2024 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT CLASS 2 LANDFILL CROSS GENERATING STATION

by Santee Cooper
Moncks Corner, South Carolina

January 31, 2025

Table of Contents Page

1. Annual Groundwater Monitoring Report Summary

The South Carolina Public Service Authority (Santee Cooper) has prepared this 2024 Annual Groundwater Monitoring Corrective Action Report for the Class 2 Landfill at the Cross Generating Station (CGS). This 2024 Annual Report was prepared to comply with the United States Environmental Protection Agency (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 April 17, 2015 (CCR Rule), specifically subsection § 257.90(e)(1) through (6).

The CGS Class 2 Landfill ceased operations by December 31, 2015, and closure by capping was completed by August 9, 2016, per a plan approved by the South Carolina Department of Environmental Services (SCDES), formerly the South Carolina Department of Health and Environmental Control (SCDHEC). The Class 2 Landfill was certified closed by SCDES on February 28, 2017, and is maintained in post-closure care pursuant to SCDES regulatory requirements. In addition to the federal CCR Rule groundwater monitoring program discussed throughout, an SCDES approved groundwater monitoring program is also being implemented to comply with the SCDES Post Closure Permit #08337-1601.

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

At the start of the current annual reporting period (January 1, 2024), the CGS Class 2 Landfill continued to operate under a corrective action monitoring program in accordance with § 257.98. Statistically significant levels (SSLs) of cobalt in monitoring well POZ-4 were identified for the January and June 2024 sampling events.

Previously, statistically significant increases (SSIs) of boron, calcium, chloride, sulfate, and TDS were identified in POZ-4, POZ-6 and POZ-7 during the detection monitoring events in 2017. This triggered an assessment monitoring program which was initiated on January 15, 2018. The statistical analysis of the downgradient wells for the Class 2 Landfill identified an SSL of the Appendix IV constituent cobalt in well POZ-4. As a result, an assessment of corrective measures was initiated on January 14, 2019, for this unit. The assessment of corrective measures report was completed on June 12, 2019, and a public meeting was held on December 3, 2019, to discuss five remedial alternatives per § 257.96(e). A remedy was selected pursuant to § 257.97 and the remedy selection report was completed July 27, 2020. The selected remedy was capping of the landfill later followed with water management enhancements and then followed by monitored natural attenuations (MNA). The water management enhancements were implemented in 2020 and MNA is on-going.

At the end of the current annual reporting period (December 31, 2024), the CGS Class 2 Landfill remained in the corrective action groundwater monitoring program. Monitoring of the selected remedy will continue in 2024.

To report on 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) and (c)

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.

Once a groundwater monitoring system and groundwater monitoring program has been established at the CCR unit as required by this subpart, the owner or operator must conduct groundwater monitoring and, if necessary, corrective action through the active life and post-closure care period of the CCR unit.

The capped and closed CGS Class 2 Landfill continues to be subject to the groundwater monitoring and corrective action requirements set forth by the EPA in 40 CFR § 257.90 through § 257.98. This document satisfies the requirement under § 257.90(e) which requires the CCR landfill Owner/Operator to prepare an Annual Report during the corrective action MNA and post-closure care period of the closed CGS Class 2 Landfill.

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 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 Report documents the activities completed in 2024 for the closed CGS Class 2 Landfill as required by the subject regulations. Groundwater sampling and analysis was conducted per the requirements of § 257.93, and the status of the groundwater monitoring program, as set forth in § 257.98, is provided in this report.

2.2.1 Status of the Groundwater Monitoring and Corrective Action Program

In 2024, the corrective action groundwater monitoring program continued in accordance with § 257.98. An SSL of cobalt in POZ-4 continues to be the only exceedance of an Appendix IV groundwater protection standard (GWPS) downgradient of the Class 2 Landfill. It is worth noting that while the concentrations vary between sampling events, recent concentrations detected are lower than the historical range of concentrations for cobalt in POZ-4. This observation indicates the selected groundwater remedy is performing as anticipated.

During the 2019 Assessment of Corrective Measures and Nature & Extent evaluations, analytical results from the groundwater monitoring well installed in the uppermost aquifer at the downgradient property boundary (monitoring well CCMLF-1) showed intermittent results above the GWPS for cobalt. While off-site migration had not been confirmed, Santee Cooper notified SCDES and nearby residents and/or landowners that the GWPS for cobalt in a property boundary well had been exceeded per § 257.105(h)(8). To evaluate potential for off-site migration and impacts to off-site drinking water supplies, samples were collected from both the single potable well that supplies drinking water for the surrounding closest

residences and from multiple residential taps and analyzed for cobalt. Santee Cooper has continued to monitor this property boundary well in both the uppermost shallow and deeper aquifers and the same nearby residential potable well for cobalt through 2024. To date, any detections of cobalt (as laboratories have been able to decrease their detection limits) have been significantly below the groundwater protection standard in the nearby residents' drinking water. In 2024, cobalt concentrations at all property boundary monitoring wells, including the uppermost aquifer, were below the GWPS. Communication with SCDES and the residents has been ongoing.

The remedy selection process, in accordance with § 257.97, began in 2020 following the public meeting held on December 3, 2019, to discuss the remedial alternatives. In accordance with § 257.97(a), a semi-annual progress report was posted to the publicly available website on January 23, 2020, detailing a summary of actions completed to date in selecting and designing the remedy as well as activities planned for the remainder of 2020. The remedy selection report was finalized on July 27, 2020, and posted to the publicly available website. The selected remedial alternative is landfill closure (cap in place) with enhanced water management improvements followed by monitored natural attenuation (MNA).

The landfill was closed by installing a low-permeability geomembrane liner and clay cap and cover along with surface water controls for drainage and erosion protection. The properly engineered and installed geomembrane cap virtually eliminates infiltration of water into the CCR material within the landfill. The enhanced water management improvements refer to capturing water present in the landfill at the time of closure, thereby removing as much of the source material potentially being released from the CCR unit as is feasible. The landfill closure and water management improvements were completed in August 2016 and January 2020, respectively, under the oversight of SCDES. The remaining component of the selected remedy is MNA, which is a viable remedial strategy recognized by state and federal regulators that is applicable to inorganic compounds in groundwater. MNA occurs due to naturally occurring processes within the aquifer following source control. Therefore, MNA, in combination with source control, should continue to reduce concentrations of cobalt in groundwater downgradient of the Class 2 Landfill, thereby attaining the GWPS in the future.

Further development of the corrective action groundwater monitoring program for MNA was completed in 2023 by reevaluating the existing Groundwater Monitoring Plan (GMP). This evaluation concluded that the assessment monitoring protocol currently being implemented is sufficient to meet the needs of corrective action groundwater monitoring program, which is consistent with § 257.98(a)(1)(i) and thus will continue to be implemented during the regularly scheduled semi-annual groundwater monitoring events.

2.2.2 Key Actions Completed

The following key actions were completed in 2024:

- Prepared 2023 Annual Report including:
    - The Annual Report was placed in the facility's operating record pursuant to § 257.105(h)(1);
    - Pursuant to § 257.106(h)(1), the notification was sent to the relevant State Director within 30 days of the Annual Report being placed in the facility's operating record [§ 257.106(d)];
    - Pursuant to § 257.107(h)(1), the Annual Report was posted to the CCR Website within 30 days of the Annual Report being placed in the facility's operating record [§ 257.107(d)].

- Collected and analyzed two rounds of groundwater monitoring (January and June) in accordance with § 257.95(b) and § 257.95(d)(1) and recorded the concentrations in the facility's operating record as required by § 257.95(d)(1) (which is also consistent with § 257.98 (a)(1)). Groundwater monitoring results are summarized in Table 1 and laboratory analytical results are provided in Appendix B.
- Completed statistical evaluations associated with the January 2024 and June 2024 sampling events to determine statistically significant exceedance of GWPS for Appendix IV constituents in accordance with § 257.93(h)(2). Statistical results are summarized in Appendix A.
- In late 2022, it was decided to add existing state landfill compliance well POZ-3 to the CCR compliance groundwater monitoring network. Baseline sampling commenced to gather the eight independent samples required to complete statistical evaluations. POZ-3 will be added to the compliance groundwater monitoring network and statistical evaluations after collecting the first semi-annual sample of 2025.
- Continued to characterize the nature and extent of Appendix IV constituents identified at statistically significant levels above the GWPS in accordance with § 257.95(g)(1).
- Continued to implement the semiannual Corrective Action Groundwater Monitoring Program consistent with § 257.98(a)(1):
    - Continued monitoring boundary wells for cobalt and continued to collect drinking water samples from a nearby residential potable water well. Analytical results for these wells continue to show cobalt below the groundwater protection standard.
    - Continued monitoring surface water in the Bulltown Ditch for cobalt on a semi-annual basis. Analytical results continue to show cobalt is below the groundwater protection standard.
    - During the first semi-annual sampling event, groundwater samples were analyzed for geochemical parameters, including cations and anions, which will be used for the long-term performance monitoring of the attenuation mechanisms contributing to the cobalt concentration reductions in the groundwater.
- Piezometers CGSPZ-4 and CGSPZ-5 were abandoned and replaced by a South Carolina certified well driller in January 2024. The piezometers were moved to be outside of the easement of an infrastructure construction project. The records are included in Appendix C.
- Continued with improved potentiometric surface characterization of the uppermost aquifer given changing site conditions by completing sitewide synoptic water level measurements on an approximately quarterly basis to further evaluate temporal changes.
- Continued an evaluation of the aquifer properties to support the selected remedy of monitored natural attenuation of cobalt. In November 2024, soil samples were obtained from six (6) Direct Push Technology (DPT) borings for a series of laboratory analyses. The report for this project will not be completed until 2025.
- Continued evaluation of turbidity, oxidation-reduction potential, and well screen submersion trends sitewide in wells and to identify wells to be redeveloped by a certified well driller to remove buildup of sediment fines and suspected biofouling on the well screens. A submersible camera was also used where applicable to investigate wells with unsubmerged screens prior to redevelopment. Plans to conduct redevelopment will be finalized in 2025 and reported in the 2025 Annual Report.
- The CGS Sampling and Analysis Plan was updated in August 2024 to make general revisions and improvements to reflect changes in site conditions and procedures. It will continue to be revised as necessary.

2.2.3 Problems Encountered

No problems were encountered.

2.2.4 Actions to Resolve Problems

No actions were required.

2.2.5 Project Key Activities for Upcoming Year

Key activities to be completed in 2025 include the following:

- Prepare the 2024 annual report; place it in the 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)].
- Conduct semi-annual groundwater monitoring consistent with § 257.98(a)(1) and § 257.95(d)(1) and in accordance with the CGS GMP.
- POZ-3 will be added to the compliance groundwater monitoring network in conjunction with the January 2025 sampling event.
- Update the statistical upper tolerance limits for background wells PM-1 and CBW-1 after the second semiannual sampling event of 2025 in accordance with the Unified Guidance.
- Conduct statistical analyses of semi-annual groundwater monitoring analytical results of the CCR compliance wells to determine if SSLs of the detected Appendix IV constituents are present.
- Use the existing groundwater fate and transport model as needed to compare cobalt concentrations in groundwater monitoring wells POZ-4 and POZ-6 against modeled values post-closure. Re-calibrate or enhance the model as needed to support MNA studies.
- Continue the evaluation of the aquifer properties to support the selected remedy of monitored natural attenuation of cobalt.
- Conduct additional nature and extent activities, including possible installation of additional monitoring well(s):
    - Continue monitoring the property boundary wells in the uppermost and deeper aquifers on a semi-annual basis.
    - Continue annual monitoring of the nearby residential potable water well.
    - Continue surface water monitoring of the Bulltown Ditch.
- Continue improving the potentiometric surface characterization of the uppermost aquifer given changing site conditions by expanding the number of locations for collecting surface water elevations from unlined ponds.

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 locations of the CCR unit and associated upgradient and downgradient monitoring wells for the Class 2 Landfill 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;

Although no groundwater monitoring wells were installed or decommissioned in 2024, Piezometers CGSPZ-4 and CGSPZ-5 were abandoned and replaced by a South Carolina certified well driller in January 2024. These two (2) piezometers were located inside an easement of an infrastructure construction project, so they were relocated outside the easement for safety and accessibility. The records for these wells are included in Appendix C.

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 § 257.95(b) and § 257.95(d)(1), at least two independent samples from each background and downgradient monitoring well were collected and analyzed. A summary table including the sample names, dates of sample collection, reason for sample collection, and monitoring data obtained for the groundwater monitoring program for the Class 2 Landfill is presented in Table 1 of this report. In addition, as required by § 257.95(d)(3), Table 1 includes the GWPS established under § 257.95(d)(2). Laboratory analytical data reports, along with field sampling forms, are provided in Appendix B 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 groundwater monitoring program remained in corrective action monitoring for the duration of 2024. A summary of the history of the evolution of the monitoring programs is provided in this section.

As required by § 257.93(h) a statistical analysis of the Appendix III constituents was completed on January 15, 2018. Baseline analytical data collected from background monitoring wells CBW-1 and PM-1 were combined to develop Upper Tolerance Limits (UTLs). The UTLs for each Appendix III constituent were compared to the analytical results for the downgradient monitoring wells POZ-4, POZ-6, and POZ-7. Constituents with analytical results exceeding the UTLs were identified as SSIs over background for the respective Appendix III constituent. Per § 257.94(h) an assessment monitoring program was initiated on February 14, 2018. As required by § 257.93(h)(2), the subsequent statistical evaluation of the detected Appendix IV constituents identified SSLs, specifically cobalt, above GWPS. Therefore, per §257.95(g)(3), an assessment of corrective measures and nature and extent evaluation was initiated to evaluate the horizontal and vertical nature and extent of the SSLs downgradient of the CGS Class 2 Landfill.

The statistical analysis of Appendix IV constituents was conducted within 90 days of completing each semiannual sampling and analysis event in 2024 and it was determined that an SSL of cobalt continues to be present downgradient of the Class 2 Landfill in POZ-4 only. There is no maximum contaminant level (MCL) for cobalt and elevated levels of cobalt were not identified in the background wells; therefore, the GWPS for cobalt is set at the regional screening level (RSL). The sample concentrations from the downgradient wells for each of the detected Appendix IV constituents from the monitoring events of 2024 were compared to their respective background UTLs and GWPS (Appendix A). A sample concentration greater than the GWPS is considered to represent an SSL. Based on previous compliance sampling events and statistical evaluations, interwell comparisons were utilized for all downgradient wells and constituents. During sampling events in January and June 2024, an SSL above GWPS was identified at the Class 2 Landfill in monitoring well POZ-4 for cobalt, consistent with previous results. All other wells meet the GWPS, including POZ-6, which did not meet the GWPS prior to implementation of the selected remedy. These results generally reflect the predicted cobalt groundwater fate and transport modeling results. Even though there is variability in the cobalt data, the statistical trends are all stable for the three downgradient wells, POZ-4, POZ-6, and POZ-7. The ongoing performance of the selected remedy in achieving GWPS will continue to be evaluated during subsequent semiannual monitoring events. Of note, Appendix III constituents in multiple wells continue to have analytical results that are elevated above the background wells. In addition, this Class 2 Landfill has been identified as the alternate source of elevated Appendix III constituents for the adjacent Class 3 Landfill.

Further development of the corrective action groundwater monitoring program was completed by reevaluating the existing CGS GMP in 2023. It was determined that the current assessment monitoring plan being implemented is sufficient to meet the post-closure monitoring needs to continue to evaluate the performance of the selected remedy and thus will continue to be implemented during the regularly scheduled semi-annual groundwater monitoring events. This is consistent with § 257.98(a)(1)(i).

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.

This Annual Report documents activities conducted to comply with Sections § 257.90 through § 257.98 of the CCR Rule.

Additionally, an overview of the performance of the remedy implementation to date is provided. The landfill closure and water management improvements were completed in August 2016 and January 2020, respectively, under the oversight of SCDES. The enhanced water management improvements refer to capturing water present in the landfill at the time of closure, therefore removing as much of the source material potentially being released from the CCR unit as is feasible. To account for any water draining through the toe drains, an improvement consisting of installing a seepage collection system, including discharge piping and lift stations, was implemented. The water captured from the toe drains is fully isolated from stormwater and is redirected to the operational Class 3 Landfill Leachate Collection Pond before further treatment in the station's permitted wastewater treatment facility prior to discharge under NPDES permit #SC0037401.

Since the completion of the water management improvements, the uppermost shallow aquifer boundary well (CCMLF-1) has shown marked decreases in cobalt concentrations from 17.8 µg/L to 1.3 µg/L. The sampling results from both 2024 sampling events remained below the GWPS of 6 µg/L. The adjacent deeper aquifer boundary well (CCMLF-1D) has consistently been below the GWPS since monitoring of the

property boundary began with the initial nature & extent activities in 2019. Additionally, the two other nature & extent wells that define lateral extent, CCMLF-2 and CAP-13, continue to demonstrate cobalt below the GWPS. These wells will continue to be monitored closely in 2025. The decline in cobalt concentrations observed in the shallow aquifer boundary well CCLMF-1 indicates that the cobalt plume is contracting, and that natural attenuation is being effective in reducing cobalt concentrations in groundwater.

The only remaining monitoring well with a statistically significant level of cobalt is POZ-4. This well is located on the northeastern boundary of the CCR unit. While the concentrations increased from 77.9 µg/L to 147 µg/L over the course of the 2024 sampling events, these concentrations are considerably lower than the historical range. Additionally, it is not unusual to observe a temporary spike during the summer sampling events. These seasonal fluctuations do not necessarily suggest continuing releases from the Class 2 Landfill. This well will be monitored closely during ongoing corrective action sampling activities in 2025.

Groundwater flow rate and direction are provided as Figures 2, 3, 4, and 5 for each sampling event as specified in § 257.93(c).

In 2024, average turnaround time remained approximately 60 days from sample submission to receipt of validated data.

TABLES

Table 1 - Summary of Analytical Results
Cross Generating Station Class 2 Landfill Corrective Action Monitoring 2024

Well ID	Purpose	Date of Sample Event	Laboratory Sample ID Number		Appendix III Constituents							Appendix IV Constituents																Field Parameters							
					Boron	Calcium	Chloride	Fluoride	Sulfate	Total Dissolved Solids	pH	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Fluoride	Lead	Lithium	Mercury	Molybdenum	Radium 226	Radium 228	Radium 226/228 Combined Calculation	Selenium	Thallium	Depth to Groundwater	Groundwater Elevation	pH	Specific Conductivity	Temperature	Oxidation Reduction Potential	Turbidity	Dissolved Oxygen
				Unit	ug/L	mg/L	mg/L	mg/L	mg/L	mg/L	SU	ug/L	ug/l	ug/L	ug/l	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	pCi/L	pCi/L	pCi/L	ug/L	ug/L	Feet	Feet	SU	uS	C	mv	NTU	ppm
				Method	EPA 6010D	EPA 6020B	EPA 300.0	EPA 300.0	EPA 300.0	SM 2540C		EPA 6020B	EPA 6020B	EPA 6020B	EPA 6020B	EPA 6020B	EPA 6020B	EPA 6020B	EPA 300.0	EPA 6020B	EPA 6010D	EPA 7470	EPA 6010D	EPA 903.1 Mod	EPA 904.0	EPA 903.1 Mod	EPA 6020B	EPA 6020B						SM2580		
				GW²S/ US EPA MCL/RSL	----	----	----	4.00	----	----	----	25.0	16.0	2000	4.00	5.00	100	6.00	4.00	15.0	40.0	2.00	100	----	----	16.3	50.0	2.00	----	----	----	----	----	----	----	----
	Site Background Wells																																	
PM-I	Background	1/8/24	AF87807		14.2	119	12.8	<0.10	7.62	193.8	5.13	<5.0	<5.0	77.8	<0.5	<0.5	<5.0	1.6	<0.10	<1.0	5.26	<0.2	<5.0	0.612	1.24	1.852	<10.0	<1.0	8.03	75.21	5.13	143	15.90	6.00	0	0.720
PM-I	Background	6/4/24	AG01476		12.4	10.5	12.1	<0.10	7.75	143.8	5.20	<5.0	<5.0	76.9	<0.5	<0.5	<5.0	1.4	<0.10	<1.0	<5.0	<0.2	<5.0	0.188	1.46	1.648	<10.0	<1.0	8.51	74.73	5.20	127	24.34	-35.0	0	0.260
PM-I	total samples				2	2	2	2	2	2	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
CBW-1	Background	1/8/24	AF87768		19.3	25.0	3.48	0.14	83.6	188.8	4.44	<5.0	<5.0	41.3	<0.5	<0.5	<5.0	0.87	0.14	2.4	<5.0	<0.2	<5.0	0.278	1.22	1.498	<10.0	<1.0	8.89	76.91	4.44	250	15.14	354	0	0.750
CBW-1	Background	6/4/24	AG01438		19.6	24.7	3.22	0.13	89.6	170.0	4.54	<5.0	<5.0	37.4	<0.5	<0.5	<5.0	0.84	0.13	2.1	<5.0	<0.2	<5.0	0.0311	2.79	2.8211	<10.0	<1.0	10.41	75.39	4.54	264	20.26	202	0	1.28
CBW-1	total samples				2	2	2	2	2	2	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Class 2 Landfill Wells																																	
POZ-3	Baseline	1/23/24	AF87808		12.4	180	9.42	<0.10	74.2	588.8	6.47	<5.0	<5.0	94.0	<0.5	<0.5	<5.0	0.89	<0.10	<1.0	***	***	***	0.309	2.73	3.039	<10.0	<1.0	4.58	78.03	6.47	987	15.41	90.0	0	1.09
POZ-3	Baseline	3/5/24	AF93803		12.0	179	9.09	0.12	83.9	598.8	6.47	<5.0	<5.0	97.5	<0.5	<0.5	<5.0	0.98	0.12	<1.0	<5.0	<0.2	<5.0	***	***	***	<10.0	<1.0	4.05	78.56	6.47	1010	17.01	35.0	0.100	1.19
POZ-3	Duplicate	3/5/24	AF93804		12.4	180	8.53	0.12	84.0	620.0	***	<5.0	<5.0	95.3	<0.5	<0.5	<5.0	1.1	0.12	<1.0	<5.0	<0.2	<5.0	***	***	***	<10.0	<1.0	***	***	***	***	***	***	***	***
POZ-3	Baseline	6/4/24	AG01477		13.5	176	8.41	0.10	68.7	616.2	6.60	<5.0	<5.0	105	<0.5	<0.5	<5.0	2.5	0.10	<1.0	<5.0	<0.2	<5.0	0.571	1.89	2.461	<10.0	<1.0	7.85	74.76	6.60	1030	31.38	19.0	0	0.740
POZ-3	total samples				4	4	4	4	4	4	3	4	4	4	4	4	4	4	4	4	3	3	3	2	2	2	4	4	3	3	3	3	3	3	3	3
POZ-4	Corrective Action	1/23/24	AF87809		26.9	320	6.20	<0.10	5.32	1552	6.24	<5.0	<5.0	155	<0.5	<0.5	<5.0	77.9	<0.10	<1.0	14.5	<0.2	<5.0	0.403	1.99	2.393	<10.0	<1.0	4.72	78.01	6.24	1900	17.07	2.00	0	0.400
POZ-4	Corrective Action	6/5/24	AG01478		35.0	396	623	<0.10	186	2300	6.25	<5.0	<5.0	92.2	<0.5	<0.5	<5.0	147	<0.10	<1.0	24.6	<0.2	<5.0	1.28	1.42	2.70	<10.0	<1.0	8.50	74.23	6.25	2290	27.49	28.0	0	0.290
POZ-4	total samples				2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
POZ-6	Corrective Action	1/23/24	AF87811		38.6	431	323	<0.10	494	1872	6.55	<5.0	<5.0	83.4	<0.5	<0.5	<5.0	1.6	<0.10	<1.0	9.42	<0.2	<5.0	1.05	-0.619	1.05	<10.0	<1.0	5.59	78.25	6.55	2320	18.79	-61.0	0	1.06
POZ-6	Corrective Action	6/4/24	AG01480		38.4	472	357	<0.10	551	2220	6.19	<5.0	<5.0	81.4	<0.5	<0.5	<5.0	3.2	<0.10	<1.0	12.0	<0.2	<5.0	1.28	1.36	2.64	<10.0	<1.0	9.93	73.91	6.19	2280	26.81	-32.0	0	0.220
POZ-6	total samples				2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
POZ-7	Corrective Action	1/24/24	AF87812		<10.0	8.9	21.0	<0.10	<2.0	105.0	5.15	<5.0	<5.0	94.9	0.58	<0.5	<5.0	1.2	<0.10	<1.0	<5.0	<0.2	<5.0	0.508	0.581	1.089	<10.0	<1.0	4.36	77.66	5.15	94.0	19.54	94.0	0	4.53
POZ-7	Duplicate	1/24/24	AF87813		10.2	8.2	20.4	<0.10	<2.0	68.75	***	<5.0	<5.0	90.9	0.62	<0.5	<5.0	1.3	<0.10	<1.0	<5.0	<0.2	<5.0	0.981	2.96	3.941	<10.0	<1.0	***	***	***	***	***	***	***	***
POZ-7	Corrective Action	6/5/24	AG01481		13.9	72.4	79.5	<0.10	5.93	410.0	6.13	<5.0	<5.0	249	<0.5	<0.5	<5.0	<0.5	<0.10	<1.0	8.3	<0.2	<5.0	0.380	3.30	3.68	<10.0	<1.0	7.51	74.51	6.13	478	20.09	183	0	1.53
POZ-7	Duplicate	6/5/24	AG01482		13.8	74.3	79.7	<0.10	5.93	382.5	***	<5.0	<5.0	255	<0.5	<0.5	<5.0	<0.5	<0.10	<1.0	8.2	<0.2	<5.0	0.389	1.14	1.529	<10.0	<1.0	***	***	***	***	***	***	***	***
POZ-7	total samples				4	4	4	4	4	4	2	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	2	2	2	2	2	2	2	2
POZ-8	CMA/NE	1/25/24	AF87814		48.4	1030	2010	<0.10	180	4562	6.37	<5.0	<5.0	796	<0.5	<0.5	<5.0	<0.5	<0.10	<1.0	307	<0.2	<5.0	1.08	0.712	1.792	<10.0	<1.0	5.08	78.05	6.37	6300	18.34	-32.0	1.70	1.00
POZ-8	Resample	5/7/2024	AF98794		***	***	***	***	***	***	***	***	***	***	***	***	***	**	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
POZ-8	CMA/NE	6/5/24	AG01483		28.6	624	1140	<0.10	74.6	2759	6.66	<5.0	<5.0	419	<0.5	<0.5	<5.0	0.57	<0.10	<1.0	129	<0.2	<5.0	0.0534	1.21	1.2634	<10.0	<1.0	9.25	73.88	6.66	2440	24.63	-55.0	0	0.440
POZ-8	total samples				2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
CCNLF-1	CMA/NE	1/24/24	AF87789		24.0	13.3	9.82	<0.10	15.6	65.00	5.53	<5.0	<5.0	79.7	<0.5	<0.5	<5.0	2.1	<0.10	<1.0	<5.0	<0.2	<5.0	0.793	0.349	1.142	<10.0	<1.0	3.61	77.25	5.53	125	17.61	119	0	1.36
CCNLF-1	CMA/NE	6/13/24	AG01459		16.7	23.6	7.26	<0.10	6.57	113.8	5.37	<5.0	5	65.6	<0.5	<0.5	<5.0	1.3	<0.10	<1.0	<5.0	<0.2	<5.0	0.523	1.63	2.15	<10.0	<1.0	7.80	73.06	5.37	156	20.94	114	0	0.400
CCNLF-1	total samples				2	2	2	2	2	2	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
CCNLF-1D	CMA/NE	1/24/24	AF87790		15.6	55.0	6.16	<0.10	3.99	167.5	7.23	<5.0	<5.0	37.4	<0.5	<0.5	<5.0	0.64	<0.10	<1.0	<5.0	<0.2	<5.0	0.631	0.998	1.629	<10.0	<1.0	3.41	77.24	7.23	305	17.94	-58.0	0	1.32
CCNLF-1D	CMA/NE	6/13/24	AG01460		15.6	53.2	6.14	<0.10	3.41	256.2	6.62	5.4	<5.0	41.4	<0.5	<0.5	<5.0	0.82	<0.10	<1.0	<5.0	<0.2	<5.0	0.391	2.15	2.54	<10.0	<1.0	7.58	73.07	6.62	297	21.01	-80.0	0	6.47
CCNLF-1D	total samples				2	2	2	2	2	2	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
CCNLF-2	CMA/NE	1/24/24	AF87791		17.0	3.0	3.26	<0.10	2.19	28.75	5.09	<5.0	<5.0	21.3	<0.5	<0.5	<5.0	0.61	<0.10	<1.0	<5.0	<0.2	<5.0	0.369	0.905	1.274	<10.0	<1.0	7.03	77.05	5.09	47.0	17.68	60.0	0.200	2.19
CCNLF-2	CMA/NE	6/17/24	AG01461		15.6	10.4	4.96	<0.10	<2.0	73.75	5.31	<5.0	<5.0	28.6	<0.5	<0.5	<5.0	0.56	<0.10	<1.0	<5.0	<0.2	<5.0	0.319	-1.14	-0.821	<10.0	<1.0	12.56	71.52	5.31	77.0	22.22	160	0	1.62
CCNLF-2	total samples				2	2	2	2	2	2	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
CAF-13	CMA/NE	1/17/24	AF87766		15.2	42.1	4.03	<0.10	84.8	341.2	5.35	<5.0	<5.0	169	<0.5	<0.5	<5.0	0.65	<0.10	<1.0	<5.0	<0.2	<5.0	0.769	1.84	2.609	<10.0	<1.0	4.36	76.41	5.35	327	13.32	80.0	47.6	0.370
CAF-13	CMA/NE	6/11/24	AG01436		18.8	29.7	5.05	<0.10	58.0	195.0	4.98	<5.0	<5.0	123	<0.5	<0.5	<5.0	0.61	<0.10	<1.0	<5.0	<0.2	<5.0	0.392	1.37	1.762	<10.0	<1.0	8.05	72.72	4.98	260	26.53	81.0	20.4	0.260
CAF-13	total samples				2	2	2	2	2	2	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2

Notes:
1. All groundwater samples collected from the monitoring wells for Assessment & Corrective Action Monitoring in 2024 for the constituents listed in Appendix III of the EPA CCR Rule (40 CFR) were analyzed by South Carolina Certified laboratories: Santee Cooper Analytical Services (Certification # 08552), GEL Laboratories, LLC (Certification # 10120), Test America Laboratories Inc. Savannah (Certification # 98001), Rogers & Callcot, Inc. (Certification # 23105001), Davis & Brown (Certification # 21117), and Shealy Environmental Services, Inc (Certification # 32010).
2. All Background, Corrective Measures Assessment (CMA) / Nature & Extent (NE), & Corrective Action comliance wells have been sampled to meet § 257.95 and § 257.98(a)(1).
3. Due to challenges with laboratory delays, all groundwater samples were not analyzed by a single laboratory. This accounts for the majority of the reporting limit variability. Matrix interference also contributed to variable RLs.
4. Depth to groundwater is measured below the top of the casing (btoc) to the water surface. Elevation is shown relative to mean sea level (msl).
5. *** means not collected. Mainly pertinant for duplicate samples.

