# 2024 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT SOUTH ASH POND WINYAH GENERATING STATION

by Santee Cooper Moncks Corner, South Carolina

**January 31, 2025** 

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# 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 South Ash Pond at the Winyah Generating Station (WGS). 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, Title 40 Code of Federal Regulations (40 CFR) Part 257, Subpart D dated April 17, 2015 (CCR Rule), specifically subsection § 257.90(e)(1) through (6).

In accordance with § 257.90(e)(6), an overview of the current status of the 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 WGS South Ash Pond continued to operate under an assessment monitoring program in accordance with § 257.95, which was initiated on July 16, 2018. Statistically significant levels (SSLs) of Appendix IV constituents above the groundwater protection standards (GWPS) were not identified in any of the wells to date, including both the February and July 2024 sampling events. At the end of the current annual reporting period (December 31, 2024), the South Ash Pond remained in the assessment monitoring program.

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

# 2. 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 South Ash Pond at WGS is an existing CCR surface impoundment which is no longer receiving CCR or non-CCR waste streams and is undergoing closure by removal. As such, it is 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 Unit Owner/Operator to prepare an Annual Groundwater Monitoring and Corrective Action Report.

## 2.2 40 CFR § 257.90(e) - SUMMARY

Annual groundwater monitoring and corrective action report. For existing CCR landfills and existing CCR surface impoundments, no later than January 31, 2018, and annually thereafter, the owner or operator must prepare an annual groundwater monitoring and corrective action report. For 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 WGS South Ash Pond 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, set forth in § 257.95, is provided in this report.

## 2.2.1 Status of the Groundwater Monitoring and Corrective Action Program

Earlier, statistically significant increases (SSIs) of Appendix III constituents were identified downgradient of the South Ash Pond, and the notification was provided on January 15, 2018. As a result, an assessment monitoring program was initiated as required by  $\S$  257.94(e)(2) and notification was placed in the facility's operating record as required by 257.106(h)(4).

As required by § 257.93(h)(2), a statistical evaluation of the detected Appendix IV constituents was conducted. The results of this evaluation determined that the detected Appendix IV constituents were not present at statistically significant levels (SSLs) above the GWPS. Therefore, this unit has remained in assessment monitoring.

For the assessment monitoring in 2024, the two sampling events are consistent with prior sampling results and confirm that SSLs of the detected Appendix IV constituents above GWPS are not present for this unit, so the unit continues to remain in assessment monitoring.

#### 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 samples (February and July) 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). Groundwater monitoring results are summarized in Table 1 and laboratory analytical results are provided in Appendix B.
- Completed statistical evaluations to determine if SSLs above GWPS were present for detected Appendix IV constituents in accordance with § 257.93(h)(2) (Appendix A).
- Completed baseline sampling for WAP-28, collecting the remaining independent sample to establish a statistically representative dataset. WAP-28 was added to the compliance groundwater monitoring network after collecting eight samples which coincided with the first sampling event of 2024.

- 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 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.
- Continued baseline sampling for WAP-2R and WAP-28R (which were installed in 2023 due to concerns related to WAP-2 and WAP-28), while evaluating whether to potentially replace WAP-2 and WAP-28, respectively.

#### 2.2.3 Problems Encountered

No problems were encountered during 2024.

#### 2.2.4 Actions to Resolve Problems

No actions were required during 2024.

## 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 state [§ 257.106(d)]; and post to website [§ 257.107(d)].
- Conduct semi-annual groundwater monitoring as required by § 257.95.
- Complete semi-annual statistical analysis of assessment monitoring analytical data to determine if SSLs of the detected Appendix IV constituents are present above GWPS.
- WAP-2R and WAP-28R will continue baseline sampling while they are evaluated as replacement
  wells for WAP-2 and WAP-28, respectively, and potentially added to the compliance groundwater
  monitoring network and statistical evaluations. Depending on review of data collected in 2024
  and 2025, evaluate the need to abandon existing monitoring wells WAP-2 and WAP-28 and
  replace with the new adjacent wells installed in December 2023.
- 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 location of the CCR unit and associated upgradient and downgradient monitoring wells for South Ash Pond 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;

No groundwater monitoring wells were installed or decommissioned in 2024.

## 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), 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 (detection or assessment), and monitoring data obtained for the groundwater monitoring program for South Ash Pond is presented in Table 1 of this report. In addition, in accordance with § 257.95(d)(3), Table 1 includes the groundwater protection standards 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

As required by § 257.93(h) an initial statistical analysis of the Appendix III constituents was completed January 15, 2018. Baseline analytical data collected from background monitoring wells WBW-1 and WAP-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 (WAP-2, WAP-3, WAP-12, and WAP-13). Constituents with analytical results exceeding the UTLs were identified as SSIs over background for the respective Appendix III constituent. This statistical analysis determined that SSIs of boron, calcium, chloride, fluoride, pH, sulfate, and total dissolved solids were present downgradient of South Ash Pond. An evaluation of alternate sources was initiated and completed on April 16, 2018, as provided in § 257.94(e)(2). A source causing the SSI over background levels was not identified at that time, and to meet the requirements of 40 CFR § 257.95, an assessment monitoring program was initiated on July 16, 2018.

In assessment monitoring the sample concentrations from the downgradient wells for each of the detected Appendix IV constituents from the monitoring events in 2024 were compared to their respective

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. As required by § 257.93(h)(2), the statistical evaluation of the detected Appendix IV constituents determined that SSLs above the GWPS were not present at South Ash Pond, consistent with previous results. Therefore, this unit will remain in assessment monitoring going into 2025.

## 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 § 257.95 of the CCR Rule. There are no applicable requirements from Sections § 257.96 through § 257.98.

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

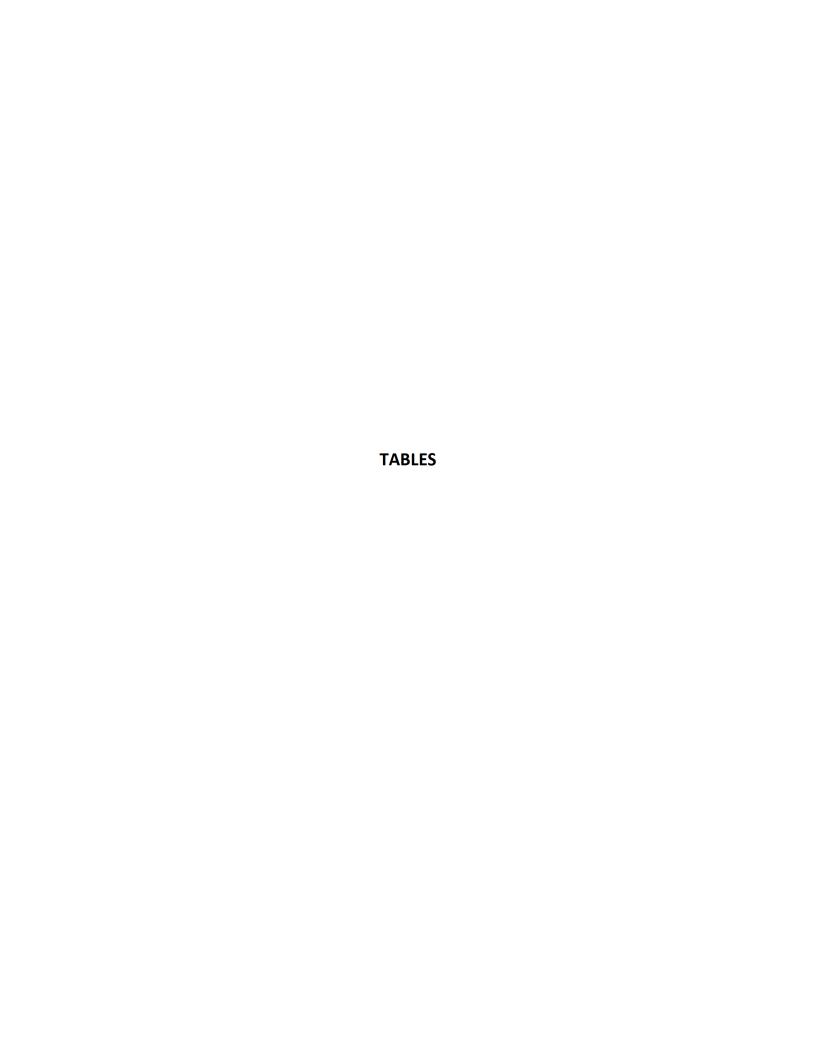


Table 1 - Summary of Analytical Results Winyah Generating Station South Ash Pond Assessment Monitoring 2024

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2. All Background Corrective Measures Assessment (CMA) Nation & Estent (NE), & Assessment Monitoring compliance wells have been sampled to meet § 2675 44 and § 2679 96.

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Table 2
Cross Generating Station

2024 Synoptic Water Levels for Groundwater Monitoring Wells

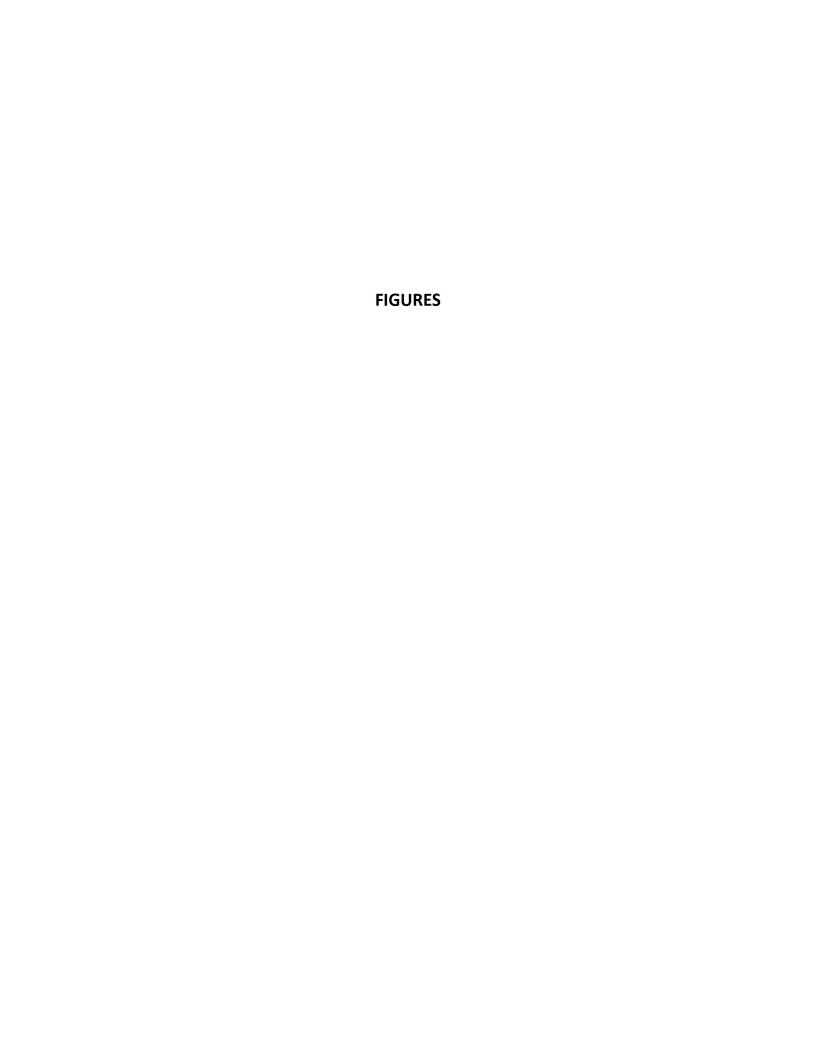
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PM-1         83.24         7.75         75.49         8.14         83.24         8.50         74.74         9.1           CBW-1         85.80         8.50         77.30         9.12         85.80         10.41         75.39         11.           CAP-1         82.70         8.50         74.20         6.61         82.70         7.66         75.04         8.4           CAP-2         89.70         15.10         74.60         15.91         89.70         16.98         72.72         17.           CAP-3         91.49         14.70         76.79         15.47         91.49         16.54         74.95         17.           CAP-4         91.77         15.05         76.72         15.77         91.77         16.97         74.80         17.           CAP-5         91.78         14.60         77.18         15.26         91.78         16.67         74.12         18.           CAP-6         91.82         14.65         77.17         15.89         91.82         18.05         73.77         18.           CAP-7         91.64         14.75         76.89         15.19         91.64         17.57         74.07         18.           CAP-10	77 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	74.33 74.30 72.01 74.15 73.96 73.11 72.88 73.12 72.63 72.86 82.57 74.24 73.60 72.01 71.84 72.91 72.91 73.73 73.85 73.38 72.92 72.91 73.73 74.92 75.92 76.93 77.93
CBW-1         85.80         8.50         77.30         9.12         85.80         10.41         75.39         11.           CAP-1         82.70         8.50         74.20         6.61         82.70         7.66         75.04         8.4           CAP-2         89.70         15.10         74.60         15.91         89.70         16.98         72.72         17.           CAP-3         91.49         14.70         76.79         15.47         91.49         16.54         74.95         17.           CAP-4         91.77         15.05         76.72         15.77         91.77         16.97         74.80         17.           CAP-5         91.78         14.60         77.18         15.26         91.78         17.66         74.12         18.           CAP-6         91.82         14.65         77.17         15.89         91.81         18.05         73.77         18.           CAP-7         91.64         14.75         76.89         15.19         91.64         17.57         74.07         18.           CAP-8         91.61         15.95         75.66         16.67         91.61         18.30         73.31         18.           CAP-10	77 7 7 9 9 9 9 9 9 14 4 1 1 1 1 1 1 1 1 1 1 1	74.33 74.30 72.01 74.15 73.96 73.11 72.88 73.12 72.63 72.86 82.57 74.24 73.60 72.01 71.84 72.91 72.91 73.73 73.85 73.38 72.92 72.91 73.73 74.92 75.92 76.93 77.93
CAP-1         82.70         8.50         74.20         6.61         82.70         7.66         75.04         8.4           CAP-2         89.70         15.10         74.60         15.91         89.70         16.98         72.72         17.           CAP-3         91.49         14.70         76.79         15.47         91.49         16.54         74.95         17.           CAP-4         91.77         15.05         76.72         15.77         91.77         16.97         74.80         17.           CAP-5         91.78         14.60         77.18         15.26         91.78         17.66         74.12         18.           CAP-6         91.82         14.65         77.17         15.89         91.82         18.05         73.77         18.           CAP-7         91.64         14.75         76.89         15.19         91.62         18.05         73.77         18.           CAP-8         91.61         15.95         75.66         16.67         91.61         18.30         73.31         18.           CAP-10         95.68         20.25         75.43         21.12         95.68         22.40         73.28         13.           CAP-11 <td>9 9 4 4 4 1 1 7 7 7 4 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2</td> <td>74.30 72.01 74.15 73.96 73.11 72.88 73.12 72.86 82.57 74.24 73.60 72.01 71.84 72.91 71.34 72.91 72.91 71.34 72.91 73.33 73.38 72.92 72.91 73.73 72.98 74.08 73.85 73.85 73.85 73.15 72.78 72.78</td>	9 9 4 4 4 1 1 7 7 7 4 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	74.30 72.01 74.15 73.96 73.11 72.88 73.12 72.86 82.57 74.24 73.60 72.01 71.84 72.91 71.34 72.91 72.91 71.34 72.91 73.33 73.38 72.92 72.91 73.73 72.98 74.08 73.85 73.85 73.85 73.15 72.78 72.78
CAP-2         89.70         15.10         74.60         15.91         89.70         16.98         72.72         17.           CAP-3         91.49         14.70         76.79         15.47         91.49         16.54         74.95         17.           CAP-4         91.77         15.05         76.72         15.77         91.77         16.97         74.80         17.           CAP-5         91.78         14.60         77.18         15.26         91.78         17.66         74.12         18.           CAP-6         91.82         14.65         77.17         15.89         91.82         18.05         73.77         18.           CAP-7         91.64         14.75         76.89         15.19         91.64         17.57         74.07         18.           CAP-8         91.61         15.95         75.66         16.67         91.61         18.30         73.31         18.           CAP-9         91.59         14.35         77.24         14.62         91.59         17.82         73.77         18.           CAP-10         95.68         20.25         75.43         21.12         95.68         22.40         73.28         13.           CAP-11	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	74.15 73.96 73.11 72.86 73.12 72.63 72.86 82.57 74.24 73.60 72.01 71.84 72.91 72.91 71.34 73.63 73.38 72.92 72.91 73.73 73.73 72.98 74.08 73.85 73.57 73.15 74.15
CAP-3         91.49         14.70         76.79         15.47         91.49         16.54         74.95         17.           CAP-4         91.77         15.05         76.72         15.77         91.77         16.97         74.80         17.           CAP-5         91.78         14.60         77.18         15.26         91.78         17.66         74.12         18.           CAP-6         91.82         14.65         77.17         15.89         91.82         18.05         73.77         18.           CAP-7         91.64         14.75         76.89         15.19         91.64         17.57         74.07         18.           CAP-8         91.61         15.95         75.66         16.67         91.61         18.30         73.31         18.           CAP-9         91.59         14.35         77.24         14.62         91.59         17.82         73.77         18.           CAP-10         95.68         20.25         75.43         21.12         95.68         22.40         73.28         13.           CAP-11         95.55         19.20         76.35         18.72         95.55         20.71         74.84         21.           CAP-1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	74.15 73.96 73.11 72.86 73.12 72.63 72.86 82.57 74.24 73.60 72.01 71.84 72.91 72.91 71.34 73.63 73.38 72.92 72.91 73.73 73.73 72.98 74.08 73.85 73.57 73.15 74.15
CAP-5         91.78         14.60         77.18         15.26         91.78         17.66         74.12         18.           CAP-6         91.82         14.65         77.17         15.89         91.82         18.05         73.77         18.           CAP-7         91.64         14.75         76.89         15.19         91.64         17.57         74.07         18.           CAP-8         91.61         15.95         75.66         16.67         91.61         18.30         73.31         18.           CAP-9         91.59         14.35         77.24         14.62         91.59         17.82         73.77         18.           CAP-10         95.68         20.25         75.43         21.12         95.68         22.40         73.28         13.           CAP-11         95.55         19.20         76.35         18.72         95.55         20.71         74.84         21.           CAP-12         98.33         22.25         76.08         23.72         98.33         24.13         74.20         24.           CAP-12         98.33         24.13         74.20         24.         R.83         80.77         7.65         73.12         8. <t< td=""><td>77 7 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4</td><td>73.11 72.88 73.12 72.63 72.86 82.57 74.24 73.60 72.91 71.84 72.91 73.63 73.38 72.92 72.91 73.73 72.92 73.73 72.98 74.08 73.85 73.57 73.15</td></t<>	77 7 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	73.11 72.88 73.12 72.63 72.86 82.57 74.24 73.60 72.91 71.84 72.91 73.63 73.38 72.92 72.91 73.73 72.92 73.73 72.98 74.08 73.85 73.57 73.15
CAP-5         91.78         14.60         77.18         15.26         91.78         17.66         74.12         18.           CAP-6         91.82         14.65         77.17         15.89         91.82         18.05         73.77         18.           CAP-7         91.64         14.75         76.89         15.19         91.64         17.57         74.07         18.           CAP-8         91.61         15.95         75.66         16.67         91.61         18.30         73.31         18.           CAP-9         91.59         14.35         77.24         14.62         91.59         17.82         73.77         18.           CAP-10         95.68         20.25         75.43         21.12         95.68         22.40         73.28         13.           CAP-11         95.55         19.20         76.35         18.72         95.55         20.71         74.84         21.           CAP-12         98.33         22.25         76.08         23.72         98.33         24.13         74.20         24.           CAP-13         80.77         4.15         76.62         4.78         80.77         7.65         73.12         8.           CCMLF-1	77 7 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	72.88 73.12 72.63 72.66 82.57 74.24 73.60 72.01 71.84 72.91 71.34 73.63 73.33 72.92 72.91 73.73 73.73 72.91 73.73 72.91 73.73 72.91 73.73 72.91 73.73 72.91 73.73 72.91 73.73 72.91 73.73 72.91 73.73 72.91 73.73 72.91 72.91 73.73 72.91 73.73 72.91 73.73 72.91 73.73 72.91 73.73 72.91 73.73 72.91 73.73 72.91 73.73 72.91 73.73 72.91 73.73 72.91 73.73 72.91 73.73 72.91 73.73 72.91 73.73 72.91 73.73 73.75 74.08 73.57 73.15 72.78 72.78 72.71
CAP-7         91.64         14.75         76.89         15.19         91.64         17.57         74.07         18.           CAP-8         91.61         15.95         75.66         16.67         91.61         18.30         73.31         18.           CAP-10         95.68         20.25         75.43         21.12         95.68         22.40         73.28         13.           CAP-11         95.55         19.20         76.35         18.72         95.55         20.71         74.84         21.           CAP-12         98.33         22.25         76.08         23.72         98.33         24.13         74.20         24.           CAP-13         80.77         4.35         76.42         4.83         80.77         7.65         73.12         8.3           CAP-14         80.77         4.15         76.62         4.78         80.77         7.77         73.00         8.9           CCMLF-1         80.65         3.20         77.45         3.74         4.00         80.86         7.11         73.75         7.5           CCMLF-1D         80.65         3.20         77.45         3.74         80.65         6.89         73.76         7.7	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	73.12 72.63 72.86 82.57 74.24 73.60 72.01 71.84 72.91 71.34 73.63 73.38 72.92 72.91 73.73 73.73 72.98 74.08 73.85 73.57 73.73
CAP-7         91.64         14.75         76.89         15.19         91.64         17.57         74.07         18.           CAP-8         91.61         15.95         75.66         16.67         91.61         18.30         73.31         18.           CAP-10         95.68         20.25         75.43         21.12         95.68         22.40         73.28         13.           CAP-11         95.55         19.20         76.35         18.72         95.55         20.71         74.84         21.           CAP-12         98.33         22.25         76.08         23.72         98.33         24.13         74.20         24.           CAP-13         80.77         4.35         76.42         4.83         80.77         7.65         73.12         8.3           CAP-14         80.77         4.15         76.62         4.78         80.77         7.77         73.00         8.9           CCMLF-1         80.65         3.20         77.45         3.74         4.00         80.86         7.11         73.75         7.5           CCMLF-1D         80.65         3.20         77.45         3.74         80.65         6.89         73.76         7.7	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	72.63 72.86 82.57 74.24 73.60 72.01 71.84 72.91 72.91 71.34 73.63 73.38 72.92 72.91 73.73 72.98 74.08 73.85 73.57 73.73
CAP-8         91.61         15.95         75.66         16.67         91.61         18.30         73.31         18.           CAP-9         91.59         14.35         77.24         14.62         91.59         17.82         73.77         18.           CAP-10         95.68         20.25         75.43         21.12         95.68         22.40         73.28         13.           CAP-11         95.55         19.20         76.35         18.72         95.55         20.71         74.84         21.           CAP-12         98.33         22.25         76.08         23.72         98.33         24.13         74.20         24.           CAP-13         80.77         4.35         76.42         4.83         80.77         7.65         73.12         8.           CAP-14         80.77         4.15         76.62         4.78         80.77         7.77         73.00         8.5           CCMLF-1         80.65         3.20         77.45         3.74         80.65         6.89         73.76         7.5           CCMLF-1D         80.65         3.20         77.45         3.74         80.65         6.89         73.76         7.5           CCMLF-2 <td>3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3</td> <td>72.86 82.57 74.24 73.60 72.01 71.84 72.91 73.63 73.38 72.92 72.91 73.73 72.98 74.08 73.85 73.57 73.15 72.78</td>	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	72.86 82.57 74.24 73.60 72.01 71.84 72.91 73.63 73.38 72.92 72.91 73.73 72.98 74.08 73.85 73.57 73.15 72.78
CAP-10         95.68         20.25         75.43         21.12         95.68         22.40         73.28         13.           CAP-11         95.55         19.20         76.35         18.72         95.55         20.71         74.84         21.           CAP-12         98.33         22.25         76.08         23.72         98.33         24.13         74.20         24.           CAP-13         80.77         4.35         76.42         4.83         80.77         7.65         73.12         8.7           CAP-14         80.77         4.15         76.62         4.78         80.77         7.77         73.00         8.5           CCMLF-1         80.86         3.45         77.41         4.00         80.86         7.11         73.75         7.5           CCMLF-1D         80.65         3.20         77.45         3.74         80.65         6.89         73.76         7.7           CCMLF-2         84.08         6.75         77.33         7.43         84.08         11.53         72.55         12.           POZ-3         82.61         4.30         78.81         4.98         82.61         7.80         74.81         8.5           POZ-4	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	82.57 74.24 73.60 72.01 71.84 72.91 72.91 72.91 73.63 73.38 72.92 72.91 73.73 72.98 74.08 73.85 73.57 73.15 73.15
CAP-I1         95.55         19.20         76.35         18.72         95.55         20.71         74.84         21.           CAP-I2         98.33         22.25         76.08         23.72         98.33         24.13         74.20         24.           CAP-I3         80.77         4.35         76.42         4.83         80.77         7.65         73.12         8.7           CAP-I4         80.77         4.15         76.62         4.78         80.77         7.77         73.00         8.5           CCMIF-I         80.86         3.45         77.41         4.00         80.86         7.11         73.75         7.5           CCMIF-ID         80.65         3.20         77.45         3.74         80.65         6.89         73.76         7.7           CCMIF-2         84.08         6.75         77.33         7.43         84.08         11.53         72.55         12.           POZ-3         82.61         4.30         78.31         4.98         82.61         7.80         74.81         8.5           POZ-4         82.73         3.95         78.78         5.07         82.73         8.34         74.39         9.3           POZ-5D	11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	74.24 73.60 72.01 71.84 72.91 71.34 73.63 73.38 72.92 72.91 73.73 72.98 74.08 73.85 73.57 73.57 73.73 72.78 73.73
CAP-12         98.33         22.25         76.08         23.72         98.33         24.13         74.20         24.           CAP-13         80.77         4.35         76.42         4.83         80.77         7.65         73.12         8.7           CAP-14         80.77         4.15         76.62         4.78         80.77         7.77         73.00         8.9           CCMLF-1         80.86         3.45         77.41         4.00         80.86         7.11         73.75         7.5           CCMLF-1         80.65         3.20         77.45         3.74         80.65         6.89         73.76         7.7           CCMLF-2         84.08         6.75         77.33         7.43         84.08         11.53         72.55         12.           POZ-3         82.61         4.30         78.31         4.98         82.61         7.80         74.81         8.5           POZ-4         82.73         3.95         78.78         5.07         82.73         8.34         74.39         9.3           POZ-5D         82.49         4.15         78.34         5.21         82.49         8.56         73.93         9.3           POZ-6         <	33 3 3 3 3 3 3 3 3 5 5 5 5 5 5 5 5 5 5	73.60 72.01 71.84 72.91 72.91 73.63 73.38 72.92 72.91 73.73 72.98 74.08 73.85 73.57 73.15 72.78 72.11
CAP-13         80.77         4.35         76.42         4.83         80.77         7.65         73.12         8.7           CAP-14         80.77         4.15         76.62         4.78         80.77         7.77         73.00         8.5           CCMLF-1         80.86         3.45         77.41         4.00         80.86         7.11         73.75         7.5           CCMLF-1D         80.65         3.20         77.45         3.74         80.65         6.89         73.76         7.7           CCMLF-2         84.08         6.75         77.33         7.43         84.08         11.53         72.55         12.           POZ-3         82.61         4.30         78.31         4.98         82.61         7.80         74.81         8.5           POZ-4         82.73         3.95         78.78         5.07         82.73         8.34         74.39         9.3           POZ-5         82.49         4.15         78.34         5.21         82.49         8.56         73.93         9.3           POZ-6         83.84         5.80         78.04         6.44         83.84         9.86         73.98         10.           POZ-8         8	333333333333333333333333333333333333333	72.01 71.84 72.91 72.91 73.63 73.38 72.92 72.91 73.73 72.98 74.08 73.85 73.57 73.15 72.78 72.11
CAP-14         80.77         4.15         76.62         4.78         80.77         7.77         73.00         8.5           CCMIF-1         80.86         3.45         77.41         4.00         80.86         7.11         73.75         7.5           CCMIF-1D         80.65         3.20         77.45         3.74         80.65         6.89         73.76         7.7           CCMIF-2         84.08         6.75         77.33         7.43         84.08         11.53         72.55         12.           POZ-3         82.61         4.30         78.31         4.98         82.61         7.80         74.81         8.9           POZ-4         82.73         3.95         78.78         5.07         82.73         8.34         74.39         9.3           POZ-5D         82.49         4.15         78.34         5.21         82.49         8.56         73.93         9.5           POZ-6         83.84         5.80         78.04         6.44         83.84         9.86         73.98         10.           POZ-7         82.02         3.95         78.07         4.77         82.02         7.44         74.58         82.           POZ-8         8	3 3 3 3 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	71.84 72.91 72.91 71.34 73.63 73.38 72.92 72.91 73.73 72.98 74.08 73.85 73.57 73.15 72.78 72.11
CCMLF-1         80.86         3.45         77.41         4.00         80.86         7.11         73.75         7.5           CCMLF-1D         80.65         3.20         77.45         3.74         80.65         6.89         73.76         7.7           CCMLF-2         84.08         6.75         77.33         7.43         84.08         11.53         72.55         12.           POZ-3         82.61         4.30         78.81         4.98         82.61         7.80         74.81         85.           POZ-4         82.73         3.95         78.78         5.07         82.73         8.34         74.39         9.3           POZ-5D         82.49         4.15         78.34         5.21         82.49         8.56         73.93         9.5           POZ-6         83.84         5.80         78.04         6.44         83.84         9.86         73.98         10.           POZ-7         82.02         3.95         78.07         4.77         82.02         7.44         74.58         8.2           POZ-8         83.13         4.80         78.33         5.84         83.13         9.12         74.01         10.           CLF1B-1	33 35 55 36 37 38 39 55	72.91 72.91 71.34 73.63 73.38 72.92 72.91 73.73 72.98 74.08 73.85 73.57 73.15 72.78 72.11
CCMLF-1D         80.65         3.20         77.45         3.74         80.65         6.89         73.76         7.7.           CCMLF-2         84.08         6.75         77.33         7.43         84.08         11.53         72.55         12.           POZ-3         82.61         4.30         78.31         4.98         82.61         7.80         74.81         8.9           POZ-4         82.73         3.95         78.78         5.07         82.73         8.34         74.39         9.3           POZ-5D         82.49         4.15         78.34         5.21         82.49         8.56         73.93         9.3           POZ-6         83.84         5.80         78.04         6.44         83.84         9.86         73.98         10.           POZ-7         82.02         3.95         78.07         4.77         82.02         7.44         74.58         8.2           POZ-8         83.13         4.80         78.33         5.84         83.13         9.12         74.01         10.           CLF1B-1         83.76         6.00         77.76         6.66         83.76         8.70         75.06         9.0           CLF1B-2 <td< td=""><td>33 3 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5</td><td>72.91 71.34 73.63 73.38 72.92 72.91 73.73 72.98 74.08 73.85 73.57 73.15 72.78 72.11</td></td<>	33 3 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	72.91 71.34 73.63 73.38 72.92 72.91 73.73 72.98 74.08 73.85 73.57 73.15 72.78 72.11
CCMLF-2         84.08         6.75         77.33         7.43         84.08         11.53         72.55         12           POZ-3         82.61         4.30         78.31         4.98         82.61         7.80         74.81         8.5           POZ-4         82.73         3.95         78.78         5.07         82.73         8.34         74.39         9.3           POZ-5D         82.49         4.15         78.34         5.21         82.49         8.56         73.93         9.3           POZ-6         83.84         5.80         78.04         6.44         83.84         9.86         73.98         10.           POZ-7         82.02         3.95         78.07         4.77         82.02         7.44         74.58         8.2           POZ-8         83.13         4.80         78.33         5.84         83.13         9.12         74.01         10.           CLFIB-1         83.76         6.00         77.76         6.66         83.76         8.70         75.06         9.6           CLFIB-2         82.04         4.35         77.69         5.05         82.04         7.18         74.86         8.1           CLFIB-3         82	4	71.34 73.63 73.38 72.92 72.91 73.73 72.98 74.08 73.85 73.57 73.15 72.78 72.11
POZ-3         82.61         4.30         78.31         4.98         82.61         7.80         74.81         8.5           POZ-4         82.73         3.95         78.78         5.07         82.73         8.34         74.39         9.3           POZ-5D         82.49         4.15         78.34         5.21         82.49         8.56         73.93         9.5           POZ-6         83.84         5.80         78.04         6.44         83.84         9.86         73.98         10.           POZ-7         82.02         3.95         78.07         4.77         82.02         7.44         74.58         8.2           POZ-8         83.13         4.80         78.33         5.84         83.13         9.12         74.01         10.           CLF1B-1         83.76         6.00         77.76         6.66         83.76         8.70         75.06         9.6           CLF1B-2         82.04         4.35         77.69         5.05         82.04         71.8         74.86         8.1           CLF1B-3         82.75         3.95         78.89         5.80         82.74         8.55         74.19         9.5           CLF1B-4         82	33 55 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	73.63 73.38 72.92 72.91 73.73 72.98 74.08 73.85 73.57 73.15 72.78 72.11
POZ-4         82.73         3.95         78.78         5.07         82.73         8.34         74.39         9.3           POZ-5D         82.49         4.15         78.34         5.21         82.49         8.56         73.93         9.5           POZ-6         83.84         5.80         78.04         6.44         83.84         9.86         73.98         10.           POZ-7         82.02         3.95         78.07         4.77         82.02         7.44         74.58         82.           POZ-8         83.13         4.80         78.33         5.84         83.13         9.12         74.01         10.           CLFIB-1         83.76         6.00         77.76         6.66         83.76         8.70         75.06         9.6           CLFIB-2         82.04         4.35         77.69         5.05         82.04         71.8         74.86         8.1           CLFIB-3         82.75         3.95         78.80         5.82         82.75         8.18         74.57         9.1           CLFIB-4         82.74         3.85         78.89         5.80         82.74         8.55         74.19         9.5           CLFIB-5	33 55 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	73.38 72.92 72.91 73.73 72.98 74.08 73.85 73.57 73.15 72.78 72.11
POZ-5D         82.49         4.15         78.34         5.21         82.49         8.56         73.93         9.3           POZ-6         83.84         5.80         78.04         6.44         83.84         9.86         73.98         10.           POZ-7         82.02         3.95         78.07         4.77         82.02         7.44         74.58         8.3           POZ-8         83.13         4.80         78.33         5.84         83.13         9.12         74.01         10.           CLF1B-1         83.76         6.00         77.76         6.66         83.76         8.70         75.06         9.6           CLF1B-2         82.04         4.35         77.69         5.05         82.04         7.18         74.86         8.1           CLF1B-3         82.75         3.95         78.80         5.82         82.75         8.18         74.57         9.1           CLF1B-4         82.74         3.85         78.89         5.80         82.74         8.55         74.19         9.2           CLF1B-5         81.09         3.40         77.69         4.23         81.09         7.32         73.77         8.3           CCMAP-1 <t< td=""><td>33 3 5 5 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6</td><td>72.92 72.91 73.73 72.98 74.08 73.85 73.57 73.15 72.78 72.11</td></t<>	33 3 5 5 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	72.92 72.91 73.73 72.98 74.08 73.85 73.57 73.15 72.78 72.11
POZ-6         83.84         5.80         78.04         6.44         83.84         9.86         73.98         10.           POZ-7         82.02         3.95         78.07         4.77         82.02         7.44         74.58         8.2           POZ-8         83.13         4.80         78.33         5.84         83.13         9.12         74.01         10.           CLF1B-1         83.76         6.00         77.76         6.66         83.76         8.70         75.06         9.6           CLF1B-2         82.04         4.35         77.69         5.05         82.04         7.18         74.86         8.1           CLF1B-3         82.75         3.95         78.80         5.82         82.75         8.18         74.57         9.1           CLF1B-4         82.74         3.85         78.89         5.80         82.74         8.55         74.19         9.3           CLF1B-5D         80.93         3.385         77.08         4.55         80.93         7.72         73.21         8.8           CCMAP-1         80.21         4.50         75.71         5.10         80.21         7.61         72.60         8.4           CCMAP-2	3 5 5 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	72.91 73.73 72.98 74.08 73.85 73.57 73.15 72.78 72.11
POZ-7         82.02         3.95         78.07         4.77         82.02         7.44         74.58         8.2           POZ-8         83.13         4.80         78.33         5.84         83.13         9.12         74.01         10.           CLFIB-1         83.76         6.00         77.76         6.66         83.76         8.70         75.06         9.6           CLFIB-2         82.04         4.35         77.69         5.05         82.04         7.18         74.86         8.1           CLFIB-3         82.75         3.95         78.80         5.82         82.75         8.18         74.57         9.1           CLFIB-4         82.74         3.85         78.89         5.80         82.74         8.55         74.19         9.5           CLFIB-5         81.09         3.40         77.69         4.23         81.09         7.32         73.77         8.3           CLFIB-5D         80.93         3.85         77.08         4.55         80.93         7.72         73.21         8.8           CCMAP-1         80.21         4.50         75.71         5.10         80.21         7.61         72.60         8.4           CCMAP-2	5	73.73 72.98 74.08 73.85 73.57 73.15 72.78 72.11
POZ-8         83.13         4.80         78.33         5.84         83.13         9.12         74.01         10.           CLFIB-1         83.76         6.00         77.76         6.66         83.76         8.70         75.06         9.6           CLFIB-2         82.04         4.35         77.69         5.05         82.04         71.8         74.86         8.1           CLFIB-3         82.75         3.95         78.80         5.82         82.75         8.18         74.57         9.1           CLFIB-4         82.74         3.85         78.89         5.80         82.74         8.55         74.19         9.5           CLFIB-5         81.09         3.40         77.69         4.23         81.09         7.32         73.77         8.3           CLFIB-5D         80.93         3.85         77.08         4.55         80.93         7.72         73.21         8.8           CCMAP-1         80.21         4.50         75.71         5.10         80.21         7.60         8.4           CCMAP-2         81.24         6.50         74.74         7.14         81.24         8.02         73.22         8.5           CCMAP-3         81.91	5	72.98 74.08 73.85 73.57 73.15 72.78 72.11
CLF1B-1         83.76         6.00         77.76         6.66         83.76         8.70         75.06         9.6           CLF1B-2         82.04         4.35         77.69         5.05         82.04         71.8         74.86         8.1           CLF1B-3         82.75         3.95         78.80         5.82         82.75         8.18         74.57         9.1           CLF1B-4         82.74         3.85         78.89         5.80         82.74         8.55         74.19         9.5           CLF1B-5         81.09         3.40         77.69         4.23         81.09         7.32         73.77         8.3           CLF1B-5D         80.93         3.85         77.08         4.55         80.93         7.72         73.21         8.8           CCMAP-1         80.21         4.50         75.71         5.10         80.21         7.61         72.60         8.4           CCMAP-2         81.24         6.50         74.74         7.14         81.24         8.02         73.22         8.5           CCMAP-3         81.91         6.15         75.76         6.92         81.91         8.58         73.33         8.9           CCMAP-4		74.08 73.85 73.57 73.15 72.78 72.11
CLF1B-2         82.04         4.35         77.69         5.05         82.04         7.18         74.86         8.1           CLF1B-3         82.75         3.95         78.80         5.82         82.75         8.18         74.57         9.1           CLF1B-4         82.74         3.85         78.89         5.80         82.74         8.55         74.19         9.5           CLF1B-5         81.09         3.40         77.69         4.23         81.09         7.32         73.77         8.3           CLF1B-5D         80.93         3.85         77.08         4.55         80.93         7.72         73.21         8.8           CCMAP-1         80.21         4.50         75.71         5.10         80.21         7.61         72.60         8.4           CCMAP-2         81.24         6.50         74.74         7.14         81.24         8.02         73.22         8.5           CCMAP-3         81.91         6.15         75.76         6.92         81.91         8.58         73.33         8.5           CCMAP-4         81.83         4.45         77.38         5.19         81.83         7.64         74.19         8.6	) 	73.85 73.57 73.15 72.78 72.11
CLF1B-3         82.75         3.95         78.80         5.82         82.75         8.18         74.57         9.1           CLF1B-4         82.74         3.85         78.89         5.80         82.74         8.55         74.19         9.5           CLF1B-5         81.09         3.40         77.69         4.23         81.09         7.32         73.77         8.3           CCH1B-5D         80.93         3.85         77.08         4.55         80.93         7.72         73.21         8.8           CCMAP-1         80.21         4.50         75.71         5.10         80.21         7.61         72.60         8.4           CCMAP-2         81.24         6.50         74.74         7.14         81.24         8.02         73.22         8.3           CCMAP-3         81.91         6.15         75.76         6.92         81.91         8.58         73.33         8.9           CCMAP-4         81.83         4.45         77.38         5.19         81.83         7.64         74.19         8.6		73.57 73.15 72.78 72.11
CLF1B-4         82.74         3.85         78.89         5.80         82.74         8.55         74.19         9.3           CLF1B-5         81.09         3.40         77.69         4.23         81.09         7.32         73.77         8.3           CLF1B-5D         80.93         3.85         77.08         4.55         80.93         7.72         73.21         8.8           CCMAP-1         80.21         4.50         75.71         5.10         80.21         7.61         72.60         8.4           CCMAP-2         81.24         6.50         74.74         7.14         81.24         8.02         73.22         8.5           CCMAP-3         81.91         6.15         75.76         6.92         81.91         8.58         73.33         8.9           CCMAP-4         81.83         4.45         77.38         5.19         81.83         7.64         74.19         8.6		73.15 72.78 72.11
CLF1B-5         81.09         3.40         77.69         4.23         81.09         7.32         73.77         8.3           CLF1B-5D         80.93         3.85         77.08         4.55         80.93         7.72         73.21         8.8           CCMAP-1         80.21         4.50         75.71         5.10         80.21         7.61         72.60         8.4           CCMAP-2         81.24         6.50         74.74         7.14         81.24         8.02         73.22         8.5           CCMAP-3         81.91         6.15         75.76         6.92         81.91         8.58         73.33         8.9           CCMAP-4         81.83         4.45         77.38         5.19         81.83         7.64         74.19         8.6	: !	72.78 72.11
CLF1B-5D         80.93         3.85         77.08         4.55         80.93         7.72         73.21         8.8           CCMAP-1         80.21         4.50         75.71         5.10         80.21         7.61         72.60         8.4           CCMAP-2         81.24         6.50         74.74         7.14         81.24         8.02         73.22         8.5           CCMAP-3         81.91         6.15         75.76         6.92         81.91         8.58         73.33         8.5           CCMAP-4         81.83         4.45         77.38         5.19         81.83         7.64         74.19         8.6	:	72.11
CCMAP-1         80.21         4.50         75.71         5.10         80.21         7.61         72.60         8.4           CCMAP-2         81.24         6.50         74.74         7.14         81.24         8.02         73.22         8.5           CCMAP-3         81.91         6.15         75.76         6.92         81.91         8.58         73.33         8.5           CCMAP-4         81.83         4.45         77.38         5.19         81.83         7.64         74.19         8.6		
CCMAP-2         81.24         6.50         74.74         7.14         81.24         8.02         73.22         8.5           CCMAP-3         81.91         6.15         75.76         6.92         81.91         8.58         73.33         8.5           CCMAP-4         81.83         4.45         77.38         5.19         81.83         7.64         74.19         8.6	$\overline{}$	
CCMAP-3         81.91         6.15         75.76         6.92         81.91         8.58         73.33         8.5           CCMAP-4         81.83         4.45         77.38         5.19         81.83         7.64         74.19         8.6	•	71.76
CCMAP-4 81.83 4.45 77.38 5.19 81.83 7.64 74.19 8.6	. 1	72.69
	$\overline{}$	72.96
CCMAP-5 83.71 6.15 77.56 6.93 83.71 9.33 74.38 10.	$\overline{}$	73.23
500 500 10 10 10 10 10 10 10 10 10 10 10 10 1	-	73.42
CCMAP-6         84.41         7.90         76.51         8.45         84.41         11.61         72.80         12.           CCMAP-7         81.57         7.05         74.52         7.59         81.57         8.21         73.36         8.5	_	71.84
	-	72.64
CCMAP-8         82.89         6.40         76.49         6.99         82.89         9.80         73.09         10.           CCMAP-9         82.51         6.00         76.51         6.62         82.51         9.75         72.76         10.	$\overline{}$	72.17 71.71
CCMAP-10 81.80 5.55 76.25 6.08 81.80 9.10 72.70 10.	$\overline{}$	71.79
CCMAP-11 80.29 4.00 76.29 5.01 80.29 8.11 72.18 9.1	$\overline{}$	71.19
CCMAP-12 80.58 4.75 75.83 5.71 80.58 7.42 73.16 8.6		72.58
CCMAP-13 80.11 4.55 75.56 5.36 80.11 6.93 73.18 7.6	_	72.51
CCMAP-14 78.64 4.40 74.24 4.71 78.64 5.43 73.21 6.0	$\overline{}$	72.60
CGYP-1 91.89 15.95 75.94 19.69 91.89 17.56 74.33 17.	$\overline{}$	73.91
CGYP-2 84.88 8.50 76.38 13.20 84.88 10.56 74.32 11.	$\overline{}$	73.87
CGYP-3 83.95 6.95 77.00 9.41 83.95 9.37 74.58 9.8	$\overline{}$	74.11
CGYP-4 83.49 6.65 76.84 8.27 83.49 8.20 75.29 8.6	-	74.89
CGYP-5 84.12 7.90 76.22 9.09 84.12 8.14 75.98 8.3	$\overline{}$	75.77
CGYP-6 83.93 7.15 76.08 9.46 74.47 9.9	-	74.02
CGYP-7 85.37 9.20 76.17 13.10 85.37 10.97 74.40 11.	2	73.95
CGSPZ-1 83.31 7.45 75.86 8.64 83.31 8.61 74.70 9.2		74.09
CGSPZ-2 82.56 6.70 75.86 9.38 82.56 8.29 74.27 8.5		74.01
CGSPZ-3 82.85 4.75 78.10 6.19 82.85 9.91 72.94 10.		72.34
CGSPZ-4 81.28 3.80 77.48 4.82 81.28 7.68 73.60 8.7		72.55
CGSPZ-5 80.56 2.75 77.81 5.39 80.56 8.27 72.29 9.6		70.94
CCMGP-1 84.30 8.15 76.15 13.43 84.30 10.07 74.23 10.	3	73.77
CCMGP-2 96.73 20.05 76.68 24.20 96.73 22.54 74.19 22.	7	73.76
CCMGP-3 84.44 8.45 75.99 12.38 84.44 10.54 73.90 10.	7	73.47
CCMGP-4 84.82 8.50 76.32 12.78 84.82 10.31 74.51 10.	9	74.03
CCMGP-5 79.91 4.70 75.21 6.06 79.91 6.56 73.35 7.0		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		-

