.4 °C NA /N	A 90 NA (NA 90 NA (NA 90	ap ID: NA
Method of coolant:       Wet Xer       I pe Packs       Dry Lec       None         [2] Yes       No       [A]       [3] If temperature of any cooler essecuted 6.0°C, was troject Manager, Notified?         [2] Yes       [No       [A]       [3] If temperature of any cooler essecuted 6.0°C, was troject Manager, Notified?         [2] Yes       [No       [5]. Were proper custody procedures (relinquished/roceival) followed?         [2] Yes       [No       [6]. Were sample IDs listed on all sample containers?         [2] Yes       [No       [7]. Were wample IDs listed on all sample containers?         [2] Yes       [No       [8]. Was collection date & time listed on all containers?         [2] Yes       [No       [10]. Did all container abel information (D), date, time) agree with the COC?         [2] Yes       [No       [12]. Did all samples merive in the proper ontainers for each test and/or in good condition (ubroken, tids on, etc.)?         [2] Yes       [No       [13]. Was adequate sample volume available?         [4] Yes       [No       [14]. Wore all samples received with N/s the holding time or 48 hours, whichever comes first?         [5] Yes       [No       [15]. Were any samples containers missing/vcccses (circle one) samples No! listed on COC?         [7] Yes       [No       [16]. For VOA and RSK-175 samples, were bubbles present >* peu-size" (No foum in diameter) in any of the VOA waits?	Method; Temperature		
Z       Yes       No       NA <sup>3</sup> . If temperature of any cooler especide 6 0°C, was troject Manager Notified?         Z       Yes       No       NA       4.16 the commercial courier's packing silp aluched to this form?         Z       Yes       No       5.1 Were proper custody procodures (cellinguished/received) followed?         Z       Yes       No       6.1 Were sample IDs listed on the COC?         Z       Yes       No       7.1 Were sample IDs listed on the COC?         Z       Yes       No       8.1 Was collection date & time listed on the COC?         Z       Yes       No       9.1 Was collection date & time listed on the COC?         Z       Yes       No       10: Did all constner label information (ID, date, time) agree with the COC?         Z       Yes       No       11: Were stess to be performed listed on the colling time or 48 hours, whichever comes first?         Yes       No       13: Were all samples received widhin ½ the holding time or 48 hours, whichever comes first?         Yes       No       13: Were all samples containers missing/veccess (circle onc) samples NcE listed on CoC?         Yes       No       14: Were all and constner missing/veccess (circle onc) samples NcE listed on CoC?         Yes       No       ZNA       16. For VOA and RSK-175 samples, were bubbles preserts? pac-size" (4*or form in diameter) <td>Method of coolant:</td> <td>Wet log Log Packs Dates IK Gun ID: V IR Gun Correction Factor</td> <td>лт; <u>0</u>•С</td>	Method of coolant:	Wet log Log Packs Dates IK Gun ID: V IR Gun Correction Factor	лт; <u>0</u> •С
Yes       No       NA       1: this commercial courier's packing sip aluched to this form?         Yes       No       6: Were proper custody procedures (relinquished/received) followed?         Yes       No       6: Were sample IDs listed on all sample containers?         Yes       No       7: Were sample IDs listed on all sample containers?         Yes       No       7: Were sample IDs listed on all sample containers?         Yes       No       9: Was collection date & time listed on all cantile containers?         Yes       No       10: Did all container label information (ID, date, time) agree with the COC?         Yes       No       11: Were tests to be performed listed on the COC?         Yes       No       11: Were tests to be performed listed on the COC?         Yes       No       11: Were tests to be performed listed on the COC?         Yes       No       13: Was adequate sample volume available?         Yes       No       14: Were all sample containers missing/excess (circle one) samples No <sup>+</sup> listed on COC?         Yes       No       15: Ware any samples containers missing/excess (circle one) samples No <sup>+</sup> listed on COC?         Yes       No       18: Wore all sphitesher Missing/excess (circle one) samples No <sup>+</sup> listed on COC?         Yes       No       NA       16: For VOA and RSK-175 samples, were bubbbles present 2 <sup>+</sup> pes-size?		3. If temperature of any rooter exampled 6 0002	
□       IN       1. If the commercial courser's packing sitp attuched to this form?         □       Yes       No       6. Were sample IDs listed on the COC?         □       Yes       No       6. Were sample IDs listed on all sample containers?         □       Yes       No       6. Ware sample IDs listed on all sample containers?         □       Yes       No       9. Was collection date & time listed on the COC?         □       Yes       No       10. Did all container iabel information (ID, date, time) agree with the COC?         □       Yes       No       11. Were tests to be performed listed on the COC?         □       Yes       No       11. Were tests to be performed listed on the COC?         □       Yes       No       13. Was adequate sample volume available?         □       Yes       No       14. Were all samples received wildin ½ to holding time or 48 hours, whichever comes first?         □       Yes       No       14. Were all samples containers missing/excess (circle ouc) samples Not listed on COC?         □       Yes       No       14. Were all samples received wildin ½ to holding time or 48 hours, whichever comes first?         □       Yes       No       14. Were all samples received wildin ½ to holding time or 48 hours, whichever comes first?         □       Yes       No <t< td=""><td></td><td>PM was Notified by: phone (enuil / face to face (pints and)</td><td>fied?</td></t<>		PM was Notified by: phone (enuil / face to face (pints and)	fied?
Image: Solution of the second sec	Yes No NA	4. Is the commercial courier's packing slip attached to this form?	
Yes       No       6.       Were sample IDs listed on all sample containers?         Yes       No       8.       Wax collection date & time listed on all sample containers?         Yes       No       9.       Wax collection date & time listed on all sample containers?         Yes       No       9.       Wax collection date & time listed on the COC?         Yes       No       10: Did all container label information (ID, date, time) agree with the COC?         Yes       No       11.       Ware store to be performed listed on the COC?         Yes       No       11.       Ware store to be performed listed on the COC?         Yes       No       11.       Ware store to be performed listed on the COC?         Yes       No       11.       Ware advection containers for each test and/or in good condition (unbroaken, tids on, etc.)?         Yes       No       13.       Was adequete sample vocatianers missing/excess (circle on:) samples No <sup>6</sup> listed on COC?         Yes       No       14.       Wore all samples received at a pH of < 2?	Ves No	5. Were proper custody procedures (reliaguished/received) 6-11-	
Z Yes       No       7. Were sample IDS listed on all sample containers?         Z Yes       No       8. Was collection date & time listed on all sample containers?         IZ Yes       No       10: Did all container label information (ID, date, time) agree with the COC?         IZ Yes       No       11: Ware tests to be performed listed on the COC?         IZ Yes       No       11: Ware tests to be performed listed on the COC?         IZ Yes       No       11: Ware tests to be performed listed on the COC?         IZ Yes       No       11: Ware tests to be performed listed on the COC?         IZ Yes       No       11: Ware tests to be performed listed on the COC?         IZ Yes       No       13: Was adequate sample volume available?         Yes       No       14: Were all samples received within ½ the holding time or 48 hours, whichever comes first?         Yes       No       15: Were any samples containers missing/excess (circle onc) samples Not listed on COC?         Yes       No       INA       16: For VOA and RSK-175 samples, were bubbles present > pea-size" (4* or forum in diameter) in any of the VOA vials?         IYes       No       INA IB. Were all applicable NBJ TKN/evalide/phenol/6723.1/608.3 (<0.5mg/L) samples free of residual chiorine?	Ves No	6. Were sample IDs listed on the COC?	
Image: Image	Yes No	7. Were sample IDs listed on all sample containers?	
Yes       No       9. Was collection clue & time listed on all sample containers?         Yes       No       10: Did all container label information (ID, date, time) agree with the COC?         Yes       No       11: Were rests to be performed listed on the COC?         Yes       No       11: Were rests to be performed listed on the COC?         Yes       No       13: Was adequate sample volume available?         Yes       No       13: Was adequate sample volume available?         Yes       No       14: Were all samples received within ½ the holding time or 48 hours, whichever comes first?         Yes       No       15: Were any samples containers missing/excess (circle one) samples Not listed on COC?         Yes       No       16: For VOA and RSK-175 samples, were bubbles present >* pen-size" (¼ or 6mm in diameter) in any of the VOA visit?         Yes       No       IA: IN: Were all BKO/metals/nutrient samples received at a pH of < 2?	Ves No	8. Was collection date & time listed on the COC?	
IV res       No       10: Did all container label information (ID, date, time) agree with the COC?         IV res       No       11. Were tests to be performed listed on the COC?         IZ Yes       No       12. Did all container label information (ID, date, time) agree with the COC?         IZ Yes       No       13. Was adequate sample olume available?         IY es       No       13. Was adequate sample containers for each ust and/or in good condition (information, lids on, etc.)?         IY es       No       14. Were all samples received within ½ the holding time or 48 hours, whichever comes first?         IY es       No       14. Were all samples received within ½ the holding time or 48 hours, whichever comes first?         IY es       No       16. FOr VOA and RSK-175 samples, were bubbles present >* pea/size" (2*" or 6mm in diameter) in any of the VOA viais?         IY es       No       IXA       16. Were all DRO/metals/nutrient samples received at a pH of < 2?	✓ Yes No	9. Was collection date & time listed on all sample containers?	
Image: International internation of the code of	Ves No	10: Did all container label information (ID) date time) auron with the Object	
IZ Vcs       IN0       IZ: Did all samples arrive in the proper containers for each test and/or in good condition (ubroaten, lids on, etc.)?         IZ Yes       No       I3: Was adequate sample volume available?         Yes       No       I4: Were atl samples received within ½ the holding time or 48 hours, whichever comes first?         Yes       IN0       I5: Were any samples containers missing/excess (circle onc) samples No! listed on COC?         Yes       IN0       IS: Were any samples containers missing/excess (circle onc) samples No! listed on COC?         Yes       IN0       IA: Were all DAV value?         Yes       IN0       IA: Were all conditional samples received at a pH of <2?	Ves No	11. Were tests to be performed listed on the COC?	
Image: Section of the second the second the section of the section of the sectio			
Yes       No       13. Was adequate sample volume available?         Yes       No       14. Were all samples received within ½ the holding time or 48 hours, whichever comes first?         Yes       No       15. Were any samples containers missing/excess (circle one) samples No! listed on COC?         Yes       No       IA. For VOA and RSK-175 samples, were bubbles present >"pea-size" (¼"or form in diameter) in any of the VOA vials?         Yes       No       IA. 17. Were all DRO/metals/nutrient samples received at a pH of < 2?		(unbraken lide on star)?	od condition
Yes       No       14. Were all samples received within ½ the holding time or 48 hours, whichever comes first?         Yes       No       15. Were any samples containers missing/xecass (circle onc) samples Not listed on COC?         Yes       No       IA. For VOA and RSK-175 samples, were bubbles present >*pea/size" (4*or forum in diameter) in any of the VOA viats?         Yes       No       NA 17. Were all DRO/metals/nutrient samples received at a pH of < 2?			
Yes       No $\mathbb{N}A$ 16. For VOA and RSK-175 samples, were bubbles present >*peasize" (A*or forum in diameter) in any of the VOA vials?         Yes       No $\mathbb{N}A$ 17. Were all DRO/metals/nutrient samples received at a pH of < 2?	The second se	3. Was adequate sample volume available?	
Yes       No $\mathbb{N}A$ 16. For VOA and RSK-175 samples, were bubbles present >*peasize" (A*or forum in diameter) in any of the VOA vials?         Yes       No $\mathbb{N}A$ 17. Were all DRO/metals/nutrient samples received at a pH of < 2?		4. Were all samples received within 1/2 the holding time or 48 hours, which	ever comes first?
Yes       No $\Box$ NA       in any of the VOA vials?         Yes       No       NA       17. Were all DRO/metals/nutrient samples received at a pH of < 2?		and the any samples containers missing/excess (circle one) come las Mak E-	1. J. A.
Yes       No       NA       10. Were all DRO/metals/nutrient samples received at a pH of < 2?	III IYesi I INALIZINAL'	to react and Kokerra samples, were bubbles present >"peoleize" (1/8)	r forum in diameter)
Yes       No       Z/NA       18. Were all cyanide samples received at a pH > 12 and suffice samples received at a pH > 97         Yes       No       Z/NA       19. Were all applicable NH <sub>3</sub> /TKN/cyanide/phenol/625.1/608.3 (<0.5mg/L) samples free of residual chlorine?		and the ron vials:	diameter /
1       Yes       No       I/INA       residual chlorine?         Yes       No       I/INA       20. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc)         Yes       No       21. Was the quote number listed on the container label? If yes, Quote #         Sample Preservation       (Must be completed for any sample(s) incorrectly preserved or with headspace.)         Sample (s)       MA       mL of circle one: H2SO4, HNO3, IICI, NaOH using SR # NA         Time of preservation       NA       mL of circle one: H2SO4, HNO3, IICI, NaOH using SR # NA         Sample(s)       MA       mL of circle one: H2SO4, HNO3, IICI, NaOH using SR # NA         Sample(s)       NA       were received with bubbles >6 mm in diameter.         Sample(s)       MA       were received with TRC > 0.5 mg/L (1f #19 is mo) and were adjusted accordingly in sample receiving with sodium thiosuifate (Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> ) with Shealy ID: NA         Samples(s)       NA       were received with TRC > 0.5 mg/L (1f #19 is mo) and were adjusted labels applied by: CBP         Date:       01/14/2022       01/14/2022		<ol> <li>Were all DRO/metals/nutrient samples received at a pH of &lt; 2?</li> <li>Were all or field and the samples received at a pH of &lt; 2?</li> </ol>	
1       Yes       No       I/INA       residual chlorine?         Yes       No       I/INA       20. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc)         Yes       No       21. Was the quote number listed on the container label? If yes, Quote #         Sample Preservation       (Must be completed for any sample(s) incorrectly preserved or with headspace.)         Sample (s)       MA       mL of circle one: H2SO4, HNO3, IICI, NaOH using SR # NA         Time of preservation       NA       mL of circle one: H2SO4, HNO3, IICI, NaOH using SR # NA         Sample(s)       MA       mL of circle one: H2SO4, HNO3, IICI, NaOH using SR # NA         Sample(s)       NA       were received with bubbles >6 mm in diameter.         Sample(s)       MA       were received with TRC > 0.5 mg/L (1f #19 is mo) and were adjusted accordingly in sample receiving with sodium thiosuifate (Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> ) with Shealy ID: NA         Samples(s)       NA       were received with TRC > 0.5 mg/L (1f #19 is mo) and were adjusted labels applied by: CBP         Date:       01/14/2022       01/14/2022		s. Were all explicitly samples received at a $pH > 12$ and sulfide samples received at a $pH > 12$ and sulfid	ived at a $pH > 9?$
Yes       No       No       20. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc)         Yes       No       21. Was the quote number listed on the container label? If yes, Quote #         Sample Preservation       (Must be completed for any sample(s) incorrectly preserved or with headspace.)         Sample (s) NA       ware received incorrectly preserved and were adjusted accordingly         Time of preservation       NA         If more than one preservative is needed, please note in the comments below.         Sample(s) NA       were received with TRC > 0.5 mg/L (If #19 is no) and were adjusted accordingly in sample receiving with sodium thiosuffate (NagS203) with Shealy ID: NA         Samples(s) NA       Date: 01/14/2022	I Yes L No VINA	$(< 0.5 \text{ m}/L) \le$	amples free of
Yes       ZI. Was the quote number listed on the container label? If yes, Quote #         Sample Preservation       (Must be completed for any sample(s) incorrectly preserved or with headspace.)         Sample(s) MA			
Sample Preservation       (Must be completed for any sample(s) incorrectly preserved or with headspace.)         Sample(s) MA		precily transcribed from the COC into the conditions, MS/MSD designation	ions, etc)
Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)         Sample(s) MA	Yes VNo 2	Was the quote number listed on the	
Sample(s)       MA       mL of circle one: H2SO4, HNO3, LICI, NaOH using SR # MA       MA         Time of preservation       NA		" has the quote number listed on the container label? If yes, Quote #	
Sample(s)       MA       mL of circle one: H2SO4, HNO3, LICI, NaOH using SR # MA       MA         Time of preservation       NA	Complet reservation (IM)	ist be completed for any sample(s) incorrectly preserved or with headspace.	
Time of preservation       NA	oampie(s) and	Wate received incompation and its	divisted accordingly
Sample(s)       NA	Time of preservation NA	- Algo Di Cholo Olic, HZOVA, FINCIA, FILL Algo Di maina Ch F NA	
Sample(s)       NA	rate of preservation	. If more than one preservative is needed, please note in the comments	s below.
were received with TRC > 0.5 mg/L (If #19 is no) and were adjusted accordingly in sample receiving with sodium thiosulfate (Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> ) with Shealy ID: NA SR barcode labels applied by: CBP Date: 01/14/2022	Sample(s) NA		
were received with TRC > 0.5 mg/L (If #19 is no) and were         adjusted accordingly in sample receiving with sodium thiosulfate (Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> ) with Shealy ID: NA         SR barcode labels applied by:       CBP         Date:       01/14/2022	Samples(s) NA		un in diameter.
Comments:	adjusted accordingly in same	were received with TRC > $0.5 \text{ mg/L}$ (If #19 is	no) and were
Comments:		to receiving with southin indstifiate (Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> ) with Shealy ID: NA	
Comments:	SR barcode labels applied by	CBP Date: 01/14/2022	
	Comments:		

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)

106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com





# Laboratory Services

# **Laboratory Report**

Client

Santee Cooper Linda Williams 1 Riverwood Dr. Moncks Corner, SC 29461

**Project:** Work Order: **Received:** 

Ground Water 1120813 12/10/2021 10:27

Dear Client:

Rogers and Callcott appreciates the opportunity to be of service to you. The attached laboratory services report includes analytical results and chain of custody for samples that were received on December 10, 2021. Rogers and Callcott maintains a formal QA/QC program. Unless otherwise noted, all analyses performed under NELAP certification have complied with all the requirements for the TNI standard. The analyses met the QA/QC confidence interval for each test method unless otherwise qualified. Estimated uncertainty is available upon request.

Privileged / Confidential information may be contained in this report and is intended only for the use of the addressee. If you are not the addressee, or the person responsible for delivering to the person addressed, you may not copy or deliver this message to anyone else. If you receive this message by mistake, please notify Rogers and Callcott immediately.

We strive to provide excellent service to our clients. Please contact Lauren Hollister, your Project Manager, at Ihollister@rcenviro.com, (864)-232-1556 if you have any questions about this report.

CC: Jeanette Gilmetti, Sherri Brown, Courtney Ames Watkins

Report Approved By:

Lauren Hollister

Lauren Hollister Project Manager

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**Certificate of Analysis** 

Client

South Carolina Greenville Laboratory Identification 23105 South Carolina Columbia Laboratory Identification 40572 North Carolina Laboratory Certification Number 27 North Carolina Drinking Water Lab Number 45710 NELAP Utah Certificate Number SC000042014-1 Georgia Drinking Water Lab ID 880

Santee Cooper	Project:	Ground Water
Linda Williams	Work Order:	1120813
1 Riverwood Dr.	Received:	12/10/2021 10:27
Moncks Corner, SC 29461	neenveuv	12/10/2021 10.27

Sample Number	Sample Description	Matrix	Sampled	Туре
1120813-01	AF21736 CGYP-4	Ground Water	12/06/21 09:54	Grab
1120813-02	AF21737 CGYP-4DUP	Ground Water	12/06/21 09:59	Grab
1120813-03	AF21738 CGYP-5	Ground Water	12/06/21 11:13	Grab
1120813-04	AF21739 CGYP-6	Ground Water	12/06/21 12:15	Grab
1120813-05	AF21740 WLF-A2-6	Ground Water	12/07/21 10:36	Grab
1120813-06	AF21741 WLF-A2-6DUP	Ground Water	12/07/21 10:41	Grab



Santee Cooper	Project:	Ground Water
1 Riverwood Dr.	Work Order:	1120813
Moncks Corner, SC 29461	Reported:	12/21/21 16:12

#### Sample Data

Sample Number	1120813-01
Sample Description	AF21736 CGYP-4 collected on 12/06/21 09:54

Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	12/16/21 11:24	EPA 7470A	<b>S</b> 7	ELN	B1L0817
Boron	7500	75	ug/L	5.00	12/20/21 15:05	EPA 6010D		MTH	B1L1025
Lithium	76	10	ug/L	1.00	12/20/21 15:37	EPA 6010D		MTH	B1L1025
Molybdenum	ND	10	ug/L	1.00	12/17/21 02:44	EPA 6010D		MTH	B1L0730

```
Sample Number
```

Sample Description

1120813-02 AF21737 CGYP-4DUP collected on 12/06/21 09:59

Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	12/16/21 11:13	EPA 7470A	<b>S</b> 7	ELN	B1L0817
Boron	7100	75	ug/L	5.00	12/20/21 15:08	EPA 6010D		MTH	B1L1025
Lithium	75	10	ug/L	1.00	12/20/21 15:41	EPA 6010D		MTH	B1L1025
Molybdenum	ND	10	ug/L	1.00	12/17/21 03:52	EPA 6010D		MTH	B1L0730

Sample Number Sample Description

1120813-03 AF21738 CGYP-5 collected on 12/06/21 11:13

Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	12/16/21 11:27	EPA 7470A	S7	ELN	B1L0817
Boron	4100	75	ug/L	5.00	12/20/21 15:12	EPA 6010D		MTH	B1L1025
Lithium	91	10	ug/L	1.00	12/20/21 15:45	EPA 6010D		MTH	B1L1025
Molybdenum	ND	10	ug/L	1.00	12/17/21 03:56	EPA 6010D		MTH	B1L0730

Sample Number Sample Description 1120813-04 AF21739 CGYP-6 collected on 12/06/21 12:15

Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	12/16/21 11:30	EPA 7470A	S7	ELN	B1L0817
Boron	6200	75	ug/L	5.00	12/20/21 15:16	EPA 6010D		MTH	B1L1025
Lithium	150	10	ug/L	1.00	12/20/21 15:48	EPA 6010D		MTH	B1L1025
Molybdenum	ND	10	ug/L	1.00	12/17/21 04:00	EPA 6010D		MTH	B1L0730

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Santee Cooper	Project:	Ground Water
1 Riverwood Dr.	Work Order:	1120813
Moncks Corner, SC 29461	Reported:	12/21/21 16:12

1120813-05 Sample Number AF21740 WLF-A2-6 collected on 12/07/21 10:36 **Sample Description** 

Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	12/16/21 11:32	EPA 7470A		ELN	B1L0817
Boron	740	15	ug/L	1.00	12/20/21 14:40	EPA 6010D		MTH	B1L1025
Lithium	66	10	ug/L	1.00	12/20/21 14:40	EPA 6010D		MTH	B1L1025
Molybdenum	ND	10	ug/L	1.00	12/17/21 03:45	EPA 6010D		MTH	B1L0730

Sample Number

1120813-06 **Sample Description** 

AF21741 WLF-A2-6DUP collected on 12/07/21 10:41

Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	12/16/21 11:41	EPA 7470A		ELN	B1L0817
Boron	690	15	ug/L	1.00	12/20/21 14:58	EPA 6010D		MTH	B1L1025
Lithium	62	10	ug/L	1.00	12/20/21 14:58	EPA 6010D		MTH	B1L1025
Molybdenum	ND	10	ug/L	1.00	12/17/21 03:49	EPA 6010D		MTH	B1L0730



Santee Cooper	Project:	Ground Water
1 Riverwood Dr.	Work Order:	1120813
Moneks Corner, SC 29461	Reported:	12/21/21 16:12

Total Metals Quality Control Summary										
Parameter	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flags
Batch B1L0730 - EPA 3005A										
Blank (B1L0730-BLK1)										
Molybdenum	ND	10	ug/L							
LCS (B1L0730-BS1)										
Molybdenum	490	10	ug/L	500		97	80-120			
Duplicate (B1L0730-DUP1)	Source: 1120813-01									
Molybdenum	ND	10	ug/L		ND				20	
Matrix Spike (B1L0730-MS1)	Source: 1120813-01									
Boron	6900	15	ug/L	500	7500	NR	75-125			S3
Lithium	631	10	ug/L	500	76	111	75-125			
Molybdenum	440	10	ug/L	500	ND	89	75-125			
Post Spike (B1L0730-PS1)	Source: 1120813-01									
Molybdenum	520	10	ug/L	500	ND	103	75-125			
Batch B1L0817 - EPA 7470A										
Blank (B1L0817-BLK1)										
Mercury	ND	0.20	ug/L							
LCS (B1L0817-BS1)										
Mercury	4.9	0.20	ug/L	5.00		98	80-120			
Matrix Spike (B1L0817-MS1)	Source: 1120813-02									
Mercury	4.3	0.20	ug/L	5.00	ND	84	75-125			S7
Matrix Spike Dup (B1L0817-MSD1)	Source: 1120813-02									
Mercury	4.3	0.20	ug/L	5.00	ND	85	75-125	2	20	<b>S</b> 7
Post Spike (B1L0817-PS1)	Source: 1120813-02									

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**S**7

Mercury

ug/L

4.00

ND

83

80-120

3.4



Santee Cooper	Project:	Ground Water
1 Riverwood Dr.	Work Order:	1120813
Moneks Corner, SC 29461	Reported:	12/21/21 16:12

	Total Metals Quality Control Summary									
Parameter	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flags
Batch B1L0817 - EPA 7470A										
Post Spike (B1L0817-PS2)	Source: 1120813-01									
Mercury	3.5		ug/L	4.00	ND	86	80-120			S7
Post Spike (B1L0817-PS3)	Source: 1120813-03									
Mercury	3.5		ug/L	4.00	ND	87	80-120			S7
Post Spike (B1L0817-PS4)	Source: 1120813-04									
Mercury	3.4		ug/L	4.00	ND	84	80-120			<b>S</b> 7
Post Spike (B1L0817-PS5)	Source: 1120813-05									
Mercury	4.0		ug/L	4.00	ND	99	80-120			
Post Spike (B1L0817-PS6)	Source: 1120813-06									
Mercury	4.0		ug/L	4.00	ND	99	80-120			
Batch B1L1025 - EPA 3005A										
Blank (B1L1025-BLK1)										
Boron	ND	15	ug/L							
Lithium	ND	10	ug/L							
LCS (B1L1025-BS1)										
Boron	520	15	ug/L	500		105	80-120			
Lithium	567	10	ug/L	500		113	80-120			
Matrix Spike (B1L1025-MS1)	Source: 1120813-05									
Boron	1200	15	ug/L	500	740	94	75-125			
Lithium	650	10	ug/L	500	66	117	75-125			
Matrix Spike Dup (B1L1025-MSD1)	Source: 1120813-05									
Boron	1200	15	ug/L	500	740	101	75-125	3	20	
Lithium	662	10	ug/L	500	66	119	75-125	2	20	
Post Spike (B1L1025-PS1)	Source: 1120813-05									
Boron	1200	15	ug/L	500	740	92	75-125			
Lithium	594	10	ug/L	500	66	106	75-125			



Santee Cooper	Project:	Ground Water
1 Riverwood Dr.	Work Order:	1120813
Moncks Corner, SC 29461	Reported:	12/21/21 16:12

#### **Sample Preparation Data**

Parameter	Batch	Sample ID	Prepared	Analyst
EPA 3005A ICP Digestion				
EPA 3005A	B1L0730	1120813-01	12/13/2021 12:12	CAL
EPA 3005A	B1L1025	1120813-01	12/20/2021 11:01	CAL
EPA 3005A	B1L0730	1120813-02	12/13/2021 12:12	CAL
EPA 3005A	B1L1025	1120813-02	12/20/2021 11:01	CAL
EPA 3005A	B1L0730	1120813-03	12/13/2021 12:12	CAL
EPA 3005A	B1L1025	1120813-03	12/20/2021 11:01	CAL
EPA 3005A	B1L0730	1120813-04	12/13/2021 12:12	CAL
EPA 3005A	B1L1025	1120813-04	12/20/2021 11:01	CAL
EPA 3005A	B1L0730	1120813-05	12/13/2021 12:12	CAL
EPA 3005A	B1L1025	1120813-05	12/20/2021 11:01	CAL
EPA 3005A	B1L0730	1120813-06	12/13/2021 12:12	CAL
EPA 3005A	B1L1025	1120813-06	12/20/2021 11:01	CAL
EPA 7470A Mercury Digestion				
EPA 7470A	B1L0817	1120813-01	12/15/2021 09:28	CAL
EPA 7470A	B1L0817	1120813-02	12/15/2021 09:28	CAL
EPA 7470A	B1L0817	1120813-03	12/15/2021 09:28	CAL
EPA 7470A	B1L0817	1120813-04	12/15/2021 09:28	CAL
EPA 7470A	B1L0817	1120813-05	12/15/2021 09:28	CAL
EPA 7470A	B1L0817	1120813-06	12/15/2021 09:28	CAL



Santee Cooper	Project:	Ground Water
1 Riverwood Dr.	Work Order:	1120813
Moncks Corner, SC 29461	Reported:	12/21/21 16:12

#### **Data Qualifiers and Definitions**

ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not reported

RPD Relative Percent Difference

S3 Estimated value - the spike result exceeded the calibration range. The spike recovery was not evaluated against the control limits.

**S**7 Result calculated by Method of Standard Addition due to sample matrix interference and initial spike failures.

Chain of Custody

Santee Cooper One Riverwood Drive Moneks Comer, SC 29461 Phone: (843)761-8000 Ext. 5148 Fax: (843)761-4175

		/Report Recip			Results No	eeded by			Project,	Rerun reques	st for a	ny flagge				
	VICCIN	@santee	cooper.com		]]			21567	Jn	102.0	<b>A.</b> G#		Sec Yes	No		
												Analysis Gro				
Labwor (interno only)		Sample Locati Description	ion/	Collection Date	Collection Time	Sample Collector	Total # of containers Bottle tyne: (Glace-	Comme Settle type: (f) (f) (f) (f) (f) (f) (f) (f)		e info	B, Li Mo, Ha					
AF21	136	CLEYP-4		12/6/2	1 0154	DEN/ML	1 F	· 3	6-W	2.	B, LI, I	No - 60	20	×		
2	37	CGYP-40	NP		어어		11	1		1	Hg - 74	-70				
3	38	CISTP-5			113											
4	39	CEMP-6		I	1215				1							
s	40	WLF - A2-G		12/7/2	1 1036							_				
101	યા	NLF- 42-6	DUP	1	1041				1	1						
												Samp	e Receiving (Internal	Use Or	60)	
Reling	uished by:	Employee#	Date	Time	Receiv	1	Employ	mployee # Date		Date Time			e Receiving (Internal P (°C):_20-2	Initial:		
	uished by:	Employee#	12/9/21 Date	Time	FC( Receive	dex ed by:	Employ	ree #	# Date		Time	Corre	ect pH: Yes No	,		
Fr	dex		12/10/21	1027	m	BA	-		12/10/7		1027	Prese	rvative Lot#:			
	lished by:	Employee#	Date	Time	Receive	ed by:	Employ		Date		Time					
	- MF	TALS (all )										Date/*	Time/Init for presen	vative:		
Ag			and the second se	rients	MIS	<u>iC.</u>	and the second second	Sypsu	m		Coal	high part is	<u>Flyash</u>		Oil	
Al	□ Fe	🗆 Se			BTEX     Napthale			board vpsum(	all	State of the second second	Ultimate	ure	C Ammonia		as, Oll Qual Moistaite	
As	OK	🗆 Sn	The second se	TPO4	□ THM/HA □ VOC	A	be	low)			🗆 Ash		D % Carbon			
В		🗆 Sr	NH U F	N-0	🗆 Oil & Gr	ease		AIM TOC		PRO CONCERNING AND INCOMENDATION OF THE PROPERTY OF THE PROPER	□ Sulfur □ BTUs		C Mineral			
Ba			CI		E. Coli	iform		Total men Soluble M		and the second second	U Volatile	Matter	Analysis		T interfaced Gay	
Be		and the second second	Br	2	□pH		GI	Purity (Ca	aSO4)		CHN		🛛 % Moisture	Us	d Oil	
Ca	🗆 Mo		D NO.		Dissolved			Moistu Sulfites	re	and the second	her Tests: RF Scan		NODEC			
Cd	🗆 Na	🗆 Zn	SO4	on the state of th	□ Rad 226 □ Rad 228		0,	H		O H	IGI		NPDES D Oil & Grease			
Co	🗆 Ni	🗆 Hg	and the second		D PCB	1.	and the second sec	Chlorides Particle S		100000	ineness articulate Ma	itter	🛛 As			
Cr	D Pb	□ CrVI		S. Marken Marken		N. Letter	Sulfi			1		A States	C TSS	60	TR	

Matrix codes: GW-groundwater, DW-drinking water, SW-surface water, WW-waste water, BW-boiler water, L-limestone, Oil-oil, S-Soil, SL-solid, C-coal, G-gypsum, FA-flyash, BA-bottom ash, M-misc (describe in comment section) Preservative code- 1=<4°C 2=HNO3 3=H2SO4 4-HCI 5=Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> 6-Other (Specify)

Sulfur



# Sample Receipt Verification

	Date ceived: <u>1</u>	2/10/2	021	Work Order: <u>1120813</u>
Carrier Name: Client FedEx UPS Tracking Number: 8162 4067 175	US Mai	[	Cou	rrier Field Services Other:
Receipt Criteria	Y e s	N o	N A	Comments
Shipping container / cooler intact?	X			Damaged Leaking Other:
Custody seals intact?			х	
COC included with samples?	х			
COC signed when relinquished and received?	х			
Sample bottles intact?	x			Damaged Leaking Other:
Sample ID on COC agree with label on bottle(s)?	x			
Date / time on COC agree with label on bottle(s)?	x			
Number of bottles on COC agrees with number of bottles rece	vived? X			
Samples received within holding time?	x			
Sample volume sufficient for analysis?	X			
VOA vials free of headspace (<6mm bubble)?			х	
Samples cooled? Temp at receipt recorded on COC Temp measured with IR thermometer - SN: 9705	50067 X			Ice Cold Packs Dry Ice None
Samples requiring pH preservation at proper pH? Note: Samples for metals analysis may be preserved upon receipt in the la Note: Samples for O&G and VOA analysis – preservation checked at ben				
Samples dechlorinated for parameters requiring chlorine remo the time of sample collection? Note: Chlorine checked at bench for samples requiring Bacterial, VOA, a analysis.	oval at		x	
If in-house pres	ervation use	d – re	cord	Lot #

If it house preservation used a record Lot "										
HCL	H <sub>3</sub> PO <sub>4</sub>									
H <sub>2</sub> SO <sub>4</sub>	NaOH									
HNO <sub>3</sub>	. Other									

Comments:

Were non-conformance issues noted at sample receipt? Yes or No

Non-Conformance issue other than noted above:



a member of The GEL Group INC



PO Box 30712 Charleston, SC 29417 2040 Savage Road Charleston, SC 29407 P 843.556.8171 F 843.766.1178

gel.com

March 09, 2021

Ms. Jeanette Gilmetti Santee Cooper P.O. Box 2946101 OCO3 Moncks Corner, South Carolina 29461

Re: ABS Lab Analytical Work Order: 534962

Dear Ms. Gilmetti:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on February 12, 2021. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at www.gel.com.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4289.

Sincerely,

Julie Roberson

Julie Robinson Project Manager

Purchase Order: 367074 Enclosures



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#### Certificate of Analysis Report for

#### SOOP001 Santee Cooper

#### Client SDG: 534962 GEL Work Order: 534962

#### The Qualifiers in this report are defined as follows:

- \* A quality control analyte recovery is outside of specified acceptance criteria
- \*\* Analyte is a Tracer compound
- \*\* Analyte is a surrogate compound
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Julie Robinson.

Julie Roberson

Reviewed by

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# **Certificate of Analysis**

				Cel	uncate	UI AII	a1y515			Report Da	te: March 9	) 2021
	Company :	Santee (	Cooper							Report Du	in in in iter of the second se	, 2021
	Address :	P.O. Bo		101								
		OCO3										
	_			, South Carol	ina 29461							
	Contact:	Ms. Jean										
	Project:	ABS La		ytical								
	Client Sample ID:							roject:		SOOP00119		
	Sample ID:	5349620					C	lient ID	):	SOOP001		
	Matrix:	Ground										
	Collect Date:	10-FEB		16								
	Receive Date:	12-FEB	-21									
	Collector:	Client										
Parameter	Quali	fier R	esult U	Jncertainty	MDC	RL	Units	PF	DF	Analyst Date	Time Batch	Method
Rad Gas Fl	ow Proportional Con	unting										
	28, Liquid "As Rece	-										
Radium-228	, I		2.63	+/-1.27	1.79	3.00	pCi/L			LXB3 03/01/21	0949 2092726	i 1
	6+Radium-228 Calc	ulation "S	See Pare									
Radium-226+2			3.86	+/-1.34			pCi/L		1	AEA 03/05/21	0658 2092725	2
Rad Radiur		D · 1										
Lucas Cell, Radium-226	Ra226, Liquid "As	Received		+/-0.427	0.269	1.00	- C: /I			MV119 02/24/21	0014 2002640	
	ing Analytical Math		1.23		0.368	1.00	pCi/L			MXH8 02/24/21	0914 2092649	3
	ing Analytical Meth		perform	nea:				4 1				
Method	Descri	1pt10n )4.0/SW846	0320 Mc	dified				Analys	t Coi	nments		
2	Calcula		<i>)</i> 520 WI0	unicu								
3		03.1 Modifie	ed									
Surrogate/7	Tracer Recovery	Test				R	esult	Nomir	al	Recovery%	Acceptable L	imits
Barium-133 T		GFPC, Ra22	8, Liquid	"As Received"						75.2	(15%-125%)	
Notes:	Incertainty is calcula	ated at the	95% c	onfidence leve	21 (1 96_sign	na)						
•	•		9570 CC		21 (1.90-sign	iia).						
	aders are defined as	tollows:		Loll C. Critic	al Laval							
DF: Dilutio	JII FACTOR			Lc/LC: Critic	ai Level							

DF: Dilution Factor Lc/LC: Critical Level **DL: Detection Limit** PF: Prep Factor MDA: Minimum Detectable Activity RL: Reporting Limit MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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# **Certificate of Analysis**

				Cer	mcate	ol Alla	arysis			Repor	t Dat	e: March 9	9, 2021
	Company : Address :	Santee Co P.O. Box OCO3	2946	5101									
	Contact:	Moncks C Ms. Jeane		er, South Carol Filmetti	ina 29461								
	Project:	ABS Lab											
	Client Sample ID:		_					roject:		SOOP001	19		
	Sample ID: Matrix:	53496200 Ground W					C	lient ID	):	SOOP001			
	Collect Date:	10-FEB-2											
	Receive Date:	10 T EB 2		.23									
	Collector:	Client											
Parameter	Quali	fier Res	ult	Uncertainty	MDC	RL	Units	PF	DF	Analyst D	ate	Time Batch	Method
Rad Gas Fl	ow Proportional Cou	unting											
	28, Liquid "As Rece												
Radium-228	6+Radium-228 Calc		2.04 o <b>D</b> oi	+/-1.09	1.56	3.00	pCi/L			LXB3 03/0	)1/21	0949 2092726	1
Radium-226+			2.83	+/-1.15			pCi/L		1	AEA 03/0	)5/21	0658 2092725	2
Rad Radiur													
Lucas Cell, Radium-226	, Ra226, Liquid "As		.796	+/-0.361	0.347	1.00	pCi/L			MXH8 02/2	04/21	0914 2092649	3
	ving Analytical Meth				0.347	1.00	pei/L			WIA118 02/2	24/21	0914 2092049	5
Method	Descri	-						Analys	t Co	mments			
1		04.0/SW846 93	320 M	lodified									
2 3	Calcula EPA 90	tion )3.1 Modified											
		Test				R	esult	Nomir	al	Recovery	%	Acceptable L	imits
Barium-133 T	2		Liqui	d "As Received"			count	Ttomm	lui	80.8	/0 /	(15%-125%)	
Notes: Counting U	Incertainty is calcula	nted at the 9	5% o	confidence leve	el (1.96-sign	na).							
Column he	eaders are defined as	follows:											
DF: Dilution	on Factor			Lc/LC: Critic	al Level								

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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# **Certificate of Analysis**

						incate		11 y 515						
											Rep	ort Da	te: March	9, 2021
	Company :		tee Coop											
	Address :		. Box 294	461(	01									
		OCO			~ . ~ .									
	<b>a</b>				South Carol	ina 29461								
	Contact:		Jeanette											
	Project:		S Lab An	alyt	ical									
	Client Sample ID:	AE	94863					Р	roject:		SOOP00	)119		
	Sample ID:	534	962003					C	Client ID	):	SOOP00	)1		
	Matrix:	Gro	und Wate	er										
	Collect Date:	10-I	FEB-21 1	2:28	8									
	Receive Date:	12-I	FEB-21											
	Collector:	Clie	ent											
Parameter	Qual	fier	Result	Ur	ncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time Batch	Metho
Rad Gas Fl	ow Proportional Co	unting	5											
	28, Liquid "As Rec													
Radium-228	· •	U	1.14	1	+/-1.06	1.74	3.00	pCi/L	,		LXB3 0	3/01/21	0949 209272	6 1
	6+Radium-228 Cal	culatic	on "See P	aren										
Radium-226+2			1.90	)	+/-1.12			pCi/L	,	1	AEA 0	3/05/21	0658 209272	5 2
Rad Radiur														
	Ra226, Liquid "As	Recei												
Radium-226			0.752		+/-0.342	0.328	1.00	pCi/L	,		MXH8 0	2/24/21	0946 209264	9 3
The follow	ring Analytical Met	10ds v	vere perfe	orme	ed:									
Method	Descr								Analys	t Co	mments			
1			V846 9320	Modi	ified									
2	Calcula		1. 6. 1											
3	EPA 9		Jained											
	Tracer Recovery	Test					R	esult	Nomir	nal	Recover		Acceptable I	
Barium-133 T	racer	JFPC, J	Ra228, Liqi	uid "/	As Received"						88	.7	(15%-125%	<b>b</b> )
Notes:														
	Incertainty is calculated	ated at	t the 95%	o cor	nfidence leve	el (1.96-sigr	na).							
Column he	aders are defined as	follo	ws:											
$\frac{\text{Column field}}{\text{DF} \cdot \text{Dilution}}$		10110		T	c/LC·Critic	al Level								

DF: Dilution Factor Lc/LC: Critical Level **DL: Detection Limit** PF: Prep Factor MDA: Minimum Detectable Activity RL: Reporting Limit MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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# **Certificate of Analysis**

			Cel	rincate	ol Alla	arysis			Re	port Da	te: M	arch 9	, 2021
	Company : Address :	Santee Cooper P.O. Box 2940 OCO3 Monetes Corres		ing 20461									
	Contact:	Ms. Jeanette C		lilla 29401									
	Project:	ABS Lab Ana	lytical										
	Client Sample ID:						roject:		SOOP				
	Sample ID:	534962004				C	lient ID	):	SOOP	001			
	Matrix: Collect Date:	Ground Water 10-FEB-21 13											
	Receive Date:	10-гев-21 15 12-FEB-21	0.00										
	Collector:	Client											
Parameter	Quali	fier Result	Uncertainty	MDC	RL	Units	PF	DF	Analys	t Date	Time F	Batch	Method
Rad Gas Fl	ow Proportional Co	unting											
	28, Liquid "As Rece												
Radium-228	6+Radium-228 Calc	3.63	+/-1.20	1.42	3.00	pCi/L			LXB3	03/01/21	0949 20	092726	1
Radium-226+2		4.69	+/-1.26			pCi/L		1	AEA	03/05/21	0658 20	092725	2
Rad Radiur	m-226					1							
	Ra226, Liquid "As												
Radium-226		1.05	+/-0.372	0.324	1.00	pCi/L			MXH8	02/24/21	0946 20	092649	3
	ing Analytical Meth		rmed:										
Method	Descri	1pt10n )4.0/SW846 9320 N	Iodified				Analys	t Co	mments				
2	Calcula		louniou										
3	EPA 90	3.1 Modified											
Surrogate/7	Tracer Recovery	Test			R	esult	Nomin	al	Recove	ery%	Accepta	ble Li	mits
Barium-133 T	racer C	GFPC, Ra228, Liqui	d "As Received"						8	1.2	(15%-	-125%)	
Notes: Counting U	Incertainty is calcula	ated at the 95%	confidence leve	el (1.96-sign	na).								
Column he	aders are defined as	follows:											
DF: Dilutio	on Factor		Lc/LC: Critic	al Level									

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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## **QC Summary**

Report Date: March 9, 2021

Page 1 of 2

	Santee Cooper
	P.O. Box 2946101
	OCO3
	Moncks Corner, South Carolina
Contact:	Ms. Jeanette Gilmetti

Workorder: 534962

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range Anlst	Date Time
Rad Gas Flow									
Batch 2092726 —									
QC1204754313 534962004 DUP									
Radium-228		3.63		4.58	pCi/L	23.1		(0% - 100%) LXB3	03/01/21 09:49
	Uncertainty	+/-1.20		+/-1.47					
QC1204754314 LCS									
Radium-228	54.7			53.3	pCi/L		97.4	(75%-125%)	03/01/21 09:48
	Uncertainty			+/-3.59					
QC1204754312 MB									
Radium-228			U	-0.104	pCi/L				03/01/21 09:49
	Uncertainty			+/-0.780					
<b>Rad Ra-226</b> Batch 2092649 ——									
QC1204754137 534962001 DUP									
Radium-226		1.23		1.11	pCi/L	10.4		(0% - 100%) MXH8	02/24/21 09:46
Rudum 220	Uncertainty	+/-0.427		+/-0.382	pent	10.4			02/24/21 09.40
QC1204754141 LCS									
Radium-226	27.0			21.8	pCi/L		80.4	(75%-125%)	02/24/21 09:47
	Uncertainty			+/-1.65	•			. ,	
QC1204754136 MB									
Radium-226			U	0.0979	pCi/L				02/24/21 09:46
	Uncertainty			+/-0.143					
QC1204754139 534962001 MS									
Radium-226	135	1.23		106	pCi/L		77.7	(75%-125%)	02/24/21 09:46
	Uncertainty	+/-0.427		+/-7.27					

#### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

- The Qualifiers in this report are defined as follows:
  - \*\* Analyte is a Tracer compound
  - < Result is less than value reported
  - > Result is greater than value reported
  - BD Results are either below the MDC or tracer recovery is low
  - FA Failed analysis.

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## **QC Summary**

armnar	me	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Н	Analytical holding time was	s exceeded										
J	See case narrative for an explanation											
J	Value is estimated											
Κ	Analyte present. Reported value may be biased high. Actual value is expected to be lower.											
L	Analyte present. Reported v	value may be biased	low. Actual	value is ex	pected to b	be higher.						
М	M if above MDC and less the	han LLD										
М	REMP Result > MDC/CL and < RDL											
N/A	RPD or %Recovery limits do not apply.											
N1	See case narrative											
ND	Analyte concentration is not detected above the detection limit											
NJ	Consult Case Narrative, Da	ta Summary packag	e, or Project	Manager o	concerning	this qualifi	er					
Q	One or more quality control	l criteria have not be	een met. Refe	r to the ap	plicable na	rrative or I	DER.					
R	Sample results are rejected											
U	Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.											
UI	Gamma SpectroscopyUnc	certain identification	1									
UJ	Gamma SpectroscopyUnc	certain identification	1									
UL	Not considered detected. The associated number is the reported concentration, which may be inaccurate due to a low bias.											
Х	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier											
Y	Other specific qualifiers were required to properly define the results. Consult case narrative.											
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.											
h	Preparation or preservation holding time was exceeded											

Fine Relative Percent Difference (RPD) obtained from the sample duplicate (DOP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

\* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

#### Radiochemistry Technical Case Narrative Santee Cooper SDG #: 534962

Product: GFPC, Ra228, Liquid Analytical Method: EPA 904.0/SW846 9320 Modified Analytical Procedure: GL-RAD-A-063 REV# 5 Analytical Batch: 2092726

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<b><u>Client Sample Identification</u></b>
534962001	AE94861
534962002	AE94862
534962003	AE94863
534962004	AE94864
1204754312	Method Blank (MB)
1204754313	534962004(AE94864) Sample Duplicate (DUP)
1204754314	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

#### **Data Summary:**

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Product: Lucas Cell, Ra226, Liquid Analytical Method: EPA 903.1 Modified Analytical Procedure: GL-RAD-A-008 REV# 15 Analytical Batch: 2092649

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<b><u>Client Sample Identification</u></b>
534962001	AE94861
534962002	AE94862
534962003	AE94863
534962004	AE94864
1204754136	Method Blank (MB)
1204754137	534962001(AE94861) Sample Duplicate (DUP)
1204754139	534962001(AE94861) Matrix Spike (MS)
1204754141	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

### **Data Summary:**

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

### **Certification Statement**

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

			Chai	in of	f Cu	sto	dy			53	4962		loneks (843)7	Se Rive Corne 61-80	ntee C wood r, SC
Customer Emai	il/Report Recipient:	Date	Results Ne	eded l	by:		Ρ	roject,	/Task/	/Unit #:	Rerun	request			3)761
LOWILLIA	@santeecooper.com		//			121	567	<u></u>	102.0	29.GØI	36500	Yes	No		00
												105		Analysi	s Grou
Labworks ID # (Internal use only)	Sample Location/ Description	Collection Date	Collection Time	Sample Collector	Total # of containers	Bottle type: (Glass- G/Plastic-P)	Grab (G) or Composite (C)	Matrix(see below)	Preservative (see	• R • N	Comments fethod # eporting limit lisc. sample info ny other notes		RAD 226	228	TOTAL RAD CALC
4E94861	-GND-1	2/10/21	1116	MDG	2	P	G	GW	2				×	X	
E94862	CGYP-2		1223	1					1			1		$\hat{1}$	<u>×</u> 1
E 74863	CGYF-2 DUP		122.8												++
€94864	CGYP-3		1338	1				1	1					1	
			<u> </u>	м — Дж			<u> </u>								
		<u></u>		<u>.</u>		<u></u>		<u>, 15 - 15 - 15 - 15 - 15 - 15 - 15 - 15 </u>	and an						
								i kiy			San				
			· · · · ·												
Relinquished by:	Employee# Date	Time	Received	L	l	I					Sample Receiving (Int	ernal Lie			<u> </u>
Moun Relinguished by:	35594 2/12/21	2930	21	1	1.000	oloyee# テモレ	1	Date /12/21		Time -930	TEMP (°C):		utial:		<u></u>
	Employee# Date	Time	Redensed	by: //	Emj	oloyee #		Date		Time	Correct pH: Yes Preservative Lot#:	No			
helinquished by:	Employee# Date	127 Vime	Received	<u>у</u> by:	Emp	loyee #		122 Date		1122 Time	Tieservauve Lot#:				
											Date/Time/Init for pr	eservati	ve:		
Ag □ Cu Al □ Fe	TALS (all )     Nutrie       □ Sb     □ TOC       □ Se     □ DOC	C	MISC BTEX Napthalene		an	allboa)	Constant of the second			<u>Coal</u> Itimate	<u>Flyash</u> □ Ammonia		Trans	<u>Oil</u> oirg	ual.
As □K B □Li	□ Sn □ TP/TI □ Sr □ NH3-	NO4	THM/HAA VOC	. Street of		Gypsu below) U AIM	r i i		τ	] % Moist ] Ash	□ % Carbon		Cole		
Ba 🗆 Mg			Oil & Greas E. Coli Total Colifo			ll TOC ll Total	metals		Ľ.	Sulfur BTUs Volatile	Mineral     Analysi	s	11	cine fa	
Be □ Mn Ca □ Mo			pH Dissolved A	\$		U Solub O Purity O % Mo	le Meta (CaSO ssture	13 4)	Ē	CHN CHN	Matter 🗍 Sieve 🗆 % Moisture		Used		iases.
Cd 🗆 Na	□ Zn □ SO4		Dissolved For Rad 226	•		0 Sulfit 0 pH	es			F Scan	NPDES		Meu	ipoint le in q Cd.C.E	
Co 🗆 Ni Cr 🗆 Pb	Hg     CrVI		Rad 228 PCB			Chlori Partic				eness ticulate Ma	tter U As U TSS		Hg) TX GOFE		

Matrix codes: GW-groundwater, DW-drinking water, SW-surface water, WW-waste water, BW-boiler water, L-limestone, Oil-oil, S-Soil, SL-solid, C-coal, G-gypsum, FA-flyash, BA-bottom ash, M-misc (describe in comment section) Preservative code: 1=<4°C 2=HNO3 3=H2SO4 4-HCl 5=Na2S2O3 6-Other (Specify)

lient:	<u>500P</u>			SAMPLE RECEIPT & REVIEW FORM
Received )		ree o		SDG/AR/COC/Work Order: 534962 Date Received: 12 - 7, ab 21
Carri	er and Tracking Number	~194		Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other
uspected F	lazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigatio
.)Shipped at	s a DOT Hazardous?			Hazard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? YesNo
) Did the cl ceived as r	ient designate the samples are to be adioactive?		_	COC notation or radioactive stickers on containers equal client designation.
) Did the R dioactive?	SO classify the samples as		_	Maximum Net Counts Observed* (Observed Counts - Area Background Counts):CPM / mR/Hr Classified as: Rad 1 Rad 2 Rad 3
) Did the cl	ient designate samples are hazardous	?	/	COC notation or hazard labels on containers equal client designation.
) Did the RS	60 identify possible hazards?		-	f D or E is yes, select Hazards below. • PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:
	ample Receipt Criteria	Yes	NA	2 Comments/Qualifiers (Required for Non-Conforming Items)
sealed?	g containers received intact and	1		Chere Appacable: Seals broken Damaged container Leaking container Other (describe)
Chain o with shi	f custody documents included pment?	1 5		Circle Applicable: Client contacted and provided COC COC created upon receipt
within (	requiring cold preservation $0 \le 6$ deg. C)?*		-	Preservation Method: Wet Ice Ice Packs Dry ice None Other. *all temperatures are recorded in Celsius TEMP: 19 c
Daily ch temperat	eck performed and passed on IR ure gun?	7		Temperature Device Serial #: <b>2 2 1 - 20</b> Secondary Temperature Device Serial # (If Applicable):
	containers intact and sealed?	./		Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
Samples at proper	requiring chemical preservation pH?	$\mathbf{F}$		Sample ID's and Containers Affected:
Do a	ny samples require Volatile Analysis?			If Yes, are Encores or Soil Kits present for solids? YesNoNA(If yes, take to VOA Freezer) Do liquid VOA vials contain acid preservation? YesNoNA(If unknown, select No) Are liquid VOA vials free of headspace? YesNoNA Sample ID's and containers affected:
Samples	received within holding time?			ID's and tests affected:
Sample I bottles?	D's on COC match ID's on			ID's and containers affected:
Date & ti on bottles	me on COC match date & time ?	1	T	Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
number in	of containers received match idicated on COC?	~		Circle Applicable: No container count on COC Other (describe)
GEL prov	le containers identifiable as rided by use of GEL labels?			
relinquish	n is properly signed in ed/received sections? Continuation Form if needed):	」		Circle Applicable: Not relinquished Other (describe)

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Utah NELAP SC000122020–34	Texas NELAP	T104704235-21-19
	Utah NELAP	
Vermont VT87156	Vermont	VT87156
Virginia NELAP 460202	Virginia NELAP	460202
Washington C780	Washington	C780

List of current GEL Certifications as of 09 March 2021



a member of The GEL Group INC



PO Box 30712 Charleston, SC 29417 2040 Savage Road Charleston, SC 29407 P 843.556.8171 F 843.766.1178

gel.com

May 05, 2021

Ms. Jeanette Gilmetti Santee Cooper P.O. Box 2946101 OCO3 Moncks Corner, South Carolina 29461

Re: ABS Lab Analytical Work Order: 540415

Dear Ms. Gilmetti:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on April 09, 2021. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at www.gel.com.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4289.

