

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

by
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for
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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 ¹	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 ¹	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 ¹	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 ¹	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 ¹	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 ¹	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 ¹	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 ¹	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 ¹	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					Detection Monitoring - EPA Appendix III Constituents							Assessment Monitoring - EPA Appendix IV Constituents													
					Boron, Total EPA 6020B	Calcium, Total EPA 6020B	Chloride EPA 300.0	Fluoride EPA 300.0	Sulfate EPA 300.0	Total Dissolved Solids (TDS) SM 2540C	pH	Antimony, Total EPA 6020B	Arsenic, Total EPA 6020B	Barium, Total EPA 6020B	Beryllium, Total EPA 6020B	Cadmium, Total EPA 6020B	Chromium, Total EPA 6020B	Cobalt, Total EPA 6020B	Fluoride EPA 300.0	Lead, Total EPA 6020B	Lithium, Total EPA 6010D	Mercury, Total EPA 7470	Molybdenum, Total EPA 6010D	Selenium, Total EPA 6020B	Thallium, Total EPA 6020B
Location	Sampling Round	Sample Date	Sample Type	Lab Sample ID	ug/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L		
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
Total Samples					2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
PM-1	Background	01/26/2021	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	N	AF07281	< 15	17	12	< 0.1	11.9	155	5.21	< 5	< 5	87.3	< 0.5	< 0.5	< 5	0.94	< 0.1	< 1	< 10	< 0.2	< 10	< 10	< 1
Total Samples					2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	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	14	< 0.2	< 10	< 10	< 1
Total 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	Detection	04/07/2021	N	AF00630	850	273	55.87	1.08	987	1536	4.02	< 5	16.9	14.5	3.1	< 0.5	< 5	18.3	1.08	17.5	14	< 0.2	< 10	< 10	< 1
CGYP-2	Detection	04/07/2021	FD	AF00631	890	276	56.4	1.04	986	1670	-	< 5	17	14.3	2.9	< 0.5	< 5	18.4	1.04	17	15	< 0.2	< 10	< 10	< 1
CGYP-2	Detection	07/07/2021	N	AF07268	1300	253	83.1	0.87	937	1618	3.8	< 5	19.4	17.8	2.8	< 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
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
Total Samples					3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
CGYP-4	Baseline	04/07/2021	N	AF00633	7600	348	733	3.19	602	2178	3.78	< 5	10.3	45.4	17.4	< 0.5	< 5	53.2	3.19	11.3	58	< 0.2	< 10	< 10	< 1
CGYP-4	Baseline	05/13/2021	N	AF03568	8000	360	683	2.82	598	2078	3.88	< 5	10.5	37.5	16.4	< 0.5	< 5	49.8	2.82	12.2	58	< 0.2	< 10	< 10	< 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	12.8	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	Baseline	10/26/2021	N	AF18534	6800	304	553	0.83	611	1614	3.66	< 5	10.4	33.6	15.2	< 0.5	< 5	46.3	0.83	14.5	53	< 0.2	< 10	< 10	< 1
CGYP-4	Baseline	10/26/2021	FD	AF18535	6900	307	554	0.8	612	1760	-	< 5	10.7	34	15	< 0.5	< 5	48	0.8	15	57	< 0.2	< 10	< 10	< 1
CGYP-4	Baseline	11/17/2021	N	AF20415	7100	310	537	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	< 0.5	< 5	45.1	1.45	14.8	53	< 0.2	< 10	< 10	< 1
Total 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	Baseline	08/31/2021	N	AF13775	3200	208	241	0.35	310	1290	5.17	< 5	< 5	47.8	6.8	< 0.5	< 5	48.9	0.35	1.5	62	< 0.2	< 10	< 10	< 1
CGYP-5	Baseline	09/27/2021	N	AF15789	5000	225	277	0.25	342	1311	4.92	< 5	< 5	91.9	10.5	< 0.5	< 5	63.2	0.25	1.8	84	< 0.2	< 10	< 10	< 1
CGYP-5	Baseline	10/26/2021	N	AF18536	4500	225	344	0.21	397	1221	4.93	< 5	< 5	107	10.6	< 0.5	< 5	70.6	0.21	1.5	76	< 0.2	< 10	< 10	< 1
CGYP-5	Baseline	11/17/2021	N	AF20417	4400	227	312	0.35	369	1185	4.95	< 5	< 5	117	11.5	< 0.5	< 5	68.3	0.35	2.3	77	< 0.2	< 10	< 10	< 1
Total 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						

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

Chemical Group					Radiological			Field Parameters					
Chemical Name					Radium-226	Radium-228	Radium-226 & 228	Conductivity	Dissolved Oxygen	ORP	pH	Temperature	Turbidity
Method					EPA 903.1 Mod	EPA 904.0	EPA 903.1 Mod	-	-	SM2580	-	-	-
US EPA MCL/RSL Units					pCi/L	pCi/L	pCi/L	uS/cm	mg/L	mv	pH units	Deg C	NTU
Location	Sampling Round	Sample Date	Sample Type	Lab Sample ID									
CBW-1	Background	01/26/2021	N	AE94854	0.436	1.29	1.73	192	0.71	338	4.31	20.25	0
CBW-1	Background	06/21/2021	N	AF07259	0.433	0.12	0.552	194	0.66	75	4.25	24.16	0.2
CBW-1 Total Samples					2	2	2	2	2	2	2	2	2
PM-1	Background	01/26/2021	N	AE94872	0.559	2.88	3.44	143	6.12	1	5.03	19.47	4.4
PM-1	Background	06/21/2021	N	AF07281	0.369	1.73	2.1	169	3.96	45	5.21	26.49	4.3
PM-1 Total Samples					2	2	2	2	2	2	2	2	2
CGYP-1	Detection	02/10/2021	N	AE94861	1.23	2.63	3.86	3410	0.6	235	3.8	19.81	0
CGYP-1	Detection	04/07/2021	N	AF00629	1.08	2.81	3.89	3200	0.37	219	4.1	23.58	0
CGYP-1	Detection	07/07/2021	N	AF07267	1.17	1.61	2.77	2670	0.77	145	4.19	23.16	0.6
CGYP-1 Total Samples					3	3	3	3	3	3	3	3	3
CGYP-2	Detection	02/10/2021	N	AE94862	0.796	2.04	2.83	1710	0.43	271	3.77	19.11	0
CGYP-2	Detection	02/10/2021	FD	AE94863	0.752	1.14	1.9	-	-	-	-	-	-
CGYP-2	Detection	04/07/2021	N	AF00630	0.272	3.91	4.18	1650	0.38	247	4.02	21.36	0
CGYP-2	Detection	04/07/2021	FD	AF00631	0.29	4.76	5.05	-	-	-	-	-	-
CGYP-2	Detection	07/07/2021	N	AF07268	0.578	1.92	2.5	1530	0.67	241	3.8	25.39	0.2
CGYP-2	Detection	07/07/2021	FD	AF07269	0.762	2.31	3.07	-	-	-	-	-	-
CGYP-2 Total Samples					3	3	3	3	3	3	3	3	3
CGYP-3	Detection	02/10/2021	N	AE94864	1.05	3.63	4.69	5700	0.51	328	3.5	19.17	0
CGYP-3	Detection	04/07/2021	N	AF00632	0.433	7.5	7.93	5280	0.32	240	3.73	23.64	0
CGYP-3	Detection	07/07/2021	N	AF07270	1.24	3.79	5.03	4090	0.72	225	3.56	24.83	0.3
CGYP-3 Total Samples					3	3	3	3	3	3	3	3	3
CGYP-4	Baseline	04/07/2021	N	AF00633	0.713	5.66	6.37	3050	0.54	246	3.78	22.48	0
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	05/13/2021	FD	AF03569	1.05	3.55	4.6	-	-	-	-	-	-
CGYP-4	Baseline	07/08/2021	N	AF07271	1.05	2.51	3.56	2940	1.01	141	3.65	23.08	0.6
CGYP-4	Baseline	09/01/2021	N	AF13773	0.669	3.97	4.64	2860	0.87	202	3.65	24.12	3.6
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	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	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	-	-	-	-	-	-
CGYP-4 Total Samples					7	7	7	7	7	7	7	7	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	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	09/27/2021	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	23.9	0
CGYP-5 Total Samples					7	7	7	7	7	7	7	7	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	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 Total Samples					7	7	7	7	7	7	7	7	7

ABBREVIATIONS AND NOTES:

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



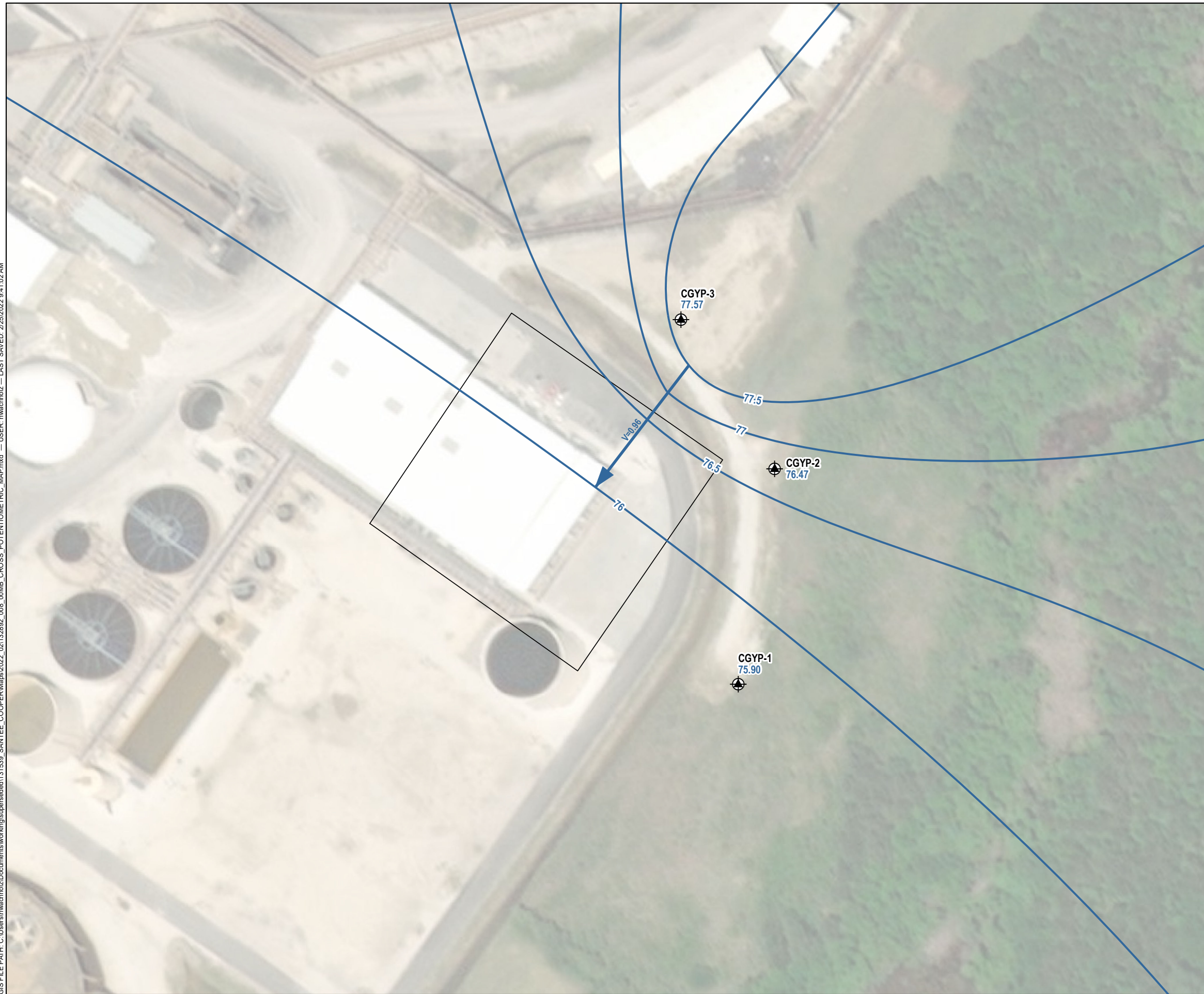
SANTEE COOPER
CROSS GENERATING STATION
CROSS, SOUTH CAROLINA

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






JANUARY 2022

FIGURE 1

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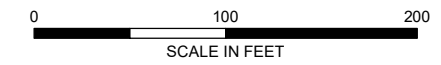
LEGEND

-  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:

$$v = \frac{K \Delta h}{n_e \Delta L}$$
3. ABBREVIATIONS:
 ft/day = FEET PER DAY
 V = AVERAGE LINEAR VELOCITY (ft/day)
 K = HORIZONTAL HYDRAULIC CONDUCTIVITY (ft/day)
 $\Delta h/\Delta L$ = HORIZONTAL GRADIENT (CHANGE IN HYDRAULIC HEAD / LENGTH OF HORIZONTAL HYDRAULIC FLOW PATH)
 ne = EFFECTIVE POROSITY
4. K = 25 FEET PER DAY (ft/day)
5. ne = 0.25
6. WATER LEVELS WERE MEASURED BY SANTEE COOPER ON FEBRUARY 10, 2021
7. AERIAL IMAGERY SOURCE: ESRI



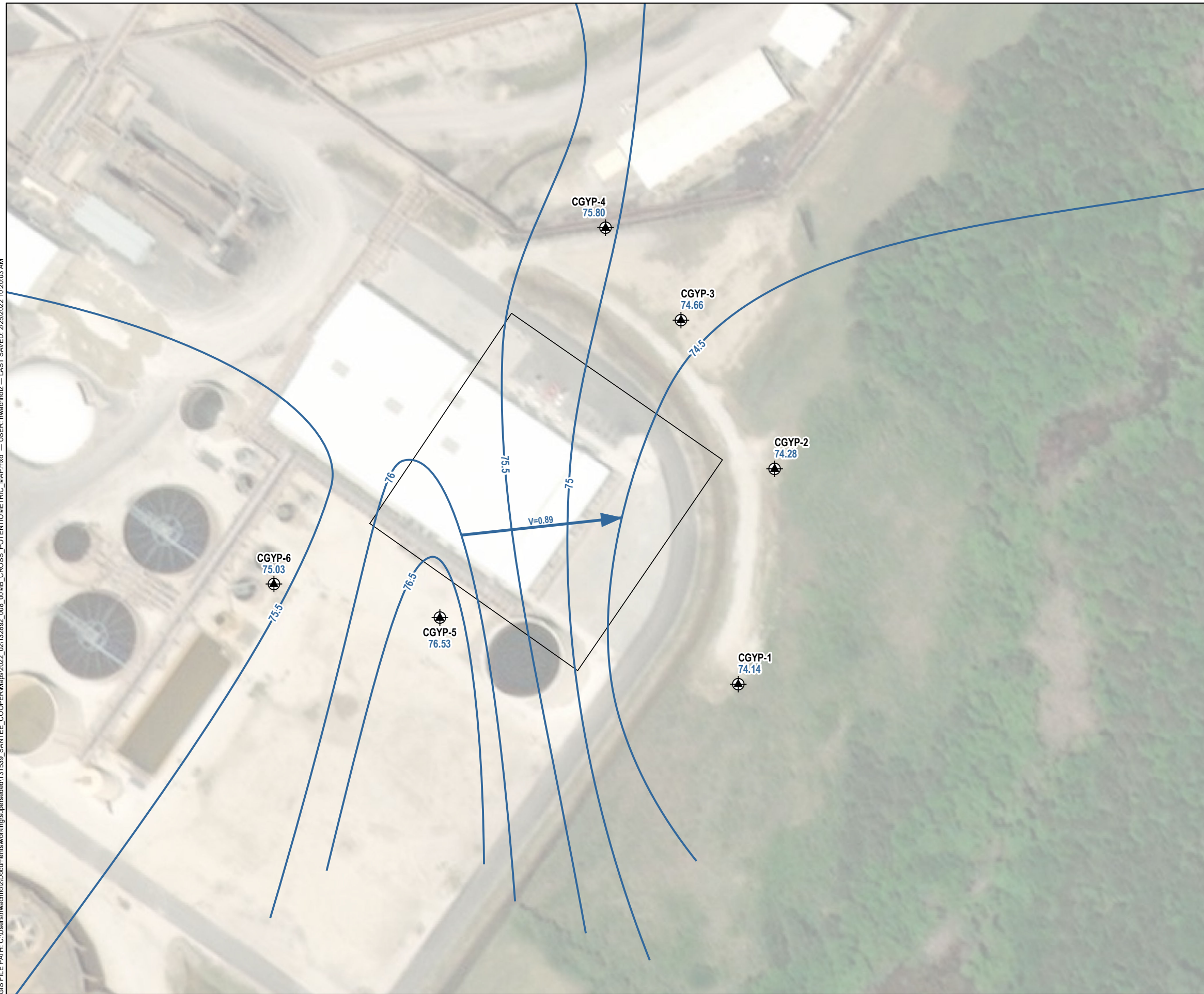
HALEY ALDRICH
 SANTEE COOPER
 CROSS GENERATING STATION
 PINEVILLE, SOUTH CAROLINA

**POTENTIOMETRIC MAP
 CLOSED GYPSUM POND
 FEBRUARY 2021**






FEBRUARY 2022

FIGURE 2

C:\Users\hwachholz\Documents\working\pse\se\131539_SANTEE_COOPER\Maps\2022_02\1328292_008_00MB_CROSS_POTENTIOMETRIC_MAP.mxd — USER: hwachholz — LAST SAVED: 2/25/2022 10:20:03 AM



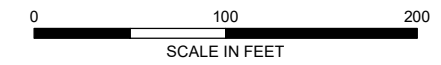
LEGEND

-  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:

$$v = \frac{K \Delta h}{n_e \Delta L}$$
3. ABBREVIATIONS:
 ft/day = FEET PER DAY
 V = AVERAGE LINEAR VELOCITY (ft/day)
 K = HORIZONTAL HYDRAULIC CONDUCTIVITY (ft/day)
 $\Delta h/\Delta L$ = HORIZONTAL GRADIENT (CHANGE IN HYDRAULIC HEAD / LENGTH OF HORIZONTAL HYDRAULIC FLOW PATH)
 ne = EFFECTIVE POROSITY
4. K = 25 FEET PER DAY (ft/day)
5. ne = 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



SANTEE COOPER
CROSS GENERATING STATION
PINEVILLE, SOUTH CAROLINA

POTENTIOMETRIC MAP
CLOSED GYPSUM POND
JULY 2021

FEBRUARY 2022

FIGURE 3

Appendix A – Laboratory Analytical Reports



One Riverwood Drive
P.O. Box 2946101
Moncks Corner, SC 29461-2901
(843) 761-8000

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 **Time:** 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	3.86	pCi/L	03/05/2021	GEL	EPA 903.1 Mod
Calculation					
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	C	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: 

Linda Williams - Supervisor Analytical Services

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 **Time:** 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	3.89	pCi/L	05/05/2021	GEL	EPA 903.1 Mod
Calculation					
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	C	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:



Linda Williams - Supervisor Analytical Services



One Riverwood Drive
 P.O. Box 2946101
 Moncks Corner, SC 29461-2901
 (843) 761-8000

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 **Time:** 14:39

Analysis	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: 

Linda Williams - Supervisor Analytical Services

SANTEE COOPER ANALYTICAL SERVICES

CERTIFICATE OF ANALYSIS

LAB CERTIFICATION #08552

Sample # AF07267 **Location:** GW Well CGYP-1 **Date:** 07/07/2021 **Sample Collector:** BRT/CWS
Loc. Code CGYP-1 **Time:** 10:31

Analysis	Result	Units	Test Date	Analyst	Method
Arsenic	18.1	ug/L	08/03/2021	SJHATCHE	EPA 6020B
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	07/14/2021	R&C	EPA 6010D
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	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	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 226	1.17	pCi/L	07/22/2021	GEL	EPA 903.1 Mod
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 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	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	
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:



Linda Williams - Supervisor Analytical Services



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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	2.83	pCi/L	03/05/2021	GEL	EPA 903.1 Mod
Calculation					
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
pH	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	C	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: 

Linda Williams - Supervisor Analytical Services

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** **Time:** 12:28

Analysis	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	1.90	pCi/L	03/05/2021	GEL	EPA 903.1 Mod
Calculation					
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 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:



Linda Williams - Supervisor Analytical Services

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 **Time:** 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	4.18	pCi/L	05/05/2021	GEL	EPA 903.1 Mod
Calculation					
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	C	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:



Linda Williams - Supervisor Analytical Services

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

Analysis	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	5.05	pCi/L	05/05/2021	GEL	EPA 903.1 Mod
Calculation					
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 Dissolved 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:



Linda Williams - Supervisor Analytical Services



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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

Analysis	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: 

Linda Williams - Supervisor Analytical Services

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	2.50	pCi/L	08/05/2021	GEL	EPA 903.1 Mod
Calculation					
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	C	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:



Linda Williams - Supervisor Analytical Services

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** **Time:** 11:33

Analysis	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	3.07	pCi/L	08/05/2021	GEL	EPA 903.1 Mod
Calculation					
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 Dissolved 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:



Linda Williams - Supervisor Analytical Services



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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 **Time:** 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	4.69	pCi/L	03/05/2021	GEL	EPA 903.1 Mod
Calculation					
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
pH	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	C	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: 

Linda Williams - Supervisor Analytical Services

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 **Time:** 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	7.93	pCi/L	05/05/2021	GEL	EPA 903.1 Mod
Calculation					
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	C	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:



Linda Williams - Supervisor Analytical Services



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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

Analysis	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:

Linda Williams - Supervisor Analytical Services

SANTEE COOPER ANALYTICAL SERVICES

CERTIFICATE OF ANALYSIS

LAB CERTIFICATION #08552

Sample # AF07270 **Location:** GW Well CGYP-3 **Date:** 07/07/2021 **Sample Collector:** BRT/CWS

Loc. Code CGYP-3 **Time:** 13:38

Analysis	Result	Units	Test Date	Analyst	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	17000	ug/L	07/14/2021	R&C	EPA 6010D
Calcium	495	mg/L	08/03/2021	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	ug/L	07/16/2021	R&C	EPA 7470
Lithium	56.0	ug/L	07/14/2021	R&C	EPA 6010D
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	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	1.24	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	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
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	
Oxidation Reduction Potential	225	mv	07/07/2021	BRT/CWS	SM2580
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	
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:



Linda Williams - Supervisor Analytical Services



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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 **Time:** 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	6.37	pCi/L	05/05/2021	GEL	EPA 903.1 Mod
Calculation					
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	C	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: 

Linda Williams - Supervisor Analytical Services

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 **Time:** 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	5.84	pCi/L	06/11/2021	GEL	EPA 903.1 Mod
Calculation					
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	C	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:



Linda Williams - Supervisor Analytical Services

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

Analysis	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	4.60	pCi/L	06/11/2021	GEL	EPA 903.1 Mod
Calculation					
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 Dissolved 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:



Linda Williams - Supervisor Analytical Services

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	3.56	pCi/L	08/05/2021	GEL	EPA 903.1 Mod
Calculation					
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
pH	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	C	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:



Linda Williams - Supervisor Analytical Services

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 **Time:** 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	4.64	pCi/L	10/01/2021	GEL	EPA 903.1 Mod
Calculation					
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	C	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:



Linda Williams - Supervisor Analytical Services

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** **Time:** 09:09

Analysis	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 226/228 Combined	3.57	pCi/L	10/01/2021	GEL	EPA 903.1 Mod
Calculation					
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 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:



Linda Williams - Supervisor Analytical Services

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 **Time:** 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	5.29	pCi/L	10/26/2021	GEL	EPA 903.1 Mod
Calculation					
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	C	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:



Linda Williams - Supervisor Analytical Services

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** **Time:** 09:43

Analysis	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 226/228 Combined	4.54	pCi/L	10/26/2021	GEL	EPA 903.1 Mod
Calculation					
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 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:



Linda Williams - Supervisor Analytical Services

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 Time: 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	5.56	pCi/L	11/10/2021	GEL	EPA 903.1 Mod
Calculation					
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	C	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:



Linda Williams - Supervisor Analytical Services

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** **Time:** 10:05

Analysis	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	8.42	pCi/L	11/10/2021	GEL	EPA 903.1 Mod
Calculation					
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 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:



Linda Williams - Supervisor Analytical Services

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 **Time:** 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	4.90	pCi/L	12/28/2021	GEL	EPA 903.1 Mod
Calculation					
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
pH	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	C	11/17/2021	DEW/ML	
Turbidity	0	NTU	11/17/2021	DEW/ML	
Depth	8.60	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:



Linda Williams - Supervisor Analytical Services

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** **Time:** 10:23

Analysis	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	2.56	pCi/L	12/28/2021	GEL	EPA 903.1 Mod
Calculation					
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 Dissolved 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:



Linda Williams - Supervisor Analytical Services

SANTEE COOPER ANALYTICAL SERVICES

CERTIFICATE OF ANALYSIS

LAB CERTIFICATION #08552

Sample # AF21736 **Location:** GW Well CGYP-4 **Date:** 12/06/2021 **Sample Collector:** TW ML
Loc. Code CGYP-4 **Time:** 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	5.03	pCi/L	01/05/2022	GEL	EPA 903.1 Mod
Calculation					
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	C	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:



Linda Williams - Supervisor Analytical Services

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** **Time:** 09:59

Analysis	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 226/228 Combined	3.30	pCi/L	01/05/2022	GEL	EPA 903.1 Mod
Calculation					
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 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:



Linda Williams - Supervisor Analytical Services



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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	2.84	pCi/L	05/05/2021	GEL	EPA 903.1 Mod
Calculation					
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
pH	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	C	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: 

Linda Williams - Supervisor Analytical Services

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 **Time:** 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	1.50	pCi/L	06/11/2021	GEL	EPA 903.1 Mod
Calculation					
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	C	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:



Linda Williams - Supervisor Analytical Services

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 **Time:** 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	0.706	pCi/L	08/05/2021	GEL	EPA 903.1 Mod
Calculation					
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
pH	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	C	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:



Linda Williams - Supervisor Analytical Services

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 **Time:** 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	1.85	pCi/L	10/01/2021	GEL	EPA 903.1 Mod
Calculation					
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	C	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:



Linda Williams - Supervisor Analytical Services

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	2.76	pCi/L	10/26/2021	GEL	EPA 903.1 Mod
Calculation					
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
pH	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	C	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:



Linda Williams - Supervisor Analytical Services

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 **Time:** 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	7.07	pCi/L	11/10/2021	GEL	EPA 903.1 Mod
Calculation					
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	C	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:



Linda Williams - Supervisor Analytical Services

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 **Time:** 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	1.59	pCi/L	12/28/2021	GEL	EPA 903.1 Mod
Calculation					
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
pH	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	C	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:



Linda Williams - Supervisor Analytical Services

SANTEE COOPER ANALYTICAL SERVICES

CERTIFICATE OF ANALYSIS

LAB CERTIFICATION #08552

Sample # AF21738 **Location:** GW Well CGYP-5 **Date:** 12/06/2021 **Sample Collector:** 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	2.92	pCi/L	01/05/2022	GEL	EPA 903.1 Mod
Calculation					
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
pH	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	C	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:



Linda Williams - Supervisor Analytical Services



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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	3.68	pCi/L	05/05/2021	GEL	EPA 903.1 Mod
Calculation					
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
pH	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	C	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: 

Linda Williams - Supervisor Analytical Services

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	6.31	pCi/L	06/11/2021	GEL	EPA 903.1 Mod
Calculation					
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	C	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:



Linda Williams - Supervisor Analytical Services

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	6.08	pCi/L	08/05/2021	GEL	EPA 903.1 Mod
Calculation					
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	C	07/08/2021	MDG/BRT	
Turbidity	0	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:



Linda Williams - Supervisor Analytical Services

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 **Time:** 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	5.53	pCi/L	10/01/2021	GEL	EPA 903.1 Mod
Calculation					
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
pH	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	C	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:



Linda Williams - Supervisor Analytical Services

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	7.93	pCi/L	10/26/2021	GEL	EPA 903.1 Mod
Calculation					
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	C	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:



Linda Williams - Supervisor Analytical Services

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 **Time:** 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	6.48	pCi/L	11/10/2021	GEL	EPA 903.1 Mod
Calculation					
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	C	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:



Linda Williams - Supervisor Analytical Services

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 **Time:** 13:04

Analysis	Result	Units	Test Date	Analyst	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	9.69	pCi/L	12/28/2021	GEL	EPA 903.1 Mod
Calculation					
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
pH	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	C	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:



Linda Williams - Supervisor Analytical Services

SANTEE COOPER ANALYTICAL SERVICES

CERTIFICATE OF ANALYSIS

LAB CERTIFICATION #08552

Sample # AF21739 **Location:** GW Well CGYP-6 **Date:** 12/06/2021 **Sample Collector:** TW ML
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	5.62	pCi/L	01/05/2022	GEL	EPA 903.1 Mod
Calculation					
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
pH	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	C	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:



Linda Williams - Supervisor Analytical Services



Laboratory Report

Client	Santee Cooper Linda Williams 1 Riverwood Dr. Moncks Corner, SC 29461	Project:	Ground Water
		Work Order:	1020859
		Received:	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
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

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an employee-owned company



*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*

Certificate of Analysis

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

Project: Ground Water
Work Order: 1020859
Received: 02/16/2021 10:20

Sample Number	Sample Description	Matrix	Sampled	Type
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



Santee Cooper
1 Riverwood Dr.
Moncks Corner, SC 29461

Project: Ground Water
Work Order: 1020859
Reported: 02/24/21 17:04

Sample Data

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

Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch
Total Metals									
Lithium	15	10	ug/L	1.00	02/18/21 17:54	EPA 6010D		MLR	B1B0817

Sample Number 1020859-02
Sample Description AE94858 CCMAP-3 DUP collected on 02/10/21 16:14

Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch
Total Metals									
Lithium	16	10	ug/L	1.00	02/18/21 19:04	EPA 6010D		MLR	B1B0817

Sample Number 1020859-03
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	S7	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	S7	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



Santee Cooper
1 Riverwood Dr.
Moncks Corner, SC 29461

Project: Ground Water
Work Order: 1020859
Reported: 02/24/21 17:04

Sample Number 1020859-05
Sample Description AE94863 CGYP-2 DUP collected on 02/10/21 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 11:37	EPA 7470A	S7	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

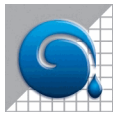
Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	02/23/21 11:40	EPA 7470A	S7	MLR	B1B1040
Boron	25000	150	ug/L	10.0	02/24/21 15:58	EPA 6010D		MLR	B1B0817
Lithium	110	20	ug/L	2.00	02/18/21 18:41	EPA 6010D		MLR	B1B0817
Molybdenum	ND	20	ug/L	2.00	02/18/21 18:41	EPA 6010D		MLR	B1B0817

Sample Number 1020859-07
Sample Description AE94855 CCMAP-1 collected on 02/11/21 12:28

Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch
Total Metals									
Lithium	ND	10	ug/L	1.00	02/18/21 19:24	EPA 6010D		MLR	B1B0817

Sample Number 1020859-08
Sample Description AE94856 CCMAP-2 collected on 02/11/21 13:14

Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch
Total Metals									
Lithium	ND	10	ug/L	1.00	02/18/21 19:28	EPA 6010D		MLR	B1B0817



Santee Cooper
1 Riverwood Dr.
Moncks Corner, SC 29461

Project: Ground Water
Work Order: 1020859
Reported: 02/24/21 17:04

Total Metals
Quality Control Summary

Parameter	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flags
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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			SS
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)

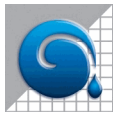
Mercury	ND	0.20	ug/L							
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LCS (B1B1040-BS1)

Mercury	5.0	0.20	ug/L	5.00		101	80-120			
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LCS Dup (B1B1040-BSD1)

Mercury	4.9	0.20	ug/L	5.00		98	80-120	2	20	
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Santee Cooper
1 Riverwood Dr.
Moncks Corner, SC 29461

Project: Ground Water
Work Order: 1020859
Reported: 02/24/21 17:04

**Total Metals
Quality Control Summary**

Parameter	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flags
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Batch B1B1040 - EPA 7470A

Matrix Spike (B1B1040-MS1) Source: 1020859-03

Mercury	4.1	0.20	ug/L	5.00	ND	80	75-125			S7
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Matrix Spike Dup (B1B1040-MSD1) Source: 1020859-03

Mercury	4.0	0.20	ug/L	5.00	ND	78	75-125	3	20	S7
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Sample Preparation Data

Parameter	Batch	Sample ID	Prepared	Analyst
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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



Santee Cooper
1 Riverwood Dr.
Moncks Corner, SC 29461

Project: Ground Water
Work Order: 1020859
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.



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

Chain of Custody

Customer Email/Report Recipient: _____ Date Results Needed by: _____ Project/Task/Unit #: _____ Rerun request for any flagged QC

LCWILLIA @santecooper.com _____ / _____ / _____ 121567 / JM02.09.601 / 36500 Yes No

1020859

Analysis 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)	Comments				
AE94857	CCMAP-3	2/10/21	1609	NDG / <u>TRM</u>	1	P	G	GW	2	-01		X		
AE94858	CCMAP-3 DUP		1614		1					-02		X		
AE94861	CGYP-1		1116							-03	X	X	X	X
AE94862	CGYP-2		1223							-04	X	X	X	X
AE94863	CGYP-2 DUP		1228							-05	X	X	X	X
AE94864	CGYP-3		1338							-06	X	X	X	X
AE94855	CCMAP-1	2/11/21	1228							-07		X		
AE94856	CCMAP-2		1314							-08		X		

Relinquished by:	Employee#	Date	Time	Received by:	Employee #	Date	Time
<u>Sibrown</u>	35594	2/15/21	1300	<u>FGD EX</u>			
<u>FGD EX</u>				<u>SC</u>		2/16/21	1020

Sample Receiving (Internal Use Only)
TEMP (°C): 11.8 Initial: _____
Correct pH: Yes No
Preservative Lot#: _____
Date/Time/Init for preservative: _____

<input type="checkbox"/> METALS (all) <input type="checkbox"/> Ag <input type="checkbox"/> Cu <input type="checkbox"/> Sb <input type="checkbox"/> Al <input type="checkbox"/> Fe <input type="checkbox"/> Se <input type="checkbox"/> As <input type="checkbox"/> K <input type="checkbox"/> Sn <input type="checkbox"/> B <input type="checkbox"/> Li <input type="checkbox"/> Sr <input type="checkbox"/> Ba <input type="checkbox"/> Mg <input type="checkbox"/> Ti <input type="checkbox"/> Be <input type="checkbox"/> Mn <input type="checkbox"/> Tl <input type="checkbox"/> Ca <input type="checkbox"/> Mo <input type="checkbox"/> V <input type="checkbox"/> Cd <input type="checkbox"/> Na <input type="checkbox"/> Zn <input type="checkbox"/> Co <input type="checkbox"/> Ni <input type="checkbox"/> Hg <input type="checkbox"/> Cr <input type="checkbox"/> Pb <input type="checkbox"/> CrVI	Nutrients <input type="checkbox"/> TOC <input type="checkbox"/> DOC <input type="checkbox"/> TP-TPC04 <input type="checkbox"/> NH3-N <input type="checkbox"/> F <input type="checkbox"/> Cl <input type="checkbox"/> NO2 <input type="checkbox"/> Br <input type="checkbox"/> NO3 <input type="checkbox"/> SO4	MISC. <input type="checkbox"/> BTEX <input type="checkbox"/> Napthalene <input type="checkbox"/> THM/HAA <input type="checkbox"/> VOC <input type="checkbox"/> Oil & Grease <input type="checkbox"/> E. Coli <input type="checkbox"/> Total Coliform <input type="checkbox"/> pH <input type="checkbox"/> Dissolved As <input type="checkbox"/> Dissolved Fe <input type="checkbox"/> Rad 226 <input type="checkbox"/> Rad 228 <input type="checkbox"/> PCB	Gypsum <input type="checkbox"/> Wallboard Gypsum(all below) <input type="checkbox"/> AIM <input type="checkbox"/> TOC <input type="checkbox"/> Total metals <input type="checkbox"/> Soluble Metals <input type="checkbox"/> Purity (CaSO4) <input type="checkbox"/> % Moisture <input type="checkbox"/> Sulfites <input type="checkbox"/> pH <input type="checkbox"/> Chlorides <input type="checkbox"/> Particle Size <input type="checkbox"/> Sulfur	Coal <input type="checkbox"/> Ultimate <input type="checkbox"/> % Moisture <input type="checkbox"/> Ash <input type="checkbox"/> Sulfur <input type="checkbox"/> BTUs <input type="checkbox"/> Volatile Matter <input type="checkbox"/> CHN Other Tests: <input type="checkbox"/> XRF Scan <input type="checkbox"/> HGI <input type="checkbox"/> Fineness <input type="checkbox"/> Particulate Matter	Flyash <input type="checkbox"/> Ammonia <input type="checkbox"/> LOI <input type="checkbox"/> % Carbon <input type="checkbox"/> Mineral Analysis <input type="checkbox"/> Sieve <input type="checkbox"/> % Moisture NPDES <input type="checkbox"/> Oil & Grease <input type="checkbox"/> As <input type="checkbox"/> TSS	Oil <input type="checkbox"/> Trans. Oil Qual. <input type="checkbox"/> % Moisture <input type="checkbox"/> Color <input type="checkbox"/> Acidity <input type="checkbox"/> Distillate Strength <input type="checkbox"/> IFT <input type="checkbox"/> Dissolved Gases Used Oil <input type="checkbox"/> Flashpoint <input type="checkbox"/> Metals in oil (As, Cd, Cr, Ni, Pb, Hg) <input type="checkbox"/> TX <input type="checkbox"/> GOFER
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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=H2SO4 4=HCl 5=Na2S2O3 6=Other (Specify)

Sample Receipt Verification

Client: Santee Cooper Date Received: 2/16/21 Work Order: 1020859

Carrier Name: Client FedEx UPS US Mail Courier Field Services Other: _____
 Tracking Number: 816240672624

Receipt Criteria	Y	N	N	Comments
	e	o	A	
	s			
Shipping container / cooler intact?	X			Damaged Leaking Other:
Custody seals intact?			X	
COC included with samples?	X			
COC signed when relinquished and received?	X			
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 received?	X			
Samples received within holding time?	X			
Sample volume sufficient for analysis?	X			
VOA vials free of headspace (<6mm bubble)?			X	
Samples cooled? <small>Temp at receipt recorded on COC Temp measured with IR thermometer - SN: 97050067</small>			X	Ice Cold Packs Dry Ice <u>None</u>
Samples requiring pH preservation at proper pH? <small>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.</small>	X			
Samples dechlorinated for parameters requiring chlorine removal at the time of sample collection? <small>Note: Chlorine checked at bench for samples requiring Bacterial, VOA, and HAA analysis.</small>			X	

If in-house preservation used – record Lot #			
HCL		H ₃ PO ₄	
H ₂ SO ₄		NaOH	
HNO ₃		Other	

Comments:

Were non-conformance issues noted at sample receipt? Yes or No
 Non-Conformance issue other than noted above:



Rogers & Callcott
ENVIRONMENTAL



Laboratory Services

Laboratory Report

Client	Santee Cooper Linda Williams 1 Riverwood Dr. Moncks Corner, SC 29461	Project:	Ground Water
		Work Order:	1040743
		Received:	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 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
Project Manager

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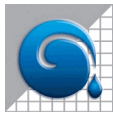
*South Carolina Greenville Laboratory Identification 23105
South Carolina Columbia Laboratory Identification 40572
North Carolina Laboratory Certification Number 27
North Carolina Drinking Water Lab Number 45710
NELAP Utah Certificate Number SC000042014-1
Georgia Drinking Water Lab ID 880*

Certificate of Analysis

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

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

Sample Number	Sample Description	Matrix	Sampled	Type
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
1 Riverwood Dr.
Moncks Corner, SC 29461

Project: Ground Water
Work Order: 1040743
Reported: 04/22/21 14:29

Sample Data

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

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 1040743-02
Sample Description AF00629 CGYP-1 collected on 04/07/21 12:16

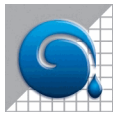
Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	04/16/21 10:24	EPA 7470A		MLR	B1D0679
Boron	11000	75	ug/L	5.00	04/16/21 14:52	EPA 6010D		MLR	B1D0837
Lithium	20	20	ug/L	2.00	04/21/21 16:28	EPA 6010D	X	MLR	B1D0590
Molybdenum	ND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

Sample Number 1040743-03
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 1040743-04
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



Santee Cooper
1 Riverwood Dr.
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Project: Ground Water
Work Order: 1040743
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 1040743-06
Sample Description AF00634 CGYP-5 collected on 04/07/21 15:09

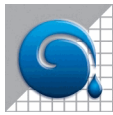
Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	04/16/21 10:49	EPA 7470A		MLR	B1D0679
Boron	3100	75	ug/L	5.00	04/16/21 15:03	EPA 6010D		MLR	B1D0837
Lithium	60	10	ug/L	1.00	04/16/21 16:36	EPA 6010D		MLR	B1D0590
Molybdenum	ND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

Sample Number 1040743-07
Sample Description AF00635 CGYP-6 collected on 04/07/21 16:02

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

Sample Number 1040743-08
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
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Moncks Corner, SC 29461

Project: Ground Water
Work Order: 1040743
Reported: 04/22/21 14:29

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

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

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 1040743-11
Sample Description AF00694 WLF-A2-6 DUP collected on 04/08/21 15:32

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 1040743-12
Sample Description 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



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Project: Ground Water
Work Order: 1040743
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
1 Riverwood Dr.
Moncks Corner, SC 29461

Project: Ground Water
Work Order: 1040743
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
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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

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

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

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

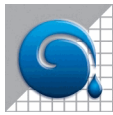
Lithium	412	10	ug/L	250	126	114	75-125	2	20	
Molybdenum	310	10	ug/L	250	59	98	75-125	0.9	20	

Post Spike (B1D0590-PS1) Source: 1040743-03

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

Lithium	691	10	ug/L	500	126	113	75-125			
Molybdenum	570	10	ug/L	500	59	102	75-125			

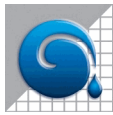


Santee Cooper
1 Riverwood Dr.
Moncks Corner, SC 29461

Project: Ground Water
Work Order: 1040743
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										
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
1 Riverwood Dr.
Moncks Corner, SC 29461

Project: Ground Water
Work Order: 1040743
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
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Batch B1D0679 - EPA 7470A

Post Spike (B1D0679-PS6) Source: 1040743-06

Mercury	3.5		ug/L	4.00	ND	86	80-120			
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Post Spike (B1D0679-PS7) Source: 1040743-07

Mercury	3.6		ug/L	4.00	ND	89	80-120			
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Post Spike (B1D0679-PS8) Source: 1040743-10

Mercury	3.9		ug/L	4.00	ND	98	80-120			
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Post Spike (B1D0679-PS9) Source: 1040743-11

Mercury	3.8		ug/L	4.00	ND	96	80-120			
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Post Spike (B1D0679-PSA) Source: 1040743-12

Mercury	3.7		ug/L	4.00	ND	91	80-120			
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Post Spike (B1D0679-PSB) Source: 1040743-13

Mercury	3.8		ug/L	4.00	ND	93	80-120			
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Batch B1D0837 - EPA 3005A

Blank (B1D0837-BLK1)

Boron	ND	15	ug/L							
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LCS (B1D0837-BS1)

Boron	210	15	ug/L	250		82	80-120			
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LCS Dup (B1D0837-BSD1)

Boron	240	15	ug/L	250		95	80-120	14	20	
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Matrix Spike (B1D0837-MS1) Source: 1040743-03

Boron	1800	75	ug/L	1250	850	80	75-125			
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Matrix Spike (B1D0837-MS2) Source: 1040743-12

Boron	4600	75	ug/L	1250	3300	105	75-125			
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Santee Cooper
1 Riverwood Dr.
Moncks Corner, SC 29461

Project: Ground Water
Work Order: 1040743
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
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Batch B1D0837 - EPA 3005A

Matrix Spike Dup (B1D0837-MSD1) Source: 1040743-03

Boron	2000	75	ug/L	1250	850	93	75-125	8	20	
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Matrix Spike Dup (B1D0837-MSD2) Source: 1040743-12

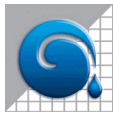
Boron	4600	75	ug/L	1250	3300	102	75-125	0.9	20	
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Post Spike (B1D0837-PS1) Source: 1040743-03

Boron	3200	75	ug/L	2500	850	95	75-125			
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Post Spike (B1D0837-PS2) Source: 1040743-12

Boron	5900	75	ug/L	2500	3300	105	75-125			
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Santee Cooper
1 Riverwood Dr.
Moncks Corner, SC 29461

Project: Ground Water
Work Order: 1040743
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
1 Riverwood Dr.
Moncks Corner, SC 29461

Project: Ground Water
Work Order: 1040743
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
- X Result subject to sample matrix interference. Reporting limit has been adjusted where applicable.

Chain of Custody

1040743



Customer Email/Report Recipient: LCWILLIA@santecooper.com Date Results Needed by: Project/Task/Unit #: 121567 / JM02.09.G01 / 36500 Rerun request for any flagged QC Yes No

1040743

Analysis 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)	Comments	B	Li	Mo	Hg
AF00633	CGYP-4	4/7/21	1106	DW/MG	1	P	G	GW	2	B, Li, Mo - 6010 -01	X	X	X	X
AF00629	CGYP-1		1216							Hg 7470A -02				
AF00630	CGYP-2		1316							-03				
AF00631	CGYP-2 DUP		1321							-04				
AF00632	CGYP-3		1420							-05				
AF00634	CGYP-5		1509							-06				
AF00635	CGYP-6		1602							-07				
AF00697	CCMAP-4	4/8/21	1032							-08		X		
AF00698	CCMAP-4 DUP		1037							-09		X		

Relinquished by:	Employee#	Date	Time	Received by:	Employee #	Date	Time
Sibrown	35594	4/12/21	1200	LCW		4/12/21	1200
Foster		4/14/21	0920	Nelson Rose		4/14/21	0920

Sample Receiving (Internal Use Only)
 TEMP (°C): 19.2 Initial:
 Correct pH: Yes No
 Preservative Lot#:
 Date/Time/Init for preservative:

<input type="checkbox"/> METALS (all) <input type="checkbox"/> Ag <input type="checkbox"/> Cu <input type="checkbox"/> Sb <input type="checkbox"/> Al <input type="checkbox"/> Fe <input type="checkbox"/> Se <input type="checkbox"/> As <input type="checkbox"/> K <input type="checkbox"/> Sn <input type="checkbox"/> B <input type="checkbox"/> Li <input type="checkbox"/> Sr <input type="checkbox"/> Ba <input type="checkbox"/> Mg <input type="checkbox"/> Ti <input type="checkbox"/> Be <input type="checkbox"/> Mn <input type="checkbox"/> Tl <input type="checkbox"/> Ca <input type="checkbox"/> Mo <input type="checkbox"/> V <input type="checkbox"/> Cd <input type="checkbox"/> Na <input type="checkbox"/> Zn <input type="checkbox"/> Co <input type="checkbox"/> Ni <input type="checkbox"/> Hg <input type="checkbox"/> Cr <input type="checkbox"/> Pb <input type="checkbox"/> CrVI	Nutrients <input type="checkbox"/> TOC <input type="checkbox"/> DOC <input type="checkbox"/> TP TPO4 <input type="checkbox"/> NH3-N <input type="checkbox"/> F <input type="checkbox"/> Cl <input type="checkbox"/> NO2 <input type="checkbox"/> Br <input type="checkbox"/> NO3 <input type="checkbox"/> SO4	MISC. <input type="checkbox"/> BTEX <input type="checkbox"/> Naphthalene <input type="checkbox"/> THM/HAA <input type="checkbox"/> VOC <input type="checkbox"/> Oil & Grease <input type="checkbox"/> E. Coli <input type="checkbox"/> Total Coliform <input type="checkbox"/> pH <input type="checkbox"/> Dissolved As <input type="checkbox"/> Dissolved Fe <input type="checkbox"/> Rad 226 <input type="checkbox"/> Rad 228 <input type="checkbox"/> PCB	Gypsum <input type="checkbox"/> Wallboard Gypsum(all below) <input type="checkbox"/> AIM <input type="checkbox"/> TOC <input type="checkbox"/> Total metals <input type="checkbox"/> Soluble Metals <input type="checkbox"/> Purity (CaSO4) <input type="checkbox"/> % Moisture <input type="checkbox"/> Sulfites <input type="checkbox"/> pH <input type="checkbox"/> Chlorides <input type="checkbox"/> Particle Size <input type="checkbox"/> Sulfur	Coal <input type="checkbox"/> Ultimate <input type="checkbox"/> % Moisture <input type="checkbox"/> Ash <input type="checkbox"/> Sulfur <input type="checkbox"/> BTUs <input type="checkbox"/> Volatile Matter <input type="checkbox"/> CHN Other Tests: <input type="checkbox"/> XRF Scan <input type="checkbox"/> HGI <input type="checkbox"/> Fineness <input type="checkbox"/> Particulate Matter	Flyash <input type="checkbox"/> Ammonia <input type="checkbox"/> LOI <input type="checkbox"/> % Carbon <input type="checkbox"/> Mineral Analysis <input type="checkbox"/> Sieve <input type="checkbox"/> % Moisture NPDES <input type="checkbox"/> Oil & Grease <input type="checkbox"/> As <input type="checkbox"/> TSS	Oil <input type="checkbox"/> Trans. Oil Qual. <input type="checkbox"/> % Moisture <input type="checkbox"/> Color <input type="checkbox"/> Acidity <input type="checkbox"/> Dielectric Strength <input type="checkbox"/> IFT <input type="checkbox"/> Dissolved Gases <input type="checkbox"/> Used Oil <input type="checkbox"/> Flashpoint <input type="checkbox"/> Metals in oil (As, Cd, Cr, Ni, Pb, Hg) <input type="checkbox"/> TX <input type="checkbox"/> GOFER
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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=H2SO4 4-HCl 5=Na2S2O3 6-Other (Specify)

Chain of Custody

1040743



Customer Email/Report Recipient: LCWILLIA@santecooper.com Date Results Needed by: Project/Task/Unit #: 121567 / JM02-09.901 / 36500 Rerun request for any flagged QC Yes No

Analysis 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)	Comments	B	L	Mo	Hg
AF00693	WLF-A2-6	4/8/21	1527	DEW/MG	1	P	G	GW	2	B, Li, Mo 6010	-10	X	X	X
AF00694	WLF-A2-6 DUP		1532							Hg 7470A	-11			
AF00695	WAP-17		1331								-12			
AF00696	WAP-17 DUP		1336								-13			

Relinquished by:	Employee#	Date	Time	Received by:	Employee #	Date	Time
<i>Sjbrown</i>	35594	4/12/21	1200	<i>Fedex</i>		4/12/21	1200
<i>Fedex</i>		4/14/21	0920	<i>Michael Rose</i>		4/14/21	0920

Sample Receiving (Internal Use Only)
 TEMP (°C): 19.2 Initial:
 Correct pH: Yes No
 Preservative Lot#:
 Date/Time/Init for preservative:

<input type="checkbox"/> METALS (all) <input type="checkbox"/> Ag <input type="checkbox"/> Cu <input type="checkbox"/> Sb <input type="checkbox"/> Al <input type="checkbox"/> Fe <input type="checkbox"/> Se <input type="checkbox"/> As <input type="checkbox"/> K <input type="checkbox"/> Sn <input type="checkbox"/> B <input type="checkbox"/> Li <input type="checkbox"/> Sr <input type="checkbox"/> Ba <input type="checkbox"/> Mg <input type="checkbox"/> Ti <input type="checkbox"/> Be <input type="checkbox"/> Mn <input type="checkbox"/> Tl <input type="checkbox"/> Ca <input type="checkbox"/> Mo <input type="checkbox"/> V <input type="checkbox"/> Cd <input type="checkbox"/> Na <input type="checkbox"/> Zn <input type="checkbox"/> Co <input type="checkbox"/> Ni <input type="checkbox"/> Hg <input type="checkbox"/> Cr <input type="checkbox"/> Pb <input type="checkbox"/> CrVI	Nutrients <input type="checkbox"/> TOC <input type="checkbox"/> DOC <input type="checkbox"/> TP/TPO4 <input type="checkbox"/> NH3-N <input type="checkbox"/> F <input type="checkbox"/> Cl <input type="checkbox"/> NO2 <input type="checkbox"/> Br <input type="checkbox"/> NO3 <input type="checkbox"/> SO4	MISC. <input type="checkbox"/> BTEX <input type="checkbox"/> Napthalene <input type="checkbox"/> THM/HAA <input type="checkbox"/> VOC <input type="checkbox"/> Oil & Grease <input type="checkbox"/> E. Coli <input type="checkbox"/> Total Coliform <input type="checkbox"/> pH <input type="checkbox"/> Dissolved As <input type="checkbox"/> Dissolved Fe <input type="checkbox"/> Rad 226 <input type="checkbox"/> Rad 228 <input type="checkbox"/> PCB	Gypsum <input type="checkbox"/> Wallboard Gypsum(all below) <input type="checkbox"/> AIM <input type="checkbox"/> TOC <input type="checkbox"/> Total metals <input type="checkbox"/> Soluble Metals <input type="checkbox"/> Purity (CaSO4) <input type="checkbox"/> % Moisture <input type="checkbox"/> Sulfites <input type="checkbox"/> pH <input type="checkbox"/> Chlorides <input type="checkbox"/> Particle Size <input type="checkbox"/> Sulfur	Coal <input type="checkbox"/> Ultimate <input type="checkbox"/> % Moisture <input type="checkbox"/> Ash <input type="checkbox"/> Sulfur <input type="checkbox"/> BTUs <input type="checkbox"/> Volatile Matter <input type="checkbox"/> CHN Other Tests: <input type="checkbox"/> XRF Scan <input type="checkbox"/> HGI <input type="checkbox"/> Fineness <input type="checkbox"/> Particulate Matter	Flyash <input type="checkbox"/> Ammonia <input type="checkbox"/> LOI <input type="checkbox"/> % Carbon <input type="checkbox"/> Mineral Analysis <input type="checkbox"/> Sieve <input type="checkbox"/> % Moisture NPDES <input type="checkbox"/> Oil & Grease <input type="checkbox"/> As <input type="checkbox"/> TSS	Oil <input type="checkbox"/> Trans. Oil Qual. <input type="checkbox"/> % Moisture <input type="checkbox"/> Color <input type="checkbox"/> Acidity <input type="checkbox"/> Tensile Strength <input type="checkbox"/> IFT <input type="checkbox"/> Dissolved Gases <input type="checkbox"/> Used Oil <input type="checkbox"/> Flashpoint <input type="checkbox"/> Metals in oil (As, Cd, Cr, Ni, Pb, Hg) <input type="checkbox"/> TX <input type="checkbox"/> GOFER
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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=H2SO4 4-HCl 5=Na2S2O3 6-Other (Specify)

Sample Receipt Verification

Client: Santee Cooper Date Received: 4/14/21 Work Order: 1040743

Carrier Name: Client FedEx UPS US Mail Courier Field Services Other: _____

Tracking Number: 804037735696

Receipt Criteria	Y	N	N/A	Comments
Shipping container / cooler intact?	X			Damaged Leaking Other:
Custody seals intact?			X	
COC included with samples?	X			
COC signed when relinquished and received?	X			
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 received?	X			
Samples received within holding time?	X			
Sample volume sufficient for analysis?	X			
VOA vials free of headspace (<6mm bubble)?			X	
Samples cooled? Temp at receipt recorded on COC Temp measured with IR thermometer - SN: 97050067			X	Ice Cold Packs Dry Ice <u>None</u>
Samples requiring pH preservation at proper pH? <small>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.</small>	X			
Samples dechlorinated for parameters requiring chlorine removal at the time of sample collection? <small>Note: Chlorine checked at bench for samples requiring Bacterial, VOA, and HAA analysis.</small>			X	

If in-house preservation used – record Lot #			
HCL		H ₃ PO ₄	
H ₂ SO ₄		NaOH	
HNO ₃		Other	

Comments: _____

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

Non-Conformance issue other than noted above: _____



Laboratory Report

Client	Santee Cooper Linda Williams 1 Riverwood Dr. Moncks Corner, SC 29461	Project:	Ground Water
		Work Order:	1051017
		Received:	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
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



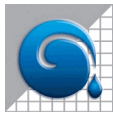
Certificate of Analysis

*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
 Linda Williams
 1 Riverwood Dr.
 Moncks Corner, SC 29461

Project: Ground Water
Work Order: 1051017
Received: 05/19/2021 09:10

Sample Number	Sample Description	Matrix	Sampled	Type
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



Santee Cooper
1 Riverwood Dr.
Moncks Corner, SC 29461

Project: Ground Water
Work Order: 1051017
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	Analized	Method	Flag	Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	05/27/21 11:42	EPA 7470A	S7	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 1051017-02
Sample Description AF03569 CGYP-4 DUP collected on 05/13/21 14:44

Parameter	Result	Reporting Limit	Units	DF	Analized	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 1051017-03
Sample Description AF03570 CGYP-5 collected on 05/13/21 16:00

Parameter	Result	Reporting Limit	Units	DF	Analized	Method	Flag	Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	05/27/21 11:56	EPA 7470A	S7	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 1051017-04
Sample Description AF03571 CGYP-6 collected on 05/13/21 16:55

Parameter	Result	Reporting Limit	Units	DF	Analized	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
1 Riverwood Dr.
Moncks Corner, SC 29461

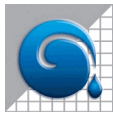
Project: Ground Water
Work Order: 1051017
Reported: 06/01/21 14:19

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
1 Riverwood Dr.
Moncks Corner, SC 29461

Project: Ground Water
Work Order: 1051017
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
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Batch B1E0974 - EPA 3005A

Blank (B1E0974-BLK1)

Boron	ND	15	ug/L							
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LCS (B1E0974-BS1)

Boron	250	15	ug/L	250		98	80-120			
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Matrix Spike (B1E0974-MS1) Source: 1051017-03

Boron	4200	75	ug/L	1250	2900	106	75-125			
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Matrix Spike Dup (B1E0974-MSD1) Source: 1051017-03

Boron	4200	75	ug/L	1250	2900	103	75-125	1	20	
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Post Spike (B1E0974-PS1) Source: 1051017-03

Boron	5500	75	ug/L	2500	2900	106	75-125			
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Batch B1E0975 - EPA 3005A

Blank (B1E0975-BLK1)

Lithium	ND	10	ug/L							
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Molybdenum	ND	10	ug/L							
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LCS (B1E0975-BS1)

Lithium	281	10	ug/L	250		113	80-120			
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Molybdenum	240	10	ug/L	250		97	80-120			
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LCS Dup (B1E0975-BSD1)

Lithium	280	10	ug/L	250		112	80-120	0.5	20	
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Molybdenum	250	10	ug/L	250		98	80-120	1	20	
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Matrix Spike (B1E0975-MS1) Source: 1051017-03

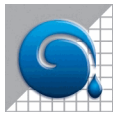
Lithium	362	10	ug/L	250	59	122	75-125			
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Molybdenum	250	10	ug/L	250	ND	98	75-125			
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Post Spike (B1E0975-PS1) Source: 1051017-03

Lithium	0.597		mg/L	0.500	ND	108	75-125			
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Molybdenum	0.49		mg/L	0.500	ND	97	75-125			
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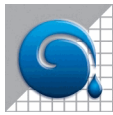


Santee Cooper
1 Riverwood Dr.
Moncks Corner, SC 29461

Project: Ground Water
Work Order: 1051017
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			S7
Post Spike (B1E1218-PS2) Source: 1051017-02										
Mercury	3.1		ug/L	4.00	ND	76	80-120			S7
Post Spike (B1E1218-PS3) Source: 1051017-03										
Mercury	2.9		ug/L	4.00	ND	72	80-120			S7
Post Spike (B1E1218-PS4) Source: 1051017-04										
Mercury	2.9		ug/L	4.00	ND	71	80-120			S7
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
1 Riverwood Dr.
Moncks Corner, SC 29461

Project: Ground Water
Work Order: 1051017
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
1 Riverwood Dr.
Moncks Corner, SC 29461

Project: Ground Water
Work Order: 1051017
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
- S7 Result calculated by Method of Standard Addition due to sample matrix interference and initial spike failures.