Table 2
Cross Generating Station
2024 Synoptic Water Levels for Groundwater Monitoring Wells

		1st Event - 1/3/2024		2nd Event - 4/9/2024		3rd Event - 6/3/2024		4th Event - 11/6/2024	
Well Name	Top of Casing Elevation (ft msl)	Depth to Groundwater (ft btoc)	GW Elevation (ft msl)	Depth to Groundwater (ft btoc)	GW Elevation (ft msl)	Depth to Groundwater (ft btoc)	GW Elevation (ft msl)	Depth to Groundwater (ft btoc)	GW Elevation (ft msl)
PM-1	83.24	7.75	75.49	8.14	83.24	8.50	74.74	9.13	74.11
CBW-1	85.80	8.50	77.30	9.12	85.80	10.41	75.39	11.47	74.33
CAP-1	82.70	8.50	74.20	6.61	82.70	7.66	75.04	8.40	74.30
CAP-2	89.70	15.10	74.60	15.91	89.70	16.98	72.72	17.69	72.01
CAP-3	91.49	14.70	76.79	15.47	91.49	16.54	74.95	17.34	74.15
CAP-4	91.77	15.05	76.72	15.77	91.77	16.97	74.80	17.81	73.96
CAP-5	91.78	14.60	77.18	15.26	91.78	17.66	74.12	18.67	73.11
CAP-6	91.82	14.65	77.17	15.89	91.82	18.05	73.77	18.94	72.88
CAP-7	91.64	14.75	76.89	15.19	91.64	17.57	74.07	18.52	73.12
CAP-8	91.61	15.95	75.66	16.67	91.61	18.30	73.31	18.98	72.63
CAP-9	91.59	14.35	77.24	14.62	91.59	17.82	73.77	18.73	72.86
CAP-10	95.68	20.25	75.43	21.12	95.68	22.40	73.28	13.11	82.57
CAP-11	95.55	19.20	76.35	18.72	95.55	20.71	74.84	21.31	74.24
CAP-12	98.33	22.25	76.08	23.72	98.33	24.13	74.20	24.73	73.60
CAP-13	80.77	4.35	76.42	4.83	80.77	7.65	73.12	8.76	72.01
CAP-14	80.77	4.15	76.62	4.78	80.77	7.77	73.00	8.93	71.84
CCMLF-1	80.86	3.45	77.41	4.00	80.86	7.11	73.75	7.95	72.91
CCMLF-1D	80.65	3.20	77.45	3.74	80.65	6.89	73.76	7.74	72.91
CCMLF-2	84.08	6.75	77.33	7.43	84.08	11.53	72.55	12.74	71.34
POZ-3	82.61	4.30	78.31	4.98	82.61	7.80	74.81	8.98	73.63
POZ-4	82.73	3.95	78.78	5.07	82.73	8.34	74.39	9.35	73.38
POZ-5D	82.49	4.15	78.34	5.21	82.49	8.56	73.93	9.57	72.92
POZ-6	83.84	5.80	78.04	6.44	83.84	9.86	73.98	10.93	72.91
POZ-7	82.02	3.95	78.07	4.77	82.02	7.44	74.58	8.29	73.73
POZ-8	83.13	4.80	78.33	5.84	83.13	9.12	74.01	10.15	72.98
CLF1B-1	83.76	6.00	77.76	6.66	83.76	8.70	75.06	9.68	74.08
CLF1B-2	82.04	4.35	77.69	5.05	82.04	7.18	74.86	8.19	73.85
CLF1B-3	82.75	3.95	78.80	5.82	82.75	8.18	74.57	9.18	73.57
CLF1B-4	82.74	3.85	78.89	5.80	82.74	8.55	74.19	9.59	73.15
CLF1B-5	81.09	3.40	77.69	4.23	81.09	7.32	73.77	8.31	72.78
CLF1B-5D	80.93	3.85	77.08	4.55	80.93	7.72	73.21	8.82	72.11
CCMAP-1	80.21	4.50	75.71	5.10	80.21	7.61	72.60	8.45	71.76
CCMAP-2	81.24	6.50	74.74	7.14	81.24	8.02	73.22	8.55	72.69
CCMAP-3	81.91	6.15	75.76	6.92	81.91	8.58	73.33	8.95	72.96
CCMAP-4	81.83	4.45	77.38	5.19	81.83	7.64	74.19	8.60	73.23
CCMAP-5	83.71	6.15	77.56	6.93	83.71	9.33	74.38	10.29	73.42
CCMAP-6	84.41	7.90	76.51	8.45	84.41	11.61	72.80	12.57	71.84
CCMAP-7	81.57	7.05	74.52	7.59	81.57	8.21	73.36	8.93	72.64
CCMAP-8	82.89	6.40	76.49	6.99	82.89	9.80	73.09	10.72	72.17
CCMAP-9	82.51	6.00	76.51	6.62	82.51	9.75	72.76	10.80	71.71
CCMAP-10	81.80	5.55	76.25	6.08	81.80	9.10	72.70	10.01	71.79
CCMAP-11	80.29	4.00	76.29	5.01	80.29	8.11	72.18	9.10	71.19
CCMAP-12	80.58	4.75	75.83	5.71	80.58	7.42	73.16	8.00	72.58
CCMAP-13	80.11	4.55	75.56	5.36	80.11	6.93	73.18	7.60	72.51
CCMAP-14	78.64	4.40	74.24	4.71	78.64	5.43	73.21	6.04	72.60
CGYP-1	91.89	15.95	75.94	19.69	91.89	17.56	74.33	17.98	73.91
CGYP-2	84.88	8.50	76.38	13.20	84.88	10.56	74.32	11.01	73.87
CGYP-3	83.95	6.95	77.00	9.41	83.95	9.37	74.58	9.84	74.11
CGYP-4	83.49	6.65	76.84	8.27	83.49	8.20	75.29	8.60	74.89
CGYP-5	84.12	7.90	76.22	9.09	84.12	8.14	75.98	8.35	75.77
CGYP-6	83.93	7.15	76.08	-	-	9.46	74.47	9.91	74.02
CGYP-7	85.37	9.20	76.17	13.10	85.37	10.97	74.40	11.42	73.95
CGSPZ-1	83.31	7.45	75.86	8.64	83.31	8.61	74.70	9.22	74.09
CGSPZ-2	82.56	6.70	75.86	9.38	82.56	8.29	74.27	8.55	74.01
CGSPZ-3	82.85	4.75	78.10	6.19	82.85	9.91	72.94	10.51	72.34
CGSPZ-4	81.28	3.80	77.48	4.82	81.28	7.68	73.60	8.73	72.55
CGSPZ-5	80.56	2.75	77.81	5.39	80.56	8.27	72.29	9.62	70.94
CCMGP-1	84.30	8.15	76.15	13.43	84.30	10.07	74.23	10.53	73.77
CCMGP-2	96.73	20.05	76.68	24.20	96.73	22.54	74.19	22.97	73.76
CCMGP-3	84.44	8.45	75.99	12.38	84.44	10.54	73.90	10.97	73.47
CCMGP-4	84.82	8.50	76.32	12.78	84.82	10.31	74.51	10.79	74.03
CCMGP-5	79.91	4.70	75.21	6.06	79.91	6.56	73.35	7.08	72.83
CGS-PSE-1	-	-	75.07	-	75.27	-	74.97	-	74.80
CGS-PSE-2	-	-	81.99	-	80.27	-	79.30	-	76.85
CGS-PSE-3	-	-	79.52	-	76.88	-	76.49	-	76.52
CGS-PSE-4	-	-	76.37	-	75.64	-	74.88	-	75.43
CGS-PSE-5	-	-	78.50	-	77.28	-	76.57	-	76.49
CGS-PSE-6	-	-	74.71	-	74.58	-	74.46	-	74.21
CGS-PSE-7	-	-	83.35	-	85.75	-	85.30	-	86.29
CGYPSW-1-WSE	-	-	75.13	-	75.16	-	74.88	-	74.93
CGYPSW-2-WSE	-	-	75.15	-	75.18	-	75.02	-	75.01
CGYPSW-3-WSE	-	-	75.49	-	75.37	-	75.45	-	75.26
CGYPSW-4-WSE	-	-	75.83	-	75.69	-	75.76	-	75.75
CGYPSW-6-WSE	-	-	75.12	-	75.17	-	74.85	-	74.70
CGYPSW-7-WSE	-	-	75.15	-	75.20	-	74.83	-	74.76
CGYPSW-8-WSE	-	-	75.14	-	75.23	-	74.86	-	74.79
GMPSW-WET-1SWE	-	-	75.98	-	75.81	-	74.35	-	74.24
GMPSW-WET-2SWE	-	-	75.55	-	75.34	-	74.49	-	74.50
GMPSW-CPD-1SWE	-	-	78.47	-	77.62	-	77.38	-	77.74
STAFF GAUGE	-	-	76.80	-	76.45	-	-	-	-
STAFF GAUGE	-	-	76.63	-	76.48	-	-	-	-

Notes:

1. Additional groundwater monitoring wells used for development of potentiometric maps. These wells monitor groundwater constituent concentrations under the SCDES NPDES Permit #SC0037401 and are not used for CCR constituent concentrations.

2. Depth to Groundwater is measured below the top of casing (btoc) to the water surface. The Top of Casing Elevation and GW Elevation are shown relative to the mean sea level (msl).

3. Pond surface elevations (PSE) and staff gauge elevations were collected to aid in the potentiometric surface interpretation elevation.

FIGURES

LEGEND

- CGS LANDFILL PIEZOMETERS
- BACKGROUND WELL
- CLASS 2 LANDFILL MONITORING WELL
- CLASS 2 LANDFILL PROPERTY BOUNDARY WELL
- CLASS 2 LANDFILL NATURE & EXTENT WELL
- BULLTOWN DITCH SURFACE WATER SAMPLE
- CCR UNIT BOUNDARY
- CROSS GENERATING STATION PROPERTY BOUNDARY
- SANTEE COOPER PROPERTY BOUNDARY
- POND WATER SURFACE ELEVATION MEASUREMENT LOCATION

NOTES:

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. AERIAL IMAGERY SOURCE: ESRI

N

0 1,000 2,000
SCALE IN FEET

SANTEE COOPER
CROSS GENERATING STATION
PINEVILLE, SOUTH CAROLINA

LOCATION OF CLASS 2 LANDFILL GROUNDWATER MONITORING WELLS FOR CCR COMPLIANCE

JANUARY 2024

FIGURE 1

GIS FILE PATH: I:\97130\Groundwater\GIS Groundwater\mxd map files\CGS_CCR_WELL_LOCATIONS.mxd — USER: ALDECOTE — LAST SAVED: 10/24/2023 11:26:02 AM

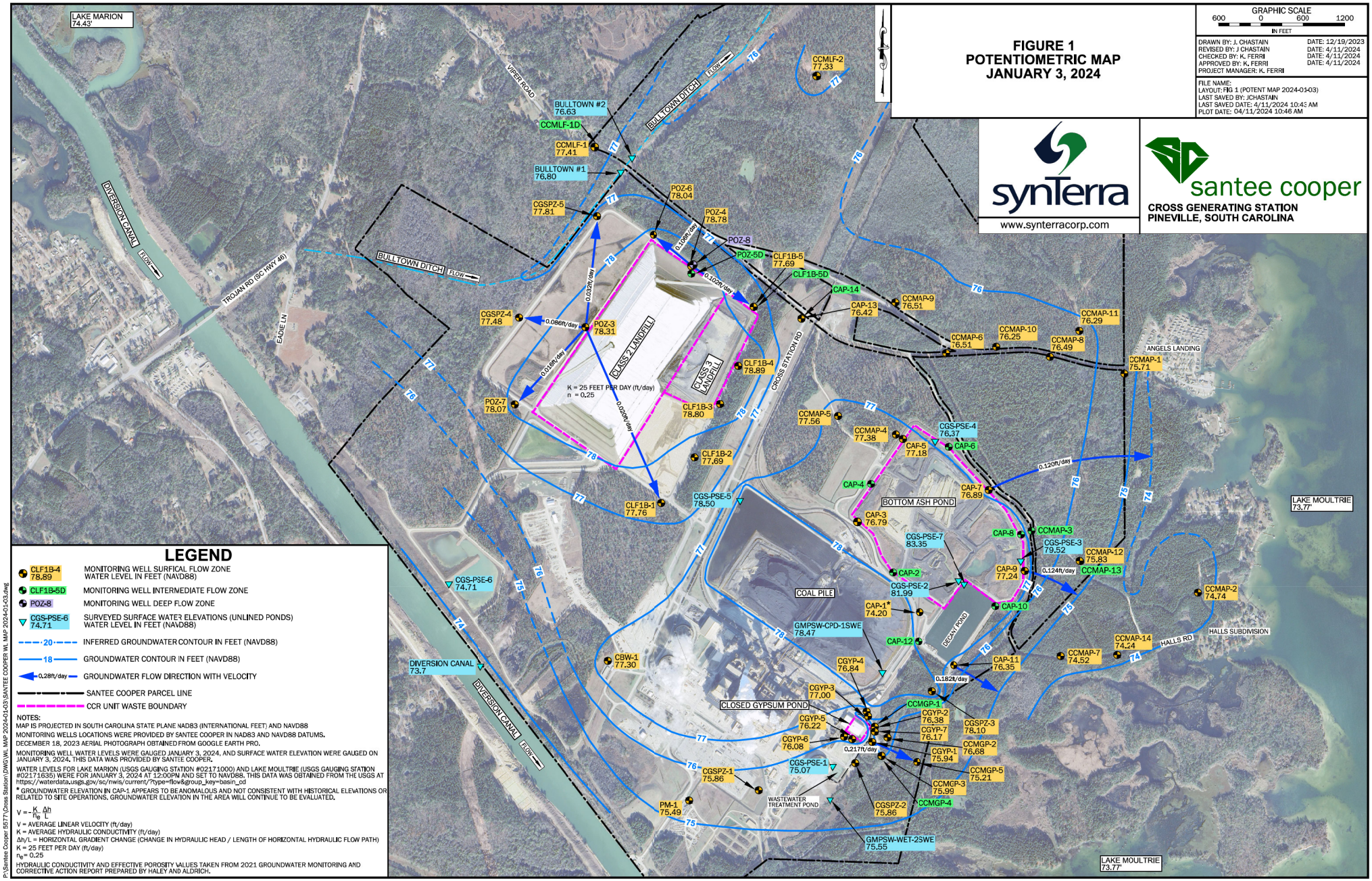


FIGURE 1
POTENTIOMETRIC MAP
JANUARY 3, 2024

GRAPHIC SCALE
600 0 600 1200
IN FEET

DRAWN BY: J. CHASTAIN	DATE: 12/19/2023
REVISED BY: J CHASTAIN	DATE: 4/11/2024
CHECKED BY: K. FERRI	DATE: 4/11/2024
APPROVED BY: K. FERRI	DATE: 4/11/2024
PROJECT MANAGER: K. FERRI	

FILE NAME:
LAYOUT: FIG 1 (POTENT MAP 2024-01-03)
LAST SAVED BY: JCHASTAIN
LAST SAVED DATE: 4/11/2024 10:45 AM
PLOT DATE: 04/11/2024 10:46 AM

synTerra
www.synterracorp.com

santee cooper
CROSS GENERATING STATION
PINEVILLE, SOUTH CAROLINA

LEGEND

- CLF1B-4 78.89 — MONITORING WELL SURFICAL FLOW ZONE WATER LEVEL IN FEET (NAVD88)
- CLF1B-5D — MONITORING WELL INTERMEDIATE FLOW ZONE
- POZ-8 — MONITORING WELL DEEP FLOW ZONE
- CGS-PSE-6 74.71 — SURVEYED SURFACE WATER ELEVATIONS (UNLINED PONDS) WATER LEVEL IN FEET (NAVD88)
- 20 — INFERRED GROUNDWATER CONTOUR IN FEET (NAVD88)
- 18 — GROUNDWATER CONTOUR IN FEET (NAVD88)
- 0.28ft/day — GROUNDWATER FLOW DIRECTION WITH VELOCITY
- SANTEE COOPER PARCEL LINE
- CCR UNIT WASTE BOUNDARY

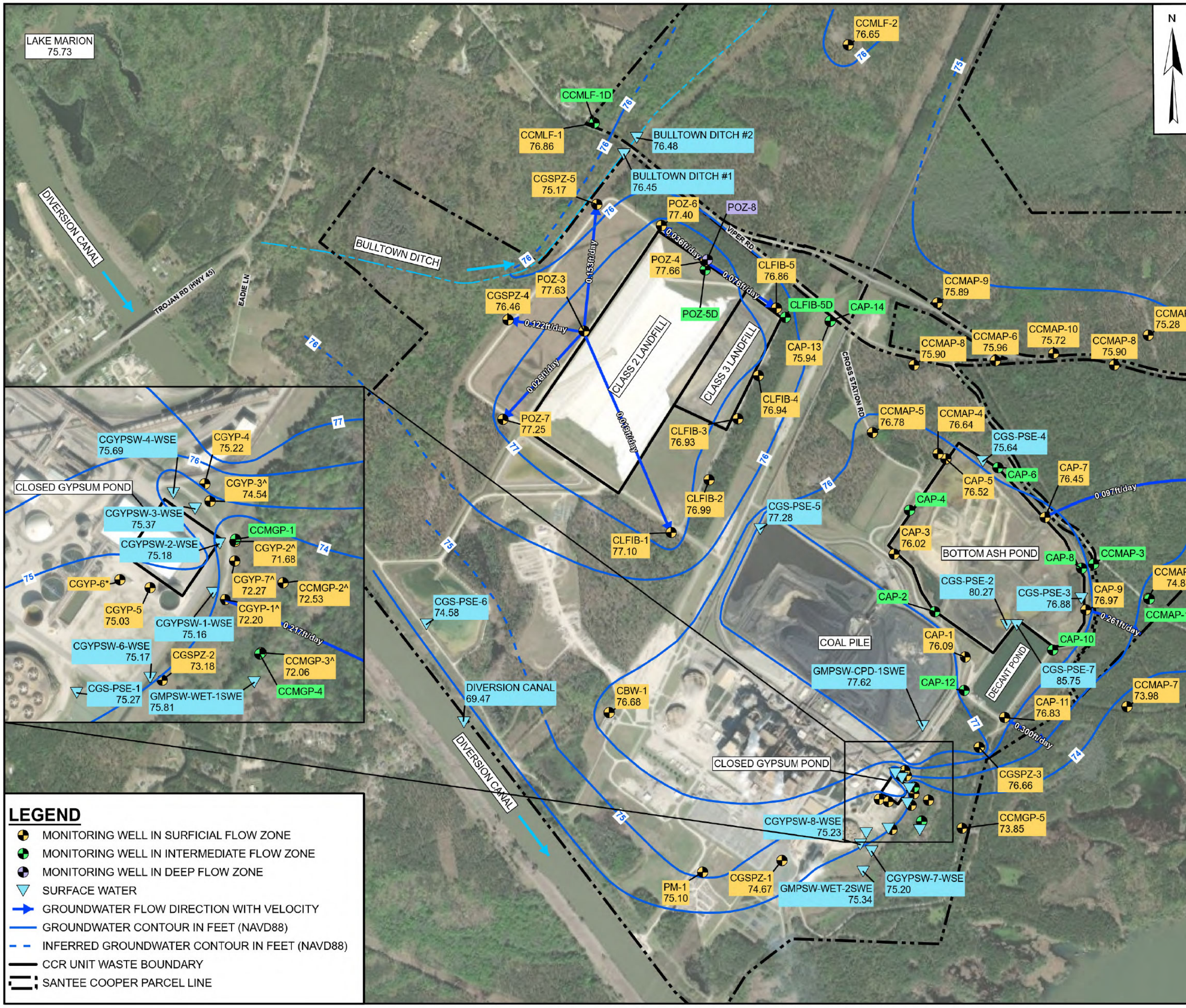
NOTES:
MAP IS PROJECTED IN SOUTH CAROLINA STATE PLANE NAD83 (INTERNATIONAL FEET) AND NAVD88
MONITORING WELLS LOCATIONS WERE PROVIDED BY SANTEE COOPER IN NAD83 AND NAVD88 DATUMS.
DECEMBER 18, 2023 AERIAL PHOTOGRAPH OBTAINED FROM GOOGLE EARTH PRO.
MONITORING WELL WATER LEVELS WERE GAUGED JANUARY 3, 2024, AND SURFACE WATER ELEVATION WERE GAUGED ON JANUARY 3, 2024. THIS DATA WAS PROVIDED BY SANTEE COOPER.
WATER LEVELS FOR LAKE MARION (USGS GAUGING STATION #02171000) AND LAKE MOULTRIE (USGS GAUGING STATION #02171635) WERE FOR JANUARY 3, 2024 AT 12:00PM AND SET TO NAVD88. THIS DATA WAS OBTAINED FROM THE USGS AT https://waterdata.usgs.gov/sc/nwis/current/?type=flow&group_key=basin_cd
* GROUNDWATER ELEVATION IN CAP-1 APPEARS TO BE ANOMALOUS AND NOT CONSISTENT WITH HISTORICAL ELEVATIONS OR RELATED TO SITE OPERATIONS. GROUNDWATER ELEVATION IN THE AREA WILL CONTINUE TO BE EVALUATED.

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

V = AVERAGE LINEAR VELOCITY (ft/day)
K = AVERAGE HYDRAULIC CONDUCTIVITY (ft/day)
Δh/L = HORIZONTAL GRADIENT CHANGE (CHANGE IN HYDRAULIC HEAD / LENGTH OF HORIZONTAL HYDRAULIC FLOW PATH)
K = 25 FEET PER DAY (ft/day)
n_e = 0.25
HYDRAULIC CONDUCTIVITY AND EFFECTIVE POROSITY VALUES TAKEN FROM 2021 GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT PREPARED BY HALEY AND ALDRICH.

P:\Santee Cooper 5577\Cross Station\DWG\WL MAP 2024-01-03\SANTEE COOPER WL MAP 2024-01-03.dwg

FIGURE 1
POTENTIOMETRIC MAP
APRIL 9, 2024
CROSS GENERATING STATION
PINEVILLE, SOUTH CAROLINA



santee cooper®

synTerra

GRAPHIC SCALE
500 0 500 1,000
(IN FEET)

DRAWN BY: T. KING DATE: 10/22/2021
REVISED BY: T. KING DATE: 07/01/2024
CHECKED BY: K. FERRI DATE: 07/01/2024
APPROVED BY: K. FERRI DATE: 07/01/2024
PROJECT MANAGER: K. FERRI

www.synterracorp.com

NOTES:

1. WATER LEVELS WERE GAUGED APRIL 9, 2024.
2. WATER LEVEL ELEVATIONS FOR LAKE MARION AND LAKE MOULTRIE WERE OBTAINED FROM USGS GAUGING STATIONS APRIL 8, 2024.
3. * - CGYP-6 WELL WAS ABANDONED TO FACILITATE CONSTRUCTION OF THE NEW WASTE WATER TREATMENT SYSTEM. THE REPLACEMENT WELL WAS INSTALLED IN MAY 2024.
4. ^ - GROUNDWATER PUMPING OCCURRED IN THE VICINITY OF THE CLOSED GYPSUM POND TO FACILITATE CONSTRUCTION OF THE NEW WASTE WATER TREATMENT SYSTEM. THEREFORE, GROUNDWATER ELEVATIONS ARE NOT REPRESENTATIVE OF NATURAL SITE CONDITIONS AND ARE EXPECTED TO RETURN TO NATURAL LEVELS DURING THE NEXT SYNOPTIC WATER LEVEL EVENT.
5. ALL BOUNDARIES ARE APPROXIMATE.
6. PROPERTY BOUNDARY AND MONITORING WELL PROVIDED BY SANTEE COOPER.
7. AERIAL IMAGERY PROVIDED BY ESRI BASEMAPS, COLLECTED APRIL 15, 2022.
8. DRAWING HAS BEEN SET WITH A PROJECTION OF SOUTH CAROLINA STATE PLANE COORDINATE SYSTEM FIPS 3900 (NAD83). CONTOURS REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88).
9. HYDRAULIC CONDUCTIVITY AND EFFECTIVE POROSITY VALUES TAKEN FROM 2021 GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT PREPARED BY HALEY AND ALDRICH.

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

V = AVERAGE LINEAR VELOCITY (ft/day)
K = AVERAGE HYDRAULIC CONDUCTIVITY (ft/day)
$\Delta h/L$ = HORIZONTAL GRADIENT CHANGE (CHANGE IN HYDRAULIC HEAD / LENGTH OF HORIZONTAL HYDRAULIC FLOW PATH)
K = 2.3 FEET PER DAY (ft/day)
n_e = 0.3

G:\0 ARCGIS PRO PROJECTS\SANTEE_COOPER\CROSS_STATION\2024\WL_UPDATE\CROSS_WL_UPDATE_2024.APRX

FIGURE 1
POTENTIOMETRIC MAP
MAY 30 - JUNE 3, 2024
CROSS GENERATING STATION
PINEVILLE, SOUTH CAROLINA

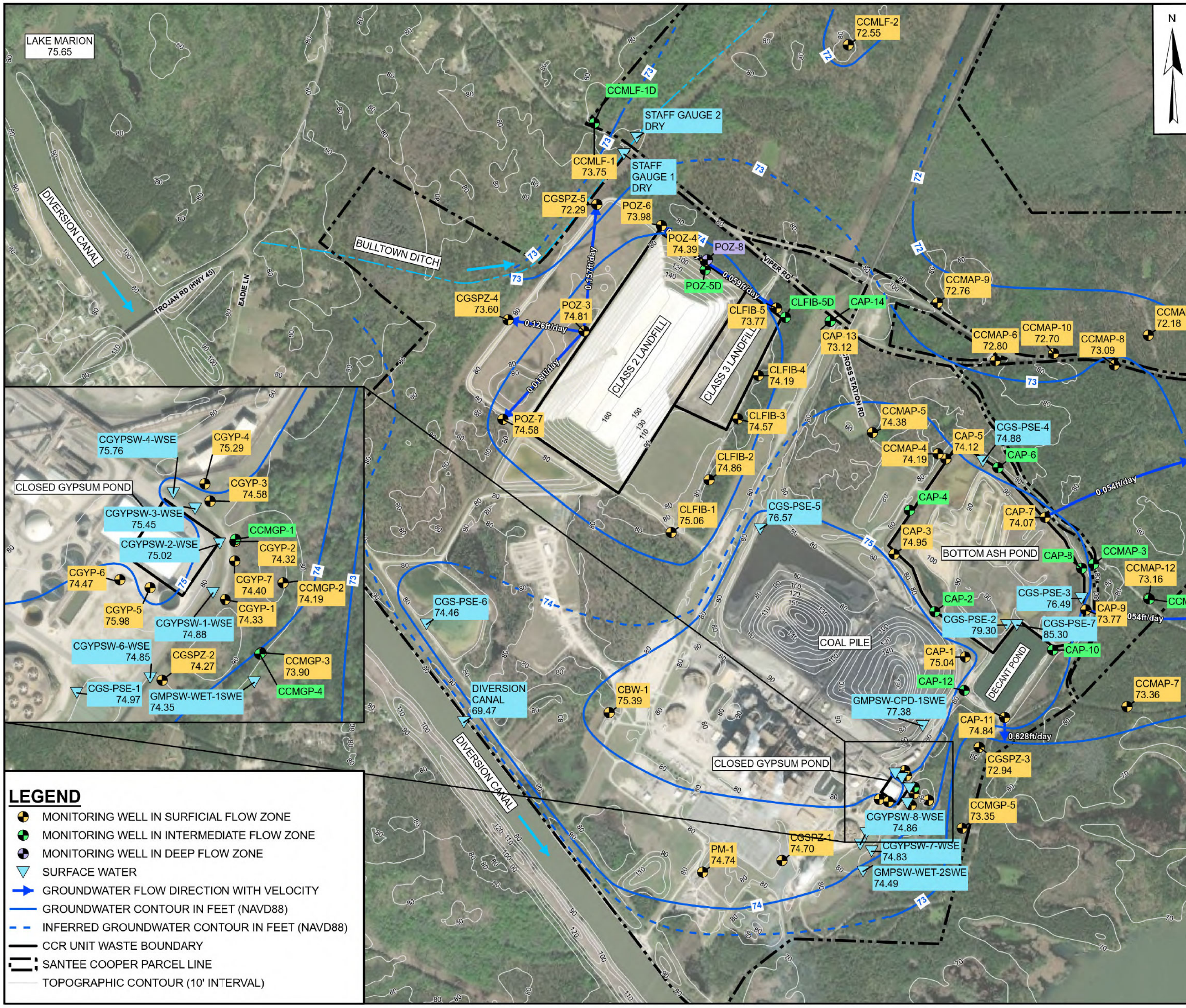
santee cooper®

synTerra

GRAPHIC SCALE
500 0 500 1,000
(IN FEET)

DRAWN BY: T. KING DATE: 10/22/2021
REVISED BY: T. KING DATE: 08/15/2024
CHECKED BY: K. FERRI DATE: 08/15/2024
APPROVED BY: K. FERRI DATE: 08/15/2024
PROJECT MANAGER: K. FERRI

www.synterracorp.com



LEGEND

- MONITORING WELL IN SURFICIAL FLOW ZONE
- MONITORING WELL IN INTERMEDIATE FLOW ZONE
- MONITORING WELL IN DEEP FLOW ZONE
- SURFACE WATER
- GROUNDWATER FLOW DIRECTION WITH VELOCITY
- GROUNDWATER CONTOUR IN FEET (NAVD88)
- INFERRED GROUNDWATER CONTOUR IN FEET (NAVD88)
- CCR UNIT WASTE BOUNDARY
- SANTEE COOPER PARCEL LINE
- TOPOGRAPHIC CONTOUR (10' INTERVAL)

NOTES:

1. WATER LEVELS WERE GAUGED MAY 30 - JUNE 3, 2024.
2. WATER LEVEL ELEVATIONS FOR LAKE MARION AND LAKE MOULTRIE WERE OBTAINED FROM USGS GAUGING STATIONS MAY 30, 2024.
3. ALL BOUNDARIES ARE APPROXIMATE.
4. PROPERTY BOUNDARY AND MONITORING WELL PROVIDED BY SANTEE COOPER.
5. AERIAL IMAGERY PROVIDED BY ESRI BASEMAPS, COLLECTED APRIL 15, 2022.
6. DRAWING HAS BEEN SET WITH A PROJECTION OF SOUTH CAROLINA STATE PLANE COORDINATE SYSTEM FIPS 3900 (NAD83). CONTOURS REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88).
7. HYDRAULIC CONDUCTIVITY AND EFFECTIVE POROSITY VALUES TAKEN FROM 2021 GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT PREPARED BY HALEY AND ALDRICH.