Sincerely,

Julie Roberson

Julie Robinson Project Manager

Purchase Order: 367074 Enclosures



2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

### Certificate of Analysis Report for

### SOOP001 Santee Cooper

### Client SDG: 540415 GEL Work Order: 540415

### The Qualifiers in this report are defined as follows:

- \* A quality control analyte recovery is outside of specified acceptance criteria
- \*\* Analyte is a Tracer compound
- \*\* Analyte is a surrogate compound
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Julie Robinson.

Julie Roberson

Reviewed by

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

# **Certificate of Analysis**

			Cel	rincate	01 Alla	arysis			R	eport Da	te: May 5	, 2021
	Company : Address :	Santee Cooper P.O. Box 2946 OCO3										
			er, South Carol	ina 29461								
	Contact:	Ms. Jeanette C										
	Project:	ABS Lab Ana	lytical									
	Client Sample ID:						roject:			P00119		
	Sample ID:	540415001				C	Client ID	):	SOO	2001		
	Matrix:	Ground Water										
	Collect Date:	07-APR-21 11	:06									
	Receive Date:	09-APR-21										
	Collector:	Client										
Parameter	Quali	fier Result	Uncertainty	MDC	RL	Units	PF	DF	Analy	st Date	Time Batch	Method
Rad Gas Fl	ow Proportional Co	unting										
GFPC, Ra2	28, Liquid "As Reco	eived"										
Radium-228		5.66	+/-1.81	2.39	3.00	pCi/L	,		LXB3	04/26/21	1145 2114215	5 1
	6+Radium-228 Calc					~ ~ ~						
Radium-226+2 Rad Radiur		6.37	+/-1.83			pCi/L		1	AEA	05/05/21	0724 2117539	) 2
	Ra226, Liquid "As	Pacaiwad"										
Radium-226	Razzo, Liquid As	0.713	+/-0.274	0.254	1.00	pCi/L			LXP1	04/22/21	0915 2114169	) 3
	ing Analytical Meth					F						
Method	Descr	-					Analys	t Co	mment	s		
1		)4.0/SW846 9320 M	lodified				<u> </u>			0		
2	Calcula	ntion										
3	EPA 90	03.1 Modified										
Surrogate/7	Tracer Recovery	Test			R	esult	Nomin	al	Reco	very%	Acceptable L	imits
Barium-133 T	racer C	GFPC, Ra228, Liqui	d "As Received"							59.9	(15%-125%	)
Notes: Counting U	ncertainty is calcula	ated at the 95% of	confidence leve	el (1.96-sign	na).							
Column he	aders are defined as	follows:										
DF Dilutio			Lc/LC Critic	al Level								

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	a SQL: Sample Quantitation Limit

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# **Certificate of Analysis**

			Cel	incate	UI Alla	<u>11 y 515</u>			Re	port Dat	te:	May 5,	2021
	Company : Address :	Santee Cooper P.O. Box 29461 OCO3	01										
	Contact: Project:	Moncks Corner Ms. Jeanette Gi ABS Lab Analy	lmetti	ina 29461									
	Client Sample ID: Sample ID: Matrix: Collect Date: Receive Date: Collector:	AF00629 540415002 Ground Water 07-APR-21 12: 09-APR-21 Client	16				roject: lient ID	):	SOOP( SOOP(				
Parameter	Quali	fier Result L	Incertainty	MDC	RL	Units	PF	DF	Analys	st Date	Time	Batch	Method
	ow Proportional Co												
Radium-228	28, Liquid "As Rece 6+Radium-228 Calc	U 2.81	+/-1.83	2.94	3.00	pCi/L			LXB3	04/20/21	1203	2114215	1
Radium-226+2 Rad Radium	228 Sum	3.89	+/-1.86			pCi/L		1	AEA	05/05/21	0724	2117539	2
Radium-226	Ra226, Liquid "As ing Analytical Meth	1.08	+/-0.346	0.330	1.00	pCi/L			LXP1	04/22/21	0915	2114169	3
Method	Descri	1	icu.				Analys	t Cor	nments				
1 2 3	EPA 90 Calcula	04.0/SW846 9320 Mo	dified				<u>r marys</u>	<u>t Col</u>	<u>Innents</u>				
Surrogate/T	racer Recovery	Test			R	esult	Nomin	al	Recov	erv%	Accep	table L	imits
Barium-133 Tr		GFPC, Ra228, Liquid	"As Received"							62.4	1	%-125%)	
Notes: Counting U	ncertainty is calcula	uted at the 95% co	onfidence leve	el (1.96-sign	na).								
	aders are defined as			-									
DF: Dilutio	on Factor	-	Lc/LC: Critic	al Level									

DF Dilution Factor Lc/LC: Critical Level **DL: Detection Limit** PF: Prep Factor MDA: Minimum Detectable Activity RL: Reporting Limit MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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# **Certificate of Analysis**

					i uncate		al y 515			л			N 7	2021
										K	leport Da	te:	May 5,	2021
	Company :		ee Coope											
	Address :		Box 294	46101										
		OCC Mon		ner, South Caro	olina 20461									
	Contact:		Jeanette		Jiila 29401									
	Project:		S Lab An											
	Client Sample ID:		0630				P	Project:		SOOI	P00119			
	Sample ID:		415003					Client ID	).	SOOL				
	Matrix:		ind Wate	er.					•	5001	001			
	Collect Date:		APR-21 1											
	Receive Date:		APR-21	5.10										
	Collector:	Clier												
	concetor.	ene	it.											
Parameter	Quali	fier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analy	yst Date	Time	Batch	Metho
Rad Gas Fl	ow Proportional Co	unting												
GFPC, Ra2	28, Liquid "As Rece	eived"												
Radium-228	-		3.91		2.18	3.00	pCi/L			LXB3	04/20/21	1021	2114215	1
	6+Radium-228 Calc	ulation												
Radium-226+			4.18	+/-1.59			pCi/L		1	AEA	05/05/21	0724	2117539	2
Rad Radiur		D :												
Radium-226	Ra226, Liquid "As	U	ved 0.272	+/-0.226	0.347	1.00	pCi/L			I XP1	04/22/21	0947	2114169	3
	ring Analytical Meth				0.547	1.00	pei/L	,		LATI	04/22/21	0747	211410)	5
Method	Descri			Jined.				Analys	t Co	mmont				
1		-	846 9320 1	Modified				Anarys			.5			
2	Calcula													
3	EPA 90	)3.1 Mo	dified											
Surrogate/7	Tracer Recovery	Test				R	esult	Nomir	nal	Reco	very%	Accep	table L	imits
Barium-133 T	racer (	GFPC, R	a228, Liqu	uid "As Received"							58.5	(15	%-125%	)
Notes:														
	Incertainty is calcula	ated at	the 95%	confidence le	vel (1.96-sigi	na).								
•	aders are defined as				. 0									
DF: Dilutio		101101		Lc/LC: Criti	ical Level									

DF: Dilution FactorLc/LC: Critical LevelDL: Detection LimitPF: Prep FactorMDA: Minimum Detectable ActivityRL: Reporting LimitMDC: Minimum Detectable ConcentrationSQL: Sample Quantitation Limit

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# **Certificate of Analysis**

					UC	lincate	UI Alla	a1 y 515			п			M. 5	2021
											K	leport Da	te:	May 5,	2021
	Company :		ee Coop												
	Address :		Box 294	46101											
		OCC Mon		ner South	Carol	ina 29461									
	Contact:			Gilmetti	Caro	lina 29401									
	Project:		S Lab An												
	Client Sample ID:							P	roject:		SOOI	200119			
	Sample ID:		415004						lient ID	).	SOOL				
	Matrix:		and Wate	-r				C			5001	001			
	Collect Date:		APR-21 1												
	Receive Date:		APR-21	13.21											
	Collector:	Clie													
	Conector.	Che	n												
Parameter	Quali	fier	Result	Uncertai	nty	MDC	RL	Units	PF	DF	Analy	st Date	Time	Batch	Metho
Rad Gas Fl	ow Proportional Cou	unting													
	28, Liquid "As Rece														
Radium-228	-		4.76			2.41	3.00	pCi/L	,		LXB3	04/20/21	1021	2114215	1
	6+Radium-228 Calc	ulatio													
Radium-226+2			5.05	5 +/-1	.82			pCi/L	,	1	AEA	05/05/21	0724	2117539	2
Rad Radiur		<b>р</b> .	1.1												
Lucas Cell, Radium-226	Ra226, Liquid "As	Recei	ved" 0.290	) +/-0.	101	0.247	1.00	pCi/L			I VD1	04/22/21	0047	2114160	3
	ing Analytical Math	ode u			191	0.247	1.00	pci/L	,		LAFI	04/22/21	0947	2114109	3
Method	ing Analytical Meth		ere perio	ormed:					A a 1	+ C -					
1	Descri	1	846 9320	Modified					Analys	st Co	mment	S			
2	Calcula		040 7520	Wiodified											
3	EPA 90	3.1 Mo	dified												
Surrogate/7	racer Recovery	Test					R	Result	Nomir	nal	Reco	very%	Accep	table L	imits
Barium-133 T	racer C	FPC, F	a228, Liq	uid "As Rece	ived"							56.1	(15	%-125%	)
Notes:															
	ncertainty is calcula	ted at	the 95%	confiden	ce lev	el (1.96-sign	na).								
-	aders are defined as					· 0	,								
DF: Dilutio		101101	<u>vb.</u>	Lc/LC·	Critic	al Level									

DF: Dilution FactorLc/LC: Critical LevelDL: Detection LimitPF: Prep FactorMDA: Minimum Detectable ActivityRL: Reporting LimitMDC: Minimum Detectable ConcentrationSQL: Sample Quantitation Limit

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# **Certificate of Analysis**

					incate	UI Alla	al y 515							
										Re	eport Da	te:	May 5,	2021
	Company :		Cooper											
	Address :		ox 2946	101										
		OCO3	a											
				r, South Carol	ina 29461									
	Contact:		anette Gi											
	Project:		ab Anal	ytical										
	Client Sample ID:						Р	roject:		SOOP				
	Sample ID:	540415	005				C	lient ID	):	SOOP	001			
	Matrix:	Ground	l Water											
	Collect Date:	07-APF	R-21 14:	:20										
	Receive Date:	09-APF	R-21											
	Collector:	Client												
Parameter	Quali	fier R	esult U	Uncertainty	MDC	RL	Units	PF	DF	Analy	st Date	Time	Batch	Method
Rad Gas Fl	ow Proportional Cou	inting												
GFPC, Ra2	28, Liquid "As Rece	eived"												
Radium-228			7.50	+/-1.99	2.74	3.00	pCi/L			LXB3	04/26/21	1145	2114215	1
	6+Radium-228 Calc	ulation "	See Pare	ent Products"										
Radium-226+2			7.93	+/-2.01			pCi/L		1	AEA	05/05/21	0724	2117539	2
Rad Radiur														
	Ra226, Liquid "As	Received												
Radium-226			0.433	+/-0.240	0.312	1.00	pCi/L			LXP1	04/22/21	0947	2114169	3
	ing Analytical Meth		e perforr	med:										
Method	Descri	-						Analys	t Co	mments	3			
1		04.0/SW846	5 9320 Mo	odified										
2 3	Calcula													
		)3.1 Modifi	ed			_				_				
	2	Test				R	Result	Nomin	al	Recov	•	-	table Li	
Barium-133 T	racer C	FPC, Ra22	28, Liquid	"As Received"						:	50.7	(15	%-125%)	
Notes:														
Counting U	Incertainty is calcula	ted at the	e 95% c	onfidence leve	el (1.96-sign	na).								
Column he	aders are defined as	follows:												
DF: Dilutio				Lc/LC: Critic	al Level									

DF: Dilution Factor Lc/LC: Critical Level **DL: Detection Limit** PF: Prep Factor MDA: Minimum Detectable Activity RL: Reporting Limit MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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# **Certificate of Analysis**

			Cel	incate	UI Alla	<u>11 y 515</u>			Repor	t Date	: May	5, 2021
	Company : Address :	Santee Cooper P.O. Box 2946 OCO3										
	Contact: Project:	Moncks Corne Ms. Jeanette G ABS Lab Anal	ilmetti	ina 29461								
	Client Sample ID: Sample ID: Matrix: Collect Date: Receive Date: Collector:	AF00634 540415006 Ground Water 07-APR-21 15: 09-APR-21 Client	:09				roject: lient ID	):	SOOP001 SOOP001	19		
Parameter	Quali	fier Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst D	ate	Time Bate	ch Method
	ow Proportional Co											
Radium-228	28, Liquid "As Reco 6+Radium-228 Calc	U 2.33	+/-1.60	2.50	3.00	pCi/L			LXB3 04/2	20/21	1021 21142	215 1
Radium-226+2 Rad Radium	228 Sum	2.84	+/-1.62			pCi/L		1	AEA 05/0	5/21	0724 21175	539 2
Radium-226	Ra226, Liquid "As	0.506	+/-0.261	0.295	1.00	pCi/L			LXP1 04/2	2/21	0947 21141	.69 3
Method	ing Analytical Meth	1	med.				Analys	t Cor	nmonte			
1 2 3	EPA 90 Calcula	)4.0/SW846 9320 Mo	odified				<u>T Anary s</u>		inicitis			
Surrogate/T	racer Recovery	Test			R	esult	Nomin	al	Recovery	% A	Acceptable	Limits
Barium-133 T	racer (	GFPC, Ra228, Liquid	"As Received"						59.6		(15%-125	5%)
Notes: Counting U	ncertainty is calcula	uted at the 95% c	onfidence leve	el (1.96-sign	na).							
Column he	aders are defined as	follows:		-								
DF: Dilutio	on Factor		Lc/LC: Critic	al Level								

DF: Dilution Factor Lc/LC: Critical Level **DL: Detection Limit** PF: Prep Factor MDA: Minimum Detectable Activity RL: Reporting Limit MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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# **Certificate of Analysis**

				inicate	UI AII	ary 515						0001
									Report D	ate:	May 5,	2021
	Company :	Santee Cooper										
	Address :	P.O. Box 2940	5101									
		OCO3										
			er, South Carol	ina 29461								
	Contact:	Ms. Jeanette C										
	Project:	ABS Lab Ana	lytical									
	Client Sample ID:						roject:		SOOP00119			
	Sample ID:	540415007				C	lient ID	:	SOOP001			
	Matrix:	Ground Water	•									
	Collect Date:	07-APR-21 16	5:02									
	Receive Date:	09-APR-21										
	Collector:	Client										
Parameter	Quali	fier Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst Date	Time	e Batch	Method
Rad Gas Fl	ow Proportional Cou	unting										
GFPC, Ra2	28, Liquid "As Rece	eived"										
Radium-228	-	2.83	+/-1.53	2.19	3.00	pCi/L			LXB3 04/20/2	1 1021	2114215	1
	6+Radium-228 Calc	ulation "See Pa	rent Products"									
Radium-226+2		3.68	+/-1.55			pCi/L		1	AEA 05/05/21	0724	2117539	2
Rad Radiur												
	Ra226, Liquid "As					~ ~ ~						
Radium-226		0.850	+/-0.266	0.189	1.00	pCi/L			LXP1 04/22/21	0947	2114169	3
	ing Analytical Meth	-	rmed:									
Method	Descri	1					Analys	t Coi	nments			
1		)4.0/SW846 9320 M	Iodified									
2 3	Calcula EDA 00	ition )3.1 Modified										
									<b>D</b>			
	2	Test			R	lesult	Nomin	al	Recovery%		otable L	
Barium-133 T	racer C	GFPC, Ra228, Liqui	d "As Received"						53.1	(1:	5%-125%)	)
Notes:												
Counting U	Incertainty is calcula	ited at the 95%	confidence leve	el (1.96-sign	na).							
Column he	aders are defined as	follows:										
DF: Dilutio			Lc/LC: Critic	al Level								

DF: Dilution Factor Lc/LC: Critical Level **DL: Detection Limit** PF: Prep Factor MDA: Minimum Detectable Activity RL: Reporting Limit MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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# **QC Summary**

Report Date: May 5, 2021

Page 1 of 2

Santee Cooper
P.O. Box 2946101
OCO3
Moncks Corner, South Carolina
Ms. Jeanette Gilmetti

Workorder: 540415

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range Anlst	Date Time
Rad Gas Flow									
Batch 2114215 —									
QC1204793535 540415006 DUP									
Radium-228	U	2.33		4.22	pCi/L	57.7		(0% - 100%) LXB3	04/20/21 10:21
	Uncertainty	+/-1.60		+/-1.79					
QC1204793536 LCS									
Radium-228	53.8			52.3	pCi/L		97.2	(75%-125%)	04/20/21 10:24
	Uncertainty			+/-3.29					
QC1204793534 MB									
Radium-228			U	-1.71	pCi/L				04/20/21 10:20
	Uncertainty			+/-1.16					
Rad Ra-226 Batch 2114169 —									
QC1204793424 540415001 DUP									
Radium-226		0.713		0.672	pCi/L	5.99		(0% - 100%) LXP1	04/22/21 10:20
	Uncertainty	+/-0.274		+/-0.268					
QC1204793426 LCS									
Radium-226	27.0			22.8	pCi/L		84.3	(75%-125%)	04/22/21 10:20
	Uncertainty			+/-1.49					
QC1204793423 MB									
Radium-226			U	0.133	pCi/L				04/22/21 10:20
	Uncertainty			+/-0.184					
QC1204793425 540415001 MS									
Radium-226	135	0.713		105	pCi/L		77.2	(75%-125%)	04/22/21 10:20
	Uncertainty	+/-0.274		+/-6.54					

#### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

- The Qualifiers in this report are defined as follows:
  - \*\* Analyte is a Tracer compound
  - < Result is less than value reported
  - > Result is greater than value reported
  - BD Results are either below the MDC or tracer recovery is low
  - FA Failed analysis.

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## **QC Summary**

e present. R pove MDC a Result > M	for an expla eported valu eported valu		sed high	Actual									
is estimated e present. R e present. R pove MDC a Result > M	eported valu	e may be bia	sed high	Astual									
e present. R e present. R pove MDC a Result > M	eported valu	•	sed high	Astual									
e present. R pove MDC a Result > M	eported valu	•	sed high	Astual									
oove MDC a Result > M		e may be bia		i. Actual	value is	expected to	be lower.						
Result > M	nd less than		sed low.	. Actual v	value is e	expected to	be higher.						
		LLD											
	DC/CL and	< RDL											
r %Recover	v limits do n	ot apply.											
se narrative													
e concentra	ion is not de	tected above	the dete	ection lin	nit								
lt Case Narr	tive, Data S	ummary pac	kage, or	Project 1	Manager	concerning	this qualifi	er					
more quali	y control cri	teria have no	ot been n	net. Refe	r to the a	pplicable na	rrative or I	DER.					
e results are	rejected												
e was analy	ed for, but	not detected	above th	e MDL,	MDA, M	IDC or LOI	).						
a Spectrosc	pyUncerta	ain identifica	tion										
a Spectrosco	pyUncerta	ain identifica	tion										
nsidered det	ected. The a	ssociated nu	mber is t	the repor	ted conce	entration, w	nich may be	e inaccurate	lue to a low	bias.			
lt Case Narr	tive, Data S	ummary pac	kage, or	Project 1	Manager	concerning	this qualifi	er					
specific qua	ifiers were 1	equired to pr	operly d	lefine the	results.	Consult cas	e narrative.						
f sample an	duplicate e	valuated usir	ng +/-RL	. Conce	ntrations	are <5X the	e RL. Qual	ifier Not Ap	plicable for H	Radiochem	istry.		
ation or pres	ervation hol	ding time wa	is exceed	ded									
	e was analyz a Spectrosco a Spectrosco nsidered dete lt Case Narra specific quali f sample and ation or prese	a SpectroscopyUncerta a SpectroscopyUncerta nsidered detected. The a lt Case Narrative, Data S specific qualifiers were r f sample and duplicate e ation or preservation hol	e was analyzed for, but not detected a a SpectroscopyUncertain identifica a SpectroscopyUncertain identifica nsidered detected. The associated num It Case Narrative, Data Summary pac specific qualifiers were required to pr f sample and duplicate evaluated usin ation or preservation holding time wa	e was analyzed for, but not detected above th a SpectroscopyUncertain identification a SpectroscopyUncertain identification nsidered detected. The associated number is th the Case Narrative, Data Summary package, or specific qualifiers were required to properly d f sample and duplicate evaluated using +/-RL ation or preservation holding time was exceed	e was analyzed for, but not detected above the MDL, a a SpectroscopyUncertain identification a SpectroscopyUncertain identification nsidered detected. The associated number is the repor- lt Case Narrative, Data Summary package, or Project I specific qualifiers were required to properly define the f sample and duplicate evaluated using +/-RL. Conce ation or preservation holding time was exceeded	e was analyzed for, but not detected above the MDL, MDA, M a SpectroscopyUncertain identification a SpectroscopyUncertain identification nsidered detected. The associated number is the reported conce It Case Narrative, Data Summary package, or Project Manager specific qualifiers were required to properly define the results. f sample and duplicate evaluated using +/-RL. Concentrations ation or preservation holding time was exceeded	e was analyzed for, but not detected above the MDL, MDA, MDC or LOE a SpectroscopyUncertain identification a SpectroscopyUncertain identification nsidered detected. The associated number is the reported concentration, while the Case Narrative, Data Summary package, or Project Manager concerning specific qualifiers were required to properly define the results. Consult case f sample and duplicate evaluated using +/-RL. Concentrations are <5X the ation or preservation holding time was exceeded	e was analyzed for, but not detected above the MDL, MDA, MDC or LOD. a SpectroscopyUncertain identification a SpectroscopyUncertain identification nsidered detected. The associated number is the reported concentration, which may be It Case Narrative, Data Summary package, or Project Manager concerning this qualifies specific qualifiers were required to properly define the results. Consult case narrative. f sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qual ation or preservation holding time was exceeded	e was analyzed for, but not detected above the MDL, MDA, MDC or LOD. a SpectroscopyUncertain identification a SpectroscopyUncertain identification nsidered detected. The associated number is the reported concentration, which may be inaccurate of the Case Narrative, Data Summary package, or Project Manager concerning this qualifier specific qualifiers were required to properly define the results. Consult case narrative. f sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Application or preservation holding time was exceeded	e was analyzed for, but not detected above the MDL, MDA, MDC or LOD. a SpectroscopyUncertain identification a SpectroscopyUncertain identification nsidered detected. The associated number is the reported concentration, which may be inaccurate due to a low It Case Narrative, Data Summary package, or Project Manager concerning this qualifier specific qualifiers were required to properly define the results. Consult case narrative. f sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for F ation or preservation holding time was exceeded	e was analyzed for, but not detected above the MDL, MDA, MDC or LOD. a SpectroscopyUncertain identification a SpectroscopyUncertain identification nsidered detected. The associated number is the reported concentration, which may be inaccurate due to a low bias. It Case Narrative, Data Summary package, or Project Manager concerning this qualifier specific qualifiers were required to properly define the results. Consult case narrative. f sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochem ation or preservation holding time was exceeded	e was analyzed for, but not detected above the MDL, MDA, MDC or LOD. a SpectroscopyUncertain identification a SpectroscopyUncertain identification nsidered detected. The associated number is the reported concentration, which may be inaccurate due to a low bias. It Case Narrative, Data Summary package, or Project Manager concerning this qualifier specific qualifiers were required to properly define the results. Consult case narrative. f sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry. ation or preservation holding time was exceeded	e was analyzed for, but not detected above the MDL, MDA, MDC or LOD. a SpectroscopyUncertain identification a SpectroscopyUncertain identification nsidered detected. The associated number is the reported concentration, which may be inaccurate due to a low bias. It Case Narrative, Data Summary package, or Project Manager concerning this qualifier specific qualifiers were required to properly define the results. Consult case narrative. f sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.

<sup>^</sup> The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

\* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

### Radiochemistry Technical Case Narrative Santee Cooper SDG #: 540415

Product: GFPC, Ra228, Liquid Analytical Method: EPA 904.0/SW846 9320 Modified Analytical Procedure: GL-RAD-A-063 REV# 5 Analytical Batch: 2114215

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	Client Sample Identification
540415001	AF00633
540415002	AF00629
540415003	AF00630
540415004	AF00631
540415005	AF00632
540415006	AF00634
540415007	AF00635
1204793534	Method Blank (MB)
1204793535	540415006(AF00634) Sample Duplicate (DUP)
1204793536	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

### **Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

### **Technical Information**

#### Recounts

Sample 540415002 (AF00629) was recounted to verify sample results. Recount is reported. Samples 540415001 (AF00633) and 540415005 (AF00632) were re-eluted and recounted to verify sample results. The recounts are reported.

Product: Lucas Cell, Ra226, Liquid Analytical Method: EPA 903.1 Modified Analytical Procedure: GL-RAD-A-008 REV# 15 Analytical Batch: 2114169

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<b><u>Client Sample Identification</u></b>
540415001	AF00633
540415002	AF00629

540415003	AF00630
540415004	AF00631
540415005	AF00632
540415006	AF00634
540415007	AF00635
1204793423	Method Blank (MB)
1204793424	540415001(AF00633) Sample Duplicate (DUP)
1204793425	540415001(AF00633) Matrix Spike (MS)
1204793426	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

### **Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

#### **Miscellaneous Information**

### **Additional Comments**

The matrix spike, 1204793425 (AF00633MS), aliquot was reduced to conserve sample volume.

### **<u>Certification Statement</u>**

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Contract Lab Info:	GEL Contract Lab D	ue Date (Lab	Only):	<u> </u>		21	Sei	nd repor	t to <u>lcw</u>	illia@santer	ecooper.com & sjbr	own@santeecoop	er.com			
			Cha	in of	f Cu	sto	dy	-	5	-10	415	Phone:	On Aoncks (843)7	<b>tee</b> Sa c Rive Come (61-80) [ax: (84	ntee ( wood r, SC	Coop 1 Driv 2946 t. 514
Customer Ema	il/Report Recipient:	Date	Results N	eeded	by:		Р	roject	/Task/	/Unit #:		Rerun reques				
LOWILLIA	@santeecooper.com		JJ		_	121	567	-/_JN	102.	09.GØ	1		No		00	
														Analys	s Grou	1D
Labworks ID # (Internal use only)	Sample Location/ Description	Collection Date	Collection Time	Sample Collector	Total # of containers	Bottle type: (Glass- G/Plastic-P)	Grab (G) or Composite (C)	Matrix(see below)	Preservative (see	• R • N	Commen fethod # eporting limit fisc. sample info ny other notes	ts	RAD 226	RAD 228	TOTAL RAD CALC.	
AF00633	CGYP-4	4/7/2	1 1106	DEW	, 2	4	G	GW	2				X	×	×	
AF 00629	CGYP-1		12.16					1	1						1	
AF-00630	CEYP-2		1316												$\uparrow$	
AF00631	CGYP-2 DUP		1321												╅┨	
AF-00632	CGYP-3		1420									*********				
4E00634	CGYP-5		1509			1.1									$\uparrow$	
4-00635	CGYP-6	<u>    [                                </u>	1602	]			]		1		*******				$\uparrow$	
,														-	=	
Relinquished by: How M Relinquished by: Relinquished by:	35594 4/9/2( Employee# Date	3.7.1 Time	Receive Receive Receive	d by: 2 d by:	Em	ployee # SEL ployee # ployee #	4	Date		Time 1015 Time <b>3 2.4</b> Time	TEMP (°C): Correct pH: Preservative Date/Time/I	Yes No	nitial:			
Ag     □ Cu       Al     □ Fe       As     □ K       Ba     □ Li       Ba     □ Mg       Be     □ Mn       Ca     □ Mo       Cd     □ Na       Co     □ Ni       Co     □ Ni	□ Sb HUTTA □ Se □ DOC □ Sn □ TP/TI □ Sr □ NH3- □ Ti □ Cl □ TI □ NO2	×04 00000000000000000000000000000000000	MISC Dapping Stress Dapping Stress D	se Sorm As		Gyp Vallboa Gypsi below/ C AlM C Alm	im( <i>all</i> inetals de Meta / (CaSC olsture es ides	nis 149)	I I I I I I I I I I I I I I I I I I I	Coal Itimate % Moist Sulfur Usulfur Usulfur Usulfur CHN er Tests: RF Scan an eneaess rticulate Ma	Lure □ Ar □ Ar □ 40 0 % □ Mi Matter □ Sic □ % <u>N</u> □ Oil	Carbon ineral Analysis ove Moisture PDES & Grease	Col Aci Die Die Dis Dis Used Flas Met	diny come Ni colved OH hpoint als in ( .Cel Cr	e Rayth Gases úl	

**CEEL** Laboratories LLC

				SAMPLE RECEIPT & REVIEW FORM
Client: SOOP			SI	DG/AR/COC/Work Order: 540415
Received By: STACY BOO	NE			te Received: 9 - APRIL - 21
Carrier and Tracking Number				Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other
Suspected Hazard Information	Yes	v Z	*1f	Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
A)Shipped as a DOT Hazardous?			-	zard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? Yes No
B) Did the client designate the samples are to be received as radioactive?			100	C notation or radioactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?				ximum Net Counts Observed* (Observed Counts - Area Background Counts):CPM / mR/Hr Classified as: Rad 1 Rad 2 Rad 3
D) Did the client designate samples are hazardous?				C notation or hazard labels on containers equal client designation.
E) Did the RSO identify possible hazards?		[·		o or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:
Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	/			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2 Chain of custody documents included with shipment?	/			Circle Applicable: Client contacted and provided COC COC created upon receipt
3 Samples requiring cold preservation within $(0 \le 6 \text{ deg. C})$ ?*		-	ł	Preservation Method: Wet Ice Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius TEMP:13;
4 Daily check performed and passed on IR temperature gun?	/			Temperature Device Serial #:
5 Sample containers intact and sealed?	1			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6 Samples requiring chemical preservation at proper pH?	7			Sample ID's and Containers Affected: If Preservation added, Lot#:
7 Do any samples require Volatile Analysis?			/	If Yes, are Encores or Soil Kits present for solids? YesNoNA(If yes, take to VOA Freezer) Do liquid VOA vials contain acid preservation? YesNoNA(If unknown, select No) Are liquid VOA vials free of headspace? YesNoNA Sample ID's and containers affected:
8 Samples received within holding time?				ID's and tests affected:
9 Sample ID's on COC match ID's on bottles?	7			ID's and containers affected:
10 Date & time on COC match date & time on bottles?	7	<u>9768392</u> 1		Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
11 Number of containers received match number indicated on COC?	1			Circle Applicable: No container count on COC Other (describe)
Are sample containers identifiable as GEL provided by use of GEL labels?			1	
<ul> <li>COC form is properly signed in relinquished/received sections?</li> <li>comments (Use Continuation Form if needed):</li> </ul>				Circle Applicable: Not relinquished Other (describe)
·				
	•			NOL- Ulista:
PM (or PMA	N) rev	iew:	Initia	uls_NRUDate 4/12/21 Page of

State	Certification
Alabama	42200
Alaska	17-018
Alaska Drinking Water	SC00012
Arkansas	88-0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH-0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-15-00283, P330-15-00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2019020
Maryland	270
Massachusetts	M-SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE-OS-26-13
Nevada	SC000122021-1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R-158
Oklahoma	2019–165
Pennsylvania NELAP	68-00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-21-19
Utah NELAP	SC000122020-34
Vermont	VT87156
Virginia NELAP	460202
Washington	C780

List of current GEL Certifications as of 05 May 2021



a member of The GEL Group INC



PO Box 30712 Charleston, SC 29417 2040 Savage Road Charleston, SC 29407 P 843.556.8171 F 843.766.1178

gel.com

June 14, 2021

Ms. Jeanette Gilmetti Santee Cooper P.O. Box 2946101 OCO3 Moncks Corner, South Carolina 29461

Re: ABS Lab Analytical Work Order: 544910

Dear Ms. Gilmetti:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on May 18, 2021. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at www.gel.com.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4289.

Sincerely,

Julie Roberson

Julie Robinson Project Manager

Purchase Order: 367074 Enclosures



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### Certificate of Analysis Report for

### SOOP001 Santee Cooper

### Client SDG: 544910 GEL Work Order: 544910

### The Qualifiers in this report are defined as follows:

- \* A quality control analyte recovery is outside of specified acceptance criteria
- \*\* Analyte is a Tracer compound
- \*\* Analyte is a surrogate compound
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Julie Robinson.

Julie Roberson

Reviewed by

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# **Certificate of Analysis**

			Cel	lincate	UI Alla	a1y515			R	eport Da	te: June	14, 2021
	Company : Address :	Santee Coope P.O. Box 2940 OCO3 Monaka Corra		ling 20461								
	Contact:	Ms. Jeanette (		lilla 29401								
	Project:	ABS Lab Ana	lytical									
	Client Sample ID:						roject:			P00119		
	Sample ID:	544910001				C	lient ID	:	SOOF	<b>2</b> 001		
	Matrix: Collect Date:	Ground Water 13-MAY-21 1										
	Receive Date:	13-MAT-21 1 18-MAY-21	4.39									
	Collector:	Client										
Parameter	Quali	fier Result	Uncertainty	MDC	RL	Units	PF	DF	Analy	vst Date	Time Bat	ch Method
Rad Gas Fl	ow Proportional Co	unting										
	28, Liquid "As Rece											
Radium-228	6+Radium-228 Calc	4.82	+/-1.56	2.09	3.00	pCi/L			LXB3	06/04/21	0853 2132	499 1
Radium-226+		5.84 5.84	+/-1.61			pCi/L		1	AEA	06/11/21	0421 2133	508 2
Rad Radiu	m-226					Ĩ						
	Ra226, Liquid "As											
Radium-226		1.02	+/-0.399	0.446	1.00	pCi/L			LXP1	06/02/21	0835 2131	978 3
	ving Analytical Meth	-	rmed:					~				
Method	Descri	1pt10n )4.0/SW846 9320 N	lodified				Analys	t Coi	mment	<u>s</u>		
2	Calcula		lounieu									
3	EPA 90	03.1 Modified										
Surrogate/7	Fracer Recovery	Test			R	lesult	Nomin	al	Reco	very%	Acceptable	e Limits
Barium-133 T	racer C	GFPC, Ra228, Liqui	d "As Received"							86.5	(15%-12	5%)
Notes: Counting U	Incertainty is calcula	ated at the 95%	confidence leve	el (1.96-sign	na).							
Column he DF: Dilutio	eaders are defined as	follows:	Lc/LC: Critic	al Level								

DF: Dilution FactorLc/LC: Critical LevelDL: Detection LimitPF: Prep FactorMDA: Minimum Detectable ActivityRL: Reporting LimitMDC: Minimum Detectable ConcentrationSQL: Sample Quantitation Limit

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# **Certificate of Analysis**

					Cel	uncate	UI Alla	11y 515			R	eport Da	te:	June 14	2021
	Company :	San	tee Coo	ner								epoir Du		buile 11	, 2021
	Address :		. Box 29		01										
		OC	03												
					South Carol	ina 29461									
	Contact:		Jeanette												
	Project:		S Lab A	nalyt	tical										
	Client Sample ID:		)3569						roject:			P00119			
	Sample ID:	544	910002					C	lient ID	<b>)</b> :	SOOF	P001			
	Matrix:	Gro	und Wa	ter											
	Collect Date:	13-N	MAY-2	1 14:4	44										
	Receive Date:	18-N	MAY-21	1											
	Collector:	Clie	nt												
Parameter	Quali	fior	 Pacul	t IIr	ncertainty	MDC	RL	Units	PF	DE	Anals	st Date	Time	Rotch	Method
					lecitality	WIDC	KL	Onits	11	DI	Anary	st Date		Daten	Wiethou
	ow Proportional Co	-	-												
Radium-228	28, Liquid "As Rec	eived	3.5	55	+/-1.40	1.98	3.00	pCi/L			I VB3	06/04/21	0853	2132499	1
	6+Radium-228 Calo	ulatic				1.90	5.00	pei/L			LADJ	00/04/21	0855	2132499	1
Radium-226+2		Juiune	4.6		+/-1.45			pCi/L		1	AEA	06/11/21	0421	2133508	2
Rad Radiur	m-226														
Lucas Cell,	Ra226, Liquid "As	Recei	ved"												
Radium-226	-		1.0	)5	+/-0.378	0.304	1.00	pCi/L			LXP1	06/02/21	0835	2131978	3
The follow	ving Analytical Meth	10ds v	vere per	form	ed:										
Method	Descr	iption	_						Analys	t Co	mment	s			
1			V846 9320	) Mod	ified										
2	Calcula														
3	EPA 90		odified												
	2	Test					R	esult	Nomir	nal		•	1	otable L	
Barium-133 T	racer (	GFPC, I	Ra228, Li	quid ".	As Received"							87.4	(15	5%-125%)	
Notes: Counting U	Incertainty is calcula	ated at	t the 959	% coi	nfidence leve	el (1.96-sign	na).								
Column he	aders are defined as	follo	ws:												
DF: Dilution				L	.c/LC: Critic	al Level									

D fulution Factor C: Critical Level DL: Detection Limit PF: Prep Factor MDA: Minimum Detectable Activity RL: Reporting Limit MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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# **Certificate of Analysis**

						lincate	UI AIId	aly 515			R	leport Da	te:	June 14	, 2021
	Company : Address :		tee Coop . Box 294 O3												
				ner, So	uth Carol	ina 29461									
	Contact:		Jeanette												
	Project:		S Lab An	alytica	1			n			5001	200110			
	Client Sample ID: Sample ID:		)3570 910003						roject: lient ID	).	SOOI	200119 2001			
	Matrix:		und Wate	er				C			5001	001			
	Collect Date:		MAY-21												
	Receive Date:	18-1	MAY-21												
	Collector:	Clie	ent												
Parameter	Qual	ifier	Result	Unce	rtainty	MDC	RL	Units	PF	DF	Analy	st Date	Time	Batch	Method
Rad Gas Fl	ow Proportional Co	unting	5												
GFPC, Ra2	28, Liquid "As Rec	eived'	,												
Radium-228		U	0.581		+/-1.16	2.03	3.00	pCi/L			LXB3	06/04/21	0853	2132499	1
Radium-22 Radium-226+2	6+Radium-228 Cal	culatio	on "See P 1.50		Products" +/-1.21			pCi/L		1	AEA	06/11/21	0421	2122508	2
Rad Radiur			1.30	)	T/=1.21			pci/L	, ,	1	ALA	00/11/21	0421	2155500	2
Lucas Cell,	Ra226, Liquid "As	Recei	ived"												
Radium-226	-		0.915	5 +	+/-0.338	0.233	1.00	pCi/L	,		LXP1	06/02/21	0907	2131978	3
	ing Analytical Met	hods v	vere perf	ormed:											
Method		iption							Analys	t Co	mment	S			
1 2	EPA 9 Calcul		V846 9320	Modified	d										
3		03.1 M	odified												
Surrogate/7	racer Recovery	Test					R	esult	Nomir	nal	Reco	very%	Acce	otable L	imits
Barium-133 T		GFPC, I	Ra228, Liq	uid "As I	Received"							86.4		5%-125%	
Notes: Counting U	ncertainty is calcul	ated at	t the 95%	confic	lence leve	el (1.96-sign	na).								
-	aders are defined as	s follo	ws:	тл	C. Critic	1.7 1									

DF: Dilution FactorLc/LC: Critical LevelDL: Detection LimitPF: Prep FactorMDA: Minimum Detectable ActivityRL: Reporting LimitMDC: Minimum Detectable ConcentrationSQL: Sample Quantitation Limit

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# **Certificate of Analysis**

			Cel	lincate	UI AIIč	11 y 515			R	eport Da	te: June 14	, 2021
	Company : Address :	Santee Cooper P.O. Box 29461 OCO3	01									
	Contact: Project:	Moncks Corner Ms. Jeanette Gi ABS Lab Analy	lmetti	ina 29461								
	Client Sample ID: Sample ID: Matrix: Collect Date: Receive Date: Collector:	AF03571 544910004 Ground Water 13-MAY-21 16 18-MAY-21 Client	:55				roject: lient ID	):	SOOF SOOF	200119 2001		
Parameter	Quali	fier Result U	ncertainty	MDC	RL	Units	PF	DF	Analy	vst Date	Time Batch	Method
Rad Gas Fl	ow Proportional Co	unting										
GFPC, Ra2 Radium-228	228, Liquid "As Rece	eived" 4.79	+/-1.16	1.17	3.00	pCi/L			LXB3	06/04/21	0853 2132499	1
Radium-22 Radium-226+ Rad Radiur		culation "See Pare 6.31	nt Products" +/-1.23			pCi/L		1	AEA	06/11/21	0421 2133508	2
Lucas Cell,	Ra226, Liquid "As	Received"										
Radium-226		1.52	+/-0.417	0.323	1.00	pCi/L			LXP1	06/02/21	0907 2131978	3
The follow Method	ving Analytical Meth		ned:				Analys	t Car		2		
1		04.0/SW846 9320 Mo	dified				Analys		mnent	8		
2 3	Calcula EPA 90	tion )3.1 Modified										
Surrogate/7	Fracer Recovery	Test			R	esult	Nomin	al	Reco	very%	Acceptable L	imits
Barium-133 T	Tracer C	GFPC, Ra228, Liquid	"As Received"							94.4	(15%-125%)	1
<b>Notes:</b> Counting U	Incertainty is calcula	ated at the 95% co	onfidence leve	el (1.96-sign	na).							
Column he DF: Dilutio	aders are defined as		Lc/LC: Critic	al Level								

DF: Dilution FactorLc/LC: Critical LevelDL: Detection LimitPF: Prep FactorMDA: Minimum Detectable ActivityRL: Reporting LimitMDC: Minimum Detectable ConcentrationSQL: Sample Quantitation Limit

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# **Certificate of Analysis**

					Cel	lincate	OI Alla	a1y515			R	eport Da	te:	June 14	2021
	Company :	San	tee Coop	er								opon Du		build I I	, 2021
	Address :		. Box 294												
		OC													
					outh Carol	ina 29461									
	Contact:		Jeanette												
	Project:		S Lab An	alytic											
	Client Sample ID:		)3572						roject:			200119			
	Sample ID:		910005					C	lient ID	<b>)</b> :	SOOF	2001			
	Matrix:		und Wate		<b>`</b>										
	Collect Date: Receive Date:		MAY-21 MAY-21	11:20	)										
	Collector:	Clie													
	Collector:	Che	III												
Parameter	Quali	fier	Result	Unc	ertainty	MDC	RL	Units	PF	DF	Analy	st Date	Time	Batch	Method
	low Proportional Co			0110	citanity	MDC		Cints			7 mary	ist Dute		Daten	Method
	228, Liquid "As Rec														
Radium-228	220, Elquid As Ree	U	0.377	7	+/-1.03	1.82	3.00	pCi/L			LXB3	06/04/21	0853	2132499	1
Radium-22	6+Radium-228 Calc	culatio	on "See P	arent	Products"			1							
Radium-226+			0.691	l	+/-1.04			pCi/L		1	AEA	06/11/21	0421	2133508	2
Rad Radiur															
	, Ra226, Liquid "As	Recei		,	. / 0.102	0.000	1.00	0.1			LVD1	06/02/21	0007	2121070	2
Radium-226	ing Anglatical Matt		0.313		+/-0.192	0.200	1.00	pCi/L			LAPI	06/02/21	0907	2131978	3
	ving Analytical Meth		-	ormec	1.				A 1						
Method 1	Descr EPA 90		V846 9320	Modifi	ed				Analys	t Coi	nment	S			
2	Calcula		1010 9520	iniouini	cu										
3	EPA 90	)3.1 Mo	odified												
Surrogate/7	Fracer Recovery	Test					R	esult	Nomin	nal	Reco	very%	Accer	otable L	imits
Barium-133 T	Tracer (	GFPC, I	Ra228, Liq	uid "As	s Received"							91.5	(15	5%-125%)	)
Notes: Counting U	Jncertainty is calcula	ated at	t the 95%	o conf	idence levo	el (1.96-sign	na).								
•	eaders are defined as					U									
DF: Dilutio			<u>·····</u>	Lc	/LC: Critic	al Level									

DF: Dilution Factor Lc/LC: Critical Level **DL: Detection Limit** PF: Prep Factor MDA: Minimum Detectable Activity RL: Reporting Limit MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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# **Certificate of Analysis**

					lincate	01 Alla	a1y515			R	eport Da	ite:	June 14	, 2021
	Company : Address :		ee Coope Box 294 )3								-			
	Contacto	Mon	cks Corn	er, South Carol	lina 29461									
	Contact: Project:		Jeanette ( Lab Ana											
	Client Sample ID:							Project:			P00119			
	Sample ID:		544910006				C	Client ID	):	SOOF	P001			
	Matrix:		ind Water											
	Collect Date: Receive Date:		1AY-21 1 1AY-21	11:25										
	Collector:	Clier												
	Concetor.	Cher	it.											
Parameter	Quali	fier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analy	st Date	 Time	Batch	Method
Rad Gas Fl	ow Proportional Co										·			
	28, Liquid "As Rec	-												
Radium-228	· •	U	0.310		2.18	3.00	pCi/L	,		LXB3	06/04/21	0853	2132499	1
	6+Radium-228 Calc	culation					0.4		1	4.5.4	06/11/01	0.401	0100500	2
Radium-226+2 Rad Radiur			0.540	+/-1.24			pCi/L		1	AEA	06/11/21	0421	2133508	2
	Ra226, Liquid "As	Receiv	ved"											
Radium-226	1	U	0.230	+/-0.194	0.282	1.00	pCi/L			LXP1	06/02/21	0907	2131978	3
The follow	ring Analytical Meth	nods w	ere perfo	rmed:										
Method	Descr	iption						Analys	t Coi	nment	s			
1			846 9320 N	Aodified										
2 3	Calcula	tion )3.1 Mo	dified											
			lilled			D	1.	N7 ·	1	D	0/		· 11 T	•••
Surrogate/ I Barium-133 T	5	Test	0228 Light	id "As Received"		K	lesult	Nomin	ai		very% 87.2	1	otable L 5%-125%)	
	racer (	јгрс, к	azzo, Liqui	Id As Received							07.2	(1.	J70-12J70)	)
Notes: Counting U	Incertainty is calcula	ated at	the 95%	confidence lev	el (1.96-sign	na).								
	aders are defined as	follow	<u>vs:</u>											
DF Dilutic	on Factor			Lc/LC: Critic	cal Level									

DF: Dilution FactorLc/LC: Critical LevelDL: Detection LimitPF: Prep FactorMDA: Minimum Detectable ActivityRL: Reporting LimitMDC: Minimum Detectable ConcentrationSQL: Sample Quantitation Limit

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# **QC Summary**

Report Date: June 14, 2021

Page 1 of 2

	Santee Cooper
	P.O. Box 2946101
	OCO3
	Moncks Corner, South Carolina
Contact:	Ms. Jeanette Gilmetti

Workorder: 544910

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range Anlst	Date Time
Rad Gas Flow									
Batch 2132499 —									
QC1204831024 544910004 DUP									
Radium-228		4.79		4.25	pCi/L	11.9		(0% - 100%) LXB3	06/04/21 08:52
	Uncertainty	+/-1.16		+/-1.19					
QC1204831025 LCS									
Radium-228	52.1			49.6	pCi/L		95.1	(75%-125%)	06/04/21 08:52
	Uncertainty			+/-3.38					
QC1204831023 MB									
Radium-228			U	0.0515	pCi/L				06/04/21 08:52
	Uncertainty			+/-0.799					
Rad Ra-226 Batch 2131978 ——									
QC1204829924 544910001 DUP									
Radium-226		1.02		1.10	pCi/L	7.73		(0%-20%) LXP1	06/02/21 09:07
	Uncertainty	+/-0.399		+/-0.350	-				
QC1204829926 LCS									
Radium-226	26.8			21.2	pCi/L		79.1	(75%-125%)	06/02/21 09:38
	Uncertainty			+/-1.46					
QC1204829923 MB									
Radium-226			U	0.000	pCi/L				06/02/21 09:07
	Uncertainty			+/-0.127					
QC1204829925 544910001 MS									
Radium-226	130	1.02		105	pCi/L		79.8	(75%-125%)	06/02/21 09:38
	Uncertainty	+/-0.399		+/-7.55					

#### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

- The Qualifiers in this report are defined as follows:
  - \*\* Analyte is a Tracer compound
  - < Result is less than value reported
  - > Result is greater than value reported
  - BD Results are either below the MDC or tracer recovery is low
  - FA Failed analysis.

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## **QC Summary**

armnar	name NOM Sample Qual QC Units RPD% REC%	Range	Anlst	Date	Time
Н	Analytical holding time was exceeded				
J	See case narrative for an explanation				
J	Value is estimated				
Κ	Analyte present. Reported value may be biased high. Actual value is expected to be lower.				
L	Analyte present. Reported value may be biased low. Actual value is expected to be higher.				
М	M if above MDC and less than LLD				
М	REMP Result > MDC/CL and < RDL				
N/A	A RPD or %Recovery limits do not apply.				
N1	See case narrative				
ND	D Analyte concentration is not detected above the detection limit				
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier				
Q	One or more quality control criteria have not been met. Refer to the applicable narrative or DER.				
R	Sample results are rejected				
U	Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.				
UI	Gamma SpectroscopyUncertain identification				
UJ	Gamma SpectroscopyUncertain identification				
UL	Not considered detected. The associated number is the reported concentration, which may be inaccurate due to a low bia	s.			
Х	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier				
Y	Other specific qualifiers were required to properly define the results. Consult case narrative.				
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Rad	liochemi	stry.		
h	Preparation or preservation holding time was exceeded				

The Relative Percent Difference (RPD) obtained from the sample duplicate (DOP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of  $\pm$  the RL is used to evaluate the DUP result.

\* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

### Radiochemistry Technical Case Narrative Santee Cooper SDG #: 544910

Product: GFPC, Ra228, Liquid Analytical Method: EPA 904.0/SW846 9320 Modified Analytical Procedure: GL-RAD-A-063 REV# 5 Analytical Batch: 2132499

The following samples were analyzed using the above methods and analytical procedure(s).

544910001AF03568544910002AF03569544910003AF03570544910004AF03571544910005AF03572544910006AF035731204831023Method Blank (MB)1204831024544910004(AF03571) Sample Duplicate (DUP)1204831025Laboratory Control Sample (LCS)	<u>GEL Sample ID#</u>	Client Sample Identification
544910003       AF03570         544910004       AF03571         544910005       AF03572         544910006       AF03573         1204831023       Method Blank (MB)         1204831024       544910004(AF03571) Sample Duplicate (DUP)	544910001	AF03568
544910004       AF03571         544910005       AF03572         544910006       AF03573         1204831023       Method Blank (MB)         1204831024       544910004(AF03571) Sample Duplicate (DUP)	544910002	AF03569
544910005AF03572544910006AF035731204831023Method Blank (MB)1204831024544910004(AF03571) Sample Duplicate (DUP)	544910003	AF03570
544910006         AF03573           1204831023         Method Blank (MB)           1204831024         544910004(AF03571) Sample Duplicate (DUP)	544910004	AF03571
1204831023         Method Blank (MB)           1204831024         544910004(AF03571) Sample Duplicate (DUP)	544910005	AF03572
1204831024 544910004(AF03571) Sample Duplicate (DUP)	544910006	AF03573
	1204831023	Method Blank (MB)
1204831025 Laboratory Control Sample (LCS)	1204831024	544910004(AF03571) Sample Duplicate (DUP)
	1204831025	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

#### **Data Summary:**

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Product: Lucas Cell, Ra226, Liquid Analytical Method: EPA 903.1 Modified Analytical Procedure: GL-RAD-A-008 REV# 15 Analytical Batch: 2131978

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<b><u>Client Sample Identification</u></b>
544910001	AF03568
544910002	AF03569
544910003	AF03570
544910004	AF03571
544910005	AF03572
544910006	AF03573
1204829923	Method Blank (MB)
1204829924	544910001(AF03568) Sample Duplicate (DUP)
1204829925	544910001(AF03568) Matrix Spike (MS)
1204829926	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

### **Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

### **Miscellaneous Information**

#### **Additional Comments**

The matrix spike, 1204829925 (AF03568MS), aliquot was reduced to conserve sample volume.