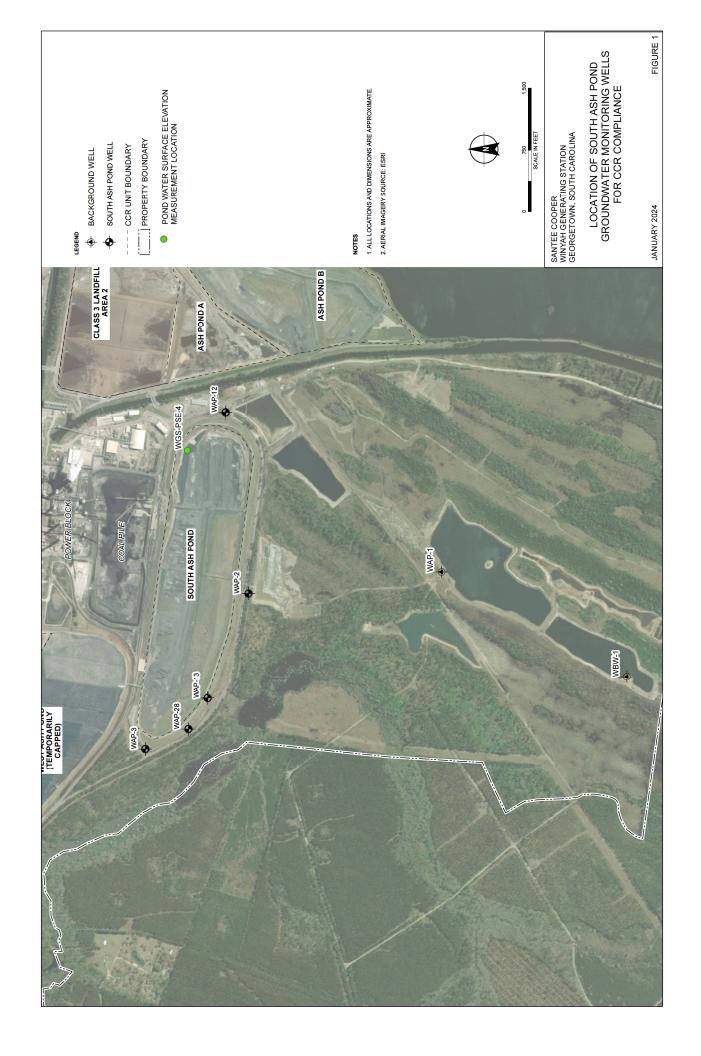
Notes:

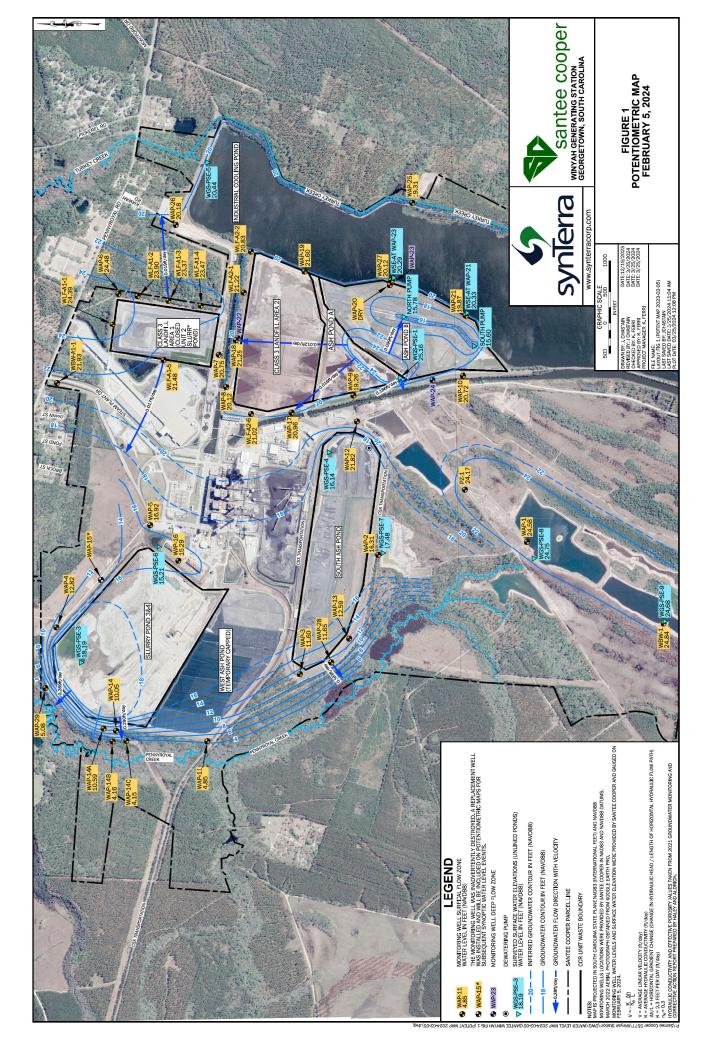
<sup>1.</sup> Additional groundwater monitoring wells used for development of potentiometric maps. These wells monitor groundwater constituent concentrations under the SCDES NPDES Permit #SC0037401 and are not used for CCR constituent concentrations.

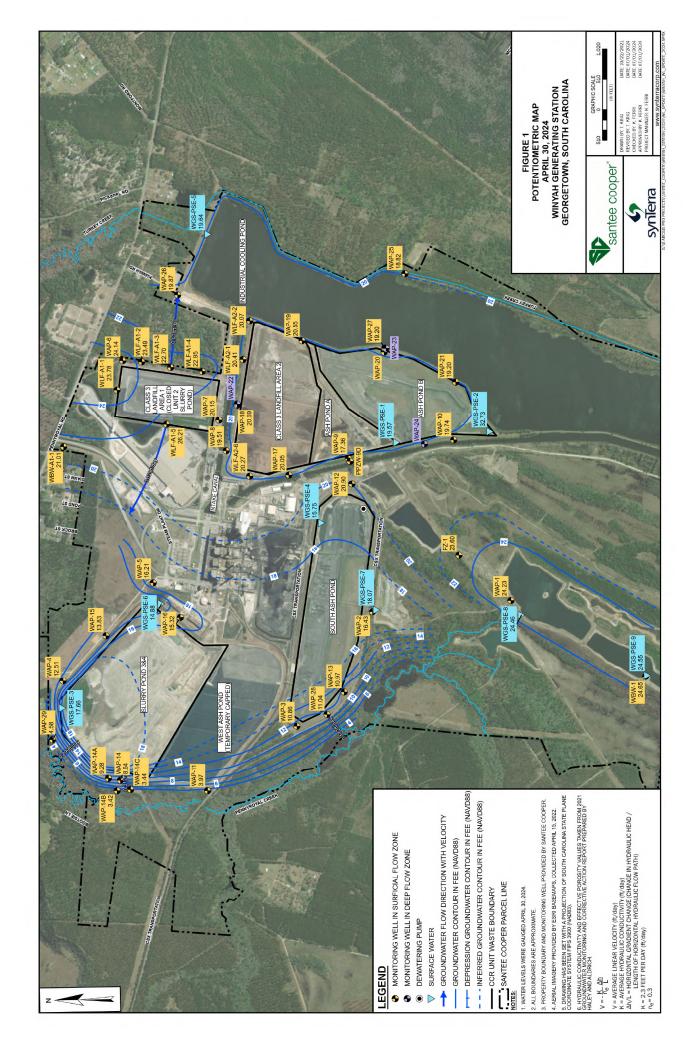
<sup>2.</sup> Depth to Groundwater is measured below the top of casing (btoc) to the water surface. The Top of Casing Elevation and GW Elevation are shown relative to the mean sea level (msl).

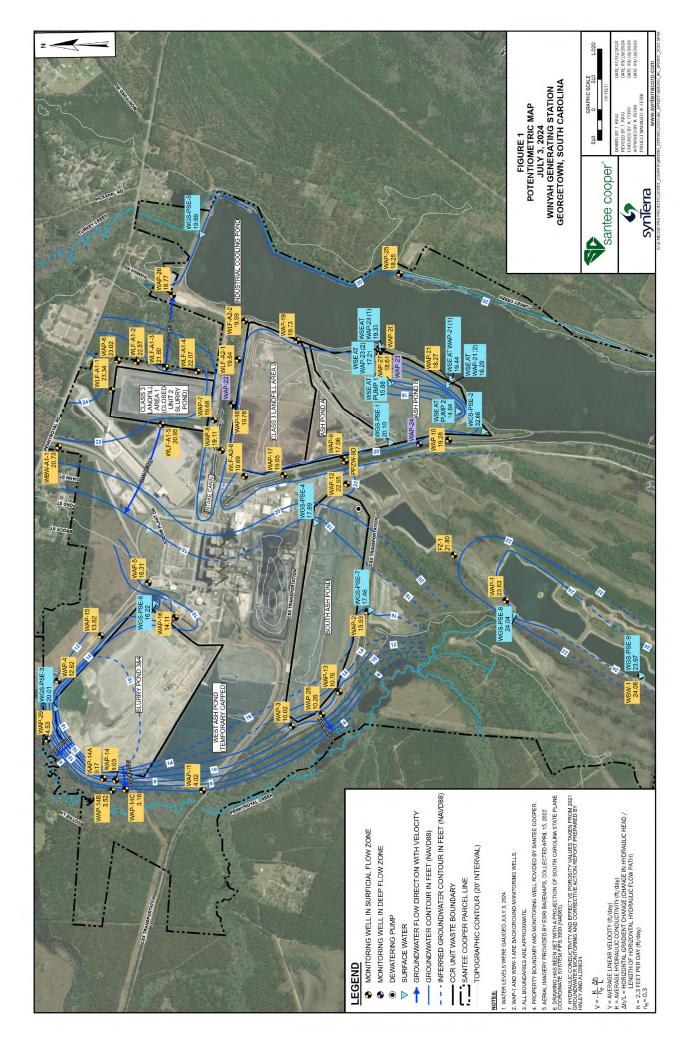
<sup>3.</sup> Pond surface elevations (PSE) and staff gauge elevations were collected to aid in the potentiometric surface interpretation elevation.

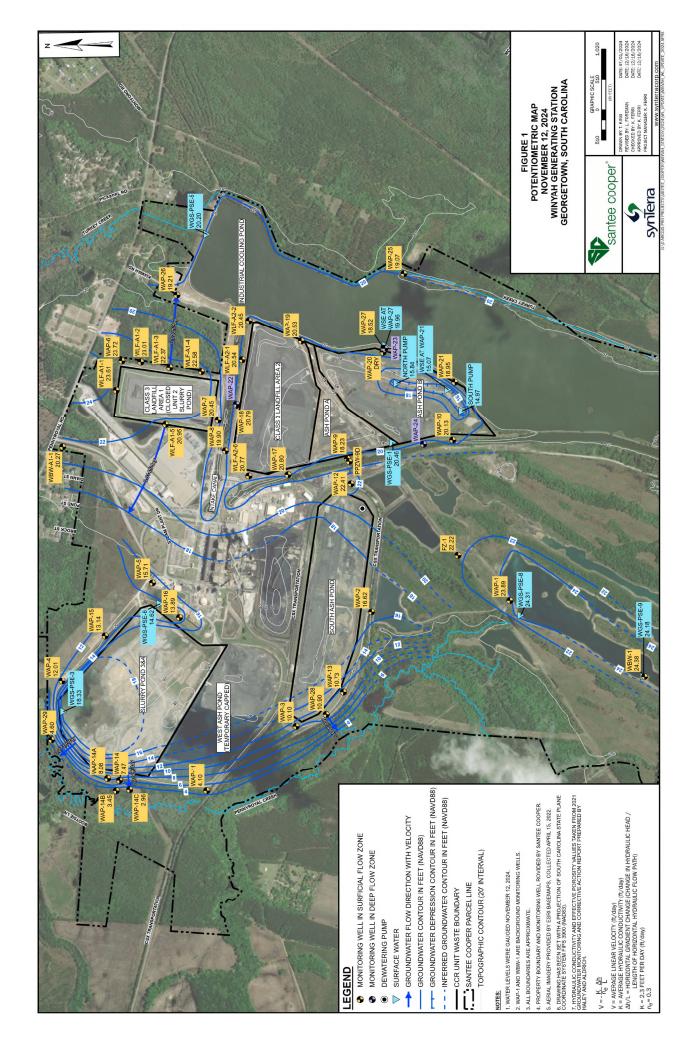


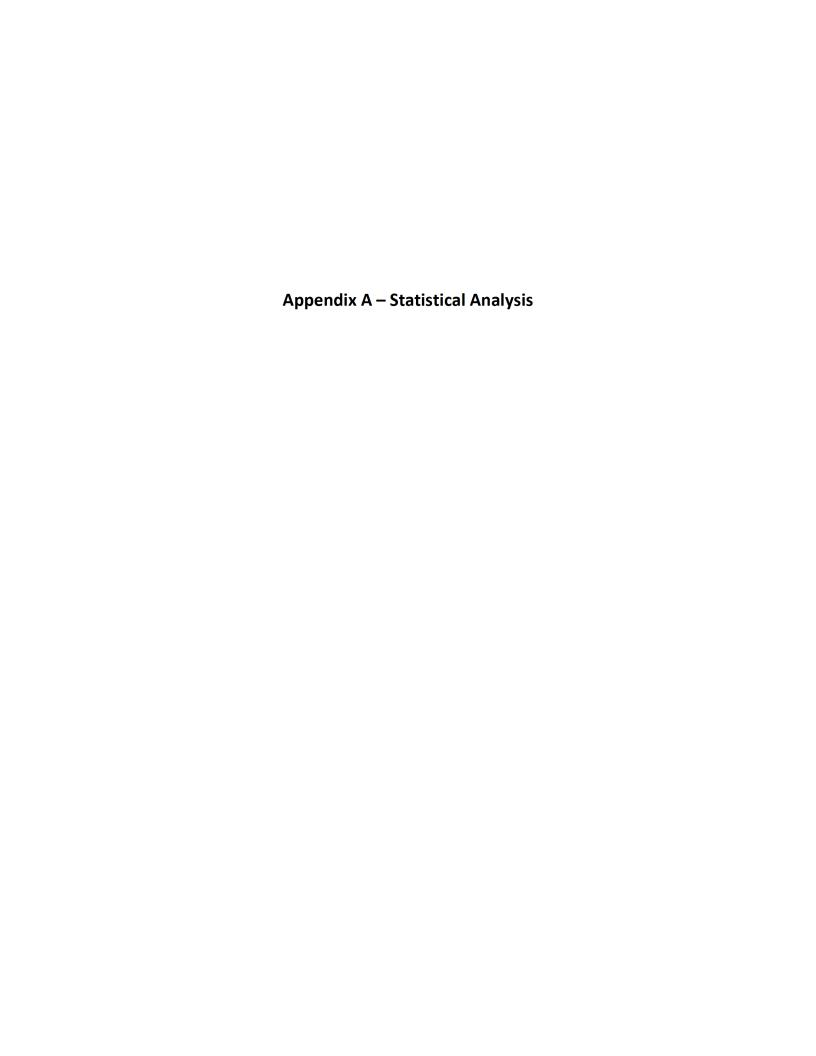














HALEY & ALDRICH, INC. 400 Augusta Street Suite 100 Greenville, SC 29601 864.214.8750

#### **TECHNICAL MEMORANDUM**

July 15, 2024

File No. 132892-100-008-02

SUBJECT: Statistical Evaluation of the February 2024 Semiannual Groundwater Assessment

Monitoring Data, Winyah Generating Station, South Ash Pond

Pursuant to Title 40 Code of Federal Regulations (40 CFR) §257.93 and §257.95 (Rule), this memorandum summarizes the statistical evaluation of the groundwater analytical results obtained for the February 2024 semiannual assessment monitoring event for the Winyah Generating Station (WGS) South Ash Pond. Data for this groundwater sampling event were validated on April 16, 2024 by Santee Cooper.

#### **BACKGROUND**

The WGS South Ash Pond ceased receipt of coal combustion residual (CCR) and non-CCR wastewater inflows prior to April 11, 2021. The unit continues in assessment monitoring and closure by excavation and removal of CCR is underway.

Recent analytical testing results were evaluated to determine if statistically significant levels (SSLs) exist above Groundwater Protection Standards (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 well data.

#### 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). This statistical method was 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, 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

South Carolina Public Service Authority (Santee Cooper) July 15, 2024 Page 2

a tolerance interval is called the upper tolerance limit (UTL). Depending on the assumed distribution of background data, parametric or non-parametric procedures were used to develop the UTL. Parametric procedures use assumed distributions of the sample background data to development the limits, whereas non-parametric limits use order statistics or bootstrap methods. If all 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 (WAP-1 and WBW-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 July 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. 87 percent of compliance wells with trends analyzed were identified as stable or decreasing. It is important to note that increasing trends are not part of the comparison criteria for triggering a SSL. 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

<sup>&</sup>lt;sup>1</sup> Visual and statistical outlier tests for background data were performed using Chemstat 6.3.0.0 and U.S. Environmental Protection Agency's ProUCL 5.1 software.



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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, SSLs were not identified. Because arsenic and cobalt were identified above the GWPS in WAP-2, the LCL was calculated for each, and the resulting concentrations were not SSLs. Potential reasons for arsenic and cobalt results were evaluated, including investigating the condition of groundwater sampling wells. The concentrations may be attributed the groundwater wells and/or dewatering activities and site conditions resulting from ongoing closure-by-removal construction activities. Concentrations should decrease once closure is complete and groundwater equilibrium is restored. The expected date for completing CCR removal for the South Ash Pond is 2025. Groundwater trends will continue to be monitored during future sampling events.

#### **Enclosures:**

Table 1 – WGS South Ash Pond February 2024 Semiannual Assessment Monitoring Data



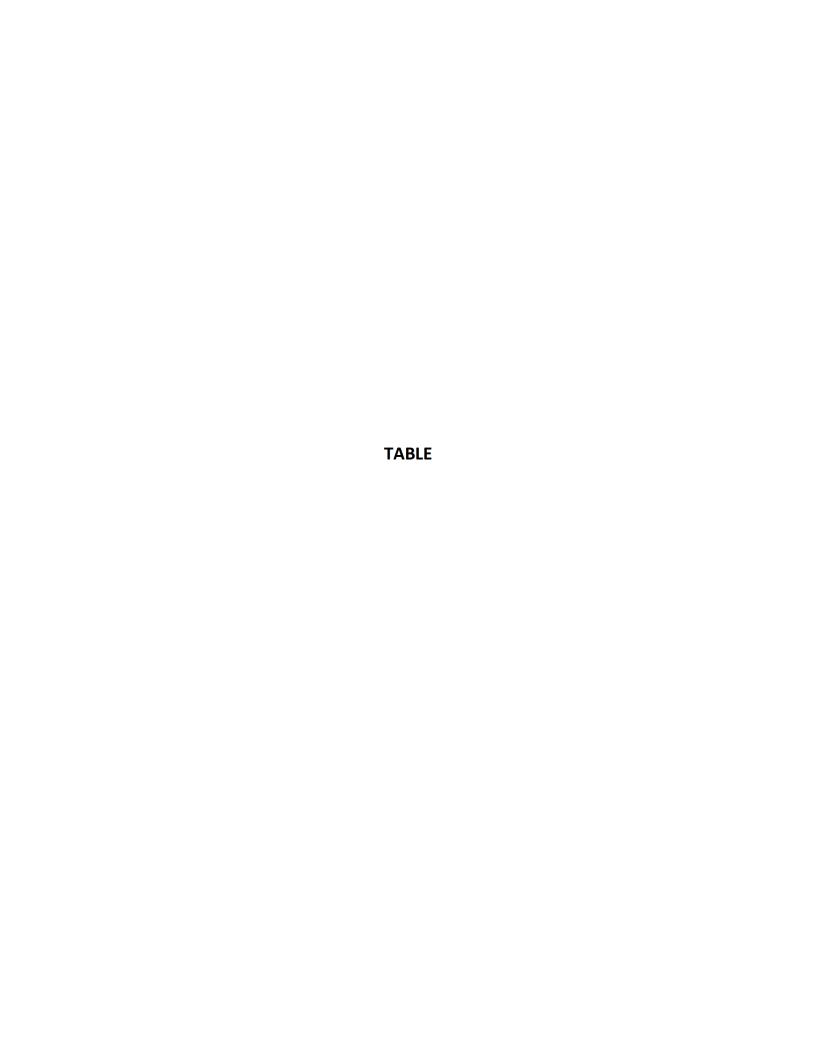


TABLE 1 WGS SOUTH ASH POND SSL

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Exceedance above Background at Individual Well GWPS (Higher MCL/RSL or Background Limit) 0.025 > > z > SSI 0.0050 0.0084 Upper Tolerance L 0.0085 0.0005 0.025 0.094 0.0005 0.140 0.012 렃 Detect? February 2024 Concentration 0.0005 0.0005 0.0005 0.0005 0.005 0.0003 0.0005 0.0011 0.0005 0.039 0.021 0.005 0.012 0.005 0.008 0.361 0.187 0.035 0.257 0.10 0.10 0.12 0.001 Distribution Trend Outlier \[ \langle \la Outlier Presence Number of Non-Detection Exceedances Number of Detection Exceedances Detection Exceedances (Y/N) Report Result Unit \(\frac{1}{2}\) \(\frac{1}\) \(\frac{1}{2}\) \(\frac{1}2\) \(\frac{1}2\) \(\frac{1}2\) \(\frac{1}2\) \(\frac{1 CCR MCL/RSI 0.000
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0. 0.10 0.11 0.11 0.13 0.103 0.00227 0.00139 0.00328 0.00328 0.00328 0.00328 0.00328 0.00328 Mean 0.00663 0.0058 0.006 0.006 0.00643 0.00632 0.0 2000-0-0000 0.0000-0-0000 0.0000-0000 0.0000-0000 0.0000-0000 0.000-0000 0.000-0000 0.000-0000 0.000-0000 0.000-0000 \$000,0-2000,0 \$000,0-2000,0 \$000,0-2000,0 \$000,0-2000,0 \$000,0-2000,0 \$000,0-2000,0 Range of Nor Detect Percent Non-Detects Frequency of Detection 9(1)9 9(1)19 9(1 WARP 1
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	SSE				No	No	No	No		_		No	No	No	No				No	No	No	No				No	No	No	No				No	No	Q.
	Exceedance above Background at Individual Well				Z	N	Z	N				N	z	Z	Z				Z	Z	Z	z				Z	z	z	z				Z	Z	2
Ì	GWPS (Higher of MCL/RSL or Background Limit)		0.0000							010							09	3						0.050							0.000				
and and and and and	nit SSI				Z	z	Z	Z				z	Z	z	z				z	Z	Z	Z				Z	Z	z	z				z	z	
	Upper Tolerance Limit		0000	7000						000	200						2 6 7							0000							000	1000			
	ct? 101																																		
	:024 Detect?						Z	Z																											
	February 2024 Concentration				0.0002	0.0002	0.0002	0.0002				0.005	0.005	0.005	0.005				5.740	2.319	1.898	3.157				0.010	0.010	0.010	0.010				0.001	0.001	
	Distribution		NA							VN							Non-narametric							NA							NA				
	Trend		NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA		Stable	Decreasing	Stable	Stable	Decreasing	Decreasing		NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	
	Outlier		No	NA	NA	No	NA	NA		NA	NA	NA	NA	NA	NA		No	No	No	No	No	No		NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	
	Outlier		No	NA	NA	No	NA	NA		NA	NA	NA	NA	NA	NA		No	No	No	No	No	No		NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	
	Number of Non-Detection Exceedances		0	0	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0		0	0	0	0	
	Number of Detection Exceedances		0	0	0	0	0	0		0	0	0	0	0	0		0	4	18	1	7	3		0	0	0	0	0	0		0	0	0	0	
	Detection N Exceedances D (Y/N) Ex		z	z	z	z	z	z		z	z	z	z	z	z		z	<b>&gt;</b>	^	*	>	<b>&gt;</b>		z	z	z	z	z	z		z	z	z	z	
	Report Det Result Excee		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L		pCi/L	pCi/L	pCi/L	pCi/L	pCI/L	pCi/L		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L		mg/L	mg/L	mg/L	mg/L	
	CCR Re MCL/RSL U			0.002 ml	0.002 ml	0.002 m	0.002 ml	0.002 mi		0.1 m	0.1 m	0.1 m	0.1 m		0.1 m		5 pc	5 pc	5 pc	5 pc	5 pc	S PO		0.05 m <sub>l</sub>		0.05 ml	0.05 m <sub>l</sub>	0.05 m <sub>l</sub>	0.05 m <sub>l</sub>		0.002 mi	0.002 m	0.002 m	0.002 m	
	Coeffilent of Varance MC		0	0	0 0	0.07033 0	0 0	0 0		0.8105	0.2224	0.2478	0.2478	0.2155	0.2155		0.503	0.182	0.3388	0.4148	0.3756	0.7883		0.4247 (	0.3874 (	0.4125 (	0.4125 (	0.4714 (	0.4714 (		0 0	0.2167 0	0	0 0	
	Standard Coeff Deviation Va	Total (mg/L)	0	0	0	0.00001431 0.0	0	0	n, Total (mg/L)	0.00907	0.002012 0.	0.002186 0.	0.002186 0.	0.001965 0.	0.001965 0.	5 & 228 (pCi/L)	1.499 0	1.588 0	2.086 0.	1.414 0.	1.616 0.		Total (mg/L)	0.004831 0.	0.004182 0.	0.00436 0.	0.000436 0.	0.005303 0.	0.005303 0.	Total (mg/L)	0	0.0002065 0.	0	0	
	Variance Star	CCR Appendix-IV: Mercury, Total (mg/L)	0	0	0	2.048E-10 0.000	0	0	CC3 Appendix-IV: Molybdenum, Total (mg/L)	0.00008226 0.00	0.0000004048 0.00	0.000004779 0.00	0.0000004779 0.00	0.00000386 0.00	0.00000386 0.00	CCR Appendix-IV: Radium-226 & 228 (pCi/L)	2.247 1.	2.521 1.9	4.352 2.0	1.999	2.61 1.0	1.288 1.3	CCR Appendix-IV: Selenium, Total (mg/L)	0.00002334 0.00		0.00001901 0.00	0.00001901 0.00	0.00002812 0.00	0.00002812 0.00	CCR Appendix-IV: Thallium, Total (mg/L)	0	4.263E-08 0.000		0	
	Maximum Var	CCR Appen	0.0002			0.000259 2.04			CC3 Appendix	0.00	0.000	0000	0.000	0.00	0.00	CCR Appendi	4.39 2	5.97 2	12.1 4	6.56 1	6.71 2	6.35 1	CCR Appen	0.00	0.00	0.00	0.00	0.00	0.00	CCR Appen		4.2			
	95th Ma Percentile D		0.0002 0	0.0002	0.0002	0.0002118 0.0	0.0002	0.0002		0.01	0.01	0.01	0.01	0.01	0.01		4.33	5.74	8.485	4.64	6.5			0.02	0.02	0.02	0.02	0.02	0.02		0.001	0.001	0.001	0.001	
	50th Percentile (Median) P.		0.0002	0.0002	0.0002	0.0002 0.	0.0002	0.0002		0.01	0.01	0.01	0.01	0.01	0.01		4	4	5.85	4	4.26	4		0.01	0.01	0.01	0.01	0.01	0.01		0.001	0.001	0.001	0.001	
	Mean 50th		0.0002	0.0002	0.0002	0.000203	0.0002	0.0002		0.0112	0.00905	0.00882	0.00882	0.00912	0.00912		2.98	3.29	6.16	3.41	4.3	3.94		0.0114	0.0108	0.0106	0.0106	0.0112	0.0112		0.001	0.000953	0.001	0.001	
	ė		0.0002-0.3002	0.0002-0.3002	0.0002-0.3002	0.0002-0.3002 0.0	0.0002-0.3002	0.0002-0.3002		0.005-0.05	0.005-0.01 0	0.005-0.01 0	0.005-0.01 0.	0.005-0.01	0.005-0.01		0.4	4-4	4-4	4-4		4-4				0.0025-0.02	0.0025-0.02	0.0025-0.02	0.0025-0.02			0.0001-0.001 0.0	0.001-0.301	0.001-0.001	
	Percent Range of Non- Non-Detects Detect			100% 0.0	100% 0.0	94% 0.0	100% 0.0	100% 0.0		100% 0	100% 0	100% 0	100% 0	100% 0	100% 0		33%	24%	4%	19%	%0	14%		100% 0.	100% 0.	100% 0.	100% 0.	100% 0.	100% 0.		100% 0.	100% 0.0	100% 0.	100% 0.	
	Frequency of Detection No		1/19	0/19	0/17	1/17	0/17	0/17		0/21	0/21	0/17	0/17	0/17	0/17		14/21	16/21	22/23	12/21	21/21	18/21		0/20	0/22	0/22	0/22	0/18	0/18		0/19	0/19	0/17	0/17	
	Fr Location Id		WBW-1	WAP-1	WAP-2	WAP-3	WAP-12	WAP-13		WBW-1	WAP-1	WAP-2	WAP-3	WAP-12	WAP-13		WBW-1	WAP-1	WAP-2	WAP-3	WAP-12	WAP-13		WBW-1	WAP-1	WAP-2	WAP-3	WAP-12	WAP-13		WBW-1	WAP-1	WAP-2	WAP-3	



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#### **TECHNICAL MEMORANDUM**

December 9, 2024 File No. 132892-102

SUBJECT: Statistical Evaluation of the July 2024 Semiannual Groundwater Assessment Monitoring

Data, Winyah Generating Station, South Ash Pond

Pursuant to Title 40 Code of Federal Regulations (40 CFR) §257.93 and §257.95 (Rule), this memorandum summarizes the statistical evaluation of the groundwater analytical results obtained for the July 2024 semiannual assessment monitoring event for the Winyah Generating Station (WGS) South Ash Pond. Data for this groundwater sampling event were validated on October 9, 2024 by Santee Cooper.

#### **BACKGROUND**

The WGS South Ash Pond ceased receipt of coal combustion residual (CCR) and non-CCR wastewater inflows prior to April 11, 2021. The unit continues in assessment monitoring and closure by excavation and removal of CCR is underway.

Recent analytical testing results were evaluated to determine if statistically significant levels (SSLs) exist above Groundwater Protection Standards (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 well data.

#### 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). This statistical method was 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, 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

South Carolina Public Service Authority (Santee Cooper) December 9, 2024 Page 2

a tolerance interval is called the upper tolerance limit (UTL). Depending on the assumed distribution of background data, parametric or non-parametric procedures were used to develop the UTL. Parametric procedures use assumed distributions of the sample background data to development the limits, whereas non-parametric limits use order statistics or bootstrap methods. If all 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.<sup>1</sup> 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 (WAP-1 and WBW-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 July 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, 87 percent of compliance wells with trends analyzed were identified as stable or decreasing. It is important to note that increasing trends are not part of the comparison criteria for triggering a SSL. Trend analysis will continue to be used to monitor and evaluate concentrations in the context of overall site conditions.



<sup>&</sup>lt;sup>1</sup> Visual and statistical outlier tests for background data were performed using Chemstat 6.3.0.0 and U.S. Environmental Protection Agency's ProUCL 5.1 software.

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#### **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, SSLs were not identified. Because arsenic and cobalt were identified above the GWPS in WAP-2 and WAP-12, the LCL was calculated for each, and the resulting concentrations were not SSLs. Potential reasons for arsenic and cobalt results were evaluated, including investigating the condition of groundwater sampling wells. The concentrations may be attributed to the groundwater wells and/or dewatering activities and site conditions resulting from ongoing closure-by-removal construction activities. Concentrations should decrease once closure is complete, and groundwater equilibrium is restored. The expected date for completing CCR removal for the South Ash Pond is first quarter of 2025. Groundwater trends will continue to be monitored during future sampling events.