$V = \frac{K}{n_e} \frac{\Delta h}{L}$

V = AVERAGE LINEAR VELOCITY (ft/day)
K = AVERAGE HYDRAULIC CONDUCTIVITY (ft/day)
Δh/L = HORIZONTAL GRADIENT CHANGE (CHANGE IN HYDRAULIC HEAD / LENGTH OF HORIZONTAL HYDRAULIC FLOW PATH)
K = 2.3 FEET PER DAY (ft/day)
n_e = 0.3

G:\D ARCGIS PRO PROJECTS\SANTEE_COOPER\CROSS_STATION\2024\WL_UPDATE\CROSS_WL_UPDATE_2024.APRX

FIGURE 1
POTENTIOMETRIC MAP
NOVEMBER 6, 2024
CROSS GENERATING STATION
PINEVILLE, SOUTH CAROLINA

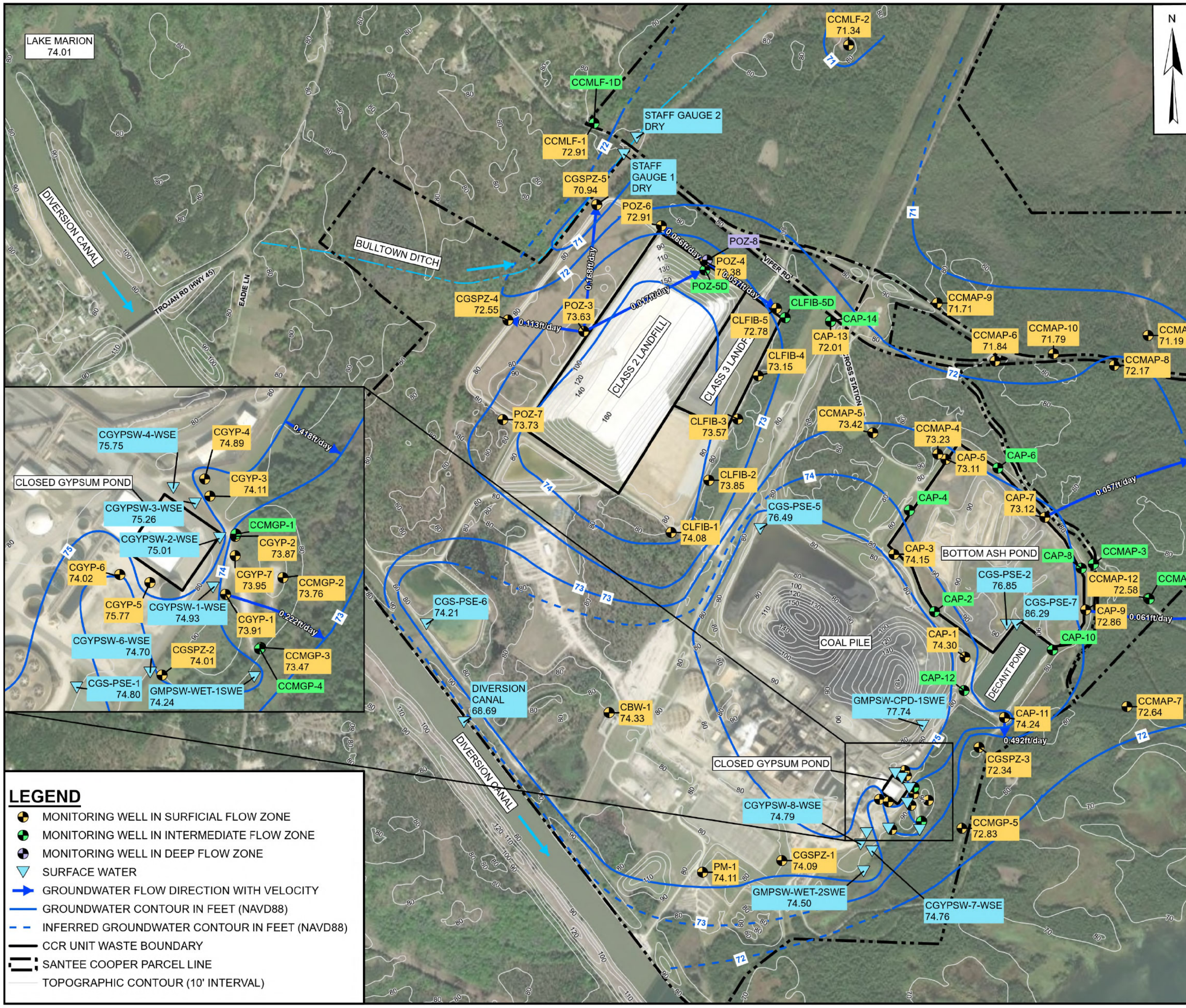
santee cooper

synTerra

GRAPHIC SCALE: 500 0 500 1,000 (IN FEET)

DRAWN BY: T. KING	DATE: 10/22/2021
REVISED BY: L. FOREMAN	DATE: 12/16/2024
CHECKED BY: K. FERRI	DATE: 12/16/2024
APPROVED BY: K. FERRI	DATE: 12/16/2024
PROJECT MANAGER: K. FERRI	

www.synterracorp.com



LEGEND

- MONITORING WELL IN SURFICIAL FLOW ZONE
- MONITORING WELL IN INTERMEDIATE FLOW ZONE
- MONITORING WELL IN DEEP FLOW ZONE
- SURFACE WATER
- GROUNDWATER FLOW DIRECTION WITH VELOCITY
- GROUNDWATER CONTOUR IN FEET (NAVD88)
- INFERRED GROUNDWATER CONTOUR IN FEET (NAVD88)
- CCR UNIT WASTE BOUNDARY
- SANTEE COOPER PARCEL LINE
- TOPOGRAPHIC CONTOUR (10' INTERVAL)

NOTES:

1. WATER LEVELS WERE GAUGED NOVEMBER 6, 2024.
2. WATER LEVEL ELEVATIONS FOR LAKE MARION AND LAKE MOULTRIE WERE OBTAINED FROM USGS GAUGING STATIONS NOVEMBER 6, 2024.
3. ALL BOUNDARIES ARE APPROXIMATE.
4. PROPERTY BOUNDARY AND MONITORING WELL PROVIDED BY SANTEE COOPER.
5. AERIAL IMAGERY PROVIDED BY ESRI BASEMAPS, COLLECTED MARCH 15, 2023.
6. DRAWING HAS BEEN SET WITH A PROJECTION OF SOUTH CAROLINA STATE PLANE COORDINATE SYSTEM FIPS 3900 (NAD83). CONTOURS REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88).
7. HYDRAULIC CONDUCTIVITY AND EFFECTIVE POROSITY VALUES TAKEN FROM 2021 GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT PREPARED BY HALEY AND ALDRICH.

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

V = AVERAGE LINEAR VELOCITY (ft/day)
K = AVERAGE HYDRAULIC CONDUCTIVITY (ft/day)
$\Delta h/L$ = HORIZONTAL GRADIENT CHANGE (CHANGE IN HYDRAULIC HEAD / LENGTH OF HORIZONTAL HYDRAULIC FLOW PATH)
K = 2.3 FEET PER DAY (ft/day)
n_e = 0.3

G:\0 ARCGIS PRO PROJECTS\SANTEE_COOPER\CROSS_STATION\2024\WL_UPDATE\CROSS_WL_UPDATE_2024.APRX

Appendix A – Statistical Analysis

HALEY & ALDRICH, INC.
400 Augusta Street
Suite 100
Greenville, SC 29601
864.214.8750

TECHNICAL MEMORANDUM

July 3, 2024
File No. 132892-102-002-02

SUBJECT: Statistical Evaluation of the January 2024 Corrective Action Groundwater Monitoring Data
Cross Generating Station
Class 2 Landfill

Pursuant to Title 40 Code of Federal Regulations (40 CFR) §257.93, §257.95, and §257.98 (Rule), this memorandum summarizes the statistical evaluation of the groundwater analytical results obtained from the January 2024 corrective action groundwater monitoring event for the Cross Generating Station (CGS) Class 2 Landfill. Data for this groundwater sampling event were validated on April 4 and May 10, 2024 by Santee Cooper.

BACKGROUND

The CGS Class 2 Landfill was capped and closed, with water management enhancements as described in the Remedy Selection Report dated July 31, 2020. At that time, assessment monitoring identified the presence of cobalt in one or more downgradient wells at a statistically significant level (SSL) above the groundwater protection standard (GWPS). In addition to closure and water management enhancements, cobalt is being addressed through monitored natural attenuation (MNA).

Recent analytical testing results were evaluated to determine if SSLs exist above the GWPS of Appendix IV groundwater monitoring constituents. Using interwell evaluations, data from the semiannual sampling event for downgradient monitoring wells were compared to the GWPS established from background wells. During previous groundwater sampling events, cobalt was the only Appendix IV constituent detected at a SSL above the GWPS.

STATISTICAL EVALUATION

The Rule provides four specific options to statistically evaluate whether water quality downgradient of the CCR Unit (§257.93(f) (1-4)) represents a SSL of Appendix IV parameters above the GWPS. The selected statistical method used for these evaluations is the tolerance limit (TL) as certified by Haley & Aldrich, Inc. on October 14, 2017.

An interwell evaluation was used for statistical analysis, which compares the most recent values from downgradient compliance wells against a background dataset composed of upgradient well data. The TL method was used to evaluate potential SSLs above GWPS. The GWPS for each of the Appendix IV constituents has been set equal to the highest value of the maximum contaminant level (MCL), regional screening level (RSL), or site background concentration. Compliance well data from the most recent

groundwater sampling event were compared to the corresponding GWPS to determine if a SSL existed. Statistical analysis results are presented in Table 1.

As part of the TL procedure, a concentration limit for each constituent is established from the distribution of the background data with a minimum 95 percent confidence level. The upper endpoint of a tolerance interval is termed the upper tolerance limit (UTL). Depending on the assumed distribution of background, parametric or non-parametric procedures were used to develop the UTL. Parametric procedures use assumed distributions of the sample background data to develop the limits, whereas non-parametric limits use order statistics or bootstrap methods. If all the background data are non-detect, a maximum reporting limit may serve as an appropriate UTL.

If an Appendix IV constituent concentration from the event was above the GWPS, the lower confidence limit (LCL) for the downgradient well constituent was used to evaluate the presence of a SSL. The LCL is the lower end of the confidence interval range, which is an estimated concentration range intended to contain the true mean or median of the population from which the sample is drawn. The confidence interval range is designed to locate the true population mean or median with a high degree of statistical confidence.

After testing for outliers, the UTLs were calculated from the background dataset to evaluate whether removal of data was necessary based on sampling or measurement discrepancies. Both visual and statistical outlier tests for the background data were performed. A visual inspection of the data was performed using distribution plots for the downgradient sample data. Based on our review, no sample data were identified as outliers that warranted removal from the dataset.

The background well (CBW-1 and PM-1) analytical results from previous events were combined to calculate the UTL for each detected Appendix IV constituent. Variability and distribution of the pooled dataset were reviewed to establish the method for UTL calculation.

Per the document *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance, March 2009* (the Unified Guidance), background concentrations were based on statistical evaluation of analytical results collected through June 2023 and updated in the Chemstat output. The background dataset will be updated in Table 1 again after four additional data points are collected (second semiannual event of 2025) in accordance with the Unified Guidance.

TREND ANALYSIS

Mann-Kendall trend analyses were performed on datasets of sufficient sample size. Results of the trend analysis are included on Table 1. In summary, 90 percent of the trends analyzed for downgradient compliance wells are identified as stable or decreasing. Trend analysis will continue to be used to monitor and evaluate concentrations in the context of overall site conditions.

RESULTS OF APPENDIX IV DOWNGRADIENT STATISTICAL COMPARISONS

As stated, Appendix IV constituent detections from downgradient well samples were compared to their respective GWPS (Table 1). Based on previous compliance sampling data and statistical evaluations,

interwell comparisons were used. Consistent with previous results, cobalt remains the only Appendix IV constituent present at a SSL above the GWPS at POZ-4.

All other wells meet the GWPS, including POZ-6, which did not meet the GWPS prior to implementation of the selected remedy. These results generally reflect the predicted cobalt groundwater fate and transport modeling results. Even though there is variability in the cobalt data, the statistical trends are stable for downgradient wells POZ-6 and POZ-7.

The ongoing performance of the selected remedy in achieving GWPS will continue to be evaluated during subsequent semiannual monitoring events.

Enclosures:

Table 1 – CGS Class 2 Landfill January 2024 Corrective Action Monitoring Data

https://haleyaldrich.sharepoint.com/sites/SanteeCooper2/Shared Documents/0132892.Santee Cooper CCR Consulting Service/0_Cross Generating Station/Statistical Analysis/2024-04/Class 2 Landfill/final/2024_07_HAI_CGS_Class II LF_Assessment Monitoring Stats_f.docx

TABLE

TABLE 1

JANUARY 2024 CORRECTIVE ACTION MONITORING DATA

CGS CLASS 2 LANDFILL

																									Inter-well Analysis		
Location Id	Frequency of Detection	Percent Non-Detects	Range of Non-Detect	Mean	50th Percentile (Median)	95th Percentile	Maximum Detect	Variance	Standard Deviation	Coefficient of Variance	CCR MCL/RSL	Report Result Unit	Detection Exceedances (Y/N)	Number of Detection Exceedances	Number of Non-Detection Exceedances	Outlier Presence	Outlier Removed	Trend	Distribution Well	January 2024 Concentrations	Detect?	95 LCL	Upper Tolerance Limit	Upper Tolerance Limit	SSI	GWPS (Higher of MCL/RSL or Upper Tolerance Limit)	Exceedance above Background at Individual Well	SSL
CCR Appendix-IV: Antimony, Total (mg/L)																												
CBW-1	0/21	100%	0.0(5-0.025	0.00595	0.005	0.005		0.00001905	0.004364	0.7332	0.006	mg/L	N	0	1	NA	NA	NA	NA				25.0	0.025		0.025		
PM-1	0/21	100%	0.0(5-0.025	0.00619	0.005	0.01		0.00001976	0.004445	0.7181	0.006	mg/L	N	0	2	NA	NA	NA										
POZ-4	0/19	100%	0.0(5-0.025	0.00605	0.005	0.007		0.00002105	0.004588	0.7581	0.006	mg/L	N	0	1	NA	NA	NA		0.005	N				N		N	No
POZ-6	0/19	100%	0.0(5-0.025	0.00605	0.005	0.007		0.00002105	0.004588	0.7581	0.006	mg/L	N	0	1	NA	NA	NA		0.005	N				N		N	No
POZ-7	0/19	100%	0.0(5-0.025	0.00605	0.005	0.007		0.00002105	0.004588	0.7581	0.006	mg/L	N	0	1	NA	NA	NA		0.005	N				N		N	No
CCR Appendix-IV: Arsenic, Total (mg/L)																												
CBW-1	3/23	87%	0.0(3-0.005	0.00531	0.005	0.006567	0.016	0.000006084	0.002467	0.4648	0.01	mg/L	Y	1	0	Yes	No	NA	Non-parametric				16.0	0.016		0.016		
PM-1	3/23	87%	0.03-0.01	0.00496	0.005	0.005	0.0042	0.000001576	0.001255	0.2532	0.01	mg/L	N	0	0	Yes	No	NA										
POZ-4	1/22	95%	0.0(3-0.005	0.00455	0.005	0.005	0.0031	7.217E-07	0.0008495	0.1867	0.01	mg/L	N	0	0	No	No	NA		0.005	N				N		N	No
POZ-6	1/22	95%	0.0(3-0.005	0.00459	0.005	0.005	0.0039	6.403E-07	0.0008002	0.1745	0.01	mg/L	N	0	0	No	No	NA		0.005	N				N		N	No
POZ-7	0/22	100%	0.0(3-0.005	0.00455	0.005	0.005		7.359E-07	0.0008579	0.1887	0.01	mg/L	N	0	0	NA	NA	NA		0.005	N				N		N	No
CCR Appendix-IV: Barium, Total (mg/L)																												
CBW-1	23/23	0%	-	0.043	0.0427	0.04723	0.061	0.00002518	0.005018	0.1167	2	mg/L	N	0	0	Yes	No	Decreasing					103.0	0.1030		2.000		
PM-1	23/23	0%	-	0.0819	0.0803	0.09875	0.103	0.00006264	0.007915	0.0967	2	mg/L	N	0	0	Yes	No	Stable										
POZ-4	22/22	0%	-	0.118	0.102	0.1866	0.215	0.002094	0.04576	0.3885	2	mg/L	N	0	0	Yes	No	Increasing		0.155	Y				Y		N	No
POZ-6	22/22	0%	-	0.0573	0.05205	0.08805	0.1	0.0002686	0.01639	0.2862	2	mg/L	N	0	0	Yes	No	Stable		0.083	Y				N		N	No
POZ-7	22/22	0%	-	0.217	0.2275	0.303	0.389	0.006204	0.07876	0.3627	2	mg/L	N	0	0	No	No	Decreasing		0.095	Y				N		N	No
CCR Appendix-IV: Beryllium, Total (mg/L)																												
CBW-1	1/22	95%	0.00(5-0.0005	0.000506	0.0005	0.0005	0.00063	7.682E-10	0.00002772	0.05478	0.004	mg/L	N	0	0	No	No	NA	Non-parametric				5.00	0.005		0.005		
PM-1	0/23	100%	0.0(05-0.005	0.000696	0.0005	0.0005		8.804E-07	0.0009383	1.349	0.004	mg/L	N	0	1	NA	NA	NA										
POZ-4	11/21	48%	0.00(5-0.0005	0.000638	0.00051	0.0011	0.00139	6.179E-08	0.0002486	0.3898	0.004	mg/L	N	0	0	No	No	NA		0.0005	N				N		N	No
POZ-6	0/21	100%	0.00(5-0.0005	0.0005	0.0005	0.0005		0	0	0	0.004	mg/L	N	0	0	NA	NA	NA		0.0005	N				N		N	No
POZ-7	13/21	38%	0.00(5-0.0005	0.000635	0.00058	0.00089	0.000935	2.286E-08	0.0001512	0.2382	0.004	mg/L	N	0	0	No	No	NA		0.0006	Y				N		N	No
CCR Appendix-IV: Cadmium, Total (mg/L)																												
CBW-1	0/22	100%	0.0035-0.004	0.000659	0.0005	0.0005		5.568E-07	0.0007462	1.132	0.005	mg/L	N	0	0	NA	NA	NA	NA				5.0	0.0050		0.005		
PM-1	0/22	100%	0.0035-0.005	0.000864	0.0005	0.003825		0.000001409	0.001187	1.374	0.005	mg/L	N	0	0	NA	NA	NA										
POZ-4	2/22	91%	0.0035-0.004	0.000678	0.0005	0.0007995	0.00081	5.553E-07	0.0007452	1.1	0.005	mg/L	N	0	0	Yes	No	NA		0.0005	N				N		N	No
POZ-6	0/22	100%	0.0035-0.004	0.000659	0.0005	0.0005		5.568E-07	0.0007462	1.132	0.005	mg/L	N	0	0	NA	NA	NA		0.0005	N				N		N	No
POZ-7	1/22	95%	0.0035-0.004	0.000664	0.0005	0.000595	0.0006	5.558E-07	0.0007455	1.123	0.005	mg/L	N	0	0	No	No	NA		0.0005	N				N		N	No
CCR Appendix-IV: Chromium, Total (mg/L)																												
CBW-1	1/22	95%	0.0(5-0.005	0.00541	0.005	0.005	0.014	0.000003682	0.001919	0.3547	0.1	mg/L	N	0	0	No	No	NA	Non-parametric				14.0	0.0140		0.100		
PM-1	0/21	100%	0.0(5-0.005	0.005	0.005	0.005		0	0	0	0.1	mg/L	N	0	0	NA	NA	NA										
POZ-4	0/22	100%	0.0(5-0.005	0.005	0.005	0.005		0	0	0	0.1	mg/L	N	0	0	No	No	NA		0.005	N				N		N	No
POZ-6	0/22	100%	0.0(5-0.005	0.005	0.005	0.005		0	0	0	0.1	mg/L	N	0	0	NA	NA	NA		0.005	N				N		N	No
POZ-7	1/22	95%	0.0(5-0.005	0.00504	0.005	0.005	0.0059	3.682E-08	0.0001919	0.03806	0.1	mg/L	N	0	0	No	No	NA		0.005	N				N		N	No
CCR Appendix-IV: Cobalt, Total (mg/L)																												
CBW-1	22/23	4%	0.0(1-0.001	0.001	0.00086	0.001286	0.0034	3.034E-07	0.0005508	0.5481	0.006	mg/L	N	0	0	Yes	No	Decreasing					5.0	0.0050		0.006		
PM-1	22/23	4%	0.0(5-0.005	0.00121	0.00098	0.001861	0.00189	7.505E-07	0.0008663	0.7182	0.006	mg/L	N	0	0	Yes	No	Increasing	Non-parametric									
POZ-4	25/25	0%	-	0.0861	0.065	0.1978	0.21	0.003844	0.062	0.7204	0.006	mg/L	Y	24	0	No	No	NA		0.0779	Y	0.065			Y		Y	Yes
POZ-6	22/22	0%	-	0.00302	0.003085	0.004975	0.0082	0.000002661	0.001631	0.5405	0.006	mg/L	Y	1	0	Yes	No	Stable		0.0016	Y				N		N	No
POZ-7	16/22	27%	0.00(5-0.0005	0.00108	0.000965	0.00237	0.0028	3.756E-07	0.0006129	0.5699	0.006	mg/L	N	0	0	Yes	No	Stable		0.0012	Y				N		N	No
CCR Appendix-IV: Fluoride (mg/L)																												
CBW-1	22/23	4%	01-0.1	0.21	0.2	0.289	0.3	0.002504	0.05004	0.2388	4	mg/L	N	0	0	No	No	Decreasing	Non-parametric				300.0	0.300		4.00		
PM-1	0/23	100%	01-0.1	0.1	0.1	0.1		0	0	0	4	mg/L	N	0	0	NA	NA	NA										
POZ-4	8/22	64%	01-0.1	0.109	0.1	0.1585	0.17	0.0003991	0.01998	0.1831	4	mg/L	N	0	0	Yes	No	Stable		0.100	N				N		N	No
POZ-6	5/22	77%	01-0.1	0.111	0.1	0.15	0.16	0.0004468	0.02114	0.1905	4	mg/L	N	0	0	No	No	NA		0.100	N				N		N	No
POZ-7	7/22	68%	01-0.1	0.112	0.1	0.13	0.27	0.001342	0.03664	0.3263	4	mg/L	N	0	0	Yes	No	NA		0.100	N				N		N	No
CCR Appendix-IV: Lead, Total (mg/L)																												
CBW-1	22/23	4%	0.(1-0.01	0.00356	0.0028	0.009375	0.011	0.00000495	0.002225	0.6258	0.015	mg/L	N	0	0	Yes	No	Decreasing	Non-parametric				11.0	0.0110		0.015		
PM-1	0/23	100%	0.0(1-0.01	0.00204	0.001	0.00925		0.000006634	0.002576	1.26	0.015	mg/L	N	0	0	NA	NA	NA										
POZ-4	0/22	100%	0.0(1-0.01	0.00175	0.001	0.0025		0.000003804	0.00195	1.114	0.015	mg/L	N	0	0	NA	NA	NA		0.001	N				N		N	No
POZ-6	0/22	100%	0.0(1-0.01	0.00175	0.001	0.0025		0.000003804	0.00195	1.114	0.015	mg/L	N	0	0	NA	NA	NA		0.001	N				N		N	No
POZ-7	0/22	100%	0.0(1-0.01	0.00175	0.001	0.0025		0.000003804	0.00195	1.114	0.015	mg/L	N	0	0	NA	NA	NA		0.001	N				N		N	No
CCR Appendix-IV: Lithium, Total (mg/L)																												
CBW-1	1/23	96%	0.0(5-0.02	0.00894	0.01	0.01	0.00066	0.00001302	0.003609	0.4035	0.04	mg/L	N	0	0	Yes	No	NA	Non-parametric				20.0	0.020		0.040		
PM-1	3/23	87%	0.0(5-0.01	0.00867	0.01	0.01	0.00144	0.000005329	0.002308	0.2663	0.04	mg/L	N	0	0	No	No	NA										
POZ-4	14/19	26%	0.0(1-0.01	0.0134	0.0118	0.02116	0.0226	0.00001644	0.004055	0.3034	0.04	mg/L	N	0	0	No	No	Stable		0.015	Y				N		N	No
POZ-6	5/19	74%	0.0(1-0.01	0.0104	0.01	0.01137	0.0201	0.000005618	0.00237	0.2272	0.04	mg/L	N	0	0	Yes	No	NA		0.009	Y				N		N	No
POZ-7	3/19	84%	0.0(5-0.01	0.00946	0.01	0.0119	0.02	0.00001167	0.003417	0.3612	0.04	mg/L	N	0	0	No	No	NA		0.005	N				N		N	No
CCR Appendix-IV: Mercury, Total (mg/L)																												
CBW-1	0/23	100%	0.0002-0.001	0.000243	0.0002	0.00038		2.893E-08	0.0001701	0.6985	0.002	mg/L	N	0	0	NA	NA	NA	NA				1.0	0.0010		0.0020		
PM-1	0/23	100%	0.0002-0.001	0.000252	0.0002	0.00056		3.352E-08	0.0001831	0.726	0.002	mg/L	N	0	0	NA	NA	NA										
POZ-4	0/19	100%	0.0002-0.001	0.000253	0.0002	0.00046		3.485E-08	0.0001867	0.739	0.002	mg/L	N	0	0	NA	NA	NA		0.0002	N				N		N	No
POZ-6	0/19	100%	0.0002-0.001	0.000242	0.0002	0.00028		3.368E-08	0.0001835	0.7581	0.002	mg/L	N	0	0	NA	NA	NA		0.0002	N				N		N	No
POZ-7	2/19	89%	0.0002-0.001	0.000254	0.0002	0.0004402	0.000378	3.436E-08	0.0001854	0.7295	0.002	mg/L	N	0	0	Yes	No	NA		0.0002	N				N		N	No
CCR Appendix-IV: Molybdenum, Total (mg/L)																												
CBW-1	0/21	100%	0.035-0.02	0.00929	0.01	0.01		0.00001071	0.003273	0.3525	0.1	mg/L	N	0	0	NA	NA	NA	NA				20.0	0.020		0.10		
PM-1	0/21	100%	0.035-0.01	0.00881	0.01	0.01		0.000004762	0.002182	0.2477	0.1	mg/L	N	0	0	NA	NA	NA										
POZ-4	0/19	100%	0.035-0.01	0.00868	0.01	0.01		0.000005117	0.002262	0.2605	0.1	mg/L	N	0	0	NA	NA	NA		0.005	N				N		N	No
POZ-6	0/19	100%	0.035-0.01	0.00868	0.01	0.01		0.000005117	0.002262	0.2605	0.1	mg/L	N	0	0	NA	NA	NA		0.005	N				N		N	No
POZ-7	0/19	100%	0.035-0.01	0.00868	0.01	0.01		0.000005117	0.002262	0.2605	0.1	mg/L	N	0	0	NA	NA	NA		0.005	N				N		N	No
CCR Appendix-IV: Radium-226 & 228 (pCi/L)																												
CBW-1	15/22	32%	4-4	3.19	4	5.3	6.14	2.769	1.664	0.5215	5	pCi/L	Y	4	0	No	No	Decreasing	Non-parametric				16.3	16.3		16.3		
PM-1	16/22	27%	4-4	3.83	3.85	6.965	16.3	10.03	3.167	0.8275	5	pCi/L	Y	2	0	Yes	No	Decreasing										
POZ-4	14/21	33%	4-4	3.32	4	4.95	6.29	2.221	1.49	0.4498	5	pCi/L	Y	1	0	No	No	Stable		2.393	Y				N		N	No
POZ-6	13/21	38%	4-4	2.73	4	4.6	4.18	2.397	1.548	0.5665	5	pCi/L	N	0	0	No	No	Decreasing		1.050	Y				N		N	No
POZ-7	18/21	14%	4-4	3.3	4	4.88	5.39	2.211	1.487	0.4513	5	pCi/L	Y	1	0	No	No	Stable		1.089	Y				N		N	No
CCR Appendix-IV: Selenium, Total (mg/L)																												
CBW-1	0/23	100%	0.0(25-0.05	0.0125	0.01	0.02		0.00007913	0.008895	0.7102	0.05	mg/L	N	0	1	NA	NA	NA	NA				50.0	0.050		0.050		
PM-1	0/23	100%	0.0(25-0.02	0.0108	0.01	0.02		0.00001672	0.00409	0.38	0.05	mg/L	N	0	0	NA	NA	NA										
POZ-4	0/22	100%	0.0(25-0.02	0.0106	0.01	0.02		0.00001901	0.00436	0.4125	0.05	mg/L	N	0	0	NA	NA	NA		0.01:0	N				N		N	No
POZ-6	0/22	100%	0.0(25-0.02	0.0106	0.01	0.02		0.00001901	0.00436	0.4125	0.05	mg/L	N	0	0	NA	NA	NA		0.01:0	N				N		N	No
POZ-7	0/22	100%	0.0(25-0.02	0.0106	0.01	0.02		0.00001901	0.00436	0.4125	0.05	mg/L	N	0	0	NA	NA	NA		0.01:0	N				N		N	No
CCR Appendix-IV: Thallium, Total (mg/L)																												
CBW-1	0/21	100%	0.0(1-0.001	0.001	0.001	0.001		0	0	0	0.002	mg/L	N	0	0	NA	NA	NA	NA				10.0	0.010		0.010		
PM-1	0/21	100%	0.03-0.01	0.00143	0.001	0.001		0.000003857	0.001964	1.375	0.002	mg/L	N	0	1	NA	NA	NA										
POZ-4	0/19	100%	0.0(1-0.001	0.001	0.001	0.001		0	0	0	0.002	mg/L	N	0	0	NA	NA	NA		0.001	N				N		N	No
POZ-6	0/19	100%	0.0(1-0.001	0.001	0.001	0.001		0	0	0	0.002	mg/L	N	0	0	NA	NA	NA		0.001	N				N		N	No
POZ-7	0/19	100%	0.0(1-0.001	0.001	0.001	0.001		0	0	0	0.002	mg/L	N	0	0	NA	NA	NA		0.001	N				N		N	No

HALEY & ALDRICH, INC.
400 Augusta Street
Suite 100
Greenville, SC 29601
864.214.8750

TECHNICAL MEMORANDUM

October 16, 2024
File No. 132892-102-002-02

SUBJECT: Statistical Evaluation of the June 2024 Corrective Action Groundwater Monitoring Data
Cross Generating Station
Class 2 Landfill

Pursuant to Title 40 Code of Federal Regulations (40 CFR) §257.93, §257.95, and §257.98 (Rule), this memorandum summarizes the statistical evaluation of the groundwater analytical results obtained from the June 2024 corrective action groundwater monitoring event for the Cross Generating Station (CGS) Class 2 Landfill. Data for this groundwater sampling event were validated August 6, 2024 by Santee Cooper.