### **Certification Statement**

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Contract Lab Info:	GEL Contract Lab D	ue Date (Lab	Only):6		5_/	21	Sen	nd repor	t to <u>Icwi</u>	illia@sant	eecooper.co	m & <u>sibrowi</u>	n@santeecoope	r.com			
54	4910		Chai	in of	<sup>:</sup> Cu	sto	dy										oper
													M Phone: (	oneks 843)7	Corne 61-800	r, SC D0 Ex	Cooper d Drive 29461 d. 5148 1-4175
Customer Ema	il/Report Recipient:	Date	Results N	eeded b	oy:		Pi	roject,	/Task/	'Unit #:		Re	run request	for a	ny fia	igge	d QC
LCWILLIA	@santeecooper.com		اا			12/1	567	<u></u>	102.0	9.6øl		6500	Yes	No		•	
										·				l	Analysi	s Gro	up
Labworks ID # (Internal use only)	Sample Location/ Description	Collection Date	Collection Time	Sample Collector	Total # of containers	Bottle type: (Glass- G/Plastic-P)	Grab (G) or Composite (C)	Matrix(see below)	Preservative (see helowi	•	Co Method # Reporting 1 Misc. samp Any other 1	le info		RAD 226		TETAL RAD CALC	
AF03568	CGYP-4	5/13/21	1439	MDG	2	P	G	GW	2					Х	×	X	
AF03569	CEYP-4 DUP	<u>   </u>	1444											]		1	
AE03570	CGYP-5		1600														
AF03571	CGYP-6	<u>                                     </u>	16 55	1													
AF03572	WLF- AZ-6		1120														
AF03573	WLF-A-2-6 DUP		1125						<u> </u>	н. 1917 - 191			the state of the	<u> </u>			
												· ·					
														e			
<u></u>																	
Relinguished by: MB www Relinguished by: With guished by:	35574     5/15/21       Employee#     Date       Coll     5/000       Employee#     Date	Time > 911 Time 571 Time	Rečeive	d by: SCAJA d by:	Em Leut	iployee f GEL ployee # DER ployee #	् - र्ज	Date Date Date Date Date		Time 0911 Time 5355 Time	Corr Prese	IP (°C): ect pH: rvative L	Yes No	uitial:	•••		
Image: Constraint of the second se	□ Sb □ TOC □ Se □ DOC □ Sn □ TP/T □ Sr □ NH3 □ Ti □ Cl □ Tl □ Cl □ NO2 □ V □ Br	PO4 II N II II II II II II II II II II II II II	MISC DETEX Napthalenu THM/HAA VOC OII & Gree COII DI & Gree DI & COII DI & Gree DI & COII DI & C	a A ise form As		Vallboa	im(all ) metals sle Meta y (CaSC oisture es ides	ils		Coa Itimate % Moo Ash Sulfur BTUs Volatil CHN ier Tests RF Scan GI neness rticulate N	sture e Matter ;	□ Amn □ LOI □ % Ca □ Mine	rbon nal nalysis nisture DES Jiease	%) Col Act Das di'i Dis Used J'la Me	idity ectric Si sofved I Oil difioint lals in s i Cd Cr	re tength Gasei Alt	9

Matrix codes: GW-groundwater, DW-drinking water, SW-surface water, WW-waste water, BW-boiler water, L-limestone, Oil-oil, S-Soil, SL-solid, C-coal, G-gypsum, FA-flyash, BA-bottom ash, M-misc (describe in comment section) Preservative-code 15 SDU: 544916 2=HNO3 3=H2SO4 4-HCl 5=Na2S2O3 6-Other (Specify)

Laboratories L.c			SAMPLE RECEIPT & REVIEW FORM
Client:			
Received By: TVe	••••		SDG/AR/COC/Work Onlers H4910/544911
Carrier and Tracking Number			Date Received: Ciede Applicable: FedEx Express FedEx Ground UPS Field Service Courier Other
Suspected Hazard Information	Ycs	v	yff Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
A)Shipped as a DOT Hazardous?		$\mathbb{N}$	Hazard Class Shipped: UN#: If UN2910. Is the Radioactive Shipment Survey Compliant? YesNo
B) Did the client designate the samples are to be received as radioactive?		V	COC notation or radioactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?		$\overline{\checkmark}$	Auximum Net Counts Observed " (Observed Counts - Area Background Counts):
D) Did the client designate samples are hazardous?			COC notation or huzard labels on containers equal client designation.
E) Did the RSO identify possible hazards?		<u> </u>	PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other.
Sample Receipt Criteria	res	ź	2 Comments/Qualifiers (Required for Non-Conforming Items)
1         Shipping containers received intact and seated?			Circle Applicable: Seats broken Damaged container Leaking container Other (describe)
2 Chain of custody documents included with shipment?			Circle Applicable: Client contacted and provided COC COC created upon receipt
3 Samples requiring cold preservation within $(0 \le 6 \text{ deg. C})$ ?*	Į	1	Preservation Method Wet Ice Packs Dry ice None Other:
4 Daily check performed and passed on IR temperature gun?			Temperature Device Serial #120183-19
5 Sample containers intact and sealed?	しん能		Circle Applicable: Seals broken Damaged container Leaking container Other (describe) :
6 Samples requiring chemical preservation V	Ÿ		Sample ID's and Containers Affected:
7 Do any samples require Volatile Analysis?	No. of the other states		If Preservation added. Lotti: If Yes, are Encores or Soil Kits present for solids? YesNoNA(If yes, take to VOA Freezer) Do liquid VOA vials contain acid preservation? YesNoNA(If unknown, select No) Are liquid VOA vials free of headspace? YesNoNA Sample ID's and containers affected:
8 Samples received within holding time?		-	(D's and tests affected:
9 Sample ID's on COC match ID's on bottles?	と言い	-	ID's and containers affected:
10 Date & time on COC match date & time v	/		Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
11 Number of containers received match number indicated on COC?	酒売		Circle Applicable: No container count on COC Other (describe)
12       Are sample containers identifiable as         GEL provided by use of GEL (abels?)         13       COC form is properly signed in	ş	v	
13 cold form is properly signed in relinquished/received sections?			Circle Applicable: Not relinquished Other (describe)
PM (or PMA) revie	:w;	Initia	15 NTC Date 5/19/21 Page of

.

GL-CHL-SR-001 Rev 7

State	Certification
Alabama	42200
Alaska	17-018
Alaska Drinking Water	SC00012
Arkansas	88-0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH-0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-15-00283, P330-15-00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2019020
Maryland	270
Massachusetts	M-SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE-OS-26-13
Nevada	SC000122021-1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R-158
Oklahoma	2019–165
Pennsylvania NELAP	68-00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-21-19
Utah NELAP	SC000122021-35
Vermont	VT87156
Virginia NELAP	460202
Washington	C780

List of current GEL Certifications as of 14 June 2021



a member of The GEL Group INC



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gel.com

August 05, 2021

Ms. Jeanette Gilmetti Santee Cooper P.O. Box 2946101 OCO3 Moncks Corner, South Carolina 29461

Re: ABS Lab Analytical Work Order: 549284

Dear Ms. Gilmetti:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on July 09, 2021. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at www.gel.com.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4289.

Sincerely,

Julie Roberson

Julie Robinson Project Manager

Purchase Order: 367074 Enclosures



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#### Certificate of Analysis Report for

#### SOOP001 Santee Cooper

#### Client SDG: 549284 GEL Work Order: 549284

#### The Qualifiers in this report are defined as follows:

- \* A quality control analyte recovery is outside of specified acceptance criteria
- \*\* Analyte is a Tracer compound
- \*\* Analyte is a surrogate compound
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Julie Robinson.

Julie Roberson

Reviewed by

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## **Certificate of Analysis**

Report Date: August 5, 2021 Company : Santee Cooper P.O. Box 2946101 Address : OCO3 Moncks Corner, South Carolina 29461 Contact: Ms. Jeanette Gilmetti Project: ABS Lab Analytical Client Sample ID: AF07267 Project: SOOP00119 Sample ID: 549284001 Client ID: SOOP001 Matrix: Ground Water Collect Date: 07-JUL-21 10:31 09-JUL-21 Receive Date: Client Collector: RL PF Qualifier Result Uncertainty MDC Units DF Analyst Date Time Batch Method Parameter Rad Gas Flow Proportional Counting GFPC, Ra228, Liquid "As Received" Radium-228 U 1.61 +/-1.45 2.39 3.00 pCi/L JXC9 08/03/21 1323 2152169 1 Radium-226+Radium-228 Calculation "See Parent Products" Radium-226+228 Sum 2.77 +/-1.50pCi/L 1 AEA 08/05/21 0501 2152172 2 Rad Radium-226 Lucas Cell, Ra226, Liquid "As Received" Radium-226 1.17 +/-0.382 0.394 1.00 LXP1 07/22/21 1020 2149561 pCi/L 3 The following Analytical Methods were performed: Method Description Analyst Comments EPA 904.0/SW846 9320 Modified Calculation EPA 903.1 Modified Surrogate/Tracer Recovery Test Result Nominal Recovery% Acceptable Limits 77.6 Barium-133 Tracer GFPC, Ra228, Liquid "As Received" (15%-125%) Notes: Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma). Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level **DL:** Detection Limit PF: Prep Factor MDA: Minimum Detectable Activity **RL: Reporting Limit** MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

1 2

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### **Certificate of Analysis**

Report Date: August 5, 2021 Company : Santee Cooper P.O. Box 2946101 Address : OCO3 Moncks Corner, South Carolina 29461 Contact: Ms. Jeanette Gilmetti Project: ABS Lab Analytical Client Sample ID: AF07268 Project: SOOP00119 Sample ID: 549284002 Client ID: SOOP001 Matrix: Ground Water Collect Date: 07-JUL-21 11:28 09-JUL-21 Receive Date: Client Collector: RL PF Qualifier Result Uncertainty MDC Units DF Analyst Date Time Batch Method Parameter Rad Gas Flow Proportional Counting GFPC, Ra228, Liquid "As Received" Radium-228 U 1.92 +/-1.25 1.95 3.00 pCi/L JXC9 08/03/21 1323 2152169 1 Radium-226+Radium-228 Calculation "See Parent Products" Radium-226+228 Sum 2.50 +/-1.28pCi/L 1 AEA 08/05/21 0501 2152172 2 Rad Radium-226 Lucas Cell, Ra226, Liquid "As Received" Radium-226 0.578 +/-0.235 0.177 1.00 LXP1 07/22/21 1020 2149561 pCi/L 3 The following Analytical Methods were performed: Method Description Analyst Comments EPA 904.0/SW846 9320 Modified Calculation EPA 903.1 Modified Surrogate/Tracer Recovery Test Result Nominal Recovery% Acceptable Limits Barium-133 Tracer GFPC, Ra228, Liquid "As Received" 81.5 (15%-125%) Notes: Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma). Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level **DL:** Detection Limit PF: Prep Factor MDA: Minimum Detectable Activity **RL: Reporting Limit** MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

1 2

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### **Certificate of Analysis**

Report Date: August 5, 2021 Company : Santee Cooper P.O. Box 2946101 Address : OCO3 Moncks Corner, South Carolina 29461 Contact: Ms. Jeanette Gilmetti Project: ABS Lab Analytical Client Sample ID: AF07269 Project: SOOP00119 Sample ID: 549284003 Client ID: SOOP001 Matrix: Ground Water Collect Date: 07-JUL-21 11:33 09-JUL-21 Receive Date: Client Collector: RL PF Qualifier Result Uncertainty MDC Units DF Analyst Date Time Batch Method Parameter Rad Gas Flow Proportional Counting GFPC, Ra228, Liquid "As Received" Radium-228 2.31 +/-1.041.43 3.00 pCi/L JXC9 08/03/21 1324 2152169 1 Radium-226+Radium-228 Calculation "See Parent Products" Radium-226+228 Sum 3.07 +/-1.09 pCi/L 1 AEA 08/05/21 0501 2152172 2 Rad Radium-226 Lucas Cell, Ra226, Liquid "As Received" Radium-226 0.762 +/-0.302 0.261 1.00 LXP1 07/22/21 1020 2149561 pCi/L 3 The following Analytical Methods were performed: Method Description Analyst Comments EPA 904.0/SW846 9320 Modified Calculation EPA 903.1 Modified Surrogate/Tracer Recovery Test Result Nominal Recovery% Acceptable Limits Barium-133 Tracer GFPC, Ra228, Liquid "As Received" 83.4 (15%-125%) Notes: Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma). Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level **DL:** Detection Limit PF: Prep Factor MDA: Minimum Detectable Activity **RL: Reporting Limit** MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

1 2

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## **Certificate of Analysis**

Report Date: August 5, 2021 Company : Santee Cooper P.O. Box 2946101 Address : OCO3 Moncks Corner, South Carolina 29461 Contact: Ms. Jeanette Gilmetti Project: ABS Lab Analytical Client Sample ID: AF07270 Project: SOOP00119 Sample ID: 549284004 Client ID: SOOP001 Matrix: Ground Water Collect Date: 07-JUL-21 13:38 09-JUL-21 Receive Date: Client Collector: RL PF Qualifier Result Uncertainty MDC Units DF Analyst Date Time Batch Method Parameter Rad Gas Flow Proportional Counting GFPC, Ra228, Liquid "As Received" Radium-228 3.79 +/-1.73 2.52 3.00 pCi/L JXC9 08/03/21 1443 2152169 1 Radium-226+Radium-228 Calculation "See Parent Products" Radium-226+228 Sum 5.03 +/-1.76 pCi/L 1 AEA 08/05/21 0501 2152172 2 Rad Radium-226 Lucas Cell, Ra226, Liquid "As Received" Radium-226 1.24 +/-0.358 0.238 1.00 LXP1 07/22/21 1020 2149561 pCi/L 3 The following Analytical Methods were performed: Method Description Analyst Comments EPA 904.0/SW846 9320 Modified Calculation EPA 903.1 Modified Surrogate/Tracer Recovery Test Result Nominal Recovery% Acceptable Limits 78.3 Barium-133 Tracer GFPC, Ra228, Liquid "As Received" (15%-125%) Notes: Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma). Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level **DL:** Detection Limit PF: Prep Factor MDA: Minimum Detectable Activity **RL: Reporting Limit** MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

1 2

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### **Certificate of Analysis**

Report Date: August 5, 2021 Company : Santee Cooper P.O. Box 2946101 Address : OCO3 Moncks Corner, South Carolina 29461 Contact: Ms. Jeanette Gilmetti Project: ABS Lab Analytical Client Sample ID: AF07271 Project: SOOP00119 Sample ID: 549284005 Client ID: SOOP001 Matrix: Ground Water Collect Date: 08-JUL-21 10:26 09-JUL-21 Receive Date: Client Collector: RL PF Qualifier Result Uncertainty MDC Units DF Analyst Date Time Batch Method Parameter Rad Gas Flow Proportional Counting GFPC, Ra228, Liquid "As Received" Radium-228 2.51 +/-1.051.36 3.00 pCi/L JXC9 08/03/21 1324 2152169 1 Radium-226+Radium-228 Calculation "See Parent Products" Radium-226+228 Sum 3.56 +/-1.10pCi/L 1 AEA 08/05/21 0501 2152172 2 Rad Radium-226 Lucas Cell, Ra226, Liquid "As Received" Radium-226 1.05 +/-0.338 0.206 1.00 LXP1 07/22/21 1020 2149561 pCi/L 3 The following Analytical Methods were performed: Method Description Analyst Comments EPA 904.0/SW846 9320 Modified Calculation EPA 903.1 Modified Surrogate/Tracer Recovery Test Result Nominal Recovery% Acceptable Limits 80.5 Barium-133 Tracer GFPC, Ra228, Liquid "As Received" (15%-125%) Notes: Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma). Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level **DL:** Detection Limit PF: Prep Factor MDA: Minimum Detectable Activity **RL: Reporting Limit** MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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### **Certificate of Analysis**

Report Date: August 5, 2021 Company : Santee Cooper P.O. Box 2946101 Address : OCO3 Moncks Corner, South Carolina 29461 Contact: Ms. Jeanette Gilmetti Project: ABS Lab Analytical Client Sample ID: AF07272 Project: SOOP00119 Sample ID: 549284006 Client ID: SOOP001 Matrix: Ground Water Collect Date: 08-JUL-21 11:24 09-JUL-21 Receive Date: Client Collector: RL PF Qualifier Result Uncertainty MDC Units DF Analyst Date Time Batch Method Parameter Rad Gas Flow Proportional Counting GFPC, Ra228, Liquid "As Received" Radium-228 U 0.366 +/-0.907 1.63 3.00 pCi/L JXC9 08/03/21 1324 2152169 1 Radium-226+Radium-228 Calculation "See Parent Products" Radium-226+228 Sum 0.706 +/-0.934 pCi/L 1 AEA 08/05/21 0501 2152172 2 Rad Radium-226 Lucas Cell, Ra226, Liquid "As Received" Radium-226 0.340 +/-0.223 0.289 1.00 LXP1 07/22/21 1020 2149561 pCi/L 3 The following Analytical Methods were performed: Method Description Analyst Comments EPA 904.0/SW846 9320 Modified Calculation EPA 903.1 Modified Surrogate/Tracer Recovery Test Result Nominal Recovery% Acceptable Limits Barium-133 Tracer GFPC, Ra228, Liquid "As Received" 81.7 (15%-125%) Notes: Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma). Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level **DL:** Detection Limit PF: Prep Factor MDA: Minimum Detectable Activity **RL: Reporting Limit** MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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## **Certificate of Analysis**

Report Date: August 5, 2021 Company : Santee Cooper P.O. Box 2946101 Address : OCO3 Moncks Corner, South Carolina 29461 Contact: Ms. Jeanette Gilmetti Project: ABS Lab Analytical Client Sample ID: AF07273 Project: SOOP00119 Sample ID: 549284007 Client ID: SOOP001 Matrix: Ground Water Collect Date: 08-JUL-21 12:21 09-JUL-21 Receive Date: Client Collector: RL PF Qualifier Result Uncertainty MDC Units DF Analyst Date Time Batch Method Parameter Rad Gas Flow Proportional Counting GFPC, Ra228, Liquid "As Received" Radium-228 4.24 +/-1.281.48 3.00 pCi/L JXC9 08/03/21 1324 2152169 1 Radium-226+Radium-228 Calculation "See Parent Products" Radium-226+228 Sum 6.08 +/-1.37 pCi/L 1 AEA 08/05/21 0501 2152172 2 Rad Radium-226 Lucas Cell, Ra226, Liquid "As Received" Radium-226 1.85 +/-0.476 0.391 1.00 LXP1 07/22/21 1102 2149561 pCi/L 3 The following Analytical Methods were performed: Method Description Analyst Comments EPA 904.0/SW846 9320 Modified Calculation EPA 903.1 Modified Surrogate/Tracer Recovery Test Result Nominal Recovery% Acceptable Limits Barium-133 Tracer GFPC, Ra228, Liquid "As Received" 80.9 (15%-125%) Notes: Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma). Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level **DL:** Detection Limit PF: Prep Factor MDA: Minimum Detectable Activity **RL: Reporting Limit** MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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# **QC Summary**

Report Date: August 5, 2021

Page 1 of 2

Santee Cooper
P.O. Box 2946101
OCO3
Moncks Corner, South Carolina
Ms. Jeanette Gilmetti

Workorder: 549284

**Contact:** 

Parmname	NOM	Sample (	Qual QC	Units	RPD%	REC%	Range A	nlst	Date Time
Rad Gas Flow Batch 2152169									
QC1204867006 549896006 DUP									
Radium-228	U	0.643	2.48	•	118*		(0% - 100%)	JXC9	08/03/21 13:23
	Uncertainty	+/-0.875	+/-1.28						
QC1204867008 LCS									
Radium-228	51.6		55.6	pCi/L		108	(75%-125%)		08/03/21 13:23
	Uncertainty		+/-3.74						
QC1204867005 MB									
Radium-228			U 1.39	pCi/L					08/03/21 13:23
	Uncertainty		+/-1.02						
QC1204867007 549896006 MS									
Radium-228	156 U	0.643	161	pCi/L		103	(75%-125%)		08/03/21 14:43
	Uncertainty	+/-0.875	+/-11.9						
<b>Rad Ra-226</b> Batch 2149561 ——									
QC1204862383 548894001 DUP									
Radium-226		0.413	U 0.344	pCi/L	18.2		(0% - 100%) I	LXP1	07/22/21 11:02
	Uncertainty	+/-0.226	+/-0.250	•	10.2		(0/0 100/0) 1		0772272111102
0.012010/22005									
QC1204862385 LCS Radium-226	26.8		24.2	pCi/L		90.5	(75%-125%)		07/22/21 11:02
Rudium 220	Uncertainty		+/-1.49	-		70.5	(15/0 125/0)		07722721 11.02
QC1204862382 MB Radium-226			U 0.176	pCi/L					07/22/21 11:02
Nadium-220	Uncertainty		+/-0.182	1					07/22/21 11:02
	-								
QC1204862384 548894001 MS Radium-226	134	0.413	101	pCi/L		75.5	(75%-125%)		07/22/21 13:10
Naurum-220	Uncertainty	+/-0.226	+/-6.78	•		15.5	(15/0-125/0)		07/22/21 13.10

#### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

The Qualifiers in this report are defined as follows:

\*\* Analyte is a Tracer compound

< Result is less than value reported

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# **QC Summary**

Parmnar	me		NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
>	Result is grea	ter than value re	eported										
BD	Results are ei	ther below the M	MDC or tracer reco	overy is low									
FA	Failed analys	is.											
Н	Analytical ho	lding time was	exceeded										
J	See case narr	ative for an exp	lanation										
J	Value is estir	nated											
Κ	Analyte prese	ent. Reported va	lue may be biased	high. Actual	value is e	xpected to	be lower.						
L	Analyte prese	ent. Reported va	lue may be biased	low. Actual	value is ex	pected to b	e higher.						
М	M if above M	IDC and less that	an LLD										
Μ	REMP Resul	t > MDC/CL an	d < RDL										
N/A	RPD or %Re	covery limits do	not apply.										
N1	See case narr	ative											
ND	Analyte conc	entration is not	detected above the	detection lin	nit								
NJ	Consult Case	Narrative, Data	a Summary packag	e, or Project	Manager c	concerning	this qualifi	ier					
Q	One or more	quality control of	criteria have not be	een met. Refe	r to the ap	plicable na	rrative or I	DER.					
R	Sample result	s are rejected											
U	Analyte was	analyzed for, bu	t not detected abo	ve the MDL,	MDA, MI	DC or LOE							
UI	Gamma Spec	troscopyUnce	rtain identification										
UJ	Gamma Spec	troscopyUnce	rtain identification										
UL	Not considered	ed detected. The	e associated numbe	er is the repor	ted concer	ntration, wl	ich may b	e inaccurate	due to a low	bias.			
Х	Consult Case	Narrative, Data	a Summary packag	e, or Project	Manager c	concerning	this qualifi	ier					
Y	Other specifie	e qualifiers were	e required to prope	erly define the	e results. C	Consult case	e narrative.						
۸	RPD of samp	le and duplicate	e evaluated using +	-/-RL. Conce	ntrations a	are <5X the	RL. Qua	lifier Not Ap	plicable for	Radiochem	istry.		
h	Preparation o	r preservation h	olding time was ex	kceeded									
^ The Re five time	elative Percent es (5X) the con	Difference (RF	ts do not apply wh PD) obtained from letection limit (RL	the sample d	uplicate (1	DUP) is ev	aluated aga	ainst the acco	eptance criter	ria when th	e sample i	s greater	

\* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

#### Radiochemistry Technical Case Narrative Santee Cooper SDG #: 549284

Product: GFPC, Ra228, Liquid Analytical Method: EPA 904.0/SW846 9320 Modified Analytical Procedure: GL-RAD-A-063 REV# 5 Analytical Batch: 2152169

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	Client Sample Identification
549284001	AF07267
549284002	AF07268
549284003	AF07269
549284004	AF07270
549284005	AF07271
549284006	AF07272
549284007	AF07273
1204867005	Method Blank (MB)
1204867006	549896006(NonSDG) Sample Duplicate (DUP)
1204867007	549896006(NonSDG) Matrix Spike (MS)
1204867008	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

#### **Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

#### **Quality Control (QC) Information**

#### Duplication Criteria between QC Sample and Duplicate Sample

The Sample and the Duplicate, (See Below), did not meet the relative percent difference requirement; however, they do meet the relative error ratio requirement with the value listed below.

Sample	Analyte	Value
1204867006 (Non SDG 549896006DUP)	Radium-228	RPD 118* (0.0%-100.0%) RER 2.15 (0-3)

#### **Technical Information**

#### Recounts

Sample 1204867007 (Non SDG 549896006MS) was recounted due to high recovery. The recount is reported. Sample 549284004 (AF07270) was recounted to verify sample results. Recount is reported.

#### **Miscellaneous Information**

#### **Additional Comments**

The matrix spike, 1204867007 (Non SDG 549896006MS), aliquot was reduced to conserve sample volume.

<u>Product:</u> Lucas Cell, Ra226, Liquid <u>Analytical Method:</u> EPA 903.1 Modified <u>Analytical Procedure:</u> GL-RAD-A-008 REV# 15 <u>Analytical Batch:</u> 2149561

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	Client Sample Identification
549284001	AF07267
549284002	AF07268
549284003	AF07269
549284004	AF07270
549284005	AF07271
549284006	AF07272
549284007	AF07273
1204862382	Method Blank (MB)
1204862383	548894001(AF07246) Sample Duplicate (DUP)
1204862384	548894001(AF07246) Matrix Spike (MS)
1204862385	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

#### **Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

#### **Technical Information**

**Recounts** Sample 1204862384 (AF07246MS) was recounted due to low recovery. The recount is reported.

#### **Miscellaneous Information**

#### **Additional Comments**

The matrix spike, 1204862384 (AF07246MS), aliquot was reduced to conserve sample volume.

#### **Certification Statement**

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Contract Lab Info	o:	EL	Contract Lab Di	ie Date (Lat	۶ Only): ٤	3	6 j	21	Ser	nd report	to <u>lcwi</u>	llia@santeect	ooper.com & sibro	wn@santeecoope	r.com				
		•			Chain of Custody 549284									Santee Coope Santee Coo One Riverwood Dr Moneks Corner, SC 294 Phone: (843)761-8000 Ext. 51 Fax: (843)761-41					
Customer En	nail/R	eport Recipi	ent:	Date	Results N	leeded l	by:		Р	roject/	'Task/	Unit #:		Rerun request	for a	ny fla	gged	lQC	
	Ą	@santee	cooper.com		1	/		121	567	-/ JA	102.0	9.GØI	1 36500	Yes	No				
							-									Analysi	s Grou	<u>IP</u>	
Labworks ID #	in survey and	ample Locatio	on/		۵		r	١.,		8	"		Commen	ts		T	ſ		
(Internal use only)		escription		Collection Date	Collection Time	Sample Collector	Total # of containers	Bottle type: (Glass- G/Plastic-P1	Grab (G) or Composite (C)	Matrix(see below)	Preservative (see	<ul> <li>Rej</li> <li>Mi</li> </ul>	thod # porting limit sc. sample info y other notes		RAD 226	FAD 228	DIPAL RAD CALC		
AF07267		-GYP-I		7/7/2	1 1031	CWS MRE BRT	2	P	G	GW	2				×	X	×		
A=07268	c	GYP-2			1128		1	1		1	1	1			1		}		
AF-07269	6	GYP-2 D	UP		1133														
AF07270	c	GYP-3		11	1338										$\uparrow$				
AF 07291	c	GYP-4		7/8/2	1 1026	NDG	1												
AF07272		GYP-5	e se se se a de la	15 Junear	1124	1.1.2.38						a l'en des							
AF07273	C	GYP-6			1221												$\frac{1}{1}$		
												a. Maria							
Relinquished	by:	Employee#	Date	Time	Recei	ved by:	E	mployee	#	Date		Time	Sample Rec	eiving (Internal L :	<i>Jse On</i> Initial	ly)			
Amoun		35594	7/9/21	<u>094</u>	Al	1		GEL		7/9/2		લ્વમ	Correct pH		AUIUAI				
Relinquished I	бу:	Employee#	Date	Time .	MRecei H	ved by:		mployee		Date	000000000	Time	Preservativ						
Relinquished	bγ:	Employee#		Time	Recei	ved by:		DEL mployee		Cate		1114 Time							
							-	21947-04863-14312		<u></u>			Date/Time/	Init for preserva	itive:				
□ Ag □ □ Al □	MET/ Cu Fe K	ALS (all ) Sb Sc Sc Sn Sn	<u>Nutr</u> □ TOO □ DOO □ TP/	C	<u>MI</u> <ul> <li>BTEX</li> <li>Napthal</li> <li>THM/H</li> </ul>	ene		Wallbo	sum( <i>a</i>		0	<u>Coal</u> Ultimate	ture D1			<u>Oil</u> n. Oil Moist dot	Qual.		
BBa	Li Mg Mn	Sr     Ti     Tl		3-N	□ VOC □ Oil & G □ E. Coli □ Total Co □ pH	rease		T Al TO TO To Sol	M	etals		<ul> <li>Ash</li> <li>Sulfur</li> <li>BTUs</li> <li>Volatile</li> <li>CHN</li> </ul>	□ Matter □ S	a Carbon fineral Analysis ieve Moisture	At Da U IF Di	idity lectric	d Oase		
Ca Ca Cd	Mo Na Ni	□ V □ Zn □ Hg	Br NO: SO4	3	Dissolve Dissolve Rad 226 Rad 228 PCB	ed Fe		CI Sul CI Sul CI PH CI Chi	Moistur líites	e		ther Tests: XRF Scan HGI Tineness Particulate M	[ 00	NPDES	, Fl M	ashpou etals ir is.Cd.( u)	nt · Loui	Ð	
	РЪ							) Par Sulfur		ж.		articulate Mi			0.001	ER			

Matrix codes: GW-groundwater, DW-drinking water, SW-surface water, WW-waste water, BW-boiler water, L-limestone, Oil-oil, S-Soil, SL-solid, C-coal, G-gypsum, FA-flyash, BA-bottom ash, M-misc (describe in comment section) Page 14 of PTO STOC: 0549284 2=HNO3 3=H2SO4 4-HCl 5=Na2S2O3 6-Other (Specify)

e

<b>CEL</b> Laboratories LLC	(		
			SAMPLE RECEIPT & REVIEW FORM
ient: SOOP			SDG/AR/COC/Work Order: 549284
ceived By: Kocy Boon	¥		Date Received: July 9,2021
Carrier and Tracking Number	"A base out" have a "succession over a success factory" of succession over		Critle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other
spected Hazard Information	Yes	٩N	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
Shipped as a DOT Hazardous?		-	Hazard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? YesNo
Did the client designate the samples are to be eived as radioactive?		-	COC notation or radioactive stickers on containers equal client designation.
Did the RSO classify the samples as foactive?		/	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): CPM / mR/Hr Classified as: Rad 1 Rad 2 Rad 3
Did the client designate samples are hazardous?			COC notation or hazard labels on containers equal client designation.
Did the RSO identify possible hazards?		1	PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:
Sample Receipt Criteria	Yes	ž	2 Comments/Qualifiers (Required for Non-Conforming Items)
Shipping containers received intact and sealed?	1		Circle Applicable: Seals broken Dannaged container Leaking container Other (describe)
Chain of custody documents included with shipment?	/		Circle Applicable: Client contacted and provided COC COC created upon receipt Preservation Method: Wet Ice Ice Packs Dry ice None Other:
Samples requiring cold preservation within $(0 \le 6 \text{ deg. C})$ ?* Daily check performed and passed on IR	/	at a cal	*all temperature Device Serial #:R < 2
temperature gun?	/		Secondary Temperature Device Serial # (If Applicable):
Sample containers intact and sealed?	/		Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
Samples requiring chemical preservation at proper pH?	/	ŀ	Sample ID's and Containers Affected:
Do any samples require Volatile Analysis?			If Yes, are Encores or Soil Kits present for solids? YesNoNA(If yes, take to VOA Freezer) Do liquid VOA vials contain acid preservation? YesNoNA(If unknown, select No) Are liquid VOA vials free of headspace? YesNoNA Sample ID's and containers affected:
Samples received within holding time?			ID's and tests affected:
Sample ID's on COC match ID's on bottles?			ID's and containers affected:
Date & time on COC match date & time on bottles?	/	•	Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
Number of containers received match number indicated on COC? Are sample containers identifiable as			Circle Applicable: No container count on COC Other (describe)
COC form is properly signed in relinquished/received sections?			Circle Applicable: Not relinquished Other (describe)
mments (Use Continuation Form if needed):		•	
PM (or PM	A) nev	view:	initials_NRGDate_7/17/21 Pageof
			GL-CHL-SR-001 Rev

State	Certification
Alabama	42200
Alaska	17-018
Alaska Drinking Water	SC00012
Arkansas	88-0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH-0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-15-00283, P330-15-00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2019020
Maryland	270
Massachusetts	M-SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE-OS-26-13
Nevada	SC000122021-1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R-158
Oklahoma	2019–165
Pennsylvania NELAP	68–00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-21-19
Utah NELAP	SC000122021-35
Vermont	VT87156
Virginia NELAP	460202
Washington	C780

List of current GEL Certifications as of 05 August 2021



a member of The GEL Group INC



PO Box 30712 Charleston, SC 29417 2040 Savage Road Charleston, SC 29407 P 843.556.8171 F 843.766.1178

gel.com

October 01, 2021

Ms. Jeanette Gilmetti Santee Cooper P.O. Box 2946101 OCO3 Moncks Corner, South Carolina 29461

Re: ABS Lab Analytical Work Order: 554912

Dear Ms. Gilmetti:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on September 03, 2021. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at www.gel.com.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4289.

Sincerely,

Julie Roberson

Julie Robinson Project Manager

Purchase Order: 367074 Enclosures



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#### Certificate of Analysis Report for

#### SOOP001 Santee Cooper

#### Client SDG: 554912 GEL Work Order: 554912

#### The Qualifiers in this report are defined as follows:

- \* A quality control analyte recovery is outside of specified acceptance criteria
- \*\* Analyte is a Tracer compound
- \*\* Analyte is a surrogate compound
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Julie Robinson.

Julie Roberson

Reviewed by

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

### **Certificate of Analysis**

Report Date: October 1, 2021 Company : Santee Cooper Address : P.O. Box 2946101 **OCO3** Moncks Corner, South Carolina 29461 Contact: Ms. Jeanette Gilmetti Project: ABS Lab Analytical Client Sample ID: AF13775 Project: SOOP00119 Sample ID: 554912001 Client ID: SOOP001 Matrix: Ground Water Collect Date: 31-AUG-21 10:01 **Receive Date:** 03-SEP-21 Collector: Client Qualifier MDC RL Parameter Result Uncertainty Units PF DF Analyst Date Time Batch Method Rad Gas Flow Proportional Counting GFPC, Ra228, Liquid "As Received" Radium-228 1.29 +/-0.875 1.32 3.00 pCi/L JXC9 09/29/21 1316 2172977 U 1 Radium-226+Radium-228 Calculation "See Parent Products" Radium-226+228 Sum +/-0.912 pCi/L 1.85 NXL1 10/01/21 0524 2176408 2 Rad Radium-226 Lucas Cell, Ra226, Liquid "As Received" Radium-226 0.559 +/-0.257 0.214 1.00 pCi/L LXP1 09/29/21 1005 2172980 3 The following Analytical Methods were performed: Method Description Analyst Comments EPA 904.0/SW846 9320 Modified Calculation EPA 903.1 Modified Surrogate/Tracer Recovery Result Nominal Test Recovery% Acceptable Limits Barium-133 Tracer GFPC, Ra228, Liquid "As Received" 88 (15% - 125%)Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Lc/LC: Critical Level
PF: Prep Factor
RL: Reporting Limit
on SQL: Sample Quantitation Limit

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### **Certificate of Analysis**

Report Date: October 1, 2021 Company : Santee Cooper Address : P.O. Box 2946101 **OCO3** Moncks Corner, South Carolina 29461 Contact: Ms. Jeanette Gilmetti Project: ABS Lab Analytical Client Sample ID: AF13776 Project: SOOP00119 Sample ID: 554912002 Client ID: SOOP001 Matrix: Ground Water Collect Date: 31-AUG-21 11:02 **Receive Date:** 03-SEP-21 Collector: Client Oualifier MDC RL Parameter Result Uncertainty Units PF DF Analyst Date Time Batch Method Rad Gas Flow Proportional Counting GFPC, Ra228, Liquid "As Received" Radium-228 4.04 +/-1.52 2.07 3.00 pCi/L JXC9 09/29/21 1316 2172977 1 Radium-226+Radium-228 Calculation "See Parent Products" Radium-226+228 Sum +/-1.58 pCi/L 5.53 NXL1 10/01/21 0524 2176408 2 Rad Radium-226 Lucas Cell, Ra226, Liquid "As Received" Radium-226 1.49 +/-0.418 0.364 1.00 pCi/L LXP1 09/29/21 1005 2172980 3 The following Analytical Methods were performed: Method Description Analyst Comments EPA 904.0/SW846 9320 Modified Calculation EPA 903.1 Modified Surrogate/Tracer Recovery Result Nominal Test Recovery% Acceptable Limits Barium-133 Tracer GFPC, Ra228, Liquid "As Received" 82.4 (15% - 125%)Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

1 2

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Page 4 of 15 SDG: 554912

Column headers are defined as follows: DF: Dilution Factor Lc/LC: Critical Level **DL:** Detection Limit PF: Prep Factor MDA: Minimum Detectable Activity **RL:** Reporting Limit MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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### **Certificate of Analysis**

Report Date: October 1, 2021 Company : Santee Cooper Address : P.O. Box 2946101 **OCO3** Moncks Corner, South Carolina 29461 Contact: Ms. Jeanette Gilmetti Project: ABS Lab Analytical Client Sample ID: AF13777 Project: SOOP00119 Sample ID: 554912003 Client ID: SOOP001 Matrix: Ground Water Collect Date: 01-SEP-21 12:40 **Receive Date:** 03-SEP-21 Collector: Client Oualifier MDC RL Parameter Result Uncertainty Units PF DF Analyst Date Time Batch Method Rad Gas Flow Proportional Counting GFPC, Ra228, Liquid "As Received" Radium-228 -0.925 +/-0.794 1.76 3.00 pCi/L JXC9 09/29/21 1316 2172977 U 1 Radium-226+Radium-228 Calculation "See Parent Products" Radium-226+228 Sum +/-0.814 pCi/L 0.295 NXL1 10/01/21 0524 2176408 2 Rad Radium-226 Lucas Cell, Ra226, Liquid "As Received" Radium-226 0.295 +/-0.180 0.188 1.00 pCi/L LXP1 09/29/21 1005 2172980 3 The following Analytical Methods were performed: Method Description Analyst Comments EPA 904.0/SW846 9320 Modified Calculation EPA 903.1 Modified Surrogate/Tracer Recovery Result Nominal Test Recovery% Acceptable Limits Barium-133 Tracer GFPC, Ra228, Liquid "As Received" 83.9 (15% - 125%)

#### Notes:

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Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows: DF: Dilution Factor Lc/LC: Critical Level **DL:** Detection Limit PF: Prep Factor MDA: Minimum Detectable Activity **RL:** Reporting Limit MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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# **Certificate of Analysis**

Report Date: October 1, 2021 Company : Santee Cooper Address : P.O. Box 2946101 **OCO3** Moncks Corner, South Carolina 29461 Contact: Ms. Jeanette Gilmetti Project: ABS Lab Analytical Client Sample ID: AF13778 Project: SOOP00119 Sample ID: 554912004 Client ID: SOOP001 Matrix: Ground Water Collect Date: 01-SEP-21 12:45 **Receive Date:** 03-SEP-21 Collector: Client Oualifier MDC RL Parameter Result Uncertainty Units PF DF Analyst Date Time Batch Method Rad Gas Flow Proportional Counting GFPC, Ra228, Liquid "As Received" Radium-228 0.100 +/-0.903 1.68 3.00 pCi/L JXC9 09/29/21 1316 2172977 U 1 Radium-226+Radium-228 Calculation "See Parent Products" Radium-226+228 Sum +/-0.934 pCi/L 0.632 NXL1 10/01/21 0524 2176408 2 Rad Radium-226 Lucas Cell, Ra226, Liquid "As Received" Radium-226 0.532 +/-0.238 0.194 1.00 pCi/L LXP1 09/29/21 1005 2172980 3 The following Analytical Methods were performed: Method Description Analyst Comments EPA 904.0/SW846 9320 Modified Calculation EPA 903.1 Modified Surrogate/Tracer Recovery Result Nominal Test Recovery% Acceptable Limits Barium-133 Tracer GFPC, Ra228, Liquid "As Received" 83.9 (15% - 125%)Notes: Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows: DF: Dilution Factor Lc/LC: Critical Level **DL:** Detection Limit PF: Prep Factor MDA: Minimum Detectable Activity **RL:** Reporting Limit MDC: Minimum Detectable Concentration

SQL: Sample Quantitation Limit

1 2

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### **Certificate of Analysis**

Report Date: October 1, 2021 Company : Santee Cooper Address : P.O. Box 2946101 **OCO3** Moncks Corner, South Carolina 29461 Contact: Ms. Jeanette Gilmetti Project: ABS Lab Analytical Client Sample ID: AF13773 Project: SOOP00119 Sample ID: 554912005 Client ID: SOOP001 Matrix: Ground Water Collect Date: 01-SEP-21 09:04 **Receive Date:** 03-SEP-21 Collector: Client Oualifier MDC RL Parameter Result Uncertainty Units PF DF Analyst Date Time Batch Method Rad Gas Flow Proportional Counting GFPC, Ra228, Liquid "As Received" Radium-228 3.97 +/-1.63 2.33 3.00 pCi/L JXC9 09/29/21 1316 2172977 1 Radium-226+Radium-228 Calculation "See Parent Products" Radium-226+228 Sum +/-1.65 pCi/L 4.64 NXL1 10/01/21 0524 2176408 2 Rad Radium-226 Lucas Cell, Ra226, Liquid "As Received" Radium-226 0.669 +/-0.278 0.213 1.00 pCi/L LXP1 09/29/21 1005 2172980 3 The following Analytical Methods were performed: Method Description Analyst Comments EPA 904.0/SW846 9320 Modified Calculation EPA 903.1 Modified Surrogate/Tracer Recovery Result Nominal Test Recovery% Acceptable Limits

81.1

(15% - 125%)

Barium-133 Tracer

Page 7 of 15 SDG: 554912

1 2

3

Notes: Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows: DF: Dilution Factor Lc/LC: Critical Level **DL:** Detection Limit PF: Prep Factor MDA: Minimum Detectable Activity **RL:** Reporting Limit MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

GFPC, Ra228, Liquid "As Received"

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# **Certificate of Analysis**

Report Date: October 1, 2021 Company : Santee Cooper Address : P.O. Box 2946101 OCO3 Moncks Corner, South Carolina 29461 Contact: Ms. Jeanette Gilmetti Project: ABS Lab Analytical Client Sample ID: AF13774 Project: SOOP00119 Sample ID: 554912006 Client ID: SOOP001 Matrix: Ground Water Collect Date: 01-SEP-21 09:09 **Receive Date:** 03-SEP-21 Collector: Client Oualifier MDC RL Parameter Result Uncertainty Units PF DF Analyst Date Time Batch Method Rad Gas Flow Proportional Counting GFPC, Ra228, Liquid "As Received" Radium-228 2.79 +/-1.48 2.23 3.00 pCi/L JXC9 09/29/21 1317 2172977 1 Radium-226+Radium-228 Calculation "See Parent Products" Radium-226+228 Sum +/-1.52 pCi/L 3.57 NXL1 10/01/21 0524 2176408 2 Rad Radium-226 Lucas Cell, Ra226, Liquid "As Received" Radium-226 0.773 +/-0.343 0.408 1.00 pCi/L LXP1 09/29/21 1005 2172980 3 The following Analytical Methods were performed: Method Description Analyst Comments EPA 904.0/SW846 9320 Modified Calculation EPA 903.1 Modified Surrogate/Tracer Recovery Result Nominal Test Recovery% Acceptable Limits Barium-133 Tracer GFPC, Ra228, Liquid "As Received" 82 (15% - 125%)Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows: DF: Dilution Factor Lc/LC: Critical Level **DL:** Detection Limit PF: Prep Factor MDA: Minimum Detectable Activity **RL:** Reporting Limit MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

1 2

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# **QC Summary**

Report Date: October 1, 2021

Page 1 of 2

	Santee Cooper
	P.O. Box 2946101
	OCO3
	Moncks Corner, South Carolina
Contact:	Ms. Jeanette Gilmetti

Workorder: 554912

Parmname	NOM	Sample Qu	ial QC	Units	RPD%	REC%	Range Anls	t Date Time
Rad Gas FlowBatch2172977								
QC1204907460 554912001 DUP								
Radium-228	U	1.29	2.71	pCi/L	70.8		(0% - 100%) JX	C9 09/29/21 13:16
	Uncertainty	+/-0.875	+/-1.06					
QC1204907461 LCS								
Radium-228	49.7		54.5	pCi/L		110	(75%-125%)	09/29/21 13:16
	Uncertainty		+/-4.01					
QC1204907459 MB								
Radium-228		τ	1110	pCi/L				09/29/21 13:16
	Uncertainty		+/-1.19					
Rad Ra-226 Batch 2172980								
QC1204907477 554912001 DUP								
Radium-226		0.559	0.316	pCi/L	55.4		(0% - 100%) LX	P1 09/29/21 10:37
	Uncertainty	+/-0.257	+/-0.219	F			(0/0 100/0) 211	
OC1204007475 L CS								
QC1204907475 LCS Radium-226	26.8		22.1	pCi/L		82.5	(75%-125%)	09/29/21 10:37
Radium-220	Uncertainty		+/-1.48	perE		02.5	(7570-12570)	0)/2)/21 10.37
	Cheertainty		17 11 10					
QC1204907472 MB		τ	L 0.295	0.4				00/00/01 10 05
Radium-226	Uncertainty	(	J 0.385 +/-0.275	pCi/L				09/29/21 10:05
	Uncertainty		+/-0.275					
QC1204907476 MB		-	T 0.1.10	<i></i>				
Radium-226	<b>TT</b> . <b>1</b> .	τ		pCi/L				09/29/21 10:37
	Uncertainty		+/-0.241					
QC1204907474 554912001 MS								
Radium-226	133	0.559	108	pCi/L		80.9	(75%-125%)	09/29/21 10:37
	Uncertainty	+/-0.257	+/-7.74					

#### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

The Qualifiers in this report are defined as follows:

\*\* Analyte is a Tracer compound

< Result is less than value reported

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# **QC Summary**

Parmnan	ne NOM Sample Qual QC Units RPD% REC% Range Anlst Date Time											
>	Result is greater than value reported											
BD	Results are either below the MDC or tracer recovery is low											
FA	Failed analysis.											
Н	Analytical holding time was exceeded											
J	See case narrative for an explanation											
J	Value is estimated											
Κ	Analyte present. Reported value may be biased high. Actual value is expected to be lower.											
L	Analyte present. Reported value may be biased low. Actual value is expected to be higher.											
М	M if above MDC and less than LLD											
М	REMP Result > MDC/CL and < RDL											
N/A	RPD or %Recovery limits do not apply.											
N1	See case narrative											
ND	Analyte concentration is not detected above the detection limit											
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier											
Q	One or more quality control criteria have not been met. Refer to the applicable narrative or DER.											
R	Sample results are rejected											
U	Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.											
UI	Gamma SpectroscopyUncertain identification											
UJ	Gamma SpectroscopyUncertain identification											
UL	Not considered detected. The associated number is the reported concentration, which may be inaccurate due to a low bias.											
Х	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier											
Y	Other specific qualifiers were required to properly define the results. Consult case narrative.											
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.											
h	Preparation or preservation holding time was exceeded											
^ The Re five time	icates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable. elative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than es (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the ed to evaluate the DUP result.											

\* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

#### Radiochemistry Technical Case Narrative Santee Cooper SDG #: 554912

Product: GFPC, Ra228, Liquid Analytical Method: EPA 904.0/SW846 9320 Modified Analytical Procedure: GL-RAD-A-063 REV# 5 Analytical Batch: 2172977

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	Client Sample Identification
554912001	AF13775
554912002	AF13776
554912003	AF13777
554912004	AF13778
554912005	AF13773
554912006	AF13774
1204907459	Method Blank (MB)
1204907460	554912001(AF13775) Sample Duplicate (DUP)
1204907461	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

#### **Data Summary:**

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Product: Lucas Cell, Ra226, Liquid Analytical Method: EPA 903.1 Modified Analytical Procedure: GL-RAD-A-008 REV# 15 Analytical Batch: 2172980

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	Client Sample Identification
554912001	AF13775
554912002	AF13776
554912003	AF13777
554912004	AF13778
554912005	AF13773
554912006	AF13774
1204907472	Method Blank (MB)
1204907474	554912001(AF13775) Matrix Spike (MS)
1204907475	Laboratory Control Sample (LCS)
1204907476	Method Blank (MB)

#### 1204907477 554912001(AF13775) Sample Duplicate (DUP)

The samples in this SDG were analyzed on an "as received" basis.

#### **Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

#### **Miscellaneous Information**

#### **Additional Comments**

The matrix spike, 1204907474 (AF13775MS), aliquot was reduced to conserve sample volume.

#### **<u>Certification Statement</u>**

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Contract Lab Info: _	GEL Contract Lab Du	ie Date (Lab	oniy): 15 Cha					d repor			ecooper.com&sibrown@santeecc	San On Moneks ne: (843)7	Si Rive Corne 61-80	intee C rwood er. SC	Coope Drive 2946
Customer Emai	il/Report Recipient:	Date I	Results No	eeded l	oy:		Pı	oject,	/Task/	'Unit #:	Rerun requ				
LCWILLIA	@santeecooper.com		//			121	567	<u></u>	NO2.	09.GØ	<u>  / 36500</u> Ye	s No			
Labworks ID # (Internal use only)	Sample Location/ Description	Collection Date	Collection Time	Sample Collector	Total # of containers	Bottle type: (Glass- G/Plastic-P)	Grab (G) or Composite (C)	Matrix(see below)	Preservative (see below)	• F	Comments Aethod # Reporting limit Aisc. sample info any other notes	RAD 226	228	S Gro	P
AF13775	CGYP-5	8/34/21	1001	DEW	2-	P	G	GW	2			×	X	<u>р</u> Х	
AF13776	CGYP-G		1102		2								1	1	
AF13777	WLF- 4-2-6	9/1/21	1240		2									$\dagger$	$\neg$
AF13778	WLFA2-6 DUP	L	1245		9										
AF13773	CGYP-4		0904		2										
AF13774	CGYP-4 DUP		0909	ŀ	2		1			al Article Area	- 2010 A			$\frac{1}{1}$	
									- y.		in the second second Second second	and the second se			
										9.410.419.000 (**********************************					
		-													
Relinquished by: BAMOUM Relinquished by:		Time 745 Time	Receive Receive		En	nployee # GEL nployee # EC	9	Date /3/2 Date		Time 2945 Time	Sample Receiving (Interna TEMP (°C): Correct pH: Yes N Preservative Lot#:	Initial	(V		
Refinquished by:	Employee# Date	Time	Receive	d by:	-	iployee #		Date		Time	Date/Time/Init for preser	vative:			
ME       Ag     Cu       Al     Fe       As     K       B     Li       Ba     Mg       Be     Mn       Ca     Mo       Cd     Na       Co     Ni       Cr     Pb	□ Se         □ TOC           □ Sn         □ TP/T           □ Sr         □ H3-           □ Ti         □ Cl           □ TI         □ NO2	PO4 (	MISC DETEX Napthalem THM/HA/ VOC Oil & Gree E. Coli Total Colif pH Dissolved J Dissolved J Rad 226 Rad 228	e A ise form As		Wallboa Gypsi <i>below)</i> AIM CTO6	im( <i>all</i> ) metals ple Meta v (CaSe pisture es	Пs	() () () () () () () () () () () () () (	Coa Itimate \overline \wedge Mon \overline Ash \overline Suffar \overline Suffar \overline Volatile \overline CHN er Tests: RF Scan Of neness rticulate M	Ammonia Ammonia 0 LO1 1 % Carbon 2 Mineral Analysis 3 Sieve 3 % Moisture NPDES Oil & Gnase	Co Dec Divi Divi Uses Cia Sir	oods ood ON Openin Gols oo Colds F	fe meneriti Occareti	

Matrix codes: GW-groundwater, DW-drinking water, SW-surface water, WW-waste water, BW-boiler water, L-limestone, Oil-oil, S-Soil, SL-solid, C-coal, G-gypsum, FA-flyash, BA-bottom ash, M-misc (describe in comment section) Page 13Pose 13Lodd: 5-34012-HNO3 3=H2SO4 4-HCl 5=Na2S2O3 6-Other (Specify)

**CEEL** Laboratories LLC

n	• • • •	DE	<u> </u>		SDG/AR/COC/Work Order: 554912
Rec	ceived By:	BE			Date Received: 9/03/21
	Carrier and T	Fracking Number			Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other
Susp	pected Hazard I	formation	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
\)Sh	ipped as a DOT	łazardous?		$\backslash$	Hazard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? Yes No
B) Di eceiv	id the client desig ved as radioactive	nate the samples are to be ?		$\backslash$	COC notation or radioactive stickers on containers equal client designation.
) Di Idioa	d the RSO classi active?	y the samples as			Maximum Net Counts Observed* (Observed Counts - Area Background Counts):CPM mR/Hr Classified as: Rad 1 Rad 2 Rad 3
) Di	d the client desig	nate samples are hazardou	is?	\	COC notation or hazard labels on containers equal client designation.
) Dic		y possible hazards?			PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:
-1-		eccipt Criteria	Yes	<b>N</b> N	
se	ealed?	ers received intact and	Ν		Ž         Comments/Qualifiers (Required for Non-Conforming Items)           Čírcle Applicable:         Seals broken           Damaged container         Leaking container           Other (describe)         Other (describe)
w	hain of custody with shipment?	documents included			Circle Applicable: Client contacted and provided COC COC created upon receipt
W	thin ( $0 \le 6 \deg$				Preservation Method: Wet Ice Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius Metals Containes TEMP: 21
D. te	aily check perfe mperature gun?	ormed and passed on IR	~		Secondary Temperature Device Serial # (If Applicable):
		s intact and sealed?	Ň		Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
Sa at	mples requiring proper pH?	chemical preservation	$\mathbf{N}$		Sample ID's and Containers Affected: If Preservation added, Lot#:
		es require Volatile alysis?			If Yes, are Encores or Soil Kits present for solids? YesNoNA(If yes, take to VOA Freezer)         Do liquid VOA vials contain acid preservation? YesNoNA(If unknown, select No)         Are liquid VOA vials free of headspace? YesNoNA         Sample ID's and containers affected:
Sar	mples received	within holding time?	$\overline{\mathbf{n}}$		ID's and tests affected:
Sar bot	nple ID's on CC tles?	OC match ID's on		-	ID's and containers affected:
on t	bottles?	OC match date & time	$\mathbf{n}$		Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
nun Are	ber indicated o sample contain	ers identifiable as			Circle Applicable: No container count on COC Other (describe)
CO(	C form is prope quished/receive	se of GEL labels? rly signed in ed sections? ion Form if needed):	2		Circle Applicable: Not relinquished Other (describe)
					-

GL-CHL-SR-001 Rev 7

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State	Certification							
Alabama	42200							
Alaska	17-018							
Alaska Drinking Water	SC00012							
Arkansas	88-0651							
CLIA	42D0904046							
California	2940							
Colorado	SC00012							
Connecticut	PH-0169							
DoD ELAP/ ISO17025 A2LA	2567.01							
Florida NELAP	E87156							
Foreign Soils Permit	P330-15-00283, P330-15-00253							
Georgia	SC00012							
Georgia SDWA	967							
Hawaii	SC00012							
Idaho	SC00012							
Illinois NELAP	200029							
Indiana	C-SC-01							
Kansas NELAP	E-10332							
Kentucky SDWA	90129							
Kentucky Wastewater	90129							
Louisiana Drinking Water	LA024							
Louisiana NELAP	03046 (AI33904)							
Maine	2019020							
Maryland	270							
Massachusetts	M-SC012							
Massachusetts PFAS Approv	Letter							
Michigan	9976							
Mississippi	SC00012							
Nebraska	NE-OS-26-13							
Nevada	SC000122021-1							
New Hampshire NELAP	2054							
New Jersey NELAP	SC002							
New Mexico	SC00012							
New York NELAP	11501							
North Carolina	233							
North Carolina SDWA	45709							
North Dakota	R-158							
Oklahoma	2019–165							
Pennsylvania NELAP	68-00485							
Puerto Rico	SC00012							
S. Carolina Radiochem	10120002							
Sanitation Districts of L	9255651							
South Carolina Chemistry	10120001							
Tennessee	TN 02934							
Texas NELAP	T104704235-21-19							
Utah NELAP	SC000122021–35							
Vermont	VT87156							
Virginia NELAP	460202							
2								
Washington	C780							

List of current GEL Certifications as of 01 October 2021



a member of The GEL Group INC



PO Box 30712 Charleston, SC 29417 2040 Savage Road Charleston, SC 29407 P 843.556.8171 F 843.766.1178

gel.com

October 26, 2021

Ms. Jeanette Gilmetti Santee Cooper P.O. Box 2946101 OCO3 Moncks Corner, South Carolina 29461

Re: ABS Lab Analytical Work Order: 557483

Dear Ms. Gilmetti:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on October 01, 2021. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at www.gel.com.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4289.