Chain of Custody 1051017



Customer Email/Report Recipient: LCWILLIA@santecooper.com Date Results Needed by: Project/Task/Unit #: 121567 / JM02.09. G01 / 36500 Rerun request for any flagged QC Yes No

Analysis Group

Labworks ID # <small>(Internal use only)</small>	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)	Comments		
AF03568	CGYP-4	5/13/21	1437	MDS/BWM	1	P	G	GW	2	-01	X	
AF03569	CGYP-4 DUP		1444							-02		
AF03570	CGYP-5		1600							-03		
AF03571	CGYP-6		1655							-04		
AF03572	WLF-A2-6		1120							-05		
AF03573	WLF-A2-6 DUP		1125							-06		

Relinquished by:	Employee#	Date	Time	Received by:	Employee #	Date	Time
<i>Sjbrown</i>	35594	5/18/21	1500	<i>Feder</i>		5/18/21	1500
<i>Feder</i>		5/19/21	0910	<i>Nathan Rose</i>		5/19/21	0910

Sample Receiving (Internal Use Only)
 TEMP (°C): 21.0 Initial:
 Correct pH: Yes No
 Preservative Lot#:
 Date/Time/Init for preservative:

<p><input type="checkbox"/> METALS (all)</p> <table style="width: 100%;"> <tr><td><input type="checkbox"/> Ag</td><td><input type="checkbox"/> Cu</td><td><input type="checkbox"/> Sb</td></tr> <tr><td><input type="checkbox"/> Al</td><td><input type="checkbox"/> Fe</td><td><input type="checkbox"/> Sc</td></tr> <tr><td><input type="checkbox"/> As</td><td><input type="checkbox"/> K</td><td><input type="checkbox"/> Sn</td></tr> <tr><td><input type="checkbox"/> B</td><td><input type="checkbox"/> Li</td><td><input type="checkbox"/> Sr</td></tr> <tr><td><input type="checkbox"/> Ba</td><td><input type="checkbox"/> Mg</td><td><input type="checkbox"/> Ti</td></tr> <tr><td><input type="checkbox"/> Be</td><td><input type="checkbox"/> Mn</td><td><input type="checkbox"/> Tl</td></tr> <tr><td><input type="checkbox"/> Ca</td><td><input type="checkbox"/> Mo</td><td><input type="checkbox"/> V</td></tr> <tr><td><input type="checkbox"/> Cd</td><td><input type="checkbox"/> Na</td><td><input type="checkbox"/> Zn</td></tr> <tr><td><input type="checkbox"/> Co</td><td><input type="checkbox"/> Ni</td><td><input type="checkbox"/> Hg</td></tr> <tr><td><input type="checkbox"/> Cr</td><td><input type="checkbox"/> Pb</td><td><input type="checkbox"/> CrVI</td></tr> </table>	<input type="checkbox"/> Ag	<input type="checkbox"/> Cu	<input type="checkbox"/> Sb	<input type="checkbox"/> Al	<input type="checkbox"/> Fe	<input type="checkbox"/> Sc	<input type="checkbox"/> As	<input type="checkbox"/> K	<input type="checkbox"/> Sn	<input type="checkbox"/> B	<input type="checkbox"/> Li	<input type="checkbox"/> Sr	<input type="checkbox"/> Ba	<input type="checkbox"/> Mg	<input type="checkbox"/> Ti	<input type="checkbox"/> Be	<input type="checkbox"/> Mn	<input type="checkbox"/> Tl	<input type="checkbox"/> Ca	<input type="checkbox"/> Mo	<input type="checkbox"/> V	<input type="checkbox"/> Cd	<input type="checkbox"/> Na	<input type="checkbox"/> Zn	<input type="checkbox"/> Co	<input type="checkbox"/> Ni	<input type="checkbox"/> Hg	<input type="checkbox"/> Cr	<input type="checkbox"/> Pb	<input type="checkbox"/> CrVI	<p>Nutrients</p> <p><input type="checkbox"/> TOC <input type="checkbox"/> DOC <input type="checkbox"/> TP/TPO <input type="checkbox"/> NH3-N <input type="checkbox"/> P <input type="checkbox"/> Cl <input type="checkbox"/> NO2 <input type="checkbox"/> Br <input type="checkbox"/> NO3 <input type="checkbox"/> SO4</p>	<p>MISC.</p> <p><input type="checkbox"/> BTEX <input type="checkbox"/> Naphthalene <input type="checkbox"/> THM/HAA <input type="checkbox"/> VOC <input type="checkbox"/> Oil & Grease <input type="checkbox"/> E. Coli <input type="checkbox"/> Total Coliform <input type="checkbox"/> pH <input type="checkbox"/> Dissolved As <input type="checkbox"/> Dissolved Fe <input type="checkbox"/> Rad 226 <input type="checkbox"/> Rad 228 <input type="checkbox"/> PCB</p>	<p>Gypsum</p> <p><input type="checkbox"/> Wallboard Gypsum (all below) <input type="checkbox"/> ATM <input type="checkbox"/> TOC <input type="checkbox"/> Total metals <input type="checkbox"/> Soluble Metals <input type="checkbox"/> Purity (CaSO4) <input type="checkbox"/> % Moisture <input type="checkbox"/> Sulfates <input type="checkbox"/> pH <input type="checkbox"/> Chlorides <input type="checkbox"/> Particle Size <input type="checkbox"/> Sulfur</p>	<p>Coal</p> <p><input type="checkbox"/> Ultimate <input type="checkbox"/> % Moisture <input type="checkbox"/> Ash <input type="checkbox"/> Sulfur <input type="checkbox"/> BTUs <input type="checkbox"/> Volatile Matter <input type="checkbox"/> CHN Other Tests: <input type="checkbox"/> XRF Scan <input type="checkbox"/> HGI <input type="checkbox"/> Fineness <input type="checkbox"/> Particulate Matter</p>	<p>Flyash</p> <p><input type="checkbox"/> Ammonia <input type="checkbox"/> LOI <input type="checkbox"/> % Carbon <input type="checkbox"/> Mineral Analysis <input type="checkbox"/> Sieve <input type="checkbox"/> % Moisture NPDES <input type="checkbox"/> Oil & Grease <input type="checkbox"/> As <input type="checkbox"/> HSS</p>	<p>Oil</p> <p><input type="checkbox"/> Trans. Oil Qual. <input type="checkbox"/> % Moisture <input type="checkbox"/> Color <input type="checkbox"/> Acidity <input type="checkbox"/> Dielectric Strength <input type="checkbox"/> TSP <input type="checkbox"/> Dissolved Gases <input type="checkbox"/> Used Oil <input type="checkbox"/> Flashpoint <input type="checkbox"/> Metals in oil (As, Cd, Cr, Ni, Pb, Hg) <input type="checkbox"/> TPH <input type="checkbox"/> LCOHER</p>
<input type="checkbox"/> Ag	<input type="checkbox"/> Cu	<input type="checkbox"/> Sb																																		
<input type="checkbox"/> Al	<input type="checkbox"/> Fe	<input type="checkbox"/> Sc																																		
<input type="checkbox"/> As	<input type="checkbox"/> K	<input type="checkbox"/> Sn																																		
<input type="checkbox"/> B	<input type="checkbox"/> Li	<input type="checkbox"/> Sr																																		
<input type="checkbox"/> Ba	<input type="checkbox"/> Mg	<input type="checkbox"/> Ti																																		
<input type="checkbox"/> Be	<input type="checkbox"/> Mn	<input type="checkbox"/> Tl																																		
<input type="checkbox"/> Ca	<input type="checkbox"/> Mo	<input type="checkbox"/> V																																		
<input type="checkbox"/> Cd	<input type="checkbox"/> Na	<input type="checkbox"/> Zn																																		
<input type="checkbox"/> Co	<input type="checkbox"/> Ni	<input type="checkbox"/> Hg																																		
<input type="checkbox"/> Cr	<input type="checkbox"/> Pb	<input type="checkbox"/> CrVI																																		

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)

Sample Receipt Verification

Client: Santee Cooper Date Received: 05/19/21 Work Order: 1051017

Carrier Name: Client FedEx UPS US Mail Courier Field Services Other: _____

Tracking Number: 815367915147

Receipt Criteria	Y	N	N	Comments
	e	o	A	
	s			
Shipping container / cooler intact?	X			Damaged Leaking Other:
Custody seals intact?			X	
COC included with samples?	X			
COC signed when relinquished and received?	X			
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 received?	X			
Samples received within holding time?	X			
Sample volume sufficient for analysis?	X			
VOA vials free of headspace (<6mm bubble)?			X	
Samples cooled? <small>Temp at receipt recorded on COC Temp measured with IR thermometer - SN: 97050067</small>	X			<u>Ice</u> Cold Packs Dry Ice None
Samples requiring pH preservation at proper pH? <small>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.</small>	X			
Samples dechlorinated for parameters requiring chlorine removal at the time of sample collection? <small>Note: Chlorine checked at bench for samples requiring Bacterial, VOA, and HAA analysis.</small>			X	

If in-house preservation used – record Lot #			
HCL		H ₃ PO ₄	
H ₂ SO ₄		NaOH	
HNO ₃		Other	

Comments:

Were non-conformance issues noted at sample receipt? Yes or No
 Non-Conformance issue other than noted above:



Laboratory Report

Client	Santee Cooper Linda Williams 1 Riverwood Dr. Moncks Corner, SC 29461	Project:	Ground Water
		Work Order:	1070855
		Received:	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 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
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
an employee-owned company



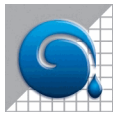
Certificate of Analysis

*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
 Linda Williams
 1 Riverwood Dr.
 Moncks Corner, SC 29461

Project: Ground Water
Work Order: 1070855
Received: 07/15/2021 10:00

Sample Number	Sample Description	Matrix	Sampled	Type
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
1 Riverwood Dr.
Moncks Corner, SC 29461

Project: Ground Water
Work Order: 1070855
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 1070855-02
Sample Description AF07268 CGYP-2 collected on 07/07/21 11:28

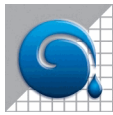
Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	07/16/21 15:06	EPA 7470A		NAR	B1G0792
Boron	1300	75	ug/L	5.00	07/14/21 17:20	EPA 6010D		MLR	B1G0597
Lithium	15	10	ug/L	1.00	07/14/21 20:28	EPA 6010D		MLR	B1G0595
Molybdenum	ND	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 1070855-04
Sample Description AF07270 CGYP-3 collected on 07/07/21 13:38

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



Santee Cooper
1 Riverwood Dr.
Moncks Corner, SC 29461

Project: Ground Water
Work Order: 1070855
Reported: 07/20/21 12:22

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

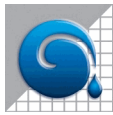
Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	07/16/21 15:26	EPA 7470A		NAR	B1G0792
Boron	7700	75	ug/L	5.00	07/14/21 17:31	EPA 6010D		MLR	B1G0597
Lithium	58	10	ug/L	1.00	07/14/21 20:40	EPA 6010D		MLR	B1G0595
Molybdenum	ND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

Sample Number 1070855-06
Sample Description 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
Sample Description AF07273 CGYP-6 collected on 07/08/21 12:21

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
1 Riverwood Dr.
Moncks Corner, SC 29461

Project: Ground Water
Work Order: 1070855
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
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Batch B1G0595 - EPA 200.7 Mod

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

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

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

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 Mod

Blank (B1G0597-BLK1)

Boron	ND	15	ug/L							
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LCS (B1G0597-BS1)

Boron	250	15	ug/L	250		99	80-120			
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LCS Dup (B1G0597-BSD1)

Boron	250	15	ug/L	250		100	80-120	0.6	20	
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Santee Cooper
1 Riverwood Dr.
Moncks Corner, SC 29461

Project: Ground Water
Work Order: 1070855
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
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Batch B1G0597 - EPA 200.7 Mod

Matrix Spike (B1G0597-MS1) Source: 1070855-06

Boron	4100	75	ug/L	1250	2900	97	75-125			
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Matrix Spike Dup (B1G0597-MSD1) Source: 1070855-06

Boron	4100	75	ug/L	1250	2900	96	75-125	0.06	20	
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Post Spike (B1G0597-PS1) Source: 1070855-06

Boron	5400	75	ug/L	2500	2900	102	75-125			
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Batch B1G0792 - EPA 7470A

Blank (B1G0792-BLK1)

Mercury	ND	0.20	ug/L							
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LCS (B1G0792-BS1)

Mercury	4.8	0.20	ug/L	5.00		96	80-120			
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LCS Dup (B1G0792-BSD1)

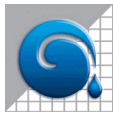
Mercury	4.9	0.20	ug/L	5.00		97	80-120	1	20	
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Matrix Spike (B1G0792-MS1) Source: 1070855-02

Mercury	4.2	0.20	ug/L	5.00	ND	85	75-125			
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Post Spike (B1G0792-PS1) Source: 1070855-02

Mercury	3.2		ug/L	4.00	ND	80	80-120			
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Santee Cooper
1 Riverwood Dr.
Moncks Corner, SC 29461

Project: Ground Water
Work Order: 1070855
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
1 Riverwood Dr.
Moncks Corner, SC 29461

Project: Ground Water
Work Order: 1070855
Reported: 07/20/21 12:22

Data Qualifiers and Definitions

ND Analyte NOT DETECTED at or above the reporting limit
NR Not reported
RPD Relative Percent Difference



Chain of Custody

Customer Email/Report Recipient: LCWILLIA@santecooper.com Date Results Needed by: Project/Task/Unit #: 121567 / JMO2.09.GP1 / 36500 Rerun request for any flagged QC: Yes No

1070855

Analysis 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)	Comments • Method # • Reporting limit • Misc. sample info • Any other notes	B, L, M, H, g			
AF07267	CGYP-1	7/7/21	1031	BRT/CWS	1	P	G	GW	2		X			
AF07268	CGYP-2		1128											
AF07269	CGYP-2 DUP		1133											
AF07270	CGYP-3		1338											
AF07291	CGYP-4	7/8/21	1026	MDS/BRT							X			
AF07272	CGYP-5		1124											
AF07273	CGYP-6		1221											

Relinquished by:	Employee#	Date	Time	Received by:	Employee #	Date	Time
<u>SJBrown</u>	<u>35594</u>	<u>7/13/21</u>	<u>1500</u>				
Relinquished by:	Employee#	Date	Time	Received by:	Employee #	Date	Time
Relinquished by:	Employee#	Date	Time	Received by:	Employee #	Date	Time

Sample Receiving (Internal Use Only)
TEMP (°C): _____ Initial: _____
Correct pH: Yes No
Preservative Lot#: _____
Date/Time/Init for preservative: _____

<input type="checkbox"/> METALS (all) <input type="checkbox"/> Ag <input type="checkbox"/> Cu <input type="checkbox"/> Sb <input type="checkbox"/> Al <input type="checkbox"/> Fe <input type="checkbox"/> Se <input type="checkbox"/> As <input type="checkbox"/> K <input type="checkbox"/> Sn <input type="checkbox"/> B <input type="checkbox"/> Li <input type="checkbox"/> Sr <input type="checkbox"/> Ba <input type="checkbox"/> Mg <input type="checkbox"/> Ti <input type="checkbox"/> Be <input type="checkbox"/> Mn <input type="checkbox"/> Tl <input type="checkbox"/> Ca <input type="checkbox"/> Mo <input type="checkbox"/> V <input type="checkbox"/> Cd <input type="checkbox"/> Na <input type="checkbox"/> Zn <input type="checkbox"/> Co <input type="checkbox"/> Ni <input type="checkbox"/> Hg <input type="checkbox"/> Cr <input type="checkbox"/> Pb <input type="checkbox"/> CrVI	Nutrients <input type="checkbox"/> TOC <input type="checkbox"/> DOC <input type="checkbox"/> TP TPO4 <input type="checkbox"/> NH3-N <input type="checkbox"/> F <input type="checkbox"/> Cl <input type="checkbox"/> NO2 <input type="checkbox"/> Br <input type="checkbox"/> NO3 <input type="checkbox"/> SO4	MISC. <input type="checkbox"/> BTEX <input type="checkbox"/> Napthalene <input type="checkbox"/> THM/HAA <input type="checkbox"/> VOC <input type="checkbox"/> Oil & Grease <input type="checkbox"/> E. Coli <input type="checkbox"/> Total Coliform <input type="checkbox"/> pH <input type="checkbox"/> Dissolved As <input type="checkbox"/> Dissolved Fe <input type="checkbox"/> Rad 226 <input type="checkbox"/> Rad 228 <input type="checkbox"/> PCB	Gypsum <input type="checkbox"/> Wallboard Gypsum(all below) <input type="checkbox"/> AIM <input type="checkbox"/> TOC <input type="checkbox"/> Total metals <input type="checkbox"/> Soluble Metals <input type="checkbox"/> Purity (CaSO4) <input type="checkbox"/> % Moisture <input type="checkbox"/> Sulfites <input type="checkbox"/> pH <input type="checkbox"/> Chlorides <input type="checkbox"/> Particle Size <input type="checkbox"/> Sulfur	Coal <input type="checkbox"/> Ultimate <input type="checkbox"/> % Moisture <input type="checkbox"/> Ash <input type="checkbox"/> Sulfur <input type="checkbox"/> BTUs <input type="checkbox"/> Volatile Matter <input type="checkbox"/> CHN Other Tests: <input type="checkbox"/> XRF Scan <input type="checkbox"/> HGI <input type="checkbox"/> Fineness <input type="checkbox"/> Particulate Matter	Flyash <input type="checkbox"/> Ammonia <input type="checkbox"/> LOI <input type="checkbox"/> % Carbon <input type="checkbox"/> Mineral Analysis <input type="checkbox"/> Sieve <input type="checkbox"/> % Moisture NPDES <input type="checkbox"/> Oil & Grease <input type="checkbox"/> As <input type="checkbox"/> TSS	Oil <input type="checkbox"/> Trans. Oil Qual. <input type="checkbox"/> % Moisture <input type="checkbox"/> Color <input type="checkbox"/> Acidity <input type="checkbox"/> Dielectric Strength <input type="checkbox"/> IFT <input type="checkbox"/> Dissolved Gases <input type="checkbox"/> Used Oil <input type="checkbox"/> Flashpoint <input type="checkbox"/> Metals in oil (As, Cd, Cr, Ni, Pb, Hg) <input type="checkbox"/> TS <input type="checkbox"/> GOFER
--	--	---	--	---	--	--

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)

Sample Receipt Verification

Client: Santee Cooper Date Received: 07/13/2021 Work Order: 1070855

Carrier Name: Client FedEx UPS US Mail Courier Field Services Other: _____

Tracking Number: 815367915272

Receipt Criteria	Y	N	N/A	Comments
Shipping container / cooler intact?	X			Damaged Leaking Other:
Custody seals intact?			X	
COC included with samples?	X			
COC signed when relinquished and received?	X			
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 received?	X			
Samples received within holding time?	X			
Sample volume sufficient for analysis?	X			
VOA vials free of headspace (<6mm bubble)?			X	
Samples cooled? Temp at receipt recorded on COC Temp measured with IR thermometer - SN: 97050067	X			<u>Ice</u> 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			

If in-house preservation used – record Lot #			
HCL		H ₃ PO ₄	
H ₂ SO ₄		NaOH	
HNO ₃	P104104	Other	

Comments:

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

Non-Conformance issue other than noted above:



Laboratory Report

Client	Santee Cooper Linda Williams 1 Riverwood Dr. Moncks Corner, SC 29461	Project:	Ground Water
		Work Order:	1090593
		Received:	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
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



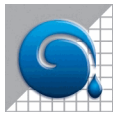
Certificate of Analysis

*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
 Linda Williams
 1 Riverwood Dr.
 Moncks Corner, SC 29461

Project: Ground Water
Work Order: 1090593
Received: 09/09/2021 10:30

Sample Number	Sample Description	Matrix	Sampled	Type
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



Santee Cooper
1 Riverwood Dr.
Moncks Corner, SC 29461

Project: Ground Water
Work Order: 1090593
Reported: 09/24/21 14:05

Sample Data

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

Parameter	Result	Reporting Limit	Units	DF	Analized	Method	Flag	Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	09/16/21 10:10	EPA 7470A	S7	ICP	B110534
Boron	3200	15	ug/L	1.00	09/10/21 19:43	EPA 6010D		MTH	B110438
Lithium	62	10	ug/L	1.00	09/10/21 19:43	EPA 6010D		MTH	B110438
Molybdenum	ND	10	ug/L	1.00	09/10/21 19:43	EPA 6010D		MTH	B110438

Sample Number 1090593-02
Sample Description AF13776 CGYP-6 collected on 08/31/21 11:02

Parameter	Result	Reporting Limit	Units	DF	Analized	Method	Flag	Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	09/16/21 10:32	EPA 7470A	S7	ICP	B110534
Boron	6900	75	ug/L	5.00	09/10/21 20:13	EPA 6010D		MTH	B110438
Lithium	130	10	ug/L	1.00	09/10/21 20:48	EPA 6010D		MTH	B110438
Molybdenum	ND	10	ug/L	1.00	09/10/21 20:48	EPA 6010D		MTH	B110438

Sample Number 1090593-03
Sample Description AF13777 WLF-A2-6 collected on 09/01/21 12:40

Parameter	Result	Reporting Limit	Units	DF	Analized	Method	Flag	Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	09/16/21 09:53	EPA 7470A		ICP	B110534
Boron	370	40	ug/L	1.00	09/10/21 20:40	EPA 6010D		MTH	B110438
Lithium	41	10	ug/L	1.00	09/10/21 20:40	EPA 6010D		MTH	B110438
Molybdenum	ND	10	ug/L	1.00	09/10/21 20:40	EPA 6010D		MTH	B110438

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

Parameter	Result	Reporting Limit	Units	DF	Analized	Method	Flag	Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	09/16/21 10:04	EPA 7470A		ICP	B110534
Boron	380	40	ug/L	1.00	09/10/21 20:44	EPA 6010D		MTH	B110438
Lithium	43	10	ug/L	1.00	09/10/21 20:44	EPA 6010D		MTH	B110438
Molybdenum	ND	10	ug/L	1.00	09/10/21 20:44	EPA 6010D		MTH	B110438



Santee Cooper
1 Riverwood Dr.
Moncks Corner, SC 29461

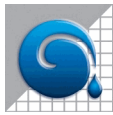
Project: Ground Water
Work Order: 1090593
Reported: 09/24/21 14:05

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	S7	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	S7	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
1 Riverwood Dr.
Moncks Corner, SC 29461

Project: Ground Water
Work Order: 1090593
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
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Batch B110438 - EPA 3005A

Blank (B110438-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 (B110438-DUP1)

Source: 1090593-01

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 (B110438-MS1)

Source: 1090593-01

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 (B110438-PS1)

Source: 1090593-01

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 B110534 - EPA 7470A

Blank (B110534-BLK1)

Mercury	ND	0.20	ug/L							
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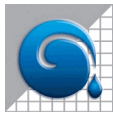
LCS (B110534-BS1)

Mercury	4.9	0.20	ug/L	5.00		97	80-120			
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Matrix Spike (B110534-MS1)

Source: 1090593-03

Mercury	5.0	0.20	ug/L	5.00	ND	99	75-125			
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Santee Cooper
1 Riverwood Dr.
Moncks Corner, SC 29461

Project: Ground Water
Work Order: 1090593
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
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Batch B110534 - EPA 7470A

Matrix Spike Dup (B110534-MSD1) Source: 1090593-03

Mercury	4.9	0.20	ug/L	5.00	ND	98	75-125	1	20	
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Post Spike (B110534-PS1) Source: 1090593-03

Mercury	3.9		ug/L	3.75	ND	103	80-120			
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Post Spike (B110534-PS2) Source: 1090593-04

Mercury	3.9		ug/L	3.75	ND	104	80-120			
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Post Spike (B110534-PS3) Source: 1090593-01

Mercury	3.7		ug/L	3.75	ND	98	80-120			
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Post Spike (B110534-PS4) Source: 1090593-02

Mercury	3.6		ug/L	3.75	ND	94	80-120			
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Post Spike (B110534-PS5) Source: 1090593-05

Mercury	3.6		ug/L	3.75	ND	96	80-120			
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Post Spike (B110534-PS6) Source: 1090593-06

Mercury	3.5		ug/L	3.75	ND	93	80-120			
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Santee Cooper
1 Riverwood Dr.
Moncks Corner, SC 29461

Project: Ground Water
Work Order: 1090593
Reported: 09/24/21 14:05

Sample Preparation Data

Parameter	Batch	Sample ID	Prepared	Analyst
EPA 3005A ICP Digestion				
EPA 3005A	B110438	1090593-01	09/10/2021 11:29	CAL
EPA 3005A	B110438	1090593-02	09/10/2021 11:29	CAL
EPA 3005A	B110438	1090593-03	09/10/2021 11:29	CAL
EPA 3005A	B110438	1090593-04	09/10/2021 11:29	CAL
EPA 3005A	B110438	1090593-05	09/10/2021 11:29	CAL
EPA 3005A	B110438	1090593-06	09/10/2021 11:29	CAL
EPA 7470A Mercury Digestion				
EPA 7470A	B110534	1090593-01	09/13/2021 12:00	NAR
EPA 7470A	B110534	1090593-02	09/13/2021 12:00	NAR
EPA 7470A	B110534	1090593-03	09/13/2021 12:00	NAR
EPA 7470A	B110534	1090593-04	09/13/2021 12:00	NAR
EPA 7470A	B110534	1090593-05	09/13/2021 12:00	NAR
EPA 7470A	B110534	1090593-06	09/13/2021 12:00	NAR



Santee Cooper
1 Riverwood Dr.
Moncks Corner, SC 29461

Project: Ground Water
Work Order: 1090593
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
- S7 Result calculated by Method of Standard Addition due to sample matrix interference and initial spike failures.



Chain of Custody

Customer Email/Report Recipient: LCWILLIA@santecooper.com Date Results Needed by: Project/Task/Unit #: 121567 / JM02.09.GP1 / 36500 Rerun request for any flagged QC Yes No

10905413

Analysis 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)	Comments	B, Li, Mo, Hg
AF13775	CGYP-5	8/31/21	1001	DEW/ ML	1	P	G	GW	2	• Method # • Reporting limit • Misc. sample info • Any other notes	X
AF13776	CGYP-6	↓	1102	↓	↓	↓	↓	↓	↓		
AF13777	WLF-A2-6	9/1/21	1240	↓	↓	↓	↓	↓	↓		
AF13778	WLF-A2-6 DUP	↓	1245	↓	↓	↓	↓	↓	↓		
AF13773	CGYP-4	↓	0904	↓	↓	↓	↓	↓	↓		
AF13774	CGYP-4 DUP	↓	0909	↓	↓	↓	↓	↓	↓		

Relinquished by:	Employee#	Date	Time	Received by:	Employee #	Date	Time
<u>Sibrown</u>	<u>35594</u>	<u>9/8/21</u>	<u>1500</u>	<u>FedEx</u>			
<u>FedEx</u>		<u>9-9-21</u>	<u>1030</u>	<u>LCW</u>		<u>9-9-21</u>	<u>1030</u>

Sample Receiving (Internal Use Only)
 TEMP (°C): 23.2 Initial:
 Correct pH: Yes No
 Preservative Lot#:
 Date/Time/Init for preservative:

<input type="checkbox"/> METALS (all) <input type="checkbox"/> Ag <input type="checkbox"/> Cu <input type="checkbox"/> Sb <input type="checkbox"/> Al <input type="checkbox"/> Fe <input type="checkbox"/> Se <input type="checkbox"/> As <input type="checkbox"/> K <input type="checkbox"/> Sn <input type="checkbox"/> B <input type="checkbox"/> Li <input type="checkbox"/> Sr <input type="checkbox"/> Ba <input type="checkbox"/> Mg <input type="checkbox"/> Ti <input type="checkbox"/> Be <input type="checkbox"/> Mn <input type="checkbox"/> Tl <input type="checkbox"/> Ca <input type="checkbox"/> Mo <input type="checkbox"/> V <input type="checkbox"/> Cd <input type="checkbox"/> Na <input type="checkbox"/> Zn <input type="checkbox"/> Co <input type="checkbox"/> Ni <input type="checkbox"/> Hg <input type="checkbox"/> Cr <input type="checkbox"/> Pb <input type="checkbox"/> CrVI	Nutrients <input type="checkbox"/> TOC <input type="checkbox"/> DOC <input type="checkbox"/> TP/TPO4 <input type="checkbox"/> NH3-N <input type="checkbox"/> F <input type="checkbox"/> Cl <input type="checkbox"/> NO2 <input type="checkbox"/> Br <input type="checkbox"/> NO3 <input type="checkbox"/> SO4	MISC. <input type="checkbox"/> BTEX <input type="checkbox"/> Napthalene <input type="checkbox"/> THM/HAA <input type="checkbox"/> VOC <input type="checkbox"/> Oil & Grease <input type="checkbox"/> E. Coli <input type="checkbox"/> Total Coliform <input type="checkbox"/> pH <input type="checkbox"/> Dissolved As <input type="checkbox"/> Dissolved Fe <input type="checkbox"/> Rad 226 <input type="checkbox"/> Rad 228 <input type="checkbox"/> PCB	Gypsum <input type="checkbox"/> Wallboard Gypsum(all below) <input type="checkbox"/> AIM <input type="checkbox"/> TOC <input type="checkbox"/> Total metals <input type="checkbox"/> Soluble Metals <input type="checkbox"/> Purity (CaSO4) <input type="checkbox"/> % Moisture <input type="checkbox"/> Sulfites <input type="checkbox"/> pH <input type="checkbox"/> Chlorides <input type="checkbox"/> Particle Size <input type="checkbox"/> Sulfur	Coal <input type="checkbox"/> Ultimate <input type="checkbox"/> % Moisture <input type="checkbox"/> Ash <input type="checkbox"/> Sulfur <input type="checkbox"/> BTUs <input type="checkbox"/> Volatile Matter <input type="checkbox"/> CHN Other Tests: <input type="checkbox"/> XRF Scan <input type="checkbox"/> HGI <input type="checkbox"/> Fineness <input type="checkbox"/> Particulate Matter	Flyash <input type="checkbox"/> Ammonia <input type="checkbox"/> LOI <input type="checkbox"/> % Carbon <input type="checkbox"/> Mineral Analysis <input type="checkbox"/> Sieve <input type="checkbox"/> % Moisture NPDES <input type="checkbox"/> Oil & Grease <input type="checkbox"/> As <input type="checkbox"/> TSS	Oil Trans. Oil Qual. <input type="checkbox"/> %Moisture <input type="checkbox"/> Color <input type="checkbox"/> Acidity <input type="checkbox"/> Dielectric Strength <input type="checkbox"/> IFT <input type="checkbox"/> Dissolved Gases Used Oil <input type="checkbox"/> Flashpoint <input type="checkbox"/> Metals in oil (As, Cd, Cr, Ni, Pb, Hg) <input type="checkbox"/> 1X <input type="checkbox"/> GOFER
--	--	---	--	---	---	---

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)

Sample Receipt Verification

Client: Santee Cooper Date Received: 09/09/2021 Work Order: 1090593

Carrier Name: Client FedEx UPS US Mail Courier Field Services Other: _____
 Tracking Number: 815367915467

Receipt Criteria	Y	N	N	Comments
	e	o	A	
	s			
Shipping container / cooler intact?	X			Damaged Leaking Other:
Custody seals intact?			X	
COC included with samples?	X			
COC signed when relinquished and received?	X			
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 received?	X			
Samples received within holding time?	X			
Sample volume sufficient for analysis?	X			
VOA vials free of headspace (<6mm bubble)?			X	
Samples cooled? <small>Temp at receipt recorded on COC Temp measured with IR thermometer - SN: 97050067</small>	X			Ice Cold Packs Dry Ice None
Samples requiring pH preservation at proper pH? <small>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.</small>	X			
Samples dechlorinated for parameters requiring chlorine removal at the time of sample collection? <small>Note: Chlorine checked at bench for samples requiring Bacterial, VOA, and HAA analysis.</small>			X	

If in-house preservation used – record Lot #			
HCL		H ₃ PO ₄	
H ₂ SO ₄		NaOH	
HNO ₃		Other	

Comments: _____

Were non-conformance issues noted at sample receipt? Yes or No
 Non-Conformance issue other than noted above: _____



Laboratory Report

Client	Santee Cooper Linda Williams 1 Riverwood Dr. Moncks Corner, SC 29461	Project:	Ground Water
		Work Order:	1091488
		Received:	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 Restivo
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

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an employee-owned company



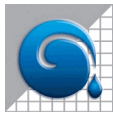
Certificate of Analysis

*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
 Linda Williams
 1 Riverwood Dr.
 Moncks Corner, SC 29461

Project: Ground Water
Work Order: 1091488
Received: 09/30/2021 09:50

Sample Number	Sample Description	Matrix	Sampled	Type
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



Santee Cooper
1 Riverwood Dr.
Moncks Corner, SC 29461

Project: Ground Water
Work Order: 1091488
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 1091488-02
Sample Description AF15788 CGYP-4 Dup collected on 09/27/21 09:43

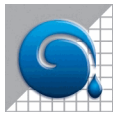
Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	10/06/21 11:21	EPA 7470A		NAR	B1J0187
Boron	8200	75	ug/L	5.00	10/04/21 16:29	EPA 6010D		MTH	B1J0040
Lithium	67	10	ug/L	1.00	10/04/21 17:12	EPA 6010D		MTH	B1J0040
Molybdenum	ND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

Sample Number 1091488-03
Sample Description AF15789 CGYP-5 collected on 09/27/21 11:17

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 1091488-04
Sample Description 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



Santee Cooper
1 Riverwood Dr.
Moncks Corner, SC 29461

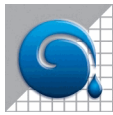
Project: Ground Water
Work Order: 1091488
Reported: 10/07/21 14:09

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

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
1 Riverwood Dr.
Moncks Corner, SC 29461

Project: Ground Water
Work Order: 1091488
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
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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			
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Matrix Spike Dup (B1J0040-MSD1)

Source: 1091488-05

Lithium	562	10	ug/L	500	31	106	75-125	1	20	
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Post Spike (B1J0040-PS1)

Source: 1091488-05

Lithium	561	10	ug/L	500	31	106	75-125			
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Batch B1J0187 - EPA 7470A

Blank (B1J0187-BLK1)

Mercury	ND	0.20	ug/L							
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LCS (B1J0187-BS1)

Mercury	5.0	0.20	ug/L	5.00		100	80-120			
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Matrix Spike (B1J0187-MS1)

Source: 1091488-06

Mercury	4.9	0.20	ug/L	5.00	ND	98	75-125			
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Matrix Spike Dup (B1J0187-MSD1)

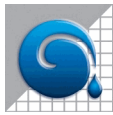
Source: 1091488-06

Mercury	5.0	0.20	ug/L	5.00	ND	101	75-125	3	20	
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Post Spike (B1J0187-PS1)

Source: 1091488-06

Mercury	3.9		ug/L	4.00	ND	97	80-120			
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Santee Cooper
1 Riverwood Dr.
Moncks Corner, SC 29461

Project: Ground Water
Work Order: 1091488
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
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Batch B1J0193 - EPA 3005A

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

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

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
1 Riverwood Dr.
Moncks Corner, SC 29461

Project: Ground Water
Work Order: 1091488
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
1 Riverwood Dr.
Moncks Corner, SC 29461

Project: Ground Water
Work Order: 1091488
Reported: 10/07/21 14:09

Data Qualifiers and Definitions

ND Analyte NOT DETECTED at or above the reporting limit
NR Not reported
RPD Relative Percent Difference



Chain of Custody

1091488

Customer Email/Report Recipient: LCWILLIA@santecooper.com Date Results Needed by: Project/Task/Unit #: 121567 / JMO2-09.G01 / 36500 Rerun request for any flagged QC: Yes No

Analysis 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)	Comments	B, Lj, Mo, Hg
AF15787	CGYP-4	9/27/21	0938	DWY/ ML	1	P	G	GW	2	-01	X
AF15788	CGYP-4 DUP		0943							-02	
AF15789	CGYP-5		1117							-03	
AF15790	CGYP-6		1232							-04	
AF15791	WLF-A2-6	9/28/21	1021							-05	
AF15792	WLF-A2-6 DUP		1026							-06	
										Tracking: 8167 0204 2076	

Relinquished by:	Employee#	Date	Time	Received by:	Employee #	Date	Time
<i>S. Brown</i>	35594	9/29/21	1500	<i>UPS Fed Ex</i>			
Relinquished by:	Employee#	Date	Time	Received by:	Employee #	Date	Time
<i>UPS Fed Ex</i>		9/30/21	0950	<i>[Signature]</i>		9/30/21	0950
Relinquished by:	Employee#	Date	Time	Received by:	Employee #	Date	Time

Sample Receiving (Internal Use Only)
 TEMP (°C): _____ Initial: _____
 Correct pH: Yes No
 Preservative Lot#: _____
 Date/Time/Init for preservative: _____

<input type="checkbox"/> METALS (all) <input type="checkbox"/> Ag <input type="checkbox"/> Cu <input type="checkbox"/> Sb <input type="checkbox"/> Al <input type="checkbox"/> Fe <input type="checkbox"/> Se <input type="checkbox"/> As <input type="checkbox"/> K <input type="checkbox"/> Sn <input type="checkbox"/> B <input type="checkbox"/> Li <input type="checkbox"/> Sr <input type="checkbox"/> Ba <input type="checkbox"/> Mg <input type="checkbox"/> Ti <input type="checkbox"/> Be <input type="checkbox"/> Mn <input type="checkbox"/> Tl <input type="checkbox"/> Ca <input type="checkbox"/> Mo <input type="checkbox"/> V <input type="checkbox"/> Cd <input type="checkbox"/> Na <input type="checkbox"/> Zn <input type="checkbox"/> Co <input type="checkbox"/> Ni <input type="checkbox"/> Hg <input type="checkbox"/> Cr <input type="checkbox"/> Pb <input type="checkbox"/> CrVI	Nutrients <input type="checkbox"/> TOC <input type="checkbox"/> DOC <input type="checkbox"/> TP/TPO4 <input type="checkbox"/> NH3-N <input type="checkbox"/> F <input type="checkbox"/> Cl <input type="checkbox"/> NO2 <input type="checkbox"/> Br <input type="checkbox"/> NO3 <input type="checkbox"/> SO4	MISC. <input type="checkbox"/> BTEX <input type="checkbox"/> Napthalene <input type="checkbox"/> THM/HAA <input type="checkbox"/> VOC <input type="checkbox"/> Oil & Grease <input type="checkbox"/> E. Coli <input type="checkbox"/> Total Coliform <input type="checkbox"/> pH <input type="checkbox"/> Dissolved As <input type="checkbox"/> Dissolved Fe <input type="checkbox"/> Rad 226 <input type="checkbox"/> Rad 228 <input type="checkbox"/> PCB	Gypsum <input type="checkbox"/> Wallboard Gypsum(all below) <input type="checkbox"/> AIM <input type="checkbox"/> TOC <input type="checkbox"/> Total metals <input type="checkbox"/> Soluble Metals <input type="checkbox"/> Purity (CaSO4) <input type="checkbox"/> % Moisture <input type="checkbox"/> Sulfides <input type="checkbox"/> pH <input type="checkbox"/> Chlorides <input type="checkbox"/> Particle Size <input type="checkbox"/> Sulfur	Coal <input type="checkbox"/> Ultimate <input type="checkbox"/> % Moisture <input type="checkbox"/> Ash <input type="checkbox"/> Sulfur <input type="checkbox"/> BTUs <input type="checkbox"/> Volatile Matter <input type="checkbox"/> CHN Other Tests: <input type="checkbox"/> XRF Scan <input type="checkbox"/> HGI <input type="checkbox"/> Fineness <input type="checkbox"/> Particulate Matter	Flyash <input type="checkbox"/> Ammonia <input type="checkbox"/> LOI <input type="checkbox"/> % Carbon <input type="checkbox"/> Mineral Analysis <input type="checkbox"/> Sieve <input type="checkbox"/> % Moisture NPDES <input type="checkbox"/> Oil & Grease <input type="checkbox"/> LA <input type="checkbox"/> TSS	Oil Trans. Oil Qual. <input type="checkbox"/> % Moisture <input type="checkbox"/> Color <input type="checkbox"/> Acidity <input type="checkbox"/> Density Strength <input type="checkbox"/> JFT <input type="checkbox"/> Distilled Gases Used Oil <input type="checkbox"/> Flashpoint <input type="checkbox"/> Metals in oil (As, Cd, Cr, Ni, Pb, Hg) <input type="checkbox"/> TYP <input type="checkbox"/> GORER
--	--	---	--	---	--	--

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)

Sample Receipt Verification

Client: Santee Cooper Date Received: 09/30/2021 Work Order: 1091488

Carrier Name: Client FedEx UPS US Mail Courier Field Services Other: _____
 Tracking Number: 8167 0204 2076

Receipt Criteria	Y e s	N o	N A	Comments
Shipping container / cooler intact?	X			Damaged Leaking Other:
Custody seals intact?			X	
COC included with samples?	X			
COC signed when relinquished and received?	X			
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 received?	X			
Samples received within holding time?	X			
Sample volume sufficient for analysis?	X			
VOA vials free of headspace (<6mm bubble)?			X	
Samples cooled? <small>Temp at receipt recorded on COC Temp measured with IR thermometer - SN: 97050067</small>	X			<u>Ice</u> Cold Packs Dry Ice None
Samples requiring pH preservation at proper pH? <small>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.</small>	X			
Samples dechlorinated for parameters requiring chlorine removal at the time of sample collection? <small>Note: Chlorine checked at bench for samples requiring Bacterial, VOA, and HAA analysis.</small>			X	

If in-house preservation used – record Lot #			
HCL		H ₃ PO ₄	
H ₂ SO ₄		NaOH	
HNO ₃		Other	

Comments:

Were non-conformance issues noted at sample receipt? Yes or No
 Non-Conformance issue other than noted above:



Laboratory Report

Client	Santee Cooper Linda Williams 1 Riverwood Dr. Moncks Corner, SC 29461	Project:	Ground Water
		Work Order:	1110388
		Received:	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 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
Project Manager

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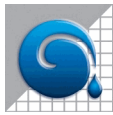
Certificate of Analysis

*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
 Linda Williams
 1 Riverwood Dr.
 Moncks Corner, SC 29461

Project: Ground Water
Work Order: 1110388
Received: 11/03/2021 09:35

Sample Number	Sample Description	Matrix	Sampled	Type
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
1 Riverwood Dr.
Moncks Corner, SC 29461

Project: Ground Water
Work Order: 1110388
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	S7	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 1110388-02
Sample Description 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	S7	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 1110388-03
Sample Description AF18536 CGYP-5 collected on 10/26/21 11:55

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 1110388-04
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	S7	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



Santee Cooper
1 Riverwood Dr.
Moncks Corner, SC 29461

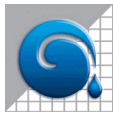
Project: Ground Water
Work Order: 1110388
Reported: 11/12/21 08:22

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

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 1110388-06
Sample Description AF18540 WLF-A2-6 Dup collected on 10/27/21 10:32

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
1 Riverwood Dr.
Moncks Corner, SC 29461

Project: Ground Water
Work Order: 1110388
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
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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)

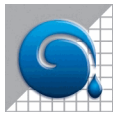
Mercury	ND	0.20	ug/L							
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LCS (B1K0469-BS1)

Mercury	4.9	0.20	ug/L	5.00		98	80-120			
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Matrix Spike (B1K0469-MS1) Source: 1110388-01

Mercury	4.4	0.20	ug/L	5.00	ND	89	75-125			S7
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Santee Cooper
1 Riverwood Dr.
Moncks Corner, SC 29461

Project: Ground Water
Work Order: 1110388
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
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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	S7
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Post Spike (B1K0469-PS1) Source: 1110388-01

Mercury	3.7		ug/L	4.00	ND	91	80-120			S7
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Post Spike (B1K0469-PS2) Source: 1110388-02

Mercury	3.6		ug/L	4.00	ND	89	80-120			S7
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Post Spike (B1K0469-PS3) Source: 1110388-03

Mercury	3.4		ug/L	4.00	ND	84	80-120			S7
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Post Spike (B1K0469-PS4) Source: 1110388-04

Mercury	3.6		ug/L	4.00	ND	88	80-120			S7
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Post Spike (B1K0469-PS5) Source: 1110388-05

Mercury	4.1		ug/L	4.00	ND	101	80-120			
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Post Spike (B1K0469-PS6) Source: 1110388-06

Mercury	4.1		ug/L	4.00	ND	104	80-120			
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Santee Cooper
1 Riverwood Dr.
Moncks Corner, SC 29461

Project: Ground Water
Work Order: 1110388
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
1 Riverwood Dr.
Moncks Corner, SC 29461

Project: Ground Water
Work Order: 1110388
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
- S7 Result calculated by Method of Standard Addition due to sample matrix interference and initial spike failures.

1110388



Chain of Custody

Customer Email/Report Recipient: LCWILLIA@santecooper.com Date Results Needed by: Project/Task/Unit #: 121567 / JMO2.09.G01 / 36500 Rerun request for any flagged QC Yes No

Analysis 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)	Comments • Method # • Reporting limit • Misc. sample info • Any other notes	B, Li, Mo, Hg
AF18538	SAP 12	10/26/21	0859	DW/ML	1	P	G	GW	2	B, Li, Mo - 6010	X
AF18534	CGYP-4		1000							Hg- 7470	
AF18535	CGYP-4 DUP		1005								
AF18536	CGYP-5		1155								
AF18537	CGYP-6		1254								
AF18539	WLF-A2-6	10/27/21	1027								
AF18540	WLF-A2-6 DUP		1032								

Relinquished by:	Employee#	Date	Time	Received by:	Employee #	Date	Time
<i>Sibrown</i>	35594	11/2/21	1800	FedEx			
FedEx		11-3-21	0935	<i>C. [Signature]</i>		11-3-21	0935

Sample Receiving (Internal Use Only)
TEMP (°C): 18.2 Initial:
Correct pH: Yes No
Preservative Lot#:
Date/Time/Init for preservative:

<input type="checkbox"/> METALS (all) <input type="checkbox"/> Ag <input type="checkbox"/> Cu <input type="checkbox"/> Sb <input type="checkbox"/> Al <input type="checkbox"/> Fe <input type="checkbox"/> Se <input type="checkbox"/> As <input type="checkbox"/> K <input type="checkbox"/> Sn <input type="checkbox"/> B <input type="checkbox"/> Li <input type="checkbox"/> Sr <input type="checkbox"/> Ba <input type="checkbox"/> Mg <input type="checkbox"/> Ti <input type="checkbox"/> Be <input type="checkbox"/> Mn <input type="checkbox"/> Tl <input type="checkbox"/> Ca <input type="checkbox"/> Mo <input type="checkbox"/> V <input type="checkbox"/> Cd <input type="checkbox"/> Na <input type="checkbox"/> Zn <input type="checkbox"/> Co <input type="checkbox"/> Ni <input type="checkbox"/> Hg <input type="checkbox"/> Cr <input type="checkbox"/> Pb <input type="checkbox"/> CrVI	Nutrients <input type="checkbox"/> TOC <input type="checkbox"/> DOC <input type="checkbox"/> TP/TPO4 <input type="checkbox"/> NH3-N <input type="checkbox"/> F <input type="checkbox"/> Cl <input type="checkbox"/> NO2 <input type="checkbox"/> Br <input type="checkbox"/> NO3 <input type="checkbox"/> SO4	MISC. <input type="checkbox"/> BTEX <input type="checkbox"/> Napthalene <input type="checkbox"/> THM/HAA <input type="checkbox"/> VOC <input type="checkbox"/> Oil & Grease <input type="checkbox"/> E. Coli <input type="checkbox"/> Total Coliform <input type="checkbox"/> pH <input type="checkbox"/> Dissolved As <input type="checkbox"/> Dissolved Fe <input type="checkbox"/> Rad 226 <input type="checkbox"/> Rad 228 <input type="checkbox"/> PCB	Gypsum <input type="checkbox"/> Wallboard Gypsum(all below) <input type="checkbox"/> AIM <input type="checkbox"/> TOC <input type="checkbox"/> Total metals <input type="checkbox"/> Soluble Metals <input type="checkbox"/> Purity (CaSO4) <input type="checkbox"/> % Moisture <input type="checkbox"/> Sulfites <input type="checkbox"/> pH <input type="checkbox"/> Chlorides <input type="checkbox"/> Particle Size <input type="checkbox"/> Sulfur	Coal <input type="checkbox"/> Ultimate <input type="checkbox"/> % Moisture <input type="checkbox"/> Ash <input type="checkbox"/> Sulfur <input type="checkbox"/> BTUs <input type="checkbox"/> Volatile Matter <input type="checkbox"/> CHN Other Tests: <input type="checkbox"/> XRF Scan <input type="checkbox"/> HGI <input type="checkbox"/> Fineness <input type="checkbox"/> Particulate Matter	Flyash <input type="checkbox"/> Ammonia <input type="checkbox"/> LOI <input type="checkbox"/> % Carbon <input type="checkbox"/> Mineral Analysis <input type="checkbox"/> Sieve <input type="checkbox"/> % Moisture NPDES <input type="checkbox"/> Oil & Grease <input type="checkbox"/> As <input type="checkbox"/> TSS	Oil <input type="checkbox"/> Trans. Oil Qual. <input type="checkbox"/> %Moisture <input type="checkbox"/> Color <input type="checkbox"/> Acidity <input type="checkbox"/> Dielectric Strength <input type="checkbox"/> IFT <input type="checkbox"/> Dissolved Gases <input type="checkbox"/> Used Oil <input type="checkbox"/> Flashpoint <input type="checkbox"/> Metals in oil (As, Cd, Cr, Ni, Pb, Hg) <input type="checkbox"/> TX <input type="checkbox"/> GOFER
--	--	---	--	---	--	---

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)

Sample Receipt Verification

Client: Santee Cooper Date Received: 11/03/2021 Work Order: 1110388

Carrier Name: Client FedEx UPS US Mail Courier Field Services Other: _____
 Tracking Number: 815367913946

Receipt Criteria	Y	N	N	Comments
	e	o	A	
	s			
Shipping container / cooler intact?	X			Damaged Leaking Other:
Custody seals intact?	X			
COC included with samples?	X			
COC signed when relinquished and received?	X			
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 received?	X			
Samples received within holding time?	X			
Sample volume sufficient for analysis?	X			
VOA vials free of headspace (<6mm bubble)?			X	
Samples cooled? Temp at receipt recorded on COC Temp measured with IR thermometer - SN: 97050067	X			<u>Ice</u> Cold Packs Dry Ice None
Samples requiring pH preservation at proper pH? <small>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.</small>	X			
Samples dechlorinated for parameters requiring chlorine removal at the time of sample collection? <small>Note: Chlorine checked at bench for samples requiring Bacterial, VOA, and HAA analysis.</small>			X	

If in-house preservation used – record Lot #			
HCL		H ₃ PO ₄	
H ₂ SO ₄		NaOH	
HNO ₃		Other	

Comments: _____

Were non-conformance issues noted at sample receipt? Yes or No
 Non-Conformance issue other than noted above: _____



Laboratory Report

Client	Santee Cooper Linda Williams 1 Riverwood Dr. Moncks Corner, SC 29461	Project:	Ground Water
		Work Order:	1111325
		Received:	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.