BACKGROUND

The CGS Class 2 Landfill was capped and closed, with water management enhancements as described in the Remedy Selection Report dated July 31, 2020. At that time, assessment monitoring identified the presence of cobalt in one or more downgradient wells at a statistically significant level (SSL) above the groundwater protection standard (GWPS). In addition to closure and water management enhancements, cobalt is being addressed through monitored natural attenuation (MNA).

Recent analytical testing results were evaluated to determine if SSLs exist above the GWPS of Appendix IV groundwater monitoring constituents. Using interwell evaluations, data from the semiannual sampling event for downgradient monitoring wells were compared to the GWPS established from the background wells. During previous groundwater sampling events, cobalt was the only Appendix IV constituent detected at a SSL above the GWPS.

STATISTICAL EVALUATION

The Rule provides four specific options to statistically evaluate whether water quality downgradient of the CCR Unit (§257.93(f) (1-4)) represents a SSL of Appendix IV parameters above the GWPS. The selected statistical method used for these evaluations is the tolerance limit (TL) as certified by Haley & Aldrich, Inc. on October 14, 2017.

An interwell evaluation was used for statistical analysis, which compares the most recent values from downgradient compliance wells against a background dataset composed of upgradient well data. The TL method was used to evaluate potential SSLs above the GWPS. The GWPS for each of the Appendix IV constituents has been set equal to the highest value of the maximum contaminant level (MCL), regional screening level (RSL), or site background concentration. Compliance well data from the most recent

groundwater sampling event were compared to the corresponding GWPS to determine if a SSL existed. Statistical analysis results are presented in Table 1.

As part of the TL procedure, a concentration limit for each constituent is established from the distribution of the background data with a minimum 95 percent confidence level. The upper endpoint of a tolerance interval is termed the upper tolerance limit (UTL). Depending on the assumed distribution of background, parametric or non-parametric procedures were used to develop the UTL. Parametric procedures use assumed distributions of the sample background data to develop the limits, whereas non-parametric limits use order statistics or bootstrap methods. If all the background data are non-detect, a maximum reporting limit may serve as an appropriate UTL.

If an Appendix IV constituent concentration from the event was above the GWPS, the lower confidence limit (LCL) for the downgradient well constituent was used to evaluate the presence of a SSL. The LCL is the lower end of the confidence interval range, which is an estimated concentration range intended to contain the true mean or median of the population from which the sample is drawn. The confidence interval range is designed to locate the true population mean or median with a high degree of statistical confidence.

After testing for outliers, the UTLs were calculated from the background dataset to evaluate whether removal of data was necessary based on sampling or measurement discrepancies. Both visual and statistical outlier tests for the background data were performed. A visual inspection of the data was performed using distribution plots for the downgradient sample data. Based on our review, no sample data were identified as outliers that warranted removal from the dataset.

The background well (CBW-1 and PM-1) analytical results from previous events were combined to calculate the UTL for each detected Appendix IV constituent. Variability and distribution of the pooled dataset were reviewed to establish the method for UTL calculation.

Per the document *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance, March 2009* (the Unified Guidance), background concentrations were based on the statistical evaluation of analytical results collected through June 2023 and updated in the Chemstat output. The background dataset will be updated in Table 1 again after four additional data points are collected (second semiannual event of 2025) in accordance with the Unified Guidance.

TREND ANALYSIS

Mann-Kendall trend analyses were performed on datasets of sufficient sample size. Results of the trend analysis are included on Table 1. In summary, 100 percent of the trends analyzed for downgradient compliance wells are identified as stable or decreasing. Trend analysis will continue to be used to monitor and evaluate concentrations in the context of overall site conditions.

RESULTS OF APPENDIX IV DOWNGRADIENT STATISTICAL COMPARISONS

As stated, Appendix IV constituent detections from downgradient well samples were compared to their respective GWPS (Table 1). Based on previous compliance sampling data and statistical evaluations,

interwell comparisons were used. Consistent with previous results, cobalt remains the only Appendix IV constituent present at a SSL above the GWPS at POZ-4.

All other wells meet the GWPS, including POZ-6, which did not meet the GWPS prior to implementation of the selected remedy. These results generally reflect the predicted cobalt groundwater fate and transport modeling results. Even though there is variability in the cobalt data, the statistical trends are stable for downgradient wells POZ-6 and POZ-7.

The ongoing performance of the selected remedy in achieving GWPS will continue to be evaluated during subsequent semiannual monitoring events.

Enclosures:

Table 1 – June 2024 Corrective Action Monitoring Data (CGS Class 2 Landfill)

https://haleyaldrich.sharepoint.com/sites/SanteeCooper2/Shared Documents/0132892.Santee Cooper CCR Consulting Service/0_Cross Generating Station/Statistical Analysis/2024-10/Class 2 Landfill/final/2024_10_HAI_CGS_Class II LF_Assessment Monitoring Stats_F.docx

TABLE

TABLE 1
JUNE 2024 CORRECTIVE ACTION MONITORING DATA
CGS CLASS 2 LANDFILL

																		Inter-well Analysis							
Location Id	Frequency of Detection	Percent Non-Detects	Range of Non-Detect	Mean	50th Percentile (Median)	95th Percentile	Maximum Detect	Variance	Standard Deviation	Coefficient of Variance	CCR MCL/RSL	Report Result Unit	Detection Exceedances (Y/N)	Number of Detection Exceedances	Number of Non-Detection Exceedances	Outlier Presence	Outlier Removed	Trend	Distribution Well	June 2024 Concentrations	Detect?	95 LCL	Upper Tolerance Limit	SSI	GWPS (Higher of MCL/RSL or Upper Tolerance Limit)	Exceedance above Background at Individual Well	SSL
CCR Appendix-IV: Antimony, Total (mg/L)																											
CBW-1	0/22	100%	0.005-0.025	0.00591	0.005	0.005		0.00001818	0.004264	0.7216	0.006	mg/L	N	0	1	NA	NA	NA	NA				0.025		0.025		
PM-1	0/22	100%	0.005-0.025	0.00614	0.005	0.00975		0.00001889	0.004346	0.7082	0.006	mg/L	N	0	2	NA	NA	NA									
POZ-4	0/20	100%	0.005-0.025	0.006	0.005	0.006		0.00002	0.004472	0.7454	0.006	mg/L	N	0	1	NA	NA	NA		0.005	No			No		No	No
POZ-6	0/20	100%	0.005-0.025	0.006	0.005	0.006		0.00002	0.004472	0.7454	0.006	mg/L	N	0	1	NA	NA	NA		0.005	No			No		No	No
POZ-7	0/20	100%	0.005-0.025	0.006	0.005	0.006		0.00002	0.004472	0.7454	0.006	mg/L	N	0	1	NA	NA	NA		0.005	No			No		No	No
CCR Appendix-IV: Arsenic, Total (mg/L)																											
CBW-1	3/24	88%	0.003-0.005	0.00529	0.005	0.0065	0.016	0.000005824	0.002413	0.4558	0.01	mg/L	Y	1	0	Yes	No	NA	Non-parametric				0.016		0.016		
PM-1	3/24	88%	0.003-0.01	0.00496	0.005	0.005	0.0042	0.000001507	0.001228	0.2476	0.01	mg/L	N	0	0	Yes	No	NA									
POZ-4	1/23	96%	0.003-0.005	0.00457	0.005	0.005	0.0031	6.977E-07	0.0008353	0.1828	0.01	mg/L	N	0	0	No	No	NA		0.005	No			No		No	No
POZ-6	1/23	96%	0.003-0.005	0.0046	0.005	0.005	0.0039	6.186E-07	0.0007865	0.1708	0.01	mg/L	N	0	0	No	No	NA		0.005	No			No		No	No
POZ-7	0/23	100%	0.003-0.005	0.00457	0.005	0.005		7.115E-07	0.0008435	0.1848	0.01	mg/L	N	0	0	NA	NA	NA		0.005	No			No		No	No
CCR Appendix-IV: Barium, Total (mg/L)																											
CBW-1	24/24	0%	-	0.0428	0.0426	0.04719	0.061	0.0000254	0.00504	0.1178	2	mg/L	N	0	0	Yes	No	Decreasing	Non-parametric				0.1030		2.000		
PM-1	24/24	0%	-	0.0816	0.08025	0.09813	0.103	0.00006094	0.007807	0.09561	2	mg/L	N	0	0	Yes	No	Stable									
POZ-4	23/23	0%	-	0.117	0.102	0.1853	0.255	0.002028	0.04503	0.3859	2	mg/L	N	0	0	Yes	No	Stable		0.092	Yes			No		No	No
POZ-6	23/23	0%	-	0.0583	0.0536	0.08781	0.1	0.0002817	0.01678	0.2879	2	mg/L	N	0	0	No	No	Stable		0.081	Yes			No		No	No
POZ-7	23/23	0%	-	0.219	0.235	0.303	0.389	0.005966	0.07724	0.3535	2	mg/L	N	0	0	No	No	Decreasing		0.249	Yes			Yes		No	No
CCR Appendix-IV: Beryllium, Total (mg/L)																											
CBW-1	1/23	96%	0.0005-0.0005	0.000506	0.0005	0.0005	0.00063	7.348E-10	0.00002711	0.05361	0.004	mg/L	N	0	0	No	No	NA	Non-parametric				0.005		0.005		
PM-1	0/24	100%	0.0005-0.005	0.000688	0.0005	0.0005		8.438E-07	0.0009186	1.336	0.004	mg/L	N	0	1	NA	NA	NA									
POZ-4	11/22	50%	0.0005-0.0005	0.000631	0.000505	0.001095	0.00139	5.971E-08	0.0002444	0.387	0.004	mg/L	N	0	0	Yes	No	Decreasing		0.0005	No			No		No	No
POZ-6	0/22	100%	0.0005-0.0005	0.0005	0.0005	0.0005		0	0	0	0.004	mg/L	N	0	0	NA	NA	NA		0.0005	No			No		No	No
POZ-7	13/22	41%	0.0005-0.0005	0.000629	0.000555	0.000887	0.000935	2.26E-08	0.0001503	0.2391	0.004	mg/L	N	0	0	No	No	Decreasing		0.0005	No			No		No	No
CCR Appendix-IV: Cadmium, Total (mg/L)																											
CBW-1	0/23	100%	0.0005-0.004	0.000652	0.0005	0.0005		5.326E-07	0.0007298	1.119	0.005	mg/L	N	0	0	NA	NA	NA	NA				0.0050		0.005		
PM-1	0/23	100%	0.0005-0.005	0.000848	0.0005	0.00365		0.000001351	0.001162	1.371	0.005	mg/L	N	0	0	NA	NA	NA									
POZ-4	2/23	91%	0.0005-0.004	0.00067	0.0005	0.000789	0.00081	5.314E-07	0.000729	1.088	0.005	mg/L	N	0	0	Yes	No	NA		0.0005	No			No		No	No
POZ-6	0/23	100%	0.0005-0.004	0.000652	0.0005	0.0005		5.326E-07	0.0007298	1.119	0.005	mg/L	N	0	0	NA	NA	NA		0.0005	No			No		No	No
POZ-7	1/23	96%	0.0005-0.004	0.000657	0.0005	0.00059	0.0006	5.317E-07	0.0007292	1.111	0.005	mg/L	N	0	0	No	No	NA		0.0005	No			No		No	No
CCR Appendix-IV: Chromium, Total (mg/L)																											
CBW-1	1/23	96%	0.005-0.005	0.00539	0.005	0.005	0.014	0.000003522	0.001877	0.3481	0.1	mg/L	N	0	0	No	No	NA	Non-parametric				0.0140		0.100		
PM-1	0/22	100%	0.005-0.005	0.005	0.005	0.005		0	0	0	0.1	mg/L	N	0	0	NA	NA	NA									
POZ-4	0/23	100%	0.005-0.005	0.005	0.005	0.005		0	0	0	0.1	mg/L	N	0	0	NA	NA	NA		0.005	No			No		No	No
POZ-6	0/23	100%	0.005-0.005	0.005	0.005	0.005		0	0	0	0.1	mg/L	N	0	0	NA	NA	NA		0.005	No			No		No	No
POZ-7	1/23	96%	0.005-0.005	0.00504	0.005	0.005	0.0059	3.522E-08	0.0001877	0.03724	0.1	mg/L	N	0	0	No	No	NA		0.005	No			No		No	No
CCR Appendix-IV: Cobalt, Total (mg/L)																											
CBW-1	23/24	4%	0.001-0.001	0.000998	0.00085	0.001279	0.0034	2.913E-07	0.0005397	0.5408	0.006	mg/L	N	0	0	Yes	No	Decreasing	Non-parametric				0.0050		0.006		
PM-1	23/24	4%	0.005-0.005	0.00121	0.00099	0.001846	0.00189	7.194E-07	0.0008482	0.6985	0.006	mg/L	N	0	0	Yes	No	Increasing									
POZ-4	26/26	0%	-	0.0884	0.07145	0.1978	0.21	0.003834	0.06192	0.7003	0.006	mg/L	Y	25	0	No	No	Stable		0.1470	Yes	0.065		Yes		Y	Yes
POZ-6	23/23	0%	-	0.00303	0.0031	0.00495	0.0082	0.000002542	0.001594	0.5268	0.006	mg/L	Y	1	0	Yes	No	Stable		0.0032	Yes			No		N	No
POZ-7	16/23	30%	0.0005-0.0005	0.00105	0.00096	0.00234	0.0028	3.729E-07	0.0006107	0.5814	0.006	mg/L	N	0	0	Yes	No	Stable		0.0005	No			No		N	No
CCR Appendix-IV: Fluoride (mg/L)																											
CBW-1	23/24	4%	0.1-0.1	0.206	0.2	0.2885	0.3	0.002659	0.05157	0.25	4	mg/L	N	0	0	No	No	Decreasing	Non-parametric				0.300		4.00		
PM-1	0/24	100%	0.1-0.1	0.1	0.1	0.1		0	0	0	4	mg/L	N	0	0	NA	NA	NA									
POZ-4	8/23	65%	0.1-0.1	0.109	0.1	0.157	0.17	0.0003846	0.01961	0.1804	4	mg/L	N	0	0	Yes	No	Stable		0.100	No			No		No	No
POZ-6	5/23	78%	0.1-0.1	0.11	0.1	0.15	0.16	0.0004316	0.02078	0.1881	4	mg/L	N	0	0	No	No	NA		0.100	No			No		No	No
POZ-7	7/23	70%	0.1-0.1	0.112	0.1	0.13	0.27	0.001288	0.03589	0.3212	4	mg/L	N	0	0	Yes	No	Stable		0.100	No			No		No	No
CCR Appendix-IV: Lead, Total (mg/L)																											
CBW-1	23/24	4%	0.01-0.01	0.00349	0.0028	0.009062	0.011	0.000004823	0.002196	0.6285	0.015	mg/L	N	0	0	Yes	No	Decreasing	Non-parametric				0.0110		0.015		
PM-1	0/24	100%	0.001-0.01	0.002	0.001	0.008875		0.000006391	0.002528	1.264	0.015	mg/L	N	0	0	NA	NA	NA									
POZ-4	0/23	100%	0.001-0.01	0.00172	0.001	0.0025		0.000003655	0.001912	1.113	0.015	mg/L	N	0	0	NA	NA	NA		0.001	No			No		No	No
POZ-6	0/23	100%	0.001-0.01	0.00172	0.001	0.0025		0.000003655	0.001912	1.113	0.015	mg/L	N	0	0	NA	NA	NA		0.001	No			No		No	No
POZ-7	0/23	100%	0.001-0.01	0.00172	0.001	0.0025		0.000003655	0.001912	1.113	0.015	mg/L	N	0	0	NA	NA	NA		0.001	No			No		No	No
CCR Appendix-IV: Lithium, Total (mg/L)																											
CBW-1	1/24	96%	0.005-0.02	0.00878	0.01	0.01	0.00066	0.0000131	0.00362	0.4124	0.04	mg/L	N	0	0	Yes	No	NA	Non-parametric				0.020		0.040		
PM-1	3/24	88%	0.005-0.01	0.00852	0.01	0.01	0.00544	0.000005658	0.002379	0.2793	0.04	mg/L	N	0	0	No	No	NA									
POZ-4	15/20	25%	0.01-0.01	0.0139	0.01185	0.0227	0.0246	0.00002189	0.004678	0.336	0.04	mg/L	N	0	0	No	No	Stable		0.025	Yes			Yes		No	No
POZ-6	6/20	70%	0.01-0.01	0.0105	0.01	0.0124	0.0201	0.000005445	0.002334	0.2221	0.04	mg/L	N	0	0	Yes	No	NA		0.012	Yes			No		No	No
POZ-7	4/20	80%	0.005-0.01	0.0094	0.01	0.01145	0.02	0.00001113	0.003335	0.3548	0.04	mg/L	N	0	0	No	No	NA		0.008	Yes			No		No	No
CCR Appendix-IV: Mercury, Total (mg/L)																											
CBW-1	0/24	100%	0.0002-0.001	0.000242	0.0002	0.00037		2.775E-08	0.0001666	0.6894	0.002	mg/L	N	0	0	NA	NA	NA	NA				0.0010		0.0020		
PM-1	0/24	100%	0.0002-0.001	0.00025	0.0002	0.00054		3.217E-08	0.0001794	0.7175	0.002	mg/L	N	0	0	NA	NA	NA									
POZ-4	0/20	100%	0.0002-0.001	0.00025	0.0002	0.00043		3.316E-08	0.0001821	0.7284	0.002	mg/L	N	0	0	NA	NA	NA		0.0002	No			No		No	No
POZ-6	0/20	100%	0.0002-0.001	0.00024	0.0002	0.00024		0.000000032	0.0001789	0.7454	0.002	mg/L	N	0	0	NA	NA	NA		0.0002	No			No		No	No
POZ-7	2/20	90%	0.0002-0.001	0.000251	0.0002	0.0004091	0.000378	3.27E-08	0.0001808	0.7193	0.002	mg/L	N	0	0	Yes	No	NA		0.0002	No			No		No	No
CCR Appendix-IV: Molybdenum, Total (mg/L)																											
CBW-1	0/22	100%	0.005-0.02	0.00909	0.01	0.01		0.00001104	0.003322	0.3655	0.1	mg/L	N	0	0	NA	NA	NA	NA				0.020		0.10		
PM-1	0/22	100%	0.005-0.01	0.00864	0.01	0.01		0.000005195	0.002279	0.2639	0.1	mg/L	N	0	0	NA	NA	NA									
POZ-4	0/20	100%	0.005-0.01	0.0085	0.01	0.01		0.000005526	0.002351	0.2766	0.1	mg/L	N	0	0	NA	NA	NA		0.005	No			No		No	No
POZ-6	0/20	100%	0.005-0.01	0.0085	0.01	0.01		0.000005526	0.002351	0.2766	0.1	mg/L	N	0	0	NA	NA	NA		0.005	No			No		No	No
POZ-7	0/20	100%	0.005-0.01	0.0085	0.01	0.01		0.000005526	0.002351	0.2766	0.1	mg/L	N	0	0	NA	NA	NA		0.005	No			No		No	No
CCR Appendix-IV: Radium-226 & 228 (pCi/L)																											
CBW-1	16/23	30%	4-4	3.17	4	5.29	6.34	2.649	1.628	0.5128	5	pCi/L	Y	4	0	No	No	Decreasing	Non-parametric				16.3		16.3		
PM-1	17/23	26%	4-4	3.73	3.7	6.84	16.3	9.78	3.127	0.838	5	pCi/L	Y	2	0	Yes	No	Decreasing									
POZ-4	15/22	32%	4-4	3.29	4	4.943	6.29	2.132	1.46	0.444	5	pCi/L	Y	1	0	No	No	Stable		2.70	Yes			No		No	No
POZ-6	14/22	36%	4-4	2.73	3.32	4.573	4.78	2.283	1.511	0.5539	5	pCi/L	N	0	0	No	No	Decreasing		2.64	Yes			No		No	No
POZ-7	19/22	14%	4-4	3.31	4	4.879	5.39	2.113	1.454	0.4388	5	pCi/L	Y	1	0	No	No	Stable		3.68	Yes			No		No	No
CCR Appendix-IV: Selenium, Total (mg/L)																											
CBW-1	0/24	100%	0.0025-0.05	0.0124	0.01	0.02		0.00007595	0.008715	0.7017	0.05	mg/L	N	0	1	NA	NA	NA	NA				0.050		0.050		
PM-1	0/24	100%	0.0025-0.02	0.0107	0.01	0.02		0.00001602	0.004003	0.3731	0.05	mg/L	N	0	0	NA	NA	NA									
POZ-4	0/23	100%	0.0025-0.02	0.0105	0.01	0.02		0.00001816	0.004261	0.4041	0.05	mg/L	N	0	0	NA	NA	NA		0.010	No			No		No	No
POZ-6	0/23	100%	0.0025-0.02	0.0105	0.01	0.02		0.00001816	0.004261	0.4041	0.05	mg/L	N	0	0	NA	NA	NA		0.010	No			No		No	No
POZ-7	0/23	100%	0.0025-0.02	0.0105	0.01	0.02		0.00001816	0.004261	0.4041	0.05	mg/L	N	0	0	NA	NA	NA		0.010	No			No		No	No
CCR Appendix-IV: Thallium, Total (mg/L)																											
CBW-1	0/22	100%	0.001-0.001	0.001	0.001	0.001		0	0	0	0.002	mg/L	N	0	0	NA	NA	NA	NA				0.010		0.010		
PM-1	0/22	100%	0.001-0.01	0.00141	0.001	0.001		0.000003682	0.001919	1.362	0.002	mg/L	N	0	1	NA	NA	NA									
POZ-4	0/20	100%	0.001-0.001	0.001	0.001	0.001		0	0	0	0.002	mg/L	N	0	0	NA	NA	NA		0.001	No			No		No	No
POZ-6	0/20	100%	0.001-0.001	0.001	0.001	0.001		0	0	0	0.002	mg/L	N	0	0	NA	NA	NA		0.001	No			No		No	No
POZ-7	0/20	100%	0.001-0.001	0.001	0.001	0.001		0	0	0	0.002	mg/L	N	0	0	NA	NA	NA		0.001	No			No		No	No

Appendix B:

Certificates of Analysis, External Lab Reports, & Field Parameters

santee cooper

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 # AF87807 **Location:** GW Well PM-1 **Date:** 01/08/2024 **Sample Collector:** WJK/ML

Loc. Code PM-1 **Time:** 10:48

Analysis	Result	Units	Test Date	Analyst	Method
Aluminum	0.86	mg/L	01/19/2024	SKJACOBS	EPA 6020B
Arsenic	<5.0	ug/L	01/19/2024	SKJACOBS	EPA 6020B
Arsenic Dissolved	<5.0	ug/L	01/12/2024	SKJACOBS	EPA 6020B
Barium	77.8	ug/L	01/19/2024	SKJACOBS	EPA 6020B
Beryllium	<0.5	ug/L	01/19/2024	SKJACOBS	EPA 6020B
Calcium	119	mg/L	01/19/2024	SKJACOBS	EPA 6020B
Cadmium	<0.5	ug/L	01/19/2024	SKJACOBS	EPA 6020B
Cobalt	1.6	ug/L	01/19/2024	SKJACOBS	EPA 6020B
Chromium	<5.0	ug/L	01/19/2024	SKJACOBS	EPA 6020B
Iron	11400	ug/L	01/19/2024	SKJACOBS	EPA 6020B
Potassium	0.65	mg/L	01/19/2024	SKJACOBS	EPA 6020B
Magnesium	0.70	mg/L	01/19/2024	SKJACOBS	EPA 6020B
Sodium	5.8	mg/L	01/19/2024	SKJACOBS	EPA 6020B
Lead	<1.0	ug/L	01/19/2024	SKJACOBS	EPA 6020B
Antimony	<5.0	ug/L	01/19/2024	SKJACOBS	EPA 6020B
Selenium	<10.0	ug/L	01/19/2024	SKJACOBS	EPA 6020B
Thallium	<1.0	ug/L	01/19/2024	SKJACOBS	EPA 6020B
Boron	14.2	ug/L	01/11/2024	SKJACOBS	EPA 6010D
Lithium	5.26	ug/L	01/11/2024	SKJACOBS	EPA 6010D
Molybdenum	<5.0	ug/L	01/11/2024	SKJACOBS	EPA 6010D
Mercury	<0.2	ug/L	01/22/2024	EUROFINS SAV	EPA 7470
Zinc	<10.0	ug/L	01/19/2024	SKJACOBS	EPA 6020B
Total Organic Carbon	5.49	mg/L	01/17/2024	GEL	SM 5310B
Nitrate	<0.10	mg/L	01/10/2024	KCWELLS	EPA 300.0
Fluoride	<0.10	mg/L	01/10/2024	KCWELLS	EPA 300.0
Chloride	12.8	mg/L	01/10/2024	KCWELLS	EPA 300.0
Sulfate	7.62	mg/L	01/10/2024	KCWELLS	EPA 300.0
Total Dissolved Solids	193.8	mg/L	01/12/2024	SJBROWN	SM 2540C
Radium 226	0.612	pCi/L	01/24/2024	GEL	EPA 903.1 Mod
Radium 228	1.24	pCi/L	01/23/2024	GEL	EPA 904.0
Radium 226/228 Combined Calculation	1.852	pCi/L	02/12/2024	SJLEVY	EPA 903.1 Mod
pH	5.13	SU	01/08/2024	WJK/ML	

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: Validation date: 3/27/24

Linda Williams - Manager Analytical Services

Authorized Signature Only- Not Valid Unless Signed

santee cooper

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 # AF87768 **Location:** GW Well CBW-1 **Date:** 01/08/2024 **Sample Collector:** WJK/ML

Loc. Code CBW-1 **Time:** 11:55

Analysis	Result	Units	Test Date	Analyst	Method
Aluminum	0.60	mg/L	01/19/2024	SKJACOBS	EPA 6020B
Arsenic	<5.0	ug/L	01/19/2024	SKJACOBS	EPA 6020B
Arsenic Dissolved	<5.0	ug/L	01/12/2024	SKJACOBS	EPA 6020B
Barium	41.3	ug/L	01/19/2024	SKJACOBS	EPA 6020B
Beryllium	<0.5	ug/L	01/19/2024	SKJACOBS	EPA 6020B
Calcium	25.0	mg/L	01/19/2024	SKJACOBS	EPA 6020B
Cadmium	<0.5	ug/L	01/19/2024	SKJACOBS	EPA 6020B
Cobalt	0.87	ug/L	01/19/2024	SKJACOBS	EPA 6020B
Chromium	<5.0	ug/L	01/19/2024	SKJACOBS	EPA 6020B
Iron	<50.0	ug/L	01/19/2024	SKJACOBS	EPA 6020B
Potassium	0.73	mg/L	01/19/2024	SKJACOBS	EPA 6020B
Magnesium	1.9	mg/L	01/19/2024	SKJACOBS	EPA 6020B
Sodium	13.4	mg/L	01/19/2024	SKJACOBS	EPA 6020B
Lead	2.4	ug/L	01/19/2024	SKJACOBS	EPA 6020B
Antimony	<5.0	ug/L	01/19/2024	SKJACOBS	EPA 6020B
Selenium	<10.0	ug/L	01/19/2024	SKJACOBS	EPA 6020B
Thallium	<1.0	ug/L	01/19/2024	SKJACOBS	EPA 6020B
Boron	19.3	ug/L	01/11/2024	SKJACOBS	EPA 6010D
Lithium	<5.0	ug/L	01/11/2024	SKJACOBS	EPA 6010D
Molybdenum	<5.0	ug/L	01/11/2024	SKJACOBS	EPA 6010D
Mercury	<0.2	ug/L	01/22/2024	EUROFINS SAV	EPA 7470
Zinc	<10.0	ug/L	01/19/2024	SKJACOBS	EPA 6020B
Total Organic Carbon	2.19	mg/L	01/17/2024	GEL	SM 5310B
Nitrate	0.72	mg/L	01/10/2024	KCWELLS	EPA 300.0
Fluoride	0.14	mg/L	01/10/2024	KCWELLS	EPA 300.0
Chloride	3.48	mg/L	01/10/2024	KCWELLS	EPA 300.0
Sulfate	83.6	mg/L	01/10/2024	KCWELLS	EPA 300.0
Total Dissolved Solids	188.8	mg/L	01/12/2024	SJBROWN	SM 2540C
Radium 226	0.278	pCi/L	01/24/2024	GEL	EPA 903.1 Mod
Radium 228	1.22	pCi/L	01/23/2024	GEL	EPA 904.0
Radium 226/228 Combined Calculation	1.498	pCi/L	02/12/2024	SJLEVY	EPA 903.1 Mod
pH	4.44	SU	01/08/2024	WJK/ML	

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: Validation date: 3/27/24

Linda Williams - Manager Analytical Services

Authorized Signature Only- Not Valid Unless Signed

santee cooper

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 # AF87808 **Location:** GW Well POZ-3 **Date:** 01/23/2024 **Sample Collector:** WJK/CS

Loc. Code POZ-3 **Time:** 12:08

Analysis	Result	Units	Test Date	Analyst	Method
Arsenic	<5.0	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Arsenic Dissolved	<5.0	ug/L	02/06/2024	SKJACOBS	EPA 6020B
Barium	94.0	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Beryllium	<0.5	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Calcium	180	mg/L	02/07/2024	SKJACOBS	EPA 6020B
Cadmium	<0.5	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Cobalt	0.89	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Chromium	<5.0	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Iron	<50.0	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Lead	<1.0	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Antimony	<5.0	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Selenium	<10.0	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Thallium	<1.0	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Boron	12.4	ug/L	01/30/2024	SKJACOBS	EPA 6010D
Zinc	<10.0	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Total Organic Carbon	2.71	mg/L	01/30/2024	GEL	SM 5310B
Nitrate	<0.10	mg/L	01/25/2024	KCWELLS	EPA 300.0
Fluoride	<0.10	mg/L	01/25/2024	KCWELLS	EPA 300.0
Chloride	9.42	mg/L	01/25/2024	KCWELLS	EPA 300.0
Sulfate	74.2	mg/L	01/25/2024	KCWELLS	EPA 300.0
Total Dissolved Solids	588.8	mg/L	01/25/2024	KCWELLS	SM 2540C
Radium 226	0.309	pCi/L	02/15/2024	GEL	EPA 903.1 Mod
Radium 228	2.73	pCi/L	02/22/2024	GEL	EPA 904.0
Radium 226/228 Combined Calculation	3.039	pCi/L	02/22/2024	TDHARRIS	EPA 903.1 Mod
pH	6.47	SU	01/23/2024	WJK/CS	