Sincerely,

Nina Gampe for Julie Robinson Project Manager

Purchase Order: 367074 Enclosures



2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

#### Certificate of Analysis Report for

#### SOOP001 Santee Cooper

#### Client SDG: 557483 GEL Work Order: 557483

#### The Qualifiers in this report are defined as follows:

- \* A quality control analyte recovery is outside of specified acceptance criteria
- \*\* Analyte is a Tracer compound
- \*\* Analyte is a surrogate compound
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Julie Robinson.

Min Ange

Reviewed by

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

# **Certificate of Analysis**

Report Date: October 26, 2021

										Rep	ort Date:	October 26,	2021
	Company :		ee Coope										
	Address :		Box 294	6101									
		000			. 20461								
	Contact:		Jeanette	er, South Carol	ina 29461								
	Project:		Lab Ana										
	Client Sample ID:			aryticar			D	roject:		5001	<b>2</b> 00119		
	Sample ID:		83001					lient ID		SOOF			
	Matrix:		ind Wate				C			3001	001		
	Collect Date:		EP-21 09										
	Receive Date:		CT-21 05	9.30									
	Collector:	Clier											
	Collector.	Chei	III										
Parameter	Quali	fier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analy	st Date	Time Batch	Method
Rad Gas Fl	ow Proportional Co	unting											
GFPC, Ra2	228, Liquid "As Reco	eived"											
Radium-228	-		4.29	+/-1.18	1.30	3.00	pCi/L			JXC9	10/13/21	0851 2181317	1
	6+Radium-228 Calc	culation											
Radium-226+			5.29	+/-1.23			pCi/L		1	AEA	10/26/21	1418 2181322	2
Rad Radiur		р.	111										
Radium-226	, Ra226, Liquid "As	Receiv	ved" 1.00	+/-0.364	0.248	1.00	pCi/L			I VD1	10/26/21	1049 2181313	3
	ing Analytical Math	ode w			0.248	1.00	pci/L			LAFI	10/20/21	1049 2181313	3
	ving Analytical Meth		ere perio	inneu:				A 1					
$\frac{\text{Method}}{1}$	Descr EPA 90	-	846 9320 I	Modified				Analys	t Coi	nment	S		
2	Calcula		040 7520 1	viounicu									
3		03.1 Mo	dified										
Surrogate/7	Fracer Recovery	Test				R	esult	Nomin	al	Reco	very%	Acceptable L	imits
Barium-133 T	5		a228, Liqu	id "As Received"							87.4	(15%-125%)	
Notes:													
	Jncertainty is calcula	ated at	the 95%	confidence leve	el (1.96-sigr	na).							
U	eaders are defined as				(								
DF: Dilutio		101100	<u>vs.</u>	Lc/LC: Critic	al Level								

DF: Dilution FactorLc/LC: Critical LevelDL: Detection LimitPF: Prep FactorMDA: Minimum Detectable ActivityRL: Reporting LimitMDC: Minimum Detectable ConcentrationSQL: Sample Quantitation Limit

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# **Certificate of Analysis**

Report Date: October 26, 2021

											Rep	ort Date:	October 2	6, 2021
	Company : Address :	P O	antee Co .O. Box CO3	2940	5101									
	Contact:		loncks ( Is. Jeane		er, South Carol	ina 29461								
	Project:		BS Lab											
	Client Samp		F15788		5									
	Sample ID:		5748300						roject: lient ID	):	SOOI	200119 2001		
	Matrix:	G	round V	Vater	•									
	Collect Date	e: 2'	7-SEP-2	1 09	:43									
	Receive Dat	e: 0	1-OCT-2	21										
	Collector:	C	lient											
		0.110												
Parameter		Qualifier		ult	Uncertainty	MDC	RL	Units	PF	DF	Analy	st Date	Time Bate	h Method
	ow Proportion													
	28, Liquid "A	s Receive		2.07	. / 1.50	0.12	2.00	0.1			IVCO	10/12/21	0051 01012	7 1
Radium-228	6+Padium 22	8 Calcula		3.87	+/-1.50 rent Products"	2.13	3.00	pCi/L			JXC9	10/13/21	0851 21813	1 1
Radium-226+2		.o Calcula		сга 4.54	+/-1.53			pCi/L		1	AEA	10/26/21	1418 21813	22 2
Rad Radiur	m-226							1						
Lucas Cell,	Ra226, Liqui	id "As Re	ceived"											
Radium-226	_		C	.672	+/-0.280	0.214	1.00	pCi/L			LXP1	10/26/21	1049 21813	3 3
The follow	ving Analytica	l Methods	s were p	erfo	rmed:									
Method	Method Description Analyst Comments													
1		EPA 904.0/		320 N	Iodified									
2 3		Calculation EPA 903.1												
	Fracer Recove				1		R	esult	Nomir	nal		very%	Acceptable	
Barium-133 T	racer	GFP	2, Ra228,	Liqui	d "As Received"							81.4	(15%-125	%)
Notes: Counting U	Incertainty is	calculated	at the 9	5%	confidence leve	el (1.96-sigr	na).							
Column he	aders are defi	ned as fol	lows:			1.7 1								

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	on SQL: Sample Quantitation Limit

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# **Certificate of Analysis**

Report Date: October 26, 2021

										Rep	ort Date:	October 26	5, 2021
	Company :		ee Coope										
	Address :		Box 294	6101									
		OCO		~ . ~ .									
	Cantanta			er, South Carol	ina 29461								
	Contact:		leanette										
	Project:		Lab Ana	alytical				-					
	Client Sample ID:							roject:			<b>2</b> 00119		
	Sample ID:		83003				C	lient ID	):	SOOF	<b>P</b> 001		
	Matrix:		nd Wate	-									
	Collect Date:	27-S	EP-21 11	:17									
	Receive Date:	01-0	CT-21										
	Collector:	Clier	ıt										
Parameter	Quali	fier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analy	st Date	Time Batch	Method
Rad Gas Flo	ow Proportional Co	unting											
	28, Liquid "As Reco	-											
Radium-228	-, <u>1</u>		1.95	+/-1.03	1.51	3.00	pCi/L			JXC9	10/13/21	0851 218131	7 1
Radium-22	6+Radium-228 Calo	culation	n "See Pa	rent Products"									
Radium-226+2			2.76	+/-1.08			pCi/L		1	AEA	10/26/21	1418 218132	2 2
Rad Radiur													
	Ra226, Liquid "As	Receiv											
Radium-226			0.805	+/-0.326	0.348	1.00	pCi/L			LXP1	10/26/21	1049 218131	3 3
The follow	ing Analytical Meth	nods w	ere perfo	rmed:									
Method	Descr							Analys	t Co	nment	S		
1			846 9320 N	Aodified									
2	Calcula		1.6. 1										
3		03.1 Moo	lified										
		Test				R	esult	Nomin	al	Reco	•	Acceptable	
Barium-133 T	racer (	GFPC, R	a228, Liqu	id "As Received"							86	(15%-125%	6)
Notes: Counting U	ncertainty is calcula	ated at	the 95%	confidence leve	el (1.96-sigi	ma).							
Column he	aders are defined as	follow	/8:										
DF: Dilutio		0011		Lc/LC: Critic	al Level								

DF: Dilution FactorLc/LC: Critical LevelDL: Detection LimitPF: Prep FactorMDA: Minimum Detectable ActivityRL: Reporting LimitMDC: Minimum Detectable ConcentrationSQL: Sample Quantitation Limit

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# **Certificate of Analysis**

Report Date: October 26, 2021

										Rep	ort Date:	October 26,	2021
	Company :		ntee Coope										
	Address :		D. Box 294	6101									
		OC M											
	Contact:		. Jeanette	er, South Carol	lina 29401								
	Project:		S Lab Ana										
	Client Sample		15790	aryticar		D	roject:		SOOI	P00119			
	Sample ID:		13790 7483004					lient ID	<b>)</b> .	SOOF			
	Matrix:		ound Wate				C		<i>.</i>	3001	001		
	Collect Date:		SEP-21 12										
	Receive Date:		OCT-21	2.32									
	Collector:	Cli											
	Conector:	Ch	ent										
Parameter	0	ualifier	 Docult	Uncertainty	MDC	RL	Units	PF	DE	Analy	st Date	Time Batch	Mathod
				Oncertainty	WIDC	KL	Units	I I.	DI	Anary	st Date		Methou
	ow Proportional		-										
GFPC, Ra2 Radium-228	228, Liquid "As F	Received	5.96	+/-1.43	1.61	3.00	pCi/L			JXC9	10/15/21	0949 2181317	1
	6+Radium-228 C	alculati			1.01	5.00	pci/L	,		JAC9	10/13/21	0949 2181317	1
Radium-226+		Jaiculati	7.93				pCi/L	,	1	AEA	10/26/21	1418 2181322	2
Rad Radiur	m-226												
Lucas Cell,	Ra226, Liquid "	As Rece	eived"										
Radium-226	· •		1.97	+/-0.480	0.408	1.00	pCi/L	,		LXP1	10/26/21	1049 2181313	3
The follow	ving Analytical M	lethods v	were perfo	ormed:									
Method	De	scription	1					Analys	t Coi	nment	s		
1			W846 9320 N	Modified									
2		culation											
3		A 903.1 M	odified										
	Fracer Recovery	Test				R	esult	Nomin	nal		•	Acceptable L	
Barium-133 T	racer	GFPC,	Ra228, Liqu	id "As Received"							86.3	(15%-125%)	)
Notes: Counting U	Incertainty is cal	culated a	it the 95%	confidence lev	el (1.96-sigi	ma).							
•	aders are defined				. 0								
DF. Diluti	on Factor			L c/L C · Critic	al Level								

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	on SQL: Sample Quantitation Limit

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# **Certificate of Analysis**

Report Date: October 26, 2021

										кер	ort Date:	October 26,	2021
	Company :		ee Coope										
	Address :		Box 294	6101									
		OCC			. 00461								
	Contact:		Jeanette (	er, South Carol	ina 29461								
	Project:		S Lab Ana										
	Client Sample ID:			irytical			n	roject:		5001	200119		
	-		483005					lient ID		SOOF			
	Sample ID: Matrix:			-			C			500F	-001		
			and Wate										
	Collect Date:		SEP-21 10	):21									
	Receive Date:		DCT-21										
	Collector:	Clie	nt										
Parameter	Quali	ifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analy	st Date	Time Batch	Method
Rad Gas Fl	ow Proportional Co	unting											
GFPC, Ra2	28, Liquid "As Rec	eived"											
Radium-228	-	U	0.384	+/-0.688	1.21	3.00	pCi/L			JXC9	10/13/21	0852 2181317	1
	6+Radium-228 Calo	culatio											
Radium-226+			0.805	+/-0.742			pCi/L		1	AEA	10/26/21	1418 2181322	2
Rad Radiur		ъ .											
	Ra226, Liquid "As	Recei			0.270	1.00	0.1			LVD1	10/06/01	1040 0101010	2
Radium-226	····	1.	0.421	+/-0.277	0.370	1.00	pCi/L			LXPI	10/26/21	1049 2181313	3
	ving Analytical Metl		ere perio	rmed:					~				
$\frac{\text{Method}}{1}$	Descr	-	7846 9320 N	A - 1:6: - 1				Analys	t Coi	nment	s		
2	Calcula		640 9520 N	Aloumeu									
3		03.1 Mo	dified										
Surrogate/7	Fracer Recovery	Test				R	esult	Nomin	al	Reco	very%	Acceptable L	imits
Barium-133 T			Ra228 Liou	id "As Received"		K	count	1 tollin	lui		93.3	(15%-125%)	
		5110,1	u220, Elqu								20.0	(15/0 125/0)	/
Notes:	Incertainty is calcula	atad at	tha 05%	confidence lov	al (1.06 cigr	<b>m</b> 0)							
•	-				ci (1.90-sigi	11 <i>a)</i> .							
-	eaders are defined as	follov	ws:		.1 T1								
DF: Dilution	on ractor			Lc/LC: Critic	ai Levei								

DF: Dilution FactorLc/LC: Critical LevelDL: Detection LimitPF: Prep FactorMDA: Minimum Detectable ActivityRL: Reporting LimitMDC: Minimum Detectable ConcentrationSQL: Sample Quantitation Limit

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# **Certificate of Analysis**

Report Date: October 26, 2021

											Кер	ort Date:	Octo	ber 26,	2021
	Company :		ntee Coop												
	Address :		D. Box 29	4610	1										
		OC													
	Contracto				South Carol	ina 29461									
	Contact: Project:		. Jeanette SS Lab Ar												
	•			laryti	cal				•		0001	200110			
	Client Sample ID		15792						roject:			200119			
	Sample ID:		7483006					C	lient ID	<b>)</b> :	SOOF	2001			
	Matrix:		ound Wat												
	Collect Date:		SEP-21 1	0:26											
	Receive Date:		OCT-21												
	Collector:	Clie	ent												
Parameter	Qual	ifier	Result	Un	certainty	MDC	RL	Units	PF	DF	Anals	st Date	Time	Batch	Method
				UII	certainty	MDC	KL	Onits	11	DI	Anary	st Date	Time	Daten	Wiethou
	ow Proportional Co		-												
Radium-228	228, Liquid "As Red	U U	ı 1.7:	3	+/-1.54	2.52	3.00	pCi/L			JXC9	10/13/21	1040	2181317	1
	6+Radium-228 Cal					2.52	5.00	pei/L			JAC)	10/13/21	1040	2101517	1
Radium-226+		culuti	2.2		+/-1.57			pCi/L	,	1	AEA	10/26/21	1418	2181322	2
Rad Radiur	n-226														
Lucas Cell,	Ra226, Liquid "As	Rece	vived"												
Radium-226			0.55	6	+/-0.339	0.473	1.00	pCi/L			LXP1	10/26/21	1049	2181313	3
The follow	ving Analytical Met	hods	were perf	orme	ed:										
Method	Desc	riptior	n						Analys	t Co	mment	s			
1			W846 9320	Modi	fied										
2	Calcu														
3		03.1 M	Iodified												
	Fracer Recovery	Test					R	esult	Nomir	nal		very%	-	table L	
Barium-133 T	racer	GFPC,	Ra228, Liq	uid "A	As Received"							84.6	(15)	%-125%)	
Notes:															
Counting U	Incertainty is calcul	ated a	it the 95%	6 con	fidence leve	el (1.96-sign	na).								
Column he	aders are defined a	s follo	ows:												
DE DU	-				<b>T G G !</b> !										

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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### **QC Summary**

Report Date: October 26, 2021

Page 1 of 2

Santee Cooper P.O. Box 2946101 OCO3 Moncks Corner, South Carolina Contact: Ms. Jeanette Gilmetti

Workorder: 557483

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range Ar	nlst	Date Time
Rad Gas Flow										
Batch 2181317 —										
QC1204923921 557483002 DUP										
Radium-228		3.87		1.94	pCi/L	66.3		(0% - 100%) J	JXC9	10/13/21 08:50
	Uncertainty	+/-1.50		+/-1.03						
QC1204923922 LCS										
Radium-228	49.5			48.5	pCi/L		98	(75%-125%)		10/13/21 08:51
	Uncertainty			+/-3.32						
QC1204923920 MB										
Radium-228			U	0.548	pCi/L					10/13/21 08:51
	Uncertainty			+/-0.740						
Rad Ra-226 Batch 2181313										
QC1204923908 557483001 DUP										
Radium-226		1.00		0.704	pCi/L	35.1		(0% - 100%) L	LXP1	10/26/21 10:49
	Uncertainty	+/-0.364		+/-0.332						
QC1204923910 LCS										
Radium-226	26.7			25.6	pCi/L		95.6	(75%-125%)		10/26/21 11:21
	Uncertainty			+/-1.66						
QC1204923907 MB										
Radium-226			U	0.260	pCi/L					10/26/21 10:49
	Uncertainty			+/-0.272						
QC1204923909 557483001 MS										
Radium-226	134	1.00		153	pCi/L		113	(75%-125%)		10/26/21 11:21
	Uncertainty	+/-0.364		+/-9.26						

#### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

- The Qualifiers in this report are defined as follows:
  - \*\* Analyte is a Tracer compound
  - < Result is less than value reported
  - > Result is greater than value reported
  - BD Results are either below the MDC or tracer recovery is low
  - FA Failed analysis.

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### **QC Summary**

armnan	ne	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Н	Analytical holding tim	ne was exceeded										
J	See case narrative for	an explanation										
J	Value is estimated											
Κ	Analyte present. Repo	orted value may be biased	l high. Actual	value is e	expected to	be lower.						
L	Analyte present. Repo	orted value may be biased	l low. Actual v	value is e	xpected to b	e higher.						
М	M if above MDC and	less than LLD										
М	REMP Result > MDC	C/CL and < RDL										
N/A	RPD or %Recovery li	mits do not apply.										
N1	See case narrative											
ND	Analyte concentration	is not detected above the	e detection lin	nit								
NJ	Consult Case Narrativ	e, Data Summary packag	ge, or Project l	Manager	concerning	this qualifi	er					
Q	One or more quality c	ontrol criteria have not b	een met. Refe	r to the aj	pplicable na	rrative or I	DER.					
R	Sample results are reje	ected										
U	Analyte was analyzed	for, but not detected abo	ve the MDL,	MDA, M	DC or LOD	).						
UI	Gamma Spectroscopy	Uncertain identification	1									
UJ	Gamma Spectroscopy	Uncertain identification	1									
UL	Not considered detect	ed. The associated numb	er is the report	ed conce	entration, wh	nich may be	e inaccurate	due to a low	bias.			
Х	Consult Case Narrativ	e, Data Summary packag	ge, or Project l	Manager	concerning	this qualifi	er					
Y	Other specific qualifie	ers were required to prop	erly define the	results.	Consult case	e narrative.						
^	RPD of sample and du	uplicate evaluated using	+/-RL. Conce	ntrations	are <5X the	RL. Qual	ifier Not Ap	plicable for I	Radiochem	istry.		
h	Preparation or preserv	vation holding time was e	xceeded									

<sup>^</sup> The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

\* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

#### Radiochemistry Technical Case Narrative Santee Cooper SDG #: 557483

Product: GFPC, Ra228, Liquid Analytical Method: EPA 904.0/SW846 9320 Modified Analytical Procedure: GL-RAD-A-063 REV# 5 Analytical Batch: 2181317

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	Client Sample Identification
557483001	AF15787
557483002	AF15788
557483003	AF15789
557483004	AF15790
557483005	AF15791
557483006	AF15792
1204923920	Method Blank (MB)
1204923921	557483002(AF15788) Sample Duplicate (DUP)
1204923922	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

#### **Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

#### **Technical Information**

#### Recounts

Sample 557483006 (AF15792) was recounted to verify sample results. Recount is reported. Sample 557483004 (AF15790) was re-eluted and recounted to verify sample result. The recount is reported.

<u>Product:</u> Lucas Cell, Ra226, Liquid <u>Analytical Method:</u> EPA 903.1 Modified <u>Analytical Procedure:</u> GL-RAD-A-008 REV# 15 <u>Analytical Batch:</u> 2181313

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<b><u>Client Sample Identification</u></b>
557483001	AF15787
557483002	AF15788
557483003	AF15789
557483004	AF15790

557483005	AF15791
557483006	AF15792
1204923907	Method Blank (MB)
1204923908	557483001(AF15787) Sample Duplicate (DUP)
1204923909	557483001(AF15787) Matrix Spike (MS)
1204923910	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

#### **Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

#### **Preparation Information**

Homogenous Matrix Samples 557483005 (AF15791) and 557483006 (AF15792) were non-homogenous matrix.

#### **Miscellaneous Information**

#### **Additional Comments**

The matrix spike, 1204923909 (AF15787MS), aliquot was reduced to conserve sample volume.

#### **Certification Statement**

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Contract Lab Info:	GEL Contract Lab Du	e Date (Lab O	nly):[O	_/2	1	21	Send	l report t	o <u>Icwillie</u>	a@santeecoop	er.com & sibro	wn@santeecooper.	<u>com</u>				
			Chai	n of	Cus	stod	y	~	55	5748	73	Ma	One i oneks ( 843)76	Sar River Corner	COOPEI mee Coope wood Driv r, SC 2946 0 Ext. 514 3)761-417		
Customer Emai	il/Report Recipient:	Date Results Needed by: Project/Task/Unit #:										Rerun request for any flagged QC					
LOWILLIA	@santeecooper.com	,	, ,			1215	367	J JM	02.09	1- GØ	36500	Yes	No				
	esumeccoopencom								<u>, , , , , , , , , , , , , , , , , , , </u>				A	nalysi	s Group		
Labworks ID # (Internal use only)	Sample Location/ Description	Collection Date	Collection Time	Sample Collector	Total # of containers	Bottle type: (Glass- G/Plastic-P)	Grab (G) or Composite (C)	Matrix(see below)	Preservative (see below)	<ul> <li>Misc</li> </ul>	Commen od # rting limit . sample info other notes		RAD 226	MAD 228	TOTAL RAD CALC		
AF15787	CGIP-4	9/27/2	1 ৫৭३১	DEN	2-	Р	G	GW	2			-	X	X	x		
AF15788	CGYP-4 DUP		0943		1												
AF15789	CGYP-5		1117-														
AF15790	CGYP-6		1232														
AF15791	WLF- A-2-6	9/28/21	1021														
AF15792	WLF-A2-6 DUP	1	1026												[		
s.													ļ				
								ļ									
													<u> </u>				
Relinquished b SMN-0000 Relinquished b Welinquished b	35574 10/1/21 y: Employee# Date	Time CP1455 Time 11200	Recei	ved by: ved by: GAA ved by:	- (	mployee GEL mployee	-     # 	Date 10/1/2 Date	1 21	Time 0945 Time //22 Time	TEMP (°C Correct p Preservat		Initia				
Ag     I       A1     I       As     I       Ba     I       Be     I       Ca     I       Ca     I       Ca     I       Co     I	Cu         Sb         TC           Fe         Se         D           K         Sn         TI           Li         Sr         F           Mg         Ti         C           Mn         TI         N           Mo         V         N	DC 2/TPO4 H3-N D2 D3	MI BTEX Napthal THM/H VOC Oil & C E. Coli Total C pH Dissolv Dissolv Rad 222 Rad 222 PCB	AA irease oliform ed As ed Fe 5		2 Wallbo Gyr bela 0 A 0 A 0 A 0 A 0 A 0 B 0 B 0 B 0 B 0 B 0 B 0 B 0 B 0 B 0 B	rsum(e nw) IM )C otal met oluble V naty (C) Moistu dfites I Slorides eticle S	alk fetals. iS()4). re	0 0 0 0 0	Coal Uttimate % Moist Ash Sulfur BTUs Volatile CHN ther Tests: XRF Scan HGJ Fineness Particulate Ma	ire i Matter	Flyash Ammonia LOI % Carbon Minetal Analysis Sieve % Moisture MPDES Oil & Grease As TSS	i i i i i i i i i i i i i i i i i i i	ador lake Vedity Vedity Viseop Oiseop <b>ed O</b> i fashri dgas	H Quist shire Shength ed Gauts, H ann ar of KCh Ni, Po		

Matrix codes: GW-groundwater, DW-drinking water, SW-surface water, WW-waste water, BW-boiler water, L-limestone, Oil-oil, S-Soil, SL-solid, Page 13 of E5.50 DG:p5.50744993ash, BA-bottom ash, M-misc (describe in comment section) Preservative code- 1=<4°C 2=HNO3 3=H2SO4 4-HCl 5=Na2S2O3 6-Other (Specify) **GEL** Laboratories LLC

### SAMPLE RECEIPT & REVIEW FORM

Client: SOOP			s	DG/AR/COC/Work Order: 557485	
Received By: SLB				hate Received: 0 • 21	
Carrier and Tracking Number				Circle Applicable:	Other
Suspected Hazard Information	Yes	NN N	*1	f Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for fu	ther investigation
A)Shipped as a DOT Hazardous?				izard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? Yes No	
B) Did the client designate the samples are to be received as radioactive?			îce	DC notation or radioactive stickers on containers equal client designation.	anan an an an Africa. An an an Airte
C) Did the RSO classify the samples as adioactive?			M	aximum Net Counts Observed* (Observed Counts - Area Background Counts):CPM / mR/ Classified as: Rad 1 Rad 2 Rad 3	Hr
D) Did the client designate samples are hazardous?			1.1.1	C notation or hazard labels on containers equal client designation.	
Did the RSO identify possible hazards?			1	D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:	<u>in herri di stanta de britana</u>
Sample Receipt Criterio           1         Shipping containers received intact and sealed?	Yes	VN	No	Comments/Qualifiers (Required for Non-Conforming Items) Circle Applicable: Seals broken Damaged écntainer Leaking container Other (describe)	
2 Chain of custody documents included with shipment?	7			Circle Applicable: Client contacted and provided COC COC created upon receipt	
3 Samples requiring cold preservation within $(0 \le 6 \text{ deg. C})$ ?*	/	)			p: 1 c Ke, 210
4 Daily check performed and passed on IR temperature gun?	1			Temperature Device Serial #: I I - Z - Z Secondary Temperature Device Serial # (If Applicable):	
5 Sample containers intact and sealed?	4			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)	
Samples requiring chemical preservation at proper pH?	4			Sample ID's and Containers Affected: If Preservation added, Lot#:	
, Do any samples require Volatile Analysis?				If Yes, are Encores or Soil Kits present for solids? YesNo NA(If yes, take to VOA Freeze Do liquid VCA vials contain acid preservation? Yes No NA(If unknown, select No) Are liquid VOA vials free of headspace? Yes No NA Sample ID's and containers affected:	er)
Samples received within holding time?	】			ID's and tests affected:	
Sample ID's on COC match ID's on bottles?	7			ID's and containers affected:	
Date & time on COC match date & time on bottles?	1			Circle Applicable: No dates on containers No times on containers COC missing info Other (descr	ibe)
Number of containers received match number indicated on COC? Are sample containers identifiable as	1			Circle Applicable: No container count on COC Other (describe)	
GEL provided by use of GEL labels? COC form is properly signed in			1	Circle Applicable: Not relinquished Other (describe)	
relinquished/received sections? nments (Use Continuation Form if needed):			I		
PM (or PMA)	reviev	w: h	itial:	s_N_RDate(2] 4 7 Page of	

GL-CHL-SR-001 Rev 7

Page 14 of 15 SDG: 557483

State	Certification
Alabama	42200
Alaska	17-018
Alaska Drinking Water	SC00012
Arkansas	88-0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH-0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-15-00283, P330-15-00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2019020
Maryland	270
Massachusetts	M-SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE-OS-26-13
Nevada	SC000122021-1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R-158
Oklahoma	2019–165
Pennsylvania NELAP	68-00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-21-19
Utah NELAP	SC000122021–36
Vermont	VT87156
Virginia NELAP	460202
Washington	C780
, asimigton	2,00

List of current GEL Certifications as of 26 October 2021



a member of The GEL Group INC



PO Box 30712 Charleston, SC 29417 2040 Savage Road Charleston, SC 29407 P 843.556.8171 F 843.766.1178

gel.com

November 10, 2021

Ms. Jeanette Gilmetti Santee Cooper P.O. Box 2946101 OCO3 Moncks Corner, South Carolina 29461

Re: ABS Lab Analytical Work Order: 560632

Dear Ms. Gilmetti:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on October 29, 2021. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at www.gel.com.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4289.

Sincerely,

Grace Bodiford for Julie Robinson Project Manager

Purchase Order: 367074 Enclosures



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### Certificate of Analysis Report for

#### SOOP001 Santee Cooper

#### Client SDG: 560632 GEL Work Order: 560632

#### The Qualifiers in this report are defined as follows:

- \* A quality control analyte recovery is outside of specified acceptance criteria
- \*\* Analyte is a Tracer compound
- \*\* Analyte is a surrogate compound
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Julie Robinson.

Share Bodiford

Reviewed by

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

# **Certificate of Analysis**

Report Date: November 10, 2021

	Company : Address :	P.C OC Mo	ncks Co	946 orne	r, South Caroli	ina 29461					-				
	Contact: Project:		. Jeanett S Lab A												
	Client Sample ID:AF18534Sample ID:560632001Matrix:Ground WaterCollect Date:26-OCT-21 10:00Receive Date:29-OCT-21Collector:Client								Projec Client		SOOF SOOF	200119 2001			
Parameter	Quali	fier	Resu	lt U	Jncertainty	MDC	RL	Unit	s Pl	F D	F Analy	st Date	Time	e Batch	Method
	low Proportional Cou	•	0												
	228, Liquid "As Rece	eived													
Radium-228	e-Radium-228 Calc	1-4:		61 Dom	+/-1.03	1.56	3.00	pCi/	L		JXC9	11/04/21	1624	2192055	1
Radium-226+ Rad Radium	-228 Sum	ulano		Paro 56	+/-1.31			pCi/	L		NXL1	11/10/21	1414	2192059	2
	, Ra226, Liquid "As	Rece	ived"												
Radium-226	,,			94	+/-0.813	0.454	1.00	pCi/	L		LXP1	11/05/21	0950	2191975	3
The follow	ving Analytical Meth	ods v	were pe	for	ned:										
Method	Descri	ptior	1						Ana	lyst C	Comment	s			
1 2 3	EPA 90 Calcula EPA 90	tion	W846 932 odified	0 Mo	odified										
Surrogate/	Fracer Recovery	Test						Result	Non	ninal	Reco	very%	Accep	otable L	imits
Barium-133 7	Fracer C	GFPC,	Ra228, L	iquid	"As Received"							81.5	(1.	5%-125%)	
<b>Notes:</b> Counting U	Jncertainty is calcula	ited a	t the 95	% c	onfidence leve	el (1.96-sign	na).								
DF: Diluti DL: Detec					Lc/LC: Critica PF: Prep Fact RL: Reporting	or									

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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# **Certificate of Analysis**

Report Date: November 10, 2021

	Company : Address :	Santee Co P.O. Box OCO3	2946	101						1			
	Contact: Project:	Moncks ( Ms. Jean ABS Lab	ette G		ina 29461								
	Client Sample ID:	AF18535					Р	roject:		SOOP	00119		
	Sample ID:	56063200	)2				C	lient ID	):	SOOP	001		
	Matrix:	Ground W											
	Collect Date:	26-OCT-	21 10	:05									
	Receive Date:	29-OCT-	21										
	Collector:	Client											
Parameter	Quali	fier Res	ult I	Uncertainty	MDC	RL	Units	PF	DF	Analy	st Date	Time Batc	h Method
Rad Gas Flo	ow Proportional Cou	inting											
GFPC, Ra2	28, Liquid "As Rece	ived"											
Radium-228	-		3.92	+/-1.79	2.68	3.00	pCi/L			JXC9	11/04/21	1624 21920	55 1
Radium-22	6+Radium-228 Calc	ulation "Se	e Par	ent Products"									
Radium-226+2			8.42	+/-2.01			pCi/L			NXL1	11/10/21	1414 21920	59 2
Rad Radiun													
	Ra226, Liquid "As	Received"					~ ~ ~						
Radium-226		_	4.50	+/-0.902	0.492	1.00	pCi/L			LXP1	11/05/21	0950 21919	75 3
	ing Analytical Meth	-	erfor	med:									
Method	Descri							Analys	st Co	mments	5		
1		4.0/SW846 9	320 Me	odified									
2	Calcula EDA 90	tion 3.1 Modified											
-		Test					Result	Nomir	าลไ	Recov	/erv%	Acceptable	Limits
Barium-133 T	· · · · · · · · · · · · · · · · · · ·		Liquid	"As Received"							70.7	(15%-125	
Notes: Counting U	ncertainty is calcula				el (1.96-sign	na).						X	,
Column he DF: Dilutio DL: Detect		follows:		Lc/LC: Critica PF: Prep Facto									
					<b>T T T</b>								

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# **Certificate of Analysis**

Report Date: November 10, 2021

	Company : Address :	Santee Coope P.O. Box 294 OCO3 Manaka Com	6101	ing 20461								
	Contact: Project:	Moncks Corn Ms. Jeanette ABS Lab Ana		ina 29461								
	Client Sample ID:	AF18536				P	roject:		SOOF	00119		
	Sample ID:	560632003				С	lient ID	):	SOOF	001		
	Matrix:	Ground Wate	r									
	Collect Date:	26-OCT-21 1	1:55									
	Receive Date:	29-OCT-21										
	Collector:	Client										
Parameter	Quali	fier Result	Uncertainty	MDC	RL	Units	PF	DF	Analy	st Date	Time Batch	Method
Rad Gas Fl	ow Proportional Con	unting										
GFPC, Ra2	228, Liquid "As Rece	eived"										
Radium-228		2.39		1.99	3.00	pCi/L			JXC9	11/04/21	1624 2192055	1
	6+Radium-228 Calc											_
Radium-226+		7.07	+/-1.63			pCi/L			NXL1	11/10/21	1414 2192059	2
Rad Radiu		Dession d''										
Radium-226	, Ra226, Liquid "As	4.68	+/-0.981	0.687	1.00	pCi/L			I XP1	11/05/21	0950 2191975	3
	ving Analytical Meth			0.007	1.00	pert				11/03/21	0)50 21)1)75	5
		-	iiiicu.				A	+ Ca				
$\frac{\text{Method}}{1}$	Descri	191101 14.0/SW846 9320 M	Addified				Analys	t Co	mment	8		
2	Calcula		loumed									
3		3.1 Modified										
Surrogate/7	Fracer Recovery	Test			F	Result	Nomin	al	Recov	very%	Acceptable Li	mits
Barium-133 T	Tracer C	GFPC, Ra228, Liqu	id "As Received"							85.1	(15%-125%)	
<b>Notes:</b> Counting U	Incertainty is calcula	ited at the 95%	confidence leve	el (1.96-sigr	na).							
Column he	eaders are defined as	follows:										
DF: Diluti			Lc/LC: Critic	al Level								
DL: Detec	tion Limit		PF: Prep Fact									

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# **Certificate of Analysis**

Report Date: November 10, 2021

	Company : Address :	Santee Coope P.O. Box 294 OCO3	6101							
	Contact: Project:	Moncks Corn Ms. Jeanette ( ABS Lab Ana		ina 29461						
	Client Sample ID:	AF18537	-			P	roject:	SOOP00119	<del>)</del>	
	Sample ID:	560632004				С	lient ID:	SOOP001		
	Matrix:	Ground Wate	r							
	Collect Date:	26-OCT-21 1	2:54							
	Receive Date:	29-OCT-21								
	Collector:	Client								
Parameter	Qualit	fier Result	Uncertainty	MDC	RL	Units	PF D	F Analyst Da	te Time Batch	Method
Rad Gas Fl	ow Proportional Cou	inting								
GFPC, Ra2	28, Liquid "As Rece	eived"								
Radium-228	-	3.94	+/-1.37	1.74	3.00	pCi/L		JXC9 11/04	/21 1624 2192055	1
	6+Radium-228 Calc									
Radium-226+		6.48	+/-1.53			pCi/L		NXL1 11/10	/21 1414 2192059	2
Rad Radiur		~								
	Ra226, Liquid "As		. / 0 . 602	0.521	1.00	0.4		LVD1 11/00	/21 0012 2101075	2
Radium-226		2.54	+/-0.692	0.531	1.00	pCi/L		LXP1 11/08	/21 0912 2191975	3
	ving Analytical Meth	-	rmed:							
Method	Descri						Analyst C	omments		
1 2	EPA 90 Calculat	4.0/SW846 9320 N	Aodified							
2		3.1 Modified								
-		Test			R	esult	Nominal	Recovery%	Acceptable L	imits
Barium-133 T	racer G	FPC, Ra228, Liqu	id "As Received"					69.2	(15%-125%)	)
Notes: Counting U	Incertainty is calcula	ted at the 95%	confidence leve	el (1.96-sign	na).					
Column he DF: Dilutio DL: Detect		follows:	Lc/LC: Critic PF: Prep Fact							

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# **Certificate of Analysis**

Report Date: November 10, 2021

	Company : Address :	Santee Coope P.O. Box 294 OCO3 Moncks Corr		ina 29461								
	Contact: Project:	Ms. Jeanette ABS Lab An	Gilmetti	ina 29101								
	Client Sample ID:	AF18539				Р	roject:		SOOP	00119		
	Sample ID:	560632005				С	lient ID	:	SOOP	001		
	Matrix:	Ground Wate	er									
	Collect Date:	27-OCT-21 1	0:27									
	Receive Date:	29-OCT-21										
	Collector:	Client										
Parameter	Quali	fier Result	Uncertainty	MDC	RL	Units	PF	DF	Analy	st Date	Time Batch	Method
Rad Gas Fl	ow Proportional Co	unting										
	28, Liquid "As Rece	eived"										
Radium-228		U 0.619		2.04	3.00	pCi/L			JXC9	11/04/21	1624 2192055	1
	6+Radium-228 Calc					<b>C</b> : /				11/10/01		
Radium-226+: Rad Radiur		3.59	+/-1.39			pCi/L			NXLI	11/10/21	1414 2192059	2
	Ra226, Liquid "As	Pacaiwad"										
Radium-226	Kazzo, Liquiu As	2.97	+/-0.758	0.553	1.00	pCi/L			LXP1	11/05/21	1057 2191975	3
	ving Analytical Meth			0.555	1.00	pent			2211 1	11/03/21	1057 2171775	5
Method	Descr	-					Analys	t Co	mments	1		
1		)4.0/SW846 9320 1	Modified				1 mary 5			·		
2	Calcula	tion										
3	EPA 90	3.1 Modified										
Surrogate/7	Tracer Recovery	Test			R	esult	Nomin	al	Recov	very%	Acceptable L	imits
Barium-133 T	racer C	GFPC, Ra228, Liqu	id "As Received"						,	78.1	(15%-125%)	)
<b>Notes:</b> Counting U	Incertainty is calcula	ated at the 95%	confidence leve	el (1.96-sign	na).							
Column he	aders are defined as	follows:										
DF: Dilutio			Lc/LC: Critic									
DL: Detect	tion Limit		PF: Prep Fact	or								

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# **Certificate of Analysis**

Report Date: November 10, 2021

	Company : Address :	Santee Coope P.O. Box 294 OCO3 Moncks Corn		ina 29461								
	Contact: Project:	Ms. Jeanette ABS Lab Ana	Gilmetti	<b>114 2</b> /101								
	Client Sample ID:	AF18540				Р	roject:		SOOP	00119		
	Sample ID:	560632006				С	lient ID	:	SOOP	001		
	Matrix:	Ground Wate	r									
	Collect Date:	27-OCT-21 1	0:32									
	Receive Date:	29-OCT-21										
	Collector:	Client										
Parameter	Quali	fier Result	Uncertainty	MDC	RL	Units	PF	DF	Analy	st Date	Time Batch	Method
Rad Gas Fl	ow Proportional Co	unting										
GFPC, Ra2	28, Liquid "As Rece	eived"										
Radium-228		U 0.903	+/-0.757	1.20	3.00	pCi/L			JXC9	11/04/21	1624 2192055	1
	6+Radium-228 Calc					<i></i>						
Radium-226+2 Rad Radiur		3.00	+/-0.975			pCi/L			NXLI	11/10/21	1414 2192059	2
		Passivad"										
Radium-226	Ra226, Liquid "As	2.09	+/-0.614	0.463	1.00	pCi/L			I XP1	11/05/21	1057 2191975	3
	ving Analytical Meth	,	.,	0.405	1.00	pei/L			L211 1	11/05/21	1037 2171773	5
Method	Descr	-	inieu.				Analys	t Co	mments			
1		04.0/SW846 9320 N	Aodified				Anarys		minents	)		
2	Calcula											
3	EPA 90	3.1 Modified										
Surrogate/T	Tracer Recovery	Test			I	Result	Nomin	al	Recov	very%	Acceptable L	imits
Barium-133 T	racer C	GFPC, Ra228, Liqu	id "As Received"						Ģ	90.1	(15%-125%)	)
<b>Notes:</b> Counting U	Incertainty is calcula	nted at the 95%	confidence leve	el (1.96-sign	na).							
Column he	aders are defined as	follows:										
DF: Dilutio	on Factor		Lc/LC: Critica									
DL: Detect	tion Limit		PF: Prep Fact	or								

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# **QC Summary**

Report Date: November 10, 2021

Page 1 of 2

Santee Cooper
P.O. Box 2946101
OCO3
Moncks Corner, South Carolina
Ms. Jeanette Gilmetti

Workorder: 560632

**Contact:** 

Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range Anlst	Date Time
Rad Gas Flow Batch 2192055								
QC1204945101 560632002 DUP								
Radium-228		3.92	2.53	pCi/L	43.2		(0% - 100%) JXC9	11/04/21 16:23
	Uncertainty	+/-1.79	+/-1.17	P			(0,0 100,0) 0110,	11,00,2110.20
QC1204945102 LCS								
Radium-228	16.7		15.3	pCi/L		91.4	(75%-125%)	11/04/21 16:23
	Uncertainty		+/-1.19					
QC1204945103 LCSD								
Radium-228	16.7		14.5	pCi/L	5.35	86.7	(0%-20%)	11/04/21 16:23
	Uncertainty		+/-1.07					
QC1204945100 MB Radium-228		U	0.105	0.1				11/04/21 16 22
Kadium-228	Uncertainty	U	0.185 +/-0.360	pCi/L				11/04/21 16:23
Rad Ra-226           Batch         2191975								
QC1204944871 560632001 DUP Radium-226		3.94	4.42	pCi/L	11.3		(0%-20%) LXP1	11/05/21 10:57
Kadium-220	Uncertainty	+/-0.813	+/-0.918	pCI/L	11.5		(0%-20%) LAFI	11/03/21 10.57
0.0120.00.0052								
QC1204944873 LCS Radium-226	26.8		23.3	pCi/L		87	(75%-125%)	11/08/21 09:12
	Uncertainty		+/-1.87	релд		07	(1570 12570)	11/00/21 09.12
QC1204944874 LCSD								
Radium-226	53.6		53.4	pCi/L	78.4*	99.6	(0%-20%)	11/05/21 10:57
	Uncertainty		+/-2.98	Ĩ				
QC1204944870 MB								
Radium-226			0.726	pCi/L				11/08/21 09:12
	Uncertainty		+/-0.466					
QC1204944872 560632001 MS								
Radium-226	134	3.94	135	pCi/L		97.4	(75%-125%)	11/05/21 10:57
	Uncertainty	+/-0.813	+/-10.8					

#### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma). The Qualifiers in this report are defined as follows:

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

### **QC Summary**

Workord		NOM	G 1	0	00	<b>T</b> T*4						e 2 of
Parmnan **		NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
	Analyte is a Tracer											
<	Result is less than	•										
>	Result is greater th											
	Failed analysis.	below the MDC or tracer rec	overy is low									
FA H	-	time was exceeded										
п J		for an explanation										
J	Value is estimated											
ј К		eported value may be biased	high Astual	value is er	reacted to	ha lawar						
к L		eported value may be biased	-		-							
L M	M if above MDC a		i low. Actual	value is ex	pected to t	e ingliei.						
M		IDC/CL and < RDL										
		ry limits do not apply.										
N1	See case narrative											
		tion is not detected above the	e detection lir	nit								
NJ	-	ative, Data Summary packag			oncerning	this qualifi	er					
Q		ty control criteria have not b		0	0	•						
R	Sample results are				r							
U		zed for, but not detected abo	ove the MDL,	MDA, MI	DC or LOE	).						
UI		opyUncertain identification		,								
UJ		opyUncertain identification										
UL	Not considered det	tected. The associated numb	er is the repor	ted concer	tration, wl	nich may be	e inaccurate	due to a low	bias.			
Х	Consult Case Narr	ative, Data Summary packag	ge, or Project	Manager c	oncerning	this qualifi	er					
Y	Other specific qual	lifiers were required to prop	erly define the	e results. C	onsult case	e narrative.						
^	RPD of sample and	d duplicate evaluated using -	+/-RL. Conce	entrations a	tre <5X the	RL. Qual	lifier Not Ap	plicable for J	Radiochem	istry.		
h	Preparation or pres	servation holding time was e	exceeded									
		covery limits do not apply wl cerence (RPD) obtained from										than

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

\* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

#### Radiochemistry Technical Case Narrative Santee Cooper SDG #: 560632

Product: Radium-226+Radium-228 Calculation Analytical Method: Calculation Analytical Procedure: GL-RAD-D-003 REV# 44 Analytical Batch: 2192059

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	Client Sample Identification
560632001	AF18534
560632002	AF18535
560632003	AF18536
560632004	AF18537
560632005	AF18539
560632006	AF18540

#### **Data Summary:**

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Product: GFPC, Ra228, Liquid Analytical Method: EPA 904.0/SW846 9320 Modified Analytical Procedure: GL-RAD-A-063 REV# 5 Analytical Batch: 2192055

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<b><u>Client Sample Identification</u></b>
560632001	AF18534
560632002	AF18535
560632003	AF18536
560632004	AF18537
560632005	AF18539
560632006	AF18540
1204945100	Method Blank (MB)
1204945101	560632002(AF18535) Sample Duplicate (DUP)
1204945102	Laboratory Control Sample (LCS)
1204945103	Laboratory Control Sample Duplicate (LCSD)

The samples in this SDG were analyzed on an "as received" basis.

#### **Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

#### **Preparation Information**

#### **Homogenous Matrix**

Samples 560632005 (AF18539) and 560632006 (AF18540) were non-homogenous matrix. Samples have a yellow tint 560632005 (AF18539) and 560632006 (AF18540).

Product: Lucas Cell, Ra226, Liquid Analytical Method: EPA 903.1 Modified Analytical Procedure: GL-RAD-A-008 REV# 15 Analytical Batch: 2191975

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
560632001	AF18534
560632002	AF18535
560632003	AF18536
560632004	AF18537
560632005	AF18539
560632006	AF18540
1204944870	Method Blank (MB)
1204944871	560632001(AF18534) Sample Duplicate (DUP)
1204944872	560632001(AF18534) Matrix Spike (MS)
1204944873	Laboratory Control Sample (LCS)
1204944874	Laboratory Control Sample Duplicate (LCSD)

The samples in this SDG were analyzed on an "as received" basis.

#### **Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

#### **Preparation Information**

#### Homogenous Matrix Samples 560632005 (AF18539) and 560632006 (AF18540) were non-homogenous matrix.

#### **Quality Control (QC) Information**

#### Method Blank Criteria

The blank result (See Below) is greater than the MDC but less than the required detection limit.

Sample Analyte	Value
----------------	-------

#### **Duplication Criteria between LCS and LCSD**

The relative percent difference does not apply as the laboratory control sample and laboratory control sample duplicate, (See Below), are not true duplicates of each other as 0.1mL of spike was added to the laboratory control sample and 0.2mL was added to the laboratory control sample duplicate. They both meet the spiked recovery requirement.

Sample	Analyte	Value
1204944873 (LCS) and 1204944874 (LCSD)	Radium-226	RPD 78.4* (0%-20%)

#### **Technical Information**

#### Recounts

Samples 1204944870 (MB), 1204944873 (LCS) and 560632004 (AF18537) were degassed and recounted to verify sample results. The second counts are reported.

#### **Miscellaneous Information**

#### **Additional Comments**

The matrix spike, 1204944872 (AF18534MS), aliquot was reduced to conserve sample volume.