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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

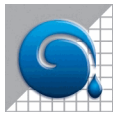
Report Approved By:

Elisabeth Noblet
Project Manager

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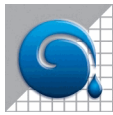
Certificate of Analysis

*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
 Linda Williams
 1 Riverwood Dr.
 Moncks Corner, SC 29461

Project: Ground Water
Work Order: 1111325
Received: 11/23/2021 10:20

Sample Number	Sample Description	Matrix	Sampled	Type
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



Santee Cooper
1 Riverwood Dr.
Moncks Corner, SC 29461

Project: Ground Water
Work Order: 1111325
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 1111325-02
Sample Description AF20416 CGYP-4 DUP collected on 11/17/21 10:23

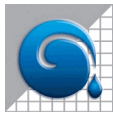
Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	11/29/21 18:40	EPA 7470A		ELN	B1K1244
Boron	7200	75	ug/L	5.00	11/24/21 15:41	EPA 6010D		MLR	B1K1218
Lithium	53	10	ug/L	1.00	11/24/21 16:12	EPA 6010D		MLR	B1K1218
Molybdenum	ND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

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

Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	11/29/21 18:43	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 1111325-04
Sample Description AF20418 CGYP-6 collected on 11/17/21 13:04

Parameter	Result	Reporting Limit	Units	DF	Analyzed	Method	Flag	Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	11/29/21 18:46	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



Santee Cooper
1 Riverwood Dr.
Moncks Corner, SC 29461

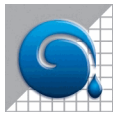
Project: Ground Water
Work Order: 1111325
Reported: 12/02/21 17:23

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	Method	Flag	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



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Moncks Corner, SC 29461

Project: Ground Water
Work Order: 1111325
Reported: 12/02/21 17:23

Total Metals
Quality Control Summary

Parameter	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flags
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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)

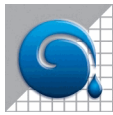
Mercury	ND	0.20	ug/L							
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LCS (B1K1244-BS1)

Mercury	4.8	0.20	ug/L	5.00		96	80-120			
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Matrix Spike (B1K1244-MS1) Source: 1111325-06

Mercury	5.0	0.20	ug/L	5.00	ND	100	75-125			
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Santee Cooper
1 Riverwood Dr.
Moncks Corner, SC 29461

Project: Ground Water
Work Order: 1111325
Reported: 12/02/21 17:23

Total Metals
Quality Control Summary

Parameter	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flags
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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
1 Riverwood Dr.
Moncks Corner, SC 29461

Project: Ground Water
Work Order: 1111325
Reported: 12/02/21 17:23

Data Qualifiers and Definitions

ND Analyte NOT DETECTED at or above the reporting limit
NR Not reported
RPD Relative Percent Difference

Chain of Custody



111325

Customer Email/Report Recipient: LCWILLIA @santecooper.com Date Results Needed by: Project/Task/Unit #: 121567 / JM02-09.G01 / 36500 Rerun request for any flagged QC: Yes No

Analysis 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)	Comments	B, Li, Mo, Hg
AF20415	CGYP-4	11/17/21	1018	DEW/ML	1	P	G	GW	2	B, Li, Mo - 6010	X
16	CGYP-4 DUP		1023							Hg 7470	
17	CGYP-5		1151								
18	CGYP-6		1304								
19	WLF-A2-6	11/18/21	1127								
20	WLF-A2-6 DUP		1132								

Relinquished by:	Employee#	Date	Time	Received by:	Employee #	Date	Time
<i>Sj Brown</i>	35594	11/22/21	1200	FedEx Tracking		810805267815	
FedEx		11/23/21	10:20	<i>Jana Wallis</i>		11/23/21	10:20

Sample Receiving (Internal Use Only)
TEMP (°C): 15 Initial:
Correct pH: Yes No
Preservative Lot#:
Date/Time/Init for preservative:

<input type="checkbox"/> METALS (all) <input type="checkbox"/> Ag <input type="checkbox"/> Cu <input type="checkbox"/> Sb <input type="checkbox"/> Al <input type="checkbox"/> Fe <input type="checkbox"/> Se <input type="checkbox"/> As <input type="checkbox"/> K <input type="checkbox"/> Sn <input type="checkbox"/> B <input type="checkbox"/> Li <input type="checkbox"/> Sr <input type="checkbox"/> Ba <input type="checkbox"/> Mg <input type="checkbox"/> Ti <input type="checkbox"/> Be <input type="checkbox"/> Mn <input type="checkbox"/> Tl <input type="checkbox"/> Ca <input type="checkbox"/> Mo <input type="checkbox"/> V <input type="checkbox"/> Cd <input type="checkbox"/> Na <input type="checkbox"/> Zn <input type="checkbox"/> Co <input type="checkbox"/> Ni <input type="checkbox"/> Hg <input type="checkbox"/> Cr <input type="checkbox"/> Pb <input type="checkbox"/> CrVI	Nutrients <input type="checkbox"/> TOC <input type="checkbox"/> DOC <input type="checkbox"/> TP/TPO4 <input type="checkbox"/> NH3-N <input type="checkbox"/> F <input type="checkbox"/> Cl <input type="checkbox"/> NO2 <input type="checkbox"/> Br <input type="checkbox"/> NO3 <input type="checkbox"/> SO4	MISC. <input type="checkbox"/> BTEX <input type="checkbox"/> Napthalene <input type="checkbox"/> THM/HAA <input type="checkbox"/> VOC <input type="checkbox"/> Oil & Grease <input type="checkbox"/> E. Coli <input type="checkbox"/> Total Coliform <input type="checkbox"/> pH <input type="checkbox"/> Dissolved As <input type="checkbox"/> Dissolved Fe <input type="checkbox"/> Rad 226 <input type="checkbox"/> Rad 228 <input type="checkbox"/> PCB	Gypsum <input type="checkbox"/> Wallboard Gypsum(all below) <input type="checkbox"/> AIM <input type="checkbox"/> TOC <input type="checkbox"/> Total metals <input type="checkbox"/> Soluble Metals <input type="checkbox"/> Purity (CaSO4) <input type="checkbox"/> % Moisture <input type="checkbox"/> Sulfites <input type="checkbox"/> pH <input type="checkbox"/> Chlorides <input type="checkbox"/> Particle Size <input type="checkbox"/> Sulfur	Coal <input type="checkbox"/> Ultimate <input type="checkbox"/> % Moisture <input type="checkbox"/> Ash <input type="checkbox"/> Sulfur <input type="checkbox"/> BTUs <input type="checkbox"/> Volatile Matter <input type="checkbox"/> CHN Other Tests: <input type="checkbox"/> XRF Scan <input type="checkbox"/> HGI <input type="checkbox"/> Fineness <input type="checkbox"/> Particulate Matter	Flyash <input type="checkbox"/> Ammonia <input type="checkbox"/> LOI <input type="checkbox"/> % Carbon <input type="checkbox"/> Mineral Analysis <input type="checkbox"/> Sieve <input type="checkbox"/> % Moisture NPDES <input type="checkbox"/> Oil & Grease <input type="checkbox"/> As <input type="checkbox"/> TSS	Oil Trans. Oil Qual. <input type="checkbox"/> Moisture <input type="checkbox"/> Color <input type="checkbox"/> Acidity <input type="checkbox"/> Dechlor. Strength <input type="checkbox"/> IFT <input type="checkbox"/> Dissolved Gases Used Oil <input type="checkbox"/> Flashpoint <input type="checkbox"/> Metals in Oil (As, Cd, Cr, Ni, Pb, Hg) <input type="checkbox"/> TSS GOFER
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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=H2SO4 4-HCl 5=Na2S2O3 6-Other (Specify)

Sample Receipt Verification

Client: Santee Cooper Date Received: 11/23/2021 Work Order: 1111325

Carrier Name: Client FedEx UPS US Mail Courier Field Services Other: _____
 Tracking Number: 810805267815

Receipt Criteria	Y	N	N/A	Comments
Shipping container / cooler intact?	X			Damaged Leaking Other:
Custody seals intact?	X			
COC included with samples?	X			
COC signed when relinquished and received?	X			
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 received?	X			
Samples received within holding time?	X			
Sample volume sufficient for analysis?	X			
VOA vials free of headspace (<6mm bubble)?			X	
Samples cooled? <small>Temp at receipt recorded on COC Temp measured with IR thermometer - SN: 97050067</small>	X			<u>Ice</u> Cold Packs Dry Ice None
Samples requiring pH preservation at proper pH? <small>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.</small>	X			
Samples dechlorinated for parameters requiring chlorine removal at the time of sample collection? <small>Note: Chlorine checked at bench for samples requiring Bacterial, VOA, and HAA analysis.</small>			X	

If in-house preservation used – record Lot #			
HCL		H ₃ PO ₄	
H ₂ SO ₄		NaOH	
HNO ₃		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

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.
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PACE ANALYTICAL SERVICES, LLC

SC DHEC No: 32010001

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

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.

PACE ANALYTICAL SERVICES, LLC

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)

PACE ANALYTICAL SERVICES, LLC

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

Sample	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)

ICP-MS Metals

Client: Santee Cooper – ABS Lab	Laboratory ID: XA14014-001
Description: AF21736	Matrix: Aqueous
Date Sampled: 12/06/2021 0954	Project Name:
Date Received: 01/14/2022	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020B	1	01/18/2022 1716	BNW	01/18/2022 0842	28629
2	3005A	6020B	20	01/19/2022 0946	BNW	01/18/2022 0842	28629

Parameter	CAS Number	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	7439-92-1	6020B	12		1.0	ug/L	1
Selenium	7782-49-2	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

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ICP-MS Metals

Client: Santee Cooper – ABS Lab	Laboratory ID: XA14014-002
Description: AF21737	Matrix: Aqueous
Date Sampled: 12/06/2021 0959	Project Name:
Date Received: 01/14/2022	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020B	1	01/18/2022 1719	BNW	01/18/2022 0842	28629
2	3005A	6020B	20	01/19/2022 0949	BNW	01/18/2022 0842	28629

Parameter	CAS Number	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	7440-28-0	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

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ICP-MS Metals

Client: Santee Cooper – ABS Lab	Laboratory ID: XA14014-003
Description: AF21738	Matrix: Aqueous
Date Sampled: 12/06/2021 1113	Project Name:
Date Received: 01/14/2022	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020B	1	01/18/2022 1723	BNW	01/18/2022 0842	28629
2	3005A	6020B	20	01/19/2022 0953	BNW	01/18/2022 0842	28629

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	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	130		5.0	ug/L	1
Beryllium	7440-41-7	6020B	10		0.40	ug/L	1
Cadmium	7440-43-9	6020B	ND		0.50	ug/L	1
Calcium	7440-70-2	6020B	250000		8000	ug/L	2
Chromium	7440-47-3	6020B	ND		5.0	ug/L	1
Cobalt	7440-48-4	6020B	68		5.0	ug/L	1
Lead	7439-92-1	6020B	ND		1.0	ug/L	1
Selenium	7782-49-2	6020B	7.2		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

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ICP-MS Metals

Client: Santee Cooper – ABS Lab	Laboratory ID: XA14014-004
Description: AF21739	Matrix: Aqueous
Date Sampled: 12/06/2021 1215	Project Name:
Date Received: 01/14/2022	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020B	1	01/18/2022 1734	BNW	01/18/2022 0842	28629
2	3005A	6020B	20	01/19/2022 0957	BNW	01/18/2022 0842	28629

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	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		0.40	ug/L	1
Cadmium	7440-43-9	6020B	ND		0.50	ug/L	1
Calcium	7440-70-2	6020B	380000		8000	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	7440-28-0	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

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

ICP-MS Metals

Client: Santee Cooper – ABS Lab	Laboratory ID: XA14014-005
Description: AF21740	Matrix: Aqueous
Date Sampled: 12/07/2021 1036	Project Name:
Date Received: 01/14/2022	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020B	1	01/18/2022 1738	BNW	01/18/2022 0842	28629
2	3005A	6020B	10	01/19/2022 1001	BNW	01/18/2022 0842	28629

Parameter	CAS Number	Analytical 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
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

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ICP-MS Metals

Client: Santee Cooper – ABS Lab	Laboratory ID: XA14014-006
Description: AF21741	Matrix: Aqueous
Date Sampled: 12/07/2021 1041	Project Name:
Date Received: 01/14/2022	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020B	1	01/18/2022 1742	BNW	01/18/2022 0842	28629
2	3005A	6020B	10	01/19/2022 1004	BNW	01/18/2022 0842	28629

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Antimony	7440-36-0	6020B	ND		2.0	ug/L	1
Arsenic	7440-38-2	6020B	10		2.0	ug/L	1
Barium	7440-39-3	6020B	43		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	140000		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
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

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

ICP-MS Metals - MB

Sample ID: XQ28629-001

Matrix: Aqueous

Batch: 28629

Prep Method: 3005A

Analytical Method: 6020B

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

* = RSD is out of criteria

P = The RPD between two GC columns exceeds 40%

+ = RPD is out of criteria

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

ICP-MS Metals - LCS

Sample ID: XQ28629-002

Matrix: Aqueous

Batch: 28629

Prep Method: 3005A

Analytical Method: 6020B

Prep Date: 01/18/2022 0842

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

**Chain of Custody
and
Miscellaneous Documents**

PACE ANALYTICAL SERVICES, LLC

Contract Lab Info: PACE-COLA Contract Lab Due Date (Lab Only): 1 / 28 / 21 Send report to icw@paceanalytical.com & sibrown@santecooper.com

Chain of Custody



Customer Email/Report Recipient: ICW@PACE @santecooper.com Date Results Needed by: 1/28/21 Project/Task/Unit #: 121567 / JMC2.08.G21 / 43400 Rerun request for any flagged QC: Yes No

Analyst Group

Labworks ID # (Internal use only)	Sample Location/ Description	Collection Date	Collection Time	Sample Collector	Total # of containers	Bottle type: (G=Glass, P=Plastic)	Grab (G) or Composite (C)	Matrix (see below)	Preservative (see below)	Comments • Method # • Reporting limit • Misc. sample info • Any other notes	TOTAL METALS - SEE BELOW	Analyst Group	
												Analyst	Supervisor
AF21736	CGYP-4	12/6/21	0954	DW/NA	1	P	G	EN	2	METHOD 6020B	X		
37	CGYP-4 DUP		0959										
38	CGYP-5		1113										
39	CGYP-6		1215										
40	WLF-A2-6	12/7/21	1036										
41	WLF-A2-6 DUP	12/7/21	1041										



BMG

Relinquished by:	Employee #:	Date:	Time:	Received by:	Employee #:	Date:	Time:
<i>Sigmon</i>	35594	1/3/21	1500				
<i>Fedex</i>		1/14/21	0910	<i>M. Haney</i>		1/14/21	0910

Sample Receiving (Internal Use Only)
 TEMP (C): 14.4 Initial: WJH
 Correct pH: Yes No
 Preservative Leth:
 Date/Time/Init for preservative:

<input type="checkbox"/> METALS (all) <input type="checkbox"/> Ag <input type="checkbox"/> Cu <input checked="" type="checkbox"/> Sb <input type="checkbox"/> Al <input type="checkbox"/> Fe <input type="checkbox"/> Se <input checked="" type="checkbox"/> As <input type="checkbox"/> K <input type="checkbox"/> Sn <input type="checkbox"/> B <input type="checkbox"/> Li <input type="checkbox"/> Sr <input type="checkbox"/> Ba <input type="checkbox"/> Mg <input type="checkbox"/> Tl <input checked="" type="checkbox"/> Be <input type="checkbox"/> Mn <input checked="" type="checkbox"/> Tl <input checked="" type="checkbox"/> Ca <input type="checkbox"/> Mo <input type="checkbox"/> V <input checked="" type="checkbox"/> Cd <input type="checkbox"/> Na <input type="checkbox"/> Zn <input checked="" type="checkbox"/> Co <input type="checkbox"/> Ni <input type="checkbox"/> Hg <input checked="" type="checkbox"/> Cr <input checked="" type="checkbox"/> Pb <input type="checkbox"/> CrVI	Nutrients <input type="checkbox"/> NH3 <input type="checkbox"/> NH4 <input type="checkbox"/> NO2 <input type="checkbox"/> NO3 <input type="checkbox"/> PO4 <input type="checkbox"/> SiO4 <input type="checkbox"/> Silica	MISC. <input type="checkbox"/> HETX <input type="checkbox"/> Nepheloid <input type="checkbox"/> LHM/HAA <input type="checkbox"/> VOC <input type="checkbox"/> Oil & Grease <input type="checkbox"/> U.E. Coli <input type="checkbox"/> Total Coliform <input type="checkbox"/> pH <input type="checkbox"/> Dissolved As <input type="checkbox"/> Dissolved Fe <input type="checkbox"/> Rad 226 <input type="checkbox"/> Rad 228 <input type="checkbox"/> PCB	Coal <input type="checkbox"/> Ultimate <input type="checkbox"/> Prox Moisture <input type="checkbox"/> Vol <input type="checkbox"/> Sulfur <input type="checkbox"/> BTU <input type="checkbox"/> Volatile Matter <input type="checkbox"/> Ash <input type="checkbox"/> Other Tests <input type="checkbox"/> XRF <input type="checkbox"/> ROF <input type="checkbox"/> Fluoresc <input type="checkbox"/> Particulate Matter	Flyash <input type="checkbox"/> Amorphous <input type="checkbox"/> Cryst <input type="checkbox"/> Silica <input type="checkbox"/> Sulfur <input type="checkbox"/> BTU <input type="checkbox"/> Volatile Matter <input type="checkbox"/> Ash <input type="checkbox"/> Other Tests <input type="checkbox"/> XRF <input type="checkbox"/> ROF <input type="checkbox"/> Fluoresc <input type="checkbox"/> Particulate Matter	Oil <input type="checkbox"/> Total Oil <input type="checkbox"/> Free Oil <input type="checkbox"/> Total Solids <input type="checkbox"/> Volatile Solids <input type="checkbox"/> Fixed Solids <input type="checkbox"/> Ash <input type="checkbox"/> Other Tests <input type="checkbox"/> XRF <input type="checkbox"/> ROF <input type="checkbox"/> Fluoresc <input type="checkbox"/> Particulate Matter
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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-ccal, 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=Na2S2O8 6=Other



Laboratory Report

Client	Santee Cooper Linda Williams 1 Riverwood Dr. Moncks Corner, SC 29461	Project:	Ground Water
		Work Order:	1120813
		Received:	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 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
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

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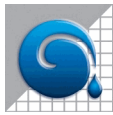
Certificate of Analysis

*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
 Linda Williams
 1 Riverwood Dr.
 Moncks Corner, SC 29461

Project: Ground Water
Work Order: 1120813
Received: 12/10/2021 10:27

Sample Number	Sample Description	Matrix	Sampled	Type
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
1 Riverwood Dr.
Moncks Corner, SC 29461

Project: Ground Water
Work Order: 1120813
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	Analized	Method	Flag	Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	12/16/21 11:24	EPA 7470A	S7	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 1120813-02
Sample Description AF21737 CGYP-4DUP collected on 12/06/21 09:59

Parameter	Result	Reporting Limit	Units	DF	Analized	Method	Flag	Analyst	Batch
Total Metals									
Mercury	ND	0.20	ug/L	1.00	12/16/21 11:13	EPA 7470A	S7	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 1120813-03
Sample Description AF21738 CGYP-5 collected on 12/06/21 11:13

Parameter	Result	Reporting Limit	Units	DF	Analized	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 1120813-04
Sample Description AF21739 CGYP-6 collected on 12/06/21 12:15

Parameter	Result	Reporting Limit	Units	DF	Analized	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



Santee Cooper
1 Riverwood Dr.
Moncks Corner, SC 29461

Project: Ground Water
Work Order: 1120813
Reported: 12/21/21 16:12

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

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
1 Riverwood Dr.
Moncks Corner, SC 29461

Project: Ground Water
Work Order: 1120813
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
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Batch B1L0730 - EPA 3005A

Blank (B1L0730-BLK1)

Molybdenum	ND	10	ug/L							
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LCS (B1L0730-BS1)

Molybdenum	490	10	ug/L	500		97	80-120			
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Duplicate (B1L0730-DUP1) Source: 1120813-01

Molybdenum	ND	10	ug/L		ND				20	
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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			
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Batch B1L0817 - EPA 7470A

Blank (B1L0817-BLK1)

Mercury	ND	0.20	ug/L							
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LCS (B1L0817-BS1)

Mercury	4.9	0.20	ug/L	5.00		98	80-120			
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Matrix Spike (B1L0817-MS1) Source: 1120813-02

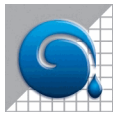
Mercury	4.3	0.20	ug/L	5.00	ND	84	75-125			S7
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Matrix Spike Dup (B1L0817-MSD1) Source: 1120813-02

Mercury	4.3	0.20	ug/L	5.00	ND	85	75-125	2	20	S7
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Post Spike (B1L0817-PS1) Source: 1120813-02

Mercury	3.4		ug/L	4.00	ND	83	80-120			S7
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Santee Cooper
1 Riverwood Dr.
Moncks Corner, SC 29461

Project: Ground Water
Work Order: 1120813
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
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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			S7
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
1 Riverwood Dr.
Moncks Corner, SC 29461

Project: Ground Water
Work Order: 1120813
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
1 Riverwood Dr.
Moncks Corner, SC 29461

Project: Ground Water
Work Order: 1120813
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.
S7	Result calculated by Method of Standard Addition due to sample matrix interference and initial spike failures.

1120813

Contract Lab Info: R/C Contract Lab Due Date (Lab Only): 12 / 17 / 21 Send report to lcwillia@santecooper.com & sjbrown@santecooper.com

Chain of Custody

Tracking #: 8162 4067 173

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

Customer Email/Report Recipient: LCWILLIA@santecooper.com Date Results Needed by: Project/Task/Unit #: 121567 / JM02.09.GW / 36500 Rerun request for any flagged QC: Yes No

Analysis Group

Labworks ID # <small>(Internal use only)</small>	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)	Comments • Method # • Reporting limit • Misc. sample info • Any other notes	B	L	M	H
-01 AF21736	CGYP-4	12/6/21	0954	DEN/ML	1	F	G	GW	2	B, Li, Mo - 6010	X			
-02 37	CGYP-4 DUP		0954							Hg - 7470				
-03 38	CGYP-5		1113											
-04 39	CGYP-6		1215											
-05 40	NLF-A2-6	12/7/21	1036											
-06 41	NLF-A2-6 DUP		1041											

Relinquished by:	Employee#	Date	Time	Received by:	Employee #	Date	Time
<i>Sj Brown</i>	35594	12/9/21	1500	<i>Fedex</i>			
<i>Fedex</i>		12/10/21	1027	<i>[Signature]</i>		12/10/21	1027

Sample Receiving (Internal Use Only)
TEMP (°C): 20.2° Initial:
Correct pH: Yes No
Preservative Lot#:
Date/Time/Init for preservative:

<p>METALS (all)</p> <p><input type="checkbox"/> Ag <input type="checkbox"/> Cu <input type="checkbox"/> Sb</p> <p><input type="checkbox"/> Al <input type="checkbox"/> Fe <input type="checkbox"/> Se</p> <p><input type="checkbox"/> As <input type="checkbox"/> K <input type="checkbox"/> Sn</p> <p><input type="checkbox"/> B <input type="checkbox"/> Li <input type="checkbox"/> Sr</p> <p><input type="checkbox"/> Ba <input type="checkbox"/> Mg <input type="checkbox"/> Ti</p> <p><input type="checkbox"/> Be <input type="checkbox"/> Mn <input type="checkbox"/> Tl</p> <p><input type="checkbox"/> Ca <input type="checkbox"/> Mo <input type="checkbox"/> V</p> <p><input type="checkbox"/> Cd <input type="checkbox"/> Na <input type="checkbox"/> Zn</p> <p><input type="checkbox"/> Co <input type="checkbox"/> Ni <input type="checkbox"/> Hg</p> <p><input type="checkbox"/> Cr <input type="checkbox"/> Pb <input type="checkbox"/> CrVI</p>	<p>Nutrients</p> <p><input type="checkbox"/> TOC</p> <p><input type="checkbox"/> DOC</p> <p><input type="checkbox"/> TP/TPO4</p> <p><input type="checkbox"/> NH3-N</p> <p><input type="checkbox"/> F</p> <p><input type="checkbox"/> Cl</p> <p><input type="checkbox"/> NO2</p> <p><input type="checkbox"/> Br</p> <p><input type="checkbox"/> NO3</p> <p><input type="checkbox"/> SO4</p>	<p>MISC.</p> <p><input type="checkbox"/> BTEX</p> <p><input type="checkbox"/> Napthalene</p> <p><input type="checkbox"/> THM/HAA</p> <p><input type="checkbox"/> VOC</p> <p><input type="checkbox"/> Oil & Grease</p> <p><input type="checkbox"/> E. Coli</p> <p><input type="checkbox"/> Total Coliform</p> <p><input type="checkbox"/> pH</p> <p><input type="checkbox"/> Dissolved As</p> <p><input type="checkbox"/> Dissolved Fe</p> <p><input type="checkbox"/> Rad 226</p> <p><input type="checkbox"/> Rad 228</p> <p><input type="checkbox"/> PCB</p>	<p>Gypsum</p> <p><input type="checkbox"/> Wallboard</p> <p>Gypsum(all below)</p> <p><input type="checkbox"/> AIM</p> <p><input type="checkbox"/> TOC</p> <p><input type="checkbox"/> Total metals</p> <p><input type="checkbox"/> Soluble Metals</p> <p><input type="checkbox"/> Purity (CaSO4)</p> <p><input type="checkbox"/> % Moisture</p> <p><input type="checkbox"/> Sulfites</p> <p><input type="checkbox"/> pH</p> <p><input type="checkbox"/> Chlorides</p> <p><input type="checkbox"/> Particle Size</p> <p><input type="checkbox"/> Sulfur</p>	<p>Coal</p> <p><input type="checkbox"/> Ultimate</p> <p><input type="checkbox"/> % Moisture</p> <p><input type="checkbox"/> Ash</p> <p><input type="checkbox"/> Sulfur</p> <p><input type="checkbox"/> BTUs</p> <p><input type="checkbox"/> Volatile Matter</p> <p><input type="checkbox"/> CHN</p> <p>Other Tests:</p> <p><input type="checkbox"/> XRF Scan</p> <p><input type="checkbox"/> HGI</p> <p><input type="checkbox"/> Fineness</p> <p><input type="checkbox"/> Particulate Matter</p>	<p>Flyash</p> <p><input type="checkbox"/> Ammonia</p> <p><input type="checkbox"/> LOI</p> <p><input type="checkbox"/> % Carbon</p> <p><input type="checkbox"/> Mineral Analysis</p> <p><input type="checkbox"/> Sieve</p> <p><input type="checkbox"/> % Moisture</p> <p>NPDES</p> <p><input type="checkbox"/> Oil & Grease</p> <p><input type="checkbox"/> As</p> <p><input type="checkbox"/> TSS</p>	<p>Oil</p> <p>Trans. Oil Qual.</p> <p><input type="checkbox"/> % Moisture</p> <p>Color</p> <p>Acidity</p> <p>Density Specific Gravity</p> <p>IFT</p> <p>Dissolved Gases</p> <p>Used Oil</p> <p>Flashpoint</p> <p>Metals in oil (As, Cd, Cr, Ni, Pb, Hg)</p> <p>TX</p> <p>COFER</p>
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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=H2SO4 4-HCl 5=Na2S2O3 6-Other (Specify)

Sample Receipt Verification

Client: Santee Cooper Date Received: 12/10/2021 Work Order: 1120813

Carrier Name: Client FedEx UPS US Mail Courier Field Services Other: _____

Tracking Number: 8162 4067 1753

Receipt Criteria	Y e s	N o	N A	Comments
Shipping container / cooler intact?	X			Damaged Leaking Other:
Custody seals intact?			X	
COC included with samples?	X			
COC signed when relinquished and received?	X			
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 received?	X			
Samples received within holding time?	X			
Sample volume sufficient for analysis?	X			
VOA vials free of headspace (<6mm bubble)?			X	
Samples cooled? Temp at receipt recorded on COC Temp measured with IR thermometer - SN: 97050067	X			<u>Ice</u> 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	

If in-house preservation used – record Lot #			
HCL		H ₃ PO ₄	
H ₂ SO ₄		NaOH	
HNO ₃		Other	

Comments: _____

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

Non-Conformance issue other than noted above: _____



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.

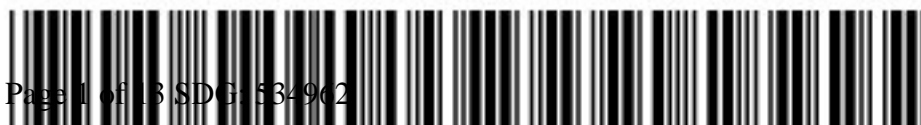
Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without 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 Robinson
Project Manager

Purchase Order: 367074
Enclosures



GEL LABORATORIES LLC

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

**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.

Reviewed by _____

Julie Robinson

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 9, 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: AE94861	Project: SOOP00119
Sample ID: 534962001	Client ID: SOOP001
Matrix: Ground Water	
Collect Date: 10-FEB-21 11:16	
Receive Date: 12-FEB-21	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting													
GFPC, Ra228, Liquid "As Received"													
Radium-228		2.63	+/-1.27	1.79	3.00	pCi/L			LXB3	03/01/21	0949	2092726	1
Radium-226+Radium-228 Calculation "See Parent Products"													
Radium-226+228 Sum		3.86	+/-1.34			pCi/L		1	AEA	03/05/21	0658	2092725	2
Rad Radium-226													
Lucas Cell, Ra226, Liquid "As Received"													
Radium-226		1.23	+/-0.427	0.368	1.00	pCi/L			MXH8	02/24/21	0914	2092649	3

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	Calculation	
3	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			75.2	(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

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 9, 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: AE94862	Project: SOOP00119
Sample ID: 534962002	Client ID: SOOP001
Matrix: Ground Water	
Collect Date: 10-FEB-21 12:23	
Receive Date: 12-FEB-21	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting													
GFPC, Ra228, Liquid "As Received"													
Radium-228		2.04	+/-1.09	1.56	3.00	pCi/L			LXB3	03/01/21	0949	2092726	1
Radium-226+Radium-228 Calculation "See Parent Products"													
Radium-226+228 Sum		2.83	+/-1.15			pCi/L		1	AEA	03/05/21	0658	2092725	2
Rad Radium-226													
Lucas Cell, Ra226, Liquid "As Received"													
Radium-226		0.796	+/-0.361	0.347	1.00	pCi/L			MXH8	02/24/21	0914	2092649	3

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	Calculation	
3	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			80.8	(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

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 9, 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: AE94863	Project: SOOP00119
Sample ID: 534962003	Client ID: SOOP001
Matrix: Ground Water	
Collect Date: 10-FEB-21 12:28	
Receive Date: 12-FEB-21	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting													
GFPC, Ra228, Liquid "As Received"													
Radium-228	U	1.14	+/-1.06	1.74	3.00	pCi/L			LXB3	03/01/21	0949	2092726	1
Radium-226+Radium-228 Calculation "See Parent Products"													
Radium-226+228 Sum		1.90	+/-1.12			pCi/L		1	AEA	03/05/21	0658	2092725	2
Rad Radium-226													
Lucas Cell, Ra226, Liquid "As Received"													
Radium-226		0.752	+/-0.342	0.328	1.00	pCi/L			MXH8	02/24/21	0946	2092649	3

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	Calculation	
3	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			88.7	(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

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 9, 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: AE94864	Project: SOOP00119
Sample ID: 534962004	Client ID: SOOP001
Matrix: Ground Water	
Collect Date: 10-FEB-21 13:38	
Receive Date: 12-FEB-21	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting													
GFPC, Ra228, Liquid "As Received"													
Radium-228		3.63	+/-1.20	1.42	3.00	pCi/L			LXB3	03/01/21	0949	2092726	1
Radium-226+Radium-228 Calculation "See Parent Products"													
Radium-226+228 Sum		4.69	+/-1.26			pCi/L		1	AEA	03/05/21	0658	2092725	2
Rad Radium-226													
Lucas Cell, Ra226, Liquid "As Received"													
Radium-226		1.05	+/-0.372	0.324	1.00	pCi/L			MXH8	02/24/21	0946	2092649	3

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	Calculation	
3	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			81.2	(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

GEL LABORATORIES LLC

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

QC Summary

Report Date: March 9, 2021

Page 1 of 2

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

Contact:
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							
Rad Ra-226											
Batch	2092649										
QC1204754137	534962001	DUP									
Radium-226		1.23		1.11	pCi/L	10.4		(0% - 100%)	MXH8	02/24/21	09:46
	Uncertainty	+/-0.427		+/-0.382							
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		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.

GEL LABORATORIES LLC

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

QC Summary

Workorder: 534962

Page 2 of 2

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
H											
H											
J											
J											
K											
L											
M											
M											
N/A											
N1											
ND											
NJ											
Q											
R											
U											
UI											
UJ											
UL											
X											
Y											
^											
h											

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

^ 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 #: 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>	<u>Client Sample Identification</u>
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>	<u>Client Sample Identification</u>
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.

Chain of Custody

534962



Customer Email/Report Recipient:

Date Results Needed by:

Project/Task/Unit #:

Rerun request for any flagged QC

LCWILLIA @santecooper.com

121567 / JM02.09.681 / 3650
9318

Yes 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)	Comments • Method # • Reporting limit • Misc. sample info • Any other notes	Analysis Group		
											RAD 226	RAD 228	TOTAL RAD CALC
AE94861	CGYP-1	2/10/21	1116	MDC /DEW	2	P	G	GW	2		X	X	X
AE94862	CGYP-2		1223										
AE94863	CGYP-2 DUP		1228										
AE94864	CGYP-3		1338										

Relinquished by:	Employee#	Date	Time	Received by:	Employee #	Date	Time
<i>Sibrown</i>	35594	2/12/21	0930	<i>[Signature]</i>	GEL	2/12/21	0930
<i>[Signature]</i>	<i>GEL</i>	2-12-21	1122	<i>[Signature]</i>		2 12 21	1122

Sample Receiving (Internal Use Only)
 TEMP (°C): _____ Initial: _____
 Correct pH: Yes No
 Preservative Lot#:
 Date/Time/Init for preservative:

<input type="checkbox"/> METALS (all) <input type="checkbox"/> Ag <input type="checkbox"/> Cu <input type="checkbox"/> Sb <input type="checkbox"/> Al <input type="checkbox"/> Fe <input type="checkbox"/> Se <input type="checkbox"/> As <input type="checkbox"/> K <input type="checkbox"/> Sn <input type="checkbox"/> B <input type="checkbox"/> Li <input type="checkbox"/> Sr <input type="checkbox"/> Ba <input type="checkbox"/> Mg <input type="checkbox"/> Ti <input type="checkbox"/> Be <input type="checkbox"/> Mn <input type="checkbox"/> Tl <input type="checkbox"/> Ca <input type="checkbox"/> Mo <input type="checkbox"/> V <input type="checkbox"/> Cd <input type="checkbox"/> Na <input type="checkbox"/> Zn <input type="checkbox"/> Co <input type="checkbox"/> Ni <input type="checkbox"/> Hg <input type="checkbox"/> Cr <input type="checkbox"/> Pb <input type="checkbox"/> CrVI	Nutrients <input type="checkbox"/> TOC <input type="checkbox"/> DOC <input type="checkbox"/> TP/TPO4 <input type="checkbox"/> NH3-N <input type="checkbox"/> F <input type="checkbox"/> Cl <input type="checkbox"/> NO2 <input type="checkbox"/> Br <input type="checkbox"/> NO3 <input type="checkbox"/> SO4	MISC. <input type="checkbox"/> BTEX <input type="checkbox"/> Napthalene <input type="checkbox"/> THM/HAA <input type="checkbox"/> VOC <input type="checkbox"/> Oil & Grease <input type="checkbox"/> E. Coli <input type="checkbox"/> Total Coliform <input type="checkbox"/> pH <input type="checkbox"/> Dissolved As <input type="checkbox"/> Dissolved Fe <input type="checkbox"/> Rad 226 <input type="checkbox"/> Rad 228 <input type="checkbox"/> PCB	Gypsum <input type="checkbox"/> Wallboard Gypsum(all below) <input type="checkbox"/> AIM <input type="checkbox"/> TOC <input type="checkbox"/> Total metals <input type="checkbox"/> Soluble Metals <input type="checkbox"/> Purity (CaSO4) <input type="checkbox"/> % Moisture <input type="checkbox"/> Sulfites <input type="checkbox"/> pH <input type="checkbox"/> Chlorides <input type="checkbox"/> Particle Size <input type="checkbox"/> Sulfur	Coal <input type="checkbox"/> Ultimate <input type="checkbox"/> % Moisture <input type="checkbox"/> Ash <input type="checkbox"/> Sulfur <input type="checkbox"/> BTUs <input type="checkbox"/> Volatile Matter <input type="checkbox"/> CHN Other Tests: <input type="checkbox"/> XRF Scan <input type="checkbox"/> HGI <input type="checkbox"/> Fineness <input type="checkbox"/> Particulate Matter	Flyash <input type="checkbox"/> Ammonia <input type="checkbox"/> LOI <input type="checkbox"/> % Carbon <input type="checkbox"/> Mineral Analysis <input type="checkbox"/> Sieve <input type="checkbox"/> % Moisture NPDES <input type="checkbox"/> Oil & Grease <input type="checkbox"/> As <input type="checkbox"/> TSS	Oil Trans. Oil Qual. %Moisture Color Acidity Dissolved Solids IP1 Dissolved Gases Used Oil Flashpoint Metals in oil (As, Ca, Cr, Ni, Pb, Hg) TX GOFER
--	--	---	--	---	--	--

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)

List of current GEL Certifications as of 09 March 2021

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



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.

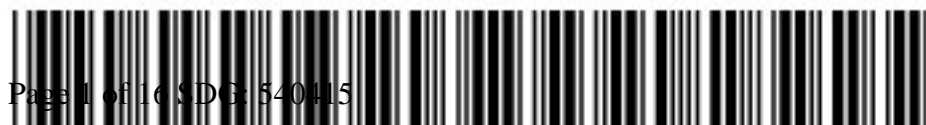
Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without 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 Robinson
Project Manager

Purchase Order: 367074
Enclosures



GEL LABORATORIES LLC

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.

Reviewed by _____

Julie Robinson

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: May 5, 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: AF00633	Project: SOOP00119
Sample ID: 540415001	Client ID: SOOP001
Matrix: Ground Water	
Collect Date: 07-APR-21 11:06	
Receive Date: 09-APR-21	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting													
GFPC, Ra228, Liquid "As Received"													
Radium-228		5.66	+/-1.81	2.39	3.00	pCi/L			LXB3	04/26/21	1145	2114215	1
Radium-226+Radium-228 Calculation "See Parent Products"													
Radium-226+228 Sum		6.37	+/-1.83			pCi/L		1	AEA	05/05/21	0724	2117539	2
Rad Radium-226													
Lucas Cell, Ra226, Liquid "As Received"													
Radium-226		0.713	+/-0.274	0.254	1.00	pCi/L			LXP1	04/22/21	0915	2114169	3

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	Calculation	
3	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			59.9	(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

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: May 5, 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: AF00629	Project: SOOP00119
Sample ID: 540415002	Client ID: SOOP001
Matrix: Ground Water	
Collect Date: 07-APR-21 12:16	
Receive Date: 09-APR-21	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting													
GFPC, Ra228, Liquid "As Received"													
Radium-228	U	2.81	+/-1.83	2.94	3.00	pCi/L			LXB3	04/20/21	1203	2114215	1
Radium-226+Radium-228 Calculation "See Parent Products"													
Radium-226+228 Sum		3.89	+/-1.86			pCi/L		1	AEA	05/05/21	0724	2117539	2
Rad Radium-226													
Lucas Cell, Ra226, Liquid "As Received"													
Radium-226		1.08	+/-0.346	0.330	1.00	pCi/L			LXP1	04/22/21	0915	2114169	3

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	Calculation	
3	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			62.4	(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

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: May 5, 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: AF00630	Project: SOOP00119
Sample ID: 540415003	Client ID: SOOP001
Matrix: Ground Water	
Collect Date: 07-APR-21 13:16	
Receive Date: 09-APR-21	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting													
GFPC, Ra228, Liquid "As Received"													
Radium-228		3.91	+/-1.58	2.18	3.00	pCi/L			LXB3	04/20/21	1021	2114215	1
Radium-226+Radium-228 Calculation "See Parent Products"													
Radium-226+228 Sum		4.18	+/-1.59			pCi/L		1	AEA	05/05/21	0724	2117539	2
Rad Radium-226													
Lucas Cell, Ra226, Liquid "As Received"													
Radium-226	U	0.272	+/-0.226	0.347	1.00	pCi/L			LXP1	04/22/21	0947	2114169	3

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	Calculation	
3	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			58.5	(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

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Certificate of Analysis

Report Date: May 5, 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: AF00631	Project: SOOP00119
Sample ID: 540415004	Client ID: SOOP001
Matrix: Ground Water	
Collect Date: 07-APR-21 13:21	
Receive Date: 09-APR-21	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting													
GFPC, Ra228, Liquid "As Received"													
Radium-228		4.76	+/-1.81	2.41	3.00	pCi/L			LXB3	04/20/21	1021	2114215	1
Radium-226+Radium-228 Calculation "See Parent Products"													
Radium-226+228 Sum		5.05	+/-1.82			pCi/L		1	AEA	05/05/21	0724	2117539	2
Rad Radium-226													
Lucas Cell, Ra226, Liquid "As Received"													
Radium-226		0.290	+/-0.191	0.247	1.00	pCi/L			LXP1	04/22/21	0947	2114169	3

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	Calculation	
3	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			56.1	(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

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: May 5, 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: AF00632	Project: SOOP00119
Sample ID: 540415005	Client ID: SOOP001
Matrix: Ground Water	
Collect Date: 07-APR-21 14:20	
Receive Date: 09-APR-21	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting													
GFPC, Ra228, Liquid "As Received"													
Radium-228		7.50	+/-1.99	2.74	3.00	pCi/L			LXB3	04/26/21	1145	2114215	1
Radium-226+Radium-228 Calculation "See Parent Products"													
Radium-226+228 Sum		7.93	+/-2.01			pCi/L		1	AEA	05/05/21	0724	2117539	2
Rad Radium-226													
Lucas Cell, Ra226, Liquid "As Received"													
Radium-226		0.433	+/-0.240	0.312	1.00	pCi/L			LXP1	04/22/21	0947	2114169	3

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	Calculation	
3	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			50.7	(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: May 5, 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: AF00634	Project: SOOP00119
Sample ID: 540415006	Client ID: SOOP001
Matrix: Ground Water	
Collect Date: 07-APR-21 15:09	
Receive Date: 09-APR-21	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting													
GFPC, Ra228, Liquid "As Received"													
Radium-228	U	2.33	+/-1.60	2.50	3.00	pCi/L			LXB3	04/20/21	1021	2114215	1
Radium-226+Radium-228 Calculation "See Parent Products"													
Radium-226+228 Sum		2.84	+/-1.62			pCi/L		1	AEA	05/05/21	0724	2117539	2
Rad Radium-226													
Lucas Cell, Ra226, Liquid "As Received"													
Radium-226		0.506	+/-0.261	0.295	1.00	pCi/L			LXP1	04/22/21	0947	2114169	3

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	Calculation	
3	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			59.6	(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

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: May 5, 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: AF00635	Project: SOOP00119
Sample ID: 540415007	Client ID: SOOP001
Matrix: Ground Water	
Collect Date: 07-APR-21 16:02	
Receive Date: 09-APR-21	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting													
GFPC, Ra228, Liquid "As Received"													
Radium-228		2.83	+/-1.53	2.19	3.00	pCi/L			LXB3	04/20/21	1021	2114215	1
Radium-226+Radium-228 Calculation "See Parent Products"													
Radium-226+228 Sum		3.68	+/-1.55			pCi/L		1	AEA	05/05/21	0724	2117539	2
Rad Radium-226													
Lucas Cell, Ra226, Liquid "As Received"													
Radium-226		0.850	+/-0.266	0.189	1.00	pCi/L			LXP1	04/22/21	0947	2114169	3

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	Calculation	
3	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			53.1	(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

GEL LABORATORIES LLC

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

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

Contact:
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.

GEL LABORATORIES LLC

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

QC Summary

Workorder: 540415

Page 2 of 2

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
H											
J											
J											
K											
L											
M											
M											
N/A											
N1											
ND											
NJ											
Q											
R											
U											
UI											
UJ											
UL											
X											
Y											
^											
h											

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

^ 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>	<u>Client Sample Identification</u>
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>	<u>Client Sample Identification</u>
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.

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.

Chain of Custody 5410415



Customer Email/Report Recipient: LCWILLIA@santeecooper.com Date Results Needed by: Project/Task/Unit #: 121567 / JM02-09.G01 / 36500 Rerun request for any flagged QC: Yes 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)	Comments • Method # • Reporting limit • Misc. sample info • Any other notes	Analysis Group		
											RAD 226	RAD 228	TOTAL RAD CALC
AF00633	CGYP-4	4/7/21	1106	DEW/MDS	2	P	G	GW	2		X	X	X
AF00629	CGYP-1		1216										
AF00630	CGYP-2		1316										
AF00631	CGYP-2 DUP		1321										
AF00632	CGYP-3		1420										
AF00634	CGYP-5		1509										
AF00635	CGYP-6		1602										

Relinquished by:	Employee#	Date	Time	Received by:	Employee #	Date	Time
<i>Sibrown</i>	35594	4/9/21	1015	<i>GEL</i>	GEL	4/9/21	1015
<i>GEL</i>	<i>GEL</i>	4/9/21	1324	<i>GEL</i>	GEL	4/9/21	1324

Sample Receiving (Internal Use Only)
TEMP (°C): _____ Initial: _____
Correct pH: Yes No
Preservative Lot#: _____
Date/Time/Init for preservative: _____

<p><input type="checkbox"/> METALS (all)</p> <table style="width: 100%;"> <tr><td><input type="checkbox"/> Ag</td><td><input type="checkbox"/> Cu</td><td><input type="checkbox"/> Sb</td></tr> <tr><td><input type="checkbox"/> Al</td><td><input type="checkbox"/> Fe</td><td><input type="checkbox"/> Se</td></tr> <tr><td><input type="checkbox"/> As</td><td><input type="checkbox"/> K</td><td><input type="checkbox"/> Sn</td></tr> <tr><td><input type="checkbox"/> B</td><td><input type="checkbox"/> Li</td><td><input type="checkbox"/> Sr</td></tr> <tr><td><input type="checkbox"/> Ba</td><td><input type="checkbox"/> Mg</td><td><input type="checkbox"/> Ti</td></tr> <tr><td><input type="checkbox"/> Be</td><td><input type="checkbox"/> Mn</td><td><input type="checkbox"/> Tl</td></tr> <tr><td><input type="checkbox"/> Ca</td><td><input type="checkbox"/> Mo</td><td><input type="checkbox"/> V</td></tr> <tr><td><input type="checkbox"/> Cd</td><td><input type="checkbox"/> Na</td><td><input type="checkbox"/> Zn</td></tr> <tr><td><input type="checkbox"/> Co</td><td><input type="checkbox"/> Ni</td><td><input type="checkbox"/> Hg</td></tr> <tr><td><input type="checkbox"/> Cr</td><td><input type="checkbox"/> Pb</td><td><input type="checkbox"/> CrVI</td></tr> </table>	<input type="checkbox"/> Ag	<input type="checkbox"/> Cu	<input type="checkbox"/> Sb	<input type="checkbox"/> Al	<input type="checkbox"/> Fe	<input type="checkbox"/> Se	<input type="checkbox"/> As	<input type="checkbox"/> K	<input type="checkbox"/> Sn	<input type="checkbox"/> B	<input type="checkbox"/> Li	<input type="checkbox"/> Sr	<input type="checkbox"/> Ba	<input type="checkbox"/> Mg	<input type="checkbox"/> Ti	<input type="checkbox"/> Be	<input type="checkbox"/> Mn	<input type="checkbox"/> Tl	<input type="checkbox"/> Ca	<input type="checkbox"/> Mo	<input type="checkbox"/> V	<input type="checkbox"/> Cd	<input type="checkbox"/> Na	<input type="checkbox"/> Zn	<input type="checkbox"/> Co	<input type="checkbox"/> Ni	<input type="checkbox"/> Hg	<input type="checkbox"/> Cr	<input type="checkbox"/> Pb	<input type="checkbox"/> CrVI	<p>Nutrients</p> <p><input type="checkbox"/> TOC <input type="checkbox"/> DOC <input type="checkbox"/> TP/TPO4 <input type="checkbox"/> NH3-N <input type="checkbox"/> F <input type="checkbox"/> Cl <input type="checkbox"/> NO2 <input type="checkbox"/> Br <input type="checkbox"/> NO3 <input type="checkbox"/> SO4</p>	<p>MISC.</p> <p><input type="checkbox"/> BTEX <input type="checkbox"/> Napthalene <input type="checkbox"/> THM/HAA <input type="checkbox"/> VOC <input type="checkbox"/> Oil & Grease <input type="checkbox"/> E. Coli <input type="checkbox"/> Total Coliform <input type="checkbox"/> pH <input type="checkbox"/> Dissolved As <input type="checkbox"/> Dissolved Fe <input type="checkbox"/> Rad 226 <input type="checkbox"/> Rad 228 <input type="checkbox"/> Rad 228 <input type="checkbox"/> PCB</p>	<p>Gypsum</p> <p><input type="checkbox"/> Wallboard Gypsum(all below) <input type="checkbox"/> AM <input type="checkbox"/> TOC <input type="checkbox"/> Total metals <input type="checkbox"/> Soluble Metals <input type="checkbox"/> Purity (CaSO4) <input type="checkbox"/> % Moisture <input type="checkbox"/> Sulfites <input type="checkbox"/> pH <input type="checkbox"/> Chlorides <input type="checkbox"/> Particle Size <input type="checkbox"/> Sulfur</p>	<p>Coal</p> <p><input type="checkbox"/> Ultimate <input type="checkbox"/> % Moisture <input type="checkbox"/> Ash <input type="checkbox"/> Sulfur <input type="checkbox"/> BTUs <input type="checkbox"/> Volatile Matter <input type="checkbox"/> CHN Other Tests: <input type="checkbox"/> XRF Scan <input type="checkbox"/> HGI <input type="checkbox"/> Fineness <input type="checkbox"/> Particulate Matter</p>	<p>Flyash</p> <p><input type="checkbox"/> Ammonia <input type="checkbox"/> LOI <input type="checkbox"/> % Carbon <input type="checkbox"/> Mineral Analysis <input type="checkbox"/> Sieve <input type="checkbox"/> % Moisture NPDES <input type="checkbox"/> Oil & Grease <input type="checkbox"/> AS <input type="checkbox"/> TSS</p>	<p>Oil</p> <p>Trans. Oil Qual. % Moisture Color Acidity Detergent Strength IFT Dissolved Gases Used Oil Flashpoint Metals in oil (As, Cd, Cr, Ni, Pb, Hg) PX COPPER</p>
<input type="checkbox"/> Ag	<input type="checkbox"/> Cu	<input type="checkbox"/> Sb																																		
<input type="checkbox"/> Al	<input type="checkbox"/> Fe	<input type="checkbox"/> Se																																		
<input type="checkbox"/> As	<input type="checkbox"/> K	<input type="checkbox"/> Sn																																		
<input type="checkbox"/> B	<input type="checkbox"/> Li	<input type="checkbox"/> Sr																																		
<input type="checkbox"/> Ba	<input type="checkbox"/> Mg	<input type="checkbox"/> Ti																																		
<input type="checkbox"/> Be	<input type="checkbox"/> Mn	<input type="checkbox"/> Tl																																		
<input type="checkbox"/> Ca	<input type="checkbox"/> Mo	<input type="checkbox"/> V																																		
<input type="checkbox"/> Cd	<input type="checkbox"/> Na	<input type="checkbox"/> Zn																																		
<input type="checkbox"/> Co	<input type="checkbox"/> Ni	<input type="checkbox"/> Hg																																		
<input type="checkbox"/> Cr	<input type="checkbox"/> Pb	<input type="checkbox"/> CrVI																																		

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 codes: 1=HNO3 2=H2SO4 4=HCl 5=Na2S2O3 6=Other (Specify)

List of current GEL Certifications as of 05 May 2021

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



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.

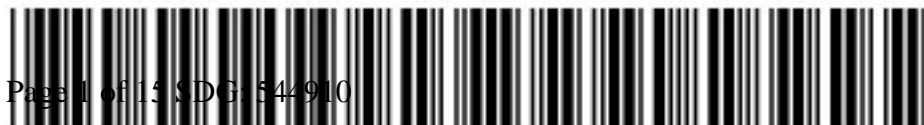
Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without 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 Robinson
Project Manager

Purchase Order: 367074
Enclosures



GEL LABORATORIES LLC

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

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.

Reviewed by _____

Julie Robinson

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: June 14, 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: AF03568	Project: SOOP00119
Sample ID: 544910001	Client ID: SOOP001
Matrix: Ground Water	
Collect Date: 13-MAY-21 14:39	
Receive Date: 18-MAY-21	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting													
GFPC, Ra228, Liquid "As Received"													
Radium-228		4.82	+/-1.56	2.09	3.00	pCi/L			LXB3	06/04/21	0853	2132499	1
Radium-226+Radium-228 Calculation "See Parent Products"													
Radium-226+228 Sum		5.84	+/-1.61			pCi/L		1	AEA	06/11/21	0421	2133508	2
Rad Radium-226													
Lucas Cell, Ra226, Liquid "As Received"													
Radium-226		1.02	+/-0.399	0.446	1.00	pCi/L			LXP1	06/02/21	0835	2131978	3

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	Calculation	
3	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			86.5	(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

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: June 14, 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: AF03569	Project: SOOP00119
Sample ID: 544910002	Client ID: SOOP001
Matrix: Ground Water	
Collect Date: 13-MAY-21 14:44	
Receive Date: 18-MAY-21	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting													
GFPC, Ra228, Liquid "As Received"													
Radium-228		3.55	+/-1.40	1.98	3.00	pCi/L			LXB3	06/04/21	0853	2132499	1
Radium-226+Radium-228 Calculation "See Parent Products"													
Radium-226+228 Sum		4.60	+/-1.45			pCi/L		1	AEA	06/11/21	0421	2133508	2
Rad Radium-226													
Lucas Cell, Ra226, Liquid "As Received"													
Radium-226		1.05	+/-0.378	0.304	1.00	pCi/L			LXP1	06/02/21	0835	2131978	3

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	Calculation	
3	EPA 903.1 Modified	

Surrogate/Tracer	Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer		GFPC, Ra228, Liquid "As Received"			87.4	(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

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: June 14, 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: AF03570 Project: SOOP00119
Sample ID: 544910003 Client ID: SOOP001
Matrix: Ground Water
Collect Date: 13-MAY-21 16:00
Receive Date: 18-MAY-21
Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting													
GFPC, Ra228, Liquid "As Received"													
Radium-228	U	0.581	+/-1.16	2.03	3.00	pCi/L			LXB3	06/04/21	0853	2132499	1
Radium-226+Radium-228 Calculation "See Parent Products"													
Radium-226+228 Sum		1.50	+/-1.21			pCi/L		1	AEA	06/11/21	0421	2133508	2
Rad Radium-226													
Lucas Cell, Ra226, Liquid "As Received"													
Radium-226		0.915	+/-0.338	0.233	1.00	pCi/L			LXP1	06/02/21	0907	2131978	3

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	Calculation	
3	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			86.4	(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

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: June 14, 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: AF03571	Project: SOOP00119
Sample ID: 544910004	Client ID: SOOP001
Matrix: Ground Water	
Collect Date: 13-MAY-21 16:55	
Receive Date: 18-MAY-21	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting													
GFPC, Ra228, Liquid "As Received"													
Radium-228		4.79	+/-1.16	1.17	3.00	pCi/L			LXB3	06/04/21	0853	2132499	1
Radium-226+Radium-228 Calculation "See Parent Products"													
Radium-226+228 Sum		6.31	+/-1.23			pCi/L		1	AEA	06/11/21	0421	2133508	2
Rad Radium-226													
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 following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	Calculation	
3	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			94.4	(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

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: June 14, 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: AF03572	Project: SOOP00119
Sample ID: 544910005	Client ID: SOOP001
Matrix: Ground Water	
Collect Date: 13-MAY-21 11:20	
Receive Date: 18-MAY-21	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting													
GFPC, Ra228, Liquid "As Received"													
Radium-228	U	0.377	+/-1.03	1.82	3.00	pCi/L			LXB3	06/04/21	0853	2132499	1
Radium-226+Radium-228 Calculation "See Parent Products"													
Radium-226+228 Sum		0.691	+/-1.04			pCi/L		1	AEA	06/11/21	0421	2133508	2
Rad Radium-226													
Lucas Cell, Ra226, Liquid "As Received"													
Radium-226		0.313	+/-0.192	0.200	1.00	pCi/L			LXP1	06/02/21	0907	2131978	3

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	Calculation	
3	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			91.5	(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

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: June 14, 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: AF03573	Project: SOOP00119
Sample ID: 544910006	Client ID: SOOP001
Matrix: Ground Water	
Collect Date: 13-MAY-21 11:25	
Receive Date: 18-MAY-21	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting													
GFPC, Ra228, Liquid "As Received"													
Radium-228	U	0.310	+/-1.22	2.18	3.00	pCi/L			LXB3	06/04/21	0853	2132499	1
Radium-226+Radium-228 Calculation "See Parent Products"													
Radium-226+228 Sum		0.540	+/-1.24			pCi/L		1	AEA	06/11/21	0421	2133508	2
Rad Radium-226													
Lucas Cell, Ra226, Liquid "As Received"													
Radium-226	U	0.230	+/-0.194	0.282	1.00	pCi/L			LXP1	06/02/21	0907	2131978	3

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	Calculation	
3	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			87.2	(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

GEL LABORATORIES LLC

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

QC Summary

Report Date: June 14, 2021

Page 1 of 2

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

Contact:
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.

GEL LABORATORIES LLC

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QC Summary

Workorder: 544910

Page 2 of 2

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
H											
J											
J											
K											
L											
M											
M											
N/A											
NI											
ND											
NJ											
Q											
R											
U											
UI											
UJ											
UL											
X											
Y											
^											
h											

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

^ 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 #: 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).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
544910001	AF03568
544910002	AF03569
544910003	AF03570
544910004	AF03571
544910005	AF03572
544910006	AF03573
1204831023	Method Blank (MB)
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>	<u>Client Sample Identification</u>
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.

544910

Chain of Custody



Customer Email/Report Recipient: LCWILLIA@santecooper.com Date Results Needed by: Project/Task/Unit #: 121567 / JM02.09.G01 / 36500 Rerun request for any flagged QC: Yes 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)	Comments • Method # • Reporting limit • Misc. sample info • Any other notes	Analysis Group		
											RAP 226	RAP 228	TOTAL RAD CALC
AF03568	CGYP-4	5/13/21	1439	MDS/BWM	2	P	G	GW	2		X	X	X
AF03569	CGYP-4 DUP		1444										
AF03570	CGYP-5		1600										
AF03571	CGYP-6		1655										
AF03572	WLF-A2-6		1120										
AF03573	WLF-A2-6 DUP		1125										

Relinquished by:	Employee#	Date	Time	Received by:	Employee #	Date	Time
<i>SJBrown</i>	35594	5/18/21	0911	<i>[Signature]</i>	GEL	5/18/21	0911
<i>[Signature]</i>	<i>661</i>	<i>5/18/21</i>	<i>1511</i>	<i>[Signature]</i>	<i>GEL</i>	<i>5/18/21</i>	<i>1535</i>

Sample Receiving (Internal Use Only)
 TEMP (°C): _____ Initial: _____
 Correct pH: Yes No
 Preservative Lot#: _____
 Date/Time/Init for preservative: _____

☐ METALS (all) ☐ Ag ☐ Cu ☐ Sb ☐ Al ☐ Fe ☐ Se ☐ As ☐ K ☐ Sn ☐ B ☐ Li ☐ Sr ☐ Ba ☐ Mg ☐ Ti ☐ Be ☐ Mn ☐ Tl ☐ Ca ☐ Mo ☐ V ☐ Cd ☐ Na ☐ Zn ☐ Co ☐ Ni ☐ Hg ☐ Cr ☐ Pb ☐ CrVI	Nutrients ☐ TOC ☐ DOC ☐ TP/TPO4 ☐ NH3-N ☐ F ☐ Cl ☐ NO2 ☐ Br ☐ NO3 ☐ SO4	MISC. ☐ BTEX ☐ Naphthalene ☐ THM/HAA ☐ VOC ☐ Oil & Grease ☐ E. Coli ☐ Total Coliform ☐ pH ☐ Dissolved As ☐ Dissolved Fe ☐ Rad 226 ☐ Rad 228 ☐ PCB	Gypsum ☐ Wallboard Gypsum (all below) ☐ Alk ☐ TOC ☐ Total metals ☐ Soluble Metals ☐ Purity (CaSO4) ☐ % Moisture ☐ Sulfites ☐ pH ☐ Chlorides ☐ Particle Size ☐ Sulfur	Coal ☐ Ultimate ☐ % Moisture ☐ Ash ☐ Sulfur ☐ BTUs ☐ Volatile Matter ☐ CHN Other Tests: ☐ XRF Scan ☐ HGI ☐ Fineness ☐ Particulate Matter	Flyash ☐ Ammonia ☐ LOI ☐ % Carbon ☐ Mineral Analysis ☐ Sieve ☐ % Moisture NPDES ☐ Oil & Grease ☐ AS ☐ TSS	Oil Trans. Oil Qual. ☐ % Moisture ☐ Color ☐ Acidity ☐ Dielectric Strength ☐ IFT ☐ Dissolved Gases Used Oil Flashpoint Metals in oil (As, Cd, Cr, Ni, Pb, Hg) TX GOPER
--	--	---	--	--	---	---

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° 2=HNO3 3=H2SO4 4-HCl 5=Na2S2O3 6-Other (Specify)

SAMPLE RECEIPT & REVIEW FORM

Client: <u>SOOP</u>		SDG/AR/COC/Work Order: <u>544910/544911</u>		<u>SR</u>	
Received By: <u>Tye</u>		Date Received: <u>5/18/21</u>			
Carrier and Tracking Number		Circle Applicable			
		FedEx Express FedEx Ground UPS Field Services <u>Courier</u> Other			
Suspected Hazard Information		Yes	No	If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation. Hazard Class Shipped: _____ UN#: _____ If UN2910, Is the Radioactive Shipment Survey Compliant? Yes ___ No ___ COC notation or radioactive stickers on containers equal client designation. Maximum Net Counts Observed* (Observed Counts - Area Background Counts): <u>0</u> CPM / mR/hr Classified as: Rad 1 Rad 2 Rad 3 COC notation or hazard labels on containers equal client designation. If D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:	
A) Shipped as a DOT Hazardous?			<input checked="" type="checkbox"/>		
B) Did the client designate the samples are to be received as radioactive?			<input checked="" type="checkbox"/>		
C) Did the RSO classify the samples as radioactive?			<input checked="" type="checkbox"/>		
D) Did the client designate samples are hazardous?			<input checked="" type="checkbox"/>		
E) Did the RSO identify possible hazards?			<input checked="" type="checkbox"/>		
Sample Receipt Criteria		Yes	NA	No	
1	Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Circle Applicable: Client contacted and provided COC COC created upon receipt
3	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Preservation Method: <u>Wet Ice</u> Ice Packs Dry Ice <u>None</u> Other: *all temperatures provided in Celsius
4	Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Temperature Device Serial #: <u>IR3-19</u> Secondary Temperature Device Serial # (If Applicable):
5	Sample containers intact and sealed?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6	Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Sample ID's and Containers Affected:
7	Do any samples require Volatile Analysis?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	If Preservation added, Lot#: _____ If Yes, are Encores or Soil Kits present for solids? Yes ___ No ___ NA ___ (If yes, take to VOA Freezer) Do liquid VOA 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:
8	Samples received within holding time?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	ID's and tests affected:
9	Sample ID's on COC match ID's on bottles?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	ID's and containers affected:
10	Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	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?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Circle Applicable: No container count on COC Other (describe)
12	Are sample containers identifiable as GEL provided by use of GEL labels?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
13	COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Circle Applicable: Not relinquished Other (describe)
Comments (Use Continuation Form if needed):					

PM (or PMA) review: Initials NRG Date 5/19/21 Page 1 of 1

List of current GEL Certifications as of 14 June 2021

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



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.