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: _____ Validation date: 3/27/24

Linda Williams - Manager Analytical Services

Authorized Signature Only- Not Valid Unless Signed

santee cooper

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 # AF87809 **Location:** GW Well POZ-4 **Date:** 01/23/2024 **Sample Collector:** WJK/CS

Loc. Code POZ-4 **Time:** 14:37

Analysis	Result	Units	Test Date	Analyst	Method
Arsenic	<5.0	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Arsenic Dissolved	<5.0	ug/L	02/06/2024	SKJACOBS	EPA 6020B
Barium	155	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Beryllium	<0.5	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Calcium	320	mg/L	02/07/2024	SKJACOBS	EPA 6020B
Cadmium	<0.5	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Cobalt	77.9	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Chromium	<5.0	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Iron	2080	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Lead	<1.0	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Antimony	<5.0	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Selenium	<10.0	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Thallium	<1.0	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Boron	26.9	ug/L	01/30/2024	SKJACOBS	EPA 6010D
Zinc	11.6	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Total Organic Carbon	1.86	mg/L	01/30/2024	GEL	SM 5310B
Nitrate	0.48	mg/L	01/25/2024	KCWELLS	EPA 300.0
Fluoride	<0.10	mg/L	01/25/2024	KCWELLS	EPA 300.0
Chloride	6.20	mg/L	01/25/2024	KCWELLS	EPA 300.0
Sulfate	5.32	mg/L	01/25/2024	KCWELLS	EPA 300.0
Total Dissolved Solids	1552	mg/L	01/25/2024	KCWELLS	SM 2540C
Radium 226	0.403	pCi/L	02/15/2024	GEL	EPA 903.1 Mod
Radium 228	1.99	pCi/L	02/22/2024	GEL	EPA 904.0
Radium 226/228 Combined Calculation	2.393	pCi/L	02/22/2024	SJLEVY	EPA 903.1 Mod
pH	6.24	SU	01/23/2024	WJK/CS	

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: _____ Validation date: 3/27/24

Linda Williams - Manager Analytical Services

Authorized Signature Only- Not Valid Unless Signed

santee cooper

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 # AF87810 **Location:** GW Well POZ-5D **Date:** 01/23/2024 **Sample Collector:**

Loc. Code POZ-5D **Time:** 10:46

Analysis	Result	Units	Test Date	Analyst	Method
Arsenic	<5.0	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Arsenic Dissolved	<5.0	ug/L	02/06/2024	SKJACOBS	EPA 6020B
Barium	69.8	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Cadmium	<0.5	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Cobalt	9.7	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Chromium	<5.0	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Iron	11600	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Lead	<1.0	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Selenium	<10.0	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Zinc	14.4	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Boron	244	ug/L	01/30/2024	SKJACOBS	EPA 6010D
Total Organic Carbon	2.39	mg/L	01/30/2024	GEL	SM 5310B
Chloride	816	mg/L	01/25/2024	KCWELLS	EPA 300.0
Nitrate	<0.10	mg/L	01/25/2024	KCWELLS	EPA 300.0
Sulfate	649	mg/L	01/25/2024	KCWELLS	EPA 300.0
Total Dissolved Solids	3035	mg/L	01/25/2024	KCWELLS	SM 2540C
pH	6.47	SU	01/23/2024	WJK/CS	

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

Sample Validated: _____ Final Validation Date: 3/27/24

Linda Williams - Manager, Analytical Services

santee cooper

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 # AF87811 **Location:** GW Well POZ-6 **Date:** 01/23/2024 **Sample Collector:** WJK/CS

Loc. Code POZ-6 **Time:** 15:42

Analysis	Result	Units	Test Date	Analyst	Method
Arsenic	<5.0	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Arsenic Dissolved	<5.0	ug/L	02/06/2024	SKJACOBS	EPA 6020B
Barium	83.4	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Beryllium	<0.5	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Calcium	431	mg/L	02/07/2024	SKJACOBS	EPA 6020B
Cadmium	<0.5	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Cobalt	1.6	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Chromium	<5.0	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Iron	13200	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Lead	<1.0	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Antimony	<5.0	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Selenium	<10.0	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Thallium	<1.0	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Boron	38.6	ug/L	01/30/2024	SKJACOBS	EPA 6010D
Zinc	<10.0	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Total Organic Carbon	2.77	mg/L	01/30/2024	GEL	SM 5310B
Nitrate	<0.10	mg/L	01/25/2024	KCWELLS	EPA 300.0
Fluoride	<0.10	mg/L	01/25/2024	KCWELLS	EPA 300.0
Chloride	323	mg/L	01/25/2024	KCWELLS	EPA 300.0
Sulfate	494	mg/L	01/25/2024	KCWELLS	EPA 300.0
Total Dissolved Solids	1872	mg/L	01/25/2024	KCWELLS	SM 2540C
Radium 226	1.05	pCi/L	02/15/2024	GEL	EPA 903.1 Mod
Radium 228	-0.619	pCi/L	02/22/2024	GEL	EPA 904.0
Radium 226/228 Combined Calculation	1.05	pCi/L	02/22/2024	TDHARRIS	EPA 903.1 Mod
pH	6.55	SU	01/23/2024	WJK/CS	

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: Validation date: 3/27/24

Linda Williams - Manager Analytical Services

Authorized Signature Only- Not Valid Unless Signed

santee cooper

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 # AF87812 **Location:** GW Well POZ-7 **Date:** 01/24/2024 **Sample Collector:** WJK/ML

Loc. Code POZ-7 **Time:** 14:25

Analysis	Result	Units	Test Date	Analyst	Method
Arsenic	<5.0	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Arsenic Dissolved	<5.0	ug/L	02/06/2024	SKJACOBS	EPA 6020B
Barium	94.9	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Beryllium	0.58	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Calcium	8.9	mg/L	02/07/2024	SKJACOBS	EPA 6020B
Cadmium	<0.5	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Cobalt	1.2	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Chromium	<5.0	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Iron	<50.0	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Lead	<1.0	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Antimony	<5.0	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Selenium	<10.0	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Thallium	<1.0	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Boron	<10.0	ug/L	01/30/2024	SKJACOBS	EPA 6010D
Zinc	<10.0	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Total Organic Carbon	<1	mg/L	01/30/2024	GEL	SM 5310B
Nitrate	<0.10	mg/L	01/25/2024	KCWELLS	EPA 300.0
Fluoride	<0.10	mg/L	01/25/2024	KCWELLS	EPA 300.0
Chloride	21.0	mg/L	01/25/2024	KCWELLS	EPA 300.0
Sulfate	<2.0	mg/L	01/25/2024	KCWELLS	EPA 300.0
Total Dissolved Solids	105.0	mg/L	01/25/2024	KCWELLS	SM 2540C
Radium 226	0.508	pCi/L	02/15/2024	GEL	EPA 903.1 Mod
Radium 228	0.581	pCi/L	02/22/2024	GEL	EPA 904.0
Radium 226/228 Combined Calculation	1.089	pCi/L	02/22/2024	SJLEVY	EPA 903.1 Mod
pH	5.15	SU	01/24/2024	WJK/ML	

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: Validation date: 3/27/24

Linda Williams - Manager Analytical Services

Authorized Signature Only- Not Valid Unless Signed

santee cooper

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 # AF87813 **Location:** GW Well POZ-7 **Date:** 01/24/2024 **Sample Collector:** WJK/ML

Loc. Code POZ-7 DUP **Time:** 14:30

Analysis	Result	Units	Test Date	Analyst	Method
Arsenic	<5.0	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Arsenic Dissolved	<5.0	ug/L	02/06/2024	SKJACOBS	EPA 6020B
Barium	90.9	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Beryllium	0.62	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Calcium	8.2	mg/L	02/07/2024	SKJACOBS	EPA 6020B
Cadmium	<0.5	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Cobalt	1.3	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Chromium	<5.0	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Iron	<50.0	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Lead	<1.0	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Antimony	<5.0	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Selenium	<10.0	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Thallium	<1.0	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Boron	10.2	ug/L	01/30/2024	SKJACOBS	EPA 6010D
Zinc	<10.0	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Total Organic Carbon	<1	mg/L	01/30/2024	GEL	SM 5310B
Nitrate	<0.10	mg/L	01/25/2024	KCWELLS	EPA 300.0
Fluoride	<0.10	mg/L	01/25/2024	KCWELLS	EPA 300.0
Chloride	20.4	mg/L	01/25/2024	KCWELLS	EPA 300.0
Sulfate	<2.0	mg/L	01/25/2024	KCWELLS	EPA 300.0
Total Dissolved Solids	68.75	mg/L	01/25/2024	KCWELLS	SM 2540C
Radium 226	0.981	pCi/L	02/15/2024	GEL	EPA 903.1 Mod
Radium 228	2.96	pCi/L	02/22/2024	GEL	EPA 904.0
Radium 226/228 Combined Calculation	3.941	pCi/L	02/22/2024	SJLEVY	EPA 903.1 Mod

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 - Manager Analytical Services Validation date: 3/27/24

Authorized Signature Only- Not Valid Unless Signed

santee cooper

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 # AF87814 **Location:** GW Well POZ-8 **Date:** 01/25/2024 **Sample Collector:** WJK/ML

Loc. Code POZ-8 **Time:** 09:28

Analysis	Result	Units	Test Date	Analyst	Method
Arsenic	<5.0	ug/L	02/08/2024	SKJACOBS	EPA 6020B
Barium	796	ug/L	02/12/2024	SKJACOBS	EPA 6020B
Beryllium	<0.5	ug/L	02/12/2024	SKJACOBS	EPA 6020B
Calcium	1030	mg/L	02/08/2024	SKJACOBS	EPA 6020B
Cadmium	<0.5	ug/L	02/08/2024	SKJACOBS	EPA 6020B
Cobalt	<0.5	ug/L	02/08/2024	SKJACOBS	EPA 6020B
Chromium	<5.0	ug/L	02/08/2024	SKJACOBS	EPA 6020B
Lead	<1.0	ug/L	02/08/2024	SKJACOBS	EPA 6020B
Antimony	<5.0	ug/L	02/08/2024	SKJACOBS	EPA 6020B
Selenium	<10.0	ug/L	02/08/2024	SKJACOBS	EPA 6020B
Thallium	<1.0	ug/L	02/08/2024	SKJACOBS	EPA 6020B
Boron	48.4	ug/L	01/31/2024	SKJACOBS	EPA 6010D
Lithium	307	ug/L	01/31/2024	SKJACOBS	EPA 6010D
Molybdenum	<5.0	ug/L	01/31/2024	SKJACOBS	EPA 6010D
Mercury	<0.2	ug/L	02/06/2024	EUROFINS SAV	EPA 7470
Fluoride	<0.10	mg/L	01/31/2024	KCWELLS	EPA 300.0
Chloride	2010	mg/L	01/31/2024	KCWELLS	EPA 300.0
Sulfate	180	mg/L	01/31/2024	KCWELLS	EPA 300.0
Total Dissolved Solids	4562	mg/L	01/31/2024	KCWELLS	SM 2540C
Radlum 226	1.08	pCi/L	02/21/2024	GEL	EPA 903.1 Mod
Radium 228	0.712	pCi/L	02/23/2024	GEL	EPA 904.0
Radium 226/228 Combined Calculation	1.792	pCi/L	03/05/2024	SJLEVY	EPA 903.1 Mod
pH	6.37	SU	01/25/2024	WJK/ML	

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: Validation date: 3/27/24

Linda Williams - Manager Analytical Services

Authorized Signature Only- Not Valid Unless Signed

santee cooper

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 # AF87789 **Location:** GW Well CCMLF-1 **Date:** 01/24/2024 **Sample Collector:** WJK/ML

Loc. Code CCMLF-1 **Time:** 12:28

Analysis	Result	Units	Test Date	Analyst	Method
Arsenic	<5.0	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Barium	79.7	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Beryllium	<0.5	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Calcium	13.3	mg/L	02/07/2024	SKJACOBS	EPA 6020B
Cadmium	<0.5	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Cobalt	2.1	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Chromium	<5.0	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Lead	<1.0	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Antimony	<5.0	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Selenium	<10.0	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Thalllum	<1.0	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Boron	24.0	ug/L	01/30/2024	SKJACOBS	EPA 6010D
Lithium	<5.0	ug/L	01/30/2024	SKJACOBS	EPA 6010D
Molybdenum	<5.0	ug/L	01/30/2024	SKJACOBS	EPA 6010D
Mercury	<0.2	ug/L	02/06/2024	EUROFINS SAV	EPA 7470
Fluoride	<0.10	mg/L	01/25/2024	KCWELLS	EPA 300.0
Chloride	9.82	mg/L	01/25/2024	KCWELLS	EPA 300.0
Sulfate	15.6	mg/L	01/25/2024	KCWELLS	EPA 300.0
Total Dissolved Solids	65.00	mg/L	01/25/2024	KCWELLS	SM 2540C
pH	5.53	SU	01/24/2024	WJK/ML	
Radium 226	0.793	pCi/L	02/15/2024	GEL	EPA 903.1 Mod
Radium 228	0.349	pCi/L	02/22/2024	GEL	EPA 904.0
Radium 226/228 Combined Calculation	1.142	pCi/L	03/05/2024	SJLEVY	EPA 903.1 Mod

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

Sample Validated: Linda Williams - Manager, Analytical Services

Final Validation Date: 3/27/24

santee cooper

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 # AF87790 **Location:** GW Well CCMLF-1D **Date:** 01/24/2024 **Sample Collector:** WJK/ML

Loc. Code CCMLF-1D **Time:** 11:31

Analysis	Result	Units	Test Date	Analyst	Method
Arsenic	<5.0	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Barium	37.4	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Beryllium	<0.5	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Calcium	55.0	mg/L	02/07/2024	SKJACOBS	EPA 6020B
Cadmium	<0.5	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Cobalt	0.64	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Chromium	<5.0	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Lead	<1.0	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Antimony	<5.0	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Selenium	<10.0	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Thallium	<1.0	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Boron	15.6	ug/L	01/30/2024	SKJACOBS	EPA 6010D
Lithium	<5.0	ug/L	01/30/2024	SKJACOBS	EPA 6010D
Molybdenum	<5.0	ug/L	01/30/2024	SKJACOBS	EPA 6010D
Mercury	<0.2	ug/L	02/06/2024	EUROFINS SAV	EPA 7470
Fluoride	<0.10	mg/L	01/25/2024	KCWELLS	EPA 300.0
Chloride	6.16	mg/L	01/25/2024	KCWELLS	EPA 300.0
Sulfate	3.99	mg/L	01/25/2024	KCWELLS	EPA 300.0
Total Dissolved Solids	167.5	mg/L	01/25/2024	KCWELLS	SM 2540C
pH	7.23	SU	01/24/2024	WJK/ML	
Radium 226	0.631	pCi/L	02/15/2024	GEL	EPA 903.1 Mod
Radium 228	0.998	pCi/L	02/22/2024	GEL	EPA 904.0
Radium 226/228 Combined Calculation	1.629	pCi/L	03/05/2024	SJLEVY	EPA 903.1 Mod

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

Sample Validated: Linda Williams - Manager, Analytical Services

Final Validation Date: 3/27/24

santee cooper

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 # AF87791 **Location:** GW Well CCMLF-2 **Date:** 01/24/2024 **Sample Collector:** WJK/ML

Loc. Code CCMLF-2 **Time:** 09:58

Analysis	Result	Units	Test Date	Analyst	Method
Arsenic	<5.0	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Barium	21.3	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Beryllium	<0.5	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Calcium	3.0	mg/L	02/07/2024	SKJACOBS	EPA 6020B
Cadmium	<0.5	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Cobalt	0.61	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Chromium	<5.0	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Lead	<1.0	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Antimony	<5.0	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Selenium	<10.0	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Thallium	<1.0	ug/L	02/07/2024	SKJACOBS	EPA 6020B
Boron	17.0	ug/L	01/30/2024	SKJACOBS	EPA 6010D
Lithium	<5.0	ug/L	01/30/2024	SKJACOBS	EPA 6010D
Molybdenum	<5.0	ug/L	01/30/2024	SKJACOBS	EPA 6010D
Mercury	<0.2	ug/L	02/06/2024	EUROFINS SAV	EPA 7470
Fluoride	<0.10	mg/L	01/25/2024	KCWELLS	EPA 300.0
Chloride	3.26	mg/L	01/25/2024	KCWELLS	EPA 300.0
Sulfate	2.19	mg/L	01/25/2024	KCWELLS	EPA 300.0
Total Dissolved Solids	28.75	mg/L	01/30/2024	TDHARRIS	SM 2540C
pH	5.09	SU	01/24/2024	WJK/ML	
Radium 226	0.369	pCi/L	02/15/2024	GEL	EPA 903.1 Mod
Radium 228	0.905	pCi/L	02/22/2024	GEL	EPA 904.0
Radium 226/228 Combined Calculation	1.274	pCi/L	03/05/2024	SJLEVY	EPA 903.1 Mod

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

Sample Validated: Linda Williams - Manager, Analytical Services

Final Validation Date: 3/27/24

santee cooper

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 # AF87766 **Location:** GW Well CAP-13 **Date:** 01/17/2024 **Sample Collector:** WJK/ML

Loc. Code CAP-13 **Time:** 10:43

Analysis	Result	Units	Test Date	Analyst	Method
Aluminum	<0.1	mg/L	01/30/2024	SKJACOBS	EPA 6020B
Arsenic	<5.0	ug/L	01/30/2024	SKJACOBS	EPA 6020B
Arsenic Dissolved	<5.0	ug/L	02/06/2024	SKJACOBS	EPA 6020B
Barium	169	ug/L	02/06/2024	SKJACOBS	EPA 6020B
Beryllium	<0.5	ug/L	01/30/2024	SKJACOBS	EPA 6020B
Calcium	42.1	mg/L	01/30/2024	SKJACOBS	EPA 6020B
Cadmium	<0.5	ug/L	01/30/2024	SKJACOBS	EPA 6020B
Cobalt	0.65	ug/L	01/30/2024	SKJACOBS	EPA 6020B
Chromium	<5.0	ug/L	01/30/2024	SKJACOBS	EPA 6020B
Iron	11500	ug/L	02/06/2024	SKJACOBS	EPA 6020B
Potassium	1.7	mg/L	01/30/2024	SKJACOBS	EPA 6020B
Magnesium	1.9	mg/L	02/06/2024	SKJACOBS	EPA 6020B
Sodium	5.6	mg/L	01/30/2024	SKJACOBS	EPA 6020B
Lead	<1.0	ug/L	01/30/2024	SKJACOBS	EPA 6020B
Antimony	<5.0	ug/L	01/30/2024	SKJACOBS	EPA 6020B
Selenium	<10.0	ug/L	01/30/2024	SKJACOBS	EPA 6020B
Thallium	<1.0	ug/L	01/30/2024	SKJACOBS	EPA 6020B
Boron	15.2	ug/L	01/23/2024	SKJACOBS	EPA 6010D
Lithium	<5.0	ug/L	01/23/2024	SKJACOBS	EPA 6010D
Molybdenum	<5.0	ug/L	01/23/2024	SKJACOBS	EPA 6010D
Mercury	<0.2	ug/L	01/25/2024	EUROFINS SAV	EPA 7470
Fluoride	<0.10	mg/L	01/18/2024	KCWELLS	EPA 300.0
Chloride	4.03	mg/L	01/18/2024	KCWELLS	EPA 300.0
Sulfate	84.8	mg/L	01/18/2024	KCWELLS	EPA 300.0
Total Dissolved Solids	341.2	mg/L	01/19/2024	KCWELLS	SM 2540C
Radium 226	0.769	pCi/L	01/31/2024	GEL	EPA 903.1 Mod
Radium 228	1.84	pCi/L	01/31/2024	GEL	EPA 904.0
Radium 226/228 Combined Calculation	2.609	pCi/L	02/12/2024	SJLEVY	EPA 903.1 Mod
pH	5.35	SU	01/17/2024	WJK/ML	

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: Validation date: 3/27/24

Linda Williams - Manager Analytical Services

Authorized Signature Only- Not Valid Unless Signed

santee cooper

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 # AF93803 **Location:** GW Well POZ-3 **Date:** 03/05/2024 **Sample Collector:** WJK/BM

Loc. Code POZ-3 **Time:** 09:46

Analysis	Result	Units	Test Date	Analyst	Method
Arsenic	<5.0	ug/L	03/12/2024	SKJACOBS	EPA 6020B
Barium	97.5	ug/L	03/12/2024	SKJACOBS	EPA 6020B
Beryllium	<0.5	ug/L	03/12/2024	SKJACOBS	EPA 6020B
Calcium	179	mg/L	03/12/2024	SKJACOBS	EPA 6020B
Cadmium	<0.5	ug/L	03/12/2024	SKJACOBS	EPA 6020B
Cobalt	0.98	ug/L	03/12/2024	SKJACOBS	EPA 6020B
Chromium	<5.0	ug/L	03/12/2024	SKJACOBS	EPA 6020B
Lead	<1.0	ug/L	03/12/2024	SKJACOBS	EPA 6020B
Antimony	<5.0	ug/L	03/12/2024	SKJACOBS	EPA 6020B
Selenium	<10.0	ug/L	03/12/2024	SKJACOBS	EPA 6020B
Thallium	<1.0	ug/L	03/12/2024	SKJACOBS	EPA 6020B
Boron	12.0	ug/L	03/12/2024	SKJACOBS	EPA 6010D
Lithium	<5.0	ug/L	03/12/2024	SKJACOBS	EPA 6010D
Molybdenum	<5.0	ug/L	03/12/2024	SKJACOBS	EPA 6010D
Mercury	<0.2	ug/L	03/12/2024	EUROFINS SAV	EPA 7470
Fluoride	0.12	mg/L	03/07/2024	LCWILLIAMS	EPA 300.0
Chloride	9.09	mg/L	03/07/2024	LCWILLIA	EPA 300.0
Sulfate	83.9	mg/L	03/07/2024	LCWILLIA	EPA 300.0
Total Dissolved Solids	598.8	mg/L	03/13/2024	KCWELLS	SM 2540C
Radium 226	0.511	pCi/L	04/02/2024	GEL	EPA 903.1 Mod
Radium 228	2.90	pCi/L	03/28/2024	GEL	EPA 904.0
Radium 226/228 Combined Calculation	3.411	pCi/L	04/16/2024	SJLEVY	EPA 903.1 Mod
pH	6.47	SU	03/05/2024	WJK/BM	

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 - Manager Analytical Services Validation date: 4/23/24

Authorized Signature Only- Not Valid Unless Signed

santee cooper

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 # AF93804 **Location:** GW Well POZ-3 **Date:** 03/05/2024 **Sample Collector:** WJK/BM

Loc. Code POZ-3 DUP **Time:** 09:51

Analysis	Result	Units	Test Date	Analyst	Method
Arsenic	<5.0	ug/L	03/12/2024	SKJACOBS	EPA 6020B
Barium	95.3	ug/L	03/12/2024	SKJACOBS	EPA 6020B
Beryllium	<0.5	ug/L	03/12/2024	SKJACOBS	EPA 6020B
Calcium	180	mg/L	03/12/2024	SKJACOBS	EPA 6020B
Cadmium	<0.5	ug/L	03/12/2024	SKJACOBS	EPA 6020B
Cobalt	1.1	ug/L	03/12/2024	SKJACOBS	EPA 6020B
Chromium	<5.0	ug/L	03/12/2024	SKJACOBS	EPA 6020B
Lead	<1.0	ug/L	03/12/2024	SKJACOBS	EPA 6020B
Antimony	<5.0	ug/L	03/12/2024	SKJACOBS	EPA 6020B
Selenium	<10.0	ug/L	03/12/2024	SKJACOBS	EPA 6020B
Thallium	<1.0	ug/L	03/12/2024	SKJACOBS	EPA 6020B
Boron	12.4	ug/L	03/12/2024	SKJACOBS	EPA 6010D
Lithium	<5.0	ug/L	03/12/2024	SKJACOBS	EPA 6010D
Molybdenum	<5.0	ug/L	03/12/2024	SKJACOBS	EPA 6010D
Mercury	<0.2	ug/L	03/12/2024	EUROFINS SAV	EPA 7470
Fluoride	0.12	mg/L	03/07/2024	LCWILLIAMS	EPA 300.0
Chloride	8.53	mg/L	03/07/2024	LCWILLIA	EPA 300.0
Sulfate	84.0	mg/L	03/07/2024	LCWILLIA	EPA 300.0
Total Dissolved Solids	620.0	mg/L	03/13/2024	KCWELLS	SM 2540C
Radium 226	0.220	pCi/L	04/02/2024	GEL	EPA 903.1 Mod
Radium 228	-0.599	pCi/L	03/28/2024	GEL	EPA 904.0
Radium 226/228 Combined Calculation	0.220	pCi/L	04/16/2024	SJLEVY	EPA 903.1 Mod

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 - Manager Analytical Services Validation date: 4/23/24

Authorized Signature Only- Not Valid Unless Signed

santee cooper

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 # AF98794 **Location:** GW Well POZ-8 **Date:** 05/07/2024 **Sample Collector:** WJK/ML

Loc. Code POZ-8 **Time:** 13:16

Analysis	Result	Units	Test Date	Analyst	Method
Calcium	671	mg/L	05/16/2024	SKJACOBS	EPA 6020B
Lithium	143	ug/L	05/16/2024	SKJACOBS	EPA 6010D
Chloride	1220	mg/L	05/15/2024	KCWELLS	EPA 300.0
pH	6.54	SU	05/07/2024	JK/ML	

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: _____ Validation date: 6/7/24

Linda Williams - Manager Analytical Services

Authorized Signature Only- Not Valid Unless Signed

santee cooper

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 # AG01459 **Location:** GW Well CCMLF-1 **Date:** 06/13/2024 **Sample Collector:** ZM/BB

Loc. Code CCMLF-1 **Time:** 11:26

Analysis	Result	Units	Test Date	Analyst	Method
Arsenic	<5.0	ug/L	06/19/2024	SKJACOBS	EPA 6020B
Barium	65.6	ug/L	06/19/2024	SKJACOBS	EPA 6020B
Beryllium	<0.5	ug/L	06/19/2024	SKJACOBS	EPA 6020B
Calcium	23.6	mg/L	06/19/2024	SKJACOBS	EPA 6020B
Cadmium	<0.5	ug/L	06/19/2024	SKJACOBS	EPA 6020B
Cobalt	1.3	ug/L	06/19/2024	SKJACOBS	EPA 6020B
Chromium	<5.0	ug/L	06/19/2024	SKJACOBS	EPA 6020B
Lead	<1.0	ug/L	06/19/2024	SKJACOBS	EPA 6020B
Antimony	<5.0	ug/L	06/19/2024	SKJACOBS	EPA 6020B
Selenium	<10.0	ug/L	06/19/2024	SKJACOBS	EPA 6020B
Thallium	<1.0	ug/L	06/19/2024	SKJACOBS	EPA 6020B
Boron	16.7	ug/L	06/19/2024	SKJACOBS	EPA 6010D
Lithium	<5.0	ug/L	06/19/2024	SKJACOBS	EPA 6010D
Molybdenum	<5.0	ug/L	06/19/2024	SKJACOBS	EPA 6010D
Mercury	<0.2	ug/L	06/25/2024	EUROFINS SAV	EPA 7470
Fluoride	<0.10	mg/L	06/17/2024	KCWELLS	EPA 300.0
Chloride	7.26	mg/L	06/17/2024	KCWELLS	EPA 300.0
Sulfate	6.57	mg/L	06/17/2024	KCWELLS	EPA 300.0
Total Dissolved Solids	113.8	mg/L	06/18/2024	KRMATHER	SM 2540C
Radium 226	0.523	pCi/L	07/15/2024	GEL	EPA 903.1 Mod
Radium 228	1.63	pCi/L	07/03/2024	GEL	EPA 904.0
Radium 226/228 Combined Calculation	2.15	pCi/L	07/31/2024	SJLEVY	EPA 903.1 Mod
pH	5.37	SU	06/13/2024	ZM/BB	

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: Validation date: 8/2/24

Linda Williams - Manager Analytical Services

Authorized Signature Only- Not Valid Unless Signed

santee cooper

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 # AG01460 **Location:** GW Well CCMLF-1D **Date:** 06/13/2024 **Sample Collector:** ZM/BB

Loc. Code CCMLF-1D **Time:** 12:16

Analysis	Result	Units	Test Date	Analyst	Method
Arsenic	<5.0	ug/L	06/19/2024	SKJACOBS	EPA 6020B
Barium	41.4	ug/L	06/19/2024	SKJACOBS	EPA 6020B
Beryllium	<0.5	ug/L	06/19/2024	SKJACOBS	EPA 6020B
Calcium	53.2	mg/L	06/19/2024	SKJACOBS	EPA 6020B
Cadmium	<0.5	ug/L	06/19/2024	SKJACOBS	EPA 6020B
Cobalt	0.82	ug/L	06/19/2024	SKJACOBS	EPA 6020B
Chromium	<5.0	ug/L	06/19/2024	SKJACOBS	EPA 6020B
Lead	<1.0	ug/L	06/19/2024	SKJACOBS	EPA 6020B
Antimony	5.4	ug/L	06/19/2024	SKJACOBS	EPA 6020B
Selenium	<10.0	ug/L	06/19/2024	SKJACOBS	EPA 6020B
Thallium	<1.0	ug/L	06/19/2024	SKJACOBS	EPA 6020B
Boron	15.6	ug/L	06/19/2024	SKJACOBS	EPA 6010D
Lithium	<5.0	ug/L	06/19/2024	SKJACOBS	EPA 6010D
Molybdenum	<5.0	ug/L	06/19/2024	SKJACOBS	EPA 6010D
Mercury	<0.2	ug/L	06/25/2024	EUROFINS SAV	EPA 7470
Fluoride	<0.10	mg/L	06/17/2024	KCWELLS	EPA 300.0
Chloride	6.14	mg/L	06/17/2024	KCWELLS	EPA 300.0
Sulfate	3.41	mg/L	06/17/2024	KCWELLS	EPA 300.0
Total Dissolved Solids	256.2	mg/L	06/18/2024	KRMATHER	SM 2540C
Radium 226	0.391	pCi/L	07/15/2024	GEL	EPA 903.1 Mod
Radium 228	2.15	pCi/L	07/03/2024	GEL	EPA 904.0
Radium 226/228 Combined Calculation	2.54	pCi/L	07/31/2024	SJLEVY	EPA 903.1 Mod
pH	6.62	SU	06/13/2024	ZM/BB	