#### **Enclosures:**

Table 1 – WGS South Ash Pond July 2024 Semiannual Assessment Monitoring Data



**TABLE** 

	188				ON ON	No N	No			No	No	No	No			Q.	o N	9	No				o N	No	No				ON ON	No.	No				No	N N	No			Q	No	No	No			No	No	No	No			No	N oN	No	No
GWPS	Exceedance above Background at	in a second			z z	z	z			z	z	z	z			2	2 2	z	z				2 2	z	z				2 2	2	z				2 2	z	z			z	z	z	z			N	z	z	z			z	: z	z	z
	GWPS (Higher of MCL/RSL or Background B		0.025						0.010						2.000						0.004						0.005						0000	0.100					800:0						4.00						0.015				
	GWP SSI Ba				2 2		z			>	z	z	z			>	<b>&gt;</b>	. z	>				2	2	z				2 2	: 2	z				2 :	2 2	z			>	z	z	z			N	z	z	z			z	2 2	z	z
	Upper Tolerance Linit		0.025						9600.0						0.094						0.0005						0.0005						0.000	0600					0.0084						0.140						00:00				
Analysis	ונו									0.005		0.005																					L							0,0005		0.0005													
Inter-well Analysi	Detect?				2 >	- 2	z			>	z	z	z			,	> >	. >	>				<b>&gt;</b> 2	2 2	z				2 2	2 2	2 2				z	zz	z			>		Н	z			z	z	z	>			z	. 2	z	z
	July 2024 Concentration				0.005	0.005	0.005			0.021	0.005	0.005	0.005			0130	0.128	0.087	0.252				0.0012	0.0005	0.0005				0.0005	50005	0.0005				0.005	0.005	0.005			0.0001	0.0007	0.0023	0.0005			0.10	0.10	0.10	0.13			0.001	0.001	0.001	0.001
									etric						stric																			2					stric						tric						tric				
	Distribution		Ν						Non-parametric						Non-parametric						NA						NA							Non-parametric					Non-parametric						Non-parametric						Non-parametric				
	Trend		NA	NA :	NA NA	NA	NA	VIV	NA NA	NA	NA	NA	NA		Stable	Crable	Stable	Decrease	Stable		NA	N :	NA NA	Y V	NA		NA	NA :	NA NA	NA NA	NA		NA	NA	NA	NA	NA		Increase	Increase	Stable	Stable	Stable	VN	NA	NA	Stable	NA	Stable	NIN	NA NA	NA	NA	NA	NA
	Outlier Removed		NA	NA	NA NA	NA NA	NA	VI	Z OZ	9	NA	No	No		ON ON	ON ON	ON ON	N S	No		NA	NA:	ON AN	No N	NA		NA	NA	NA NA	NA NA	NA		No	NA	NA	NA	NA		No	0 N	No	No	No		No No	No	No	No	No		NA NO	NA	NA NA	NA	NA
	Outlier Presence		NA	NA ::	NA Vac	NA	NA	VN	No.	Yes	NA	Yes	Yes		Yes	ON W	ON ON	Yes	No		NA	NA :	Yes	No No	NA		NA	NA ::	NA NA	NA	NA		No	NA	NA ::	NA NA	NA		No :	Yes	No	Yes	Yes	S.	0 N	Yes	No	No	Yes	-	Yes	NA	NA NA	NA	NA
	Number of Non-Detection Exceedances		1				1	c	0 0	0	0	1	0		0 0	0	0	0	0		0	0	0 0		0		0	0	0 0	0	0		0	0	0	0	0		0	0 0	0	0	0	c	0	0	0	0	0		0	0	0	1	0
	Number of Detection Exceedances		0	0	0	0	0		0	o un	0	0	1		0 0	0	0	0	0		0	0	0	0	0		0	0	0 0	0	0		0	0	0	0	0			0 0	0	0	0		0	0	0	0	0	,	0	0	0	0	0
	Detection Exceedances (Y/N)		z	z	z 2	z	z	2	2 2	. >	z	z	>		z 2	2 2	zz	z	z		z	z	z z	z	z		z	z	z 2	. z	z		z	z	z	zz	z		> :	z >	z	z	z	2	z	z	z	z	z		zz	z	: z	z	z
	Report Result Unit		mg/L	mg/L	mg/L	mg/L	mg/L	l/au	me/l	mg/L	mg/L	mg/L	mg/L		mg/L	mg/l	mg/L	mg/L	mg/L		mg/L	mg/L	mg/L	mg/L	mg/L		mg/L	mg/L	mg/L	me/L	mg/L		mg/L	mg/L	mg/L	mg/L	mg/L		mg/L	mg/L	mg/L	mg/L	mg/L	l) mar	mg/L	mg/L	mg/L	mg/L	mg/L	4	mg/L	mg/L	mg/L	mg/L	mg/L
	CCR MCL/RSL		9000	9000	9000	9000	9000	000	100	0.01	0.01	0.01	0.01		2 0	7 6	7 6	2	2		0.004	0.004	0000	0000	0000		9000	0000	9000	0000	9000		0.1	0.1	0.1	0.1	0.1		9000	9000	9000	900'0	9000		4	4	4	4	4	2000	0.015	0.015	0.015	0.015	0.015
	Coefficient of Variance		0.7454	0.779	0.8088	0.8088	0.8088	0 2047	0.2047	1.431	0.1848	0.9516	0.3411		0.6311	0.5483	0.3483	0.4181	0.1188		0	0	0.5218	1.397	0		0	0	0.5534	1.312	0.5944		0	0	0.1998	1.353	0.2179		1.476	2.035	0.6782	1.027	0.2543		0.09895	0.3456	0.3089	0.1219	0.2709	300.	1.024	0.4698	0.4698	1.832	1.078
	Standard Deviation	rtal (mg/L)	0.004472	0.004557	0.004808	0.004808	0.004808	al (mg/L)	0.0003117	0.01586	0.0008435	0.0059	0.001639	al (mg/L)	0.01149	0.02724	0.09928	0.0165	0.03161	tal (mg/L)	0	0	0.000318	0.001059	0	tal (mg/L)	0	0	0.0003128	0.00107	0.0003441	otal (mg/L)	0	0	0.001043	0.01032	0.001147	ıl (mg/L)	0.001762	0.0003736	0.0005278	0.001097	0.0001485	(mg/L)	0.0102	0.03802	0.03962	0.01251	0.03169	(mg/L)	0.001974	0.0006435	0.0006435	0.00569	0.00207
	Variance	CCR Appendix-IV: Antimony, Total (mg/L)	0.00002	0.00002077	0.00002311	0.00002311	0.00002311	CCR Appendix-IV: Arsenic, Total (mg/L)	0.3125-07	0.0002514	7.115E-07	0.00003481	0.000002687	CCR Appendix-IV: Barium, Total (mg/L)	0.0001319	0.0000/42	0.009856	0.0002723	0.0009994	CCR Appendix-IV: Beryllium, Total (mg/L)	0	0	1.011E-0/	0.000001122	0	CCR Appendix-IV: Cadmium, Total (mg/L)	0	0	9.783E-08	0.000001145	1.184E-07	CCR Appendix-IV: Chromium, Total (mg/L)	0	0	0.000001087	0.0001066	0.000001316	CCR Appendix-IV: Cobalt, Total (mg/L)	0.000003105	0.00001844	2.786E-07	0.000001203	2.205E-08	CCR Appendix-IV: Fluoride (mg/L)	0.000104	0.001445	0.00157	0.0001565	0.001004	CCR Appendix-IV: Lead, Total (mg/L)	0.000003899	0.000000414	0.000000414	0.00003238	0.000004285
	Maximum Detect	CCR Appendix			0000	2000		CCR Append	96000	0.0712		0.0082	0.0103	CCR Appendi	0.0534	0.094	0.436	0.0871	0.34	CCR Appendix			0.001/	0.00065		CCR Appendix						CCR Appendix	0.005					CCR Append	0.00838	0.0016	0.0025	0.00505	0.00111	CCR Appe	0.14	0.28	0.22	0.16	0.21	CCR Appen	0.00456				
	95th Percentile		900'0	9000	800.0	0.008	0.008	9000	0.003	0.042	0.005	0.01038	0.00643		0.04338	0.081	0.4098	0.06231	0.3192		0.0005	0.0005	0.001275	0.001303	0.0005		0.0005	0.0005	0.0005	0.0023	0.00065		0.005	0.005	0.005	0.014	0.0055		0.003108	0.001495	0.00187	0.002575	0.000831		0.127	0.137	0.21	0.1	0.196	000	0.00	0.0025	0.0025	0.0115	0.00325
	50th Percentile (Median)		0.005	0.005	0.005	0.005	0.005	2000	0.000	0.005	0.005	0.005	0.005		0.015	0.04355	0.3095	0.0357	0.2665		0.0005	0.0005	0.0005	0.0005	0.0005		0.0005	0.0005	0.0005	0.0005	0.0005		0.005	0.005	0.005	0.003	0.005		0.0005	0.0005	0.0005	0.00054	0.00053		0.1	0.1	0.11	0.1	0.1	0.001	0.001	0.001	0.001	0.001	0.001
	Mean		9000	0.00585	0.00594	0.00594	0.00594	0.00445	0.00542	0.0111	0.00457	0.0062	0.00481		0.0182	0.0423	0.0998	0.0395	0.266		0.0005	0.0005	0.000609	0.000758	0.0005		0.0005	0.0005	0.000565	0.000816	0.000579		0.005	0.005	0.00522	0.00763	0.00526		0.00119	0.000/18	0.000778	0.00107	0.000584		0.103	0.11	0.128	0.103	0.117	Fucor -	0.00221	0.00137	0.00137	0.00311	0.00192
	Range of Non- Detect		Н	4	0.002-0.025	+	0.002-0.025	2003-0-005	0.003-0.003		L		0.003-0.005								0.0005-0.0005		0.0005-0.0005				0.0005-0.0005		0.0005-0.002		_		0.005-0.005	0.005-0.005	0.005-0.01	+				0.0005-0.0005			0.0005-0.0005	1010	0.1-0.1	0.1-0.1	0.1-0.1	0.1-0.1	0.1-0.1		0.001-0.01				
	Percent Ra		100% 0	Ť	100%				75%		t	74%			%0%	8 6	%0	%0	%0				100% 0.0				100% 0.0		100%	T						100%			98%				42% 0.0	7000	91%	87%	43%	%96	%59		100%	Т	100%		
	Frequency of Detection N		0/20	0/20	0/18	0/18	0/18	50/0	0/27	6/24	0/23	5/19	3/19		22/22	24/24	24/24	22/22	22/22		0/20	0/20	3/18	0/18	0/18		0/21	0/23	0/23	0/19	61/0		1/21	0/23	0/23	0/23	61/0		7/22	9/22	9/19	10/19	11/19	1/10	2/23	3/23	13/23	1/23	8/23		0/21	0/23	0/23	61/0	0/19
	Location Id F		WBW-1	WAP-1	WAP-2	WAP-12	WAP-13	WRW.1	WAP-1	WAP-2	WAP-3	WAP-12	WAP-13		WBW-1	WAP-1	WAP-2	WAP-12	WAP-13		WBW-1	WAP-1	WAP-2	WAP-12	WAP-13		WBW-1	WAP-1	WAP-2	WAP-12	WAP-13		WBW-1	WAP-1	WAP-2	WAP-12	WAP-13		WBW-1	WAP-1	WAP-3	WAP-12	WAP-13	WDW.1	WAP-1	WAP-2	WAP-3	WAP-12	WAP-13		WBW-1	WAP-2	WAP-3	WAP-12	WAP-13

TABLE 1 WGS SOUTH ASH POND JULY 2024 SEMIANNUAL ASSESSMENT MONITORING DATA HALEY & ALDRICH, INC.

	SSL				No	No	No	N <sub>o</sub>				N <sub>o</sub>	No	No	No No				No	No	No	No				No	No	No	No				No	No	No	No				No	No	No	No
cwns	Exceedance above Background at Individual Well				Z	z	z	z				z	z	Z	z				z	Z	Z	Z				z	Z	Z	z				z	z	Z	z				z	Z	N	z
ш	GWPS (Higher of MCL/RSL or Background E Limit) II		0000	0.040						00000	0.0020						010	0.10						0	8						0000	2000						0000	200.0				
	SS S				<b>&gt;</b>	<b>&gt;</b>	z	>				z	z	z	z				z	z	Z	Z				z	z	z	Z				z	Z	z	z				z	Z	Z	z
	Upper Tolerance Limit		000	0.012						.000	2000						0.050	0.030						2 0 2	/27						0000	0.00						1000	1000				
ciedibiis	ומ																																										
III CEL-WEII AII GIBINOIS	Detect?				<b>&gt;</b>	>	z	>				z	z	z	z				N	N	Z	N				>	>	>	>				N	N	N	z				Z	Z	N	z
	July 2024 Concentration				0.017	0.026	0.005	0.016				0.0002	0.0002	0.0002	0.0002				0.005	0.005	0.005	0.005				3.755	3.539	5.420	2.390				0.010	0.010	0.010	0.010				0.001	0.001	0.001	0.001
1	Distribution			baramenic						9 2	V.						V N	V.V						Mon paragraphic	- parametrica no						< 2							9 2					
	Trend			NA	Increase	NA	NA	Stable		NA	NA	NA	NA	A	NA		NA	NA	A	A	A	A		Н		Stable	Stable	ease	ease		NA	NA	NA	NA	A	NA		٧	NA	<	NA	NA	V
								L		ŀ				NA				_		NA	NA			-				Decrease	Decrease														
	Outlier e Renoved		No	No	No	No	NA	No		No	NA	NA	No	NA	NA		NA	NA	NA	NA	NA	NA		No	No	No	No	No	No		NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA
	Outlier Presence		No	No	Yes	No	NA	Yes		No	NA	NA	No	NA	NA		NA	NA	NA	NA	NA	NA		No	No	Yes	Yes	No	No		NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA
	Number of Non-Detection Exceedances		0	0	0	0	1	0		0	0	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0		0	0	0	0	1	0
	Number of Detection Exceedances		0	0	0	0	0	2		0	0	0	0	0	0		0	0	0	0	0	0		0	4	18	1	00	e		0	0	0	0	0	0		0	0	0	0	0	0
	Detection Exceedances (Y/N)		z	z	z	z	z	>		z	z	z	z	z	z		z	z	z	z	z	z		z	>	>	>-	>-	>-		Z	z	Z	z	z	z		z	z	z	z	z	z
	Report Result Unit		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L		DCI/L	DCI/L	DC!/L	DCI/L	DCI/L	DCI/L		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
	CCR MCL/RSL		0.04	0.04	0.04	0.04	0.04	0.04		0.002	0.002	0.002	0.002	0.002	0.002		0.1	0.1	0.1	0.1	0.1	0.1		s	2	s	s	s	S		0.05	0.05	0.05	0.05	0.05	0.05		0.002	0.002	0.002	0.002	0.002	0.002
	Coefficient of Variance		0.217	0.2474	0.5294	0.4354	0.9042	1.553		0	0	0	0.06841	0	0		0.8203	0.242	0.2676	0.2676	0.2406	0.2406		0.4955	0.4683	0.3464	0.4042	0.3663	0.2989		0.4172	0.38	0.4041	0.4041	0.4615	0.4615		0	0.2107	0	0	1.414	0
	Standard Deviation	(mg/L)	0.001972	0.0022:1	0.006891	0.005247	0.009756	0.04085	1 (mg/L)	0	0	0	0.00001391	0	0	(l/gm) leto	0.008949	0.002145	0.002304	0.002304	0.002139	0.002139	28 (pCi/t)	1.466	1.564	2.098	1.38	1.595	1.156	al (mg/L)	0.004718	0.00409	0.004261	0.004261	0.005162	0.005162	II (mg/L)	0	0.0002012	0	0	0.002121	0
	Variance	CCR Appendix-IV: Lithium, Total (mg/L)	0.000003888	0.000004889	0.00004749	0.00002753	0.00009518	0.00167	CCR Appendix-IV: Mercury, Total (mg/L)	0	0	0	1.934E-10	0	0	CCR Appendix-IV: Molybdenum, Total (mg/l)		0.0000046	0.00000531	0.00000531	0.000004575	0.000004575	CCR Appendix-IV: Radium-226 & 228 (pCi/l.)	2.15	2.446	4.403	1.904	2.543	1.336	CCR Appendix-IV: Selenium, Total (mg/L)	Н	0.00001672	0.00001816	0.00001816	0.00002664	0.00002664	CCR Appendix-IV: Thallium, Total (mg/L)	0	4.05E-08	0	0	0.0000045	0
	Maximum Detect	CR Appendix-I	0.0099	0.0116	0.0385	0.0259		0.151	CR Appendix-I'	0.0002			0.000259			Appendix-IV:					_	_	t Appendix-IV:	4.39	2.97	17.1	95'9	6.71	6.35	2R Appendix-IV							CR Appendix-I						
	95th Percentile		0.01	0.01	0.02203	0.0232	0.014	0.133	0	0.0002	0.0002	0.0002	0.0002089	0.0002	0.0002	S.	0.01	0.01	0.01	0.01	10.0		8	4.33	5.705	8.477	4.625	6.495	5.979	ď	0.02	0.02	0.02	0.02	0.02		0	0.001	0.001	0.001	0.001	0.00235	0.001
	50th Percentile (Median)		0.01	0.01	0.01	0.01	0.01	0.0119		0.0002	0.0002	0.0002	0.0002	0.0002	0.0002		0.01	0.01	0.01	0.01	0.01	0.01		4	4	5.825	4	4.33	3.955		0.01	0.01	0.01	0.01	0.01	0.01		0.001	0.001	0.001	0.001	0.001	0.001
	Mean		60600:0	0.00894	0.013	0.0121	0.0108	0.0263		0.0002	0.0002	0.0002	0.000203	0.0002	0.0002		0.0109	0.00886	0.00861	0.00861	0.00889	0.00889		2.96	3.34	90'9	3.41	4.35	3.87		0.0113	0.0108	0.0105	0.0105	0.0112	0.0112		0.001	0.000955	0.001	0.001	0.0015	0.001
	Range of Non- Detect		0.005-0.01	0.005-0.01	0.01-0.01	0.005-0.01	50.0-200.0	0.01-0.01		0.0002-0.0002	0.0002-0.0002	0.0002-0.0002	0.0002-0.0002	0.0002-0.0002	0.0002-0.0002		0.005-0.05	0.005-0.01	0.005-0.01	0.005-0.01	0.005-0.01	0.005-0.01		04	44	44	44		44		0.0025-0.02	0.0025-0.02	0.0025-0.02	0.0025-0.02	0.0025-0.02	0.0025-0.02		0.001-0.001	0.0001-0.001	0.001-0.001	0.001-0.001	0.001-0.01	0.001-0.001
	Percent Ri Non-Detects		95%		47%			42%			100% 0.	100% 0.		100% 0.								100%		32%	23%	4%	18%	%0	14%							100%						100%	
	Frequency of Detection N		1/22	1/22	10/19	5/19	0/19	11/19		1/20	0/20	0/18	1/18	81/0	0/18		0/22	0/22	0/18	0/18	0/18	0/18		15/22	17/22	23/24	18/22	22/22	19/22		0/21	0/23	0/23	0/23	0/19	0/19		0/20	0/20	0/18	0/18	0/18	0/18
	Fr Location Id		WBW-1	WAP-1	WAP-2	WAP-3	WAP-12	WAP-13		WBW-1	WAP-1	WAP-2	WAP-3	WAP-12	WAP-13		WBW-1	WAP-1	WAP-2	WAP-3	WAP-12	WAP-13		WBW-1	WAP-1	WAP-2	WAP-3	WAP-12	WAP-13		WBW-1	WAP-1	WAP-2	WAP-3	WAP-12	WAP-13		WBW-1	WAP-1	WAP-2	WAP-3	WAP-12	WAP-13
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TABLE 1 WGS SOUTH ASH POND JULY 2024 SEMIANNUAL ASSESSMENT MONITORING DATA

# Appendix B:

Certificates of Analysis, External Lab Reports, & Field Parameters



# SANTEE COOPER ANALYTICAL SERVICES

### **CERTIFICATE OF ANALYSIS**

LAB CERTIFICATION #08552

**Sample #** AF90595

Location: GW Well WAP-1

Date: 02/05/2024

Sample Collector: WJK/BB

Loc. Code WAP-1

Time: 14:35

Loc. Code WAP-1			Time: 14:35		
Analysis	Result	Units	Test Date	Analyst	Method
Aluminum	1.2	mg/L	02/13/2024	SKJACOBS	EPA 6020B
Arsenic	5.6	ug/L	02/13/2024	SKJACOBS	EPA 6020B
Barium	81.0	ug/L	02/13/2024	SKJACOBS	EPA 6020B
Beryllium	<0.5	ug/L	02/13/2024	SKJACOBS	EPA 6020B
Calcium	8.8	mg/L	02/13/2024	SKJACOBS	EPA 6020B
Cadmium	<0.5	ug/L	02/13/2024	SKJACOBS	EPA 6020B
Cobalt	0.84	ug/L	02/13/2024	SKJACOBS	EPA 6020B
Chromium	<5.0	ug/L	02/13/2024	SKJACOBS	EPA 6020B
Iron	2460	ug/L	02/13/2024	SKJACOBS	EPA 6020B
Magnesium	0.93	mg/L	02/13/2024	SKJACOBS	EPA 6020B
Lead	<1.0	ug/L	02/13/2024	SKJACOBS	EPA 6020B
Antimony	<5.0	ug/L	02/13/2024	SKJACOBS	EPA 6020B
Selenium	<10.0	ug/L	02/13/2024	SKJACOBS	EPA 6020B
Thallium	<1.0	ug/L	02/13/2024	SKJACOBS	EPA 6020B
Boron	37.1	ug/L	02/14/2024	SKJACOBS	EPA 6010D
Lithium	<5.0	ug/L	02/14/2024	SKJACOBS	EPA 6010D
Molybdenum	<5.0	ug/L	02/14/2024	SKJACOBS	EPA 6010D
Mercury	<0.2	ug/L	02/20/2024	<b>EUROFINS SAV</b>	EPA 7470
Zinc	<10.0	ug/L	02/13/2024	SKJACOBS	EPA 6020B
Fluoride	<0.10	mg/L	02/14/2024	KCWELLS	EPA 300.0
Chloride	11.6	mg/L	02/14/2024	<b>KCWELLS</b>	EPA 300.0
Sulfate	30.2	mg/L	02/14/2024	<b>KCWELLS</b>	EPA 300.0
Total Dissolved Solids	80.00	mg/L	02/09/2024	KCWELLS	SM 2540C
Radium 226	2.03	pCi/L	03/05/2024	GEL	EPA 903.1 Mod
Radium 228	0.185	pCi/L	02/23/2024	GEL	EPA 904.0
Radium 226/228 Combined Calculation	2.215	pCi/L	03/21/2024	SJLEVY	EPA 903.1 Mod
pH	4.41	SU	02/05/2024	WJK/BB	
Copper	<5.0	ug/L	02/13/2024	SKJACOBS	EPA 6020B
Nickel	<0.5	ug/L	02/13/2024	SKJACOBS	EPA 6020B

# 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:



# SANTEE COOPER ANALYTICAL SERVICES

### **CERTIFICATE OF ANALYSIS**

# LAB CERTIFICATION #08552

Sample # AF90634 Location: GW Well WBW-1 Date: 02/06/2024

Sample Collector: WJK/BB

Loc. Code WBW-1 Time: 14:12

Loc. Code VVDVV-1			11me: 14.12		
Analysis	Result	Units	Test Date	Analyst	Method
Aluminum	0.42	mg/L	02/13/2024	SKJACOBS	EPA 6020B
Arsenic	<5.0	ug/L	02/13/2024	SKJACOBS	EPA 6020B
Barium	22.3	ug/L	02/13/2024	SKJACOBS	EPA 6020B
Beryllium	<0.5	ug/L	02/13/2024	SKJACOBS	EPA 6020B
Calcium	2.2	mg/L	02/13/2024	SKJACOBS	EPA 6020B
Cadmium	<0.5	ug/L	02/13/2024	SKJACOBS	EPA 6020B
Cobalt	0.88	ug/L	02/13/2024	SKJACOBS	EPA 6020B
Chromium	<5.0	ug/L	02/13/2024	SKJACOBS	EPA 6020B
Iron	98.7	ug/L	02/13/2024	SKJACOBS	EPA 6020B
Magnesium	0.45	mg/L	02/13/2024	SKJACOBS	EPA 6020B
Lead	<1.0	ug/L	02/13/2024	SKJACOBS	EPA 6020B
Antimony	<5.0	ug/L	02/13/2024	SKJACOBS	EPA 6020B
Selenium	<10.0	ug/L	02/13/2024	SKJACOBS	EPA 6020B
Thallium	<1.0	ug/L	02/13/2024	SKJACOBS	EPA 6020B
Boron	185	ug/L	02/14/2024	SKJACOBS	EPA 6010D
Lithium	9.9	ug/L	02/14/2024	SKJACOBS	EPA 6010D
Molybdenum	<5.0	ug/L	02/14/2024	SKJACOBS	EPA 6010D
Mercury	<0.2	ug/L	02/20/2024	<b>EUROFINS SAV</b>	EPA 7470
Zinc	<10.0	ug/L	02/13/2024	SKJACOBS	EPA 6020B
Fluoride	<0.10	mg/L	02/16/2024	KCWELLS	EPA 300.0
Chloride	4.50	mg/L	02/16/2024	KCWELLS	EPA 300.0
Sulfate	10.9	mg/L	02/16/2024	KCWELLS	EPA 300.0
Total Dissolved Solids	75.00	mg/L	02/13/2024	KCWELLS	SM 2540C
Radium 226	0.0320	pCi/L	03/05/2024	GEL	EPA 903.1 Mod
Radium 228	2.16	pCi/L	02/23/2024	GEL	EPA 904.0
Radium 226/228 Combined Calculation	2.192	pCi/L	03/21/2024	SJLEVY	EPA 903.1 Mod
рН	4.54	SU	02/06/2024	WJK/BM	
Copper	<5.0	ug/L	02/13/2024	SKJACOBS	EPA 6020B
Nickel	1.3	ug/L	02/13/2024	SKJACOBS	EPA 6020B

### 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

Validation date:

Analysis Validated:

Linda Williams - Manager Analytical Services

Authorized Signature Only- Not Valid Unless Signed



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 #** AF90596 Location: GW Well WAP-2 Date: 02/06/2024 Sample Collector: WJK/BB

Loc. Code WAP-2 Time: 10:25

Loc. Code VVAP-2			11me: 10:25		
Analysis	Result	Units	Test Date	Analyst	Method
Aluminum	0.1	mg/L	02/13/2024	SKJACOBS	EPA 6020B
Arsenic	8.0	ug/L	02/13/2024	SKJACOBS	EPA 6020B
Barium	361	ug/L	02/13/2024	SKJACOBS	EPA 6020B
Beryllium	<0.5	ug/L	02/13/2024	SKJACOBS	EPA 6020B
Calcium	524	mg/L	02/13/2024	SKJACOBS	EPA 6020B
Cadmium	<0.5	ug/L	02/13/2024	SKJACOBS	EPA 6020B
Cobalt	1.3	ug/L	02/13/2024	SKJACOBS	EPA 6020B
Chromium	<5.0	ug/L	02/13/2024	SKJACOBS	EPA 6020B
Iron	30900	ug/L	02/13/2024	SKJACOBS	EPA 6020B
Magnesium	63.1	mg/L	02/13/2024	SKJACOBS	EPA 6020B
Lead	<1.0	ug/L	02/13/2024	SKJACOBS	EPA 6020B
Antimony	<5.0	ug/L	02/13/2024	SKJACOBS	EPA 6020B
Selenium	<10.0	ug/L	02/13/2024	SKJACOBS	EPA 6020B
Thallium	<1.0	ug/L	02/13/2024	SKJACOBS	EPA 6020B
Boron	7830	ug/L	02/14/2024	SKJACOBS	EPA 6010D
Lithium	38.5	ug/L	02/14/2024	SKJACOBS	EPA 6010D
Molybdenum	<5.0	ug/L	02/14/2024	SKJACOBS	EPA 6010D
Mercury	<0.2	ug/L	02/20/2024	<b>EUROFINS SAV</b>	EPA 7470
Zinc	<10.0	ug/L	02/13/2024	SKJACOBS	EPA 6020B
Fluoride	<0.10	mg/L	02/22/2024	KCWELLS	EPA 300.0
Chloride	663	mg/L	02/22/2024	KCWELLS	EPA 300.0
Sulfate	546	mg/L	02/22/2024	KCWELLS	EPA 300.0
Total Dissolved Solids	2886	mg/L	02/09/2024	KCWELLS	SM 2540C
Radium 226	4.23	pCi/L	03/05/2024	GEL	EPA 903.1 Mod
Radium 228	1.51	pCi/L	02/23/2024	GEL	EPA 904.0
Radium 226/228 Combined Calculation	5.74	pCi/L	03/21/2024	SJLEVY	EPA 903.1 Mod
pН	6.34	SU	02/06/2024	WJK/BB	
Copper	<5.0	ug/L	02/13/2024	SKJACOBS	EPA 6020B

## 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

Validation date:

Analysis Validated:

Linda Williams - Manager Analytical Services



## SANTEE COOPER ANALYTICAL SERVICES

## **CERTIFICATE OF ANALYSIS**

LAB CERTIFICATION #08552

Sample # AF90597 Location: GW Well WAP-2 (Comparison Date: 02/06/2024 Sample Collector: WJK/BB

Loc. Code WAP-2R Well)

Analysis	lime: 11:19					
	Result	Units	Test Date	Analyst	Method	
Aluminum	<0.1	mg/L	02/13/2024	SKJACOBS	EPA 6020B	
Arsenic	<5.0	ug/L	02/13/2024	SKJACOBS	EPA 6020B	
Barium	384	ug/L	02/13/2024	SKJACOBS	EPA 6020B	
Beryllium	<0.5	ug/L	02/13/2024	SKJACOBS	EPA 6020B	
Calcium	604	mg/L	02/13/2024	SKJACOBS	EPA 6020B	
Cadmium	<0.5	ug/L	02/13/2024	SKJACOBS	EPA 6020B	
Cobalt	<0.5	ug/L	02/13/2024	SKJACOBS	EPA 6020B	
Chromium	<5.0	ug/L	02/13/2024	SKJACOBS	EPA 6020B	
Iron	39800	ug/L	02/13/2024	SKJACOBS	EPA 6020B	
Magnesium	69.8	mg/L	02/13/2024	SKJACOBS	EPA 6020B	
Lead	<1.0	ug/L	02/13/2024	SKJACOBS	EPA 6020B	
Antimony	<5.0	ug/L	02/13/2024	SKJACOBS	EPA 6020B	
Selenium	<10.0	ug/L	02/13/2024	SKJACOBS	EPA 6020B	
Thallium	<1.0	ug/L	02/13/2024	SKJACOBS	EPA 6020B	
Boron	8450	ug/L	02/14/2024	SKJACOBS	EPA 6010D	
Lithium	45.3	ug/L	02/14/2024	SKJACOBS	EPA 6010D	
Molybdenum	<5.0	ug/L	02/14/2024	SKJACOBS	EPA 6010D	
Mercury	<0.2	ug/L	02/20/2024	<b>EUROFINS SAV</b>	EPA 7470	
Zinc	<10.0	ug/L	02/13/2024	SKJACOBS	EPA 6020B	
Fluoride	<0.10	mg/L	02/22/2024	KCWELLS	EPA 300.0	
Chloride	791	mg/L	02/22/2024	KCWELLS	EPA 300.0	
Sulfate	559	mg/L	02/22/2024	KCWELLS	EPA 300.0	
Total Dissolved Solids	3279	mg/L	02/09/2024	KCWELLS	SM 2540C	
Radium 226	4.72	pCi/L	03/05/2024	GEL	EPA 903.1 Mod	
Radium 228	3.16	pCi/L	02/23/2024	GEL	EPA 904.0	
Radium 226/228 Combined Calculation	7.88	pCi/L	03/21/2024	SJLEVY	EPA 903.1 Mod	
pH	6.29	SU	02/06/2024	WJK/BB		
Copper	<5.0	ug/L	02/13/2024	SKJACOBS	EPA 6020B	

#### 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

Validation date: 4

Analysis Validated:

Linda Williams - Manager Analytical Services



# SANTEE COOPER ANALYTICAL SERVICES

#### CERTIFICATE OF ANALYSIS

LAB CERTIFICATION #08552

**Sample #** AF90598

Location: GW Well WAP-3

Date: 02/08/2024

Sample Collector: WJK/BM

Loc. Code WAP-3 Time: 14:39

200. 00d¢ 11711 0	Time. 14.09					
Analysis	Result	Units	Test Date	Analyst	Method	
Aluminum	<0.1	mg/L	02/14/2024	SKJACOBS	EPA 6020B	
Arsenic	<5.0	ug/L	02/14/2024	SKJACOBS	EPA 6020B	
Barium	187	ug/L	02/14/2024	SKJACOBS	EPA 6020B	
Beryllium	<0.5	ug/L	02/14/2024	SKJACOBS	EPA 6020B	
Calcium	266	mg/L	02/14/2024	SKJACOBS	EPA 6020B	
Cadmium	<0.5	ug/L	02/14/2024	SKJACOBS	EPA 6020B	
Cobalt	0.53	ug/L	02/14/2024	SKJACOBS	EPA 6020B	
Chromium	<5.0	ug/L	02/14/2024	SKJACOBS	EPA 6020B	
Iron	19100	ug/L	02/14/2024	SKJACOBS	EPA 6020B	
Magnesium	13.5	mg/L	02/14/2024	SKJACOBS	EPA 6020B	
Lead	<1.0	ug/L	02/14/2024	SKJACOBS	EPA 6020B	
Antimony	<5.0	ug/L	02/14/2024	SKJACOBS	EPA 6020B	
Selenium	<10.0	ug/L	02/14/2024	SKJACOBS	EPA 6020B	
Thallium	<1.0	ug/L	02/14/2024	SKJACOBS	EPA 6020B	
Boron	1410	ug/L	02/14/2024	SKJACOBS	EPA 6010D	
Lithium	21.0	ug/L	02/14/2024	SKJACOBS	EPA 6010D	
Molybdenum	<5.0	ug/L	02/14/2024	SKJACOBS	EPA 6010D	
Mercury	<0.2	ug/L	02/20/2024	<b>EUROFINS SAV</b>	EPA 7470	
Zinc	<10.0	ug/L	02/14/2024	SKJACOBS	EPA 6020B	
Fluoride	<0.10	mg/L	02/22/2024	KCWELLS	EPA 300.0	
Chloride	236	mg/L	02/22/2024	KCWELLS	EPA 300.0	
Sulfate	162	mg/L	02/22/2024	KCWELLS	EPA 300.0	
Total Dissolved Solids	1369	mg/L	02/09/2024	KCWELLS	SM 2540C	
Radium 226	0.879	pCi/L	03/13/2024	GEL	EPA 903.1 Mod	
Radium 228	1.44	pCi/L	03/08/2024	GEL	EPA 904.0	
Radium 226/228 Combined Calculation	2.319	pCi/L	03/13/2024	SJLEVY	EPA 903.1 Mod	
рН	6.38	SU	02/08/2024	WJK/BM		
Copper	<5.0	ug/L	02/14/2024	SKJACOBS	EPA 6020B	

# 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:



## SANTEE COOPER ANALYTICAL SERVICES

## **CERTIFICATE OF ANALYSIS**

# LAB CERTIFICATION #08552

Sample # AF90608

Location: GW Well WAP-12

Date: 02/14/2024

Sample Collector: WJK/BM

Loc. Code WAP-12

Time: 14:04

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Analysis	Result	Units	Test Date	Analyst	Method	
Arsenic	<5.0	ug/L	03/01/2024	SKJACOBS	EPA 6020B	
Barium	35.4	ug/L	03/01/2024	SKJACOBS	EPA 6020B	
Beryllium	<0.5	ug/L	03/05/2024	SKJACOBS	EPA 6020B	
Calcium	216	mg/L	03/01/2024	SKJACOBS	EPA 6020B	
Cadmium	<0.5	ug/L	03/01/2024	SKJACOBS	EPA 6020B	
Cobalt	1.1	ug/L	03/01/2024	SKJACOBS	EPA 6020B	
Chromium	<5.0	ug/L	03/01/2024	SKJACOBS	EPA 6020B	
Lead	<1.0	ug/L	03/01/2024	SKJACOBS	EPA 6020B	
Antimony	<5.0	ug/L	03/01/2024	SKJACOBS	EPA 6020B	
Selenium	<10.0	ug/L	03/05/2024	SKJACOBS	EPA 6020B	
Thallium	<1.0	ug/L	03/01/2024	SKJACOBS	EPA 6020B	
Boron	2070	ug/L	02/21/2024	SKJACOBS	EPA 6010D	
Lithium	<5.0	ug/L	02/21/2024	SKJACOBS	EPA 6010D	
Molybdenum	<5.0	ug/L	02/21/2024	SKJACOBS	EPA 6010D	
Mercury	<0.2	ug/L	02/26/2024	<b>EUROFINS SAV</b>	EPA 7470	
Fluoride	<0.10	mg/L	02/16/2024	KCWELLS	EPA 300.0	
Chloride	136	mg/L	02/16/2024	KCWELLS	EPA 300.0	
Sulfate	432	mg/L	02/16/2024	KCWELLS	EPA 300.0	
Total Dissolved Solids	1014	mg/L	02/16/2024	KCWELLS	SM 2540C	
Radium 226	0.578	pCi/L	03/13/2024	GEL	EPA 903.1 Mod	
Radium 228	1.32	pCi/L	03/08/2024	GEL	EPA 904.0	
Radium 226/228 Combined Calculation	1.898	pCi/L	03/13/2024	SJLEVY	EPA 903.1 Mod	
рН	5.44	SU	02/12/2024	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

Validation date:

Analysis Validated:

Linda Williams - Manager Analytical Services

- Mariagor / Mary toda oct 11008



## SANTEE COOPER ANALYTICAL SERVICES

#### **CERTIFICATE OF ANALYSIS**

## LAB CERTIFICATION #08552

Sample # AF90609 Location: GW Well WAP-12 Date: 02/14/2024 Sample Collector: WJK/BM