#### **Certification Statement**

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Contract Lab Info: _	GEL Contract Lab D	ue Date (Lab	Only):lt	2°	<u> </u>	21	Send	d report	to <u>lcwi</u>	llia@santeecoo	per.com& sit	prown@santeecoope	r.com			
			Chai	n of	Cu	stoc	ły		51	6063	2	M Phone: 0	One oneks	Sa River Corne 51-800	ntee ( wood r, SC	<b>DDO</b> Cooper 1 Drive 29461 1. 5148 1-4175
Customer Emai	I/Report Recipient:	Date I	Results Ne	eded b	y:		Pr	oject/	Task/	'Unit #:		Rerun request	for a	ny fla	iggeo	d QC
LCWILLIA	@santeecooper.com		JJ.			12/9	567	J_JM	02.0	9. GØI	<u>  3650</u>	Yes	No	Analys	is Gro	up
Labworks ID # (Internal use only)	Sample Location/ Description	Collection Date	Collection Time	Sample Collector	Total # of containers	Bottle type: (Glass- G/Plastic-P)	Grab (G) or Composite (C)	Matrix(see below)	Preservative (see	Repo     Miso	Comme nod # orting limit a sample inf other notes	б <b>о</b>	RAD: 226	RAD 225	TETAL RADCALC.	
AF-18538				W												
AF18534	CGYP-4	10/26/2	1 1000	DEW	2	12	G	GW	2	-			X	×	X	╄─┤
AF18535	CGYP-4 DUP	<u> </u>	1005				<u> </u>			_			_	_		$\left  - \right $
AF18536	CGYP-5		1155						<u> </u>		·····			_		<b></b>
AF18537	CGYP-6		1254													<b>_</b>
AF18539	WLF-A2-6	10/27/21	1027							-				<u> </u>		
AF18540	WLF-A2-6 DUP		1032	1			1							<u> </u>		
										ļ			ļ			
Relinquished by	: Employee# Date	Time	Receiv	ed by:	E	mployee	#	Date		Time		eceiving (Internal ) °C):	<i>Jse Or</i> Initia			
Algrown Relinquished by	35574 10/29/21 : Employee# Date	1000 Time	Receiv	) ed by:		GEL mployee		9/29/: Date		1000 Time		pH: Yes No				
NIIO.	Che 1029.21		- N			H.L.		onal		1455	Preserva	tive Lot#:				
Relinquished by		1457 Turne	Receiv	ed by:		mployee		Date		Time						
				alar isolaan aa aa							Date/Tim	e/Init for preserv	ative:			
Image: Constraint of the second sec	u         I Sb         TC           e         I Se         Di           II Sn         III           i         I Sr           fg         III           fn         III           fo         IV           ia         III	)2 )3	Mils BTEX Napthale THM/H VOC Oil & Gr E. Coli Total Co pH Dissolve Dissolve Rad 226 Rad 228 PCB	ne NA ease liform d As d Fe		Waffbo Gyp belo G Al D To G Sol Pui Sol Sol TpH O Ch	sum(a m) M R al meta huble M nuv (Cat Moistur Moistur filies	U ds ctals SO(4) v	C C C C C C C C C C C C C C C C C C C	Coal Ultimate % Moista Ash Sulfur BTUs Volatile CHN ther Tests: XRF Scan HGI Fineness Particulate Ma	Matter	Elwash Ammonia LOI % Carbon Mineral Analysis Sieve % Moisture <u>NPDES</u> Oil & Grease As		Oi ms, Ou Miass other auditus auditus editoida tashquo	l (tea laire Strong ed Can I int int intait	gth Salt

Matrix codes: GW-groundwater, DW-drinking water, SW-surface water, WW-waste water, BW-boiler water, L-limestone, Oil-oil, S-Soil, SL-solid, Page 14 of bccslbcg.p5.60,6312ash, BA-bottom ash, M-misc (describe in comment section) Preservative code- 1=<4°C 2=HNO3 3=H2SO4 4-HCl 5=Na2S2O3 6-Other (Specify)

<b>CEE</b> Laboratories LLC			SAMDIE DECEMPT & DEVENUE	
Client: SOOP			SAMPLE RECEIPT & REVIEW FORM SDG/AR/COC/Work Order: 5 60632	
Received By: DC			Date Received: $\left[ 0 - 79 - 7 \right]$	
Carrier and Tracking Number			Circle Applicable:	urier Other
Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Gro	p for further investigation.
A)Shipped as a DOT Hazardous? B) Did the client designate the samples are to be		X	Iazard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? Yes No	
received as radioactive?		$ \rightarrow $	COC notation or radioactive stickers on containers equal client designation.	
C) Did the RSO classify the samples as radioactive?		Χļ	Aaximum Net Counts Observed* (Observed Counts - Area Background Counts):CPP Classified as: Rad 1 Rad 2 Rad 3	M / mR/Hr
D) Did the client designate samples are hazardous?	44		OC notation or hazard labels on containers equal client designation.	
E) Did the RSO identify possible hazards?	D	XI.	PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:	and a second
Sample Receipt Criteria Shipping containers received intact and isealed?	Yes	NA	2 Comments/Qualifiers (Required for Non-Conforming Item Circle Applicable: Seals broken Damaged container Leaking container Other (describe)	s)
2 Chain of custody documents included with shipment?	F	-	Circle Applicable: Client contacted and provided COC COC created upon receipt	
3 Samples requiring cold preservation within $(0 \le 6 \text{ deg. C})$ ?*		7	Preservation Method: Wet Ice Toe Packs Dry ice None Other: *all temperatures are-recorded in Celsius	темр: 200
4 Daily check performed and passed on IR temperature gun?	i)	ł	Temperature Device Serial #: <u>IR6-21</u> Secondary Temperature Device Serial # (If Applicable):	
5 Sample containers intact and sealed?	C	7	Circle Applicable: Seals broken Damaged container Leaking container Other (describe)	
Samples requiring chemical preservation at proper pH?		+	Sample ID's and Containers Affected:	
7 Do any samples require Volatile Analysis?		V	If Preservation added, Lot#: If Yes, are Encores or Soil Kits present for solids? Yes <u>No NA</u> (If yes, take to VO, Doliguid VOA vials contain acid preservation? Yes <u>No NA</u> (If unknown, select 1 Are liquid VOA vials free of headspace? Yes <u>No NA</u> Sample ID's and containers affected:	A Freezer) No)
Samples received within holding time?	1	ľ	ID's and tests affected:	
Sample ID's on COC match ID's on bottles?	J		ID's and containers affected:	
Date & time on COC match date & time on bottles?		7	Circle Applicable: No dates on containers No times on containers COC missing info Othe	r (describe)
Number of containers received match number indicated on COC?			Circle Applicable: No container count on COC Other (describe)	
Are sample containers identifiable as GEL provided by use of GEL labels?	1	F		
COC form is properly signed in relinquished/received sections? mments (Use Continuation Form if needed):	1		Circle Applicable: Not relinquished Other (describe)	
, (				

State	Certification
Alabama	42200
Alaska	17-018
Alaska Drinking Water	SC00012
Arkansas	88-0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH-0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-15-00283, P330-15-00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2019020
Maryland	270
Massachusetts	M-SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE-OS-26-13
Nevada	SC000122021-1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R-158
Oklahoma	2019–165
Pennsylvania NELAP	68-00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-21-19
Utah NELAP	SC000122021-36
Vermont	VT87156
Virginia NELAP	460202
Washington	C780
g.o.	2.00

List of current GEL Certifications as of 10 November 2021



a member of The GEL Group INC



PO Box 30712 Charleston, SC 29417 2040 Savage Road Charleston, SC 29407 P 843.556.8171 F 843.766.1178

gel.com

December 28, 2021

Ms. Jeanette Gilmetti Santee Cooper P.O. Box 2946101 OCO3 Moncks Corner, South Carolina 29461

Re: ABS Lab Analytical Work Order: 562782

Dear Ms. Gilmetti:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on November 19, 2021. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at www.gel.com.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4289.

Sincerely,

Julie Roberson

Julie Robinson Project Manager

Purchase Order: 367074 Enclosures



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### Certificate of Analysis Report for

#### SOOP001 Santee Cooper

#### Client SDG: 562782 GEL Work Order: 562782

#### The Qualifiers in this report are defined as follows:

- \* A quality control analyte recovery is outside of specified acceptance criteria
- \*\* Analyte is a Tracer compound
- \*\* Analyte is a surrogate compound
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Julie Robinson.

Julie Roberson

Reviewed by

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

# **Certificate of Analysis**

Report Date: December 28, 2021

	Company : Address :	P.O. I OCO		6101						-			
	Contact: Project:	Ms. J		er, South Caro Gilmetti alytical	lina 29461								
	Client Sample ID:	AF20	415				P	roject:		SOOP	00119		
	Sample ID:	56278	32001				С	lient II	):	SOOP	001		
	Matrix:	Grour	nd Wate	r									
	Collect Date:	17-N0	OV-21 1	0:18									
	Receive Date:	19-N0	OV-21										
	Collector:	Client	t										
Parameter	Quali	fier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analy	st Date	Time Batch	Method
Rad Gas Fl	ow Proportional Cou	unting											
GFPC, Ra2	28, Liquid "As Rece	eived"											
Radium-228			3.72		2.41	3.00	pCi/L			JXC9	12/27/21	1129 2211287	1
	6+Radium-228 Calc	ulation											
Radium-226+2			4.90	+/-1.70			pCi/L			NXL1	12/28/21	1150 2202339	2
Rad Radiur		<b>р</b> .	111										
Lucas Cell, Radium-226	Ra226, Liquid "As	Receiv	ed" 1.18	+/-0.496	0.543	1.00	pCi/L			I VD1	12/02/21	0916 2201682	3
	ing Analytical Math	oda ma			0.545	1.00	pCI/L			LAFI	12/03/21	0910 2201082	5
	ring Analytical Meth		re perio	imed:				A 1					
Method 1	Descri	-	46 9320 N	Adified				Analys	st Co	mments	8		
2	Calcula		40 9520 1	viounieu									
3		3.1 Mod	ified										
Surrogate/T	Tracer Recovery	Test				]	Result	Nomin	nal	Recov	/ery%	Acceptable Li	mits
Barium-133 T	racer C	FPC, Ra	228, Liqu	id "As Received"						:	84.4	(15%-125%)	
Notes: Counting U	Incertainty is calcula	ited at t	he 95%	confidence lev	el (1.96-sign	na).							
Column he	aders are defined as	follow	s:										
DF: Dilutio				Lc/LC: Critic	cal Level								
DL: Detect				PF: Prep Fac									
MDA.M.	imum Dataatabla A	ativity		DI · Doportin	a Limit								

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# **Certificate of Analysis**

Report Date: December 28, 2021

	Company : Address :	P.O. OCC			ina 29461								
	Contact: Project:		Jeanette Lab Ana										
	Client Sample ID:			5			Р	roject:		SOOP	00119		
	Sample ID:		82002					lient ID	):	SOOP	001		
	Matrix:	Grou	ind Wate	er									
	Collect Date:	17-N	IOV-21	10:23									
	Receive Date:		IOV-21										
	Collector:	Clier											
	concetor.	ene	iii iii iii ii ii ii ii ii ii ii ii ii										
Parameter	Qualit	fier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analy	st Date	Time Batch	Method
Rad Gas Flo	ow Proportional Cou	inting											
GFPC, Ra2	28, Liquid "As Rece	eived"											
Radium-228		U	0.764	+/-0.837	1.39	3.00	pCi/L			JXC9	12/27/21	1129 221128	7 1
Radium-22	6+Radium-228 Calc	ulatio	n "See Pa	arent Products"									
Radium-226+2			2.56	+/-1.02			pCi/L			NXL1	12/28/21	1150 220233	9 2
Rad Radiur													
	Ra226, Liquid "As	Receiv											
Radium-226			1.80		0.536	1.00	pCi/L			LXP1	12/03/21	0916 220168	2 3
	ing Analytical Meth		ere perfo	ormed:									
Method	Descri							Analys	st Co	mments	8		
1			846 9320 1	Modified									
2 3	Calcula EPA 90		dified										
-			amea				<b>D</b>			Ð			
		Test					Result	Nomir	nal	Recov		Acceptable l	
Barium-133 T	racer G	SFPC, R	a228, Liqu	id "As Received"						:	83.8	(15%-125%	<b>b</b> )
Notes:	ncertainty is calcula	ted at	the 05%	confidence leve	al (1.06 sign	<b>1</b> 9)							
•	-			confidence leve	-1 (1.70-sigii	ia).							
-	aders are defined as	follov	vs:		1 7 1								
DF: Dilutio				Lc/LC: Critic									
DL: Detect				PF: Prep Fact									

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# **Certificate of Analysis**

Report Date: December 28, 2021

	Company : Address :	Santee P.O. Bo OCO3 Moncks	ox 294		ina 29461								
	Contact: Project:		nette (	Gilmetti	inu 29101								
	Client Sample ID: Sample ID: Matrix: Collect Date: Receive Date: Collector:		17 003 Water V-21 1	r				roject: lient II	):	SOOP SOOP			
Parameter	Quali	fier R	esult	Uncertainty	MDC	RL	Units	PF	DF	Analy	st Date	Time Batch	Method
Rad Gas Fl	ow Proportional Cou	unting											
	28, Liquid "As Rece	-											
Radium-228	-	U	0.281	+/-1.00	1.84	3.00	pCi/L			JXC9	12/27/21	1129 2211287	1
Radium-22 Radium-226+: Rad Radiur		ulation "	See Pa 1.59	+/-1.12			pCi/L			NXL1	12/28/21	1150 2202339	2
	Ra226, Liquid "As	Received	1"										
Radium-226	1		1.31	+/-0.507	0.432	1.00	pCi/L			LXP1	12/03/21	0916 2201682	3
The follow	ving Analytical Meth	ods were	e perfo	rmed:									
Method	Descri	ption						Analys	st Co	mments	3		
1 2 3	Calcula	94.0/SW846 tion 93.1 Modifie		Aodified									
Surrogate/7	Fracer Recovery	Test				]	Result	Nomir	nal	Recov	/ery%	Acceptable Li	imits
Barium-133 T	•	FPC, Ra22	28, Liqui	id "As Received"							68.5	(15%-125%)	
Notes: Counting U	Incertainty is calcula	ited at the	e 95%	confidence leve	el (1.96-sigr	na).							
Column he DF: Dilutio	eaders are defined as	follows:	-	Lc/LC: Critic	al Level								
DL: Detect	tion Limit			PF: Prep Fact	tor								

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# **Certificate of Analysis**

Report Date: December 28, 2021

	Company : Address :	P.O. B OCO3	Cooper ox 2946		na 29461								
	Contact: Project:	Ms. Jea	anette G ab Anal	ilmetti	110 29401								
	Client Sample ID	AF204	18	-			Р	roject:		SOOP	00119		
	Sample ID:	562782	2004				С	lient ID	):	SOOP	001		
	Matrix:	Ground	l Water										
	Collect Date:	17-NO	V-21 13	3:04									
	Receive Date:	19-NO	V-21										
	Collector:	Client											
Parameter	Qual	ifier F	Result	Uncertainty	MDC	RL	Units	PF	DF	Analy	st Date	Time Batch	Method
Rad Gas Fl	ow Proportional Co	ounting											
GFPC, Ra2	28, Liquid "As Red	ceived"											
Radium-228			5.88	+/-1.46	1.48	3.00	pCi/L			JXC9	12/27/21	1129 2211287	1
	6+Radium-228 Cal	culation "					<i></i>				10/00/01		
Radium-226+: Rad Radiur			9.69	+/-1.71			pCi/L			NXLI	12/28/21	1150 2202339	2
		Dooriyo	d"										
Radium-226	, Ra226, Liquid "As	s Received	u 3.82	+/-0.882	0.696	1.00	pCi/L			I XP1	12/03/21	0916 2201682	3
	ving Analytical Met	hods wer			0.090	1.00	pent				12/03/21	0710 2201082	5
Method	<u> </u>	ription	e perior	incu.				Analys	t Co	mmonte			
1		04.0/SW84	6 9320 M	odified				Analys	i CO	mments	•		
2	Calcu		0 /020 11	ouniou									
3	EPA 9	03.1 Modifi	ied										
Surrogate/7	Fracer Recovery	Test				F	Result	Nomin	al	Recov	very%	Acceptable L	imits
Barium-133 T	racer	GFPC, Ra2	28, Liquic	l "As Received"						,	74.9	(15%-125%)	)
Notes: Counting U	Incertainty is calcul	ated at the	e 95% c	confidence leve	l (1.96-sign	na).							
	aders are defined a	s follows:	<u> </u>										
DF: Dilutio				Lc/LC: Critica									
DL: Detect	tion Limit			PF: Prep Facto	or								

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

# **Certificate of Analysis**

Report Date: December 28, 2021

	Company : Address :	P.O. OCC Mon	cks Corn	6101 her, South Caroli	ina 29461								
	Contact: Project:		Jeanette Lab An										
	Client Sample ID: Sample ID: Matrix: Collect Date: Receive Date: Collector:	AF20 5627 Grou 18-N	0419 82005 and Wate IOV-21 IOV-21	er				roject: lient ID	):	SOOF SOOF	200119 2001		
Parameter	Qualit	fier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analy	st Date	Time Batch	Method
Rad Gas Fl	ow Proportional Cou	inting											
GFPC, Ra2	28, Liquid "As Rece	eived"											
Radium-228		U	1.25		2.04	3.00	pCi/L			JXC9	12/27/21	1129 2211287	1
	6+Radium-228 Calc	ulatio					~ ~ ~						
Radium-226+			2.39	+/-1.32			pCi/L			NXL1	12/28/21	1150 2202339	2
Rad Radiur		<b>D</b> !	. 19										
Radium-226	Ra226, Liquid "As	Receiv	ved 1.14	+/-0.477	0.469	1.00	pCi/L			I XP1	12/03/21	0916 2201682	3
	ving Analytical Meth	ods w			0.40)	1.00	pei/L				12/03/21	0710 2201002	5
Method	Descri		ere perie	mileu.				Analys	t Co	mmont			
1			846 9320 1	Modified				Analys	i CO	mment	<b>,</b>		
2	Calcula												
3	EPA 90	3.1 Mo	dified										
Surrogate/7	Tracer Recovery	Test					Result	Nomin	al	Recov	very%	Acceptable L	imits
Barium-133 T	racer G	FPC, R	a228, Liqu	id "As Received"							80.6	(15%-125%)	)
Notes: Counting U	Incertainty is calcula	ted at	the 95%	confidence leve	el (1.96-sign	na).							
Column he DF: Dilutio	eaders are defined as	follow	vs:	Lc/LC: Critic	al Level								

DF: Dilution FactorLc/LC: Critical LevelDL: Detection LimitPF: Prep FactorMDA: Minimum Detectable ActivityRL: Reporting LimitMDC: Minimum Detectable ConcentrationSQL: Sample Quantitation Limit

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# **Certificate of Analysis**

Report Date: December 28, 2021

	Company : Address : Contact: Project:	P.O. OCC Mon Ms.	-	6101 her, South Carol Gilmetti	ina 29461								
	Client Sample ID:			•			Р	roject:		SOOP	00119		
	Sample ID:	5627	82006				C	lient ID	):	SOOP	001		
	Matrix:	Grou	ind Wate	er									
	Collect Date:	18-N	IOV-21 1	11:32									
	Receive Date:	19-N	IOV-21										
	Collector:	Clier	nt										
		<i>c</i> :											
Parameter	Quali		Result	Uncertainty	MDC	RL	Units	PF	DF	Analy	st Date	Time Batch	Method
	ow Proportional Cou	-											
	28, Liquid "As Rece						~ ~ ~						
Radium-228	6+Radium-228 Calc	U 1-4:	0.743 "Saa Di		2.52	3.00	pCi/L			JXC9	12/27/21	1129 2211287	1
Radium-22		ulatio	n See Pa 1.06				pCi/L			NXI 1	12/28/21	1150 2202339	2
Rad Radiur			1.00	17 1.52			pent			TOXE1	12/20/21	1150 2202555	-
	Ra226, Liquid "As	Receiv	ved"										
Radium-226	,, . <b>1</b>	U	0.320	+/-0.444	0.768	1.00	pCi/L			LXP1	12/03/21	0948 2201682	3
The follow	ving Analytical Meth	ods w	ere perfo	ormed:									
Method	Descri	ption						Analys	t Co	mments	3		
1	EPA 90	4.0/SW	846 9320 N	Modified									
2	Calcula												
3	EPA 90	3.1 Mo	dified										
Surrogate/7	·····	Test					Result	Nomin	al	Recov	very%	Acceptable L	imits
Barium-133 T	racer C	SFPC, R	a228, Liqu	id "As Received"							79.6	(15%-125%)	)
Notes: Counting U	Incertainty is calcula	ted at	the 95%	confidence leve	el (1.96-sign	na).							
Column he	aders are defined as	follov	vs:										
DF: Dilution				Lc/LC: Critic	al Level								

DF: Dilution FactorLc/LC: Critical LevelDL: Detection LimitPF: Prep FactorMDA: Minimum Detectable ActivityRL: Reporting LimitMDC: Minimum Detectable ConcentrationSQL: Sample Quantitation Limit

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# **QC Summary**

Report Date: December 28, 2021

<b>G</b>										
P.O. Box 294 OCO3 Moncks Corr	46101 ner, South Carolina							ate: December	20, 202	Page 1 of 2
562782										
	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
2211287										
29 562782001		3.72		2.81	pCi/L	27.9		(0% - 100%)	JXC9	12/27/21 11:28
	Uncertainty	+/-1.63		+/-1.54						
030 LCS	48.7			39.2	pCi/L		80.5	(75%-125%)		12/27/21 11:28
	Uncertainty			+/-3.69				× .		
028 MB			U	0.293	pCi/L					12/27/21 11:28
	Uncertainty			+/-1.40						
2201682										
89 562782001	DUP	1.10		1.0.4	0.1	4.4.5				- 2/22/21 00 40
	Uncertainty	1.18 +/-0.496		1.84 +/-0.537	pC1/L	44*		(0%-20%)	LXPI	12/03/21 09:48
91 LCS	26.6			27.1	pCi/L		102	(75%-125%)		12/03/21 09:48
	Uncertainty			+/-2.11	Ľ			(,		
.92 LCSD	24.4			20.6	0.1	5.04	100	(00) (00)		-2/02/21 00 40
	26.6 Uncertainty			28.6 +/-2.19	pCı/L	5.24	108	(0%-20%)		12/03/21 09:48
.88 MB			τŢ	0 237	°Ci∕I					12/02/21 11:27
	Uncertainty		U	+/-0.219	рси с					12/03/21 11:37
90 562782001		1 18		127	pCi/L		93.6	(75%-125%)		12/03/21 09:48
	Uncertainty	+/-0.496		+/-10.5	рсиц		25.0	(13/0-123/0)		12/03/21 07
	P.O. Box 294         OCO3         Moncks Corr         Ms. Jeanette         562782         2211287         29       562782001         30       LCS         28       MB         2201682         89       562782001         91       LCS         92       LCSD         88       MB	Moncks Corner, South Carolina Ms. Jeanette Gilmetti562782NOM $2211287$ 29562782001 DUP29562782001 DUP30LCS48.7 Uncertainty28MB2016829562782001 DUP2016829562782001 DUP91LCS26.6 Uncertainty92LCSD26.6 Uncertainty88MBUncertainty90562782001 MS134	P.O. Box 2946101 OCO3 Moncks Corner, South Carolina Ms. Jeanette Gilmetti 562782 NOM Sample 2211287 29 562782001 DUP 3.72 Uncertainty $\pm/-1.63$ 30 LCS 48.7 Uncertainty 28 MB Uncertainty 2201682 89 562782001 DUP 1.18 Uncertainty $\pm/-0.496$ 91 LCS 26.6 Uncertainty 92 LCSD 26.6 Uncertainty 88 MB Uncertainty 88 MB Uncertainty 90 562782001 MS 134 1.18	P.O. Box 2946101 OCO3 Moncks Corner, South Carolina Ms. Jeanette Gilmetti 562782 NOM Sample Qual 2211287 22 562782001 DUP 3.72 Uncertainty $\pm/-1.63$ 30 LCS $48.7$ Uncertainty 28 MB 2201682 89 562782001 DUP 1.18 Uncertainty $\pm/-0.496$ 91 LCS $26.6$ Uncertainty $\pm/-0.496$ 91 LCS $26.6$ Uncertainty 92 LCSD $26.6$ Uncertainty 92 LCSD $26.6$ Uncertainty 92 LCSD $26.6$ Uncertainty 94 MB UU Uncertainty 95 562782001 MS 134 1.18	P.O. Box 2946101 OCO3 Moncks Corner, South Carolina Ms. Jeanette Gilmetti         S62782         NOM       Sample       Qual       QC         2211287	P.O. Box 2946101 OCO3 Moncks Corner, South Carolina Ms. Jeanette Gilmetti         562782       NOM       Sample       Qual       QC       Units         2211287	P.0. Box 2946101 OCO3 Moncks Corner, South Carolina Ms. Jeanette Gilmetti         562782       NOM       Sample       Qual       QC       Units       RPD%         2211287	P.0. Box 2 <sup>3</sup> 46101 OCO3 Moneks Corner, South Carolina Ms. Jeanette Gilmetti         562782       NOM       Sample       Qual       QC       Units       RPD%       REC%         2211287	P.O. Box 2946101 OCO3 Moncks Corner, South Carolina Ms. Jeanette Gilmetti         562782       NOM       Sample       Qual       QC       Units       RPD%       REC%       Range         2211287	P.0. Box 2 <sup>3</sup> 46101 OCO3 Moncks Corner, South Carolina Ms. Jeanette Gilmetti 562782         NOM       Sample       Qual       QC       Units       RPD%       REC%       Range       A.Ist         2211287

#### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma). The Qualifiers in this report are defined as follows:

\*\* Analyte is a Tracer compound

< Result is less than value reported

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## **QC Summary**

Workor				~ -		~~~							e 2 of
Parmnan			NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
	0	r than value repor											
		er below the MD	C or tracer reco	overy is low									
	Failed analysis.												
	-	ing time was exc											
J		ve for an explana	ation										
J	Value is estima	ted											
Κ	Analyte present	. Reported value	may be biased	high. Actual	value is e	xpected to	be lower.						
	• •	. Reported value	•	low. Actual	value is ex	pected to b	e higher.						
М	M if above MD	C and less than L	LD										
М	REMP Result >	• MDC/CL and <	RDL										
N/A	RPD or %Reco	very limits do no	t apply.										
N1	See case narrati	ve											
ND	Analyte concen	tration is not dete	ected above the	detection lin	nit								
NJ	Consult Case N	arrative, Data Su	mmary packag	e, or Project	Manager c	oncerning	this qualifi	er					
Q	One or more qu	ality control crite	eria have not be	een met. Refe	r to the ap	plicable na	rrative or I	DER.					
R	Sample results	are rejected											
U	Analyte was an	alyzed for, but no	ot detected abo	ve the MDL,	MDA, MI	DC or LOD	).						
UI	Gamma Spectro	oscopyUncertain	n identification	l									
UJ	Gamma Spectro	oscopyUncertain	n identification	I									
UL	Not considered	detected. The ass	sociated number	er is the repor	ted concer	ntration, wl	nich may b	e inaccurate	due to a low	bias.			
Х	Consult Case N	arrative, Data Su	mmary packag	e, or Project	Manager o	oncerning	this qualifi	er					
Y	Other specific of	ualifiers were rea	quired to prope	erly define the	e results. C	Consult case	e narrative.						
٨	RPD of sample	and duplicate eva	aluated using +	-/-RL. Conce	ntrations a	are <5X the	RL. Qua	ifier Not Ap	plicable for	Radiochem	istry.		
h	Preparation or p	preservation hold	ing time was ex	xceeded									
^ The Re five time	elative Percent D		obtained from ction limit (RL	the sample d	uplicate (Internet termination)	DUP) is ev	aluated aga	inst the acce	eptance criter	ria when the	e sample i	s greater	

\* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

#### Radiochemistry Technical Case Narrative Santee Cooper SDG #: 562782

Product: GFPC, Ra228, Liquid Analytical Method: EPA 904.0/SW846 9320 Modified Analytical Procedure: GL-RAD-A-063 REV# 5 Analytical Batch: 2211287

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	Client Sample Identification
562782001	AF20415
562782002	AF20416
562782003	AF20417
562782004	AF20418
562782005	AF20419
562782006	AF20420
1204985028	Method Blank (MB)
1204985029	562782001(AF20415) Sample Duplicate (DUP)
1204985030	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

#### **Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

#### **Technical Information**

#### Sample Re-prep/Re-analysis

Samples were reprepped due to high blank activity. The re-analysis is being reported.

#### **Miscellaneous Information**

#### **Additional Comments**

Samples 562782005 (AF20419) and 562782006 (AF20420) are a yellow tint, but are homogenous.

<u>Product:</u> Lucas Cell, Ra226, Liquid <u>Analytical Method:</u> EPA 903.1 Modified <u>Analytical Procedure:</u> GL-RAD-A-008 REV# 15 <u>Analytical Batch:</u> 2201682

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u> <u>Client Sample Identification</u>

562782001	AF20415
562782002	AF20416
562782003	AF20417
562782004	AF20418
562782005	AF20419
562782006	AF20420
1204966188	Method Blank (MB)
1204966189	562782001(AF20415) Sample Duplicate (DUP)
1204966190	562782001(AF20415) Matrix Spike (MS)
1204966191	Laboratory Control Sample (LCS)
1204966192	Laboratory Control Sample Duplicate (LCSD)

The samples in this SDG were analyzed on an "as received" basis.

### **Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

#### **Quality Control (QC) Information**

#### **Duplication Criteria between QC Sample and Duplicate Sample**

The Sample and the Duplicate, (See Below), did not meet the relative percent difference requirement; however, they do meet the relative error ratio requirement with the value listed below.

Sample	Analyte	Value
1204966189 (AF20415DUP)	Radium-226	RPD 44* (0.00%-20.00%) RER 1.54 (0-3)

#### **Certification Statement**

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Contr	act Lab Info:		Contract Lab	Due Date (La	ab Only):l	2	2.1	/_21	Se	nd repo	ort to <u>lcw</u>	illia@san	teecooper.com & sjbrow	n@santeecoop	er.com			
			Chain of Custody 562782									Santee coope One Riverwood Driv Moneks Corner, SC 2946 Phone: (843)761-8000 Ext. 514 Fax: (843)761-8000 Ext. 514						
Custo	omer Ema	il/Report Rec	ipient:	Date	Results	honod	<b>b</b>		_		•			Phone:	(843) I	5 Con 761-80 7ax: (8	er, S 000 E 43)7	C 2946 Xt. 514 61-417
	WILLIA		eecooper.con		,		<i>ы</i> у.					'Unit #:		run requesi	t for a	ny fl	agge	ed QC
			eccoper.con	1	J	/	-	1219	567	1_57	102.0	9.60	<u>    3</u>	Yes	No			
	orks ID #	Sample Loca	ation/	s Star Star Starter		- 			1						1	Analy	is Gr	oup
(Inter only)	nal use	Description		Collection Date	Collection Time	Sample Collector	Total # of containers	Bottle type: (Glass- G/Plastic-p)	Grab (G) or Composite (C)	Matrix(see below)	Preservative (see below)	0	Comments Method # Reporting limit Misc. sample info Any other notes	a pos	RAD 226	KAD 228	TOTAL RAD CALL	
<u>AF 2</u>	2415	CGYP-4		1/17/2	1 1018	DEW ML	2	P	G	GW	2				1	X		+-1
	16	CGYP-4	DUP		1023		1	1	}	1					× 1	r í	X	$\left  - \right $
	17	CGYP-5			1151					1							$\frac{1}{1}$	$\left  - \right $
	เซ	CGYP-6		11	1304		1		+									
	19	WLF-A2-	6	11/18/21	(127				+							+		
	20	WLF-A2-6	DUP		1132			++	+		+				+	+	$\left  \right $	
1						<u> </u>	-	<u> </u>	<u> </u>					<u> </u>	1	<u> </u>	$\lfloor \rfloor$	
			*****															
												·····						
Relino	uished by:				l	<u> </u>												
Angro	un.	Employee#	Date	<u>Time</u> စာပုဝ	Receive	d by: A	100.00	oloyee #				Time	Sample Receiving TEMP (°C):	(Internal Use In	e Only itial:	)		land Direct
Relinqu	Jished by:	Employee#	Date	Time	Beceiver	y i by:	-	loyee #		7/21 Date		1046 Time	Correct pH: Y					
Melingu	ished by:	Employee#	11-19-21 Date	177 Time	Received	4		66		an	c	127	Preservative Lot	#:				
		a characteristic			Aneceiver	i by:	Emp	loyee #		Date		Time						
		ALS (all )	<u>Nutri</u>	ente	BAICO			~	<u> </u>			a canada a c	Date/Time/Init fo	r preservativ	/e:			
Ag Al		□ Sb □ Se		C	MISC BTEX	-		<u>Gyps</u> allboard	d i		o Un	<u>Coal</u> imate	<u>Flyas</u> Ammor	Participation (Participation)	1. S.	211		
As		🗆 Sn	TP/TI	204 E	Napthalene THM/HAA VOC			Gypsur below)	n( <i>all</i>		Ω	% Moist Ash	ure [] LOI		Frans, SeM Com	dis mare	121,	
B Ba		□ Sr	□ NH3- □ F	"   0	Oil & Greas	ie		AIM TOC			Ð	Sulfur	Carb Mineral		Acid	<b>1</b> ,		
Be	□ Mg		CI	0	E. Coli Total Colife	rm		l Total u 2 Soluble				BTUs Volatile	Ana	lysis	- H I	nie Sie		
			□ NO2 □ Br		pH Dissolved A	5	1	Purity (	CaSO4)		. 0	CHN	Sieve Sieve	ture (	làsed (	loed ( MI	1980).	
Zd				D	Dissolved F Rad 226	e	1	1% Mois Sulfites			Other O XRF	Tests: Scan	NODE		Tiash Metal	win		
20	🗆 Ni	□ Hg			Rad 228			l pH i Chlorid	es		C HGI C Finer		NPDE DOIT& Gre		6.55.6	a.C.; 1	0 I Ja	
<u>}r</u>	[] Pb				PCB			Particle			O Parti	ulate Ma			Higi TX ANFLI			

Matrix codes: GW-groundwater, DW-drinking water, SW-surface water, WW-waste water, BW-boiler water, L-limestone, Oil-oil, S-Soil, SL-solid, C-coal, G-gynsum, EA-flyash, RA-bottom ash, M-misc (describe in comment section) Page Presonvalive code I = 462 24 ftNO3 3=H2SO4 4-HCl 5=Na2S2O3 6-Other (Specify)

Client: SCOV				SAMPLE RECEIPT & REVIEW FORM SDG/AR/COC/Work Order: 542782						
Rec	Pived By:DC			Pate Received: $11 - 161 - 71$						
				Circle Applicable:						
	() I I I I I I I I I I I I I I I I I I I			.5						
	Carrier and Tracking Number			$coler \neq l =  S^{\circ} $						
				Cooler#2=00						
usp	ected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety G	roup for further investigation.					
.)Sł	ipped as a DOT Hazardous?		X	Hazard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? Yes No						
	d the client designate the samples are to be ved as radioactive?		X	COC notation or radioactive stickers on containers equal client designation.						
	d the RSO classify the samples as active?		$\underline{\lambda}$	Maximum Net Counts Observed* (Observed Counts - Area Background Counts):	PM / mR/Hr					
) D	d the client designate samples are hazardous?		X	COC notation or hazard labels on containers equal client designation.						
D	d the RSO identify possible hazards?		X	f D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:						
	Sample Receipt Criteria	Yes	NA	2 Comments/Qualifiers (Required for Non-Conforming Is						
	Shipping containers received intact and ealed?	6		Circle Applicable: Seals broken Damaged container Leaking container Other (describe)						
	Chain of custody documents included vith shipment?	L		Circle Applicable: Ciient contacted and provided COC COC created upon receipt						
	samples requiring cold preservation within $(0 \le 6 \text{ deg. C})$ ?*	L		Preservation Method: Wet Ice Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius	ТЕМР:					
	Daily check performed and passed on IR emperature gun?	-		Temperature Device Serial #: <u>IR6-21</u> Secondary Temperature Device Serial # (If Applicable):						
5	ample containers intact and sealed?	L		Cifcle Applicable: Seals broken Damaged container Leaking container Other (describe)						
	amples requiring chemical preservation t proper pH?	1		Sample ID's and Containers Affected:						
Ť		10		If Preservation added, Lot#: If Yes, are Encores or Soil Kits present for solids? YesNo NA(If yes, take to	VOA Freezer)					
	Do any samples require Volatile Analysis?			Do liquid VOA vials contain acid preservation? Yes No NA(If unknown, sele Are liquid VOA vials free of headspace? Yes No NA						
	rutatySIS (			Sample ID's and containers affected:						
1	amples received within holding time?			TD's and tests affected:						
+		2		and containing official d						
	ample ID's on COC match ID's on ottles?	じ		HD's and containers affected:						
I o	ate & time on COC match date & time 1 bottles?	e		Circle Applicable: No dates on containers No times on containers COC missing info	Other (describe)					
n	umber of containers received match umber indicated on COC?	c		Circle Applicable: No container count on COC Other (describe)						
A	re sample containers identifiable as EL provided by use of GEL labels?	J		DC.						
C	OC form is properly signed in	Ĵ		Circle Applicable: Not relinquished Other (describe)						
	linquished/received sections? ents (Use Continuation Form if needed):	<u> </u>								

C

State	Certification
Alabama	42200
Alaska	17-018
Alaska Drinking Water	SC00012
Arkansas	88-0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH-0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-15-00283, P330-15-00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2019020
Maryland	270
Massachusetts	M-SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE-OS-26-13
Nevada	SC000122021-1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R-158
Oklahoma	2019–165
Pennsylvania NELAP	68–00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-21-19
Utah NELAP	SC000122021-36
Vermont	VT87156
Virginia NELAP	460202
Washington	C780

List of current GEL Certifications as of 28 December 2021



a member of The GEL Group INC



PO Box 30712 Charleston, SC 29417 2040 Savage Road Charleston, SC 29407 P 843.556.8171 F 843.766.1178

gel.com

January 05, 2022

Ms. Jeanette Gilmetti Santee Cooper P.O. Box 2946101 OCO3 Moncks Corner, South Carolina 29461

Re: ABS Lab Analytical Work Order: 564713

Dear Ms. Gilmetti:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on December 10, 2021. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at www.gel.com.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4289.

Sincerely,

Grace Bodiford for Julie Robinson Project Manager

Purchase Order: 367074 Enclosures



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### Certificate of Analysis Report for

### SOOP001 Santee Cooper

### Client SDG: 564713 GEL Work Order: 564713

#### The Qualifiers in this report are defined as follows:

- \* A quality control analyte recovery is outside of specified acceptance criteria
- \*\* Analyte is a Tracer compound
- \*\* Analyte is a surrogate compound
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Julie Robinson.

Share Bodiford

Reviewed by

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## **Certificate of Analysis**

Report Date: January 5, 2022 Company : Santee Cooper Address : P.O. Box 2946101 OCO3 Moncks Corner, South Carolina 29461 Contact: Ms. Jeanette Gilmetti Project: ABS Lab Analytical Client Sample ID: AF21736 Project: SOOP00119 Sample ID: 564713001 Client ID: SOOP001 Matrix: Ground Water Collect Date: 06-DEC-21 09:54 **Receive Date:** 10-DEC-21 Collector: Client Oualifier MDC RL Parameter Result Uncertainty Units PF DF Analyst Date Time Batch Method Rad Gas Flow Proportional Counting GFPC, Ra228, Liquid "As Received" Radium-228 2.86 +/-1.19 1.65 3.00 pCi/L JXC9 01/05/22 1022 2207640 1 Radium-226+Radium-228 Calculation "See Parent Products" Radium-226+228 Sum +/-1.29 pCi/L NXL1 01/05/22 1203 2207658 5.03 2 1 Rad Radium-226 Lucas Cell, Ra226, Liquid "As Received" Radium-226 2.18 +/-0.501 0.335 1.00 pCi/L LXP1 01/04/22 0757 2207637 3 The following Analytical Methods were performed: Method Description Analyst Comments EPA 904.0/SW846 9320 Modified Calculation EPA 903.1 Modified Surrogate/Tracer Recovery Result Nominal Test Recovery% Acceptable Limits Barium-133 Tracer GFPC, Ra228, Liquid "As Received" 87 (15% - 125%)Notes: Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows: DF: Dilution Factor Lc/LC: Critical Level **DL:** Detection Limit PF: Prep Factor MDA: Minimum Detectable Activity **RL:** Reporting Limit MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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### **Certificate of Analysis**

Report Date: January 5, 2022 Company : Santee Cooper Address : P.O. Box 2946101 OCO3 Moncks Corner, South Carolina 29461 Contact: Ms. Jeanette Gilmetti Project: ABS Lab Analytical Client Sample ID: AF21737 Project: SOOP00119 Sample ID: 564713002 Client ID: SOOP001 Matrix: Ground Water Collect Date: 06-DEC-21 09:59 **Receive Date:** 10-DEC-21 Collector: Client Oualifier MDC RL Parameter Result Uncertainty Units PF DF Analyst Date Time Batch Method Rad Gas Flow Proportional Counting GFPC, Ra228, Liquid "As Received" Radium-228 3.00 +/-1.26 1.78 3.00 pCi/L JXC9 01/05/22 1022 2207640 1 Radium-226+Radium-228 Calculation "See Parent Products" Radium-226+228 Sum +/-1.28 pCi/L NXL1 01/05/22 1203 2207658 3.30 2 1 Rad Radium-226 Lucas Cell, Ra226, Liquid "As Received" Radium-226 0.303 +/-0.206 0.232 1.00 pCi/L LXP1 01/04/22 0830 2207637 3 The following Analytical Methods were performed: Method Description Analyst Comments EPA 904.0/SW846 9320 Modified Calculation EPA 903.1 Modified Surrogate/Tracer Recovery Result Nominal Test Recovery% Acceptable Limits Barium-133 Tracer GFPC, Ra228, Liquid "As Received" 88.4 (15% - 125%)Notes: Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows: DF: Dilution Factor Lc/LC: Critical Level **DL:** Detection Limit PF: Prep Factor MDA: Minimum Detectable Activity **RL:** Reporting Limit MDC: Minimum Detectable Concentration

SQL: Sample Quantitation Limit

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### **Certificate of Analysis**

Report Date: January 5, 2022 Company : Santee Cooper Address : P.O. Box 2946101 OCO3 Moncks Corner, South Carolina 29461 Contact: Ms. Jeanette Gilmetti Project: ABS Lab Analytical Client Sample ID: AF21738 Project: SOOP00119 Sample ID: 564713003 Client ID: SOOP001 Matrix: Ground Water Collect Date: 06-DEC-21 11:13 **Receive Date:** 10-DEC-21 Collector: Client Oualifier MDC RL Parameter Result Uncertainty Units PF DF Analyst Date Time Batch Method Rad Gas Flow Proportional Counting GFPC, Ra228, Liquid "As Received" Radium-228 2.46 +/-1.56 2.46 3.00 pCi/L JXC9 01/05/22 1022 2207640 U 1 Radium-226+Radium-228 Calculation "See Parent Products" Radium-226+228 Sum 2.92 +/-1.59 pCi/L NXL1 01/05/22 1203 2207658 2 1 Rad Radium-226 Lucas Cell, Ra226, Liquid "As Received" Radium-226 0.468 +/-0.310 0.445 1.00 pCi/L LXP1 01/04/22 0830 2207637 3 The following Analytical Methods were performed: Method Description Analyst Comments EPA 904.0/SW846 9320 Modified Calculation EPA 903.1 Modified Surrogate/Tracer Recovery Result Nominal Test Recovery% Acceptable Limits Barium-133 Tracer GFPC, Ra228, Liquid "As Received" 85.3 (15% - 125%)Notes: Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows: DF: Dilution Factor Lc/LC: Critical Level **DL:** Detection Limit PF: Prep Factor MDA: Minimum Detectable Activity **RL:** Reporting Limit MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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### **Certificate of Analysis**

Report Date: January 5, 2022 Company : Santee Cooper Address : P.O. Box 2946101 OCO3 Moncks Corner, South Carolina 29461 Contact: Ms. Jeanette Gilmetti Project: ABS Lab Analytical Client Sample ID: AF21739 Project: SOOP00119 Sample ID: 564713004 Client ID: SOOP001 Matrix: Ground Water Collect Date: 06-DEC-21 12:15 **Receive Date:** 10-DEC-21 Collector: Client Oualifier MDC RL Parameter Result Uncertainty Units PF DF Analyst Date Time Batch Method Rad Gas Flow Proportional Counting GFPC, Ra228, Liquid "As Received" Radium-228 2.88 +/-1.21 1.70 3.00 pCi/L JXC9 01/05/22 1022 2207640 1 Radium-226+Radium-228 Calculation "See Parent Products" Radium-226+228 Sum +/-1.34 pCi/L NXL1 01/05/22 1203 2207658 5.62 2 1 Rad Radium-226 Lucas Cell, Ra226, Liquid "As Received" Radium-226 2.74 +/-0.558 0.309 1.00 pCi/L LXP1 01/04/22 0830 2207637 3 The following Analytical Methods were performed: Method Description Analyst Comments EPA 904.0/SW846 9320 Modified Calculation EPA 903.1 Modified Surrogate/Tracer Recovery Result Nominal Acceptable Limits Test Recovery% Barium-133 Tracer GFPC, Ra228, Liquid "As Received" 91.1 (15% - 125%)Notes: Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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### **Certificate of Analysis**

Report Date: January 5, 2022 Company : Santee Cooper Address : P.O. Box 2946101 OCO3 Moncks Corner, South Carolina 29461 Contact: Ms. Jeanette Gilmetti Project: ABS Lab Analytical Client Sample ID: AF21740 Project: SOOP00119 Sample ID: 564713005 Client ID: SOOP001 Matrix: Ground Water Collect Date: 07-DEC-21 10:36 **Receive Date:** 10-DEC-21 Collector: Client Oualifier MDC RL Parameter Result Uncertainty Units PF DF Analyst Date Time Batch Method Rad Gas Flow Proportional Counting GFPC, Ra228, Liquid "As Received" Radium-228 0.757 +/-0.750 1.23 3.00 pCi/L JXC9 01/05/22 1022 2207640 U 1 Radium-226+Radium-228 Calculation "See Parent Products" Radium-226+228 Sum +/-0.780 pCi/L NXL1 01/05/22 1203 2207658 1.18 2 1 Rad Radium-226 Lucas Cell, Ra226, Liquid "As Received" Radium-226 0.422 +/-0.212 0.190 1.00 pCi/L LXP1 01/04/22 0830 2207637 3 The following Analytical Methods were performed: Method Description Analyst Comments EPA 904.0/SW846 9320 Modified Calculation EPA 903.1 Modified Surrogate/Tracer Recovery Result Nominal Test Recovery% Acceptable Limits Barium-133 Tracer GFPC, Ra228, Liquid "As Received" 91.9 (15% - 125%)Notes: Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows: DF: Dilution Factor Lc/LC: Critical Level **DL:** Detection Limit PF: Prep Factor MDA: Minimum Detectable Activity **RL:** Reporting Limit MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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### **Certificate of Analysis**

Report Date: January 5, 2022 Company : Santee Cooper Address : P.O. Box 2946101 OCO3 Moncks Corner, South Carolina 29461 Contact: Ms. Jeanette Gilmetti Project: ABS Lab Analytical Client Sample ID: AF21741 Project: SOOP00119 Sample ID: 564713006 Client ID: SOOP001 Matrix: Ground Water Collect Date: 07-DEC-21 10:41 **Receive Date:** 10-DEC-21 Collector: Client Oualifier MDC RL Parameter Result Uncertainty Units PF DF Analyst Date Time Batch Method Rad Gas Flow Proportional Counting GFPC, Ra228, Liquid "As Received" Radium-228 0.233 +/-0.791 1.44 3.00 pCi/L JXC9 01/05/22 1023 2207640 U 1 Radium-226+Radium-228 Calculation "See Parent Products" Radium-226+228 Sum +/-0.821 pCi/L NXL1 01/05/22 1203 2207658 0.643 2 1 Rad Radium-226 Lucas Cell, Ra226, Liquid "As Received" Radium-226 0.410 +/-0.216 0.231 1.00 pCi/L LXP1 01/04/22 0830 2207637 3 The following Analytical Methods were performed: Method Description Analyst Comments EPA 904.0/SW846 9320 Modified 1 2 Calculation 3 EPA 903.1 Modified Surrogate/Tracer Recovery Result Nominal Test Recovery% Acceptable Limits Barium-133 Tracer GFPC, Ra228, Liquid "As Received" 93.1 (15% - 125%)Notes: Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:DF: Dilution FactorLc/LC: Critical LevelDL: Detection LimitPF: Prep FactorMDA: Minimum Detectable ActivityRL: Reporting LimitMDC: Minimum Detectable ConcentrationSQL: Sample Quantitation Limit

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## **QC Summary**

Report Date: January 5, 2022

Page 1 of 2

	Santee Cooper
	P.O. Box 2946101
	OCO3
	Moncks Corner, South Carolina
Contact:	Ms. Jeanette Gilmetti

Workorder: 564713

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gas Flow Batch 2207640 ——										
QC1204978137 564713004 DUP										
Radium-228		2.88		2.86	pCi/L	0.762		(0% - 100%)	IXC9	01/05/22 10:21
	Uncertainty	+/-1.21		+/-1.05	P	01702		(070 10070)	01105	01/00/22 10:21
QC1204978138 LCS										
Radium-228	49.1			50.3	pCi/L		102	(75%-125%)		01/05/22 10:21
	Uncertainty			+/-3.82						
QC1204978136 MB			••	0.444	~ ~					
Radium-228	<b>T</b> T ( ' (		U	0.661 +/-0.773	pCi/L					01/05/22 10:21
	Uncertainty			+/-0.773						
Rad Ra-226 Batch 2207637 —										
QC1204978129 564713006 DUP										
Radium-226		0.410	U	0.273	pCi/L	40.1		(0% - 100%)	LXP1	01/04/22 08:30
	Uncertainty	+/-0.216		+/-0.251						
QC1204978131 LCS										
Radium-226	26.5			21.9	pCi/L		82.8	(75%-125%)		01/04/22 09:12
	Uncertainty			+/-1.67						
QC1204978132 LCSD										
Radium-226	26.5			25.4	pCi/L	14.5	95.7	(0%-20%)		01/04/22 09:12
	Uncertainty			+/-1.64						
QC1204978128 MB										
Radium-226			U	0.0271	pCi/L					01/04/22 08:30
	Uncertainty			+/-0.206						
QC1204978130 564713006 MS										
Radium-226	133	0.410		108	pCi/L		80.9	(75%-125%)		01/04/22 08:30
	Uncertainty	+/-0.216		+/-8.17						

#### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

The Qualifiers in this report are defined as follows:

\*\* Analyte is a Tracer compound

< Result is less than value reported

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## **QC Summary**

Parmnan	ne NOM Sample Qual QC Units RPD% REC% Range Anlst Date Time					
>	Result is greater than value reported					
BD	Results are either below the MDC or tracer recovery is low					
FA	Failed analysis.					
Н	Analytical holding time was exceeded					
J	See case narrative for an explanation					
J	Value is estimated					
Κ	Analyte present. Reported value may be biased high. Actual value is expected to be lower.					
L	Analyte present. Reported value may be biased low. Actual value is expected to be higher.					
М	M if above MDC and less than LLD					
М	REMP Result > MDC/CL and < RDL					
N/A	RPD or %Recovery limits do not apply.					
N1	See case narrative					
ND	Analyte concentration is not detected above the detection limit					
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier					
Q	One or more quality control criteria have not been met. Refer to the applicable narrative or DER.					
R	Sample results are rejected					
U	Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.					
UI	Gamma SpectroscopyUncertain identification					
UJ	Gamma SpectroscopyUncertain identification					
UL	Not considered detected. The associated number is the reported concentration, which may be inaccurate due to a low bias.					
Х	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier					
Y	Other specific qualifiers were required to properly define the results. Consult case narrative.					
۸	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.					
h	Preparation or preservation holding time was exceeded					
^ The Re five time	icates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable. elative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than es (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the ed to evaluate the DUP result.					

\* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

### Radiochemistry Technical Case Narrative Santee Cooper SDG #: 564713

Product: Radium-226+Radium-228 Calculation Analytical Method: Calculation Analytical Procedure: GL-RAD-D-003 REV# 44 Analytical Batch: 2207658

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	Client Sample Identification
564713001	AF21736
564713002	AF21737
564713003	AF21738
564713004	AF21739
564713005	AF21740
564713006	AF21741

#### **Data Summary:**

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Product: GFPC, Ra228, Liquid Analytical Method: EPA 904.0/SW846 9320 Modified Analytical Procedure: GL-RAD-A-063 REV# 5 Analytical Batch: 2207640

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	<b><u>Client Sample Identification</u></b>
564713001	AF21736
564713002	AF21737
564713003	AF21738
564713004	AF21739
564713005	AF21740
564713006	AF21741
1204978136	Method Blank (MB)
1204978137	564713004(AF21739) Sample Duplicate (DUP)
1204978138	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

### **Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

#### **Preparation Information**

#### **Homogenous Matrix**

Samples 564713005 (AF21740) and 564713006 (AF21741) were non-homogenous matrix. Samples have a yellow tint. 564713005 (AF21740) and 564713006 (AF21741).

Product: Lucas Cell, Ra226, Liquid Analytical Method: EPA 903.1 Modified Analytical Procedure: GL-RAD-A-008 REV# 15 Analytical Batch: 2207637

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	Client Sample Identification
564713001	AF21736
564713002	AF21737
564713003	AF21738
564713004	AF21739
564713005	AF21740
564713006	AF21741
1204978128	Method Blank (MB)
1204978129	564713006(AF21741) Sample Duplicate (DUP)
1204978130	564713006(AF21741) Matrix Spike (MS)
1204978131	Laboratory Control Sample (LCS)
1204978132	Laboratory Control Sample Duplicate (LCSD)

The samples in this SDG were analyzed on an "as received" basis.

#### **Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

#### **Preparation Information**

#### **Homogenous Matrix**

Samples 1204978129 (AF21741DUP), 1204978130 (AF21741MS), 564713005 (AF21740) and 564713006 (AF21741) were non-homogenous matrix.

### **Miscellaneous Information**

#### **Additional Comments**

The matrix spike, 1204978130 (AF21741MS), aliquot was reduced to conserve sample volume.

### **<u>Certification Statement</u>**

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Contract Lab Info:	GEL Contract Lab	Due Date (Lab	Only): <del>‡2</del>	1/12	/24 12		Se	nd repo	rt to lcv	villia@santee	cooper.com & sibro	wn@conteacor		_		
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Customer Ema	il/Report Recipient:	Date	Results N	eeded i					1					Fax: (l	\$43)76	51-417:
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Labworks ID #	Sample Location/	rin Bilineart		Linear	-	- 1 1. Nov.	Tractor	-						<u>Analy</u>	sis Gro	up
(Internal use only)	Description	Date	Ime	sctor	ainers	Slass-		elow)	See		Comment thod #	\$		Τ	JIE	$\square$
		Collection Date	Collection Time	Sample Collector	Total # of containers	Bottle type: (Glass- G/Plastic-P)	Grab (G) or Composite (C)	Matrix(see below)	Preservative (see	_ • Mi	porting limit sc. sample info y other notes		RAD 276	RAD 228	AMA	
AF21736	CETP-4	12/6/21	0954	DEW	2.	P	G	GW	2				X	- <u> </u>	×	$\left  - \right $
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Laboratories LLC

SAMPLE	RECEIPT &	REVIEW FORM
		KEVIEW HIDL

s 1

Client: SOUP	SAMPLE RECEIPT & REVIEW FORM	
	SDG/AR/COC/Work Order: 564713	
Received By: MKS	Date Received: 12:10:21	
Carrier and Tracking Number	Circle Applicable: FedEx Express FedEx Ground UPS Field Services	Courier Other
Suspected Hazard Information	$\stackrel{\circ}{\mathcal{Z}}$ *If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safe	
A)Shipped as a DOT Hazardous?	Hazard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? Yes No	
B) Did the client designate the samples are to be received as radioactive?	COC notation or radioactive stickers on containers equal client designation.	-
C) Did the RSO classify the samples as radioactive?	Maximum Net Counts Observed* (Observed Counts - Area Background Counts):	CPM / mR/Hr
D) Did the client designate samples are hazardous?	COC notation or hazard labels on containers equal client designation.	
E) Did the RSO identify possible hazards?	If D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Oth	er:
Sample Receipt Criteria	Commante/Ourslife (D	<i>P</i>
1 Shipping containers received intact and scaled?	Z Comments/Qualifiers (Required for Non-Conforming Circle Applicable: Seals broken Damaged container Leaking container Other (descri	y Items)
2 Chain of custody documents included with shipment?	Circle Applicable: Client contacted and provided COC COC created upon receipt	
3 Samples requiring cold preservation within $(0 \le 6 \text{ deg. C})$ ?*	Preservation Method: Wet Ice Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius	темр: 20°
4 Daily check performed and passed on IR temperature gun?	Temperature Device Serial #: <u>7 12 3 - 21</u> Secondary Temperature Device Serial # (If Applicable):	
5 Sample containers intact and sealed?	Circle Applicable: Scals broken Damaged container Leaking container Other (describe	
6 Samples requiring chemical preservation at proper pH?	Sample ID's and Containers Affected: If Preservation added, Lot#:	
7 Do any samples require Volatile Analysis?	If Yes, are Encores or Soil Kits present for solids? YesNoNA(If yes, take to Do liquid VOA vials contain acid preservation? Yes No NA(If unknown, se Are liquid VOA vials free of headspace? Yes No NA Sample ID's and containers affected:	VOA Freezer) lect No)
8 Samples received within holding time?	ID's and tests affected:	
9 Sample ID's on COC match ID's on / bottles?	ID's and containers affected:	
10     Date & time on COC match date & time on bottles?       11     Number of containers received match	Circle Applicable: No dates on containers No times on containers COC missing info COC Says 2020 Sail Containers 707 Circle Applicable No container and Sail Containers 707	
number indicated on COC?	Circle Applicable, No container count on COC Other (describe)	Street MI
12       GEL provided by use of GEL labels?         13       COC form is properly signed in relinquished/received sections?	Circle Applicable: Not relinquished Other (describe)	
Comments (Use Continuation Form if needed):		· ·
PM (or PMA) review: Init	tials GB Date 12/13/21 Page of	

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Virginia NELAP 460202		
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Washington C780	Washington	C780

List of current GEL Certifications as of 05 January 2022

## **Field Data Sheets**

(Note: the color coding is to assist field personnel in determining when the well has stabilized enough to begin sample collection.)

Well ID	TOC	GW	Screen	Sample	Sample	Total
wen ib	Elevation	Depth	Intervals	Date	Time	Well
	(feet)	(feet)	(ft, bgs)	Date	1 IIIC	
PM-1	83.24	8.27	(11, 0gs) 4-24	1/26/2021	027	Depth
		0.27			927	26.31
Drawdown:	8.82		depth to GV	v (11)		
Time	Temp	pН	Eh	Spec Cond	Turbidity	Dissolved
	round 1	round 1	ORP	round 1		Oxygen
	(celcius)	(units)	(mV)	(uS/cm)	(NTU)	(ppm)
907	19.45	5.07	57	146	0	7.86
912	19.37	4.86	30	143	11.8	6.69
917	19.43	4.92	18	142	13.3	6.44
922	19.51	4.95	8	142	2.6	6.16
927	19.47	5.03	1	143	4.4	6.12

Comments/Conditions:

Samples were collected by Aaron Hill and Trey West

Well ID	TOC	GW	Screen	Sample	Sample	Total
	Elevation	Depth	Intervals	Date	Time	Well
	(feet)	(feet)	(ft, bgs)			Depth
PM-1	83.24	7.91	4-24	6/21/2021	1308	26.33
Drawdown:	8.34		depth to GV	V (ft)		
Time	Temp	pН	Eh	Spec Cond	Turbidity	Dissolved
	round 1	round 1	ORP	round 1		Oxygen
	(celcius)	(units)	(mV)	(uS/cm)	(NTU)	(ppm)
1240	25.76	4.9	63	183	14.6	3.07
1245	26.43	4.87	67	184	14.4	5.7
1250	26.24	5.29	40	182	10.5	5.17
1255	26.41	5.21	43	178	6.4	4.65
1300	26.34	5.23	41	172	4.5	4.32
1305	26.47	5.17	45	170	5.2	4.09
1308	26.49	5.21	45	169	4.3	3.96

Comments/Conditions:

Samples were collected by Melanie Goings and Ben Taylor

Well ID	TOC	GW	Screen	Sample	Sample	Total
	Elevation	Depth	Intervals	Date	Time	Well
	(feet)	(feet)	(ft, bgs)			Depth
CBW-1	85.80	10.12	14-24	1/26/2021	1039	26.94
Drawdown:	10.15	de	epth to GW (	ft)		
Time	Temp	pН	Eh	Spec Cond	Turbidity	Dissolved
	round 1	round 1	ORP	round 1		Oxygen
	(celcius)	(units)	(mV)	(uS/cm)	(NTU)	(ppm)
1005	20.71	4.33	160	187	3.2	2.82
1010	20.31	4.27	221	187	0.6	1.48
1015	20.2	4.2	268	191	0	1.15
1020	20.25	4.22	288	191	0	1.05
1025	20.3	4.29	303	192	0	0.84
1030	20.32	4.29	318	192	0	0.78
1033	20.34	4.29	326	192	0	0.76
1036	20.31	4.28	334	192	0	0.74
1039	20.25	4.31	338	192	0	0.71

Comments/Conditions:

Samples were collected by Aaron Hill and Trey West

Well ID	TOC	GW	Depth of	Sample	Sample	Total
	Elevation	Depth	Screened	Date	Time	Well
	(feet)	(feet)	Interval (ft, bgs)			Depth
CBW-1	85.80	10.07	14-24	6/21/2021	1413	26.76
Drawdown:	10.11	de	epth to GW (	ft)		
Time	Temp	pН	Eh	Spec Cond	Turbidity	Dissolved
	round 1	round 1	ORP	round 1		Oxygen
	(celcius)	(units)	(mV)	(uS/cm)	(NTU)	(ppm)
1345	26.18	4.24	96	167	0	1.66
1350	25.53	4.18	98	182	0	0.92
1355	24.62	3.9	104	187	0	0.78
1400	24.48	3.94	98	190	0	0.73
1405	23.9	4.28	76	193	0	0.7
1410	23.89	4.27	74	194	0.4	0.67
1413	24.16	4.25	75	194	0.2	0.66

Comments/Conditions:

Samples were collected by Melanie Goings and Ben Taylor

Well ID	TOC	GW	Screen	Sample	Sample	Total
	Elevation	Depth	Intervals	Date	Time	Well
	(feet)	(feet)	(ft, bgs)			Depth
CGYP-1	91.89	15.99	14'-24'	2/10/2021	1116	27
Drawdown:	16.22		depth to GV	V (ft)		•
Time	Temp	pН	Eh	Spec Cond	Turbidity	Dissolved
	round 1	round 1	ORP	round 1		Oxygen
	(celcius)	(units)	(mV)	(uS/cm)	(NTU)	(ppm)
1033	19.84	4.88	139	2060	37.1	2.36
1038	19.96	4.89	141	2080	28.6	2.79
1043	18.67	4.92	137	2240	30.6	2.74
1048	19.1	4.53	144	2680	1.9	1.09
1053	19.45	4.34	155	2910	0	0.78
1058	19.83	3.77	193	3370	0	0.66
1101	19.62	3.74	207	3400	0	0.64
1104	19.7	3.74	216	3410	0	0.62
1107	19.64	3.76	224	3410	0	0.62
1110	19.74	3.77	231	3400	0	0.61
1113	19.81	3.78	235	3410	0	0.6
1116	19.81	3.8	235	3410	0	0.6
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Comments/Conditions:

Well ID	TOC	GW	Screen	Sample	Sample	Total
				_	-	
	Elevation	Depth	Intervals	Date	Time	Well
	(feet)	(feet)	(ft, bgs)			Depth
CGYP-1	91.89	16.58	14'-24'	4/7/2021	1216	26.98
Drawdown:	16.81		depth to GV	V (ft)		
Time	Temp	pН	Eh	Spec Cond	Turbidity	Dissolved
	round 1	round 1	ORP	round 1		Oxygen
	(celcius)	(units)	(mV)	(uS/cm)	(NTU)	(ppm)
1145	21.97	4.37	205	2540	0	1.17
1150	23.18	4.22	213	2850	0	0.65
1155	23.34	4.19	214	2910	0	0.52
1200	23.34	4.17	213	2920	0	0.45
1205	23.43	4.14	214	2960	0	0.42
1210	23.59	4.11	217	3150	0	0.39
1213	23.64	4.11	219	3180	0	0.38
1216	23.58	4.1	219	3200	0	0.37

Comments/Conditions:

Well ID	TOC	GW	Screen	Sample	Sample	Total
	Elevation		Intervals	Date	Time	Well
		Depth		Date	Time	
	(feet)	(feet)	(ft, bgs)			Depth
CGYP-1	91.89	17.75	14'-24'	7/7/2021	1031	27.44
Drawdown:	18.1		depth to GV	V (ft)		
Time	Temp	pН	Eh	Spec Cond	Turbidity	Dissolved
	round 1	round 1	ORP	round 1		Oxygen
	(celcius)	(units)	(mV)	(uS/cm)	(NTU)	(ppm)
1003	22.32	3.93	166	2730	4.1	3.69
1008	23.45	4	152	2680	3.2	1.27
1013	24.71	4.05	144	2680	4.1	1.12
1018	24.06	4.13	158	2700	6.2	1.07
1023	23.25	4.19	148	2650	1.6	0.84
1028	23.15	4.19	146	2660	0.5	0.79
1031	23.16	4.19	145	2670	0.6	0.77

Comments/Conditions:

Depth to water/GW Elevation Only

Samples were collected by Connor Smalling and Ben Taylor

Well ID	TOC Elevation (feet)	GW Depth (feet)	Screen Intervals (ft, bgs)	Sample Date	Sample Time	Total Well Depth
CGYP-2	84.88	8.41	8-18	2/10/2021	1223	22.49
Drawdown:	9.77	de	epth to GW (	TT)		
Time	Temp	pН	Eh	Spec Cond	Turbidity	Dissolved
	round 1	round 1	ORP	round 1		Oxygen
	(celcius)	(units)	(mV)	(uS/cm)	(NTU)	(ppm)
1158	19.33	3.92	243	1700	0	1.17
1203	19.16	3.84	266	1700	0	0.22
1208	18.93	3.82	267	1710	0	0.56
1213	18.92	3.8	269	1710	0	0.5
1218	19.05	3.78	268	1710	0	0.46
1223	19.11	3.77	271	1710	0	0.43

Comments/Conditions:

Duplicate was collected at 1228

Well ID CGYP-2 Drawdown:	TOC Elevation (feet) 84.88 9.66	GW Depth (feet) 9.39 de	Screen Intervals (ft, bgs) 8-18 epth to GW (	Sample Date 4/7/2021 ft)	Sample Time 1316	Total Well Depth 21.5
Time	Temp round 1 (celcius)	pH round 1 (units)	Eh ORP (mV)	Spec Cond round 1 (uS/cm)	Turbidity (NTU)	Dissolved Oxygen (ppm)
1251	23.19	4.19	203	1570	0	1.8
1256	21.85	4.11	233	1640	0	0.56
1301	21.7	4.09	241	1640	0	0.45
1306	21.5	4.05	245	1650	0	0.4
1311	21.51	4.04	246	1650	0	0.38
1316	21.36	4.02	247	1650	0	0.38

Comments/Conditions:

Duplicate was collected at 1321

TOC Elevation (feet) 83.95	GW Depth (feet) 10.6	Screen Intervals (ft, bgs) 8'-18'	Sample Date 7/7/2021	Sample Time 1128	Total Well Depth 21.78
10.74			v (11)		
Temp round 1 (celcius)	pH round 1 (units)	Eh ORP (mV)	Spec Cond round 1 (uS/cm)	Turbidity (NTU)	Dissolved Oxygen (ppm)
27.87	3.88	247	1470	14.5	1.04
				0	0.71
					0.69
25.39	3.8	241	1530	0.2	0.67
	Elevation (feet) 83.95 10.74 Temp round 1 (celcius)	Elevation       Depth         (feet)       (feet)         83.95       10.6         10.74	Elevation       Depth       Intervals         (feet)       (feet)       (ft, bgs)         83.95       10.6       8'-18'         10.74       depth to GW         Temp       pH       Eh         round 1       round 1       ORP         (celcius)       (units)       (mV)         27.87       3.88       247         25.75       3.81       244	Elevation (feet)Depth (feet)Intervals (ft, bgs)Date $83.95$ 10.6 $8'-18'$ $7/7/2021$ $10.74$ $epth$ to $GW$ (ft)TemppHEhSpec Cond round 1round 1round 1ORPround 1(celcius)(units)(mV)(uS/cm)27.873.88247147025.753.812441500	Elevation (feet)Depth (feet)Intervals (ft, bgs)DateTime $83.95$ 10.6 $8'-18'$ $7/7/2021$ 1128 $10.74$ $epth to GW(ft)$ $1128$ $10.74$ $1001$ $14.5$ $25.75$ $3.82$ $236$ $1520$ $25.68$ $3.81$ $244$ $1500$ $0$

Comments/Conditions:

Duplicate at 1133/Fix TOC Elevation

Samples were collected by Connor Smalling and Ben Taylor

Well ID	TOC	GW	Screen	Sample	Sample	Total
wen ib	Elevation	Depth	Intervals	Date	Time	Well
		-		Date	THIC	
COMP 1	(feet)	(feet)	(ft, bgs)	2/10/2021	1000	Depth
CGYP-3	83.95	6.38	10-20	2/10/2021	1338	23.15
Drawdown:	6.63		depth to GV	V (ff)		
Time	Temp	pН	Eh	Spec Cond	Turbidity	Dissolved
	round 1	round 1	ORP	round 1		Oxygen
	(celcius)	(units)	(mV)	(uS/cm)	(NTU)	(ppm)
1318	20.31	3.47	335	5540	0	0.95
1323	19.77	3.48	333	5620	0	0.68
1328	19.37	3.49	331	5660	0	0.59
1333	19.3	3.5	329	5690	0	0.54
1338	19.17	3.5	328	5700	0	0.51

Comments/Conditions:

Well ID	TOC	GW	Screen	Sample	Sample	Total
	Elevation	Depth	Intervals	Date	Time	Well
	(feet)	(feet)	(ft, bgs)			Depth
CGYP-3	83.95	8.27	10-20	4/7/2021	1420	23.14
Drawdown:	8.69		depth to GV	V (ft)		
Time	Temp	pН	Eh	Spec Cond	Turbidity	Dissolved
	round 1	round 1	ORP	round 1		Oxygen
	(celcius)	(units)	(mV)	(uS/cm)	(NTU)	(ppm)
1400	25.67	3.76	260	4980	0	1.07
1405	25.56	3.76	248	5150	0	0.45
1410	24.57	3.75	242	5210	0	0.36
1415	24.17	3.75	241	5190	0	0.34
1420	23.64	3.73	240	5280	0	0.32

Comments/Conditions:

Well ID	TOC	GW	Screen	Sample	Sample	Total
	Elevation	Depth	Intervals	Date	Time	Well
	(feet)	(feet)	(ft, bgs)			Depth
CGYP-3	83.95	9.29	10-20	7/7/2021	1338	
Drawdown:	9.53		depth to GV	V (ft)		
Time	Temp	pН	Eh	Spec Cond	Turbidity	Dissolved
	round 1	round 1	ORP	round 1		Oxygen
	(celcius)	(units)	(mV)	(uS/cm)	(NTU)	(ppm)
1310	25.75	3.83	165	4500	0.4	3.95
1315	25.81	3.68	187	3950	1.2	1.33
1320	25.53	3.62	217	3770	0	1.13
1325	25.28	3.6	223	3870	0.4	1.05
1330	24.99	3.58	225	3920	0	0.8
1335	24.87	3.57	225	4030	0.2	0.73
1338	24.83	3.56	225	4090	0.3	0.72

Comments/Conditions:

Samples were collected by Connor Smalling and Ben Taylor

Well ID	TOC	GW	Screen	Sample	Sample	Total
	Elevation	Depth	Intervals	Date	Time	Well
	(feet)	(feet)	(ft, bgs)			Depth
CGYP-4	83.49	7.56	10-20	4/7/2021	1106	23.01
Drawdown:	7.84		depth to GV	V (ft)		
	_			a a (		
Time	Temp	pН	Eh	Spec Cond	Turbidity	Dissolved
	round 1	round 1	ORP	round 1		Oxygen
	(celcius)	(units)	(mV)	(uS/cm)	(NTU)	(ppm)
1026	19.75	3.8	143	3140	28.5	2.75
1031	20.5	3.81	161	3130	16.8	1.53
1036	20.87	3.8	176	3100	10	1.19
1041	21.39	3.8	196	3060	5.4	0.9
1046	21.64	3.8	212	3050	3.4	0.84
1051	21.67	3.79	227	3070	2.2	0.79
1054	21.82	3.79	234	3060	0.5	0.7
1057	22.03	3.78	239	3060	0	0.63
1100	22.23	3.78	242	3060	0	0.55
1103	22.29	3.78	244	3060	0	0.55
1106	22.48	3.78	246	3050	0	0.54

Comments/Conditions:

Well ID	TOC	GW	Screen	Sample	Sample	Total
	Elevation	Depth	Intervals	Date	Time	Well
	(feet)	(feet)	(ft, bgs)			Depth
CGYP-4	83.49	7.65	10-20	5/13/2021	1439	23.04
Drawdown:	7.95		depth to GV	V (ft)		
Time	Temp	pН	Eh	Spec Cond	Turbidity	Dissolved
	round 1	round 1	ORP	round 1		Oxygen
	(celcius)	(units)	(mV)	(uS/cm)	(NTU)	(ppm)
1405	23.82	4.01	80	2830	0	1.44
1410	23.29	3.97	70	2870	0	0.85
1415	22.41	3.96	81	2920	0	0.68
1420	22.06	3.91	94	2960	0	0.75
1425	22.04	3.9	100	2970	0	0.72
1430	22.1	3.89	107	2990	0	0.68
1433	22.19	3.88	114	2990	0	0.66
1436	22.15	3.88	118	2990	0	0.65
1439	22.18	3.88	122	2990	0	0.64

Comments/Conditions:

Duplicate was collected at 1444

Samples were collected by Melanie Goings and Brad MCCray

Well ID	TOC	GW	Screen	Sample	Sample	Total	
	Elevation	Depth	Intervals	Date	Time	Well	
	(feet)	(feet)	(ft, bgs)			Depth	
CGYP-4	83.49	7.69	10-20	7/8/2021	1026	23.01	
Drawdown:	7.89 depth to GW (ft)						
Time	Temp	pН	Eh	Spec Cond	Turbidity	Dissolved	
	round 1	round 1	ORP	round 1		Oxygen	
	(celcius)	(units)	(mV)	(uS/cm)	(NTU)	(ppm)	
958	21.15	3.67	153	2940	3.1	1.86	
1003	22.14	3.72	131	2920	3.3	0.82	
1008	22.57	3.69	133	2920	1.5	0.71	
1013	22.99	3.68	136	2910	0.4	1.03	
1018	23.08	3.67	137	2910	0.5	1.16	
1023	23.06	3.66	140	2930	0.6	1.05	
1026	23.08	3.65	141	2940	0.6	1.01	

Comments/Conditions:

Samples were collected by Melanie Goings and Ben Taylor

Well ID	TOC	GW	Screen	Sample	Sample	Total
	Elevation	Depth	Intervals	Date	Time	Well
	(feet)	(feet)	(ft, bgs)	2		Depth
CGYP-4	83.49	7.33	10-20	9/1/2021	904	23
Drawdown:	7.68		depth to GV	V (ft)		
			_			
Time	Temp	pН	Eh	Spec Cond	Turbidity	Dissolved
	round 1	round 1	ORP	round 1		Oxygen
	(celcius)	(units)	(mV)	(uS/cm)	(NTU)	(ppm)
844	22.22	3.72	179	2880	10.1	3.16
849	23.35	3.67	183	2840	22.8	1.02
854	23.72	3.65	192	2850	10.8	0.96
859	23.88	3.65	196	2860	8.6	0.92
904	24.12	3.65	202	2860	3.6	0.87

Comments/Conditions:

DUP taken at 909

Well ID	TOC	GW	Screen	Sample	Sample	Total	
	Elevation	Depth	Intervals	Date	Time	Well	
	(feet)	(feet)	(ft, bgs)			Depth	
CGYP-4	83.49	7.04	10-20	9/27/2021	938	23	
Drawdown:	7.34depth to GW (ft)						
Time	Temp	pН	Eh	Spec Cond	Turbidity	Dissolved	
	round 1	round 1	ORP	round 1		Oxygen	
	(celcius)	(units)	(mV)	(uS/cm)	(NTU)	(ppm)	
910	23	3.73	167	2830	11.1	1.86	
915	23.56	3.77	172	2780	2.8	0.88	
920	23.79	3.73	183	2780	0	0.72	
925	23.99	3.69	195	2800	0	0.75	
930	24.17	3.67	203	2800	0	0.71	
935	24.39	3.66	210	2810	0	0.67	
938	24.49	3.65	212	2800	0	0.65	

Comments/Conditions:

DUP taken at 943

Well ID	TOC	GW	Screen	Sample	Sample	Total
	Elevation	Depth	Intervals	Date	Time	Well
	(feet)	(feet)	(ft, bgs)			Depth
CGYP-4	83.49	8.15	10-20	10/26/2021	1000	23
Drawdown:	8.4 depth to GW (ft)					
Time	Temp	pН	Eh	Spec Cond	Turbidity	Dissolved
TILL	round 1	round 1	ORP	round 1	Turblatty	Oxygen
	(celcius)	(units)	(mV)	(uS/cm)	(NTU)	
923	22.12	3.63	241	2660	$(\mathbf{N}\mathbf{I}\mathbf{O})$	(ppm) 1.37
923		3.63	241	2670	0	0.73
928	22.40	3.63	243	2670	0	
						0.6
938 943		3.62	246	2670	0	0.52
943	23.22	3.63	244	2660	0	0.47
		3.61	244	2660	0	0.52
951	23.56	3.63	242	2660	0	0.5
954	23.68	3.64	241	2660	0	0.44
957	23.82	3.66	239	2660	0	0.41
1000	23.95	3.66	238	2660	0	0.4

Comments/Conditions:

DUP taken at 1005

Well ID	TOC	GW	Screen	Sample	Sample	Total	
	Elevation	Depth	Intervals	Date	Time	Well	
	(feet)	(feet)	(ft, bgs)			Depth	
CGYP-4	83.49	8.6	10-20	11/17/2021	1018	23	
Drawdown:	8.86 depth to GW (ft)						
Time	Temp	pН	Eh	Spec Cond	Turbidity	Dissolved	
	round 1	round 1	ORP	round 1		Oxygen	
	(celcius)	(units)	(mV)	(uS/cm)	(NTU)	(ppm)	
941	20.4	3.09	439	2830	0	3.17	
946	21.23	3.27	386	2730	10.8	1.21	
951	21.81	3.36	340	2710	4.8	0.86	
956	22.38	3.43	325	2660	9.2	0.68	
1001	22.86	3.46	321	2640	0	0.6	
1006		3.5	303	2630	0	0.54	
1009	23.55	3.51	301	2610	0	0.51	
1012	23.72	3.53	290	2600	0	0.5	
1015	23.89	3.59	292	2590	0	0.48	
1018	23.99	3.54	288	2590	0	0.47	

Comments/Conditions:

DUP taken at 1023

Well ID	TOC	GW	Screen	Sample	Sample	Total
	Elevation	Depth	Intervals	Date	Time	Well
	(feet)	(feet)	(ft, bgs)			Depth
CGYP-4	83.49	8.8	10-20	12/6/2021	954	23
Drawdown:	9 depth to GW (ft)					
Time	Temp	pН	Eh	Spec Cond	Turbidity	Dissolved
	round 1	round 1	ORP	round 1		Oxygen
	(celcius)	(units)	(mV)	(uS/cm)	(NTU)	(ppm)
929	21.9	3.32	304	2590	0.9	1.22
934	22.06	3.34	302	2590	5.9	1.01
939	22.32	3.34	298	2600	0.4	0.9
944	22.48	3.37	289	2600	0.5	0.87
949	22.55	3.4	285	2600	0.2	0.85
954	22.6	3.41	280	2600	0	0.86

Comments/Conditions:

DUP taken at 959

Well ID	TOC	GW	Screen	Sample	Sample	Total
	Elevation	Depth	Intervals	Date	Time	Well
	(feet)	(feet)	(ft, bgs)			Depth
CGYP-5	84.12	7.68	9-19	4/7/2021	1509	21.95
Drawdown:	8.62		depth to GV	V (ft)		
Time	Temp	pН	Eh	Spec Cond	Turbidity	Dissolved
	round 1	round 1	ORP	round 1		Oxygen
	(celcius)	(units)	(mV)	(uS/cm)	(NTU)	(ppm)
1449	21.47	5.45	182	1470	11.3	1.99
1454	21.95	5.46	173	1490	4.8	0.56
1459	22.41	5.43	172	1460	4.2	0.46
1504	22.19	5.4	171	1420	2.3	0.42
1509	22.32	5.36	172	1380	1.3	0.39

Comments/Conditions:

Samples were collected by Melanie Goings and Trey West

Well ID	TOC	GW	Screen	Sample	Sample	Total	
	Elevation	Depth	Intervals	Date	Time	Well	
	(feet)	(feet)	(ft, bgs)			Depth	
CGYP-5	84.12	8.76	9-19	5/13/2021	1600	21.98	
Drawdown:	8.92 depth to GW (ft)						
Time	Temp	pН	Eh	Spec Cond	Turbidity	Dissolved	
	round 1	round 1	ORP	round 1		Oxygen	
	(celcius)	(units)	(mV)	(uS/cm)	(NTU)	(ppm)	
1535	23.59	5.55	148	1380	1.3	1.28	
1540	22.91	5.54	143	1390	0	0.91	
1545	22.11	5.48	143	1360	0	0.79	
1550	22.05	5.4	146	1300	1.6	0.71	
1555	21.89	5.35	149	1290	0	0.68	
1600	21.86	5.32	151	1270	0	0.64	

Comments/Conditions:

Samples were collected by Melanie Goings and Brad MCCray

Well ID	TOC	GW	Screen	Sample	Sample	Total	
	Elevation	Depth	Intervals	Date	Time	Well	
	(feet)	(feet)	(ft, bgs)			Depth	
CGYP-5	84.12	7.59	9-19	7/8/2021	1124	21.98	
Drawdown:	8.5 depth to GW (ft)						
Time	Temp	pН	Eh	Spec Cond	Turbidity	Dissolved	
	round 1	round 1	ORP	round 1		Oxygen	
	(celcius)	(units)	(mV)	(uS/cm)	(NTU)	(ppm)	
1059	23.66	5.15	119	1340	5.4	1.61	
1104	24.3	5.14	108	1340	18.9	0.64	
1109	24.45	5.2	104	1350	13.4	0.56	
1114	24.38	5.08	105	1300	2.8	0.49	
1119	24.38	5.04	106	1280	0.2	0.47	
1124	24.29	4.99	108	1260	0	0.46	

Comments/Conditions:

Samples were collected by Melanie Goings and Ben Taylor

Well ID	TOC	GW	Screen	Sample	Sample	Total
	Elevation	Depth	Intervals	Date	Time	Well
	(feet)	(feet)	(ft, bgs)			Depth
CGYP-5	84.12	7.43	9-19	8/31/2021	1001	21.99
Drawdown:	9.12		depth to GV	V (ft)		
Time	Temp	pН	Eh	Spec Cond	Turbidity	Dissolved
	round 1	round 1	ORP	round 1		Oxygen
	(celcius)	(units)	(mV)	(uS/cm)	(NTU)	(ppm)
935	25.14	5.17	113	1550	21	2.22
940	25.5	5.23	89	1560	23.3	0.85
945	25.55	5.24	89	1510	22.1	0.64
950	25.35	5.29	89	1460	6.3	0.54
955	25.37	5.18	90	1470	3.3	0.5
958	25.41	5.19	92	1450	2.5	0.48
1001	25.44	5.17	92	1420	1.2	0.45

Comments/Conditions:

Well ID	TOC	GW	Screen	Sample	Sample	Total	
	Elevation	Depth	Intervals	Date	Time	Well	
	(feet)	(feet)	(ft, bgs)			Depth	
CGYP-5	84.12	7.79	9-19	9/27/2021	1117	21.98	
Drawdown:	10.44	10.44 depth to GW (ft)					
Time	Temp	pН	Eh	Spec Cond	Turbidity	Dissolved	
	round 1	round 1	ORP	round 1		Oxygen	
	(celcius)	(units)	(mV)	(uS/cm)	(NTU)	(ppm)	
1024	27.46	5.16	143	1340	2.1	2.07	
1029	27.13	5.25	132	1480	8.3	1.26	
1034	26.81	5.27	133	1520	3.4	0.85	
1039	24.54	5.25	134	1510	1.1	0.65	
1044	26.19	5.21	137	1490	1.7	0.5	
1049	25.64	5.18	140	1490	0	1.19	
1052	25.66	5.14	142	1480	0	2.01	
1055	25.6	5.15	143	1490	0	1.96	
1058	25.53	5.13	145	1480	0	2.49	
1105	25.63	5.05	152	1500	0	1.16	
1108	25.68	4.98	156	1500	0	0.68	
1111	25.71	4.95	159	1500	0	0.55	
1114	25.73	4.94	162	1500	0	0.51	
1117	25.73	4.92	163	1500	0	0.5	

Comments/Conditions:

Well ID	TOC	GW	Screen	Sample	Sample	Total
	Elevation	Depth	Intervals	Date	Time	Well
	(feet)	(feet)	(ft, bgs)			Depth
CGYP-5	84.12	8.13	9-19	10/26/2021	1155	21.98
Drawdown:	10.64		depth to GV	V (ft)		
Time	Temp	pН	Eh	Spec Cond	Turbidity	Dissolved
	round 1	round 1	ORP	round 1		Oxygen
	(celcius)	(units)	(mV)	(uS/cm)	(NTU)	(ppm)
1103	26.89	5.25	239	1470	0	4.61
1108	25.76	5.21	198	1500	0	3.4
1113	25.44	5.22	187	1530	0	1.34
1118	25.21	5.24	171	1560	0	0.92
1123	24.93	5.23	161	1580	0	0.56
1128	24.74	5.21	158	1570	0	0.45
1131	24.62	5.19	158	1560	0	0.41
1134	24.47	5.15	160	1560	0	0.51
1137	24.39	5.13	162	1550	0	0.51
1140	24.23	5.1	164	1560	0	0.63
1143	24.16	5.04	169	1550	0	1.21
1146	24.1	5	173	1540	0	0.43
1149	24.04	4.93	174	1540	0	0.38
1152	23.97	4.96	175	1540	0	0.36
1155	23.94	4.93	177	1540	0	0.36

Comments/Conditions:

Well ID	TOC	GW	Screen	Sample	Sample	Total
	Elevation	Depth	Intervals	Date	Time	Well
	(feet)	(feet)	(ft, bgs)			Depth
CGYP-5	84.12	8.59	9-19	11/17/2021	1151	21.98
Drawdown:	11.16		depth to GV	V (ft)		
Time	Temp	pН	Eh	Spec Cond	Turbidity	Dissolved
	round 1	round 1	ORP	round 1		Oxygen
	(celcius)	(units)	(mV)	(uS/cm)	(NTU)	(ppm)
1114	24.93	5.45	213	1530	0	3.83
1119	24.08	5.4	222	1530	0	2.9
1124	24.05	5.36	214	1520	0	2.65
1129	23.86	5.33	214	1510	0	2.38
1134	23.9	5.27	213	1510	0	2.17
1139	23.83	5.15	216	1510	0	1.96
1142	23.81	5.14	218	1510	0	1.86
1145	23.84	5.03	220	1510	0	1.75
1148	23.85	5	223	1510	0	1.64
1151	23.9	4.95	230	1510	0	1.53

Comments/Conditions:

Well ID	TOC	GW	Screen	Sample	Sample	Total
	Elevation	Depth	Intervals	Date	Time	Well
	(feet)	(feet)	(ft, bgs)			Depth
CGYP-5	84.12	8.65	9-19	12/6/2021	1113	21.98
Drawdown:	10.43		depth to GV	V (ft)		
Time	Temp	pН	Eh	Spec Cond	Turbidity	Dissolved
	round 1	round 1	ORP	round 1		Oxygen
	(celcius)	(units)	(mV)	(uS/cm)	(NTU)	(ppm)
1045	22.83	5.25	205	1600	15.5	3.71
1050	22.59	5.24	231	1620	10.2	2.19
1055	22.55	5.23	220	1610	8	1.67
1100	22.65	5.21	212	1600	7.4	1.41
1105	22.76	5.18	205	1580	5.5	0.93
1110	22.84	5.17	201	1570	8.5	0.95
1113	22.94	5.15	200	1560	6.2	0.98

Comments/Conditions:

Well ID	TOC	GW	Screen	Sample	Sample	Total
	Elevation	Depth	Intervals	Date	Time	Well
	(feet)	(feet)	(ft, bgs)			Depth
CGYP-6	83.23	7.6	9-19	4/7/2021	1602	22.35
Drawdown:	8		depth to GV	V (ft)		
Time	Temp	pН	Eh	Spec Cond	Turbidity	Dissolved
	round 1	round 1	ORP	round 1		Oxygen
	(celcius)	(units)	(mV)	(uS/cm)	(NTU)	(ppm)
1537	21.68	3.7	136	3730	0	1.59
1542	22.89	3.67	208	3830	0	0.6
1547	23.34	3.66	246	3780	0	0.45
1552	24.18	3.67	268	3690	0	0.37
1557	24.14	3.68	274	3670	0	0.35
1602	23.98	3.68	276	3700	0	0.33

Comments/Conditions:

Samples were collected by Melanie Goings and Trey West

Well ID	TOC	GW	Screen	Sample	Sample	Total
	Elevation	Depth	Intervals	Date	Time	Well
	(feet)	(feet)	(ft, bgs)			Depth
CGYP-6	83.23	7.99	9-19	5/13/2021	1655	22.35
Drawdown:	8.44		depth to GV	V (ft)		
Time	Temp	pН	Eh	Spec Cond	Turbidity	Dissolved
	round 1	round 1	ORP	round 1		Oxygen
	(celcius)	(units)	(mV)	(uS/cm)	(NTU)	(ppm)
1630	21.82	3.76	153	3660	0	1.41
1635	21.29	3.73	211	3700	0	0.72
1640	20.97	3.72	238	3700	0	0.57
1645	20.83	3.71	249	3700	0	0.51
1650	20.69	3.7	253	3700	0	0.49
1655	20.67	3.7	253	3710	0	0.47

Comments/Conditions:

Samples were collected by Melanie Goings and Brad McCray

Well ID	TOC	GW	Screen	Sample	Sample	Total
	Elevation	Depth	Intervals	Date	Time	Well
	(feet)	(feet)	(ft, bgs)			Depth
CGYP-6	83.23	8.2	9-19	7/8/2021	1221	22.35
Drawdown:	8.52		depth to GV	V (ft)		
Time	Temp	pН	Eh	Spec Cond	Turbidity	Dissolved
	round 1	round 1	ORP	round 1		Oxygen
	(celcius)	(units)	(mV)	(uS/cm)	(NTU)	(ppm)
1150	25.08	4.75	90	2280	0	2.79
1155	25.2	3.54	130	3480	0	1.03
1200	25.24	3.53	148	3560	0	1.08
1205	25.27	3.53	154	3550	0	1.06
1210	25.35	3.53	176	3560	0	0.94
1215	25.47	3.53	194	3560	0	0.85
1218	25.5	3.54	198	3550	0	0.8
1221	25.56	3.54	202	3540	0	0.75

Comments/Conditions:

Samples were collected by Melanie Goings and Ben Taylor

Well ID	TOC	GW	Screen	Sample	Sample	Total
	Elevation	Depth	Intervals	Date	Time	Well
	(feet)	(feet)	(ft, bgs)			Depth
CGYP-6	83.23	7.57	9-19	8/31/2021	1102	22.34
Drawdown:	8.09		depth to GV	V (ft)		
Time	Temp	pН	Eh	Spec Cond	Turbidity	Dissolved
	round 1	round 1	ORP	round 1		Oxygen
	(celcius)	(units)	(mV)	(uS/cm)	(NTU)	(ppm)
1034	27.5	4.78	79	2200	0	1.24
1039	27.66	4.1	87	3190	0	0.56
1044	27.38	3.71	107	3450	0.3	0.42
1049	27.42	3.67	116	3480	3.1	0.37
1054	27.46	3.67	122	3470	3.6	0.34
1059	27.42	3.67	128	3460	3.7	0.33
1102	27.22	3.67	132	3460	4.2	0.33

Comments/Conditions:

Well ID	TOC	GW	Screen	Sample	Sample	Total
	Elevation	Depth	Intervals	Date	Time	Well
	(feet)	(feet)	(ft, bgs)			Depth
CGYP-6	83.23	7.8	9-19	9/27/2021	1232	22.34
Drawdown:	8.24		depth to GV	V (ft)		
Time	Temp	pН	Eh	Spec Cond	Turbidity	Dissolved
	round 1	round 1	ORP	round 1		Oxygen
	(celcius)	(units)	(mV)	(uS/cm)	(NTU)	(ppm)
1207	27.24	4.65	93	2270	0	0.86
1212	27.51	3.66	165	3490	0	0.89
1217	27.22	3.62	204	3580	0	0.79
1222	27.2	3.61	216	3570	0	0.71
1227	27.22	3.62	217	3550	0	0.67
1232	27.14	3.62	222	3520	0	0.62

Comments/Conditions:

Well ID	TOC	GW	Screen	Sample	Sample	Total
	Elevation	Depth	Intervals	Date	Time	Well
	(feet)	(feet)	(ft, bgs)			Depth
CGYP-6	83.23	8.65	9-19	10/26/2021	1254	22.33
Drawdown:	9.14		depth to GV	V (ft)		
Time	Temp	pН	Eh	Spec Cond	Turbidity	Dissolved
	round 1	round 1	ORP	round 1		Oxygen
	(celcius)	(units)	(mV)	(uS/cm)	(NTU)	(ppm)
1229	24.34	3.97	409	2310	0	1.99
1234	24.42	3.54	306	3160	0	0.86
1239	24.21	3.54	288	3540	0	0.45
1244	24.36	3.53	282	3650	0	0.39
1249	24.29	3.53	281	3670	0	0.36
1254	24.18	3.54	278	3670	0	0.34

Comments/Conditions:

Well ID	TOC	GW	Screen	Sample	Sample	Total
	Elevation	Depth	Intervals	Date	Time	Well
	(feet)	(feet)	(ft, bgs)			Depth
CGYP-6	83.23	9.13	9-19	11/17/2021	1304	22.33
Drawdown:	9.6		depth to GV	V (ft)		
Time	Temp	pН	Eh	Spec Cond	Turbidity	Dissolved
	round 1	round 1	ORP	round 1		Oxygen
	(celcius)	(units)	(mV)	(uS/cm)	(NTU)	(ppm)
1236	23.88	3.72	472	2410	0	3.81
1241	23.3	3.68	482	2440	0	2.47
1246	23.53	3.64	322	3110	0	0.83
1251	23.51	3.65	303	3150	0	0.63
1256	23.41	3.66	297	3170	0	0.58
1301	23.27	3.66	291	3170	0	0.54
1304	23.24	3.66	287	3170	0	0.53

Comments/Conditions:

noticed the gasket came loose in the flow cell and was slightly leaking

Well ID	TOC	GW	Screen	Sample	Sample	Total
	Elevation	Depth	Intervals	Date	Time	Well
	(feet)	(feet)	(ft, bgs)			Depth
CGYP-6	83.23	9.38	9-19	12/6/2021	1215	22.33
Drawdown:	9.55		depth to GV	V (ft)		
Time	Temp	pН	Eh	Spec Cond	Turbidity	Dissolved
	round 1	round 1	ORP	round 1		Oxygen
	(celcius)	(units)	(mV)	(uS/cm)	(NTU)	(ppm)
1200	23.51	3.32	458	2870	0.5	2.51
1205	23.85	3.36	453	2850	0	2.83
1210	24.02	3.39	455	2850	0.7	2.76
1215	24.15	3.46	455	2850	1.4	2.74

Comments/Conditions:

Appendix B – Well Installation Records

D H E C		2600 B	Water Well Record Bureau of Water ull Street, Columbia, SC 29201-1708; (803) 898-4300
PROMOTE PROTECT PROSPER		2000 Di	
1. WELL OWNER INFORMATION: Name: SANTEE COOPER			7. PERMIT NUMBER: SC0037401
(last)	(fir:	st)	8. USE:
Address: ONE RIVERWOOD DRIV	E		Construction     C
City: MONCKS CORNER State: St	C Zip: 2	9461	Irrigation     Air Conditioning     Emergency       Test Well     Monitor Well     Replacement
Telephone: Work:	Home:		9. WELL DEPTH (completed) Date Started: 03/01/21
2. LOCATION OF WELL: SC	COUNTY: BERI	KELEY	ft. Date Completed: 03/01/21
Name: CROSS GENERATING S	TATION		10. CASING: 🗹 Threaded 🔲 Welded
Street Address: 553 CROSS ST		2	Diam.: 2 INCH Height: Above Below
City: PINEVILLE	<sup>Zip:</sup> 29468		Type: Z PVC C Galvanized Surface <u>2.5</u>
Latitude: 33° 23' 10.94" Longitud	le: 80° 06' 56	5.66"	□     Steel     □     Other     Weight
3. PUBLIC SYSTEM NAME: P	UBLIC SYSTE	M NUMBER:	11. SCREEN:
	CGYP-		Type: <u>SCH.40 PVC</u> Diam.: <u>2 INCH</u>
4. ABANDONMENT: Yes	] No		Stot/Gauge:010 Length:10.0 FEET Set Between:10.0ft, and20.0ft, NOTE: MULTIPLE SCREENS
			Set Between: <u>10.0</u> ft. and <u>20.0</u> ft. NOTE: MULTIPLE SCREENS ft. and ft. USE SECOND SHEET
Grouted Depth: from	ft. to	ft.	Sieve Analysis Stee Yes (please enclose) INo
	*Thickness	Depth to	12. STATIC WATER LEVEL
Formation Description	of Stratum	Bottom of Stratum	13. PUMPING LEVEL Below Land Surface.
			ft. after hrs. Pumping G.P.M.
SANDY CLAY	20.0	20.0	Pumping Test: 🔲 Yes (please enclose) 🗖 No
			Yield:
			14. WATER QUALITY
			Chemical Analysis 🛛 Yes 🔲 No Bacterial Analysis 💭 Yes 🗔 No
			Please enclose lab results.
			15. ARTIFICIAL FILTER (filter pack) Ø Yes □ No Installed from 8.0 ft. to 20.0 ft.
			Installed from 8.0 ft. to 20.0 ft. Effective size 1.43 Uniformity Coefficient 1.30
			16. WELL GROUTED? [7] Yes 🖸 No
			Neat Cement      Bentonite     Bentonite/Cement      Other
			Depth: From ft. to ft.
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction
			Туре
			Well Disinfected D Yes D No Type: Amount:
			18. PUMP: Date installed: Not installed
			Mfr. Name:
			TYPE: Submersible Jet (shallow) Turbine
· · · · · ·			☐ Jet (deep)
10			19. WELL DRILLER: JEREMY RINGLER CERT. NO.: 02294
			Address: (Print) Level: A B C D (circle one)
			176 COMMERCE BLVD
*Indicate Water Bearing Zones			STATESVILLE, NC 28625
			Telephone No., 704-872-7686         Fax No.: 704-872-0248           20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under
(Use a 2nd sheet if needed)			my direction and this report is true to the best of my knowledge and belief.
5. REMARKS:			
BENTONITE SEAL 5.0 - 8.0 FEET			Q-P
			Signed: Date: Date: 03/05/21
			Well Dritter
6. TYPE: C Mud Rotary Jetted Dug Air Ro Cable tool Ø Other	=	Bored Driven	If D Level Driller, provide supervising driller's name:

COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)

DHEC PROMOTE PROTECT PROSPER		2600 Bi	Water Well Record Bureau of Water Ill Street, Columbia, SC 29201-1708; (803) 898-4300
1. WELLOWNER INFORMATION: Name: SANTEE COOPER	45-	- 11	7. PERMIT NUMBER: SC0037401
(last) Address: ONE RIVERWOOD DRIV City: MONCKS CORNER State: S			8. USE:     Image: Constraint in the second se
		5401	Test Well     Monitor Well     Replacement     Oxugation     Additional Action     Test Well     Date Started: 03/02/21
Telephone: Work: 2. LOCATION OF WELL: SC	Home: COUNTY: RED.		
Name: CROSS GENERATING S Street Address: 553 CROSS ST <sup>City:</sup> PINEVILLE	STATION		10. CASING: ID Threaded     □ Welded       Diam.:     2 INCH       Type:     ID       PVC     □ Galvanized       Steel     □ Other       2.0     in. to       9.0     ft. depth
Latitude: 33° 23' 10.94" Longitur	de: 80° 06' 56	0.66"	in. toft. depth
3. PUBLIC SYSTEM NAME: F	PUBLIC SYSTE CGYP-	-	11. SCREEN: Type: <u>SCH 40 PVC</u> Diam.: <u>2 INCH</u>
4. ABANDONMENT: Ves 1			Slot/Gauge:
Grouted Depth: from	_ ft. to Thickness	ft. Depth to	Sieve Analysis  Yes (please enclose)  No
Formation Description	of	Bottom of Stratum	12. STATIC WATER LEVEL       6.0         13. PUMPING LEVEL Below Land Surface.
SAND	19.0	19.0	ft. after hrs. Pumping G.P.M. Pumping Test: I Yes (please enclose) I No
			Yield:
			Chemical Analysis ☐ Yes ☐No Bacterial Analysis ☐ Yes ☐ No Please enclose lab results.
			15. ARTIFICIAL FILTER (filter pack)       ☑ Yes □ No         Installed from 7.0       ft. to 19.0         Effective size 1.43       Uniformity Coefficient 1.30
			Effective size Oniformity Coefficient      1.20      16. WELL GROUTED? [Z] Yes [] No
			Image: Comparison of the compariso
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:       ft.       direction         Type
			18. PUMP: Date installed: Not installed 📋
			Mfr. Name:        Model No.:          H.P       Volts       Length of drop pipeft.       Capacity gpm         TYPE:       Submersible       Jet (shallow)       Turbine         Jet (deep)       Reciprocating       Centrifugal
			19. WELL DRILLER: JEREMY RINGLER       CERT. NO.: 02294         Address: (Print)       Level: A B C D (circle one)         176 COMMERCE BLVD       Image: Communication of the second seco
*Indicate Water Bearing Zones			STATESVILLE, NC 28625 Telephone No.; 704-872-7686 Fax No.: 704-872-0248
(Use a 2nd sheet if needed)			<ol> <li>WATER WELL DRILLER'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.</li> </ol>
5. REMARKS: BENTONITE SEAL 5.0 - 7.0 FEET			Signed:
6. TYPE:  Mud Rotary G Dug Air R Cable tool Othe	=	Bored Driven	if D Level Driller, provide supervising driller's name:

COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)

DHEC PROMOTE PROTECT PROSPER		2600 Bu	Water Well Record Bureau of Water Street, Columbia, SC 29201-1708; (803) 898-4300		
1. WELL OWNER INFORMATION: Name: SANTEE COOPER			7. PERMIT NUMBER: SC0037401		
(last) Address: ONE RIVERWOOD DRIV			8. USE:      Residential     I Public Supply     Process     Irrigation     Air Conditioning     Emergency		
City: MONCKS CORNER State: S	C Zip: 29	9461	Test Well I Monitor Well Replacement		
Telephone: Work:	Home:		9. WELL DEPTH (completed) Date Started: 03/02/21		
2. LOCATION OF WELL: SC COUNTY: BERKELEY Name: CROSS GENERATING STATION					
Street Address: 553 CROSS STATION ROAD			Diam.: 2 INCH Height: Above Below		
City: PINEVILLE Zip: 29468			Type: D PVC D Galvanized Surface 2.5 ft. Steel D Other Weight		
Latitude: 33° 23' 10.94" Longitude: 80° 06' 56.66"			□         Steel         □         Other         Weight         Weight         Ib./ft.		
3. PUBLIC SYSTEM NAME:	PUBLIC SYSTE CGYP-		11. SCREEN: Type:		
4. ABANDONMENT: Ves	2 No	-	Slot/Gauge:		
Grouted Depth: from		ft.	Sieve Analysis Ves (please enclose) 🗹 No		
Formation Description	*Thickness of	Depth to Bottom of	12. STATIC WATER LEVEL		
	Stratum	Stratum	13. PUMPING LEVEL Below Land Surface.		
SAND	19.0	19.0	ft. after hrs. Pumping G.P.M. Pumping Test: I Yes (please enclose) I No Yield:		
			14. WATER QUALITY		
			Chemical Analysis  Yes  No Bacterial Analysis  Yes  No Please enclose lab results.		
			15. ARTIFICIAL FILTER (filter pack) 🛛 Yes 🗋 No		
			Installed from 7.0 ft. to 19.0 ft. Effective size 1.43 Uniformity Coefficient 1.30		
			16. WELL GROUTED? Z Yes D No		
			Z Neat Cement     Bentonite     Bentonite/Cement     Other     Depth:     From     0.0     ft.     to     5.0     ft.		
			17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft direction		
			Type Amount: Amount:		
			18. PUMP: Date installed: Not installed 🗍		
			Mfr. Name: Model No.:		
· · · · · · · · · · · · · · · · · · ·			H.P Volts Length of drop pipe ft. Capacity gpm		
			TYPE: Submersible I Jet (shallow) I Turbine Jet (deep) I Reciprocating I Centrifugal		
			19. WELL DRILLER: JEREMY RINGLER CERT. NO.: 02294		
			Address: (Print) Level: A B C D (circle one)		
			176 COMMERCE BLVD STATESVILLE, NC 28625		
*Indicate Water Bearing Zones			Telephone No.; 704-872-7686 Fax No.: 704-872-0248		
(Use a 2nd sheet if needed)			20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.		
5. REMARKS:	-		and and the second second of the second s		
BENTONITE SEAL 5.0 - 7.0 FEET			Signed: Date: Date:		
6. TYPE: □ Mud Rotary □ Jetted □ Bored □ Dug □ Air Rotary □ Driven □ Cable tool ☑ Other AUGER			If D Level Driller, provide supervising driller's name:		

COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)

Appendix C – Slug Testing Results



HALEY & ALDRICH, INC. 400 Augusta Street Suite 100 Greenville, SC 29601 864.214.8750

#### MEMORANDUM

January 27, 2022 File No. 132892-013

SUBJECT: Slug Testing Results Cross Generating Station

Rising-head and falling-head permeability ("slug") tests were conducted for the newly installed monitoring wells in the vicinity of the Closed Gypsum Pond, site-wide background wells and nature and extent monitoring wells for the Bottom Ash Pond and Class 2 Landfill. These slug tests were conducted to measure the hydraulic conductivity of the uppermost aquifer for the newly installed/existing monitoring wells, compare them to historical results documented in the "Site Hydrogeologic Characterization Report" by Garrett & Moore in 2011, and if necessary and appropriate, refine the hydraulic properties in the groundwater flow and solute transport model.

#### SLUG TESTING AND DATA ANALYSIS PROCEDURES

To conduct the slug tests at the well locations, the following steps were completed at each location.

- Static water level measurements were collected at the well prior to the test.
- To measure the displacement of the water column over time in the well, a pressure transducer was lowered to the bottom of the well (In-Situ Level Troll<sup>™</sup>).
- A solid PVC rod was constructed cut to length and attached to a rope to be used as a slug of known volume to displace water within the well.
- The slug was lowered into the well instantaneously and completely below the static water level without splashing the water column. The water level was then allowed to recover to within 90 percent of the static water level. This portion of the test constituted the "slug in" test.
- Once the water level recovered the slug was removed instantaneously and completely from the water column and the water level was allowed to recover to within 90 percent of the static water level. This portion of the test constituted the "slug out" test.
- This pair of slug in and slug out tests were repeated at each well up to three times to compare results and obtain a geometric mean for hydraulic conductivity.
- The measured rate of recovery of the water level is a function of the horizontal hydraulic conductivity of the aquifer material in the vicinity of the monitoring well.

The slug test data were analyzed using the HydroSOLVE, Inc. AQTESOLV for Windows<sup>™</sup> program according to the Bouwer-Rice solution method. This method estimates hydraulic conductivity through graphical straight line slope matching. The data output and graphs generated by AQTESOLV<sup>™</sup> are provided in Attachment A. Calculated values of K based on the slug test data are presented in Table 1.

South Carolina Public Service Authority (Santee Cooper) 27 January 2021 Page 2

#### **SLUG TESTING RESULTS**

The range of hydraulic conductivities from the monitoring wells that were tested were 1.387E-04 (cm/sec) to 4.800E-03 (cm/sec). These results are comparable to the Site Hydrogeologic Characterization Report which reported a range of hydraulic conductivities of 3.357E-04 (cm/sec) to 8.93E-03 (cm/sec) for the shallow aquifer. This range of hydraulic conductivities is typical for the soil types identified and for this depositional setting. This information, combined with the calculated horizontal hydraulic gradients, and an assumed effective porosity of 25 percent will be used to report on groundwater flow direction and rate following each semiannual sampling event as required by § 257.93(c) of the Federal CCR Rule.



TABLES

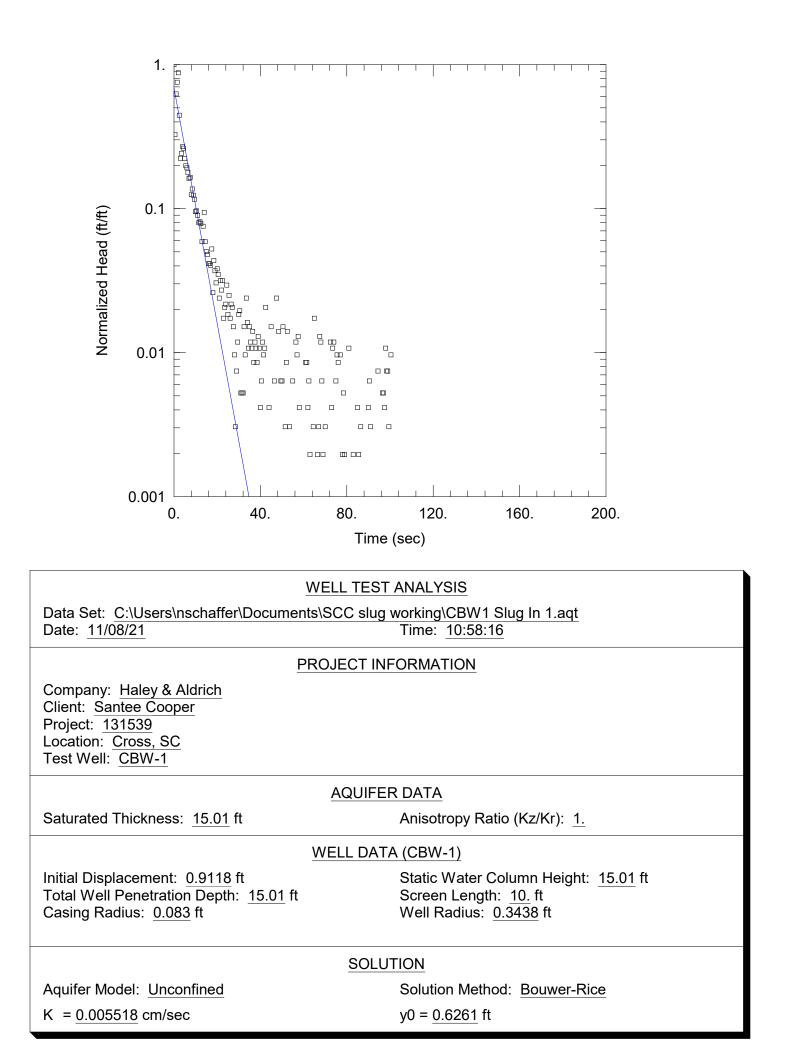
#### TABLE 1 SUMMARY OF SLUG TEST DATA CROSS GENERATING STATION SANTEE COOPER CROSS, SOUTH CAROLINA

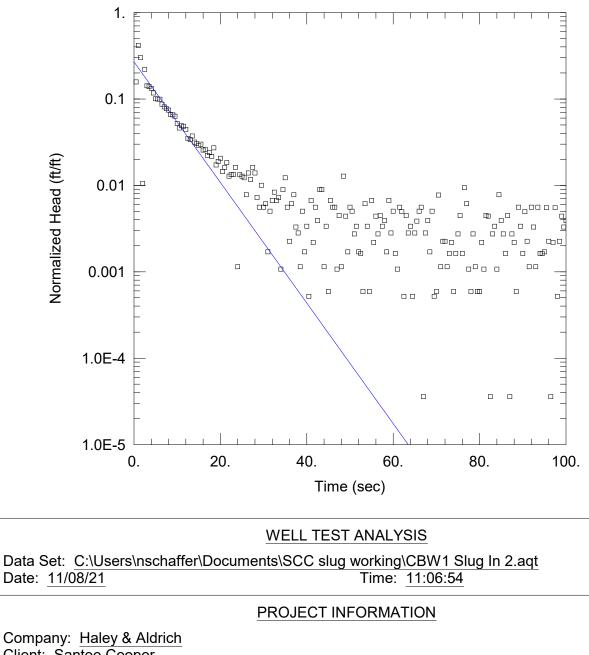
Well ID	Slug In 1 (cm/sec)	Slug Out 1 (cm/sec)	Slug In 2 (cm/sec)	Slug Out 2 (cm/sec)	Slug In 3 (cm/sec)	Slug Out 3 (cm/sec)	Geom. Mean (cm/sec)	Formatted Geom. (cm/sec)
CGYP-5	0.0001439	0.0001419	0.0001481	0.0001225			0.000138734	1.387E-04
CGYP-2	0.0003882	0.000484	0.0004948	0.0004822			0.000460139	4.601E-04
CGYP-6	0.0005347	0.0004815	0.0005616	0.0005252			0.000524946	5.249E-04
CGYP-3	0.0005141	0.0005617	0.0005961	0.0005746			0.000560802	5.608E-04
POZ-4	0.0006012	0.0006036	0.000628	0.0006124			0.00061121	6.112E-04
CGYP-4	0.0007695	0.0007741	0.0007724	0.0007743			0.000772573	7.726E-04
CCMAP-1	0.001106	0.001122	0.001127	0.001169			0.001130763	1.131E-03
PM-1	0.002385	0.001913	0.003361	0.00166	0.006277	0.00214	0.002644383	2.644E-03
CCMAP-2	0.002834	0.002656	0.002835	0.002556			0.0027176	2.718E-03
CGYP-1	0.001177	0.004646	0.00266	0.004105	0.002869	0.004905	0.003071874	3.072E-03
CBW-1	0.005518	0.004379	0.004712	0.004799	0.004725	0.00474	0.004800452	4.800E-03

#### Notes:

Geom. = Geometric Mean

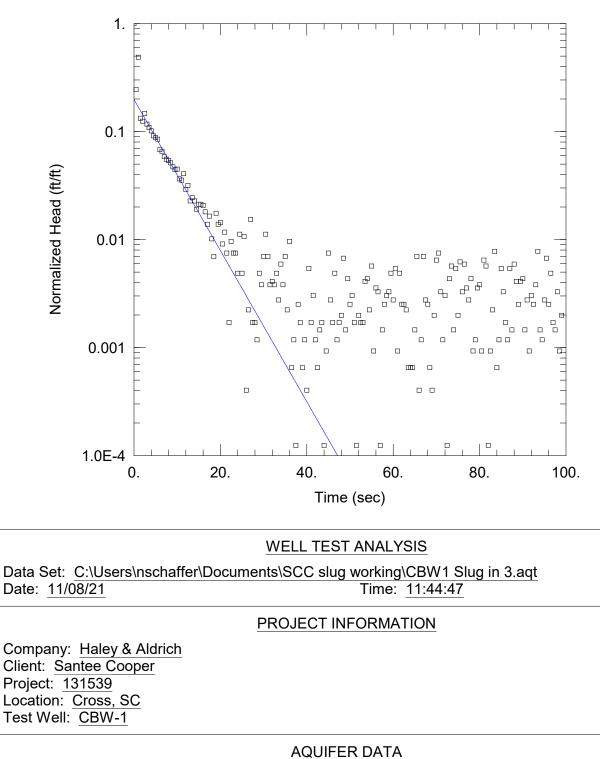
**ATTACHMENTS** 





Company: <u>Haley & Aldricr</u> Client: <u>Santee Cooper</u> Project: <u>131539</u> Location: <u>Cross, SC</u> Test Well: CBW-1

Test Well: CBW-1						
AQUIFER DATA						
Saturated Thickness: <u>15.01</u> ft	Anisotropy Ratio (Kz/Kr): <u>1.</u>					
WELL DATA (CBW-1)						
Initial Displacement: <u>1.802</u> ft Total Well Penetration Depth: <u>15.01</u> ft Casing Radius: <u>0.083</u> ft	Static Water Column Height: <u>15.01</u> ft Screen Length: <u>10.</u> ft Well Radius: <u>0.3438</u> ft					
SOLUTION						
Aquifer Model: Unconfined	Solution Method: Bouwer-Rice					
K = <u>0.004712</u> cm/sec	y0 = 0.4834 ft					



Saturated Thickness: 15.01 ft

Anisotropy Ratio (Kz/Kr): <u>1.</u>

Initial Displacement: <u>1.896</u> ft Total Well Penetration Depth: <u>15.01</u> ft Casing Radius: 0.083 ft Static Water Column Height: <u>15.01</u> ft Screen Length: <u>10.</u> ft Well Radius: 0.3438 ft

#### SOLUTION

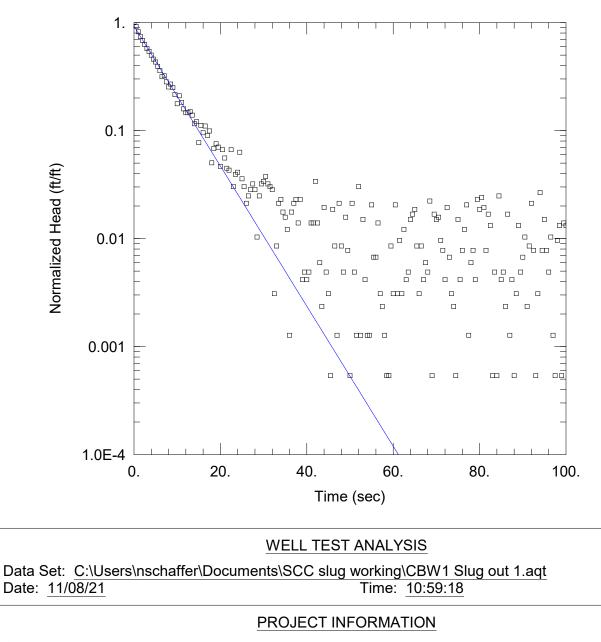
WELL DATA (CBW-1)

Aquifer Model: Unconfined

K = 0.004725 cm/sec

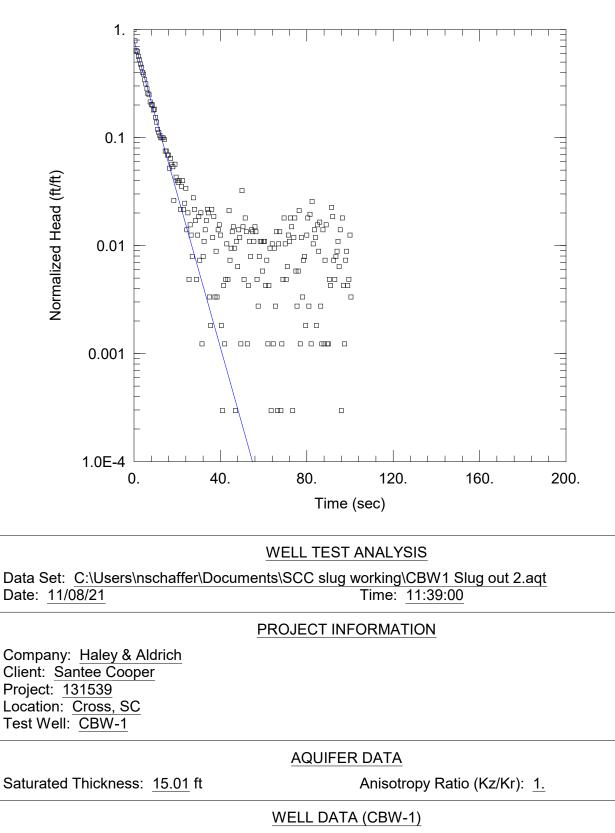
Solution Method: Bouwer-Rice

y0 = 0.3762 ft



Company: Haley & Aldrich Client: <u>Santee Cooper</u> Project: <u>131539</u> Location: <u>Cross, SC</u> Test Well: CBW-1

Test Well: <u>CBW-1</u>						
AQUIFER DATA						
Saturated Thickness: <u>15.01</u> ft	Anisotropy Ratio (Kz/Kr): <u>1.</u>					
WELL DATA (CBW-1)						
Initial Displacement: <u>0.5517</u> ft Total Well Penetration Depth: <u>15.01</u> ft Casing Radius: <u>0.083</u> ft	Static Water Column Height: <u>15.01</u> ft Screen Length: <u>10.</u> ft Well Radius: <u>0.3438</u> ft					
SOLUTION						
Aquifer Model: Unconfined	Solution Method: Bouwer-Rice					
K = <u>0.004379</u> cm/sec	y0 = 0.5124 ft					



Initial Displacement: <u>0.6562</u> ft Total Well Penetration Depth: <u>15.01</u> ft Casing Radius: <u>0.083</u> ft Static Water Column Height: <u>15.01</u> ft Screen Length: <u>10.</u> ft Well Radius: 0.3438 ft

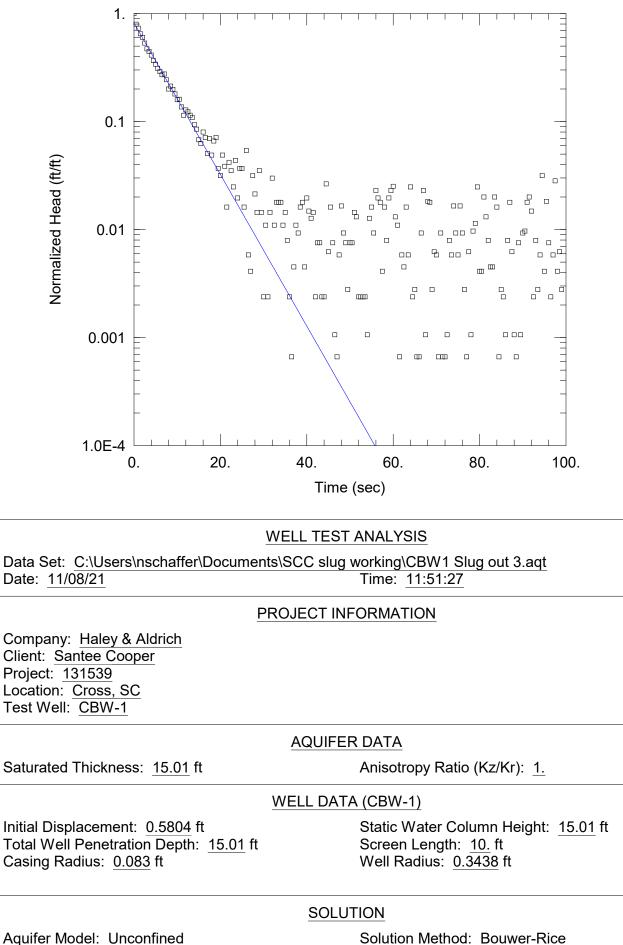
### SOLUTION

Aquifer Model: Unconfined

Solution Method: Bouwer-Rice

K = 0.004799 cm/sec

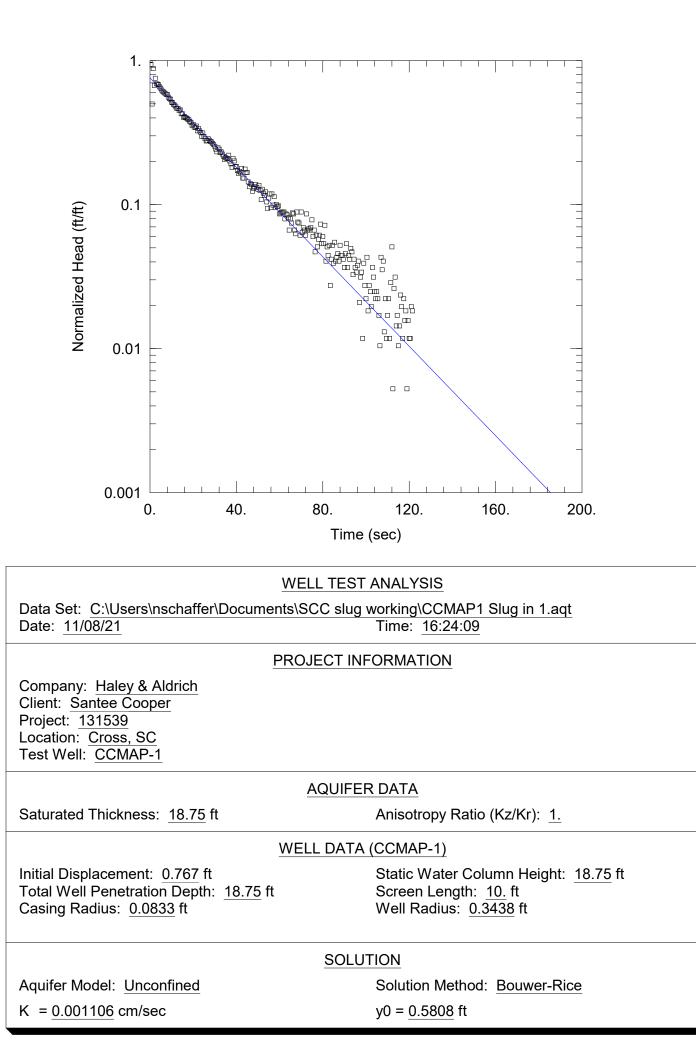
y0 = 0.5205 ft

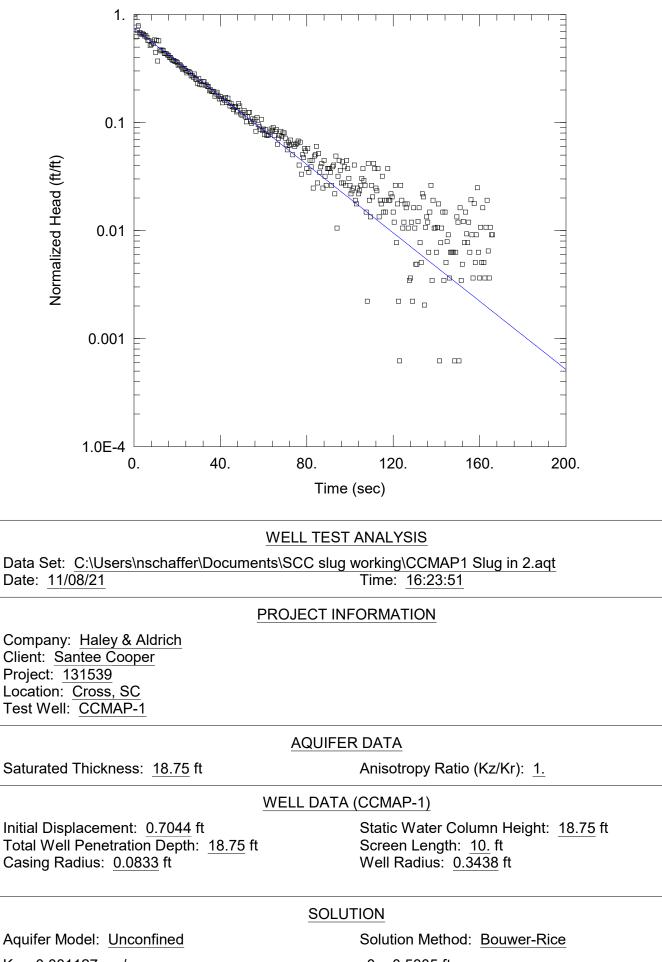


K = 0.00474 cm/sec

Solution Method: Bouwer-Rice

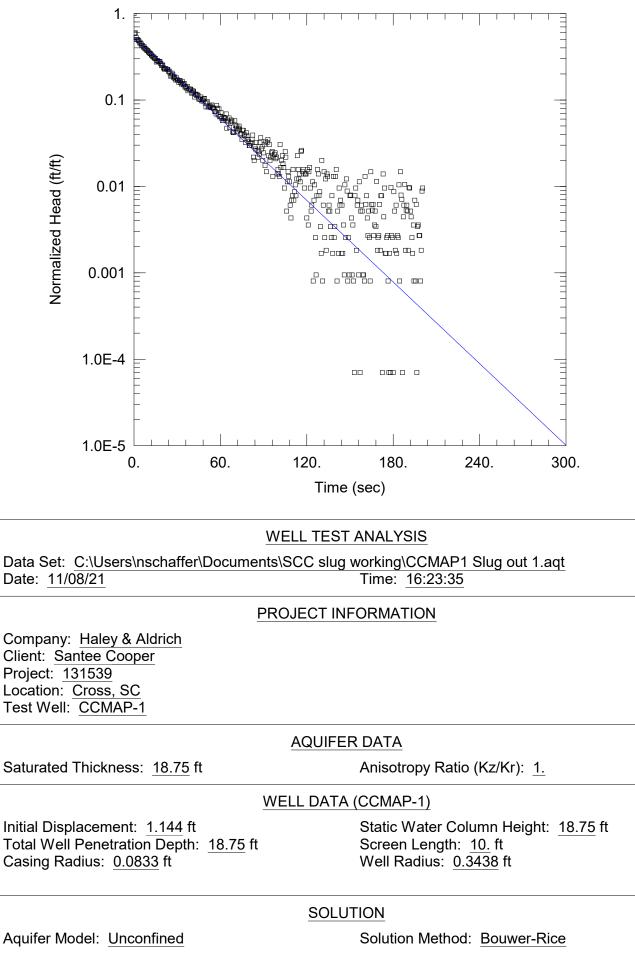
y0 = 0.4754 ft





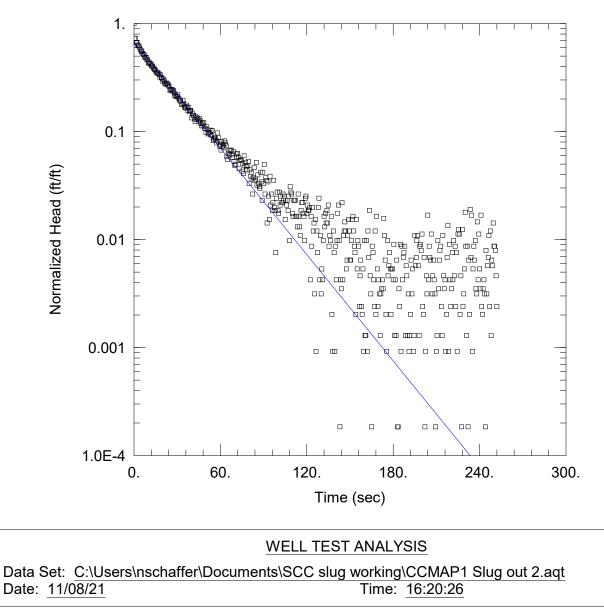
K = 0.001127 cm/sec

y0 = <u>0.5305</u> ft



K = 0.001122 cm/sec

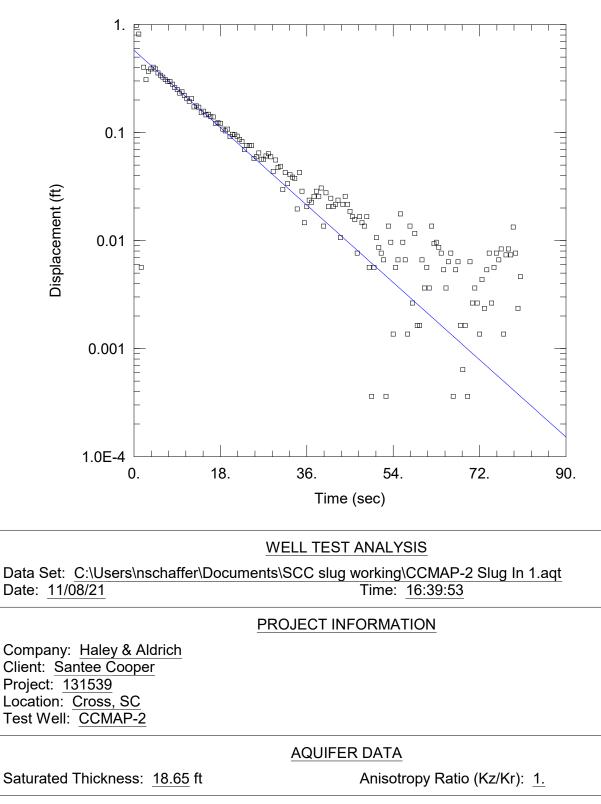
y0 = 0.6091 ft



### **PROJECT INFORMATION**

Company: <u>Haley & Aldrich</u> Client: <u>Santee Cooper</u> Project: <u>131539</u> Location: <u>Cross, SC</u> Test Well: CCMAP-1

Test Well: <u>CCMAP-1</u>		
AQUIFER DATA		
Saturated Thickness: <u>18.75</u> ft	Anisotropy Ratio (Kz/Kr): <u>1.</u>	
WELL DATA (CCMAP-1)		
Initial Displacement: <u>0.9028</u> ft Total Well Penetration Depth: <u>18.75</u> ft Casing Radius: <u>0.0833</u> ft	Static Water Column Height: <u>18.75</u> ft Screen Length: <u>10.</u> ft Well Radius: <u>0.3438</u> ft	
SOLUTION		
Aquifer Model: Unconfined	Solution Method: Bouwer-Rice	
K = <u>0.001169</u> cm/sec	y0 = 0.6094 ft	



## WELL DATA (CCMAP-2)

Initial Displacement: <u>1.109</u> ft Total Well Penetration Depth: <u>18.65</u> ft Casing Radius: <u>0.08333</u> ft Static Water Column Height: <u>18.65</u> ft Screen Length: <u>10.</u> ft Well Radius: 0.3438 ft

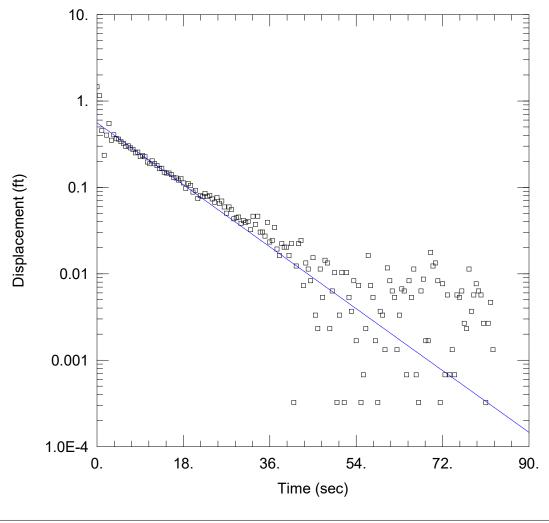
### SOLUTION

Aquifer Model: Unconfined

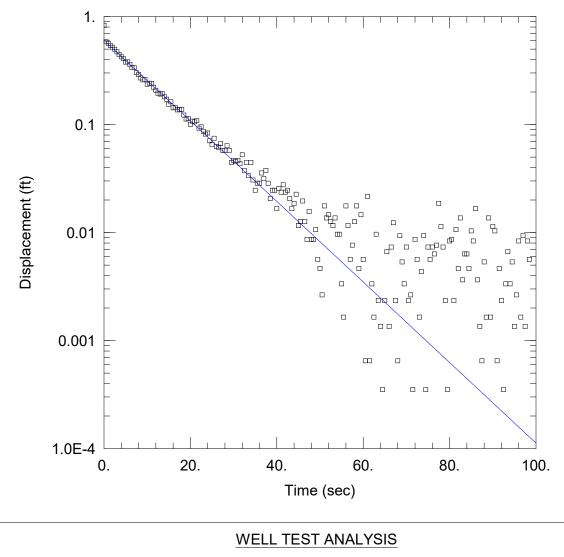
Solution Method: Bouwer-Rice

K = 0.002834 cm/sec

y0 = 0.5778 ft



WELL TEST ANALYSIS	
Data Set: <u>C:\Users\nschaffer\Documents\SCC slug</u> Date: <u>11/08/21</u>	working\CCMAP-2 Slug in 2.aqt Time: <u>16:59:53</u>
PROJECT INFORMATION	
Company: <u>Haley &amp; Aldrich</u> Client: <u>Santee Cooper</u> Project: <u>131539</u> Location: <u>Cross, SC</u> Test Well: <u>CCMAP-2</u>	
AQUIFER DATA	
Saturated Thickness: <u>18.65</u> ft	Anisotropy Ratio (Kz/Kr): <u>1.</u>
WELL DATA (CCMAP-2)	
Initial Displacement: <u>1.46</u> ft Total Well Penetration Depth: <u>18.65</u> ft Casing Radius: <u>0.08333</u> ft	Static Water Column Height: <u>18.65</u> ft Screen Length: <u>10.</u> ft Well Radius: <u>0.3438</u> ft
SOLUTION	
Aquifer Model: <u>Unconfined</u> K = <u>0.002835</u> cm/sec	Solution Method: <u>Bouwer-Rice</u> y0 = $0.5577$ ft



 Data Set:
 C:\Users\nschaffer\Documents\SCC slug working\CCMAP-2 Slug out 1.aqt

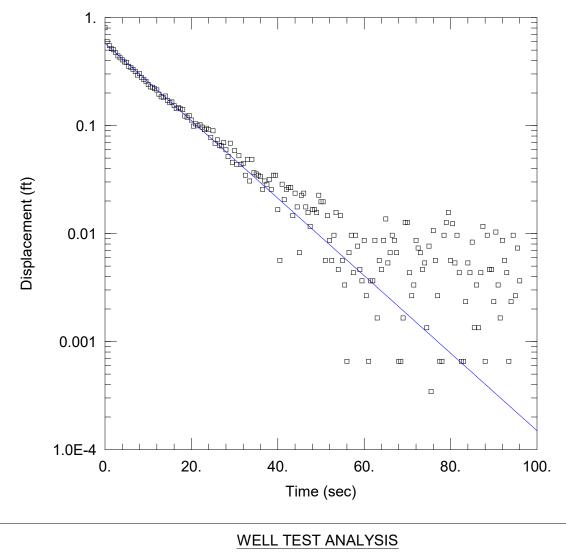
 Date:
 11/08/21

 Time:
 16:55:05

### **PROJECT INFORMATION**

Company: Haley & Aldrich Client: <u>Santee Cooper</u> Project: <u>131539</u> Location: <u>Cross, SC</u> Test Well: CCMAP-2

Test Well: <u>CCMAP-2</u>		
AQUIFER DATA		
Saturated Thickness: <u>18.65</u> ft	Anisotropy Ratio (Kz/Kr): <u>1.</u>	
WELL DATA (CCMAP-2)		
Initial Displacement: <u>0.8286</u> ft Total Well Penetration Depth: <u>18.65</u> ft Casing Radius: <u>0.08333</u> ft	Static Water Column Height: <u>18.65</u> ft Screen Length: <u>10.</u> ft Well Radius: <u>0.3438</u> ft	
SOLUTION		
Aquifer Model: Unconfined	Solution Method: Bouwer-Rice	
K = <u>0.002656</u> cm/sec	y0 = 0.6026 ft	



 Data Set:
 C:\Users\nschaffer\Documents\SCC slug working\CCMAP-2 Slug out 2.aqt

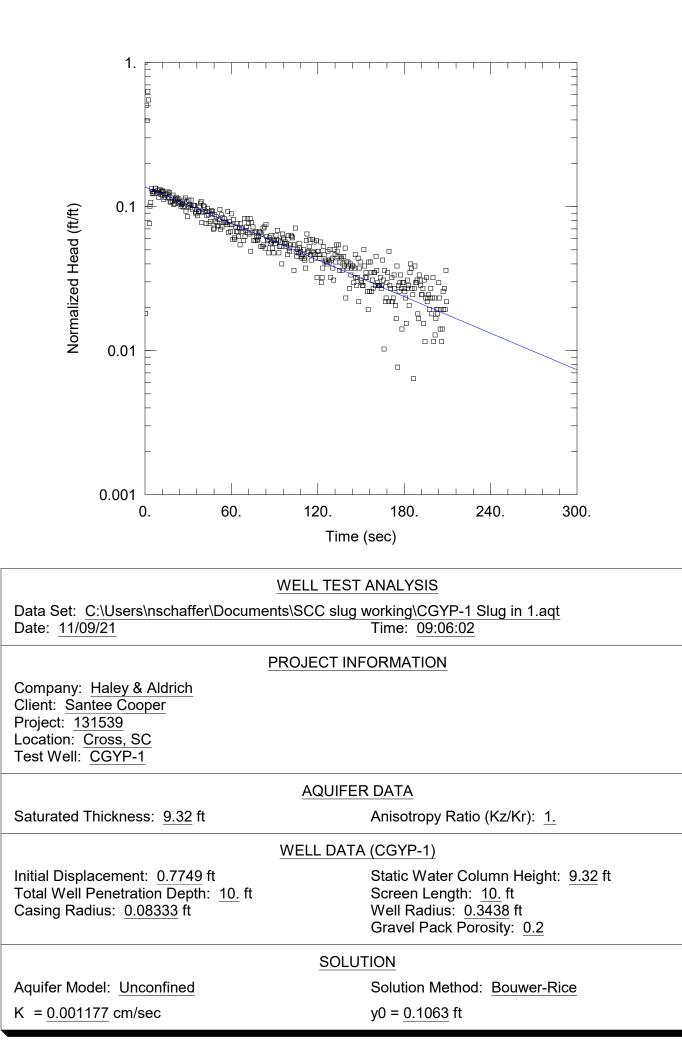
 Date:
 11/08/21

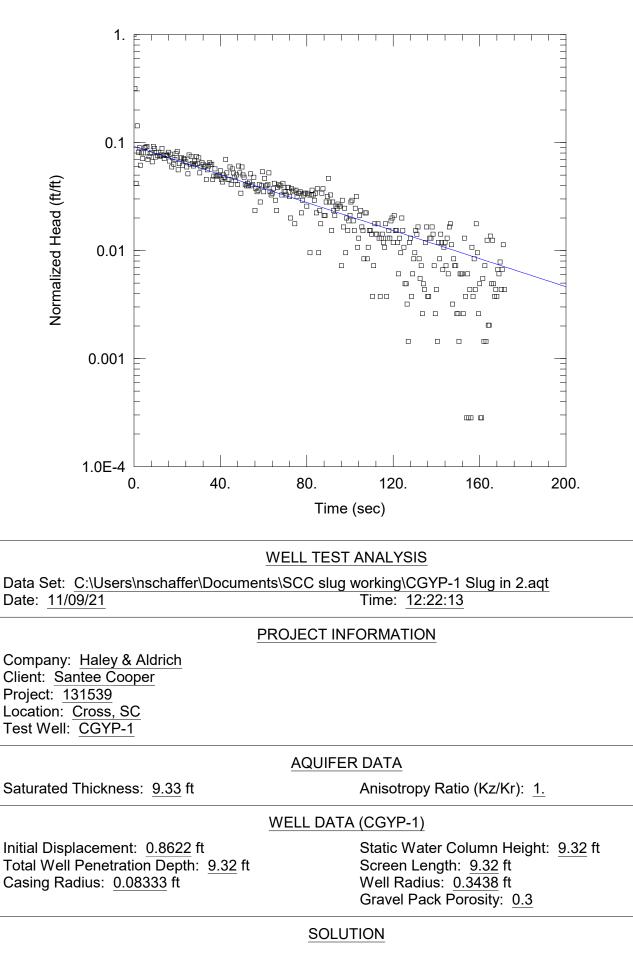
 Time:
 17:19:40

# **PROJECT INFORMATION**

Company: <u>Haley & Aldrich</u> Client: <u>Santee Cooper</u> Project: <u>131539</u> Location: <u>Cross, SC</u> Test Well: CCMAP-2

Test Well: <u>CCMAP-2</u>		
AQUIFER DATA		
Saturated Thickness: <u>18.65</u> ft	Anisotropy Ratio (Kz/Kr): <u>1.</u>	
WELL DATA (CCMAP-2)		
Initial Displacement: <u>0.8047</u> ft Total Well Penetration Depth: <u>18.65</u> ft Casing Radius: <u>0.08333</u> ft	Static Water Column Height: <u>18.65</u> ft Screen Length: <u>10.</u> ft Well Radius: <u>0.3438</u> ft	
SOLUTION		
Aquifer Model: Unconfined	Solution Method: Bouwer-Rice	
K = <u>0.002556</u> cm/sec	y0 = 0.5789 ft	

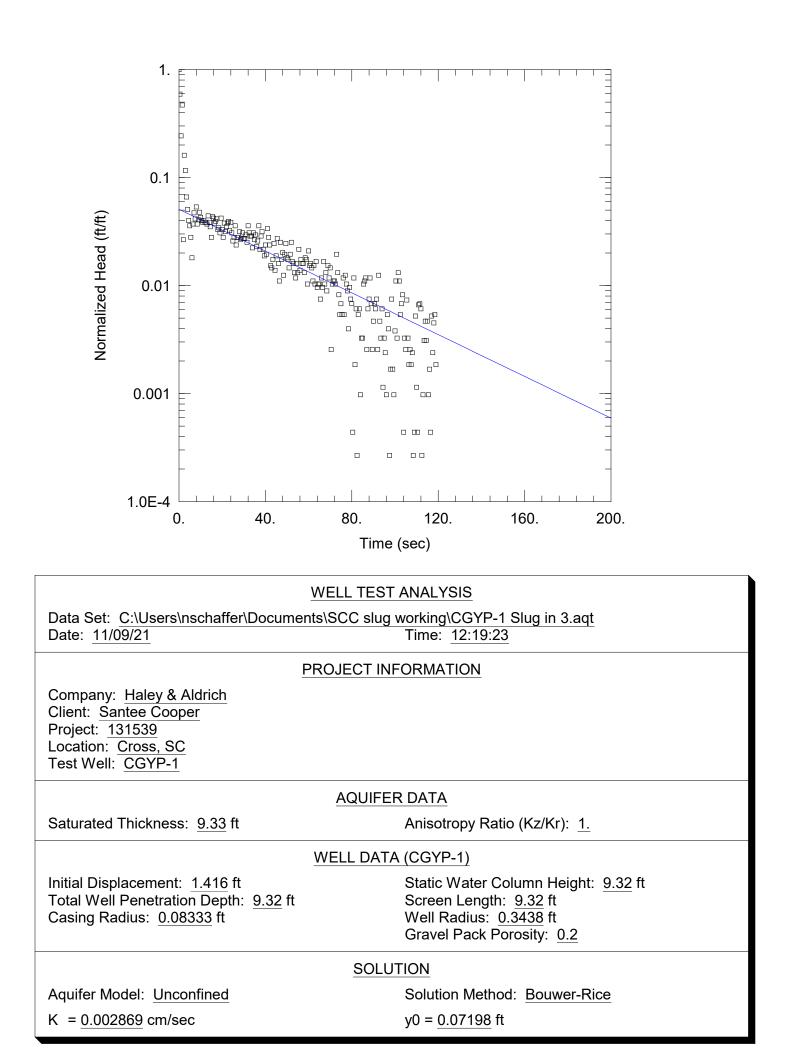


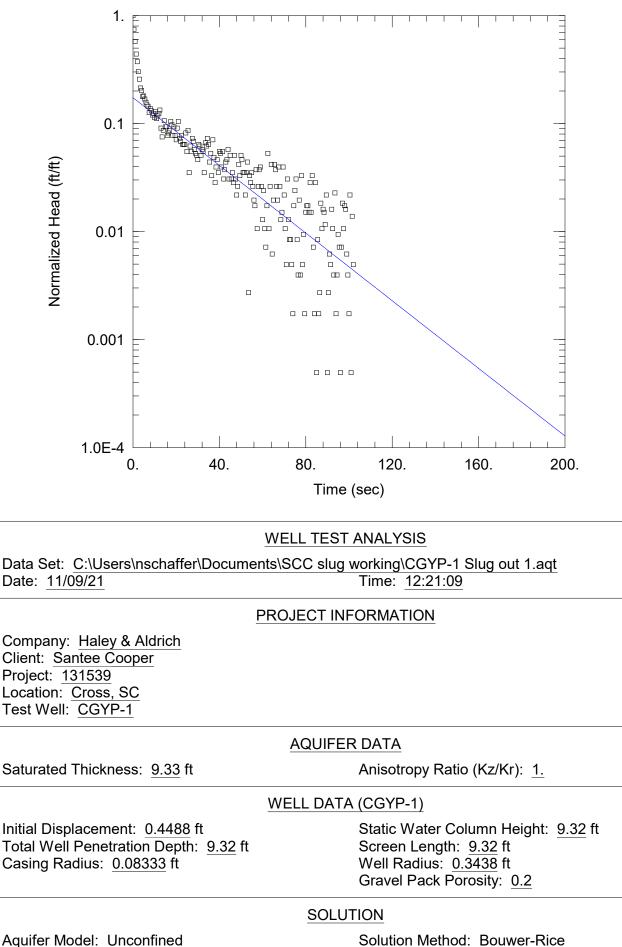


Solution Method: Bouwer-Rice

K = 0.00266 cm/sec

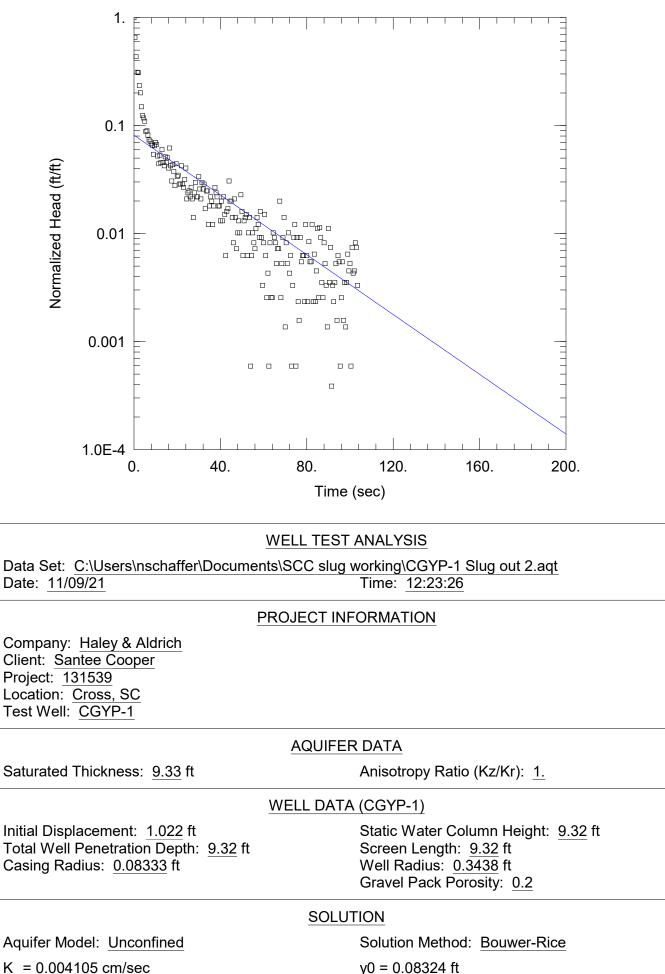
y0 = 0.07938 ft



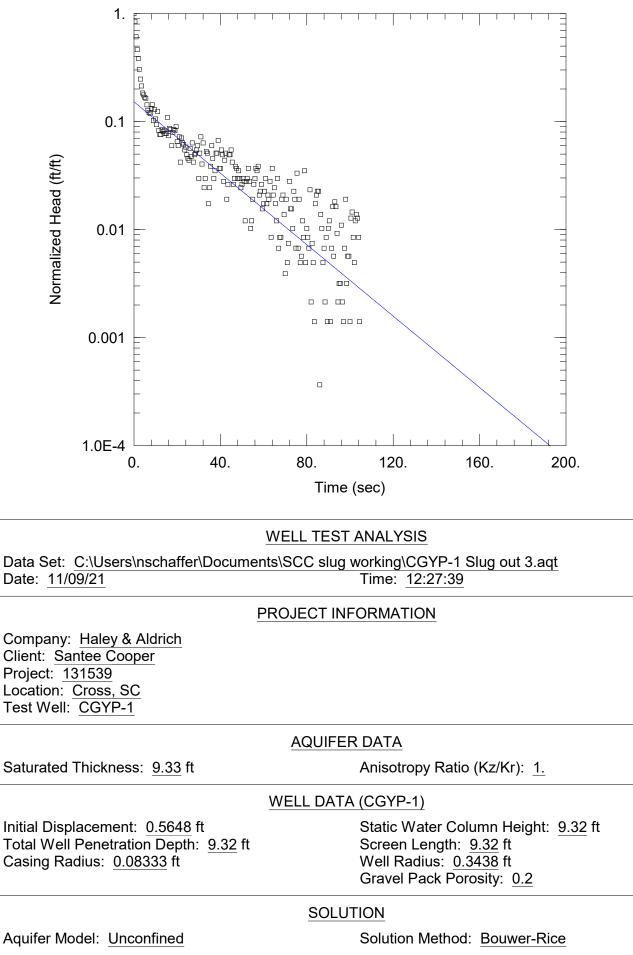


K = 0.004646 cm/sec

y0 = 0.07784 ft

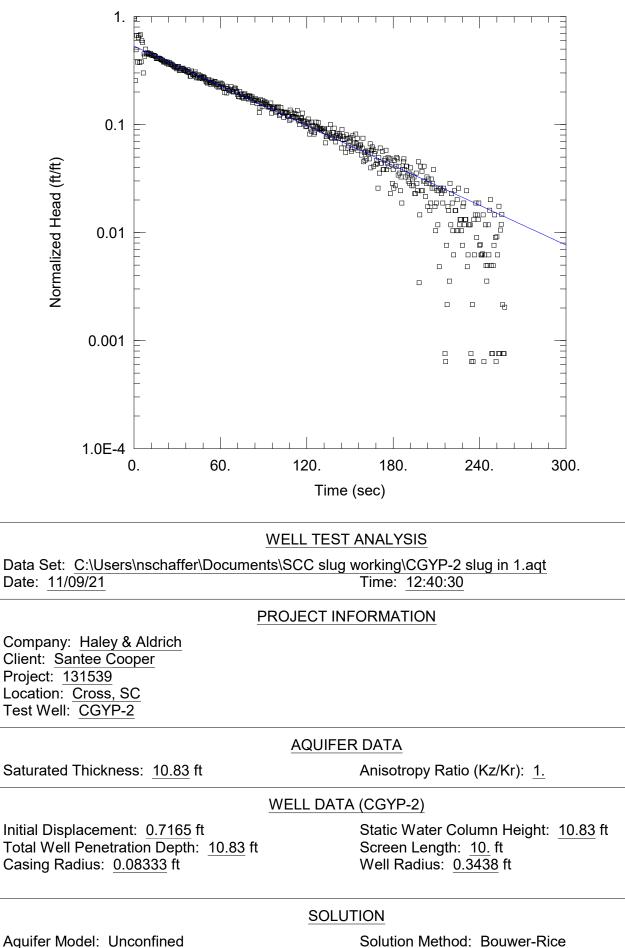


y0 = 0.08324 ft



K = 0.004904 cm/sec

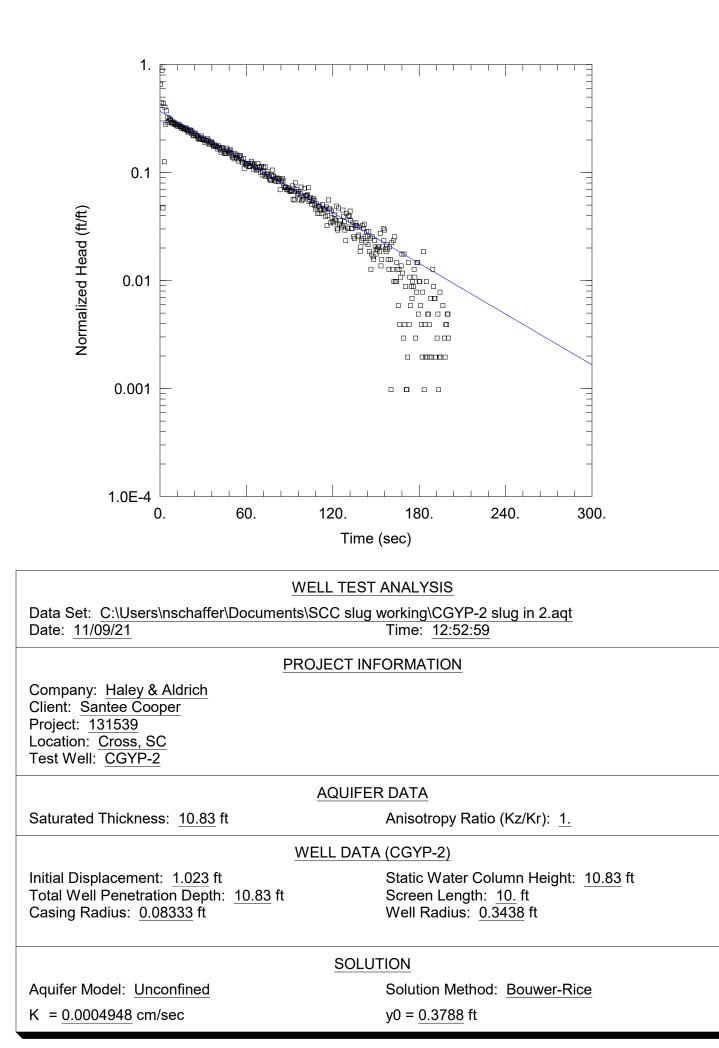
y0 = 0.08604 ft

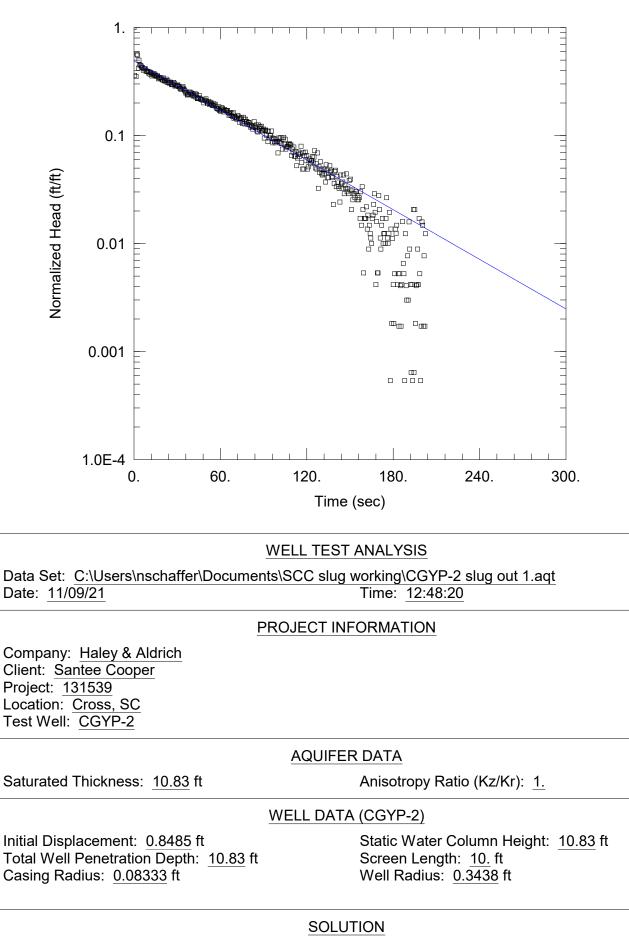


K = 0.0003882 cm/sec

Solution Method: Bouwer-Rice

y0 = 0.382 ft

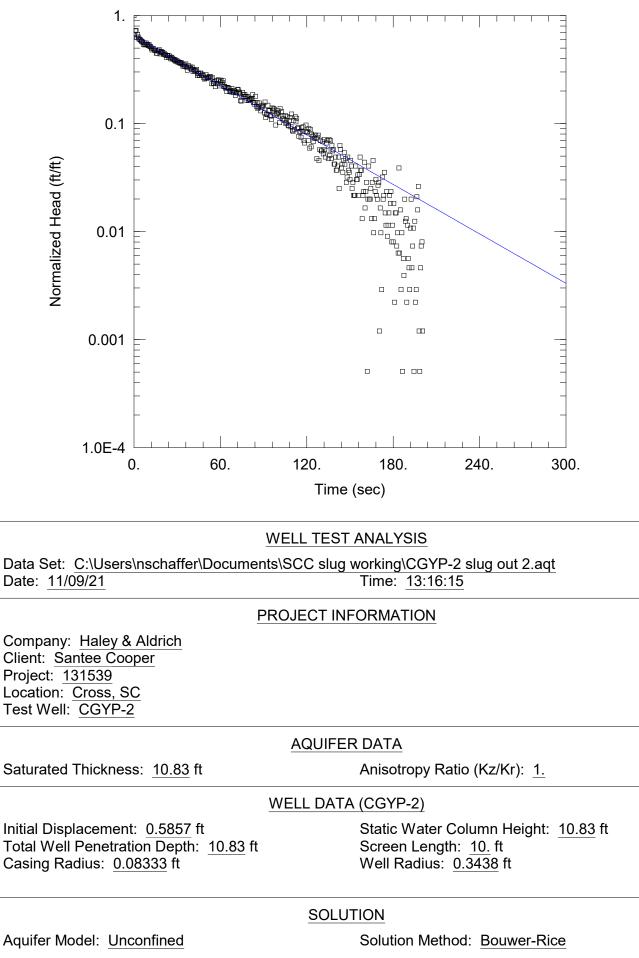




Solution Method: Bouwer-Rice

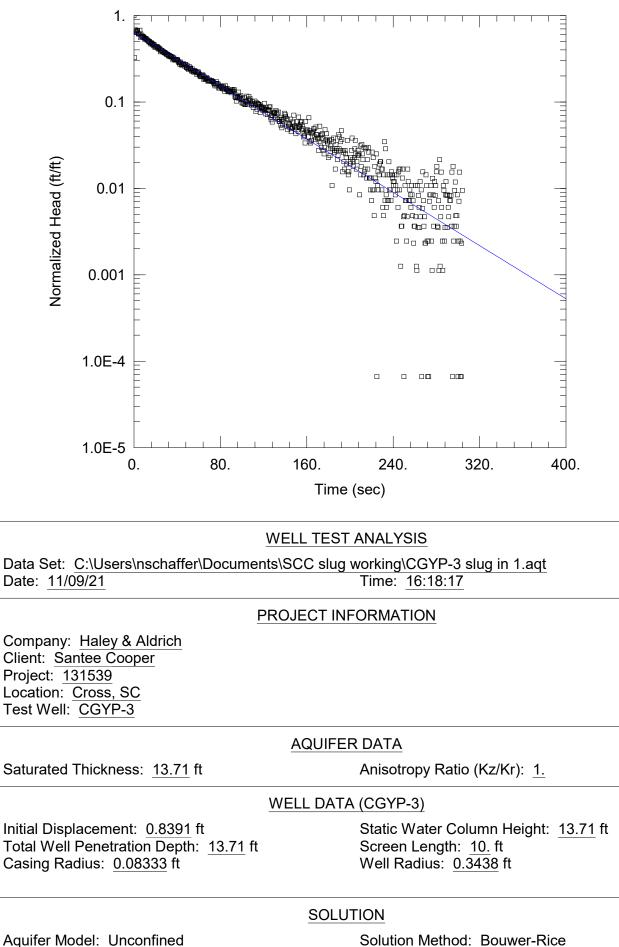
K = <u>0.000484</u> cm/sec

y0 = <u>0.4172</u> ft



K = 0.0004822 cm/sec

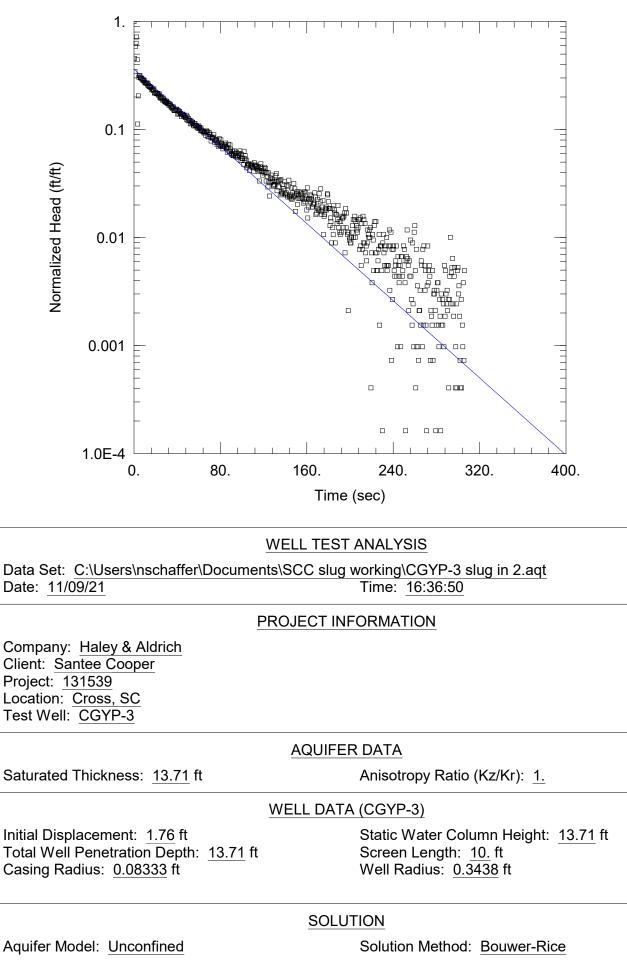
y0 = 0.3778 ft



K = 0.0005141 cm/sec

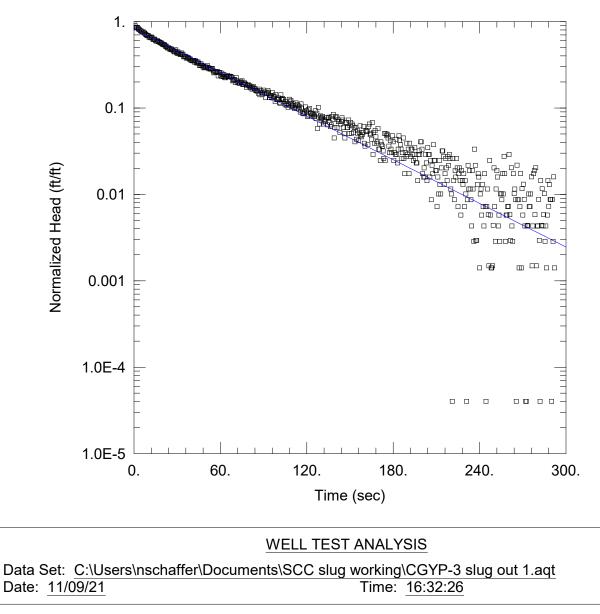
Solution Method: Bouwer-Rice

y0 = 0.5324 ft



K = 0.0005961 cm/sec

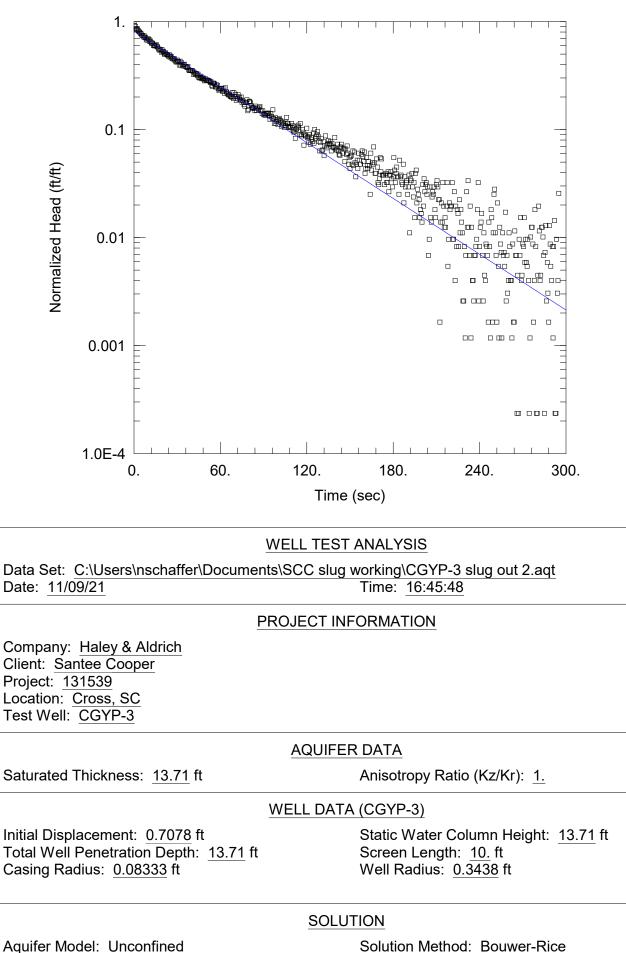
y0 = 0.6374 ft



# **PROJECT INFORMATION**

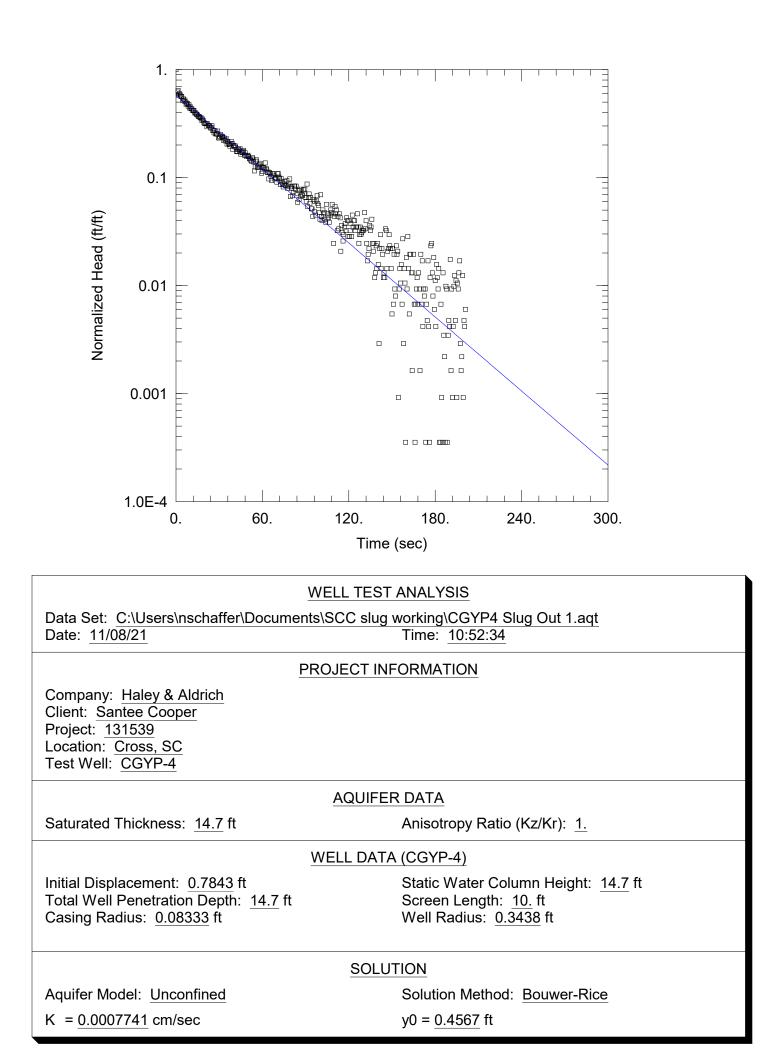
Company: <u>Haley & Aldrich</u> Client: <u>Santee Cooper</u> Project: <u>131539</u> Location: <u>Cross, SC</u> Test Well: CGYP-3

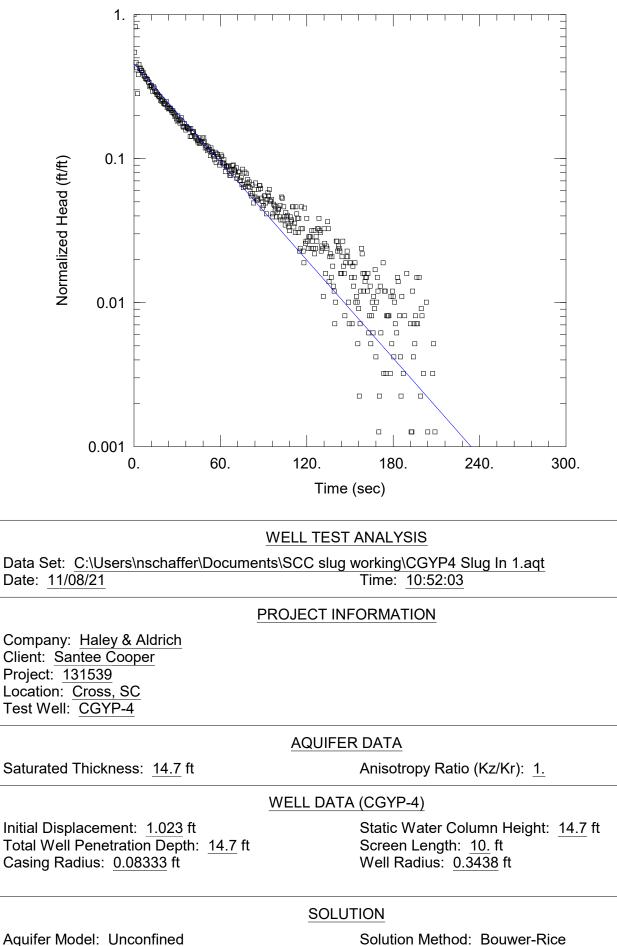
Test Well: <u>CGYP-3</u>		
AQUIFER DATA		
Saturated Thickness: <u>13.71</u> ft	Anisotropy Ratio (Kz/Kr): <u>1.</u>	
WELL DAT	A (CGYP-3)	
Initial Displacement: <u>0.69</u> ft Total Well Penetration Depth: <u>13.71</u> ft Casing Radius: <u>0.08333</u> ft	Static Water Column Height: <u>13.71</u> ft Screen Length: <u>10.</u> ft Well Radius: <u>0.3438</u> ft	
SOLUTION		
Aquifer Model: Unconfined	Solution Method: Bouwer-Rice	
K = <u>0.0005617</u> cm/sec	y0 = 0.5682 ft	



K = 0.0005746 cm/sec

y0 = 0.578 ft

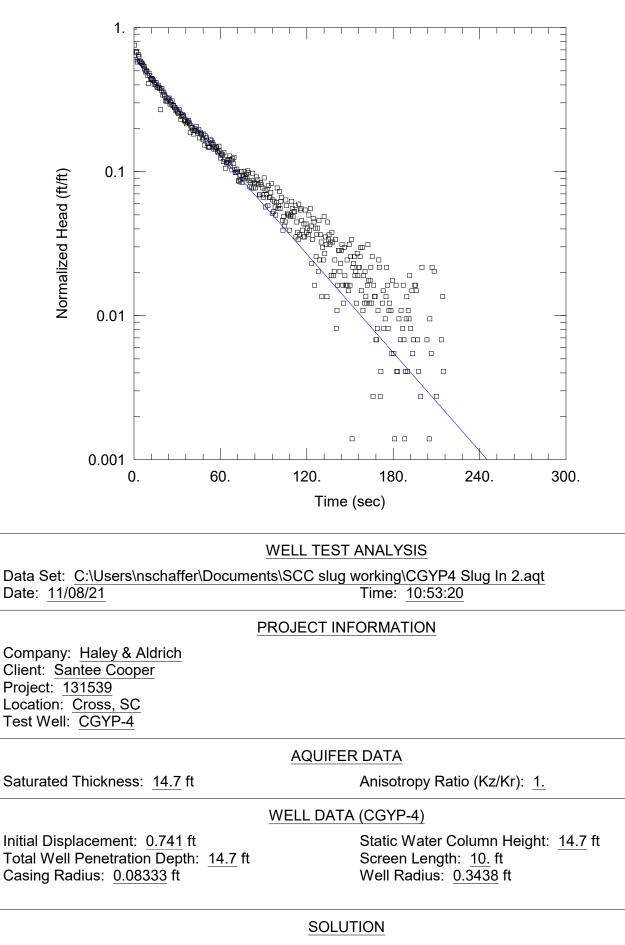




K = 0.0007695 cm/sec

Solution Method: Bouwer-Rice

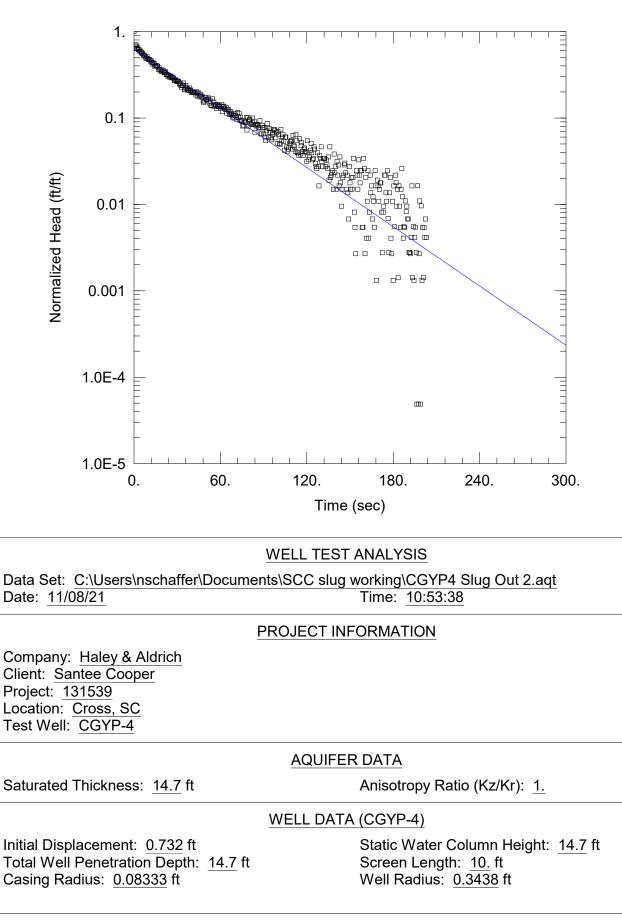
y0 = 0.4651 ft



K = 0.0007724 cm/sec

Solution Method: Bouwer-Rice

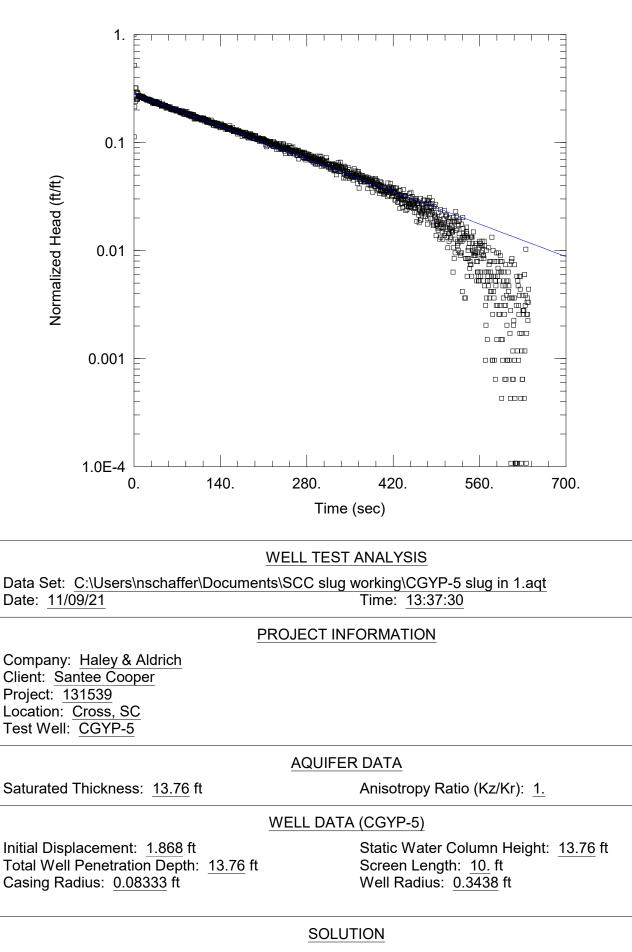
y0 = 0.4623 ft



Solution Method: Bouwer-Rice

K = 0.0007743 cm/sec

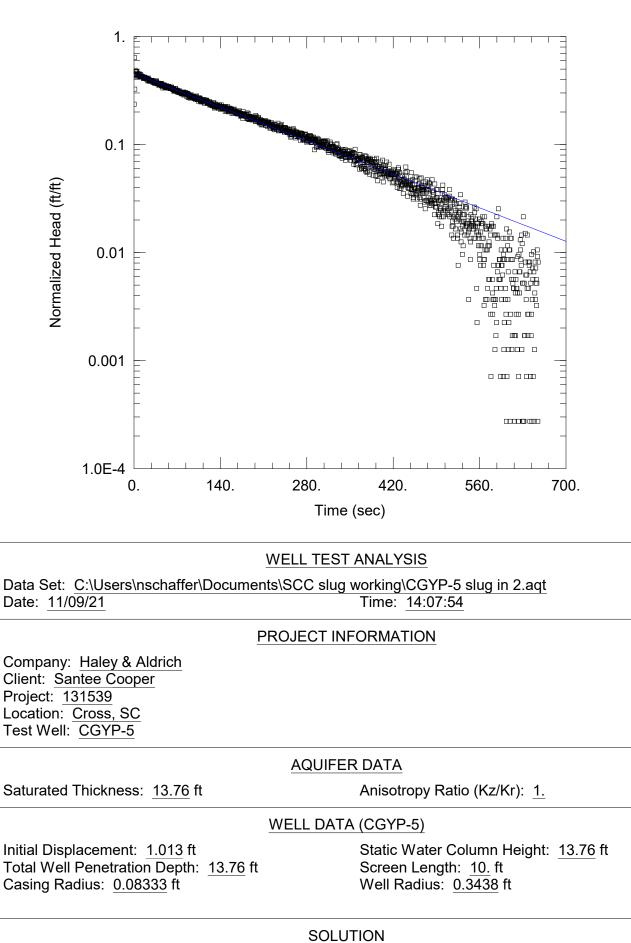
y0 = <u>0.4594</u> ft



Solution Method: Bouwer-Rice

K = 0.0001439 cm/sec

y0 = 0.5285 ft



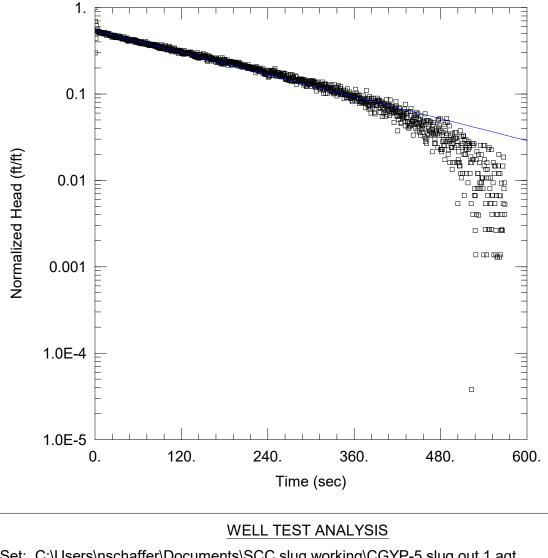
\_\_\_\_\_

Aquifer Model: Unconfined

K = 0.0001481 cm/sec

Solution Method: Bouwer-Rice

y0 = 0.4592 ft



 Data Set:
 C:\Users\nschaffer\Documents\SCC slug working\CGYP-5 slug out 1.aqt

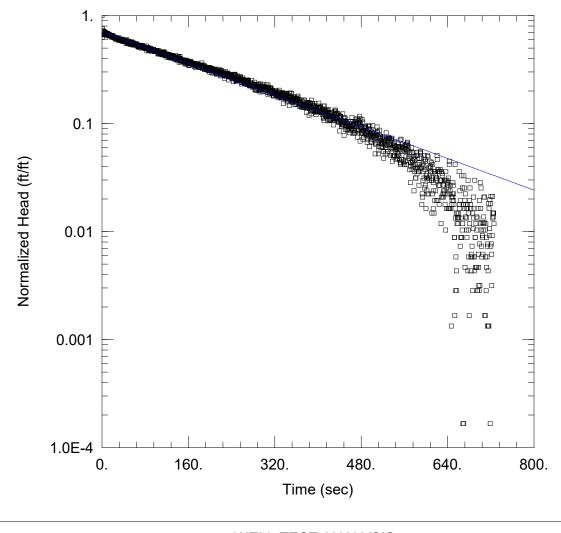
 Date:
 11/09/21

 Time:
 14:01:56

# **PROJECT INFORMATION**

Company: <u>Haley & Aldrich</u> Client: <u>Santee Cooper</u> Project: <u>131539</u> Location: <u>Cross, SC</u> Test Well: CGYP-5

Test Well: <u>CGYP-5</u>		
AQUIFER DATA		
Saturated Thickness: <u>13.76</u> ft	Anisotropy Ratio (Kz/Kr): <u>1.</u>	
WELL DA	TA (CGYP-5)	
Initial Displacement: 0.75 ft Total Well Penetration Depth: <u>13.76</u> ft Casing Radius: <u>0.08333</u> ft	Static Water Column Height: <u>13.76</u> ft Screen Length: <u>10.</u> ft Well Radius: <u>0.3438</u> ft	
SOLUTION		
Aquifer Model: Unconfined	Solution Method: Bouwer-Rice	
K = 0.0001419 cm/sec	y0 = 0.4073 ft	

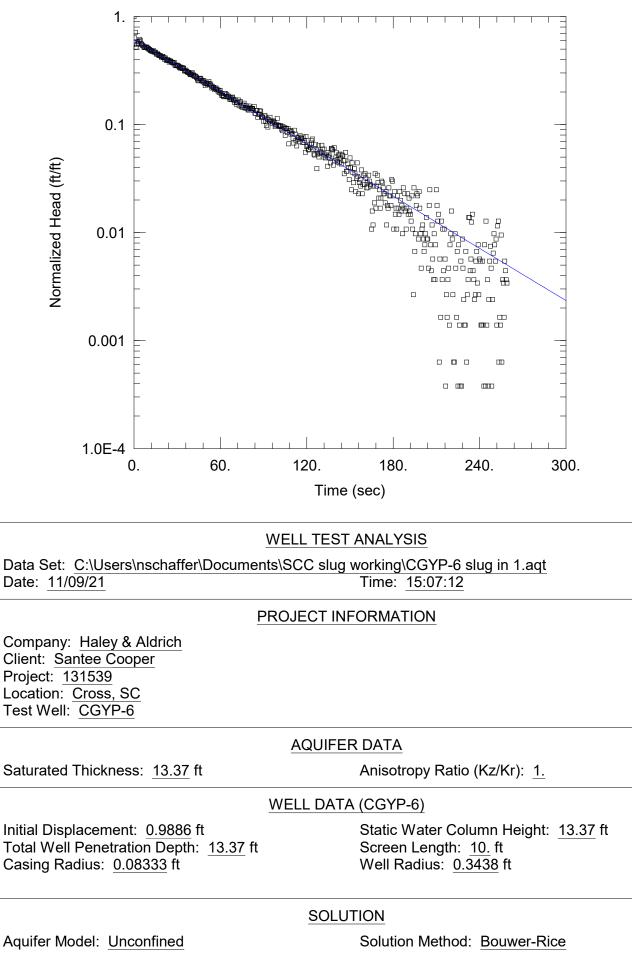


	WELL TEST ANALYSIS
Data Set: C:\Use	ers\nschaffer\Documents\SCC slug working\CGYP-5 slug out 2.aqt
Date: 11/09/21	Time: <u>14:52:44</u>

# **PROJECT INFORMATION**

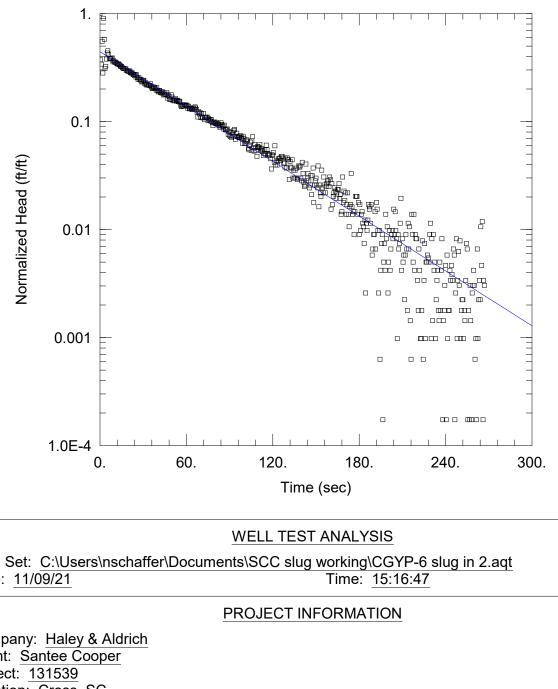
Company: <u>Haley & Aldrich</u> Client: <u>Santee Cooper</u> Project: <u>131539</u> Location: <u>Cross, SC</u> Test Well: CGYP-5

Test Well: CGYP-5	
AQUIFER DATA	
Saturated Thickness: <u>13.76</u> ft	Anisotropy Ratio (Kz/Kr): <u>1.</u>
WELL DA	TA (CGYP-5)
Initial Displacement: <u>0.6669</u> ft Total Well Penetration Depth: <u>13.76</u> ft Casing Radius: <u>0.08333</u> ft	Static Water Column Height: <u>13.76</u> ft Screen Length: <u>10.</u> ft Well Radius: <u>0.3438</u> ft
SOLUTION	
Aquifer Model: Unconfined	Solution Method: Bouwer-Rice
K = <u>0.0001225</u> cm/sec	y0 = <u>0.4725</u> ft

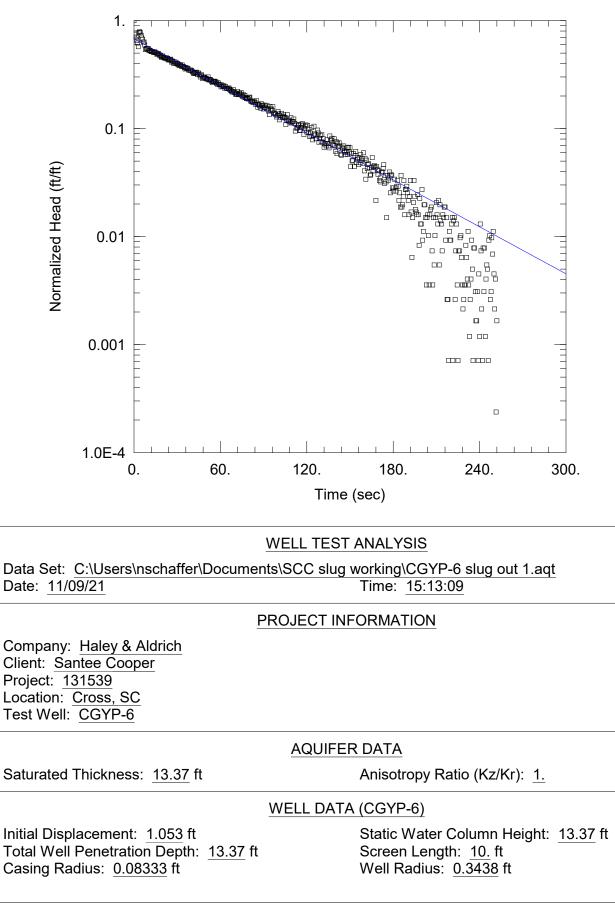


K = 0.0005347 cm/sec

y0 = 0.6054 ft



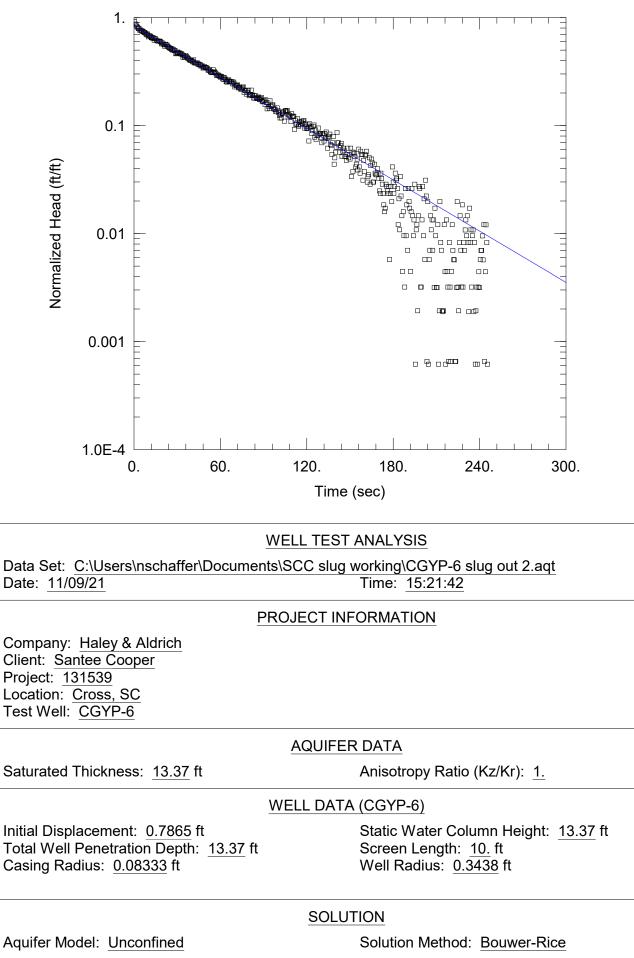
Data Set: <u>C:\Users\nschaffer\Documents\SCC slug</u> Date: <u>11/09/21</u>	working\CGYP-6 slug in 2.aqt Time: <u>15:16:47</u>
PROJECT INFORMATION	
Company: <u>Haley &amp; Aldrich</u> Client: <u>Santee Cooper</u> Project: <u>131539</u> Location: <u>Cross, SC</u> Test Well: <u>CGYP-6</u>	
AQUIFER DATA	
Saturated Thickness: <u>13.37</u> ft	Anisotropy Ratio (Kz/Kr): <u>1.</u>
WELL DATA (CGYP-6)	
Initial Displacement: <u>1.244</u> ft Total Well Penetration Depth: <u>13.37</u> ft Casing Radius: <u>0.08333</u> ft	Static Water Column Height: <u>13.37</u> ft Screen Length: <u>10.</u> ft Well Radius: <u>0.3438</u> ft
SOLUTION	
Aquifer Model: Unconfined	Solution Method: Bouwer-Rice
K = <u>0.0005616</u> cm/sec	y0 = 0.5522 ft



Solution Method: Bouwer-Rice

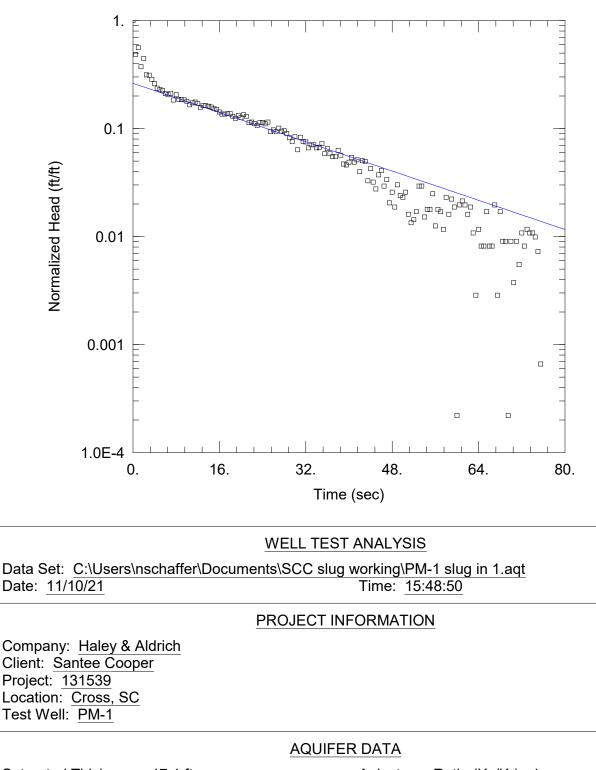
K = 0.0004815 cm/sec

y0 = 0.7143 ft



K = 0.0005252 cm/sec

y0 = 0.6574 ft



Saturated Thickness: 17.1 ft

Anisotropy Ratio (Kz/Kr): 1.

Initial Displacement: <u>1.134</u> ft Total Well Penetration Depth: <u>17.1</u> ft Casing Radius: <u>0.1042</u> ft WELL DATA (PM-1)

Static Water Column Height: <u>17.1</u> ft Screen Length: <u>17.1</u> ft Well Radius: <u>0.25</u> ft Gravel Pack Porosity: <u>0.2</u>

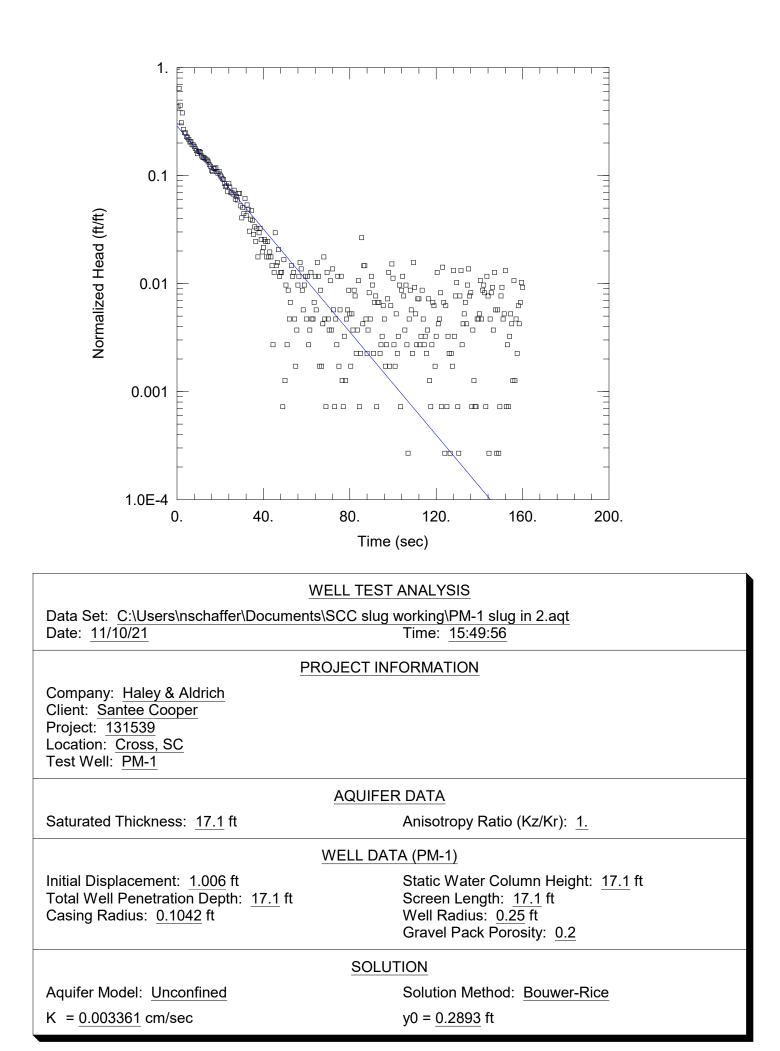
### SOLUTION

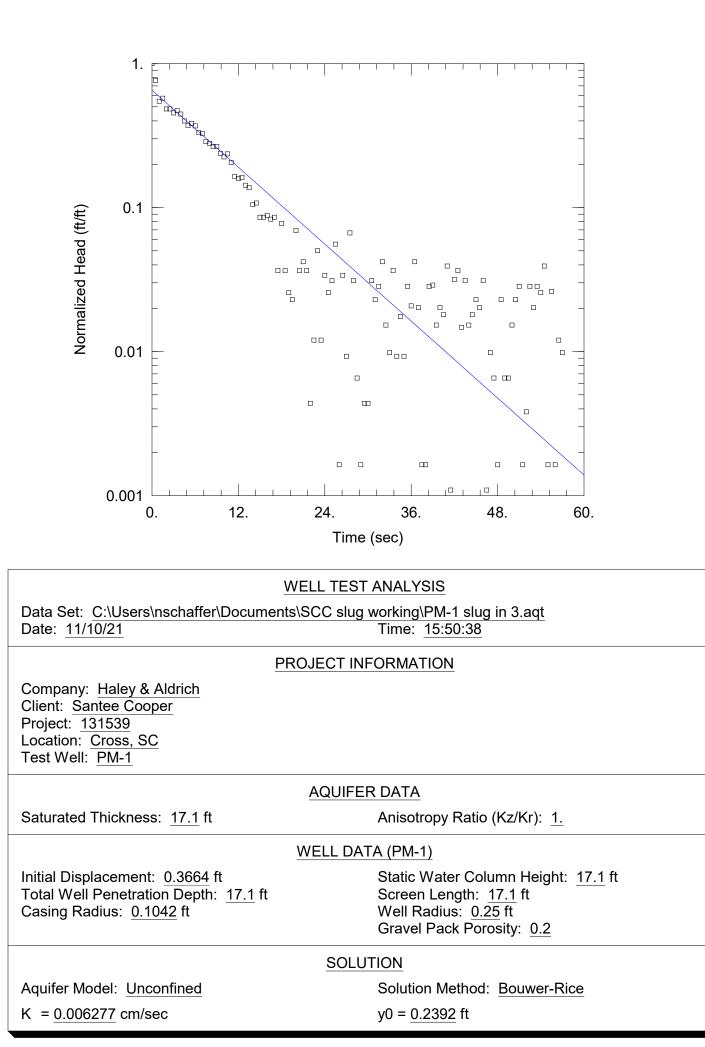
Aquifer Model: Unconfined

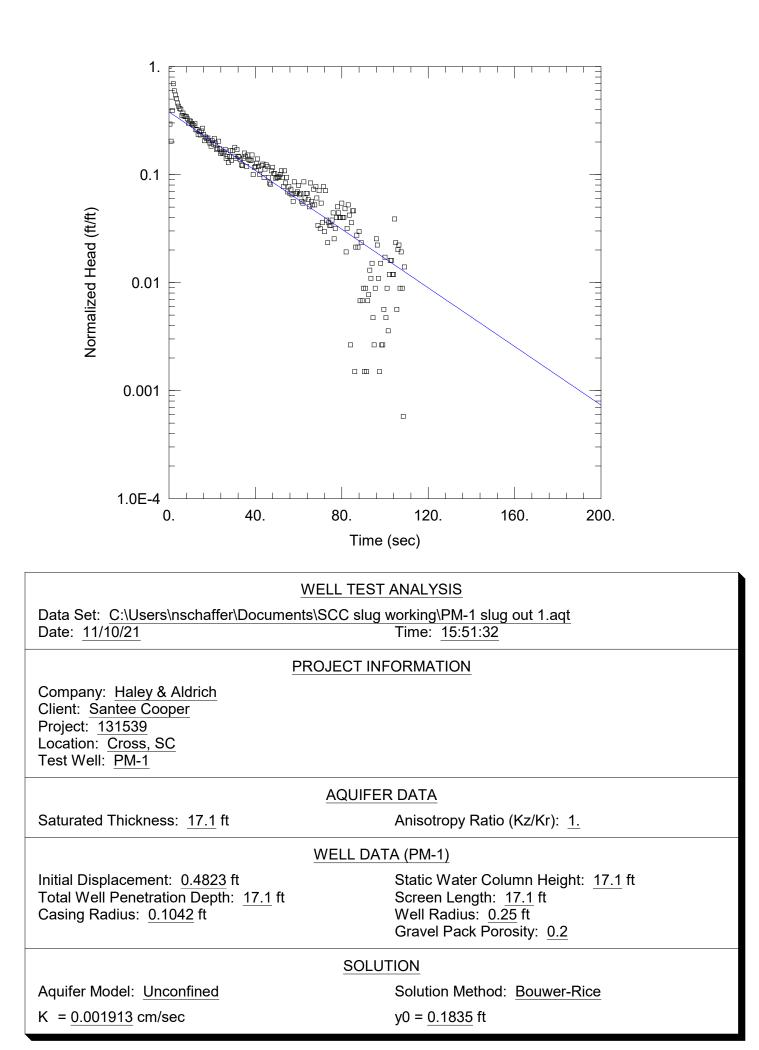
Solution Method: Bouwer-Rice

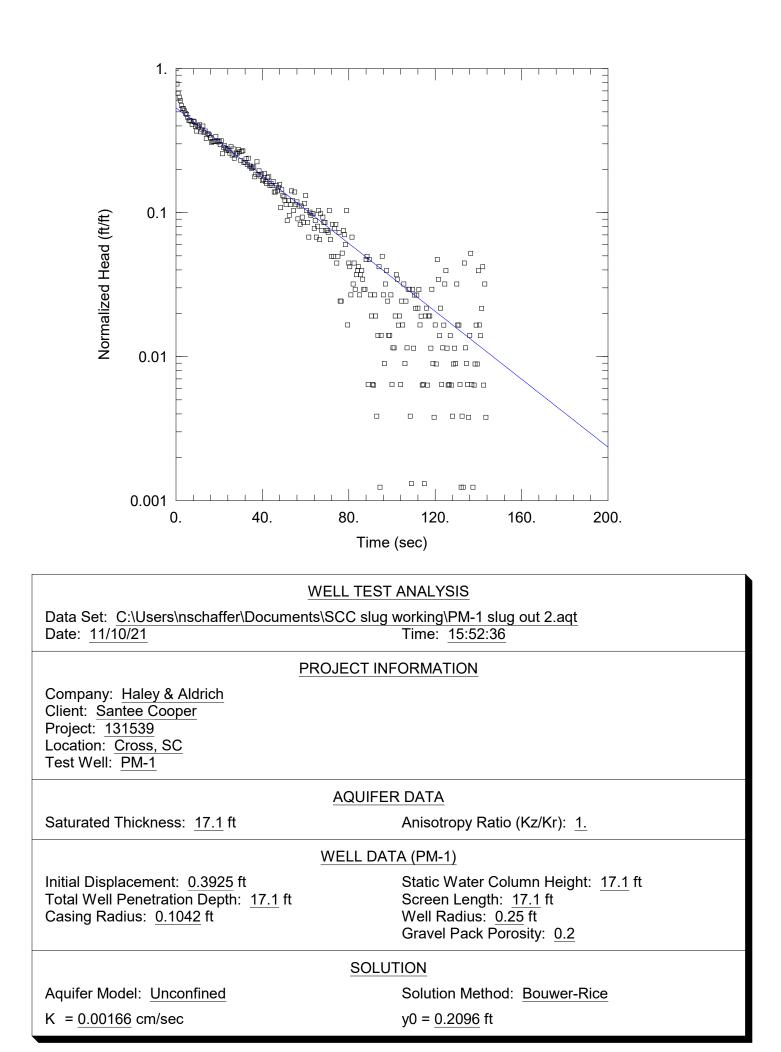
K = 0.002385 cm/sec

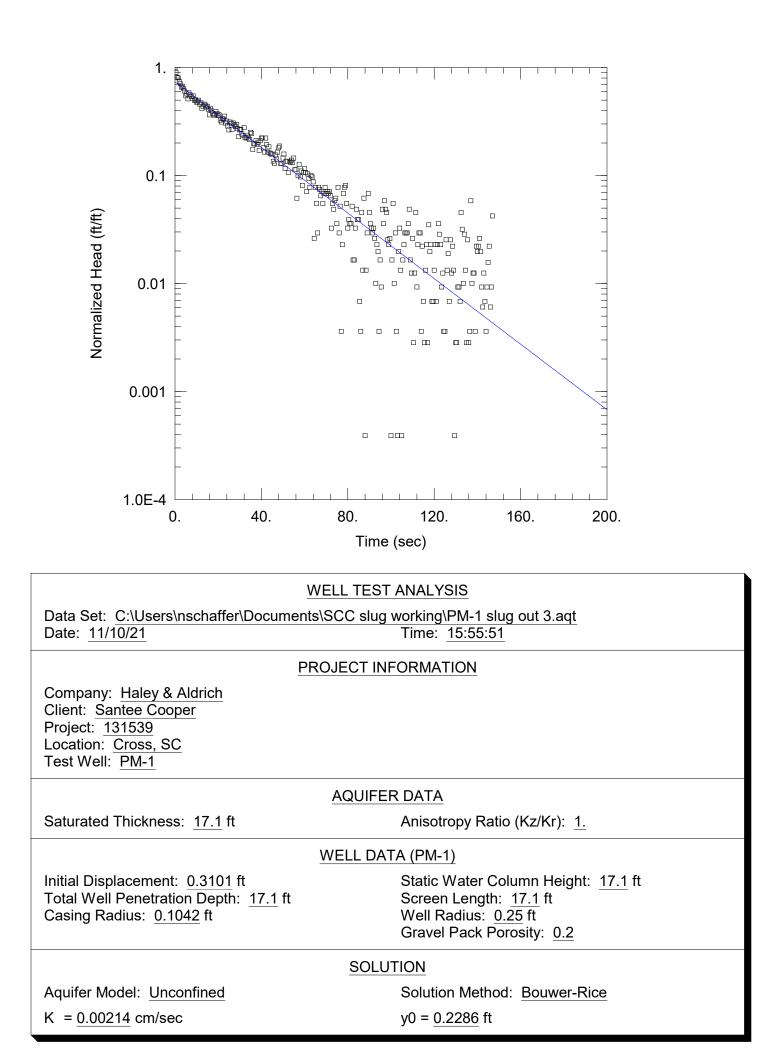
y0 = 0.2976 ft

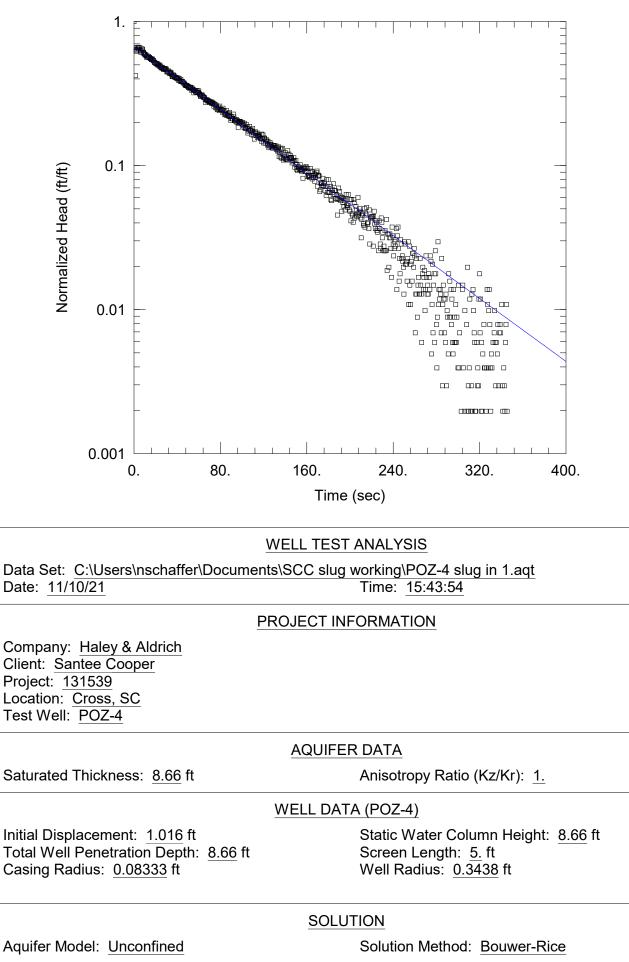






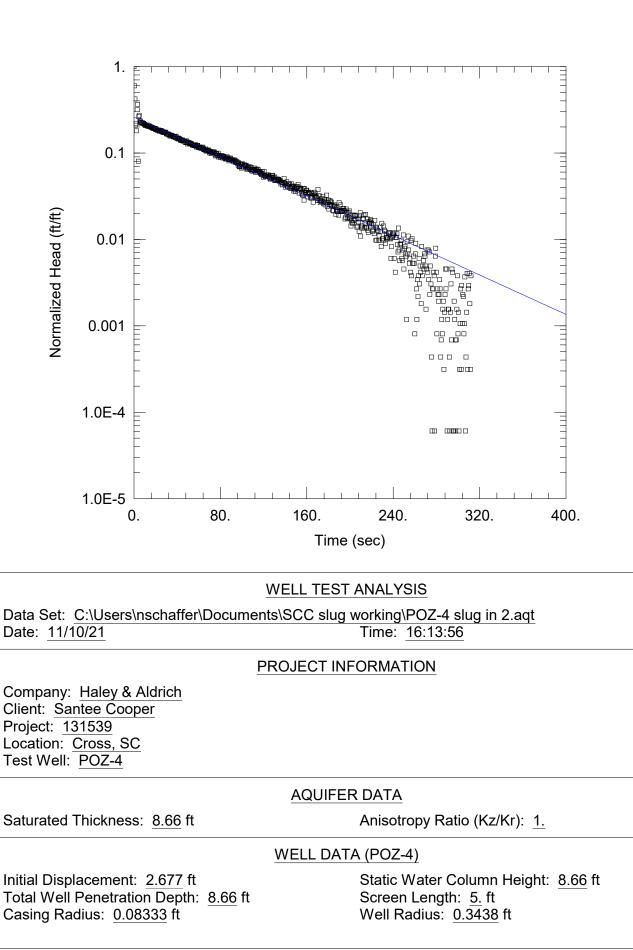






K = 0.0006012 cm/sec

y0 = 0.6789 ft



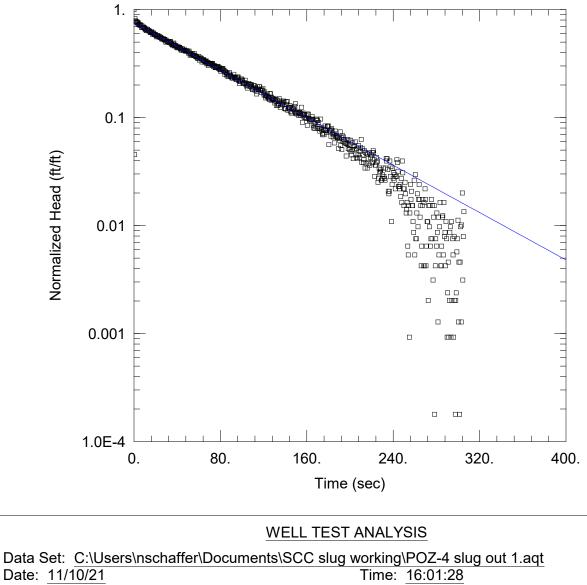
SOLUTION

Aquifer Model: Unconfined

Solution Method: Bouwer-Rice

K = 0.000628 cm/sec

y0 = 0.6943 ft

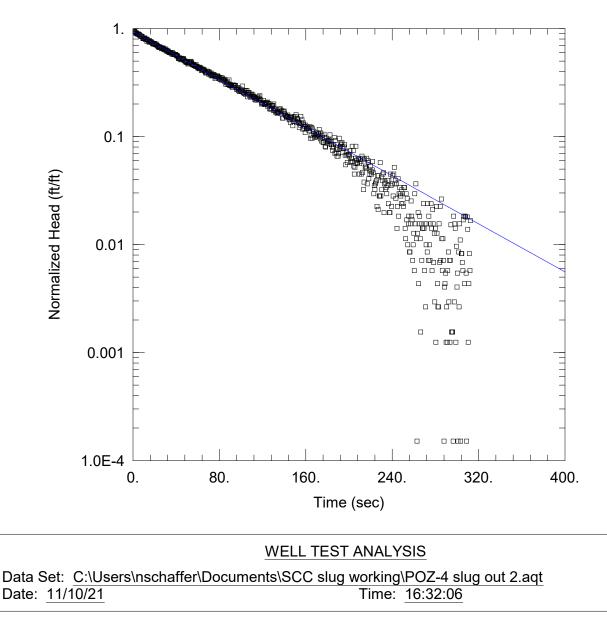


Time: 16:01:28

# **PROJECT INFORMATION**

Company: <u>Haley & Aldrich</u> Client: <u>Santee Cooper</u> Project: <u>131539</u> Location: Cross, SC

Test Well: <u>POZ-4</u>		
AQUIFER DATA		
Saturated Thickness: 8.66 ft	Anisotropy Ratio (Kz/Kr): <u>1.</u>	
WELL DATA (POZ-4)		
Initial Displacement: <u>0.9062</u> ft Total Well Penetration Depth: <u>8.66</u> ft Casing Radius: <u>0.08333</u> ft	Static Water Column Height: <u>8.66</u> ft Screen Length: <u>5.</u> ft Well Radius: <u>0.3438</u> ft	
SOLUTION		
Aquifer Model: Unconfined	Solution Method: Bouwer-Rice	
K = <u>0.0006036</u> cm/sec	y0 = 0.6804 ft	



# **PROJECT INFORMATION**

Company: <u>Haley & Aldrich</u> Client: <u>Santee Cooper</u> Project: <u>131539</u> Location: <u>Cross, SC</u> Test Well: POZ-4

# AQUIFER DATA AQUIFER DATA Saturated Thickness: $\underline{8.66}$ ft AQUIFER DATA Saturated Thickness: $\underline{8.66}$ ft MELL DATA (POZ-4) Initial Displacement: $\underline{0.7151}$ ft Static Water Column Height: $\underline{8.66}$ ft Screen Length: $\underline{5.}$ ft Colspan="2">Solution Method: $\underline{8.66}$ ft Solution Method: $\underline{9.3438}$ ft Solution Method: Bouwer-Rice y0 = 0.6719 ft