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: Validation date: 8/2/24

Linda Williams - Manager Analytical Services

Authorized Signature Only- Not Valid Unless Signed

santee cooper

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 # AG01461 **Location:** GW Well CCMLF-2 **Date:** 06/17/2024 **Sample Collector:** ZM/BB

Loc. Code CCMLF-2 **Time:** 13:21

Analysis	Result	Units	Test Date	Analyst	Method
Arsenic	<5.0	ug/L	06/25/2024	SKJACOBS	EPA 6020B
Barium	28.6	ug/L	06/25/2024	SKJACOBS	EPA 6020B
Beryllium	<0.5	ug/L	06/25/2024	SKJACOBS	EPA 6020B
Calcium	10.4	mg/L	06/25/2024	SKJACOBS	EPA 6020B
Cadmium	<0.5	ug/L	06/25/2024	SKJACOBS	EPA 6020B
Cobalt	0.56	ug/L	06/25/2024	SKJACOBS	EPA 6020B
Chromium	<5.0	ug/L	06/25/2024	SKJACOBS	EPA 6020B
Lead	<1.0	ug/L	06/25/2024	SKJACOBS	EPA 6020B
Antimony	<5.0	ug/L	06/25/2024	SKJACOBS	EPA 6020B
Selenium	<10.0	ug/L	06/25/2024	SKJACOBS	EPA 6020B
Thallium	<1.0	ug/L	06/25/2024	SKJACOBS	EPA 6020B
Boron	15.6	ug/L	06/20/2024	SKJACOBS	EPA 6010D
Lithium	<5.0	ug/L	06/20/2024	SKJACOBS	EPA 6010D
Molybdenum	<5.0	ug/L	06/20/2024	SKJACOBS	EPA 6010D
Mercury	<0.2	ug/L	06/24/2024	EUROFINS SAV	EPA 7470
Fluoride	<0.10	mg/L	06/25/2024	KCWELLS	EPA 300.0
Chloride	4.96	mg/L	06/25/2024	KCWELLS	EPA 300.0
Sulfate	<2.0	mg/L	07/08/2024	KCWELLS	EPA 300.0
Total Dissolved Solids	73.75	mg/L	06/20/2024	KRMATHER	SM 2540C
Radium 226	0.319	pCi/L	07/15/2024	GEL	EPA 903.1 Mod
Radium 228	-1.14	pCi/L	07/03/2024	GEL	EPA 904.0
Radium 226/228 Combined Calculation	-0.821	pCi/L	07/31/2024	SJLEVY	EPA 903.1 Mod
pH	5.31	SU	06/17/2024	ZM/BB	

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: Validation date: 8/7/24

Linda Williams - Manager Analytical Services

Authorized Signature Only- Not Valid Unless Signed

santee cooper

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 # AG01436 **Location:** GW Well CAP-13 **Date:** 06/11/2024 **Sample Collector:** ZM/BB

Loc. Code CAP-13 **Time:** 12:37

Analysis	Result	Units	Test Date	Analyst	Method
Arsenic	<5.0	ug/L	06/18/2024	SKJACOBS	EPA 6020B
Barium	123	ug/L	06/18/2024	SKJACOBS	EPA 6020B
Beryllium	<0.5	ug/L	06/18/2024	SKJACOBS	EPA 6020B
Calcium	29.7	mg/L	06/18/2024	SKJACOBS	EPA 6020B
Cadmium	<0.5	ug/L	06/18/2024	SKJACOBS	EPA 6020B
Cobalt	0.61	ug/L	06/18/2024	SKJACOBS	EPA 6020B
Chromium	<5.0	ug/L	06/18/2024	SKJACOBS	EPA 6020B
Lead	<1.0	ug/L	06/18/2024	SKJACOBS	EPA 6020B
Selenium	<10.0	ug/L	06/18/2024	SKJACOBS	EPA 6020B
Antimony	<5.0	ug/L	06/18/2024	SKJACOBS	EPA 6020B
Thallium	<1.0	ug/L	06/18/2024	SKJACOBS	EPA 6020B
Boron	18.8	ug/L	06/17/2024	SKJACOBS	EPA 6010D
Lithium	<5.0	ug/L	06/17/2024	SKJACOBS	EPA 6010D
Molybdenum	<5.0	ug/L	06/17/2024	SKJACOBS	EPA 6010D
Mercury	<0.2	ug/L	06/17/2024	EUROFINS SAV	EPA 7470
Fluoride	<0.10	mg/L	06/17/2024	KCWELLS	EPA 300.0
Chloride	5.05	mg/L	06/17/2024	KCWELLS	EPA 300.0
Sulfate	58.0	mg/L	06/17/2024	KCWELLS	EPA 300.0
Total Dissolved Solids	195.0	mg/L	06/17/2024	KRMATHER	SM 2540C
Radium 226	0.392	pCi/L	07/09/2024	GEL	EPA 903.1 Mod
Radium 228	1.37	pCi/L	07/02/2024	GEL	EPA 904.0
Radium 226/228 Combined Calculation	1.762	pCi/L	07/19/2024	SJLEVY	EPA 903.1 Mod
pH	4.98	SU	06/11/2024	ZM/BB	

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: _____ Validation date: 8/2/24

Linda Williams - Manager Analytical Services

Authorized Signature Only- Not Valid Unless Signed

santee cooper

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 # AG01476 **Location:** GW Well PM-1 **Date:** 06/04/2024 **Sample Collector:** ZM/BB

Loc. Code PM-1 **Time:** 09:58

Analysis	Result	Units	Test Date	Analyst	Method
Arsenic	<5.0	ug/L	06/11/2024	SKJACOBS	EPA 6020B
Barium	76.9	ug/L	06/11/2024	SKJACOBS	EPA 6020B
Beryllium	<0.5	ug/L	06/11/2024	SKJACOBS	EPA 6020B
Calcium	10.5	mg/L	06/11/2024	SKJACOBS	EPA 6020B
Cadmium	<0.5	ug/L	06/11/2024	SKJACOBS	EPA 6020B
Cobalt	1.4	ug/L	06/11/2024	SKJACOBS	EPA 6020B
Chromium	<5.0	ug/L	06/11/2024	SKJACOBS	EPA 6020B
Iron	8890	ug/L	06/11/2024	SKJACOBS	EPA 6020B
Lead	<1.0	ug/L	06/11/2024	SKJACOBS	EPA 6020B
Selenium	<10.0	ug/L	06/11/2024	SKJACOBS	EPA 6020B
Antimony	<5.0	ug/L	06/11/2024	SKJACOBS	EPA 6020B
Thallium	<1.0	ug/L	06/11/2024	SKJACOBS	EPA 6020B
Zinc	<10.0	ug/L	06/11/2024	SKJACOBS	EPA 6020B
Boron	12.4	ug/L	06/12/2024	SKJACOBS	EPA 6010D
Lithium	<5.0	ug/L	06/12/2024	SKJACOBS	EPA 6010D
Molybdenum	<5.0	ug/L	06/12/2024	SKJACOBS	EPA 6010D
Mercury	<0.2	ug/L	06/17/2024	EUROFINS SAV	EPA 7470
Total Organic Carbon	4.48	mg/L	06/12/2024	GEL	SM 5310B
Fluoride	<0.10	mg/L	06/11/2024	KCWELLS	EPA 300.0
Chloride	12.1	mg/L	06/11/2024	KCWELLS	EPA 300.0
Nitrate	<0.10	mg/L	06/11/2024	KCWELLS	EPA 300.0
Sulfate	7.75	mg/L	06/11/2024	KCWELLS	EPA 300.0
Total Dissolved Solids	143.8	mg/L	06/07/2024	KCWELLS	SM 2540C
Radium 226	0.188	pCi/L	06/19/2024	GEL	EPA 903.1 Mod
Radium 228	1.46	pCi/L	06/25/2024	GEL	EPA 904.0
Radium 226/228 Combined Calculation	1.648	pCi/L	07/19/2024	SJLEVY	EPA 903.1 Mod
pH	5.20	SU	06/04/2024	ZM/BB	

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: _____ Validation date: 8/2/24

Linda Williams - Manager Analytical Services

Authorized Signature Only- Not Valid Unless Signed

santee cooper

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 # AG01438 **Location:** GW Well CBW-1 **Date:** 06/04/2024 **Sample Collector:** ZM/BB

Loc. Code CBW-1 **Time:** 08:53

Analysis	Result	Units	Test Date	Analyst	Method
Arsenic	<5.0	ug/L	06/11/2024	SKJACOBS	EPA 6020B
Barium	37.4	ug/L	06/11/2024	SKJACOBS	EPA 6020B
Beryllium	<0.5	ug/L	06/11/2024	SKJACOBS	EPA 6020B
Calcium	24.7	mg/L	06/11/2024	SKJACOBS	EPA 6020B
Cadmium	<0.5	ug/L	06/11/2024	SKJACOBS	EPA 6020B
Cobalt	0.84	ug/L	06/11/2024	SKJACOBS	EPA 6020B
Chromium	<5.0	ug/L	06/11/2024	SKJACOBS	EPA 6020B
Iron	<50.0	ug/L	06/11/2024	SKJACOBS	EPA 6020B
Lead	2.1	ug/L	06/11/2024	SKJACOBS	EPA 6020B
Selenium	<10.0	ug/L	06/11/2024	SKJACOBS	EPA 6020B
Antimony	<5.0	ug/L	06/11/2024	SKJACOBS	EPA 6020B
Thallium	<1.0	ug/L	06/11/2024	SKJACOBS	EPA 6020B
Zinc	<10.0	ug/L	06/11/2024	SKJACOBS	EPA 6020B
Boron	19.6	ug/L	06/12/2024	SKJACOBS	EPA 6010D
Lithium	<5.0	ug/L	06/12/2024	SKJACOBS	EPA 6010D
Molybdenum	<5.0	ug/L	06/12/2024	SKJACOBS	EPA 6010D
Mercury	<0.2	ug/L	06/17/2024	EUROFINS SAV	EPA 7470
Total Organic Carbon	1.47	mg/L	06/12/2024	GEL	SM 5310B
Fluoride	0.13	mg/L	06/11/2024	KCWELLS	EPA 300.0
Chloride	3.22	mg/L	06/11/2024	KCWELLS	EPA 300.0
Nitrate	0.61	mg/L	06/11/2024	KCWELLS	EPA 300.0
Sulfate	89.6	mg/L	06/11/2024	KCWELLS	EPA 300.0
Total Dissolved Solids	170.0	mg/L	06/07/2024	KCWELLS	SM 2540C
Radium 226	0.0311	pCi/L	06/19/2024	GEL	EPA 903.1 Mod
Radium 228	2.79	pCi/L	06/25/2024	GEL	EPA 904.0
Radium 226/228 Combined Calculation	2.8211	pCi/L	07/19/2024	SJLEVY	EPA 903.1 Mod
pH	4.54	SU	06/04/2024	ZM/BB	

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: _____ Validation date: 8/2/24

Linda Williams - Manager Analytical Services

Authorized Signature Only- Not Valid Unless Signed

santee cooper

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 # AG01477 **Location:** GW Well POZ-3 **Date:** 06/04/2024 **Sample Collector:** ZM/BB

Loc. Code POZ-3 **Time:** 12:12

Analysis	Result	Units	Test Date	Analyst	Method
Arsenic	<5.0	ug/L	06/11/2024	SKJACOBS	EPA 6020B
Arsenic Dissolved	<5.0	ug/L	06/11/2024	SKJACOBS	EPA 6020B
Barium	105	ug/L	06/11/2024	SKJACOBS	EPA 6020B
Beryllium	<0.5	ug/L	06/11/2024	SKJACOBS	EPA 6020B
Calcium	176	mg/L	06/11/2024	SKJACOBS	EPA 6020B
Cadmium	<0.5	ug/L	06/11/2024	SKJACOBS	EPA 6020B
Cobalt	2.5	ug/L	06/11/2024	SKJACOBS	EPA 6020B
Chromium	<5.0	ug/L	06/11/2024	SKJACOBS	EPA 6020B
Iron	165	ug/L	06/11/2024	SKJACOBS	EPA 6020B
Lead	<1.0	ug/L	06/11/2024	SKJACOBS	EPA 6020B
Selenium	<10.0	ug/L	06/11/2024	SKJACOBS	EPA 6020B
Antimony	<5.0	ug/L	06/11/2024	SKJACOBS	EPA 6020B
Thallium	<1.0	ug/L	06/11/2024	SKJACOBS	EPA 6020B
Zinc	<10.0	ug/L	06/11/2024	SKJACOBS	EPA 6020B
Boron	13.5	ug/L	06/12/2024	SKJACOBS	EPA 6010D
Lithium	<5.0	ug/L	06/12/2024	SKJACOBS	EPA 6010D
Molybdenum	<5.0	ug/L	06/12/2024	SKJACOBS	EPA 6010D
Mercury	<0.2	ug/L	06/17/2024	EUROFINS SAV	EPA 7470
Total Organic Carbon	2.81	mg/L	06/12/2024	GEL	SM 5310B
Fluoride	0.10	mg/L	06/11/2024	KCWELLS	EPA 300.0
Chloride	8.41	mg/L	06/11/2024	KCWELLS	EPA 300.0
Nitrate	<0.10	mg/L	06/11/2024	KCWELLS	EPA 300.0
Sulfate	68.7	mg/L	06/11/2024	KCWELLS	EPA 300.0
Total Dissolved Solids	616.2	mg/L	06/07/2024	KCWELLS	SM 2540C
Radium 226	0.571	pCi/L	06/19/2024	GEL	EPA 903.1 Mod
Radium 228	1.89	pCi/L	06/25/2024	GEL	EPA 904.0
Radium 226/228 Combined Calculation	2.461	pCi/L	07/19/2024	SJLEVY	EPA 903.1 Mod
pH	6.60	SU	06/04/2024	ZM/BB	

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: Validation date: 8/2/24

Linda Williams - Manager Analytical Services

Authorized Signature Only- Not Valid Unless Signed

santee cooper

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 # AG01478 **Location:** GW Well POZ-4 **Date:** 06/05/2024 **Sample Collector:** ZM/GK

Loc. Code POZ-4 **Time:** 11:45

Analysis	Result	Units	Test Date	Analyst	Method
Arsenic	<5.0	ug/L	06/14/2024	SKJACOBS	EPA 6020B
Arsenic Dissolved	<5.0	ug/L	06/11/2024	SKJACOBS	EPA 6020B
Barium	92.2	ug/L	06/14/2024	SKJACOBS	EPA 6020B
Beryllium	<0.5	ug/L	06/14/2024	SKJACOBS	EPA 6020B
Calcium	396	mg/L	06/14/2024	SKJACOBS	EPA 6020B
Cadmium	<0.5	ug/L	06/14/2024	SKJACOBS	EPA 6020B
Cobalt	147	ug/L	06/14/2024	SKJACOBS	EPA 6020B
Chromium	<5.0	ug/L	06/14/2024	SKJACOBS	EPA 6020B
Iron	2110	ug/L	06/14/2024	SKJACOBS	EPA 6020B
Lead	<1.0	ug/L	06/14/2024	SKJACOBS	EPA 6020B
Selenium	<10.0	ug/L	06/14/2024	SKJACOBS	EPA 6020B
Antimony	<5.0	ug/L	06/14/2024	SKJACOBS	EPA 6020B
Thallium	<1.0	ug/L	06/14/2024	SKJACOBS	EPA 6020B
Zinc	13.2	ug/L	06/14/2024	SKJACOBS	EPA 6020B
Boron	35.0	ug/L	06/13/2024	SKJACOBS	EPA 6010D
Lithium	24.6	ug/L	06/13/2024	SKJACOBS	EPA 6010D
Molybdenum	<5.0	ug/L	06/13/2024	SKJACOBS	EPA 6010D
Mercury	<0.2	ug/L	06/17/2024	EUROFINS SAV	EPA 7470
Total Organic Carbon	1.83	mg/L	06/12/2024	GEL	SM 5310B
Fluoride	<0.10	mg/L	06/07/2024	KCWELLS	EPA 300.0
Chloride	623	mg/L	06/07/2024	KCWELLS	EPA 300.0
Nitrate	<0.10	mg/L	06/07/2024	KCWELLS	EPA 300.0
Sulfate	186	mg/L	06/07/2024	KCWELLS	EPA 300.0
Total Dissolved Solids	2300	mg/L	06/11/2024	KCWELLS	SM 2540C
Radium 226	1.28	pCi/L	06/19/2024	GEL	EPA 903.1 Mod
Radium 228	1.42	pCi/L	06/25/2024	GEL	EPA 904.0
Radium 226/228 Combined Calculation	2.70	pCi/L	07/19/2024	SJLEVY	EPA 903.1 Mod
pH	6.25	SU	06/05/2024	ZM/GK	

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: Validation date: 8/2/24

Linda Williams - Manager Analytical Services

Authorized Signature Only- Not Valid Unless Signed

santee cooper

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 # AG01479 **Location:** GW Well POZ-5D **Date:** 06/05/2024 **Sample Collector:** ZM/GK

Loc. Code POZ-5D **Time:** 12:45

Analysis	Result	Units	Test Date	Analyst	Method
Arsenic	<5.0	ug/L	06/14/2024	SKJACOBS	EPA 6020B
Arsenic Dissolved	<5.0	ug/L	06/11/2024	SKJACOBS	EPA 6020B
Barium	54.8	ug/L	06/14/2024	SKJACOBS	EPA 6020B
Cadmium	<0.5	ug/L	06/14/2024	SKJACOBS	EPA 6020B
Cobalt	3.3	ug/L	06/14/2024	SKJACOBS	EPA 6020B
Chromium	<5.0	ug/L	06/14/2024	SKJACOBS	EPA 6020B
Iron	11200	ug/L	06/14/2024	SKJACOBS	EPA 6020B
Lead	<1.0	ug/L	06/14/2024	SKJACOBS	EPA 6020B
Selenium	<10.0	ug/L	06/14/2024	SKJACOBS	EPA 6020B
Zinc	<10.0	ug/L	06/14/2024	SKJACOBS	EPA 6020B
Boron	238	ug/L	06/13/2024	SKJACOBS	EPA 6010D
Total Organic Carbon	2.22	mg/L	06/12/2024	GEL	SM 5310B
Chloride	795	mg/L	06/07/2024	KCWELLS	EPA 300.0
Nitrate	<0.10	mg/L	06/07/2024	KCWELLS	EPA 300.0
Sulfate	654	mg/L	06/07/2024	KCWELLS	EPA 300.0
Total Dissolved Solids	3289	mg/L	06/07/2024	KCWELLS	SM 2540C
pH	6.69	SU	06/05/2024	ZM/GK	

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

Sample Validated: Linda Williams - Manager, Analytical Services

Final Validation Date: 7/22/24

santee cooper

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 # AG01480 **Location:** GW Well POZ-6 **Date:** 06/04/2024 **Sample Collector:** ZM/BB

Loc. Code POZ-6 **Time:** 13:14

Analysis	Result	Units	Test Date	Analyst	Method
Arsenic	<5.0	ug/L	06/11/2024	SKJACOBS	EPA 6020B
Arsenic Dissolved	<5.0	ug/L	06/11/2024	SKJACOBS	EPA 6020B
Barium	81.4	ug/L	06/11/2024	SKJACOBS	EPA 6020B
Beryllium	<0.5	ug/L	06/11/2024	SKJACOBS	EPA 6020B
Calcium	472	mg/L	06/11/2024	SKJACOBS	EPA 6020B
Cadmium	<0.5	ug/L	06/11/2024	SKJACOBS	EPA 6020B
Cobalt	3.2	ug/L	06/11/2024	SKJACOBS	EPA 6020B
Chromium	<5.0	ug/L	06/11/2024	SKJACOBS	EPA 6020B
Iron	15300	ug/L	06/11/2024	SKJACOBS	EPA 6020B
Lead	<1.0	ug/L	06/11/2024	SKJACOBS	EPA 6020B
Selenium	<10.0	ug/L	06/11/2024	SKJACOBS	EPA 6020B
Antimony	<5.0	ug/L	06/11/2024	SKJACOBS	EPA 6020B
Thallium	<1.0	ug/L	06/11/2024	SKJACOBS	EPA 6020B
Zinc	<10.0	ug/L	06/11/2024	SKJACOBS	EPA 6020B
Boron	38.4	ug/L	06/12/2024	SKJACOBS	EPA 6010D
Lithium	12.0	ug/L	06/12/2024	SKJACOBS	EPA 6010D
Molybdenum	<5.0	ug/L	06/12/2024	SKJACOBS	EPA 6010D
Mercury	<0.2	ug/L	06/17/2024	EUROFINS SAV	EPA 7470
Total Organic Carbon	2.59	mg/L	06/12/2024	GEL	SM 5310B
Fluoride	<0.10	mg/L	06/11/2024	KCWELLS	EPA 300.0
Chloride	357	mg/L	06/11/2024	KCWELLS	EPA 300.0
Nitrate	<0.10	mg/L	06/11/2024	KCWELLS	EPA 300.0
Sulfate	551	mg/L	06/11/2024	KCWELLS	EPA 300.0
Total Dissolved Solids	2220	mg/L	06/07/2024	KCWELLS	SM 2540C
Radium 226	1.28	pCi/L	06/19/2024	GEL	EPA 903.1 Mod
Radium 228	1.36	pCi/L	06/25/2024	GEL	EPA 904.0
Radium 226/228 Combined Calculation	2.64	pCi/L	07/19/2024	SJLEVY	EPA 903.1 Mod
pH	6.19	SU	06/04/2024	ZM/BB	

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: Validation date: 8/2/24

Linda Williams - Manager Analytical Services

Authorized Signature Only- Not Valid Unless Signed

santee cooper

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 # AG01481 **Location:** GW Well POZ-7 **Date:** 06/05/2024 **Sample Collector:** ZM/GK

Loc. Code POZ-7 **Time:** 08:45

Analysis	Result	Units	Test Date	Analyst	Method
Arsenic	<5.0	ug/L	06/14/2024	SKJACOBS	EPA 6020B
Arsenic Dissolved	<5.0	ug/L	06/11/2024	SKJACOBS	EPA 6020B
Barium	249	ug/L	06/14/2024	SKJACOBS	EPA 6020B
Beryllium	<0.5	ug/L	06/14/2024	SKJACOBS	EPA 6020B
Calcium	72.4	mg/L	06/14/2024	SKJACOBS	EPA 6020B
Cadmium	<0.5	ug/L	06/14/2024	SKJACOBS	EPA 6020B
Cobalt	<0.5	ug/L	06/14/2024	SKJACOBS	EPA 6020B
Chromium	<5.0	ug/L	06/14/2024	SKJACOBS	EPA 6020B
Iron	<50.0	ug/L	06/14/2024	SKJACOBS	EPA 6020B
Lead	<1.0	ug/L	06/14/2024	SKJACOBS	EPA 6020B
Selenium	<10.0	ug/L	06/14/2024	SKJACOBS	EPA 6020B
Antimony	<5.0	ug/L	06/14/2024	SKJACOBS	EPA 6020B
Thallium	<1.0	ug/L	06/14/2024	SKJACOBS	EPA 6020B
Zinc	<10.0	ug/L	06/14/2024	SKJACOBS	EPA 6020B
Boron	13.9	ug/L	06/13/2024	SKJACOBS	EPA 6010D
Lithium	8.3	ug/L	06/13/2024	SKJACOBS	EPA 6010D
Molybdenum	<5.0	ug/L	06/13/2024	SKJACOBS	EPA 6010D
Mercury	<0.2	ug/L	06/17/2024	EUROFINS SAV	EPA 7470
Total Organic Carbon	<1	mg/L	06/12/2024	GEL	SM 5310B
Fluoride	<0.10	mg/L	06/07/2024	KCWELLS	EPA 300.0
Chloride	79.5	mg/L	06/07/2024	KCWELLS	EPA 300.0
Nitrate	<0.10	mg/L	06/07/2024	KCWELLS	EPA 300.0
Sulfate	5.93	mg/L	06/07/2024	KCWELLS	EPA 300.0
Total Dissolved Solids	410.0	mg/L	06/07/2024	KCWELLS	SM 2540C
Radium 226	0.380	pCi/L	06/19/2024	GEL	EPA 903.1 Mod
Radium 228	3.30	pCi/L	06/25/2024	GEL	EPA 904.0
Radium 226/228 Combined Calculation	3.68	pCi/L	07/19/2024	SJLEVY	EPA 903.1 Mod
pH	6.13	SU	06/05/2024	ZM/GK	

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: _____ Validation date: 8/2/24

Linda Williams - Manager Analytical Services

Authorized Signature Only- Not Valid Unless Signed

santee cooper

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 # AG01482 **Location:** GW Well POZ-7 **Date:** 06/05/2024 **Sample Collector:** ZM/GK

Loc. Code POZ-7 DUP **Time:** 08:50

Analysis	Result	Units	Test Date	Analyst	Method
Arsenic	<5.0	ug/L	06/14/2024	SKJACOBS	EPA 6020B
Arsenic Dissolved	<5.0	ug/L	06/11/2024	SKJACOBS	EPA 6020B
Barium	255	ug/L	06/14/2024	SKJACOBS	EPA 6020B
Beryllium	<0.5	ug/L	06/14/2024	SKJACOBS	EPA 6020B
Calcium	74.3	mg/L	06/14/2024	SKJACOBS	EPA 6020B
Cadmium	<0.5	ug/L	06/14/2024	SKJACOBS	EPA 6020B
Cobalt	<0.5	ug/L	06/14/2024	SKJACOBS	EPA 6020B
Chromium	<5.0	ug/L	06/14/2024	SKJACOBS	EPA 6020B
Iron	<50.0	ug/L	06/14/2024	SKJACOBS	EPA 6020B
Lead	<1.0	ug/L	06/14/2024	SKJACOBS	EPA 6020B
Selenium	<10.0	ug/L	06/14/2024	SKJACOBS	EPA 6020B
Antimony	<5.0	ug/L	06/14/2024	SKJACOBS	EPA 6020B
Thallium	<1.0	ug/L	06/14/2024	SKJACOBS	EPA 6020B
Zinc	<10.0	ug/L	06/14/2024	SKJACOBS	EPA 6020B
Boron	13.8	ug/L	06/13/2024	SKJACOBS	EPA 6010D
Lithium	8.2	ug/L	06/13/2024	SKJACOBS	EPA 6010D
Molybdenum	<5.0	ug/L	06/13/2024	SKJACOBS	EPA 6010D
Mercury	<0.2	ug/L	06/17/2024	EUROFINS SAV	EPA 7470
Total Organic Carbon	<1	mg/L	06/12/2024	GEL	SM 5310B
Fluoride	<0.10	mg/L	06/07/2024	KCWELLS	EPA 300.0
Chloride	79.7	mg/L	06/07/2024	KCWELLS	EPA 300.0
Nitrate	<0.10	mg/L	06/07/2024	KCWELLS	EPA 300.0
Sulfate	5.93	mg/L	06/07/2024	KCWELLS	EPA 300.0
Total Dissolved Solids	382.5	mg/L	06/07/2024	KCWELLS	SM 2540C
Radium 226	0.389	pCi/L	06/19/2024	GEL	EPA 903.1 Mod
Radium 228	1.14	pCi/L	06/25/2024	GEL	EPA 904.0
Radium 226/228 Combined Calculation	1.529	pCi/L	07/19/2024	SJLEVY	EPA 903.1 Mod
pH	***	SU	06/05/2024	ZDMCHENR	

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: Validation date: 8/2/24

Linda Williams - Manager Analytical Services

Authorized Signature Only- Not Valid Unless Signed

santee cooper

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 # AG01483 **Location:** GW Well POZ-8 **Date:** 06/05/2024 **Sample Collector:** ZM/GK

Loc. Code POZ-8 **Time:** 10:20

Analysis	Result	Units	Test Date	Analyst	Method
Arsenic	<5.0	ug/L	06/14/2024	SKJACOBS	EPA 6020B
Arsenic Dissolved	<5.0	ug/L	06/11/2024	SKJACOBS	EPA 6020B
Barium	419	ug/L	06/14/2024	SKJACOBS	EPA 6020B
Beryllium	<0.5	ug/L	06/14/2024	SKJACOBS	EPA 6020B
Calcium	624	mg/L	06/14/2024	SKJACOBS	EPA 6020B
Cadmium	<0.5	ug/L	06/14/2024	SKJACOBS	EPA 6020B
Cobalt	0.57	ug/L	06/14/2024	SKJACOBS	EPA 6020B
Chromium	<5.0	ug/L	06/14/2024	SKJACOBS	EPA 6020B
Iron	15900	ug/L	06/14/2024	SKJACOBS	EPA 6020B
Lead	<1.0	ug/L	06/14/2024	SKJACOBS	EPA 6020B
Selenium	<10.0	ug/L	06/14/2024	SKJACOBS	EPA 6020B
Antimony	<5.0	ug/L	06/14/2024	SKJACOBS	EPA 6020B
Thallium	<1.0	ug/L	06/14/2024	SKJACOBS	EPA 6020B
Zinc	<10.0	ug/L	06/14/2024	SKJACOBS	EPA 6020B
Boron	28.6	ug/L	06/13/2024	SKJACOBS	EPA 6010D
Lithium	129	ug/L	06/13/2024	SKJACOBS	EPA 6010D
Molybdenum	<5.0	ug/L	06/13/2024	SKJACOBS	EPA 6010D
Mercury	<0.2	ug/L	06/17/2024	EUROFINS SAV	EPA 7470
Total Organic Carbon	1.26	mg/L	06/12/2024	GEL	SM 5310B
Fluoride	<0.10	mg/L	06/07/2024	KCWELLS	EPA 300.0
Chloride	1140	mg/L	06/07/2024	KCWELLS	EPA 300.0
Nitrate	<0.10	mg/L	06/07/2024	KCWELLS	EPA 300.0
Sulfate	74.6	mg/L	06/07/2024	KCWELLS	EPA 300.0
Total Dissolved Solids	2759	mg/L	06/12/2024	KRMATHER	SM 2540C
Radium 226	0.0534	pCi/L	06/19/2024	GEL	EPA 903.1 Mod
Radium 228	1.21	pCi/L	06/25/2024	GEL	EPA 904.0
Radium 226/228 Combined Calculation	1.2634	pCi/L	07/19/2024	SJLEVY	EPA 903.1 Mod
pH	6.66	SU	06/05/2024	ZM/GK	

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: _____ Validation date: 8/2/24

Linda Williams - Manager Analytical Services

Authorized Signature Only- Not Valid Unless Signed

GEL Laboratories LLC
a member of The GEL Group INC

2040 Savage Road | Charleston, SC 29407
843.556.8171
gel.com

February 26, 2024

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

Re: ABS Lab Analytical
Work Order: 654136

Dear Ms. Gilmetti:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on February 02, 2024. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

The samples were delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. There are no additional comments concerning sample receipt.