Loc. Code WAP-12 DUP Time: 14:09

Loc. Code WAF-12	11me: 14.09					
Analysis	Result	Units	Test Date	Analyst	Method	
Arsenic	<5.0	ug/L	03/01/2024	SKJACOBS	EPA 6020B	
Barium	34.0	ug/L	03/01/2024	SKJACOBS	EPA 6020B	
Beryllium	<0.5	ug/L	03/05/2024	SKJACOBS	EPA 6020B	
Calcium	207	mg/L	03/01/2024	SKJACOBS	EPA 6020B	
Cadmium	<0.5	ug/L	03/01/2024	SKJACOBS	EPA 6020B	
Cobalt	1.1	ug/L	03/01/2024	SKJACOBS	EPA 6020B	
Chromium	<5.0	ug/L	03/01/2024	SKJACOBS	EPA 6020B	
Lead	<1.0	ug/L	03/01/2024	SKJACOBS	EPA 6020B	
Antimony	<5.0	ug/L	03/01/2024	SKJACOBS	EPA 6020B	
Selenium	<10.0	ug/L	03/05/2024	SKJACOBS	EPA 6020B	
Thallium	<1.0	ug/L	03/01/2024	SKJACOBS	EPA 6020B	
Boron	2010	ug/L	02/21/2024	SKJACOBS	EPA 6010D	
Lithium	<5.0	ug/L	02/21/2024	SKJACOBS	EPA 6010D	
Molybdenum	<5.0	ug/L	02/21/2024	SKJACOBS	EPA 6010D	
Mercury	<0.2	ug/L	02/26/2024	<b>EUROFINS SAV</b>	EPA 7470	
Fluoride	<0.10	mg/L	02/16/2024	<b>KCWELLS</b>	EPA 300.0	
Chloride	140	mg/L	02/16/2024	KCWELLS	EPA 300.0	
Sulfate	447	mg/L	02/16/2024	KCWELLS	EPA 300.0	
Total Dissolved Solids	1020	mg/L	02/16/2024	KCWELLS	SM 2540C	
Radium 226	0.320	pCi/L	03/13/2024	GEL	EPA 903.1 Mod	
Radium 228	1.10	pCi/L	03/08/2024	GEL	EPA 904.0	
Radium 226/228 Combined Calculation	1.42	pCi/L	03/13/2024	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

Validation date:

Analysis Validated:



## SANTEE COOPER ANALYTICAL SERVICES

#### **CERTIFICATE OF ANALYSIS**

## LAB CERTIFICATION #08552

Sample # AF90610 Location: GW Well WAP-13 Date: 02/21/2024 Sample Collector: WJK/BM

Loc. Code WAP-13 **Time:** 10:15

1111011101					
Result	Units	Test Date	Analyst	Method	
<5.0	ug/L	03/12/2024	SKJACOBS	EPA 6020B	
257	ug/L	03/12/2024	SKJACOBS	EPA 6020B	
<0.5	ug/L	03/12/2024	SKJACOBS	EPA 6020B	
385	mg/L	03/12/2024	SKJACOBS	EPA 6020B	
<0.5	ug/L	03/12/2024	SKJACOBS	EPA 6020B	
<0.5	ug/L	03/12/2024	SKJACOBS	EPA 6020B	
<5.0	ug/L	03/12/2024	SKJACOBS	EPA 6020B	
<1.0	ug/L	03/12/2024	SKJACOBS	EPA 6020B	
<5.0	ug/L	03/12/2024	SKJACOBS	EPA 6020B	
<10.0	ug/L	03/12/2024	SKJACOBS	EPA 6020B	
<1.0	ug/L	03/12/2024	SKJACOBS	EPA 6020B	
3800	ug/L	02/27/2024	SKJACOBS	EPA 6010D	
12.4	ug/L	02/27/2024	SKJACOBS	EPA 6010D	
<5.0	ug/L	02/27/2024	SKJACOBS	EPA 6010D	
<0.2	ug/L	02/28/2024	<b>EUROFINS SAV</b>	EPA 7470	
0.12	mg/L	02/23/2024	KCWELLS	EPA 300.0	
520	mg/L	02/23/2024	KCWELLS	EPA 300.0	
121	mg/L	02/23/2024	<b>KCWELLS</b>	EPA 300.0	
1904	mg/L	02/28/2024	SJLEVY	SM 2540C	
0.987	pCi/L	03/17/2024	GEL	EPA 903.1 Mod	
2.17	pCi/L	03/13/2024	GEL	EPA 904.0	
3.157	pCi/L	03/21/2024	SJLEVY	EPA 903.1 Mod	
6.43	SU	02/21/2024	WJK/BM		
	<5.0 257 <0.5 385 <0.5 <0.5 <5.0 <1.0 <5.0 <10.0 <1.0 3800 12.4 <5.0 <0.2 0.12 520 121 1904 0.987 2.17 3.157	<5.0	<5.0	<5.0	

#### 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:



## SANTEE COOPER ANALYTICAL SERVICES

#### **CERTIFICATE OF ANALYSIS**

LAB CERTIFICATION #08552

Sample # AF90631 Location: GW Well WAP-28 Date: 02/21/2024 Sample Collector: WJK/BM

Loc. Code WAP-28 Time: 11:20

LOC. Code WAF-20	Time. 11.20					
Analysis	Result	Units	Test Date	Analyst	Method	
Arsenic	<5.0	ug/L	03/12/2024	SKJACOBS	EPA 6020B	
Barium	184	ug/L	03/12/2024	SKJACOBS	EPA 6020B	
Beryllium	0.51	ug/L	03/12/2024	SKJACOBS	EPA 6020B	
Calcium	57.3	mg/L	03/12/2024	SKJACOBS	EPA 6020B	
Cadmium	<0.5	ug/L	03/12/2024	SKJACOBS	EPA 6020B	
Cobalt	14.1	ug/L	03/12/2024	SKJACOBS	EPA 6020B	
Chromium	<5.0	ug/L	03/12/2024	SKJACOBS	EPA 6020B	
Lead	2.3	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	2600	ug/L	02/27/2024	SKJACOBS	EPA 6010D	
Lithium	<5.0	ug/L	02/27/2024	SKJACOBS	EPA 6010D	
Molybdenum	<5.0	ug/L	02/27/2024	SKJACOBS	EPA 6010D	
Mercury	<0.2	ug/L	02/28/2024	<b>EUROFINS SAV</b>	EPA 7470	
Fluoride	0.30	mg/L	02/23/2024	KCWELLS	EPA 300.0	
Chloride	355	mg/L	02/23/2024	KCWELLS	EPA 300.0	
Sulfate	83.2	mg/L	02/23/2024	KCWELLS	EPA 300.0	
Total Dissolved Solids	837.5	mg/L	02/23/2024	KCWELLS	SM 2540C	
Radium 226	2.88	pCi/L	03/17/2024	GEL	EPA 903.1 Mod	
Radium 228	2.04	pCi/L	03/13/2024	GEL	EPA 904.0	
Radium 226/228 Combined Calculation	4.92	pCi/L	03/21/2024	SJLEVY	EPA 903.1 Mod	
рН	4.35	SU	02/21/2024	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

Validation date:

Analysis Validated:



## SANTEE COOPER ANALYTICAL SERVICES

## **CERTIFICATE OF ANALYSIS**

LAB CERTIFICATION #08552

Time: 14:21

Sample # AF90632 Location: GW Well WAP-28R (Comparison Date: 02/20/2024 Sample Collector: WJK/BM

Loc. Code WAP-28R Well)

LOC. CODE WAF-20N	1 me: 14.21					
Analysis	Result	Units	Test Date	Analyst	Method	
Arsenic	6.4	ug/L	03/12/2024	SKJACOBS	EPA 6020B	
Barium	54.5	ug/L	03/12/2024	SKJACOBS	EPA 6020B	
Beryllium	<0.5	ug/L	03/12/2024	SKJACOBS	EPA 6020B	
Calcium	82.4	mg/L	03/12/2024	SKJACOBS	EPA 6020B	
Cadmium	<0.5	ug/L	03/12/2024	SKJACOBS	EPA 6020B	
Cobalt	4.6	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	2600	ug/L	02/27/2024	SKJACOBS	EPA 6010D	
Lithium	<5.0	ug/L	02/27/2024	SKJACOBS	EPA 6010D	
Molybdenum	<5.0	ug/L	02/27/2024	SKJACOBS	EPA 6010D	
Mercury	<0.2	ug/L	02/28/2024	<b>EUROFINS SAV</b>	EPA 7470	
Fluoride	<0.10	mg/L	02/23/2024	KCWELLS	EPA 300.0	
Chloride	120	mg/L	02/23/2024	KCWELLS	EPA 300.0	
Sulfate	63.5	mg/L	02/23/2024	KCWELLS	EPA 300.0	
Total Dissolved Solids	596.2	mg/L	02/23/2024	KCWELLS	SM 2540C	
Radium 226	0.697	pCi/L	03/17/2024	GEL	EPA 903.1 Mod	
Radium 228	-3.62	pCi/L	03/13/2024	GEL	EPA 904.0	
Radium 226/228 Combined Calculation	0.697	pCi/L	03/21/2024	SJLEVY	EPA 903.1 Mod	
pH	6.12	SU	02/20/2024	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

Validation date: 4

Analysis Validated:



## SANTEE COOPER ANALYTICAL SERVICES

## **CERTIFICATE OF ANALYSIS**

#### LAB CERTIFICATION #08552

**Sample #** AG03721 Location: GW Well WAP-1 Date: 07/01/2024 Sample Collector: ZM/BM

Loc. Code WAP-1 Time: 10:53

	Time: Total						
Analysis	Result	Units	Test Date	Analyst	Method		
Arsenic	9.6	ug/L	07/19/2024	SKJACOBS	EPA 6020B		
Barium	68.1	ug/L	07/19/2024	SKJACOBS	EPA 6020B		
Beryllium	<0.5	ug/L	07/22/2024	SKJACOBS	EPA 6020B		
Calcium	7.5	mg/L	07/19/2024	SKJACOBS	EPA 6020B		
Cadmium	<0.5	ug/L	07/19/2024	SKJACOBS	EPA 6020B		
Cobalt	0.75	ug/L	07/19/2024	SKJACOBS	EPA 6020B		
Chromium	<5.0	ug/L	07/19/2024	SKJACOBS	EPA 6020B		
Lead	<1.0	ug/L	07/19/2024	SKJACOBS	EPA 6020B		
Antimony	<5.0	ug/L	07/19/2024	SKJACOBS	EPA 6020B		
Selenium	<10.0	ug/L	07/19/2024	SKJACOBS	EPA 6020B		
Thallium	<1.0	ug/L	07/19/2024	SKJACOBS	EPA 6020B		
Boron	30.4	ug/L	07/19/2024	SKJACOBS	EPA 6010D		
Lithium	<5.0	ug/L	07/19/2024	SKJACOBS	EPA 6010D		
Molybdenum	<5.0	ug/L	07/19/2024	SKJACOBS	EPA 6010D		
Mercury	<0.2	ug/L	07/19/2024	<b>EUROFINS SAV</b>	EPA 7470		
Fluoride	<0.10	mg/L	07/08/2024	KCWELLS	EPA 300.0		
Chloride	9.26	mg/L	07/08/2024	KCWELLS	EPA 300.0		
Sulfate	30.8	mg/L	07/08/2024	KCWELLS	EPA 300.0		
Total Dissolved Solids	70.00	mg/L	07/03/2024	KRMATHER	SM 2540C		
Radium 226	2.13	pCi/L	08/07/2024	GEL	EPA 903.1 Mod		
Radium 228	2.16	pCi/L	08/02/2024	GEL	EPA 904.0		
Radium 226/228 Combined Calculation	4.29	pCi/L	08/14/2024	SJLEVY	EPA 903.1 Mod		
pH	4.42	SU	07/01/2024	ZM/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

Validation date:

Analysis Validated:



## SANTEE COOPER ANALYTICAL SERVICES

## **CERTIFICATE OF ANALYSIS**

## LAB CERTIFICATION #08552

Sample # AG03766 Location: GW Well WBW-1 Date: 07/01/2024 Sample Collector: ZM/BM

Loc. Code WBW-1 Time: 09:54

Result	Units	Test Date	Analyst	Method
<5.0	ug/L	07/23/2024	SKJACOBS	EPA 6020B
12.9	ug/L	07/23/2024	SKJACOBS	EPA 6020B
<0.5	ug/L	07/23/2024	SKJACOBS	EPA 6020B
1.8	mg/L	07/23/2024	SKJACOBS	EPA 6020B
<0.5	ug/L	07/23/2024	SKJACOBS	EPA 6020B
0.54	ug/L	07/23/2024	SKJACOBS	EPA 6020B
<5.0	ug/L	07/23/2024	SKJACOBS	EPA 6020B
<1.0	ug/L	07/23/2024	SKJACOBS	EPA 6020B
<5.0	ug/L	07/23/2024	SKJACOBS	EPA 6020B
<10.0	ug/L	07/23/2024	SKJACOBS	EPA 6020B
<1.0	ug/L	07/23/2024	SKJACOBS	EPA 6020B
13.2	ug/L	07/18/2024	SKJACOBS	EPA 6010D
<5.0	ug/L	07/18/2024	SKJACOBS	EPA 6010D
<5.0	ug/L	07/18/2024	SKJACOBS	EPA 6010D
<0.2	ug/L	07/22/2024	<b>EUROFINS SAV</b>	EPA 7470
<0.10	mg/L	07/12/2024	KCWELLS	EPA 300.0
4.92	mg/L	07/12/2024	KCWELLS	EPA 300.0
7.22	mg/L	07/12/2024	KCWELLS	EPA 300.0
<25	mg/L	07/03/2024	KRMATHER	SM 2540C
0.102	pCi/L	08/07/2024	GEL	EPA 903.1 Mod
2.41	pCi/L	08/02/2024	GEL	EPA 904.0
2.512	pCi/L	08/14/2024	SJLEVY	EPA 903.1 Mod
4.04	SU	07/01/2024	ZM/BM	
	<5.0 12.9 <0.5 1.8 <0.5 0.54 <5.0 <1.0 <5.0 <1.0 13.2 <5.0 <5.0 <0.2 <0.10 4.92 7.22 <25 0.102 2.41 2.512	<5.0	<5.0	Result         Units         Test Date         Analyst           <5.0

## 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

Validation date:

Analysis Validated:

Linda Williams - Manager Analytical Services

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## SANTEE COOPER ANALYTICAL SERVICES

#### **CERTIFICATE OF ANALYSIS**

LAB CERTIFICATION #08552

Sample # AG03722 Location: GW Well WAP-2 Date: 07/02/2024 Sample Collector: ZM/BM

Loc. Code WAP-2 Time: 12:15

LOO: OOGC TITE	11110. 12.10					
Analysis	Result	Units	Test Date	Analyst	Method	
Arsenic	20.7	ug/L	07/19/2024	SKJACOBS	EPA 6020B	
Barium	128	ug/L	07/19/2024	SKJACOBS	EPA 6020B	
Beryllium	1.2	ug/L	07/22/2024	SKJACOBS	EPA 6020B	
Calcium	117	mg/L	07/19/2024	SKJACOBS	EPA 6020B	
Cadmium	<0.5	ug/L	07/19/2024	SKJACOBS	EPA 6020B	
Cobalt	9.1	ug/L	07/19/2024	SKJACOBS	EPA 6020B	
Chromium	<5.0	ug/L	07/19/2024	SKJACOBS	EPA 6020B	
Lead	<1.0	ug/L	07/19/2024	SKJACOBS	EPA 6020B	
Antimony	<5.0	ug/L	07/19/2024	SKJACOBS	EPA 6020B	
Selenium	<10.0	ug/L	07/19/2024	SKJACOBS	EPA 6020B	
Thallium	<1.0	ug/L	07/19/2024	SKJACOBS	EPA 6020B	
Boron	1390	ug/L	07/19/2024	SKJACOBS	EPA 6010D	
Lithium	16.6	ug/L	07/19/2024	SKJACOBS	EPA 6010D	
Molybdenum	<5.0	ug/L	07/19/2024	SKJACOBS	EPA 6010D	
Mercury	<0.2	ug/L	07/20/2024	<b>EUROFINS SAV</b>	EPA 7470	
Fluoride	<0.10	mg/L	07/08/2024	KCWELLS	EPA 300.0	
Chloride	137	mg/L	07/08/2024	KCWELLS	EPA 300.0	
Sulfate	184	mg/L	07/08/2024	KCWELLS	EPA 300.0	
Total Dissolved Solids	642.5	mg/L	07/08/2024	KRMATHER	SM 2540C	
Radium 226	2.77	pCi/L	08/07/2024	GEL	EPA 903.1 Mod	
Radium 228	0.985	pCi/L	08/02/2024	GEL	EPA 904.0	
Radium 226/228 Combined Calculation	3.755	pCi/L	08/14/2024	SJLEVY	EPA 903.1 Mod	
pH	5.80	SU	07/02/2024	ZM/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:



## SANTEE COOPER ANALYTICAL SERVICES

## **CERTIFICATE OF ANALYSIS**

LAB CERTIFICATION #08552

Sample # AG03724 Location: GW Well WAP-2 (Comparison Date: 07/02/2024 Sample Collector: ZM/BM

Loc. Code WAP-2R Well) Time: 13:15

LOC. Code WAF-21	Time. 15.15				
Analysis	Result	Units	Test Date	Analyst	Method
Arsenic	<5.0	ug/L	07/19/2024	SKJACOBS	EPA 6020B
Barium	360	ug/L	07/19/2024	SKJACOBS	EPA 6020B
Beryllium	<0.5	ug/L	07/22/2024	SKJACOBS	EPA 6020B
Calcium	319	mg/L	07/19/2024	SKJACOBS	EPA 6020B
Cadmium	<0.5	ug/L	07/19/2024	SKJACOBS	EPA 6020B
Cobalt	<0.5	ug/L	07/19/2024	SKJACOBS	EPA 6020B
Chromium	<5.0	ug/L	07/19/2024	SKJACOBS	EPA 6020B
Lead	<1.0	ug/L	07/19/2024	SKJACOBS	EPA 6020B
Antimony	<5.0	ug/L	07/19/2024	SKJACOBS	EPA 6020B
Selenium	<10.0	ug/L	07/19/2024	SKJACOBS	EPA 6020B
Thallium	<1.0	ug/L	07/19/2024	SKJACOBS	EPA 6020B
Boron	3560	ug/L	07/19/2024	SKJACOBS	EPA 6010D
Lithium	20.8	ug/L	07/19/2024	SKJACOBS	EPA 6010D
Molybdenum	<5.0	ug/L	07/19/2024	SKJACOBS	EPA 6010D
Mercury	<0.2	ug/L	07/20/2024	<b>EUROFINS SAV</b>	EPA 7470
Fluoride	<0.10	mg/L	07/08/2024	KCWELLS	EPA 300.0
Chloride	501	mg/L	07/08/2024	KCWELLS	EPA 300.0
Sulfate	375	mg/L	07/08/2024	KCWELLS	EPA 300.0
Total Dissolved Solids	1721	mg/L	07/08/2024	KRMATHER	SM 2540C
Radium 226	2.86	pCi/L	08/07/2024	GEL	EPA 903.1 Mod
Radium 228	3.65	pCi/L	08/02/2024	GEL	EPA 904.0
Radium 226/228 Combined Calculation	6.51	pCi/L	08/14/2024	SJLEVY	EPA 903.1 Mod
pH	6.14	SU	07/02/2024	ZM/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

Validation date:

Analysis Validated:

Linda Williams - Manager Analytical Services

Ellida Wilhams - Manager Anarytical Cel Vices



## SANTEE COOPER ANALYTICAL SERVICES

## **CERTIFICATE OF ANALYSIS**

LAB CERTIFICATION #08552

Sample # AG03727 Location

Location: GW Well WAP-3

Date: 07/10/2024

Sample Collector: ZM/BM

Loc. Code WAP-3

Time: 11:55

2001 0000 111111 0	Time, 11.00					
Analysis	Result	Units	Test Date	Analyst	Method	
Arsenic	<5.0	ug/L	07/23/2024	SKJACOBS	EPA 6020B	
Barium	224	ug/L	07/23/2024	SKJACOBS	EPA 6020B	
Beryllium	<0.5	ug/L	07/23/2024	SKJACOBS	EPA 6020B	
Calcium	291	mg/L	07/23/2024	SKJACOBS	EPA 6020B	
Cadmium	<0.5	ug/L	07/23/2024	SKJACOBS	EPA 6020B	
Cobalt	0.67	ug/L	07/23/2024	SKJACOBS	EPA 6020B	
Chromium	<5.0	ug/L	07/23/2024	SKJACOBS	EPA 6020B	
Lead	<1.0	ug/L	07/23/2024	SKJACOBS	EPA 6020B	
Antimony	5.0	ug/L	07/23/2024	SKJACOBS	EPA 6020B	
Selenium	<10.0	ug/L	07/23/2024	SKJACOBS	EPA 6020B	
Thallium	<1.0	ug/L	07/23/2024	SKJACOBS	EPA 6020B	
Boron	1500	ug/L	07/18/2024	SKJACOBS	EPA 6010D	
Lithium	25.9	ug/L	07/18/2024	SKJACOBS	EPA 6010D	
Molybdenum	<5.0	ug/L	07/18/2024	SKJACOBS	EPA 6010D	
Mercury	<0.2	ug/L	07/20/2024	<b>EUROFINS SAV</b>	EPA 7470	
Fluoride	<0.10	mg/L	07/19/2024	LCWILLIA	EPA 300.0	
Chloride	293	mg/L	07/19/2024	LCWILLIA	EPA 300.0	
Sulfate	195	mg/L	07/19/2024	LCWILLIA	EPA 300.0	
Total Dissolved Solids	1391	mg/L	07/17/2024	KRMATHER	SM 2540C	
Radium 226	0.409	pCi/L	08/07/2024	GEL	EPA 903.1 Mod	
Radium 228	3.13	pCi/L	08/02/2024	GEL	EPA 904.0	
Radium 226/228 Combined Calculation	3.539	pCi/L	08/14/2024	SJLEVY	EPA 903.1 Mod	
pH	6.15	SU	07/10/2024	ZM/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: 9/30



## SANTEE COOPER ANALYTICAL SERVICES

## **CERTIFICATE OF ANALYSIS**

## LAB CERTIFICATION #08552

Sample # AG03738 Location: GW Well WAP-12 Date: 07/23/2024 Sample Collector: ZM/BM

Loc. Code WAP-12 Time: 09:13

EUC. COUE WAI - 12	Time, 03.13					
Analysis	Result	Units	Test Date	Analyst	Method	
Arsenic	<5.0	ug/L	08/13/2024	SKJACOBS	EPA 6020B	
Barium	87.1	ug/L	08/13/2024	SKJACOBS	EPA 6020B	
Beryllium	<0.5	ug/L	08/13/2024	SKJACOBS	EPA 6020B	
Calcium	187	mg/L	08/13/2024	SKJACOBS	EPA 6020B	
Cadmium	<0.5	ug/L	08/13/2024	SKJACOBS	EPA 6020B	
Cobalt	2.3	ug/L	08/13/2024	SKJACOBS	EPA 6020B	
Chromium	<5.0	ug/L	08/13/2024	SKJACOBS	EPA 6020B	
Lead	<1.0	ug/L	08/13/2024	SKJACOBS	EPA 6020B	
Antimony	<5.0	ug/L	08/13/2024	SKJACOBS	EPA 6020B	
Selenium	<10.0	ug/L	08/13/2024	SKJACOBS	EPA 6020B	
Thallium	<1.0	ug/L	08/13/2024	SKJACOBS	EPA 6020B	
Boron	3580	ug/L	07/30/2024	SKJACOBS	EPA 6010D	
Lithium	<5.0	ug/L	07/30/2024	SKJACOBS	EPA 6010D	
Molybdenum	<5.0	ug/L	07/30/2024	SKJACOBS	EPA 6010D	
Mercury	<0.2	ug/L	08/01/2024	<b>EUROFINS SAV</b>	EPA 7470	
Fluoride	<0.1	mg/L	08/02/2024	GEL	EPA 300.0	
Chloride	221	mg/L	08/02/2024	GEL	EPA 300.0	
Sulfate	374	mg/L	08/02/2024	GEL	EPA 300.0	
Total Dissolved Solids	1020	mg/L	07/26/2024	KRMATHER	SM 2540C	
Radium 226	1.35	pCi/L	08/23/2024	GEL	EPA 903.1 Mod	
Radium 228	4.07	pCi/L	08/13/2024	GEL	EPA 904.0	
Radium 226/228 Combined Calculation	5.42	pCi/L	08/29/2024	SJLEVY	EPA 903.1 Mod	
pH	4.28	SU	07/23/2024	ZM/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: 9



## SANTEE COOPER ANALYTICAL SERVICES

## **CERTIFICATE OF ANALYSIS**

#### LAB CERTIFICATION #08552

Sample # AG03739 Location: GW Well WAP-12 Date: 07/23/2024 Sample Collector: ZM/BM

Loc. Code WAP-12 DUP Time: 09:18

200. 0000 17711 12	71111 <b>e.</b> 09.10					
Analysis	Result	Units	Test Date	Analyst	Method	
Arsenic	<5.0	ug/L	08/13/2024	SKJACOBS	EPA 6020B	
Barium	89.9	ug/L	08/13/2024	SKJACOBS	EPA 6020B	
Beryllium	<0.5	ug/L	08/13/2024	SKJACOBS	EPA 6020B	
Calcium	184	mg/L	08/13/2024	SKJACOBS	EPA 6020B	
Cadmium	<0.5	ug/L	08/13/2024	SKJACOBS	EPA 6020B	
Cobalt	2.4	ug/L	08/13/2024	SKJACOBS	EPA 6020B	
Chromium	<5.0	ug/L	08/13/2024	SKJACOBS	EPA 6020B	
Lead	<1.0	ug/L	08/13/2024	SKJACOBS	EPA 6020B	
Antimony	<5.0	ug/L	08/13/2024	SKJACOBS	EPA 6020B	
Selenium	<10.0	ug/L	08/13/2024	SKJACOBS	EPA 6020B	
Thallium	<1.0	ug/L	08/13/2024	SKJACOBS	EPA 6020B	
Boron	3640	ug/L	07/30/2024	SKJACOBS	EPA 6010D	
Lithium	<5.0	ug/L	07/30/2024	SKJACOBS	EPA 6010D	
Molybdenum	<5.0	ug/L	07/30/2024	SKJACOBS	EPA 6010D	
Mercury	<0.2	ug/L	08/01/2024	<b>EUROFINS SAV</b>	EPA 7470	
Fluoride	<0.1	mg/L	08/02/2024	GEL	EPA 300.0	
Chloride	223	mg/L	08/02/2024	GEL	EPA 300.0	
Sulfate	375	mg/L	08/02/2024	GEL	EPA 300.0	
Total Dissolved Solids	1068	mg/L	07/26/2024	KRMATHER	SM 2540C	
Radium 226	1.55	pCi/L	08/23/2024	GEL	EPA 903.1 Mod	
Radium 228	3.60	pCi/L	08/13/2024	GEL	EPA 904.0	
Radium 226/228 Combined Calculation	5.15	pCi/L	08/29/2024	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: 9/36/2



## SANTEE COOPER ANALYTICAL SERVICES

#### **CERTIFICATE OF ANALYSIS**

## LAB CERTIFICATION #08552

Sample # AG03740 Location: GW Well WAP-13

Date: 07/22/2024

Sample Collector: ZM/BM

Loc. Code WAP-13

Time: 14:20

Loc. Code WAF-15					
Analysis	Result	Units	Test Date	Analyst	Method
Arsenic	<5.0	ug/L	08/08/2024	SKJACOBS	EPA 6020B
Barium	252	ug/L	08/08/2024	SKJACOBS	EPA 6020B
Beryllium	<0.5	ug/L	08/09/2024	SKJACOBS	EPA 6020B
Calcium	391	mg/L	08/08/2024	SKJACOBS	EPA 6020B
Cadmium	<0.5	ug/L	08/08/2024	SKJACOBS	EPA 6020B
Cobalt	<0.5	ug/L	08/08/2024	SKJACOBS	EPA 6020B
Chromium	<5.0	ug/L	08/08/2024	SKJACOBS	EPA 6020B
Lead	<1.0	ug/L	08/08/2024	SKJACOBS	EPA 6020B
Antimony	<5.0	ug/L	08/08/2024	SKJACOBS	EPA 6020B
Selenium	<10.0	ug/L	08/09/2024	SKJACOBS	EPA 6020B
Thallium	<1.0	ug/L	08/08/2024	SKJACOBS	EPA 6020B
Boron	4460	ug/L	07/29/2024	SKJACOBS	EPA 6010D
Lithium	15.8	ug/L	07/29/2024	SKJACOBS	EPA 6010D
Molybdenum	<5.0	ug/L	07/29/2024	SKJACOBS	EPA 6010D
Mercury	<0.2	ug/L	08/01/2024	<b>EUROFINS SAV</b>	EPA 7470
Fluoride	0.13	mg/L	08/01/2024	GEL	EPA 300.0
Chloride	531	mg/L	08/02/2024	GEL	EPA 300.0
Sulfate	152	mg/L	08/02/2024	GEL	EPA 300.0
Total Dissolved Solids	2284	mg/L	07/24/2024	KRMATHER	SM 2540C
Radium 226	1.25	pCI/L	08/23/2024	GEL	EPA 903.1 Mod
Radium 228	1.14	pCi/L	08/13/2024	GEL	EPA 904.0
Radium 226/228 Combined Calculation	2.39	pCi/L	08/29/2024	SJLEVY	EPA 903.1 Mod
pH	6.47	SU	07/22/2024	ZM/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

Validation date:

Analysis Validated:



## SANTEE COOPER ANALYTICAL SERVICES

## **CERTIFICATE OF ANALYSIS**

## LAB CERTIFICATION #08552

Sample # AG03762 Location: GW Well WAP-28 Date: 07/22/2024 Sample Collector: ZM/BM

Loc. Code WAP-28 Time: 09:54

ECC. COde VV/II -20			Time: 09:54		
Analysis	Result	Units	Test Date	Analyst	Method
Arsenic	<5.0	ug/L	08/08/2024	SKJACOBS	EPA 6020B
Barium	143	ug/L	08/08/2024	SKJACOBS	EPA 6020B
Beryllium	<0.5	ug/L	08/09/2024	SKJACOBS	EPA 6020B
Calcium	78.7	mg/L	08/08/2024	SKJACOBS	EPA 6020B
Cadmium	<0.5	ug/L	08/08/2024	SKJACOBS	EPA 6020B
Cobalt	11.5	ug/L	08/08/2024	SKJACOBS	EPA 6020B
Chromium	<5.0	ug/L	08/08/2024	SKJACOBS	EPA 6020B
Lead	1.5	ug/L	08/08/2024	SKJACOBS	EPA 6020B
Antimony	<5.0	ug/L	08/08/2024	SKJACOBS	EPA 6020B
Selenium	<10.0	ug/L	08/09/2024	SKJACOBS	EPA 6020B
Thallium	<1.0	ug/L	08/08/2024	SKJACOBS	EPA 6020B
Boron	3000	ug/L	07/29/2024	SKJACOBS	EPA 6010D
Lithium	<5.0	ug/L	07/29/2024	SKJACOBS	EPA 6010D
Molybdenum	<5.0	ug/L	07/29/2024	SKJACOBS	EPA 6010D
Mercury	<0.2	ug/L	08/01/2024	<b>EUROFINS SAV</b>	EPA 7470
Fluoride	0.28	mg/L	08/01/2024	GEL	EPA 300.0
Chloride	232	mg/L	08/02/2024	GEL.	EPA 300.0
Sulfate	101	mg/L	08/02/2024	GEL	EPA 300.0
Total Dissolved Solids	801.2	mg/L	07/24/2024	KRMATHER	SM 2540C
Radium 226	2.03	pCi/L	08/23/2024	GEL	EPA 903.1 Mod
Radium 228	2.82	pCi/L	08/13/2024	GEL	EPA 904.0
Radium 226/228 Combined Calculation	4.85	pCi/L	08/29/2024	SJLEVY	EPA 903.1 Mod
pH	5.10	SU	07/22/2024	ZM/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: 9/30/24



## SANTEE COOPER ANALYTICAL SERVICES

## **CERTIFICATE OF ANALYSIS**

## LAB CERTIFICATION #08552

Time: 13:27

Sample # AG03763 Location: GW Well WAP-28R (Comparison Date: 07/22/2024 Sample Collector: ZM/BM

Loc. Code WAP-28R Well)

Analysis	Result	Units	Test Date	Analyst	Method
Arsenic	8.5	ug/L	08/08/2024	SKJACOBS	EPA 6020B
Barium	48.2	ug/L	08/08/2024	SKJACOBS	EPA 6020B
Beryllium	<0.5	ug/L	08/09/2024	SKJACOBS	EPA 6020B
Calcium	79.4	mg/L	08/08/2024	SKJACOBS	EPA 6020B
Cadmium	<0.5	ug/L	08/08/2024	SKJACOBS	EPA 6020B
Cobalt	4.0	ug/L	08/08/2024	SKJACOBS	EPA 6020B
Chromium	<5.0	ug/L	08/08/2024	SKJACOBS	EPA 6020B
Lead	<1.0	ug/L	08/08/2024	SKJACOBS	EPA 6020B
Antimony	<5.0	ug/L	08/08/2024	SKJACOBS	EPA 6020B
Selenium	<10.0	ug/L	08/09/2024	SKJACOBS	EPA 6020B
Thallium	<1.0	ug/L	08/08/2024	SKJACOBS	EPA 6020B
Boron	2700	ug/L	07/29/2024	SKJACOBS	EPA 6010D
Lithium	<5.0	ug/L	07/29/2024	SKJACOBS	EPA 6010D
Molybdenum	<5.0	ug/L	07/29/2024	SKJACOBS	EPA 6010D
Mercury	<0.2	ug/L	08/01/2024	<b>EUROFINS SAV</b>	EPA 7470
Fluoride	0.11	mg/L	08/01/2024	GEL	EPA 300.0
Chloride	67.6	mg/L	08/02/2024	GEL	EPA 300.0
Sulfate	50.9	mg/L	08/02/2024	GEL	EPA 300.0
Total Dissolved Solids	518.8	mg/L	07/24/2024	KRMATHER	SM 2540C
Radium 226	0.512	pCi/L	08/23/2024	GEL	EPA 903.1 Mod
Radium 228	1.44	pCi/L	08/13/2024	GEL	EPA 904.0
Radium 226/228 Combined Calculation	1.95	pCi/L	08/29/2024	SJLEVY	EPA 903.1 Mod
рН	6.11	SU	07/22/2024	ZM/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

Validation date:

Analysis Validated:

Linda Williams - Manager Analytical Services





a member of The GEL Group INC

2040 Savage Road | Charleston, SC 29407

gel.com

March 06, 2024

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

Re: ABS Lab Analytical Work Order: 654972

Dear Ms. Gilmetti:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on February 09, 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 for Julie Robinson Project Manager

Purchase Order: 125915/JM02.08.G01.3/36500

Enclosures



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

# Certificate of Analysis Report for

SOOP001 Santee Cooper

Client SDG: 654972 GEL Work Order: 654972

#### 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.

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

Certificate of Analysis

Project:

Client ID:

Report Date: March 6, 2024

(15%-125%)

SOOP00119

90.7

SOOP001

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: AF90605 Sample ID: 654972001

Matrix: GW

Collect Date: 07-FEB-24 10:07
Receive Date: 09-FEB-24
Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF Anal	yst Date	Time Batch	Method
Rad Gas Flow Proportional Counting											
GFPC, Ra228, Liquid "A	As Received"										
Radium-228	U	0.936	+/-0.907	1.49	3.00	pCi/L		JE1	02/23/24	1110 2568526	1
Rad Radium-226											
Lucas Cell, Ra226, Liqu	iid "As Recei	ved"									
Radium-226		2.11	+/-0.917	0.840	1.00	pCi/L		LXP1	03/05/24	0913 2571356	2
The following Analytical Methods were performed:											
Method	Description					F	Analys	st Comment	S		
1	EPA 904.0/SW	846 9320 1	Modified								

2 EPA	903.1 Modified				
Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits

#### **Notes:**

Barium-133 Tracer

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

GFPC, Ra228, Liquid "As Received"

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

Page 3 of 18 SDG: 654972

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

Certificate of Analysis

Project:

Client ID:

Report Date: March 6, 2024

SOOP00119

SOOP001

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: AF90606 Sample ID: 654972002

Matrix: GW

Collect Date: 07-FEB-24 10:12
Receive Date: 09-FEB-24
Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF Anal	yst Date	Time Batch	Method
Rad Gas Flow Proport	tional Counting	5									
GFPC, Ra228, Liquid	"As Received"	'									
Radium-228	U	0.147	+/-0.989	1.81	3.00	pCi/L		JE1	02/23/24	1110 2568526	1
Rad Radium-226											
Lucas Cell, Ra226, Li	quid "As Recei	ived"									
Radium-226		1.69	+/-0.674	0.577	1.00	pCi/L		LXP1	03/05/24	0913 2571356	2
The following Analyt	ical Methods w	vere perfo	ormed:								
Method	Description						Analy	st Comment	c		

MethodDescriptionAnalyst Comments1EPA 904.0/SW846 9320 Modified

EPA 903.1 Modified

Surrogate/Tracer Recovery Test Result Nominal Recovery% Acceptable Limits

Barium-133 Tracer GFPC, Ra228, Liquid "As Received"

85.8 (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

Page 4 of 18 SDG: 654972

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

Certificate of Analysis

Report Date: March 6, 2024

SOOP00119

SOOP001

Project:

Client ID:

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: AF90604 Sample ID: 654972003

Matrix: GW

Collect Date: 07-FEB-24 11:12
Receive Date: 09-FEB-24
Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF Anal	yst Date	Time Batch	Method
Rad Gas Flow Proportional Counting											
GFPC, Ra228, Liquid	"As Received"	•									
Radium-228		2.17	+/-0.887	1.13	3.00	pCi/L		JE1	02/23/24	1110 2568526	1
Rad Radium-226											
Lucas Cell, Ra226, Li	quid "As Recei	ived"									
Radium-226		2.13	+/-0.867	0.754	1.00	pCi/L		LXP1	03/05/24	0913 2571356	2
The following Analyt	The following Analytical Methods were performed:										
Method	Description						Analys	st Commen	ts		

Michiga	Description	7 maryst 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"

92.8 (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

Page 5 of 18 SDG: 654972

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

Certificate of Analysis

Project:

Client ID:

Report Date: March 6, 2024

SOOP00119

SOOP001

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: AF90596 Sample ID: 654972004

Matrix: GW

Collect Date: 06-FEB-24 10:25
Receive Date: 09-FEB-24
Collector: Client

1 Counting					Units	PF	Di Allai	st Date	Time Batch	Method
1 Counting										
Received"										
	1.51	+/-0.814	1.16	3.00	pCi/L		JE1	02/23/24	1110 2568526	1
"As Receiv	ed"									
	4.23	+/-1.22	0.752	1.00	pCi/L		LXP1	03/05/24	0913 2571356	2
The following Analytical Methods were performed:										
escription					1	Analys	t Comment	S		
1	Received" "As Receiv	Received" 1.51  "As Received" 4.23  Methods were perfo	Received" 1.51 +/-0.814  "As Received" 4.23 +/-1.22  Methods were performed:	Received"  1.51 +/-0.814 1.16  "As Received"  4.23 +/-1.22 0.752  Methods were performed:	Received"  1.51 +/-0.814 1.16 3.00  "As Received"  4.23 +/-1.22 0.752 1.00  Methods were performed:	Received"  1.51 +/-0.814 1.16 3.00 pCi/L  "As Received"  4.23 +/-1.22 0.752 1.00 pCi/L  Methods were performed:	Received"  1.51 +/-0.814 1.16 3.00 pCi/L  "As Received"  4.23 +/-1.22 0.752 1.00 pCi/L  Methods were performed:	Received"  1.51 +/-0.814 1.16 3.00 pCi/L JE1  "As Received"  4.23 +/-1.22 0.752 1.00 pCi/L LXP1  Methods were performed:	Received"  1.51 +/-0.814 1.16 3.00 pCi/L JE1 02/23/24  "As Received"  4.23 +/-1.22 0.752 1.00 pCi/L LXP1 03/05/24  Methods were performed:	Received"  1.51 +/-0.814 1.16 3.00 pCi/L JE1 02/23/24 1110 2568526  "As Received"  4.23 +/-1.22 0.752 1.00 pCi/L LXP1 03/05/24 0913 2571356  Methods were performed:

Memou	Description	Analyst Comments
1	EPA 904.0/SW846 9320 Modified	·
2	EDA 002 1 M- 4'C - 4	

EPA 903.1 Modified

Surrogate/Tracer Recovery Test Result Nominal Recovery% Acceptable Limits

Barium-133 Tracer GFPC, Ra228, Liquid "As Received"

92.2 (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

Page 6 of 18 SDG: 654972

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

Certificate of Analysis

Report Date: March 6, 2024

SOOP00119

SOOP001

Project:

Client ID:

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: AF90597 Sample ID: 654972005

Matrix: GW

Collect Date: 06-FEB-24 11:19
Receive Date: 09-FEB-24
Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF Analy	st Date	Time Batch	Method
Rad Gas Flow Proportional Counting											
GFPC, Ra228, Liquid	"As Received"										
Radium-228		3.16	+/-1.37	2.00	3.00	pCi/L		JE1	02/23/24	1111 2568526	1
Rad Radium-226											
Lucas Cell, Ra226, Lio	quid "As Recei	ved"									
Radium-226		4.72	+/-1.18	0.676	1.00	pCi/L		LXP1	03/05/24	0948 2571356	2
The following Analyti	The following Analytical Methods were performed:										
Method	Description						Analys	t Comment	S		

Michiga	Description	maryst Comments
1	EPA 904.0/SW846 9320 Modified	<u>-</u>
2	EPA 903.1 Modified	

Surrogate/Tracer Recovery Test Result Nominal Recovery% Acceptable Limits

Barium-133 Tracer GFPC, Ra228, Liquid "As Received"

90.6 (15%-125%)

#### **Notes:**

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

Column headers are defined as follows:

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

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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

Certificate of Analysis

Project:

Client ID:

Report Date: March 6, 2024

SOOP00119

SOOP001

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: AF90599 Sample ID: 654972006

Matrix: GW

Collect Date: 06-FEB-24 12:45
Receive Date: 09-FEB-24
Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF Anal	yst Date	Time Batch	Method
Rad Gas Flow Proportion	onal Counting	;									
GFPC, Ra228, Liquid ".	As Received"										
Radium-228	U	0.0789	+/-1.34	2.47	3.00	pCi/L		JE1	02/23/24	1225 2568526	1
Rad Radium-226											
Lucas Cell, Ra226, Liqu	uid "As Recei	ved"									
Radium-226	$\mathbf{U}$	0.470	+/-0.485	0.761	1.00	pCi/L		LXP1	03/05/24	0948 2571356	2
The following Analytic	al Methods w	ere perfo	rmed:								

MethodDescriptionAnalyst Comments1EPA 904.0/SW846 9320 Modified

EPA 903.1 Modified

Surrogate/Tracer Recovery Test Result Nominal Recovery% Acceptable Limits

Barium-133 Tracer GFPC, Ra228, Liquid "As Received"

88.6 (15%-125%)

#### **Notes:**

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

Column headers are defined as follows:

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

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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

Certificate of Analysis

Project:

Client ID:

Report Date: March 6, 2024

SOOP00119

SOOP001

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: AF90602 Sample ID: 654972007

Matrix: GW

Collect Date: 06-FEB-24 09:24
Receive Date: 09-FEB-24
Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF Anal	yst Date	Time Batch	Method
Rad Gas Flow Prop	ortional Counting	5									
GFPC, Ra228, Liqu	id "As Received"	1									
Radium-228	U	-0.0579	+/-0.881	1.66	3.00	pCi/L		JE1	02/23/24	1111 2568526	1
Rad Radium-226											
Lucas Cell, Ra226,	Liquid "As Recei	ved"									
Radium-226		1.30	+/-0.721	0.811	1.00	pCi/L		LXP1	03/05/24	0948 2571356	2
The following Ana	lytical Methods w	ere perfo	ormed:								
Method	Description						Analys	st Commen	ts		
	•		Jilleu.				Analys	st Commen	ts		

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

EPA 903.1 Modified

Surrogate/Tracer Recovery Test Result Nominal Recovery% Acceptable Limits

Barium-133 Tracer GFPC, Ra228, Liquid "As Received"

92.1 (15%-125%)

#### **Notes:**

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

Column headers are defined as follows:

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

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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

Certificate of Analysis

Project:

Client ID:

Report Date: March 6, 2024

SOOP00119

SOOP001

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: AF90634 Sample ID: 654972008

Matrix: GW

Collect Date: 06-FEB-24 14:12
Receive Date: 09-FEB-24
Collector: Client

Parameter **Oualifier** Result Uncertainty **MDC** RLUnits PF DF Analyst Date Time Batch Method Rad Gas Flow Proportional Counting GFPC, Ra228, Liquid "As Received" Radium-228 2.16 +/-0.8841.10 3.00 pCi/L JE1 02/23/24 1111 2568526 1 Rad Radium-226 Lucas Cell, Ra226, Liquid "As Received" Radium-226 0.0320 +/-0.140 0.374 1.00 pCi/L LXP1 03/05/24 0948 2571356 The following Analytical Methods were performed:

MethodDescriptionAnalyst Comments1EPA 904.0/SW846 9320 Modified

EPA 903.1 Modified

Surrogate/Tracer Recovery Test Result Nominal Recovery% Acceptable Limits

Barium-133 Tracer GFPC, Ra228, Liquid "As Received"

89.5 (15%-125%)

#### **Notes:**

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

Column headers are defined as follows:

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

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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

Certificate of Analysis

Report Date: March 6, 2024

SOOP00119

90.3

(15%-125%)

SOOP001

Project:

Client ID:

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: AF90595 Sample ID: 654972009

Matrix: GW

Collect Date: 05-FEB-24 14:35
Receive Date: 09-FEB-24
Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF Anal	yst Date	Time Batch	Method
Rad Gas Flow Propor	tional Counting	,									
GFPC, Ra228, Liquid	"As Received"	1									
Radium-228	U	0.185	+/-0.587	1.09	3.00	pCi/L		JE1	02/23/24	1111 2568526	1
Rad Radium-226											
Lucas Cell, Ra226, Li	quid "As Recei	ved"									
Radium-226		2.03	+/-0.764	0.653	1.00	pCi/L		LXP1	03/05/24	0948 2571356	2
The following Analyt	tical Methods w	ere perfo	ormed:								
Method	Description						Analys	st Commen	ts		

Surrogate/Tracer Recov	ery Test	Result	Nominal	Recovery%	Acceptable Limits
2	EPA 903.1 Modified				
1	EPA 904.0/SW846 9320 Modified				

#### **Notes:**

Barium-133 Tracer

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

GFPC, Ra228, Liquid "As Received"

Column headers are defined as follows:

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

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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

**QC** Summary

Report Date: March 6, 2024

Santee Cooper P.O. Box 2946101

OCO3

**Moncks Corner, South Carolina** 

**Contact:** Ms. Jeanette Gilmetti

Workorder: 654972

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range A	nlst	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			$\mathbf{U}$	0.536	pCi/L					02/23/24 11:11
	Uncertainty			+/-0.599						
Rad Ra-226										
Batch 2571356 —										
QC1205655691 654972001 DUP					G. 75			(00)		0.
Radium-226	**	2.11		1.74	pCi/L	19.2		(0% - 100%)	LXP1	03/05/24 10:05
	Uncertainty	+/-0.917		+/-0.865						
QC1205655693 LCS										
Radium-226	26.4			31.4	pCi/L		119	(75%-125%)		03/05/24 10:05
	Uncertainty			+/-3.08						
QC1205655690 MB										
Radium-226			U	0.318	pCi/L					03/05/24 10:05
	Uncertainty			+/-0.318						
QC1205655692 654972001 MS										
Radium-226	137	2.11		130	pCi/L		93.5	(75%-125%)		03/05/24 10:05
	Uncertainty	+/-0.917		+/-13.6						

#### **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

Page 12 of 18 SDG: 654972

Page 1 of 2

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

## **QC** Summary

Workorder: 654972

Page 2 of 2

Page 2 of 2

NOM Sample Qual OC Units RPD% REC% Range And Date Time

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.

Page 13 of 18 SDG: 654972

## Radiochemistry Technical Case Narrative Santee Cooper SDG #: 654972

Product: GFPC, Ra228, Liquid

<u>Analytical Method:</u> EPA 904.0/SW846 9320 Modified <u>Analytical Procedure:</u> GL-RAD-A-063 REV# 5

**Analytical Batch:** 2568526

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

<b>GEL Sample ID#</b>	<b>Client Sample Identification</b>
654972001	AF90605
654972002	AF90606
654972003	AF90604
654972004	AF90596
654972005	AF90597
654972006	AF90599
654972007	AF90602
654972008	AF90634
654972009	AF90595
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:**

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

#### **Preparation Information**

#### **Homogenous Matrix**

Sample 654972003 (AF90604) was non-homogenous matrix. yellow liquid 654972003 (AF90604).

## **Technical Information**

#### Recounts

Sample 654972006 (AF90599) was recounted due to a suspected false positive. The recount is reported.

<u>Product:</u> Lucas Cell, Ra226, Liquid <u>Analytical Method:</u> EPA 903.1 Modified

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

**Analytical Batch: 2571356** 

Page 14 of 18 SDG: 654972

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

GEL Sample ID#	Client Sample Identification
654972001	AF90605
654972002	AF90606
654972003	AF90604
654972004	AF90596
654972005	AF90597
654972006	AF90599
654972007	AF90602
654972008	AF90634
654972009	AF90595
1205655690	Method Blank (MB)
1205655691	654972001(AF90605) Sample Duplicate (DUP)
1205655692	654972001(AF90605) Matrix Spike (MS)
1205655693	Laboratory Control Sample (LCS)

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

## **Data Summary:**

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

## **Preparation Information**

## **Aliquot Reduced**

1205655691 (AF90605DUP), 1205655692 (AF90605MS) and 654972001 (AF90605) Aliquots were reduced due to limited 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.

Page 15 of 18 SDG: 654972

Contract Lab Due Date (Lab Only):

Contract Lab Info:

 $\textit{Send report to } \underline{\textit{lcwillia@santeecooper.com}} \& \underline{\textit{sherri.levy@santeecooper.com}} \\$ 

## **Chain of Custody**



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

Customer Email/Report Recipient:			Date R	esults Ne	у:	Project/Task/Unit #:					Rerun request for any flagged Q					
LINDA. WILLIA	-MS_@santeed	cooper.com					125	915	MT_L	62.0	8. GU1.3	1_369	500 (Yes	No		
														A	nalysis	Group
Labworks ID # (Internal use only)	Sample Location Description	on/	Collection Date	Collection Time	Sample Collector	Total # of containers	Bottle type: (Glass-G/Plastic-P)	Grab (G) or Composite (C)	Matrix(see below)	Preservative (see	Metl     Repe     Misc     Any	Combod # orting limes, sample other not	info	KAD 226	RAD 228	
AF90665	WAP-10		2/7/24	1067	WJK	2	P	G	G-W	2				1	1	
06	WAP-10 D	uP		1012	-											
1 04	WAP-9		1	1112	1	1	1	1		1						
AF 90596	WAP-2		2/6/24	1025	MJK											
97	WAP-2R			1119												
1 99	WAP-4			1245	1	Ī	Ī	1		7						
AF90602	WAP-7			6924			Ш									
1 34	WBW-1	ě	]	1412	1	Ī		1	1							
AF90595	WAP-1		2/5/24	1435	WJK	1	1	1		1		,			]	
Relinquished by:	Employee#	Date	Time	Receiv	ed by:	E	mployee	#	Date		Time	Sampl	e Receiving (Internal P (°C):	Use On	ly)	
Shevy	35594	2/9/24	Dis	D	1		GEL		2/9/2	24	095 <sub>1</sub>	and the state of			-	
Relinquished by:	Employee#	Date	Time	Receiv	ed by:	E	mployee	#	Date		Time	Corre	ct pH: Yes No			
Relinquished by:	Employee#	3-9, 24 Date	1550 (		ed by:		mployee		2 /9/2 Date	24	/550 Time	Prese	rvative Lot#:			
	PTALE (all )	\$200 P										Date/	Time/Init for preserv	ative:		
	ETALS (all)	Sin Like	rients	MIS	SC.		Servenson.	psur	<u>n</u>		Coal		<u>Flyash</u>		Oil	
	WHEN PERSON NAMED IN COLUMN TWO PERSONS AND ADDRESS.			☐ BTEX ☐ Naphtha	lene		Wallbo	oard sum(a	ıll		Ultimate   Moist	ure	☐ Ammonia ☐ LOI		ns. Oil Moist	
□ As □ K	□ Sn	□ TP/	TPO4	□ THM/H/ □ VOC			belo	w)			□ Ash		☐ % Carbon	O C	olor	
□B □Li	Called Baseline	□ NH:	3-IN	□ Oil & Gi	rease		□ Al				□ Sulfur □ BTUs		☐ Mineral	□ Di		Strength
□ Ba □ M	THE PARTY OF THE P			☐ E. Coli ☐ Total Co	liform			tal metal			□ Volatile	Matter	Analysis  ☐ Sieve	DI		d Gases
□ Be □ M	图写是 AL 是保持的是主体	□ NO2	2	□ pH □ Dissolve			□ Pui	rity (Ca	SO4)	0	CHN Cher Tests:		☐ % Moisture	□ Use	d Oil	
□ Ca □ M	PARTY MERSTALLER	□ NO:	3	☐ Dissolve	d Fe		□ %	Moistu lfites	re		XRF Scan		NPDES	□ M	lashpoi letals ii	oil
□ Cd □ Na	2000年1月1日1日1日	□ SO4		☐ Rad 226 ☐ Rad 228			□pH□Ch	lorides		1000000	HGI Fineness		□ Oil & Grease		As,Cd,( lg)	Cr,Ni,Pb
□ Co □ Ni □ Cr □ Pt		MANUAL PROPERTY.	CONTRACTOR OF THE PARTY OF THE	□ PCB			□ Par	ticle Si			Particulate Ma	ntter	□ As □ TSS	□T	x	
□ Cr □ Pt	J LIVI	NOTE:					Sulfur							m 60	FER	

	Laboratories LLC	SAMPLE RECEIPT & REVIEW FORM
	Client: SOO!	SDG/AR/COC/Viork Order: 1054077
	Ranalyad Ry. CLM	Da Received: 2 9124
		· Grata Anniach (s.
		Fedex Express Fedex Ground UPS Field Services Courier Other (50)er 1 - 19° (RCHEM) (50) + 1 - 19°
	Carrier and Tracking Number	Cooler 1-19° (RCHEM) Cooler 3-4°
		Coolers-3. Cooler4-00
	Suspected Hazard Information	*If Net Counts > 1000pttt on samples not marked "radiosinited", equisant the Radiation Safety Group for farther investigation.
	A)Saipped as a DOT Hazardous?	Hazard Class Shipped:  LT UN2910, Is the Radioactive Shipment Survey Compliant? YesNo
	Did the pilant designate the samples are to be readined as radiocative?	COC betting of an expression and a continue state of the continue
	C) Did the RSO classify the samples as radioactive?	Maximum Net Counts Observed.* (Coserved Counts - Area Background Counts): CPM/mR/Hr Classified as: Rad 1 Rad 2 Rad 3
1	D) Did the client designate samples are hazardous?	
	E) Did the RSO identify possible bezerds?	it U of D is yes, select Hazards below.  PCB's Flaturable Foreign Soil RCRA Aspessos Bandling Other
Ī.	Sample Receipt Criteria   💆 💆	Comments/Qualifiers (Required for Non-Conforming Items)
	Shipping containers received intest and scaled?	Circle Applicable: Seals broken Damaged cominer Leaking consider Other (describe)
	2 Chain of oustedy 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 apprendicated in Calsius Temperature Device Serial & 198-23 COOLETS
	Daily check performed and passed on R temperature gun?	Temperature Device Serial #: IR8-23 Secondary Temperature Device Serial # (Tf Applicable):
	5 Sample containers intact and sealed?	Circle Applicables Social broken Demaged container Leaking container Other (describe).
	6 Samples requiring chemical preservation	Sample D's and Comminers Affected:  ### Preservation biddled, Look
1		If Yas, are Eurores of Soil Kits present for solids? Yas No NA Gi was take to VOA Entrad
7	Do any samples require Voletile Analysis?	Do liquid VOA visis contain anid preservation? Yes IV No NA (Li unknown, select No)  Are liquid VOA visis fiee of headspone? Yes No NA (NA VIA VI
		Sample D's and continers effected:
8	Samples received within holding time?	Till's and tasts affacted:
9	Sample D's on COC match D's on bordes?	ID's and containers affected:
10	Date & time on COC match date & time on bottles?	Circle Applicable: No casa's pocoporainers: No circles on containers—COC missing into Other (describe) Times and different on sample ID's: AF91624-62
11		Circle Applicable: No container gount on CCC   Ciber (describe)
.12	Are sample conteiners identifiable as GEL provided by use of GEL labels?	
13	LCOC form is properly signed in	Circle Applicable: Not relinquished Other (describe)
2	arments (Use Continuation Form if needed):	050122 00 00011- 401/BC
		AF91632 compared to the COC.
	* 654978 + 65L	1976
	PM (or PMA) review Initia	ds

GL-CHL-SR-C01. Rev 7

List of current GEL Certifications as of 06 March 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 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
·· asimigron	2.00





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gel.com

March 13, 2024

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

Re: ABS Lab Analytical Work Order: 655804

Dear Ms. Gilmetti:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on February 16, 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



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

## Certificate of Analysis Report for

SOOP001 Santee Cooper

Client SDG: 655804 GEL Work Order: 655804

#### 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 \_\_\_\_\_

Page 2 of 18 SDG: 655804

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

Certificate of Analysis

Project:

Client ID:

Report Date: March 13, 2024

SOOP00119

82.3

(15%-125%)

SOOP001

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: AF90624 Sample ID: 655804001

Matrix: GW

Collect Date: 12-FEB-24 11:47
Receive Date: 16-FEB-24
Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF Anal	yst Date	Time Batch	Method
Rad Gas Flow Proport	tional Counting	5									
GFPC, Ra228, Liquid	"As Received"	1									
Radium-228	U	-0.535	+/-0.788	1.64	3.00	pCi/L		JE1	03/08/24	1059 2572465	1
Rad Radium-226											
Lucas Cell, Ra226, Li	quid "As Recei	ved"									
Radium-226		1.35	+/-0.542	0.322	1.00	pCi/L		MJ2	03/13/24	0826 2571365	2
The following Analyt	ical Methods w	ere perfe	ormed:								
Method	Description		Analyst Comments								
1	EDA 004 0/SW	1946 0220	Modified								

1	EPA 904.0/8 w 846 9320 Modified				
2	EPA 903.1 Modified				
Surrogate/Tracer Recove	ery Test	Result	Nominal	Recovery%	Acceptable Limits

## Barium-133 Tracer **Notes:**

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

GFPC, Ra228, Liquid "As Received"

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

Page 3 of 18 SDG: 655804

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

Certificate of Analysis

Report Date: March 13, 2024

SOOP00119

81.9

(15%-125%)

SOOP001

Project:

Client ID:

Company: Santee Cooper Address: P.O. Box 2946101

OCO3

Moncks Corner, South Carolina 29461

Contact: Ms. Jeanette Gilmetti ABS Lab Analytical Project:

Client Sample ID: AF90608 Sample ID: 655804002

Matrix: GW

Collect Date: 14-FEB-24 14:04 Receive Date: 16-FEB-24 Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF Anal	yst Date	Time Batch	Method
Rad Gas Flow Propor	tional Counting	;									
GFPC, Ra228, Liquid	"As Received"	1									
Radium-228	U	1.32	+/-0.890	1.35	3.00	pCi/L		JE1	03/08/24	1100 2572465	1
Rad Radium-226											
Lucas Cell, Ra226, Li	quid "As Recei	ved"									
Radium-226		0.578	+/-0.333	0.340	1.00	pCi/L		MJ2	03/13/24	0826 2571365	2
The following Analy	tical Methods w	vere perfo	ormed:								
Method	Description						Analy	st Commen	ts		
1	EPA 904.0/SW	V846 9320	Modified				_				

1	EFA 904.0/3 w 846 9320 Wodffled				
2	EPA 903.1 Modified				
Surrogate/Tracer Recove	very Test	Result	Nominal	Recovery%	Acceptable Limits

#### Barium-133 Tracer GFPC, Ra228, Liquid "As Received"

**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

Page 4 of 18 SDG: 655804

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

Certificate of Analysis

Project:

Client ID:

Report Date: March 13, 2024

SOOP00119

SOOP001

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: AF90609 Sample ID: 655804003

Matrix: GW

Collect Date: 14-FEB-24 14:09 Receive Date: 16-FEB-24 Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF Anal	yst Date	Time Batch	Method
Rad Gas Flow Propos	rtional Counting	;									
GFPC, Ra228, Liquio	d "As Received"	1									
Radium-228	U	1.10	+/-1.01	1.63	3.00	pCi/L		JE1	03/08/24	1100 2572465	1
Rad Radium-226											
Lucas Cell, Ra226, L	iquid "As Recei	ved"									
Radium-226	U	0.320	+/-0.323	0.506	1.00	pCi/L		MJ2	03/13/24	0826 2571365	2
The following Analy	rtical Methods w	vere perfo	ormed:								
Method	Description						Analys	st Commen	ts		

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" (15%-125%) 64.3

#### **Notes:**

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

Column headers are defined as follows:

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

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

Page 5 of 18 SDG: 655804

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

Certificate of Analysis

Project:

Client ID:

Report Date: March 13, 2024

SOOP00119

SOOP001

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: AF90642 Sample ID: 655804004

Matrix: GW

Collect Date: 13-FEB-24 11:35
Receive Date: 16-FEB-24
Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF Anal	yst Date	Time Batch	Method
Rad Gas Flow Proportion	nal Counting										
GFPC, Ra228, Liquid "A	As Received"										
Radium-228	U	1.83	+/-1.29	2.03	3.00	pCi/L		JE1	03/12/24	1000 2572465	1
Rad Radium-226											
Lucas Cell, Ra226, Liqu	iid "As Recei	ved"									
Radium-226		1.03	+/-0.460	0.429	1.00	pCi/L		MJ2	03/13/24	0826 2571365	2
The following Analytic	al Methods w	ere perfo	ormed:								
Method	Description					1	Analy	st Commen	ts		
1	EPA 904.0/SW	846 9320 1	Modified				_				

2 EPA	903.1 Modified				
Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			71.8	(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

Page 6 of 18 SDG: 655804

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

Certificate of Analysis

Project:

Client ID:

Report Date: March 13, 2024

SOOP00119

SOOP001

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: AF90643 Sample ID: 655804005

Matrix: GW

Collect Date: 13-FEB-24 12:41
Receive Date: 16-FEB-24
Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF Analy	st Date	Time Batch	Method
Rad Gas Flow Proportion	onal Counting										
GFPC, Ra228, Liquid "	As Received"										
Radium-228		4.91	+/-1.51	1.89	3.00	pCi/L		JE1	03/12/24	1000 2572465	1
Rad Radium-226											
Lucas Cell, Ra226, Liqu	uid "As Recei	ved"									
Radium-226	U	0.0278	+/-0.261	0.585	1.00	pCi/L		MJ2	03/13/24	0826 2571365	2
The following Analytic	al Methods w	ere perfo	ormed:								
Method	Description						Analys	st Comments	S		

~	-	_	_	_	_		_	,		
2			EPA 903.1 Modified							
1			EPA 904.0/SW846 9320 Modified							

Surrogate/Tracer Recovery Test Result Nominal Recovery% Acceptable Limits

Barium-133 Tracer GFPC, Ra228, Liquid "As Received"

72.6 (15%-125%)

#### **Notes:**

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

Column headers are defined as follows:

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

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

Page 7 of 18 SDG: 655804

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

Certificate of Analysis

Report Date: March 13, 2024

SOOP00119

SOOP001

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: AF90618 Sample ID: 655804006

Matrix: GW

Collect Date: 13-FEB-24 13:48 Receive Date: 16-FEB-24 Collector: Client

Project:

Client ID:

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF Anal	yst Date	Time Batch	Method
Rad Gas Flow Proporti	onal Counting	,									
GFPC, Ra228, Liquid '	'As Received"	1									
Radium-228	U	1.29	+/-1.11	1.79	3.00	pCi/L		JE1	03/08/24	1100 2572465	1
Rad Radium-226											
Lucas Cell, Ra226, Liq	uid "As Recei	ved"									
Radium-226		0.899	+/-0.461	0.395	1.00	pCi/L		MJ2	03/13/24	0826 2571365	2
The following Analyti	cal Methods w	ere perfo	ormed:								
Method	Description						Analys	st Commen	ts		
1	EDA 904 0/SW	7846 0320 1	Modified								

EPA 904.0/SW846 9320 Modified

EPA 903.1 Modified

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

#### **Notes:**

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

Column headers are defined as follows:

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

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

Page 8 of 18 SDG: 655804

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

Certificate of Analysis

Project:

Client ID:

Report Date: March 13, 2024

SOOP00119

85.8

(15%-125%)

SOOP001

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: AF90619 Sample ID: 655804007

Matrix: GW

Collect Date: 13-FEB-24 13:53
Receive Date: 16-FEB-24
Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF Anal	yst Date	Time Batch	Method
Rad Gas Flow Proportion	onal Counting										
GFPC, Ra228, Liquid "	As Received"										
Radium-228	U	0.681	+/-0.716	1.18	3.00	pCi/L		JE1	03/08/24	1100 2572465	1
Rad Radium-226											
Lucas Cell, Ra226, Liqu	uid "As Recei	ved"									
Radium-226		0.878	+/-0.468	0.450	1.00	pCi/L		MJ2	03/13/24	0902 2571365	2
The following Analytic	al Methods w	ere perfo	ormed:								
Method	Description					1	Analys	st Comment	S		
1	EPA 904.0/SW	846 9320 1	Modified								

2 EPA	903.1 Modified				
Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits

#### **Notes:**

Barium-133 Tracer

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

GFPC, Ra228, Liquid "As Received"

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

Page 9 of 18 SDG: 655804

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Certificate of Analysis

Project:

Client ID:

Report Date: March 13, 2024

SOOP00119

SOOP001

Company: Santee Cooper Address: P.O. Box 2946101

OCO3

Moncks Corner, South Carolina 29461

Contact: Ms. Jeanette Gilmetti ABS Lab Analytical Project:

Client Sample ID: AF90598 Sample ID: 655804008

Matrix: GW

Collect Date: 08-FEB-24 14:39 Receive Date: 16-FEB-24 Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF Analy	st Date	Time Batch	Method
Rad Gas Flow Proportion	onal Counting										
GFPC, Ra228, Liquid "	As Received"										
Radium-228		1.44	+/-0.813	1.17	3.00	pCi/L		JE1	03/08/24	1100 2572465	1
Rad Radium-226											
Lucas Cell, Ra226, Liqu	uid "As Recei	ved"									
Radium-226		0.879	+/-0.454	0.471	1.00	pCi/L		MJ2	03/13/24	0902 2571365	2
The following Analytic	al Methods w	ere perfo	ormed:								
Method	Description						Analy	st Comment	S		
1	EPA 904.0/SW	7846 93 <mark>2</mark> 0 1	Modified								
2	EPA 903.1 Mo	dified									

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			90.8	(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

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

Certificate of Analysis

Project:

Client ID:

Report Date: March 13, 2024

SOOP00119

SOOP001

Company: Santee Cooper Address: P.O. Box 2946101

OCO3

Moncks Corner, South Carolina 29461

Contact: Ms. Jeanette Gilmetti ABS Lab Analytical Project:

Client Sample ID: AF90637 Sample ID: 655804009

Matrix: GW

Collect Date: 08-FEB-24 13:20 Receive Date: 16-FEB-24 Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF Analy	st Date	Time Batch	Method
Rad Gas Flow Proportion	nal Counting										
GFPC, Ra228, Liquid "A	As Received"										
Radium-228		1.26	+/-0.783	1.14	3.00	pCi/L		JE1	03/08/24	1100 2572465	1
Rad Radium-226											
Lucas Cell, Ra226, Liqu	iid "As Recei	ved"									
Radium-226		2.02	+/-0.672	0.333	1.00	pCi/L		MJ2	03/13/24	0902 2571365	2
The following Analytic	al Methods w	ere perfo	ormed:								
Method	Description						Analys	st Comment	S		

1	EPA 904.0/SW846 9320 Modified				
2	EPA 903.1 Modified				
Surrogate/Tracer Recove	erv Test	Result	Nominal	Recoverv%	Acceptable Limits

GFPC, Ra228, Liquid "As Received" Barium-133 Tracer 86.9 (15%-125%)

#### **Notes:**

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

Column headers are defined as follows:

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

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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

**QC** Summary

Report Date: March 13, 2024

Santee Cooper P.O. Box 2946101

OCO3

**Moncks Corner, South Carolina** 

**Contact:** Ms. Jeanette Gilmetti

Workorder: 655804

Parmname		NOM	Sample	Qual	QC	Units	RPD%	REC%	Range A	nlst	Date Time
Rad Gas Flow Batch 2572465											
QC1205657933 65580 Radium-228	04001 DUP	U Uncertainty	-0.535 +/-0.788	U	0.00679 +/-0.454	pCi/L	N/A		N/A	JE1	03/08/24 11:00
QC1205657934 LC Radium-228	'S	73.0 Uncertainty			63.6 +/-3.85	pCi/L		87.1	(75%-125%)		03/08/24 11:00
QC1205657932 ME Radium-228	3	Uncertainty		U	1.35 +/-1.28	pCi/L					03/08/24 12:18
Rad Ra-226 Batch 2571365											
QC1205655728 65580 Radium-226	02001 DUP	Uncertainty	1.47 +/-0.594		1.29 +/-0.569	pCi/L	12.8		(0% - 100%)	MJ2	03/13/24 09:02
QC1205655730 LC Radium-226	es	26.9 Uncertainty			25.2 +/-2.32	pCi/L		93.7	(75%-125%)		03/13/24 09:02
QC1205655727 ME Radium-226	3	Uncertainty		U	0.112 +/-0.191	pCi/L					03/13/24 09:02
QC1205655729 65586 Radium-226	02001 MS	135 Uncertainty	1.47 +/-0.594		110 +/-9.77	pCi/L		80.5	(75%-125%)		03/13/24 09:02

#### **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

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Page 1 of 2

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## **QC** Summary

Workorder: 655804

Parmname

NOM Sample Qual QC Units RPD% REC% Range AnIst Date Time

>	Result is	orester 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 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.

Page 13 of 18 SDG: 655804

## Radiochemistry Technical Case Narrative Santee Cooper SDG #: 655804

Product: GFPC, Ra228, Liquid

<u>Analytical Method:</u> EPA 904.0/SW846 9320 Modified <u>Analytical Procedure:</u> GL-RAD-A-063 REV# 5

**Analytical Batch:** 2572465

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

<b>GEL Sample ID#</b>	<b>Client Sample Identification</b>
655804001	AF90624
655804002	AF90608
655804003	AF90609
655804004	AF90642
655804005	AF90643
655804006	AF90618
655804007	AF90619
655804008	AF90598
655804009	AF90637
1205657932	Method Blank (MB)
1205657933	655804001(AF90624) Sample Duplicate (DUP)
1205657934	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 1205657932 (MB) was recounted due to a suspected blank false positive. The recount is reported. Samples 655804004 (AF90642) and 655804005 (AF90643) were re-eluted and recounted to verify sample results. The recounts are reported.

<u>Product:</u> Lucas Cell, Ra226, Liquid <u>Analytical Method:</u> EPA 903.1 Modified

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

**Analytical Batch:** 2571365

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

GEL Sample ID#	Client Sample Identification
655804001	AF90624
655804002	AF90608

Page 14 of 18 SDG: 655804

655804003	AF90609
655804004	AF90642
655804005	AF90643
655804006	AF90618
655804007	AF90619
655804008	AF90598
655804009	AF90637
1205655727	Method Blank (MB)
1205655728	655802001(AF90636) Sample Duplicate (DUP)
1205655729	655802001(AF90636) Matrix Spike (MS)
1205655730	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, 1205655729 (AF90636MS), 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.

Page 15 of 18 SDG: 655804

Contract Lab Info:

\_ Contract Lab Due Date (Lab Only):\_



Send report to <a href="mailto:lcwillia@santeecooper.com">lcwillia@santeecooper.com</a> & <a href="mailto:sherri.levy@santeecooper.com">sherri.levy@santeecooper.com</a> & <a href="mai

# **Chain of Custody**



Santee Cooper One Riverwood Drive Moneks 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. V	VILLA	™S_@santeec	ooper.com		/			125	915	J_JM	102.0	9.601.11 365	Sec Yes	No		
														A	nalysi	Group
Labworks (Internal only)		Sample Locatio Description	n/	Collection Date	Collection Time	Sample Collector	Total # of containers	Bottle type: (Glass-G/Plastic-P)	Grab (G) or Composite (C)	Matrix(see below)	Preservative (see	Con Method # Reporting lin Misc. sample Any other no	e info	RAD 226	RAD 228	
AF 906	24	WAP-22		2/12/24	1147	WJK BM	2	P	G	GW	2			×	×	
AF906	80	WAP-12		2/14/24	1464	1		1	1	1	1				1	
AF906	.09	WAP-12 DU	IP.	L	1469		1									
AF 906	42	WLF-A2-1		2/13/24	1135											
1	43	WLF-A2-2		1	1241											
	18	WAP-17			1348											
1	19	WAP-17 DU	P		1353	1	_	1								
AF905	98	WAP-3		2/8/24	1439	1							**			
AF906	37	WLF-A1-2		2/8/24	1320	1	1	1		1	1			1	Ī	
Relinqu	ished by:	Employee#	Date  2/16/24  Date  2-/is- A- Date	Time 0 9 75 Time	Received	ved by:	E	mployee mployee SEL mployee	:# 2	Date  2/16/ Date  /// Date  Date	124	Time Corr Time Presc	le Receiving (Internal P (°C): ect pH: Yes No ervative Lot#:  /Time/Init for presen	Initia		
□ Ag		ETALS (all )  Sb  Se	Nutr	C	MI: □ BTEX □ Naphtha	lene		Wallbe	psur			Coal Ultimate  Moisture	Flyash  Ammonia  Trans. Oil Qual.  SMoisture			
□ As	□ K □ Li	是,是"是一种"的一种"是一种"。	□ TP/	ГРО4	☐ THM/H☐ VOC☐ Oil & G	AA		belo A BTO	iw) IM			☐ Ash ☐ Sulfur	□ LOI □ % Carbon □ Mineral		Color Acidity	
□ Ba	□ M			2	□ E. Coli	E. Coli Cotal Coliform		□ To □ So	tal meta luble M rity (Ca	letals		□ BTUs □ Volatile Matter □ CHN	Analysis  ☐ Sieve ☐ % Moisture	01	FT	ed Gases
□ Ca	□ M		□ Br		□ Dissolve			□%	Moistur			ther Tests:		OF	lashpo	oint
□ Cd	□ Na				☐ Dissolve			□pH			0	XRF Scan HGI	NPDES  □ Oil & Grease			in oil ,Cr,Ni,Pb
□Со	□ Ni				□ Rad 228 □ PCB			□ Pa	lorides rticle Si			Fineness Particulate Matter	□ As □ TSS	01		
□ Cr	□Pb	□ CrVI						□ Sulfur					C 133	11 C.C.	FER	

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM Client: SOOP SDG/AR/COC/Work Order: Received By: QG Date Received: 2 Circle Applicable: FedEx Express FedEx Ground UPS Field Services Carrier and Tracking Number Yes \*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation. Suspected Hazard Information ŝ zard Class Shipped: If UN2910, Is the Radioactive Shipment Survey Compliant? Yes\_ A)Shipped as a DOT Hazardous? B) Did the client designate the samples are to be received as radioactive? Maximum Net Counts Observed\* (Observed Counts - Area Background Counts); \_\_ C) Did the RSO classify the samples as Classified as: Rad I Rad 2 Rad 3 radioactive? eration or hazard lakels on containers equal client design D) Did the client designate samples are hazardous? If D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium E) Did the RSO identify possible hazards? Sample Receipt Criteria S K S Comments/Qualifiers (Required for Non-Conforming Items) Circle Applicable: Seals broken Damaged container Leaking container Other (describe) Shipping containers received intact and scaled? Chain of custody documents included Circle Applicable: Client contacted and provided COC COC created upon receipt with shipment? Preservation Method: Wet Ice Ice Packs Dry ice Other: TEMP: 12 6 Samples requiring cold preservation \*all temperatures are recorded in Celsius within  $(0 \le 6 \text{ deg. C})$ ?\* Temperature Device Serial #: IR1-23 Daily check performed and passed on IR Secondary Temperature Device Serial # (If Applicable): temperature gun? Circle Applicable: Seals broken Damaged container Leaking container Other (describe) Sample containers intact and sealed? Sample ID's and Containers Affected: Samples requiring chemical preservation 6 at proper pH? If Preservation added, Lot#: We 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) Do any samples require Volatile 7 Are liquid VOA vials free of headspace? Yes\_\_\_ No\_\_ NA\_ Analysis? Sample ID's and containers affected: ID's and tests affected: Samples received within holding time? ID's and containers affected: Sample ID's on COC match ID's on bottles? Circle Applicable: No dates on containers No times on containers COC missing info Other (describe) Date & time on COC match date & time Circle Applicable: No container count on COC Other (describe) Number of containers received match number indicated on COC? Are sample containers identifiable as GEL client and GEL provided by use of GEL labels? COC form is properly signed in Circle Applicable: Not relinquished Other (describe) relinquished/received sections? Comments (Use Continuation Form if needed):

PM (or PMA) review: Initials \_\_

List of current GEL Certifications as of 13 March 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 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
·· asimigron	2.00





a member of The GEL Group INC

2040 Savage Road | Charleston, SC 29407

gel.com

March 19, 2024

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

Re: ABS Lab Analytical Work Order: 656481

Dear Ms. Gilmetti:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on February 23, 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. The client labels were swapped on the containers. The client was notified and confirmed that the GEL labels were correct656481011(AF90628), 656481012(AF90629).

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,

20 colon

Jordan Melton for Julie Robinson Project Manager

Purchase Order: 398684

Enclosures



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## Certificate of Analysis Report for

SOOP001 Santee Cooper

Client SDG: 656481 GEL Work Order: 656481

#### 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
- 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.

	Jordan	Melton		
Reviewed by				

Page 2 of 36 SDG: 656481

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

Certificate of Analysis

Report Date: March 19, 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: AF90610 Sample ID: 656481001

Matrix: GW

Collect Date: 21-FEB-24 10:15
Receive Date: 23-FEB-24
Collector: Client

Project: SOOP00119 Client ID: SOOP001

Parameter Qualifier Result DL RL Units PF DF Analyst Date Time Batch Method

#### Notes:

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

Page 3 of 36 SDG: 656481

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

**QC** Summary

Report Date: March 19, 2024

Santee Cooper P.O. Box 2946101

OCO3

**Moncks Corner, South Carolina** 

Contact: Ms. Jeanette Gilmetti

Workorder: 656481

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

#### **Notes:**

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
- > Result is greater than value reported
- 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
- NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Q One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
- N1 See case narrative
- 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.

Page 4 of 36 SDG: 656481

Page 1 of 1

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

Certificate of Analysis

Report Date: March 19, 2024

1

SOOP00119

SOOP001

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: AF90610 Sample ID: 656481001

Matrix: GW

Collect Date: 21-FEB-24 10:15
Receive Date: 23-FEB-24
Collector: Client

Parameter Qualifier Result Uncertainty MDC RL Units PF DF Analyst Date Time Batch Method Rad Gas Flow Proportional Counting

Project:

Client ID:

GFPC, Ra228, Liquid "As Received"

Radium-228

2.17 +/-1.36

2.10

3.00 pCi/L

JE1 03/13/24 1045 2575958

Rad Radium-226

Lucas Cell, Ra226, Liquid "As Received"

Radium-226 0.987 +/-0.402 0.302 1.00 pCi/L MJ2 03/17/24 0838 2574135 2

The following Analytical Methods were performed:

MethodDescriptionAnalyst Comments1EPA 904.0/SW846 9320 Modified

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 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

Page 5 of 36 SDG: 656481

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

Certificate of Analysis

Project:

Client ID:

Report Date: March 19, 2024

SOOP00119

84.2

(15%-125%)

SOOP001

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: AF90631 Sample ID: 656481002

Matrix: GW

Collect Date: 21-FEB-24 11:03
Receive Date: 23-FEB-24
Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF Anal	yst Date	Time Batch	Method	
Rad Gas Flow Proport	tional Counting	;										
GFPC, Ra228, Liquid	"As Received"	1										
Radium-228		2.04	+/-1.11	1.64	3.00	pCi/L		JE1	03/13/24	1045 2575958	1	
Rad Radium-226												
Lucas Cell, Ra226, Li	quid "As Recei	ved"										
Radium-226		2.88	+/-0.768	0.647	1.00	pCi/L		MJ2	03/17/24	0838 2574135	2	
The following Analyt	The following Analytical Methods were performed:											
Method	Description						Analy	st Commen	ts			
1	EDA 004 0/SW	7946 0220	Modified									

1	EPA 904.0/SW 846 9320 Modified				
2	EPA 903.1 Modified				
Surrogate/Tracer Recove	ery Test	Result	Nominal	Recovery%	Acceptable Limits

#### **Notes:**

Barium-133 Tracer

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

GFPC, Ra228, Liquid "As Received"

Column headers are defined as follows:

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

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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Certificate of Analysis

Project:

Client ID:

Report Date: March 19, 2024

SOOP00119

SOOP001

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: AF90615 Sample ID: 656481003

Matrix: GW

Collect Date: 20-FEB-24 11:13 Receive Date: 23-FEB-24 Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF Analy	st Date	Time Batch	Method
Rad Gas Flow Propor	tional Counting										
GFPC, Ra228, Liquid	l "As Received"										
Radium-228	U	-1.32	+/-0.870	1.89	3.00	pCi/L		JE1	03/13/24	1045 2575958	1
Rad Radium-226											
Lucas Cell, Ra226, Li	iquid "As Recei	ved"									
Radium-226		1.91	+/-0.631	0.560	1.00	pCi/L		MJ2	03/17/24	0838 2574135	2
The following Analy	tical Methods w	ere perfo	ormed:								
Method	Description					1	Analys	st Comment	S		

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" (15%-125%) 88.1

#### **Notes:**

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

Column headers are defined as follows:

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

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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Certificate of Analysis

Project:

Client ID:

Report Date: March 19, 2024

SOOP00119

SOOP001

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: AF90614 Sample ID: 656481004

Matrix: GW

Collect Date: 20-FEB-24 13:07 Receive Date: 23-FEB-24 Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF Analy	yst Date	Time Batch	Method
Rad Gas Flow Propo	ortional Counting										
GFPC, Ra228, Liqui	d "As Received"										
Radium-228	U	-2.70	+/-0.807	2.12	3.00	pCi/L		JE1	03/13/24	1045 2575958	1
Rad Radium-226											
Lucas Cell, Ra226, I	Liquid "As Recei	ved"									
Radium-226		6.88	+/-1.16	0.596	1.00	pCi/L		MJ2	03/17/24	0838 2574135	2
The following Analy	ytical Methods w	ere perfo	ormed:								
Method	Description						Analys	st Comment	S		

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

EPA 903.1 Modified

Surrogate/Tracer Recovery Test Result Nominal Recovery% Acceptable Limits Barium-133 Tracer GFPC, Ra228, Liquid "As Received" (15%-125%) 77.6

#### **Notes:**

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

Column headers are defined as follows:

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

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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Certificate of Analysis

Project:

Client ID:

Report Date: March 19, 2024

SOOP00119

SOOP001

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: AF90617 Sample ID: 656481005

Matrix: GW

Collect Date: 20-FEB-24 09:51
Receive Date: 23-FEB-24
Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF Analy	st Date	Time Batch	Method
Rad Gas Flow Proport	ional Counting										
GFPC, Ra228, Liquid	"As Received"										
Radium-228	U	-1.48	+/-0.873	2.00	3.00	pCi/L		JE1	03/13/24	1045 2575958	1
Rad Radium-226											
Lucas Cell, Ra226, Lie	quid "As Recei	ved"									
Radium-226		3.90	+/-0.882	0.387	1.00	pCi/L		MJ2	03/17/24	0838 2574135	2
The following Analyt	ical Methods w	ere perfo	ormed:								
Method	Description						Analys	st Comment	S		

Memou	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"			77.3	(15%-125%)

#### **Notes:**

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

Column headers are defined as follows:

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

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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Project:

Client ID:

Report Date: March 19, 2024

SOOP00119

SOOP001

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: AF90632 Sample ID: 656481006

Matrix: GW

Collect Date: 20-FEB-24 14:21
Receive Date: 23-FEB-24
Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF Anal	yst Date	Time Batch	Method
Rad Gas Flow Propor	tional Counting	<u> </u>									
GFPC, Ra228, Liquid	l "As Received"	•									
Radium-228	U	-3.62	+/-0.859	2.26	3.00	pCi/L		JE1	03/13/24	1045 2575958	1
Rad Radium-226											
Lucas Cell, Ra226, Li	iquid "As Recei	ived"									
Radium-226	U	0.697	+/-0.497	0.717	1.00	pCi/L		MJ2	03/17/24	0910 2574135	2
The following Analy	tical Methods v	vere perfo	ormed:								
Method	Description						Analy	st Commen	ts		

MethodDescriptionAnalyst Comments1EPA 904.0/SW846 9320 Modified

EPA 903.1 Modified

Surrogate/Tracer Recovery Test Result Nominal Recovery% Acceptable Limits

Barium-133 Tracer GFPC, Ra228, Liquid "As Received"

87.2 (15%-125%)

#### **Notes:**

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

Column headers are defined as follows:

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

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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Certificate of Analysis

Project:

Client ID:

Report Date: March 19, 2024

SOOP00119

SOOP001

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: AF90611 Sample ID: 656481007

Matrix: GW

Collect Date: 19-FEB-24 14:15
Receive Date: 23-FEB-24
Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF Anal	yst Date	Time Batch	Method
Rad Gas Flow Proport	tional Counting										
GFPC, Ra228, Liquid	"As Received"										
Radium-228		1.85	+/-1.06	1.54	3.00	pCi/L		JE1	03/13/24	1045 2575958	1
Rad Radium-226											
Lucas Cell, Ra226, Li	quid "As Recei	ved"									
Radium-226		0.552	+/-0.322	0.325	1.00	pCi/L		MJ2	03/17/24	0910 2574135	2
The following Analyt	tical Methods w	ere perfo	ormed:								
Method	Description						Analy	st Commen	ts		

MethodDescriptionAnalyst Comments1EPA 904.0/SW846 9320 Modified

EPA 903.1 Modified

Surrogate/Tracer Recovery Test Result Nominal Recovery% Acceptable Limits

Barium-133 Tracer GFPC, Ra228, Liquid "As Received"

72.5 (15%-125%)

#### **Notes:**

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

Column headers are defined as follows:

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

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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Project:

Client ID:

Report Date: March 19, 2024

SOOP00119

SOOP001

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: AF90612 Sample ID: 656481008

Matrix: GW

Collect Date: 19-FEB-24 14:20 Receive Date: 23-FEB-24 Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF Analy	st Date	Time Batch	Method
Rad Gas Flow Propor	tional Counting										
GFPC, Ra228, Liquid	l "As Received"										
Radium-228	U	1.26	+/-0.899	1.38	3.00	pCi/L		JE1	03/13/24	1045 2575958	1
Rad Radium-226											
Lucas Cell, Ra226, Li	iquid "As Recei	ved"									
Radium-226		1.04	+/-0.525	0.612	1.00	pCi/L		MJ2	03/17/24	0910 2574135	2
The following Analy	tical Methods w	ere perfo	ormed:								
Method	Description						Analys	st Comment	S		

Michiga	Description	7 maryst 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"

77.5 (15%-125%)

#### **Notes:**

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

Column headers are defined as follows:

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

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: March 19, 2024

SOOP00119

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: AF90625 Sample ID: 656481009

Collect Date: 15-FEB-24 10:38 Receive Date: 23-FEB-24 Collector: Client

Client ID: SOOP001 Matrix: GW

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF Analy	st Date	Time Batch	Method
Rad Gas Flow Proporti	onal Counting										
GFPC, Ra228, Liquid	"As Received"										
Radium-228		1.53	+/-0.843	1.16	3.00	pCi/L		JE1	03/13/24	1045 2575958	1
Rad Radium-226											
Lucas Cell, Ra226, Lic	juid "As Recei	ved"									
Radium-226		1.74	+/-0.545	0.325	1.00	pCi/L		MJ2	03/17/24	0910 2574135	2
The following Analyti	cal Methods w	ere perfo	ormed:								
Method	Description						Analyst	Comment	S		
1	EPA 904.0/SW	7846 93 <b>2</b> 0 1	Modified								
2	EPA 903.1 Mo	dified									
Surrogate/Tracer Reco	very Test				R	esult	Nomina	l Reco	very%	Acceptable L	imits

GFPC, Ra228, Liquid "As Received" Barium-133 Tracer

87.2 (15%-125%)

Project:

#### **Notes:**

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

Column headers are defined as follows:

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

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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Certificate of Analysis

Project:

Client ID:

Report Date: March 19, 2024

SOOP00119

SOOP001

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: AF90613 Sample ID: 656481010

Matrix: GW

Collect Date: 15-FEB-24 13:31 Receive Date: 23-FEB-24 Collector: Client

Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF Analyst Date	Time Batch	Method
nal Counting									
As Received"									
$\mathbf{U}$	-0.280	+/-0.836	1.66	3.00	pCi/L		JE1 03/13/24	1045 2575958	1
id "As Recei	ved"								
	1.02	+/-0.414	0.311	1.00	pCi/L		MJ2 03/17/24	0910 2574135	2
al Methods w	ere perfo	ormed:							
Description					1	Analys	st Comments		
	nal Counting As Received" U  id "As Received"  If the second the s	nal Counting As Received" U -0.280  id "As Received" 1.02  al Methods were perfo	nal Counting As Received" U -0.280 +/-0.836  id "As Received" 1.02 +/-0.414  al Methods were performed:	nal Counting As Received" U -0.280 +/-0.836 1.66  id "As Received" 1.02 +/-0.414 0.311  al Methods were performed:	nal Counting As Received"  U -0.280 +/-0.836 1.66 3.00  id "As Received"  1.02 +/-0.414 0.311 1.00  nl Methods were performed:	nal Counting As Received"  U -0.280 +/-0.836 1.66 3.00 pCi/L  id "As Received"  1.02 +/-0.414 0.311 1.00 pCi/L  al Methods were performed:	nal Counting As Received"  U -0.280 +/-0.836 1.66 3.00 pCi/L  id "As Received"  1.02 +/-0.414 0.311 1.00 pCi/L  al Methods were performed:	nal Counting As Received"  U -0.280 +/-0.836 1.66 3.00 pCi/L JE1 03/13/24  id "As Received"  1.02 +/-0.414 0.311 1.00 pCi/L MJ2 03/17/24  al Methods were performed:	nal Counting As Received"  U -0.280 +/-0.836 1.66 3.00 pCi/L JE1 03/13/24 1045 2575958  id "As Received"  1.02 +/-0.414 0.311 1.00 pCi/L MJ2 03/17/24 0910 2574135  al Methods were performed:

EPA 904.0/SW846 9320 Modified

EPA 903.1 Modified

Surrogate/Tracer Recovery Test Result Nominal Recovery% Acceptable Limits Barium-133 Tracer GFPC, Ra228, Liquid "As Received" 81.5 (15%-125%)

#### **Notes:**

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

Column headers are defined as follows:

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

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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Certificate of Analysis

Project:

Client ID:

Report Date: March 19, 2024

SOOP00119

SOOP001

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: AF90628 Sample ID: 656481011 Matrix: GW

Collect Date: 19-FEB-24 09:44 Receive Date: 23-FEB-24 Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF Analyst Dat		t Date Time Batch	
Rad Gas Flow Propor	tional Counting	;									
GFPC, Ra228, Liquid	d "As Received"										
Radium-228	$\mathbf{U}$	-5.48	+/-0.846	2.60	3.00	pCi/L		JE1	03/13/24	1045 2575958	1
Rad Radium-226											
Lucas Cell, Ra226, L	iquid "As Recei	ved"									
Radium-226		0.853	+/-0.429	0.500	1.00	pCi/L		MJ2	03/17/24	0910 2574135	2
The following Analy	tical Methods w	ere perfe	ormed:								
Method	Description						Analys	st Commen	ts		

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

EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC, Ra228, Liquid "As Received"			77.3	(15%-125%)

#### **Notes:**

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

Column headers are defined as follows:

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

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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

Certificate of Analysis

Project:

Client ID:

**Analyst Comments** 

Report Date: March 19, 2024

SOOP00119

SOOP001

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: AF90629 Sample ID: 656481012

Matrix: GW

Collect Date: 19-FEB-24 09:49
Receive Date: 23-FEB-24
Collector: Client

Parameter **Oualifier** Result Uncertainty **MDC** RLUnits PF DF Analyst Date Time Batch Method Rad Gas Flow Proportional Counting GFPC, Ra228, Liquid "As Received" Radium-228 0.0686 +/-0.839 1.57 3.00 pCi/L JE1 03/13/24 1046 2575958 1 Rad Radium-226 Lucas Cell, Ra226, Liquid "As Received" Radium-226 +/-0.503 0.711 1.00 pCi/L MJ2 03/17/24 0910 2574135

The following Analytical Methods were performed:

Description

1 EPA 904.0/SW846 9320 Modified
2 EPA 903.1 Modified

Surrogate/Tracer Recovery Test Result Nominal Recovery% Acceptable Limits

Surrogate/Tracer Recovery Test Result Nominal Recovery% Acceptable Limits

Barium-133 Tracer GFPC, Ra228, Liquid "As Received"

83 (15%-125%)

#### **Notes:**

Method

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

Column headers are defined as follows:

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

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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Certificate of Analysis

Project:

Client ID:

Report Date: March 19, 2024

SOOP00119

SOOP001

Company: Santee Cooper Address: P.O. Box 2946101

OCO3

Moncks Corner, South Carolina 29461

Contact: Ms. Jeanette Gilmetti ABS Lab Analytical Project:

Client Sample ID: AF90627 Sample ID: 656481013

Matrix: GW

Collect Date: 19-FEB-24 11:05 Receive Date: 23-FEB-24 Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF Anal	yst Date	Time Batch	Method
Rad Gas Flow Proporti	onal Counting	;									
GFPC, Ra228, Liquid	'As Received'	1									
Radium-228	U	-0.281	+/-0.669	1.40	3.00	pCi/L		JE1	03/13/24	1046 2575958	1
Rad Radium-226											
Lucas Cell, Ra226, Lic	լuid "As Recei	ved"									
Radium-226		1.72	+/-0.651	0.712	1.00	pCi/L		MJ2	03/17/24	0910 2574135	2
The following Analyti	cal Methods w	vere perfo	ormed:								
Method	Description						Analy	st Commen	ts		
1	EPA 904 0/SW	7846 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

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

Certificate of Analysis

Project:

Client ID:

Report Date: March 19, 2024

03/17/24 0943 2574135

SOOP00119

SOOP001

MJ2

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: AF90626 Sample ID: 656481014

Matrix: GW

Collect Date: 19-FEB-24 12:49
Receive Date: 23-FEB-24
Collector: Client

Parameter **Oualifier** Result Uncertainty **MDC** RLUnits PF DF Analyst Date Time Batch Method Rad Gas Flow Proportional Counting GFPC, Ra228, Liquid "As Received" Radium-228 -0.867 +/-0.665 1.56 3.00 pCi/L JE1 03/13/24 1046 2575958 1 Rad Radium-226 Lucas Cell, Ra226, Liquid "As Received"

1.00

pCi/L

Radium-226 0.563 +/-0.362 The following Analytical Methods were performed:

MethodDescriptionAnalyst Comments1EPA 904.0/SW846 9320 Modified

EPA 903.1 Modified

Surrogate/Tracer Recovery Test Result Nominal Recovery% Acceptable Limits

Barium-133 Tracer GFPC, Ra228, Liquid "As Received"

73.8 (15%-125%)

0.392

#### **Notes:**

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

Column headers are defined as follows:

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

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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

Certificate of Analysis

Project:

Client ID:

Report Date: March 19, 2024

SOOP00119

SOOP001

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: AF90630 Sample ID: 656481015

Matrix: GW

Collect Date: 15-FEB-24 11:25
Receive Date: 23-FEB-24
Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF Anal	yst Date	Time Batch	Method
Rad Gas Flow Propor	tional Counting	;									
GFPC, Ra228, Liquid	l "As Received"										
Radium-228	U	-2.47	+/-0.972	2.22	3.00	pCi/L		JE1	03/13/24	1046 2575958	1
Rad Radium-226											
Lucas Cell, Ra226, Li	iquid "As Recei	ved"									
Radium-226		1.74	+/-0.638	0.703	1.00	pCi/L		MJ2	03/17/24	0943 2574135	2
The following Analy	tical Methods w	ere perfe	ormed:								
Method	Description					1	Analy	st Commen	ts		
1	EDA 004 0/CV	7046 0220	M - 1:C: - 1								

1	EPA 904.0/SW846 9320 Modified	•	
2	EPA 903.1 Modified		

Surrogate/Tracer RecoveryTestResultNominalRecovery%Acceptable LimitsBarium-133 TracerGFPC, Ra228, Liquid "As Received"86.4(15%-125%)

#### **Notes:**

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

Column headers are defined as follows:

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

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

Page 19 of 36 SDG: 656481

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

Certificate of Analysis

Project:

Client ID:

Report Date: March 19, 2024

03/17/24 0943 2574135

SOOP00119

SOOP001

MJ2

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: AF90623 Sample ID: 656481016

Matrix: GW

Collect Date: 15-FEB-24 12:20
Receive Date: 23-FEB-24
Collector: Client

Parameter **Oualifier** Result Uncertainty **MDC** RLUnits PF DF Analyst Date Time Batch Method Rad Gas Flow Proportional Counting GFPC, Ra228, Liquid "As Received" Radium-228 1.67 +/-0.985 1.46 3.00 pCi/L JE1 03/13/24 1046 2575958 1 Rad Radium-226 Lucas Cell, Ra226, Liquid "As Received"

1.00

pCi/L

Radium-226 0.581 +/-0.355 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"

87.5 (15%-125%)

0.371

#### **Notes:**

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

Column headers are defined as follows:

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

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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

Certificate of Analysis

Project:

Client ID:

Report Date: March 19, 2024

SOOP00119

SOOP001

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: AF90633 Sample ID: 656481017

Matrix: GW

Collect Date: 15-FEB-24 14:12 Receive Date: 23-FEB-24 Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF Analy	st Date	Time Batch	Method
Rad Gas Flow Proport	tional Counting										
GFPC, Ra228, Liquid	"As Received"										
Radium-228	U	0.882	+/-0.750	1.19	3.00	pCi/L		JE1	03/13/24	1046 2575958	1
Rad Radium-226											
Lucas Cell, Ra226, Li	quid "As Recei	ved"									
Radium-226		0.472	+/-0.308	0.377	1.00	pCi/L		MJ2	03/17/24	0943 2574135	2
The following Analyt	The following Analytical Methods were performed:										
Method	Description						Analys	st Comment	S		

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

2 EPA 903.1 Modified

Recovery% Surrogate/Tracer Recovery Test Result Nominal Acceptable Limits Barium-133 Tracer GFPC, Ra228, Liquid "As Received" (15%-125%) 83.8

#### **Notes:**

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

Column headers are defined as follows:

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

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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

**QC** Summary

Report Date: March 19, 2024

Santee Cooper P.O. Box 2946101

OCO3

**Moncks Corner, South Carolina** 

Contact: Ms. Jeanette Gilmetti

Workorder: 656481

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range A	nlst	Date Time
Rad Gas Flow										
Batch 2575958 ———										
QC1205664335 656481001 DUP										
Radium-228		2.17	U	1.13	pCi/L	62.7		(0% - 100%)	JE1	03/13/24 10:46
	Uncertainty	+/-1.36		+/-0.775						
QC1205664336 LCS										
Radium-228	73.4			59.4	pCi/L		80.9	(75%-125%)		03/13/24 10:46
	Uncertainty			+/-3.74						
QC1205664334 MB										
Radium-228			U	0.782	pCi/L					03/13/24 10:46
	Uncertainty			+/-0.753						
Rad Ra-226										
Batch 2574135										
QC1205661277 656481001 DUP										
Radium-226		0.987		1.33	pCi/L	29.9		(0% - 100%)	MJ2	03/17/24 09:43
	Uncertainty	+/-0.402		+/-0.520						
QC1205661279 LCS										
Radium-226	26.9			20.9	pCi/L		77.5	(75%-125%)		03/17/24 09:43
	Uncertainty			+/-1.99						
QC1205661276 MB										
Radium-226			U	0.000	pCi/L					03/17/24 09:43
	Uncertainty			+/-0.264						
QC1205661278 656481001 MS										
Radium-226	131	0.987		104	pCi/L		78.8	(75%-125%)		03/17/24 09:43
	Uncertainty	+/-0.402		+/-9.80						

#### **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

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Page 1 of 2

### **GEL LABORATORIES LLC**

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

## **QC** Summary

Workorder: 656481

Parmname

NOM Sample Qual QC Units RPD% REC% Range AnIst Date Time

>	Result is	greater	than va	lue re	norted
	ixesuit is	greater	uiaii va	Tuc Ic	porteur

- 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 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.

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### Technical Case Narrative Santee Cooper SDG #: 656481

# **Radiochemistry**

**Product:** GFPC, Ra228, Liquid

<u>Analytical Method:</u> EPA 904.0/SW846 9320 Modified <u>Analytical Procedure:</u> GL-RAD-A-063 REV# 5

**Analytical Batch:** 2575958

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

<b>GEL Sample ID#</b>	Client Sample Identification
656481001	AF90610
656481002	AF90631
656481003	AF90615
656481004	AF90614
656481005	AF90617
656481006	AF90632
656481007	AF90611
656481008	AF90612
656481009	AF90625
656481010	AF90613
656481011	AF90628
656481012	AF90629
656481013	AF90627
656481014	AF90626
656481015	AF90630
656481016	AF90623
656481017	AF90633
1205664334	Method Blank (MB)
1205664335	656481001(AF90610) Sample Duplicate (DUP)
1205664336	Laboratory Control Sample (LCS)

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

#### **Data Summary:**

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

### **Preparation Information**

#### **Homogenous Matrix**

Samples 1205664335 (AF90610DUP), 656481001 (AF90610) and 656481004 (AF90614) were non-homogenous matrix. slightly yellow 1205664335 (AF90610DUP), 656481001 (AF90610) and 656481004 (AF90614).

### **Technical Information**

#### Negative > 3 sigma TPU

Sample results were more negative than the three sigma TPU. The background control charts were examined and the

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detectors were determined to be fully functional.

Sample	Analyte	Value
656481004 (AF90614)	Radium-228	Negative Result > 3 sigma value
656481005 (AF90617)	Radium-228	Negative Result > 3 sigma value
656481006 (AF90632)	Radium-228	Negative Result > 3 sigma value
656481011 (AF90628)	Radium-228	Negative Result > 3 sigma value
656481015 (AF90630)	Radium-228	Negative Result > 3 sigma value

Product: Lucas Cell, Ra226, Liquid Analytical Method: EPA 903.1 Modified

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

**Analytical Batch:** 2574135

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

GEL Sample ID#	Client Sample Identification
656481001	AF90610
656481002	AF90631
656481003	AF90615
656481004	AF90614
656481005	AF90617
656481006	AF90632
656481007	AF90611
656481008	AF90612
656481009	AF90625
656481010	AF90613
656481011	AF90628
656481012	AF90629
656481013	AF90627
656481014	AF90626
656481015	AF90630
656481016	AF90623
656481017	AF90633
1205661276	Method Blank (MB)
1205661277	656481001(AF90610) Sample Duplicate (DUP)
1205661278	656481001(AF90610) Matrix Spike (MS)
1205661279	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**

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#### **Additional Comments**

The matrix spike, 1205661278 (AF90610MS), 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.

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# **Chain of Custody**



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

Comments   D# (Internal use only)   Description   Descri	(es) No	Analysis Group
(Internal use only)  Description  Descriptio	KAD 226	RAD 22.8
(Internal use only)  Description  Descriptio	RAD	AA A
AF90615 WAP-14C 2/20/24 [1]3	×	×
AF90615 WAP-14C 2/20/24 1113		
	1 1	
14 WAP-14B 1 1307		
AF90617 WAP-16 0951		
1 32 WAP-28R 1421		
11 WAP-14 2/19/24 1415		
12 WAP-14 DUP 1 1420		
25 WAP-23 2/15/24 1038		
13 WAP-14A   1331   -   -   -   -		<u> </u>
Refinquished by: Employee# Date Time Received by: Employee# Date Time TEMP (°C):	ernal Use C	Only)
16851 2/23/24 0931 DA CEL 2/23/24 0931		ai
Relinquished by: Employee# Date Time Received by: Employee# Date Time Correct ph: Yes	No	
Relinquished by: Employee# Date Prime Received by: Employee# Date Time		
BELLEVICE AND		
Date/Time/Init for pro	eservative	
METALS (all ) Nutrients MISC. Gypsum Coal Flyash		Oil
□ Al □ Fe □ Se □ TOC □ BTEX □ Wallboard □ Ultimate □ Ammonia	OT	rans. Oil Qual.
□ As □ K □ Sn □ TP/TPO4 □ THM/HAA below) □ Ash □ % Corbon		%Moisture Color
□ B □ Li □ Sr □ NH3-N □ VOC □ AIM □ Sulfur □ Mineral		Acidity Dielectric Strength
□ Ba □ Mg □ Ti □ E. Coli □ Total metals □ BTUs Analysi	S	IFT
□ Be □ Mn □ Tl □ NO2 □ Total Coliform □ Soluble Metals □ Volatile Matter □ Sieve □ Purity (CaSO4) □ CHN □ Moisture		Dissolved Gases    sed Oil
□ Ca □ Mo □ V □ Br □ Dissolved As □ % Moisture □ Other Tests:	0	Flashpoint Metals in oil
□ Cd □ Na □ Zn □ SO4 □ Rad 226 □ pH □ HGI		(As,Cd,Cr,Ni,Pb
□ Co □ Ni □ Hg □ Rad 228 □ Chlorides □ Fineness □ As □ Particle Size □ Particulate Matter □ As		Hg) TX
□ Cr □ Pb □ CrVI □ Sulfur □ TSS		OFER

# **Chain of Custody**



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

Laborotic ID   Sample Location   Description   Descripti	Customer Em	ail/Report Recipi	ent:	Date R	Results No	eeded b	y:		Pr	roject/	Task/	Unit #:		Rerun req	uest f	for an	y flag	ged QC
Table   Tabl	LINDA. WILL	@santeed	cooper.com					125	915	JM	02.0	9. GØI.	1 3650	<u>~</u>	(es	No		
Comments																A	nalysis (	Group
Part	(Internal use	THE PROPERTY OF THE PROPERTY O	on/	Collection Date	Collection Time	Sample Collector	Total # of containers	Bottle type: (Glass-G/Plastic-P)	Grab (G) or Composite (C)	Matrix(see below)	Preservative (see	• M • Ro • M	ethod # eporting limitisc. sample	it info		184D 226	763	
27	AP90628	WAP-26		2/19/24	0944	WJK	2	P	G	GW	2					X	×	
Relinquished by:   Employee#   Date   Time   Received by:   Employee#   Date   Time   Time   Received by:   Employee#   Date   Time   Employee#   Date   Time   Received by:   Employee#   Date   Time   Date/Time/Init for preservative:   Date/Time/Init for pre	29	WAP - 26 t	OUP		0949													
Received by:   Employees   Date   Time   Received by:   Employees   Date   Time   Ti	27	WAP-25			1105			e Y										
1220	1 26	WAP-24		1	1249	1	1	1	1	_	1					1	I	
Relinquished by:   Employee#   Date   Time   Received by:   Employee #   Date   Time	AF90630	2.7		2/15/24	1125		-						-			X	X	
Relinquished by:   Employee#   Date   Time   Received by:   Employee #   Date   Time   Correct pH:   Yes   No	23	WAT			1220									- 11,50		1		
Relinquished by: Employee#   Date   Time   Received by: Employee#   Date   Time   Time   Sample Receiving (Internal Use Only)   TEMP (°C): Initial:   TE		WAP-29		1	1412	_	1	1	L		1					-		
Relinquished by:   Employee#   Date   Time   Received by:   Employee #   Date   Time   TEMP (°C):   Initial:   TEMP (°C):   TEMP (°C):   Initial:   TEMP (°C):   TEMP (°C):   Initial:   TEMP (°C):   Initial:   TEMP (°C):   Initial:   TEMP (°C):   TEMP (°C):   TEMP (°C):   Initial:   TEMP (°C):   TEMP (°C)		C = 39 A G	ishs	oline Oline													T	$\top$
Relinquished by:   Employee#   Date   Time   Time   Received by:   Employee #   Date   Time   Time   Time   Received by:   Employee #   Date   Time   Preservative Lot#:   Correct pH: Yes   No   Preservative Lot#:   Date   Time   Date   Date   Time   Date   Da		7.093	77172															
Relinquished by:   Employee#   Date   Time   Time   Received by:   Employee #   Date   Time   Time   Time   Received by:   Employee #   Date   Time   Preservative Lot#:   Correct pH: Yes   No   Preservative Lot#:   Date   Time   Date   Date   Time   Date   Da			4	i	:									3,52				
Relinquished by:   Employee#   Date   Time   Time   Received by:   Employee #   Date   Time   Time   Time   Received by:   Employee #   Date   Time   Preservative Lot#:   Correct pH: Yes   No   Preservative Lot#:   Date   Time   Date   Date   Time   Date   Da	Relinquished b	y: Employee#	Date	Time	Receive	ed by:	Fn	nnlovee	+	Date		Times	Sample	Receiving (Inter	rnal Us	e Onl	1)	
Relinquished by: Employee# Date Time	mb				. 12/	0		7.1			4 /		TEMP	(°C):				_
Relinquished by: Employee# Date Time    Date   Time   Time	Relinquished b				Receive	d by:	Em	nployee #	_				Correc	tpH: Yes	No			
METALS (all )	sil	666	2-23,241	550		1		6E	12	1231	27	1550	Preserv	ative Lot#:				
METALS (all )	Kelinquished by	y: Employee#	'Date'	Time	Receive	d by:	En	ployee #		Date		Time						
□ Ag □ Cu □ Sb □ TOC □ BFEX □ Se □ DOC □ THM/HAA □ Sn □ K □ Sn □ TP/TPO4 □ THM/HAA □ Sr □ K □ Sr □ NH3-N □ Oil & Grease □ FL Oil □ TOC □ Sulfur □ Mineral Analysis □ FL Oil □ Total metals □ Soluble Metals □ Purity (CaSO4) □ Cd □ Na □ Zn □ NO3 □ Dissolved As □ Cd □ Na □ Zn □ SO4 □ Rad 226 □ PH □ Cl □ Rad 228 □ PCB □ Particle Size □ Particulate Matter □ Size		ETALS (all )	local Caracteristics						TACTOR AND	10.00			Date/Ti	me/Init for pres	servati	ive:		
□ Al □ Fe □ Se □ IOC □ Naphthalene □ Sysum(all below) □ Mineral □ Noc □ Naphthalene □ Noc □ Naphthalene □ Mineral □ Noc	STREET, STREET	PERSONAL PROPERTY AND INC.	The second second	CONTRACTOR OF STREET	MIS	<u>C.</u>		Gy	osum	1		Coa		Flyash			Oil	
□ As □ K □ Sn □ TP/TPO4 □ THM/HAA □ VOC □ AIM □ VOC □ AIM □ VOC □ AIM □ TOC □ Total Coliform □ Dissolved As □ Dissolved As □ Dissolved Fe □ Cd □ Na □ Zn □ SO4 □ Rad 226 □ Particle Size □ Particulate Matter □ Coli □ Flashpoint □ Colifordes □ Particulate Matter □ Coliform □ Coliform □ Size □ Coliform		A STATE OF THE OWNER,				na.	D				DI				0		Oil Q	
□ B □ Li □ Sr □ NH3-N □ Oil & Grease □ ToC □ BTUs □ BTUs □ Dissolved Gases □ Dissolved As □ Dissolved Fe □ NO3 □ Zn □ SO4 □ Rad 226 □ PATICLE Size □ Particulate Matter □ Chlorides □ Fineness □ Oil & Grease □ As □ NO3 □ Particle Size □ Particulate Matter □ As □ NO3 □ NO3 □ Particle Size □ Particulate Matter □ Sieve □ No3 □ So4 □ Rad 228 □ Particulate Matter □ Sieve □ Dissolved Gases □ Used Oil (As,Cd,Cr,Ni,Pb Hg) □ HGI □ Chlorides □ Fineness □ Oil & Grease □ Hg) □ NO3 □ Particle Size □ Particulate Matter □ NO3 □ NO3 □ Particle Size □ Particulate Matter □ NO3 □ NO3 □ Particle Size □ Particulate Matter □ NO3 □ NO	□ As □ I	K □ Sn	CT (Price) MEDICAL STREET	PO4	THM/HA								sture		4			
□ Ba □ Mg □ Ti □ Cl □ Cl □ Total metals □ Soluble Metals □ Volatile Matter □ Dissolved Gases □ Dissolved Gases □ Volatile Matter □ Dissolved Gases □ Dissol	□ B □ I	Li 🗆 Sr				ase										□ Ac	dity	
□ Be □ Mn □ T1 □ NO2 □ PH □ Dissolved As □ Dissolved As □ Dissolved Fe □ Rad 226 □ PH □ Dissolved Fe □ Rad 228 □ CO □ Ni □ Hg □ Dissolved Fe □ Rad 228 □ PH □ Dissolved Gases □ Volatile Native □ Sieve □ Noisture	□ Ba □ N	Mg □ Ti			□ E. Coli			□ Tota	I metals					Analysis		DIF		
□ Ca □ Mo □ V □ BF □ Dissolved As □ Dissolved As □ Dissolved Fe □ Sulfites □ Metals in oil (As,Cd,Cr,Ni,Pb □ Particle Size □ Particulate Matter □ As □ TX	□ Be □ N	Mn 🗆 T1	□ NO2	Control C	□ pH						STATE OF THE PARTY		CONTRACTOR OF THE PARTY OF THE					Jases
□ Cd □ Na □ Zn □ SO4 □ Rad 226 □ pH □ HGI □ HGI □ As □ Chlorides □ Particulate Matter □ As □ TX □ TX	□ Ca □ N	Mo □ V						□%M	loisture							□ Fla	hpoint	
□ Co □ Ni □ Hg □ PCB □ Particle Size □ Particulate Matter □ As □ TX		Va □ Zn			Rad 226			□pH			DH	IGI		SI THE RESIDENCE OF A PROPERTY OF				
	The Court of the C							□ Chlo	rides cle Size									
GOFER GOFER	□ Cr □ P	b CrVI					D							□ TSS	Ţ			



SAMPLE RECEIPT & REVIEW FORM

Client: 500P	SDG/AR/COC/Work Order:					
Received By: QG	Date Received: 2 23 24					
Carrier and Tracking Number	Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other					
	n(a)					
Suspected Hazard Information	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.					
A)Shipped as a DOT Hazardous?	Hazard Class Shipped: UN#:  If UN2910, Is the Radioactive Shipment Survey Compliant? Yes No					
B) Did the client designate the samples are to be received as radioactive?	COC notation or radioactive stickers on containers equal client designation.					
C) Did the RSO classify the samples as radioactive?	Maximum Net Counts Observed* (Observed Counts - Area Background Counts):					
D) Did the client designate samples are hazardous?	COC notation or hazard labels on containers equal client designation.  If D or E is yes, select Hazards below.					
E) Did the RSO identify possible hazards?	PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:					
Sample Receipt Criteria	Comments/Qualifiers (Required for Non-Conforming Items)					
1 Shipping containers received intact and sealed?	Circle Applicable: Seals broken Damaged container Leaking container Other (describe)					
2 Chain of custody documents included with shipment?	Circle Applicable: Client contacted and provided COC COC created upon receipt					
3 Samples requiring cold preservation within $(0 \le 6 \text{ deg. C})$ ?*	Preservation Method: Wet Ice Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius  TEMP: 2					
4 Daily check performed and passed on IR temperature gun?	Temperature Device Serial #: <u>IR1-23</u> 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#:					
	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)					
7 Do any samples require Volatile Analysis?	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	ID's and containers affected:					
bottles?	Circle Ambiguida, No dura en antigran. No timo en esta con constitución de con					
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)					
Are sample containers identifiable as GEL provided by use of GEL labels?	Schient and GEL lobels					
COC form is properly signed in relinquished/received sections?	Circle Applicable: Not relinquished Other (describe)					
For samples Af 90429 and Afgales, the client						
label and GEL label don't match. The WAP-24 is						
for samples Afgoli29 and Afgoli28, the client label and GEL label don't match. The WAP-26 is labeled as dup with client label and vice versa.						
PM (or PMA) review	Initials Date 2/24   24 Page Lof					

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### **Max Gloth**

From: Jessica Ward

Sent: Monday, February 26, 2024 12:30 PM

To: Sherri Levy Cc: Team Robinson

**Subject:** Re: Question about container labels for samples for Ra226/Ra228 delivered Friday 02/23

Sherri,

Thank you for confirming I have labeled as requested.

Thank you, Jessica Ward **Project Manager Assistant** 



2040 Savage Road, Charleston, SC 29407

Office Direct: 843.556.8171 ext. 4523 | Office Main: 843.556.8171 | Fax: 843.766.1178







Email: Jessica.Ward@gel.com

From: Sherri Levy <Sherri.Levy@santeecooper.com>

Sent: Monday, February 26, 2024 12:21 PM To: Jessica Ward <Jessica.Ward@gel.com> Cc: Team Robinson < Team. Robinson@gel.com>

Subject: Re: Question about container labels for samples for Ra226/Ra228 delivered Friday 02/23

#### [EXTERNAL EMAIL] DO NOT CLICK links or attachments unless you recognize the sender and know the content is safe.

Please follow the GEL labeled sample (handwritten info). The labels are actually swapped. Please let me know if you need further clarification. Sorry about that and thanks for catching it.

Warm Regards,

## Sherri J. Levy

Laboratory Specialist III **Environmental Resources ☎**843.761.8000 ext. 5709

fighter significant strain significant sig



From: Jessica Ward <Jessica.Ward@gel.com> Sent: Monday, February 26, 2024 12:13 PM

To: Sherri Levy <Sherri.Levy@santeecooper.com>

Cc: Team Robinson < Team. Robinson@gel.com>

Subject: [EXTERNAL SENDER] Re: Question about container labels for samples for Ra226/Ra228 delivered Friday 02/23

#### Sherri,

I just wanted to follow up on the email sent Saturday in case it was lost in the Monday shuffle. Can you confirm how we should label the containers fro WAP-26/WAP-26 DUP, by following the GEL container label or the affixed client label. Pictures are on the email in this chain.

Thank you,
Jessica Ward
Project Manager Assistant



2040 Savage Road, Charleston, SC 29407

Office Direct: 843.556.8171 ext. 4523 | Office Main: 843.556.8171 | Fax: 843.766.1178







Email: Jessica.Ward@gel.com

From: Jessica Ward < Jessica. Ward@gel.com > Sent: Saturday, February 24, 2024 12:23 PM

**To:** Brown, Sherri <sherri.brown@santeecooper.com> **Cc:** Team Robinson <Team.Robinson@gel.com>

Subject: Question about container labels for samples for Ra226/Ra228 delivered Friday 02/23

#### Sherri,

Attached are photos of the containers received for Ra226/228 analysis brought by courier on Friday 02/23. The containers for Sample ID AF90628 WAP-26 & AF90629 WAP-26 DUP have the labels that are switched on the containers (there is a DUP label on the non-DUP) for example. The receiving team wanted to ensure we labeled these correctly, can you please let me know should we label the containers based off of your labels affixed or the handwritten labels that GEL supplied on the containers for identifying the correct container for the sample IDs?

Thank you, Jessica Ward Project Manager Assistant



2040 Savage Road, Charleston, SC 29407

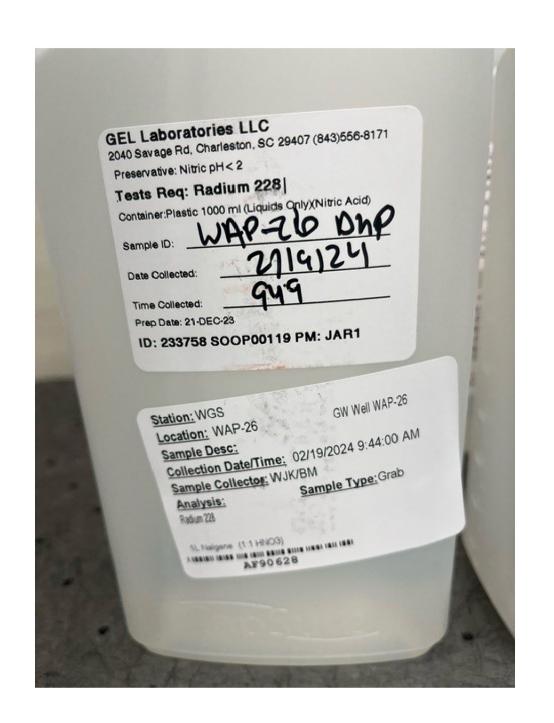
Office Direct: 843.556.8171 ext. 4523 | Office Main: 843.556.8171 | Fax: 843.766.1178

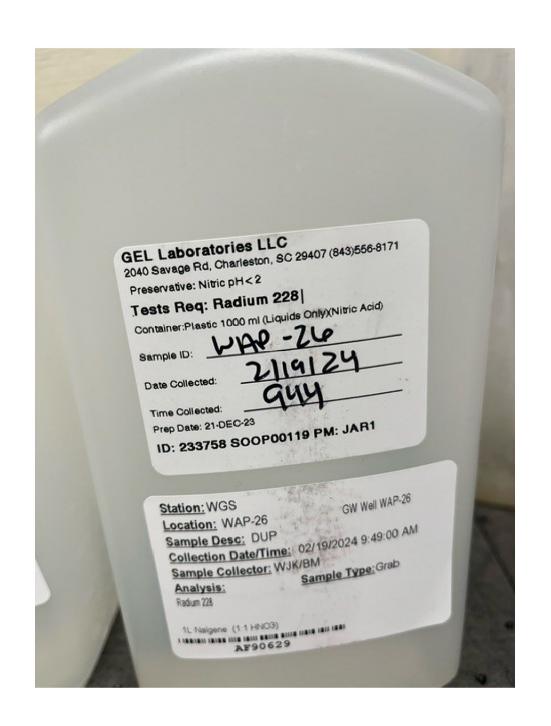


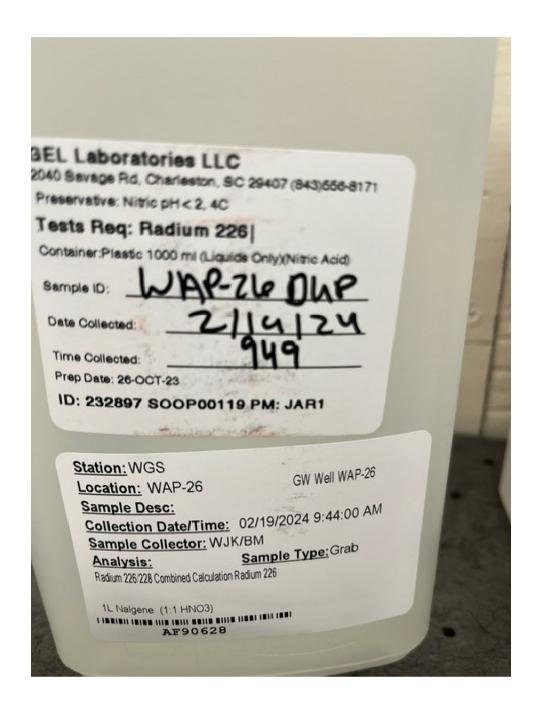


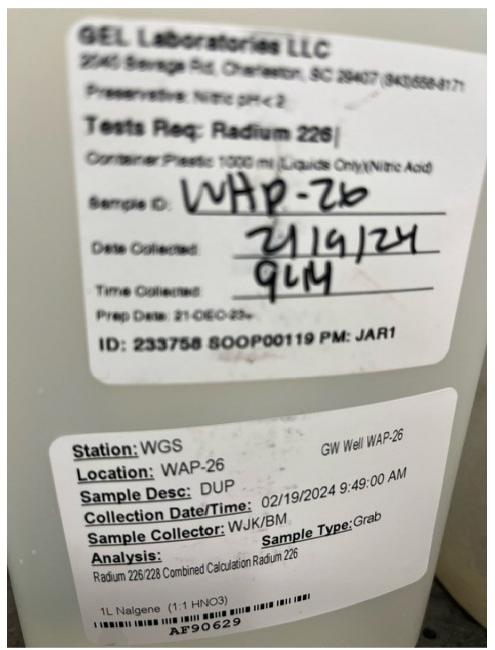


Email: Jessica.Ward@gel.com









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List of current GEL Certifications as of 19 March 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 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
·· asimigron	2.00

# **ANALYTICAL REPORT**

# PREPARED FOR

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

Generated 2/22/2024 1:44:35 PM

# **JOB DESCRIPTION**

125915/JM02.08.G01.3/36500

# **JOB NUMBER**

680-246795-1

Eurofins Savannah 5102 LaRoche Avenue Savannah GA 31404



# **Eurofins Savannah**

### **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 2/22/2024 1:44:35 PM

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

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### **Case Narrative**

Client: South Carolina Public Service Authority

Project: 125915/JM02.08.G01.3/36500

Job ID: 680-246795-1 Eurofins Savannah

Job Narrative 680-246795-1

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 2/15/2024 10:30 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 14.8°C.

#### **Metals**

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

**Eurofins Savannah** 

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Job ID: 680-246795-1

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# **Sample Summary**

Client: South Carolina Public Service Authority Project/Site: 125915/JM02.08.G01.3/36500

Job ID: 680-246795-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-246795-1	AF90598	GW	02/08/24 14:39	02/15/24 10:30
680-246795-2	AF90605	GW	02/07/24 10:07	02/15/24 10:30
680-246795-3	AF90606	GW	02/07/24 10:12	02/15/24 10:30
680-246795-4	AF90604	GW	02/07/24 11:12	02/15/24 10:30
680-246795-5	AF90596	GW	02/06/24 10:25	02/15/24 10:30
680-246795-6	AF90597	GW	02/06/24 11:19	02/15/24 10:30
680-246795-7	AF90599	GW	02/06/24 12:45	02/15/24 10:30

## **Method Summary**

Client: South Carolina Public Service Authority Project/Site: 125915/JM02.08.G01.3/36500

Job ID: 680-246795-1

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/JM02.08.G01.3/36500

Job ID: 680-246795-1

#### **Qualifiers**

B 4	_	4_	1-
IVI	е	ta	IS

CNF

 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

Percent Recovery

CFL Contains Free Liquid

CFU Colony Forming Unit

DER Duplicate Error Ratio (normalized absolute difference)

Contains No Free Liquid

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

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# **Detection Summary**

Project/Site: 125915/JM02.08.G01.3/36500	000 IB. 000 240100 T
Client Sample ID: AF90598	Lab Sample ID: 680-246795-1
No Detections.	
Client Sample ID: AF90605	Lab Sample ID: 680-246795-2
No Detections.	
Client Sample ID: AF90606	Lab Sample ID: 680-246795-3
No Detections.	
Client Sample ID: AF90604	Lab Sample ID: 680-246795-4
No Detections.	
Client Sample ID: AF90596	Lab Sample ID: 680-246795-5
No Detections.	
Client Sample ID: AF90597	Lab Sample ID: 680-246795-6
No Detections.	
Client Sample ID: AF90599	Lab Sample ID: 680-246795-7
No Detections.	

This Detection Summary does not include radiochemical test results.

Client: South Carolina Public Service Authority

Eurofins Savannah

Job ID: 680-246795-1

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Client: South Carolina Public Service Authority Project/Site: 125915/JM02.08.G01.3/36500

Job ID: 680-246795-1

**Client Sample ID: AF90598** Lab Sample ID: 680-246795-1 Date Collected: 02/08/24 14:39

Matrix: GW

Date Received: 02/15/24 10:30

Method: SW846 7470A - Mercury (C	CVAA)								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.200	U	0.200		ug/L		02/20/24 10:58	02/20/24 16:32	1

Client: South Carolina Public Service Authority Project/Site: 125915/JM02.08.G01.3/36500

Job ID: 680-246795-1

**Client Sample ID: AF90605** Lab Sample ID: 680-246795-2 Date Collected: 02/07/24 10:07

Matrix: GW

Date Received: 02/15/24 10:30

Method: SW846 7470A - Mercury (C	VAA)								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.200	U	0.200		ug/L		02/20/24 10:58	02/20/24 16:35	1

Client: South Carolina Public Service Authority Project/Site: 125915/JM02.08.G01.3/36500

Job ID: 680-246795-1

Lab Sample ID: 680-246795-3 **Client Sample ID: AF90606** 

Date Collected: 02/07/24 10:12 Date Received: 02/15/24 10:30

Mercury

Matrix: GW

02/20/24 16:37

02/20/24 10:58

Method: SW846 7470A - Mercury (CVAA) RL Dil Fac Result Qualifier MDL Unit Prepared Analyzed 0.200

ug/L

0.200 U

Client: South Carolina Public Service Authority Project/Site: 125915/JM02.08.G01.3/36500

Job ID: 680-246795-1

**Client Sample ID: AF90604** Lab Sample ID: 680-246795-4

Matrix: GW

Date Collected: 02/07/24 11:12 Date Received: 02/15/24 10:30

Method:	SW846	7470A	- Mercury	(CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.200	U	0.200		ug/L		02/20/24 10:58	02/20/24 16:40	1

Client: South Carolina Public Service Authority Project/Site: 125915/JM02.08.G01.3/36500

Job ID: 680-246795-1

Lab Sample ID: 680-246795-5 **Client Sample ID: AF90596** Date Collected: 02/06/24 10:25

Date Received: 02/15/24 10:30

Matrix: GW

Method: SW846 7470A - Mercury (CVAA) RL Dil Fac Result Qualifier MDL Unit Prepared Analyzed Mercury 0.200 U 0.200 ug/L 02/20/24 10:58 02/20/24 16:24

Client: South Carolina Public Service Authority Project/Site: 125915/JM02.08.G01.3/36500

Job ID: 680-246795-1

Lab Sample ID: 680-246795-6

Matrix: GW

Client Sample ID: AF90597 Date Collected: 02/06/24 11:19

Date Received: 02/15/24 10:30

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.200	U	0.200		ua/L		02/20/24 10:58	02/20/24 16:51	1

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Client: South Carolina Public Service Authority Project/Site: 125915/JM02.08.G01.3/36500

Job ID: 680-246795-1

Lab Sample ID: 680-246795-7

**Client Sample ID: AF90599** Date Collected: 02/06/24 12:45 Date Received: 02/15/24 10:30

Matrix: GW

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.200	U	0.200		ua/L		02/20/24 10:58	02/20/24 16:53	1

### **QC Sample Results**

Client: South Carolina Public Service Authority Project/Site: 125915/JM02.08.G01.3/36500

Job ID: 680-246795-1

Prep Type: Total/NA **Prep Batch: 823551** 

Prep Type: Total/NA

Prep Batch: 823551

Prep Type: Total/NA

**Prep Batch: 823551** 

Prep Type: Total/NA **Prep Batch: 823551** 

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 680-823551/1-A

**Matrix: Water** 

Analysis Batch: 823745

MB MB

Analyte

Result Qualifier

Sample Sample

0.200 U

Result Qualifier

0.200 U 0.200

Spike

Added

2.50

Spike

Added

1.00

MDL Unit RL

LCS LCS

MS MS

Result Qualifier

2.542

0.9942

Result Qualifier

ug/L

Unit

ug/L

Unit

ug/L

Prepared 02/20/24 10:58

D

%Rec

%Rec

102

Client Sample ID: Lab Control Sample

%Rec

Limits

80 \_ 120

%Rec

Limits

80 \_ 120

Client Sample ID: Matrix Spike Duplicate

%Rec

Client Sample ID: Matrix Spike

Client Sample ID: Method Blank

Dil Fac Analyzed 02/20/24 15:49

Lab Sample ID: LCS 680-823551/2-A

**Matrix: Water** 

Mercury

**Analysis Batch: 823745** 

Analyte Mercury

Lab Sample ID: 400-251111-H-1-C MS

**Matrix: Water** 

Analysis Batch: 823745

Analyte

Mercury

Lab Sample ID: 400-251111-H-1-D MSD

**Matrix: Water** 

Mercury

Analysis Batch: 823745

Analyte

Sample Sample Spike Result Qualifier Added 0.200 U

MSD MSD Result Qualifier 1.00 0.9929

Unit ug/L

%Rec 99

RPD Limits 80 - 120 0

RPD

Limit

# **QC Association Summary**

Client: South Carolina Public Service Authority Project/Site: 125915/JM02.08.G01.3/36500 Job ID: 680-246795-1

### Metals

**Prep Batch: 823551** 

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batcl
680-246795-1	AF90598	Total/NA	GW	7470A	
680-246795-2	AF90605	Total/NA	GW	7470A	
680-246795-3	AF90606	Total/NA	GW	7470A	
680-246795-4	AF90604	Total/NA	GW	7470A	
680-246795-5	AF90596	Total/NA	GW	7470A	
680-246795-6	AF90597	Total/NA	GW	7470A	
680-246795-7	AF90599	Total/NA	GW	7470A	
MB 680-823551/1-A	Method Blank	Total/NA	Water	7470A	
LCS 680-823551/2-A	Lab Control Sample	Total/NA	Water	7470A	
400-251111-H-1-C MS	Matrix Spike	Total/NA	Water	7470A	
400-251111-H-1-D MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	

### Analysis Batch: 823745

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-246795-1	AF90598	Total/NA	GW	7470A	823551
680-246795-2	AF90605	Total/NA	GW	7470A	823551
680-246795-3	AF90606	Total/NA	GW	7470A	823551
680-246795-4	AF90604	Total/NA	GW	7470A	823551
680-246795-5	AF90596	Total/NA	GW	7470A	823551
680-246795-6	AF90597	Total/NA	GW	7470A	823551
680-246795-7	AF90599	Total/NA	GW	7470A	823551
MB 680-823551/1-A	Method Blank	Total/NA	Water	7470A	823551
LCS 680-823551/2-A	Lab Control Sample	Total/NA	Water	7470A	823551
400-251111-H-1-C MS	Matrix Spike	Total/NA	Water	7470A	823551
400-251111-H-1-D MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	823551

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Job ID: 680-246795-1

Client: South Carolina Public Service Authority

Project/Site: 125915/JM02.08.G01.3/36500

**Client Sample ID: AF90598** Lab Sample ID: 680-246795-1 Date Collected: 02/08/24 14:39

Matrix: GW

Date Received: 02/15/24 10:30

Batch Batch Dilution Batch **Prepared** Prep Type Туре Method Run Factor Number Analyst Lab or Analyzed Total/NA 7470A 823551 DW 02/20/24 10:58 Prep **EET SAV** Total/NA 823745 DW 02/20/24 16:32 Analysis 7470A 1 **EET SAV** 

Client Sample ID: AF90605 Lab Sample ID: 680-246795-2

Date Collected: 02/07/24 10:07 Matrix: GW

Date Received: 02/15/24 10:30

	Batch	Batch		Dilution	Batch			Prepared	
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed	
Total/NA	Prep	7470A			823551	DW	EET SAV	02/20/24 10:58	
Total/NA	Analysis	7470A		1	823745	DW	EET SAV	02/20/24 16:35	

Client Sample ID: AF90606 Lab Sample ID: 680-246795-3

Date Collected: 02/07/24 10:12 Matrix: GW

Date Received: 02/15/24 10:30

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	7470A			823551	DW	EET SAV	02/20/24 10:58
Total/NA	Analysis	7470A		1	823745	DW	EET SAV	02/20/24 16:37

Client Sample ID: AF90604 Lab Sample ID: 680-246795-4 Date Collected: 02/07/24 11:12 **Matrix: GW** 

Date Received: 02/15/24 10:30

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	7470A			823551	DW	EET SAV	02/20/24 10:58
Total/NA	Analysis	7470A		1	823745	DW	EET SAV	02/20/24 16:40

Client Sample ID: AF90596 Lab Sample ID: 680-246795-5

Date Collected: 02/06/24 10:25 Matrix: GW

Date Received: 02/15/24 10:30

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	7470A			823551	DW	EET SAV	02/20/24 10:58
Total/NA	Analysis	7470A		1	823745	DW	EET SAV	02/20/24 16:24

Client Sample ID: AF90597 Lab Sample ID: 680-246795-6

Date Collected: 02/06/24 11:19 Matrix: GW

Date Received: 02/15/24 10:30

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	7470A			823551	DW	EET SAV	02/20/24 10:58
Total/NA	Analysis	7470A		1	823745	DW	EET SAV	02/20/24 16:51

**Eurofins Savannah** 

2/22/2024

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### **Lab Chronicle**

Client: South Carolina Public Service Authority Job ID: 680-246795-1

Project/Site: 125915/JM02.08.G01.3/36500

Lab Sample ID: 680-246795-7 **Client Sample ID: AF90599** 

Matrix: GW

Date Collected: 02/06/24 12:45 Date Received: 02/15/24 10:30

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	7470A			823551	DW	EET SAV	02/20/24 10:58
Total/NA	Analysis	7470A		1	823745	DW	EET SAV	02/20/24 16:53

#### **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 / 24 Send report to |cwillia@santeecooper.com & sherri.levv@santeecooper.com

# **Chain of Custody**



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

Rerun request for any flagged QC **Customer Email/Report Recipient: Date Results Needed by:** Project/Task/Unit #: LINDA.MILIAMS @santeecooper.com 125915 / JM 02.08. GØ1.3 / 36500 (Yes) No Analysis Group Comments Labworks ID# Sample Location/ Bottle type: (Glass-G/Plastic-P) Matrix(see below Collection Time (Internal use Description Collection Date Method # Collecto Total # of contain Preservative (s below) Reporting limit only) Grab (G) or Composite (C) Misc. sample info Any other notes 市 WJK 2/8/24 WAP -3 G 2 AF90598 GW 7470 RL=0.2 Mg/L X 1439 2/7/24 WAP-10 AF90605 1067 WAP-10 DUP 06 1012 04 WAP-9 11/2 WJK 2/6/24 WAP-2 1025 AF70596 WAP-2R 1119 77 1245 99 WKP-4 680-246795 Chain of Custody Sample Receiving (Internal Use Only) Received by: Employee # Date Time. Relinquished by: Employee# Date Time TEMP (°C):\_ Initial: Slevy 35594 2/14/24 1000 Correct pH: Yes No Date Time Relinguished by: Employee# Date Time Received by: Employee # Preservative Lot#: Margo Received by: Employee# Date Time Employee # Date Time Relinquished by: Date/Time/init for preservative: ☐ METALS (all) **Nutrients** MISC. Gypsum Coal Flyash Oil O Cu D Sb □ Ag O TOC □ Wallboard Trans. Oll Qual. **DBTEX** □ Ultimate ☐ Ammonia ПFe □ Se DAI □ Naphthalene II DOC Gypsum(all ☐ % Moisture D LOI THM/HAA OK below) □ As □ Sn □ TP/TPO4 □ Ash ☐ % Carbon Acidly □ VOC D AIM □ NH3-N □ Sulfur □ Mineral □В **DLi** □ Sr □ Oil & Grease DITOC D BTUs Analysis IIT □ E. Coli □ Ti □ Ba □ Mg D Volatile Matter □ Sieve ☐ Total Coliform C Soluble Metals Used Oll □ Mn DTI II NO2 DCHN ☐ % Moisture □ Be □рН ☐ Purity (CaSO4)
☐ % Moisture O Br ☐ Dissolved As Other Tests: Flashpoint OV □ Ca □Мо Metals in oll □ Dissolved Fe ☐ XRF Scan **B** NO3 □ Sulfites **NPDES** (An, Md, Mr, Ni.Pb □ Cd □ Na O Zn ☐ Rad 226 □pH D HGI □ SO4 □ Oil & Grease ☐ Rad 228 ☐ Fineness D Ni O Hg □Со □ PCB ☐ Particulate Matter DAS DISS □ CrVI □ Cr □Pb

## **Login Sample Receipt Checklist**

Client: South Carolina Public Service Authority

Job Number: 680-246795-1

Login Number: 246795 List Source: Eurofins Savannah

List Number: 1

Creator: Munro, Caroline

Creator: Munro, Caroline		
Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td></td>	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	

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## **Accreditation/Certification Summary**

Client: South Carolina Public Service Authority

Project/Site: 125915/JM02.08.G01.3/36500

Job ID: 680-246795-1

### **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	

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## PREPARED FOR

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

Generated 2/27/2024 12:48:25 PM

## JOB DESCRIPTION

125915/JM02.08.G01.1/36500

## **JOB NUMBER**

680-246968-1

Eurofins Savannah 5102 LaRoche Avenue Savannah GA 31404



## **Eurofins Savannah**

#### **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 2/27/2024 12:48:25 PM

Authorized for release by Jerry Lanier, Project Manager I <u>Jerry.Lanier@et.eurofinsus.com</u> (912)250-0281 Client: South Carolina Public Service Authority Project/Site: 125915/JM02.08.G01.1/36500

Laboratory Job ID: 680-246968-1

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#### **Case Narrative**

Client: South Carolina Public Service Authority

Project: 125915/JM02.08.G01.1/36500

Job ID: 680-246968-1 Eurofins Savannah

Job Narrative 680-246968-1

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 2/21/2024 10:05 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 14.2°C.

#### **Metals**

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

**Eurofins Savannah** 

Job ID: 680-246968-1

Page 4 of 39 2/27/2024

## **Sample Summary**

Client: South Carolina Public Service Authority Project/Site: 125915/JM02.08.G01.1/36500

Job ID: 680-246968-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-246968-1	AF90642	Water	02/13/24 11:35	02/21/24 10:05
680-246968-2	AF90643	Water	02/13/24 12:41	02/21/24 10:05
680-246968-3	AF90618	Water	02/13/24 13:48	02/21/24 10:05
680-246968-4	AF90619	Water	02/13/24 13:53	02/21/24 10:05
680-246968-5	AF90641	Water	02/12/24 14:05	02/21/24 10:05
680-246968-6	AF90636	Water	02/13/24 10:13	02/21/24 10:05
680-246968-7	AF90638	Water	02/14/24 10:10	02/21/24 10:05
680-246968-8	AF90639	Water	02/14/24 11:05	02/21/24 10:05
680-246968-9	AF90640	Water	02/14/24 11:10	02/21/24 10:05
680-246968-10	AF90635	Water	02/14/24 12:19	02/21/24 10:05
680-246968-11	AF90608	Water	02/14/24 14:04	02/21/24 10:05
680-246968-12	AF90609	Water	02/14/24 14:09	02/21/24 10:05
680-246968-13	AF90630	Water	02/15/24 11:25	02/21/24 10:05
680-246968-14	AF90623	Water	02/15/24 12:20	02/21/24 10:05
680-246968-15	AF90633	Water	02/15/24 14:12	02/21/24 10:05
680-246968-16	AF90625	Water	02/15/24 10:35	02/21/24 10:05
680-246968-17	AF90613	Water	02/15/24 13:31	02/21/24 10:05
680-246968-18	AF90620	Water	02/12/24 12:45	02/21/24 10:05
680-246968-19	AF90624	Water	02/12/24 11:47	02/21/24 10:05

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## **Method Summary**

Client: South Carolina Public Service Authority Project/Site: 125915/JM02.08.G01.1/36500

Job ID: 680-246968-1

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

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## **Definitions/Glossary**

Client: South Carolina Public Service Authority Project/Site: 125915/JM02.08.G01.1/36500

Most Probable Number

Not Calculated

Negative / Absent

Positive / Present

Presumptive

**Quality Control** 

Method Quantitation Limit

Practical Quantitation Limit

Relative Error Ratio (Radiochemistry)

Toxicity Equivalent Factor (Dioxin)

Too Numerous To Count

Toxicity Equivalent Quotient (Dioxin)

Reporting Limit or Requested Limit (Radiochemistry)

Relative Percent Difference, a measure of the relative difference between two points

Not Detected at the reporting limit (or MDL or EDL if shown)

Job ID: 680-246968-1

#### **Qualifiers**

M	eta	ls

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
U	Indicates the analyte was analyzed for but not detected.

MPN

MQL

NC

ND

NEG POS

PQL

**PRES** 

QC

RER RL

RPD

TEF

TEQ

TNTC

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)

## **Detection Summary**

Detection Cammary	
Client: South Carolina Public Service Authority Project/Site: 125915/JM02.08.G01.1/36500	Job ID: 680-246968-1
Client Sample ID: AF90642	Lab Sample ID: 680-246968-1
No Detections.	
Client Sample ID: AF90643	Lab Sample ID: 680-246968-2
No Detections.	
Client Sample ID: AF90618	Lab Sample ID: 680-246968-3
No Detections.	
Client Sample ID: AF90619	Lab Sample ID: 680-246968-4
No Detections.	
Client Sample ID: AF90641	Lab Sample ID: 680-246968-5
No Detections.	
Client Sample ID: AF90636	Lab Sample ID: 680-246968-6
No Detections.	
Client Sample ID: AF90638	Lab Sample ID: 680-246968-7
No Detections.	
Client Sample ID: AF90639	Lab Sample ID: 680-246968-8
No Detections.	
Client Sample ID: AF90640	Lab Sample ID: 680-246968-9
No Detections.	
Client Sample ID: AF90635	Lab Sample ID: 680-246968-10
No Detections.	
Client Sample ID: AF90608	Lab Sample ID: 680-246968-11
No Detections.	
Client Sample ID: AF90609	Lab Sample ID: 680-246968-12
No Detections.	
Client Sample ID: AF90630	Lab Sample ID: 680-246968-13
No Detections.	
Client Sample ID: AF90623	Lab Sample ID: 680-246968-14
No Detections.	
Client Sample ID: AF90633	Lab Sample ID: 680-246968-15
No Detections.	
Client Sample ID: AF90625	Lab Sample ID: 680-246968-16
No Detections.	

This Detection Summary does not include radiochemical test results.

Eurofins Savannah

## **Detection Summary**

Project/Site: 125915/JM02.08.G01.1/36500

Client Sample ID: AF90613

No Detections.

Client Sample ID: AF90620

Lab Sample ID: 680-246968-18

No Detections.

Lab Sample ID: 680-246968-19

Job ID: 680-246968-1

No Detections.

Client Sample ID: AF90624

Client: South Carolina Public Service Authority

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Client: South Carolina Public Service Authority Project/Site: 125915/JM02.08.G01.1/36500

Job ID: 680-246968-1

Lab Sample ID: 680-246968-1

Date Collected: 02/13/24 11:35 Date Received: 02/21/24 10:05

**Client Sample ID: AF90642** 

Matrix: Water

Method: SW846 7470A - Mercury (CVAA)

Metilod. 3W040 1410A - Metcuty (CVAA)									
Analyte	Result (	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.200	J	0.200		ug/L		02/22/24 15:20	02/23/24 17:33	1

Client: South Carolina Public Service Authority Project/Site: 125915/JM02.08.G01.1/36500

Job ID: 680-246968-1

Lab Sample ID: 680-246968-2

Dil Fac

Date Collected: 02/13/24 12:41 Date Received: 02/21/24 10:05

**Client Sample ID: AF90643** 

Matrix: Water

Analyzed

02/23/24 17:39

Method: SW846 7470A - Mercury (CVAA)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared		
Mercury	0.200	U	0.200		ug/L		02/22/24 15:20		

Client: South Carolina Public Service Authority Project/Site: 125915/JM02.08.G01.1/36500

Job ID: 680-246968-1

**Client Sample ID: AF90618** Lab Sample ID: 680-246968-3

0.200 U

Matrix: Water

Date Collected: 02/13/24 13:48 Date Received: 02/21/24 10:05

Mercury

02/23/24 17:42

02/22/24 15:20

Method: SW846 7470A - Mercury (CVAA) RL Dil Fac Result Qualifier MDL Unit Prepared Analyzed 0.200

ug/L

Client: South Carolina Public Service Authority Project/Site: 125915/JM02.08.G01.1/36500

Job ID: 680-246968-1

Client Sample ID: AF90619

Lab Sample ID: 680-246968-4

Matrix: Water

Date Collected: 02/13/24 13:53 Date Received: 02/21/24 10:05

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.200	U	0.200		ua/L		02/22/24 15:20	02/23/24 17:44	1

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Client: South Carolina Public Service Authority Project/Site: 125915/JM02.08.G01.1/36500

Job ID: 680-246968-1

Lab Sample ID: 680-246968-5

**Matrix: Water** 

Date Collected: 02/12/24 14:05 Date Received: 02/21/24 10:05

Client Sample ID: AF90641

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.200	U	0.200	ua/l		02/22/24 15:20	02/23/24 17:46	1

Client: South Carolina Public Service Authority Project/Site: 125915/JM02.08.G01.1/36500

Job ID: 680-246968-1

Lab Sample ID: 680-246968-6

Date Collected: 02/13/24 10:13 Date Received: 02/21/24 10:05

**Client Sample ID: AF90636** 

Matrix: Water

Method: SW846 7470A - Mercury (CVAA)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	

Analyzed Dil Fac Prepared 0.200 U Mercury 0.200 ug/L 02/22/24 15:20 02/23/24 17:48

Client: South Carolina Public Service Authority Project/Site: 125915/JM02.08.G01.1/36500

Job ID: 680-246968-1

Lab Sample ID: 680-246968-7 **Client Sample ID: AF90638** Date Collected: 02/14/24 10:10

**Matrix: Water** 

Date Received: 02/21/24 10:05

Method: SW846 7470A - Mercury (CVAA) RL Dil Fac Result Qualifier MDL Unit Prepared Analyzed Mercury 0.200 U 0.200 ug/L 02/22/24 15:20 02/23/24 17:50

Client: South Carolina Public Service Authority Project/Site: 125915/JM02.08.G01.1/36500

Job ID: 680-246968-1

Lab Sample ID: 680-246968-8

Date Collected: 02/14/24 11:05 Date Received: 02/21/24 10:05

**Client Sample ID: AF90639** 

Matrix: Water

Analyte	Result	Qualifier	RL	MDL Un		D	Prepared	Analyzed	Dil Fac
Mercury	0.200	U	0.200	ug	L		02/22/24 15:20	02/23/24 17:52	1

Client: South Carolina Public Service Authority Project/Site: 125915/JM02.08.G01.1/36500

Job ID: 680-246968-1

Analyzed

02/23/24 17:54

02/22/24 15:20

**Client Sample ID: AF90640** Lab Sample ID: 680-246968-9 Date Collected: 02/14/24 11:10

0.200

ug/L

**Matrix: Water** 

Dil Fac

Date Received: 02/21/24 10:05

Mercury

Method: SW846 7470A - Mercury (CVAA) RL Result Qualifier MDL Unit Prepared

0.200 U

Client: South Carolina Public Service Authority Project/Site: 125915/JM02.08.G01.1/36500

Job ID: 680-246968-1

Client Sample ID: AF90635 Lab Sample ID: 680-246968-10

Matrix: Water

Date Collected: 02/14/24 12:19 Date Received: 02/21/24 10:05

Method: SW846 7470A - Mercury (CVAA)

 Analyte
 Result
 Qualifier
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 MDL
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 Mercury
 0.200
 U
 0.200
 ug/L
 02/22/24 15:20
 02/23/24 17:56
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Client: South Carolina Public Service Authority

Project/Site: 125915/JM02.08.G01.1/36500

**Client Sample ID: AF90608** 

Date Received: 02/21/24 10:05

Lab Sample ID: 680-246968-11 Date Collected: 02/14/24 14:04

**Matrix: Water** 

Job ID: 680-246968-1

Method: SW846 7470A - Mercury (CVAA)

RL Dil Fac Result Qualifier MDL Unit Prepared Analyzed Mercury 0.200 U 0.200 ug/L 02/26/24 11:43 02/26/24 17:12

Client: South Carolina Public Service Authority Project/Site: 125915/JM02.08.G01.1/36500

Job ID: 680-246968-1

Lab Sample ID: 680-246968-12 **Client Sample ID: AF90609** Date Collected: 02/14/24 14:09

Matrix: Water

Date Received: 02/21/24 10:05

Method: SW846 7470A - Mercury (0	CVAA)								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.200	U	0.200		ug/L		02/26/24 11:43	02/26/24 17:18	1

Client: South Carolina Public Service Authority

Project/Site: 125915/JM02.08.G01.1/36500

Client Sample ID: AF90630 Lab Sample ID: 680-246968-13

Date Collected: 02/15/24 11:25 Matrix: Water

Date Received: 02/21/24 10:05

Method: SW846 7470A - Mercury (	CVAA)								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.200	U	0.200		ua/L		02/26/24 11:43	02/26/24 17:20	1

Job ID: 680-246968-1

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Client: South Carolina Public Service Authority Project/Site: 125915/JM02.08.G01.1/36500

Job ID: 680-246968-1

Client Sample ID: AF90623

Lab Sample ID: 680-246968-14

**Matrix: Water** 

Date Collected: 02/15/24 12:20 Date Received: 02/21/24 10:05

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.200	U	0.200		ug/L		02/26/24 11:43	02/26/24 17:22	1

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Client: South Carolina Public Service Authority

Job ID: 680-246968-1

Project/Site: 125915/JM02.08.G01.1/36500

Lab Sample ID: 680-246968-15

**Matrix: Water** 

Date Collected: 02/15/24 14:12 Date Received: 02/21/24 10:05

**Client Sample ID: AF90633** 

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.200	U	0.200		ua/l		02/26/24 11:43	02/26/24 17:24	1

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Client: South Carolina Public Service Authority

Job ID: 680-246968-1

Project/Site: 125915/JM02.08.G01.1/36500

Lab Sample ID: 680-246968-16 **Client Sample ID: AF90625** Date Collected: 02/15/24 10:35

**Matrix: Water** 

Date Received: 02/21/24 10:05

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.200	U	0.200	ua/l		02/26/24 11:43	02/26/24 17:26	1

Client: South Carolina Public Service Authority Project/Site: 125915/JM02.08.G01.1/36500

Job ID: 680-246968-1

Lab Sample ID: 680-246968-17

Date Collected: 02/15/24 13:31 Date Received: 02/21/24 10:05

**Client Sample ID: AF90613** 

Matrix: Water

Method: SW	346 7470A -	Mercury	(CVAA)
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Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.200	U	0.200		ug/L		02/26/24 11:43	02/26/24 17:32	1

Client: South Carolina Public Service Authority

Job ID: 680-246968-1

Project/Site: 125915/JM02.08.G01.1/36500

Lab Sample ID: 680-246968-18

**Matrix: Water** 

Date Collected: 02/12/24 12:45 Date Received: 02/21/24 10:05

**Client Sample ID: AF90620** 

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.200	П	0.200		ua/l		02/26/24 11:43	02/26/24 17:34	1

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Client: South Carolina Public Service Authority Project/Site: 125915/JM02.08.G01.1/36500

Job ID: 680-246968-1

Client Sample ID: AF90624 Lab Sample ID: 680-246968-19

Matrix: Water

Date Collected: 02/12/24 11:47 Date Received: 02/21/24 10:05

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.200	U	0.200		ua/L		02/26/24 11:43	02/26/24 17:36	1

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Client: South Carolina Public Service Authority Project/Site: 125915/JM02.08.G01.1/36500

Job ID: 680-246968-1

Prep Type: Total/NA

Prep Batch: 824088

Prep Type: Total/NA

**Prep Batch: 824551** 

Client Sample ID: Method Blank

Client Sample ID: Lab Control Sample

%Rec

Limits

80 \_ 120

%Rec

Limits

80 \_ 120

Client Sample ID: Matrix Spike Duplicate

%Rec

Limits

80 - 120

Client Sample ID: Method Blank

Analyzed

Client Sample ID: Matrix Spike

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 680-824088/1-A

Matrix: Water

Analysis Batch: 824292

MB MB

Sample Sample

Result Qualifier

Sample Sample

0.200 UF1

Result Qualifier

MR MR

0.200 U

Sample Sample

0.200 U

Result Qualifier

Result Qualifier

Analyte Result Qualifier RL MDL Unit D Prepared Analyzed Dil Fac Mercury 0.200 U 0.200 ug/L 02/22/24 15:20 02/23/24 17:00

Lab Sample ID: LCS 680-824088/2-A

Matrix: Water

**Analysis Batch: 824292** 

Analyte

Mercury

Lab Sample ID: 680-246896-E-1-E MS **Matrix: Water** 

Analysis Batch: 824292

Analyte

Mercury 0.200 UF1

Lab Sample ID: 680-246896-E-1-F MSD

**Matrix: Water** 

Analysis Batch: 824292

Analyte Mercury

Lab Sample ID: MB 680-824551/1-A

Mercury

Mercury

**Analyte** 

**Matrix: Water** 

Analysis Batch: 824780

Analyte

Lab Sample ID: LCS 680-824551/2-A

**Matrix: Water** 

Analysis Batch: 824780

Analyte

Lab Sample ID: 680-246968-11 MS

**Matrix: Water** 

Analysis Batch: 824780

Mercury

Lab Sample ID: 680-246968-11 MSD

**Matrix: Water** 

Analysis Batch: 824780

Spike Sample Sample Analyte Result Qualifier Added Mercury 0.200 1 00

Added Result Qualifier 2.50 2.384

Spike

Spike

Added

Spike

Added

1.00

Spike

Added

2.50

Spike

Added

1.00

RL

0 200

1.00

LCS LCS

Unit

ug/L

Unit

ug/L

Unit

ug/L

D

%Rec

%Rec

%Rec

62

58

95

MS MS

Result Qualifier

0.5773 F1

MSD MSD

Result Qualifier 0.6176 F1

LCS LCS

MS MS

MSD MSD

Qualifier

Result

0.8121

Result Qualifier

Qualifier

Result

2.120

0.8729

MDL Unit ug/L

Unit

ug/L

Unit

ug/L

Unit

ug/L

D

D

02/26/24 11:43 Client Sample ID: Lab Control Sample

Prepared

%Rec

%Rec

%Rec

81

80 \_ 120

87

85

02/26/24 17:08

Prep Type: Total/NA

Prep Batch: 824551

%Rec Limits 80 \_ 120

Client Sample ID: AF90608 Prep Type: Total/NA

**Prep Batch: 824551** 

%Rec Limits 80 \_ 120

Client Sample ID: AF90608 Prep Type: Total/NA

Prep Batch: 824551

RPD %Rec Limits **RPD** Limit

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RPD

Limit

Dil Fac

## **QC Association Summary**

Client: South Carolina Public Service Authority Project/Site: 125915/JM02.08.G01.1/36500

Job ID: 680-246968-1

#### Metals

**Prep Batch: 824088** 

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-246968-1	AF90642	Total/NA	Water	7470A	
680-246968-2	AF90643	Total/NA	Water	7470A	
680-246968-3	AF90618	Total/NA	Water	7470A	
680-246968-4	AF90619	Total/NA	Water	7470A	
680-246968-5	AF90641	Total/NA	Water	7470A	
680-246968-6	AF90636	Total/NA	Water	7470A	
680-246968-7	AF90638	Total/NA	Water	7470A	
680-246968-8	AF90639	Total/NA	Water	7470A	
680-246968-9	AF90640	Total/NA	Water	7470A	
680-246968-10	AF90635	Total/NA	Water	7470A	
MB 680-824088/1-A	Method Blank	Total/NA	Water	7470A	
LCS 680-824088/2-A	Lab Control Sample	Total/NA	Water	7470A	
680-246896-E-1-E MS	Matrix Spike	Total/NA	Water	7470A	
680-246896-E-1-F MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	

#### Analysis Batch: 824292

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-246968-1	AF90642	Total/NA	Water	7470A	824088
680-246968-2	AF90643	Total/NA	Water	7470A	824088
680-246968-3	AF90618	Total/NA	Water	7470A	824088
680-246968-4	AF90619	Total/NA	Water	7470A	824088
680-246968-5	AF90641	Total/NA	Water	7470A	824088
680-246968-6	AF90636	Total/NA	Water	7470A	824088
680-246968-7	AF90638	Total/NA	Water	7470A	824088
680-246968-8	AF90639	Total/NA	Water	7470A	824088
680-246968-9	AF90640	Total/NA	Water	7470A	824088
680-246968-10	AF90635	Total/NA	Water	7470A	824088
MB 680-824088/1-A	Method Blank	Total/NA	Water	7470A	824088
LCS 680-824088/2-A	Lab Control Sample	Total/NA	Water	7470A	824088
680-246896-E-1-E MS	Matrix Spike	Total/NA	Water	7470A	824088
680-246896-E-1-F MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	824088

#### **Prep Batch: 824551**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-246968-11	AF90608	Total/NA	Water	7470A	
680-246968-12	AF90609	Total/NA	Water	7470A	
680-246968-13	AF90630	Total/NA	Water	7470A	
680-246968-14	AF90623	Total/NA	Water	7470A	
680-246968-15	AF90633	Total/NA	Water	7470A	
680-246968-16	AF90625	Total/NA	Water	7470A	
680-246968-17	AF90613	Total/NA	Water	7470A	
680-246968-18	AF90620	Total/NA	Water	7470A	
680-246968-19	AF90624	Total/NA	Water	7470A	
MB 680-824551/1-A	Method Blank	Total/NA	Water	7470A	
_CS 680-824551/2-A	Lab Control Sample	Total/NA	Water	7470A	
880-246968-11 MS	AF90608	Total/NA	Water	7470A	
680-246968-11 MSD	AF90608	Total/NA	Water	7470A	

#### Analysis Batch: 824780

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-246968-11	AF90608	Total/NA	Water	7470A	824551

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## **QC Association Summary**

Client: South Carolina Public Service Authority Project/Site: 125915/JM02.08.G01.1/36500

Job ID: 680-246968-1

#### **Metals (Continued)**

#### Analysis Batch: 824780 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-246968-12	AF90609	Total/NA	Water	7470A	824551
680-246968-13	AF90630	Total/NA	Water	7470A	824551
680-246968-14	AF90623	Total/NA	Water	7470A	824551
680-246968-15	AF90633	Total/NA	Water	7470A	824551
680-246968-16	AF90625	Total/NA	Water	7470A	824551
680-246968-17	AF90613	Total/NA	Water	7470A	824551
680-246968-18	AF90620	Total/NA	Water	7470A	824551
680-246968-19	AF90624	Total/NA	Water	7470A	824551
MB 680-824551/1-A	Method Blank	Total/NA	Water	7470A	824551
LCS 680-824551/2-A	Lab Control Sample	Total/NA	Water	7470A	824551
680-246968-11 MS	AF90608	Total/NA	Water	7470A	824551
680-246968-11 MSD	AF90608	Total/NA	Water	7470A	824551

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Job ID: 680-246968-1

Client: South Carolina Public Service Authority Project/Site: 125915/JM02.08.G01.1/36500

Client Sample ID: AF90642

Date Collected: 02/13/24 11:35 Date Received: 02/21/24 10:05

Lab Sample ID: 680-246968-1

**Matrix: Water** 

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	7470A			824088	DW	EET SAV	02/22/24 15:20
Total/NA	Analysis	7470A		1	824292	DW	EET SAV	02/23/24 17:33

Client Sample ID: AF90643 Lab Sample ID: 680-246968-2

Date Collected: 02/13/24 12:41 Matrix: Water

Date Received: 02/21/24 10:05

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	7470A			824088	DW	EET SAV	02/22/24 15:20
Total/NA	Analysis	7470A		1	824292	DW	EET SAV	02/23/24 17:39

Client Sample ID: AF90618 Lab Sample ID: 680-246968-3

**Matrix: Water** 

Date Collected: 02/13/24 13:48 Date Received: 02/21/24 10:05

Batch Batch Dilution Batch **Prepared** Method **Prep Type** Type Run Factor Number Analyst Lab or Analyzed Total/NA 7470A 824088 **EET SAV** 02/22/24 15:20 Prep Total/NA 02/23/24 17:42 7470A 824292 DW **EET SAV** Analysis 1

Client Sample ID: AF90619 Lab Sample ID: 680-246968-4

Date Collected: 02/13/24 13:53 Date Received: 02/21/24 10:05

	Batch	Batch		Dilution	Batch			Prepared	
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed	
Total/NA	Prep	7470A			824088	DW	EET SAV	02/22/24 15:20	
Total/NA	Analysis	7470A		1	824292	DW	EET SAV	02/23/24 17:44	

Client Sample ID: AF90641 Lab Sample ID: 680-246968-5

Date Collected: 02/12/24 14:05

Date Received: 02/21/24 10:05

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	7470A			824088	DW	EET SAV	02/22/24 15:20
Total/NA	Analysis	7470A		1	824292	DW	EET SAV	02/23/24 17:46

Client Sample ID: AF90636 Lab Sample ID: 680-246968-6

Date Collected: 02/13/24 10:13 **Matrix: Water** 

Date Received: 02/21/24 10:05

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	7470A			824088	DW	EET SAV	02/22/24 15:20
Total/NA	Analysis	7470A		1	824292	DW	EET SAV	02/23/24 17:48

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**Matrix: Water** 

**Matrix: Water** 

Job ID: 680-246968-1

Client: South Carolina Public Service Authority Project/Site: 125915/JM02.08.G01.1/36500

Client Sample ID: AF90638

Lab Sample ID: 680-246968-7 Date Collected: 02/14/24 10:10

**Matrix: Water** 

Date Received: 02/21/24 10:05

Total/NA

Analysis

7470A

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	7470A			824088	DW	EET SAV	02/22/24 15:20
Total/NA	Analysis	7470A		1	824292	DW	EET SAV	02/23/24 17:50

Client Sample ID: AF90639 Lab Sample ID: 680-246968-8

Date Collected: 02/14/24 11:05 Matrix: Water

Date Received: 02/21/24 10:05

Batch Batch Dilution Batch Prepared **Prep Type** Туре Method Run Factor Number Analyst Lab or Analyzed Total/NA 7470A 824088 DW EET SAV 02/22/24 15:20 Prep Total/NA 7470A 824292 DW 02/23/24 17:52 Analysis **EET SAV** 

Client Sample ID: AF90640 Lab Sample ID: 680-246968-9

Date Collected: 02/14/24 11:10 **Matrix: Water** Date Received: 02/21/24 10:05

Batch Batch Dilution Batch Prepared Method or Analyzed Prep Type Type Run Factor Number Analyst Lab Total/NA 7470A 824088 DW EET SAV 02/22/24 15:20 Prep Total/NA 02/23/24 17:54 Analysis 7470A 824292 DW **EET SAV** 1

Client Sample ID: AF90635 Lab Sample ID: 680-246968-10

Date Collected: 02/14/24 12:19 **Matrix: Water** Date Received: 02/21/24 10:05

Batch Batch Dilution Batch **Prepared** Method **Prep Type** Type Run Factor Number Analyst Lab or Analyzed 02/22/24 15:20 Total/NA Prep 7470A 824088 DW **EET SAV** Total/NA Analysis 7470A 1 824292 DW EET SAV 02/23/24 17:56

Client Sample ID: AF90608 Lab Sample ID: 680-246968-11

Date Collected: 02/14/24 14:04 **Matrix: Water** Date Received: 02/21/24 10:05

Batch Batch Dilution Batch Prepared Method **Prep Type** Туре Run Factor or Analyzed Number Analyst Lab Total/NA Prep 7470A 824551 DW **EET SAV** 02/26/24 11:43

1 Client Sample ID: AF90609 Lab Sample ID: 680-246968-12

Date Collected: 02/14/24 14:09 **Matrix: Water** 

Date Received: 02/21/24 10:05

824780 DW

EET SAV

02/26/24 17:12

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	7470A			824551	DW	EET SAV	02/26/24 11:43
Total/NA	Analysis	7470A		1	824780	DW	EET SAV	02/26/24 17:18

2/27/2024

Job ID: 680-246968-1

Client: South Carolina Public Service Authority Project/Site: 125915/JM02.08.G01.1/36500

**Client Sample ID: AF90630** 

Date Collected: 02/15/24 11:25 Date Received: 02/21/24 10:05 Lab Sample ID: 680-246968-13

**Matrix: Water** 

	Batch	Batch		Dilution	Batch		Prepared			
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed		
Total/NA	Prep	7470A			824551	DW	EET SAV	02/26/24 11:43		
Total/NA	Analysis	7470A		1	824780	DW	EET SAV	02/26/24 17:20		

**Client Sample ID: AF90623** Lab Sample ID: 680-246968-14

Date Collected: 02/15/24 12:20 Matrix: Water

Date Received: 02/21/24 10:05

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	7470A			824551	DW	EET SAV	02/26/24 11:43
Total/NA	Analysis	7470A		1	824780	DW	EET SAV	02/26/24 17:22

Client Sample ID: AF90633 Lab Sample ID: 680-246968-15

Date Collected: 02/15/24 14:12 **Matrix: Water** 

Date Received: 02/21/24 10:05

		Batch	Batch		Dilution	Batch		Prepared		
Prep 1	Туре	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed	
Total/N	NA	Prep	7470A			824551	DW	EET SAV	02/26/24 11:43	
Total/N	NA	Analysis	7470A		1	824780	DW	EET SAV	02/26/24 17:24	

Lab Sample ID: 680-246968-16 **Client Sample ID: AF90625** 

Date Collected: 02/15/24 10:35

Date Received: 02/21/24 10:05

	Batch	Batch		Dilution	Batch			Prepared		
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed		
Total/NA	Prep	7470A			824551	DW	EET SAV	02/26/24 11:43		
Total/NA	Analysis	7470A		1	824780	DW	EET SAV	02/26/24 17:26		

**Client Sample ID: AF90613** Lab Sample ID: 680-246968-17

Date Collected: 02/15/24 13:31 **Matrix: Water** 

Date Received: 02/21/24 10:05

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	7470A			824551	DW	EET SAV	02/26/24 11:43
Total/NA	Analysis	7470A		1	824780	DW	EET SAV	02/26/24 17:32

Client Sample ID: AF90620 Lab Sample ID: 680-246968-18

Date Collected: 02/12/24 12:45 **Matrix: Water** Date Received: 02/21/24 10:05

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	7470A			824551	DW	EET SAV	02/26/24 11:43
Total/NA	Analysis	7470A		1	824780	DW	EET SAV	02/26/24 17:34

2/27/2024

**Matrix: Water** 

#### **Lab Chronicle**

Client: South Carolina Public Service Authority

Job ID: 680-246968-1

Project/Site: 125915/JM02.08.G01.1/36500

Client Sample ID: AF90624 Lab Sample ID: 680-246968-19

Matrix: Water

Date Collected: 02/12/24 11:47 Date Received: 02/21/24 10:05

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	7470A			824551	DW	EET SAV	02/26/24 11:43
Total/NA	Analysis	7470A		1	824780	DW	EET SAV	02/26/24 17:36

#### **Laboratory References:**

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

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Santee Cooper
One Riverwood Drive
Moncla Comer, \$C 29461
Phone: (843)761-8000 Ext. 5148
Pex: (843)761-4175

Project/Task/Unit #: Rer

Date Results Needed by:

Customer Email/Report Recipient:

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Analysis Group

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	#8	ealon I	• Yux othe	Preservative (see below)	Matrix(see below)	Grab (G) or Composite (C)	Bottle type: (Glass- G/Plastic-P)	Total # of containers	Sample Collector	Collection Time	Collection Date				

D Ct

O Pb

□ CtVI

### **Login Sample Receipt Checklist**

Client: South Carolina Public Service Authority

Job Number: 680-246968-1

Login Number: 246968 List Source: Eurofins Savannah

List Number: 1

Creator: Stewart, Rendaisha

oreator. Oterrari, remaining		
Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td></td>	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.	True	
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	

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### **Accreditation/Certification Summary**

Client: South Carolina Public Service Authority

Job ID: 680-246968-1

Project/Site: 125915/JM02.08.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	

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# **ANALYTICAL REPORT**

## PREPARED FOR

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

Generated 3/3/2024 10:38:40 AM

### JOB DESCRIPTION

125915/JM02.09.G01.1/36500

## **JOB NUMBER**

680-247155-1

Eurofins Savannah 5102 LaRoche Avenue Savannah GA 31404



## **Eurofins Savannah**

#### **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 3/3/2024 10:38:40 AM

Authorized for release by Jerry Lanier, Project Manager I <u>Jerry.Lanier@et.eurofinsus.com</u> (912)250-0281 Client: South Carolina Public Service Authority Project/Site: 125915/JM02.09.G01.1/36500

Laboratory Job ID: 680-247155-1

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#### **Case Narrative**

Client: South Carolina Public Service Authority

Project: 125915/JM02.09.G01.1/36500

Job ID: 680-247155-1 Eurofins Savannah

## Job Narrative 680-247155-1

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 2/26/2024 10:39 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 17.0°C.

#### **Metals**

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

**Eurofins Savannah** 

Job ID: 680-247155-1

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### **Sample Summary**

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

Job ID: 680-247155-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-247155-1	AF90610	Water	02/21/24 10:15	02/26/24 10:39
680-247155-2	AF90631	Water	02/21/24 11:03	02/26/24 10:39
680-247155-3	AF90615	Water	02/20/24 11:13	02/26/24 10:39
680-247155-4	AF90614	Water	02/20/24 13:07	02/26/24 10:39
680-247155-5	AF90617	Water	02/20/24 09:51	02/26/24 10:39
680-247155-6	AF90632	Water	02/20/24 14:21	02/26/24 10:39
680-247155-7	AF90611	Water	02/19/24 14:45	02/26/24 10:39
680-247155-8	AF90612	Water	02/19/24 14:20	02/26/24 10:39
680-247155-9	AF90628	Water	02/19/24 09:44	02/26/24 10:39
680-247155-10	AF90629 Dup	Water	02/19/24 09:49	02/26/24 10:39
680-247155-11	AF90627	Water	02/19/24 11:05	02/26/24 10:39
680-247155-12	AF90626	Water	02/19/24 12:49	02/26/24 10:39

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### **Method Summary**

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

Job ID: 680-247155-1

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

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### **Definitions/Glossary**

Client: South Carolina Public Service Authority Job ID: 680-247155-1 Project/Site: 125915/JM02.09.G01.1/36500

#### **Qualifiers**

Metals	M	eta	Is
--------	---	-----	----

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
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 Minimum Level (Dioxin) ML

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 Practical Quantitation Limit PQL

**PRES** Presumptive

QC **Quality Control** Relative Error Ratio (Radiochemistry) RER

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

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### **Detection Summary**

Project/Site: 125915/JM02.09.G01.1/36500	300 10. 000-247 135-1
Client Sample ID: AF90610	Lab Sample ID: 680-247155-1
No Detections.	
Client Sample ID: AF90631	Lab Sample ID: 680-247155-2
No Detections.	
Client Sample ID: AF90615	Lab Sample ID: 680-247155-3
No Detections.	
Client Sample ID: AF90614	Lab Sample ID: 680-247155-4
No Detections.	
Client Sample ID: AF90617	Lab Sample ID: 680-247155-5
No Detections.	
Client Sample ID: AF90632	Lab Sample ID: 680-247155-6
No Detections.	
Client Sample ID: AF90611	Lab Sample ID: 680-247155-7
No Detections.	
Client Sample ID: AF90612	Lab Sample ID: 680-247155-8
No Detections.	
Client Sample ID: AF90628	Lab Sample ID: 680-247155-9
No Detections.	
Client Sample ID: AF90629 Dup	Lab Sample ID: 680-247155-10
No Detections.	
Client Sample ID: AF90627	Lab Sample ID: 680-247155-11
No Detections.	
Client Sample ID: AF90626	Lab Sample ID: 680-247155-12

This Detection Summary does not include radiochemical test results.

No Detections.

Client: South Carolina Public Service Authority

Eurofins Savannah

Job ID: 680-247155-1

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

Job ID: 680-247155-1

Client Sample ID: AF90610 Lab Sample ID: 680-247155-1

Matrix: Water

Date Collected: 02/21/24 10:15 Date Received: 02/26/24 10:39

Method: SW846 7470A - Mercury (C	CVAA)								
Analyte	Result C	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.200 [	1	0.200		ua/l		02/28/24 14:33	02/28/24 19:30	

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Client: South Carolina Public Service Authority

Job ID: 680-247155-1

Project/Site: 125915/JM02.09.G01.1/36500

Lab Sample ID: 680-247155-2

Matrix: Water

Client Sample ID: AF90631
Date Collected: 02/21/24 11:03
Date Received: 02/26/24 10:39

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.200	U	0.200		ug/L		02/28/24 14:33	02/28/24 19:20	1

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

Job ID: 680-247155-1

Lab Sample ID: 680-247155-3

Date Collected: 02/20/24 11:13 Date Received: 02/26/24 10:39

**Client Sample ID: AF90615** 

**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		02/28/24 14:33	02/28/24 19:37	1

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

Job ID: 680-247155-1

Lab Sample ID: 680-247155-4

Date Collected: 02/20/24 13:07 Date Received: 02/26/24 10:39

**Client Sample ID: AF90614** 

Matrix: Water

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.200	U	0.200		ua/L		02/28/24 14:33	02/28/24 19:22	1

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

Job ID: 680-247155-1

Lab Sample ID: 680-247155-5 **Client Sample ID: AF90617** Date Collected: 02/20/24 09:51

**Matrix: Water** 

Date Received: 02/26/24 10:39

Method: SW846 7470A - Mercury (CVAA)

RL Dil Fac Result Qualifier MDL Unit Prepared Analyzed

Mercury 0.200 U 0.200 ug/L 02/28/24 14:33 02/28/24 19:10

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

Job ID: 680-247155-1

Lab Sample ID: 680-247155-6

Matrix: Water

Client Sample ID: AF90632 Date Collected: 02/20/24 14:21

Date Received: 02/26/24 10:39

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.200	U	0.200		ua/L		02/28/24 14:33	02/28/24 19:14	1

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

Job ID: 680-247155-1

Lab Sample ID: 680-247155-7 Client Sample ID: AF90611 Date Collected: 02/19/24 14:45

Matrix: Water

Date Received: 02/26/24 10:39

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.200 U	0.200	ug/L		02/28/24 14:33	02/28/24 19:12	1

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

Job ID: 680-247155-1

**Client Sample ID: AF90612** Lab Sample ID: 680-247155-8 Date Collected: 02/19/24 14:20

Matrix: Water

Date Received: 02/26/24 10:39

Method: SW846 7470A - Mercury (C)	/AA)								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.200	U	0.200		ug/L		02/28/24 14:33	02/28/24 19:35	1

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

Job ID: 680-247155-1

Lab Sample ID: 680-247155-9

Date Collected: 02/19/24 09:44 Date Received: 02/26/24 10:39

**Client Sample ID: AF90628** 

Matrix: Water

\_\_\_\_\_ Method: SW846 7470A - Mercury (CVAA)

 Analyte
 Result
 Qualifier
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 MDL
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 Mercury
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 U
 0.200
 ug/L
 02/28/24 14:33
 02/28/24 19:18
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Client: South Carolina Public Service Authority Project/Site: 125915/JM02.09.G01.1/36500

Job ID: 680-247155-1

Client Sample ID: AF90629 Dup

Lab Sample ID: 680-247155-10 Date Collected: 02/19/24 09:49

Matrix: Water

Date Received: 02/26/24 10:39

Method:	SW846	7470A -	Mercury	(CVAA)
---------	-------	---------	---------	--------

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.200	U	0.200		ua/L		02/28/24 14:33	02/28/24 19:32	1

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

Job ID: 680-247155-1

**Client Sample ID: AF90627** 

Lab Sample ID: 680-247155-11

Date Collected: 02/19/24 11:05 Date Received: 02/26/24 10:39

**Matrix: Water** 

Method: SW846 7470A - Mercury (CVAA)

RL Dil Fac Result Qualifier MDL Unit Prepared Analyzed Mercury 0.200 U 0.200 ug/L 02/28/24 14:33 02/28/24 19:24

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

Job ID: 680-247155-1

Lab Sample ID: 680-247155-12

Matrix: Water

Date Collected: 02/19/24 12:49 Date Received: 02/26/24 10:39

**Client Sample ID: AF90626** 

Method: SW846 7470A - Mercury (CVAA)

Michiga. Stroto 1410A - Micigally (									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.200	U	0.200		ug/L		02/28/24 14:33	02/28/24 19:16	1

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#### **QC Sample Results**

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

Job ID: 680-247155-1

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 680-825019/1-A Client Sample ID: Method Blank

**Matrix: Water** 

Analysis Batch: 825097 MB MB

Prep Type: Total/NA

**Prep Batch: 825019** 

MDL Unit Dil Fac Analyte Result Qualifier RL Prepared Analyzed Mercury 0.200 U 0.200 ug/L 02/28/24 14:33 02/28/24 18:41

Lab Sample ID: LCS 680-825019/2-A Client Sample ID: Lab Control Sample **Matrix: Water** Prep Type: Total/NA Analysis Batch: 825097

**Prep Batch: 825019** 

Prep Type: Total/NA

Spike LCS LCS %Rec Analyte Added Result Qualifier Unit D %Rec Limits Mercury 2.50 2.199 ug/L 88 80 \_ 120

Lab Sample ID: 680-247070-C-7-F MS Client Sample ID: Matrix Spike

**Matrix: Water** 

Analysis Batch: 825097 MS MS

**Prep Batch: 825019** Sample Sample Spike %Rec Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits 0.200 U F1 1.00 Mercury 1.944 F1 ug/L 194 80 \_ 120

Lab Sample ID: 680-247070-C-7-G MSD Client Sample ID: Matrix Spike Duplicate

**Matrix: Water** 

Prep Type: Total/NA Analysis Batch: 825097

**Prep Batch: 825019** 

MSD MSD %Rec **RPD** Sample Sample **Spike** Analyte Result Qualifier Added Result Qualifier RPD Limit Unit %Rec Limits 0.200 UF1 1.00 1.991 F1 80 - 120 Mercury ug/L 199 2 20

## **QC Association Summary**

Client: South Carolina Public Service Authority

Project/Site: 125915/JM02.09.G01.1/36500

Job ID: 680-247155-1

#### Metals

#### **Prep Batch: 825019**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-247155-1	AF90610	Total/NA	Water	7470A	
680-247155-2	AF90631	Total/NA	Water	7470A	
680-247155-3	AF90615	Total/NA	Water	7470A	
680-247155-4	AF90614	Total/NA	Water	7470A	
680-247155-5	AF90617	Total/NA	Water	7470A	
680-247155-6	AF90632	Total/NA	Water	7470A	
680-247155-7	AF90611	Total/NA	Water	7470A	
680-247155-8	AF90612	Total/NA	Water	7470A	
680-247155-9	AF90628	Total/NA	Water	7470A	
680-247155-10	AF90629 Dup	Total/NA	Water	7470A	
680-247155-11	AF90627	Total/NA	Water	7470A	
680-247155-12	AF90626	Total/NA	Water	7470A	
MB 680-825019/1-A	Method Blank	Total/NA	Water	7470A	
LCS 680-825019/2-A	Lab Control Sample	Total/NA	Water	7470A	
680-247070-C-7-F MS	Matrix Spike	Total/NA	Water	7470A	
680-247070-C-7-G MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	

#### Analysis Batch: 825097

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-247155-1	AF90610	Total/NA	Water	7470A	825019
680-247155-2	AF90631	Total/NA	Water	7470A	825019
680-247155-3	AF90615	Total/NA	Water	7470A	825019
680-247155-4	AF90614	Total/NA	Water	7470A	825019
680-247155-5	AF90617	Total/NA	Water	7470A	825019
680-247155-6	AF90632	Total/NA	Water	7470A	825019
680-247155-7	AF90611	Total/NA	Water	7470A	825019
680-247155-8	AF90612	Total/NA	Water	7470A	825019
680-247155-9	AF90628	Total/NA	Water	7470A	825019
680-247155-10	AF90629 Dup	Total/NA	Water	7470A	825019
680-247155-11	AF90627	Total/NA	Water	7470A	825019
680-247155-12	AF90626	Total/NA	Water	7470A	825019
MB 680-825019/1-A	Method Blank	Total/NA	Water	7470A	825019
LCS 680-825019/2-A	Lab Control Sample	Total/NA	Water	7470A	825019
680-247070-C-7-F MS	Matrix Spike	Total/NA	Water	7470A	825019
680-247070-C-7-G MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	825019

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Job ID: 680-247155-1

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

**Client Sample ID: AF90610** Lab Sample ID: 680-247155-1

**Matrix: Water** 

Date Collected: 02/21/24 10:15 Date Received: 02/26/24 10:39

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	7470A			825019	RS	EET SAV	02/28/24 14:33
Total/NA	Analysis	7470A		1	825097	BJB	EET SAV	02/28/24 19:30

Client Sample ID: AF90631 Lab Sample ID: 680-247155-2

Date Collected: 02/21/24 11:03 Matrix: Water

Date Received: 02/26/24 10:39

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	7470A			825019	RS	EET SAV	02/28/24 14:33
Total/NA	Analysis	7470A		1	825097	BJB	EET SAV	02/28/24 19:20

**Client Sample ID: AF90615** Lab Sample ID: 680-247155-3

Date Collected: 02/20/24 11:13 **Matrix: Water** Date Received: 02/26/24 10:39

Batch Batch Dilution Batch **Prepared** Method **Prep Type** Type Run Factor Number Analyst Lab or Analyzed Total/NA 7470A 825019 RS **EET SAV** 02/28/24 14:33 Prep Total/NA 7470A 02/28/24 19:37 Analysis 825097 BJB **EET SAV** 1

Client Sample ID: AF90614 Lab Sample ID: 680-247155-4

Date Collected: 02/20/24 13:07 **Matrix: Water** 

Date Received: 02/26/24 10:39

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	7470A			825019	RS	EET SAV	02/28/24 14:33
Total/NA	Analysis	7470A		1	825097	BJB	EET SAV	02/28/24 19:22

Client Sample ID: AF90617 Lab Sample ID: 680-247155-5

Date Collected: 02/20/24 09:51 **Matrix: Water** 

Date Received: 02/26/24 10:39

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	7470A			825019	RS	EET SAV	02/28/24 14:33
Total/NA	Analysis	7470A		1	825097	BJB	EET SAV	02/28/24 19:10

Client Sample ID: AF90632 Lab Sample ID: 680-247155-6

Date Collected: 02/20/24 14:21 **Matrix: Water** 

Date Received: 02/26/24 10:39

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	7470A			825019	RS	EET SAV	02/28/24 14:33
Total/NA	Analysis	7470A		1	825097	BJB	EET SAV	02/28/24 19:14

**Eurofins Savannah** 

3/3/2024

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Job ID: 680-247155-1

Client: South Carolina Public Service Authority

Project/Site: 125915/JM02.09.G01.1/36500

**Client Sample ID: AF90611** Lab Sample ID: 680-247155-7

**Matrix: Water** 

Date Collected: 02/19/24 14:45 Date Received: 02/26/24 10:39

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	7470A			825019	RS	EET SAV	02/28/24 14:33
Total/NA	Analysis	7470A		1	825097	BJB	EET SAV	02/28/24 19:12

Client Sample ID: AF90612 Lab Sample ID: 680-247155-8

Date Collected: 02/19/24 14:20 Matrix: Water

Date Received: 02/26/24 10:39

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	7470A			825019	RS	EET SAV	02/28/24 14:33
Total/NA	Analysis	7470A		1	825097	BJB	EET SAV	02/28/24 19:35

Client Sample ID: AF90628 Lab Sample ID: 680-247155-9

Date Collected: 02/19/24 09:44 **Matrix: Water** 

Date Received: 02/26/24 10:39

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	7470A			825019	RS	EET SAV	02/28/24 14:33
Total/NA	Analysis	7470A		1	825097	BJB	EET SAV	02/28/24 19:18

Client Sample ID: AF90629 Dup Lab Sample ID: 680-247155-10

Date Collected: 02/19/24 09:49 Date Received: 02/26/24 10:39

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	7470A			825019	RS	EET SAV	02/28/24 14:33
Total/NA	Analysis	7470A		1	825097	BJB	EET SAV	02/28/24 19:32

Client Sample ID: AF90627 Lab Sample ID: 680-247155-11

Date Collected: 02/19/24 11:05 **Matrix: Water** Date Received: 02/26/24 10:39

Batch Batch Dilution Batch Prepared Method **Prep Type** Factor or Analyzed Type Run **Number Analyst** Lab Total/NA Prep 7470A 825019 RS **EET SAV** 02/28/24 14:33 Total/NA 7470A 825097 BJB EET SAV 02/28/24 19:24

1 Client Sample ID: AF90626 Lab Sample ID: 680-247155-12

Date Collected: 02/19/24 12:49 **Matrix: Water** 

Date Received: 02/26/24 10:39

Analysis

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	7470A			825019	RS	EET SAV	02/28/24 14:33
Total/NA	Analysis	7470A		1	825097	BJB	EET SAV	02/28/24 19:16

**Laboratory References:** 

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

**Eurofins Savannah** 

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**Matrix: Water** 

### **Chain of Custody**

santee cooper

Santee Cooper One Riverwood Drive Moneks Comer, 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 / JM02.09.601.1 / 36500 (Yes No **Analysis Group** Labworks ID# Sample Location/ Comments Preservative (see below) Matrix(see below) Collection Date Collection Time (Glass Method # (Internal use Description Sample Collector Total # of contain only) Grab (G) or Composite (C) Reporting limit Bottle type: ( G/Plastic-P) Misc. sample info Any other notes WOK 2 X 2/21/24 l 6 P GW AF90610 WAP-13 1015 BM T470 RL= 0.2 49/L WAP -28 31 1103 680-247155 WAP-14C 2/20/24 1113 AF906 15 WAP-14B 1307 14 Chain of AF90617 WAP-16 0951 32 Custody WAP-28R 1421 2/19/24 AF906 11 WAP-14 1415 1 12 WAP-14-DUP 1420 Sample Receiving (Internal Use Only) Relinquished by: Employee# Time Time TEMP (°C):\_ Initial: Spodes Shevy 2/26/24 0806 COURIER 2/26/24 0806 35694 Correct pH: Yes Relinquished by: Employee# Date Time Received by: Employee # Date Time Preservative Lot#: 1039 Ettodge 2/26/24 Relinquished by: Employee# Date Received by: Employee # Date Time Date/Time/Init for preservative: ☐ METALS (all) **Nutrients** MISC. Oil Gypsum Coal **Flyash** □ Ag □ Cu □ Sb BTEX Trum, Oil Qual. □ TOC Wallboard □ Ultimate ☐ Ammonia O Al □ Fe ☐ Se □ Naphthalene %Moisture Gypsum(all D DOC ☐ % Moisture □ LOI □ THM/HAA Color □ As DK □ Sn below) □ TP/TPO4 [] Ash ☐ % Carbon IT VOC. O AIM Acidin O Li NH3-N ☐ Sulfur ☐ Mineral DB □ Sr ☐ Oil & Grease □ TOC BTUs Analysis □ E. Coli O Ba □Mg O Ti ☐ Total metals ■ Cl □ Volatile Matter ☐ Sieve Disselved Gases ☐ Total Coliform Soluble Metals □ Be □ Mn ПП □ NO2 CHN ☐ % Moisture Used Oil □pH □ Purity (CaSO4) □ Br □ Dissolved As Other Tests: Flashpoint ☐ % Moisture □ Ca □Мо DV □ NO3 Dissolved Fe ☐ XRF Scan Metals in oil **NPDES** (As,Cd,Cr,Ni,Pb □ Cd □ Na □ Zn □ Rad 226 O HGI □ pH □ SO4 □ Oil & Grease Hg) ☐ Rad 228 ☐ Fineness Chlorides □Hg □ Co □ Ni DAS □ PCB ☐ Particulate Matter Particle Size ■ TSS GOFER □ Cr □ Pb □ CrVI

Matrix codes: GW-groundwater, DW-drinking water, SW-surface water, WW-waste water, BW-boiler water, L-limestone, Oil-oil, S-Soil, SL-solid, C-coal, G-gypsum, FA-flyash, BA-bottom ash, M-misc (describe in comment section)

Preservative code- 1=<4°C 2=HNO3 3=H2SO4 4-HC1 5=Na2S2O3 6-Other (Specify)

### **Chain of Custody**



Santee Cooper One Riverwood Drive Moncks Comer, 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 125915 / JM02.09.681.1 / 36500 Yes @santeecooper.com No **Analysis Group** Labworks ID# Sample Location/ Comments Collection Time Matrix(see below) Collection Date Total # of containers Glass Preservative (see below) (Internal use Description Method # Sample Collecto only) Grab (G) or Composite (C) Reporting limit Bottle type: ( G/Plastic-P) Misc. sample info Any other notes WJK WA-P- 26 2 AF906 28 GW × 2/19/24 G 0944 7470 RL= 0.2 ug/L BM 0949 WAP-26 DUP 29 27 WAP-25 1105 1249 26 WAP - 24 Sample Receiving (Internal Use Only) Relinquished by: Employee# Employee# Time TEMP (°C):\_\_ Initial: oda 0806 Sleves 35974 2/26/24 COURIER 2/26/24 0866 Correct pH: Yes No Relinquished by: Employee# Date Time Received by: Employee # Date Time Preservative Lot#: 1039 2/26/24 EHODGE Employee # Relinquished by: Employee# Date Time Time Received by: Date/Time/Init for preservative: ☐ METALS (all) Nutrients MISC. Gypsum Coal Oil Flyash □ Ag □ Cu □ Sb BTEX DTOC Wallboard Trans. Oil Qual. □ Ultimate ☐ Ammonia □ Al O Fe □ Se DOC □ Naphthalene Gypsum(all ☐ % Moisture %Moisture □ LOI D As OK O Sn C TP/TPO4 □ THM/HAA below) □ Asb ☐ % Carbon □ VOC MA E □ NH3-N □ Sulfur DB □ Li □ Sr ☐ Mineral □ Oil & Grease TITOC OF D BTUs Analysis □ E. Coli □ Ti □ Ba □ Mg Total metals ■ Cl □ Volatile Matter ☐ Sieve ☐ Total Coliform ☐ Soluble Metals □ Be □ Mn O TI □ NO2 □pH O CHN □ % Moisture Used Oil ☐ Purity (CaSO4) □ Br ☐ Dissolved As Other Tests: OV □ Ca □Мо ☐ % Moisture D NO3 ☐ Dissolved Fe □ XRF Scan **NPDES** □ Cd □ Na □ Zn ☐ Rad 226 HGI □ SO4 □ pH □ Oil & Grease ☐ Rad 228 □ Chlorides ☐ Fineness □ Hg □ Co □Ni O As □ PCB ☐ Particulate Matter Particle Size □ TSS GOFER □ Cr □ Pb □ CrVI □ Sulfur

Matrix codes: GW-groundwater, DW-drinking water, SW-surface water, WW-waste water, BW-boiler water, L-limestone, Oil-oil, S-Soil, SL-solid, C-coal, G-gypsum, FA-flyash, BA-bottom ash, M-misc (describe in comment section)

Preservative code- 1=<4°C 2=HNO3 3=H2SO4 4-HCl 5=Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> 6-Other (Specify)

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### **Login Sample Receipt Checklist**

Client: South Carolina Public Service Authority

Job Number: 680-247155-1

Login Number: 247155 List Source: Eurofins Savannah

List Number: 1

Creator: Johnson, Corey M

oreator. Common, Corey in	
Question	Answer Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td>	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.	True
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

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### **Accreditation/Certification Summary**

Client: South Carolina Public Service Authority

Project/Site: 125915/JM02.09.G01.1/36500

Job ID: 680-247155-1

#### **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

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