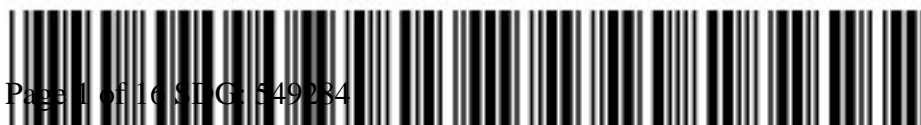
Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without 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 Robinson
Project Manager

Purchase Order: 367074
Enclosures



GEL LABORATORIES LLC

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

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.

Reviewed by _____

Julie Robinson

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: August 5, 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: AF07267	Project: SOOP00119
Sample ID: 549284001	Client ID: SOOP001
Matrix: Ground Water	
Collect Date: 07-JUL-21 10:31	
Receive Date: 09-JUL-21	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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	+/-1.50			pCi/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	pCi/L			LXP1	07/22/21	1020	2149561	3

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	Calculation	
3	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			77.6	(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

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: August 5, 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: AF07268	Project: SOOP00119
Sample ID: 549284002	Client ID: SOOP001
Matrix: Ground Water	
Collect Date: 07-JUL-21 11:28	
Receive Date: 09-JUL-21	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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	+/-1.28			pCi/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	pCi/L			LXP1	07/22/21	1020	2149561	3

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	Calculation	
3	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

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: August 5, 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: AF07269	Project: SOOP00119
Sample ID: 549284003	Client ID: SOOP001
Matrix: Ground Water	
Collect Date: 07-JUL-21 11:33	
Receive Date: 09-JUL-21	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228		2.31	+/-1.04	1.43	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	pCi/L			LXP1	07/22/21	1020 2149561	3

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	Calculation	
3	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

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: August 5, 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: AF07270	Project: SOOP00119
Sample ID: 549284004	Client ID: SOOP001
Matrix: Ground Water	
Collect Date: 07-JUL-21 13:38	
Receive Date: 09-JUL-21	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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	pCi/L			LXP1	07/22/21	1020	2149561	3

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	Calculation	
3	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			78.3	(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: August 5, 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: AF07271	Project: SOOP00119
Sample ID: 549284005	Client ID: SOOP001
Matrix: Ground Water	
Collect Date: 08-JUL-21 10:26	
Receive Date: 09-JUL-21	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting													
GFPC, Ra228, Liquid "As Received"													
Radium-228		2.51	+/-1.05	1.36	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	+/-1.10			pCi/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	pCi/L			LXP1	07/22/21	1020	2149561	3

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	Calculation	
3	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			80.5	(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

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: August 5, 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: AF07272	Project: SOOP00119
Sample ID: 549284006	Client ID: SOOP001
Matrix: Ground Water	
Collect Date: 08-JUL-21 11:24	
Receive Date: 09-JUL-21	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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	pCi/L			LXP1	07/22/21	1020	2149561	3

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	Calculation	
3	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

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: August 5, 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: AF07273	Project: SOOP00119
Sample ID: 549284007	Client ID: SOOP001
Matrix: Ground Water	
Collect Date: 08-JUL-21 12:21	
Receive Date: 09-JUL-21	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting													
GFPC, Ra228, Liquid "As Received"													
Radium-228		4.24	+/-1.28	1.48	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	pCi/L			LXP1	07/22/21	1102	2149561	3

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	Calculation	
3	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

GEL LABORATORIES LLC

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

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

Contact:
Workorder: 549284

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gas Flow											
Batch	2152169										
QC1204867006	549896006	DUP									
Radium-228	U	0.643		2.48	pCi/L	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							
Rad Ra-226											
Batch	2149561										
QC1204862383	548894001	DUP									
Radium-226		0.413	U	0.344	pCi/L	18.2		(0% - 100%)	LXP1	07/22/21	11:02
	Uncertainty	+/-0.226		+/-0.250							
QC1204862385	LCS										
Radium-226	26.8			24.2	pCi/L		90.5	(75%-125%)		07/22/21	11:02
	Uncertainty			+/-1.49							
QC1204862382	MB										
Radium-226			U	0.176	pCi/L					07/22/21	11:02
	Uncertainty			+/-0.182							
QC1204862384	548894001	MS									
Radium-226	134	0.413		101	pCi/L		75.5	(75%-125%)		07/22/21	13:10
	Uncertainty	+/-0.226		+/-6.78							

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

GEL LABORATORIES LLC

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

QC Summary

Workorder: 549284

Page 2 of 2

Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
>											
BD											
FA											
H											
J											
J											
K											
L											
M											
M											
N/A											
N1											
ND											
NJ											
Q											
R											
U											
UI											
UJ											
UL											
X											
Y											
^											
h											

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

^ 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 #: 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>	<u>Client Sample Identification</u>
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.

Product: Lucas Cell, Ra226, Liquid

Analytical Method: EPA 903.1 Modified

Analytical Procedure: GL-RAD-A-008 REV# 15

Analytical Batch: 2149561

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
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.

Chain of Custody

549284



Customer Email/Report Recipient: LCWILLIA@santeecooper.com Date Results Needed by: Project/Task/Unit #: 121567 / JM02.09.G01 / 36500 Rerun request for any flagged QC: Yes No

Analysis 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)	Comments • Method # • Reporting limit • Misc. sample info • Any other notes	RAD 226	RAD 228	TOTAL RAD CALC
AF07267	CGYP-1	7/7/21	1031	CWS MDE/ BRT	2	P	G	GW	2		X	X	X
AF07268	CGYP-2		1128										
AF07269	CGYP-2 DUP		1133										
AF07270	CGYP-3		1338										
AF07271	CGYP-4	7/8/21	1026	MDE/ BRT									
AF07272	CGYP-5		1124										
AF07273	CGYP-6		1221										

Relinquished by:	Employee#	Date	Time	Received by:	Employee #	Date	Time
<i>SJBrown</i>	35594	7/9/21	0944	<i>GEL</i>	GEL	7/9/21	0944
<i>GEL</i>	GEL	7-9-21	1114	<i>MDE</i>	GEL	7-9-21	1114

Sample Receiving (Internal Use Only)
TEMP (°C): _____ Initial: _____
Correct pH: Yes No
Preservative Lot#: _____
Date/Time/Init for preservative: _____

<input type="checkbox"/> METALS (all) <input type="checkbox"/> Ag <input type="checkbox"/> Cu <input type="checkbox"/> Sb <input type="checkbox"/> Al <input type="checkbox"/> Fe <input type="checkbox"/> Se <input type="checkbox"/> As <input type="checkbox"/> K <input type="checkbox"/> Sn <input type="checkbox"/> B <input type="checkbox"/> Li <input type="checkbox"/> Sr <input type="checkbox"/> Ba <input type="checkbox"/> Mg <input type="checkbox"/> Ti <input type="checkbox"/> Be <input type="checkbox"/> Mn <input type="checkbox"/> Tl <input type="checkbox"/> Ca <input type="checkbox"/> Mo <input type="checkbox"/> V <input type="checkbox"/> Cd <input type="checkbox"/> Na <input type="checkbox"/> Zn <input type="checkbox"/> Co <input type="checkbox"/> Ni <input type="checkbox"/> Hg <input type="checkbox"/> Cr <input type="checkbox"/> Pb <input type="checkbox"/> CrVI	Nutrients <input type="checkbox"/> TOC <input type="checkbox"/> DOC <input type="checkbox"/> TP/TPO4 <input type="checkbox"/> NH3-N <input type="checkbox"/> F <input type="checkbox"/> Cl <input type="checkbox"/> NO2 <input type="checkbox"/> Br <input type="checkbox"/> NO3 <input type="checkbox"/> SO4	MISC. <input type="checkbox"/> BTEX <input type="checkbox"/> Napthalene <input type="checkbox"/> THM/HAA <input type="checkbox"/> VOC <input type="checkbox"/> Oil & Grease <input type="checkbox"/> E. Coli <input type="checkbox"/> Total Coliform <input type="checkbox"/> pH <input type="checkbox"/> Dissolved As <input type="checkbox"/> Dissolved Fe <input type="checkbox"/> Rad 226 <input type="checkbox"/> Rad 228 <input type="checkbox"/> PCB	Gypsum <input type="checkbox"/> Wallboard <input type="checkbox"/> Gypsum(all below) <input type="checkbox"/> AlM <input type="checkbox"/> TOC <input type="checkbox"/> Total metals <input type="checkbox"/> Soluble Metals <input type="checkbox"/> Purity (CaSO4) <input type="checkbox"/> % Moisture <input type="checkbox"/> Sulfites <input type="checkbox"/> pH <input type="checkbox"/> Chlorides <input type="checkbox"/> Particle Size <input type="checkbox"/> Sulfur	Coal <input type="checkbox"/> Ultimate <input type="checkbox"/> % Moisture <input type="checkbox"/> Ash <input type="checkbox"/> Sulfur <input type="checkbox"/> BTUs <input type="checkbox"/> Volatile Matter <input type="checkbox"/> CHN Other Tests: <input type="checkbox"/> XRF Scan <input type="checkbox"/> HGI <input type="checkbox"/> Fineness <input type="checkbox"/> Particulate Matter	Flyash <input type="checkbox"/> Ammonia <input type="checkbox"/> LOI <input type="checkbox"/> % Carbon <input type="checkbox"/> Mineral Analysis <input type="checkbox"/> Sieve <input type="checkbox"/> % Moisture NPDES <input type="checkbox"/> Oil & Grease <input type="checkbox"/> As <input type="checkbox"/> TSS	Oil Trans. Oil Qual. <input type="checkbox"/> % Moisture <input type="checkbox"/> Color <input type="checkbox"/> Acidity <input type="checkbox"/> Dielectric Strength <input type="checkbox"/> IPI <input type="checkbox"/> Dissolved Gases Used Oil <input type="checkbox"/> Flashpoint <input type="checkbox"/> Metals in oil (As, Cd, Cr, Ni, Pb, Hg) <input type="checkbox"/> IXL <input type="checkbox"/> GOFER
--	--	---	--	---	--	--

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 codes: 0=H2O 2=HNO3 3=H2SO4 4-HCl 5=Na2S2O3 6-Other (Specify)

List of current GEL Certifications as of 05 August 2021

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



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.

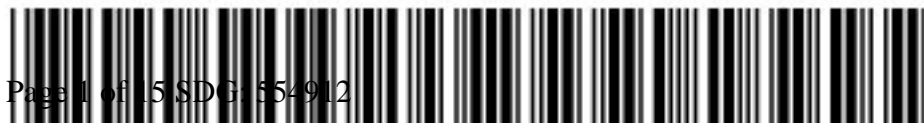
Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without 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 Robinson
Project Manager

Purchase Order: 367074
Enclosures



GEL LABORATORIES LLC

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

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.

Reviewed by _____

Julie Robinson

GEL LABORATORIES LLC

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	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting													
GFPC, Ra228, Liquid "As Received"													
Radium-228	U	1.29	+/-0.875	1.32	3.00	pCi/L			JXC9	09/29/21	1316	2172977	1
Radium-226+Radium-228 Calculation "See Parent Products"													
Radium-226+228 Sum		1.85	+/-0.912			pCi/L			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
1	EPA 904.0/SW846 9320 Modified	
2	Calculation	
3	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	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).

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

GEL LABORATORIES LLC

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: 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	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	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		5.53	+/-1.58			pCi/L			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
1	EPA 904.0/SW846 9320 Modified	
2	Calculation	
3	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	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).

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

GEL LABORATORIES LLC

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: 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	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	-0.925	+/-0.794	1.76	3.00	pCi/L			JXC9	09/29/21	1316 2172977	1
Radium-226+Radium-228 Calculation "See Parent Products"												
Radium-226+228 Sum		0.295	+/-0.814			pCi/L			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
1	EPA 904.0/SW846 9320 Modified	
2	Calculation	
3	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	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

GEL LABORATORIES LLC

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: 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	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	0.100	+/-0.903	1.68	3.00	pCi/L		JXC9	09/29/21	1316	2172977	1
Radium-226+Radium-228 Calculation "See Parent Products"												
Radium-226+228 Sum		0.632	+/-0.934			pCi/L		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
1	EPA 904.0/SW846 9320 Modified	
2	Calculation	
3	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	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

GEL LABORATORIES LLC

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: 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

Parameter	Qualifier	Result	Uncertainty	MDC	RL	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		4.64	+/-1.65			pCi/L			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
1	EPA 904.0/SW846 9320 Modified	
2	Calculation	
3	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			81.1	(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

GEL LABORATORIES LLC

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: 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	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	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		3.57	+/-1.52			pCi/L		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
1	EPA 904.0/SW846 9320 Modified	
2	Calculation	
3	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	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

GEL LABORATORIES LLC

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

QC Summary

Report Date: October 1, 2021

Page 1 of 2

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

Contact:
Workorder: 554912

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gas Flow											
Batch	2172977										
QC1204907460	554912001	DUP									
Radium-228	U	1.29		2.71	pCi/L	70.8		(0% - 100%)	JXC9	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			U	-1.13	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%)	LXP1	09/29/21	10:37
	Uncertainty	+/-0.257		+/-0.219							
QC1204907475	LCS										
Radium-226	26.8			22.1	pCi/L		82.5	(75%-125%)		09/29/21	10:37
	Uncertainty			+/-1.48							
QC1204907472	MB										
Radium-226			U	0.385	pCi/L					09/29/21	10:05
	Uncertainty			+/-0.275							
QC1204907476	MB										
Radium-226			U	0.149	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

GEL LABORATORIES LLC

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

QC Summary

Workorder: 554912

Page 2 of 2

Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
>											
BD											
FA											
H											
J											
J											
K											
L											
M											
M											
N/A											
N1											
ND											
NJ											
Q											
R											
U											
UI											
UJ											
UL											
X											
Y											
^											
h											

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

^ 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 #: 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>	<u>Client Sample Identification</u>
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>	<u>Client Sample Identification</u>
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)

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.

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.

Chain of Custody

554912



Customer Email/Report Recipient: LCWILLIA@santecooper.com Date Results Needed by: Project/Task/Unit #: 121567 / JMO2.09.G01 / 36500 Rerun request for any flagged QC: Yes 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)	Comments • Method # • Reporting limit • Misc. sample info • Any other notes	Analysis Group		
											RAD 226	RAD 228	TOTAL RAD CALC
AF13775	CGYP-5	8/31/21	1001	DW/ML	2	P	G	GW	2		X	X	X
AF13776	CGYP-6	1	1102		2								
AF13777	WLF-A2-6	9/1/21	1240		2								
AF13778	WLF A2-6 DUP	1	1245		2								
AF13773	CGYP-4	1	0904		2								
AF13774	CGYP-4 DUP	1	0909		2								

Relinquished by:	Employee#	Date	Time	Received by:	Employee #	Date	Time
<i>Sibrown</i>	35594	9/3/21	0945	<i>LCW</i>	GEL	9/3/21	0945
<i>LCW</i>	<i>LCW</i>	9/2/21	1148	<i>BC</i>	690	9/15/21	1200

Sample Receiving (Internal Use Only)
 TEMP (°C): _____ Initial: _____
 Correct pH: Yes No
 Preservative Lot#: _____
 Date/Time/Init for preservative: _____

<input type="checkbox"/> METALS (all) <input type="checkbox"/> Ag <input type="checkbox"/> Cu <input type="checkbox"/> Sb <input type="checkbox"/> Al <input type="checkbox"/> Fe <input type="checkbox"/> Se <input type="checkbox"/> As <input type="checkbox"/> K <input type="checkbox"/> Sn <input type="checkbox"/> B <input type="checkbox"/> Li <input type="checkbox"/> Sr <input type="checkbox"/> Ba <input type="checkbox"/> Mg <input type="checkbox"/> Ti <input type="checkbox"/> Be <input type="checkbox"/> Mn <input type="checkbox"/> Tl <input type="checkbox"/> Ca <input type="checkbox"/> Mo <input type="checkbox"/> V <input type="checkbox"/> Cd <input type="checkbox"/> Na <input type="checkbox"/> Zn <input type="checkbox"/> Co <input type="checkbox"/> Ni <input type="checkbox"/> Hg <input type="checkbox"/> Cr <input type="checkbox"/> Pb <input type="checkbox"/> CrVI	Nutrients <input type="checkbox"/> TOC <input type="checkbox"/> DOC <input type="checkbox"/> TP/TPO4 <input type="checkbox"/> NH3-N <input type="checkbox"/> P <input type="checkbox"/> Cl <input type="checkbox"/> NO2 <input type="checkbox"/> Br <input type="checkbox"/> NO3 <input type="checkbox"/> SO4	MISC. <input type="checkbox"/> BTEX <input type="checkbox"/> Naphthalene <input type="checkbox"/> THM/HAA <input type="checkbox"/> VOC <input type="checkbox"/> Oil & Grease <input type="checkbox"/> E. Coli <input type="checkbox"/> Total Coliform <input type="checkbox"/> pH <input type="checkbox"/> Dissolved As <input type="checkbox"/> Dissolved Fe <input type="checkbox"/> Rad 226 <input type="checkbox"/> Rad 228 <input type="checkbox"/> PCB	Gypsum <input type="checkbox"/> Wallboard <input type="checkbox"/> Gypsum (all below) <input type="checkbox"/> AIM <input type="checkbox"/> TOC <input type="checkbox"/> Total metals <input type="checkbox"/> Soluble Metals <input type="checkbox"/> Purity (CaSO4) <input type="checkbox"/> % Moisture <input type="checkbox"/> pH <input type="checkbox"/> Chlorides <input type="checkbox"/> Particle Size <input type="checkbox"/> Sulfur	Coal <input type="checkbox"/> Ultimate <input type="checkbox"/> % Moisture <input type="checkbox"/> Ash <input type="checkbox"/> Sulfur <input type="checkbox"/> BTUs <input type="checkbox"/> Volatile Matter <input type="checkbox"/> CHN Other Tests: <input type="checkbox"/> XRF Scan <input type="checkbox"/> HGI <input type="checkbox"/> Fineness <input type="checkbox"/> Particulate Matter	Flyash <input type="checkbox"/> Ammonia <input type="checkbox"/> LOI <input type="checkbox"/> % Carbon <input type="checkbox"/> Mineral Analysis <input type="checkbox"/> Sieve <input type="checkbox"/> % Moisture NPDES <input type="checkbox"/> Oil & Grease <input type="checkbox"/> Ar <input type="checkbox"/> TSS	Oil Trans. Oil Qual <input type="checkbox"/> % Moisture <input type="checkbox"/> VCM <input type="checkbox"/> Acids <input type="checkbox"/> Dynamic Viscosity <input type="checkbox"/> BT <input type="checkbox"/> Dissolved Gases <input type="checkbox"/> Free Oil <input type="checkbox"/> Fluoride <input type="checkbox"/> Metals (incl. Pb) <input type="checkbox"/> Hg <input type="checkbox"/> TC <input type="checkbox"/> GOFER
--	--	--	--	---	--	---

JK

SAMPLE RECEIPT & REVIEW FORM

Client: SOOP SDG/AR/COC/Work Order: 554912
 Received By: BE Date Received: 9/03/21
 Carrier and Tracking Number: _____
 FedEx Express FedEx Ground UPS Field Services Courier Other

Suspected Hazard Information

Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
	<input checked="" type="checkbox"/>	Hazard Class Shipped: _____ UN#: _____ If UN2910, Is the Radioactive Shipment Survey Compliant? Yes ___ No ___
	<input checked="" type="checkbox"/>	COC notation or radioactive stickers on containers equal client designation.
	<input checked="" type="checkbox"/>	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): <u>0</u> CPM/mR/Hr Classified as: Rad 1 Rad 2 Rad 3
	<input checked="" type="checkbox"/>	COC notation or hazard labels on containers equal client designation.
	<input checked="" type="checkbox"/>	If D 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?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: Client contacted and provided COC COC created upon receipt
3	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Preservation Method: Wet Ice Ice Packs Dry ice <u>None</u> Other: *all temperatures are recorded in Celsius <u>Metals Containers</u> TEMP: <u>21</u>
4	Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Temperature Device Serial #: <u>IR2-21</u> Secondary Temperature Device Serial # (If Applicable):
5	Sample containers intact and sealed?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6	Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sample ID's and Containers Affected: If Preservation added, Lot#:
7	Do any samples require Volatile Analysis?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	If Yes, are Encores or Soil Kits present for solids? Yes ___ No ___ NA ___ (If yes, take to VOA Freezer)
					Do liquid VOA vials contain acid preservation? Yes ___ No ___ NA ___ (If unknown, select No)
					Are liquid VOA vials free of headspace? Yes ___ No ___ NA ___
8	Samples received within holding time?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ID's and tests affected:
9	Sample ID's on COC match ID's on bottles?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ID's and containers affected:
10	Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	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?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: No container count on COC Other (describe)
12	Are sample containers identifiable as GEL provided by use of GEL labels?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
13	COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: Not relinquished Other (describe)

Comments (Use Continuation Form if needed):

PM (or PMA) review: Initials GB Date 9/18/21 Page 1 of 1

List of current GEL Certifications as of 01 October 2021

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



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



GEL LABORATORIES LLC

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.



Reviewed by _____

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: October 26, 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: AF15787 Project: SOOP00119
Sample ID: 557483001 Client ID: SOOP001
Matrix: Ground Water
Collect Date: 27-SEP-21 09:38
Receive Date: 01-OCT-21
Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228		4.29	+/-1.18	1.30	3.00	pCi/L			JXC9	10/13/21	0851 2181317	1
Radium-226+Radium-228 Calculation "See Parent Products"												
Radium-226+228 Sum		5.29	+/-1.23			pCi/L		1	AEA	10/26/21	1418 2181322	2
Rad Radium-226												
Lucas Cell, Ra226, Liquid "As Received"												
Radium-226		1.00	+/-0.364	0.248	1.00	pCi/L			LXP1	10/26/21	1049 2181313	3

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	Calculation	
3	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			87.4	(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

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: October 26, 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: AF15788	Project: SOOP00119
Sample ID: 557483002	Client ID: SOOP001
Matrix: Ground Water	
Collect Date: 27-SEP-21 09:43	
Receive Date: 01-OCT-21	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228		3.87	+/-1.50	2.13	3.00	pCi/L			JXC9	10/13/21	0851 2181317	1
Radium-226+Radium-228 Calculation "See Parent Products"												
Radium-226+228 Sum		4.54	+/-1.53			pCi/L		1	AEA	10/26/21	1418 2181322	2
Rad Radium-226												
Lucas Cell, Ra226, Liquid "As Received"												
Radium-226		0.672	+/-0.280	0.214	1.00	pCi/L			LXP1	10/26/21	1049 2181313	3

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	Calculation	
3	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			81.4	(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

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: October 26, 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: AF15789	Project: SOOP00119
Sample ID: 557483003	Client ID: SOOP001
Matrix: Ground Water	
Collect Date: 27-SEP-21 11:17	
Receive Date: 01-OCT-21	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228		1.95	+/-1.03	1.51	3.00	pCi/L			JXC9	10/13/21	0851 2181317	1
Radium-226+Radium-228 Calculation "See Parent Products"												
Radium-226+228 Sum		2.76	+/-1.08			pCi/L		1	AEA	10/26/21	1418 2181322	2
Rad Radium-226												
Lucas Cell, Ra226, Liquid "As Received"												
Radium-226		0.805	+/-0.326	0.348	1.00	pCi/L			LXP1	10/26/21	1049 2181313	3

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	Calculation	
3	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			86	(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: October 26, 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: AF15790	Project: SOOP00119
Sample ID: 557483004	Client ID: SOOP001
Matrix: Ground Water	
Collect Date: 27-SEP-21 12:32	
Receive Date: 01-OCT-21	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228		5.96	+/-1.43	1.61	3.00	pCi/L			JXC9	10/15/21	0949 2181317	1
Radium-226+Radium-228 Calculation "See Parent Products"												
Radium-226+228 Sum		7.93	+/-1.51			pCi/L		1	AEA	10/26/21	1418 2181322	2
Rad Radium-226												
Lucas Cell, Ra226, Liquid "As Received"												
Radium-226		1.97	+/-0.480	0.408	1.00	pCi/L			LXP1	10/26/21	1049 2181313	3

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	Calculation	
3	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			86.3	(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: October 26, 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: AF15791	Project: SOOP00119
Sample ID: 557483005	Client ID: SOOP001
Matrix: Ground Water	
Collect Date: 28-SEP-21 10:21	
Receive Date: 01-OCT-21	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	0.384	+/-0.688	1.21	3.00	pCi/L			JXC9	10/13/21	0852 2181317	1
Radium-226+Radium-228 Calculation "See Parent Products"												
Radium-226+228 Sum		0.805	+/-0.742			pCi/L		1	AEA	10/26/21	1418 2181322	2
Rad Radium-226												
Lucas Cell, Ra226, Liquid "As Received"												
Radium-226		0.421	+/-0.277	0.370	1.00	pCi/L			LXP1	10/26/21	1049 2181313	3

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	Calculation	
3	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			93.3	(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

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: October 26, 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: AF15792	Project: SOOP00119
Sample ID: 557483006	Client ID: SOOP001
Matrix: Ground Water	
Collect Date: 28-SEP-21 10:26	
Receive Date: 01-OCT-21	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	1.73	+/-1.54	2.52	3.00	pCi/L			JXC9	10/13/21	1040 2181317	1
Radium-226+Radium-228 Calculation "See Parent Products"												
Radium-226+228 Sum		2.29	+/-1.57			pCi/L		1	AEA	10/26/21	1418 2181322	2
Rad Radium-226												
Lucas Cell, Ra226, Liquid "As Received"												
Radium-226		0.556	+/-0.339	0.473	1.00	pCi/L			LXP1	10/26/21	1049 2181313	3

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	Calculation	
3	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			84.6	(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

GEL LABORATORIES LLC

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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
Ms. Jeanette Gilmetti

Contact:
Workorder: 557483

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gas Flow											
Batch	2181317										
QC1204923921	557483002	DUP									
Radium-228			3.87	1.94	pCi/L	66.3		(0% - 100%)	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%)	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	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.

GEL LABORATORIES LLC

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

QC Summary

Workorder: 557483

Page 2 of 2

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
H											
J											
J											
K											
L											
M											
M											
N/A											
NI											
ND											
NJ											
Q											
R											
U											
UI											
UJ											
UL											
X											
Y											
^											
h											

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

^ 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>	<u>Client Sample Identification</u>
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.

Product: Lucas Cell, Ra226, Liquid

Analytical Method: EPA 903.1 Modified

Analytical Procedure: GL-RAD-A-008 REV# 15

Analytical Batch: 2181313

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
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.

Chain of Custody

557483



Customer Email/Report Recipient: LCWILLIA@santecooper.com Date Results Needed by: Project/Task/Unit #: 121567 / JMO2.09. G81 / 36500 Rerun request for any flagged QC: Yes No

Analysis 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 style="list-style-type: none"> • Method # • Reporting limit • Misc. sample info • Any other notes 	Analysis Group		
											RAD 226	RAD 228	TOTAL RAD CALC
AF15787	CGYP-4	9/27/21	0938	DEW/ML	1	P	G	GW	2		X	X	X
AF15788	CGYP-4 DUP		0943										
AF15789	CGYP-5		1117										
AF15790	CGYP-6		1232										
AF15791	WLF-A2-6	9/28/21	1021										
AF15792	WLF-A2-6 DUP		1026										

Relinquished by:	Employee#	Date	Time	Received by:	Employee #	Date	Time
<i>Sibrown</i>	35574	10/1/21	0945	<i>GEL</i>	GEL	10/1/21	0945
<i>GEL</i>	661	10/1/21	1120	<i>GEL</i>	GEL	10/1/21	1122

Sample Receiving (Internal Use Only)
 TEMP (°C): _____ Initial: _____
 Correct pH: Yes No
 Preservative Lot#: _____
 Date/Time/Init for preservative: _____

<input type="checkbox"/> METALS (all) <input type="checkbox"/> Ag <input type="checkbox"/> Cu <input type="checkbox"/> Sb <input type="checkbox"/> Al <input type="checkbox"/> Fe <input type="checkbox"/> Se <input type="checkbox"/> As <input type="checkbox"/> K <input type="checkbox"/> Sn <input type="checkbox"/> B <input type="checkbox"/> Li <input type="checkbox"/> Sr <input type="checkbox"/> Ba <input type="checkbox"/> Mg <input type="checkbox"/> Ti <input type="checkbox"/> Be <input type="checkbox"/> Mn <input type="checkbox"/> Tl <input type="checkbox"/> Ca <input type="checkbox"/> Mo <input type="checkbox"/> V <input type="checkbox"/> Cd <input type="checkbox"/> Na <input type="checkbox"/> Zn <input type="checkbox"/> Co <input type="checkbox"/> Ni <input type="checkbox"/> Hg <input type="checkbox"/> Cr <input type="checkbox"/> Pb <input type="checkbox"/> CrVI	Nutrients <input type="checkbox"/> TOC <input type="checkbox"/> DOC <input type="checkbox"/> TP/TPO4 <input type="checkbox"/> NH3-N <input type="checkbox"/> F <input type="checkbox"/> Cl <input type="checkbox"/> NO2 <input type="checkbox"/> Br <input type="checkbox"/> NO3 <input type="checkbox"/> SO4	MISC. <input type="checkbox"/> BTEX <input type="checkbox"/> Napthalene <input type="checkbox"/> THM/HAA <input type="checkbox"/> VOC <input type="checkbox"/> Oil & Grease <input type="checkbox"/> E. Coli <input type="checkbox"/> Total Coliform <input type="checkbox"/> pH <input type="checkbox"/> Dissolved As <input type="checkbox"/> Dissolved Fe <input type="checkbox"/> Rad 226 <input type="checkbox"/> Rad 228 <input type="checkbox"/> PCB	Gypsum <input type="checkbox"/> Wallboard <input type="checkbox"/> Gypsum(all below) <input type="checkbox"/> AIM <input type="checkbox"/> FOC <input type="checkbox"/> Total metals <input type="checkbox"/> Soluble Metals <input type="checkbox"/> Purity (CaSO4) <input type="checkbox"/> % Moisture <input type="checkbox"/> Sulfites <input type="checkbox"/> pH <input type="checkbox"/> Chlorides <input type="checkbox"/> Particle Size <input type="checkbox"/> Sulfur	Coal <input type="checkbox"/> Ultimate <input type="checkbox"/> % Moisture <input type="checkbox"/> Ash <input type="checkbox"/> Sulfur <input type="checkbox"/> BTUs <input type="checkbox"/> Volatile Matter <input type="checkbox"/> CHN Other Tests: <input type="checkbox"/> XRF Scan <input type="checkbox"/> HGI <input type="checkbox"/> Fineness <input type="checkbox"/> Particulate Matter	Flyash <input type="checkbox"/> Ammonia <input type="checkbox"/> LOI <input type="checkbox"/> % Carbon <input type="checkbox"/> Mineral Analysis <input type="checkbox"/> Sieve <input type="checkbox"/> % Moisture NPDES <input type="checkbox"/> Oil & Grease <input type="checkbox"/> As <input type="checkbox"/> TSS	Oil Trans. Oil Qual. Refractive Index Color Acidity Dielectric Strength (IP) Dissolved Gases Used Oil Flammability Metals in Oil (As, Cd, Cr, Ni, Pb, Hg) TOC GOUCL
--	--	---	--	---	--	---

SAMPLE RECEIPT & REVIEW FORM

Client: SOOP	SDG/AR/COC/Work Order: 557483
Received By: SLB	Date Received: 10-1-21
Carrier and Tracking Number	Circle Applicable: <input type="checkbox"/> FedEx Express <input type="checkbox"/> FedEx Ground <input type="checkbox"/> UPS <input type="checkbox"/> Field Services <input type="checkbox"/> Courier <input type="checkbox"/> Other

Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
A) Shipped as a DOT Hazardous?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Hazard Class Shipped: _____ UN#: _____ If UN2910, Is the Radioactive Shipment Survey Compliant? Yes ___ No ___
B) Did the client designate the samples to be received as radioactive?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	COC notation or radioactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): <input checked="" type="checkbox"/> CPM / mR/Hr Classified as: Rad 1 Rad 2 Rad 3
D) Did the client designate samples are hazardous?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	COC notation or hazard labels on containers equal client designation.
E) Did the RSO identify possible hazards?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	If D or E is yes, select Hazards below. <input type="checkbox"/> PCB's <input type="checkbox"/> Flammable <input type="checkbox"/> Foreign Soil <input type="checkbox"/> RCRA <input type="checkbox"/> Asbestos <input type="checkbox"/> Beryllium Other: _____

Sample Receipt Criteria		Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: Client contacted and provided COC COC created upon receipt
3	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Preservation Method: Wet Ice Ice Pac's Dry ice None Other: _____ *all temperatures are recorded in Celsius
4	Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Temperature Device Serial #: 184-21 Secondary Temperature Device Serial # (If Applicable): _____
5	Sample containers intact and sealed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6	Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sample ID's and Containers Affected: _____ If Preservation added, Lot#: _____
7	Do any samples require Volatile Analysis?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If Yes, are Encores or Soil Kits present for solids? Yes ___ No ___ NA ___ (If yes, take to VOA Freezer) Do liquid VOA 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: _____
8	Samples received within holding time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ID's and tests affected: _____
9	Sample ID's on COC match ID's on bottles?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ID's and containers affected: _____
10	Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: No container count on COC Other (describe)
12	Are sample containers identifiable as GEL provided by use of GEL labels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
13	COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: Not relinquished Other (describe)

SB
TEMP: **10, 11, 21c**

Comments (Use Continuation Form if needed):

PM (or PMA) review: Initials **NRC** Date **10/4/21** Page **1** of **1**

List of current GEL Certifications as of 26 October 2021

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



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.

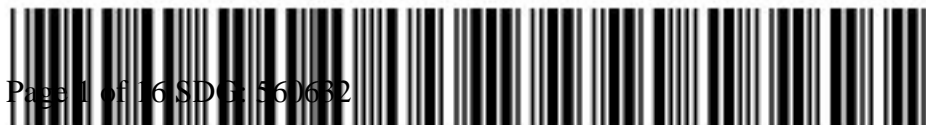
Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without 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



GEL LABORATORIES LLC

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

**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.



Reviewed by _____

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: November 10, 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: AF18534 Project: SOOP00119
Sample ID: 560632001 Client ID: SOOP001
Matrix: Ground Water
Collect Date: 26-OCT-21 10:00
Receive Date: 29-OCT-21
Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting													
GFPC, Ra228, Liquid "As Received"													
Radium-228		1.61	+/-1.03	1.56	3.00	pCi/L			JXC9	11/04/21	1624	2192055	1
Radium-226+Radium-228 Calculation "See Parent Products"													
Radium-226+228 Sum		5.56	+/-1.31			pCi/L			NXL1	11/10/21	1414	2192059	2
Rad Radium-226													
Lucas Cell, Ra226, Liquid "As Received"													
Radium-226		3.94	+/-0.813	0.454	1.00	pCi/L			LXP1	11/05/21	0950	2191975	3

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	Calculation	
3	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

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: November 10, 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: AF18535	Project: SOOP00119
Sample ID: 560632002	Client ID: SOOP001
Matrix: Ground Water	
Collect Date: 26-OCT-21 10:05	
Receive Date: 29-OCT-21	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228		3.92	+/-1.79	2.68	3.00	pCi/L			JXC9	11/04/21	1624 2192055	1
Radium-226+Radium-228 Calculation "See Parent Products"												
Radium-226+228 Sum		8.42	+/-2.01			pCi/L			NXL1	11/10/21	1414 2192059	2
Rad Radium-226												
Lucas Cell, Ra226, Liquid "As Received"												
Radium-226		4.50	+/-0.902	0.492	1.00	pCi/L			LXP1	11/05/21	0950 2191975	3

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	Calculation	
3	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			70.7	(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

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: November 10, 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: AF18536 Project: SOOP00119
Sample ID: 560632003 Client ID: SOOP001
Matrix: Ground Water
Collect Date: 26-OCT-21 11:55
Receive Date: 29-OCT-21
Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228		2.39	+/-1.30	1.99	3.00	pCi/L			JXC9	11/04/21	1624 2192055	1
Radium-226+Radium-228 Calculation "See Parent Products"												
Radium-226+228 Sum		7.07	+/-1.63			pCi/L			NXL1	11/10/21	1414 2192059	2
Rad Radium-226												
Lucas Cell, Ra226, Liquid "As Received"												
Radium-226		4.68	+/-0.981	0.687	1.00	pCi/L			LXP1	11/05/21	0950 2191975	3

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	Calculation	
3	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			85.1	(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

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: November 10, 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: AF18537	Project: SOOP00119
Sample ID: 560632004	Client ID: SOOP001
Matrix: Ground Water	
Collect Date: 26-OCT-21 12:54	
Receive Date: 29-OCT-21	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228		3.94	+/-1.37	1.74	3.00	pCi/L			JXC9	11/04/21	1624 2192055	1
Radium-226+Radium-228 Calculation "See Parent Products"												
Radium-226+228 Sum		6.48	+/-1.53			pCi/L			NXL1	11/10/21	1414 2192059	2
Rad Radium-226												
Lucas Cell, Ra226, Liquid "As Received"												
Radium-226		2.54	+/-0.692	0.531	1.00	pCi/L			LXP1	11/08/21	0912 2191975	3

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	Calculation	
3	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			69.2	(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

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: November 10, 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: AF18539	Project: SOOP00119
Sample ID: 560632005	Client ID: SOOP001
Matrix: Ground Water	
Collect Date: 27-OCT-21 10:27	
Receive Date: 29-OCT-21	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	0.619	+/-1.17	2.04	3.00	pCi/L		JXC9	11/04/21	1624	2192055	1
Radium-226+Radium-228 Calculation "See Parent Products"												
Radium-226+228 Sum		3.59	+/-1.39			pCi/L		NXL1	11/10/21	1414	2192059	2
Rad Radium-226												
Lucas Cell, Ra226, Liquid "As Received"												
Radium-226		2.97	+/-0.758	0.553	1.00	pCi/L		LXP1	11/05/21	1057	2191975	3

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	Calculation	
3	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			78.1	(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

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: November 10, 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: AF18540	Project: SOOP00119
Sample ID: 560632006	Client ID: SOOP001
Matrix: Ground Water	
Collect Date: 27-OCT-21 10:32	
Receive Date: 29-OCT-21	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	0.903	+/-0.757	1.20	3.00	pCi/L			JXC9	11/04/21	1624 2192055	1
Radium-226+Radium-228 Calculation "See Parent Products"												
Radium-226+228 Sum		3.00	+/-0.975			pCi/L			NXL1	11/10/21	1414 2192059	2
Rad Radium-226												
Lucas Cell, Ra226, Liquid "As Received"												
Radium-226		2.09	+/-0.614	0.463	1.00	pCi/L			LXP1	11/05/21	1057 2191975	3

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	Calculation	
3	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			90.1	(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

GEL LABORATORIES LLC

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

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

Contact: Ms. Jeanette Gilmetti

Workorder: 560632

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							
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	0.185	pCi/L					11/04/21	16:23
	Uncertainty			+/-0.360							
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
	Uncertainty	+/-0.813		+/-0.918							
QC1204944873	LCS										
Radium-226	26.8			23.3	pCi/L		87	(75%-125%)		11/08/21	09:12
	Uncertainty			+/-1.87							
QC1204944874	LCSD										
Radium-226	53.6			53.4	pCi/L	78.4*	99.6	(0%-20%)		11/05/21	10:57
	Uncertainty			+/-2.98							
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:

GEL LABORATORIES LLC

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

QC Summary

Workorder: 560632

Page 2 of 2

Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
**	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.										
H	Analytical holding time was exceeded										
J	See case narrative for an explanation										
J	Value is estimated										
K	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.										
M	M if above MDC and less than LLD										
M	REMP Result > MDC/CL and < RDL										
N/A	RPD or %Recovery limits do not apply.										
NI	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 Spectroscopy--Uncertain identification										
UJ	Gamma Spectroscopy--Uncertain identification										
UL	Not considered detected. The associated number is the reported concentration, which may be inaccurate due to a low bias.										
X	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										

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

^ 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>	<u>Client Sample Identification</u>
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>	<u>Client Sample Identification</u>
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).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
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
---------------	----------------	--------------

1204944870 (MB)	Radium-226	Result: 0.726 pCi/L > MDA: 0.654 pCi/L <= RDL: 1.00 pCi/L
-----------------	------------	---

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.

Chain of Custody

560632



Customer Email/Report Recipient: LCWILLIA@santecooper.com Date Results Needed by: Project/Task/Unit #: 121567 / JMO2.09.G01 / 36500 Rerun request for any flagged QC: Yes No

Analysis 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)	Comments • Method # • Reporting limit • Misc. sample info • Any other notes	RAD 226	RAD 228	TOTAL RAD/CALC.
AF18535	CGYP-4												
AF18534	CGYP-4	10/26/21	1000	DEW/ML	2	P	G	GW	2		X	X	X
AF18535	CGYP-4 DUP		1005										
AF18536	CGYP-5		1155										
AF18537	CGYP-6		1254										
AF18539	WLF-A2-6	10/27/21	1027										
AF18540	WLF-A2-6 DUP		1032										

Relinquished by:	Employee#	Date	Time	Received by:	Employee #	Date	Time
<i>SJBrown</i>	35594	10/29/21	1000	<i>GEL</i>	GEL	10/29/21	1000
<i>DEW</i>	662	10/26/21	1455	<i>GEL</i>	GEL	10/26/21	1455

Sample Receiving (Internal Use Only)
TEMP (°C): _____ Initial: _____
Correct pH: Yes No
Preservative Lot#:
Date/Time/Init for preservative:

<input type="checkbox"/> METALS (all) <input type="checkbox"/> Ag <input type="checkbox"/> Cu <input type="checkbox"/> Sb <input type="checkbox"/> Al <input type="checkbox"/> Fe <input type="checkbox"/> Se <input type="checkbox"/> As <input type="checkbox"/> K <input type="checkbox"/> Sn <input type="checkbox"/> B <input type="checkbox"/> Li <input type="checkbox"/> Sr <input type="checkbox"/> Ba <input type="checkbox"/> Mg <input type="checkbox"/> Ti <input type="checkbox"/> Be <input type="checkbox"/> Mn <input type="checkbox"/> Tl <input type="checkbox"/> Ca <input type="checkbox"/> Mo <input type="checkbox"/> V <input type="checkbox"/> Cd <input type="checkbox"/> Na <input type="checkbox"/> Zn <input type="checkbox"/> Co <input type="checkbox"/> Ni <input type="checkbox"/> Hg <input type="checkbox"/> Cr <input type="checkbox"/> Pb <input type="checkbox"/> CrVI	Nutrients TOC DOC TP/TPO3 NH3-N P Cl NO2 Br NO3 SO4	MISC. <input type="checkbox"/> BTEX <input type="checkbox"/> Napthalene <input type="checkbox"/> THM/HAA <input type="checkbox"/> VOC <input type="checkbox"/> Oil & Grease <input type="checkbox"/> E. Coli <input type="checkbox"/> Total Coliform <input type="checkbox"/> pH <input type="checkbox"/> Dissolved As <input type="checkbox"/> Dissolved Fe <input type="checkbox"/> Rad 226 <input type="checkbox"/> Rad 228 <input type="checkbox"/> PCB	Gypsum <input type="checkbox"/> Wallboard Gypsum(all below) <input type="checkbox"/> AIM <input type="checkbox"/> TOC <input type="checkbox"/> Total metals <input type="checkbox"/> Soluble Metals <input type="checkbox"/> Purity (CaSO4) <input type="checkbox"/> % Moisture <input type="checkbox"/> Sulfates <input type="checkbox"/> pH <input type="checkbox"/> Chlorides <input type="checkbox"/> Particle Size <input type="checkbox"/> Sulfur	Coal <input type="checkbox"/> Ultimate <input type="checkbox"/> % Moisture <input type="checkbox"/> Ash <input type="checkbox"/> Sulfur <input type="checkbox"/> BTUs <input type="checkbox"/> Volatile Matter <input type="checkbox"/> CHN Other Tests: <input type="checkbox"/> XRF Scan <input type="checkbox"/> HGI <input type="checkbox"/> Fineness <input type="checkbox"/> Particulate Matter	Flyash <input type="checkbox"/> Ammonia <input type="checkbox"/> LOI <input type="checkbox"/> % Carbon <input type="checkbox"/> Mineral <input type="checkbox"/> Analysts <input type="checkbox"/> Sieve <input type="checkbox"/> % Moisture NPDES <input type="checkbox"/> Oil & Grease <input type="checkbox"/> As <input type="checkbox"/> TSS	Oil Trans. Oil Qual % Moisture Color Acids Precip. Sample IFI Unstabilized Gas Used Oil Flashpoint Metals in oil (As, Cd, Cr, Ni, Pb) TSS WATER
--	--	---	--	---	--	---

JAR

SAMPLE RECEIPT & REVIEW FORM

Client: <u>SOOP</u>		SDG/AR/COC/Work Order: <u>560632</u>			
Received By: <u>DC</u>		Date Received: <u>10-29-21</u>			
Carrier and Tracking Number		Circle Applicable: FedEx Express FedEx Ground UPS Field Services <u>Courier</u> Other <u>Cooler 1 - 210</u> <u>Cooler 3 - 00</u> <u>Cooler 2 - 200</u>			
Suspected Hazard Information		*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.			
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): <u>0</u> CPM / mR/Hr Classified as: Rad 1 Rad 2 Rad 3			
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 Other:			
Sample Receipt Criteria		Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: Client contacted and provided COC COC created upon receipt
3	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Preservation Method: <u>Wet Ice</u> Ice Packs Dry ice <u>None</u> Other: *all temperatures are recorded in Celsius TEMP: <u>200</u>
4	Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Temperature Device Serial #: <u>IR6-21</u> Secondary Temperature Device Serial # (If Applicable):
5	Sample containers intact and sealed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6	Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sample ID's and Containers Affected:
7	Do any samples require Volatile Analysis?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If Preservation added, Lot#:
					If Yes, are Encores or Soil Kits present for solids? Yes ___ No ___ NA ___ (If yes, take to VOA Freezer)
					Do liquid VOA vials contain acid preservation? Yes ___ No ___ NA ___ (If unknown, select No)
8	Samples received within holding time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Are liquid VOA vials free of headspace? Yes ___ No ___ NA ___ Sample ID's and containers affected:
9	Sample ID's on COC match ID's on bottles?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ID's and tests affected:
10	Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ID's and containers affected:
11	Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
12	Are sample containers identifiable as GEL provided by use of GEL labels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: No container count on COC Other (describe)
13	COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: Not relinquished Other (describe)
Comments (Use Continuation Form if needed):					

PM (or PMA) review: Initials GB Date 11/2/21 Page 1 of 1

List of current GEL Certifications as of 10 November 2021

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



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.

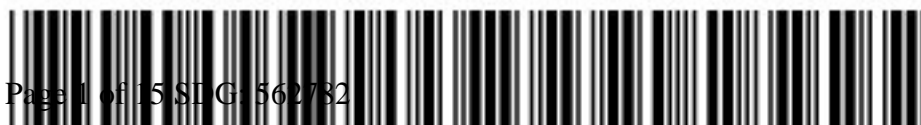
Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without 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 Robinson
Project Manager

Purchase Order: 367074
Enclosures



GEL LABORATORIES LLC

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

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.

Reviewed by _____

Julie Robinson

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: December 28, 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: AF20415 Project: SOOP00119
Sample ID: 562782001 Client ID: SOOP001
Matrix: Ground Water
Collect Date: 17-NOV-21 10:18
Receive Date: 19-NOV-21
Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228		3.72	+/-1.63	2.41	3.00	pCi/L			JXC9	12/27/21	1129 2211287	1
Radium-226+Radium-228 Calculation "See Parent Products"												
Radium-226+228 Sum		4.90	+/-1.70			pCi/L			NXL1	12/28/21	1150 2202339	2
Rad Radium-226												
Lucas Cell, Ra226, Liquid "As Received"												
Radium-226		1.18	+/-0.496	0.543	1.00	pCi/L			LXP1	12/03/21	0916 2201682	3

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	Calculation	
3	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			84.4	(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

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: December 28, 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: AF20416	Project: SOOP00119
Sample ID: 562782002	Client ID: SOOP001
Matrix: Ground Water	
Collect Date: 17-NOV-21 10:23	
Receive Date: 19-NOV-21	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	0.764	+/-0.837	1.39	3.00	pCi/L			JXC9	12/27/21	1129 2211287	1
Radium-226+Radium-228 Calculation "See Parent Products"												
Radium-226+228 Sum		2.56	+/-1.02			pCi/L			NXL1	12/28/21	1150 2202339	2
Rad Radium-226												
Lucas Cell, Ra226, Liquid "As Received"												
Radium-226		1.80	+/-0.581	0.536	1.00	pCi/L			LXP1	12/03/21	0916 2201682	3

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	Calculation	
3	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			83.8	(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

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: December 28, 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: AF20417	Project: SOOP00119
Sample ID: 562782003	Client ID: SOOP001
Matrix: Ground Water	
Collect Date: 17-NOV-21 11:51	
Receive Date: 19-NOV-21	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	0.281	+/-1.00	1.84	3.00	pCi/L		JXC9	12/27/21	1129	2211287	1
Radium-226+Radium-228 Calculation "See Parent Products"												
Radium-226+228 Sum		1.59	+/-1.12			pCi/L		NXL1	12/28/21	1150	2202339	2
Rad Radium-226												
Lucas Cell, Ra226, Liquid "As Received"												
Radium-226		1.31	+/-0.507	0.432	1.00	pCi/L		LXP1	12/03/21	0916	2201682	3

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	Calculation	
3	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			68.5	(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

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: December 28, 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: AF20418	Project: SOOP00119
Sample ID: 562782004	Client ID: SOOP001
Matrix: Ground Water	
Collect Date: 17-NOV-21 13:04	
Receive Date: 19-NOV-21	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228		5.88	+/-1.46	1.48	3.00	pCi/L			JXC9	12/27/21	1129 2211287	1
Radium-226+Radium-228 Calculation "See Parent Products"												
Radium-226+228 Sum		9.69	+/-1.71			pCi/L			NXL1	12/28/21	1150 2202339	2
Rad Radium-226												
Lucas Cell, Ra226, Liquid "As Received"												
Radium-226		3.82	+/-0.882	0.696	1.00	pCi/L			LXP1	12/03/21	0916 2201682	3

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	Calculation	
3	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			74.9	(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

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: December 28, 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: AF20419	Project: SOOP00119
Sample ID: 562782005	Client ID: SOOP001
Matrix: Ground Water	
Collect Date: 18-NOV-21 11:27	
Receive Date: 19-NOV-21	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	1.25	+/-1.23	2.04	3.00	pCi/L		JXC9	12/27/21	1129	2211287	1
Radium-226+Radium-228 Calculation "See Parent Products"												
Radium-226+228 Sum		2.39	+/-1.32			pCi/L		NXL1	12/28/21	1150	2202339	2
Rad Radium-226												
Lucas Cell, Ra226, Liquid "As Received"												
Radium-226		1.14	+/-0.477	0.469	1.00	pCi/L		LXP1	12/03/21	0916	2201682	3

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	Calculation	
3	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			80.6	(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

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: December 28, 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: AF20420	Project: SOOP00119
Sample ID: 562782006	Client ID: SOOP001
Matrix: Ground Water	
Collect Date: 18-NOV-21 11:32	
Receive Date: 19-NOV-21	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	0.743	+/-1.45	2.52	3.00	pCi/L			JXC9	12/27/21	1129 2211287	1
Radium-226+Radium-228 Calculation "See Parent Products"												
Radium-226+228 Sum		1.06	+/-1.52			pCi/L			NXL1	12/28/21	1150 2202339	2
Rad Radium-226												
Lucas Cell, Ra226, Liquid "As Received"												
Radium-226	U	0.320	+/-0.444	0.768	1.00	pCi/L			LXP1	12/03/21	0948 2201682	3

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	Calculation	
3	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			79.6	(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

GEL LABORATORIES LLC

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

QC Summary

Report Date: December 28, 2021

Page 1 of 2

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

Contact: Ms. Jeanette Gilmetti

Workorder: 562782

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gas Flow											
Batch	2211287										
QC1204985029	562782001	DUP									
Radium-228		3.72		2.81	pCi/L	27.9		(0% - 100%)	JXC9	12/27/21	11:28
	Uncertainty	+/-1.63		+/-1.54							
QC1204985030	LCS										
Radium-228		48.7		39.2	pCi/L		80.5	(75%-125%)		12/27/21	11:28
	Uncertainty			+/-3.69							
QC1204985028	MB										
Radium-228			U	0.293	pCi/L					12/27/21	11:28
	Uncertainty			+/-1.40							
Rad Ra-226											
Batch	2201682										
QC1204966189	562782001	DUP									
Radium-226		1.18		1.84	pCi/L	44*		(0%-20%)	LXP1	12/03/21	09:48
	Uncertainty	+/-0.496		+/-0.537							
QC1204966191	LCS										
Radium-226		26.6		27.1	pCi/L		102	(75%-125%)		12/03/21	09:48
	Uncertainty			+/-2.11							
QC1204966192	LCSD										
Radium-226		26.6		28.6	pCi/L	5.24	108	(0%-20%)		12/03/21	09:48
	Uncertainty			+/-2.19							
QC1204966188	MB										
Radium-226			U	0.237	pCi/L					12/03/21	11:37
	Uncertainty			+/-0.219							
QC1204966190	562782001	MS									
Radium-226		134	1.18	127	pCi/L		93.6	(75%-125%)		12/03/21	09:48
	Uncertainty	+/-0.496		+/-10.5							

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

GEL LABORATORIES LLC

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

QC Summary

Workorder: 562782

Page 2 of 2

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
>											
BD											
FA											
H											
J											
J											
K											
L											
M											
M											
N/A											
N1											
ND											
NJ											
Q											
R											
U											
UI											
UJ											
UL											
X											
Y											
^											
h											

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

^ 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 #: 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>	<u>Client Sample Identification</u>
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 re-prepped 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.

Product: Lucas Cell, Ra226, Liquid

Analytical Method: EPA 903.1 Modified

Analytical Procedure: GL-RAD-A-008 REV# 15

Analytical Batch: 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.

Chain of Custody

562782



Customer Email/Report Recipient:

Date Results Needed by:

Project/Task/Unit #:

Rerun request for any flagged QC

LCWILLIA @santecooper.com

121567 / JM02.09-G01 / 3

Yes 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)	Comments • Method # • Reporting limit • Misc. sample info • Any other notes	Analysis Group		
											RAD 226	RAD 228	TOTALRAD CALC
AF20415	CGYP-4	11/17/21	1018	DEW/ML	2	P	G	GW	2		X	X	X
16	CGYP-4 DUP		1023										
17	CGYP-5		1151										
18	CGYP-6		1304										
19	WLF-A2-6	11/18/21	1127										
20	WLF-A2-6 DUP		1132										

Relinquished by: <u>Sibrown</u>	Employee# <u>35594</u>	Date <u>11/19/21</u>	Time <u>1040</u>	Received by: <u>GEL</u>	Employee # <u>GEL</u>	Date <u>11/19/21</u>	Time <u>1046</u>
Relinquished by: <u>GEL</u>	Employee# <u>662</u>	Date <u>11/19/21</u>	Time <u>1127</u>	Received by: <u>GEL</u>	Employee # <u>GEL</u>	Date <u>11/19/21</u>	Time <u>1127</u>

Sample Receiving (Internal Use Only)
 TEMP (°C): _____ Initial: _____
 Correct pH: Yes No
 Preservative Lot#: _____
 Date/Time/Init for preservative: _____

<input type="checkbox"/> METALS (all) Ag <input type="checkbox"/> Cu <input type="checkbox"/> Sb Al <input type="checkbox"/> Fe <input type="checkbox"/> Se As <input type="checkbox"/> K <input type="checkbox"/> Sn B <input type="checkbox"/> Li <input type="checkbox"/> Sr Ba <input type="checkbox"/> Mg <input type="checkbox"/> Ti Be <input type="checkbox"/> Mn <input type="checkbox"/> Tl Ca <input type="checkbox"/> Mo <input type="checkbox"/> V Cd <input type="checkbox"/> Na <input type="checkbox"/> Zn Co <input type="checkbox"/> Ni <input type="checkbox"/> Hg Cr <input type="checkbox"/> Pb <input type="checkbox"/> CrVI	<input type="checkbox"/> Nutrients TOC DOC TP-TPO4 NH3-N F Cl NO2 Br NO3 SO4	<input type="checkbox"/> MISC. BTEX Napthalene THM/HAA VOC Oil & Grease E. Coli Total Coliform pH Dissolved As Dissolved Fe Rad 226 Rad 228 PCB	<input type="checkbox"/> Gypsum Wallboard Gypsum(all below) ATM TOC Total metals Soluble Metals Purity (CaSO4) % Moisture Sulfates pH Chlorides Particle Size Sulfur	<input type="checkbox"/> Coal Ultimate % Moisture Ash Sulfur BTUs Volatile Matter CHN Other Tests: XRF Scan HGI Fineness Particulate Matter	<input type="checkbox"/> Flyash Ammonia LOI % Carbon Mineral Analysis Sieve % Moisture NPDES Oil & Grease AS TSS	<input type="checkbox"/> Oil Trans. Oil Qual. % Moisture Color Acidity Petroleum Products HET Distilled Grease Used Oil The gravim. Metals in oil CAS 33.69.10 HET IN GOFER
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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 codes: 1-HNO3 2-H2O2 3-H2SO4 4-HCl 5=Na2S2O3 6-Other (Specify)

JAR

SAMPLE RECEIPT & REVIEW FORM

Client: <u>SCOOP</u>		SDG/AR/COC/Work Order: <u>562782</u>	
Received By: <u>DC</u>		Date Received: <u>11-19-21</u>	
Carrier and Tracking Number		Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other <u>Cooler #1 = 15°</u> <u>Cooler #2 = 0°</u>	
Suspected Hazard Information	Yes <input type="checkbox"/> No <input type="checkbox"/>	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.	
A) Shipped as a DOT Hazardous?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	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?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	COC notation or radioactive stickers on containers equal client designation.	
C) Did the RSO classify the samples as radioactive?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): <u>0</u> CPM / mR/Hr Classified as: Rad 1 Rad 2 Rad 3	
D) Did the client designate samples are hazardous?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	COC notation or hazard labels on containers equal client designation.	
E) Did the RSO identify possible hazards?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	If D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:	
Sample Receipt Criteria		Yes <input type="checkbox"/> NA <input type="checkbox"/> No <input type="checkbox"/>	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>	Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>	Circle Applicable: Client contacted and provided COC COC created upon receipt
3	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	<input checked="" type="checkbox"/>	Preservation Method: <u>Wet Ice</u> Ice Packs Dry ice <u>None</u> Other: *all temperatures are recorded in Celsius TEMP: _____
4	Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>	Temperature Device Serial #: <u>IR6-21</u> Secondary Temperature Device Serial # (If Applicable):
5	Sample containers intact and sealed?	<input checked="" type="checkbox"/>	Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6	Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>	Sample ID's and Containers Affected: If Preservation added, Lot#:
7	Do any samples require Volatile Analysis?	<input checked="" type="checkbox"/>	If Yes, are Encores or Soil Kits present for solids? Yes ___ No ___ NA ___ (If yes, take to VOA Freezer) Do liquid VOA 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:
8	Samples received within holding time?	<input checked="" type="checkbox"/>	ID's and tests affected:
9	Sample ID's on COC match ID's on bottles?	<input checked="" type="checkbox"/>	ID's and containers affected:
10	Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>	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?	<input checked="" type="checkbox"/>	Circle Applicable: No container count on COC Other (describe)
12	Are sample containers identifiable as GEL provided by use of GEL labels?	<input checked="" type="checkbox"/>	<u>DC</u>
13	COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>	Circle Applicable: Not relinquished Other (describe)
Comments (Use Continuation Form if needed):			

PM (or PMA) review: Initials GTB Date 11/22/21 Page 1 of 1

List of current GEL Certifications as of 28 December 2021

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



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.

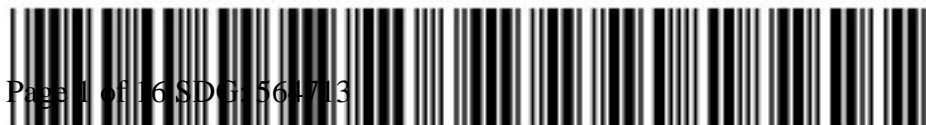
Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without 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



GEL LABORATORIES LLC

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

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.

Grace Bodiford

Reviewed by _____

GEL LABORATORIES LLC

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	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	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		5.03	+/-1.29			pCi/L		1	NXL1	01/05/22	1203 2207658	2
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
1	EPA 904.0/SW846 9320 Modified	
2	Calculation	
3	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	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

GEL LABORATORIES LLC

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: 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	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	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		3.30	+/-1.28			pCi/L		1	NXL1	01/05/22	1203	2207658	2
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
1	EPA 904.0/SW846 9320 Modified	
2	Calculation	
3	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	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

GEL LABORATORIES LLC

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: 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	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	2.46	+/-1.56	2.46	3.00	pCi/L			JXC9	01/05/22	1022 2207640	1
Radium-226+Radium-228 Calculation "See Parent Products"												
Radium-226+228 Sum		2.92	+/-1.59			pCi/L		1	NXL1	01/05/22	1203 2207658	2
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
1	EPA 904.0/SW846 9320 Modified	
2	Calculation	
3	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	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

GEL LABORATORIES LLC

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: 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	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	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		5.62	+/-1.34			pCi/L		1	NXL1	01/05/22	1203 2207658	2
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
1	EPA 904.0/SW846 9320 Modified	
2	Calculation	
3	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
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

GEL LABORATORIES LLC

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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	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	0.757	+/-0.750	1.23	3.00	pCi/L			JXC9	01/05/22	1022 2207640	1
Radium-226+Radium-228 Calculation "See Parent Products"												
Radium-226+228 Sum		1.18	+/-0.780			pCi/L		1	NXL1	01/05/22	1203 2207658	2
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
1	EPA 904.0/SW846 9320 Modified	
2	Calculation	
3	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	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

GEL LABORATORIES LLC

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: 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	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Ra228, Liquid "As Received"												
Radium-228	U	0.233	+/-0.791	1.44	3.00	pCi/L			JXC9	01/05/22	1023 2207640	1
Radium-226+Radium-228 Calculation "See Parent Products"												
Radium-226+228 Sum		0.643	+/-0.821			pCi/L		1	NXL1	01/05/22	1203 2207658	2
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
1	EPA 904.0/SW846 9320 Modified	
2	Calculation	
3	EPA 903.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	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 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

GEL LABORATORIES LLC

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

QC Summary

Report Date: January 5, 2022

Page 1 of 2

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

Contact:
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%)	JXC9	01/05/22	10:21
	Uncertainty	+/-1.21		+/-1.05							
QC1204978138	LCS										
Radium-228		49.1		50.3	pCi/L		102	(75%-125%)		01/05/22	10:21
	Uncertainty			+/-3.82							
QC1204978136	MB										
Radium-228			U	0.661	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		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

GEL LABORATORIES LLC

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

QC Summary

Workorder: 564713

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Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
>											
BD											
FA											
H											
J											
J											
K											
L											
M											
M											
N/A											
N1											
ND											
NJ											
Q											
R											
U											
UI											
UJ											
UL											
X											
Y											
^											
h											

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

^ 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 #: 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>	<u>Client Sample Identification</u>
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).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
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>	<u>Client Sample Identification</u>
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.

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.

SAMPLE RECEIPT & REVIEW FORM

Client: SOOP SDG/AR/COC/Work Order: 564713
 Received By: MRS Date Received: 12.10.21

Carrier and Tracking Number

Circle Applicable:
 FedEx Express FedEx Ground UPS Field Services Courier Other

Suspected Hazard Information Yes No *If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.

A) Shipped as a DOT Hazardous? Yes No 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? Yes No COC notation or radioactive stickers on containers equal client designation.

C) Did the RSO classify the samples as radioactive? Yes No Maximum Net Counts Observed* (Observed Counts - Area Background Counts): 0 CPM/mR/Hr
 Classified as: Rad 1 Rad 2 Rad 3

D) Did the client designate samples are hazardous? Yes No COC notation or hazard labels on containers equal client designation.

E) Did the RSO identify possible hazards? Yes No If D 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?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: Client contacted and provided COC COC created upon receipt
3	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Preservation Method: Wet Ice Ice Packs Dry ice <u>None</u> Other: *all temperatures are recorded in Celsius TEMP: <u>20</u>°
4	Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Temperature Device Serial #: <u>LR3-21</u> Secondary Temperature Device Serial # (If Applicable): _____
5	Sample containers intact and sealed?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6	Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sample ID's and Containers Affected: _____
7	Do any samples require Volatile Analysis?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	If Preservation added, Lot#: _____
					If Yes, are Encores or Soil Kits present for solids? Yes ___ No ___ NA ___ (If yes, take to VOA Freezer)
					Do liquid VOA vials contain acid preservation? Yes ___ No ___ NA ___ (If unknown, select No)
8	Samples received within holding time?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Are liquid VOA vials free of headspace? Yes ___ No ___ NA ___ Sample ID's and containers affected: _____
9	Sample ID's on COC match ID's on bottles?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ID's and tests affected: _____
10	Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ID's and containers affected: _____
11	Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: No dates on containers No times on containers COC missing info Other (describe) <u>COC Says 2020 Soil Containers 2021</u> GSD/13/21
12	Are sample containers identifiable as GEL provided by use of GEL labels?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: No container count on COC Other (describe)
13	COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: Not relinquished Other (describe)

Comments (Use Continuation Form if needed):

List of current GEL Certifications as of 05 January 2022

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

Field Data Sheets

(Note: the color coding is to assist field personnel in determining when the well has stabilized enough to begin sample collection.)

**Cross Generating Station
Former Gypsum Pond Background Groundwater Monitoring Wells**

Well ID	TOC Elevation (feet)	GW Depth (feet)	Screen Intervals (ft, bgs)	Sample Date	Sample Time	Total Well Depth
CBW-1	85.80	10.12	14-24	1/26/2021	1039	26.94

Drawdown: 10.15 depth to GW (ft)

Time	Temp round 1 (celcius)	pH round 1 (units)	Eh ORP (mV)	Spec Cond round 1 (uS/cm)	Turbidity (NTU)	Dissolved Oxygen (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

**Cross Generating Station
Former Gypsum Pond Background Groundwater Monitoring Wells**

Well ID	TOC Elevation (feet)	GW Depth (feet)	Depth of Screened Interval (ft, bgs)	Sample Date	Sample Time	Total Well Depth
CBW-1	85.80	10.07	14-24	6/21/2021	1413	26.76

Drawdown: 10.11 depth to GW (ft)

Time	Temp round 1 (celcius)	pH round 1 (units)	Eh ORP (mV)	Spec Cond round 1 (uS/cm)	Turbidity (NTU)	Dissolved Oxygen (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

**Cross Generating Station
Former Gypsum Pond CCR Groundwater Monitoring Wells**

Well ID	TOC Elevation (feet)	GW Depth (feet)	Screen Intervals (ft, bgs)	Sample Date	Sample Time	Total Well Depth
CGYP-1	91.89	15.99	14'-24'	2/10/2021	1116	27

Drawdown: 16.22 depth to GW (ft)

Time	Temp round 1 (celcius)	pH round 1 (units)	Eh ORP (mV)	Spec Cond round 1 (uS/cm)	Turbidity (NTU)	Dissolved Oxygen (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

Comments/Conditions:

Samples were collected by Melanie Goings and Trey West

**Cross Generating Station
Former Gypsum Pond CCR Groundwater Monitoring Wells**

Well ID	TOC Elevation (feet)	GW Depth (feet)	Screen Intervals (ft, bgs)	Sample Date	Sample Time	Total Well Depth
CGYP-1	91.89	16.58	14'-24'	4/7/2021	1216	26.98

Drawdown: 16.81 depth to GW (ft)

Time	Temp round 1 (celcius)	pH round 1 (units)	Eh ORP (mV)	Spec Cond round 1 (uS/cm)	Turbidity (NTU)	Dissolved Oxygen (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:

Samples were collected by Melanie Goings and Trey West

**Cross Generating Station
Former Gypsum Pond CCR Groundwater Monitoring Wells**

Well ID	TOC Elevation (feet)	GW Depth (feet)	Screen Intervals (ft, bgs)	Sample Date	Sample Time	Total Well Depth
CGYP-3	83.95	9.29	10-20	7/7/2021	1338	

Drawdown: 9.53 depth to GW (ft)

Time	Temp round 1 (celcius)	pH round 1 (units)	Eh ORP (mV)	Spec Cond round 1 (uS/cm)	Turbidity (NTU)	Dissolved Oxygen (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

**Cross Generating Station
Former Gypsum Pond CCR Groundwater Monitoring Wells**

Well ID	TOC Elevation (feet)	GW Depth (feet)	Screen Intervals (ft, bgs)	Sample Date	Sample Time	Total Well Depth
CGYP-4	83.49	7.56	10-20	4/7/2021	1106	23.01

Drawdown: 7.84 depth to GW (ft)

Time	Temp round 1 (celcius)	pH round 1 (units)	Eh ORP (mV)	Spec Cond round 1 (uS/cm)	Turbidity (NTU)	Dissolved Oxygen (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:

Samples were collected by Melanie Goings and Trey West

**Cross Generating Station
Former Gypsum Pond CCR Groundwater Monitoring Wells**

Well ID	TOC Elevation (feet)	GW Depth (feet)	Screen Intervals (ft, bgs)	Sample Date	Sample Time	Total Well Depth
CGYP-4	83.49	7.65	10-20	5/13/2021	1439	23.04

Drawdown: 7.95 depth to GW (ft)

Time	Temp round 1 (celcius)	pH round 1 (units)	Eh ORP (mV)	Spec Cond round 1 (uS/cm)	Turbidity (NTU)	Dissolved Oxygen (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

**Cross Generating Station
Former Gypsum Pond CCR Groundwater Monitoring Wells**

Well ID	TOC Elevation (feet)	GW Depth (feet)	Screen Intervals (ft, bgs)	Sample Date	Sample Time	Total Well Depth
CGYP-4	83.49	7.69	10-20	7/8/2021	1026	23.01

Drawdown: 7.89 depth to GW (ft)

Time	Temp round 1 (celcius)	pH round 1 (units)	Eh ORP (mV)	Spec Cond round 1 (uS/cm)	Turbidity (NTU)	Dissolved Oxygen (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

**Cross Generating Station
Former Gypsum Pond CCR Groundwater Monitoring Wells**

Well ID	TOC Elevation (feet)	GW Depth (feet)	Screen Intervals (ft, bgs)	Sample Date	Sample Time	Total Well Depth
CGYP-4	83.49	7.04	10-20	9/27/2021	938	23

Drawdown: 7.34 depth to GW (ft)

Time	Temp round 1 (celcius)	pH round 1 (units)	Eh ORP (mV)	Spec Cond round 1 (uS/cm)	Turbidity (NTU)	Dissolved Oxygen (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

Samples were collected by Trey West and Marvin Lewis

**Cross Generating Station
Former Gypsum Pond CCR Groundwater Monitoring Wells**

Well ID	TOC Elevation (feet)	GW Depth (feet)	Screen Intervals (ft, bgs)	Sample Date	Sample Time	Total Well Depth
CGYP-4	83.49	8.15	10-20	10/26/2021	1000	23

Drawdown: 8.4 depth to GW (ft)

Time	Temp round 1 (celcius)	pH round 1 (units)	Eh ORP (mV)	Spec Cond round 1 (uS/cm)	Turbidity (NTU)	Dissolved Oxygen (ppm)
923	22.12	3.63	241	2660	0	1.37
928	22.46	3.63	245	2670	0	0.73
933	22.68	3.63	248	2660	0	0.6
938	22.98	3.62	246	2670	0	0.52
943	23.22	3.63	244	2660	0	0.47
948	23.47	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

Samples were collected by Trey West and Marvin Lewis

**Cross Generating Station
Former Gypsum Pond CCR Groundwater Monitoring Wells**

Well ID	TOC Elevation (feet)	GW Depth (feet)	Screen Intervals (ft, bgs)	Sample Date	Sample Time	Total Well Depth
CGYP-4	83.49	8.6	10-20	11/17/2021	1018	23

Drawdown: 8.86 depth to GW (ft)

Time	Temp round 1 (celcius)	pH round 1 (units)	Eh ORP (mV)	Spec Cond round 1 (uS/cm)	Turbidity (NTU)	Dissolved Oxygen (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	23.26	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

Samples were collected by Trey West and Marvin Lewis

**Cross Generating Station
Former Gypsum Pond CCR Groundwater Monitoring Wells**

Well ID	TOC Elevation (feet)	GW Depth (feet)	Screen Intervals (ft, bgs)	Sample Date	Sample Time	Total Well Depth
CGYP-5	84.12	7.43	9-19	8/31/2021	1001	21.99

Drawdown: 9.12 depth to GW (ft)

Time	Temp round 1 (celcius)	pH round 1 (units)	Eh ORP (mV)	Spec Cond round 1 (uS/cm)	Turbidity (NTU)	Dissolved Oxygen (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:

Samples were collected by Trey West and Marvin Lewis

**Cross Generating Station
Former Gypsum Pond CCR Groundwater Monitoring Wells**

Well ID	TOC Elevation (feet)	GW Depth (feet)	Screen Intervals (ft, bgs)	Sample Date	Sample Time	Total Well Depth
CGYP-5	84.12	7.79	9-19	9/27/2021	1117	21.98

Drawdown: 10.44 depth to GW (ft)

Time	Temp round 1 (celcius)	pH round 1 (units)	Eh ORP (mV)	Spec Cond round 1 (uS/cm)	Turbidity (NTU)	Dissolved Oxygen (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:

Samples were collected by Trey West and Marvin Lewis

**Cross Generating Station
Former Gypsum Pond CCR Groundwater Monitoring Wells**

Well ID	TOC Elevation (feet)	GW Depth (feet)	Screen Intervals (ft, bgs)	Sample Date	Sample Time	Total Well Depth
CGYP-5	84.12	8.13	9-19	10/26/2021	1155	21.98

Drawdown: 10.64 depth to GW (ft)

Time	Temp round 1 (celcius)	pH round 1 (units)	Eh ORP (mV)	Spec Cond round 1 (uS/cm)	Turbidity (NTU)	Dissolved Oxygen (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:

Samples were collected by Trey West and Marvin Lewis

**Cross Generating Station
Former Gypsum Pond CCR Groundwater Monitoring Wells**

Well ID	TOC Elevation (feet)	GW Depth (feet)	Screen Intervals (ft, bgs)	Sample Date	Sample Time	Total Well Depth
CGYP-5	84.12	8.59	9-19	11/17/2021	1151	21.98

Drawdown: 11.16 depth to GW (ft)

Time	Temp round 1 (celcius)	pH round 1 (units)	Eh ORP (mV)	Spec Cond round 1 (uS/cm)	Turbidity (NTU)	Dissolved Oxygen (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:

Samples were collected by Trey West and Marvin Lewis

**Cross Generating Station
Former Gypsum Pond CCR Groundwater Monitoring Wells**

Well ID	TOC Elevation (feet)	GW Depth (feet)	Screen Intervals (ft, bgs)	Sample Date	Sample Time	Total Well Depth
CGYP-5	84.12	8.65	9-19	12/6/2021	1113	21.98

Drawdown: 10.43 depth to GW (ft)

Time	Temp round 1 (celcius)	pH round 1 (units)	Eh ORP (mV)	Spec Cond round 1 (uS/cm)	Turbidity (NTU)	Dissolved Oxygen (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:

Samples were collected by Trey West and Marvin Lewis

**Cross Generating Station
Former Gypsum Pond CCR Groundwater Monitoring Wells**

Well ID	TOC Elevation (feet)	GW Depth (feet)	Screen Intervals (ft, bgs)	Sample Date	Sample Time	Total Well Depth
CGYP-6	83.23	8.2	9-19	7/8/2021	1221	22.35

Drawdown: 8.52 depth to GW (ft)

Time	Temp round 1 (celcius)	pH round 1 (units)	Eh ORP (mV)	Spec Cond round 1 (uS/cm)	Turbidity (NTU)	Dissolved Oxygen (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

**Cross Generating Station
Former Gypsum Pond CCR Groundwater Monitoring Wells**

Well ID	TOC Elevation (feet)	GW Depth (feet)	Screen Intervals (ft, bgs)	Sample Date	Sample Time	Total Well Depth
CGYP-6	83.23	7.57	9-19	8/31/2021	1102	22.34

Drawdown: 8.09 depth to GW (ft)

Time	Temp round 1 (celcius)	pH round 1 (units)	Eh ORP (mV)	Spec Cond round 1 (uS/cm)	Turbidity (NTU)	Dissolved Oxygen (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:

Samples were collected by Trey West and Marvin Lewis

**Cross Generating Station
Former Gypsum Pond CCR Groundwater Monitoring Wells**

Well ID	TOC Elevation (feet)	GW Depth (feet)	Screen Intervals (ft, bgs)	Sample Date	Sample Time	Total Well Depth
CGYP-6	83.23	9.13	9-19	11/17/2021	1304	22.33

Drawdown: 9.6 depth to GW (ft)

Time	Temp round 1 (celcius)	pH round 1 (units)	Eh ORP (mV)	Spec Cond round 1 (uS/cm)	Turbidity (NTU)	Dissolved Oxygen (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

Samples were collected by Trey West and Marvin Lewis

Appendix B – Well Installation Records

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™).
- 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™ 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™ are provided in Attachment A. Calculated values of K based on the slug test data are presented in Table 1.

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

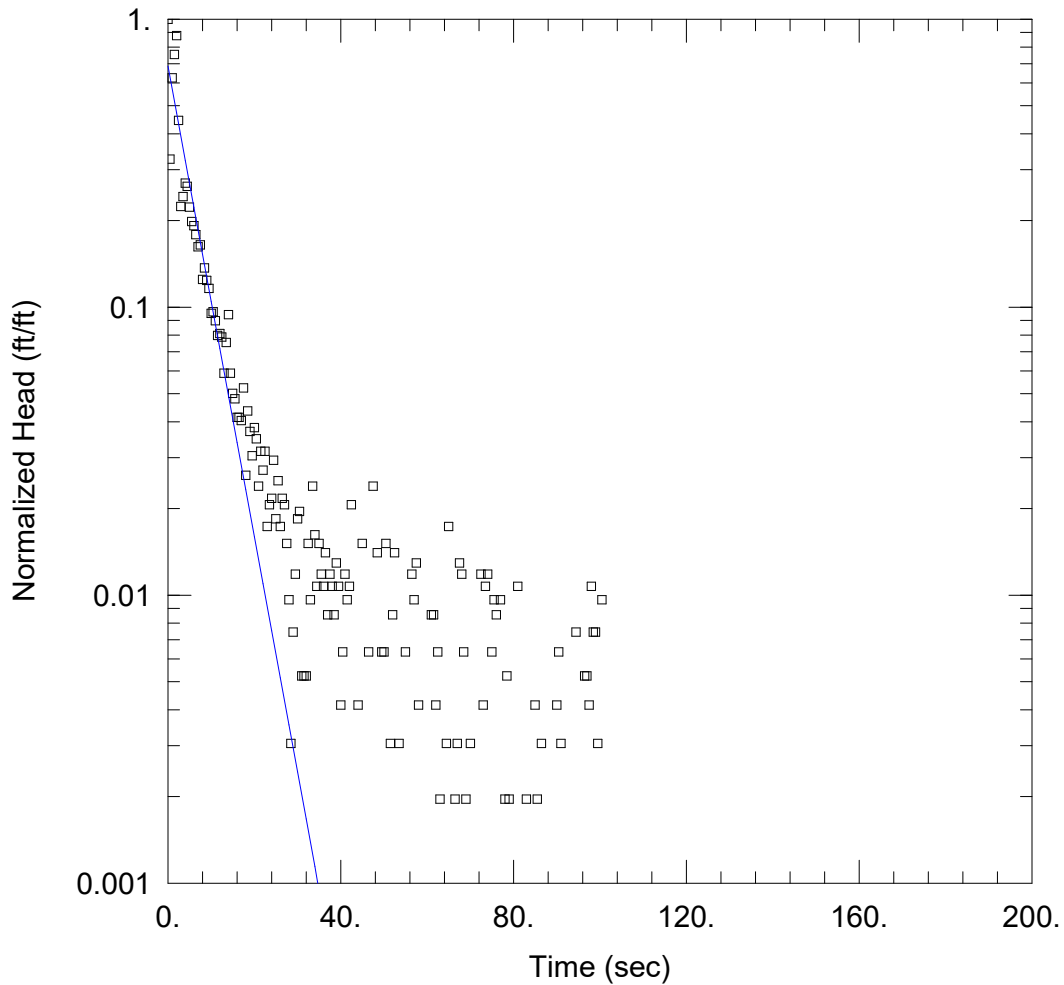
TABLE 1
SUMMARY OF SLUG TEST DATA
CROSS GENERATING STATION
SANTEE COOPER
CROSS, SOUTH CAROLINA

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



WELL TEST ANALYSIS

Data Set: C:\Users\inschaffer\Documents\SCC slug working\CBW1 Slug In 1.aqt
 Date: 11/08/21 Time: 10:58:16

PROJECT INFORMATION

Company: Haley & Aldrich
 Client: Santee Cooper
 Project: 131539
 Location: Cross, SC
 Test Well: CBW-1

AQUIFER DATA

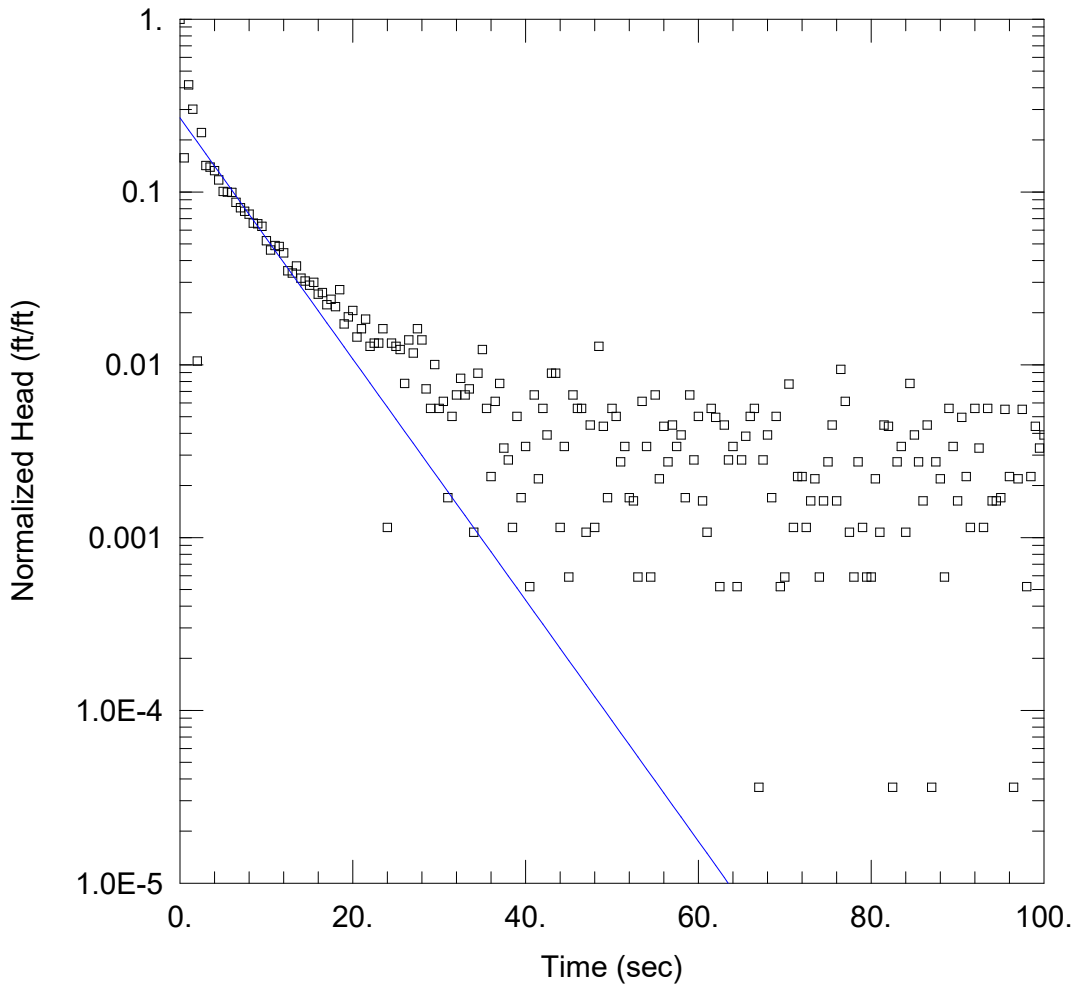
Saturated Thickness: 15.01 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (CBW-1)

Initial Displacement: 0.9118 ft Static Water Column Height: 15.01 ft
 Total Well Penetration Depth: 15.01 ft Screen Length: 10. ft
 Casing Radius: 0.083 ft Well Radius: 0.3438 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bower-Rice
 K = 0.005518 cm/sec y0 = 0.6261 ft



WELL TEST ANALYSIS

Data Set: C:\Users\inschaffer\Documents\SCC slug working\CBW1 Slug In 2.aqt
 Date: 11/08/21 Time: 11:06:54

PROJECT INFORMATION

Company: Haley & Aldrich
 Client: Santee Cooper
 Project: 131539
 Location: Cross, SC
 Test Well: CBW-1

AQUIFER DATA

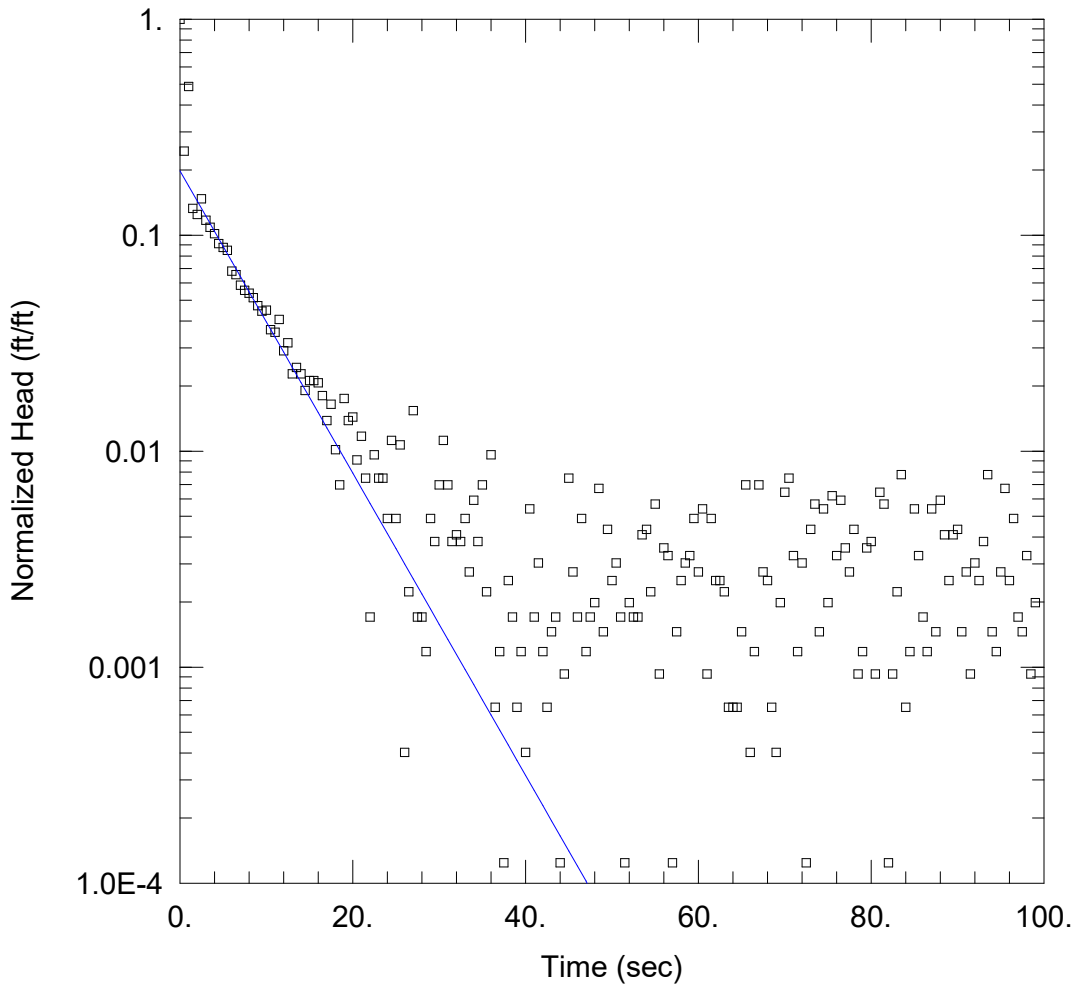
Saturated Thickness: 15.01 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (CBW-1)

Initial Displacement: 1.802 ft Static Water Column Height: 15.01 ft
 Total Well Penetration Depth: 15.01 ft Screen Length: 10. ft
 Casing Radius: 0.083 ft Well Radius: 0.3438 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bower-Rice
 K = 0.004712 cm/sec y0 = 0.4834 ft



WELL TEST ANALYSIS

Data Set: C:\Users\inschaffer\Documents\SCC slug working\CBW1 Slug in 3.aqt
 Date: 11/08/21 Time: 11:44:47

PROJECT INFORMATION

Company: Haley & Aldrich
 Client: Santee Cooper
 Project: 131539
 Location: Cross, SC
 Test Well: CBW-1

AQUIFER DATA

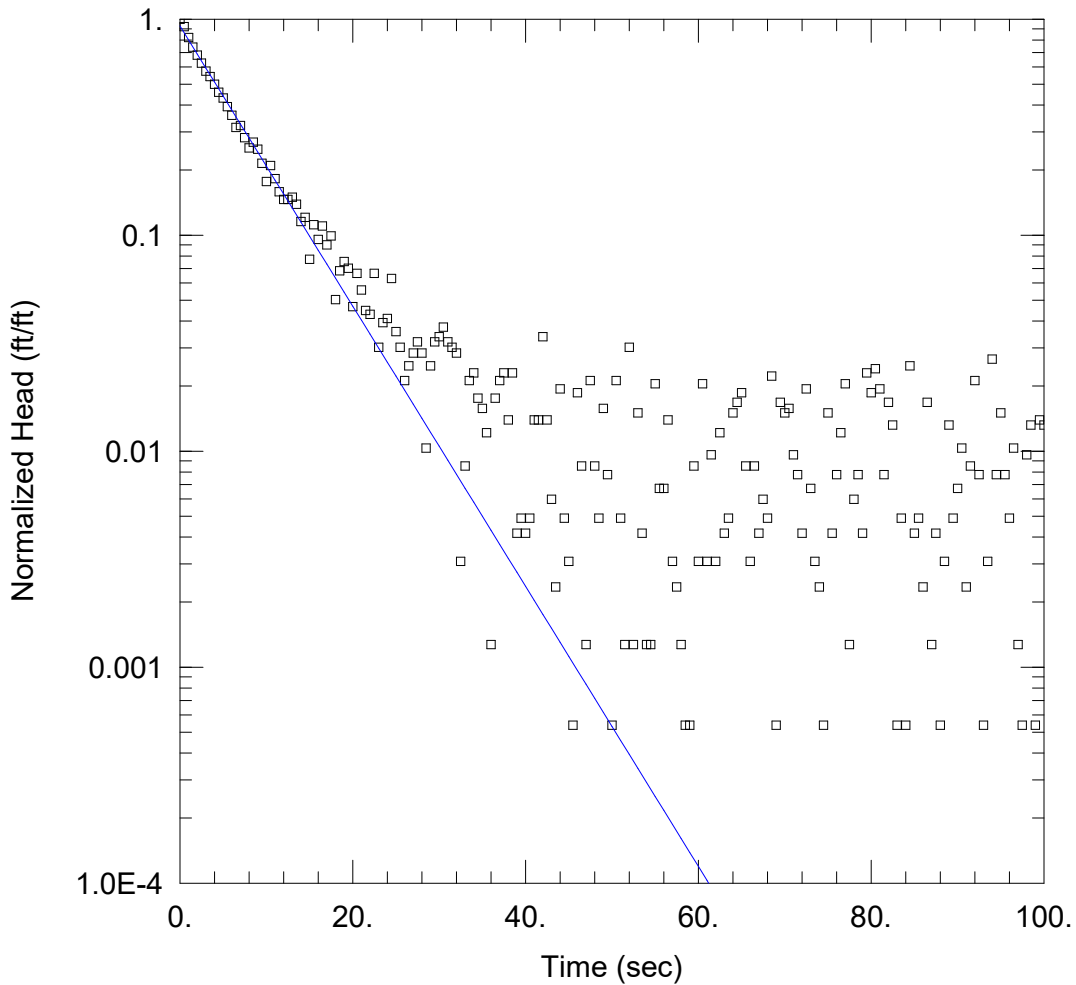
Saturated Thickness: 15.01 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (CBW-1)

Initial Displacement: 1.896 ft Static Water Column Height: 15.01 ft
 Total Well Penetration Depth: 15.01 ft Screen Length: 10. ft
 Casing Radius: 0.083 ft Well Radius: 0.3438 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bower-Rice
 K = 0.004725 cm/sec y0 = 0.3762 ft



WELL TEST ANALYSIS

Data Set: C:\Users\inschaffer\Documents\SCC slug working\CBW1 Slug out 1.aqt
 Date: 11/08/21 Time: 10:59:18

PROJECT INFORMATION

Company: Haley & Aldrich
 Client: Santee Cooper
 Project: 131539
 Location: Cross, SC
 Test Well: CBW-1

AQUIFER DATA

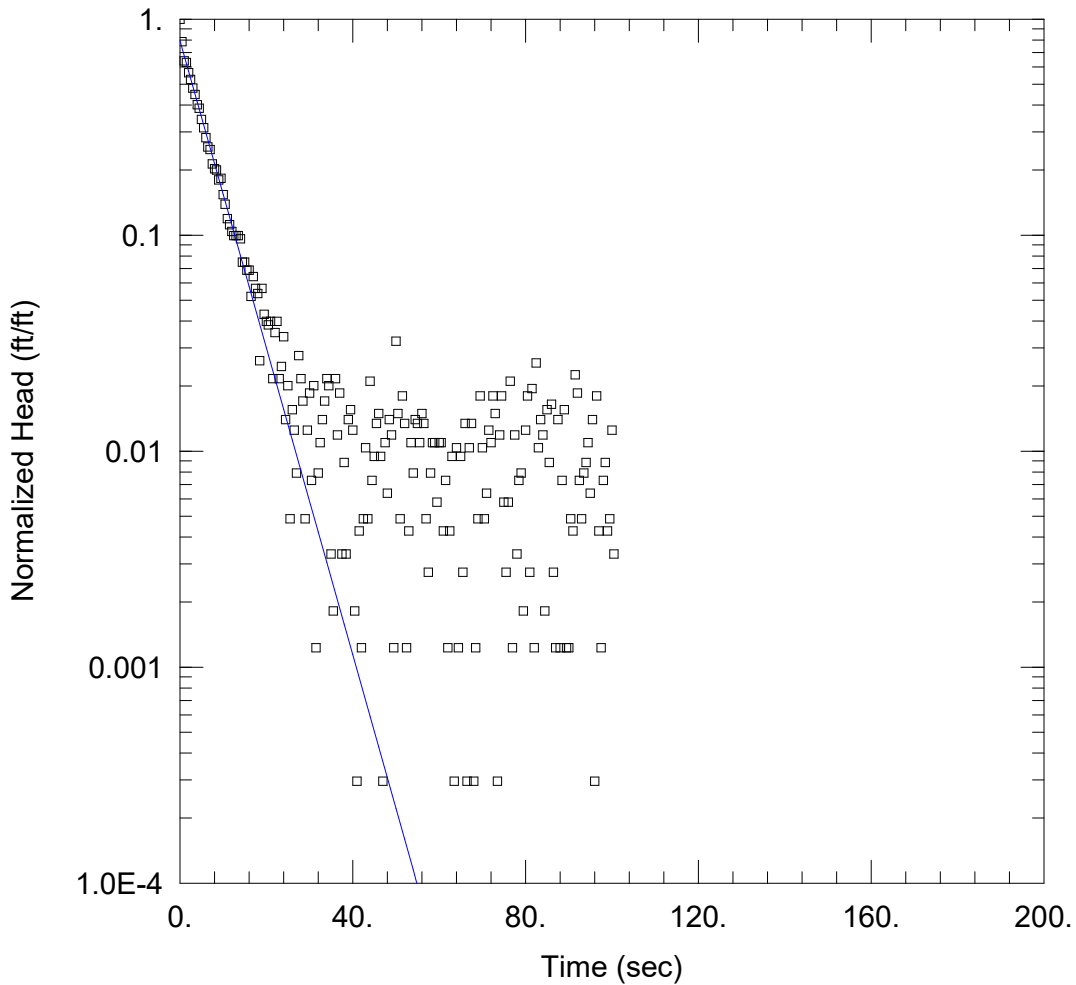
Saturated Thickness: 15.01 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (CBW-1)

Initial Displacement: 0.5517 ft Static Water Column Height: 15.01 ft
 Total Well Penetration Depth: 15.01 ft Screen Length: 10. ft
 Casing Radius: 0.083 ft Well Radius: 0.3438 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bower-Rice
 K = 0.004379 cm/sec y0 = 0.5124 ft



WELL TEST ANALYSIS

Data Set: C:\Users\inschaffer\Documents\SCC slug working\CBW1 Slug out 2.aqt
 Date: 11/08/21 Time: 11:39:00

PROJECT INFORMATION

Company: Haley & Aldrich
 Client: Santee Cooper
 Project: 131539
 Location: Cross, SC
 Test Well: CBW-1

AQUIFER DATA

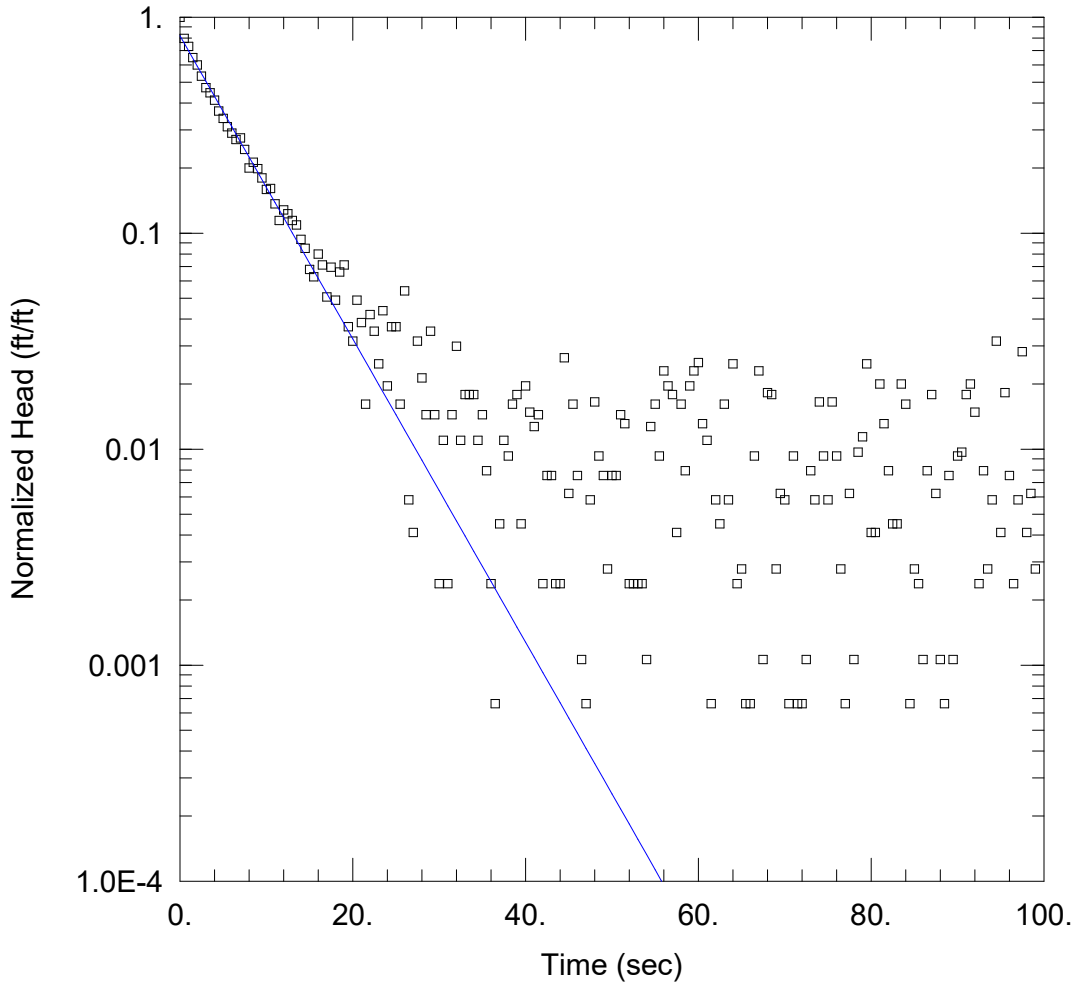
Saturated Thickness: 15.01 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (CBW-1)

Initial Displacement: 0.6562 ft Static Water Column Height: 15.01 ft
 Total Well Penetration Depth: 15.01 ft Screen Length: 10. ft
 Casing Radius: 0.083 ft Well Radius: 0.3438 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bower-Rice
 K = 0.004799 cm/sec y0 = 0.5205 ft



WELL TEST ANALYSIS

Data Set: C:\Users\inschaffer\Documents\SCC slug working\CBW1 Slug out 3.aqt
 Date: 11/08/21 Time: 11:51:27

PROJECT INFORMATION

Company: Haley & Aldrich
 Client: Santee Cooper
 Project: 131539
 Location: Cross, SC
 Test Well: CBW-1

AQUIFER DATA

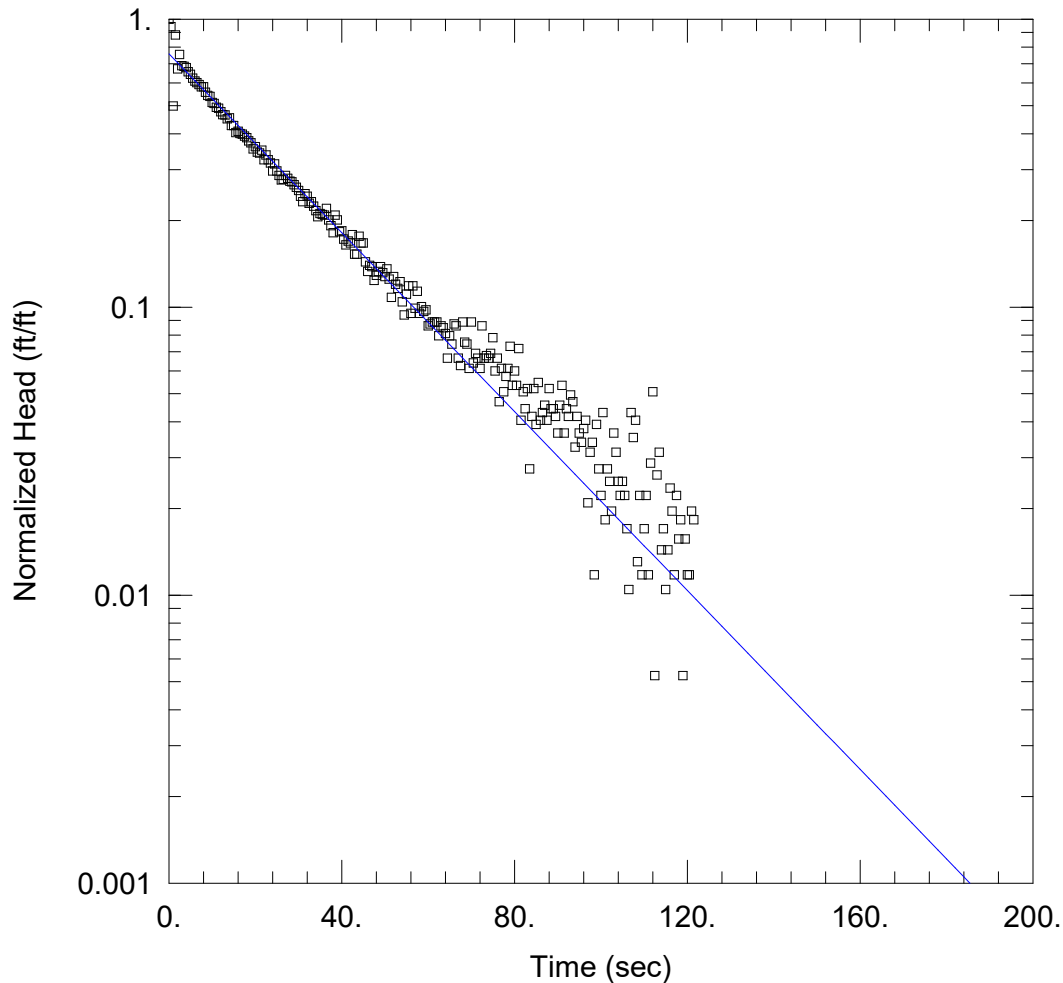
Saturated Thickness: 15.01 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (CBW-1)

Initial Displacement: 0.5804 ft Static Water Column Height: 15.01 ft
 Total Well Penetration Depth: 15.01 ft Screen Length: 10. ft
 Casing Radius: 0.083 ft Well Radius: 0.3438 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bower-Rice
 K = 0.00474 cm/sec y0 = 0.4754 ft



WELL TEST ANALYSIS

Data Set: C:\Users\inschaffer\Documents\SCC slug working\CCMAP1 Slug in 1.aqt
 Date: 11/08/21 Time: 16:24:09

PROJECT INFORMATION

Company: Haley & Aldrich
 Client: Santee Cooper
 Project: 131539
 Location: Cross, SC
 Test Well: CCMAP-1

AQUIFER DATA

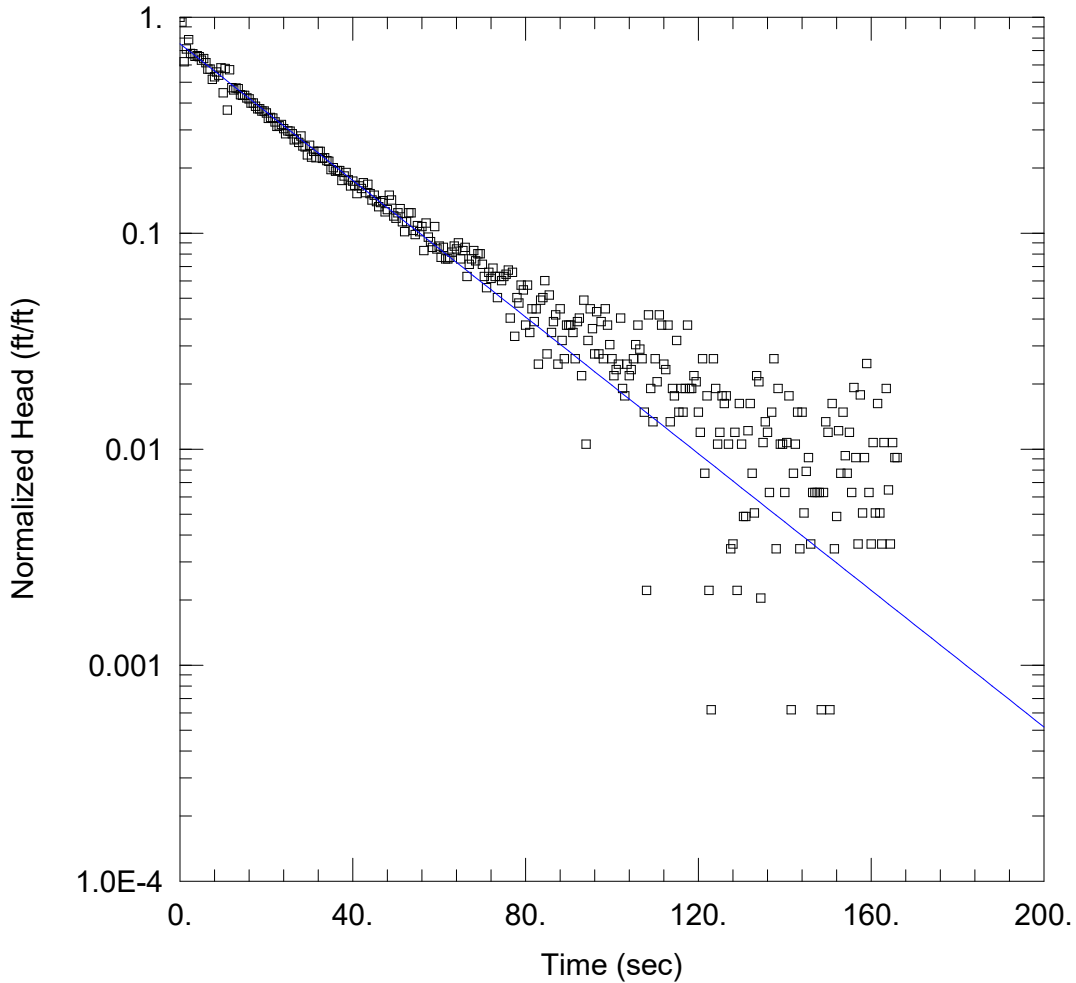
Saturated Thickness: 18.75 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (CCMAP-1)

Initial Displacement: 0.767 ft Static Water Column Height: 18.75 ft
 Total Well Penetration Depth: 18.75 ft Screen Length: 10. ft
 Casing Radius: 0.0833 ft Well Radius: 0.3438 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bower-Rice
 K = 0.001106 cm/sec $y_0 =$ 0.5808 ft



WELL TEST ANALYSIS

Data Set: C:\Users\inschaffer\Documents\SCC slug working\CCMAP1 Slug in 2.aqt
 Date: 11/08/21 Time: 16:23:51

PROJECT INFORMATION

Company: Haley & Aldrich
 Client: Santee Cooper
 Project: 131539
 Location: Cross, SC
 Test Well: CCMAP-1

AQUIFER DATA

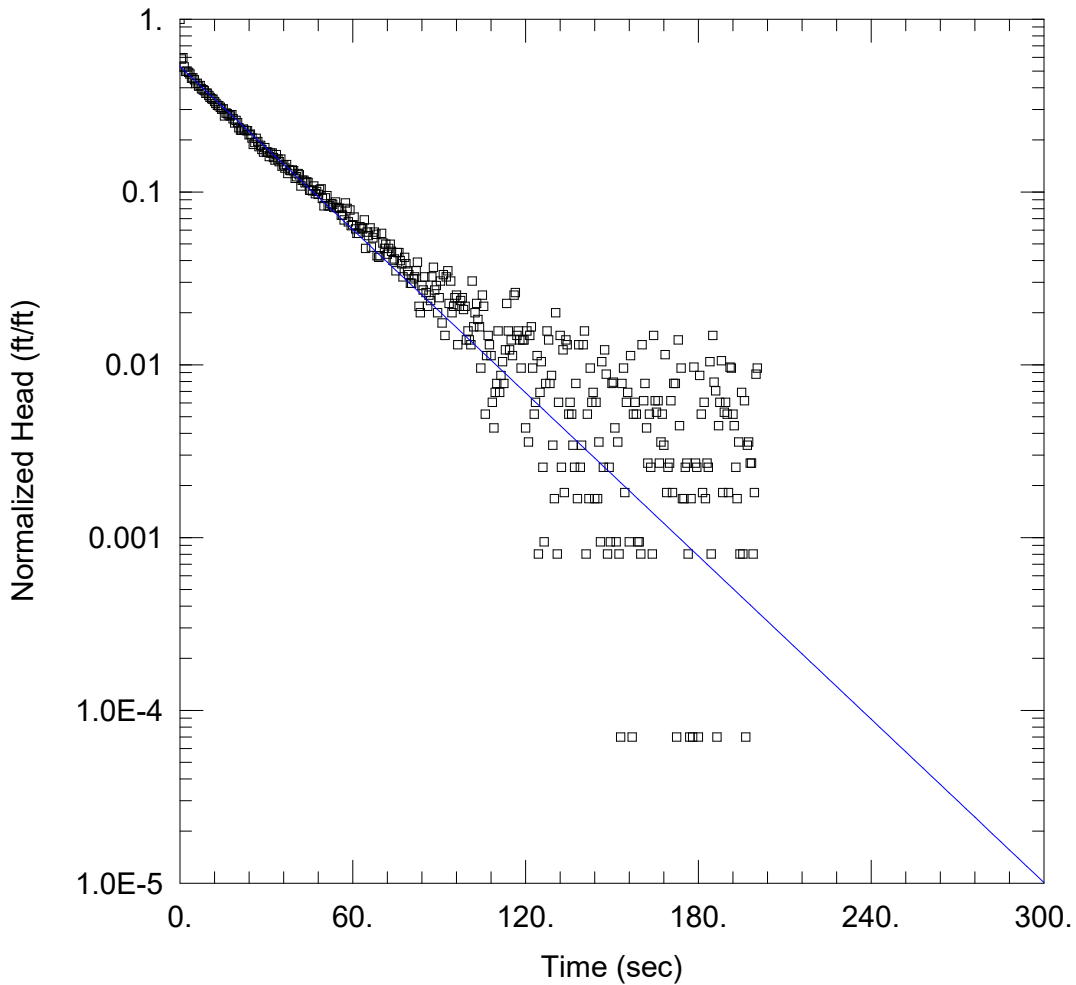
Saturated Thickness: 18.75 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (CCMAP-1)

Initial Displacement: 0.7044 ft Static Water Column Height: 18.75 ft
 Total Well Penetration Depth: 18.75 ft Screen Length: 10. ft
 Casing Radius: 0.0833 ft Well Radius: 0.3438 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bower-Rice
 K = 0.001127 cm/sec y0 = 0.5305 ft



WELL TEST ANALYSIS

Data Set: C:\Users\inschaffer\Documents\SCC slug working\CCMAP1 Slug out 1.aqt
 Date: 11/08/21 Time: 16:23:35

PROJECT INFORMATION

Company: Haley & Aldrich
 Client: Santee Cooper
 Project: 131539
 Location: Cross, SC
 Test Well: CCMAP-1

AQUIFER DATA

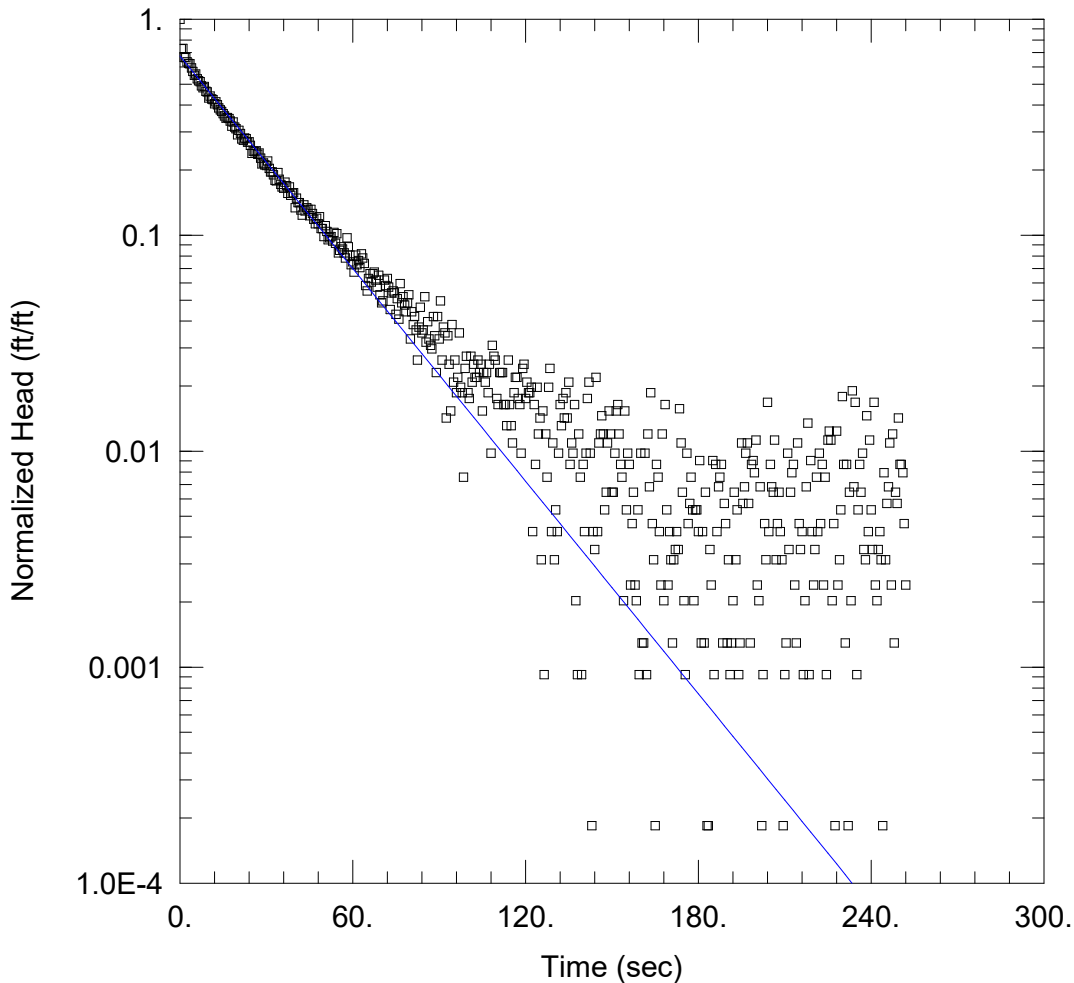
Saturated Thickness: 18.75 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (CCMAP-1)

Initial Displacement: 1.144 ft Static Water Column Height: 18.75 ft
 Total Well Penetration Depth: 18.75 ft Screen Length: 10. ft
 Casing Radius: 0.0833 ft Well Radius: 0.3438 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bower-Rice
 K = 0.001122 cm/sec y0 = 0.6091 ft



WELL TEST ANALYSIS

Data Set: C:\Users\inschaffer\Documents\SCC slug working\CCMAP1 Slug out 2.aqt
 Date: 11/08/21 Time: 16:20:26

PROJECT INFORMATION

Company: Haley & Aldrich
 Client: Santee Cooper
 Project: 131539
 Location: Cross, SC
 Test Well: CCMAP-1

AQUIFER DATA

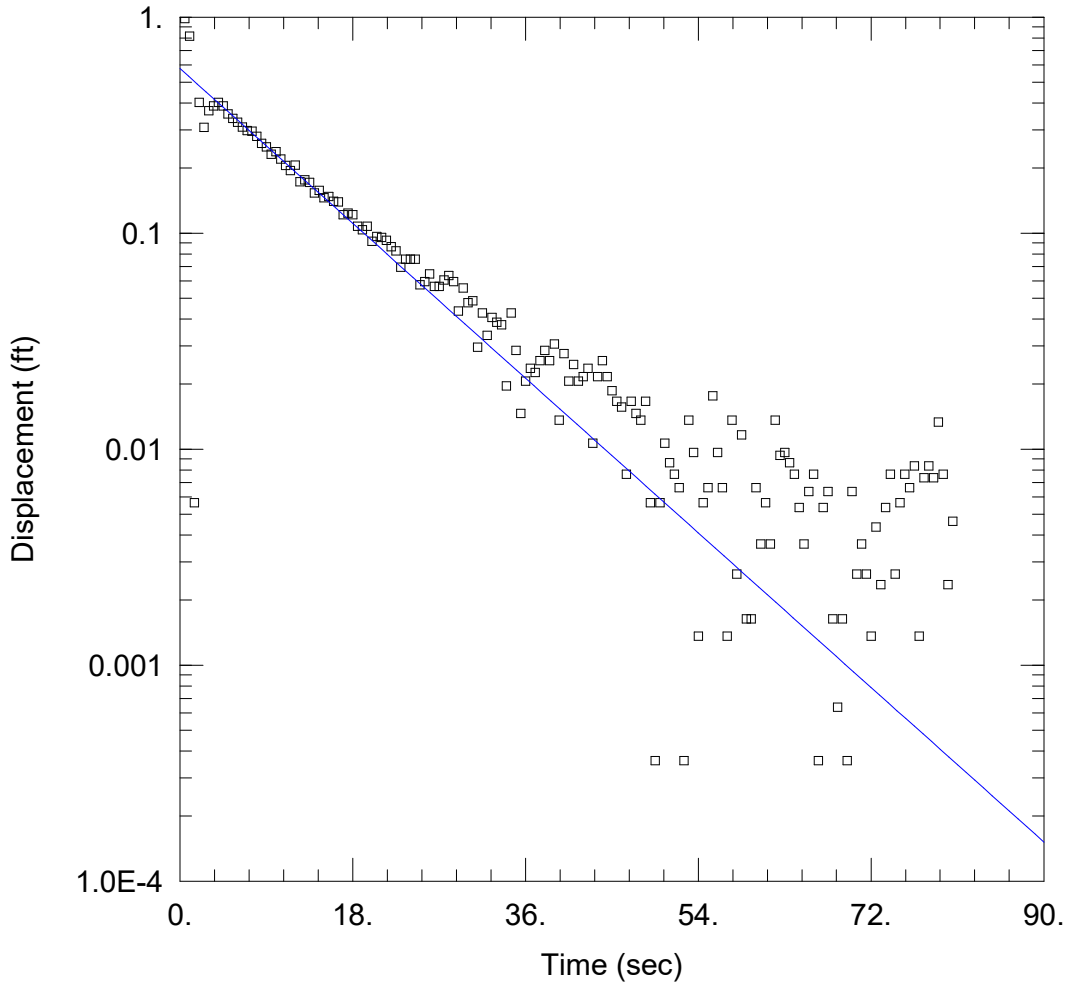
Saturated Thickness: 18.75 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (CCMAP-1)

Initial Displacement: 0.9028 ft Static Water Column Height: 18.75 ft
 Total Well Penetration Depth: 18.75 ft Screen Length: 10. ft
 Casing Radius: 0.0833 ft Well Radius: 0.3438 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bower-Rice
 K = 0.001169 cm/sec y0 = 0.6094 ft



WELL TEST ANALYSIS

Data Set: C:\Users\inschaffer\Documents\SCC slug working\CCMAP-2 Slug In 1.aqt
 Date: 11/08/21 Time: 16:39:53

PROJECT INFORMATION

Company: Haley & Aldrich
 Client: Santee Cooper
 Project: 131539
 Location: Cross, SC
 Test Well: CCMAP-2

AQUIFER DATA

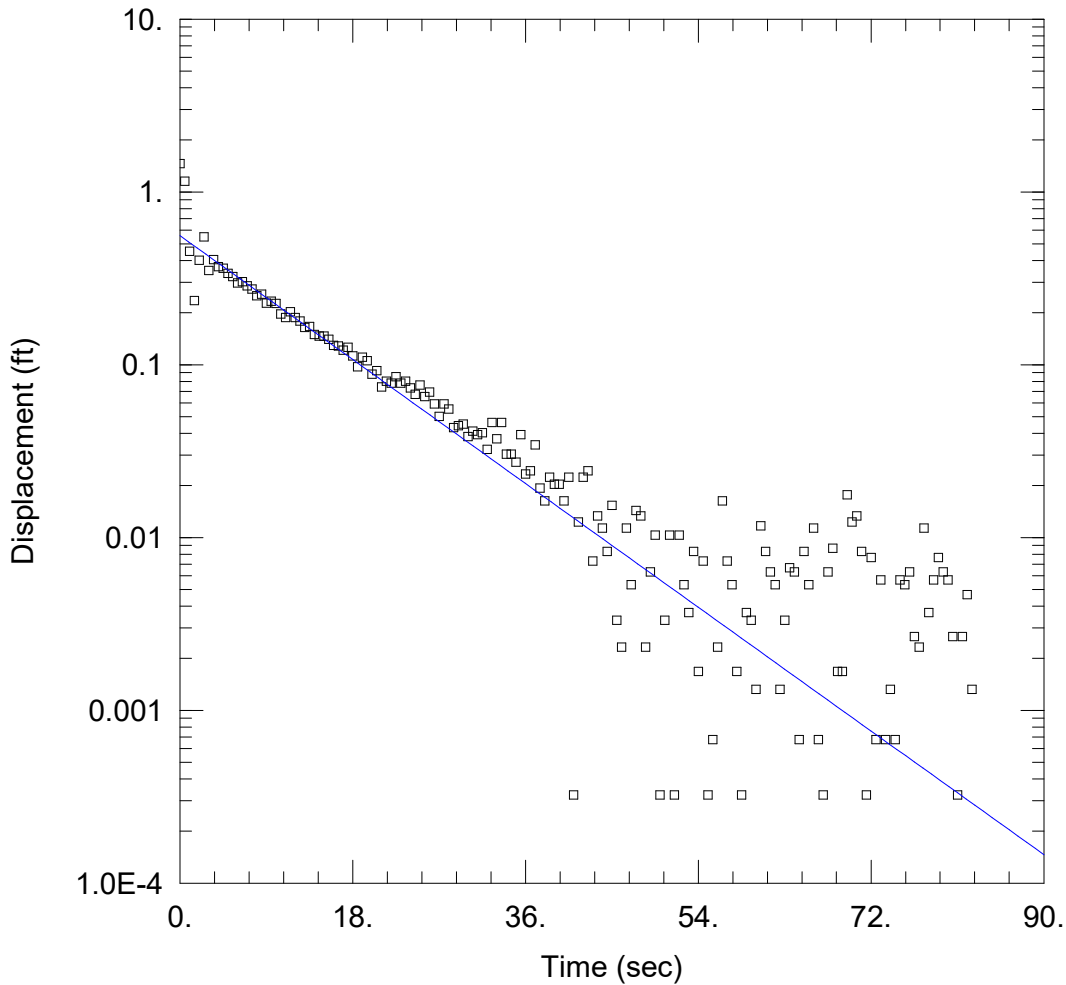
Saturated Thickness: 18.65 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (CCMAP-2)

Initial Displacement: 1.109 ft Static Water Column Height: 18.65 ft
 Total Well Penetration Depth: 18.65 ft Screen Length: 10. ft
 Casing Radius: 0.08333 ft Well Radius: 0.3438 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bower-Rice
 K = 0.002834 cm/sec y0 = 0.5778 ft



WELL TEST ANALYSIS

Data Set: C:\Users\inschaffer\Documents\SCC slug working\CCMAP-2 Slug in 2.aqt
 Date: 11/08/21 Time: 16:59:53

PROJECT INFORMATION

Company: Haley & Aldrich
 Client: Santee Cooper
 Project: 131539
 Location: Cross, SC
 Test Well: CCMAP-2

AQUIFER DATA

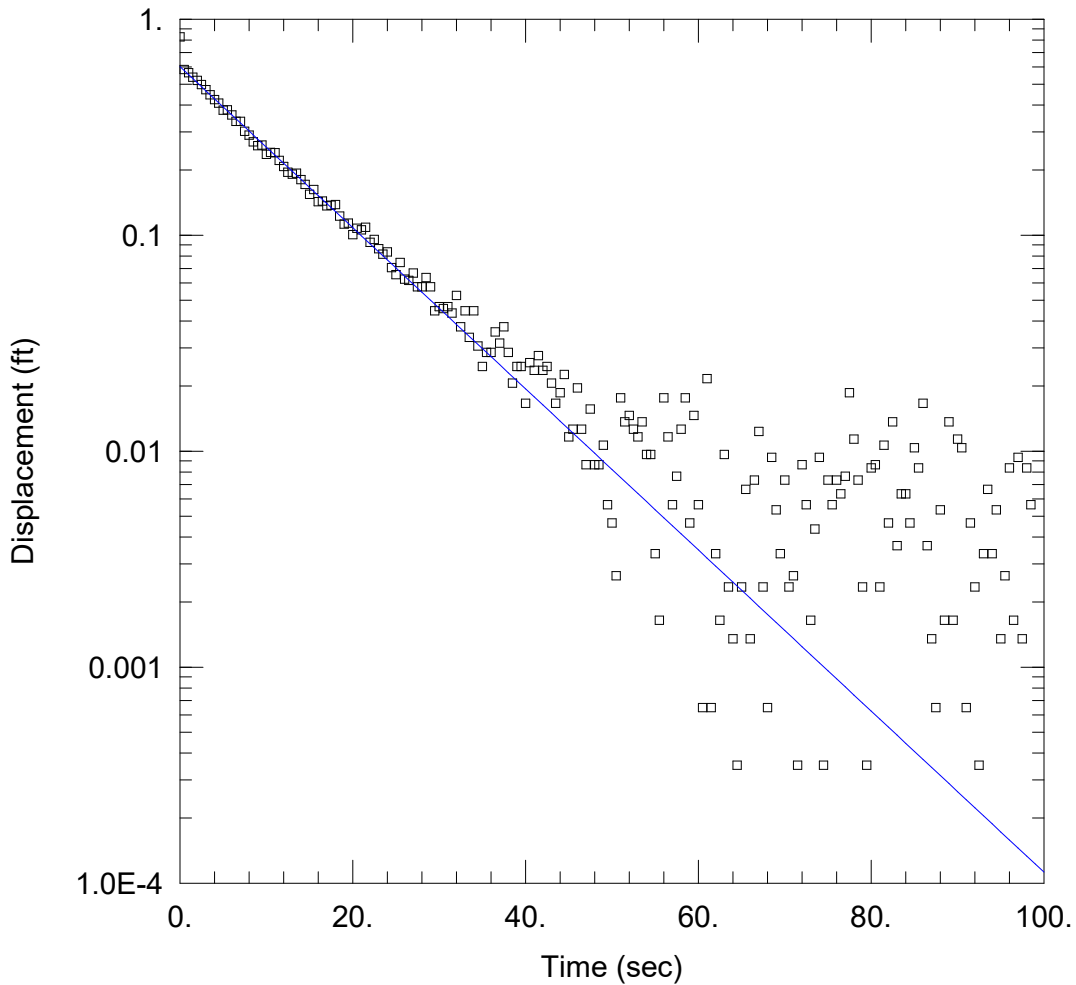
Saturated Thickness: 18.65 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (CCMAP-2)

Initial Displacement: 1.46 ft Static Water Column Height: 18.65 ft
 Total Well Penetration Depth: 18.65 ft Screen Length: 10. ft
 Casing Radius: 0.08333 ft Well Radius: 0.3438 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bower-Rice
 K = 0.002835 cm/sec y0 = 0.5577 ft



WELL TEST ANALYSIS

Data Set: C:\Users\inschaffer\Documents\SCC slug working\CCMAP-2 Slug out 1.aqt
 Date: 11/08/21 Time: 16:55:05

PROJECT INFORMATION

Company: Haley & Aldrich
 Client: Santee Cooper
 Project: 131539
 Location: Cross, SC
 Test Well: CCMAP-2

AQUIFER DATA

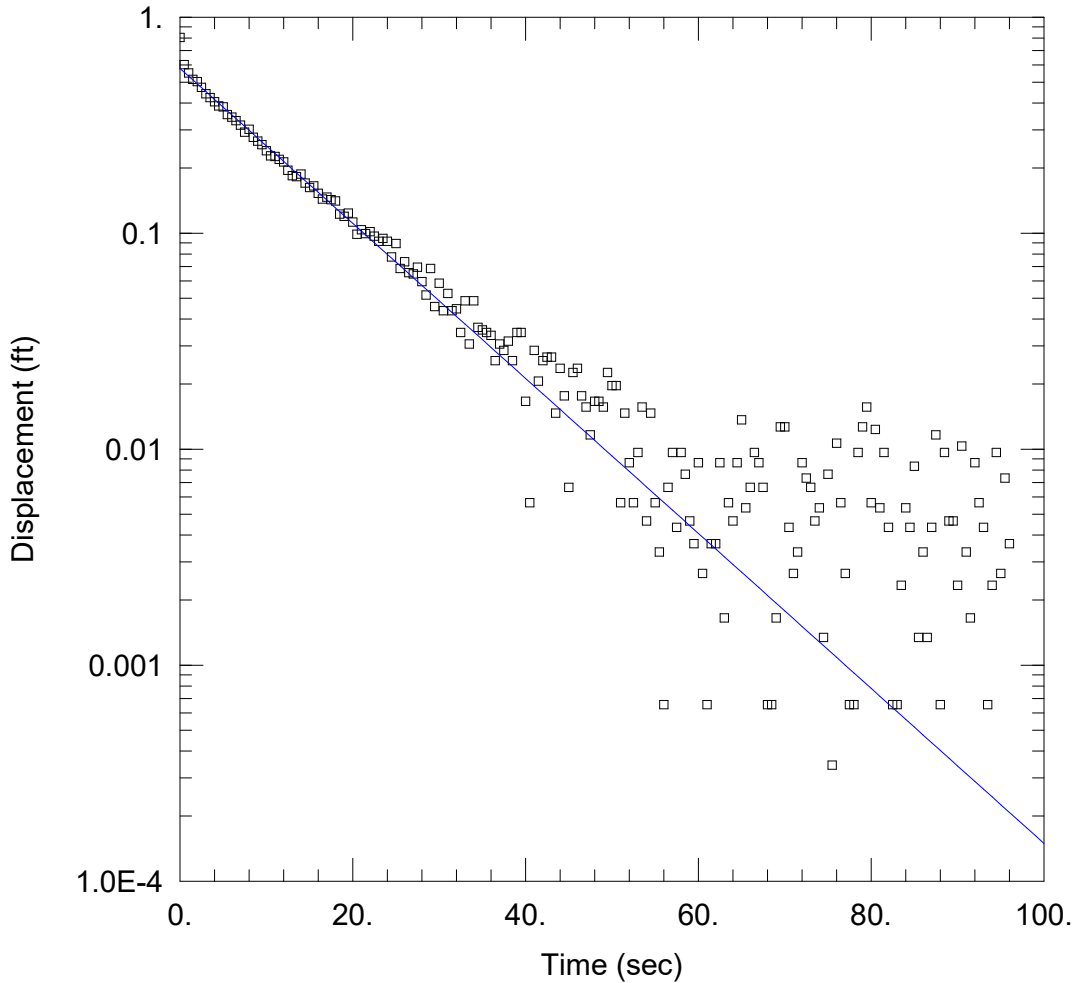
Saturated Thickness: 18.65 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (CCMAP-2)

Initial Displacement: 0.8286 ft Static Water Column Height: 18.65 ft
 Total Well Penetration Depth: 18.65 ft Screen Length: 10. ft
 Casing Radius: 0.08333 ft Well Radius: 0.3438 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bower-Rice
 K = 0.002656 cm/sec y0 = 0.6026 ft



WELL TEST ANALYSIS

Data Set: C:\Users\inschaffer\Documents\SCC slug working\CCMAP-2 Slug out 2.aqt
 Date: 11/08/21 Time: 17:19:40

PROJECT INFORMATION

Company: Haley & Aldrich
 Client: Santee Cooper
 Project: 131539
 Location: Cross, SC
 Test Well: CCMAP-2

AQUIFER DATA

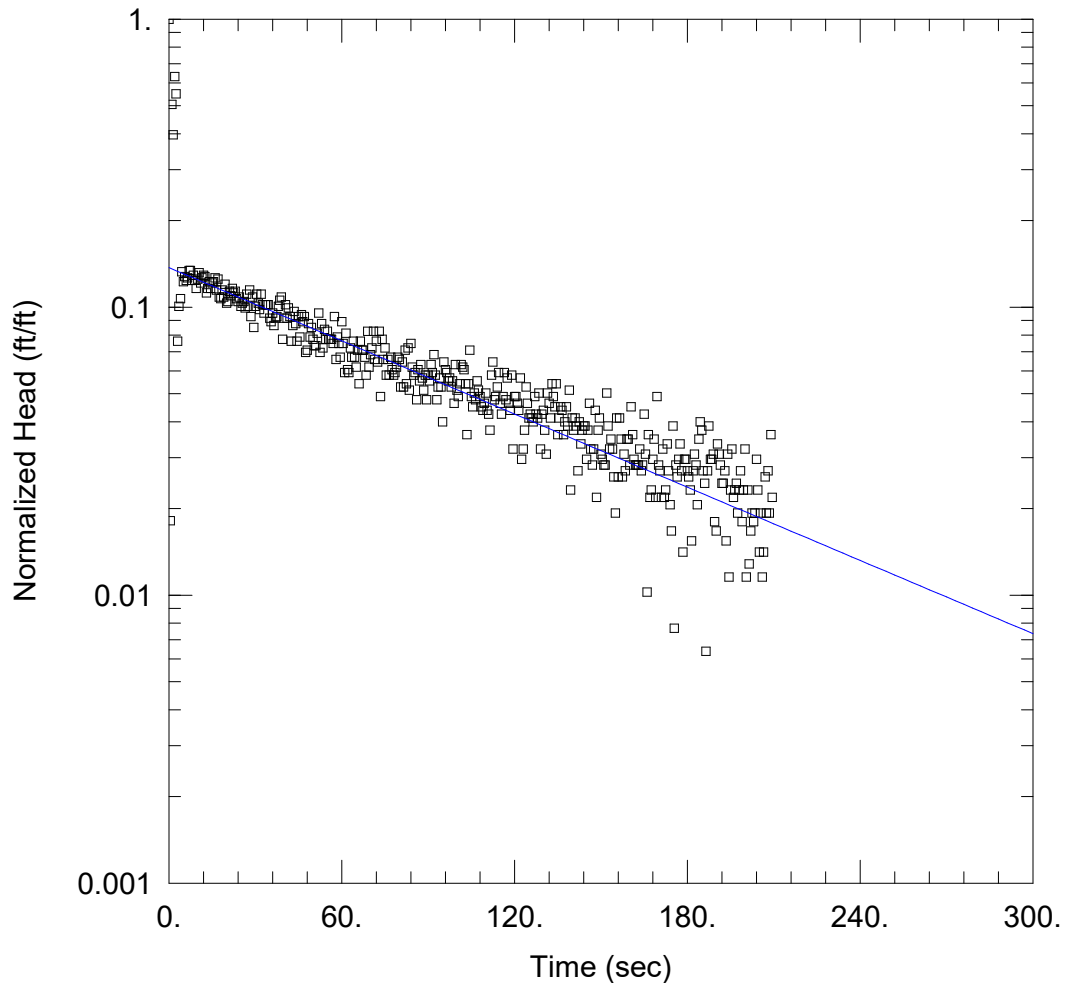
Saturated Thickness: 18.65 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (CCMAP-2)

Initial Displacement: 0.8047 ft Static Water Column Height: 18.65 ft
 Total Well Penetration Depth: 18.65 ft Screen Length: 10. ft
 Casing Radius: 0.08333 ft Well Radius: 0.3438 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bower-Rice
 K = 0.002556 cm/sec y0 = 0.5789 ft



WELL TEST ANALYSIS

Data Set: C:\Users\inschaffer\Documents\SCC slug working\CGYP-1 Slug in 1.aqt
 Date: 11/09/21 Time: 09:06:02

PROJECT INFORMATION

Company: Haley & Aldrich
 Client: Santee Cooper
 Project: 131539
 Location: Cross, SC
 Test Well: CGYP-1

AQUIFER DATA

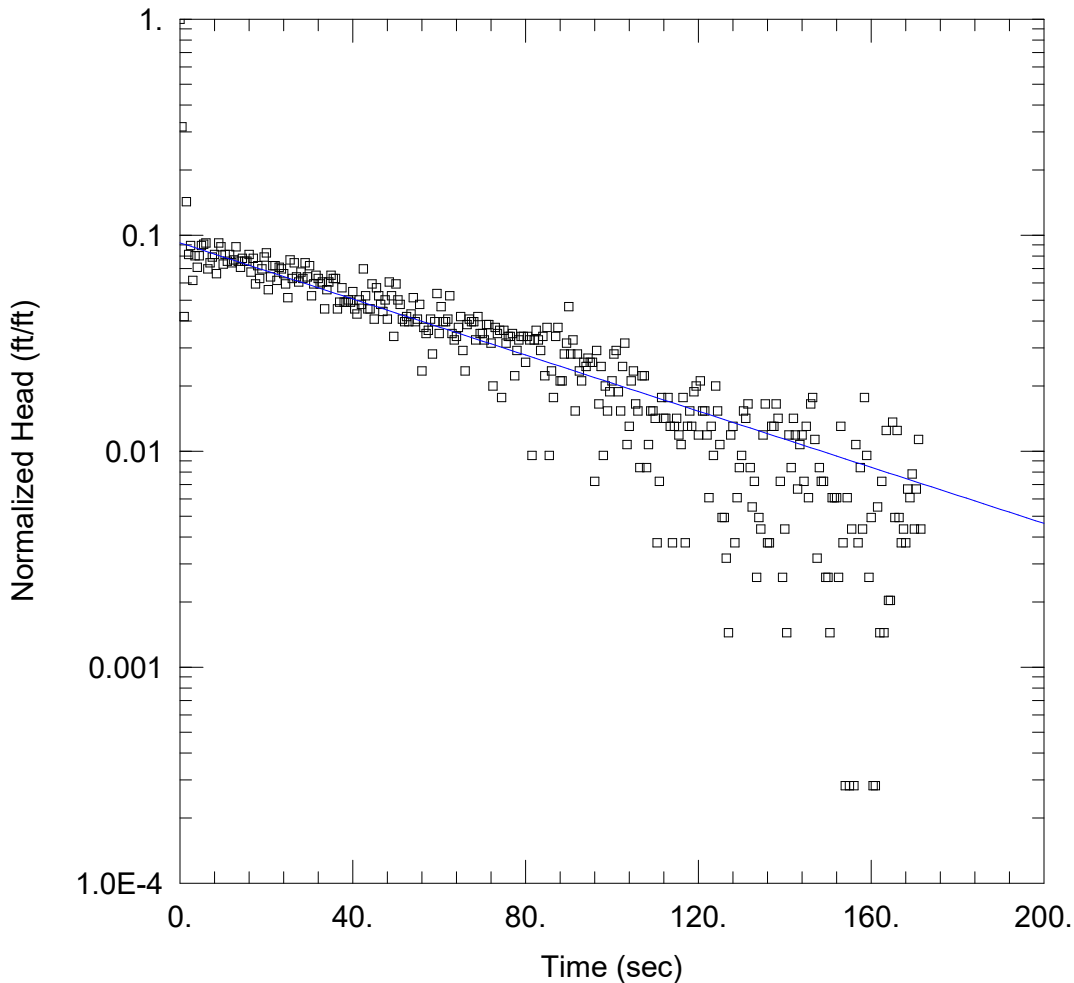
Saturated Thickness: 9.32 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (CGYP-1)

Initial Displacement: 0.7749 ft Static Water Column Height: 9.32 ft
 Total Well Penetration Depth: 10. ft Screen Length: 10. ft
 Casing Radius: 0.08333 ft Well Radius: 0.3438 ft
 Gravel Pack Porosity: 0.2

SOLUTION

Aquifer Model: Unconfined Solution Method: Bower-Rice
 K = 0.001177 cm/sec $y_0 =$ 0.1063 ft



WELL TEST ANALYSIS

Data Set: C:\Users\inschaffer\Documents\SCC slug working\CGYP-1 Slug in 2.aqt
 Date: 11/09/21 Time: 12:22:13

PROJECT INFORMATION

Company: Haley & Aldrich
 Client: Santee Cooper
 Project: 131539
 Location: Cross, SC
 Test Well: CGYP-1

AQUIFER DATA

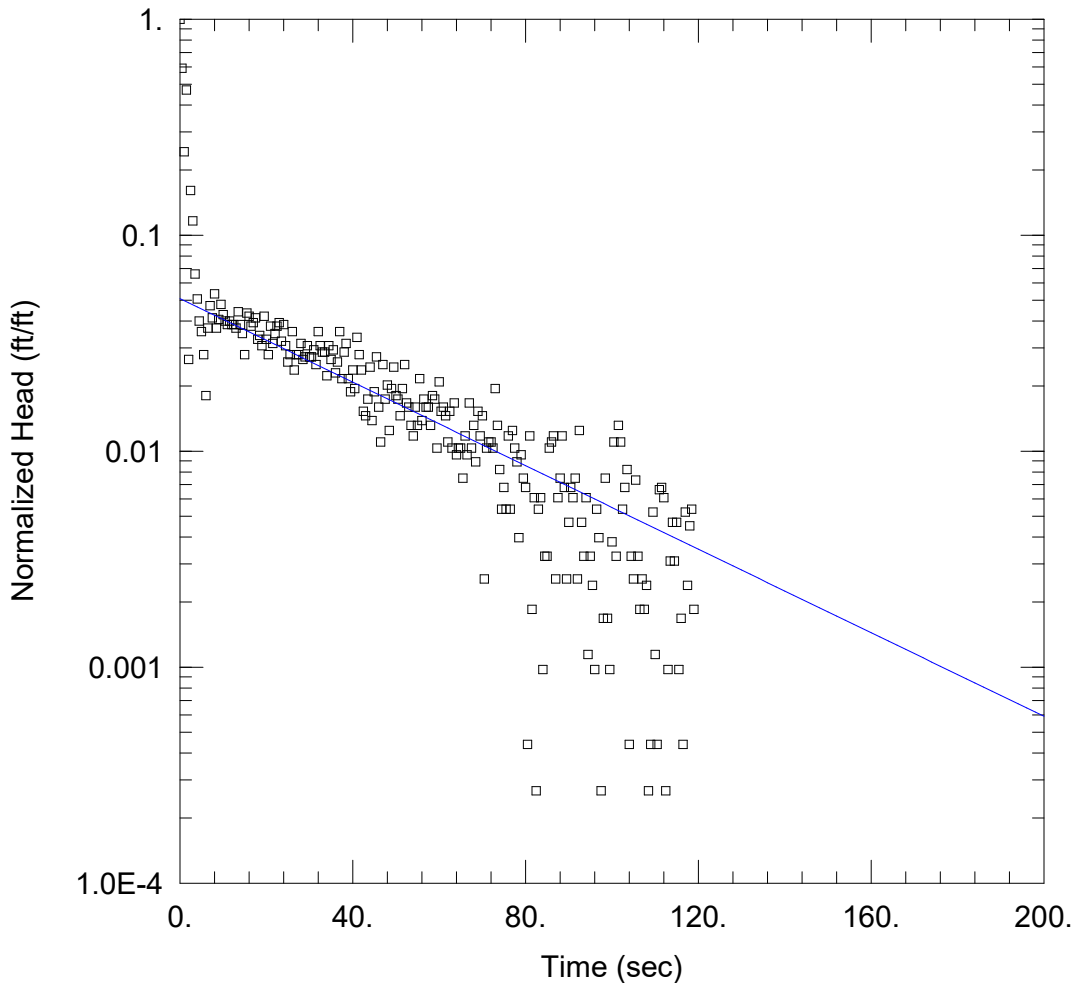
Saturated Thickness: 9.33 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (CGYP-1)

Initial Displacement: 0.8622 ft Static Water Column Height: 9.32 ft
 Total Well Penetration Depth: 9.32 ft Screen Length: 9.32 ft
 Casing Radius: 0.08333 ft Well Radius: 0.3438 ft
 Gravel Pack Porosity: 0.3

SOLUTION

Aquifer Model: Unconfined Solution Method: Bower-Rice
 K = 0.00266 cm/sec y0 = 0.07938 ft



WELL TEST ANALYSIS

Data Set: C:\Users\inschaffer\Documents\SCC slug working\CGYP-1 Slug in 3.aqt
 Date: 11/09/21 Time: 12:19:23

PROJECT INFORMATION

Company: Haley & Aldrich
 Client: Santee Cooper
 Project: 131539
 Location: Cross, SC
 Test Well: CGYP-1

AQUIFER DATA

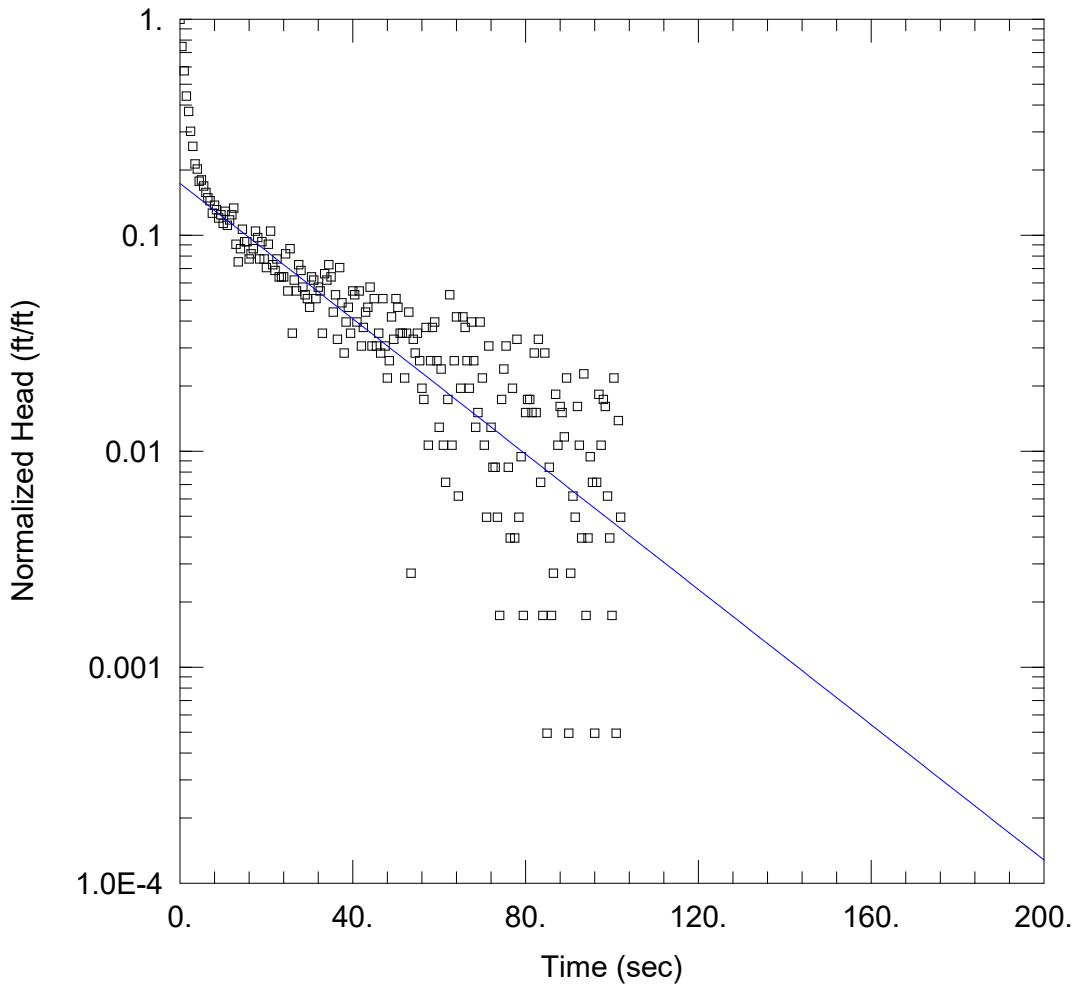
Saturated Thickness: 9.33 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (CGYP-1)

Initial Displacement: 1.416 ft Static Water Column Height: 9.32 ft
 Total Well Penetration Depth: 9.32 ft Screen Length: 9.32 ft
 Casing Radius: 0.08333 ft Well Radius: 0.3438 ft
 Gravel Pack Porosity: 0.2

SOLUTION

Aquifer Model: Unconfined Solution Method: Bower-Rice
 K = 0.002869 cm/sec y0 = 0.07198 ft



WELL TEST ANALYSIS

Data Set: C:\Users\inschaffer\Documents\SCC slug working\CGYP-1 Slug out 1.aqt
 Date: 11/09/21 Time: 12:21:09

PROJECT INFORMATION

Company: Haley & Aldrich
 Client: Santee Cooper
 Project: 131539
 Location: Cross, SC
 Test Well: CGYP-1

AQUIFER DATA

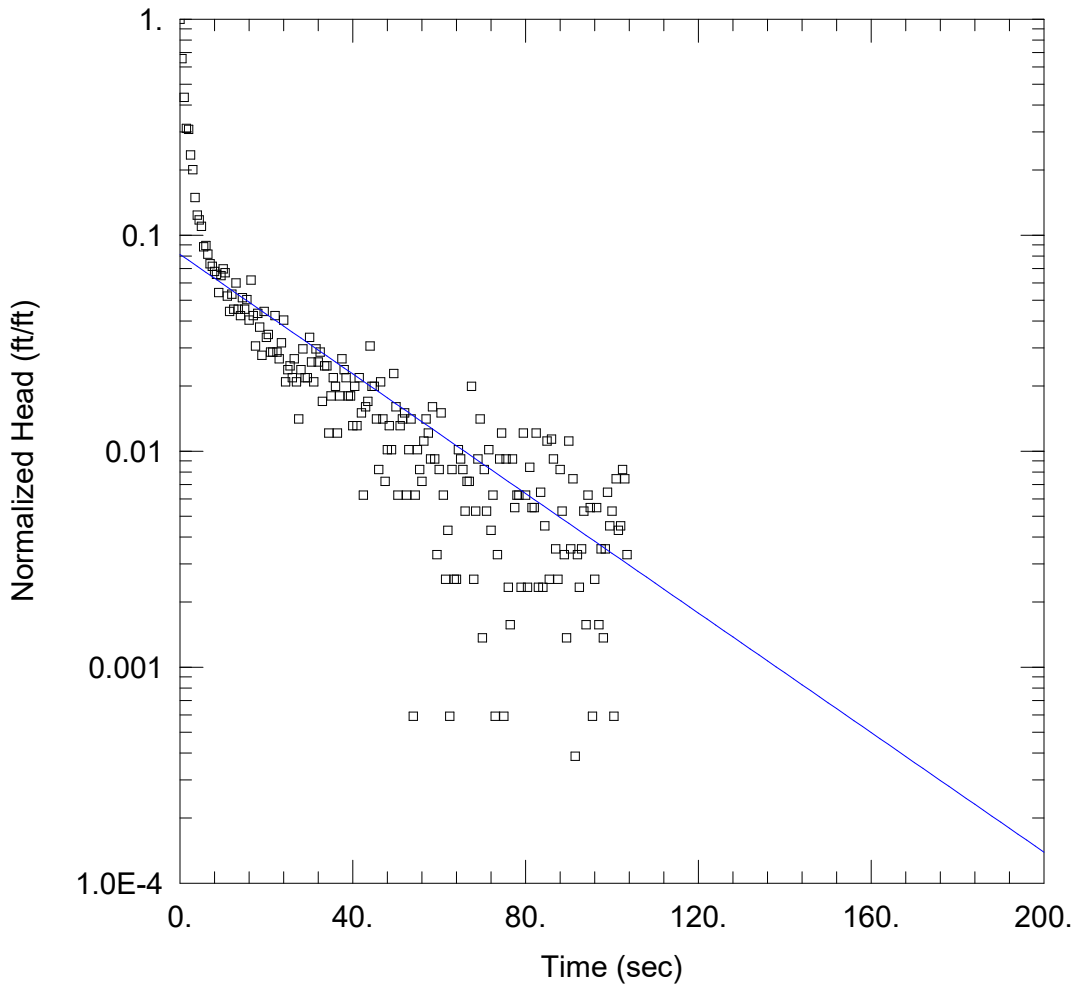
Saturated Thickness: 9.33 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (CGYP-1)

Initial Displacement: 0.4488 ft Static Water Column Height: 9.32 ft
 Total Well Penetration Depth: 9.32 ft Screen Length: 9.32 ft
 Casing Radius: 0.08333 ft Well Radius: 0.3438 ft
 Gravel Pack Porosity: 0.2

SOLUTION

Aquifer Model: Unconfined Solution Method: Bower-Rice
 K = 0.004646 cm/sec $y_0 =$ 0.07784 ft



WELL TEST ANALYSIS

Data Set: C:\Users\inschaffer\Documents\SCC slug working\CGYP-1 Slug out 2.aqt
 Date: 11/09/21 Time: 12:23:26

PROJECT INFORMATION

Company: Haley & Aldrich
 Client: Santee Cooper
 Project: 131539
 Location: Cross, SC
 Test Well: CGYP-1

AQUIFER DATA

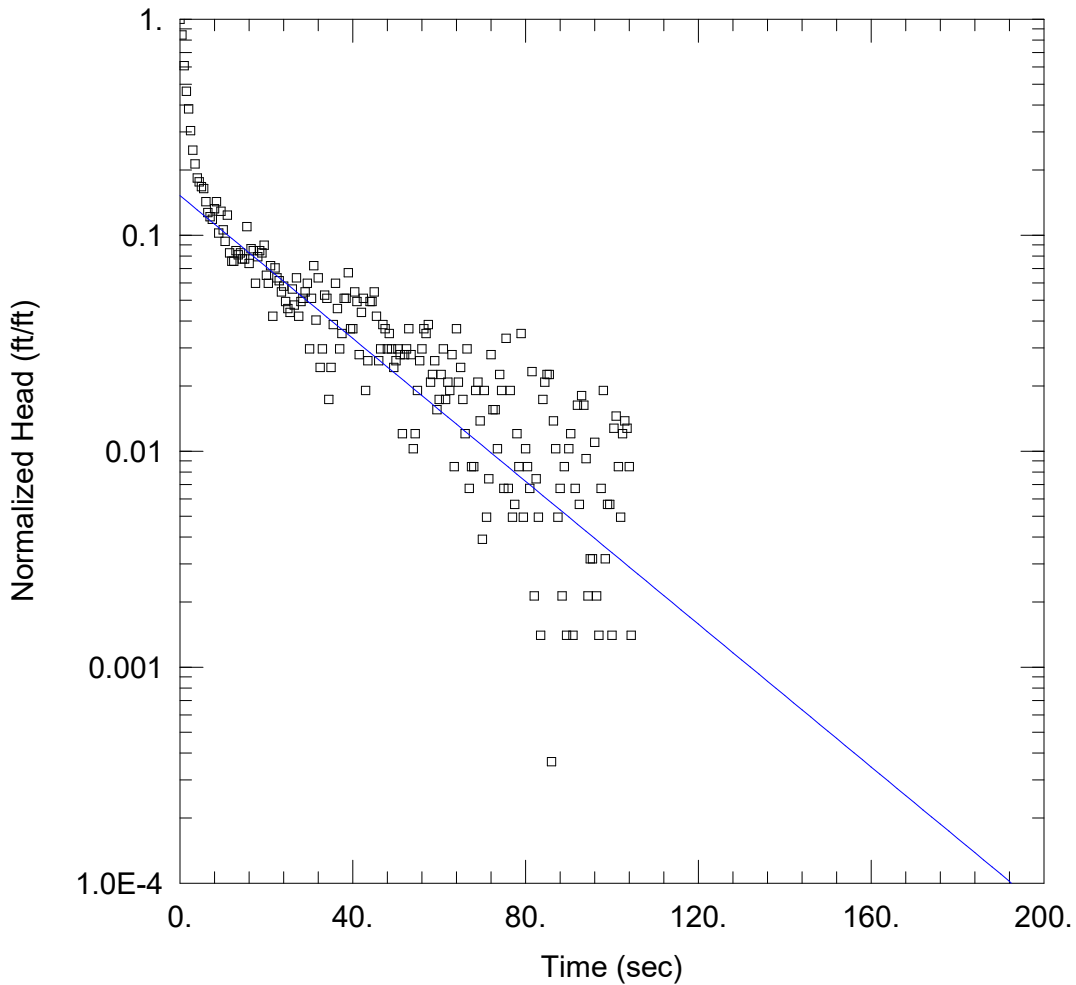
Saturated Thickness: 9.33 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (CGYP-1)

Initial Displacement: 1.022 ft Static Water Column Height: 9.32 ft
 Total Well Penetration Depth: 9.32 ft Screen Length: 9.32 ft
 Casing Radius: 0.08333 ft Well Radius: 0.3438 ft
 Gravel Pack Porosity: 0.2

SOLUTION

Aquifer Model: Unconfined Solution Method: Bower-Rice
 K = 0.004105 cm/sec $y_0 =$ 0.08324 ft



WELL TEST ANALYSIS

Data Set: C:\Users\inschaffer\Documents\SCC slug working\CGYP-1 Slug out 3.aqt
 Date: 11/09/21 Time: 12:27:39

PROJECT INFORMATION

Company: Haley & Aldrich
 Client: Santee Cooper
 Project: 131539
 Location: Cross, SC
 Test Well: CGYP-1

AQUIFER DATA

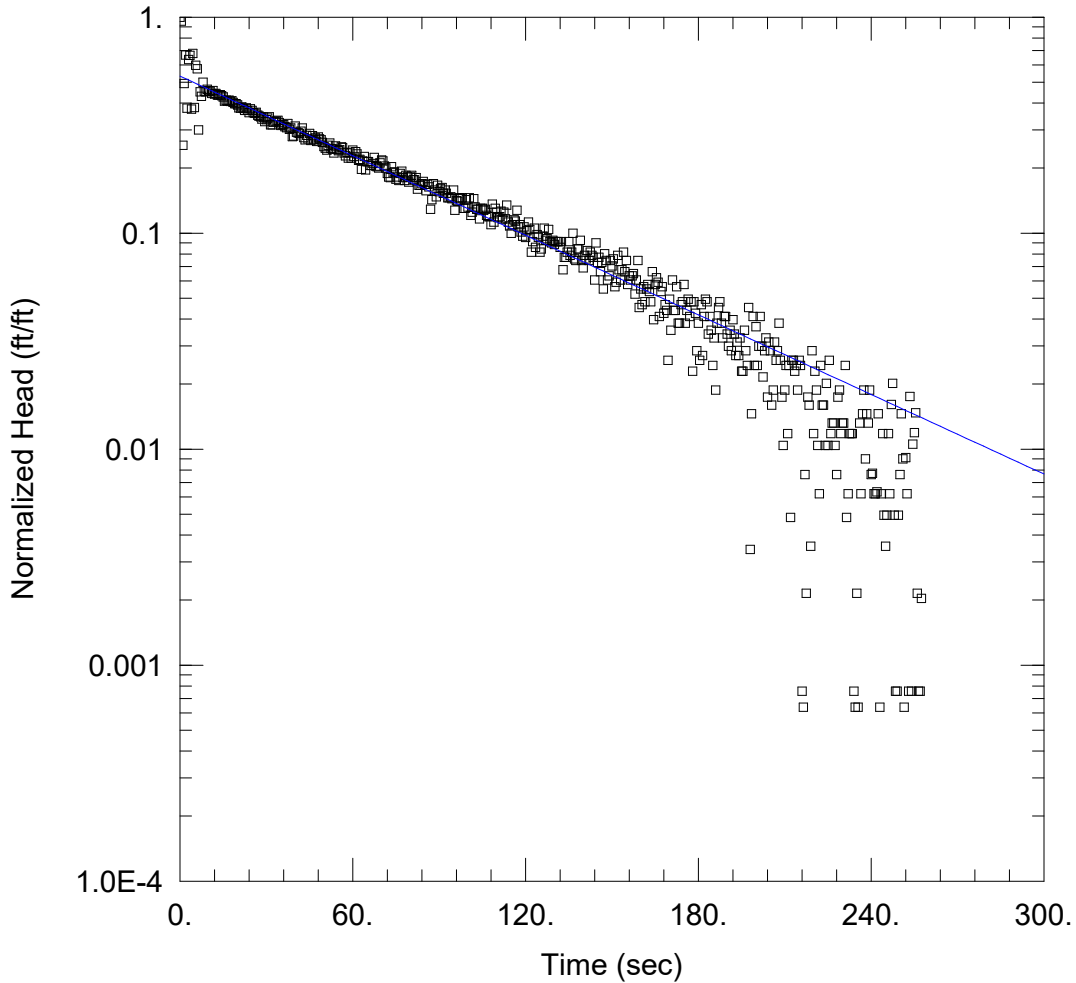
Saturated Thickness: 9.33 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (CGYP-1)

Initial Displacement: 0.5648 ft Static Water Column Height: 9.32 ft
 Total Well Penetration Depth: 9.32 ft Screen Length: 9.32 ft
 Casing Radius: 0.08333 ft Well Radius: 0.3438 ft
 Gravel Pack Porosity: 0.2

SOLUTION

Aquifer Model: Unconfined Solution Method: Bower-Rice
 K = 0.004904 cm/sec y0 = 0.08604 ft



WELL TEST ANALYSIS

Data Set: C:\Users\inschaffer\Documents\SCC slug working\CGYP-2 slug in 1.aqt
 Date: 11/09/21 Time: 12:40:30

PROJECT INFORMATION

Company: Haley & Aldrich
 Client: Santee Cooper
 Project: 131539
 Location: Cross, SC
 Test Well: CGYP-2

AQUIFER DATA

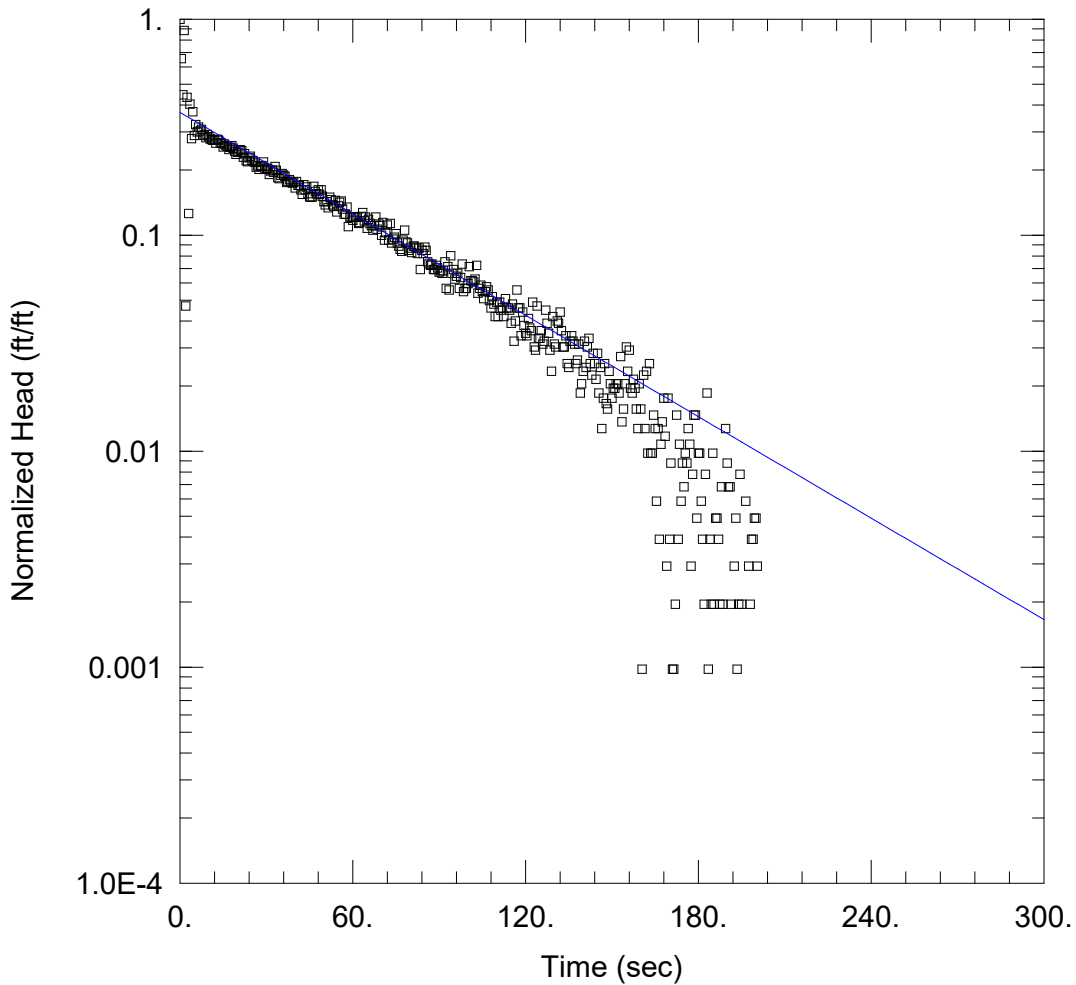
Saturated Thickness: 10.83 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (CGYP-2)

Initial Displacement: 0.7165 ft Static Water Column Height: 10.83 ft
 Total Well Penetration Depth: 10.83 ft Screen Length: 10. ft
 Casing Radius: 0.08333 ft Well Radius: 0.3438 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bower-Rice
 K = 0.0003882 cm/sec y0 = 0.382 ft



WELL TEST ANALYSIS

Data Set: C:\Users\inschaffer\Documents\SCC slug working\CGYP-2 slug in 2.aqt
 Date: 11/09/21 Time: 12:52:59

PROJECT INFORMATION

Company: Haley & Aldrich
 Client: Santee Cooper
 Project: 131539
 Location: Cross, SC
 Test Well: CGYP-2