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,

Jordan Melton

Jordan Melton for
Julie Robinson
Project Manager

Purchase Order: 125915/JM02.09.G01.1/36500
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: 654136 GEL Work Order: 654136

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 Jordan Melton

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

Certificate of Analysis

Report Date: February 26, 2024

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:	AF87814	Project:	SOOP00119
Sample ID:	654136001	Client ID:	SOOP001
Matrix:	GW		
Collect Date:	25-JAN-24 09:28		
Receive Date:	02-FEB-24		
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	0.712	+/-1.28	2.23	3.00	pCi/L			JE1	02/23/24	1110	2568526	1
Rad Radium-226													
Lucas Cell, Ra226, Liquid "As Received"													
Radium-226		1.08	+/-0.486	0.322	1.00	pCi/L			MJ2	02/21/24	0800	2563217	2

The following Analytical Methods were performed:

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

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			85.6	(15%-125%)

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

Column headers are defined as follows:

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

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

Certificate of Analysis

Report Date: February 26, 2024

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:	AF87778	Project:	SOOP00119
Sample ID:	654136002	Client ID:	SOOP001
Matrix:	GW		
Collect Date:	25-JAN-24 10:46		
Receive Date:	02-FEB-24		
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		1.60	+/-1.00	1.53	3.00	pCi/L			JE1	02/23/24	1110	2568526	1
Rad Radium-226													
Lucas Cell, Ra226, Liquid "As Received"													
Radium-226		0.515	+/-0.364	0.430	1.00	pCi/L			MJ2	02/21/24	0800	2563217	2

The following Analytical Methods were performed:

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

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			89.3	(15%-125%)

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

Column headers are defined as follows:

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

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

Certificate of Analysis

Report Date: February 26, 2024

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:	AF87777	Project:	SOOP00119
Sample ID:	654136003	Client ID:	SOOP001
Matrix:	GW		
Collect Date:	25-JAN-24 11:31		
Receive Date:	02-FEB-24		
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	0.948	+/-0.936	1.54	3.00	pCi/L			JE1	02/23/24	1110	2568526	1
Rad Radium-226													
Lucas Cell, Ra226, Liquid "As Received"													
Radium-226	U	-0.0272	+/-0.192	0.510	1.00	pCi/L			MJ2	02/21/24	0836	2563217	2

The following Analytical Methods were performed:

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

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			92.4	(15%-125%)

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

Column headers are defined as follows:

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

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

Certificate of Analysis

Report Date: February 26, 2024

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:	AF87769	Project:	SOOP00119
Sample ID:	654136004	Client ID:	SOOP001
Matrix:	GW		
Collect Date:	25-JAN-24 12:20		
Receive Date:	02-FEB-24		
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	0.635	+/-0.802	1.36	3.00	pCi/L			JE1	02/23/24	1110	2568526	1
Rad Radium-226													
Lucas Cell, Ra226, Liquid "As Received"													
Radium-226		0.601	+/-0.329	0.260	1.00	pCi/L			MJ2	02/21/24	0836	2563217	2

The following Analytical Methods were performed:

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

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			87.6	(15%-125%)

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

Column headers are defined as follows:

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

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

Certificate of Analysis

Report Date: February 26, 2024

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:	AF87780	Project:	SOOP00119
Sample ID:	654136005	Client ID:	SOOP001
Matrix:	GW		
Collect Date:	25-JAN-24 13:46		
Receive Date:	02-FEB-24		
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	0.289	+/-0.631	1.14	3.00	pCi/L			JE1	02/23/24	1110	2568526	1
Rad Radium-226													
Lucas Cell, Ra226, Liquid "As Received"													
Radium-226		0.575	+/-0.383	0.455	1.00	pCi/L			MJ2	02/21/24	0836	2563217	2

The following Analytical Methods were performed:

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

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			89.1	(15%-125%)

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

Column headers are defined as follows:

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

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

Certificate of Analysis

Report Date: February 26, 2024

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:	AF87779	Project:	SOOP00119
Sample ID:	654136006	Client ID:	SOOP001
Matrix:	GW		
Collect Date:	25-JAN-24 14:34		
Receive Date:	02-FEB-24		
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	-0.283	+/-0.635	1.34	3.00	pCi/L			JE1	02/23/24	1110	2568526	1
Rad Radium-226													
Lucas Cell, Ra226, Liquid "As Received"													
Radium-226		1.49	+/-0.496	0.290	1.00	pCi/L			MJ2	02/21/24	0836	2563217	2

The following Analytical Methods were performed:

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

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			91	(15%-125%)

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

Column headers are defined as follows:

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

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

QC Summary

Report Date: February 26, 2024

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

Contact: **Ms. Jeanette Gilmetti**

Workorder: **654136**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gas Flow										
Batch 2568526										
QC1205650263 654136001 DUP										
Radium-228	U	0.712		1.52	pCi/L	72.3		(0% - 100%)	JE1	02/23/24 11:11
	Uncertainty	+/-1.28		+/-0.944						
QC1205650264 LCS										
Radium-228	72.0			71.4	pCi/L		99.2	(75%-125%)		02/23/24 11:11
	Uncertainty			+/-3.83						
QC1205650262 MB										
Radium-228			U	0.536	pCi/L					02/23/24 11:11
	Uncertainty			+/-0.599						
Rad Ra-226										
Batch 2563217										
QC1205639954 654136001 DUP										
Radium-226		1.08		0.917	pCi/L	15.9		(0% - 100%)	MJ2	02/21/24 08:36
	Uncertainty	+/-0.486		+/-0.490						
QC1205639957 LCS										
Radium-226	26.9			27.0	pCi/L		100	(75%-125%)		02/21/24 09:11
	Uncertainty			+/-2.18						
QC1205639952 MB										
Radium-226			U	0.210	pCi/L					02/21/24 08:36
	Uncertainty			+/-0.286						
QC1205639956 654136001 MS										
Radium-226	130	1.08		119	pCi/L		90.5	(75%-125%)		02/21/24 09:11
	Uncertainty	+/-0.486		+/-9.93						

Notes:

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

The Qualifiers in this report are defined as follows:

- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.
- J Value is estimated
- X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- H Analytical holding time was exceeded
- < Result is less than value reported

QC Summary

Workorder: **654136**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time

>	Result is greater than value reported
UI	Gamma Spectroscopy--Uncertain identification
BD	Results are either below the MDC or tracer recovery is low
h	Preparation or preservation holding time was exceeded
R	Sample results are rejected
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
N/A	RPD or %Recovery limits do not apply.
ND	Analyte concentration is not detected above the detection limit
M	M if above MDC and less than LLD
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
FA	Failed analysis.
UJ	Gamma Spectroscopy--Uncertain identification
Q	One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
K	Analyte present. Reported value may be biased high. Actual value is expected to be lower.
UL	Not considered detected. The associated number is the reported concentration, which may be inaccurate due to a low bias.
L	Analyte present. Reported value may be biased low. Actual value is expected to be higher.
N1	See case narrative
Y	Other specific qualifiers were required to properly define the results. Consult case narrative.
**	Analyte is a Tracer compound
M	REMP Result > MDC/CL and < RDL
J	See case narrative for an explanation

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 #: 654136

Product: **GFPC, Ra228, Liquid**
Analytical Method: EPA 904.0/SW846 9320 Modified
Analytical Procedure: GL-RAD-A-063 REV# 5
Analytical Batch: 2568526

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

GEL Sample ID#	Client Sample Identification
654136001	AF87814
654136002	AF87778
654136003	AF87777
654136004	AF87769
654136005	AF87780
654136006	AF87779
1205650262	Method Blank (MB)
1205650263	654136001(AF87814) Sample Duplicate (DUP)
1205650264	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: 2563217

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

GEL Sample ID#	Client Sample Identification
654136001	AF87814
654136002	AF87778
654136003	AF87777
654136004	AF87769
654136005	AF87780
654136006	AF87779
1205639952	Method Blank (MB)
1205639954	654136001(AF87814) Sample Duplicate (DUP)
1205639956	654136001(AF87814) Matrix Spike (MS)
1205639957	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
Aliquots for the matrix spikes, 1205639956 (AF87814MS), were reduced to conserve sample volume.

Certification Statement

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

Contract Lab Info: GEL Contract Lab Due Date (Lab Only): 2 / 28 / 24 Send report to lcwillia@santeecooper.com & sherri.levy@santeecooper.com

654136

Chain of Custody

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: LINDA.WILLIAMS@santeecooper.com

Date Results Needed by: ___/___/___

Project/Task/Unit #: 125915 / JM02.09.G01.1 / 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		
AF87814	FOZ-8	1/25/24	0928	WJK ML	2	P	G	GW	2		1	1		
AF87778	CCMAP-9	"	1046	"	"	"	"	"	"		"	"		
77	CCMAP-8	"	1131	"	"	"	"	"	"		"	"		
69	CCMAP-1	"	1220	"	"	"	"	"	"		"	"		
80	CCMAP-11	"	1346	"	"	"	"	"	"		"	"		
79	CCMAP-10	"	1434	"	"	"	"	"	"		"	"		

Relinquished by:	Employee#	Date	Time	Received by:	Employee #	Date	Time
	36851	2/2/24	0947		GEL	2/2/24	0947
Relinquished by:	Employee#	Date	Time	Received by:	Employee #	Date	Time
	GEL	2.2.24	1525		GEL	2/2/24	1525
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:

☐ 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*)
☐ AIM
☐ 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
☐ 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=HNO_3 3=H_2SO_4 4-HCl 5=$Na_2S_2O_3$ 6-Other (Specify)

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: SCCP	**SDG/AR/COC/Work Order:** 654136
Received By: QG	**Date Received:** 2/2/24
Carrier and Tracking Number	Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other n/a

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?		✓	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): 0 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?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Chain of custody documents included with shipment?	✓			Circle Applicable: Client contacted and provided COC COC created upon receipt
3	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*			✓	Preservation Method: Wet Ice Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius TEMP: 13 °C
4	Daily check performed and passed on IR temperature gun?	✓			**Temperature Device Serial #:** IR1-23 Secondary Temperature Device Serial # (If Applicable):
5	Sample containers intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6	Samples requiring chemical preservation at proper pH?	✓			Sample ID's and Containers Affected: If Preservation added, Lot#:
7	Do any samples require Volatile Analysis?			✓	If Yes, are Encores or Soil Kits present for solids? 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?	✓			ID's and tests affected:
9	Sample ID's on COC match ID's on bottles?	✓			ID's and containers affected:
10	Date & time on COC match date & time on bottles?	✓			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?	✓			Circle Applicable: No container count on COC Other (describe)
12	Are sample containers identifiable as GEL provided by use of GEL labels?	✓			client and Gel labels
13	COC form is properly signed in relinquished/received sections?	✓			Circle Applicable: Not relinquished Other (describe)

Comments (Use Continuation Form if needed):

PM (or PMA) review: Initials KW Date 2/5/24 Page 1 of 1

List of current GEL Certifications as of 26 February 2024

State	Certification
Alabama	42200
Alaska	17-018
Alaska Drinking Water	SC00012
Arkansas	88-00651
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	KY90129
Kentucky Wastewater	KY90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2023019
Maryland	270
Massachusetts	M-SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE-OS-26-13
Nevada	SC000122024-05
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	2023-152
Pennsylvania NELAP	68-00485
Pucrto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-23-21
Utah NELAP	SC000122023-38
Vermont	VT87156
Virginia NELAP	460202
Washington	C780

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Linda Williams
South Carolina Public Service Authority
Santee Cooper
PO BOX 2946101
Moncks Corner, South Carolina 29461-2901

Generated 2/6/2024 1:13:01 PM

JOB DESCRIPTION

125915/JM02.09.G01.1/36500

JOB NUMBER

680-246129-1

Eurofins Savannah
5102 LaRoche Avenue
Savannah GA 31404

See page two for job notes and contact information.

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Southeast, LLC Project Manager.

Authorization

Generated
2/6/2024 1:13:01 PM

Authorized for release by
Jerry Lanier, Project Manager I
Jerry.Lanier@et.eurofinsus.com
(912)250-0281

Table of Contents

Job ID: 680-246129-1 — Eurofins Savannah

Job Narrative
680-246129-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 2/1/2024 10:06 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 11.1°C

Metals
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Sample Summary

Client: South Carolina Public Service Authority
Project/Site: 125915/JM02.09.G01.1/36500

Job ID: 680-246129-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-246129-1	AF87791	Water	01/24/24 09:58	02/01/24 10:06
680-246129-2	AF87790	Water	01/24/24 11:31	02/01/24 10:06
680-246129-3	AF87789	Water	01/24/24 12:28	02/01/24 10:06
680-246129-4	AF87814	Water	01/25/24 09:28	02/01/24 10:06
680-246129-5	AF87778	Water	01/25/24 10:46	02/01/24 10:06
680-246129-6	AF87777	Water	01/25/24 11:31	02/01/24 10:06
680-246129-7	AF87769	Water	01/25/24 12:20	02/01/24 10:06
680-246129-8	AF87780	Water	01/25/24 13:46	02/01/24 10:06
680-246129-9	AF87779	Water	01/25/24 14:34	02/01/24 10:06

Method Summary

Client: South Carolina Public Service Authority
Project/Site: 125915/JM02.09.G01.1/36500

Job ID: 680-246129-1

Method	Method Description	Protocol	Laboratory
7470A	Mercury (CVAA)	SW846	EET SAV
7470A	Preparation, Mercury	SW846	EET SAV

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Definitions/Glossary

Client: South Carolina Public Service Authority
Project/Site: 125915/JM02.09.G01.1/36500

Job ID: 680-246129-1

Qualifiers

Metals

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Detection Summary

Client: South Carolina Public Service Authority
Job ID: 680-246129-1
Project/Site: 125915/JM02.09.G01.1/36500

Client Sample ID: AF87791 — Lab Sample ID: 680-246129-1

No Detections.

Client Sample ID: AF87790 — Lab Sample ID: 680-246129-2

No Detections.

Client Sample ID: AF87789 — Lab Sample ID: 680-246129-3

No Detections.

Client Sample ID: AF87814 — Lab Sample ID: 680-246129-4

No Detections.

Client Sample ID: AF87778 — Lab Sample ID: 680-246129-5

No Detections.

Client Sample ID: AF87777 — Lab Sample ID: 680-246129-6

No Detections.

Client Sample ID: AF87769 — Lab Sample ID: 680-246129-7

No Detections.

Client Sample ID: AF87780 — Lab Sample ID: 680-246129-8

No Detections.

Client Sample ID: AF87779 — Lab Sample ID: 680-246129-9

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Savannah

Client: South Carolina Public Service Authority
Project/Site: 125915/JM02.09.G01.1/36500

Job ID: 680-246129-1

Client Sample ID: AF87791
Date Collected: 01/24/24 09:58
Date Received: 02/01/24 10:06

Lab Sample ID: 680-246129-1
Matrix: Water

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.200	U	0.200		ug/L		02/05/24 10:16	02/06/24 10:12	1

Client: South Carolina Public Service Authority
Project/Site: 125915/JM02.09.G01.1/36500

Job ID: 680-246129-1

Client Sample ID: AF87790
Date Collected: 01/24/24 11:31
Date Received: 02/01/24 10:06

Lab Sample ID: 680-246129-2
Matrix: Water

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.200	U	0.200		ug/L		02/05/24 10:16	02/06/24 10:18	1

Client: South Carolina Public Service Authority
Project/Site: 125915/JM02.09.G01.1/36500

Job ID: 680-246129-1

Client Sample ID: AF87789
Date Collected: 01/24/24 12:28
Date Received: 02/01/24 10:06

Lab Sample ID: 680-246129-3
Matrix: Water

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.200	U	0.200		ug/L		02/05/24 10:16	02/06/24 10:20	1

Client: South Carolina Public Service Authority
Project/Site: 125915/JM02.09.G01.1/36500

Job ID: 680-246129-1

Client Sample ID: AF87814
Date Collected: 01/25/24 09:28
Date Received: 02/01/24 10:06

Lab Sample ID: 680-246129-4
Matrix: Water

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.200	U	0.200		ug/L		02/05/24 10:16	02/06/24 10:22	1

Client: South Carolina Public Service Authority
Project/Site: 125915/JM02.09.G01.1/36500

Job ID: 680-246129-1

Client Sample ID: AF87778
Date Collected: 01/25/24 10:46
Date Received: 02/01/24 10:06

Lab Sample ID: 680-246129-5
Matrix: Water

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.200	U	0.200		ug/L		02/05/24 10:16	02/06/24 10:24	1

Client: South Carolina Public Service Authority
Project/Site: 125915/JM02.09.G01.1/36500

Job ID: 680-246129-1

Client Sample ID: AF87777
Date Collected: 01/25/24 11:31
Date Received: 02/01/24 10:06

Lab Sample ID: 680-246129-6
Matrix: Water

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.200	U	0.200		ug/L		02/05/24 10:16	02/06/24 10:26	1

Client: South Carolina Public Service Authority
Project/Site: 125915/JM02.09.G01.1/36500

Job ID: 680-246129-1

Client Sample ID: AF87769
Date Collected: 01/25/24 12:20
Date Received: 02/01/24 10:06

Lab Sample ID: 680-246129-7
Matrix: Water

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.200	U	0.200		ug/L		02/05/24 10:16	02/06/24 10:32	1

Client: South Carolina Public Service Authority
Project/Site: 125915/JM02.09.G01.1/36500

Job ID: 680-246129-1

Client Sample ID: AF87780
Date Collected: 01/25/24 13:46
Date Received: 02/01/24 10:06

Lab Sample ID: 680-246129-8
Matrix: Water

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.200	U	0.200		ug/L		02/05/24 10:16	02/06/24 10:34	1

Client: South Carolina Public Service Authority
Project/Site: 125915/JM02.09.G01.1/36500

Job ID: 680-246129-1

Client Sample ID: AF87779
Date Collected: 01/25/24 14:34
Date Received: 02/01/24 10:06

Lab Sample ID: 680-246129-9
Matrix: Water

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.200	U	0.200		ug/L		02/05/24 10:16	02/06/24 10:36	1

Client: South Carolina Public Service Authority
Project/Site: 125915/JM02.09.G01.1/36500

Job ID: 680-246129-1

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 680-821046/1-A
Matrix: Water
Analysis Batch: 821322

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 821046

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.200	U	0.200		ug/L		02/05/24 10:16	02/06/24 10:08	1

Lab Sample ID: LCS 680-821046/2-A
Matrix: Water
Analysis Batch: 821322

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 821046

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Mercury			2.50	2.508		ug/L		100	80 - 120		

Lab Sample ID: 680-246129-1 MS
Matrix: Water
Analysis Batch: 821322

Client Sample ID: AF87791
Prep Type: Total/NA
Prep Batch: 821046

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Mercury	0.200	U	1.00	0.9583		ug/L		96	80 - 120		

Lab Sample ID: 680-246129-1 MSD
Matrix: Water
Analysis Batch: 821322

Client Sample ID: AF87791
Prep Type: Total/NA
Prep Batch: 821046

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	0.200	U	1.00	0.9759		ug/L		98	80 - 120	2	20

Metals

Prep Batch: 821046

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-246129-1	AF87791	Total/NA	Water	7470A	
680-246129-2	AF87790	Total/NA	Water	7470A	
680-246129-3	AF87789	Total/NA	Water	7470A	
680-246129-4	AF87814	Total/NA	Water	7470A	
680-246129-5	AF87778	Total/NA	Water	7470A	
680-246129-6	AF87777	Total/NA	Water	7470A	
680-246129-7	AF87769	Total/NA	Water	7470A	
680-246129-8	AF87780	Total/NA	Water	7470A	
680-246129-9	AF87779	Total/NA	Water	7470A	
MB 680-821046/1-A	Method Blank	Total/NA	Water	7470A	
LCS 680-821046/2-A	Lab Control Sample	Total/NA	Water	7470A	
680-246129-1 MS	AF87791	Total/NA	Water	7470A	
680-246129-1 MSD	AF87791	Total/NA	Water	7470A	

Analysis Batch: 821322

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-246129-1	AF87791	Total/NA	Water	7470A	821046
680-246129-2	AF87790	Total/NA	Water	7470A	821046
680-246129-3	AF87789	Total/NA	Water	7470A	821046
680-246129-4	AF87814	Total/NA	Water	7470A	821046
680-246129-5	AF87778	Total/NA	Water	7470A	821046
680-246129-6	AF87777	Total/NA	Water	7470A	821046
680-246129-7	AF87769	Total/NA	Water	7470A	821046
680-246129-8	AF87780	Total/NA	Water	7470A	821046
680-246129-9	AF87779	Total/NA	Water	7470A	821046
MB 680-821046/1-A	Method Blank	Total/NA	Water	7470A	821046
LCS 680-821046/2-A	Lab Control Sample	Total/NA	Water	7470A	821046
680-246129-1 MS	AF87791	Total/NA	Water	7470A	821046
680-246129-1 MSD	AF87791	Total/NA	Water	7470A	821046

Lab Chronicle

Client: South Carolina Public Service Authority
Project/Site: 125915/JM02.09.G01.1/36500

Job ID: 680-246129-1

Client Sample ID: AF87791
Date Collected: 01/24/24 09:58
Date Received: 02/01/24 10:06

Lab Sample ID: 680-246129-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	7470A			821046	DW	EET SAV	02/05/24 10:16
Total/NA	Analysis	7470A		1	821322	BCB	EET SAV	02/06/24 10:12

Client Sample ID: AF87790
Date Collected: 01/24/24 11:31
Date Received: 02/01/24 10:06

Lab Sample ID: 680-246129-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	7470A			821046	DW	EET SAV	02/05/24 10:16
Total/NA	Analysis	7470A		1	821322	BCB	EET SAV	02/06/24 10:18

Client Sample ID: AF87789
Date Collected: 01/24/24 12:28
Date Received: 02/01/24 10:06

Lab Sample ID: 680-246129-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	7470A			821046	DW	EET SAV	02/05/24 10:16
Total/NA	Analysis	7470A		1	821322	BCB	EET SAV	02/06/24 10:20

Client Sample ID: AF87814
Date Collected: 01/25/24 09:28
Date Received: 02/01/24 10:06

Lab Sample ID: 680-246129-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	7470A			821046	DW	EET SAV	02/05/24 10:16
Total/NA	Analysis	7470A		1	821322	BCB	EET SAV	02/06/24 10:22

Client Sample ID: AF87778
Date Collected: 01/25/24 10:46
Date Received: 02/01/24 10:06

Lab Sample ID: 680-246129-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	7470A			821046	DW	EET SAV	02/05/24 10:16
Total/NA	Analysis	7470A		1	821322	BCB	EET SAV	02/06/24 10:24

Client Sample ID: AF87777
Date Collected: 01/25/24 11:31
Date Received: 02/01/24 10:06

Lab Sample ID: 680-246129-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	7470A			821046	DW	EET SAV	02/05/24 10:16
Total/NA	Analysis	7470A		1	821322	BCB	EET SAV	02/06/24 10:26

Lab Chronicle

Client: South Carolina Public Service Authority
Project/Site: 125915/JM02.09.G01.1/36500

Job ID: 680-246129-1

Client Sample ID: AF87769

Lab Sample ID: 680-246129-7

Date Collected: 01/25/24 12:20

Matrix: Water

Date Received: 02/01/24 10:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	7470A			821046	DW	EET SAV	02/05/24 10:16
Total/NA	Analysis	7470A		1	821322	BCB	EET SAV	02/06/24 10:32

Client Sample ID: AF87780

Lab Sample ID: 680-246129-8

Date Collected: 01/25/24 13:46

Matrix: Water

Date Received: 02/01/24 10:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	7470A			821046	DW	EET SAV	02/05/24 10:16
Total/NA	Analysis	7470A		1	821322	BCB	EET SAV	02/06/24 10:34

Client Sample ID: AF87779

Lab Sample ID: 680-246129-9

Date Collected: 01/25/24 14:34

Matrix: Water

Date Received: 02/01/24 10:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	7470A			821046	DW	EET SAV	02/05/24 10:16
Total/NA	Analysis	7470A		1	821322	BCB	EET SAV	02/06/24 10:36

Laboratory References:

EET SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Contract Lab Info: TA-SAV Contract Lab Due Date (Lab Only): 2 / 7 / 24 Send report to lcwillia@santeecooper.com & sherri.levy@santeecooper.com

2/6/2024

Chain of Custody

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:	Date Results Needed by:	Project/Task/Unit #:	Rerun request for any flagged QC
LINDA. WILLIAMS @santeecooper.com	/ /	125915 / JM02.09.G81.1 / 36500	(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	Hg
AF87791	CCMLF-2	1/24/24	0958	WJK ML	1	P	G	GW	2	7470 RL = 0.2 ug/L	X
90	CCMLF-1D		1131								
89	CCMLF-1		1228								
AF87814	POZ-8	1/25/24	0928								
AF87778	CCMAP-9		1046								
77	CCMAP-8		1131								
69	CCMAP-1		1220								
86	CCMAP-11		1346								
79	CCMAP-10		1434								

680-246129 Chain of Custody

Relinquished by:	Employee#	Date	Time	Received by:	Employee #	Date	Time
S Levy	35594	1/31/24	1000	DL	TM	2-1-24	1006
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): 11.1/11.1 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

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

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=HNO_3 3=H_2SO_4 4-HCl 5=$Na_2S_2O_3$ 6-Other (Specify)

Login Sample Receipt Checklist

Client: South Carolina Public Service Authority

Job Number: 680-246129-1

Login Number: 246129

List Source: Eurofins Savannah

List Number: 1

Creator: Sims, Robert D

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	False	Thermal preservation not required.
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: South Carolina Public Service Authority
Job ID: 680-246129-1
Project/Site: 125915/JM02.09.G01.1/36500

Laboratory: Eurofins Savannah

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
South Carolina	State	98001	06-30-24

GEL Laboratories LLC
a member of The GEL Group INC

2040 Savage Road | Charleston, SC 29407
843.556.8171
gel.com

February 23, 2024

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

Re: ABS Lab Analytical
Work Order: 653147

Dear Ms. Gilmetti:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on January 26, 2024. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

The samples were delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. There are no additional comments concerning sample receipt.

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,

Max Gloth for
Julie Robinson
Project Manager

Purchase Order: 125915/JM02.09.G01.1/36500
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: 653147 GEL Work Order: 653147

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

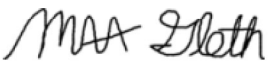
** Analyte is a surrogate compound

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: February 23, 2024

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:	AF87812	Project:	SOOP00119
Sample ID:	653147001	Client ID:	SOOP001
Matrix:	GW		
Collect Date:	24-JAN-24 14:25		
Receive Date:	26-JAN-24		
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	+/-0.774	1.33	3.00	pCi/L			JE1	02/22/24	0848	2563691	1
Rad Radium-226													
Lucas Cell, Ra226, Liquid "As Received"													
Radium-226	U	0.508	+/-0.389	0.567	1.00	pCi/L			MJ2	02/15/24	1008	2561057	2

The following Analytical Methods were performed:

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

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			80	(15%-125%)

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

Column headers are defined as follows:

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

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

Certificate of Analysis

Report Date: February 23, 2024

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:	AF87813	Project:	SOOP00119
Sample ID:	653147002	Client ID:	SOOP001
Matrix:	GW		
Collect Date:	24-JAN-24 14:30		
Receive Date:	26-JAN-24		
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		2.96	+/-1.56	2.37	3.00	pCi/L			JE1	02/22/24	0848	2563691	1
Rad Radium-226													
Lucas Cell, Ra226, Liquid "As Received"													
Radium-226		0.981	+/-0.563	0.743	1.00	pCi/L			MJ2	02/15/24	1008	2561057	2

The following Analytical Methods were performed:

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

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			76.5	(15%-125%)

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

Column headers are defined as follows:

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

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

Certificate of Analysis

Report Date: February 23, 2024

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:	AF87809	Project:	SOOP00119
Sample ID:	653147003	Client ID:	SOOP001
Matrix:	GW		
Collect Date:	23-JAN-24 12:08		
Receive Date:	26-JAN-24		
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	1.99	+/-1.30	2.03	3.00	pCi/L			JE1	02/22/24	0848	2563691	1
Rad Radium-226													
Lucas Cell, Ra226, Liquid "As Received"													
Radium-226		0.403	+/-0.312	0.386	1.00	pCi/L			MJ2	02/15/24	1008	2561057	2

The following Analytical Methods were performed:

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

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			78.6	(15%-125%)

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

Column headers are defined as follows:

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

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

Certificate of Analysis

Report Date: February 23, 2024

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:	AF87811	Project:	SOOP00119
Sample ID:	653147004	Client ID:	SOOP001
Matrix:	GW		
Collect Date:	23-JAN-24 14:37		
Receive Date:	26-JAN-24		
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	+/-1.13	2.25	3.00	pCi/L			JE1	02/22/24	1022	2563691	1
Rad Radium-226													
Lucas Cell, Ra226, Liquid "As Received"													
Radium-226		1.05	+/-0.439	0.336	1.00	pCi/L			MJ2	02/15/24	1008	2561057	2

The following Analytical Methods were performed:

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

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			80.1	(15%-125%)

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

Column headers are defined as follows:

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

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

Certificate of Analysis

Report Date: February 23, 2024

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:	AF87808	Project:	SOOP00119
Sample ID:	653147005	Client ID:	SOOP001
Matrix:	GW		
Collect Date:	23-JAN-24 15:42		
Receive Date:	26-JAN-24		
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		2.73	+/-1.03	1.24	3.00	pCi/L			JE1	02/22/24	0848	2563691	1
Rad Radium-226													
Lucas Cell, Ra226, Liquid "As Received"													
Radium-226	U	0.309	+/-0.302	0.475	1.00	pCi/L			MJ2	02/15/24	1008	2561057	2

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	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
DL: Detection Limit
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Lc/LC: Critical Level
PF: Prep Factor
RL: Reporting Limit
SQL: Sample Quantitation Limit

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

QC Summary

Report Date: February 23, 2024

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

Contact: **Ms. Jeanette Gilmetti**

Workorder: **653147**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gas Flow										
Batch 2563691										
QC1205641030 653141001 DUP										
Radium-228	U	0.337	U	1.06	pCi/L	N/A		N/A	JE1	02/22/24 08:48
	Uncertainty	+/-1.07		+/-0.798						
QC1205641031 LCS										
Radium-228	74.0			68.3	pCi/L		92.3	(75%-125%)		02/22/24 08:48
	Uncertainty			+/-4.05						
QC1205641029 MB										
Radium-228			U	0.921	pCi/L					02/22/24 08:48
	Uncertainty			+/-0.735						
Rad Ra-226										
Batch 2561057										
QC1205636195 653141001 DUP										
Radium-226		0.619	U	0.138	pCi/L	127*		(0% - 100%)	MJ2	02/15/24 10:08
	Uncertainty	+/-0.385		+/-0.201						
QC1205636197 LCS										
Radium-226	27.0			22.5	pCi/L		83.4	(75%-125%)		02/15/24 10:41
	Uncertainty			+/-2.00						
QC1205636194 MB										
Radium-226			U	0.119	pCi/L					02/15/24 09:00
	Uncertainty			+/-0.174						
QC1205636196 653141001 MS										
Radium-226	123	0.619		135	pCi/L		109	(75%-125%)		02/15/24 10:08
	Uncertainty	+/-0.385		+/-10.9						

Notes:

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

The Qualifiers in this report are defined as follows:

- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.
- J Value is estimated
- X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- H Analytical holding time was exceeded
- < Result is less than value reported

QC Summary

Workorder: **653147**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time

>	Result is greater than value reported
UI	Gamma Spectroscopy--Uncertain identification
BD	Results are either below the MDC or tracer recovery is low
h	Preparation or preservation holding time was exceeded
R	Sample results are rejected
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
N/A	RPD or %Recovery limits do not apply.
ND	Analyte concentration is not detected above the detection limit
M	M if above MDC and less than LLD
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
FA	Failed analysis.
UJ	Gamma Spectroscopy--Uncertain identification
Q	One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
K	Analyte present. Reported value may be biased high. Actual value is expected to be lower.
UL	Not considered detected. The associated number is the reported concentration, which may be inaccurate due to a low bias.
L	Analyte present. Reported value may be biased low. Actual value is expected to be higher.
N1	See case narrative
Y	Other specific qualifiers were required to properly define the results. Consult case narrative.
**	Analyte is a Tracer compound
M	REMP Result > MDC/CL and < RDL
J	See case narrative for an explanation

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 #: 653147

Product: **GFPC, Ra228, Liquid**
Analytical Method: EPA 904.0/SW846 9320 Modified
Analytical Procedure: GL-RAD-A-063 REV# 5
Analytical Batch: 2563691

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

GEL Sample ID#	Client Sample Identification
653147001	AF87812
653147002	AF87813
653147003	AF87809
653147004	AF87811
653147005	AF87808
1205641029	Method Blank (MB)
1205641030	653141001(AF87770) Sample Duplicate (DUP)
1205641031	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 653147004 (AF87811) was recounted due to a suspected false positive. 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: 2561057

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

GEL Sample ID#	Client Sample Identification
653147001	AF87812
653147002	AF87813
653147003	AF87809
653147004	AF87811
653147005	AF87808
1205636194	Method Blank (MB)
1205636195	653141001(AF87770) Sample Duplicate (DUP)
1205636196	653141001(AF87770) Matrix Spike (MS)

1205636197 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
1205636195 (AF87770DUP)	Radium-226	RPD 127* (0.0%-100.0%) RER 2.1 (0-3)

Miscellaneous Information

Additional Comments
The matrix spike, 1205636196 (AF87770MS), 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.