AQUIFER DATA

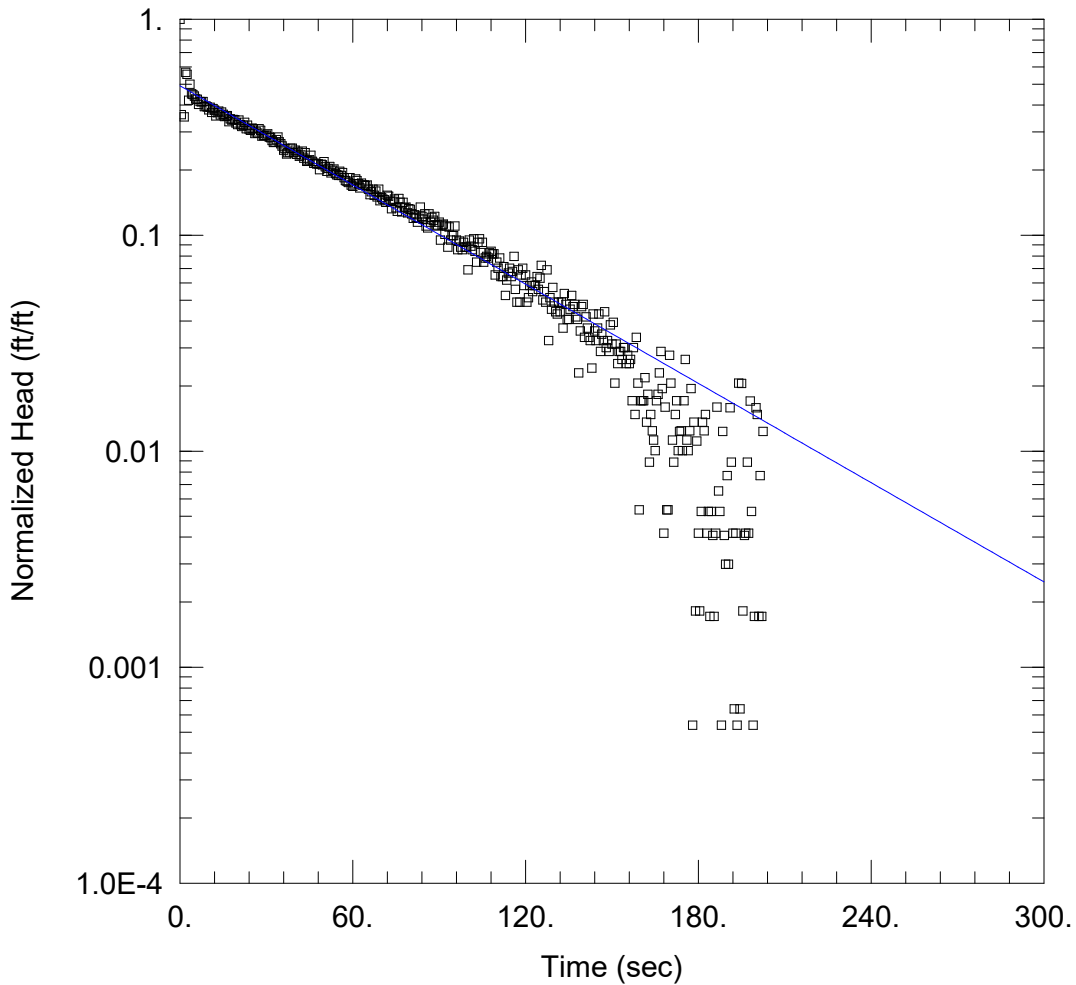
Saturated Thickness: 10.83 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (CGYP-2)

Initial Displacement: 1.023 ft Static Water Column Height: 10.83 ft
 Total Well Penetration Depth: 10.83 ft Screen Length: 10. ft
 Casing Radius: 0.08333 ft Well Radius: 0.3438 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bower-Rice
 K = 0.0004948 cm/sec y0 = 0.3788 ft



WELL TEST ANALYSIS

Data Set: C:\Users\inschaffer\Documents\SCC slug working\CGYP-2 slug out 1.aqt
 Date: 11/09/21 Time: 12:48:20

PROJECT INFORMATION

Company: Haley & Aldrich
 Client: Santee Cooper
 Project: 131539
 Location: Cross, SC
 Test Well: CGYP-2

AQUIFER DATA

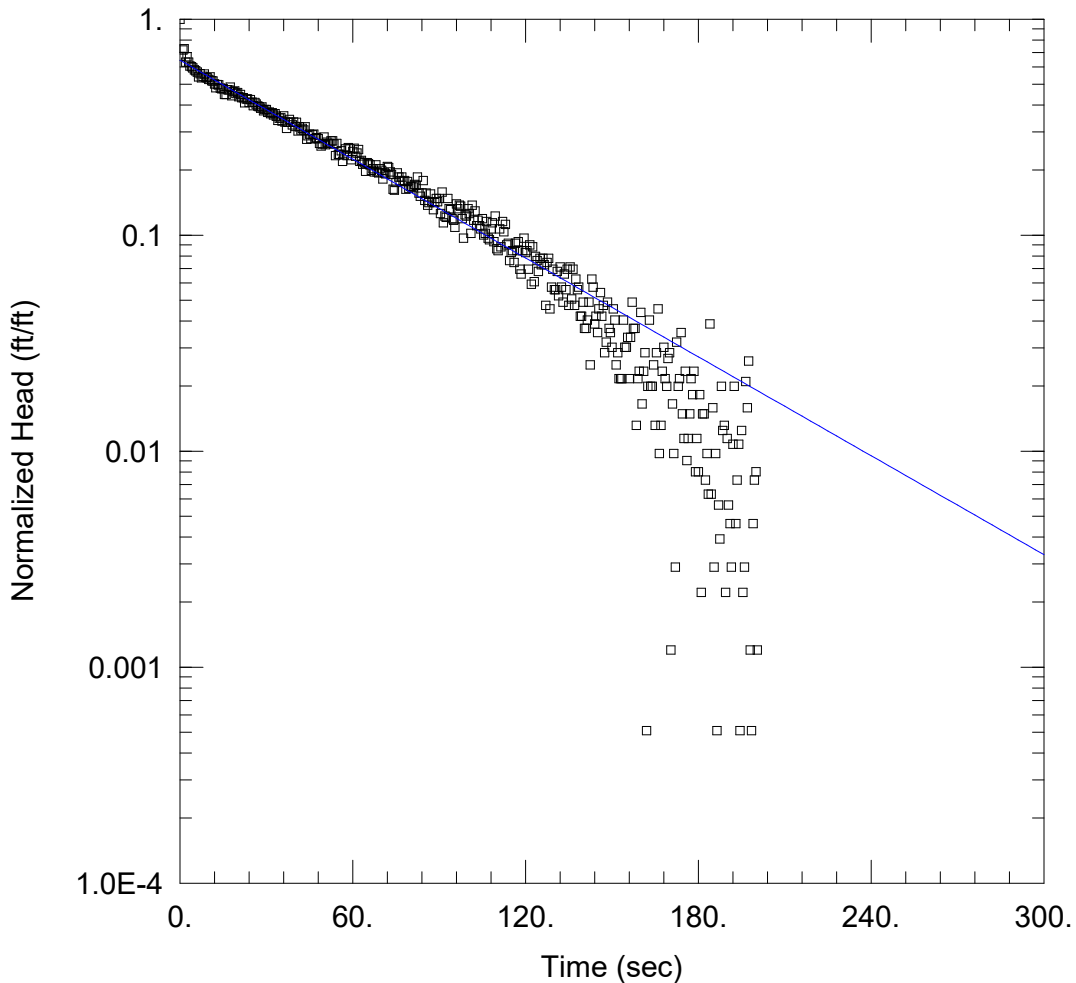
Saturated Thickness: 10.83 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (CGYP-2)

Initial Displacement: 0.8485 ft Static Water Column Height: 10.83 ft
 Total Well Penetration Depth: 10.83 ft Screen Length: 10. ft
 Casing Radius: 0.08333 ft Well Radius: 0.3438 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bower-Rice
 K = 0.000484 cm/sec $y_0 =$ 0.4172 ft



WELL TEST ANALYSIS

Data Set: C:\Users\inschaffer\Documents\SCC slug working\CGYP-2 slug out 2.aqt
 Date: 11/09/21 Time: 13:16:15

PROJECT INFORMATION

Company: Haley & Aldrich
 Client: Santee Cooper
 Project: 131539
 Location: Cross, SC
 Test Well: CGYP-2

AQUIFER DATA

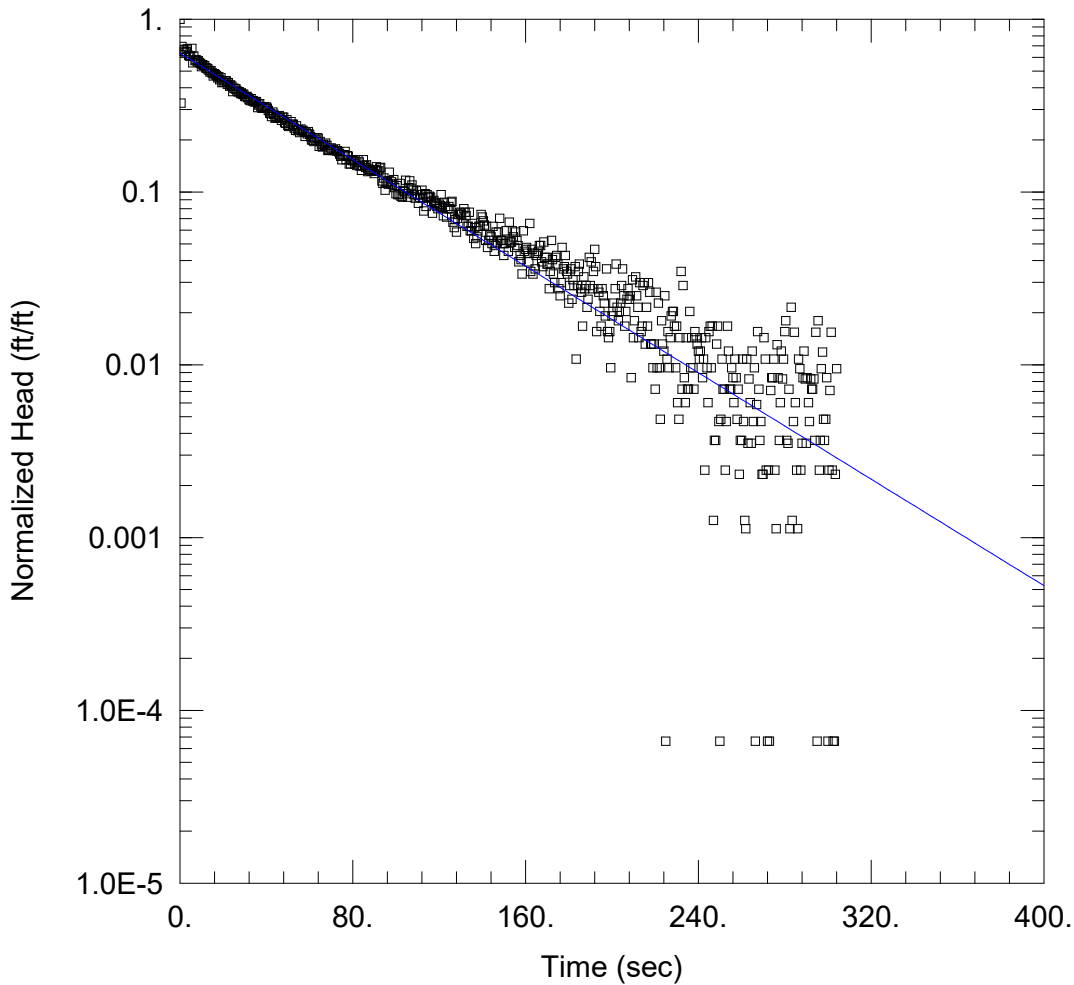
Saturated Thickness: 10.83 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (CGYP-2)

Initial Displacement: 0.5857 ft Static Water Column Height: 10.83 ft
 Total Well Penetration Depth: 10.83 ft Screen Length: 10. ft
 Casing Radius: 0.08333 ft Well Radius: 0.3438 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bower-Rice
 K = 0.0004822 cm/sec y0 = 0.3778 ft



WELL TEST ANALYSIS

Data Set: C:\Users\inschaffer\Documents\SCC slug working\CGYP-3 slug in 1.aqt
 Date: 11/09/21 Time: 16:18:17

PROJECT INFORMATION

Company: Haley & Aldrich
 Client: Santee Cooper
 Project: 131539
 Location: Cross, SC
 Test Well: CGYP-3

AQUIFER DATA

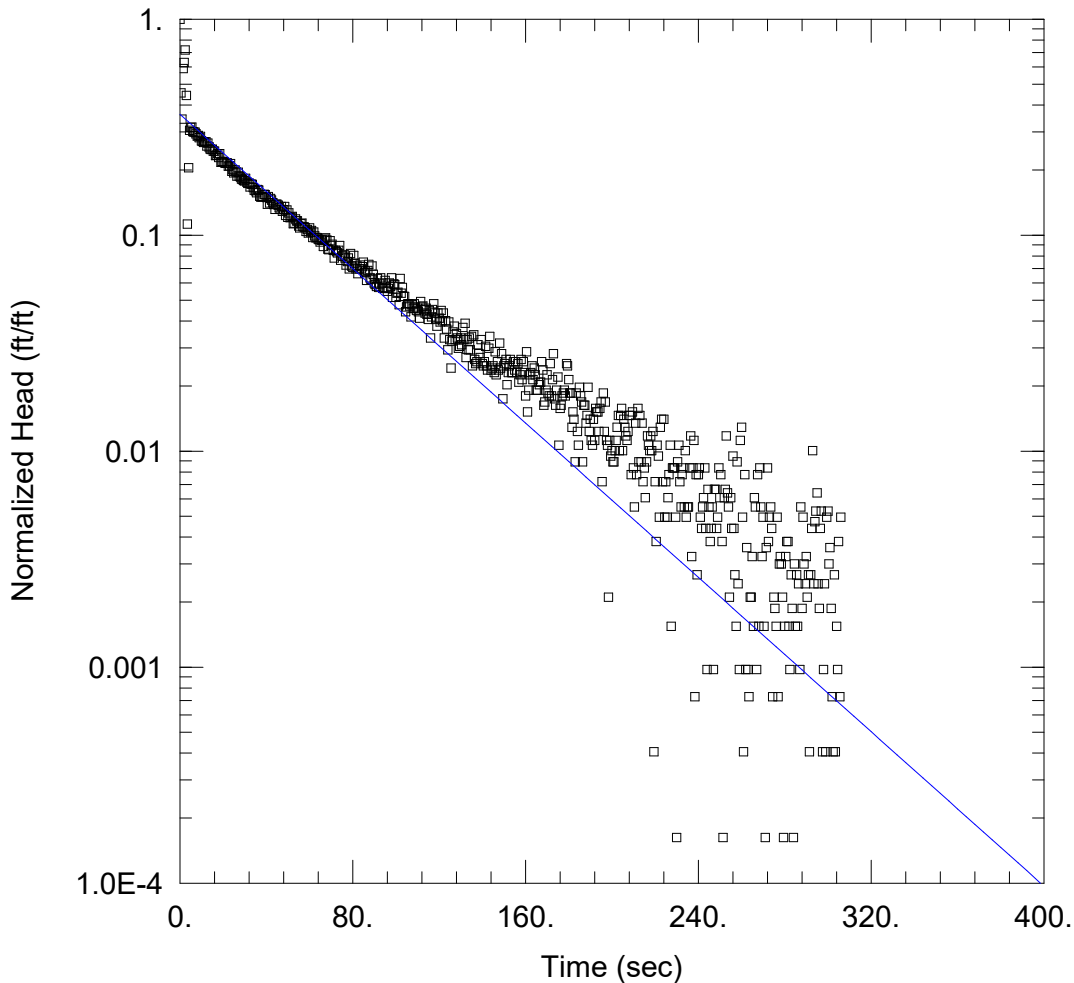
Saturated Thickness: 13.71 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (CGYP-3)

Initial Displacement: 0.8391 ft Static Water Column Height: 13.71 ft
 Total Well Penetration Depth: 13.71 ft Screen Length: 10. ft
 Casing Radius: 0.08333 ft Well Radius: 0.3438 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bower-Rice
 K = 0.0005141 cm/sec y0 = 0.5324 ft



WELL TEST ANALYSIS

Data Set: C:\Users\inschaffer\Documents\SCC slug working\CGYP-3 slug in 2.aqt
 Date: 11/09/21 Time: 16:36:50

PROJECT INFORMATION

Company: Haley & Aldrich
 Client: Santee Cooper
 Project: 131539
 Location: Cross, SC
 Test Well: CGYP-3

AQUIFER DATA

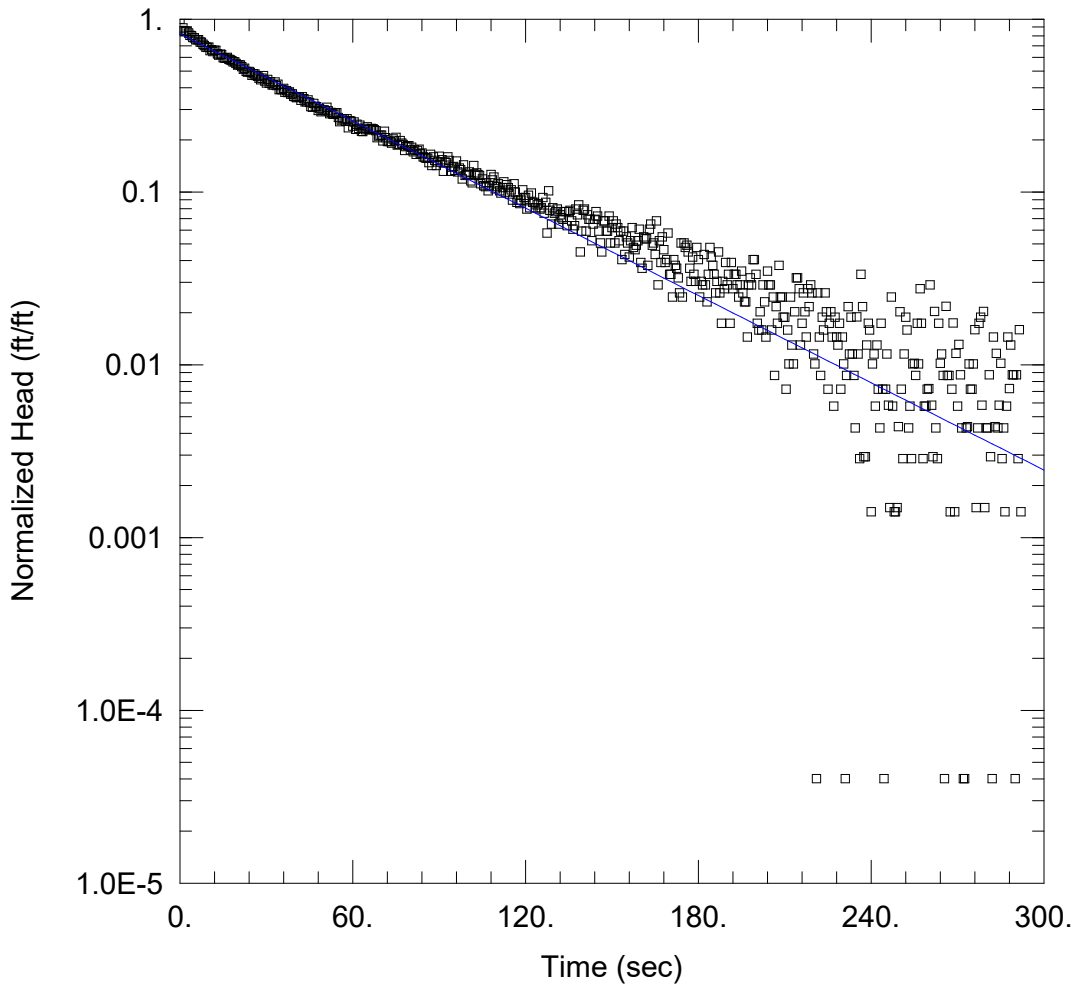
Saturated Thickness: 13.71 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (CGYP-3)

Initial Displacement: 1.76 ft Static Water Column Height: 13.71 ft
 Total Well Penetration Depth: 13.71 ft Screen Length: 10. ft
 Casing Radius: 0.08333 ft Well Radius: 0.3438 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bower-Rice
 K = 0.0005961 cm/sec y0 = 0.6374 ft



WELL TEST ANALYSIS

Data Set: C:\Users\inschaffer\Documents\SCC slug working\CGYP-3 slug out 1.aqt
 Date: 11/09/21 Time: 16:32:26

PROJECT INFORMATION

Company: Haley & Aldrich
 Client: Santee Cooper
 Project: 131539
 Location: Cross, SC
 Test Well: CGYP-3

AQUIFER DATA

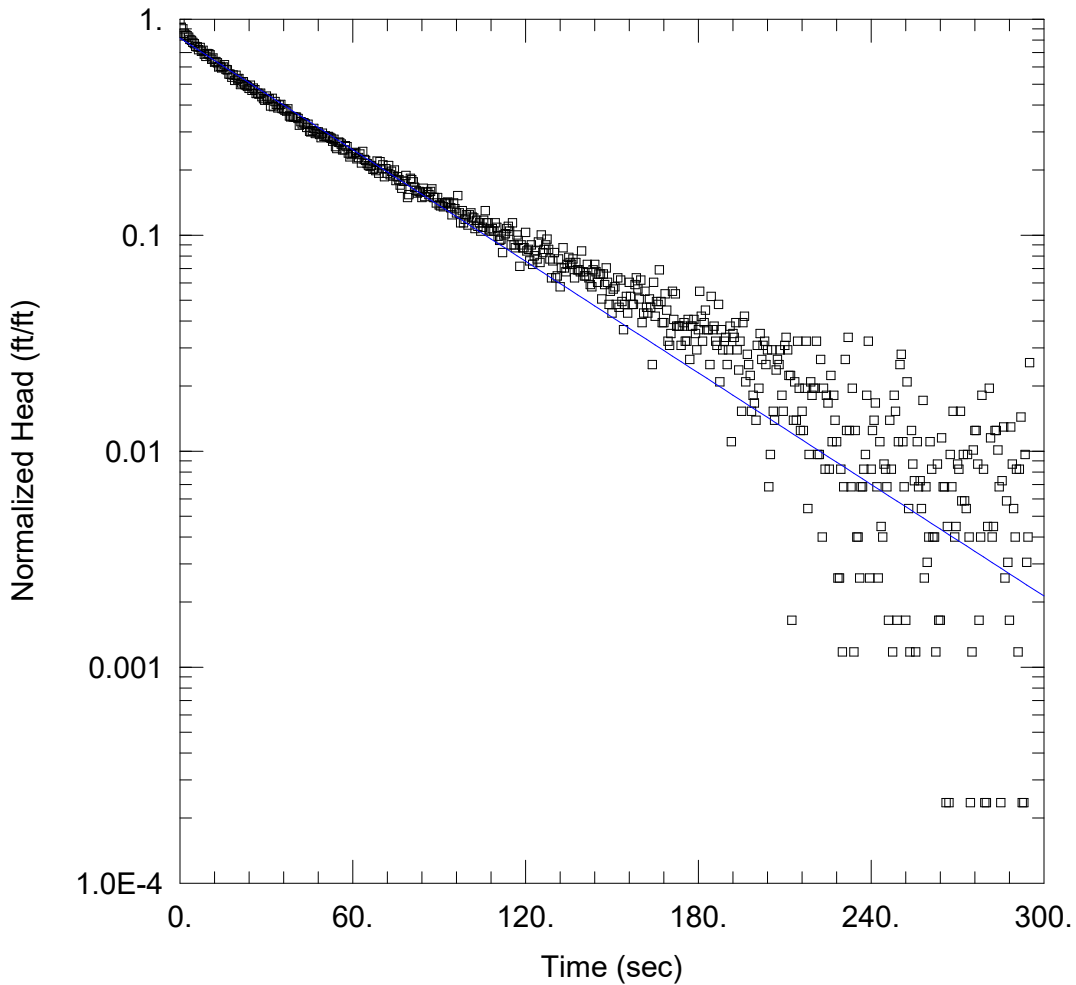
Saturated Thickness: 13.71 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (CGYP-3)

Initial Displacement: 0.69 ft Static Water Column Height: 13.71 ft
 Total Well Penetration Depth: 13.71 ft Screen Length: 10. ft
 Casing Radius: 0.08333 ft Well Radius: 0.3438 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bower-Rice
 K = 0.0005617 cm/sec y0 = 0.5682 ft



WELL TEST ANALYSIS

Data Set: C:\Users\inschaffer\Documents\SCC slug working\CGYP-3 slug out 2.aqt
 Date: 11/09/21 Time: 16:45:48

PROJECT INFORMATION

Company: Haley & Aldrich
 Client: Santee Cooper
 Project: 131539
 Location: Cross, SC
 Test Well: CGYP-3

AQUIFER DATA

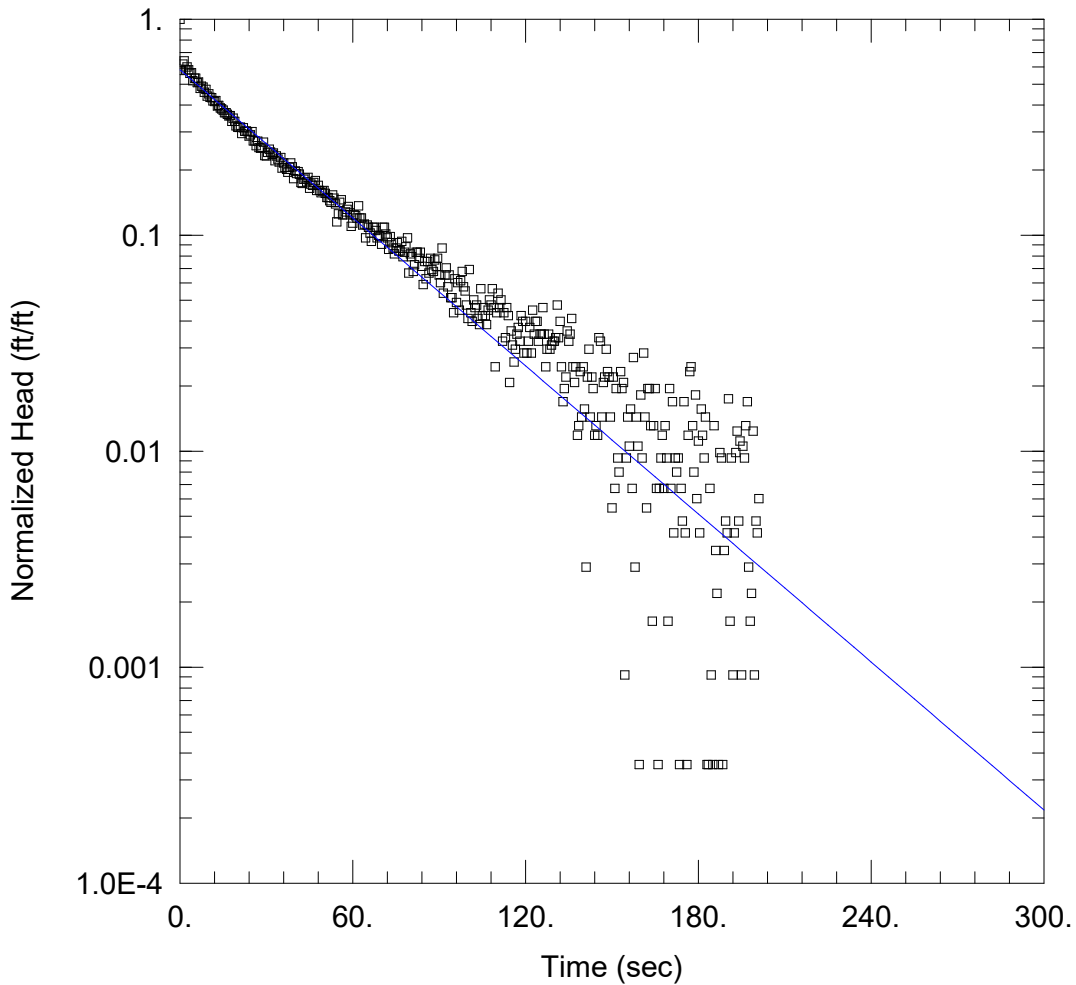
Saturated Thickness: 13.71 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (CGYP-3)

Initial Displacement: 0.7078 ft Static Water Column Height: 13.71 ft
 Total Well Penetration Depth: 13.71 ft Screen Length: 10. ft
 Casing Radius: 0.08333 ft Well Radius: 0.3438 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bower-Rice
 K = 0.0005746 cm/sec y0 = 0.578 ft



WELL TEST ANALYSIS

Data Set: C:\Users\inschaffer\Documents\SCC slug working\CGYP4 Slug Out 1.aqt
 Date: 11/08/21 Time: 10:52:34

PROJECT INFORMATION

Company: Haley & Aldrich
 Client: Santee Cooper
 Project: 131539
 Location: Cross, SC
 Test Well: CGYP-4

AQUIFER DATA

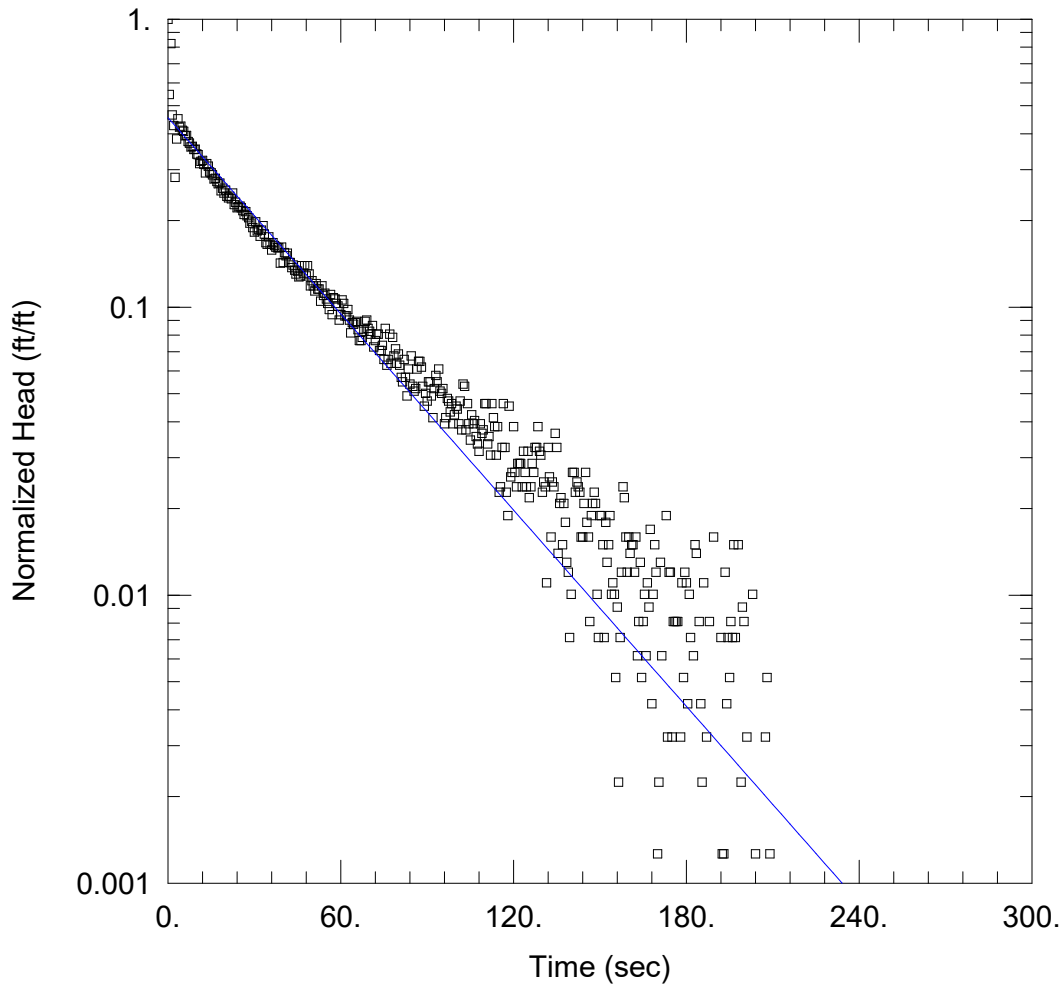
Saturated Thickness: 14.7 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (CGYP-4)

Initial Displacement: 0.7843 ft Static Water Column Height: 14.7 ft
 Total Well Penetration Depth: 14.7 ft Screen Length: 10. ft
 Casing Radius: 0.08333 ft Well Radius: 0.3438 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bower-Rice
 K = 0.0007741 cm/sec $y_0 =$ 0.4567 ft



WELL TEST ANALYSIS

Data Set: C:\Users\inschaffer\Documents\SCC slug working\CGYP4 Slug In 1.aqt
 Date: 11/08/21 Time: 10:52:03

PROJECT INFORMATION

Company: Haley & Aldrich
 Client: Santee Cooper
 Project: 131539
 Location: Cross, SC
 Test Well: CGYP-4

AQUIFER DATA

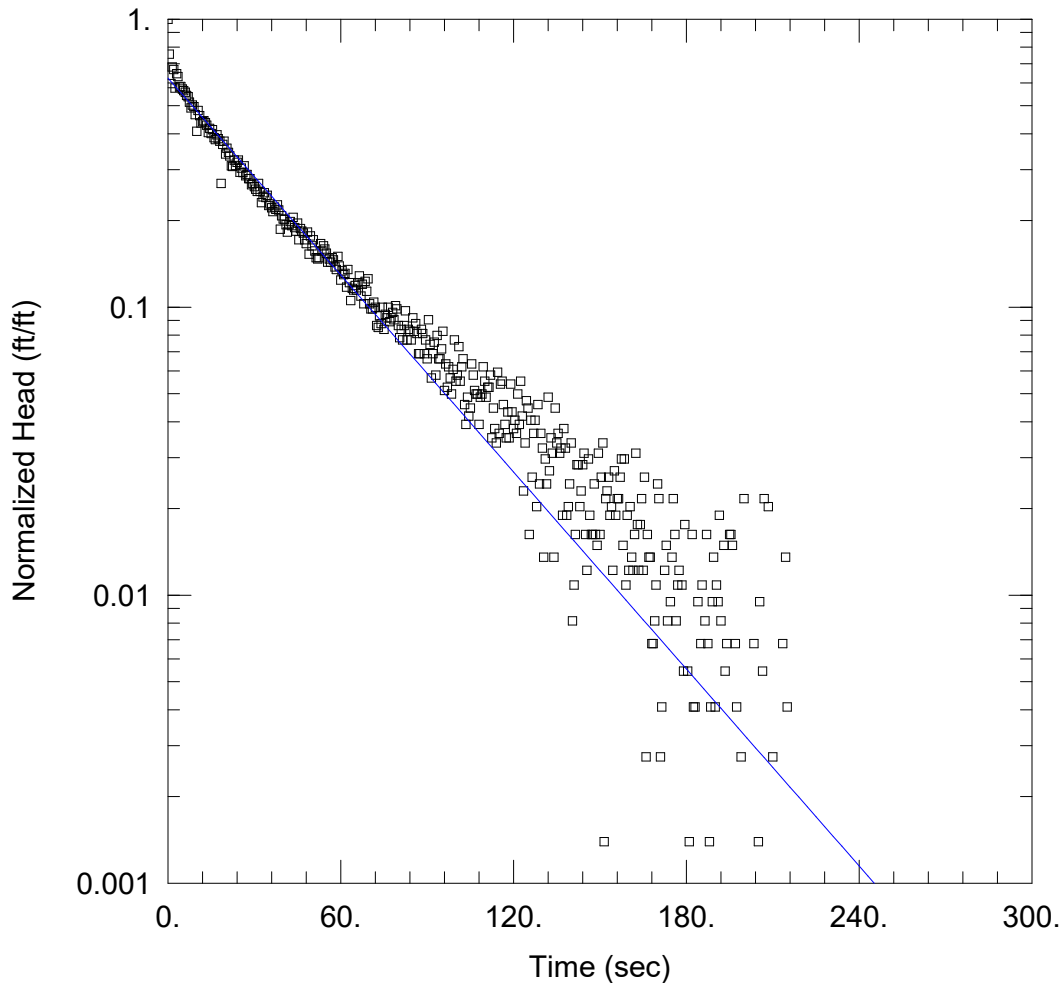
Saturated Thickness: 14.7 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (CGYP-4)

Initial Displacement: 1.023 ft Static Water Column Height: 14.7 ft
 Total Well Penetration Depth: 14.7 ft Screen Length: 10. ft
 Casing Radius: 0.08333 ft Well Radius: 0.3438 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bower-Rice
 K = 0.0007695 cm/sec $y_0 =$ 0.4651 ft



WELL TEST ANALYSIS

Data Set: C:\Users\inschaffer\Documents\SCC slug working\CGYP4 Slug In 2.aqt
 Date: 11/08/21 Time: 10:53:20

PROJECT INFORMATION

Company: Haley & Aldrich
 Client: Santee Cooper
 Project: 131539
 Location: Cross, SC
 Test Well: CGYP-4

AQUIFER DATA

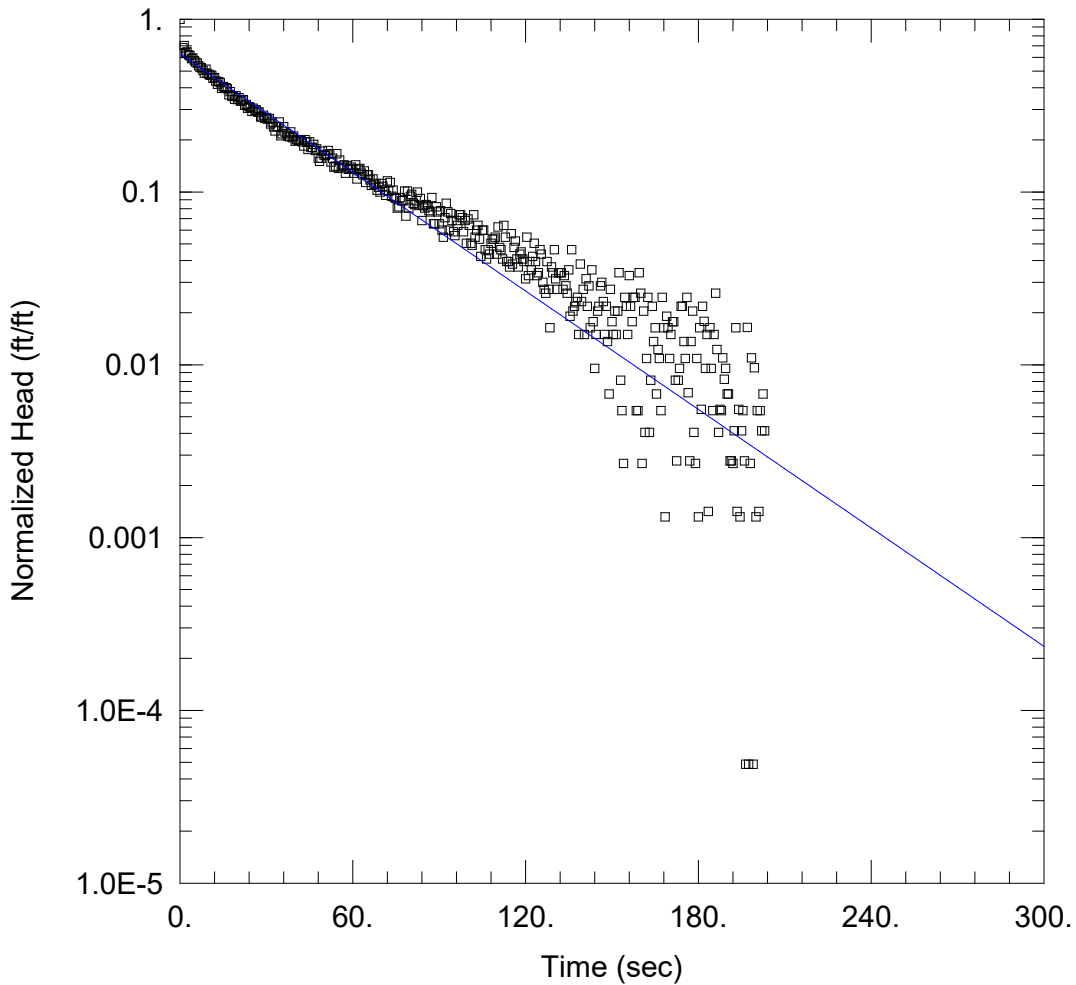
Saturated Thickness: 14.7 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (CGYP-4)

Initial Displacement: 0.741 ft Static Water Column Height: 14.7 ft
 Total Well Penetration Depth: 14.7 ft Screen Length: 10. ft
 Casing Radius: 0.08333 ft Well Radius: 0.3438 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bower-Rice
 K = 0.0007724 cm/sec $y_0 =$ 0.4623 ft



WELL TEST ANALYSIS

Data Set: C:\Users\inschaffer\Documents\SCC slug working\CGYP4 Slug Out 2.aqt
 Date: 11/08/21 Time: 10:53:38

PROJECT INFORMATION

Company: Haley & Aldrich
 Client: Santee Cooper
 Project: 131539
 Location: Cross, SC
 Test Well: CGYP-4

AQUIFER DATA

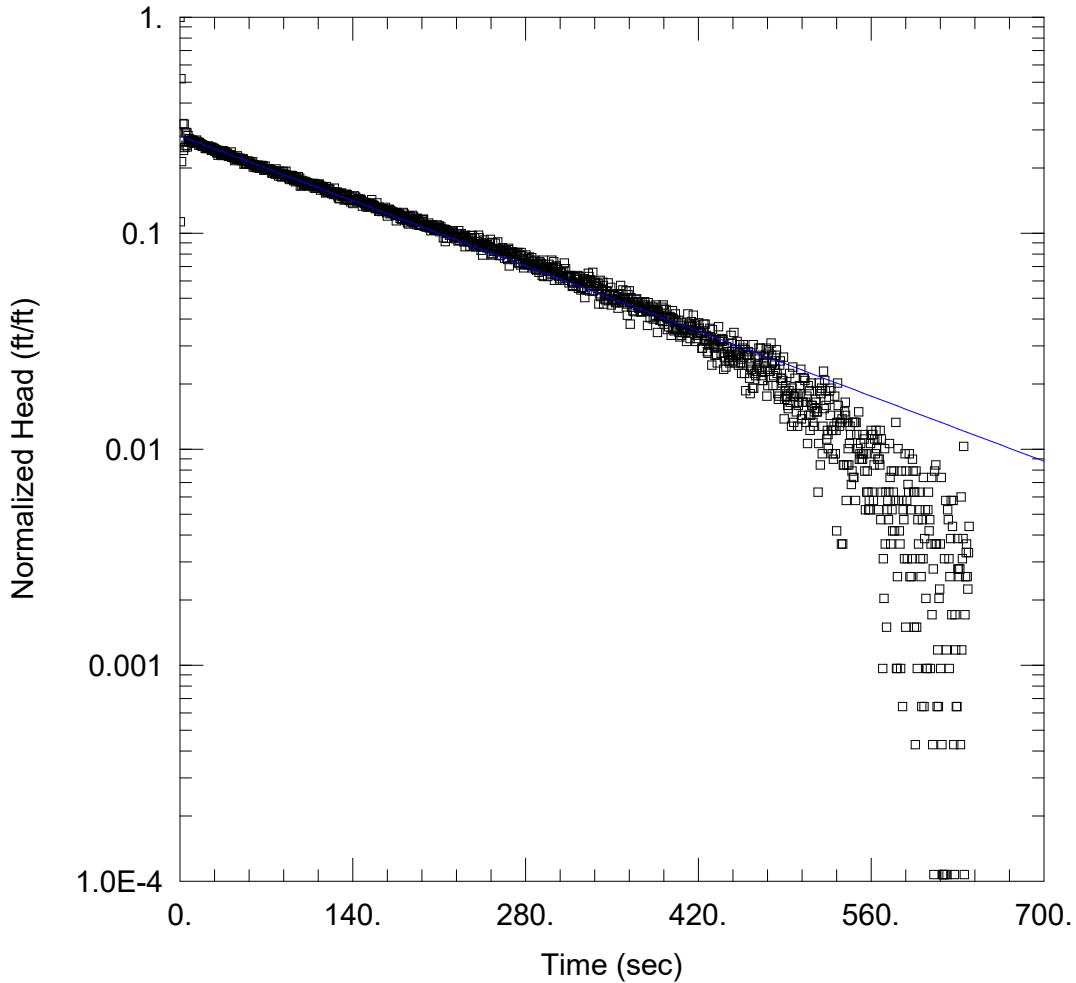
Saturated Thickness: 14.7 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (CGYP-4)

Initial Displacement: 0.732 ft Static Water Column Height: 14.7 ft
 Total Well Penetration Depth: 14.7 ft Screen Length: 10. ft
 Casing Radius: 0.08333 ft Well Radius: 0.3438 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bower-Rice
 K = 0.0007743 cm/sec y0 = 0.4594 ft



WELL TEST ANALYSIS

Data Set: C:\Users\inschaffer\Documents\SCC slug working\CGYP-5 slug in 1.aqt
 Date: 11/09/21 Time: 13:37:30

PROJECT INFORMATION

Company: Haley & Aldrich
 Client: Santee Cooper
 Project: 131539
 Location: Cross, SC
 Test Well: CGYP-5

AQUIFER DATA

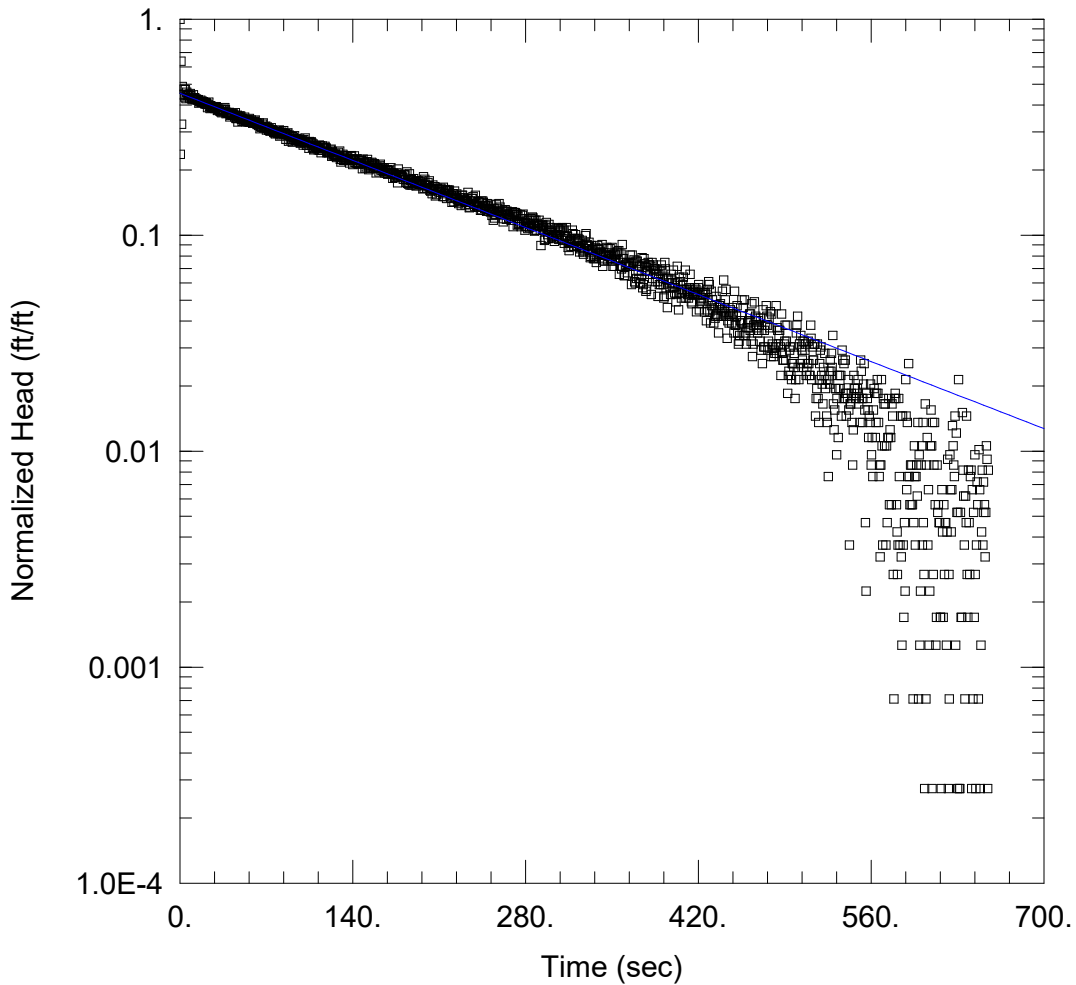
Saturated Thickness: 13.76 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (CGYP-5)

Initial Displacement: 1.868 ft Static Water Column Height: 13.76 ft
 Total Well Penetration Depth: 13.76 ft Screen Length: 10. ft
 Casing Radius: 0.08333 ft Well Radius: 0.3438 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bower-Rice
 K = 0.0001439 cm/sec y0 = 0.5285 ft



WELL TEST ANALYSIS

Data Set: C:\Users\inschaffer\Documents\SCC slug working\CGYP-5 slug in 2.aqt
 Date: 11/09/21 Time: 14:07:54

PROJECT INFORMATION

Company: Haley & Aldrich
 Client: Santee Cooper
 Project: 131539
 Location: Cross, SC
 Test Well: CGYP-5

AQUIFER DATA

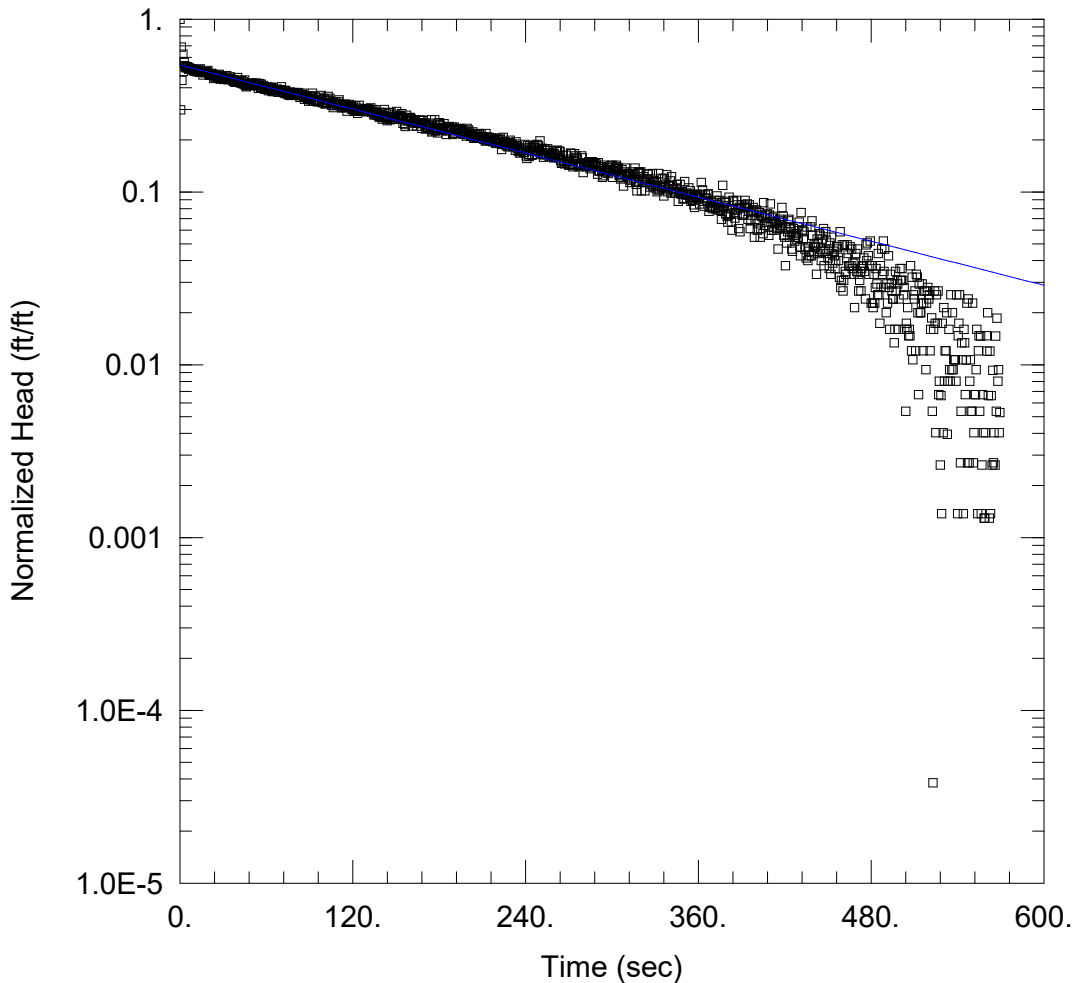
Saturated Thickness: 13.76 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (CGYP-5)

Initial Displacement: 1.013 ft Static Water Column Height: 13.76 ft
 Total Well Penetration Depth: 13.76 ft Screen Length: 10. ft
 Casing Radius: 0.08333 ft Well Radius: 0.3438 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bower-Rice
 K = 0.0001481 cm/sec y0 = 0.4592 ft



WELL TEST ANALYSIS

Data Set: C:\Users\inschaffer\Documents\SCC slug working\CGYP-5 slug out 1.aqt
 Date: 11/09/21 Time: 14:01:56

PROJECT INFORMATION

Company: Haley & Aldrich
 Client: Santee Cooper
 Project: 131539
 Location: Cross, SC
 Test Well: CGYP-5

AQUIFER DATA

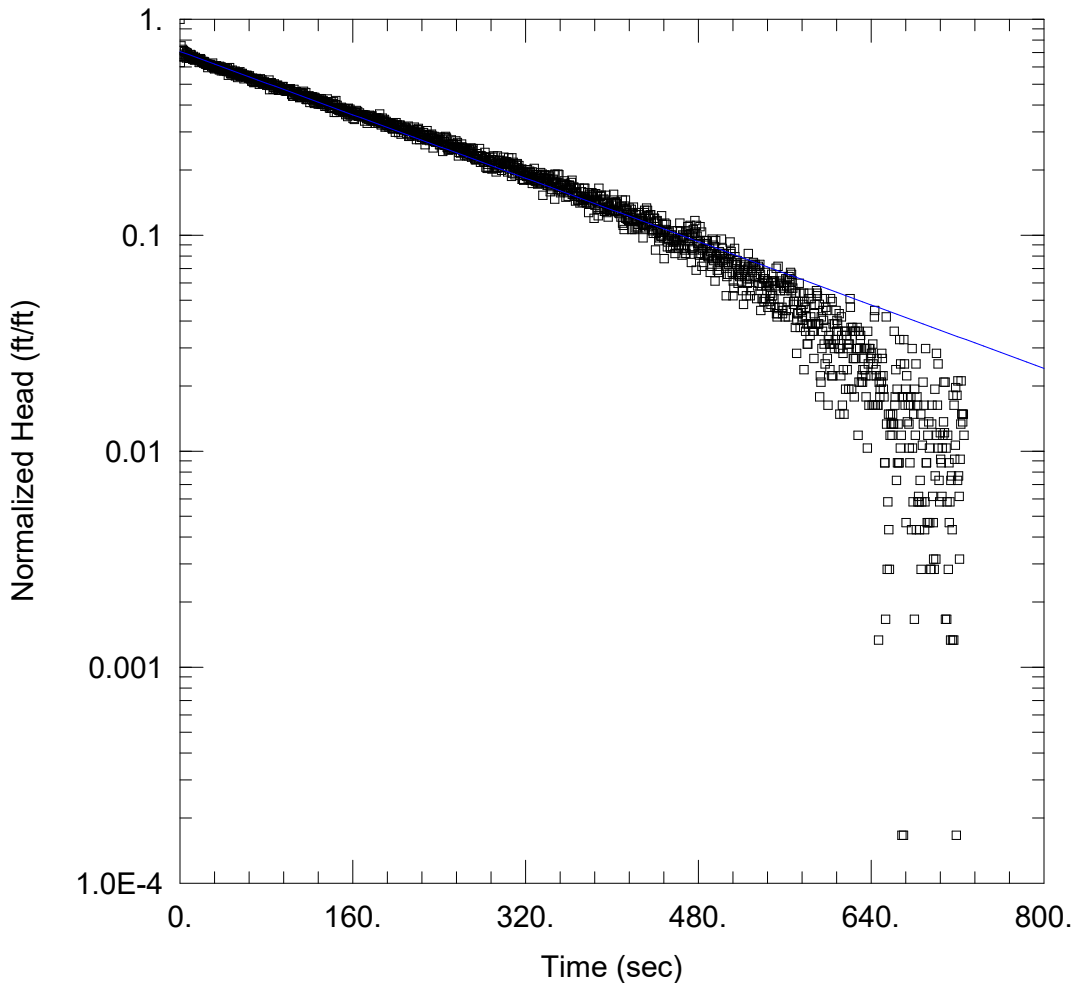
Saturated Thickness: 13.76 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (CGYP-5)

Initial Displacement: 0.75 ft Static Water Column Height: 13.76 ft
 Total Well Penetration Depth: 13.76 ft Screen Length: 10. ft
 Casing Radius: 0.08333 ft Well Radius: 0.3438 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bower-Rice
 K = 0.0001419 cm/sec y0 = 0.4073 ft



WELL TEST ANALYSIS

Data Set: C:\Users\inschaffer\Documents\SCC slug working\CGYP-5 slug out 2.aqt
 Date: 11/09/21 Time: 14:52:44

PROJECT INFORMATION

Company: Haley & Aldrich
 Client: Santee Cooper
 Project: 131539
 Location: Cross, SC
 Test Well: CGYP-5

AQUIFER DATA

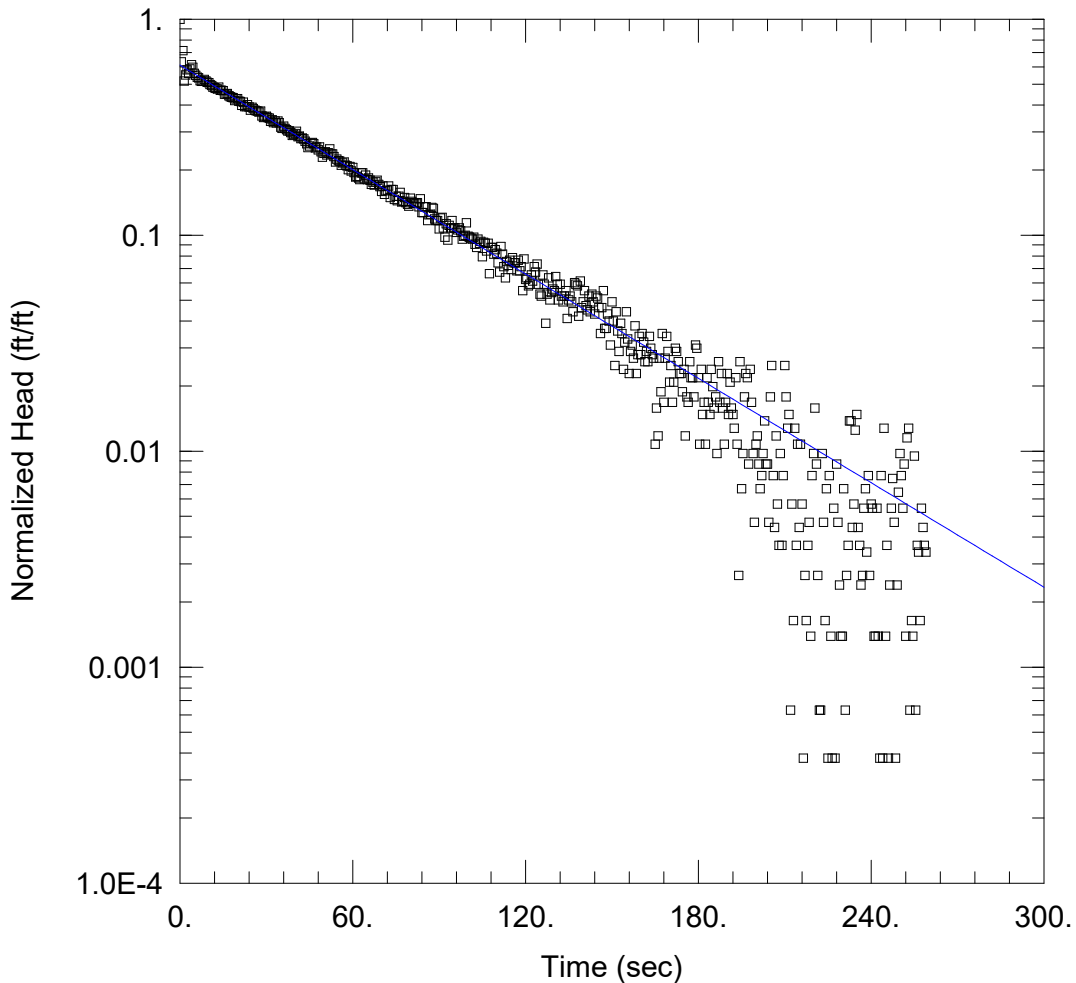
Saturated Thickness: 13.76 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (CGYP-5)

Initial Displacement: 0.6669 ft Static Water Column Height: 13.76 ft
 Total Well Penetration Depth: 13.76 ft Screen Length: 10. ft
 Casing Radius: 0.08333 ft Well Radius: 0.3438 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bower-Rice
 K = 0.0001225 cm/sec y0 = 0.4725 ft



WELL TEST ANALYSIS

Data Set: C:\Users\inschaffer\Documents\SCC slug working\CGYP-6 slug in 1.aqt
 Date: 11/09/21 Time: 15:07:12

PROJECT INFORMATION

Company: Haley & Aldrich
 Client: Santee Cooper
 Project: 131539
 Location: Cross, SC
 Test Well: CGYP-6

AQUIFER DATA

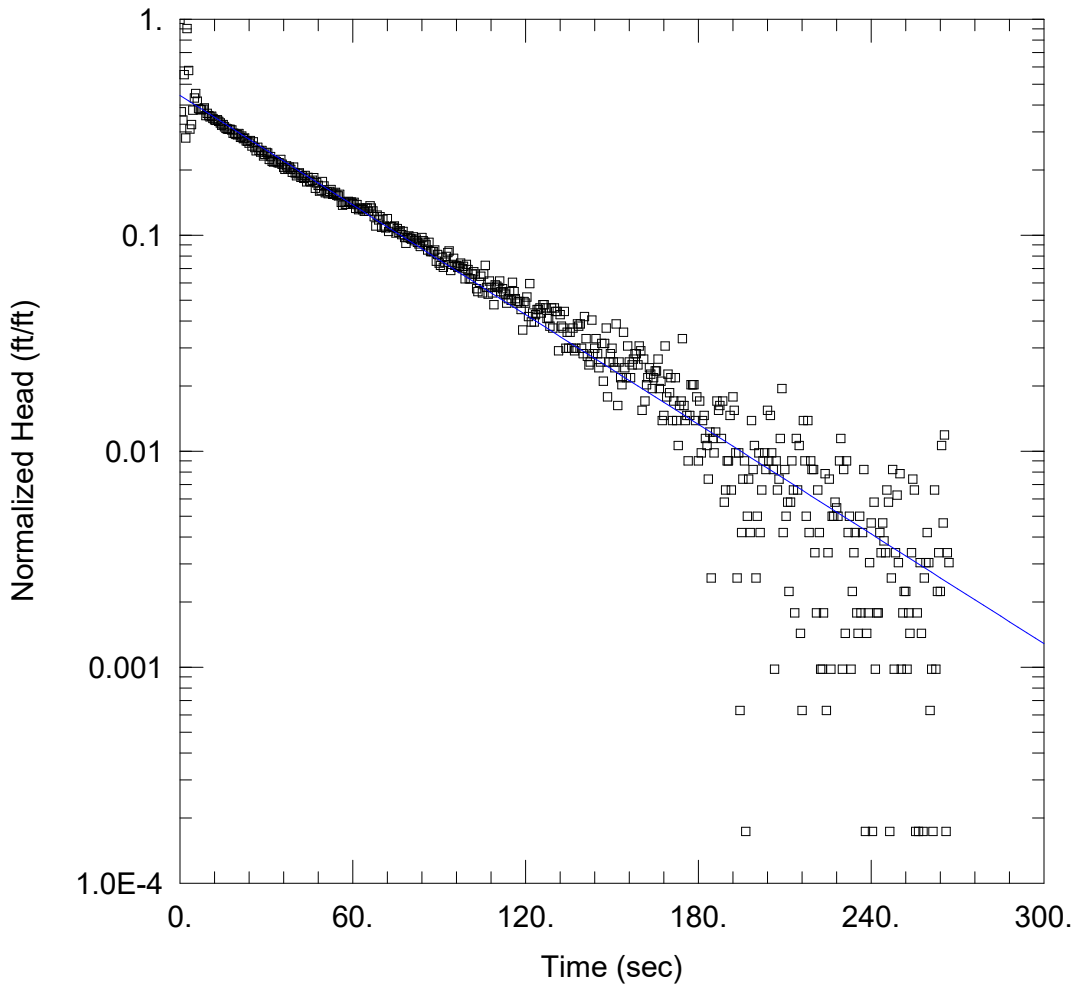
Saturated Thickness: 13.37 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (CGYP-6)

Initial Displacement: 0.9886 ft Static Water Column Height: 13.37 ft
 Total Well Penetration Depth: 13.37 ft Screen Length: 10. ft
 Casing Radius: 0.08333 ft Well Radius: 0.3438 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bower-Rice
 K = 0.0005347 cm/sec y0 = 0.6054 ft



WELL TEST ANALYSIS

Data Set: C:\Users\inschaffer\Documents\SCC slug working\CGYP-6 slug in 2.aqt
 Date: 11/09/21 Time: 15:16:47

PROJECT INFORMATION

Company: Haley & Aldrich
 Client: Santee Cooper
 Project: 131539
 Location: Cross, SC
 Test Well: CGYP-6

AQUIFER DATA

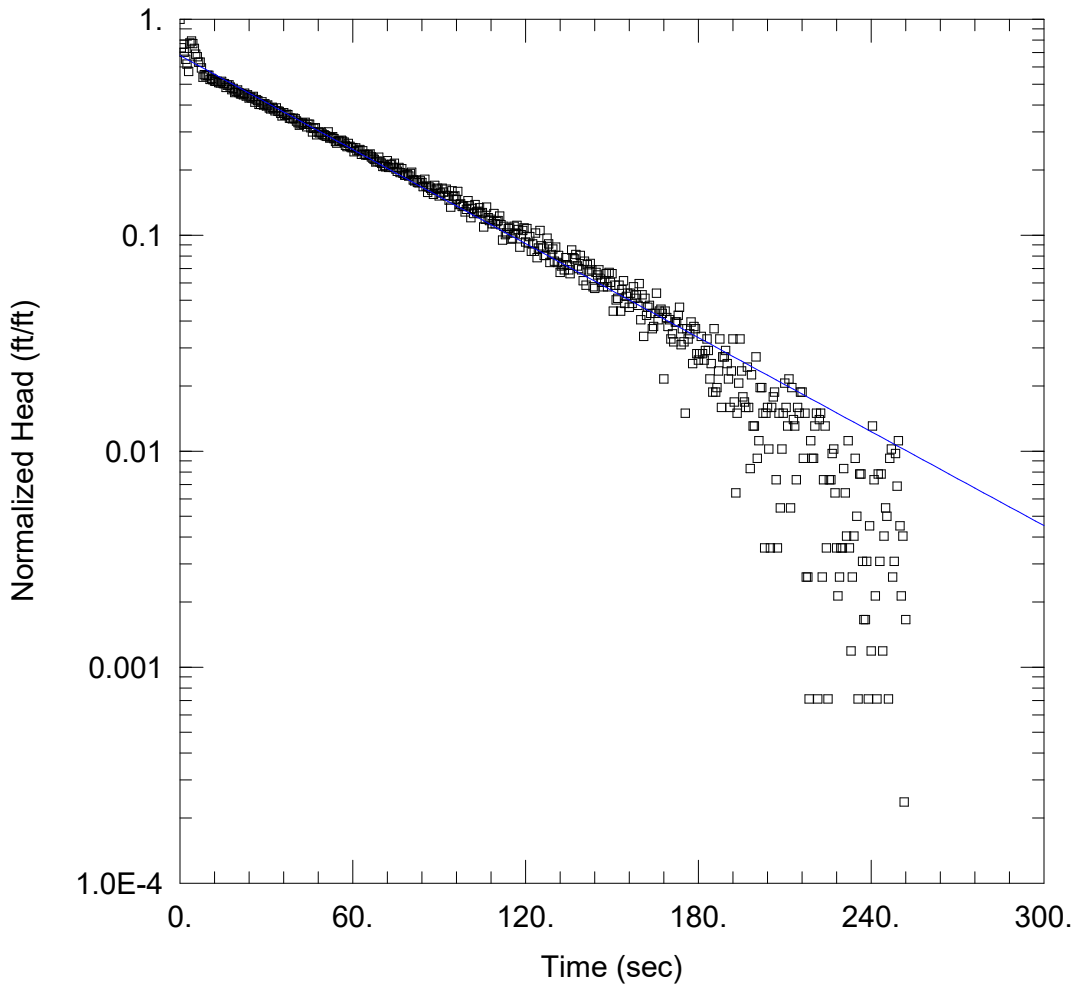
Saturated Thickness: 13.37 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (CGYP-6)

Initial Displacement: 1.244 ft Static Water Column Height: 13.37 ft
 Total Well Penetration Depth: 13.37 ft Screen Length: 10. ft
 Casing Radius: 0.08333 ft Well Radius: 0.3438 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bower-Rice
 K = 0.0005616 cm/sec y0 = 0.5522 ft



WELL TEST ANALYSIS

Data Set: C:\Users\inschaffer\Documents\SCC slug working\CGYP-6 slug out 1.aqt
 Date: 11/09/21 Time: 15:13:09

PROJECT INFORMATION

Company: Haley & Aldrich
 Client: Santee Cooper
 Project: 131539
 Location: Cross, SC
 Test Well: CGYP-6

AQUIFER DATA

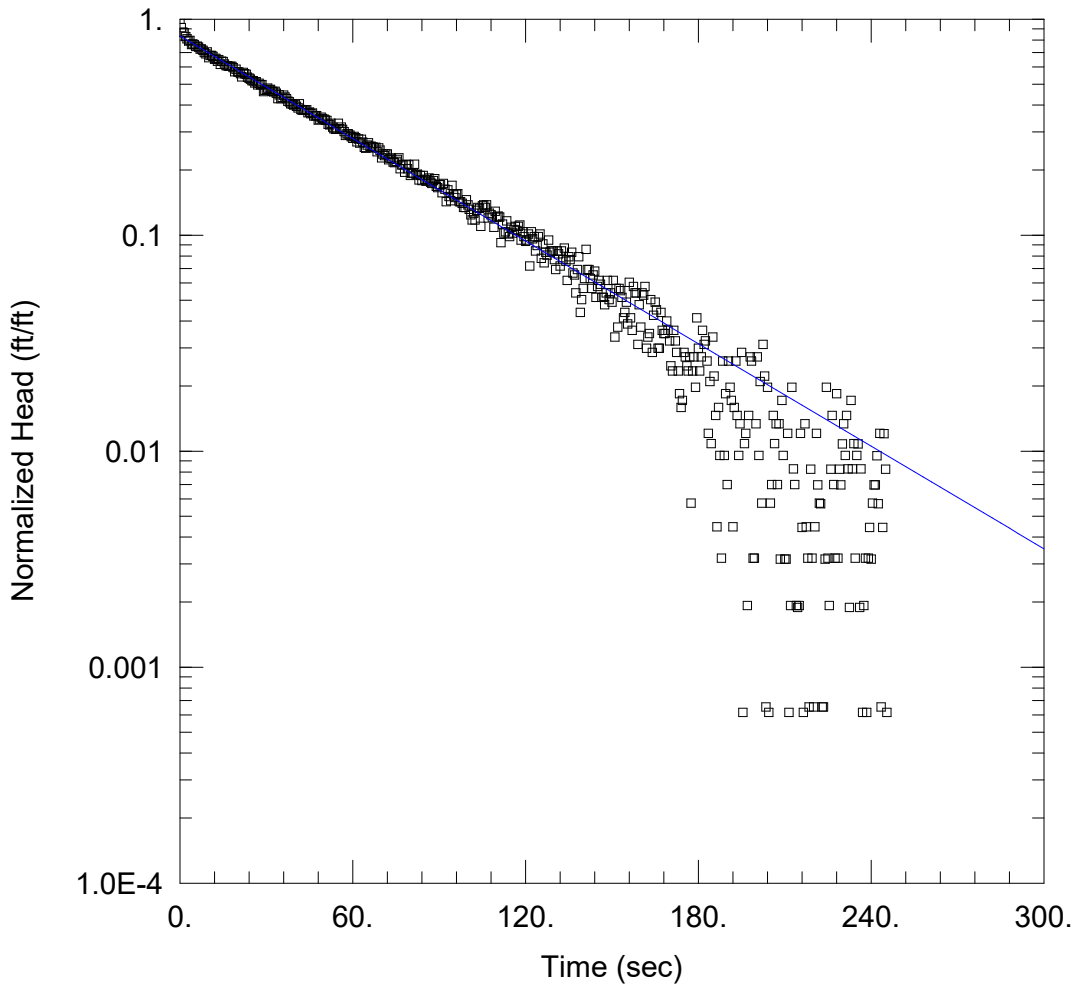
Saturated Thickness: 13.37 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (CGYP-6)

Initial Displacement: 1.053 ft Static Water Column Height: 13.37 ft
 Total Well Penetration Depth: 13.37 ft Screen Length: 10. ft
 Casing Radius: 0.08333 ft Well Radius: 0.3438 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bower-Rice
 K = 0.0004815 cm/sec y0 = 0.7143 ft



WELL TEST ANALYSIS

Data Set: C:\Users\inschaffer\Documents\SCC slug working\CGYP-6 slug out 2.aqt
 Date: 11/09/21 Time: 15:21:42

PROJECT INFORMATION

Company: Haley & Aldrich
 Client: Santee Cooper
 Project: 131539
 Location: Cross, SC
 Test Well: CGYP-6

AQUIFER DATA

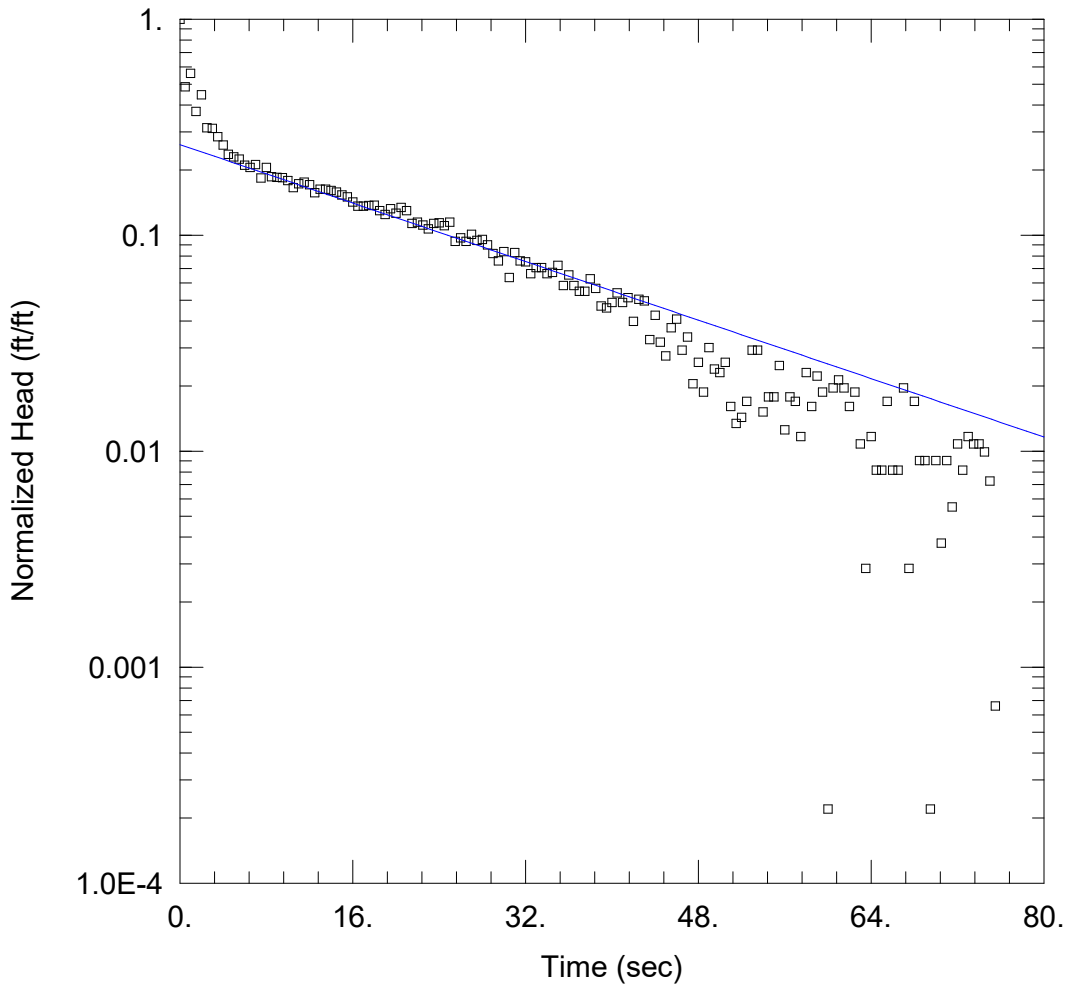
Saturated Thickness: 13.37 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (CGYP-6)

Initial Displacement: 0.7865 ft Static Water Column Height: 13.37 ft
 Total Well Penetration Depth: 13.37 ft Screen Length: 10. ft
 Casing Radius: 0.08333 ft Well Radius: 0.3438 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bower-Rice
 K = 0.0005252 cm/sec y0 = 0.6574 ft



WELL TEST ANALYSIS

Data Set: C:\Users\inschaffer\Documents\SCC slug working\PM-1 slug in 1.aqt
 Date: 11/10/21 Time: 15:48:50

PROJECT INFORMATION

Company: Haley & Aldrich
 Client: Santee Cooper
 Project: 131539
 Location: Cross, SC
 Test Well: PM-1

AQUIFER DATA

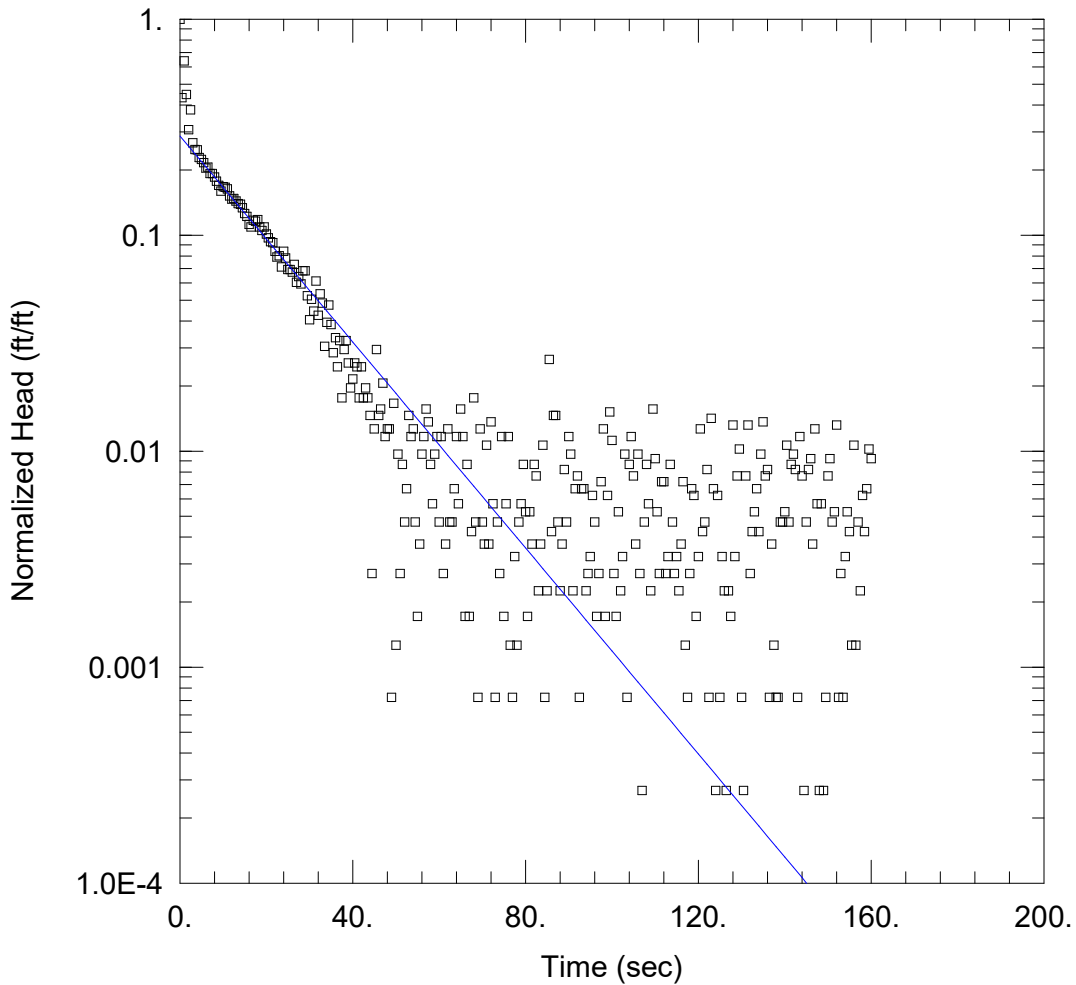
Saturated Thickness: 17.1 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (PM-1)

Initial Displacement: 1.134 ft Static Water Column Height: 17.1 ft
 Total Well Penetration Depth: 17.1 ft Screen Length: 17.1 ft
 Casing Radius: 0.1042 ft Well Radius: 0.25 ft
 Gravel Pack Porosity: 0.2

SOLUTION

Aquifer Model: Unconfined Solution Method: Bower-Rice
 K = 0.002385 cm/sec $y_0 =$ 0.2976 ft



WELL TEST ANALYSIS

Data Set: C:\Users\inschaffer\Documents\SCC slug working\PM-1 slug in 2.aqt
 Date: 11/10/21 Time: 15:49:56

PROJECT INFORMATION

Company: Haley & Aldrich
 Client: Santee Cooper
 Project: 131539
 Location: Cross, SC
 Test Well: PM-1

AQUIFER DATA

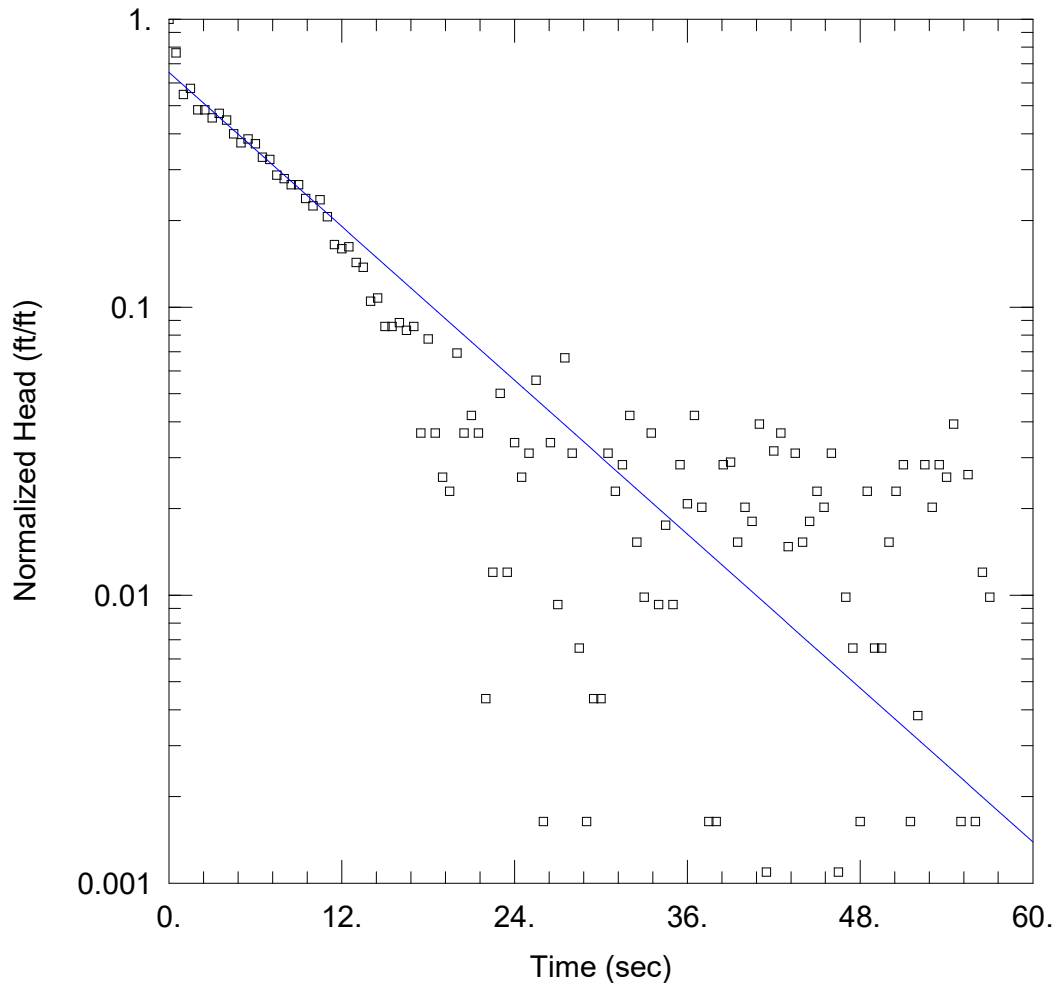
Saturated Thickness: 17.1 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (PM-1)

Initial Displacement: 1.006 ft Static Water Column Height: 17.1 ft
 Total Well Penetration Depth: 17.1 ft Screen Length: 17.1 ft
 Casing Radius: 0.1042 ft Well Radius: 0.25 ft
 Gravel Pack Porosity: 0.2

SOLUTION

Aquifer Model: Unconfined Solution Method: Bower-Rice
 K = 0.003361 cm/sec $y_0 =$ 0.2893 ft



WELL TEST ANALYSIS

Data Set: C:\Users\inschaffer\Documents\SCC slug working\PM-1 slug in 3.aqt
 Date: 11/10/21 Time: 15:50:38

PROJECT INFORMATION

Company: Haley & Aldrich
 Client: Santee Cooper
 Project: 131539
 Location: Cross, SC
 Test Well: PM-1

AQUIFER DATA

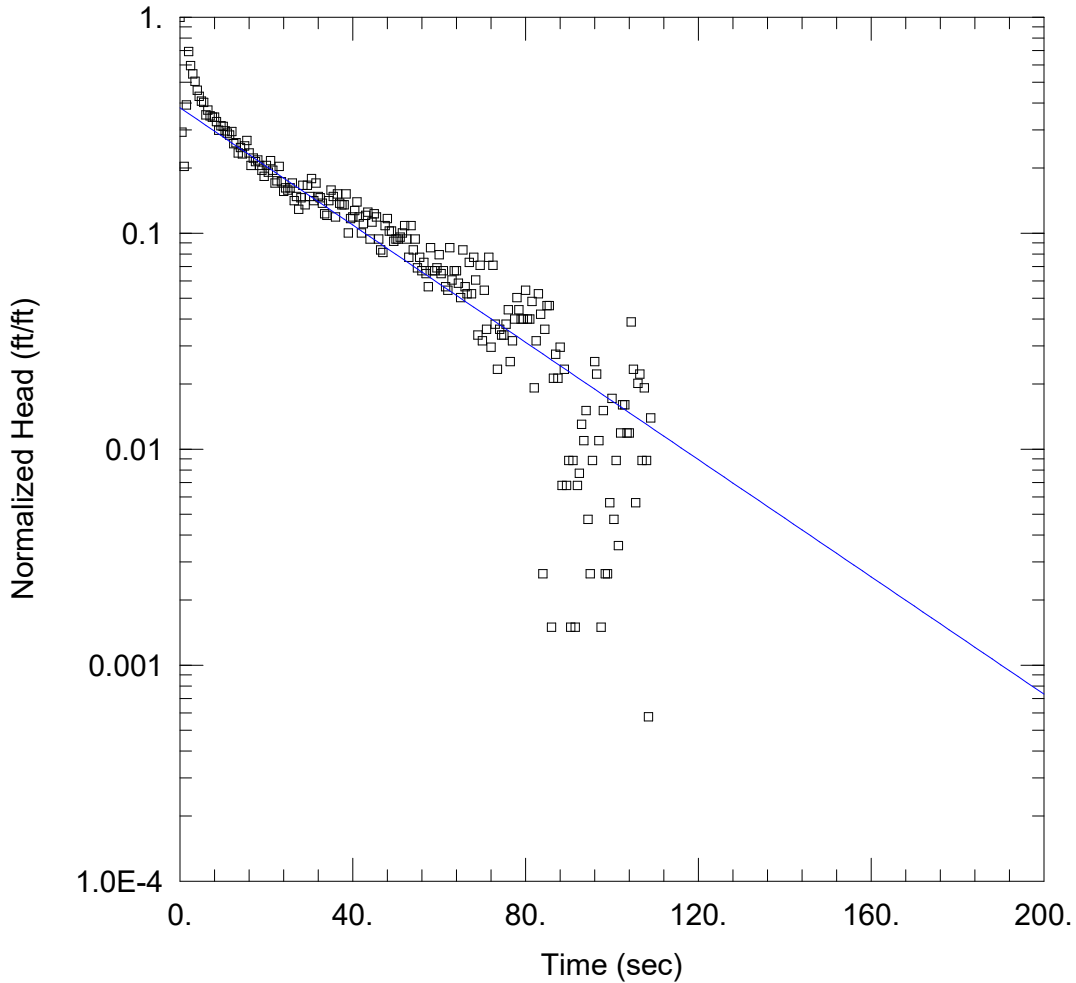
Saturated Thickness: 17.1 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (PM-1)

Initial Displacement: 0.3664 ft Static Water Column Height: 17.1 ft
 Total Well Penetration Depth: 17.1 ft Screen Length: 17.1 ft
 Casing Radius: 0.1042 ft Well Radius: 0.25 ft
 Gravel Pack Porosity: 0.2

SOLUTION

Aquifer Model: Unconfined Solution Method: Bower-Rice
 K = 0.006277 cm/sec y0 = 0.2392 ft



WELL TEST ANALYSIS

Data Set: C:\Users\inschaffer\Documents\SCC slug working\PM-1 slug out 1.aqt
 Date: 11/10/21 Time: 15:51:32

PROJECT INFORMATION

Company: Haley & Aldrich
 Client: Santee Cooper
 Project: 131539
 Location: Cross, SC
 Test Well: PM-1

AQUIFER DATA

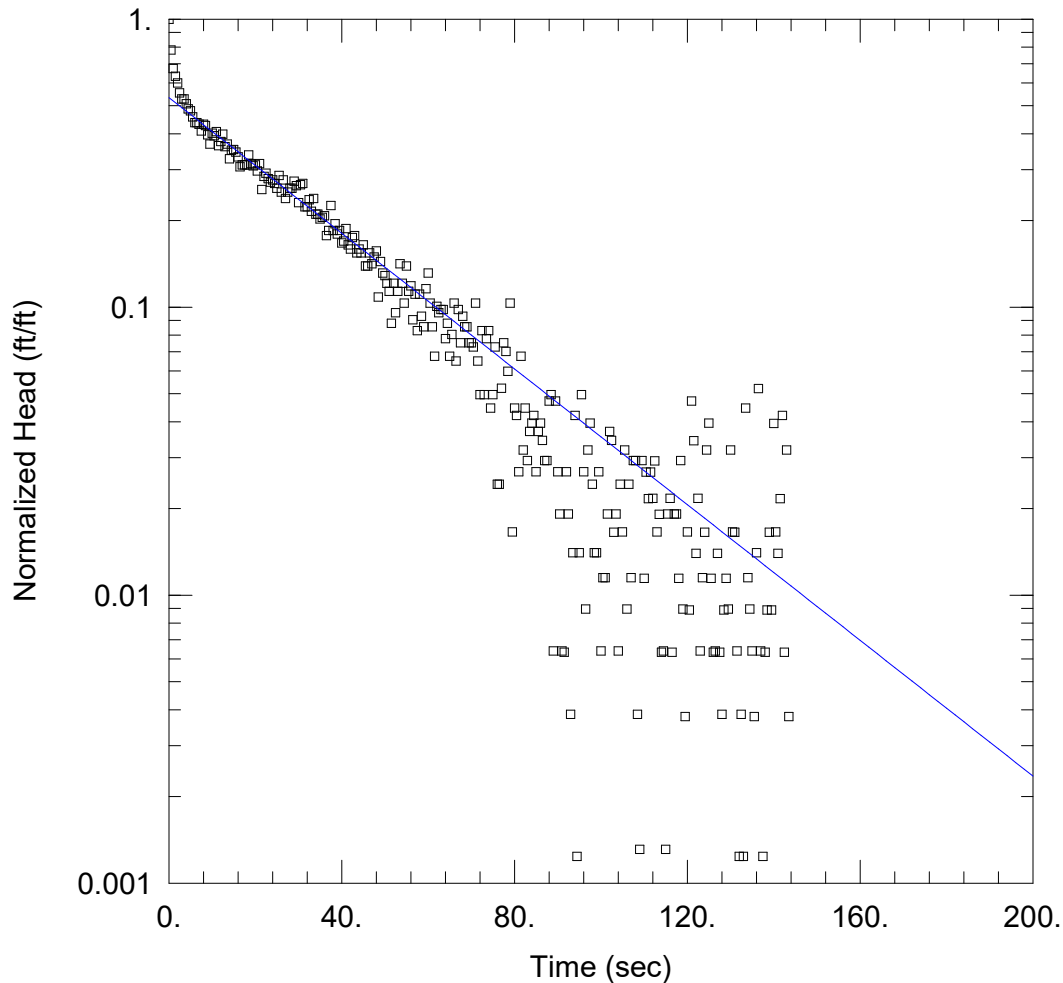
Saturated Thickness: 17.1 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (PM-1)

Initial Displacement: 0.4823 ft Static Water Column Height: 17.1 ft
 Total Well Penetration Depth: 17.1 ft Screen Length: 17.1 ft
 Casing Radius: 0.1042 ft Well Radius: 0.25 ft
 Gravel Pack Porosity: 0.2

SOLUTION

Aquifer Model: Unconfined Solution Method: Bower-Rice
 K = 0.001913 cm/sec $y_0 =$ 0.1835 ft



WELL TEST ANALYSIS

Data Set: C:\Users\inschaffer\Documents\SCC slug working\PM-1 slug out 2.aqt
 Date: 11/10/21 Time: 15:52:36

PROJECT INFORMATION

Company: Haley & Aldrich
 Client: Santee Cooper
 Project: 131539
 Location: Cross, SC
 Test Well: PM-1

AQUIFER DATA

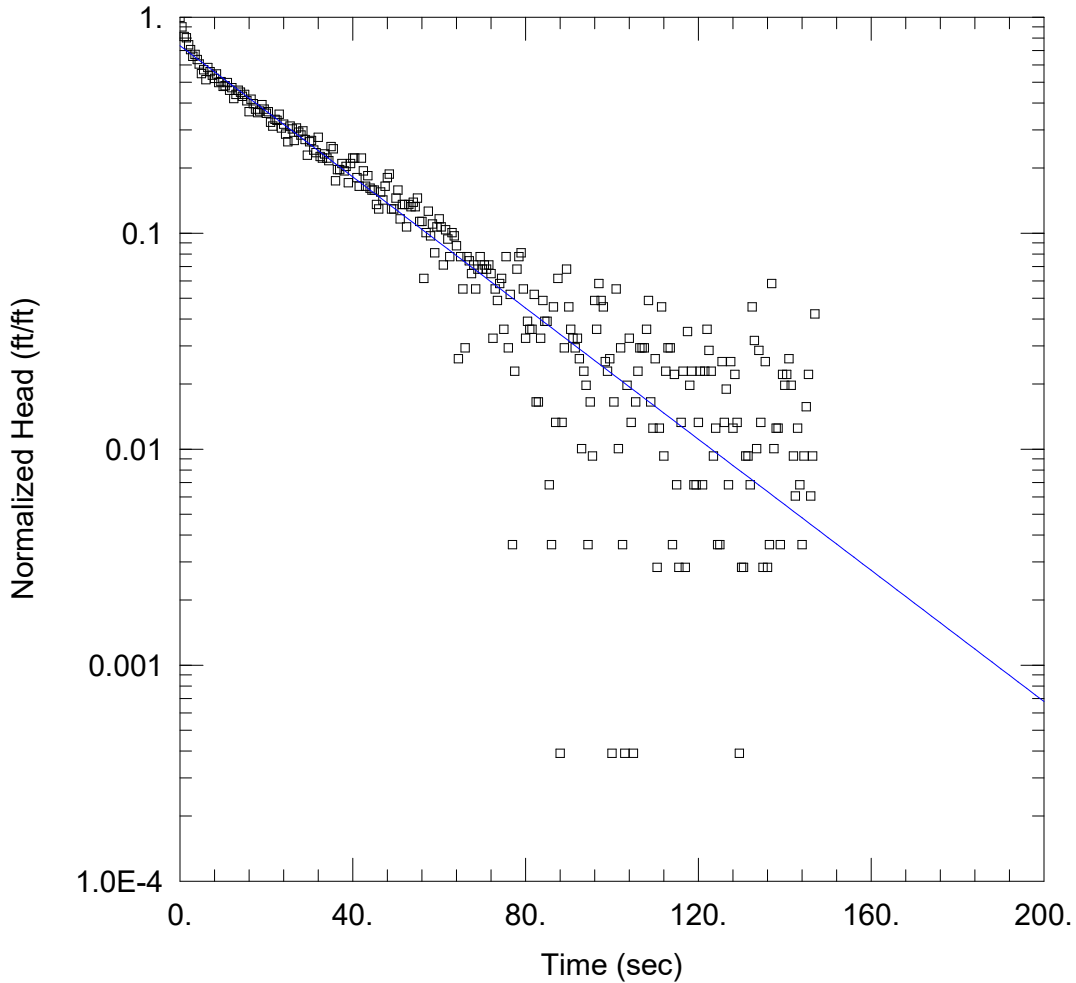
Saturated Thickness: 17.1 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (PM-1)

Initial Displacement: 0.3925 ft Static Water Column Height: 17.1 ft
 Total Well Penetration Depth: 17.1 ft Screen Length: 17.1 ft
 Casing Radius: 0.1042 ft Well Radius: 0.25 ft
 Gravel Pack Porosity: 0.2

SOLUTION

Aquifer Model: Unconfined Solution Method: Bower-Rice
 K = 0.00166 cm/sec $y_0 =$ 0.2096 ft



WELL TEST ANALYSIS

Data Set: C:\Users\inschaffer\Documents\SCC slug working\PM-1 slug out 3.aqt
 Date: 11/10/21 Time: 15:55:51

PROJECT INFORMATION

Company: Haley & Aldrich
 Client: Santee Cooper
 Project: 131539
 Location: Cross, SC
 Test Well: PM-1

AQUIFER DATA

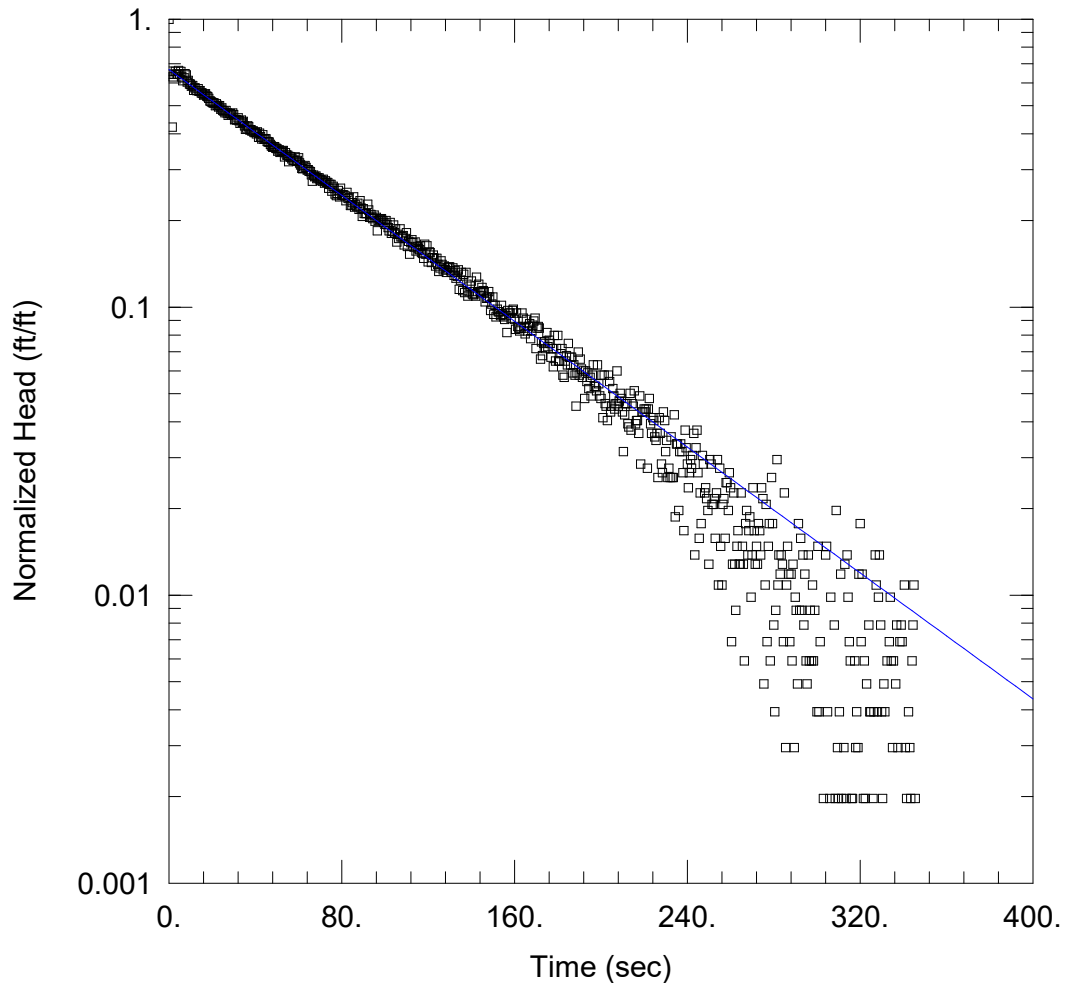
Saturated Thickness: 17.1 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (PM-1)

Initial Displacement: 0.3101 ft Static Water Column Height: 17.1 ft
 Total Well Penetration Depth: 17.1 ft Screen Length: 17.1 ft
 Casing Radius: 0.1042 ft Well Radius: 0.25 ft
 Gravel Pack Porosity: 0.2

SOLUTION

Aquifer Model: Unconfined Solution Method: Bower-Rice
 K = 0.00214 cm/sec $y_0 =$ 0.2286 ft



WELL TEST ANALYSIS

Data Set: C:\Users\inschaffer\Documents\SCC slug working\POZ-4 slug in 1.aqt
 Date: 11/10/21 Time: 15:43:54

PROJECT INFORMATION

Company: Haley & Aldrich
 Client: Santee Cooper
 Project: 131539
 Location: Cross, SC
 Test Well: POZ-4

AQUIFER DATA

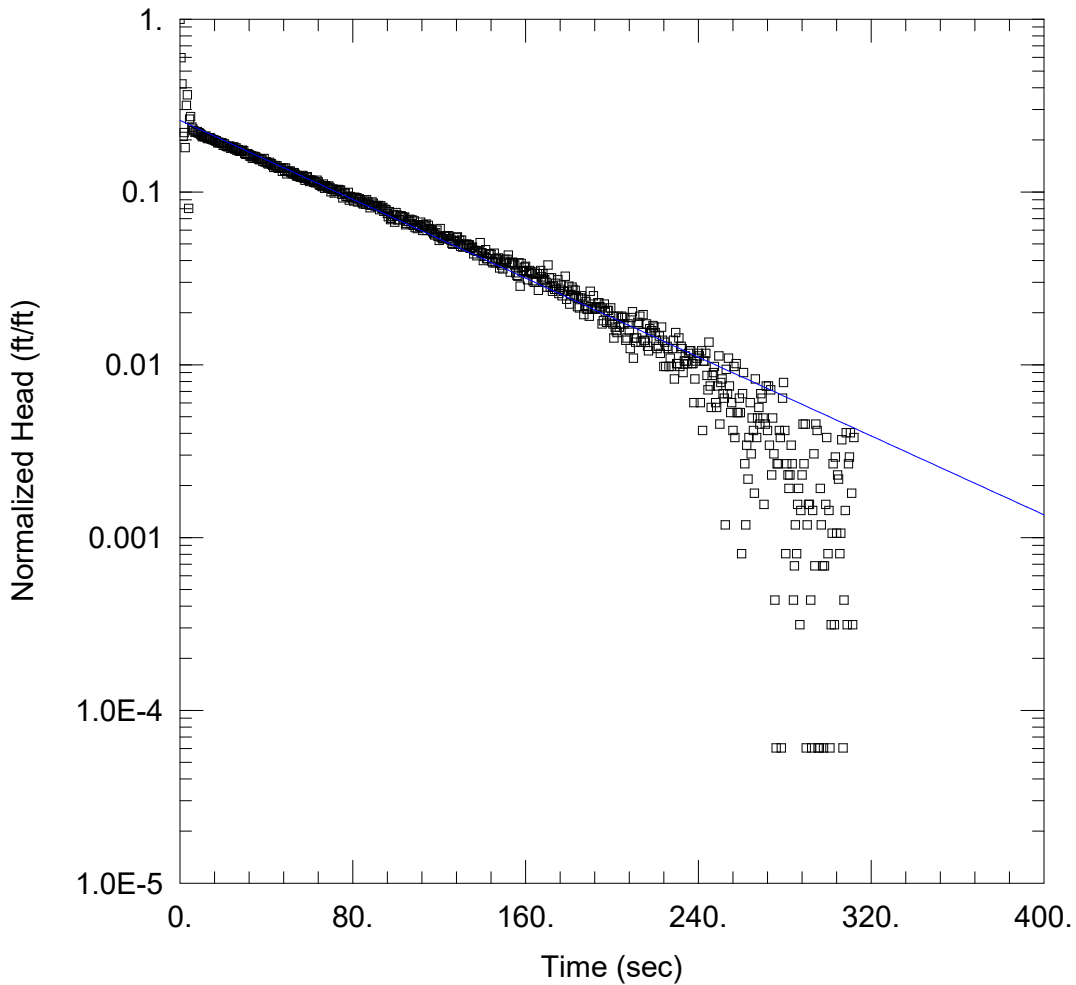
Saturated Thickness: 8.66 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (POZ-4)

Initial Displacement: 1.016 ft Static Water Column Height: 8.66 ft
 Total Well Penetration Depth: 8.66 ft Screen Length: 5. ft
 Casing Radius: 0.08333 ft Well Radius: 0.3438 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bower-Rice
 K = 0.0006012 cm/sec $y_0 =$ 0.6789 ft



WELL TEST ANALYSIS

Data Set: C:\Users\inschaffer\Documents\SCC slug working\POZ-4 slug in 2.aqt
 Date: 11/10/21 Time: 16:13:56

PROJECT INFORMATION

Company: Haley & Aldrich
 Client: Santee Cooper
 Project: 131539
 Location: Cross, SC
 Test Well: POZ-4

AQUIFER DATA

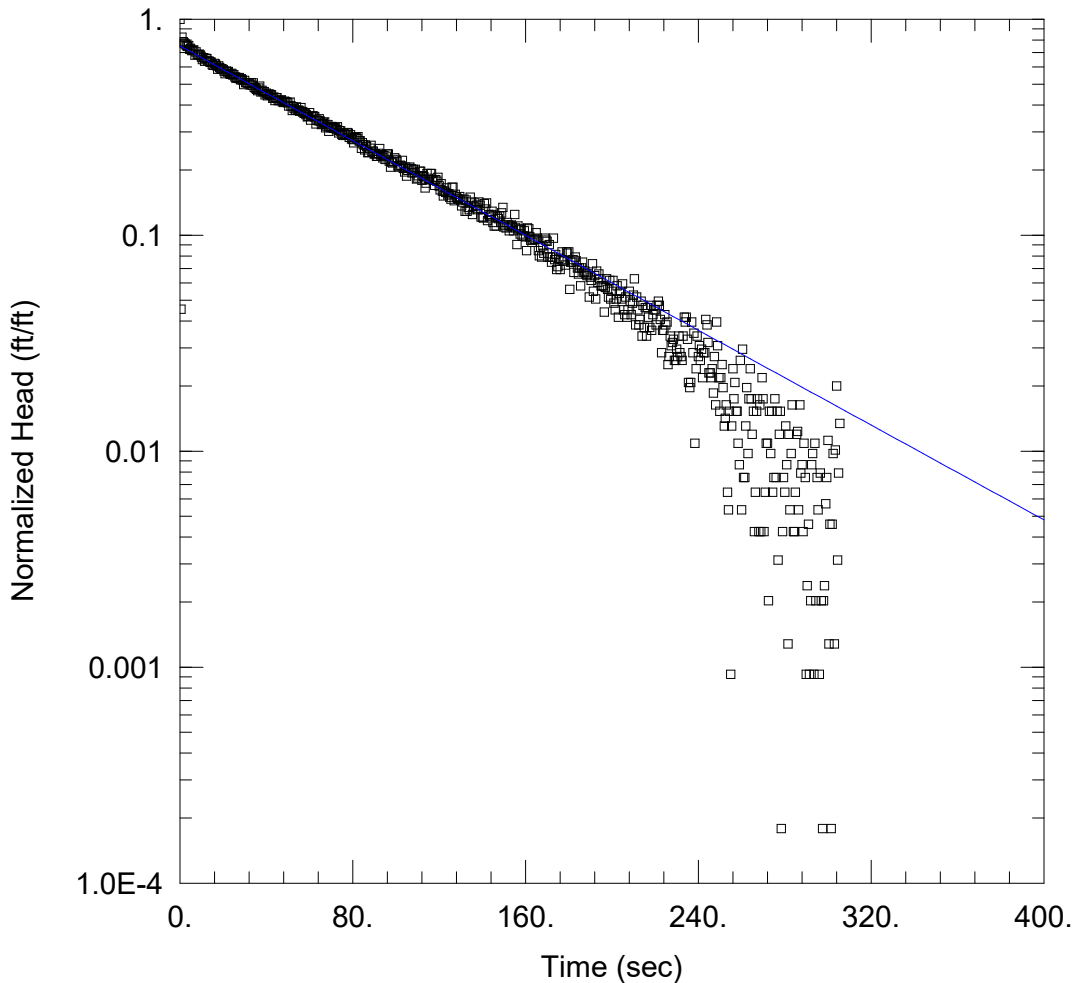
Saturated Thickness: 8.66 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (POZ-4)

Initial Displacement: 2.677 ft Static Water Column Height: 8.66 ft
 Total Well Penetration Depth: 8.66 ft Screen Length: 5. ft
 Casing Radius: 0.08333 ft Well Radius: 0.3438 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bower-Rice
 K = 0.000628 cm/sec y0 = 0.6943 ft



WELL TEST ANALYSIS

Data Set: C:\Users\inschaffer\Documents\SCC slug working\POZ-4 slug out 1.aqt
 Date: 11/10/21 Time: 16:01:28

PROJECT INFORMATION

Company: Haley & Aldrich
 Client: Santee Cooper
 Project: 131539
 Location: Cross, SC
 Test Well: POZ-4

AQUIFER DATA

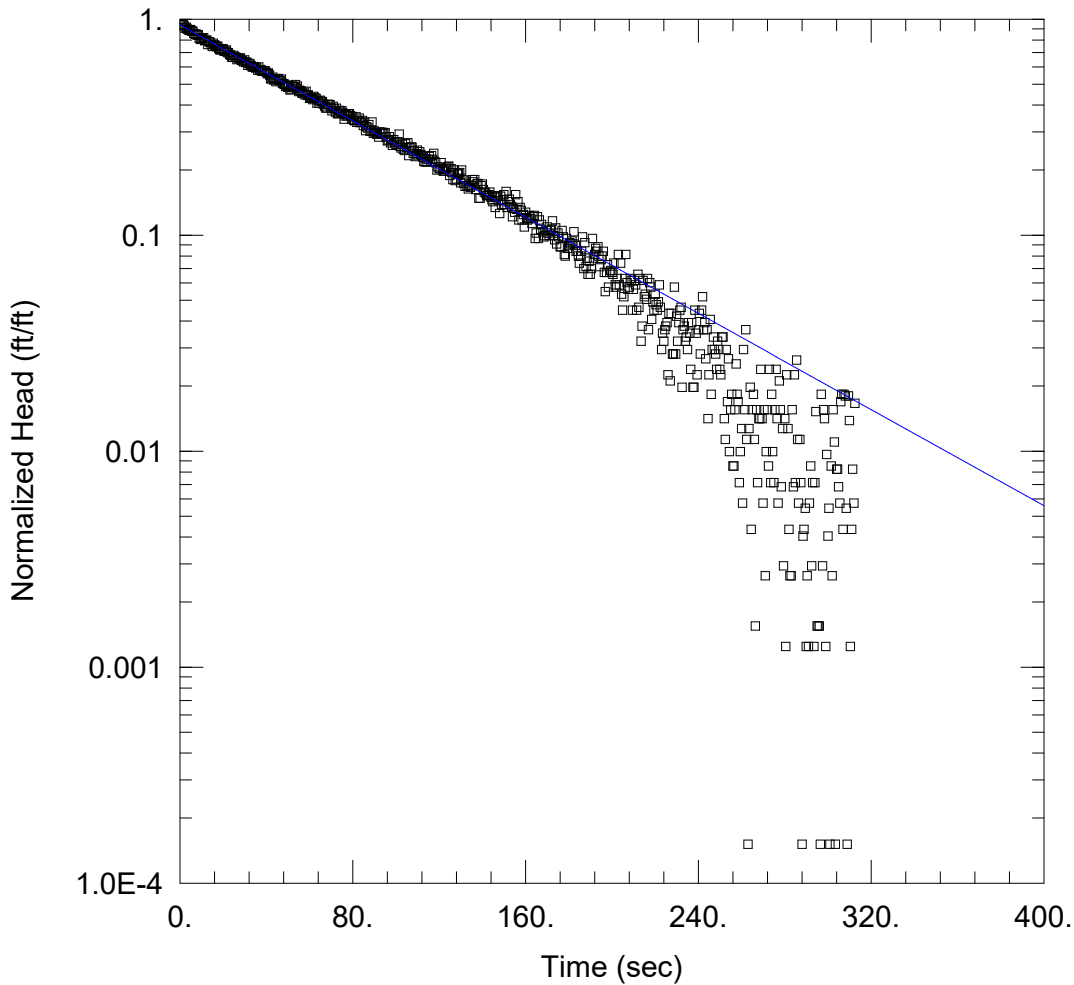
Saturated Thickness: 8.66 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (POZ-4)

Initial Displacement: 0.9062 ft Static Water Column Height: 8.66 ft
 Total Well Penetration Depth: 8.66 ft Screen Length: 5. ft
 Casing Radius: 0.08333 ft Well Radius: 0.3438 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bower-Rice
 K = 0.0006036 cm/sec y0 = 0.6804 ft



WELL TEST ANALYSIS

Data Set: C:\Users\inschaffer\Documents\SCC slug working\POZ-4 slug out 2.aqt
 Date: 11/10/21 Time: 16:32:06

PROJECT INFORMATION

Company: Haley & Aldrich
 Client: Santee Cooper
 Project: 131539
 Location: Cross, SC
 Test Well: POZ-4

AQUIFER DATA

Saturated Thickness: 8.66 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (POZ-4)

Initial Displacement: 0.7151 ft Static Water Column Height: 8.66 ft
 Total Well Penetration Depth: 8.66 ft Screen Length: 5. ft
 Casing Radius: 0.08333 ft Well Radius: 0.3438 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bower-Rice
 K = 0.0006124 cm/sec y0 = 0.6719 ft