653147

Contract Lab Info: GEL Contract Lab Due Date (Lab Only): 2 / 23 / 24 Send report to lcwillia@santeecooper.com & sjbrown@santeecooper.com

Chain of Custody

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:	Date Results Needed by:	Project/Task/Unit #:	Rerun request for any flagged QC
LINDA.WILLIAMS@santeecooper.com	/ /	125915 / JM02.07.G01.1 / 3650	(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		
AF87812	POZ-7	1/24/24	1425	WJK ML	2	P	G	GW	2		1	1		
AF87813	POZ-7 DUP	〃	1430	〃	〃	〃	〃	〃	〃		〃	〃		
AF87809	POZ-4	1/23/24	1208	〃	〃	〃	〃	〃	〃		〃	〃		
〃 11	POZ-6	〃	1437	〃	〃	〃	〃	〃	〃		〃	〃		
〃 08	POZ-3	〃	1542	〃	〃	〃	〃	〃	〃		〃	〃		

Relinquished by:	Employee#	Date	Time	Received by:	Employee #	Date	Time
	3685-1	1/26/24	0930		GEL	1/26/24	0930
Relinquished by:	Employee#	Date	Time	Received by:	Employee #	Date	Time
	GEL	1/26/24	1610	Thermo Tutu	GEL	1/26/24	1610
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:

☐ 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*)
☐ AIM
☐ 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
☐ 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=HNO_3 3=H_2SO_4 4-HCl 5=$Na_2S_2O_3$ 6-Other (Specify)

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: SOP	SDG/AR/COC/Work Order: 653147 SR
Received By: Thyasia Tatum	Date Received: 1-26-24
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?		✓	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): 0 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?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Chain of custody documents included with shipment?	✓			Circle Applicable: Client contacted and provided COC COC created upon receipt
3	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	✓			Preservation Method: (Wet Ice) Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius TEMP: CHEM-1°C ECHEM-10°C
4	Daily check performed and passed on IR temperature gun?	✓			Temperature Device Serial #: IR2-23 Secondary Temperature Device Serial # (If Applicable):
5	Sample containers intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6	Samples requiring chemical preservation at proper pH?	✓			Sample ID's and Containers Affected: If Preservation added, Lot#:
7	Do any samples require Volatile Analysis?			✓	If Yes, are Encores or Soil Kits present for solids? 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?	✓			ID's and tests affected:
9	Sample ID's on COC match ID's on bottles?	✓			ID's and containers affected:
10	Date & time on COC match date & time on bottles?	✓			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?	✓			Circle Applicable: No container count on COC Other (describe)
12	Are sample containers identifiable as GEL provided by use of GEL labels?	✓			
13	COC form is properly signed in relinquished/received sections?	✓			Circle Applicable: Not relinquished Other (describe)

Comments (Use Continuation Form if needed):

PM (or PMA) review: Initials VM Date 1/29/24 Page 1 of 1

GL-CHL-SR-001 Rev 7

List of current GEL Certifications as of 23 February 2024

State	Certification
Alabama	42200
Alaska	17-018
Alaska Drinking Water	SC00012
Arkansas	88-00651
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	KY90129
Kentucky Wastewater	KY90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2023019
Maryland	270
Massachusetts	M-SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE-OS-26-13
Nevada	SC000122024-05
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	2023-152
Pennsylvania NELAP	68-00485
Pucrto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-23-21
Utah NELAP	SC000122023-38
Vermont	VT87156
Virginia NELAP	460202
Washington	C780

GEL Laboratories LLC
a member of The GEL Group INC

2040 Savage Road | Charleston, SC 29407
843.556.8171
gel.com

February 08, 2024

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

Re: ABS Lab Analytical
Work Order: 652246

Dear Ms. Gilmetti:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on January 19, 2024. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

The samples were delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. There are no additional comments concerning sample receipt.

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: 125915/JM02.09.601.1/36500
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: 652246 GEL Work Order: 652246

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

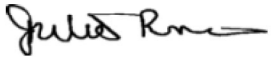
** Analyte is a surrogate compound

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: February 8, 2024

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:	AF87763	Project:	SOOP00119
Sample ID:	652246001	Client ID:	SOOP001
Matrix:	GW		
Collect Date:	11-JAN-24 12:02		
Receive Date:	19-JAN-24		
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	1.31	+/-1.15	1.86	3.00	pCi/L			JE1	01/31/24	0952	2556729	1
Rad Radium-226													
Lucas Cell, Ra226, Liquid "As Received"													
Radium-226		0.804	+/-0.508	0.555	1.00	pCi/L			LXP1	01/31/24	0913	2556270	2

The following Analytical Methods were performed:

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

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			73.5	(15%-125%)

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

Column headers are defined as follows:

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

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

Certificate of Analysis

Report Date: February 8, 2024

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:	AF87761	Project:	SOOP00119
Sample ID:	652246002	Client ID:	SOOP001
Matrix:	GW		
Collect Date:	11-JAN-24 13:23		
Receive Date:	19-JAN-24		
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		6.84	+/-1.68	1.86	3.00	pCi/L			JE1	02/02/24	1003	2556729	1
Rad Radium-226													
Lucas Cell, Ra226, Liquid "As Received"													
Radium-226	U	0.306	+/-0.370	0.610	1.00	pCi/L			LXP1	01/31/24	0913	2556270	2

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	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
DL: Detection Limit
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Lc/LC: Critical Level
PF: Prep Factor
RL: Reporting Limit
SQL: Sample Quantitation Limit

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

Certificate of Analysis

Report Date: February 8, 2024

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:	AF87762	Project:	SOOP00119
Sample ID:	652246003	Client ID:	SOOP001
Matrix:	GW		
Collect Date:	11-JAN-24 13:28		
Receive Date:	19-JAN-24		
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		5.45	+/-1.48	1.71	3.00	pCi/L			JE1	02/02/24	1003	2556729	1
Rad Radium-226													
Lucas Cell, Ra226, Liquid "As Received"													
Radium-226		0.634	+/-0.423	0.479	1.00	pCi/L			LXP1	01/31/24	0913	2556270	2

The following Analytical Methods were performed:

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

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			75.3	(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: February 8, 2024

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:	AF88958	Project:	SOOP00119
Sample ID:	652246004	Client ID:	SOOP001
Matrix:	GW		
Collect Date:	11-JAN-24 14:39		
Receive Date:	19-JAN-24		
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		1.79	+/-0.914	1.24	3.00	pCi/L			JE1	01/31/24	0952	2556729	1
Rad Radium-226													
Lucas Cell, Ra226, Liquid "As Received"													
Radium-226	U	0.304	+/-0.345	0.537	1.00	pCi/L			LXP1	01/31/24	0913	2556270	2

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	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
DL: Detection Limit
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Lc/LC: Critical Level
PF: Prep Factor
RL: Reporting Limit
SQL: Sample Quantitation Limit

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

Certificate of Analysis

Report Date: February 8, 2024

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:	AF87760	Project:	SOOP00119
Sample ID:	652246005	Client ID:	SOOP001
Matrix:	GW		
Collect Date:	16-JAN-24 09:17		
Receive Date:	19-JAN-24		
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		4.23	+/-1.27	1.34	3.00	pCi/L			JE1	01/31/24	0952	2556729	1
Rad Radium-226													
Lucas Cell, Ra226, Liquid "As Received"													
Radium-226		1.10	+/-0.559	0.414	1.00	pCi/L			LXP1	01/31/24	0913	2556270	2

The following Analytical Methods were performed:

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

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

Certificate of Analysis

Report Date: February 8, 2024

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:	AF87759	Project:	SOOP00119
Sample ID:	652246006	Client ID:	SOOP001
Matrix:	GW		
Collect Date:	16-JAN-24 10:22		
Receive Date:	19-JAN-24		
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		3.70	+/-1.30	1.61	3.00	pCi/L			JE1	01/31/24	0952	2556729	1
Rad Radium-226													
Lucas Cell, Ra226, Liquid "As Received"													
Radium-226		1.50	+/-0.635	0.506	1.00	pCi/L			LXP1	01/31/24	0949	2556270	2

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	
2	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: February 8, 2024

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:	AF87758	Project:	SOOP00119
Sample ID:	652246007	Client ID:	SOOP001
Matrix:	GW		
Collect Date:	16-JAN-24 11:08		
Receive Date:	19-JAN-24		
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		10.6	+/-1.79	1.38	3.00	pCi/L			JE1	01/31/24	0952	2556729	1
Rad Radium-226													
Lucas Cell, Ra226, Liquid "As Received"													
Radium-226		3.54	+/-0.890	0.337	1.00	pCi/L			LXP1	01/31/24	0949	2556270	2

The following Analytical Methods were performed:

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

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			74.1	(15%-125%)

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

Column headers are defined as follows:

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

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

Certificate of Analysis

Report Date: February 8, 2024

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:	AF87757	Project:	SOOP00119
Sample ID:	652246008	Client ID:	SOOP001
Matrix:	GW		
Collect Date:	16-JAN-24 12:19		
Receive Date:	19-JAN-24		
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	0.625	+/-0.941	1.63	3.00	pCi/L			JE1	01/31/24	0952	2556729	1
Rad Radium-226													
Lucas Cell, Ra226, Liquid "As Received"													
Radium-226		1.43	+/-0.629	0.407	1.00	pCi/L			LXP1	01/31/24	0949	2556270	2

The following Analytical Methods were performed:

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

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			76.8	(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: February 8, 2024

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:	AF87756	Project:	SOOP00119
Sample ID:	652246009	Client ID:	SOOP001
Matrix:	GW		
Collect Date:	16-JAN-24 13:46		
Receive Date:	19-JAN-24		
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	1.21	+/-1.41	2.38	3.00	pCi/L			JE1	01/31/24	0952	2556729	1
Rad Radium-226													
Lucas Cell, Ra226, Liquid "As Received"													
Radium-226	U	0.446	+/-0.431	0.643	1.00	pCi/L			LXP1	01/31/24	0949	2556270	2

The following Analytical Methods were performed:

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

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			72.1	(15%-125%)

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

Column headers are defined as follows:

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

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

Certificate of Analysis

Report Date: February 8, 2024

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:	AF87766	Project:	SOOP00119
Sample ID:	652246010	Client ID:	SOOP001
Matrix:	GW		
Collect Date:	17-JAN-24 10:43		
Receive Date:	19-JAN-24		
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		1.84	+/-1.04	1.51	3.00	pCi/L			JE1	01/31/24	0952	2556729	1
Rad Radium-226													
Lucas Cell, Ra226, Liquid "As Received"													
Radium-226		0.769	+/-0.444	0.497	1.00	pCi/L			LXP1	01/31/24	0949	2556270	2

The following Analytical Methods were performed:

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

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			76.8	(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: February 8, 2024

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:	AF87772	Project:	SOOP00119
Sample ID:	652246011	Client ID:	SOOP001
Matrix:	GW		
Collect Date:	17-JAN-24 12:26		
Receive Date:	19-JAN-24		
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	1.68	+/-1.22	1.92	3.00	pCi/L			JE1	01/31/24	0953	2556729	1
Rad Radium-226													
Lucas Cell, Ra226, Liquid "As Received"													
Radium-226		0.688	+/-0.393	0.322	1.00	pCi/L			LXP1	01/31/24	0949	2556270	2

The following Analytical Methods were performed:

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

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			75.9	(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: February 8, 2024

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:	AF87773	Project:	SOOP00119
Sample ID:	652246012	Client ID:	SOOP001
Matrix:	GW		
Collect Date:	17-JAN-24 12:31		
Receive Date:	19-JAN-24		
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	1.08	+/-0.855	1.33	3.00	pCi/L			JE1	01/31/24	0953	2556729	1
Rad Radium-226													
Lucas Cell, Ra226, Liquid "As Received"													
Radium-226		0.680	+/-0.452	0.478	1.00	pCi/L			LXP1	01/31/24	0949	2556270	2

The following Analytical Methods were performed:

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

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			73.3	(15%-125%)

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

Column headers are defined as follows:

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

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

Certificate of Analysis

Report Date: February 8, 2024

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:	AF87774	Project:	SOOP00119
Sample ID:	652246013	Client ID:	SOOP001
Matrix:	GW		
Collect Date:	17-JAN-24 14:04		
Receive Date:	19-JAN-24		
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		2.05	+/-0.908	1.13	3.00	pCi/L			JE1	01/31/24	0953	2556729	1
Rad Radium-226													
Lucas Cell, Ra226, Liquid "As Received"													
Radium-226		0.998	+/-0.547	0.432	1.00	pCi/L			LXP1	01/31/24	0949	2556270	2

The following Analytical Methods were performed:

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

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			76.2	(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: February 8, 2024

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:	AF87775	Project:	SOOP00119
Sample ID:	652246014	Client ID:	SOOP001
Matrix:	GW		
Collect Date:	17-JAN-24 15:20		
Receive Date:	19-JAN-24		
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		3.56	+/-1.19	1.40	3.00	pCi/L			JE1	01/31/24	0953	2556729	1
Rad Radium-226													
Lucas Cell, Ra226, Liquid "As Received"													
Radium-226		1.14	+/-0.552	0.490	1.00	pCi/L			LXP1	01/31/24	1024	2556270	2

The following Analytical Methods were performed:

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

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			77.7	(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

QC Summary

Report Date: February 8, 2024

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

Contact: **Ms. Jeanette Gilmetti**

Workorder: **652246**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gas Flow										
Batch 2556729										
QC1205628819 652246001 DUP										
Radium-228	U	1.31		2.04	pCi/L	44		(0% - 100%)	JE1	01/31/24 09:52
	Uncertainty	+/-1.15		+/-1.09						
QC1205628820 LCS										
Radium-228	76.0			76.7	pCi/L		101	(75%-125%)		01/31/24 09:52
	Uncertainty			+/-4.37						
QC1205628818 MB										
Radium-228			U	1.28	pCi/L					01/31/24 09:52
	Uncertainty			+/-1.03						
Rad Ra-226										
Batch 2556270										
QC1205627969 652246001 DUP										
Radium-226		0.804		1.17	pCi/L	37		(0% - 100%)	LXP1	01/31/24 10:24
	Uncertainty	+/-0.508		+/-0.646						
QC1205627971 LCS										
Radium-226	26.8			27.1	pCi/L		101	(75%-125%)		01/31/24 10:24
	Uncertainty			+/-2.80						
QC1205627968 MB										
Radium-226			U	0.419	pCi/L					01/31/24 10:24
	Uncertainty			+/-0.373						
QC1205627970 652246001 MS										
Radium-226	130	0.804		136	pCi/L		104	(75%-125%)		01/31/24 10:24
	Uncertainty	+/-0.508		+/-13.4						

Notes:

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

The Qualifiers in this report are defined as follows:

- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.
- J Value is estimated
- X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- H Analytical holding time was exceeded
- < Result is less than value reported

QC Summary

Workorder: **652246**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time

>	Result is greater than value reported
UI	Gamma Spectroscopy--Uncertain identification
BD	Results are either below the MDC or tracer recovery is low
h	Preparation or preservation holding time was exceeded
R	Sample results are rejected
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
N/A	RPD or %Recovery limits do not apply.
ND	Analyte concentration is not detected above the detection limit
M	M if above MDC and less than LLD
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
FA	Failed analysis.
UJ	Gamma Spectroscopy--Uncertain identification
Q	One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
K	Analyte present. Reported value may be biased high. Actual value is expected to be lower.
UL	Not considered detected. The associated number is the reported concentration, which may be inaccurate due to a low bias.
L	Analyte present. Reported value may be biased low. Actual value is expected to be higher.
N1	See case narrative
Y	Other specific qualifiers were required to properly define the results. Consult case narrative.
**	Analyte is a Tracer compound
M	REMP Result > MDC/CL and < RDL
J	See case narrative for an explanation

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.

Technical Case Narrative
Santee Cooper
SDG #: 652246

Radiochemistry

Product: **GFPC, Ra228, Liquid**
Analytical Method: EPA 904.0/SW846 9320 Modified
Analytical Procedure: GL-RAD-A-063 REV# 5
Analytical Batch: 2556729

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

GEL Sample ID#	Client Sample Identification
652246001	AF87763
652246002	AF87761
652246003	AF87762
652246004	AF88958
652246005	AF87760
652246006	AF87759
652246007	AF87758
652246008	AF87757
652246009	AF87756
652246010	AF87766
652246011	AF87772
652246012	AF87773
652246013	AF87774
652246014	AF87775
1205628818	Method Blank (MB)
1205628819	652246001(AF87763) Sample Duplicate (DUP)
1205628820	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
Samples 652246002 (AF87761) and 652246003 (AF87762) 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: 2556270

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

GEL Sample ID#	Client Sample Identification
652246001	AF87763
652246002	AF87761
652246003	AF87762
652246004	AF88958
652246005	AF87760
652246006	AF87759
652246007	AF87758
652246008	AF87757
652246009	AF87756
652246010	AF87766
652246011	AF87772
652246012	AF87773
652246013	AF87774
652246014	AF87775
1205627968	Method Blank (MB)
1205627969	652246001(AF87763) Sample Duplicate (DUP)
1205627970	652246001(AF87763) Matrix Spike (MS)
1205627971	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, 1205627970 (AF87763MS), aliquot was reduced to conserve sample volume.

Certification Statement

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

Contract Lab Info: GEL Contract Lab Due Date (Lab Only): 2 / 16 / 24 Send report to lcwillia@santeecooper.com & sjbrown@santeecooper.com

Chain of Custody

652246

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: LINDA.WILLIAMS@santeecooper.com

Date Results Needed by: ___/___/___

Project/Task/Unit #: 125915 / JM02.08.G02.3 / 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		
AF87763	CAP-10	1/11/24	1202	WJK ML	1	P	G	GW	2		X	X		
61	CAP-9	"	1323	"	"	"	"	"	"		"	"		
62	CAP-9 DUP	"	1328	"	"	"	"	"	"		"	"		
AF88958	CAP-8	"	1439	"	"	"	"	"	"		"	"		
AF87760	CAP-7	1/16/24	0917	"	"	"	"	"	"		"	"		
59	CAP-6	"	1022	"	"	"	"	"	"		"	"		
58	CAP-5	"	1168	"	"	"	"	"	"		"	"		
57	CAP-4	"	1219	"	"	"	"	"	"		"	"		
56	CAP-3	"	1346	"	"	"	"	"	"		"	"		
AF87766	CAP-13	1/17/24	1043	"	"	"	"	"	"		"	"		

Relinquished by:	Employee#	Date	Time	Received by:	Employee #	Date	Time
	36851	1/19/24	0936		GEL	1/19/24	0936
Relinquished by:	**Employee#**	**Date**	**Time**	**Received by:**	**Employee #**	**Date**	**Time**
	GEL	1.19.24	1635	M.	GEL	MS 1.19.24	1635
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:

☐ 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*)**
☐ AIM
☐ 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
☐ **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=HNO_3 3=H_2SO_4 4-HCl 5=$Na_2S_2O_3$ 6-Other (Specify)

Contract Lab Info: GEL Contract Lab Due Date (Lab Only): 2 / 16 / 24 Send report to lcwillia@santeecooper.com & sjbrown@santeecooper.com

Chain of Custody

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: LINDA.WILLIAMS@santeecooper.com

Date Results Needed by: ___/___/___

Project/Task/Unit #: 125915 / JM02.09.G81.1 / 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		
AF87772	CCMAP-4	1/17/24	1226	WJK ML	2	P	G	GW	2		X	X		
73	- 4 DUP		1231											
74	-5		1404											
75	-6		1520											

Relinquished by:	Employee#	Date	Time	Received by:	Employee #	Date	Time
	36851	1/19/24	0936		GEL	1/19/24	0936
Relinquished by:	Employee#	Date	Time	Received by:	Employee #	Date	Time
	GEL	1.19.24	1635	M.	GEL	1.19.24	1635
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:

☐ **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*)**
☐ AIM
☐ 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
☐ 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: 1=Ice 2=HNO_3 3=H_2SO_4 4-HCl 5=$Na_2S_2O_3$ 6-Other (Specify)

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: SOOP	SDG/AR/COC/Work Order: 652246
Received By: MLS	Date Received: 1-19-24
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?		✓	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): 0 (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?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Chain of custody documents included with shipment?	✓			Circle Applicable: Client contacted and provided COC COC created upon receipt
3	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	MLS ✓			Preservation Method: Wet Ice Ice Packs Dry ice (None) Other: *all temperatures are recorded in Celsius TEMP: 20
4	Daily check performed and passed on IR temperature gun?	✓			Temperature Device Serial #: IR5-23 Secondary Temperature Device Serial # (If Applicable):
5	Sample containers intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6	Samples requiring chemical preservation at proper pH?	✓			Sample ID's and Containers Affected: If Preservation added, Lot#:
7	Do any samples require Volatile Analysis?			✓	If Yes, are Encores or Soil Kits present for solids? 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?	✓			ID's and tests affected:
9	Sample ID's on COC match ID's on bottles?	✓			ID's and containers affected:
10	Date & time on COC match date & time on bottles?	✓			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?	✓			Circle Applicable: No container count on COC Other (describe)
12	Are sample containers identifiable as GEL provided by use of GEL labels?			✓	
13	COC form is properly signed in relinquished/received sections?	✓			Circle Applicable: Not relinquished Other (describe)

Comments (Use Continuation Form if needed):

PM (or PMA) review: Initials AM Date 1/22/24 Page 1 of 1

GL-CHL-SR-001 Rev 7

List of current GEL Certifications as of 08 February 2024

State	Certification
Alabama	42200
Alaska	17-018
Alaska Drinking Water	SC00012
Arkansas	88-00651
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	KY90129
Kentucky Wastewater	KY90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2023019
Maryland	270
Massachusetts	M-SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE-OS-26-13
Nevada	SC000122024-05
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	2023-152
Pennsylvania NELAP	68-00485
Pucrto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-23-21
Utah NELAP	SC000122023-38
Vermont	VT87156
Virginia NELAP	460202
Washington	C780

Appendix C – Well Construction Record

Water Well Record
Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

1. WELL OWNER INFORMATION:
Name: SANTEE COOPER CROSS GENERATING STATION (last) (first)
Address: 553 CROSS STATION ROAD
City: PINEVILLE State: SC Zip: 29468
Telephone: Work: 843-761-8000 Home: 843-303-1639

2. LOCATION OF WELL: **COUNTY:** BERKELEY
Name: Santee Cooper-Cross Generating Station
Street Address: 553 Cross Station Rd.
City: Pineville Zip: 29468
Latitude: Longitude:

3. PUBLIC SYSTEM NAME: **PUBLIC SYSTEM NUMBER:** PZ-4R

4. ABANDONMENT: ☐ Yes ☒ No
Give Details Below
Grouted Depth: from _____ ft. to _____ ft.

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
BROWN SAND/CLAY	7	7
GRAY SILTYSAND	12	19
WATER AT 10'		
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS: BENTONITE AT 5' TO 7'.

6. TYPE: ☐ Mud Rotary ☐ Jetted ☒ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

7. PERMIT NUMBER:

8. USE: ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☐ Test Well ☒ Monitor Well ☐ Replacement

9. WELL DEPTH (completed) 19 ft. Date Started: 1-8-2024 Date Completed: 1-8-2024

10. CASING: ☒ Threaded ☐ Welded
Diam.: 2"
Type: ☒ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 9 ft. depth
_____ in. to _____ ft. depth
Height: Above/(Below)
Surface _____ ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☒ No

11. SCREEN:
Type: PVC Diam.: 2"
Slot/Gauge: .010 Length: 10'
Set Between: 9 ft. and 19 ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☒ No

12. STATIC WATER LEVEL 10 ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☒ No
Yield: _____

14. WATER QUALITY
Chemical Analysis ☐ Yes ☒ No Bacterial Analysis ☐ Yes ☒ No
Please enclose lab results.

15. ARTIFICIAL FILTER (filter pack) ☒ Yes ☐ No
Installed from 7 ft. to 19 ft.
Effective size #2 Uniformity Coefficient SAND

16. WELL GROUTED? ☒ Yes ☐ No
☒ Neat Cement ☐ Bentonite ☐ Bentonite/Cement ☐ Other _____
Depth: From 0 ft. to 5 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: _____ ft. _____ direction
Type _____
Well Disinfected ☐ Yes ☒ No Type: _____ Amount: _____

18. PUMP: Date installed: _____ Not installed ☒
Mfr. Name: _____ Model No.: _____
H.P._____ Volts_____ Length of drop pipe_____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Rich Lemire **CERT. NO.:** 1423
Address: (Print)
SAEDACCO
9088 Northfield Drive
Fort Mill, SC 29707
Level: A (B) C D (circle one)
Telephone No.: (803)548-2180 Fax No.: (803)548-2181

20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Rich Lemire Date: 1/11/2024
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (03/2004)

COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

Water Well Record
Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

1. WELL OWNER INFORMATION:
Name: SANTEE COOPER CROSS GENERATING STATION (last) (first)
Address: 553 CROSS STATION ROAD
City: PINEVILLE State: SC Zip: 29468
Telephone: Work: 843-761-8000 Home: 843-303-1639

2. LOCATION OF WELL: **COUNTY:** BERKELEY
Name: Santee Cooper-Cross Generating Station
Street Address: 553 Cross Station Rd.
City: Pineville Zip: 29468
Latitude: Longitude:

3. PUBLIC SYSTEM NAME: **PUBLIC SYSTEM NUMBER:** PZ-5R

4. ABANDONMENT: ☐ Yes ☒ No
Give Details Below
Grouted Depth: from _____ ft. to _____ ft.

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
BROWN SAND/CLAY	7	7
GRAY SILTY SAND	9	16
WATER AT 10'		
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS: BENTONITE AT 3' TO 5'.

6. TYPE: ☐ Mud Rotary ☐ Jetted ☒ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

7. PERMIT NUMBER:

8. USE: ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☐ Test Well ☒ Monitor Well ☐ Replacement

9. WELL DEPTH (completed) 16' ft. Date Started: 1-8-2024 Date Completed: 1-8-2024

10. CASING: ☒ Threaded ☐ Welded
Diam.: 2"
Type: ☒ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 6 ft. depth
_____ in. to _____ ft. depth
Height: Above/(Below)
Surface _____ ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☒ No

11. SCREEN:
Type: PVC Diam.: 2"
Slot/Gauge: .010 Length: 10'
Set Between: 6 ft. and 16 ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☒ No

12. STATIC WATER LEVEL 10 ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☒ No
Yield: _____

14. WATER QUALITY
Chemical Analysis ☐ Yes ☒ No Bacterial Analysis ☐ Yes ☒ No
Please enclose lab results.

15. ARTIFICIAL FILTER (filter pack) ☒ Yes ☐ No
Installed from 5 ft. to 16 ft.
Effective size #2 Uniformity Coefficient SAND

16. WELL GROUTED? ☒ Yes ☐ No
☒ Neat Cement ☐ Bentonite ☐ Bentonite/Cement ☐ Other _____
Depth: From 0 ft. to 3 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: _____ ft. _____ direction
Type _____
Well Disinfected ☐ Yes ☒ No Type: _____ Amount: _____

18. PUMP: Date installed: _____ Not installed ☒
Mfr. Name: _____ Model No.: _____
H.P._____ Volts_____ Length of drop pipe_____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Rich Lemire **CERT. NO.:** 1423
Address: (Print)
SAEDACCO
9088 Northfield Drive
Fort Mill, SC 29707
Level: A (B) C D (circle one)
Telephone No.: (803)548-2180 Fax No.: (803)548-2181

20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Rich Lemire Date: 1/11/2024
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (03/2004)

COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER