

### DOMINION ENERGY SOUTH CAROLINA

### WATEREE STATION CLASS III INDUSTRIAL LANDFILL

RICHLAND COUNTY, SOUTH CAROLINA

**EPA CCR RULE COMPLIANCE** 

### 2022 CCR ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

January 31, 2023



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TRC Environmental Corporation | Dominion Energy South Carolina Wateree Station Class III Industrial Landfill 2022 Annual Groundwater Monitoring and Corrective Action Report

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### **Executive Summary**

Dominion Energy South Carolina (DESC) operates a Class III Industrial Landfill (Unit) for the disposal of coal combustion residuals (CCR) at the Wateree Generating Station (Station) located in Eastover, Richland County, South Carolina. The Unit receives CCR generated from the combustion of coal at the Station. Management of the CCR in the Unit is performed pursuant to national criteria established in Title 40 of the Code of Federal Regulations (40 CFR), Part 257 (CCR Rule), effective April 19, 2015, and subsequent revisions to the CCR Rule. Pursuant to the CCR Rule, the Station operator is required to complete an *Annual Groundwater Monitoring and Corrective Action Report* for the Unit by January 31<sup>st</sup>, annually.

This report documents the status of the CCR groundwater monitoring program for the Unit, summarizes key actions completed, describes issues encountered, actions taken to resolve identified concerns, and planned key activities for the upcoming year.

In accordance with 40 CFR Part 257.90(e)(6), the following information is being provided as an overview of the current status of groundwater monitoring and corrective action for the Unit:

- At the start of the current annual reporting period, indicate whether the CCR unit was operating under the detection monitoring program in §257.94 or the assessment monitoring program in §257.95.
  - At the start of 2022, the Unit was operating under the detection monitoring program in accordance with §257.94.
- ii. At the end of the current annual reporting period, indicate whether the CCR unit was operating under the detection monitoring program in §257.94 or the assessment monitoring program in §257.95.
  - At the end of 2022, the Unit was operating under the detection monitoring program in accordance with §257.94.
- iii. If it was determined that there was a statistically significant increase over background for one or more constituents listed in Appendix III to this part pursuant to §257.94(e).
  - a. Identify those constituents listed in Appendix III to this part and the names of the monitoring wells associated with such an increase.
    - In 2022, there were SSIs over background for the following Appendix III constituents at the following wells:
      - Calcium MW-LF-10

- Chloride MW-LF-10 and MW-LF-22
- Fluoride MW-LF-10
- Sulfate MW-LF-10
- \_ TDS MW-LF-10
- b. Provide the date when the assessment program was initiated for the CCR unit.
  - The Unit is in the detection monitoring program and has not initiated assessment monitoring to date.
- iv. If it was determined that there was a statistically significant level above the groundwater protection standard for one or more constituents listed in Appendix IV to this part pursuant to §257.95(g).
  - a. Identify those constituents listed in Appendix IV to this part and the names of the monitoring wells associated with such an increase.
    - The Unit is in the detection monitoring program and Appendix IV constituents were not evaluated in 2022.
  - b. Provide the date when the assessment of corrective measures was initiated for the CCR unit.
    - The Unit has not entered the assessment monitoring program and therefore not applicable.
  - c. Provide the date when the public meeting was held for the assessment of corrective measures for the CCR unit.
    - The Unit has not entered the assessment monitoring program and therefore not applicable.
  - d. Provide the date when the assessment of corrective measures was completed for the CCR unit.
    - The Unit has not entered the assessment monitoring program and therefore not applicable.
- v. Whether a remedy was selected pursuant to §257.97 during the current annual reporting period, and if so, the date of the remedy selection.
  - The Unit has not entered the assessment monitoring program and therefore not applicable.

vi. Whether remedial activities were initiated or are ongoing pursuant to §257.98 during the current annual reporting period.
 Remedial activities were not initiated or are not ongoing during this current annual

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reporting period.

### Section 1 Introduction

This 2022 CCR Annual Groundwater Monitoring and Corrective Action Report (Report) was prepared on behalf of Dominion Energy South Carolina (DESC) for the Class III Industrial Landfill (Unit) at the Wateree Generating Station (Station) located in Eastover, Richland County, South Carolina. Coal combustion residuals (CCR) are produced as part of the electrical generation operations and is disposed of in the Unit. The CCR Unit is managed in accordance with the South Carolina Department of Health and Environmental Control (SCDHEC) Class III Landfill Permit (Permit No. LF3-00026) and the national criteria established by the CCR Rule. DESC installed a groundwater monitoring system at the Unit that is subject to the groundwater monitoring and corrective action requirements provided under 40 CFR §257.90 through §257.98. In accordance with 40 CFR §257.90(e), DESC must prepare an annual report by January 31st that provides information regarding the groundwater monitoring and corrective action program at the Unit. This Report provides the monitoring and corrective action data and data evaluations for the semiannual CCR monitoring compliance events performed in March and September 2022.

### 1.1 Site Location

The Station is operated by DESC and is located at 142 Wateree Station Road in Richland County, South Carolina (**Figure 1**). The Station is located approximately 5 miles southeast of Eastover, South Carolina. The Unit is located on the western portion of the Station property approximately 2,000 feet from the generating plant.

### 1.2 Site History

The Wateree Generating Station is a coal-fired steam electric power generating facility. The facility includes two identical coal-fired generating units. Units 1 and 2, which began operation in 1970 and 1971, respectively. Each unit has a gross generating capacity of 372 megawatts. Both generating units are categorized as base load units.

The Station consists of a former coal ash storage pond (Ash Pond), a polishing pond (previously Ash Pond 2), a flue gas desulfurization (FGD) pond, and a Class III Industrial Landfill (Unit). **Figure 1** illustrates the locations of these CCR units. Discharge of treated wastewater to the Wateree River is monitored and permitted under a National Pollutant Discharge System (NPDES) permit (Permit No. SC0002038) issued by SCDHEC.

### 1.3 Key Actions

Key actions for the Unit are as follows:

- Permitted for management of CCR by SCDHEC under Class III Landfill Permit No. LF3-00026.
- Initiated the Detection Monitoring Program (DMP) on May 12, 2016, with the collection of eight (8) baseline/background samples and completed the background monitoring activities on July 24-25, 2017, pursuant to 40 CFR §257.94(b).
- Conducted the initial DMP compliance sampling event on September 26-27, 2017, pursuant to 40
   CFR §257.94.
- Placed a copy of the Ash Pond's Groundwater Monitoring Plan (GMP) documenting the design information for the monitoring wells pursuant to 40 CFR §257.91(e)(1) in the Station's operating record on October 17, 2017, pursuant to 40 CFR §257.105(h)(2).
- Certified the groundwater monitoring system pursuant to 40 CFR §257.91(f) and posted the Certification in the Station's operating record on October 17, 2017, pursuant to 40 CFR §257.105(h)(3).
- Certified the selection of a statistical method pursuant to 40 CFR §257.93(f)(6) and posted the Certification in the Station's operating record on October 17, 2017, pursuant to 40 CFR §257.105(h)(4).
- Background concentrations of Appendix III constituents were updated using United States
   Environmental Protection Agency-approved statistical procedures in August 2021.
- In 2022, DESC completed a successful Alternate Source Demonstration (ASD) per 40 CFR §257.94(e)(2) in response to potential Statistically Significant Increases (SSIs) identified during the statistical evaluation of the data generated from the second semiannual 2021 (September 2021) detection monitoring event. The ASD was certified by a South Carolina-registered professional engineer. As required by 40 CFR §257.94(e)(2), a copy of the ASD is included in **Appendix A**. Based on the successful evaluation and the results presented in the ASD, DESC continued with detection monitoring in accordance with 40 CFR §257.94.
- Conducted the first semiannual 2022 detection monitoring between March 14-15, 2022 and completed the sample analyses on March 22, 2022, pursuant to the CCR Rule [§257.94(b)].
- Completed a successful ASD per 40 CFR §257.94(e)(2) for the potential SSIs identified during the first semiannual 2022 detection monitoring event. The ASD was certified by a South Carolina-registered professional engineer. As required by 40 CFR §257.94(e)(2), a copy of the ASD is included in this Report and provided in Appendix B. DESC continued with detection monitoring in accordance with 40 CFR §257.94.

Conducted the second semiannual 2022 detection monitoring between September 6-12, 2022 and completed the sample analyses on September 27, 2022, pursuant to the CCR Rule [§257.94(b)]. An ASD evaluation of the data will be performed during the first quarter of 2023 per 40 CFR §257.94(e)(2).

■ The Unit remained in detection monitoring for the duration of 2022.

### 1.4 Monitoring Program Concerns

There were no monitoring program concerns identified during 2022.

### 2.1 Monitoring Well Network

Groundwater monitoring wells (MW-LF-07, MW-LF-08, MW-LF-10, and MW-LF-11) were installed in March 2016 at the Unit to serve as the EPA CCR Compliance Monitoring Well Network. Existing monitoring wells (MW-LF-01, MW-LF-06, and MW-LF-22) utilized for other monitoring programs for the Unit, were incorporated into the CCR Compliance Monitoring Well Network in 2016. Two additional groundwater monitoring wells, MW-LF-10A and MW-BG-73, were installed in November 2016 and November 2017, respectively. Three additional groundwater monitoring wells, AS-LF-01, AS-LF-02, and AS-LF-03, were installed in June 2017 to support an ASD investigation.

The Compliance Monitoring Well Network currently consists of six upgradient wells (MW-BG-73, MW-LF-01, AS-LF-01, AS-LF-02, AS-LF-03, and MW-LF-06) to monitor background groundwater quality entering the surficial aquifer of the Unit and six downgradient monitoring wells (MW-LF-07, MW-LF-08, MW-LF-10, MW-LF-11, and MW-LF-22) that serve to monitor groundwater quality downgradient of the Unit. The location of the EPA CCR Rule Compliance Monitoring Well Network is presented on **Figure 2**.

### 2.2 Monitoring Well Installation and Decommissioning Activities

In December 2022, monitoring well MW-LF-10 was abandoned due to damage to the surface completion affecting the integrity of the well. Monitoring well MW-LF-10A was previously installed in November 2016 as a replacement well for MW-LF-10 and although both wells have historically been sampled as part of the Unit's monitoring well network, MW-LF-10A will serve as the downgradient compliance well beginning in January 2023.

Three (3) observations wells (MW-LF-01D, MW-BG-74, and MW-LF-12) were installed in December 2022 to further refine hydrogeologic conditions in the vicinity of the Unit.

### 2.3 Groundwater Potentiometric Surface Evaluation

Current and historical static water level data for the Station are summarized in **Table 1**. Per requirements of 40 CFR 257.93(c), the rate and direction of groundwater flow within the uppermost aquifer beneath the Unit must be determined after each sampling event. Groundwater potentiometric surface maps were prepared using water level data obtained from both semiannual sampling events conducted in March and

September 2022. Using the groundwater contours from March (Figure 3) and September (Figure 4), the average horizontal hydraulic gradient was calculated using the following equation:

$$i = (h^1 - h^2)/S$$

#### Where:

*i* = horizontal hydraulic gradient (unitless)

 $h^1$  = water elevation in well 1 (feet)

 $h^2$  = water elevation in well 2 (feet)

S = horizontal distance between well 1 and well 2 (feet)

The groundwater seepage velocity was calculated using the following formula:

 $Vs = ki/n_e$ 

#### Where:

Vs = Groundwater seepage velocity (feet/day)

k = hydraulic conductivity (feet/day)

*i* = horizontal hydraulic gradient (unitless)

 $n_e$  = effective porosity (percent)

The result for each semiannual event is presented separately in Sections 2.3.1 and 2.3.2. As presented, the estimated groundwater seepage velocity in the uppermost aquifer beneath the Unit is between 145 to 147 ft/year. Furthermore, the overall interpreted data indicates that the groundwater flow direction and velocity remain consistent with previous calculations for the Unit. The groundwater monitoring network continues to monitor the uppermost aquifer in accordance with the CCR Rule.

### 2.3.1 First Semiannual 2022 Detection Monitoring Program

The groundwater potentiometric surface map for March 2022 is presented in **Figure 3**. Using an estimated effective porosity value of 20% and an estimated average hydraulic conductivity value of 15.30 ft/day, the average rate of groundwater flow for the uppermost aquifer beneath the Unit was calculated to be 146.93 ft/year.

Well 1	Well 2	h¹ (ft)	h² (ft)	S (ft)	i	K (ft/day)	n <sub>e</sub>	Vs (ft/day)	Vs (ft/yr.)			
MW-LF-01	AS-LF-01	124.89	118.46	985	0.0065			0.4994	182.28			
MW-LF-01	AS-LF-02	124.89	117.40	925	0.0081			0.6194	226.10			
AS-LF-02	MW-LF-08	117.40	112.78	1,330	0.0035	15.30	0.20	0.2657	96.99			
AS-LF-03	MW-LF-10A	118.85	112.09	1,570	0.0043						0.3294	120.23
AS-LF-03	MW-LF-11	118.85	113.09	1,475	0.0039			0.2987	109.04			
Hydraulic conductivity and effective porosity values from February 2021: Analysis of Groundwater Flow Rate and Direction – Class III Landfill Wells (Nautilus 2021).						Avera	age	0.4025	146.93			

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### 2.3.2 Second Semiannual 2022 Detection Monitoring Program

The groundwater potentiometric surface map for September 2022 is presented in **Figure 4**. Using an estimated effective porosity value of 20% and estimated average hydraulic conductivity value of 15.30 ft/day, the average rate of groundwater flow for the uppermost aquifer beneath the Unit was calculated to be 145.22 ft/year.

Well 1	Well 2	h¹ (ft)	h² (ft)	S (ft)	i	K (ft/day)	n <sub>e</sub>	Vs (ft/day)	Vs (ft/yr.)
MW-LF-01	AS-LF-01	124.35	117.80	985	0.0066			0.5087	185.68
MW-LF-01	AS-LF-02	124.35	116.67	925	0.0083			0.6352	231.83
AS-LF-02	MW-LF-08	116.67	112.51	1,330	0.0031	15.30	0.20	0.2393	87.34
AS-LF-03	MW-LF-10A	118.14	111.66	1,570	0.0041			0.3157	115.25
AS-LF-03	MW-LF-11	118.14	112.54	1,475	0.0038			0.2904	106.01
Hydraulic conductivity and effective porosity values from February 2021: Analysis of Groundwater Flow Rate and Direction – Class III Landfill Wells (Nautilus 2021).						Aver	age	0.3979	145.22

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### Section 3 Field Activities

CCR-related groundwater sampling activities that occurred during 2022 are summarized in the following sections.

### 3.1 Compliance Monitoring Program Sampling Activities

As per 40 CFR §257.94(c), two semiannual DMP events were conducted for the constituents and parameters listed in Appendix III of the CCR Rule. Summaries of the 2022 DMP sampling events are presented below.

2022 Monitoring Event	Sample Dates	Final Laboratory Package Receipt Date
First Semiannual Detection Monitoring Program Event	March 14-15, 2022	March 22, 2022
Second Semiannual Detection Monitoring Program Event	September 6, 8, 9, and12, 2022	September 27, 2022

During each of the DMP sampling events, the compliance monitoring wells were sampled in accordance with the Station's Groundwater Monitoring Program (GWMP).

Samples collected during the semiannual sampling events were submitted to GEL Laboratories (GEL) in Charleston, South Carolina under proper chain-of-custody procedures. GEL is a SCDHEC Environmental Laboratory Certification Program (ELCP) accredited laboratory for analysis of CCR Rule constituents (GEL certification #10120001).

### Section 4 Laboratory Analytical Results

Laboratory analytical results from the DMP sampling events conducted in 2022 are summarized in the following sections.

### 4.1 First Semiannual 2022 Detection Monitoring Program Event

The groundwater samples collected during the first semiannual DMP event were analyzed by GEL for the constituents and parameters listed in Appendix III of the CCR Rule. The laboratory certificates of analysis, chain-of-custody forms, and field notes for the sampling event are presented in **Appendix C**. A summary of the CCR sampling data for the Unit is included in **Table 2**.

### 4.2 Second Semiannual 2022 Detection Monitoring Program Event

The groundwater sampling collected during the second semiannual sampling event were analyzed by GEL for the constituents and parameters listed in Appendix III of the CCR Rule. The laboratory certificates of analysis, chain-of-custody forms, and field notes for the sampling event are presented in **Appendix D**. A summary of the CCR sampling data for the Unit is included in **Table 3**.

### Section 5 Data Quality Validation

Third-party data validation services were provided by Environmental Standards, Inc. for the DMP sampling events. The reviews were performed with guidance from the USEPA data validation guidelines and in accordance with the Station's GWMP. A discussion of the findings is presented below.

### 5.1 First Semiannual 2022 Compliance Event Findings

The following field QA/QC samples for this event included:

- One blind duplicate sample was collected from the MW-LF-10 location on March 14, 2022.
- Additional sample volume was collected at MW-LF-11 on March 14, 2022, to allow for the laboratory to conduct a MS/MSD quality control check.
- A field blank was collected in the area of MW-LF-10A on March 14, 2022, using laboratory provided deionized water. The field blank was used to assess for potential contaminants from field conditions during sampling activities.
- A field blank was collected in the area of AS-LF-03 on March 15, 2022, using laboratory provided deionized water. The field blank was used to assess for potential contaminants from field conditions during sampling activities.

These QA/QC samples were analyzed for the same constituents as the groundwater samples. Based on review of the laboratory-provided QC data and Environmental Standards recommendations, the data for this sampling event were determined to meet the data quality objectives for the project. A copy of the data validation report is included in **Appendix C**.

### 5.2 Second Semiannual 2022 Compliance Event Findings

The following field QA/QC samples for this event included:

- One blind duplicate sample was collected from the AS-LF-03 location on September 9, 2022.
- Additional sample volume was collected at AS-LF-02 on September 9, 2022, to allow for the laboratory to conduct a MS/MSD quality control check.
- A field blank was collected in the area of MW-LF-01 on September 9, 2022, using laboratory provided deionized water. The field blank was used to assess for potential contaminants from field conditions during sampling activities.

A field blank was collected in the area of MW-LF-10A on September 12, 2022, using laboratory provided deionized water. The field blank was used to assess for potential contaminants from field conditions during sampling activities.

These QA/QC samples were analyzed for the same constituents as the groundwater samples. Based on review of the laboratory-provided QC data and Environmental Standards recommendations, the data for this sampling event were determined to meet the data quality objectives for the project. A copy of the data validation report is included in **Appendix D**.

### Section 6 Statistical Evaluation of Groundwater Data

Statistical evaluation of the semiannual DMP data was performed in accordance with the statistical method certified by a qualified South Carolina-registered professional engineer. The certified statistical method has been posted to the Unit's operating record. Statistical evaluations completed in 2022 are summarized in the following sections.

### 6.1 Site-Specific Background Evaluations

Compliance data from each semiannual event was evaluated against site-specific background values as follows.

### 6.1.1 First Semiannual 2022 Compliance Event

Pursuant to 40 CFR §257.95, TRC evaluated Appendix III constituent detections against site-specific background values that were established for the DMP (**Appendix E**). Based on that evaluation, the following Appendix III SSIs were identified for the first semiannual 2022 event (**Table 2**):

- Calcium (MW-LF-10)
- Chloride (MW-LF-10 and MW-LF-22)
- Fluoride (MW-LF-10)
- Sulfate (MW-LF-10)
- \_ TDS (MW-LF-10)

An ASD and certification were prepared for these SSIs and is attached as Appendix B.

#### 6.1.2 Second Semiannual 2022 Compliance Event

Pursuant to 40 CFR §257.95, TRC evaluated Appendix III constituent detections against site-specific background values that were established for the DMP (**Appendix F**). Based on that evaluation, the following Appendix III SSIs were identified for the second semiannual 2022 event (**Table 3**):

- Chloride (MW-LF-22)
- Sulfate (MW-LF-10)

An ASD evaluation of the data from the second semiannual 2022 compliance event will be performed during the first quarter of 2023 per 40 CFR §257.94(e)(2).

### 7.1 Findings

The first semiannual 2022 DMP compliance sampling event was conducted on March 14-15, 2022, with sample analyses completed on March 22, 2022. The second semiannual 2022 DMP compliance sampling event was conducted on September 6, 8, 9, and 12, 2022, with sample analyses complete on September 27, 2022. These groundwater sampling and analysis activities were performed in general accordance with the requirements of the Unit's GWMP for the CCR Rule network.

Evaluation of the monitoring results from the first semiannual 2022 event identified an exceedance above the background value for calcium (MW-LF-10), chloride (MW-LF-10 and MW-LF-22), fluoride (MW-LF-10), sulfate (MW-LF-10), and TDS (MW-LF-10). DESC completed a successful ASD for the potential SSIs identified during the first semiannual 2022 detection monitoring event. The ASD was certified by a South Carolina-registered professional engineer and is presented in this Report. Monitoring results from the second semiannual 2022 event identified exceedances above the background value for chloride (MW-LF-22) and sulfate (MW-LF-10). An ASD evaluation is being conducted in accordance with the applicable CCR Rule timeframe.

### 7.2 Planned Activities

Based on the results from the 2022 monitoring activities, DESC intends to continue with semiannual groundwater monitoring activities in 2023 that are consistent with the provisions in the CCR Rule [Part 257.94] and prepare an ASD to address 2022 second semiannual SSIs.

### Section 8 References

- Environmental Protection Agency (EPA). 2015. Federal Register. Volume 80. No. 74. Friday April 17, 2015. Part II. Environmental Protection Agency. 40 CFR Parts 257and 261. Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities; Final Rule. [EPA-HQ-RCRA-2009-0640; FRL-9919-44-OSWER]. RIN-2050-AE81.
- EPA. 2016. Federal Register. Volume 81. No. 151. Friday August 5, 2016. Part II. Environmental Protection Agency. 40 CFR Parts 257 and 261. Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities; Final Rule. [EPA-HQ-OLEM-2016-0274; FRL-9949-44-OLEM].
- Nautilus 2016. Groundwater Sampling and Analysis Plan, Wateree Station Class Three Landfill. Eastover, South Carolina: Nautilus Geologic Consulting, PLLC.
- Nautilus 2018. Alternate Source Demonstration Report, Wateree Station Class Three Landfill. Eastover, South Carolina: Nautilus Geologic Consulting, PLLC.
- Nautilus 2020. Quarterly Groundwater Monitoring Report for the May 2020 Sampling Event, Wateree Generating Station Class III Landfill. Eastover, South Carolina: Nautilus Geologic Consulting, PLLC.
- Nautilus 2021. Analysis of Groundwater Flow Rate and Direction: September 2020 Monitoring Data, Cope Station: Class III Landfill, Wateree Station: Class III Landfill, FGD Pond, Ash Pond, Williams Station: FGD Pond, Highway 52 Class III Landfill: Nautilus Geologic Consulting, PLLC. February 2021.

### Section 9 Signature Page

This 2022 CCR Annual Groundwater Monitoring and Corrective Action Report (Report) has been prepared by a qualified groundwater scientist on behalf of Dominion Energy South Carolina (DESC) for the Class III Industrial Landfill at Wateree Generating Station. This Report satisfied the reporting requirements specified in Title 40 CFR §257.90(e) et seq. [Disposal of Coal Combustion Residuals (CCR) from Electric Utilities (CCR Rule; Federal Register Vol. 80, No. 74, 21302-21501 on April 17, 2015, as amended)].

Name: Richard A. Mayer Jr., P.G.	Expiration Date: June 30, 2023			
Company: TPC Environmental Corporation	Date: January 21, 2022			



(SEAL)

### **Tables**

Monitoring Well ID	Top of Casing Elevation (ft. AMSL)	Date	Depth to Water (feet)	Static Water Level Elevation (ft. AMSL)
	(	5/12/2016	22.48	126.17
		7/12/2016	22.48	126.17
		9/20/2016	22.82	125.83
		11/15/2016	22.94	125.71
		1/17/2017	23.02	125.63
		3/20/2017	22.73	125.92
		5/22/2017	22.40	126.25
		7/24/2017	22.46	126.19
		9/27/2017	22.75	125.90
		10/31/2017	22.90	125.75
		11/13/2017	22.94	125.71
		3/6/2018	23.78	124.87
NAVA 1 5 04	140.65	9/11/2018	24.85	123.80
MW-LF-01	148.65	11/20/2018	26.80	121.85
		3/4/2019	23.68	124.97
		5/1/2019	23.21	125.44
		8/29/2019	23.48	125.17
		11/18/2019	23.98	124.67
		3/10/2020	23.78	124.87
		5/26/2020	24.61	124.04
		9/14/2020	23.55	125.10
		10/26/2020	23.49	125.16
		3/8/2021	22.90	125.75
		9/14/2021	22.43	126.22
		3/15/2022	23.76	124.89
		9/6/2022	24.30	124.35
		11/15/2016	29.25	116.72
		1/17/2017	29.45	116.52
		3/20/2017	29.28	116.69
		5/22/2017	28.98	116.99
		7/24/2017	28.82	117.15
		9/27/2017	28.99	116.98
		10/31/2017	29.06	116.91
		11/13/2017	29.05	116.92
		3/6/2018	29.87	116.10
NAVA 1 5 00	445.07	9/11/2018	30.94	115.03
MW-LF-06	145.97	3/5/2019	30.08	115.89
		8/29/2019	29.45	116.52
		11/18/2019	29.81	116.16
		3/11/2020	30.10	115.87
		5/26/2020	30.05	115.92
		9/14/2020	29.86	116.11
		3/8/2021	29.51	116.46
		9/14/2021	28.13	117.84
		3/15/2022	29.76	116.21

Notes:

<sup>1)</sup> ft AMSL = feet above mean sea level.

Monitoring Well ID	Top of Casing Elevation (ft. AMSL)	Date	Depth to Water (feet)	Static Water Level Elevation (ft. AMSL)
	(It. AIVISE)	5/12/2016	23.23	116.75
		7/12/2016	23.34	116.64
		9/20/2016	23.65	116.33
		11/16/2016	23.82	116.16
		1/18/2017	23.98	116.00
		3/21/2017	24.03	115.95
		5/23/2017	23.96	116.02
		7/24/2017	23.89	116.02
		9/27/2017	24.10	115.88
		10/31/2017	24.27	115.88
		11/14/2017	24.27	115.71
		3/5/2018	24.71	115.27
MW-LF-07	139.98	9/11/2018	24.54	115.44
		11/20/2018 3/5/2019	25.40 23.67	114.58 116.31
		5/1/2019	23.60	116.31
		· · · · · · · · · · · · · · · · · · ·		<u> </u>
		8/29/2019	24.10	115.88
		11/19/2019	24.47	115.51
		3/11/2020	22.60	117.38
		5/26/2020	23.55	116.43
		9/15/2020	23.23	116.75
		10/26/2020	23.18	116.80
		3/8/2021	22.43	117.55
		9/14/2021	23.29	116.69
		3/15/2022	24.15	115.83
		9/6/2022	24.65	115.33
T		5 /42 /204 C	24.57	142.40
		5/12/2016	24.57	113.10
		7/12/2016	24.78	112.89
		9/20/2016	24.79	112.88
		11/16/2016	25.01	112.66
		1/18/2017	24.53	113.14
		3/21/2017	24.81	112.86
		5/23/2017	24.49	113.18
		7/25/2017	24.50	113.17
		9/27/2017	24.97	112.70
		10/31/2017	25.53	112.14
MW-LF-08	137.67	11/14/2017	25.50	112.17
		3/5/2018	25.70	111.97
		9/11/2018	26.67	111.00
		3/4/2019	23.94	113.73
		8/29/2019	25.65	112.02
		3/11/2020	23.19	114.48
		9/15/2020	24.03	113.64
		3/8/2021	23.20	114.47
		9/14/2021	23.75	113.92
		3/15/2022	24.89	112.78
		9/6/2022	25.16	112.51

Notes:

<sup>1)</sup> ft AMSL = feet above mean sea level.

Monitoring Well ID	Top of Casing Elevation (ft. AMSL)	Date	Depth to Water (feet)	Static Water Level Elevation (ft. AMSL)
	(10111111111111111111111111111111111111	5/12/2016	15.94	115.59
		7/12/2016	17.53	114.00
		9/20/2016	18.27	113.26
		11/16/2016	18.50	113.03
		1/18/2017	18.05	113.48
		3/20/2017	17.85	113.68
		5/22/2017	17.59	113.94
		7/25/2017	18.01	113.52
		9/27/2017	18.61	112.92
		10/31/2017	19.00	112.53
		11/14/2017	19.15	112.38
		3/5/2018	19.32	112.21
NAVA 1 E 40	121 52	9/11/2018	19.53	112.00
MW-LF-10	131.53	11/20/2018	18.78	112.75
		12/11/2018	18.53	113.00
		3/4/2019	17.34	114.19
		5/1/2019	17.55	113.98
		8/29/2019	19.37	112.16
		3/11/2020	17.42	114.11
		5/26/2020	18.09	113.44
		9/14/2020	18.30	113.23
		10/26/2020	18.09	113.44
		3/8/2021	16.90	114.63
		9/14/2021	18.38	113.15
		3/15/2022	19.19	112.34
		9/6/2022	19.61	111.92
		12/11/2018	19.72	112.77
		3/4/2019	18.54	113.95
		8/29/2019	20.54	111.95
		3/11/2020	18.65	113.84
		5/26/2020	19.37	113.12
MW-LF-10A	132.49	9/14/2020	19.48	113.01
		10/26/2020	19.24	113.25
		3/8/2021	18.05	114.44
		9/14/2021	19.73	112.76
		3/15/2022	20.40	112.09
		9/6/2022	20.83	111.66

Notes:

1) ft AMSL = feet above mean sea level.

Monitoring Well ID	Top of Casing Elevation	Date	Depth to Water (feet)	Static Water Level Elevation
	(ft. AMSL)		(1001)	(ft. AMSL)
		5/12/2016	18.88	116.38
		7/12/2016	21.61	113.65
		9/20/2016	21.45	113.81
		11/16/2016	21.55	113.71
		1/17/2017	21.02	114.24
		3/20/2017	20.84	114.42
		5/22/2017	20.53	114.73
		7/25/2017	21.07	114.19
		9/27/2017	21.62	113.64
		10/31/2017	22.00	113.26
MW-LF-11	135.26	11/14/2017	22.20	113.06
IAIAA-FL-TT	155.20	3/5/2018	22.52	112.74
		9/11/2018	22.53	112.73
		3/4/2019	20.15	115.11
		5/1/2019	20.30	114.96
		8/28/2019	22.30	112.96
		3/11/2020	20.09	115.17
		9/14/2020	21.35	113.91
		3/8/2021	19.57	115.69
		9/14/2021	21.54	113.72
		3/15/2022	22.17	113.09
		9/6/2022	22.72	112.54
		5/12/2016	20.98	114.77
		7/12/2016	21.61	114.14
		9/20/2016	22.13	113.62
		11/16/2016	22.32	113.43
		1/18/2017	21.70	114.05
		3/20/2017	21.77	113.98
		5/23/2017	21.48	114.27
		7/25/2017	21.72	114.03
		9/26/2017	22.38	113.37
		10/31/2017	22.94	112.81
		11/14/2017	22.96	112.79
		3/5/2018	23.02	112.73
MW-LF-22	135.75	9/11/2018	23.64	112.73
IVIVV LI ZZ	133.73			114.78
		3/4/2019	20.97	114.78
		5/1/2019	21.45	
		8/29/2019	23.23	112.52
		11/18/2019	23.61	112.14
		3/11/2020	20.75	115.00
		5/26/2020	21.88	113.87
		9/14/2020	21.87	113.88
		10/27/2020	21.57	114.18
		3/8/2021	20.76	114.99
		9/14/2021	21.83	113.92
		3/15/2022	22.59	113.16
Notos		9/6/2022	22.82	112.93

Notes:

<sup>1)</sup> ft AMSL = feet above mean sea level.

Monitoring Well ID	Top of Casing Elevation (ft. AMSL)	Date	Depth to Water (feet)	Static Water Level Elevation (ft. AMSL)
		7/25/2017	30.58	119.32
		9/12/2017	30.49	119.41
		9/27/2017	30.63	119.27
		10/10/2017	30.65	119.25
		11/1/2017	30.90	119.00
		11/13/2017	30.80	119.10
		3/6/2018	31.57	118.33
		9/11/2018	32.84	117.06
		3/5/2019	31.81	118.09
AS-LF-01	149.90	5/1/2019	31.36	118.54
		8/28/2019	31.10	118.80
		3/11/2020	31.39	118.51
		5/27/2020	31.36	118.54
		9/15/2020	31.55	118.35
		10/26/2020	31.36	118.54
		3/8/2021	30.90	119.00
		9/14/2021	29.96	119.94
		3/15/2022	31.44	118.46
		9/6/2022	32.10	117.80
		7/25/2017	31.32	118.23
		9/12/2017	31.18	118.37
		9/27/2017	31.40	118.15
		10/10/2017	31.51	118.04
		11/1/2017	31.09	118.46
		11/13/2017	31.57	117.98
		3/6/2018	32.17	117.38
		9/11/2018	33.45	116.10
		3/5/2019	31.37	118.18
		5/1/2019	31.86	117.69
AS-LF-02	149.55	8/29/2019	32.29	117.26
		11/19/2019	32.47	117.08
		3/11/2020	32.18	117.37
		5/27/2020	31.99	117.56
		9/15/2020	31.94	117.61
		10/26/2020	31.78	117.77
		3/8/2021	31.25	118.30
		9/14/2021	30.89	118.66
		3/15/2022	32.15	117.40
		9/6/2022	32.88	116.67

Notes:

<sup>1)</sup> ft AMSL = feet above mean sea level.

Monitoring Well ID	Top of Casing Elevation	Date	Depth to Water (feet)	Static Water Level Elevation
	(ft. AMSL)			(ft. AMSL)
		7/25/2017	25.80	120.35
		9/12/2017	26.30	119.85
		9/27/2017	26.52	119.63
		10/10/2017	26.81	119.34
		11/1/2017	27.20	118.95
		11/13/2017	27.20	118.95
		3/6/2018	27.69	118.46
		9/11/2018	28.21	117.94
		11/20/2018	26.96	119.19
AS-LF-03	146.15	3/4/2019	25.07	121.08
A3-L1-03	140.13	5/1/2019	25.50	120.65
		8/28/2019	27.50	118.65
		11/19/2019	28.69	117.46
		3/10/2020	25.19	120.96
		9/14/2020	26.65	119.50
		10/27/2020	26.20	119.95
		3/8/2021	24.54	121.61
		9/14/2021	26.49	119.66
		3/15/2022	27.30	118.85
		9/6/2022	28.01	118.14
		3/6/2018	11.20	130.37
		9/10/2018	13.28	128.29
		11/20/2018	9.02	132.55
		3/5/2019	7.81	133.76
		5/1/2019	10.05	131.52
		8/28/2019	14.60	126.97
		11/18/2019	13.11	128.46
MW-BG-73	141.57	3/11/2020	8.21	133.36
		5/26/2020	11.56	130.01
		9/15/2020	11.71	129.86
		10/26/2020	9.88	131.69
		3/8/2021	5.69	135.88
		9/14/2021	10.36	131.21
		3/15/2022	7.52	134.05
		9/6/2022	9.72	131.85

Notes:

1) ft AMSL = feet above mean sea level.

## Table 2 Summary of First Semiannual 2022 Detection Monitoring Program Sampling Event Data Dominion Energy South Carolina - Wateree Station Class III Landfill Eastover, Richland County, South Carolina

				Background Wells																		
		Sample ID:		MW-BG-73 MW-LF-01							AS-LF-01					AS-L	.F-02			AS-L	F-03	
<u>.                                  </u>		Sample Date:		03/15/2022 03/14/2022			03/15/2022					03/15	/2022			03/15	2022					
		Background				٠.								٠.								
Parameter Name	Units	Threshold Values	Result	Qual	MDL	QL	Result	Qual	MDL	QL	Result	Qual	MDL	QL	Result	Qual	MDL	QL	Result	Qual	MDL	QL
CCR Appendix III		values																				
Boron	μg/L	140	9.18	J	5.20	15.0	12.7	J	5.20	15.0	10.3	J	5.20	15.0	11.3	J	5.20	15.0	8.98	J	5.20	15.0
Calcium	μg/L	6670	304		80.0	200	126	J	80.0	200	772		80.0	200	943		80.0	200	606		80.0	200
Chloride	mg/L	9.14	2.27		0.0670	0.200	7.18		0.0670	0.200	8.89		0.0670	0.200	2.74		0.0670	0.200	5.28		0.0670	0.200
Fluoride	mg/L	0.1	0.0330	U	0.0330	0.100	0.0330	U	0.0330	0.100	0.0330	U	0.0330	0.100	0.0330	U	0.0330	0.100	0.0330	U	0.0330	0.100
рН	SU	2.5 - 6.2	4.56		0.1	0.1	4.41		0.1	0.1	4.50		0.1	0.1	5.00		0.1	0.1	4.37		0.1	0.1
Sulfate	mg/L	7.89	0.377	J	0.133	0.400	0.301	J	0.133	0.400	0.752		0.133	0.400	3.43		0.133	0.400	0.433		0.133	0.400
Total Dissolved Solids	mg/L	111	4.29	J	3.40	14.3	11.4	J	3.40	14.3	22.9		3.40	14.3	12.9	J	3.40	14.3	3.40	U	3.40	14.3
Field Parameters																						
Conductivity	μS/cm		23.30		0.1	0.1	53.10		0.1	0.1	58.95		0.1	0.1	31.20		0.1	0.1	50.35		0.1	0.1
Dissolved Oxygen	mg/L		6.13		0.01	0.01	6.78		0.01	0.01	6.62		0.01	0.01	2.81		0.01	0.01	7.18		0.01	0.01
Temperature	С		20.48		0.01	0.01	17.82		0.01	0.01	18.36		0.01	0.01	22.28		0.01	0.01	20.49		0.01	0.01
Turbidity	NTU		2.41		0.1	0.1	1.82		0.1	0.1	1.46		0.1	0.1	12.9		0.1	0.1	1.35		0.1	0.1
Depth to Water*	ft btoc		7.52		0.01	0.01	23.76		0.01	0.01	31.44		0.01	0.01	32.15		0.01	0.01	27.30		0.01	0.01
Groundwater Elevation*	ft msl		134.05	•	0.01	0.01	124.89	•	0.01	0.01	118.46	•	0.01	0.01	117.40	•	0.01	0.01	118.85		0.01	0.01
Oxidation Reduction Potential	millivolts		90.2		0.1	0.1	123.3		0.1	0.1	108.6		0.1	0.1	105.2		0.1	0.1	96.1		0.1	0.1

#### Notes:

MDL = Method Detection Limit

QL = Quantitation Limit

mg/L = Milligram per liter

μg/L = Microgram per liter

 $\mu S/cm$  = MicroSiemen per centimeter

SU = Standard Units

C = Degrees Celsius

NTU = Nephelometric Turbidity Unit ft btoc = feet below top of casing ft msl = feet above mean sea level

### Qualifiers (Qual)

J = Estimated Results

U = Samples reported below their respective MDL

= Concentration greater than Background Threshold Values

### Bold font = Detected constituent

\* - Groundwater Elevation data collected on March 15, 2022

## Table 2 Summary of First Semiannual 2022 Detection Monitoring Program Sampling Event Data Dominion Energy South Carolina - Wateree Station Class III Landfill Eastover, Richland County, South Carolina

		Background Well					Downgradient Wells															
		Sample ID:	MW-LF-06				MW-LF-07				MW-L	-F-08			MW-L	.F-10			MW-LF-	0 DUP		
		Sample Date:		03/14/	2022			03/14/	2022		03/14/2022					03/14/	2022			03/14/	2022	
		Background																				
Parameter Name	Units	Threshold	Result	Qual	MDL	QL	Result	Qual	MDL	QL	Result	Qual	MDL	QL	Result	Qual	MDL	QL	Result	Qual	MDL	QL
000 4 !' . !!!		Values																				
CCR Appendix III					1		,															
Boron	μg/L	140	9.16	J	5.20	15.0	8.97	J	5.20	15.0	8.16	J	5.20	15.0	21.7		5.20	15.0	23.2		5.20	15.0
Calcium	μg/L	6670	887		80.0	200	981		80.0	200	897		80.0	200	19800		80.0	200	20000		80.0	200
Chloride	mg/L	9.14	6.73		0.0670	0.200	8.91		0.0670	0.200	5.57		0.0670	0.200	13.1		0.335	1.00	13.3		0.670	2.000
Fluoride	mg/L	0.1	0.0330	U	0.0330	0.100	0.0330	U	0.0330	0.100	0.0330	U	0.0330	0.100	0.351		0.0330	0.100	0.346		0.0330	0.100
рН	SU	2.5 - 6.2	4.91		0.1	0.1	4.41		0.1	0.1	4.75		0.1	0.1	4.21		0.1	0.1	4.21		0.1	0.1
Sulfate	mg/L	7.89	0.604		0.133	0.400	1.18		0.133	0.400	0.424		0.133	0.400	93.8		1.33	4.00	96.9		1.33	4.00
Total Dissolved Solids	mg/L	111	10.0	J	3.40	14.3	4.29	J	3.40	14.3	15.7		3.40	14.3	117		3.40	14.3	119		3.40	14.3
Field Parameters																						
Conductivity	μS/cm		52.52		0.1	0.1	59.92		0.1	0.1	46.33		0.1	0.1	73.78		0.1	0.1	73.78		0.1	0.1
Dissolved Oxygen	mg/L		4.91		0.01	0.01	7.04		0.01	0.01	7.49		0.01	0.01	6.88		0.01	0.01	6.88		0.01	0.01
Temperature	С		17.89		0.01	0.01	20.01		0.01	0.01	21.28		0.01	0.01	27.98		0.01	0.01	27.98		0.01	0.01
Turbidity	NTU		3.83		0.1	0.1	4.31		0.1	0.1	0.79		0.1	0.1	4.32		0.1	0.1	4.32		0.1	0.1
Depth to Water*	ft btoc		29.76		0.01	0.01	24.15		0.01	0.01	24.89		0.01	0.01	19.19		0.01	0.01	19.19		0.01	0.01
Groundwater Elevation*	ft msl		116.21		0.01	0.01	115.83		0.01	0.01	112.78		0.01	0.01	112.34		0.01	0.01	112.34		0.01	0.01
Oxidation Reduction Potential	millivolts		146.2		0.1	0.1	129.3		0.1	0.1	129.3		0.1	0.1	187.2		0.1	0.1	187.2		0.1	0.1

#### Notes:

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μg/L = Microgram per liter

 $\mu$ S/cm = MicroSiemen per centimeter

SU = Standard Units

C = Degrees Celsius

NTU = Nephelometric Turbidity Unit ft btoc = feet below top of casing ft msl = feet above mean sea level

### Qualifiers (Qual)

J = Estimated Results

U = Samples reported below their respective MDL

= Concentration greater than Background Threshold Values

### Bold font = Detected constituent

\* - Groundwater Elevation data collected on March 15, 2022

Table 2
Summary of First Semiannual 2022 Detection Monitoring Program Sampling Event Data
Dominion Energy South Carolina - Wateree Station Class III Landfill
Eastover, Richland County, South Carolina

			Downgradient Wells											
		Sample ID:		MW-LI	F-10A			MW-L	.F-11			MW-L	.F-22	
		Sample Date:	03/14/2022					03/14/	2022			03/14/	2022	
		Background									_			
Parameter Name	Units	Threshold Values	Result	Qual	MDL	QL	Result	Qual	MDL	QL	Result	Qual	MDL	QL
CCR Appendix III		values												
Boron	μg/L	140	10.2	J	5.20	15.0	10.5	J	5.20	15.0	15.8		5.20	15.0
Calcium	μg/L	6670	395		80.0	200	378		80.0	200	1950		80.0	200
Chloride	mg/L	9.14	4.14		0.0670	0.200	5.89		0.0670	0.200	10.3		0.134	0.400
Fluoride	mg/L	0.1	0.0330	U	0.0330	0.100	0.0330	U	0.0330	0.100	0.0330	U	0.0330	0.100
рН	SU	2.5 - 6.2	4.72		0.1	0.1	4.62		0.1	0.1	4.34		0.1	0.1
Sulfate	mg/L	7.89	0.742		0.133	0.400	0.285	J	0.133	0.400	1.11		0.133	0.400
Total Dissolved Solids	mg/L	111	3.40	U	3.40	14.3	18.6		3.40	14.3	7.14	J	3.40	14.3
Field Parameters														
Conductivity	μS/cm		34.55		0.1	0.1	40.21		0.1	0.1	78.97		0.1	0.1
Dissolved Oxygen	mg/L		5.07		0.01	0.01	6.07		0.01	0.01	4.77		0.01	0.01
Temperature	С		20.50		0.01	0.01	19.94		0.01	0.01	20.84		0.01	0.01
Turbidity	NTU		3.12		0.1	0.1	3.12		0.1	0.1	2.27		0.1	0.1
Depth to Water*	ft btoc		20.40		0.01	0.01	22.17		0.01	0.01	22.59		0.01	0.01
Groundwater Elevation*	ft msl		112.09	•	0.01	0.01	113.09		0.01	0.01	113.16	•	0.01	0.01
Oxidation Reduction Potential	millivolts		161.5		0.1	0.1	102.0		0.1	0.1	291.9		0.1	0.1

#### Notes:

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mg/L = Milligram per liter

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 $\mu$ S/cm = MicroSiemen per centimeter

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NTU = Nephelometric Turbidity Unit ft btoc = feet below top of casing ft msl = feet above mean sea level

### Qualifiers (Qual)

J = Estimated Results

U = Samples reported below their respective MDL

= Concentration greater than Background Threshold Values

### Bold font = Detected constituent

\* - Groundwater Elevation data collected on March 15, 2022

## Table 3 Summary of Second Semiannual 2022 Detection Monitoring Program Sampling Event Data Dominion Energy South Carolina - Wateree Station Class III Landfill Eastover, Richland County, South Carolina

				Background Wells																		
		Sample ID:		MW-B	G-73			MW-L	.F-01			AS-L	F-01			AS-L	F-02			AS-L	F-03	
		Sample Date:		09/09/	2022			09/09/	2022			09/09/	/2022			09/09/	2022			09/09/	2022	
		Background																				
Parameter Name	Units	Threshold	Result	Qual	MDL	QL	Result	Qual	MDL	QL	Result	Qual	MDL	QL	Result	Qual	MDL	QL	Result	Qual	MDL	QL
000 4 11 111		Values																				
CCR Appendix III					1																1	
Boron	μg/L	140	10.9	J	5.20	15.0	11.5	J	5.20	15.0	8.99	J	5.20	15.0	8.97	J	5.20	15.0	9.14	J	5.20	15.0
Calcium	μg/L	6670	280		80.0	200	125	J	80.0	200	1200		80.0	200	1220		80.0	200	658		80.0	200
Chloride	mg/L	9.14	2.52		0.0670	0.200	6.69		0.0670	0.200	8.91		0.0670	0.200	2.82		0.0670	0.200	5.48		0.0670	0.200
Fluoride	mg/L	0.1	0.0330	U	0.0330	0.100	0.0330	U	0.0330	0.100	0.0330	J	0.0330	0.100	0.0330	U	0.0330	0.100	0.0330	U	0.0330	0.100
рН	SU	2.5 - 6.2	4.13		0.1	0.1	4.38		0.1	0.1	4.54		0.1	0.1	4.94		0.1	0.1	3.93		0.1	0.1
Sulfate	mg/L	7.89	0.398	J	0.133	0.400	0.133	U	0.133	0.400	0.891		0.133	0.400	3.25		0.133	0.400	0.587		0.133	0.400
Total Dissolved Solids	mg/L	111	2.38	U	2.38	10.0	9.00	J	2.38	10.0	17.0		2.38	10.0	7.00	J	5.20	15.0	10.0		5.20	15.0
Field Parameters																						
Conductivity	μS/cm		25.09		0.1	0.1	54.71		0.1	0.1	58.65		0.1	0.1	34.01		0.1	0.1	53.59		0.1	0.1
Dissolved Oxygen	mg/L		5.50		0.01	0.01	5.62		0.01	0.01	7.45		0.01	0.01	3.15		0.01	0.01	6.78		0.01	0.01
Temperature	С		23.07		0.01	0.01	21.37		0.01	0.01	19.59		0.01	0.01	22.14		0.01	0.01	21.75		0.01	0.01
Turbidity	NTU		0.59		0.1	0.1	1.80		0.1	0.1	2.77		0.1	0.1	41		0.1	0.1	1.01		0.1	0.1
Depth to Water*	ft btoc		9.72	•	0.01	0.01	24.30		0.01	0.01	32.10	•	0.01	0.01	32.88	•	0.01	0.01	28.01	•	0.01	0.01
Groundwater Elevation*	ft msl		131.85		0.01	0.01	124.35		0.01	0.01	117.80		0.01	0.01	116.67		0.01	0.01	118.14		0.01	0.01
Oxidation Reduction Potential	millivolts		302.4		0.1	0.1	223.4		0.1	0.1	218.2		0.1	0.1	197.0		0.1	0.1	256.2		0.1	0.1

#### Notes:

MDL = Method Detection Limit

QL = Quantitation Limit

mg/L = Milligram per liter

μg/L = Microgram per liter

 $\mu S/cm$  = MicroSiemen per centimeter

SU = Standard Units

C = Degrees Celsius

NTU = Nephelometric Turbidity Unit ft btoc = feet below top of casing ft msl = feet above mean sea level

### Qualifiers (Qual)

J = Estimated Results

U = Samples reported below their respective MDL

= Concentration greater than Background Threshold Values

### Bold font = Detected constituent

\* - Groundwater Elevation data collected on September 6, 2022

## Table 3 Summary of Second Semiannual 2022 Detection Monitoring Program Sampling Event Data Dominion Energy South Carolina - Wateree Station Class III Landfill Eastover, Richland County, South Carolina

			Background Well							Downgradient Wells												
		Sample ID:		AS-LF-0	3 DUP	DUP MW-LF-06						MW-L	.F-07			MW-L	-F-08			MW-L	-F-10	
		Sample Date:		09/09/	2022	09/09/2022			09/09/2022					09/12/2021				09/12	/2022			
Parameter Name	Units	Background Threshold Values	Result	Qual	MDL	QL	Result	Qual	MDL	QL	Result	Qual	MDL	QL	Result	Qual	MDL	QL	Result	Qual	MDL	QL
CCR Appendix III													•									
Boron	μg/L	140	8.56	J	5.20	15.0	7.41	J	5.20	15.0	8.83	J	5.20	15.0	9.02	J	5.20	15.0	11.3	J	5.20	15.0
Calcium	μg/L	6670	639		80.0	200	925		80.0	200	1010		80.0	200	850		80.0	200	2890		80.0	200
Chloride	mg/L	9.14	5.50		0.0670	0.200	6.46		0.0670	0.200	7.79		0.0670	0.200	5.07		0.0670	0.200	7.01		0.335	1.00
Fluoride	mg/L	0.1	0.0330	U	0.0330	0.100	0.0330	U	0.0330	0.100	0.0448	J	0.0330	0.100	0.0330	U	0.0330	0.100	0.0330	U	0.0330	0.100
рН	SU	2.5 - 6.2	3.93		0.1	0.1	4.79		0.1	0.1	3.97		0.1	0.1	4.37		0.1	0.1	4.10		0.1	0.1
Sulfate	mg/L	7.89	0.870		0.133	0.400	0.590		0.133	0.400	1.41		0.133	0.400	0.563		0.133	0.400	9.79		0.133	0.400
Total Dissolved Solids	mg/L	111	8.00	J	5.20	15.0	11.0		2.38	10.0	3.00	J	2.38	10.0	7.00	J	2.38	10.0	33.0		2.38	10.0
Field Parameters	•																					
Conductivity	μS/cm		53.59		0.1	0.1	49.80		0.1	0.1	55.34		0.1	0.1	41.91		0.1	0.1	74.37		0.1	0.1
Dissolved Oxygen	mg/L		6.78		0.01	0.01	6.22		0.01	0.01	6.64		0.01	0.01	6.85		0.01	0.01	6.01		0.01	0.01
Temperature	С		21.75		0.01	0.01	19.44		0.01	0.01	27.19		0.01	0.01	24.65		0.01	0.01	25.34		0.01	0.01
Turbidity	NTU		1.01		0.1	0.1	3.68		0.1	0.1	5.90		0.1	0.1	2.41		0.1	0.1	4.48		0.1	0.1
Depth to Water*	ft btoc		28.01		0.01	0.01	30.44		0.01	0.01	24.65		0.01	0.01	25.16		0.01	0.01	19.61		0.01	0.01
Groundwater Elevation*	ft msl		118.14		0.01	0.01	115.53		0.01	0.01	115.33		0.01	0.01	112.51		0.01	0.01	111.92		0.01	0.01
Oxidation Reduction Potential	millivolts		256.2		0.1	0.1	217.5		0.1	0.1	316.9		0.1	0.1	142.3		0.1	0.1	342.7		0.1	0.1

#### Notes:

MDL = Method Detection Limit

QL = Quantitation Limit

mg/L = Milligram per liter

μg/L = Microgram per liter

 $\mu$ S/cm = MicroSiemen per centimeter

SU = Standard Units

C = Degrees Celsius

NTU = Nephelometric Turbidity Unit ft btoc = feet below top of casing ft msl = feet above mean sea level

### Qualifiers (Qual)

J = Estimated Results

U = Samples reported below their respective MDL

= Concentration greater than Background Threshold Values

### Bold font = Detected constituent

\* - Groundwater Elevation data collected on September 6, 2022

Table 3
Summary of Second Semiannual 2022 Detection Monitoring Program Sampling Event Data
Dominion Energy South Carolina - Wateree Station Class III Landfill
Eastover, Richland County, South Carolina

			Downgradient Wells												
		Sample ID:		MW-LI			MW-L	F-11		MW-LF-22					
		Sample Date:	09/12/2022					09/12/	2022			09/08/	2022		
_		Background													
Parameter Name	Units	Threshold	Result	Qual	MDL	QL	Result	Qual	MDL	QL	Result	Qual	MDL	QL	
CCR Appendix III		Values													
Boron	μg/L	140	8.61	1	5.20	15.0	9.57	<u> </u>	5.20	15.0	15.1		5.20	15.0	
		6670		J				<u> </u>			_				
Calcium	μg/L		332		80.0	200	379		80.0	200	2060		80.0	200	
Chloride	mg/L	9.14	4.17		0.0670	0.200	5.75		0.0670	0.200	9.99		0.134	0.400	
Fluoride	mg/L	0.1	0.0330	U	0.0330	0.100	0.0330	U	0.0330	0.100	0.0707	J	0.0330	0.100	
рН	SU	2.5 - 6.2	4.26		0.1	0.1	4.14		0.1	0.1	4.15		0.1	0.1	
Sulfate	mg/L	7.89	0.791		0.133	0.400	0.499		0.133	0.400	1.06		0.133	0.400	
Total Dissolved Solids	mg/L	111	10.0		2.38	10.0	11.0		2.38	10.0	21.0		2.38	10.0	
Field Parameters															
Conductivity	μS/cm		33.79		0.1	0.1	41.41		0.1	0.1	81.80		0.1	0.1	
Dissolved Oxygen	mg/L		4.88		0.01	0.01	6.06		0.01	0.01	3.60		0.01	0.01	
Temperature	С		26.09		0.01	0.01	24.51		0.01	0.01	22.19		0.01	0.01	
Turbidity	NTU		2.53		0.1	0.1	1.64		0.1	0.1	2.45		0.1	0.1	
Depth to Water*	ft btoc		20.83		0.01	0.01	22.72	·	0.01	0.01	22.82	·	0.01	0.01	
Groundwater Elevation*	ft msl		111.66		0.01	0.01	112.54	•	0.01	0.01	112.93	•	0.01	0.01	
Oxidation Reduction Potential	millivolts		196.0		0.1	0.1	194.4		0.1	0.1	114.1		0.1	0.1	

### Notes:

MDL = Method Detection Limit

QL = Quantitation Limit mg/L = Milligram per liter

μg/L = Microgram per liter

μS/cm = MicroSiemen per centimeter

SU = Standard Units

C = Degrees Celsius

NTU = Nephelometric Turbidity Unit ft btoc = feet below top of casing ft msl = feet above mean sea level

### Qualifiers (Qual)

J = Estimated Results

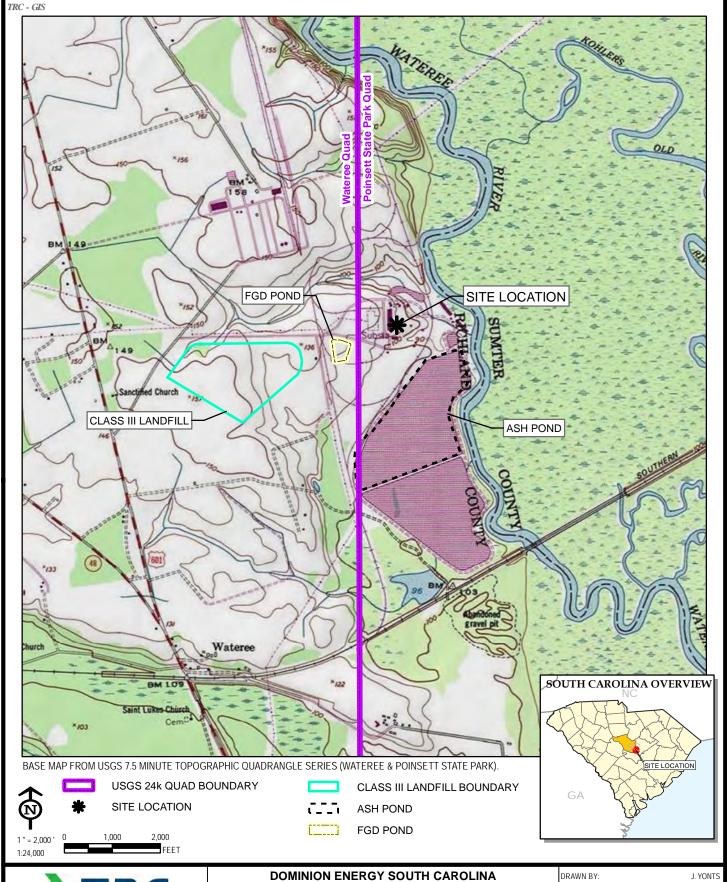
U = Samples reported below their respective MDL

= Concentration greater than Background Threshold Values

### Bold font = Detected constituent

\* - Groundwater Elevation data collected on September 6, 2022

### **Figures**





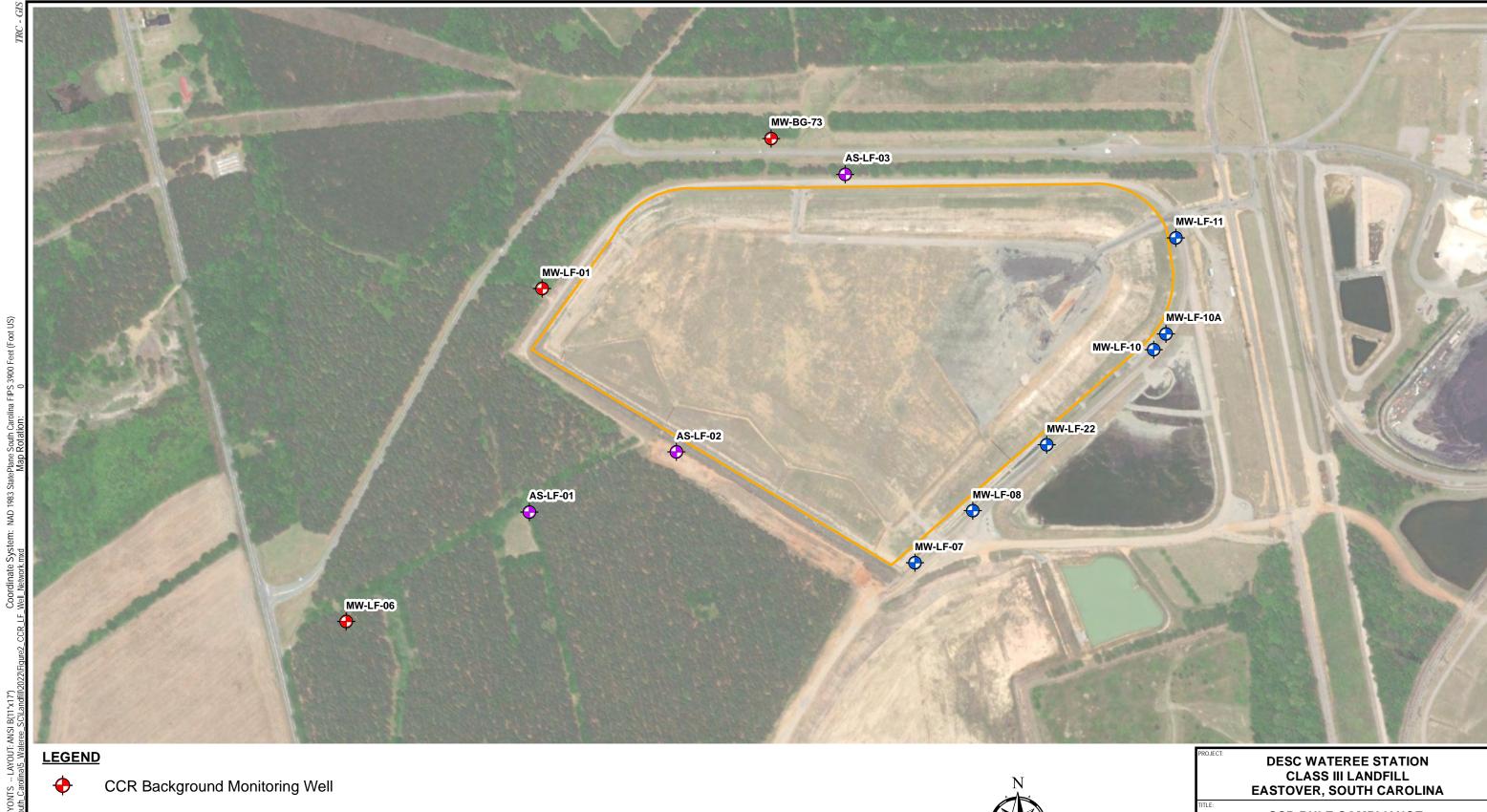
Patewood Plaza Three Greenville, SC 29615

Phone: 864.281.0030

WATEREE STATION
142 WATEREE STATION ROAD
EASTOVER, SOUTH CAROLINA 29044

FIGURE 1 SITE LOCATION MAP

DRAWN BY:	J. YONTS
APPROVED BY:	R. MAYER
PROJECT NO:	416559.0007.0000
FILE NO. Figure1_Wateree	_LF_Loc_Map_CCR.mxd
DATE:	DECEMBER 2022



CCR Downgradient Monitoring Well

CCR Background ASD Monitoring Well

Class III Landfill Boundary





CCR RULE COMPLIANCE
MONITORING WELL NETWORK

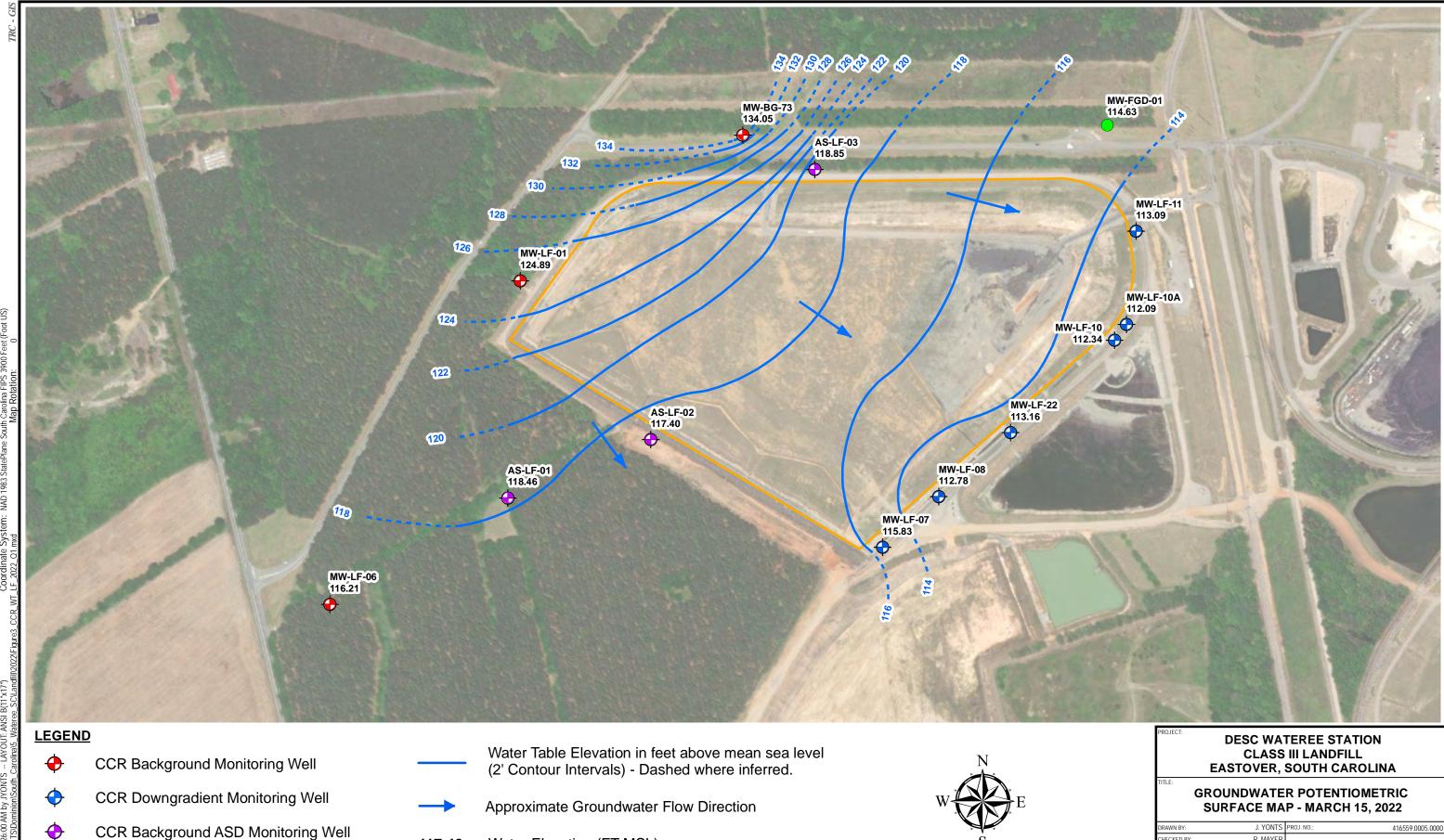
RAWN BY:	J. YONIS	PROJ. NO.:
HECKED BY:	R. MAYER	
PPROVED BY:	R. MAYER	
ATE:	DECEMBER 2022	

FIGURE 2



50 International Drive, Suite 150
Palewood Plaza Three
Greenville, SC 29615
Phone: 864.281.0030
www.TRCcompanies.com
Figure2\_CCR\_LF\_Well\_Network.mxd

NOTE: Aerial Image from ESRI World Imagery dated April 2021.



117.40

Water Elevation (FT MSL)

NOTE: Aerial Image from ESRI World Imagery dated April 2021.

R. MAYER

JANUARY 2023

FIGURE 3

50 International Drive, Suite 150 Patewood Plaza Three Greenville, SC 29615 Phone: 864.281.0030 www.TRCcompanies.com

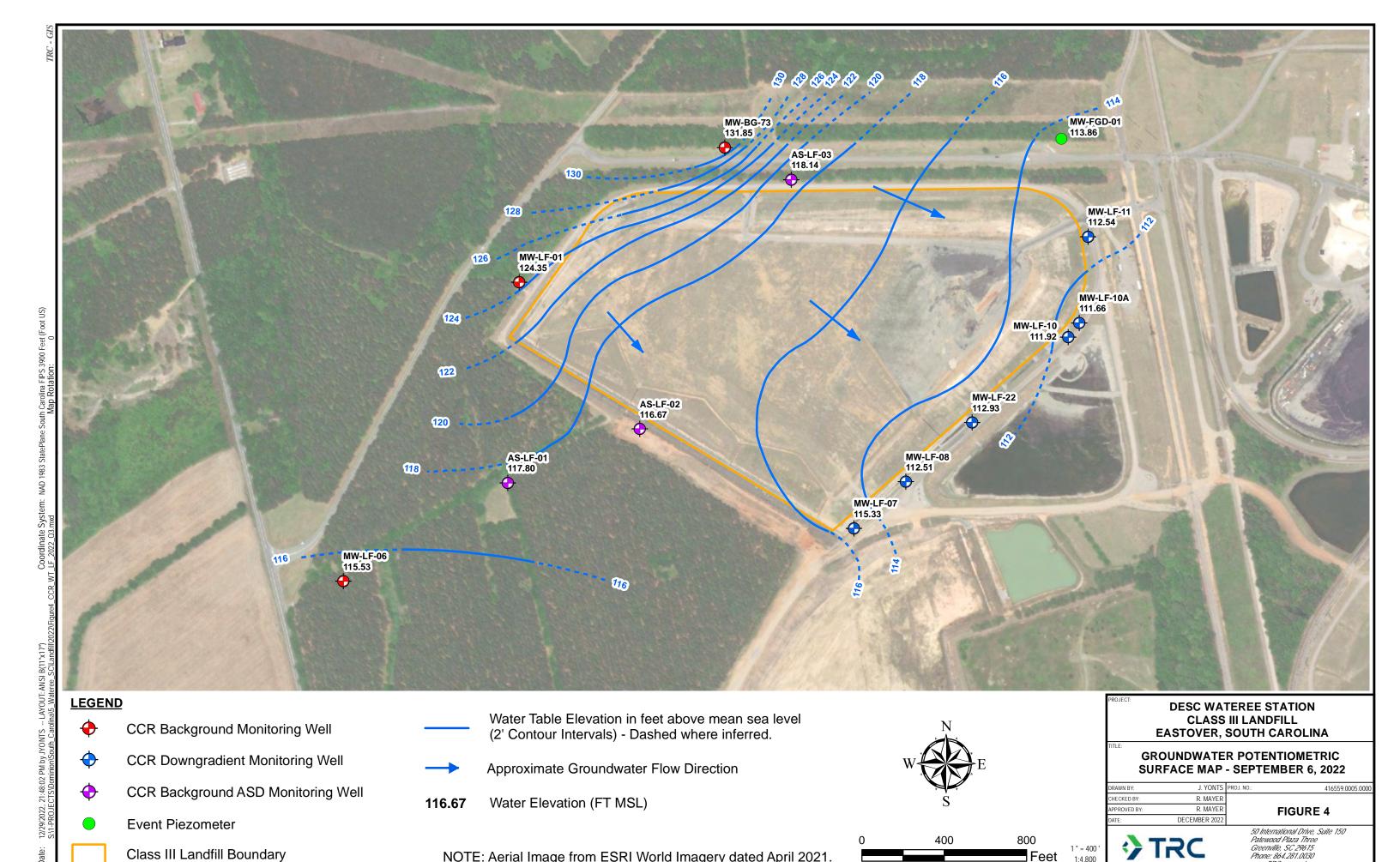
Figure3\_CCR\_WT\_LF\_2022\_Q1.mxd

HECKED BY:

800

**Event Piezometer** 

Class III Landfill Boundary



NOTE: Aerial Image from ESRI World Imagery dated April 2021.

Class III Landfill Boundary

800

www.TRCcompanies.com

Figure4\_CCR\_WT\_LF\_2022\_Q3.mxd

# Appendix A September 2021 Alternate Source Demonstration



## DOMINION ENERGY SOUTH CAROLINA

## WATEREE STATION CLASS III LANDFILL

RICHLAND COUNTY, SOUTH CAROLINA

**EPA CCR RULE COMPLIANCE** 

#### ALTERNATE SOURCE DEMONSTRATION REPORT

Second Semiannual 2021 Detection Monitoring Event

April 2022



Nakia W. Addison, P.E. Senior Engineer

Richard A. Mayer Jr., P. G Project Hydrogeologist

TRC Environmental Corporation | Dominion Energy South Carolina Alternate Source Demonstration – Wateree Generating Station

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i

## **Executive Summary**

Dominion Energy South Carolina (DESC) completed the most recent semiannual detection monitoring sampling (second semiannual 2021 sampling event) in September 2021 for the Wateree Generating Station (Station) Class III Industrial Landfill (Unit) pursuant to the *Criteria for Classification of Solid Waste Disposal Facilities and Practices; Disposal of Coal Combustion Residuals from Electric Utilities; Final Rule,* 40 CFR Part 257 (CCR Rule). The Unit constitutes a coal combustion residuals (CCR) Unit per the CCR Rule. Per 40 CFR §257.94, the samples were analyzed for the Appendix III detection monitoring parameters. Upon receipt of the laboratory analytical results, statistical analysis was performed and evaluated for potential statistically significant increases (SSI) above background concentrations.

The following SSIs above the background concentrations were identified based on direct comparisons made between the statistically derived background threshold values (95 percent upper prediction limit) and the downgradient monitoring results:

- Calcium, fluoride, and sulfate (MW-LF-10).
- Chloride (MW-LF-11).

The information provided in this report serves as DESC's alternate source demonstration (ASD) prepared in accordance with 40 CFR §257.94(e)(2) and successfully demonstrates that the SSIs are not due to a release from the Unit to groundwater, but are due to the following:

• Natural variation in groundwater quality within the area.

Therefore, based on the information provided in this ASD report, DESC will continue to conduct semiannual detection monitoring for Appendix III constituents in accordance with 40 CFR §257.94 at the certified groundwater monitoring well system (Certified Monitoring Well Network) for the CCR Unit.

## Section 1 Introduction

### 1.1 Background

Dominion Energy South Carolina, Inc. (DESC) operates the Wateree Generating Station (Station), a coal-fired power plant, to generate electricity. The Station is located at 142 Wateree Station Road in Eastover, Richland County, South Carolina as shown on **Figure 1**. Coal combustion residuals (CCR) are produced as part of the electrical generation operations at the Station. The Station has been generating and disposing of CCR on-site in a coal ash disposal landfill (Unit) since it began operations in 2008. The Unit is a Class 3 non-commercial industrial landfill and operates under South Carolina Department of Health and Environmental Control (SCDHEC) Solid Waste Permit No. LF-3-00026.

The on-site Unit consists of 18 landfill cells planned for development in multiple phases and encompasses a total of 141 future lined acres. The current landfill facility has constructed Cells 1 through 9. Cells 1 through 5 encompasses 34 acres while cells 6 through 9 encompasses an additional 37 acres. These cells were placed into operation in accordance with an operation plan approval issued by SCDHEC in 2010 (cells 1 through 5) and 2015 (cells 6 through 9), respectively.

The Unit receives both fly ash and flue gas desulfurization (FGD) waste from the Station and includes a liner system consisting of a minimum 2-foot-thick compacted clay layer (maximum permeability of  $1 \times 10^{-7}$  cm/sec) overlain by a 60-mil HDPE geomembrane and leachate collection system.

The Unit accepts CCR for disposal in accordance with the federal *Criteria for Classification of Solid Waste Disposal Facilities and Practices; Disposal of Coal Combustion Residuals from Electric Utilities; Final Rule* (CCR Rule), effective October 19, 2015, and subsequent Final Rules promulgated by the United States Environmental Protection Agency (USEPA).

## 1.2 Groundwater Monitoring and Statistical Analysis

In accordance with 40 CFR §257.90 through §257.94, DESC installed a groundwater monitoring system for the Unit and has collected samples from the Certified Monitoring Well Network for laboratory analysis for CCR constituents and performed statistical analysis of the collected samples. DESC installed a Certified Monitoring Well Network for the CCR Unit in accordance with 40 CFR §257.90 and §257.91. The location of the EPA CCR Rule Compliance Monitoring Well Network is presented on **Figure 2**. The

Certified Monitoring Well Network consists of 12 wells installed into the subsurface to monitor shallow groundwater as follows:

- Six wells were installed as background monitoring wells and include AS-LF-01, AS-LF-02, AS-LF-03, MW-BG-73, MW-LF-01, and MW-LF-06.
- Six wells were installed as compliance monitoring wells and include MW-LF-07, MW-LF-08, MW-LF-10, MW-LF-10A, MW-LF-11, and MW-LF-22.

Pursuant to 40 CFR §257.91(f), DESC obtained certification by a qualified South Carolina-registered professional engineer (P.E.) stating that the Certified Monitoring Well Network has been designed and constructed to meet the requirements of 40 CFR §257.91 of the CCR Rule (Garrett & Moore 2017).

As discussed above, the Unit is currently being monitored pursuant to the CCR Rule. A groundwater sampling and analysis plan including selection of statistical procedures to evaluate groundwater data was prepared per the CCR Rule (Nautilus 2016). Eight quarterly background CCR detection monitoring events were performed from May 2016 through July 2017 in accordance with 40 CFR §257.93(d) and §257.94(b). The eight quarterly detection monitoring background samples were analyzed for Appendix III to Part 257 – Constituents for Detection Monitoring and for Appendix IV to Part 257 – Constituents for Assessment Monitoring.

Following completion of quarterly background detection monitoring in July 2017, DESC implemented semiannual detection monitoring per 40 CFR §257.94(b) for the CCR Unit. The second semiannual (initial) detection monitoring event was performed in September 2017. Subsequent detection monitoring events, with associated verification sampling when appropriate, have been performed on a semiannual basis since September 2017. DESC completed the second 2021 semiannual detection monitoring event in September 2021. Per the CCR Rule, the semiannual detection monitoring event samples were analyzed for Appendix III constituents.

After completion of each semiannual detection monitoring event, the Appendix III data were statistically evaluated to identify potential statistically significant increases (SSIs) for Appendix III constituents above background levels. In accordance with 40 CFR §257.93(f)(6), DESC obtained certification by a qualified South Carolina-registered P.E. stating that the selected statistical method is appropriate for evaluating the groundwater monitoring data for the CCR Unit (SCE&G 2017).

Pursuant to 40 CFR §257.93(h), statistical analysis of the laboratory analytical data was performed to identify potential SSIs for the second semiannual 2021 detection monitoring event. Data from the second semiannual 2021 detection monitoring event is presented in **Table 1**. A total of 4 SSIs were identified for four Appendix III constituents: calcium, chloride, fluoride, and sulfate.

### 1.3 Purpose

Pursuant to 40 CFR §257.94(e)(2), DESC may demonstrate that a source other than the CCR Unit caused the SSIs identified or that the SSIs resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. The purpose of this report is to provide written documentation of the successful ASD for the SSIs identified for the second semiannual 2021 detection monitoring event, pursuant to 40 CFR §257.94(e)(2) of the CCR Rule.

## 1.4 Site Hydrogeology

The Station is located within the Catawba-Wateree River Subbasin (Santee River Basin watershed) of the Coastal Plain physiographic province. Aquifers and confining units in the South Carolina portion of the Coastal Plain are composed of crystalline carbonate rocks, sand, clay, silt, and gravel that contain large volumes of high-quality groundwater (SAWSC 2016). The Unit groundwater monitoring wells are within the surficial aquifer of the Black Creek geologic formation. This formation ranges from ground surface to a depth of approximately 350 feet and consists of medium to coarse-grained glauconitic and phosphatic quartz sands interbedded with lenses of lignitic and micaceous clay beds (SCDNR 2009). Groundwater flow beneath the Unit is generally to the southeast as depicted on **Figure 3**. Hydraulic conductivity values in the surficial aquifer at the Unit range from 2.47 x 10<sup>-4</sup> cm/s to 2.33 x 10<sup>-2</sup> cm/s with an estimated groundwater flow velocities of between 0.02 to 2.09 feet/day (Nautilus 2021).

## 1.5 General Groundwater Quality

Regionally, groundwater quality within the Black Creek Aquifer may contain high fluoride values attributed to the presence of fluorapatite from abundant fossilized shark teeth in the formation (SCDHEC 2013). Groundwater is generally alkaline in composition consisting of a sodium bicarbonate water type (SCDHEC 2013). The USEPA has established National Primary Drinking Water Regulations that define a permitted maximum contaminant level (MCL) for specific constituents in drinking water. The primary MCLs are legally enforceable standards that were established to protect public health by limiting the levels of contaminants in drinking water. Additionally, the USEPA has established non-enforceable secondary MCLs for guidelines to assist public water systems in managing their drinking water for aesthetic consideration such as taste, color, and odor. Reported water quality concentrations for select primary and/or secondary drinking water contaminants compared to USEPA MCLs are provided in the table below.

Catawba-Wateree River Subbasin Groundwater Water Quality

	Concentration Range		USEPA
Constituent	Low	High	MCL
Calcium (mg/L)	8	200	None
Chloride (mg/L)	1	36	250 (Secondary)
Fluoride (mg/L)	0.10	4.0	4.0 (Primary)
Sulfate (mg/L)	1	118	250 (Secondary)

Note: mg/L = milligram per liter

As noted in the table above, the natural range of groundwater quality within the Catawba-Wateree River Subbasin approaches the primary MCL established by the USEPA for drinking water with respect to fluoride and is less than the secondary MCLs for chloride and sulfate (SCDNR 2009). A primary or secondary drinking water MCL has not been established for calcium however, the natural range of groundwater quality in the Catawba-Wateree River Subbasin is reported to be in the range of 8 mg/L to 200 mg/L (SCDNR 2009).

# Section 2 Alternate Source Demonstration

Pursuant to 40 CFR §257.94(e)(2), DESC may demonstrate that a source other than the CCR Unit caused the SSI or that the SSI resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. As discussed previously, the second semiannual 2021 detection monitoring event was performed in September 2021. Statistical analysis of the second semiannual 2021 detection monitoring data was performed pursuant to 40 CFR §257.93(f) and (g) and in accordance with the Statistical Methods Certification (SCE&G 2017) and the Statistical Analysis Plan (OBG 2017). Based on either increasing trends at 95% confidence levels using Thiel-Sen's trend test and/or interwell prediction limits statistical analyses, the following 4 SSIs were identified:

- Calcium, fluoride, and sulfate (MW-LF-10).
- Chloride (MW-LF-11).

All other Appendix III constituent concentrations were within their trends at 95% confidence levels using Thiel-Sen's trend and/or interwell prediction limits in all the CCR Rule groundwater downgradient monitoring system wells.

A discussion for each of the individual SSIs and associated evidence demonstrating that the SSIs were not caused by a release from the Unit is provided in the subsections below.

#### 2.1 Calcium at MW-LF-10

The calcium SSI identified at MW-LF-10 is a result of natural variation in groundwater quality from areas upgradient from the Unit. The following evidence supports this determination:

Because of upward trending in the background data set, the calcium SSI was identified based on a comparison of trend slopes, with the lower confidence limit (LCL) of the trend at MW-LF-10 (1.803) higher than the upper confidence limit (UCL) of the background trend at a 95% confidence level (1.063). Calcium was detected in MW-LF-10 at a concentration of 8.39 mg/L in the September 2021 sample. This concentration exceeds the concentration-based background threshold value of 6.67 mg/L. Reported regional calcium concentrations for groundwater in the Station area range between 8 mg/L to 200 mg/L (SCDNR 2009). The detected calcium concentration of 8.39 mg/L from September 2021 falls at the lower end of this naturally occurring range.

#### 2.2 Fluoride at MW-LF-10

The fluoride SSI identified at MW-LF-10 is a result of natural variation in groundwater quality from areas upgradient from the Unit. The following evidence supports this determination:

- Fluoride was detected in MW-LF-10 at a concentration of 0.122 mg/L in the September 2021 sample. This concentration slightly exceeds the background threshold value of 0.10 mg/L, which is also the reporting limit of the analytical method. Reported regional fluoride concentrations for groundwater in the Station area range between 0.1 mg/L to 4.0 mg/L (SCDNR 2009). The detected fluoride concentration of 0.122 mg/L from September 2021 falls at the lower end of this naturally occurring range.
- Since November 2016, fluoride has been detected at concentrations above the 0.1 mg/L background threshold value only four times: in MW-LF-07 in November 2016, in MW-LF-10 in November 2018 and September 2021, and in MW-LF-10A in March 2021. Fluoride concentrations in these samples ranged from 0.118 mg/L to 0.23 mg/L. Because these detections are sporadic and infrequent, it is unlikely that they represent a release from the Unit, but more likely that they represent natural variability in groundwater quality.

#### 2.3 Sulfate at MW-LF-10

The sulfate SSI identified at MW-LF-10 is a result of natural variation in groundwater quality from areas upgradient from the Unit. The following evidence supports this determination:

Sulfate was detected in MW-LF-10 at a concentration of 28.7 mg/L in the September 2021 sample. This concentration exceeds the background threshold value of 7.89 mg/L. Reported regional sulfate concentrations for groundwater in the Station area range between 1 mg/L to 118 mg/L (SCDNR 2009). The detected sulfate concentration of 28.7 mg/L from September 2021 falls within the range of natural variation in area groundwater quality.

#### 2.4 Chloride at MW-LF-11

The chloride SSI identified at MW-LF-11 is a result of natural variation in groundwater quality from areas upgradient from the Unit. The following evidence supports this determination:

■ Because of downward trending in the background data set, the chloride SSI was identified based on a comparison of trend slopes, with the LCL of the trend at MW-LF-11 (0.000244) higher than the UCL of the background trend at a 95 percent confidence level (-0.0000703). Chloride was detected in MW-LF-11 at a concentration of 5.34 mg/L in the September 2021 sample. While this concentration does not exceed the concentration-based background threshold value of 9.14 mg/L, the SSI was based on the trend of the slope. Reported regional chloride concentrations for groundwater in the Station area range between 1 mg/L to 36 mg/L (SCDNR 2009). The detected sulfate concentration of 5.34 mg/L from September 2021 falls within the range of natural variation in area groundwater quality.

# Section 3 Conclusions

The information provided in this report serves as the ASD prepared in accordance with 40 CFR §257.94(e)(2) of the CCR Rule and demonstrates that the SSIs determined based on statistical analysis of the second semiannual 2021 detection monitoring event performed in September of 2021 was not due to a release from the Unit to the subsurface.

Based on the information provided in this ASD report, DESC will continue to conduct semiannual detection monitoring in accordance with 40 CFR §257.94 at the Certified Monitoring Well Network for the CCR Unit.

## Section 4 Certification

I hereby certify that the alternative source demonstration presented within this document for the DESC Wateree Station Class III Industrial Landfill CCR Unit has been prepared to meet the requirements of Title 40 CFR §257.94(e)2 of the Federal CCR Rule. This document is accurate and has been prepared in accordance with good engineering practices, including the consideration of applicable industry standards, and with the requirements of Title 40 CFR §257.94(e) 2.

Name: Nakia W. Addison, P.E. Expiration Date: June 30, 2024

Company: TRC Engineers, Inc. Date: April 13, 2022



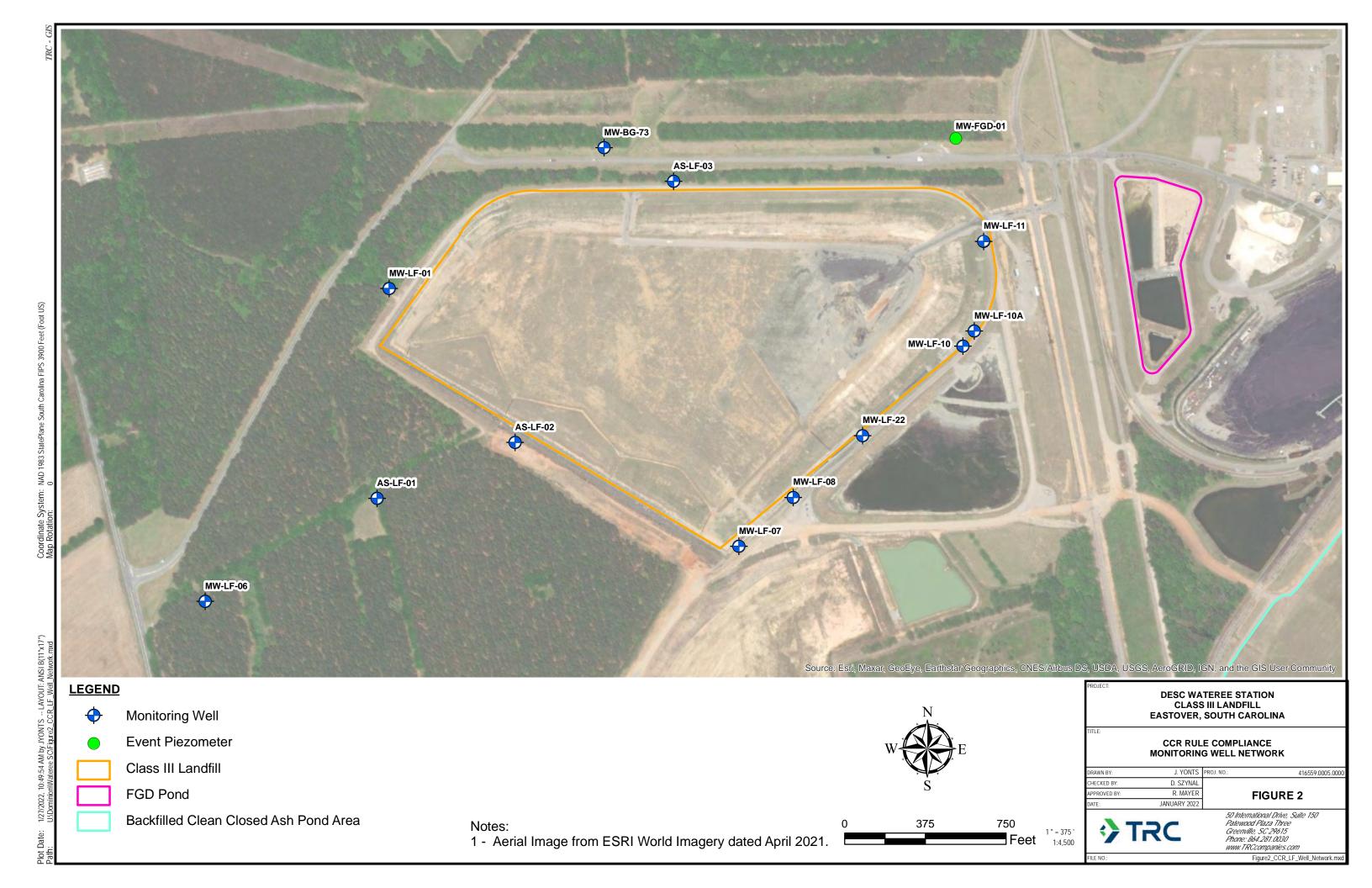
W. ADDISIN 4/13/2022

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## **Figures**



## **Tables**

Table 1
September 2021 Downgradient Results and Potential SSIs
Dominion Energy South Carolina
Wateree Station Class III Landfill

	CONSTITUENT / BTV / RESULT (mg/L except as noted) <sup>[1]</sup>								
WELL	BORON	CALCIUM	CHLORIDE	FLUORIDE	рН	SULFATE	TDS		
	140	1.063 <sup>[2]</sup> (6,670)	-7.03E-5 <sup>[2]</sup> (9.14)	0.1	2.5 - 6.2	7.89	111		
BACKGROUND WELLS	ACKGROUND WELLS								
MW-BG-73	8.82 J	275	2.52	< 0.100	4.50	<0.133	12.9 J		
MW-LF-01	7.86 J	128 J	6.31	< 0.100	4.39	0.353 J	14.3		
AS-LF-01	7.66 J	711	7.81	< 0.100	4.58	0.506	27.1		
AS-LF-02	7.62 J	1,190	2.66	< 0.100	4.82	5.28	70 J		
AS-LF-03	5.63 J	525	4.95	< 0.100	4.34	< 0.133	20.0		
MW-LF-06	11.8 J	3,210	7.37	< 0.100	4.29	2.38	58.6		
DOWNGRADIENT WEL	DOWNGRADIENT WELLS								
MW-LF-07	6.93 J	-0.878 (637)	-4.63E-04 (10.4)	< 0.100	4.52	4.62	12.9 J		
MW-LF-08	6.09 J	-0.0971 (939)	-9.23E-05 (5.21)	< 0.100	4.68	0.307 J	14.3		
MW-LF-10	14.9	1.803 (8,390)	-4.64E-04 (8.36)	0.122	4.35	28.7	50.0		
MW-LF-10A	7.76 J	-8.763 (1,300)	-0.0107 (4.54)	< 0.100	4.55	3.34	12.9 J		
MW-LF-11	8.10 J	-0.0571 (360)	2.44E-04 (5.34)	< 0.100	4.78	< 0.133	15.7		
MW-LF-22	11.4 J	-0.217 (2,000)	-0.00107 (9.99)	< 0.100	4.32	0.97	20.0		

Shaded cells indicate an SSI.

<sup>[1]</sup> Boron and calcium concentration expressed in  $\mu g/L$ ; pH expressed in standard units (s.u.)

<sup>[2]</sup> BTV for calcium and chloride are the UCLs of the trend. Downgradient values for calcium and chloride are the LCLs of the trend for the well with the September 2021 concentrations in parentheses

<sup>&</sup>lt; Result is less than the stated detection limit

J Estimated value between the method detection limit and the practical quantitation limit

# Appendix B March 2022 Alternate Source Demonstration



## DOMINION ENERGY SOUTH CAROLINA

## WATEREE STATION CLASS III LANDFILL

RICHLAND COUNTY, SOUTH CAROLINA

**EPA CCR RULE COMPLIANCE** 

#### ALTERNATE SOURCE DEMONSTRATION REPORT

First Semiannual 2022 Detection Monitoring Event

September 2022



Nakia W. Addison, P.E.

Senior Engineer

Richard A. Mayer Jr., P. G. Project Hydrogeologist

TRC Environmental Corporation | Dominion Energy South Carolina Wateree Station Class III Landfill Alternate Source Demonstration

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## **Executive Summary**

Dominion Energy South Carolina (DESC) completed the most recent semiannual detection monitoring sampling (first semiannual 2022 sampling event) in March 2022 for the Wateree Generating Station (Station) Class III Landfill (Unit) pursuant to the *Criteria for Classification of Solid Waste Disposal Facilities and Practices; Disposal of Coal Combustion Residuals from Electric Utilities; Final Rule,* 40 CFR Part 257 (CCR Rule). The Unit constitutes a coal combustion residuals (CCR) Unit per the CCR Rule. Per 40 CFR §257.94, the samples were analyzed for the Appendix III detection monitoring parameters. Upon receipt of the laboratory analytical results, statistical analysis was performed and evaluated for potential statistically significant increases (SSI) above background concentrations.

The following SSIs above the background concentrations were identified based on direct comparisons made between the statistically derived background threshold values (95 percent upper prediction limit) and the downgradient monitoring results:

- MW-LF-10: calcium, chloride, fluoride, sulfate and total dissolved solids (TDS)
- MW-LF-22: chloride

The information provided in this report serves as DESC's Alternate Source Demonstration (ASD) prepared in accordance with 40 CFR §257.94(e)(2) and successfully demonstrates that the SSIs are not due to a release from the Unit to groundwater, but are due to the following:

- Potential compromised surface completion at MW-LF-10.
- Natural variation in groundwater quality within the area.

Therefore, based on the information provided in this ASD report, DESC will continue to conduct semiannual detection monitoring for Appendix III constituents in accordance with 40 CFR §257.94 at the certified groundwater monitoring well system (Certified Monitoring Well Network) for the CCR Unit.

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### 1.1 Background

Dominion Energy South Carolina (DESC) operates the Wateree Generating Station (Station), a coal-fired power plant, to generate electricity. The Station is located at 142 Wateree Station Road in Eastover, Richland County, South Carolina as shown on **Figure 1**. Coal combustion residuals (CCR) are produced as part of the electrical generation operations. The Station has been generating and disposing of CCR onsite in a coal ash disposal landfill (Unit) since it began operations in 2008. The Unit is a Class 3 non-commercial industrial landfill and operates under South Carolina Department of Health and Environmental Control (SCDHEC) Solid Waste Permit No. LF-3-00026.

The on-site Unit consists of 18 landfill cells planned for development in multiple phases and encompasses a total of 141 future lined acres. The current landfill facility has constructed Cells 1 through 9. Cells 1 through 5 encompasses 34 acres while cells 6 through 9 encompasses an additional 37 acres. These cells were placed into operation in accordance with an operation plan approval issued by SCDHEC in 2010 (cells 1 through 5) and 2015 (cells 6 through 9), respectively.

The Unit receives both fly ash and flue gas desulfurization (FGD) waste from the Station and includes a liner system consisting of a minimum 2-foot-thick compacted clay layer (maximum permeability of  $1 \times 10^{-7}$  cm/sec) overlain by a 60-mil HDPE geomembrane and leachate collection system.

The Unit accepts CCR for disposal in accordance with the federal *Criteria for Classification of Solid Waste Disposal Facilities and Practices; Disposal of Coal Combustion Residuals from Electric Utilities; Final Rule* (CCR Rule), effective October 19, 2015, and subsequent Final Rules promulgated by the United States Environmental Protection Agency (USEPA).

## 1.2 Groundwater Monitoring and Statistical Analysis

In accordance with 40 CFR §257.90 through §257.94, DESC installed a groundwater monitoring system for the Unit, collected samples from the Certified Monitoring Well Network for laboratory analysis for CCR constituents, and performed statistical analysis of the collected samples. The location of the EPA CCR Rule Compliance Monitoring Well Network is presented on **Figure 2**. The Certified Monitoring Well Network consists of 12 wells installed into the subsurface to monitor shallow groundwater as follows:

■ Six wells were installed as background monitoring wells and include AS-LF-01, AS-LF-02, AS-LF-03, MW-BG-73, MW-LF-01, and MW-LF-06.

■ Six wells were installed as compliance monitoring wells and include MW-LF-07, MW-LF-08, MW-LF-10, MW-LF-10A, MW-LF-11, and MW-LF-22.

Pursuant to 40 CFR §257.91(f), DESC obtained certification by a qualified South Carolina-registered professional engineer (P.E.) stating that the Certified Monitoring Well Network has been designed and constructed to meet the requirements of 40 CFR §257.91 of the CCR Rule (Garrett & Moore 2017).

As discussed above, the Unit is currently being monitored pursuant to the CCR Rule. A groundwater sampling and analysis plan including selection of statistical procedures to evaluate groundwater data was prepared per the CCR Rule (Nautilus 2016). Eight quarterly background CCR detection monitoring events were performed from May 2016 through July 2017 in accordance with 40 CFR §257.93(d) and §257.94(b). The eight quarterly detection monitoring background samples were analyzed for Appendix III to Part 257 – Constituents for Detection Monitoring and for Appendix IV to Part 257 – Constituents for Assessment Monitoring.

Following completion of quarterly background detection monitoring in July 2017, DESC implemented semiannual detection monitoring per 40 CFR §257.94(b) for the Unit. The second semiannual (initial) detection monitoring event was performed in September 2017. Subsequent detection monitoring events, with associated verification sampling when appropriate, have been performed on a semiannual basis since September 2017. DESC completed the first semiannual 2022 detection monitoring event in March 2022. Per the CCR Rule, the semiannual detection monitoring event samples were analyzed for Appendix III constituents.

After completion of each semiannual detection monitoring event, the Appendix III data were statistically evaluated to identify potential statistically significant increases (SSIs) for Appendix III constituents above background levels. In accordance with 40 CFR §257.93(f)(6), DESC obtained certification by a qualified South Carolina-registered P.E. stating that the selected statistical method is appropriate for evaluating the groundwater monitoring data for the Unit (SCE&G 2017).

Pursuant to 40 CFR §257.93(h), statistical analysis of the laboratory analytical data was performed to identify potential SSIs for the first semiannual 2022 detection monitoring event. Data from the first semiannual 2022 detection monitoring event is presented in **Table 1**. A total of 6 SSIs were identified for five Appendix III constituents: calcium, chloride, fluoride, sulfate and total dissolved solids (TDS).

## 1.3 Purpose

Pursuant to 40 CFR §257.94(e)(2), DESC may demonstrate that a source other than the CCR Unit caused the SSIs identified or that the SSIs resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. The purpose of this report is to provide written

documentation of the successful ASD for the SSIs identified for the first semiannual 2022 detection monitoring event, pursuant to 40 CFR §257.94(e)(2) of the CCR Rule.

## 1.4 Site Hydrogeology

The Station is located within the Catawba-Wateree River Subbasin (Santee River Basin watershed) of the Coastal Plain physiographic province. Aquifers and confining units in the South Carolina portion of the Coastal Plain are composed of crystalline carbonate rocks, sand, clay, silt, and gravel that contain large volumes of high-quality groundwater (SAWSC 2016). The Unit groundwater monitoring wells are within the surficial aquifer of the Black Creek geologic formation. This formation ranges from ground surface to a depth of approximately 350 feet and consists of medium to coarse-grained glauconitic and phosphatic quartz sands interbedded with lenses of lignitic and micaceous clay beds (SCDNR 2009). Groundwater flow beneath the Unit is generally to the southeast as depicted on **Figure 3**. Hydraulic conductivity values in the surficial aquifer at the Unit range from 2.47 x 10<sup>-4</sup> cm/s to 2.33 x 10<sup>-2</sup> cm/s with an estimated groundwater flow velocities of between 0.02 to 2.09 feet/day (Nautilus 2021).

#### 1.5 General Groundwater Quality

Regionally, groundwater quality within the Black Creek Aquifer may contain high fluoride values attributed to the presence of fluorapatite from abundant fossilized shark teeth in the formation (SCDHEC 2013). Groundwater is generally alkaline in composition consisting of a sodium bicarbonate water type (SCDHEC 2013). The USEPA has established National Primary Drinking Water Regulations that define a permitted maximum contaminant level (MCL) for specific constituents in drinking water. The primary MCLs are legally enforceable standards that were established to protect public health by limiting the levels of contaminants in drinking water. Additionally, the USEPA has established non-enforceable secondary MCLs for guidelines to assist public water systems in managing their drinking water for aesthetic consideration such as taste, color, and odor. Reported water quality concentrations for select primary and/or secondary drinking water contaminants compared to USEPA MCLs are provided in the table below.

Catawba-Wateree River Subbasin Groundwater Water Quality

	Concentration Range		USEPA
Constituent	Low	High	MCL
Calcium (mg/L)	8	200	None
Chloride (mg/L)	1	36	250 (Secondary)
Fluoride (mg/L)	0.10	4.0	4.0 (Primary)
Sulfate (mg/L)	1	118	250 (Secondary)
TDS (mg/L)	16	1,260	500 (Secondary)

1-3

Note: mg/L = milligram per liter

As noted in the table above, the natural range of groundwater quality within the Catawba-Wateree River Subbasin approaches the primary MCL established by the USEPA for drinking water with respect to fluoride, is less than the secondary MCLs for chloride and sulfate, and exceeds the secondary MCL for TDS (SCDNR 2009). A primary or secondary drinking water MCL has not been established for calcium however, the natural range of groundwater quality in the Catawba-Wateree River Subbasin is reported to be in the range of 8 mg/L to 200 mg/L (SCDNR 2009).

# Section 2 Alternate Source Demonstration

Pursuant to 40 CFR §257.94(e)(2), DESC may demonstrate that a source other than the CCR Unit caused the SSI or that the SSI resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. As discussed previously, the first semiannual 2022 detection monitoring event was performed in March 2022. A verification resampling for MW-LF-10 (calcium, chloride, and sulfate) was conducted on June 2<sup>nd</sup>, 2022. Results from the June 2022 resampling event for MW-LF-10 were used for statistical analysis. Statistical analysis of the first semiannual 2022 detection monitoring data was performed pursuant to 40 CFR §257.93(f) and (g) and in accordance with the Statistical Methods Certification (SCE&G 2017) and the Statistical Analysis Plan (OBG 2017). Based on either increasing trends at 95% confidence levels using Thiel-Sen's trend test and/or interwell prediction limits statistical analyses, the following SSIs were identified:

- MW-LF-10: calcium, chloride, fluoride, sulfate and TDS
- MW-LF-22: chloride

All other Appendix III constituent concentrations were within their trends at 95% confidence levels using Thiel-Sen's trend and/or interwell prediction limits in all the CCR Rule groundwater downgradient monitoring system wells.

A discussion for each of the individual SSIs and associated evidence demonstrating that the SSIs were not caused by a release from the Unit is provided in the subsections below.

#### 2.1 Calcium, Chloride, Fluoride, Sulfate, and TDS at MW-LF-10

The calcium, chloride, fluoride, sulfate, and TDS SSIs identified at MW-LF-10 are the result of potential surface water impacts to groundwater at the well and natural variation in groundwater quality from areas upgradient from the CCR Unit. The following evidence supports this determination:

- The steel protective cover for MW-LF-10 was accidently struck by a mowing contractor in 2018 during routine maintenance at the CCR Unit. The surface integrity of the steel protective cover and concrete well pad was suspected to have been compromised as the result of the accident and a replacement well (MW-LF-10A) was installed in December 2018. Monitoring well MW-LF-10A was installed approximately 80 feet northeast of MW-LF-10 and set to monitor the same groundwater interval (15 to 25 feet below ground surface) as MW-LF-10.
- Surface water is carried away from the CCR Unit via a drainage ditch that runs parallel to the perimeter of the CCR Unit boundary. Both MW-LF-10 and MW-LF-10A are located approximately

30 to 40 feet downgradient from this drainage ditch however, MW-LF-10 is located adjacent to a check dam within the ditch that serves to reduce the flow of surface water and prevent erosion in the area. During times of heavy precipitation, surface water accumulates at the check dam and infiltrates into the ground surface near MW-LF-10. The compromised surface completion at MW-LF-10 provides a conduit for surface water to potentially migrate to groundwater at the well.

- Given the potential for surface water impacts to groundwater at MW-LF-10, DESC intends to abandon this well in the fall/winter of 2022. MW-LF-10A will serve as the compliance monitoring well at this location.
- Because of upward trending in the background data set, the calcium SSI was identified based on a comparison of trend slopes, with the lower confidence limit (LCL) of the trend at MW-LF-10 (3.092) higher than the upper confidence limit (UCL) of the background trend at a 95% confidence level (1.063). Calcium was detected in MW-LF-10 at a concentration of 10.4 mg/L in the June 2022 verification resample event. This concentration exceeds the concentration-based background threshold value of 6.67 mg/L. Reported regional calcium concentrations for groundwater in the Station area range between 8 mg/L to 200 mg/L (SCDNR 2009). The detected calcium concentration of 10.4 mg/L from June 2022 falls at the lower end of this naturally occurring range.
- Chloride was detected in MW-LF-10 at a concentration of 9.22 mg/L in the June 2022 verification sample. Reported regional chloride concentrations for groundwater in the Station area range between 1 mg/L to 36 mg/L (SCDNR 2009). The detected chloride concentration of 9.22 mg/L from June 2022 falls within the range of natural variation in area groundwater quality.
- Fluoride was detected in MW-LF-10 at a concentration of 0.351 mg/L in the March 2022 sample. This concentration exceeds the background threshold value of 0.10 mg/L, which is also the reporting limit of the analytical method. Reported regional fluoride concentrations for groundwater in the Station area range between 0.1 mg/L to 4.0 mg/L (SCDNR 2009). The detected fluoride concentration of 0.351 mg/L from March 2022 falls at the lower end of this naturally occurring range.
- Since November 2016, fluoride has been detected at concentrations above the 0.1 mg/L background threshold value five times: in MW-LF-07 in November 2016, in MW-LF-10 in November 2018, September 2021 and March 2022, and in MW-LF-10A in March 2021. Fluoride concentrations in these samples ranged from 0.118 mg/L to 0.351 mg/L. Because these detections are sporadic and infrequent, it is unlikely that they represent a release from the Unit, but more likely that they represent natural variability in groundwater quality.
- Sulfate was detected in MW-LF-10 at a concentration of 36.0 mg/L in the June 2022 verification resample event. This concentration exceeds the background threshold value of 7.89 mg/L.
   Reported regional sulfate concentrations for groundwater in the Station area range between

- 1 mg/L to 118 mg/L (SCDNR 2009). The detected sulfate concentration of 36.0 mg/L from June 2022 falls within the range of natural variation in area groundwater quality.
- TDS was detected in MW-LF-10 at a concentration of 117 mg/L in the March 2022 sampling event. This concentration exceeds the background threshold value of 111 mg/L. Reported regional TDS concentrations for groundwater in the Station area range between 16 mg/L to 1,260 mg/L (SCDNR 2009). The detected TDS concentration of 117 mg/L from March 2022 falls within the range of natural variation in area groundwater quality.

#### 2.2 Chloride at MW-LF-22

The chloride SSI identified at MW-LF-22 is a result of natural variation in groundwater quality from areas upgradient from the Unit. The following evidence supports this determination:

- Chloride was detected in MW-LF-22 at a concentration of 10.3 mg/L in the March 2022 sampling event. Reported regional chloride concentrations for groundwater in the Station area range between 1 mg/L to 36 mg/L (SCDNR 2009). The detected chloride concentration of 10.3 mg/L from March 2022 falls within the range of natural variation in area groundwater quality.
- Chloride concentrations in background monitoring wells have historically ranged from between 2.14 mg/L (MW-BG-73) to 9.14 mg/L (AS-LF-01). The March 2022 chloride concentration of 10.3 mg/L falls just outside the range of historical background levels but still within the range of naturally occurring chloride levels in the area.

# Section 3 Conclusions

The information provided in this report serves as the ASD prepared in accordance with 40 CFR §257.94(e)(2) of the CCR Rule and demonstrates that the SSIs determined based on statistical analysis of the first semiannual 2022 detection monitoring event performed in March 2022 (verification resampling in June 2022) was not due to a release from the Unit to the subsurface.

Based on the information provided in this ASD report, DESC will continue to conduct semiannual detection monitoring in accordance with 40 CFR §257.94 at the Certified Monitoring Well Network for the CCR Unit.

# Section 4 Certification

I hereby certify that the alternative source demonstration presented within this document for the DESC Wateree Station Class III Industrial Landfill CCR Unit has been prepared to meet the requirements of Title 40 CFR §257.94(e)2 of the Federal CCR Rule. This document is accurate and has been prepared in accordance with good engineering practices, including the consideration of applicable industry standards, and with the requirements of Title 40 CFR §257.94(e) 2.

Name: Nakia W. Addison, P.E. Expiration Date: June 30, 2024

Company: TRC Engineers, Inc. Date: 9 21 2022



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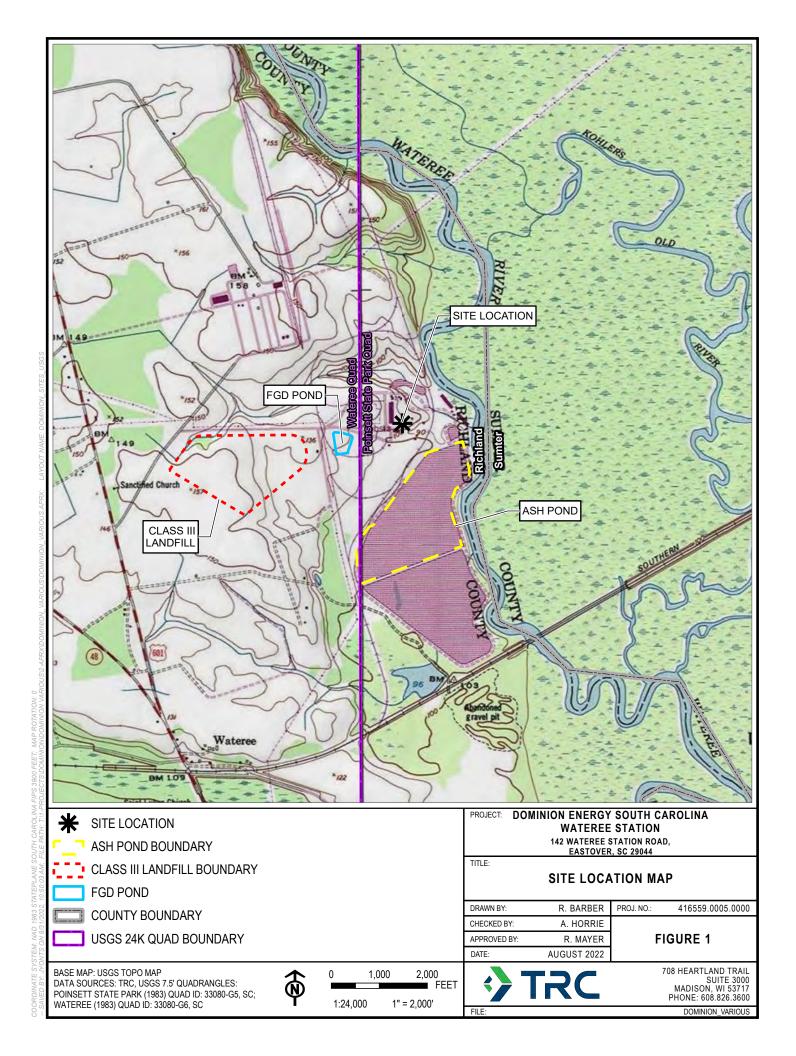
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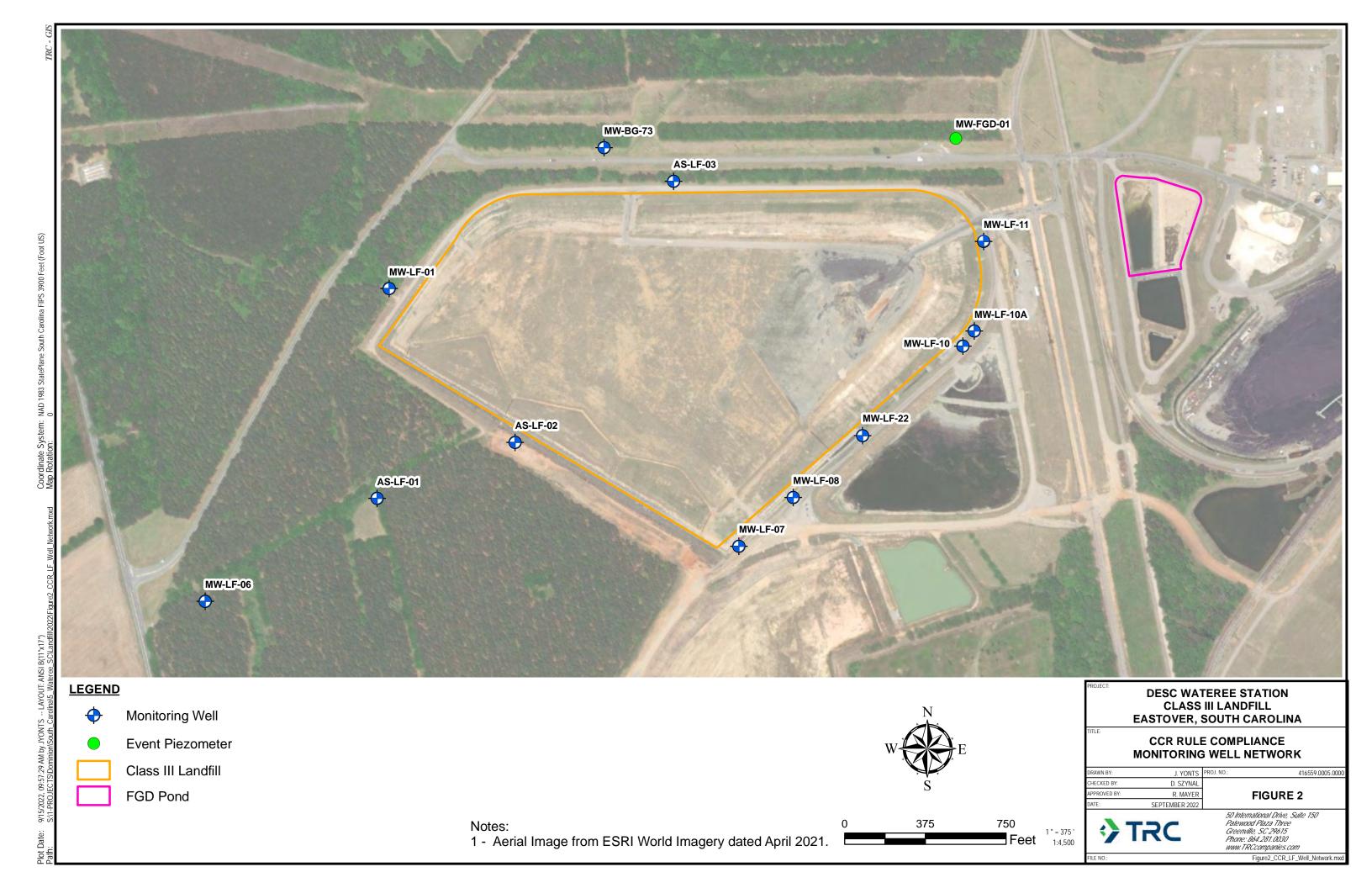
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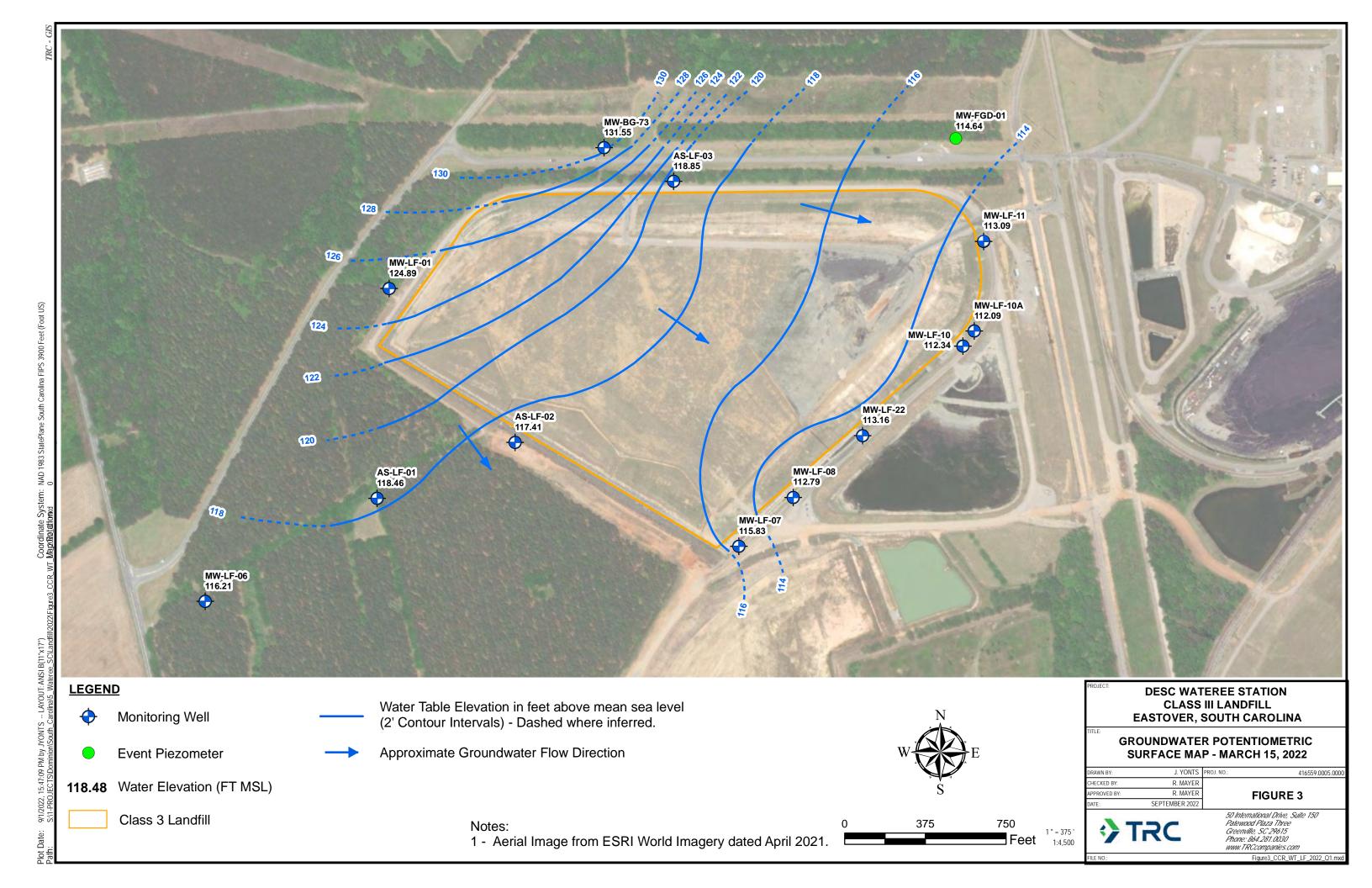
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- South Carolina Department of Health and Environmental Control (SCDHEC), 2013, Watershed Water Quality Assessment Santee River Basin. 454 pp.
- South Carolina Department of Natural Resources (SCDNR), 2009, South Carolina State Water Assessment, 2<sup>nd</sup> Edition. 408 pp.
- United States Environmental Protection Agency. 2017. Secondary Drinking Water Standards: Guidance for Nuisance Chemicals, March 8, 2017.

## **Figures**







## **Tables**

# Table 1 March 2022 Summary of Potentially Statistical Significant Increases Dominion Energy South Carolina Wateree Station Class III Landfill

	CONSTITUENT / BTV / RESULT (mg/L except as noted) <sup>[1]</sup>												
WELL	BORON	CALCIUM	CHLORIDE	FLUORIDE	рН	SULFATE	TDS						
	140	1.063 <sup>[2]</sup> (6,670)	-7.03E-5 <sup>[2]</sup> (9.14)	0.1	2.5 - 6.2	7.89	111						
BACKGROUND WELLS	s												
MW-BG-73	9.18 J	304	2.27	0.0330 U	4.56	0.377 J	4.29 J						
MW-LF-01	12.7 J	126 J	7.18	0.0330 U	4.41	0.301 J	11.4 J						
AS-LF-01	10.3 J	772	8.89	0.0330 U	4.50	0.752	22.9						
AS-LF-02	11.3 J	943	2.74	0.0330 U	5.00	3.43	12.9 J						
AS-LF-03	8.98 J	606	5.28	0.0330 U	4.37	0.433	3.40 U						
MW-LF-06	9.16 J	887	6.73	0.0330 U	4.91	0.604	10.0 J						
DOWNGRADIENT WEL	LS												
MW-LF-07	8.97 J	-0.831 (981)	8.91	0.0330 U	4.41	1.18	4.29 J						
MW-LF-08	8.16 J	-0.0748 (897)	5.57	0.0330 U	4.75	0.424	15.7						
MW-LF-10	21.7	3.092 (10,400) <sup>[3]</sup>	9.22 <sup>[3]</sup>	0.351	4.21	36.0 <sup>[3]</sup>	117						
MW-LF-10A	10.2 J	-7.441 (395)	4.14	0.0330 U	4.72	0.742	3.40 U						
MW-LF-11	10.5 J	-0398 (378)	5.89	0.0330 U	4.62	0.285 J	18.6						
MW-LF-22	15.8	-0.314 (1,950)	10.3	0.0330 U	4.34	1.11	7.14 J						

Shaded cells indicate an SSI.

<sup>[1]</sup> Boron and calcium concentration expressed in  $\mu g/L$ ; pH expressed in standard units (s.u.).

<sup>[2]</sup> BTV for calcium is the UCL of the trend. Downgradient values for calcium are the LCLs of the trend for the well with the March 2022 concentrations in parentheses.

 $<sup>\</sup>begin{tabular}{ll} [3] Verification resample conducted on 6/2/2022; result of verification resample data used. \end{tabular}$ 

U The analyte was not detected above the level of the sample reporting limit.

J Estimated concentration.

# Appendix C First Semiannual Detection Monitoring Program Event Field Data Sheets, Laboratory Reports, and Data Validation Forms

Date(s) Measured:

3-15-2022

Well ID	Well Diameter (inches)	Well Total Depth (ft BTOC)	Well Completion	Screen length (ft)	Depth to Water (ft below TOC)	Pump Type
MW-LF-01	2	33.55	Stickup	15	23.76	Peristaltic
MW-LF-06	2	41.10	Stickup	15	29.76	Dedicated Bladder
MW-LF-07	2	31.73	Stickup	10	24.15	Peristaltic
MW-LF-08	2	36.05	Stickup	10	24.89	Peristaltic
MW-LF-10	2	27.40	Stickup	10	19.19	Peristaltic
MW-LF-10A	2	28.69	Stickup	10	20.40	Peristaltic
MW-LF-11	2	30.25	Stickup	10	22.17	Peristaltic
MW-LF-22	2	34.45	Stickup	15	22.59	Peristaltic
AS-LF-01	2	48.85	Stickup	10	31,44	Dedicated Bladder
AS-LF-02	2	55.66	Stickup	10	32.15	Dedicated Bladder
AS-LF-03	2	38.07	Stickup	10	27.30	Peristaltic
MW-BG-73	. 2	23,38	Stickup	10.	7,52	Peristaltic

MW-F60-01 2

Stickup

24.51 Waterleve

<b>{</b> }	TRC

	PROJECT	NAME:	Watere	ee Station LF	-CCR	PRI	EPARED		CHEC	KED		
							MB	DATE: 3/1	4/2022 <sup>BY:</sup>	RAM	DATE: 3-21-22	
	SAMPLE	ID: MV	V-LF-01	/mw-c	216 FVELL	DIAMET	TER: 🗸	2"	6"  OTH	IER		
	WELL MAT	ERIAL:	✓ PVC	ss [	] IRON 🗌	GALVA	NIZED S	TEEL	П ОТН	IER		
	SAMPLE T	YPE:	☑ GW	□ww □	]sw 🗆	DI		LEACHATE	□ отн	IER		
	PURG		TIME: 16		PATE: 3/14	[2022		AMPLE			ATE: 3/14/2020	
	PURGE METHOD	_	PUMP BAILER	PERISTALTIC	PUMP			<u>4.41</u> s <u>123.3</u> m		CTIVITY: <u>53,</u> 6,78 mg		
	DEPTH TO	) WATER:	23.79	T/ PVC			TURBI	•				
		ВОТТОМ:		T/ PVC	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		NON 📈		GHT	MODERATE	VERY	
	WELL VOL	UME:	1.7	LITERS	☑ GALLO	NS	TEMPE	RATURE:	<b>7,82</b> ℃	OTHER: _		
	VOLUME F	REMOVED:	0.7	LITERS	☑ GALLO	NS	COLOF	: clear		ODOR: _	none	
	COLOR:	_ ch	oudy	0	DOR: <b>nor</b>	ve_	FILTRA	TE (0.45 um)	YES	Ø NO		
				BIDITY			FILTRA	ΓE COLOR:		FILTRATE ODG	DR:	
	NONE			MODERATE	U VE	RY	QC SAI	MPLE: MS	/MSD	DUP-		
	DISPOSAL	METHOD:	GROUN	ND DRUM	1 V OTHER	₹	СОММ	ENTS:				
	TIME	PURGE RATE	PH	CONDUCTIVITY	Y ORP		D.O.	TURBIDITY	TEMPERATU	JRE WATER LEVEL	CUMULATIVE PURGE VOLUME	
		(ML/MIN)	(SU)	(umhos/cm)	(mV)		( mg/L)	(NTU)	(°C)	(FEET)	(GALLONS)	
	1606	130	4.52	50.88	99.9	6	59	54,8	19.86	23.80	INITIAL	
	1620		4.43	52.95	115.	8 6	,72	2.14	17.95	23.80		
	1625		4.42	52.87	119.3		,76	1.79	18.04	i		
	1630		4.41	53.05	lal.	1 -	,77	1,53	17.91	23.80	1 1	
	1635		4.41	53,10	123.		7.78	1.82	17.86	23.80		
		1										
(	1645	V						2.46		23.80	0.7	
	NC	OTE: STAB	LIZATION 1	TEST IS COME	PLETE WHEN	N 3 SUC	CESSIVI	E READINGS A	RE WITHIN T	HE FOLLOWIN	G LIMITS:	
	pH: +/- <b>0.1</b> COND.: +/- <b>3</b> % ORP: +/- <b>10</b> D.						: +/- <b>10</b> %	% TURB: +/-	<b>10</b> % or	= 5</td <td>TEMP.: +/- 3 %</td>	TEMP.: +/- 3 %	
	BOTTLES FILLED PRESERVATIVE CODES A - NONE							C - H2SO4	D - NaOl	H E-HC	CL F	
NUMBER SIZE TYPE PRESERVATIVE FILTERE							NUMBI	ER SIZE	TYPE	PRESERVAT	IVE FILTERED	
1 250 mL PLASTIC B						☑ N		·			□Y □N	
	1	250 mL	PLASTIC	А	□ Y	☑ N					□ Y □ N	
	1	125 mL	PLASTIC	Α	□ Y	V					U Y UN	
					□ Y	□ N					U Y U N	
					□ Y	□ N					□ Y □ N	
	SHIPPING	METHOD:			DATE SHIPPE	PED: AIRBILL NU				NUMBER:		
	COC NUMI	BER.			SIGNATURE:			un	DATE SI	DATE SIGNED: 3-/4-702 7		

TRC	

PROJECT	PROJECT NAME: Wateree Station LF-CCR PREPARED CHECKED											
PROJECT	NUMBER	R: 416559	9.0005.0000	.2.2	BY: (	2AM	DATE:3-1	4-22	BY: NA	4	DATE: 3-21-27	<u>_</u>
SAMPLE I	D: <b>M</b> V	V-LF-06	/mw-01	OLF WELL	DIAMET	ER: 🗸	2"	6" [	OTHER			
WELL MATE	ERIAL:	✓ PVC	ss [	] IRON [	GALVA	NIZED S	STEEL		OTHER			
SAMPLE TY	PE:	☑ GW	□ ww [	]sw 🗆	DI		LEACHATE		OTHER			
PURG	SING	TIME: 16	011	DATE: <b>3-14</b>	-22	S	AMPLE		1648		TE: 3-14-22	_
PURGE METHOD		PUMP BAILER	BLADDER PU	JMP (DEDICA	ATED)	PH: ORP:	4.91 s 146.2 m			·	<u>52</u> umhos/cn /L	1
DEPTH TO	WATER:	29.81	T/ PVC			TURBII		<u>3</u> мт	U			
DEPTH TO	воттом:		T/ PVC			Мог		GHT		DERATE	☐ VERY	
WELL VOL	JME:	1.9	LITERS	☑ GALLO	ONS	TEMPE	RATURE: 1	2.89	_°C OT⊦	HER:		_
VOLUME R	REMOVED:	1.1	LITERS	☑ GALLO		COLOF	R: <u>Clea</u>		ODO	OR:	none	_
COLOR:		lear		DOR: <u>101</u>	1 <u>e</u>	FILTRA	TE (0.45 um)	YE:	s 🖳	NO		
_		TURI	BIDITY			FILTRA	TE COLOR:		FIL	TRATE ODO	DR:	
NONE	SLI	GHT 🗌	MODERATE	U VE	RY	QC SA		/MSD		DUP-		
DISPOSAL	METHOD:	GROU	ND 🗌 DRUI	M 🗸 OTHE	R	СОММ	ENTS: F	<u>BLK</u>	-WAT	- LF-2	191015	625
TIME	PURGE RATE	PH	CONDUCTIVIT	Y ORP		D.O.	TURBIDITY	TEMP	ERATURE	WATER LEVEL	CUMULATIVE PURGE VOLUME	
	(ML/MIN)	(SU)	(umhos/cm)	(mV)	(	mg/L)	(NTU)		(°C)	(FEET)	(GALLONS)	1
1613	100	4.78	49.34	198.		7.75	13.50	21	1.51	29.86		
1618	100	4.80	52.20	188.	6 6	<i>5</i> .33	10.62	18	.65	29.86	,	_
1623	100	4.79	52.59	1/84.	3 5	5.99	8.15	18	25	29.86		
1628	100	4.78	52.7	7 180.	4 6	0.10	5.51	1	2.16	29.80	1 1	
1633	100	4.81	52.64		-	5.82	4.79		3.03	29.86	Y	
1638	100	4.85	52.45	1/67		5.41	4.05	1-	294	29.86		1
1/442	100	4.89	<7 u/	160		5,39	411	17	90	29.80	1. / <b>/ / /</b>	_
1/ 1/0	(0)		5			91	3.83	17	80		\ \\/	-
1678	100	4.91	52.55	- 146.	<u>م ۱</u>		7.83	17	.89	29.86	7 1 1	_
17.							2 1			79 2		-
1710	100						3.17			29.81	b —	_]
<b>NC</b> pH: +/-		ILIZATION ' COND.: +/-		PLETE WHE P: +/- <b>10</b>			'E READINGS A % TURB: +/-				G LIMITS: TEMP.: +/- 3%	
BOTTLES	S FILLED	PRESERV	ATIVE CODE	S A - NONE	В-	HNO3	C - H2SO4	4 D-	· NaOH	E - HC	CL F	
NUMBER	SIZE	TYPE	PRESERVA	TIVE FILT	ΓERED	NUMB	ER SIZE	TY	PE PF	RESERVATI	IVE FILTERED	7
1	250 mL	PLASTIC	В		☑ N							J
1	250 mL	PLASTIC	A		✓ N						UY UN	1
1	125 mL	PLASTIC	A		□ N	ļ						]
			-		□ N	-		1				_
				□ Y	□ N							
CHIDDING	METUAD:			DATE SHIPP	ED.	<u>.l</u>			RBILL NUM	MRED:		$\exists$
SHIPPING							111	-		_	3.14.7	=
COC NUMI	BER:			SIGNATURE	: /	///	W	DA	ATE SIGNE	ט:	3-14-22	<u>.  </u>

	1	,
PAGE	OF	<u> </u>

# **∜** TRC

PROJECT NAME: Wateree Station LF-CCR							PR	EPARED		CHEC	KED
PROJECT NUMBER: 416559.0005.0000.2.2 BY: 3						MB	DATE: 3/1	4/2002 BY: /	lan	DATE: 3-21-27	
SAMF	LE I	D: <b>N</b>	/W-LF-07		WELL	DIAME	ΓER: 🗸	2"	6" OTHE	:R	
WELL	MATI	ERIAL:	✓ PVC	ss _	IRON	GALVA	ANIZED S	STEEL	OTHE	:R	
SAMPI	LE T\	/PE:	✓ GW	□ ww □	sw 🗌	DI		LEACHATE	OTHE	:R	
Р	URC	SING	TIME: 12	.24 DA	TE: 3/14	1/2022		AMPLE	TIME: 1300		TE: 3/14/2022
	RGE HOD	: : [	/ PUMP BAILER	PERISTALTIC I	PUMP		<u> </u>	<u>4.4</u> s <u>124.3</u> m		TIVITY: <u>59.</u> 7.04 mg/	<del></del>
DEPT	нто	WATER	24,21	T/ PVC			TURBI	DITY: 4.3	NTU		
DEPT	нто	вотто	M: 31.73	T/ PVC			₩ мог	NE 🗌 SLI	GHT 🗌 N	MODERATE	☐ VERY
WELL	VOL	JME:	1.3	LITERS	✓ GALLO	NS	TEMPE	RATURE: 2	<u>0.01</u> °c d	OTHER:	
VOLU	VOLUME REMOVED: LITERS   ✓ GALLONS							R: Clear		DDOR: <u>r</u>	<u> </u>
COLC	R:	۷	lear	OD	OR: <u>'100</u> 1	<u>re_</u>	FILTRA	TE (0.45 um)	YES [	Ø NO	
			TUR	BIDITY			FILTRA	TE COLOR:		FILTRATE ODO	R:
[ <b>X</b> MC	DNE	S	SLIGHT	MODERATE	VE	RY	QC SA	MPLE: MS	/MSD [	DUP-	
DISPO	DSAL	METHO	D: GROU	ND DRUM	✓ OTHE	₹	СОММ	ENTS:	···.		
TIM	E	PURGE RATE	РН	CONDUCTIVITY	ORP		D.O.	TURBIDITY	TEMPERATUR	RE WATER LEVEL	CUMULATIVE PURGE VOLUME
(ML/MIN) (SU) (umhos/cm) (mV)							( mg/L)	(NTU)	(°C)	(FEET)	(GALLONS)
132	7	90	4.52	84.58	123.1	6	.70	6.80	20.97	24.36	INITIAL
1240	<b>か</b> し	1	4.42	62.16	126.2	7	.17	6,47	19.77	24.60	1
124	5		4,42	61,22	125.5	,	7.12	5.31	19.67	24.61	
125	30		4.41	60.96	129.5	, "	7.11	4,59	19.82	24.64	
123	55		4.41	60.48	126.8		f.01	4.20	19.95	24.64	
130			4,41	59.42	129.3	3 -	7.04	4.31	20.01	24.64	
k 131		1	4					3.36		_ 24.64	
, 121	ı							3,30		- 21101	0.8
<u> </u>	NO	TF. STA	BILIZATION	TEST IS COMPI	ETE WHE	N 3 SH	CESSIV	E READINGS A	DE WITHIN TH	IE EOLL OWIN	G LIMITS:
pH ——	: +/-		COND.: +/-		+/- 10			% TURB: +/-			TEMP.: +/- 3 %
BOTTLES FILLED PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F								L F			
NUME	3ER	SIZE	TYPE	PRESERVATI	VE FILT	ERED	NUMB	ER SIZE	TYPE	PRESERVATI	VE FILTERED
1		250 ml	- PLASTIC	В	Y	☑ N					N 🗆 Y
1		250 ml	_ PLASTIC	А	□ Y	☑ N					☐ Y ☐ N
1	1 125 mL PLASTIC A Y										□ Y □ N
	ļ				□ Y	N					N   Y
					Y	N					☐ Y ☐ N
SHIPPING METHOD: DATE SHIPPED: AIRBILL NUMBER:											
0001					GNATURE:		11.	11/		<del>-</del>	3-14-7027

# TRC

PROJECT NAME: Wateree Station LF-CCR PREPARED CHECKED									
PROJECT NUMBER: 4	416559.0005.000	).2.2 B	BY: RAP	<b>♦</b> □ DATE:3-1	4-27 BY: /	24 M DATE:3-21-27			
SAMPLE ID: MW-LF	-08	WELL D	IAMETER: 🗸	2"	6" OTHE	ER			
WELL MATERIAL: 🗸 F	PVC SS [	RON G	GALVANIZED S	STEEL	ОТНЕ	R			
SAMPLE TYPE: 🗸 (	gw □ww	sw 🗆 🗈	OI 🗌	LEACHATE	OTHE	ER			
PURGING TIME	E: /271	DATE: <b>3-14</b>	-22 S	AMPLE	TIME: 17	54 DATE: 3-14. 27			
PURGE PUM METHOD: BAIL		C PUMP # 10630	PH: ORP:	4.75 s		TIVITY: <u>46-33</u> umhos/cm 7-49 mg/L			
	02 T/ PVC		TURBI						
	6.05 T/ PVC		X NO		<del></del>	MODERATE VERY			
WELL VOLUME:		✓ GALLON	<del></del>	RATURE: 21.		OTHER:			
	I LITERS	☐ GALLON				odor: none			
color: Clea	<del></del> _	ODOR: 10 1	. //	ATE (0.45 um)		<u> </u>			
	TURBIDITY			TE COLOR:		FILTRATE ODOR:			
NONE SLIGHT MODERATE VERY QC SAMPLE: MS/MSD DUP-									
DISPOSAL METHOD: GROUND DRUM OTHER COMMENTS:									
TIME PURGE RATE F	PH CONDUCTIV	TY ORP	D.O.	TURBIDITY	TEMPERATUR	RE WATER CUMULATIVE PURGE VOLUME			
(ML/MIN) (S	SU) (umhos/cm	) (mV)	( mg/L)	(NTU)	(°C)	(FEET) (GALLONS)			
1276 100 5	18 55.6	6 114.1	6.89	3.68	21.96	Z5:05 INITIAL			
1230 100 4:	76 49.5	1 107.8	7.29	1.82	21,28	25.05			
1234 100 4.7	76 47.61	108.2	7.51	1.52	21.19	25:05			
	75 46.7	3 111.7		1.1)	21.12	25.05			
1242 100 4.	75 46.56	116.2	7.51	1,05	21.28	25.05			
1246 100 4.	73 466	1 1214	7.59	0.96	21.27	7 25:05			
1250 100 4.	73 46.3		7.50	0.85	21.37	2 25.05			
1754 100 4:	75 46-3	129-3	749	0-79	21.28	8 25.05 1.1			
				1		5-14			
110 100 -				1.04		-25.05			
		NPLETE WHEN : RP: +/- 10		<b>'E READINGS A</b> % TURB: +/-		HE FOLLOWING LIMITS: = 5 TEMP.: +/- 3 %</td			
BOTTLES FILLED PRE	SERVATIVE CODE	S A-NONE	B - HNO3	C - H2SO4	D - NaOH	E - HCL F			
	YPE PRESERV	<del></del>	RED NUME	SER SIZE	TYPE	PRESERVATIVE FILTERED			
1 250 mL PLA	ASTIC B		J N			□Y □N			
1 250 mL PLA	ASTIC A		IJ N	1.00		☐ Y ☐ N			
1 125 mL PLA	ASTIC A	□ Y [	✓ N			□ Y □ N			
		□ Y [	□ N			□ Y □ N			
						□ Y □ N			
SHIPPING METHOD:		DATE SHIPPED	D:		AIRBILL N	IUMBER:			
COC NUMBER: SIGNATURE: DATE SIGNED: SUM 450									

# TRC WATER SAMPLE LOG

PROJECT NAME: Wateree Station LF-CCR PREPARED CHECKED												
PROJECT	NUMBER	R: 416559	9.0005.0000	0.2.2	BY:	CAN	DATE:3-	14-22	BY: N	tm.	DATE 3-21-27	- 1 <sup>1</sup> +
SAMPLE I	D: MV	V-LF-10		WELL	DIAMET	ER: 🗸	2"	6" [	OTHER			•
WELL MATE	ERIAL:	✓ PVC	SS [	IRON [	GALVA	NIZED S	STEEL		OTHER			
SAMPLE TY	PE:	☑ GW	□ ww [	SW 🗌	DI		LEACHATE		OTHER			
PURG	SING	TIME: 13	30	DATE: 3-14	-22	S	AMPLE	TIME:	1417	D/	ATE: 3-14-27	
PURGE METHOD:	. –	PUMP BAILER	PERISTALTI	1063	08	PH: ORP:		SU CC	NDUCTIV	ITY:mg	umhos/cm	
DEPTH TO		19.72	T/ PVC			TURBI		NTI		9	<u>. –                                     </u>	
DEPTH TO		27.4	T/ PVC			□ иоі	NE SLI	— IGHT	□ мог	DERATE	☐ VERY	
WELL VOLU	JME:	1.4	LITERS	✓ GALLO	NS	TEMPE	RATURE:		°C OTH	HER:		
VOLUME R	EMOVED:	1.5	LITERS	✓ GALLO	NS	COLOF	₹:		ODG	DR:		
COLOR:	CI	ear		ODOR: 10	ne	FILTRA	TE (0.45 um)	YES	<u> </u>	NO		
		TURI	BIDITY			FILTRA	TE COLOR:		FIL	TRATE ODC	DR:	
₩ NONE	SLI		MODERATE	. UE	RY			/MSD	<u> </u>	DUZ W	AT-CCR-LF-	22101
DISPOSAL	METHOD:	GROUN	ND DRU	IM 🗸 OTHE	₹	сомм	ENTS:	PUP	licar	le *		·
TIME	PURGE RATE	PH	CONDUCTIV	TY ORP		D.O.	TURBIDITY	TEMP	ERATURE	WATER LEVEL	CUMULATIVE. PURGE VOLUME	
	(ML/MIN)	(SU)	(umhos/cm	) (mV)	(	mg/L)	(NTU)		(°C)	(FEET)	CONSIGNATION OF	
1332	100	5.03	0.00	101.8	3 8	.05	28.5	7	2.93	19.22	INITIAL	125,34
1336	100	4.34	0.00	109.8	7 5	2.91	12.4	26	5.53	19.22	110.89	
1340	100	4.33	0.34	198.	7	7.91	10.89	26	6.16	19.22	78.33	
1344	100	4.28	0.28	185.0	6 7	2.78	11-05	26	.78	19-22	75.33	
1348	100	4.26	0.27		9 ;	7.56	11.71	2;	2.36	19-22	74.89	
1352	100	4.31	0,2	197.	6:	7.32	8.35	る	807	19.22	72.66	
1356	100	4.31	0.18	198.	3 3	2.18	7,22	28	7.57	19.22	27/1	
1400	100	4.30	0.13	197.	1 7	2.09	100	28	.86	19.20		
1404	100	4.29	0.3	184.	16	.99	4.89		:17	19.27		
1408	100	4.28		182.	7 6	.80	4.78	<u> </u>	8.73	1	1 10	į
			W W	. 1			E READINGS A					1
pH: +/-			3 % 01	/			% TURB: +/-				TEMP.: +/- 3 %	٠.
BOTTLES	FILLED	PRESERV	ATIVE CODE	S A - NONE	В-	HNO3	C - H2SO4	1 D-	NaOH	E - HO	CL F	
NUMBER	SIZE	TYPE	PRESERV	ATIVE FILT	ERED	NUMB	ER SIZE	TYI	PE PF	RESERVAT	IVE FILTERED	
1	250 mL	PLASTIC	В	□ Y	✓ N						□ Y □ N	
1	250 mL	PLASTIC	А	□ Y	☑ N						YN	1
1	125 mL	PLASTIC	А	□ Y	☑ N						YN	]
				□ Y	□ N						U Y U N	
				ΠY	□ N						YN	
SHIPPING	METHOD:		ı	DATE SHIPP	ED.			AIF	RBILL NUM	IBER <sup>.</sup>		j
								-				-
COC NUME	SEK:			SIGNATURE	_			. IDA	TE SIGNE	ט:		



Post

#### WATER SAMPLE LOG (CONTINUED FROM PREVIOUS PAGE)

PROJECT NAME:	Wateree Station		PREPARED	CHEC	CKED	
PROJECT NUMBER:	416559.0005.0000	BY:	B/BM/ANDATE: 3-14-27	BY: NAM	DATE: 3-4-2	ک
			1,000		, ,	

SAMPLE ID: MW-15-10

TIME RUSE PURGE (MLAMIN) (SU) (Umhos/cm) ORP (MN) ((mg/L) (MTU) (MTU) (FET) PURGE VOILUME (FET) (MLAMIN) (SU) (Umhos/cm) (MN) (MN) (MN) (MN) (MN) (MN) (MN) (MN	SAMITEE		L	1-10						
1912 100 4.2\\ 73.78 187.2\\ 688 4.32\\ 27.98 19.2\\ \\ \\ \\ \ \ \ \ \ \ \ \ \ \ \ \ \	TIME	RATE		j l		1		(°C)	LEVEL	PURGE VOLUME
	1912			73.78	187.2	6.88	4.32	27.98		
	1428	100					4.73		19.27	
				,						
										,
										· ,
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							<u> </u>			
	·									

DATE SIGNED: 3-14-2072

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PROJECT NAME: Wateree Station LF-CCR						PREPARED			CHECKED			
PROJECT NUMBER: 416559.0005.0000.2.2 BY: R				BY: 🌈	AM	DATE: 3-	14-2Z BY:	RA	41	DATE: 3-	21-2-	
SAMPLE	ID: M\	N-LF-10A	<u> </u>	WELL I	DIAMET	ER: 🗸 2	2" 4" [	] 6"	THER			
WELL MAT	ERIAL:	✓ PVC	ss [	] IRON [	GALVA	NIZED ST	EEL	O <sup>-</sup>	THER			
SAMPLE T	YPE:	☑ GW	□ww [	] sw 🔲	DI		EACHATE	O	THER			
PUR	GING	TIME:   L	153	DATE: 3-14	-22	SA	MPLE	TIME: 15	24	DA	ATE: <b>3-/</b>	4.22
PURGE METHOE		PUMP BAILER	PERISTALTIO	C PUMP 1063	08	_	1/1	SU COND		TY: <u>34.</u> 07 mg		nhos/cm
DEPTH TO	) WATER:	20.38	T/ PVC			TURBID	<del></del>	2-NTU				
DEPTH TO	ВОТТОМ:	28.69	T/ PVC		* .	🔀 иои	E SLI	IGHT [	] MOI	DERATE	☐ VE	ERY
WELL VOL	.UME:	1.4	LITERS	✓ GALLO	NS	TEMPER	ATURE: 7	0.50°c	OTH			
VOLUME F	REMOVED:	1.3	LITERS	☑ GALLO	NS	COLOR:	Cle	ac	ODC	DR:	none	
COLOR:	Cli	eac		DDOR: <u>170</u>	ne	FILTRAT	E (0.45 um)	YES	7	NO		
NONE	☐ SLI	_	BIDITY MODERATE	☐ VEF	₹Y	FILTRATI QC SAM	E COLOR:	/MSD		TRATE ODC	OR:	-
DISPOSAL	_METHOD:	GROUI	ND DRUI	M 🗸 OTHER	₹ .	СОММЕ	NTS: FE	LK-h	IAT	- (CR-L	F- 2Z	1010
TIME	PURGE RATE	PH	CONDUCTIVIT	TY ORP		D.O.	TURBIDITY	TEMPERA		WATER LEVEL	CUMUL PURGE V	ATIVE
	(ML/MIN)	(SU)	(umhos/cm)	(mV)	(	mg/L)	(NTU)	(°C)		(FEET)	(GALL	ONS) (-
1456	115	4.84	122.9	33.5	5 5	.42	9.26	26.6	5	20.38	INIT	IAL
1500	115	4.70	35.6	1 /31.	6 3	5,23	5.93	21.3	5	20.40	1	
1504	115	4.69	35.51			5.24	6.10	20-7	20	20.40		
1500	115	4.72	35.20	j 144.	7 5	5.14	5.77	70.5	7	20.40	}	
1512	115	4.70	34.85	151-	9 5	5.18	4.26	20.6	3	20.40		
1516	115	4.70	34.68	7 156.	Ż   ≤	5.05	3.94	70.	56	20.40	7	,
1520	115	4.72	34.76	158.	3 3	5.10	3.22	70.5	7	70.40	V	
1524	115	4.72	34.5	5 161.5	5	.07	3.12	20.5	Ó	20.40		3
1331	115						3.77			20.40		
NC	OTE: STAB	ILIZATION '	TEST IS COM	IPLETE WHEN	1 3 SUC	CESSIVE	READINGS A	ARE WITHIN	THE F	OLLOWIN	G LIMITS:	
pH: +/-	0.1	COND.: +/-	3 % OR	IP: +/- <b>10</b>	D.O.:	+/- 10 %	TURB: +/-	<b>10</b> % o	r =</td <td>5</td> <td>TEMP.: +/</td> <td>- 3%</td>	5	TEMP.: +/	- 3%
BOTTLE	S FILLED	PRESERV	ATIVE CODES	S A - NONE	В-	HNO3	C - H2SO4	D - Na	ОН	E - HC	L F	
NUMBER	SIZE	TYPE	PRESERVA	TIVE FILTI	ERED	NUMBE	R SIZE	TYPE	PR	ESERVATI	VE FILT	TERED
1	250 mL	PLASTIC	В	Y	✓ N						Y	N
1	250 mL	PLASTIC	А	☐ Y	✓ N						Y	N
1	125 mL	PLASTIC	Α	Y	✓ N						Y	□N
				☐ Y	N						Y	□ N
				Y	N						Y	N
SHIPPING METHOD: DATE SHIPPED: AIRBILL NUMBER:												
COC NUMBER: SIGNATURE: M. 1/1/1 DATE SIGNED: 3-14-702					027							

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#### **WATER SAMPLE LOG**

r <del> =</del> -	NIAME	10/-4	- Ot-ti I C	000			ADED			CUEC	KED	
PROJECT			ee Station LF-				PARED			CHEC		
PROJECT	NUMBER	R: 416559	9.0005.0000.2	2.2	BY: J	MB	DATE: <b>3/1</b>	4/2025	BY: RK	ty.	DATE 3-4-27	
SAMPLE	ID: MV	V-LF-11		WELL [	DIAMET	ER: 🗸 2"	4"	6"	OTHER			
WELL MAT	NELL MATERIAL:   ☑ PVC   ☐ SS   ☐ IRON   ☐ GALVANIZED STEEL   ☐ OTHER											
SAMPLE T	YPE:	☑ GW	□ ww □	SW 🗌	DI	LE	ACHATE		OTHER			
PUR	SING	TIME: 14	15G D	ATE: 3/14	/2022	SAN	/IPLE	TIME:	1530	DA	ATE: 3/14/2022	
PURGE PUMP PERISTALTIC PUMP PH: 4.62 SU CONDUCTIVITY: 40.21 umhos/cm  METHOD: BAILER ORP: 102.0 mV DO: 6.07 mg/L												
DEPTH TO	WATER:	22.15	T/ PVC			TURBIDIT	Y: 3.12	NTL	J			
DEPTH TO	воттом:	30.25	T/ PVC			NONE		GHT		DERATE	☐ VERY	
WELL VOL	UME:	1.4	LITERS	☑ GALLO	NS	TEMPERA	TURE: 19	1.94	°C OTH	IER:		
VOLUME F	REMOVED:	1.0	LITERS	☑ GALLO	NS	COLOR:	clear		ODO	DR:	rone	
COLOR:		udy		OR: _ <b>^_</b>	e	FILTRATE	(0.45 um)	YES	<b>×</b>	NO		
		TUR	BIDITY			FILTRATE	COLOR:	_	FIL1	RATE ODC	PR:	
NONE	X SLI	GHT 🗌	MODERATE	☐ VEF	₹Y	QC SAMP	PLE: 🔀 MS	/MSD		DUP-		
DISPOSAL	METHOD:	GROUN	ND DRUM	✓ OTHER	<u> </u>	COMMEN	ITS:					
TIME	PURGE RATE	PH	CONDUCTIVITY	TY ORP D		D.O. T	TURBIDITY	TEMPE	ERATURE	WATER CUMULATIVE LEVEL PURGE VOLUME		
	(ML/MIN)	(SU)	(umhos/cm)	(mV)	(	mg/L)	(NTU)	(	(°C)	(FEET)	T) (GALLONS)	
1458	115	4.68	39,59	104.3 5.		,95	18.6	21	1.12	22.21	INITIAL	
1520		4.62	40.28	102.6	2 G	14	4.77	19	.87	22.21		
1525		4.61	40.40	102.	2 6	.10	3.46	19	,90	22.21		
1530		4.62	40.21	102.0			3.12	l .	.94	22.21		
1544	1/						2.85			22.21	1.0	
	V											
		-										
NC NC	TE: STABI	LIZATION T	TEST IS COMP	LETE WHEN	I 3 SUC	CESSIVE R	READINGS A	RE WIT	HIN THE F	OLLOWIN	G LIMITS:	
pH: +/-		COND.: +/-		+/- 10			TURB: +/-		or =</td <td></td> <td>TEMP.: +/- 3 %</td>		TEMP.: +/- 3 %	
BOTTLES	S FILLED	PRESERVA	ATIVE CODES	A - NONE	B -	HNO3	C - H2SO4	D -	NaOH	E - HC	L F	
NUMBER	SIZE	TYPE	PRESERVAT	<del></del>	ERED	NUMBER	<del></del>	TYF		ESERVATI		
2	250 mL	PLASTIC	В	ПУ	√ N							
<del>2</del>	250 mL	PLASTIC	A		☑ N					***		
<del>2</del>	125 mL	PLASTIC	A		√ N							
J	120 1116	LAGIO	^	=								
					<u> </u>	<u> </u>	1	<u> </u>				
SHIPPING	METHOD:		D.	ATE SHIPPE	D:	770 -		AIR	BILL NUM			
COC NUMI	BER:		SI	IGNATURE:		///\	0	DA	TE SIGNEI	D: 3	-14-7027	

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PROJECT NAME: Wateree Station LF-CCR						PR	EPARED		CHECKED			
PROJECT NUMBER: 416559.0005.0000.2.2					ا <b>ر</b> ، BY:	иß	DATE:3/14	12022 BY:	RA	-19	DATE: 7	3-21-2
SAMPLE	ID: MV	N-LF-22 /	/MW-22LF	WELL 0	DIAMET	ER: 🗸	2"	6" OT	THER			
WELL MAT	ERIAL:	✓ PVC	ss	IRON	GALVA	NIZED S	STEEL	ТО	THER			
SAMPLE T	YPE:	✓ GW	□ ww □	sw 🗌	DI		LEACHATE	ТО	THER			
PURGING TIME: (323 DATE: 3/14/20					2022	S	AMPLE	TIME: [	415	DA	TE: <b>3/</b>	(4/20;
PURGE	· <del></del>	PUMP	PERISTALTIC I	PUMP		PH:		U COND		ry: 78.	7 <u>7</u> .	ımhos/cı
METHOD	):	BAILER						V DO:	4.	<i>17</i> mg/	L	
DEPTH TO	WATER:	22.70	T/ PVC	-		4	DITY: <u>2.27</u>		-		_	
DEPTH TO	BOTTOM:		T/ PVC			ОИ 🔀		GHT _	MOD	ERATE		/ERY
WELL VOL	UME:	<u>2.0</u>	LITERS	GALLO		TEMPE	RATURE: 2		ОТН	ER:		
VOLUME F			LITERS	✓ GALLO		COLO		_	ODO		none	,
COLOR:	یاے_	ear	OD	OR:	re_	FILTRA	TE (0.45 um)	YES		NO		
<b>-</b>			BIDITY		- > .	-	TE COLOR:			RATE ODO	R:	•
NONE			MODERATE	VEF		<del> </del>		/MSD		DUP-		
DISPOSAL	METHOD:	GROUN	ND DRUM	✓ OTHER		COWN	IENTS:	····	. <u>.</u>			
TIME	PURGE RATE	PH	CONDUCTIVITY	ORP		D.O.	TURBIDITY	TEMPERATURE		WATER CUMULATIV LEVEL PURGE VOLU		
	(ML/MIN)	(SU)	(umhos/cm)	(mV) (		mg/L)	(NTU)	(°C)	-	(FEET)	(GALLONS)	
1326	105	4.36	79,69	128.3 4.1		.41	7.88	22.8	7	22.72	,	
1345		4.33	79.60	221.9	8 4	.80	2.41	20,6	6	22.72		
1350		4,33	79.45	233,	6 4	1.85	2.98	20.6	6	22.42		
1355		4.33	79,34	250,		1.70	2.47	20.9	3	22.72		
1400		4,33	79.13	261,6	يا ڍ	1,71	2.11	20.9	7	22.72	{	
1405		4.33	79.60	277.0		1.76	2,49	20.8	4	22.72		
1410		4.33	79.16	285.0	2 1	1.81	2.45	30,80		22.72		
1415		4.34	78.97	291.9	ı	1.77	2.27	20.8		22.72		
, 1,0		١٠٠١	.0.17	00 (11		1 7 1	иги	WO. 9	-		\	
1432							2.15			22.42	1	r
	TE. 6515		FEOT IO COLLE			05000	•		<b></b>		1,5	
<b>N</b> С pH: +/-		COND.: +/-	TEST IS COMPI 3 % ORP:	LETE WHEN : +/- 10			E READINGS A % TURB: +/-		THE F   =</td <td></td> <td>S LIMITS TEMP.:</td> <td></td>		S LIMITS TEMP.:	
BOTTLE	S FILLED	PRESERV	ATIVE CODES	A - NONE	В-	· HNO3	C - H2SO4	D - Na	OH.	E - HC	L F-	
NUMBER	SIZE	TYPE	PRESERVATI	IVE FILTI	ERED	NUMB	ER SIZE	TYPE	PRI	ESERVATI	∕E FI	LTERE
1	250 mL	PLASTIC	В		☑ N	1						Y 🔲
1	250 mL	PLASTIC	A	□ Y	√ N							Y 🔲
1	125 mL	PLASTIC	Α		□ N							Y 🔲
												Y
					N N	1						Y
			<u> </u>			<u> </u>						•
3HIPPING	METHOD:		D,	ATE SHIPPE				AIRBIL	L NUME			
COC NUM	BER:		SI	GNATURE:	M	M	201	DATE S	SIGNED	): 3	-14-8	2027

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PROJECT N	IAME:	Watere	e Station LF	-CCR		PR	EPARED			CHE	CKED
PROJECT N	IUMBER	: 416559	9.0005.0000.	2.2	BY: 2	M	DATE: 3.1	5.22	BY: RA	M	DATE 3-21-27
SAMPLE ID:	: AS	-LF-01		WELL I	DIAMET	ER: 🗸	2"	6"	OTHER		
WELL MATER	RIAL:	✓ PVC	ss [	] IRON _	GALVA	NIZED S	TEEL		OTHER		
SAMPLE TYPI	E:	☑ GW	□ww □	] sw 🔲	DI		LEACHATE		OTHER		
PURGII	NG	TIME: 10	048 C	ATE: 3 · 15	.22	S	AMPLE	TIME:	1130	) [	DATE: 3.15.22
PURGE	7	PUMP	<del>BLADDER PU</del>	·	<del>TE</del> D)	PH:	<u>4.50</u> s	u co	NDUCTIV		*
METHOD:		BAILER	<u>Alexis</u>	peri.		ORP:	m <u>مک.8'0</u>		_6	. <u>62</u> n	ng/L
DEPTH TO W		31.44	T/ PVC			TURBI	-	_		DED 4 TE	·
DEPTH TO B		48.85	T/ PVC		NO.	<b>X</b> _NO		GHT		DERATE	U VERY
WELL VOLUM		2.8	LITERS LITERS	✓ GALLO			•	8.36		HER:	
VOLUME REI		1.6				COLO	R: <u>Clea</u> c .TE (0.45 um)	 YES	ODO	NO -	none
COLOR:		za/		DOR: <u>nor</u>	<u>e</u>			Hear'			OOP: •
<b>₩</b> NONE		_	BIDITY MODERATE	∏ VEI	RΥ			/MSD		TRATE OF	JOR:
DISPOSAL M								turb:			
	PURGE									WATER	R CUMULATIVE
I IN/I⊢ I	RATE	PH	CONDUCTIVIT	Y ORP		D.O.	TURBIDITY	TEMP	ERATURE	LEVEL	PURGE VOLUME
(/\	ML/MIN)	(SU)	(umhos/cm)	(mV)	(	mg/L)	(NTU)	(	(°C)	(FEET)	(GALLONS)
1050 1	150	4.49	60.06	124.7	6	.69	17.1	18	.20	31.44	INITIAL
1055		4.49	60.23	108.7	6	.62	11.1	18	.03		
1100		4.49	59.04	102.4	6	,50	8.81	17	.99		
1105		4.48	59.17	102.8	6	.41	6.31	18	.01		
1110		4.47	59.32	103.3	6	.35	5.13	18	.02		
1115		4.49	59.15	104.3	7	.25	3.29	18	.43		
1120		4.49	59.17	105.2	. 6	.47	2.76	18.	35		
1125		4.49	59.18	107.3	6	.41	2.07	18.	35		
1130	ſ	4.50	58.95	108.4	. 6	.62	1.46	18.	36		1.60
NOTE	E: STABI	LIZATION .	TEST IS COM	PLETE WHE	1 3 SUC	CESSIV	E READINGS A	RE WIT	HIN THE	FOLLOW	ING LIMITS:
pH: +/- <b>0.</b> ′	1 (	COND.: +/-	3 % ORI	P: +/- <b>10</b>	D.O.	+/- 10	% TURB: +/-	10 %	or =</td <td>5</td> <td>TEMP.: +/- 3%</td>	5	TEMP.: +/- 3%
BOTTLES F	ILLED	PRESERV	ATIVE CODES	A - NONE	В-	HNO3	C - H2SO4	D -	NaOH	E - 1	HCL F
NUMBER	SIZE	TYPE	PRESERVA	TIVE FILT	ERED	NUMB	ER SIZE	TYI	PE PF	RESERVA	TIVE FILTERED
1 2	250 mL	PLASTIC	В	ΠY	☑ N						□ Y □ N
1 2	250 mL	PLASTIC	А	□ Y	☑ N						□ Y □ N
1	125 mL	PLASTIC	А	□ Y	N						□ Y □ N
				□ Y	□ N						☐ Y ☐ N
				□ Y	□ N						□ Y □ N
SHIPPING ME	ETHOD:			DATE SHIPPE	<del></del> ED:			AIF	RBILL NUM	MBER:	
COC NUMBE	COC NUMBER: SIGNATURE: DATE SIGNED:										

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PROJECT NAME: Wateree Station LF-CCR						PREPARED			CHECKED			
PROJECT	NUMBEF	R: 41655	9.0005.0000.2	.2	BY: 2	ML	DATE: 3.	15.22	BY: RA	+M	DATE: 3-21-27	
SAMPLE	ID: AS	-LF-02		WELL	DIAMET	ER: 🗸	2"	6"	OTHER			
WELL MAT	ERIAL:	✓ PVC	ss 🗆	IRON 🗌	GALVA	NIZED S	TEEL		OTHER			
SAMPLE T	YPE:	☑ GW	□ ww □	sw 🗌	DI	I	EACHATE		OTHER			
PURGING TIME: \200 DATE: 3.15.22						S/	AMPLE	TIME:	1235		DATE: 3.15.22	
PURGE		PUMP	BLADDER PUN	IP (DEDICA	TED)	PH:	<b>5.00</b> s	u c	ONDUCTIV		.20 umhos/cm	
METHOD	):	BAILER	Alexis p	eri.		ORP:	105.2 m	N DC	): <u>2</u>	.81 m	ng/L	
DEPTH TO	WATER:	32.15	T/ PVC			TURBIC		NT	_		_	
DEPTH TO	ВОТТОМ:		T/ PVC			NON 🔄		GHT	MO	DERATE	∐ VERY	
WELL VOL		3.8	LITERS	☑ GALLO		TEMPER	RATURE: 22	28	_°C OT	HER: _		
	REMOVED:		LITERS	✓ GALLO		COLOR				OR:	none	
COLOR:	<u> </u>	ear	OD	OR: <u>hor</u>		FILTRA	TE (0.45 um)	YE	s 🔣	NO		
			BIDITY			<b>—</b>	E COLOR:		FIL	TRATE OF	OOR:	
NONE	SLI		MODERATE	VEI		QC SAI		/MSD	<u> </u>	DUP		
DISPOSAL		GROU	ND DRUM	✓ OTHEF	·	T COMM	ENTS: Post	turb:	10.14			
TIME	PURGE RATE	PH	CONDUCTIVITY	ORP		D.O.	TURBIDITY	TEMF	PERATURE	WATER LEVEL	CUMULATIVE PURGE VOLUME	
	(ML/MIN)	(SU)	(umhos/cm)	(mV)	(	mg/L)	(NTU)		(°C) <sup>(</sup>	(FEET)	EET) (GALLONS)	
1205	60	4,92	30.82	126.	5 3	.59	30.7	2:	2.72	32.75	5 INITIAL	
1210		4.95	30.46	108.	7 3	.06	17.7	21	.57	32.82	-	
1215		4.96	30.76	105.8	3	.01	14.6	21	.72	32.89	1	
1220		4.98	30.26	104.1	3	3.17	11.8	2	2.11	32.95	•	
1225		5.00	30.30	104.2	- 2	.98	11.6	22	2.22	32.97		
1230		5.01	30.33	104.4	/ 2	.85	11.7	28	2.35	33.00	)	
1235	1	5.00	31.20	105.2	2	2.81	12.9	23	2.28	33.02	0.5	
			·									
			·									
NC	TE: STABI	LIZATION 7	TEST IS COMPL	ETE WHEN	1 3 SUC	CESSIVE	READINGS A	RE WI	THIN THE	FOLLOW	NG LIMITS:	
pH: +/-	0.1	COND.: +/-	3 % ORP:	+/- 10	D.O.:	+/- 10 %	6 TURB: +/-	10 %	or =</td <td>5</td> <td>TEMP.: +/- 3 %</td>	5	TEMP.: +/- 3 %	
BOTTLES	S FILLED	PRESERV	ATIVE CODES	A - NONE	В-	- HNO3	C - H2SO4	D -	- NaOH	E - 1	ICL F	
NUMBER	SIZE	TYPE	PRESERVATI	VE FILT	ERED	NUMBE	R SIZE	TY	PE PI	RESERVA		
1	250 mL	PLASTIC	В	□Y	V N						□Y □N	
1	250 mL	PLASTIC	А	□Y	IJ N						□ Y □ N	
1	125 mL	PLASTIC	А	□ Y	✓ N						□Y □N	
				□Y	□ N						□ Y □ N	
				□ Y	Пи		-				UY UN	
SHIPPING	METHOD:	1	<u> </u>	ATE SHIPPE	<u>-</u>			ДП	RBILL NUM	/BFR·		
SHIPPING METHOD: DATE SHIPPED: AIRBILL NUMBE  COC NUMBER: DATE SIGNED:					-							

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PROJE	PROJECT NAME: Wateree Station LF-CCR			PREPARED				CHECKED		
PROJE	CT NUMBEF	R: 41655	9.0005.0000.	2.2	BY: J	MB	DATE: 3/	15/2023 <sup>BY:</sup>	RAN	DATE: 3-21-2
SAMPL	E ID: AS	S-LF-03		WELL	DIAMET	ER: 🗸	2"	6" OTH	IER	
WELL M	ATERIAL:	✓ PVC	□ss □		GALVA	NIZED S	STEEL	OTH	IER 	
SAMPLE	TYPE:	☑ GW	□ww □	] sw 🔲	DI		LEACHATE	ОТН	IER	
PURGING TIME: 1133 DATE: 3/15			12022	S	AMPLE	TIME: 120		DATE: 3/15/2021		
PURGE ✓ PUMP PERISTALTIC PUMP METHOD: □ BAILER				PH: ORP:		ONDUC	<u></u>	<mark>ひょ35</mark> umhos/cm ng/L		
DEPTH	TO WATER:	27.31	T/ PVC			TURB	DITY: 1.31	5_ NTU		
DEPTH	ТО ВОТТОМ:	38.07	T/ PVC			М №	NE 🗌 SLI	GHT	MODERATE	☐ VERY
WELL V	OLUME:	1.9	LITERS	☑ GALLO	NS	TEMPE	RATURE: 2	<i>0.49</i>	OTHER:	
VOLUM	E REMOVED:	0.7	LITERS	☑ GALLO	NS	COLO	R: <u>Clear</u>	-	ODOR:	none
COLOR	: <u>clea</u>	ar	c	DOR: _ <b>_^_0</b>	ne_	FILTRA	ATE (0.45 um)	YES	□ NO	
		TUR	BIDITY			FILTRA	TE COLOR:		FILTRATE OF	DOR:
<b>⊠</b> NON	IE SLI	GHT 🗌	MODERATE	☐ VE	RY	QC SA	AMPLE: MS	/MSD	DUP-	
DISPOS	SAL METHOD:	: GROUI	ND _ DRUM	M V OTHER	₹	COMM	MENTS: FBL	LK-WAT	-CCR-	LF-22102
TIME	PURGE RATE	PH	CONDUCTIVIT	Y ORP		D.O.	TURBIDITY	TEMPERATU	JRE WATER LEVEL	
	(ML/MIN)	(SU)	(umhos/cm)	(mV)	(	mg/L)	(NTU)	(°C)	(FEET)	) (GALLONS)
1130	100	4,40	51.44	79.5	6	. 99	2.79	20.48	27.31	4 INITIAL
1155		4.38	50,44	88.1	-	1.08	1.59	20.35	27.3	4
1200	,	4.37	50.30	95.6	, 7	7.18	1,46	20.44		
/205		4.37	50.35	96.1	7	4.18	1.35	20,49		
_	<del></del>									
1215	,   1					~	1.51		'	0.7
			,							
										į.
	NOTE: STAB	ILIZATION	TEST IS COM	PLETE WHE	N 3 SUC	CESSIV	/E READINGS A	ARE WITHIN 1	THE FOLLOW	ING LIMITS:
		COND.: +/-		P: +/- <b>10</b>			% TURB: +/-			TEMP.: +/- 3%
BOTT	LES FILLED	PRESERV	ATIVE CODES	A - NONE	В.	- HNO3	C - H2SO4	D - NaOl	H E-1	HCL F
NUMBE	·	TYPE	PRESERVA	<del></del>	ERED	TNUME	<del></del>	TYPE	PRESERVA	
1	250 mL	PLASTIC	В	ΠY	☑ N	1101112	0122		1112021117	
-		PLASTIC			V V					
1	250 mL	-	A							
1	125 mL	PLASTIC	A							
				□ Y	=-	-				
				<u> </u>	<u> </u>  N					
SHIPPIN	NG METHOD:			DATE SHIPP	ED:			AIRBILL	NUMBER:	
COC NUMBER: SIGNATURE:							DATE SI	GNED:		

TR	C
	`

F	PROJECT	NAME:	Watere	ee Station LF-C	CR	PREPARED				CHECKED		
F	PROJECT	NUMBER	R: 416559	9.0005.0000.2.	2	BA: 9	MB	DATE:3//	5/2022 <sup>E</sup>	BY: R	AM	DATE: 3-21-27
5	SAMPLE	D: MV	V-BG-73	-	WELL (	DIAMET	ER: 🗸	2"	6"	OTHER		
٧	VELL MATI	ERIAL:	☑ PVC	□ss □	IRON 🗌	GALVA	NIZED S	TEEL		OTHER		
5	SAMPLE TY	/PE:	☑ GW	□ ww □	SW 🗌	DI		EACHATE		OTHER		
	PURG	SING	TIME: 12	32 DA	TE: 3/15/	12022	SA	MPLE	TIME:		DA	TE: 3/15/202
	PURGE METHOD		PUMP BAILER	PERISTALTIC P	PUMP			<u>4.56</u> s	U CON		/ITY: <u>23.</u> 13_ mg/	30 umhos/cm
	DEPTH TO	WATER:	7.50	T/ PVC				OITY: 3.4	NTU			
	DEPTH TO	воттом:		T/ PVC			MON 🔀	IE 🗌 SLI	GHT	МО	DERATE	☐ VERY
V	WELL VOLU	JME:	2.7	LITERS	☑ GALLO	NS	TEMPER	RATURE: 3	0.48 .	с от	HER:	
Ľ	VOLUME F		•	LITERS	☑ GALLO	NS	COLOR	: <u>clear</u>	<del></del>	OD	OR:	none
Ľ	COLOR:		ear	OD0	OR: <u>1001</u>	<u>re</u>	FILTRAT	TE (0.45 um)	YES		NO	
],	<b>1</b> 21			BIDITY				E COLOR:		FIL	TRATE ODO	R:
۴	NONE DISPOSAL			MODERATE  ID	VEF		COMME	MPLE: MS	/MSD		DUP-	
L	DISPUSAL			ID DKOM	O OTHER		COMM	INTO.			Luaren	OUBBU ATNE
	TIME	PURGE RATE	PH	CONDUCTIVITY	ORP		D.O.	TURBIDITY	TEMPER	RATURE	WATER LEVEL	CUMULATIVE PURGE VOLUME
		(ML/MIN)	(SU)	(umhos/cm)	(mV)		( mg/L)	(NTU)	(°¹	C)	(FEET)	(GALLONS)
	1234	130	4.63	22.83	82.	(	5.14	2.19	22.0	35	7.57	INITIAL
	1250	1	4.57		84.5	S = a	20	1.82	20,	33	7.60	1
	1955		4.56	23,21	86.3			2.70	20.		7.60	
	1300		4.56	23.10	89,1		0.12	2.06	20,			
	1305		4.56	23.30	90.2	1		2.41	20,	48		
ſ												
1	1315							2.49				0.8
Ī												<u> </u>
ſ				,						·		
	,											
	NO	TE: STABI	LIZATION 1	TEST IS COMPL	ETE WHEN	1 3 SUC	CESSIVE	READINGS A	RE WITH	IIN THE	FOLLOWING	G LIMITS:
	pH: +/-	0.1	COND.: +/-	3 % ORP:	+/- 10	D.O.	: +/- 10 %	6 TURB: +/-	10 %	or =</td <td>5</td> <td>TEMP.: +/- 3 %</td>	5	TEMP.: +/- 3 %
Γ	BOTTLES	FILLED	PRESERVA	ATIVE CODES	A - NONE	В-	- HNO3	C - H2SO4	D - N	NaOH	E - HC	L F
t	NUMBER	SIZE	TYPE	PRESERVATIV	/E FILTI	ERED	NUMBE	R SIZE	TYPE	E PI	RESERVATI	VE FILTERED
t	1	250 mL	PLASTIC	В	□Y	✓ N						□Y □N
t	1	250 mL	PLASTIC	А	□ Y	☑ N						Y N
t	1	125 mL	PLASTIC	А	Y	☑ N						Y N
t	-				Y	□N						□ Y □ N
					ΠY	$\square$	1					DY DN
							1			l		
	SHIPPING	METHOD:		DA	TE SHIPPE		1		AIRE	BILL NUN	/IBER:	



ı	7 111	WATERQ	UALITI	IVICI	ER CA	ALIDIVATI				
	PROJECT NAME:	Wateree Station			MODEL:	Agua Tr		SAMPLER:	(JB) / BM /	AM
	PROJECT NO.:	416559.0005.0000			SERIAL	#: 72856	<u>(</u>	DATE: 3/14/2	2022	
	PH (	CALIBRATION CHECK				SPEC	IFIC CONDU	ICTIVITY CALIB	RATION C	HECK
	pH 7 (LOT#): 21010066 (EXP. DATE): 08/2082 PRE-CAL. READING/STANDARD	pH 4 / 10 a1470232 (LOT #): 21080189 (EXP. DATE): 04 /2823 PRE-CAL. READING / STANDARD	CAL. RANGE	TIME		(LOT#): 3147 (EXP. DATE): 0		TEMPERATURE	CAL. RANGE	TIME
pre	6.75 / 7.00	9.93 / 10.00	WITHIN RANGE	1125	pre	4474	1 4490	11.52	WITHIN	1142
'	1	4.40 / 4.00		1128	POSH		14490	II. Cel	WITHIN RANGE	143
gre	7.06 / 7.00	10.13 / 10.00	WITHIN	1133	(*)	' ' ' '	1	11100	WITHIN	
post post		4.00 / 4.00	WITHIN RANGE	1134			1		WITHIN	
امتحصا	ORP	CALIBRATION CHECK	104102	1101	J		D.O. CAL	IBRATION CHE		
:	CAL. READING	TEMPERATURE			1	CA	LIBRATION R	EADING		
	(LOT#): QIINO143 (EXP. DATE): 04/2023 PRE-CAL. READING / STANDARD	(°CELSIUS)	CAL. RANGE	TIME			(mg/L)	* #	CAL. RANGE	TIME
OC4-	241,3/228	16.90	WITHIN	1144		Baro : 7:	12.22		WITHIN	1120
pre	227 / 228	10.73	RANGE			Temp! 12			RANGE WITHIN	1120
bost	991,000	10173	WITHIN	1145	2	Act: 11.			RANGE	:
	,		RANGE WITHIN			Calc: 10	.8		RANGE WITHIN	
	TI IDRIN	ITY CALIBRATION CHEC	RANGE					COMMENTS	RANGE	<u></u>
		READING (NTU)	,r. 	<u> </u>	1	AUTOCAL	SOLUTION		SOLUTION (	(S)
	(LOT #):	(LOT #):	CAL.			(LOT#):		LIST LOT NUMBERS		· ·
	(EXP. DATE):	(EXP. DATE):	RANGE	TIME		(EXP. DATE):			IBRATION CHE	
	PRE-CAL. READING / STANDARD	POST-CAL. READING / STANDARD				CALIBRATED	PARAMETERS	CALIBRAT	ION RANGES (	1)
	6.02 / 0.00	0.01 10.00	WITHIN RANGE	1137		П рн		pH: +/- 0.2 S	.U.	
	1,95 / 1.00	1.90 / 1.00	WITHIN RANGE			☐ cor	ND	COND: +/- 1% C	F CAL. STAN	IDARD
	8.23 /10.00	9.98 / 10.00	WITHIN RANGE	1136		☐ ORI	Р .	ORP: +/- 25 m	V	
	1	1	WITHIN RANGE			□ D.O	<b>.</b>	D.O.: VARIES		
		NOTES	-	•	<b>-</b>	/ □ TUF	₹В	TURB: +/- 5% C	F CAL. STAN	IDARD
								<sup>(1)</sup> CALIBRATION RATHE MODEL OF THE		
					<u></u>					
	P	ROBLEMS ENCOUNTERED	**		ļ		CORRECT	IVE ACTIONS		
	NONE				N	14				
					-					
	12 1		<b>.</b>		<u></u>					
			3-14-	202	2	J. Yo	nts		3/18/2	2022
			DATE	-		CHECKE				

REVISED 06/2011



7 111	WATER Q	UALITY	MET	ER C	ALIBRATION	LOG		L	M
PROJECT NAME:	Wateree Station			MODEL:	Agra TColl	400	SAMPLER:	JB / BM /	AM
PROJECT NO.:	416559.0005.0000			SERIAL	# 8514 25	5	DATE: 3 -	14-20	つてて
PH	CALIBRATION CHECK	40			SPECIFIC	CONDU	CTIVITY CALIBI	RATION C	HECK
pH 7 (LOT #): 2 380 02 (EXP. DATE): 4/23 PRE-CAL, READING/STANDARD	(LOT #): 20080056 (EXP. DATE): 4/23	CAL. RANGE	TIME		CAL. READIN (LOT #):  (EXP. DATE):  PRE-CAL. READING / ST		TEMPERATURE	CAL. RANGE	TIME
G.71 1 7.00 7.00 1 3.00 1	3.73   4.00 3.98   4.00 9.64   10.00 10.00   10.00 CALIBRATION CHECK	WITHIN RANGE WITHIN RANGE WITHIN RANGE WITHIN RANGE	1143 1145 1157 1153		4 2 79 1 44 1 1		1495 IBRATION CHE	WITHIN RANGE WITHIN RANGE WITHIN RANGE WITHIN RANGE WITHIN RANGE	7.44
CAL. READING (LOT #): 21/4 014 3 (EXP. DATE): 9 / 23  PRE-CAL. READING / STANDARD	TEMPERATURE (*CELSIUS)	CAL. RANGE	TIME		CALIBRA	ATION RE	EADING	CAL. RANGE	TIME
	ITY CALIBRATION CHECK READING (NTU)  (LOT #):  (EXP. DATE):  POST-CAL. READING / STANDARD  OOO / OOO  [OOO / OOO  [OOO / OOO  ]  NOTES	WITHIN RANGE WITHIN RANGE WITHIN RANGE WITHIN RANGE  CK  CAL. RANGE WITHIN RANGE WITHIN RANGE WITHIN RANGE WITHIN RANGE WITHIN RANGE	1155		18.90°C   9.63 mg/   Pressure = Call 10.0   Autocal solu (LOT #): 214700 (EXP. DATE): 4/   CALIBRATED PARAN   PH	TION する 23	COMMENTS  STANDARD  LIST LOT NUMBERS AUNDER CALIBRATI  PH: +/- 0.2 S.  COND: +/- 1% OI  ORP: +/- 25 mN  D.O.: VARIES	WITHIN RANGE WITHIN RANGE WITHIN RANGE SOLUTION IN RANGE WITHIN RANGE WITHIN RANGE WITHIN RANGE WITHIN RANGE WITHIN RANGE WITHIN RANGE SOLUTION IN RANGE ON RANGES IN RANGE U. F CAL. STAN	(S) ION DATES CK I) IDARD IDARD
NONE	PROBLEMS ENCOUNTERED			) 	r A	CORRECTI	VE ACTIONS		
All All SIGNED	7 3-14	-707 DATE	. ک	T	J. Yonts			3/18/	/2022 DATE





REVISED 06/2011

		WAIERQ	UALIT	I IVI I		ALIDKA	HON LOG			
	PROJECT NAME:	Wateree Station			MODEL:	AquaTro	IJ	SAMPLER:	JB / BM /	АМ
	PROJECT NO.:	416559.0005.0000			SERIAL			DATE: 3.15.2	2	
	PH (	CALIBRATION CHECK				SPI	ECIFIC CONDU	ICTIVITY CALIBI	RATION CI	HECK
	(EXP. DATE): 8 22	(LOT #): A bocal (EXP. DATE):	CAL. RANGE	TIME		(LOT #): (EXP. DATE):	READING Autocal	TEMPERATURE (°CELSIUS)	CAL. RANGE	TIME
	PRE-CAL. READING / STANDARD	PRE-CAL. READING / STANDARD	☐ WITHIN	0850/		ļ	ADING/STANDARD		[ ] WITHIN	0855
Post	6.83 / 7.00	4.25 / 4.00	RANGE WITHIN	/0900		_	1 4.49	12.69	RANGE WITHIN	
102	7.00 / 7.00	4.01 / 4.00	RANGE WITHIN RANGE	/0905	903+	4.49	/ T. T. T	12.82	RANGE WITHIN RANGE	0905
	1	,	WITHIN				1	<del>-</del>	WITHIN	
	ORP	CALIBRATION CHECK	TORIOL		l		D.O. CAL	IBRATION CHE	<u> </u>	
	CAL. READING	TEMPERATURE					CALIBRATION R			
	(LOT #): 21140143 (EXP. DATE): 4123 PRE-CAL. READING / STANDARD	(°CELSIUS)	CAL. RANGE	TIME			(mg/L)		CAL. RANGE	TIME
	246 / 228	13.26	WITHIN RANGE	0915		Baro:	13 770m	กน	WITHIN RANGE	0910
Post	228 / 228	13.28	WITHIN RANGE	0920		Temp:		בייי	WITHIN RANGE	
	1		WITHIN RANGE				10.7		WITHIN RANGE	
	. /		WITHIN RANGE			Actual	: 10.65		WITHIN RANGE	
	TURBID	ITY CALIBRATION CHEC	K		ı	·		COMMENTS		
	CALIBRATION	READING (NTU)				AUTOC.	AL SOLUTION	STANDARD	SOLUTION (	S)
	(LOT #):	(LOT #):	CAL.	TIME		(LOT#): 2	1070193	LIST LOT NUMBERS		
	(EXP. DATE):	(EXP. DATE):	RANGE	11111		(EXP. DATE):		UNDER CALIE	BRATION CHE	СК 
	PRE-CAL. READING / STANDARD	POST-CAL. READING / STANDARD	-			CALIBRAT	ED PARAMETERS	CALIBRATI	ON RANGES (1	1)
	3.07 / 0	0 1 0	WITHIN			- '	H	pH: +/- 0.2 S.	U.	
	2.28 / 1	1 / 1	WITHIN RANGE				COND	COND: +/- 1% OI	F CAL. STAN	DARD
	8.29 / 10	1 10	WITHIN RANGE				DRP	ORP: +/- 25 mV	′	
			WITHIN RANGE				0.0.	D.O.: VARIES		
	,	NOTES				□ т	URB	TURB: +/- 5% OI	F CAL. STAN	DARD
	Lamotte Turbidimet	rec 5/N 2949-041	3					(1) CALIBRATION RAI THE MODEL OF THE		
	P		·	CORRECT	IVE ACTIONS	·				
	PROBLEMS ENCOUNTERED  NONE						VON9			
		.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,								
		11 0								
	1/1/4	4/1	3-15-	77		J.	Yonts		3/18	/2022
	SIGNED	0	DATE .	_		CHEC	KED BY			DATE



PROJECT NAME:	Wateree Station			MODEL:	An un	Troll 400	SAMPLER RAD	JB / BM /	AM
PROJECT NO.:	416559.0005.0000	,			•	1425	DATE: 3-15		
				OLIVIAL	<u>".</u> გ 3 <u>ј</u>	1423	J. 1.3	- 602	
	CALIBRATION CHECK	· · · · · · · · · · · · · · · · · · ·		7			JCTIVITY CALIBI		HECK
pH 7 (LOT #): (EXP. DATE): PRE-CAL. READING / STANDARD	pH 4 / 10 (LOT #): (EXP. DATE):  PRE-CAL. READING / STANDARD	CAL. RANGE	TIME		(LOT #): (EXP. DATE)	READING  I: READING / STANDARD	TEMPERATURE (°CELSIUS)	CAL. RANGE	TIME
7.04 / 7.00	3.94 14.00	WITHIN	on s	-		014490	10.68	WITHIN	082
1	10.01 / 10.00	WAITHIN RANGE				1		WITHIN RANGE	
1	1	WITHIN RANGE				1		WITHIN RANGE	
1	1	WITHIN RANGE				1		WITHIN RANGE	
ORP	CALIBRATION CHECK			_		D.O. CAL	IBRATION CHE	K	
CAL. READING	TEMPERATURE					CALIBRATION R	READING		
(LOT #): (EXP. DATE):	(°CELSIUS)	CAL. RANGE	TIME			(mg/L)		CAL. RANGE	TIME
PRE-CAL. READING / STANDARD				4					
245 1228	11.89	WITHIN RANGE	0831	_	Temp	= 1264°C	10.87	WITHIN RANGE	0819
	·	RANGE			15a(10	= 769.041	ma Itg	RANGE	
1		WITHIN RANGE			AL+	= 769.041 = 11.2 mg = 11.3 mg	14	WITHIN RANGE	
. /		WITHIN RANGE			///	1115	<i>3</i> /C	WITHIN RANGE	
TURBID	ITY CALIBRATION CHEC	K	,	_		· ·	COMMENTS		
CALIBRATION	READING (NTU)				<b>L</b> AUTO	CAL SOLUTION	☐ STANDARD	SOLUTION (	(S)
(LOT #): (EXP. DATE):	(LOT #): (EXP. DATE):	CAL. RANGE	TIME	<u> </u>	(LOT #): (EXP. DATE	):	LIST LOT NUMBERS A UNDER CALI	AND EXPIRAT BRATION CHE	
PRE-CAL. READING / STANDARD	POST-CAL. READING / STANDARD	<u> </u>		_	CALIBRA	TED PARAMETERS	CALIBRATI	ON RANGES (	1)
0.13 10.00	0.01 1 0.00	WITHIN	- 4.	2		pH	pH: +/- 0.2 S.	U.	
0.881/00	0.9711.00	WITHIN	١,			COND	COND: +/- 1% O	F CAL. STAN	IDARD
8.91 1 10.00	9.71 110.00	WITHIN	0001			ORP	ORP: +/- 25 m\	′	
1	/	WITHIN RANGE				D.O.	D.O.: VARIES		
	NOTES					TURB	TURB: +/- 5% O	F CAL. STAN	IDARD
							(1) CALIBRATION RAI THE MODEL OF THE		
F	PROBLEMS ENCOUNTERED					CORRECT	TIVE ACTIONS		<del></del>
Les A CO						NON	, G		
	WOOL					10010			
MM	7 3-1	15-72	7	1	I.	. Yonts	<u> </u>	3/1	8/2022

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DATE

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		WAILKQ	<u> </u>					1	<i>K.</i>	
	PROJECT NAME:	Wateree Station			1	Agua T		SAMPLER: JB/ BM / AM		
	PROJECT NO.:	416559.0005.0000			SERIAL	# 7285	<b>G</b> G	DATE: 3-15-27		
	PH (	CALIBRATION CHECK			_	SP	ECIFIC CONDU	UCTIVITY CALIBRATION CHECK		
	pH 7 (LOT#): <b>2\010066</b>	рН 4 / 10 (LOT #): <b>೩ I Ч 7</b> 0032 210 <b>6</b> 0 187	CAL. RANGE	TIME		(LOT#): 21	READING	TEMPERATURE	CAL. RANGE	TIME
	(EXP. DATE); 08/2022  PRE-CAL: READING / STANDARD	PRE-CAL READING / STANDARD	RANGE				O4/2023 EADING/STANDARD	(°CELSIUS)	RANGE	
pre	6.79 / 7.00	9.91 / 10.00	WITHIN	0822	pre	4549	1 4490	12.67	WITHIN	0832
r pre	/	4.40/4.00	RANGE WITHIN	200	past			12.72	WITHIN	0835
post	7.06 / 7.00		RANGE WITHIN RANGE		'		1	10172	WITHIN	ريدوه
	7.06 / 7.00	4.00 / 4.00	WITHIN	,	_		,		RANGE WITHIN	
post	/ OPP	CALIBRATION CHECK	RANGE	083	J		, DO CAL	 LIBRATION CHE	RANGE	
	CAL. READING	TEMPERATURE	T	Ι	1		CALIBRATION R		T	
	(LOT #): 21140143 (EXP. DATE): 04/2023	(°CELSIUS)	CAL. RANGE	TIME			(mg/L)	LADING	CAL. RANGE	TIME
	PRE-CAL. READING / STANDARD								ļ	
pre	225 / 228	12.46	1	083+	,	Baro:	768.08			0820
post	224 / 228	12.49	WITHIN RANGE	0840		Temp:	23,931811	57	WITHIN RANGE	
		·	WITHIN RANGE			Act!			WITHIN RANGE	
	/		WITHIN RANGE			Calc:	11.00		WITHIN RANGE	
	TURBID	ITY CALIBRATION CHEC	K		_			COMMENTS		
	CALIBRATION	READING (NTU)			1	AUTOC	AL SOLUTION	STANDARD	SOLUTION	(S)
	(LOT #):	(LOT #):	CAL.	   TIME		(LOT #):		LIST LOT NUMBERS		
	(EXP. DATE):	(EXP. DATE):	RANGE	''''-		(EXP. DATE):		UNDER CAL	BRATION CHE	ECK
	PRE-CAL. READING / STANDARD	POST-CAL. READING / STANDARD	WITHIN		-		ED PARAMETERS		ION RANGES	(1)
	6.19 / 0.00	0.01 / 0.00	RANGE		-		ρΗ	pH: +/- 0.2 S		
	2.34 / 1.00	1.68 / 1.00	WITHIN	0839	1		COND	COND: +/- 1% C	F CAL. STAN	NDARD .
	8.34 / 10.00	9.92 / 10.00	WITHIN RANGE	100-0			ORP	ORP: +/- 25 m	<b>/</b>	
	/	1	WITHIN RANGE				D.O.	D.O.: VARIES		
		NOTES			-		TURB	TURB: +/- 5% C	F CAL. STAN	NDARD
								(1) CALIBRATION RA		
						🗆 .		THE MODEL OF THE	WATER QUAL	LITY METEI
	PROBLEMS ENCOUNTERED					CORRECTIVE ACTIONS				
		NONZ					NON	19		
							10010			
	:								-	
	Mill	11 2			<u> </u>					
		//	, /८	.77		T	Vonte		3/19/	2022
	SIGNED	// 5	0 - 15 DATE	.27	-		Yonts KED BY		3/18/	2022 DATE





gel.com

March 22, 2022

Kelly Hicks Dominion Energy Services, Inc. 120 Tredegar Street Richmond, Virginia 23219

Re: CCR Groundwater Monitoring - Level 1 Package

Work Order: 573245

Dear Kelly Hicks:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on March 15, 2022. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

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

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 1648.

Sincerely,

Meredith Boddiford Project Manager

Meredith Boldiford

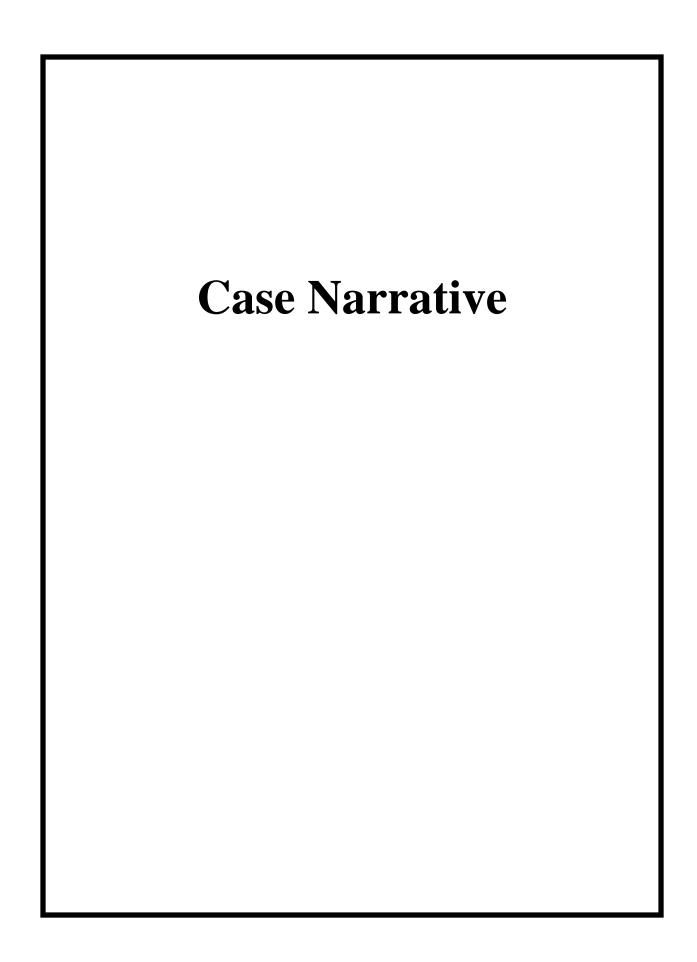
Purchase Order: 50149867

Enclosures



### **Table of Contents**

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#### Receipt Narrative for Dominion Energy (50149867) SDG: 573245

March 22, 2022

#### **Laboratory Identification:**

GEL Laboratories LLC 2040 Savage Road Charleston, South Carolina 29407 (843) 556-8171

#### **Summary:**

<u>Sample receipt:</u> The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on March 15, 2022 for analysis. 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.

**Sample Identification:** The laboratory received the following samples:

<b>Laboratory ID</b>	Client ID
573245001	MW-LF-01-2022Q1
573245002	MW-LF-06-2022Q1
573245003	MW-LF-07-2022Q1
573245004	MW-LF-08-2022Q1
573245005	MW-LF-10-2022Q1
573245006	MW-LF-10A-2022Q1
573245007	MW-LF-11-2022Q1
573245008	DU-WAT-CCR-LF-22101
573245009	FLBK-WAT-CCR-LF-22101
573245010	MW-LF-22-2022Q1
573245011	AS-LF-01-2022Q1
573245012	AS-LF-02-2022Q1
573245013	AS-LF-03-2022Q1
573245014	MW-BG-73-2022Q1
573245015	FBLK-WAT-CCR-LF-22102

#### **Case Narrative:**

Sample analyses were conducted using methodology as outlined in GEL's Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are contained in the analytical case narratives in the enclosed data package.

Page 2 of 70 SDG: 573245

The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Data Package Qualifier Definitions and data from the following fractions: General Chemistry and Metals.

Meredith Boddiford Project Manager

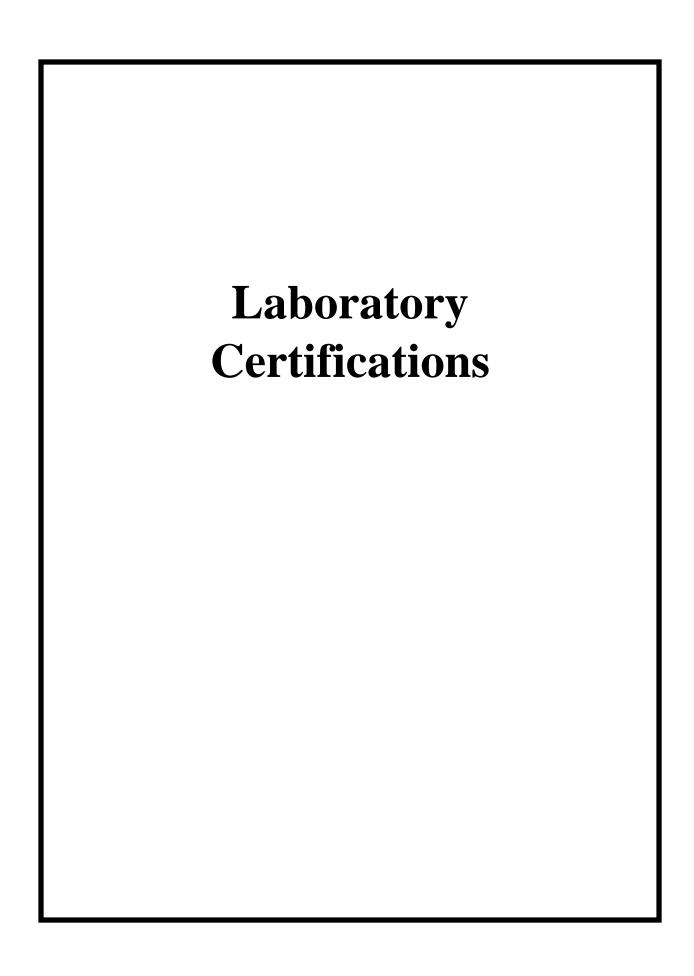
Meredith Boldiford



Page: Or Of State of				horg	ahoratoriae	0110	c						GEL 1	GEL Laboratories,	GEL Laboratories, LLC	2			
(a) Quote #:		gel.com		istry   Radio	hemistry I Radiochemistry   Radiobioassay   Specialty Analytics	Padiobioass	ay I Spec	ialty Ana	lytics				Charle	ston, S	Charleston, SC 29407	7			
COC Number (1): 202 <b>2</b> 143		Cha	Chain of C	stody a	Custody and Analytical Request	ytical F	ednes	ایب					Phone	: (843)	Phone: (843) 556-8171	71			
50149867	GEL Work Order Number: 200774	200774			GEL Project Manager: Taylor Cannon	fanager:	Taylor	Canno					Fax: (	843) 76	Fax: (843) 766-1178				2
Control Name: Dominion Energy		Phone # 803-258-	3-258-1528	×			Samp	Sample Analysis Requested	ysis R	dnest			ne num	ber of	contain	ners for	(Fill in the number of containers for each test)		
Project/Site Name: Wateree Station Class 3 Landfill CCR 2022Q1		Fax#			S	Should this	s.i			IN						<b>Y</b>	< Preservative Type (6)	ve Type (6)	
Adress: Wateree, South Carolina					s B	sample be considered:	oujeju	OC		na							Commonte	omto	
Gellected By: B. Medlin / J. Bradley Send R	Send Results To: ARecd@envstd.com	nvstd.com				(		M254		60B							Note: extra sample is	sample is	
Sample ID  * For commonite, individe start and	*Date Collected	*Time Collected (Military)	QC (3) F	Field Sa Filtered <sup>(3)</sup> Ma	Natrix ⊕ Matrix ⊕ Kadioactive Kadioactive yes, please su	sotopic info. (7) Known o	enn oanseed	S - SCLL	CI, FI, SC	EllatoT 208							required for sample specific QC	r sample c QC	
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AS-LF-02-2022Q1	3-15-22	1235	z	z	GW N		w									Sec	See attached work	work	
AS-LF-03-2022Q1	315.22	laos	z	z	GW N		W	_	_							ord	order for details	ails	I
MW-BG-73-2022Q1	3-16-22	1305	z	z	GW N		3												
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Chain of C	Chain of Custody Signatures							ľ	TAT Requested:	nested	Normal:		X	Rush:	ds	Specify:			
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4 Mall 21-212 164	11 1/5	A	3/15/	22	64	Selec	Select Deliverable: [	rable: [	]C of A		] QC Summary		[X] level 1	el 1	Level 2		[ ] Level 3	[   Level 4	
2	2					Addii	Additional Remarks.	marks:											T
3	3				-	For i	For Lab Receiving Use Only: Custody Seal Intact? [	eiving l	se Onl	:: Cust	ody Sea	Intact?	[ ] Yes	s [ ]	] No C	Cooler Temp:	:ать:	$\mathcal{I}_{\mathcal{L}}$	Ī
> For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)	eceipt & Review form (	SRR.)			Sam	ile Collec	tion Tim	e Zone	$\Xi$	astern		cific	l Cel	la l	Mo []	untain	Sample Collection Time Zone: [X] Eastern [ ] Pacific [ ] Central [ ] Mountain [ ] Other.		
1.) Chain of Custody Number = Client Determined	1 - 10 T			1. MGD	r effects	2	<u> </u>	ر بر	, and a second	3									
<ol> <li>(2.) QC Codes: N = Normal Sample, 1B = 17th Blank, FD = Frield Duplicate, EB = Equipment Blank, MS = Mattra Spine Satisfies, MSD = Mattra Spine Duplicate Satisfies, C = Composite         <ol> <li>Fight Filmond: For Fourity as IV. for you the sample was field filtered or = N - for sample was not field filtered.</li> </ol> </li> </ol>	cate, LB = Equipment 191ank, male was field filtered or = N	MS - Maunx • for sample v	Spike Samp	ic, man - n filtered.	ianta spine i	upiicate sai	- 5 Sach	ing, Ci	Compos	2									
3.) Hear interest, on upun mantees, murae, with a rest of some sample master measures.  4.) Matrix Codes; DW-Drinking Water, GW-Groundwater, SW-Surface Water, WW-Waste Water, W=Water, ML-Mise	te Water, WW=Waste Water	W=Water, M	L=Misc Liu	uid, SO=Soi	Liquid, SO=Soil, SD=Sediment, SL=Sludge, SS=Solid Waste, O=Oil, F=Filter, P=Wipe, U=Urine, F=Feeal, N=Nasal	mt, SL=Slud	ge, SS≔Sc	did Waste	, 0=0il,	F≕Filter,	P=Wipe,	U≕Urine,	F=Fecal,	N=Nasa	=				
5.) Sample Analysis Requested: Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1).	3, 6010B/7470A) and number	of containers	provided fo	r each (i.e. 8	260B - 3, 601	0B/7470A -	. <del></del>				,								
6.) Preservative Type: HA = Hydrockloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thosullate, II no preservative is added = leave held blank as the HAZARDS   Characteristic Hazards   Listed Waste   Other	id, SH = Sodium Hydroxide, SA = Su Characteristic Hazards	furic Acid, AA = Asco	. = Ascorbi	Acid, HX =	Hexane, ST	= Sodium Thio	rosulfate,	II no pres	ervative	s added =	leave he	d blank			u osoola	rovide	Please nrovide any additional details	d details	
<b>-</b>	FL = Flammable/Ignitable CO = Corrosive	LW = 1 $(F, K, P)$	LW= Listed Waste (F, K, P and U-listed	LW= Listed Waste (F,K,P and U-listed wastes.)	] _	(i.e.: 0T	OT= Other / Unknown (i.e.: High/low pH, asbestos, beryllium, irritants, other	Unknov w pH, a	vn sbestos,	berylli	um, irri	ants, ot	her	. 9 0	Selon re	garding S. (i.e.:	handling a Origin of sa	below regarding handling andor disposal concerns. (i.e.: Origin of sample(s), type	72
Hg= Mercury Se= Selenium	RE = Reactive	Waste code(s)	ode(s):			misc. Desc	misc. health hazards, etc.) Description:	iazards	etc.)					9	y site cc	ollected	of site collected from, odd matrices, etc.)	ttrices, etc.)	
Cd = Cadmium Ag= Silver Tr = Chromium AR= Misc RCRA metals PCB =	TSCA Regulated PCB = Polychlorinated				1														
MIN MINO MONTH THOMAS	biphenyls																		

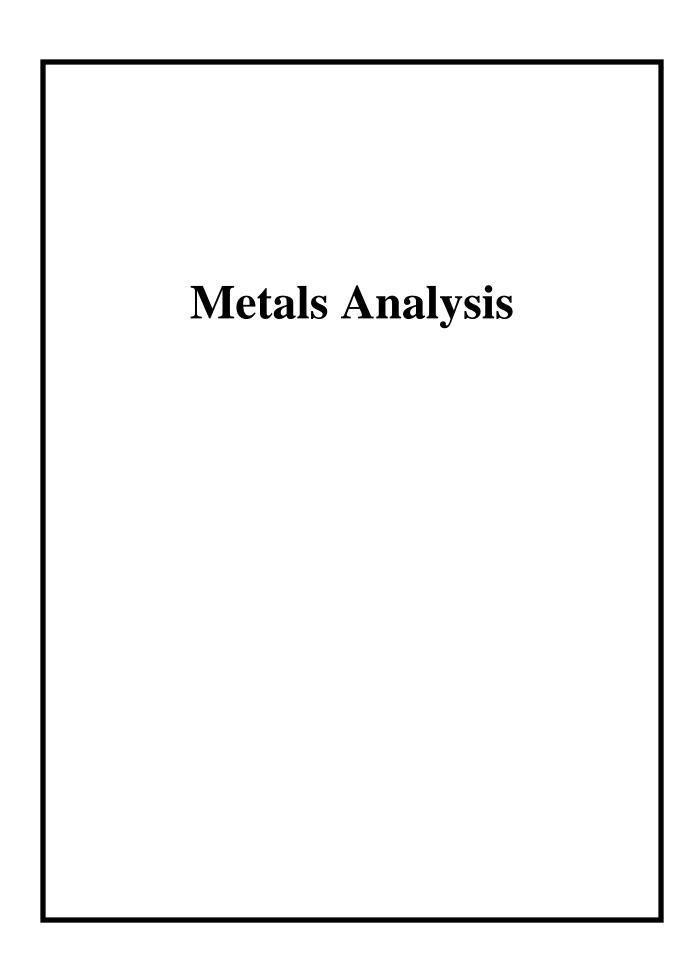
SAMPLE RECEIPT & REVIEW FORM

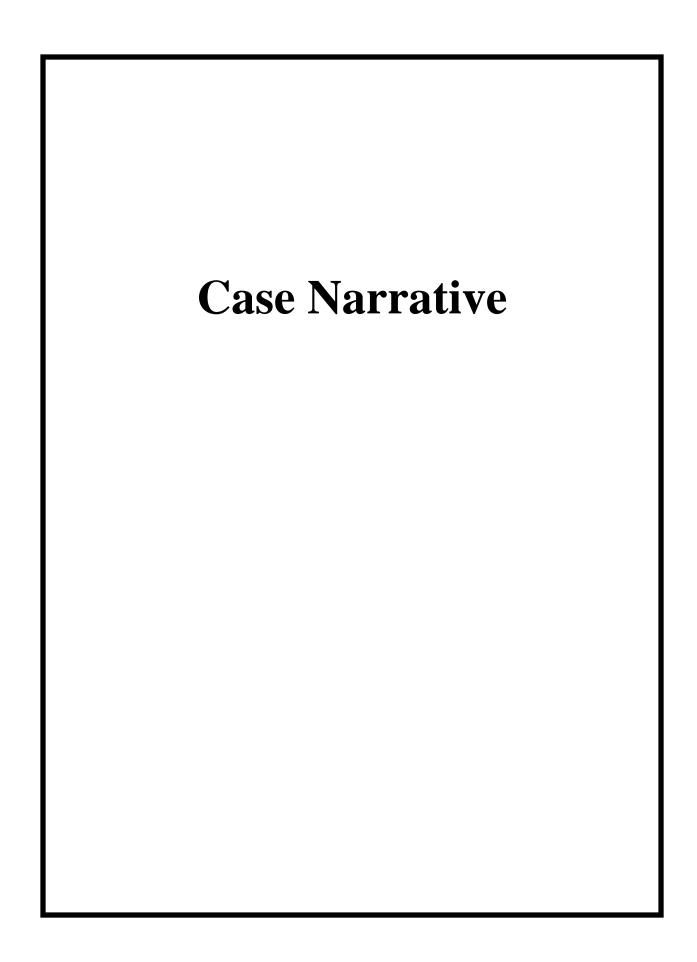
1	DMNN ed By: SB  is tracking number per line below.  ourier if applicable and no tracking available  N/A  N/A	e.		Di	OG/AR/COC/Work Order: 573245 1573246  ate Received: 3/15/22  IR temperature gun # Daily Calibration performed? \(\tilde{\nabla}\) N  \(\tilde{\text{TR1-22}}\)  Uncorrected temperature readings are to the 0.1 degree with final recorded temperatures rounded to the 0.5 degree. Provide individual
Enter on	ie fracking number per line below.	v.			IR temperature gun # Daily Calibration performed?(Y) / N  IR! - 22
1		e.		-	
Enter co	N/A N/A	e.		1	Uncorrected temperature readings are to the 0.1 degree with final recorded temperatures rounded to the 6.5 degree. Provide individual
	N/A N/A				container details when a cooler requiring 0 <=60C is identified as out of specification.
	NA			Un	ncorrected Temp:   C   IR Correction Factor: + / -   Final Recorded Temp:   C   Within 0.0-6.0C? Y / N
	N/A			Un	ncorrected Temp:   6 IR Correction Factor: + / - Final Recorded Temp:   Within 0.0-6.0C? Y / N
	· · · · · · · · · · · · · · · · · · ·			T	
				T	recorrected Temp: IR Correction Factor: + / - Final Recorded Temp: Within 0.0-6.0C? Y / N
				Π	
				T	
Surnocio	ed Hazard Information	ln	T.	1	corrected Temp: IR Correction Factor: + / - Final Recorded Temp: Within 0.0-6.0C? Y / N
Suspecto	ed research information	Yes	2	"	Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
A)Shipped as a DOT Hazardous?			/	Haz	zard Class Shipped:  UNII:  12910, Is the Radioactive Shipment Survey Compliant? Yes No
B) Did the client designate the samples are to be received as radioactive?			/	co	C notation or radioactive stickers on containers equal client designation.
	ne RSO classify the samples as		-	Ма	ximum Net Counts Observed* (Observed Counts - Area Background Counts):CPM / mR/Hr ssified ns: Rnd 1 Rnd 2 Rnd 3
	ne client designate samples are	T		Ç0	C notation or hazard labels on containers equal client designation.
	e RSO identify possible hazards?			ICD Fi	or E is yes, select Hazards below.  PCB's  ammable Foreign Soil RCRA Asbestos Beryllium Other:
	Sample Receipt Criteria	Yes	ź	2	Comments/Qualifiers (Required for Non-Conforming Items)
	pping containers received intact and		15	~	Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
scale 2 Chai	in of custody documents included				Circle Applicable: Client contacted and provided COC COC created upon receipt
with	shipment?	/			Circle Applicable: Seals broken Dannaged container Leaking container Other (describe)
	ple containers intact and scaled?	/			
4 Sam	aples requiring chemical preservation roper pH?	/			Sample ID's and Containers Affected:
T					If Preservation added, Lmtl:  If Yes, are Encores or Soil Kits present for solids? YesNo NA(If yes, take to VOA Freezer)
5	Do any samples require Volatile				Do liquid VOA viuls contain acid preservation? Yes No NA (If unknown, select No)
	Analysis?				Are liquid VOA viuls free of headspace? Yes No NA Sample ID's and containers affected:
6 8200	ples received within holding time?				ID's and tests affected:
		_			
7 Samp	ple ID's on COC match ID's on es?				ID's and containers affected:
	: & time on COC match date & time ottles?				Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
	nber of containers received match ber indicated on COC?				Circle Applicable: No container count on COC Other (describe)
10 Arc :	sample containers identifiable as provided by use of GEL labels?				
, coc	form is properly signed in quished/received sections?				Circle Applicable: Not relinquished Other (describe)
	s (Use Continuation Form if needed):		1		



List of current GEL Certifications as of 22 March 2022

State	Certification
Alabama	42200
Alaska	17-018
Alaska Drinking Water	SC00012
Arkansas	88-0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH-0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-15-00283, P330-15-00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2019020
Maryland	270
Massachusetts	M-SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE-OS-26-13
Nevada	SC000122021-1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R-158
Oklahoma	2019–165
Pennsylvania NELAP	68-00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-21-19
Utah NELAP	SC000122021-36
Vermont	VT87156
Virginia NELAP	460202
Washington	C780
·· dollington	2.00





## Metals Technical Case Narrative Dominion Energy SDG #: 573245

<u>Product:</u> Determination of Metals by ICP-MS <u>Analytical Method:</u> SW846 3005A/6020B <u>Analytical Procedure:</u> GL-MA-E-014 REV# 35

**Analytical Batch:** 2245781

**Preparation Method:** SW846 3005A

Preparation Procedure: GL-MA-E-006 REV# 14

**Preparation Batch:** 2245780

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

GEL Sample ID#	Client Sample Identification
573245001	MW-LF-01-2022Q1
573245002	MW-LF-06-2022Q1
573245003	MW-LF-07-2022Q1
573245004	MW-LF-08-2022Q1
573245005	MW-LF-10-2022Q1
573245006	MW-LF-10A-2022Q1
573245007	MW-LF-11-2022Q1
573245008	DU-WAT-CCR-LF-22101
573245009	FLBK-WAT-CCR-LF-22101
573245010	MW-LF-22-2022Q1
573245011	AS-LF-01-2022Q1
573245012	AS-LF-02-2022Q1
573245013	AS-LF-03-2022Q1
573245014	MW-BG-73-2022Q1
573245015	FBLK-WAT-CCR-LF-22102
1205050488	Method Blank (MB)ICP-MS
1205050489	Laboratory Control Sample (LCS)
1205050492	573245007(MW-LF-11-2022Q1L) Serial Dilution (SD)
1205050490	573245007(MW-LF-11-2022Q1D) Sample Duplicate (DUP)
1205050491	573245007(MW-LF-11-2022Q1S) Matrix Spike (MS)

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.

## **Calibration Information**

#### **ICSA/ICSAB Statement**

For the ICP-MS analysis, the ICSA solution contains analyte concentrations which are verified trace impurities

Page 12 of 70 SDG: 573245

indigenous to the purchased standard.

## **Miscellaneous Information**

## **Additional Comments**

All method-driven specifications are followed for these analyses except where client-specific SOW requirements are required to be met.

## **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 13 of 70 SDG: 573245

## **GEL LABORATORIES LLC**

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

## Qualifier Definition Report for

DMNN001 Dominion Energy (50149867) Client SDG: 573245 GEL Work Order: 573245

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

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

#### Review/Validation

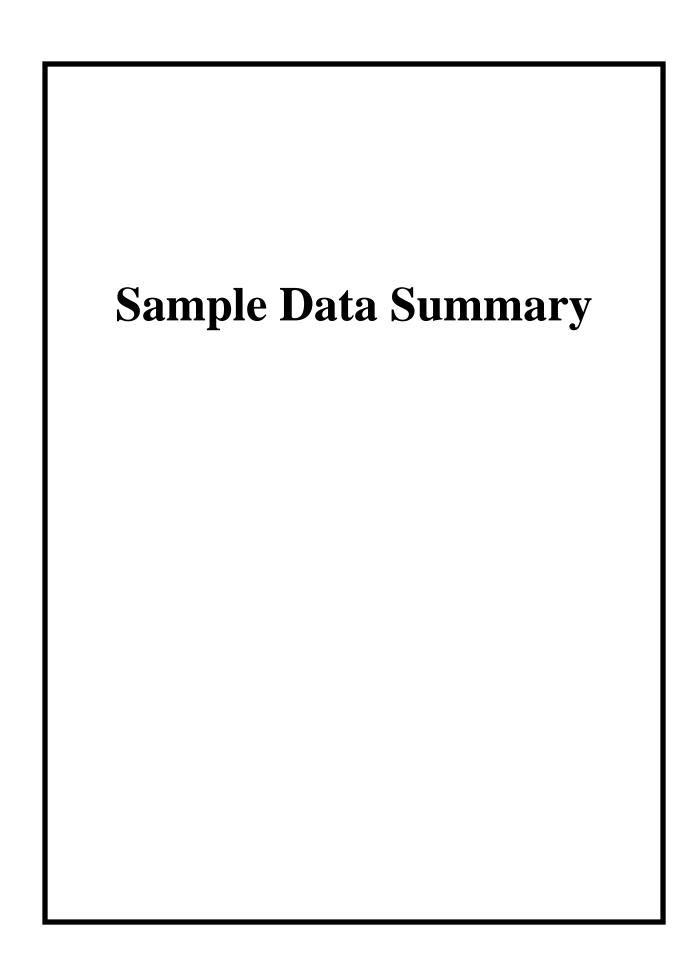
GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature: Edmund Frampton

Date: 29 MAR 2022 Title: Group Leader

Page 14 of 70 SDG: 573245



#### -1-

## INORGANICS ANALYSIS DATA PACKAGE

SDG No: 573245 CONTRACT: DMNN00101 METHOD TYPE: SW846

SAMPLE ID: 573245001 BASIS: As Received DATE COLLECTED 14-MAR-22

CLIENT ID: MW-LF-01-2022Q1 LEVEL: Low DATE RECEIVED 15-MAR-22

MATRIX: GW %SOLIDS: 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7440-42-8	Boron	12.7	ug/L	J	5.20	15.0	15.0	1	MS	SKJ	03/29/22 11:33	220329-1	2245781
7440-70-2	Calcium	126	ug/L	J	80.0	200	200	1	MS	SKJ	03/29/22 11:33	220329-1	2245781

## **Prep Information:**

Batch Batch	Method				Units	Date	Analyst
2245781 2245780	SW846 3005A	50	mL	50	mL	03/25/22	RG1

<sup>\*</sup>Analytical Methods:

#### -1-

## INORGANICS ANALYSIS DATA PACKAGE

SDG No: 573245 CONTRACT: DMNN00101 METHOD TYPE: SW846

SAMPLE ID: 573245002 BASIS: As Received DATE COLLECTED 14-MAR-22

CLIENT ID: MW-LF-06-2022Q1 LEVEL: Low DATE RECEIVED 15-MAR-22

MATRIX: GW %SOLIDS: 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7440-42-8	Boron	9.16	ug/L	J	5.20	15.0	15.0	1	MS	SKJ	03/29/22 11:35	220329-1	2245781
7440-70-2	Calcium	887	ug/L		80.0	200	200	1	MS	SKJ	03/29/22 11:35	220329-1	2245781

## **Prep Information:**

Batch Batch	Method				Units	Date	Analyst
2245781 2245780	SW846 3005A	50	mL	50	mL	03/25/22	RG1

<sup>\*</sup>Analytical Methods:

#### -1-

## INORGANICS ANALYSIS DATA PACKAGE

SDG No: 573245 CONTRACT: DMNN00101 METHOD TYPE: SW846

SAMPLE ID: 573245003 BASIS: As Received DATE COLLECTED 14-MAR-22

CLIENT ID: MW-LF-07-2022Q1 LEVEL: Low DATE RECEIVED 15-MAR-22

MATRIX: GW %SOLIDS: 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7440-42-8	Boron	8.97	ug/L	J	5.20	15.0	15.0	1	MS	SKJ	03/29/22 11:37	220329-1	2245781
7440-70-2	Calcium	981	ug/L		80.0	200	200	1	MS	SKJ	03/29/22 11:37	220329-1	2245781

## **Prep Information:**

			Method						Analyst
2245781 2245780 SW846 3005A 50 mL 50 mL 03.	2245781	781 2245780	SW846 3005A	50	mI.	50	mI.	03/25/22	RG1

<sup>\*</sup>Analytical Methods:

#### -1-

## INORGANICS ANALYSIS DATA PACKAGE

SDG No: 573245 CONTRACT: DMNN00101 METHOD TYPE: SW846

SAMPLE ID: 573245004 BASIS: As Received DATE COLLECTED 14-MAR-22

CLIENT ID: MW-LF-08-2022Q1 LEVEL: Low DATE RECEIVED 15-MAR-22

MATRIX: GW %SOLIDS: 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7440-42-8	Boron	8.16	ug/L	J	5.20	15.0	15.0	1	MS	SKJ	03/29/22 11:39	220329-1	2245781
7440-70-2	Calcium	897	ug/L		80.0	200	200	1	MS	SKJ	03/29/22 11:39	220329-1	2245781

#### **Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2245781	2245780	SW846 3005A	50	mL	50	mL	03/25/22	RG1

<sup>\*</sup>Analytical Methods:

#### -1-

## INORGANICS ANALYSIS DATA PACKAGE

SDG No: 573245 CONTRACT: DMNN00101 METHOD TYPE: SW846

SAMPLE ID: 573245005 BASIS: As Received DATE COLLECTED 14-MAR-22

CLIENT ID: MW-LF-10-2022Q1 LEVEL: Low DATE RECEIVED 15-MAR-22

MATRIX: GW %SOLIDS: 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	М*	Analyst	Run Date	Analytical Run	Analytical Batch
7440-42-8	Boron	21.7	ug/L		5.20	15.0	15.0	1	MS	SKJ	03/29/22 11:41	220329-1	2245781
7440-70-2	Calcium	19800	ug/L		80.0	200	200	1	MS	SKJ	03/29/22 11:41	220329-1	2245781

## **Prep Information:**

			Method						Analyst
2245781 2245780 SW846 3005A 50 mL 50 mL 03.	2245781	781 2245780	SW846 3005A	50	mI.	50	mI.	03/25/22	RG1

<sup>\*</sup>Analytical Methods:

#### -1-

## INORGANICS ANALYSIS DATA PACKAGE

SDG No: 573245 CONTRACT: DMNN00101 METHOD TYPE: SW846

SAMPLE ID: 573245006 BASIS: As Received DATE COLLECTED 14-MAR-22

CLIENT ID: MW-LF-10A-2022Q1 LEVEL: Low DATE RECEIVED 15-MAR-22

MATRIX: GW %SOLIDS: 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7440-42-8	Boron	10.2	ug/L	J	5.20	15.0	15.0	1	MS	SKJ	03/29/22 11:44	220329-1	2245781
7440-70-2	Calcium	395	ug/L		80.0	200	200	1	MS	SKJ	03/29/22 11:44	220329-1	2245781

## **Prep Information:**

Batch Batch	Method				Units	Date	Analyst
2245781 2245780	SW846 3005A	50	mL	50	mL	03/25/22	RG1

<sup>\*</sup>Analytical Methods:

#### -1-

## INORGANICS ANALYSIS DATA PACKAGE

SDG No: 573245 CONTRACT: DMNN00101 METHOD TYPE: SW846

SAMPLE ID: 573245007 BASIS: As Received DATE COLLECTED 14-MAR-22

CLIENT ID: MW-LF-11-2022Q1 LEVEL: Low DATE RECEIVED 15-MAR-22

MATRIX: GW %SOLIDS: 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7440-42-8	Boron	10.5	ug/L	J	5.20	15.0	15.0	1	MS	SKJ	03/29/22 11:56	220329-1	2245781
7440-70-2	Calcium	378	ug/L		80.0	200	200	1	MS	SKJ	03/29/22 11:56	220329-1	2245781

## **Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
								I
2245781	2245780	SW846 3005A	50	mL	50	mL	03/25/22	RG1

<sup>\*</sup>Analytical Methods:

#### -1-

## INORGANICS ANALYSIS DATA PACKAGE

SDG No: 573245 CONTRACT: DMNN00101 METHOD TYPE: SW846

SAMPLE ID: 573245008 BASIS: As Received DATE COLLECTED 14-MAR-22

CLIENT ID: DU-WAT-CCR-LF-22101 LEVEL: Low DATE RECEIVED 15-MAR-22

MATRIX: GW %SOLIDS: 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7440-42-8	Boron	23.2	ug/L		5.20	15.0	15.0	1	MS	SKJ	03/29/22 12:07	220329-1	2245781
7440-70-2	Calcium	20000	ug/L		80.0	200	200	1	MS	SKJ	03/29/22 12:07	220329-1	2245781

## **Prep Information:**

Batch Batch	Method				Units	Date	Analyst
2245781 2245780	SW846 3005A	50	mL	50	mL	03/25/22	RG1

<sup>\*</sup>Analytical Methods:

#### -1-

## INORGANICS ANALYSIS DATA PACKAGE

SDG No: 573245 CONTRACT: DMNN00101 METHOD TYPE: SW846

SAMPLE ID: 573245009 BASIS: As Received DATE COLLECTED 14-MAR-22

CLIENT ID: FLBK-WAT-CCR-LF-2210 LEVEL: Low DATE RECEIVED 15-MAR-22

MATRIX: AQ %SOLIDS: 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7440-42-8	Boron	5.20	ug/L	U	5.20	15.0	15.0	1	MS	SKJ	03/29/22 12:09	220329-1	2245781
7440-70-2	Calcium	80.0	ug/L	U	80.0	200	200	1	MS	SKJ	03/29/22 12:09	220329-1	2245781

#### **Prep Information:**

			Method						Analyst
2245781 2245780 SW846 3005A 50 mL 50 mL 03.	2245781	781 2245780	SW846 3005A	50	mI.	50	mI.	03/25/22	RG1

<sup>\*</sup>Analytical Methods:

#### -1-

## INORGANICS ANALYSIS DATA PACKAGE

SDG No: 573245 CONTRACT: DMNN00101 METHOD TYPE: SW846

SAMPLE ID: 573245010 BASIS: As Received DATE COLLECTED 14-MAR-22

CLIENT ID: MW-LF-22-2022Q1 LEVEL: Low DATE RECEIVED 15-MAR-22

MATRIX: GW %SOLIDS: 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7440-42-8	Boron	15.8	ug/L		5.20	15.0	15.0	1	MS	SKJ	03/29/22 12:15	220329-1	2245781
7440-70-2	Calcium	1950	ug/L		80.0	200	200	1	MS	SKJ	03/29/22 12:15	220329-1	2245781

#### **Prep Information:**

<b>F</b>								
Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2245781	2245780	SW846 3005A	50	mL	50	mL	03/25/22	RG1

<sup>\*</sup>Analytical Methods:

#### -1-

## INORGANICS ANALYSIS DATA PACKAGE

SDG No: 573245 CONTRACT: DMNN00101 METHOD TYPE: SW846

SAMPLE ID: 573245011 BASIS: As Received DATE COLLECTED 15-MAR-22

CLIENT ID: AS-LF-01-2022Q1 LEVEL: Low DATE RECEIVED 15-MAR-22

MATRIX: GW %SOLIDS: 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7440-42-8	Boron	10.3	ug/L	J	5.20	15.0	15.0	1	MS	SKJ	03/29/22 12:17	220329-1	2245781
7440-70-2	Calcium	772	ug/L		80.0	200	200	1	MS	SKJ	03/29/22 12:17	220329-1	2245781

#### **Prep Information:**

<b>F</b>								
Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2245781	2245780	SW846 3005A	50	mL	50	mL	03/25/22	RG1

<sup>\*</sup>Analytical Methods:

#### -1-

## INORGANICS ANALYSIS DATA PACKAGE

SDG No: 573245 CONTRACT: DMNN00101 METHOD TYPE: SW846

SAMPLE ID: 573245012 BASIS: As Received DATE COLLECTED 15-MAR-22

CLIENT ID: AS-LF-02-2022Q1 LEVEL: Low DATE RECEIVED 15-MAR-22

MATRIX: GW %SOLIDS: 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7440-42-8	Boron	11.3	ug/L	J	5.20	15.0	15.0	1	MS	SKJ	03/29/22 12:19	220329-1	2245781
7440-70-2	Calcium	943	ug/L		80.0	200	200	1	MS	SKJ	03/29/22 12:19	220329-1	2245781

## **Prep Information:**

			Method						Analyst
2245781 2245780 SW846 3005A 50 mL 50 mL 03.	2245781	781 2245780	SW846 3005A	50	mI.	50	mI.	03/25/22	RG1

<sup>\*</sup>Analytical Methods:

#### -1-

## INORGANICS ANALYSIS DATA PACKAGE

SDG No: 573245 CONTRACT: DMNN00101 METHOD TYPE: SW846

SAMPLE ID: 573245013 BASIS: As Received DATE COLLECTED 15-MAR-22

CLIENT ID: AS-LF-03-2022Q1 LEVEL: Low DATE RECEIVED 15-MAR-22

MATRIX: GW %SOLIDS: 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7440-42-8	Boron	8.98	ug/L	J	5.20	15.0	15.0	1	MS	SKJ	03/29/22 12:21	220329-1	2245781
7440-70-2	Calcium	606	ug/L		80.0	200	200	1	MS	SKJ	03/29/22 12:21	220329-1	2245781

#### **Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2245781	2245780	SW846 3005A	50	mL	50	mL	03/25/22	RG1

<sup>\*</sup>Analytical Methods:

#### -1-

## INORGANICS ANALYSIS DATA PACKAGE

SDG No: 573245 CONTRACT: DMNN00101 METHOD TYPE: SW846

SAMPLE ID: 573245014 BASIS: As Received DATE COLLECTED 15-MAR-22

CLIENT ID: MW-BG-73-2022Q1 LEVEL: Low DATE RECEIVED 15-MAR-22

MATRIX: GW %SOLIDS: 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7440-42-8	Boron	9.18	ug/L	J	5.20	15.0	15.0	1	MS	SKJ	03/29/22 12:23	220329-1	2245781
7440-70-2	Calcium	304	ug/L		80.0	200	200	1	MS	SKJ	03/29/22 12:23	220329-1	2245781

## **Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2245781	2245780	SW846 3005A	50	mL	50	mL	03/25/22	RG1

<sup>\*</sup>Analytical Methods:

#### -1-

## INORGANICS ANALYSIS DATA PACKAGE

SDG No: 573245 CONTRACT: DMNN00101 METHOD TYPE: SW846

SAMPLE ID: 573245015 BASIS: As Received DATE COLLECTED 15-MAR-22

CLIENT ID: FBLK-WAT-CCR-LF-2210 LEVEL: Low DATE RECEIVED 15-MAR-22

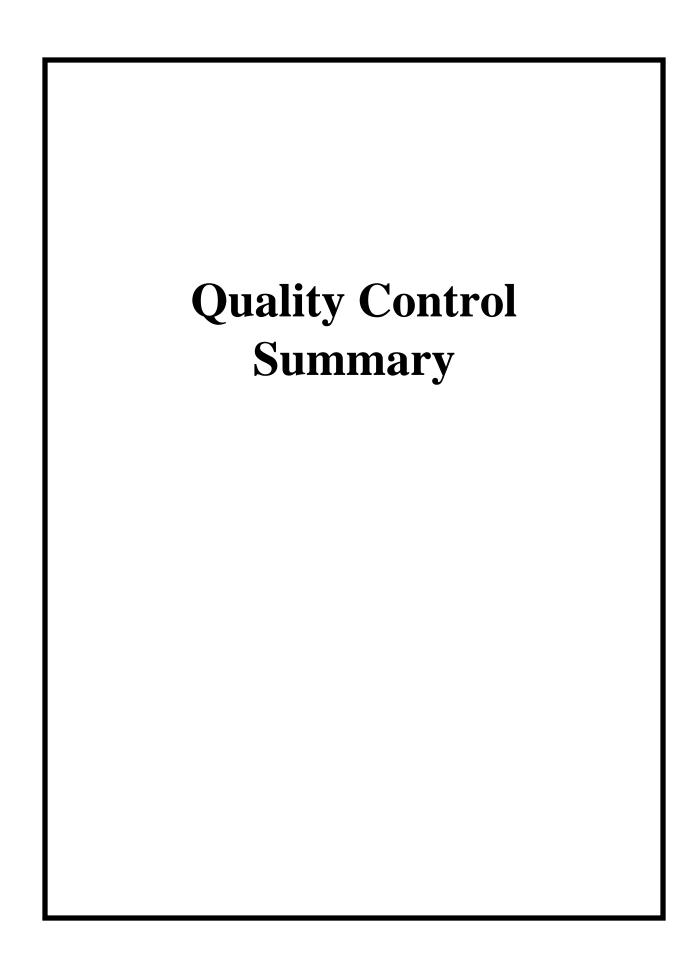
MATRIX: AQ %SOLIDS: 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7440-42-8	Boron	5.20	ug/L	U	5.20	15.0	15.0	1	MS	SKJ	03/29/22 12:25	220329-1	2245781
7440-70-2	Calcium	80.0	ug/L	U	80.0	200	200	1	MS	SKJ	03/29/22 12:25	220329-1	2245781

## **Prep Information:**

Batch Batch	Method				Units	Date	Analyst
2245781 2245780	SW846 3005A	50	mL	50	mL	03/25/22	RG1

<sup>\*</sup>Analytical Methods:



## $\begin{array}{c} {\bf METALS} \\ -2a- \\ \\ {\bf Initial\ and\ Continuing\ Calibration\ Verification} \end{array}$

**SDG No:** 573245

Contract: DMNN00101 Lab Code: GEL

**Instrument ID:** ICPMS11

Sample ID	<u>Analyte</u>	Result	<u>Units</u>	True Value	<u>Units</u>	% Recovery	Acceptance Window (%R)	<u>M*</u>	Analysis Date/Time	<u>Run</u> <u>Number</u>
ICV01										
	Boron	106	ug/L	100	ug/L	105.9	90.0 - 110.0	MS	29-MAR-22 10:16	220329-1
	Calcium	5140	ug/L	5000	ug/L	102.9	90.0 - 110.0	MS	29-MAR-22 10:16	220329-1
CCV01										
	Boron	99.4	ug/L	100	ug/L	99.4	90.0 - 110.0	MS	29-MAR-22 10:26	220329-1
	Calcium	5010	ug/L	5000	ug/L	100.3	90.0 - 110.0	MS	29-MAR-22 10:26	220329-1
CCV02										
	Boron	102	ug/L	100	ug/L	101.8	90.0 - 110.0	MS	29-MAR-22 10:33	220329-1
	Calcium	5180	ug/L	5000	ug/L	103.7	90.0 - 110.0	MS	29-MAR-22 10:33	220329-1
CCV03										
	Boron	93.5	ug/L	100	ug/L	93.5	90.0 - 110.0	MS	29-MAR-22 11:25	220329-1
	Calcium	5070	ug/L	5000	ug/L	101.5	90.0 - 110.0	MS	29-MAR-22 11:25	220329-1
CCV04										
	Boron	94.6	ug/L	100	ug/L	94.6	90.0 - 110.0	MS	29-MAR-22 11:52	220329-1
	Calcium	5110	ug/L	5000	ug/L	102.3	90.0 - 110.0	MS	29-MAR-22 11:52	220329-1
CCV05										
	Boron	93.9	ug/L	100	ug/L	93.9	90.0 - 110.0	MS	29-MAR-22 12:11	220329-1
	Calcium	5090	ug/L	5000	ug/L	101.7	90.0 - 110.0	MS	29-MAR-22 12:11	220329-1
CCV06										
	Boron	90.8	ug/L	100	ug/L	90.8	90.0 - 110.0	MS	29-MAR-22 12:34	220329-1
	Calcium	5120	ug/L	5000	ug/L	102.4	90.0 - 110.0	MS	29-MAR-22 12:34	220329-1

\*Analytical Methods:

# METALS -2bCRDL Standard for ICP & ICPMS

**SDG No:** 573245

Contract: DMNN00101 Lab Code: GEL

**Instrument ID:** ICPMS11

Sample ID	Analyte	Result	<u>Units</u>	True Value	<u>Units</u>	% Recovery	Advisory Limits (%R)	<u>M*</u>	Analysis Date/Time	<u>Run</u> Number
CRDL01										
	Boron	19.1	ug/L	15	ug/L	127.4	70.0 - 130.0	MS	29-MAR-22 10:20	220329-1
	Calcium	246	ug/L	200	ug/L	122.9	70.0 - 130.0	MS	29-MAR-22 10:20	220329-1
CRDL02										
	Boron	13.8	ug/L	15	ug/L	91.8	70.0 – 130.0	MS	29-MAR-22 11:18	220329-1
	Calcium	242	ug/L	200	ug/L	120.8	70.0 – 130.0	MS	29-MAR-22 11:18	220329-1
CRDL03										
	Boron	14	ug/L	15	ug/L	93.1	70.0 - 130.0	MS	29-MAR-22 11:46	220329-1
	Calcium	237	ug/L	200	ug/L	118.3	70.0 - 130.0	MS	29-MAR-22 11:46	220329-1
CRDL04										
	Boron	12.6	ug/L	15	ug/L	84.1	70.0 - 130.0	MS	29-MAR-22 12:27	220329-1
	Calcium	233	ug/L	200	ug/L	116.3	70.0 - 130.0	MS	29-MAR-22 12:27	220329-1

\*Analytical Methods:

Metals
-3aInitial and Continuing Calibration Blank Summary

**SDG No.:** 573245

Contract: DMNN00101

Lab Code: GEL

Sample ID	<u>Analyte</u>	Result ug/L	Acceptance	Conc Qual	MDL	RDL	<u>Matrix</u>	<u>M*</u>	Analysis Date/Time	Run
ICB01	D	5.0	. / 5.5		<i>5.</i> 2	15.0	1.10	140	20 MAD 22 10 10	220220 1
	Boron	5.2	+/-7.5	U	5.2	15.0	LIQ		29-MAR-22 10:18	220329–1
	Calcium	80.0	+/-100	U	80.0	200	LIQ	MS	29-MAR-22 10:18	220329-1
CCB01										
	Boron	5.2	+/-7.5	U	5.2	15.0	LIQ	MS	29-MAR-22 10:28	220329-1
	Calcium	80.0	+/-100	U	80.0	200	LIQ	MS	29-MAR-22 10:28	220329-1
CCB02										
CCB02	Boron	5.2	+/-7.5	U	5.2	15.0	LIQ	MS	29-MAR-22 10:35	220329-1
	Calcium	80.0	+/-100	U	80.0	200	LIQ	MS	29-MAR-22 10:35	220329-1
CCDAA										
CCB03	Boron	5.2	+/-7.5	U	5.2	15.0	LIO	MS	29-MAR-22 11:27	220329-1
	Calcium	80.0	+/-100	U	80.0	200	LIO		29-MAR-22 11:27	220329-1
	Calciani	00.0	17 100	O	00.0	200	LiQ	1110	2) WHAR 22 11.27	22032) 1
CCB04	Boron	5.2	+/-7.5	U	5.2	15.0	LIO	мс	29-MAR-22 11:54	220329-1
							`			
	Calcium	80.0	+/-100	U	80.0	200	LIQ	MS	29-MAR-22 11:54	220329–1
CCB05										
	Boron	5.2	+/-7.5	U	5.2	15.0	LIQ	MS	29-MAR-22 12:13	220329-1
	Calcium	80.0	+/-100	U	80.0	200	LIQ	MS	29-MAR-22 12:13	220329-1
CCB06										
CCBVV	Boron	5.2	+/-7.5	U	5.2	15.0	LIQ	MS	29-MAR-22 12:36	220329-1
	Calcium	80.0	+/-100	U	80.0	200	LIQ	MS	29-MAR-22 12:36	220329-1

\*Analytical Methods:

## METALS -3bPREPARATION BLANK SUMMARY

**SDG NO.** 573245

Contract: DMNN00101

Matrix: GW

Sample ID	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	Acceptance Window	Conc Qual	<u>M*</u>	MDL	RDL
1205050488								
	Boron	5.20	ug/L	+/-7.5	U	MS	5.20	15.0
	Calcium	80.0	ug/L	+/-100	U	MS	80.0	200

\*Analytical Methods:

# METALS -4Interference Check Sample

**SDG No:** 573245

Contract: DMNN00101 Lab Code: GEL

**Instrument:** ICPMS11

Part	Sample ID	<u>Analyte</u>	Result	<u>Units</u>	<u>True</u> <u>Value</u>	<u>Units</u>	% Recovery	Acceptance Window (%R)	<u>Analysis</u> <u>Date/Time</u>	<u>Run</u> <u>Number</u>
Calcium	ICSA01									
CSAB0		Boron	3.78	ug/L					29-MAR-22 10:22	220329-1
Roral   Soro   21.8   ug/L   20   ug/L   109   80.0 - 120.0   29-MAR-22 10:24   220329-1     Roral   Boron   4.08   ug/L   1000   ug/L   101   80.0 - 120.0   29-MAR-22 10:24   220329-1     Roral   Boron   4.08   ug/L   101   80.0 - 120.0   29-MAR-22 10:56   220329-1     Roral   Calcium   101000   ug/L   10000   ug/L   101   80.0 - 120.0   29-MAR-22 10:56   220329-1     Roral   Boron   21.1   ug/L   20   ug/L   106   80.0 - 120.0   29-MAR-22 10:58   220329-1     Roral   Boron   2.44   ug/L   100   80.0 - 120.0   29-MAR-22 10:58   220329-1     Roral   Boron   2.44   ug/L   100   80.0 - 120.0   29-MAR-22 11:21   220329-1     Roral   Boron   2.44   ug/L   100   80.0 - 120.0   29-MAR-22 11:21   220329-1     Roral   Boron   21.5   ug/L   10000   ug/L   100   80.0 - 120.0   29-MAR-22 11:21   220329-1     Roral   Boron   21.5   ug/L   20   ug/L   103   80.0 - 120.0   29-MAR-22 11:23   220329-1     Roral   Boron   23   ug/L   10000   ug/L   103   80.0 - 120.0   29-MAR-22 11:23   220329-1     Roral   Boron   2.3   ug/L   10000   ug/L   103   80.0 - 120.0   29-MAR-22 11:48   220329-1     Roral   Boron   2.3   ug/L   10000   ug/L   101   80.0 - 120.0   29-MAR-22 11:48   220329-1     Roral   Boron   20.4   ug/L   200   ug/L   101   80.0 - 120.0   29-MAR-22 11:48   220329-1     Roral   Boron   20.4   ug/L   200   ug/L   101   80.0 - 120.0   29-MAR-22 11:48   220329-1     Roral   Boron   20.4   ug/L   200   ug/L   101   80.0 - 120.0   29-MAR-22 11:48   220329-1     Roral   Boron   20.4   ug/L   200   ug/L   101   80.0 - 120.0   29-MAR-22 11:50   220329-1     Roral   Boron   3.41   ug/L   200   ug/L   101   80.0 - 120.0   29-MAR-22 11:50   220329-1     Roral   Boron   3.41   ug/L   200   ug/L   102   80.0 - 120.0   29-MAR-22 11:50   220329-1     Roral   Boron   3.41   ug/L   200   ug/L   102   80.0 - 120.0   29-MAR-22 11:50   220329-1     Roral   Boron   3.41   ug/L   200   ug/L   102   80.0 - 120.0   29-MAR-22 11:50   220329-1     Roral   200   200   200   200   200   200   200   200   200   200   200   200   200   200   20		Calcium	103000	ug/L	100000	ug/L	103	80.0 – 120.0	29-MAR-22 10:22	220329-1
Calcium	ICSAB01									
ICSA02		Boron	21.8	ug/L	20	ug/L	109	80.0 - 120.0	29-MAR-22 10:24	220329-1
Boron   A.08   ug/L		Calcium	101000	ug/L	100000	ug/L	101	80.0 – 120.0	29-MAR-22 10:24	220329-1
Calcium	ICSA02									
Note		Boron	4.08	ug/L					29-MAR-22 10:56	220329-1
Boron   21.1   ug/L   20   ug/L   100   80.0 - 120.0   29-MAR-22 10:58   220329-1     ICSA03   Boron   2.44   ug/L   20   ug/L   1000   80.0 - 120.0   29-MAR-22 10:58   220329-1     ICSA03   Boron   2.44   ug/L   20   ug/L   1000   10000   ug/L   100000   ug/L   10000   ug/L   10000   10000   ug/L   100000   ug/L		Calcium	101000	ug/L	100000	ug/L	101	80.0 – 120.0	29-MAR-22 10:56	220329-1
Calcium   100000   ug/L   100000   ug/L   100   80.0 - 120.0   29-MAR-22 10:58   220329-1	ICSAB02									
Rosano		Boron	21.1	ug/L	20	ug/L	106	80.0 - 120.0	29-MAR-22 10:58	220329-1
Roron   2.44   ug/L   100000   ug/L   100000   ug/L   1000   ug/L   1000   80.0 - 120.0   29-MAR-22 11:21   220329-1     CSAB03   Roron   21.5   ug/L   20   ug/L   107   80.0 - 120.0   29-MAR-22 11:23   220329-1     Calcium   103000   ug/L   100000   ug/L   103   80.0 - 120.0   29-MAR-22 11:23   220329-1     CSA04   Roron   2.3   ug/L   20   ug/L   103   80.0 - 120.0   29-MAR-22 11:23   220329-1     CSAB04   Roron   2.3   ug/L   20   ug/L   101   80.0 - 120.0   29-MAR-22 11:48   220329-1     CSAB04   Roron   20.4   ug/L   20   ug/L   102   80.0 - 120.0   29-MAR-22 11:50   220329-1     CSAB04   Roron   3.41   ug/L   20   ug/L   101   80.0 - 120.0   29-MAR-22 11:50   220329-1     CSAB05   Roron   3.41   ug/L   20   ug/L   102   80.0 - 120.0   29-MAR-22 11:50   220329-1     CSAB05   Calcium   102000   ug/L   100000   ug/L   102   80.0 - 120.0   29-MAR-22 12:30   220329-1     CSAB05   Calcium   102000   ug/L   100000   ug/L   102   80.0 - 120.0   29-MAR-22 12:30   220329-1     CSAB05   Calcium   102000   ug/L   100000   ug/L   102   80.0 - 120.0   29-MAR-22 12:30   220329-1     CSAB05   CAlcium   102000   ug/L   100000   ug/L   102   80.0 - 120.0   29-MAR-22 12:30   220329-1     CSAB05   CAlcium   102000   ug/L   100000   ug/L   102   80.0 - 120.0   29-MAR-22 12:30   220329-1     CSAB05   CAlcium   102000   ug/L   100000   ug/L   102   80.0 - 120.0   29-MAR-22 12:30   220329-1     CSAB05   CAlcium   102000   ug/L   100000   ug/L   102   80.0 - 120.0   29-MAR-22 12:30   220329-1     CSAB05   CAlcium   102000   ug/L   100000   ug/L   102   80.0 - 120.0   29-MAR-22 12:30   220329-1     CSAB05   CAlcium   102000   ug/L   100000   ug/L   102   102000   102000   29-MAR-22 12:30   220329-1     CSAB05   CAlcium   102000   ug/L   100000   ug/L   102000   ug/L   102000   102000   ug/L   102000		Calcium	100000	ug/L	100000	ug/L	100	80.0 – 120.0	29-MAR-22 10:58	220329-1
Calcium   100000   ug/L   100000   ug/L   100   80.0 - 120.0   29-MAR-22 11:21   220329-1     CSAB03	ICSA03									
CSAB03		Boron	2.44	ug/L					29-MAR-22 11:21	220329-1
Boron   21.5   ug/L   20   ug/L   107   80.0 - 120.0   29-MAR-22 11:23   220329-1     Calcium   103000   ug/L   100000   ug/L   103   80.0 - 120.0   29-MAR-22 11:23   220329-1     Boron   2.3   ug/L   100000   ug/L   101   80.0 - 120.0   29-MAR-22 11:48   220329-1     Calcium   101000   ug/L   100000   ug/L   101   80.0 - 120.0   29-MAR-22 11:48   220329-1     Calcium   101000   ug/L   20   ug/L   102   80.0 - 120.0   29-MAR-22 11:50   220329-1     Calcium   101000   ug/L   100000   ug/L   101   80.0 - 120.0   29-MAR-22 11:50   220329-1     ICSA05   Boron   3.41   ug/L   102   80.0 - 120.0   29-MAR-22 11:50   220329-1     Calcium   102000   ug/L   100000   ug/L   102   80.0 - 120.0   29-MAR-22 12:30   220329-1     ICSA05   ICSA05   100000   ug/L   100000   ug/L   102   80.0 - 120.0   29-MAR-22 12:30   220329-1     ICSA05   100000   ug/L   100000   ug/L   102   80.0 - 120.0   29-MAR-22 12:30   220329-1     ICSA05   100000   ug/L   100000   ug/L   102		Calcium	100000	ug/L	100000	ug/L	100	80.0 – 120.0	29-MAR-22 11:21	220329-1
Calcium   103000   ug/L   100000   ug/L   103   80.0 - 120.0   29-MAR-22 11:23   220329-1	ICSAB03									
Note		Boron	21.5	ug/L	20	ug/L	107	80.0 - 120.0	29-MAR-22 11:23	220329-1
Boron   2.3   ug/L		Calcium	103000	ug/L	100000	ug/L	103	80.0 – 120.0	29-MAR-22 11:23	220329-1
Calcium   101000   ug/L   10000   ug/L   101   80.0 - 120.0   29-MAR-22 11:48   220329-1     Calcium   Boron   20.4   ug/L   20   ug/L   102   80.0 - 120.0   29-MAR-22 11:50   220329-1     Calcium   101000   ug/L   10000   ug/L   101   80.0 - 120.0   29-MAR-22 11:50   220329-1     Calcium   29-MAR-22 11:50   220329-1     Calcium   102000   ug/L   100000   ug/L   102   80.0 - 120.0   29-MAR-22 12:30   220329-1     Calcium   102000   ug/L   100000   ug/L   102   80.0 - 120.0   29-MAR-22 12:30   220329-1     Calcium   102000   ug/L   100000   ug/L   102   80.0 - 120.0   29-MAR-22 12:30   220329-1     CSAB05   Calcium   102000   ug/L   100000   ug/L   102   80.0 - 120.0   29-MAR-22 12:30   220329-1     CSAB05   Calcium   102000   ug/L   100000   ug/L   102   80.0 - 120.0   29-MAR-22 12:30   220329-1     CSAB05   Calcium   102000   ug/L   100000   ug/L   102   80.0 - 120.0   29-MAR-22 12:30   220329-1     CSAB05   Calcium   102000   ug/L   100000   ug/L   102   80.0 - 120.0   29-MAR-22 12:30   220329-1     CSAB05   Calcium   102000   ug/L   100000   ug/L   102   80.0 - 120.0   29-MAR-22 12:30   220329-1     CSAB05   Calcium   102000   ug/L   100000   ug/L   102   80.0 - 120.0   29-MAR-22 12:30   220329-1     CSAB05   Calcium   102000   ug/L   100000   ug/L   102   80.0 - 120.0   29-MAR-22 12:30   220329-1     CSAB05   Calcium   102000   ug/L   100000   ug/L   102   80.0 - 120.0   29-MAR-22 12:30   220329-1     CSAB05   Calcium   102000   ug/L   100000   ug/L   102   80.0 - 120.0   29-MAR-22 12:30   220329-1     CSAB05   Calcium   102000   ug/L   100000   ug/L   102   80.0 - 120.0   29-MAR-22 12:30   220329-1     CSAB05   Calcium   102000   ug/L   100000   ug/L   102   80.0 - 120.0   29-MAR-22 12:30   200329-1       CSAB05   CAlcium   102000   ug/L   100000   ug/L   102   80.0 - 120.0   29-MAR-22 11:48   20000   20000       CALCIUM   CALC	ICSA04									
Roron   20.4   ug/L   20   ug/L   102   80.0 - 120.0   29-MAR-22 11:50   220329-1     Calcium   101000   ug/L   10000   ug/L   101   80.0 - 120.0   29-MAR-22 11:50   220329-1     Calcium   3.41   ug/L   50000   ug/L   102   80.0 - 120.0   29-MAR-22 12:30   220329-1     Calcium   102000   ug/L   100000   ug/L   102   80.0 - 120.0   29-MAR-22 12:30   220329-1     Calcium   102000   ug/L   100000   ug/L   102   80.0 - 120.0   29-MAR-22 12:30   220329-1     Calcium   102000   ug/L   100000   ug/L   102   80.0 - 120.0   29-MAR-22 12:30   220329-1     Calcium   102000   ug/L   100000   ug/L   102   80.0 - 120.0   29-MAR-22 12:30   220329-1     Calcium   102000   ug/L   100000   ug/L   102   80.0 - 120.0   29-MAR-22 12:30   220329-1     Calcium   102000   ug/L   100000   ug/L   102   80.0 - 120.0   29-MAR-22 12:30   220329-1     Calcium   102000   ug/L   100000   ug/L   102   80.0 - 120.0   29-MAR-22 12:30   220329-1     Calcium   102000   ug/L   100000   ug/L   102   80.0 - 120.0   29-MAR-22 12:30   220329-1     Calcium   102000   ug/L   100000   ug/L   102   80.0 - 120.0   29-MAR-22 12:30   220329-1     Calcium   102000   ug/L   100000   ug/L   102   80.0 - 120.0   29-MAR-22 12:30   220329-1     Calcium   102000   ug/L   100000   ug/L   102   80.0 - 120.0   29-MAR-22 12:30   220329-1     Calcium   102000   ug/L   100000   ug/L   102   80.0 - 120.0   29-MAR-22 12:30   220329-1     Calcium   102000   ug/L   100000   ug/L   102   80.0 - 120.0   29-MAR-22 12:30   220329-1     Calcium   102000   ug/L   100000   ug/L   102   80.0 - 120.0   29-MAR-22 12:30   220329-1       Calcium   102000   ug/L   100000   ug/L   102   80.0 - 120.0   29-MAR-22 12:30   220329-1       Calcium   102000   ug/L   100000   ug/L   102   80.0 - 120.0   29-MAR-22 12:30   200000		Boron	2.3	ug/L					29-MAR-22 11:48	220329-1
Boron   20.4   ug/L   20   ug/L   102   80.0 - 120.0   29-MAR-22 11:50   220329-1     Calcium   101000   ug/L   100000   ug/L   101   80.0 - 120.0   29-MAR-22 11:50   220329-1     ICSA05   Boron   3.41   ug/L		Calcium	101000	ug/L	100000	ug/L	101	80.0 – 120.0	29-MAR-22 11:48	220329-1
Calcium   101000   ug/L   10000   ug/L   101   80.0 - 120.0   29-MAR-22 11:50   220329-1     ICSA05   Boron   3.41   ug/L	ICSAB04									
ICSA05   Boron   3.41   ug/L   29-MAR-22 12:30   220329-1     Calcium   102000   ug/L   100000   ug/L   102   80.0 - 120.0   29-MAR-22 12:30   220329-1		Boron	20.4	ug/L	20	ug/L	102	80.0 - 120.0	29-MAR-22 11:50	220329-1
Boron 3.41 ug/L 220329-1 Calcium 102000 ug/L 100000 ug/L 102 80.0 - 120.0 29-MAR-22 12:30 220329-1  ICSAB05		Calcium	101000	ug/L	100000	ug/L	101	80.0 - 120.0	29-MAR-22 11:50	220329-1
Calcium 102000 ug/L 100000 ug/L 102 80.0 – 120.0 29–MAR–22 12:30 220329–1 ICSAB05	ICSA05									
ICSAB05		Boron	3.41	ug/L					29-MAR-22 12:30	220329-1
		Calcium	102000	ug/L	100000	ug/L	102	80.0 - 120.0	29-MAR-22 12:30	220329-1
Boron 20.7 ug/L 20 ug/L 103 80.0 – 120.0 29–MAR–22 12:32 220329–1	ICSAB05									
		Boron	20.7	ug/L	20	ug/L	103	80.0 - 120.0	29-MAR-22 12:32	220329-1

#### -4-

## **Interference Check Sample**

**SDG No:** 573245

Contract: DMNN00101 Lab Code: GEL

Sample ID	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>True</u> <u>Value</u>	<u>Units</u>	% Recovery	Acceptance Window (%R)	<u>Analysis</u> <u>Date/Time</u>	<u>Run</u> <u>Number</u>
	Calcium	103000	ug/I	100000	ug/I	103	80.0 - 120.0	29_MΔR_22 12·32	220329_1

METALS -5a-

**Matrix Spike Summary** 

573245 SDG NO.

Client ID

MW-LF-11-2022Q1S

**Contract:** 

DMNN00101

Level: Low

Matrix:

GROUND WATER

% Solids:

**Sample ID:** 573245007 **Spike ID:** 1205050491

<u>Analyte</u>	<u>Units</u>	Acceptance Limit	Spiked Result	<u>C</u>	Sample Result	<u>C</u>	<u>Spike</u> <u>Added</u>	<u>%</u> Recovery C	<u>Qual</u>	<u>M*</u>
Boron	ug/L	75–125	120		10.5	В	100	110		MS
Calcium	ug/L	75–125	2630		378		2000	113		MS

<sup>\*</sup>Analytical Methods:

MS

## Metals -6-**Duplicate Sample Summary**

573245 SDG No.:

Lab Code: GEL

**Contract:** 

DMNN00101

Client ID: MW-LF-11-2022Q1D

Matrix:

**GROUND WATER** 

Level:

Low

**Sample ID:** 573245007

**Duplicate ID:** 1205050490

Percent Solids for Dup: N/A

Analyte	Units	Acceptance Limit	Sample Result C	Duplicate Result C	RPD	Qual	M*
Boron	ug/L	+/-30	10.5 B	10.4 B	.229		MS
Calcium	ug/L	+/-400	378	378	.136		MS

<sup>\*</sup>Analytical Methods:

-7-

## **Laboratory Control Sample Summary**

**SDG NO.** 573245

Contract: DMNN00101

Aqueous LCS Source: Environmental Express

## **Solid LCS Source:**

Sample ID 1205050489	<u>Analyte</u>	<u>Units</u>	<u>True</u> <u>Value</u>	Result	<u>C</u>	% Recovery	Acceptance Limit	<u>M*</u>
	Calcium Boron	ug/L ug/L	2000 100	2260 115		113 115	80–120 80–120	MS MS

<sup>\*</sup>Analytical Methods:

## METALS -9Serial Dilution Sample Summary

**SDG NO.** 573245 **Client ID** MW-LF-11-2022Q1L

Contract: DMNN00101

Matrix: LIQUID Level: Low

**Sample ID:** 573245007 **Serial Dilution ID:** 1205050492

Analyte	Initial Yalue ug/L	<u>C</u>	Serial Value ug/L	<u>C</u>	<u>%</u> Difference	Qual	Acceptance Limit	<u>M*</u>
Boron	10.5	В	27.1	В	158.665			MS
Calcium	378		400	U	4.392			MS

<sup>\*</sup>Analytical Methods:

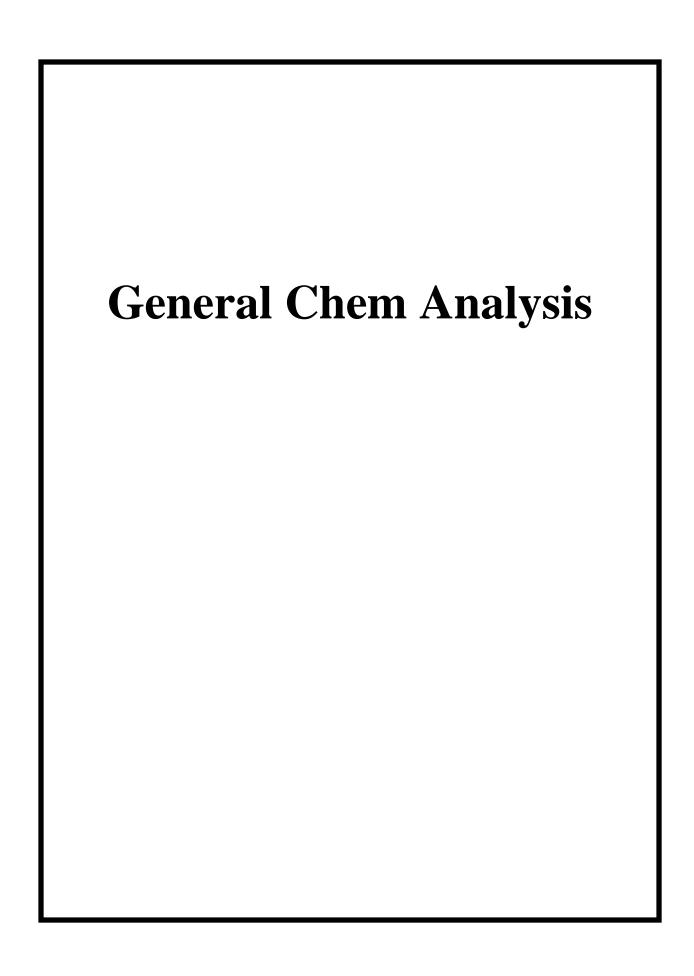
## METALS -13SAMPLE PREPARATION SUMMARY

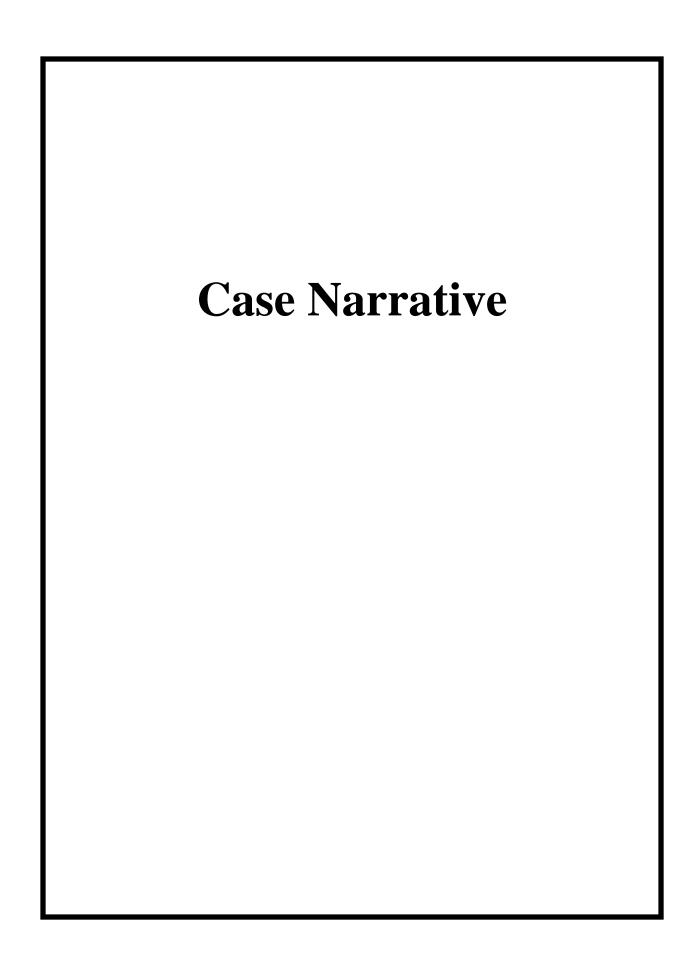
SDG No: 573245 Method Type MS

Contract: DMNN00101 Lab Code: GEL

Sample ID	<u>Client ID</u>	<u>Sample</u> <u>Type</u>	<u>Matrix</u>	<u>Prep</u> <u>Date</u>	<u>Initial</u> <u>Sample</u> <u>Size</u>	Final Sample Volume Solids
Batch Number	er 2245780					
1205050488	MB for batch 2245780	MB	G	25-MAR-22	50mL	50mL
1205050489	LCS for batch 2245780	LCS	G	25-MAR-22	50mL	50mL
1205050491	MW-LF-11-2022Q1S	MS	G	25-MAR-22	50mL	50mL
1205050490	MW-LF-11-2022Q1D	DUP	G	25-MAR-22	50mL	50mL
573245001	MW-LF-01-2022Q1	SAMPLE	G	25-MAR-22	50mL	50mL
573245002	MW-LF-06-2022Q1	SAMPLE	G	25-MAR-22	50mL	50mL
573245003	MW-LF-07-2022Q1	SAMPLE	G	25-MAR-22	50mL	50mL
573245004	MW-LF-08-2022Q1	SAMPLE	G	25-MAR-22	50mL	50mL
573245005	MW-LF-10-2022Q1	SAMPLE	G	25-MAR-22	50mL	50mL
573245006	MW-LF-10A-2022Q1	SAMPLE	G	25-MAR-22	50mL	50mL
573245007	MW-LF-11-2022Q1	SAMPLE	G	25-MAR-22	50mL	50mL
573245008	DU-WAT-CCR-LF-22101	SAMPLE	G	25-MAR-22	50mL	50mL
573245009	FLBK-WAT-CCR-LF-22101	SAMPLE	G	25-MAR-22	50mL	50mL
573245010	MW-LF-22-2022Q1	SAMPLE	G	25-MAR-22	50mL	50mL
573245011	AS-LF-01-2022Q1	SAMPLE	G	25-MAR-22	50mL	50mL
573245012	AS-LF-02-2022Q1	SAMPLE	G	25-MAR-22	50mL	50mL
573245013	AS-LF-03-2022Q1	SAMPLE	G	25-MAR-22	50mL	50mL
573245014	MW-BG-73-2022Q1	SAMPLE	G	25-MAR-22	50mL	50mL
573245015	FBLK-WAT-CCR-LF-22102	SAMPLE	G	25-MAR-22	50mL	50mL

SW846





## General Chemistry Technical Case Narrative Dominion Energy SDG #: 573245

**Product: Ion Chromatography Analytical Method:** EPA 300.0

Analytical Procedure: GL-GC-E-086 REV# 30 Analytical Batches: 2241660 and 2241672

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

GEL Sample ID#	Client Sample Identification
573245001	MW-LF-01-2022Q1
573245002	MW-LF-06-2022Q1
573245003	MW-LF-07-2022Q1
573245004	MW-LF-08-2022Q1
573245005	MW-LF-10-2022Q1
573245006	MW-LF-10A-2022Q1
573245007	MW-LF-11-2022Q1
573245008	DU-WAT-CCR-LF-22101
573245009	FLBK-WAT-CCR-LF-22101
573245010	MW-LF-22-2022Q1
573245011	AS-LF-01-2022Q1
573245012	AS-LF-02-2022Q1
573245013	AS-LF-03-2022Q1
573245014	MW-BG-73-2022Q1
573245015	FBLK-WAT-CCR-LF-22102
1205042137	Method Blank (MB)
1205042138	Laboratory Control Sample (LCS)
1205042139	573245007(MW-LF-11-2022Q1) Sample Duplicate (DUP)
1205042140	573245007(MW-LF-11-2022Q1) Post Spike (PS)
1205042165	Method Blank (MB)
1205042166	Laboratory Control Sample (LCS)
1205042167	573246002(MW-02LF-2022Q1) Sample Duplicate (DUP)
1205042168	573246002(MW-02LF-2022Q1) Post Spike (PS)
1205042169	573246007(DU-WAT-LF-22101) Sample Duplicate (DUP)
1205042170	573246007(DU-WAT-LF-22101) Post Spike (PS)

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

## **Data Summary:**

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

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

## Matrix Spike (MS)/Post Spike (PS) Recovery Statement

The percent recoveries (%R) obtained from the spike analyses are evaluated when the sample concentration is less

than four times (4X) the spike concentration added. The matrix spike recovered outside of the established acceptance limits due to matrix interference and/or non-homogeneity.

Analyte	Sample	Value
Chloride	1205042140 (MW-LF-11-2022Q1PS)	112* (90%-110%)
	1205042168 (MW-02LF-2022Q1PS) and 1205042170 (DU-WAT-LF-22101PS)	117* (90%-110%)

#### **Technical Information**

#### **Sample Dilutions**

The following samples 573245005 (MW-LF-10-2022Q1), 573245008 (DU-WAT-CCR-LF-22101) and 573245010 (MW-LF-22-2022Q1) were diluted because target analyte concentrations exceeded the calibration range. Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range.

A 1	573245								
Analyte	005	008	010						
Chloride	5X	10X	2X						
Sulfate	10X	10X	1X						

#### **Miscellaneous Information**

#### **Manual Integrations**

Sample 1205042169 (DU-WAT-LF-22101DUP) was manually integrated to correctly position the baseline as set in the calibration standards.

#### **Additional Comments**

All method-driven specifications are followed for these analyses except where client-specific SOW requirements are required to be met.

Page 46 of 70 SDG: 573245

**Product:** Solids, Total Dissolved **Analytical Method:** SM 2540C

**Analytical Procedure:** GL-GC-E-001 REV# 19

**Analytical Batch:** 2243637

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

<b>GEL Sample ID#</b>	<b>Client Sample Identification</b>
573245001	MW-LF-01-2022Q1
573245002	MW-LF-06-2022Q1
573245003	MW-LF-07-2022Q1
573245004	MW-LF-08-2022Q1
573245005	MW-LF-10-2022Q1
573245006	MW-LF-10A-2022Q1
573245007	MW-LF-11-2022Q1
573245008	DU-WAT-CCR-LF-22101
573245009	FLBK-WAT-CCR-LF-22101
573245010	MW-LF-22-2022Q1
573245011	AS-LF-01-2022Q1
573245012	AS-LF-02-2022Q1
573245013	AS-LF-03-2022Q1
573245014	MW-BG-73-2022Q1
573245015	FBLK-WAT-CCR-LF-22102
1205046121	Method Blank (MB)
1205046122	Laboratory Control Sample (LCS)
1205046123	573129001(NonSDG) Sample Duplicate (DUP)
1205046124	573245007(MW-LF-11-2022Q1) Sample Duplicate (DUP)
1205046125	573257001(NonSDG) Sample Duplicate (DUP)

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

#### **Data Summary:**

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

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

#### **Duplicate Relative Percent Difference (RPD) Statement**

The Relative Percent Difference (RPD) between the sample and duplicate falls outside of the established acceptance limits because of the heterogeneous matrix of the sample:

Analyte	Sample	Value
Total Dissolved Solids	1205046125 (Non SDG 573257001DUP)	12.7* (0%-5%)

#### **Miscellaneous Information**

#### **Additional Comments**

All method-driven specifications are followed for these analyses except where client-specific SOW requirements are required to be met.

#### **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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# Qualifier Definition Report for

DMNN001 Dominion Energy (50149867) Client SDG: 573245 GEL Work Order: 573245

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

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

#### Review/Validation

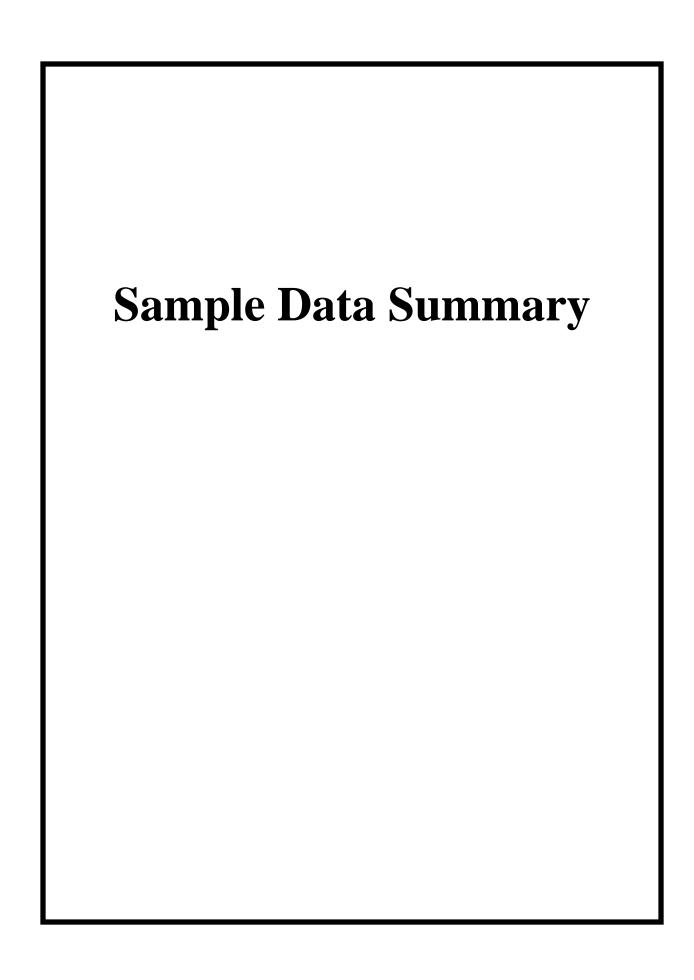
GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature: Name: Aubrey Kingsbury

Date: 25 MAR 2022 Title: Team Leader

Page 49 of 70 SDG: 573245



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**Certificate of Analysis** 

Project:

Client ID:

Report Date: March 25, 2022

DMNN00101

DMNN001

Company: Dominion Energy Services, Inc.

Address: 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks

Project: CCR Groundwater Monitoring - Level 1 Package

Client Sample ID: MW-LF-01-2022Q1

Sample ID: 573245001

Matrix: GW

Collect Date: 14-MAR-22 16:35 Receive Date: 15-MAR-22 Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Analyst Date	Time Batch	Method
Ion Chromatography									
EPA 300.0 Anions Li	quid "As Recei	ved"							
Chloride	•	7.18	0.0670	0.200	mg/L		1 HXC1 03/15/2	2 1742 2241660	1
Fluoride	U	ND	0.0330	0.100	mg/L		1		
Sulfate	J	0.301	0.133	0.400	mg/L		1		
Solids Analysis									
SM2540C TDS "As F	Received"								
Total Dissolved Solids	J	11.4	3.40	14.3	mg/L		KLP1 03/21/2	2 1248 2243637	2
The following Analy	tical Methods v	vere performed:							
Method	Description				1	Analys	st Comments		

1 EPA 300.0 2 SM 2540C

# **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 51 of 70 SDG: 573245

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

**Certificate of Analysis** 

Project:

Client ID:

Report Date: March 25, 2022

DMNN00101

DMNN001

Company: Dominion Energy Services, Inc.

Address: 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks

Project: CCR Groundwater Monitoring - Level 1 Package

Client Sample ID: MW-LF-06-2022Q1

Sample ID: 573245002

Matrix: GW

Collect Date: 14-MAR-22 16:48 Receive Date: 15-MAR-22

Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Analys	st Date	Time Batch	Method
Ion Chromatography										
EPA 300.0 Anions Lie	quid "As Recei	ved"								
Chloride	•	6.73	0.0670	0.200	mg/L		1 HXC1	03/15/22	1812 2241660	1
Fluoride	U	ND	0.0330	0.100	mg/L		1			
Sulfate		0.604	0.133	0.400	mg/L		1			
Solids Analysis										
SM2540C TDS "As R	Received"									
Total Dissolved Solids	J	10.0	3.40	14.3	mg/L		KLP1	03/21/22	1248 2243637	2
The following Analys	tical Methods v	were performed:								
Method	Description	[			1	Analys	st Comments			
1	ED 4 200 0									

EPA 300.0 SM 2540C

# **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 52 of 70 SDG: 573245

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**Certificate of Analysis** 

Project:

Client ID:

Report Date: March 25, 2022

DMNN00101

DMNN001

Company: Dominion Energy Services, Inc.

Address: 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks

Project: CCR Groundwater Monitoring - Level 1 Package

Client Sample ID: MW-LF-07-2022Q1

Sample ID: 573245003

Matrix: GW

Collect Date: 14-MAR-22 13:00 Receive Date: 15-MAR-22 Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Analyst Date	Time Batch	Method
Ion Chromatography									
EPA 300.0 Anions Li	quid "As Recei	ved"							
Chloride	-	8.91	0.0670	0.200	mg/L		1 HXC1 03/15/2	2 1843 2241660	1
Fluoride	U	ND	0.0330	0.100	mg/L		1		
Sulfate		1.18	0.133	0.400	mg/L		1		
Solids Analysis									
SM2540C TDS "As R	Received"								
Total Dissolved Solids	J	4.29	3.40	14.3	mg/L		KLP1 03/21/2	2 1248 2243637	2
The following Analy	tical Methods v	vere performed:							
Method	Description					Δnalve	et Comments		

Method Description Analyst Comments

EPA 300.0

EPA 300.0 SM 2540C

#### **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

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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 25, 2022

DMNN00101

DMNN001

Company: Dominion Energy Services, Inc.

Address: 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks

Project: CCR Groundwater Monitoring - Level 1 Package

Client Sample ID: MW-LF-08-2022Q1

Sample ID: 573245004

Matrix: GW

Collect Date: 14-MAR-22 12:54
Receive Date: 15-MAR-22
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Analyst Dat	e Time Batch	Method
Ion Chromatography									
EPA 300.0 Anions Li	iquid "As Recei	ved"							
Chloride	•	5.57	0.0670	0.200	mg/L		1 HXC1 03/15/2	22 1914 2241660	1
Fluoride	U	ND	0.0330	0.100	mg/L		1		
Sulfate		0.424	0.133	0.400	mg/L		1		
Solids Analysis									
SM2540C TDS "As I	Received"								
Total Dissolved Solids		15.7	3.40	14.3	mg/L		KLP1 03/21/2	22 1248 2243637	2
The following Analy	tical Methods v	vere performed:							
Method	Description				1	Analys	st Comments		

1 EPA 300.0 2 SM 2540C

# **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

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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 25, 2022

DMNN00101

DMNN001

Company: Dominion Energy Services, Inc.

Address: 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks

Project: CCR Groundwater Monitoring - Level 1 Package

Client Sample ID: MW-LF-10-2022Q1

Sample ID: 573245005

Matrix: GW

Collect Date: 14-MAR-22 14:12
Receive Date: 15-MAR-22
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analy	st Date	Time	Batch	Method
Ion Chromatography												
EPA 300.0 Anions L	iquid "As Recei	ved"										
Fluoride	-	0.351	0.0330	0.100	mg/L		1	HXC1	03/15/22	1945	2241660	1
Chloride		13.1	0.335	1.00	mg/L		5	HXC1	03/16/22	0226	2241660	2
Sulfate		93.8	1.33	4.00	mg/L		10	HXC1	03/17/22	1029	2241660	3
Solids Analysis												
SM2540C TDS "As I	Received"											
Total Dissolved Solids		117	3.40	14.3	mg/L			KLP1	03/21/22	1248	2243637	4
The following Analy	ytical Methods v	vere performed:										

Method Description Analyst Comments

1	EPA 300.0
2	EPA 300.0
3	EPA 300.0
4	SM 2540C

#### Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

Lc/LC: Critical Level

PF: Prep Factor

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 25, 2022

DMNN00101

DMNN001

Dominion Energy Services, Inc. Company:

Address: 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks

Project: CCR Groundwater Monitoring - Level 1 Package

Client Sample ID: MW-LF-10A-2022Q1

Sample ID: 573245006

Matrix: GW

Collect Date: 14-MAR-22 15:24 Receive Date: 15-MAR-22 Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Analyst Da	te Time Batch	Method
Ion Chromatography									
EPA 300.0 Anions Lic	quid "As Recei	ved"							
Chloride	•	4.14	0.0670	0.200	mg/L		1 HXC1 03/15	/22 2016 2241660	) 1
Fluoride	U	ND	0.0330	0.100	mg/L		1		
Sulfate		0.742	0.133	0.400	mg/L		1		
Solids Analysis									
SM2540C TDS "As R	eceived"								
Total Dissolved Solids	U	ND	3.40	14.3	mg/L		KLP1 03/2	/22 1248 224363	7 2
The following Analyt	ical Methods v	vere performed:							
Method	Description				1	Analys	st Comments		

EPA 300.0

SM 2540C

#### **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

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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 25, 2022

DMNN00101

DMNN001

Company: Dominion Energy Services, Inc.

Address: 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks

Project: CCR Groundwater Monitoring - Level 1 Package

Client Sample ID: MW-LF-11-2022Q1

Sample ID: 573245007

Matrix: GW

Collect Date: 14-MAR-22 15:30 Receive Date: 15-MAR-22 Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Analyst Dat	e Time Batch	Method
Ion Chromatography									
EPA 300.0 Anions Li	quid "As Recei	ved"							
Chloride	•	5.89	0.0670	0.200	mg/L		1 HXC1 03/15/2	22 2047 2241660	1
Fluoride	U	ND	0.0330	0.100	mg/L		1		
Sulfate	J	0.285	0.133	0.400	mg/L		1		
Solids Analysis									
SM2540C TDS "As R	Received"								
Total Dissolved Solids		18.6	3.40	14.3	mg/L		KLP1 03/21/2	22 1248 2243637	2
The following Analy	tical Methods v	vere performed:							
Method	Description	Description Analyst Comments							

1 EPA 300.0 2 SM 2540C

# **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

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**Certificate of Analysis** 

Project:

Client ID:

Report Date: March 25, 2022

DMNN00101

DMNN001

Company: Dominion Energy Services, Inc.

Address: 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks

Project: CCR Groundwater Monitoring - Level 1 Package

Client Sample ID: DU-WAT-CCR-LF-22101

Sample ID: 573245008

Matrix: GW

Collect Date: 14-MAR-22 12:00
Receive Date: 15-MAR-22
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Analyst I	Date	Time Batch	Method
Ion Chromatography										
EPA 300.0 Anions Lie	quid "As Recei	ved"								
Fluoride		0.346	0.0330	0.100	mg/L		1 HXC1 03/	15/22	2117 2241660	1
Chloride		13.3	0.670	2.00	mg/L		10 HXC1 03/	16/22	0257 2241660	2
Sulfate		96.9	1.33	4.00	mg/L		10			
Solids Analysis										
SM2540C TDS "As R	leceived"									
Total Dissolved Solids		119	3.40	14.3	mg/L		KLP1 03/	21/22	1248 2243637	3
The following Analyt	tical Methods v	vere performed	:							

Method	Description	Analyst Comments
1	EPA 300.0	•

2 EPA 300.0 3 SM 2540C

#### **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

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**Certificate of Analysis** 

Project:

Client ID:

Report Date: March 25, 2022

DMNN00101

DMNN001

Company: Dominion Energy Services, Inc.

Address: 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks

Project: CCR Groundwater Monitoring - Level 1 Package

Client Sample ID: FLBK-WAT-CCR-LF-22101

Sample ID: 573245009

Matrix: AQ

Collect Date: 14-MAR-22 14:45
Receive Date: 15-MAR-22
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Analyst Date	Time Batch	Method
Ion Chromatography									
EPA 300.0 Anions Li	quid "As Recei	ved"							
Chloride	U	ND	0.0670	0.200	mg/L		1 HXC1 03/15/2	2 2148 2241660	1
Fluoride	U	ND	0.0330	0.100	mg/L		1		
Sulfate	U	ND	0.133	0.400	mg/L		1		
Solids Analysis									
SM2540C TDS "As F	Received"								
Total Dissolved Solids	U	ND	3.40	14.3	mg/L		KLP1 03/21/2	2 1248 2243637	2
The following Analy	tical Methods v	vere performed:							
Method	Description				1	Analys	st Comments		

1 EPA 300.0 2 SM 2540C

# **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

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**Certificate of Analysis** 

Project:

Client ID:

Analyst Comments

Report Date: March 25, 2022

DMNN00101

DMNN001

Company: Dominion Energy Services, Inc.

Address: 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks

Project: CCR Groundwater Monitoring - Level 1 Package

Client Sample ID: MW-LF-22-2022Q1

Sample ID: 573245010

Matrix: GW

Collect Date: 14-MAR-22 14:15
Receive Date: 15-MAR-22
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Analyst	t Date	Time Batch	Method
Ion Chromatography										
EPA 300.0 Anions Li	quid "As Recei	ved"								
Fluoride	U	ND	0.0330	0.100	mg/L		1 HXC1 (	03/15/22	2219 224166	0 1
Sulfate		1.11	0.133	0.400	mg/L		1			
Chloride		10.3	0.134	0.400	mg/L		2 HXC1 (	03/16/22	0327 224166	0 2
Solids Analysis										
SM2540C TDS "As R	Received"									
Total Dissolved Solids	J	7.14	3.40	14.3	mg/L		KLP1 (	03/21/22	1248 224363	7 3
The following Analy	tical Methods v	vere performed:								

Method	Description	
1	EPA 300.0	
2	EPA 300.0	
3	SM 2540C	

#### **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

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**Certificate of Analysis** 

Project:

Client ID:

Report Date: March 25, 2022

DMNN00101

DMNN001

Dominion Energy Services, Inc. Company:

Address: 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks

Project: CCR Groundwater Monitoring - Level 1 Package

Client Sample ID: AS-LF-01-2022Q1

Sample ID: 573245011

Matrix: GW

Collect Date: 15-MAR-22 11:30 Receive Date: 15-MAR-22 Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Analyst	Date	Time Batch	Method
Ion Chromatography										
EPA 300.0 Anions Li	quid "As Recei	ved"								
Chloride	•	8.89	0.0670	0.200	mg/L		1 JLD1 0:	3/15/22	2100 2241672	1
Fluoride	U	ND	0.0330	0.100	mg/L		1			
Sulfate		0.752	0.133	0.400	mg/L		1			
Solids Analysis										
SM2540C TDS "As R	Received"									
Total Dissolved Solids		22.9	3.40	14.3	mg/L		KLP1 0	3/21/22	1248 2243637	2
The following Analy	tical Methods v	vere performed:								
Method	Description				1	Analys	st Comments			

EPA 300.0

SM 2540C

#### **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

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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 25, 2022

KLP1 03/21/22 1248 2243637

DMNN00101

DMNN001

Company: Dominion Energy Services, Inc.

Address: 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks

Project: CCR Groundwater Monitoring - Level 1 Package

Client Sample ID: AS-LF-02-2022Q1

Sample ID: 573245012

Matrix: GW

Collect Date: 15-MAR-22 12:35
Receive Date: 15-MAR-22
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF A	Analyst Date	Time Batch	Method
Ion Chromatograp	ohy									
EPA 300.0 Anion	s Liquid "As Recei	ved"								
Chloride	•	2.74	0.0670	0.200	mg/L		1 J	LD1 03/15/22	2129 2241672	1
Fluoride	U	ND	0.0330	0.100	mg/L		1			
Sulfate		3.43	0.133	0.400	mg/L		1			
Solids Analysis										
SM2540C TDS "A	As Received"									

14.3

mg/L

3.40

The following Analytical Methods were performed:

Method Description Analyst Comments

EPA 300.0 SM 2540C

#### **Notes:**

Total Dissolved Solids

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 25, 2022

DMNN00101

DMNN001

Company: Dominion Energy Services, Inc.

Address: 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks

Project: CCR Groundwater Monitoring - Level 1 Package

Client Sample ID: AS-LF-03-2022Q1

Sample ID: 573245013

Matrix: GW

Collect Date: 15-MAR-22 12:05 Receive Date: 15-MAR-22

Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Analyst D	ate	Time Batch	Method
Ion Chromatography										
EPA 300.0 Anions Lie	quid "As Recei	ved"								
Chloride	_	5.28	0.0670	0.200	mg/L		1 JLD1 03/1	5/22	2159 2241672	1
Fluoride	U	ND	0.0330	0.100	mg/L		1			
Sulfate		0.433	0.133	0.400	mg/L		1			
Solids Analysis										
SM2540C TDS "As R	Received"									
Total Dissolved Solids	U	ND	3.40	14.3	mg/L		KLP1 03/2	1/22	1248 2243637	2
The following Analys	tical Methods v	vere performed:								
Method	Description				1	Analy	st Comments			
1	EPA 300.0									

#### **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

SM 2540C

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 25, 2022

DMNN00101

DMNN001

Company: Dominion Energy Services, Inc.

Address: 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks

Project: CCR Groundwater Monitoring - Level 1 Package

Client Sample ID: MW-BG-73-2022Q1

Sample ID: 573245014

Matrix: GW

Collect Date: 15-MAR-22 13:05
Receive Date: 15-MAR-22
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Analy	st Date	Time Batch	Method
Ion Chromatography										
EPA 300.0 Anions Li	quid "As Recei	ved"								
Chloride	•	2.27	0.0670	0.200	mg/L		1 JLD1	03/15/22	2229 2241672	. 1
Fluoride	U	ND	0.0330	0.100	mg/L		1			
Sulfate	J	0.377	0.133	0.400	mg/L		1			
Solids Analysis										
SM2540C TDS "As R	Received"									
Total Dissolved Solids	J	4.29	3.40	14.3	mg/L		KLP1	03/21/22	1248 2243637	2
The following Analy	tical Methods v	were performed:								
Method	Description					Analys	st Comments	3		

# **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

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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 25, 2022

DMNN00101

DMNN001

Company: Dominion Energy Services, Inc.

Address: 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks

Project: CCR Groundwater Monitoring - Level 1 Package

Client Sample ID: FBLK-WAT-CCR-LF-22102

Sample ID: 573245015

Matrix: AQ

Collect Date: 15-MAR-22 12:02
Receive Date: 15-MAR-22
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Analy	st Date	Time Batch	Method
Ion Chromatography										
EPA 300.0 Anions Li	quid "As Recei	ved"								
Chloride	J	0.152	0.0670	0.200	mg/L		1 JLD1	03/15/22	2259 2241672	1
Fluoride	U	ND	0.0330	0.100	mg/L		1			
Sulfate	U	ND	0.133	0.400	mg/L		1			
Solids Analysis										
SM2540C TDS "As F	Received"									
Total Dissolved Solids	U	ND	3.40	14.3	mg/L		KLP1	03/21/22	1248 2243637	2
The following Analy	tical Methods v	vere performed:								
Method	Description				,	Analys	st Comments	S		

1 EPA 300.0 2 SM 2540C

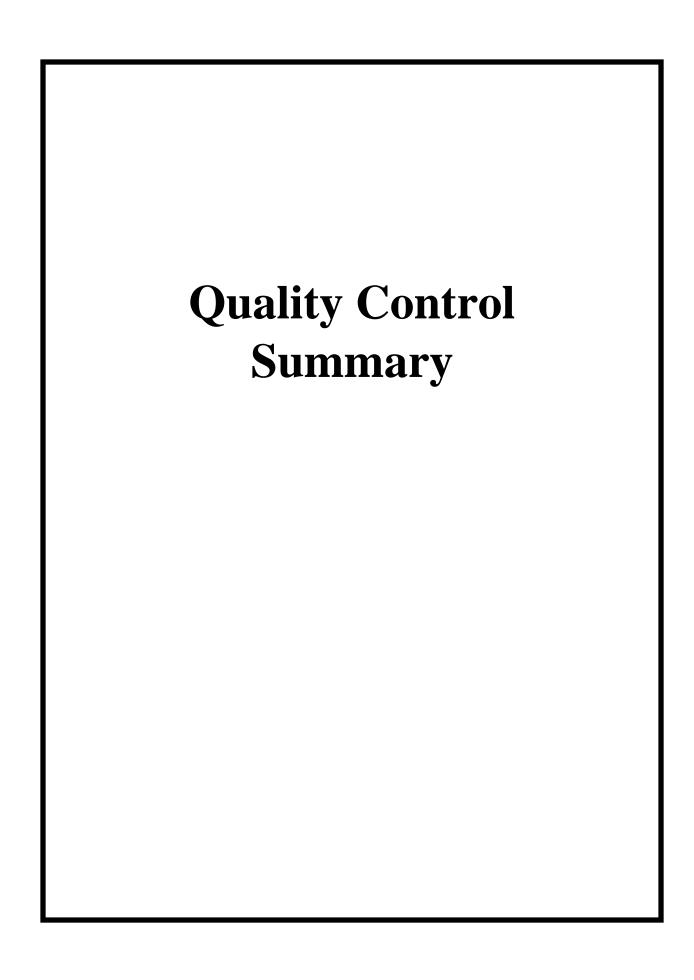
#### **Notes:**

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

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

**QC Summary** 

Report Date: March 25, 2022

Page 1 of 4

**Dominion Energy Services, Inc.** 

120 Tredegar Street Richmond, Virginia

Contact: Kelly Hicks

Workorder: 573245

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range Anlst	Date Time
Ion Chromatography									
Batch 2241660 ———————————————————————————————————		5.89		5.83	mg/L	0.941		(0%-20%) HXC1	03/16/22 01:24
Fluoride	U	ND	U	ND	mg/L	N/A			
Sulfate	J	0.285	J	0.281	mg/L	1.45 ^		(+/8)	
QC1205042138 LCS Chloride	5.00			4.94	mg/L		98.9	(90%-110%)	03/16/22 00:53
Fluoride	2.50			2.47	mg/L		99	(90%-110%)	
Sulfate	10.0			10.3	mg/L		103	(90%-110%)	
QC1205042137 MB Chloride			U	ND	mg/L				03/16/22 00:22
Fluoride			U	ND	mg/L				
Sulfate			U	ND	mg/L				
QC1205042140 573245007 PS Chloride	5.00	5.89		11.5	mg/L		112*	(90%-110%)	03/16/22 01:55
Fluoride	2.50 U	ND		2.67	mg/L		107	(90%-110%)	
Sulfate	10.0 J	0.285		10.7	mg/L		104	(90%-110%)	

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# **QC Summary**

Workorder: 573245 Page 2 of 4

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range A	Anlst	Date Time
Ion Chromatography Batch 2241672 ———										
QC1205042167 573246002 DUP Chloride		9.63		9.61	mg/L	0.203		(0%-20%)	JLD1	03/16/22 00:29
Fluoride	J	0.0349	J	0.0378	mg/L	7.98	^	(+/2)		
Sulfate		0.416	J	0.389	mg/L	6.71	^	(+/8)		
QC1205042169 573246007 DUP Chloride		9.15		9.15	mg/L	0.104		(0%-20%)		03/16/22 05:27
Fluoride	J	0.0495	J	0.0429	mg/L	14.3	۸	(+/2)		
Sulfate		3.80		3.83	mg/L	0.736		(0%-20%)		
QC1205042166 LCS Chloride	5.00			4.73	mg/L		94.7	(90%-110%)		03/16/22 07:57
Fluoride	2.50			2.31	mg/L		92.4	(90%-110%)		
Sulfate	10.0			9.71	mg/L		97.1	(90%-110%)		
QC1205042165 MB Chloride			U	ND	mg/L					03/16/22 07:27
Fluoride			U	ND	mg/L					
Sulfate			U	ND	mg/L					
QC1205042168 573246002 PS Chloride	5.00	9.63		15.5	mg/L		117*	(90%-110%)		03/16/22 00:59
Fluoride	2.50 J	0.0349		2.59	mg/L		102	(90%-110%)		

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# **QC Summary**

Workorder: 573245 Page 3 of 4 QC **Parmname NOM** Sample Qual Units RPD% REC% Range Anlst Date Time Ion Chromatography Batch 2241672 (90%-110%) JLD1 03/16/22 00:59 Sulfate 10.0 0.416 10.2 mg/L 98 QC1205042170 573246007 PS Chloride 5.00 9.15 15.0 (90%-110%) 03/16/22 05:57 mg/L 117\* Fluoride 2.50 0.0495 2.48 97.1 (90%-110%) mg/L Sulfate 10.0 3.80 13.3 mg/L 95.4 (90%-110%) **Solids Analysis** Batch 2243637 QC1205046123 573129001 DUP U ND U ND KLP1 03/21/22 12:48 **Total Dissolved Solids** mg/L N/A QC1205046124 573245007 DUP **Total Dissolved Solids** 18.6 J 14.3 mg/L 26.1 ^ (+/-28.6)03/21/22 12:48 QC1205046125 573257001 DUP Total Dissolved Solids 156 137 mg/L 03/21/22 12:48 12.7\* (0%-5%)OC1205046122 LCS 300 297 03/21/22 12:48 **Total Dissolved Solids** mg/L 99 (95%-105%) QC1205046121 U ND 03/21/22 12:48 Total Dissolved Solids mg/L

#### Notes:

The Qualifiers in this report are defined as follows:

- < Result is less than value reported
- > Result is greater than value reported
- B The target analyte was detected in the associated blank.
- E General Chemistry--Concentration of the target analyte exceeds the instrument calibration range
- H Analytical holding time was exceeded

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# **QC Summary**

573245 Page 4 of 4 Sample Qual Parmname **NOM** OC Units RPD% REC% Range Anlst Date Time

- J See case narrative for an explanation
- J Value is estimated

Workorder:

- N/A RPD or %Recovery limits do not apply.
- N1 See case narrative
- ND Analyte concentration is not detected above the detection limit
- NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- One or more quality control criteria have not been met. Refer to the applicable narrative or DER. Q
- R Per section 9.3.4.1 of Method 1664 Revision B, due to matrix spike recovery issues, this result may not be reported or used for regulatory compliance purposes.
- R Sample results are rejected
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.
- X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Z Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
- ٨ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
- d 5-day BOD--The 2:1 depletion requirement was not met for this sample
- 5-day BOD--Test replicates show more than 30% difference between high and low values. The data is qualified per the method and can be used for e reporting purposes
- Preparation or preservation holding time was exceeded h

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable. ^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

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

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

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

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This quality assurance (QA) review is based upon an examination of the data generated from the analyses of the samples collected as part of:

# Wateree Power Station Groundwater Sampling Samples Collected between: 3/14/2022 and 3/18/2022

This review was performed with guidance from the associated US EPA data validation guidelines and in accordance with the Quality Assurance Program Plan. These validation guidance documents specifically address analyses performed in accordance with the Contract Laboratory Program (CLP) analytical methods and are not completely applicable to the type of analyses and analytical protocols performed for the US EPA, SW-846, and Standard Methods utilized by the laboratory for these samples. Environmental Standards, Inc. (Environmental Standards) used professional judgment to determine the usability of the analytical results and compliance relative to the US EPA, SW-846, and Standard Methods utilized by the laboratory. This QA review was performed on the data associated with Job Number:

#### 573245

The findings offered in this report are based on a review of holding times and preservation, method blank results, field blank results, filter blank results, equipment blank results, tubing blank results, matrix spike/matrix spike duplicate recoveries and precision, laboratory control sample/laboratory control sample duplicate recoveries and precision, laboratory and field duplicate precision, total and dissolved results comparisons, and/or positive results between the method detection limit and quantitation limit.

The following results were qualified based on the data verification effort:

Sample	Location	Sample Type	Method	Anayte	T/D	Result	Qual	Reason Code(s)	MDL	QL	Uncertainty	Unit
MW-LF-01-2022Q1	MW-01LF	N	EPA 300.0	Sulfate	N	0.301	J	RL	0.133	0.400		mg/L
MW-LF-01-2022Q1	MW-01LF	N	SM 2540C	Total Dissolved Solids	N	11.4	J	RL	3.40	14.3		mg/L
MW-LF-01-2022Q1	MW-01LF	N	SW-846 6020B	Boron	Т	12.7	J	RL	5.20	15.0		ug/L
MW-LF-01-2022Q1	MW-01LF	N	SW-846 6020B	Calcium	Т	126	J	RL	80.0	200		ug/L
MW-LF-06-2022Q1	MW-06LF	N	SM 2540C	Total Dissolved Solids	N	10.0	J	RL	3.40	14.3		mg/L
MW-LF-06-2022Q1	MW-06LF	N	SW-846 6020B	Boron	Т	9.16	J	RL	5.20	15.0		ug/L
MW-LF-07-2022Q1	MW-LF-07	N	SM 2540C	Total Dissolved Solids	N	4.29	J	RL	3.40	14.3		mg/L
MW-LF-07-2022Q1	MW-LF-07	N	SW-846 6020B	Boron	Т	8.97	J	RL	5.20	15.0		ug/L
MW-LF-08-2022Q1	MW-LF-08	N	SW-846 6020B	Boron	Т	8.16	J	RL	5.20	15.0		ug/L
MW-LF-10A-2022Q1	MW-LF-10A	N	SW-846 6020B	Boron	Т	10.2	J	RL	5.20	15.0		ug/L
MW-LF-11-2022Q1	MW-LF-11	N	EPA 300.0	Sulfate	N	0.285	J	RL	0.133	0.400		mg/L
MW-LF-11-2022Q1	MW-LF-11	N	SW-846 6020B	Boron	Т	10.5	J	RL	5.20	15.0		ug/L
MW-LF-22-2022Q1	MW-22	N	SM 2540C	Total Dissolved Solids	N	7.14	J	RL	3.40	14.3		mg/L
AS-LF-01-2022Q1	AS-LF-01	N	SW-846 6020B	Boron	Т	10.3	J	RL	5.20	15.0		ug/L
AS-LF-02-2022Q1	AS-LF-02	N	SM 2540C	Total Dissolved Solids	N	12.9	J	RL	3.40	14.3		mg/L
AS-LF-02-2022Q1	AS-LF-02	N	SW-846 6020B	Boron	Т	11.3	J	RL	5.20	15.0		ug/L
AS-LF-03-2022Q1	AS-LF-03	N	SW-846 6020B	Boron	Т	8.98	J	RL	5.20	15.0		ug/L
MW-BG-73-2022Q1	MW-BG-73	N	EPA 300.0	Sulfate	N	0.377	J	RL	0.133	0.400		mg/L
MW-BG-73-2022Q1	MW-BG-73	N	SM 2540C	Total Dissolved Solids	N	4.29	J	RL	3.40	14.3		mg/L
MW-BG-73-2022Q1	MW-BG-73	N	SW-846 6020B	Boron	Т	9.18	J	RL	5.20	15.0		ug/L
FBLK-WAT-CCR-LF-22102	Field Blank	FB	EPA 300.0	Chloride	N	0.152	J	RL	0.0670	0.200		mg/L

Data Qualif	<u>iers</u>
U	The analyte was not detected above the level of the reported sample quantitation limit.
J	Quantitation is approximate due to limitations identified during data validation.
J+	The result is an estimated quantity; the result may be biased high.
J-	The result is an estimated quantity; the result may be biased low.
UJ	This analyte was not detected, but the reporting limit may or may not be higher due to a bias identified during data validation.

R	Unreliable positive result; analyte may or may not be present in sample.
Reason C	Codes and Explanations
BE	Equipment blank contamination.
BF	Field blank contamination.
BL	Laboratory blank contamination.
FD	Field duplicate imprecision.
FG	Total versus Dissolved Imprecision.
Н	Holding time exceeded.
L	LCS and LCSD recoveries outside of acceptance limits
LD	Laboratory duplicate imprecision.
LP	LCS/LCSD imprecision.
М	MS and MSD recoveries outside of acceptance limits
MP	MS/MSD imprecision.
Q	Chemical Preservation issue.
RL	Reported Results between the MDL and QL.
S	Radium-226+228 flagged due to reporting protocol for combined results
Т	Temperature preservation issue.
Х	Percent solids < 50%.
Υ	Chemical yield outside of acceptance limits
ZZ	Other

				Lab Sample ID	573245001										
				Sys Sample Code	MW-LF-01-20	22Q1									
				Sample Name	MW-LF-01-20										
				Sample Date	3/14/2022 4:35	5:00 PM									
				Location	WAT-MW-01L	F/MW-	01LF								
				Sample Type	N										
				Matrix	GW										
				Parent Sample											
Analytic Method	Chemical Name	CAS Rn	Fraction	Result Unit	Final Result	Final Qual	Reason code	Uncertainty	Final MDL	Final RL	Final QL	Final Detect	Final Report		Basis
EPA 300.0	Chloride	16887-00-6	N	mg/L	7.18				0.0670	0.0670	0.200	Υ	Yes	1	NA
	Fluoride	16984-48-8	N	mg/L		U			0.0330	0.0330	0.100	N	Yes	1	NA
	Sulfate	14808-79-8	N	mg/L	0.301	J	RL		0.133	0.133	0.400	Υ	Yes	1	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	11.4	J	RL		3.40	3.40	14.3	Υ	Yes	1	NA
SW-846 6020B	Boron	7440-42-8	Т	ug/L	12.7	J	RL		5.20	5.20	15.0	Υ	Yes	1	NA
	Calcium	7440-70-2	Т	ug/L	126	J	RL		80.0	80.0	200	Υ	Yes	1	NA

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Chemical Name

Total Dissolved Solids Boron

Chloride Fluoride Sulfate

Calcium

Analytic Method

EPA 300.0

SM 2540C

SW-846 6020B

			1										
		Lab Sample ID	573245002										
		Sys Sample Code	MW-LF-06-20	22Q1									
		Sample Name	MW-LF-06-20	22Q1									
		Sample Date	3/14/2022 4:48	8:00 PM									
		Location	WAT-MW-06L	F / MW-	06LF								
		Sample Type	N										
		Matrix	GW										
		Parent Sample											
CAS Rn	Fraction	Result Unit	Final Result	Final Qual	Reason code	Uncertainty	Final MDL	Final RL	Final QL	Final Detect	Final Report	DF	Basis
16887-00-6	N	mg/L	6.73				0.0670	0.0670	0.200	Υ	Yes	1	NA
16984-48-8	N	mg/L		U			0.0330	0.0330	0.100	N	Yes	1	NA
14808-79-8	N	mg/L	0.604				0.133	0.133	0.400	Υ	Yes	1	NA
TDS	N	mg/L	10.0	J	RL		3.40	3.40	14.3	Υ	Yes	1	NA
7440-42-8	Т	ug/L	9.16	J	RL		5.20	5.20	15.0	Υ	Yes	1	NA

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				Lab Sample ID	573245003										
				Sys Sample Code	MW-LF-07-20	22Q1									
				Sample Name	MW-LF-07-20	22Q1									
				Sample Date	3/14/2022 1:00	0:00 PM									
				Location	WAT-MW-LF-	07 / MW	-LF-07								
				Sample Type	N										
				Matrix	GW										
				Parent Sample											
Analytic Method	Chemical Name	CAS Rn	Fraction	Result Unit	Final Result	Final Qual	Reason code	Uncertainty	Final MDL	Final RL	Final QL	Final Detect	Final Report	DF	Basis
EPA 300.0	Chloride	16887-00-6	N	mg/L	8.91				0.0670	0.0670	0.200	Υ	Yes	1	NA
	Fluoride	16984-48-8	N	mg/L		U			0.0330	0.0330	0.100	N	Yes	1	NA
	Sulfate	14808-79-8	N	mg/L	1.18				0.133	0.133	0.400	Υ	Yes	1	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	4.29	J	RL		3.40	3.40	14.3	Υ	Yes	1	NA
SW-846 6020B	Boron	7440-42-8	T	ug/L	8.97	J	RL		5.20	5.20	15.0	Υ	Yes	1	NA
	Calcium	7440-70-2	T	ug/L	981				80.0	80.0	200	Υ	Yes	1	NA

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Calcium

7440-70-2

ug/L

				Lab Sample ID	573245004										
				Sys Sample Code	MW-LF-08-202	22Q1									
				Sample Name	MW-LF-08-202	22Q1									
				Sample Date	3/14/2022 12:5	54:00 PN	Л								
				Location	WAT-MW-LF-0	08 / MW	-LF-08								
				Sample Type	N										
				Matrix	GW										
				Parent Sample											
Analytic Method	Chemical Name	CAS Rn	Fraction	Result Unit	Final Result	Final Qual	Reason code	Uncertainty	Final MDL	Final RL	Final QL	Final Detect	Final Report		Basis
EPA 300.0	Chloride	16887-00-6	N	mg/L	5.57				0.0670	0.0670	0.200	Υ	Yes	1	NA
	Fluoride	16984-48-8	N	mg/L		U			0.0330	0.0330	0.100	N	Yes	1	NA
	Sulfate	14808-79-8	N	mg/L	0.424				0.133	0.133	0.400	Υ	Yes	1	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	15.7				3.40	3.40	14.3	Υ	Yes	1	NA
SW-846 6020B	Boron	7440-42-8	Т	ug/L	8.16	J	RL		5.20	5.20	15.0	Υ	Yes	1	NA

897

80.0

80.0

200

NA

Yes

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CAS Rn

16984-48-8

16887-00-6

14808-79-8

7440-42-8

7440-70-2

TDS

ug/L

19800

Chemical Name

Total Dissolved

Fluoride

Chloride

Sulfate

Solids

Boron

Calcium

Analytic Method

EPA 300.0

EPA 300.0

SM 2540C

SW-846 6020B

		-										
	Lab Sample ID	573245005										
	Sys Sample Code	MW-LF-10-202	22Q1									
	Sample Name	MW-LF-10-202	22Q1									
	Sample Date	3/14/2022 2:12	2:00 PM									
	Location	WAT-MW-LF-	10 / MW-	-LF-10								
	Sample Type	N										
	Matrix	GW										
	Parent Sample											
Fraction	Result Unit	Final Result	Final Qual	Reason code	Uncertainty	Final MDL	Final RL	Final QL	Final Detect	Final Report	DF	Basis
N	mg/L	0.351				0.0330	0.0330	0.100	Υ	Yes	1	NA
N	mg/L	13.1				0.335	0.335	1.00	Υ	Yes	5	NA
N	mg/L	93.8				1.33	1.33	4.00	Υ	Yes	10	NA
N	mg/L	117				3.40	3.40	14.3	Υ	Yes	1	NA
Т	ug/L	21.7				5.20	5.20	15.0	Υ	Yes	1	NA

80.0

80.0

200

Υ

Yes

NA

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Lab Camarla ID	F7004F000
Lab Sample ID	573245006
Sys Sample Code	MW-LF-10A-2022Q1
Sample Name	MW-LF-10A-2022Q1
Sample Date	3/14/2022 3:24:00 PM
Location	WAT-MW-LF-10A / MW-LF-10A
Sample Type	N
Matrix	GW

Parent	Sample	_

				Parent Sample											
Analytic Method	Chemical Name	CAS Rn	Fraction	Result Unit	Final Result	Final Qual	Reason code	Uncertainty	Final MDL	Final RL	Final QL	Final Detect	Final Report		Basis
EPA 300.0	Chloride	16887-00-6	N	mg/L	4.14				0.0670	0.0670	0.200	Υ	Yes	1	NA
	Fluoride	16984-48-8	N	mg/L		U			0.0330	0.0330	0.100	N	Yes	1	NA
	Sulfate	14808-79-8	N	mg/L	0.742				0.133	0.133	0.400	Υ	Yes	1	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L		U			3.40	3.40	14.3	N	Yes	1	NA
SW-846 6020B	Boron	7440-42-8	Т	ug/L	10.2	J	RL		5.20	5.20	15.0	Υ	Yes	1	NA
	Calcium	7440-70-2	Т	ug/L	395				80.0	80.0	200	Υ	Yes	1	NA

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Chemical Name

Total Dissolved Solids

7440-70-2

ug/L

378

Chloride

Fluoride

Sulfate

Boron

Calcium

Analytic Method

EPA 300.0

SM 2540C

SW-846 6020B

		Lab Sample ID	573245007										
		Sys Sample Code	MW-LF-11-20	22Q1									
		Sample Name	MW-LF-11-20	22Q1									
		Sample Date	3/14/2022 3:30	0:00 PM									
		Location	WAT-MW-LF-	11 / MW	-LF-11								
		Sample Type	N										
		Matrix	GW										
		Parent Sample											
CAS Rn	Fraction	Result Unit	Final Result	Final Qual	Reason code	Uncertainty	Final MDL	Final RL	Final QL	Final Detect	Final Report	DF	Basis
16887-00-6	N	mg/L	5.89				0.0670	0.0670	0.200	Υ	Yes	1	NA
16984-48-8	N	mg/L		U			0.0330	0.0330	0.100	N	Yes	1	NA
14808-79-8	N	mg/L	0.285	J	RL		0.133	0.133	0.400	Υ	Yes	1	NA
TDS	N	mg/L	18.6				3.40	3.40	14.3	Υ	Yes	1	NA
7440-42-8	Т	ug/L	10.5	J	RL		5.20	5.20	15.0	Υ	Yes	1	NA

80.0

80.0

200

Yes

NA

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Lab Sample ID	573245008														
Sys Sample Code	DU-WAT-CCR-LF-22101														
Sample Name	DU-WAT-CCR-LF-22101														
Sample Date	3/14/2022 12:00:00 PM														
Location	WAT-MW-LF-	WAT-MW-LF-10 / MW-LF-10													
Sample Type	FD	FD													
Matrix	GW														
Parent Sample	MW-LF-10-2022Q1														
Result Unit	Final Result	Final Qual	Reason code	Uncertainty	Final MDL	Final RL	Final QL	Final Detect	Final Report	DF	Basis				

		Parent Sample	MW-LF-10-2022Q1												
Analytic Method	Chemical Name	CAS Rn	Fraction	Result Unit	Final Result	Final Qual	Reason code	Uncertainty	Final MDL	Final RL	Final QL	Final Detect	Final Report		Basis
EPA 300.0	Fluoride	16984-48-8	N	mg/L	0.346				0.0330	0.0330	0.100	Υ	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	13.3				0.670	0.670	2.00	Υ	Yes	10	NA
	Sulfate	14808-79-8	N	mg/L	96.9				1.33	1.33	4.00	Υ	Yes	10	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	119				3.40	3.40	14.3	Y	Yes	1	NA
SW-846 6020B	Boron	7440-42-8	Т	ug/L	23.2				5.20	5.20	15.0	Υ	Yes	1	NA
	Calcium	7440-70-2	Т	ug/L	20000				80.0	80.0	200	Υ	Yes	1	NA

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				Lab Sample ID	573245009												
				Sys Sample Code	FLBK-WAT-C	CR-LF-2	2101										
Sample Name						FLBK-WAT-CCR-LF-22101											
				Sample Date	3/14/2022 2:4	5:00 PM											
				Location	WAT-CCRLF-	FB / Fie	ld Blank										
				Sample Type	FB												
				Matrix	AQ												
				Parent Sample													
Analytic Method	Chemical Name	CAS Rn	Fraction	Result Unit	Final Result	Final Qual	Reason code	Uncertainty	Final MDL	Final RL	Final QL	Final Detect	Final Report	DF	Basis		
EPA 300.0	Chloride	16887-00-6	N	mg/L		U			0.0670	0.0670	0.200	N	Yes	1	NA		
	Fluoride	16984-48-8	N	mg/L		U			0.0330	0.0330	0.100	N	Yes	1	NA		
	Sulfate	14808-79-8	N	mg/L		U			0.133	0.133	0.400	N	Yes	1	NA		
SM 2540C	Total Dissolved Solids	TDS	N	mg/L		U			3.40	3.40	14.3	N	Yes	1	NA		
SW-846 6020B	Boron	7440-42-8	Т	ug/L		U			5.20	5.20	15.0	N	Yes	1	NA		
	Calcium	7440-70-2	ĪΤ	ug/L		U			80.0	80.0	200	N	Yes	1	NA		

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	1										
Lab Sample ID	573245010										
Sys Sample Code	MW-LF-22-20	22Q1									
Sample Name	MW-LF-22-202	22Q1									
Sample Date	3/14/2022 2:15	5:00 PM									
Location	WAT-MW-22 /	MW-22									
Sample Type	N										
Matrix	GW										
Parent Sample											
Result Unit	Final Result	Final Qual	Reason code	Uncertainty	Final MDL	Final RL	Final QL	Final Detect	Final Report	DF	Basis
mg/L		U			0.0330	0.0330	0.100	N	Yes	1	NA
mg/L	1.11				0.133	0.133	0.400	Υ	Yes	1	NA
mg/L	10.3				0.134	0.134	0.400	Υ	Yes	2	NA

Analytic Method	Chemical Name	CAS Rn	Fraction	Result Unit	Final Result	Final Qual	Reason code	Uncertainty	Final MDL	Final RL	Final QL	Final Detect	Final Report	DF	Basis
EPA 300.0	Fluoride	16984-48-8	N	mg/L		U			0.0330	0.0330	0.100	N	Yes	1	NA
	Sulfate	14808-79-8	N	mg/L	1.11				0.133	0.133	0.400	Υ	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	10.3				0.134	0.134	0.400	Υ	Yes	2	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	7.14	J	RL		3.40	3.40	14.3	Y	Yes	1	NA
SW-846 6020B	Boron	7440-42-8	Т	ug/L	15.8				5.20	5.20	15.0	Υ	Yes	1	NA
	Calcium	7440-70-2	Т	ug/L	1950				80.0	80.0	200	Y	Yes	1	NA

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**Chemical Name** 

Total Dissolved

Chloride

Fluoride

Sulfate

Solids

Boron

Calcium

CAS Rn

16887-00-6

16984-48-8

14808-79-8

7440-42-8

7440-70-2

ug/L

772

TDS

**Analytic Method** 

EPA 300.0

SM 2540C

SW-846 6020B

		i .										
	Lab Sample ID	573245011										
	Sys Sample Code	AS-LF-01-202	2Q1									
	Sample Name	AS-LF-01-202	2Q1									
	Sample Date	3/15/2022 11:3	30:00 AN	И								
	Location	WAT-AS-LF-0	1 / AS-L	F-01								
	Sample Type	N										
	Matrix	GW										
	Parent Sample											
Fraction	Result Unit	Final Result	Final Qual	Reason code	Uncertainty	Final MDL	Final RL	Final QL	Final Detect	Final Report	DF	Basis
N	mg/L	8.89				0.0670	0.0670	0.200	Υ	Yes	1	NA
N	mg/L		U			0.0330	0.0330	0.100	N	Yes	1	NA
N	mg/L	0.752				0.133	0.133	0.400	Υ	Yes	1	NA
N	mg/L	22.9				3.40	3.40	14.3	Υ	Yes	1	NA
Т	ug/L	10.3	J	RL		5.20	5.20	15.0	Υ	Yes	1	NA

80.0

80.0

200

Υ

Yes

NA

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Boron Calcium

7440-70-2

ug/L

943

Analytic Method

EPA 300.0

SM 2540C

SW-846 6020B

			Lab Sample ID	573245012										
			Sys Sample Code	AS-LF-02-202	2Q1									
			Sample Name	AS-LF-02-202	2Q1									
			Sample Date	3/15/2022 12:3	35:00 PI	И								
			Location	WAT-AS-LF-0	2 / AS-L	F-02								
			Sample Type	N										
			Matrix	GW										
			Parent Sample											
Chemical Name	CAS Rn	Fraction	Result Unit	Final Result	Final Qual	Reason code	Uncertainty	Final MDL	Final RL	Final QL	Final Detect	Final Report	DF	Basis
Chloride	16887-00-6	N	mg/L	2.74				0.0670	0.0670	0.200	Υ	Yes	1	NA
Fluoride	16984-48-8	N	mg/L		U			0.0330	0.0330	0.100	N	Yes	1	NA
Sulfate	14808-79-8	N	mg/L	3.43				0.133	0.133	0.400	Υ	Yes	1	NA
Total Dissolved Solids	TDS	N	mg/L	12.9	J	RL		3.40	3.40	14.3	Υ	Yes	1	NA
Boron	7440-42-8	Т	ug/L	11.3	J	RL		5.20	5.20	15.0	Υ	Yes	1	NA

80.0

80.0

200

Υ

Yes

NA

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				Lab Sample ID	573245013										
				Sys Sample Code	AS-LF-03-202	2Q1									
				Sample Name	AS-LF-03-202	2Q1									
				Sample Date	3/15/2022 12:	05:00 PI	И								
				Location	WAT-AS-LF-0	3 / AS-L	F-03								
				Sample Type	N										
				Matrix	GW										
				Parent Sample											
Analytic Method	Chemical Name	CAS Rn	Fraction	Result Unit	Final Result	Final Qual	Reason code	Uncertainty	Final MDL	Final RL	Final QL	Final Detect	Final Report		Basis
EPA 300.0	Chloride	16887-00-6	N	mg/L	5.28				0.0670	0.0670	0.200	Υ	Yes	1	NA
	Fluoride	16984-48-8	N	mg/L		U			0.0330	0.0330	0.100	N	Yes	1	NA
	Sulfate	14808-79-8	N	mg/L	0.433				0.133	0.133	0.400	Υ	Yes	1	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L		U			3.40	3.40	14.3	N	Yes	1	NA
SW-846 6020B	Boron	7440-42-8	Т	ug/L	8.98	J	RL		5.20	5.20	15.0	Υ	Yes	1	NA
	Calcium	7440-70-2	ĪΤ	ua/L	606				80.0	80.0	200	Υ	Yes	1	NA

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				Lab Sample ID	573245014										
				Sys Sample Code	MW-BG-73-20	)22Q1									
				Sample Name	MW-BG-73-20	)22Q1									
				Sample Date	3/15/2022 1:0	5:00 PM									
				Location	WAT-MW-BG										
				Sample Type	N										
				Matrix	GW										
				Parent Sample											
Analytic Method	Chemical Name	CAS Rn	Fraction	Result Unit	Final Result	Final Qual	Reason code	Uncertainty	Final MDL	Final RL	Final QL	Final Detect	Final Report	DF	Basis
EPA 300.0	Chloride	16887-00-6	N	mg/L	2.27				0.0670	0.0670	0.200	Υ	Yes	1	NA
	Fluoride	16984-48-8	N	mg/L		U			0.0330	0.0330	0.100	N	Yes	1	NA
	Sulfate	14808-79-8	N	mg/L	0.377	J	RL		0.133	0.133	0.400	Υ	Yes	1	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	4.29	J	RL		3.40	3.40	14.3	Υ	Yes	1	NA
SW-846 6020B	Boron	7440-42-8	Т	ug/L	9.18	J	RL		5.20	5.20	15.0	Υ	Yes	1	NA
	Calcium	7440-70-2	Т	ug/L	304				80.0	80.0	200	Υ	Yes	1	NA

Report Generated: 4/1/2022 3:48:13 PM Page: 14 of 15

Chemical Name

Total Dissolved Solids

Chloride Fluoride Sulfate

Boron

Calcium

Analytic Method

EPA 300.0

SM 2540C

SW-846 6020B

		Lab Sample ID	573245015										
		Sys Sample Code	FBLK-WAT-C	CR-LF-2	2102								
		Sample Name	FBLK-WAT-C	CR-LF-2	2102								
		Sample Date	3/15/2022 12:0	02:00 PN	Л								
		Location	WAT-CCRLF-	FB / Fiel	d Blank								
		Sample Type	FB										
		Matrix	AQ										
		Parent Sample											
CAS Rn	Fraction	Result Unit	Final Result	Final Qual	Reason code	Uncertainty	Final MDL	Final RL	Final QL	Final Detect	Final Report	DF	Basis
16887-00-6	N	mg/L	0.152	J	RL		0.0670	0.0670	0.200	Υ	Yes	1	NA
16984-48-8	N	mg/L		U			0.0330	0.0330	0.100	N	Yes	1	NA
14808-79-8	N	mg/L		U			0.133	0.133	0.400	N	Yes	1	NA
TDS	N	mg/L		U			3.40	3.40	14.3	N	Yes	1	NA
7440-42-8	Т	ug/L		U			5.20	5.20	15.0	N	Yes	1	NA
7440-70-2	Т	ug/L		U			80.0	80.0	200	N	Yes	1	NA

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## Appendix D Second Semiannual Detection Monitoring Program Event Field Data Sheets, Laboratory Reports, and Data Validation Forms

Date(s) Measured: 9-6-2022

Well ID	Well Diameter (inches)	Well Total Depth (ft BTOC)	Well Completion	Screen length (ft)	Depth to Water (ft below TOC)	Pump Type
MW-LF-01	2	33:55 33.62	Stickup	15	24.30	Peristaltic
MW-LF-06	2	41.10	Stickup	15	30.44	Dedicated Bladder
MW-LF-07	2	31.73	Stickup	10	24.65	Peristaltic
MW-LF-08	2	3 <del>6:05</del> 36.14	Stickup	10	25.16	Peristaltic
MW-LF-10	2	2 <del>7.40</del>	Stickup	10	19.61	Peristaltic
MW-LF-10A	2	2 <del>8.69</del> <b>38.73</b>	Stickup	10	20.83	Peristaltic
MW-LF-11	2	30.25	Stickup	10	22.72	Peristaltic
MW-LF-22	2	34.45 <b>34.50</b>	Stickup	15	22.82	Peristaltic
AS-LF-01	2	48.85	Stickup	10	32.10	Dedicated Bladder
AS-LF-02	2	55.66	Stickup	10	32.88	Dedicated Bladder
AS-LF-03	2	3 <del>8.9</del> 7 38.10	Stickup	10	28.01	Peristaltic
MW-BG-73	. 2	23.38	Stickup	10	9,72	Peristaltic

Measure well TD below TOC once sample collected.

MW - F60-0 | 2 | 30.15

Stickup

			1
PAGE	J	OF	1

A.	
3	ITCL
- 100	

PROJECT	T NAME:	Domin	ion - Wateree	Station		PREF	PARED			CHEC	KED			
PROJECT	T NUMBE	R: 41655	9.0005.0000.3	3.2 E	BY: AGM		DATE: 9	66.P	BY: JA	.Y	DATE	9.1	3.5	2
SAMPLE	ID: M	W-01LF/N	/W-LF-01	WELL D	IAMETER	: 🗸 2"	4"	]6" []	OTHER				2//	ī
WELL MAT	TERIAL:	☑ PVC	ss [	IRON 🔲	SALVANIZ	ED STE	EL		OTHER	-				-
SAMPLE T	YPE:	☑ GW	□ww □	sw 🗆	OI .	LE	ACHATE		OTHER					
PUR	GING	TIME: 13	48 0	ATE: <b>9.9.</b> 3	<b>S</b>	SAN	/IPLE	TIME:	1420	DA	TE:9	.4.	12	
PURGE		PUMP	PERISTALTIC	PUMP	P	+ 4	.38	su co	NDUCTIV	/ITY: 54.			hos/c	emi
METHO	D:	BAILER			0	RP: a		mV DO:	5	mg 60'.	/L			
DEPTH TO	WATER:	_	T/ PVC			JRBIDIT								
DEPTH TO	BOTTOM	: _33.05	T/ PVC 33,			NONE		IGHT		DERATE		VE	RY	4
WELL VOL		10	LITERS	GALLON		TEMPERATURE: 21.37 °C OTHER:								=
	REMOVED		LITERS	<b>X</b> GALLON		color: dear odor: none								4
COLOR:	cle			OOR: none			(0.45 um)	YES		NO			_	_
NONE		TUR IGHT 🗍	BIDITY MODERATE	☐ VER			COLOR:	S/MSD	FIL	TRATE ODO	)R: _			-
,		: GROUI					TS:Post 4		71	FBLIC-W	2 - 2	40.1	f - >	123
200	PURGE					T		T		WATER	_	MULA		=
TIME	RATE	PH	CONDUCTIVITY	ORP	D.C	). T	URBIDITY	TEMPE	RATURE	LEVEL		GE V		
L	(GPM or ML/MIN)	(SU)	(umhos/cm)	(mV)	( mg	/L)	(NTU)	(	°C)	(FEET)	(0	GAL O	RL)	
1350	150	4.40	50,95	a18.1	5.3	17 1	2.8	24	.41	24.33		INITI	AL	
1355	1	4.38	52.48	221.7	5.0	6.20		21.69		1				
1400		4.38	52.60	6.666	5.2	9 3	7.87	21.56						
1405	- 5	4.39	52.73	221.9	5.4	5.7	262	21.3		/				
1410		4.39	53.60	222.9	5.5		2.20	21-	-	(				
1415		4.38	54.24	232.8	5.0	- III	2.11	21	# - D	1				
1420		4.38	54.71	223.4	5.6		.80	31.	7747	1				
	- 4	- 47					V. V.	1 310						
						- 1								
NO	OTE: STAB	ILIZATION	TEST IS COMP	LETE WHEN	3 SUCCE	SSIVE F	READINGS	ARE WIT	HIN THE	FOLLOWIN	G LIM	ITS:		
pH: +/-	0.1	COND.: +/-	3 % ORP	: +/- 10	D.O.: +/-	10 %	TURB: +/-	10 %	or =</td <td>5</td> <td>TEMP</td> <td>:: +/-</td> <td>3 %</td> <td></td>	5	TEMP	:: +/-	3 %	
BOTTLE	SFILLED	PRESERV	ATIVE CODES	A - NONE	B-H	103	C - H2SO	4 D-	NaOH	E-HC	L F			
NUMBER	SIZE	TYPE	PRESERVAT	IVE FILTE	RED N	UMBER	SIZE	TYP	E PI	RESERVAT	VE	FILT	EREI	D
3	250 mL	PLASTIC	В	□ Y [	N			THE T				Y		N
3	250 mL	PLASTIC	A	□ Y [	√ N						E	Y		N
2	125 mL	PLASTIC	Α	□ Y [	J N							Y		N
		1122		□ Y [	] N							Y		N
□ Y □ N					N							Y		N
SHIPPING METHOD: DATE SHIPPED:							AIR	BILL NUN	MBER:					
COC NUMI	BFR.		9	IGNATURE:					TE SIGNE			_		

1887	THE REP. APR
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PROJECT	NAME:	Domir	nion - Wateree	Station		PR	EPARED			KED			
PROJECT	NUMBE	R: 41655	9.0005.0000.3	3.2	BY: A	4GM	DATE: 9.0	66.1	DATES.Y				
SAMPLE	ID: M	W-06LF/N	W-LF-06	WELL	DIAME	ETER: 🗸	2"	6"	OTHER				
WELL MAT	ERIAL:	✓ PVC	□ss □	IRON [	GALV	ANIZED S	STEEL	E	OTHER				
SAMPLE T	YPE:	☑ GW	□ww □	sw 🗆	DI		LEACHATE	Ē	OTHER				
PUR	GING	TIME:12	26	ATE: 9.9.	99	S	AMPLE	TIME:	1320	D/	TE: 9.9-22		
PURGE METHOD	_	PUMP BAILER	CPM 4 RI										
DEPTH TO	WATER:		T/ PVC	-		_			Total Control	ing	-		
DEPTH TO			T/ PVC			NO KE		100		DERATE	☐ VERY		
WELL VOL			LITERS	✓ GALLO	NS	TEMPE	RATURE: 10	1.44	°C OTI	HER:			
VOLUME F	REMOVED	2.3	LITERS	<b></b> GALLO	NS	S COLOR: dear ODOR: none							
COLOR:	hah	t brown		OR: none		FILTRA	ATE (0.45 um)	YE	s 🛭	NO			
		TUR	BIDITY			FILTRA	TE COLOR:		FIL	TRATE ODC	PR:		
NONE	□ SL		MODERATE	☐ VEI		11 10 10 10 10	MPLE: MS	SU   CONDUCTIVITY:   149.80   umhos/of					
DISPOSAL	METHOD	: GROU	ND 🗌 DRUM	✓ OTHER	3	COMM	IENTS: POST 4	usbi.	3.23				
TIME	PURGE RATE (GPM or	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)		D.O. ( mg/L)	TURBIDITY (NTU)			LEVEL	CUMULATIVE PURGE VOLUME (GAL OR L)		
اعددا	ML/MIN)	4.80	53.29	9199		6,4)	35.2						
1235	7	4.65	43.00	223.6		7.82	29.9	100	F-22-1				
1 - 4 -		4.64	49.44	228.4		W							
1240		1 2 1 1 5 1 7 5		111111111111111111111111111111111111111		7.82	15.01	11 76 8 1		20.12			
1245	-1-	4.67	40.97	231.3		7,60	12.5	1			-		
1310	1	4,74	49.80	215.8		6.27	11.3	1 2	7.77	-			
1315	-	4.74	49.40	214.0	- (	6.20	6.83			-			
1390		4.79	49.80	217.5		6.32	3.68	14,1	14				
											G LIMITS: TEMP.: +/- 3 %		
BOTTLES	SFILLED	PRESERV	ATIVE CODES	A - NONE	В	B - HNO3	C - H2SO4	D-	NaOH	E - HC	L F		
NUMBER	SIZE	TYPE	PRESERVATI	VE FILT	ERED	NUMB	ER SIZE	TYI	PE PF	RESERVATI	VE FILTERED		
3	250 mL	PLASTIC	В	□ Y	V	1			,		OY ON		
3	250 mL	PLASTIC	Α	□ Y	V	1					DY DN		
2	125 mL	PLASTIC	A	□ Y	V	1		ir =			OY ON		
				□ Y		1		1			OY ON		
				□Y		1					DY DN		
SHIPPING	METHOD:		D.	ATE SHIPPE	-D.			AIE	RBILL NUM	IREP.			
	A	-		ta na Anazaraka						_			
COC NUMBER: DATE SIGNED:													

# \* TRC

PROJECT	NAME:	Water	ree Station LF-	CCR		PR	EPARED			CHEC	KED	
PROJECT	T NUMBE	R: 41655	59.0005.0000.2	2	BY: T	31M	DATE: 9.	1.22 BY:	JA	V	DATEG	13:20
SAMPLE	ID: M	W-LF-07		WELL	DIAMET	TER: 🗸	2"	6" 0	HER			
WELL MAT	ERIAL:	✓ PVC	∏ss □	IRON	GALVA	ANIZED S	TEEL	☐ o1	HER			
SAMPLE T	YPE:	☑ GW	□ww □	sw 🗌	DI		LEACHATE	or	HER			
PUR	GING	TIME: )	320 DA	ATE: 9.9.	22	S	AMPLE	TIME:	400	) DA	ATE: 9.	1.v
PURGE		PUMP	PERISTALTIC I			PH:	3.97	-	-	TY: 55		
METHOD	):	BAILER	-			ORP:	316.9	nV DO;	6.	64 mg	/L	
DEPTH TO	WATER:	24.65	T/ PVC				DITY: 5.90	NTU				
	BOTTOM	: 31.73	T/ PVC			@ NOI		IGHT [	MO	DERATE		/ERY
WELL VOL			LITERS	☑ GALLO		TEMPE	RATURE: 2	7.12 °C	OTI	HER:		
	REMOVED		LITERS	<b>⊠</b> GALLOI	_	COLOF	-		-	011.	****	
COLOR:	_0	ber	OD	OR:	_	FILTRA	TE (0.45 um)	YES	K	_NO		
MNONE			BIDITY			_	TE COLOR;	ade a		TRATE ODO	R:	
NONE	SL METHOD		MODERATE  ND	VER	- /		MPLE: MS		-	DUP-		
DIGI COAL		GROU	IND DROW	O O MER		COMM	ENTS: Pos	- turb:	3.0			
TIME	PURGE	PH	CONDUCTIVITY	ORP		D.O.	TURBIDITY	TEMPERAT	URE	WATER LEVEL		LATIVE VOLUME
10.7	(ML/MIN)	(SU)	(umhos/cm)	(mV)		(mg/L)	(NTU)	(°C)		(FEET)	100000	LONS)
1325	80	3,94	52.08	296.5	, 6	.01	8.39	28.05	5	24.81		TIAL
1330		3.94	54.38	300.5	1	.53	5.76	25.9		24.99		
1335	4/6	3.95	55.18	3020		.46	8.15	26.0	7	25.01		
1340		3.96	55.17	310.9	100.5	.44	12.31	26.8		25.02		
1345	-	3.96	55.18	314.8	6	0.43	10.10	24.7		25.03		
1350		3.96	55.11	317.4	1 1-2	.32	7.77	26.9	6	25.03		
1355		3.94	55.40	318.6	6	.56	6.76	27.0	1	11 V =_		
1400	1	3.97	55.34	314.9	6	.64	5.90	27.10	ì			
NO	TE: STAB	ILIZATION	TEST IS COMPL	ETE WHEN	3 SUC	CESSIVE	READINGS A	RE WITHIN	THEF	OLLOWING	G LIMITS	6
			3 % ORP:									
BOTTLES	FILLED	PRESERV	ATIVE CODES	A - NONE	В-	HNO3	C - H2SO4	D - NaC	ЭН	E-HC	L F-	
NUMBER	SIZE	TYPE	PRESERVATIV		-	NUMBE		TYPE	-	RESERVATIV		TERED
2	250 mL	PLASTIC	В		J N			12 0 31 65		- 4 /45000		
2	250 mL	PLASTIC	Α		J N							/ DN
1	125 mL	PLASTIC	A		N N							/ DN
	- 1-				- N							
				□ Y [	] N							
SHIPPING	METHOD:		DA		0.			AIDDU	ND D. C	DED-	1-1,	
		-		TE SHIPPEI	_			AIRBILL	-			
COC NUME	BER:		SIC	GNATURE:				DATE S	IGNE	D:		

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	OF )

## > TRC

PROJEC	T NAME;	Wate	ree Station LF-	CCR		PF	REPARED			CHEC	KED	
PROJEC	T NUMBE	R: 4165	59.0005.0000.2	.2	BY: AC	Mc	DATE: 4-1	9.97	BY: J)	1/2	DATES	5 25
SAMPLE	ID: M	W-L	F-08	WELL	DIAME	ren:	2" 4" [	6" [	OTHER			
WELL MAT	ERIAL:	PVC	ss [	IRON [	GALVA	NIZED	STEEL		OTHER			
SAMPLE T	YPE:	GW	□ww □	sw 🗌	DI		LEACHATE		OTHER			
PUR	GING	TIME:12	75 DA	ATE: 9.12.	22		SAMPLE	TIME:	1250	DA	ATE:	
PURGE		PUMP	-			PH:	7/37	SU CO		71TY: 41.9		hos/cn
DEPTH TO	) WATER:		T/ PVC		-		IDITY: 2.41			<u>85</u> mg	/L	
		:36,14	_ T/ PVC 36.1	Н		Z NC		IGHT	71	DERATE	☐ VE	DV.
WELL VOL		10,1-7	LITERS	GALLO	NS		ERATURE: 2			HER:		181
	REMOVED	1.3		GALLO		-	OR: clear	,,,,			ne	
COLOR:	cke			OR: none			ATE (0.45 um)	☐ YE		NO NO	7.00	
COLONG	- 10	-	RBIDITY	Ora. Transc	_	100	ATE COLOR:			TRATE ODO	iD-	
NONE	□ SL		MODERATE	☐ VE	RY		AMPLE: MS	S/MSD	-	DUP-		
DISPOSAL	METHOD	: GROL	JND DRUM	OTHER	2	COM	MENTS: Post 4	تدرماء	0.270	1310	_	
TIME	PURGE RATE	PH	CONDUCTIVITY	ORP		D.O.	TÜRBIDITY	1	ERATURE	WATER	CUMULA PURGE VI	
	(GPM or ML/MIN)	(SU)	(umhos/cm)	(mV)	1	(mg/L)	(NTU)		(°C)	(FEET)	(GAL O	R L)
1210	125	4.32	44.78	86.7	5	.65	12.18	31.	4)	25.09	INITI	AL
1215	1	4.30	44,97	89.5	4	.43	8.04	26.	1777	)		
1990		4.32	44.41	100.)	4	.59	7.99	25	.68			
1225		4.32	42.72	106.7		18.9	5.06	25				
1230		4.34	41,29	117.5	63	.82	2,98	25.	13			
1235		4,33	40.79	1283		.51	2.67	25.				
1240	1-1	4.36	41.01	135.0	6	80	2,74	25				
1245	1/	4.34	41.06	140.0		68.	2.78	25.	CA CAPTER			
1256	1	4.37	41.91	142.3	-	.35	2.41	24	-			
			TEST IS COMPL									
	S FILLED		- 10 % ORP: /ATIVE CODES						or =</td <td></td> <td>TEMP.: +/-</td> <td>100</td>		TEMP.: +/-	100
NUMBER		TYPE	PRESERVATI		ERED	NUME		-		RESERVATI		ERED
10000000	1 (3)	1000	7	Пу		11,711/6	3,44	3.3.	- 0			1 -1
				Пү		-					Пү	
	-		-			-					Пү	
		-										
		-									L Y	
			1	☐ Y	N						Y	LIN
SHIPPING	METHOD:		.DA	ATE SHIPPE	D:			AIF	RBILL NUM	MBER:		
COC NUM	DED.		01/	GNATURE:				04	DATE SIGNED:			

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PROJECT	NAME:	Water	ee Station LF-0	CCR	PR	EPARED		CHEC	CKED	
PROJECT	NUMBER	R: 41655	9.0005.0000.2	.2 BY:	BIM	DATE: 9 -12	122 BY:	YAC	DATE:9.152	
SAMPLE	ID: MI	N-LF-10		WELL DIA	METER:	2" 4"	6" OTH	HER		
WELL MAT	ERIAL:	PVC	ss	IRON GA	LVANIZED S	STEEL	☐ OTH	HER		
SAMPLE T	YPE:	<b>y</b> GW	□ ww □	SW DI		LEACHATE	☐ OTH	HER		
PUR	GING	TIME: 13	345 DA	TE: 9.12.2	2 8	SAMPLE	TIME: 14	35 0	ATE: 9.12.22	
PURGE METHOD	):	PUMP BAILER	PERISTALTIC I	PUMP	PH: ORP:	4.0	U CONDU	6.01 mg	37 umhos/cn	
DEPTH TO	WATER:	19.61	T/ PVC		TURB	11. 1				
DEPTH TO	ВОТТОМ	27.43	T/ PVC		NO	NE SLI	GHT	MODERATE	VERY	
WELL VOL	UME:		LITERS	✓ GALLONS	TEMPE	RATURE: 1	5.34 °C	OTHER:		
VOLUME F	REMOVED:	1.5	LITERS	GALLONS	COLO			ODOR:	none	
COLOR:		lear	OD	OR: none	FILTRA	ATE (0.45 um)	YES	Ø-NO		
NONE	SLI		BIDITY MODERATE	☐ VERY		TE COLOR:	/MSD	FILTRATE ODG	OR:	
DISPOSAL	METHOD:	GROU	ND DRUM	✓ OTHER	COMM	MENTS: FOST	turb:	1.06 (	2 1455	
TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. ( mg/L)	TURBIDITY (NTU)	TEMPERATU	WATER	CUMULATIVE PURGE VOLUME (GALLONS)	
10-5			2 22 22 23 24							
1350	130	4.19	70.24	227.4	4.93	10.50	38.29		INITIAL	
1355		3.99	72.41	239.0	4.89	11.36	32.02		-	
1400		4.06	78.09	266.6	5.99	26.9	25.50			
1420		4.08	77.76	291.6	6.01	10.07	25.43			
1425	1150	4.09	76.66	307.7	6.03	9.98	25.40			
1430		4.09	74.82	338.2	6.04	7.76	25.35	5		
1435		4.10	74.37	342.7	6.01	4.48	25.34			
100			TEST IS COMPI			5.	22.20	7	NG LIMITS:	
BOTTLES	SFILLED	PRESERV	ATIVE CODES	A - NONF	B - HNO3	C - H2SO4	D - NaO	Н Е-Н	CL F-	
NUMBER	SIZE	TYPE	PRESERVATI			1	TYPE	PRESERVAT		
2	250 mL	PLASTIC	В	OY V	N					
2	250 mL	PLASTIC	А					1	DY DN	
1111	125 mL	PLASTIC	A		N					
				□ Y □	N					
				Y	N					
SHIPPING	METHOD:		DA	ATE SHIPPED:			AIRBILL	NUMBER:		
COC NUM	DED.		- CI	GNATURE:			DATE OF	DATE SIGNED:		

# > TRC

PROJEC*	T NAME:	Water	ee Station LF-(	CCR	PF	REPARED		CHEC	KED
			9.0005.0000.2				7.22 RY		
			7.0.0.0.0.0.0		AGM		13.39 BX:	- 1	DATE 9 15 22
SAMPLE		W-LF-10/			AMETER: 🗸		6" OTH		
WELL MAT		✓ PVC			ALVANIZED		□ отн	AV -4	
SAMPLE T	YPE:	☑ GW	□ww □	SW D		LEACHATE	□ отн	ER	
PUR	GING	TIME: \3	57 DA	TE:9.12.3	12 5	SAMPLE	TIME: 1430	DA	SG. 61.6 :3TA
PURGE METHOI		PUMP	PERISTALTIC F	PUMP	PH: ORP:	40.00		17.88 mg	
DEPTH TO	WATER:	<u> </u>	T/ PVC		TURB	IDITY: 2.53	NTU		
DEPTH TO	о воттом	28.09	T/ PVC 28:	13	NO NO	ONE SL	IGHT 🗌	MODERATE	VERY
WELL VOL	UME:		LITERS	☑ GALLONS	TEMP	ERATURE: 2	.09 °C	OTHER:	
VOLUME	REMOVED	: 0.7	LITERS	☐ GALLONS	COLC	OR: Clear		ODOR: 🚾	ne
COLOR:	clu	ar	OD	OR: none	FILTR	ATE (0.45 um)	YES	NO NO	
NONE	SL		BIDITY MODERATE	☐ VERY		ATE COLOR:	/MSD	FILTRATE ODG	OR:
DISPOSA	L METHOD	: GROU	ND DRUM	✓ OTHER	COM	MENTS: FBLL	WAT-CLE-L	-f-22302 F	Post turbia. 21
TIME	PURGE RATE	PH	CONDUCTIVITY	ORP	D.O.	TURBIDITY	TEMPERATU	IMATER	CUMULATIVE PURGE VOLUME
-	(ML/MIN)	(SU)	(umhos/cm)	(mV)	( mg/L)	(NTU)	(°C)	(FEET)	(GALLONS)
MOD	85	420	33.65	176.0	448	5.19	33,07	20,80	INITIAL
1405	7	4,20	35.41	185.0	4.81	5.81	26-63	1	
1410		4.23	34,67	198.5	4.92	מהב	26.45		
1415		4.23	34.39	190.6	4.91	9.70	2606		
1420		4.24	34.12	1976	4.95	3.71	25.68		
1425		4.25	33.87	194.0	4.86	2.40	⊋5,43	1-1-1	
1430	1	4.26	33.79	1960	4.88	a.53	26.09	, I	
				*					
. 4									
			TEST IS COMPL 3 % ORP:						G LIMITS: TEMP.: +/- 3 %
BOTTLE	SFILLED	PRESERV.	ATIVE CODES	A - NONE	B - HNO3	C - H2SO4	D - NaOH	E-HC	L F
NUMBER	SIZE	TYPE	PRESERVATI	VE FILTER	ED NUME	BER SIZE	TYPE	PRESERVATI	VE FILTERED
2	250 mL	PLASTIC	В	□ Y □	N .				DY DN
2	250 mL	PLASTIC	А		N				DY DN
1	125 mL	PLASTIC	А	OY V	N [				
					0001				
					l N				□ Y □ N
SHIPPING	METHOD:		DA	TE SHIPPED:			AIRBILL N	ILIMBER:	
Sea live teas			LINE CE	-		2010 01	08450		
COC NUMBER: DATE SIGNED:									

## > TRC

PROJECT	NAME:	Water	ee Station LF-C	CR	PR	EPARED		CHEC	KED	
PROJEC1	NUMBER	R: 41655	9.0005.0000.2.2	2 BY:	BIM	DATE:9.1	2-22 BY:	AV	DATE: 9.15.20	
SAMPLE	ID: M	N-LF-11				2" [ 4" [	] 6" □ OTH	ER		
WELL MAT	ERIAL:	☑ PVC	SS [	RON GA	LVANIZED S	STEEL	ОТН	ER		
SAMPLE T	YPE:	☑ GW	□ww □:	SW 🗌 DI		LEACHATE	□ отн	ER		
PUR	GING	TIME: 12	205 DAT	E:9.12.22	S	AMPLE	TIME: 124	O DA	TE: 9.12.22	
PURGE METHOD	-	PUMP BAILER	PERISTALTIC P	JMP			1	TIVITY: 41.4		
DEPTH TO	WATER:	22.72	T/ PVC		TURBI	DITY: 1.6	1 NTU	The state of the s		
DEPTH TO	ВОТТОМ	30.25	T/ PVC		<b>₹</b> NO	NE SL	IGHT 🗌	MODERATE	☐ VERY	
WELL VOL	UME:		LITERS [	GALLONS	TEMPE	RATURE: 2	4.51 °C	OTHER:		
VOLUME I	REMOVED:	1.(	LITERS [	GALLONS	COLO	R: dev		ODOR:	none	
COLOR:	cle		ODC	R: nore	FILTRA	TE (0.45 um)	YES	ØN0		
NONE	SLI		BIDITY MODERATE	☐ VERY	_	TE COLOR:		FILTRATE ODO	R:	
DISPOSAL	METHOD:	GROUI	ND DRUM [	OTHER	COMM	ENTS: Post	turbic	305 0.9	7	
TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. ( mg/L)	TURBIDITY (NTU)	TEMPERATUI	MATER	CUMULATIVE PURGE VOLUME (GALLONS)	
1210	140	4.63	18-	132.2	4.83		30.82		INITIAL	
1215	110	4.14	41.21	124.6	5.44	4.83	26.06	22.85	WW.7.7 KE	
1220		4.12		THE STATE OF THE S		4.72	25.09			
1225		4.15	41.91	136.6	595	3.83				
4 5 747 -541		EXAMPLE A	42.10	147.8	6.01		24.67			
1230	-	4,20	42.91	155.4	6.05	3.33	24.77			
1235		4.21	41.85	163.6	6.06	2.95	24.87		+	
1240		4.14	41.41	194.4	6.06	1.64	24.5/			
NO	OTE: STAB	LIZATION	TEST IS COMPLE	ETE WHEN 3 S	SUCCESSIV	E READINGS A	ARE WITHIN TI	HE FOLLOWING	G LIMITS:	
			3 % ORP:		200		100			
	SFILLED		ATIVE CODES /					NOTE OF STREET		
NUMBER		TYPE	PRESERVATIV			ER SIZE	TYPE	PRESERVATI		
2	250 mL	PLASTIC	В							
2	250 mL	PLASTIC	A							
2	125 mL	PLASTIC	A		N					
					N					
SHIPPING	METHOD:		DAT	E SHIPPED:			AIRBILL	IUMBER:		
COC NUM	BED.		SIG	NATURE:			DATE SIGNED:			

# TRC

PROJECT			nion - Watere	2.70.000.000		PI	REPARED			CHEC	KED
PROJECT	NUMBE	R: 4165	59.0005.0000	.3.2	BY: A	GM	DATE . S	रेक्त्र ।	ACY	У	DATE: 9.13.2
SAMPLE	ID: M	W-22/MV	V-LF22	WELL	DIAME:	TER:	2" 4" [	6"	OTHER		
WELL MAT	ERIAL:	✓ PVC	ss [	] IRON [	GALVA	ANIZED	STEEL		OTHER		
SAMPLE T	YPE:	☑ GW	□ww [	]sw 🗌	DI		] LEACHATE		OTHER		
PUR	GING	TIMEO	33 1	DATE:9 .8 -	22		SAMPLE	TIME: 10	05	DA	ATE: 9.8.22
PURGE METHOD		PUMP BAILER	PERISTALTIC			PH:				/ITY: 81.8	30 umhos/cr
DEPTH TO	WATER:	22.87	T/ PVC	-		-	HOITY: 2.45	nV DO:	3.	<b>60</b> mg	/L
DEPTH TO			T/ PVC 34	.5n	-	NO		IGHT	Пмо	DERATE	☐ VERY
WELL VOL			LITERS	GALLO	NS	1	ERATURE: 2			HER:	LIVER
VOLUME F	REMOVED	1.2	LITERS	₽ GALLO		-	or: clear			OR: No	<b>14</b> .
COLOR:	cle	hr.		DOR: none			ATE (0.45 um)	YES	_	NO	
			RBIDITY			8.75	ATE COLOR:		-1-	TRATE ODC	R:
NONE	SL		MODERATE	☐ VEF		QC S	AMPLE: MS	S/MSD		DUP-	
DISPOSAL	METHOD	: GROU	ND DRUM	✓ OTHER		COM	FENTS.POST	turb: 3.	13		
TIME	PURGE RATE (GPM or	PH (SU)	CONDUCTIVIT			D.O.	TURBIDITY	TEMPER		WATER	CUMULATIVE PURGE VOLUME
200	ML/MIN)	2000	A A A A A A A	(mV)	-	(mg/L)	(NTU)	(°C	;)	(FEET)	(GAL OR L)
0935	150	4.07	86.92	106.9	3	.85	6.55	23.66		22.87	INITIAL
0440	-}-	4.07	83,53	990	3	,51	4.81	22.4	+	23.86	
3945	-	4.09	93.43	98.5	3	5.51	4.63	92.2	00	1	
0950		4.13	82.91	99.7	3	.53	3.82	22.0	a		
955		4.13	82.41	1.701	3	.58	2.62	22.0	8		
1000		4.15	82.08	110.7	3.	60	2.53	22.09			
1005	,	4.15	81.80	114.1	3	.60	2.45	20.19	)	N.	
						*					-
NO	TE: STAR	I IZATION	TEST IS COME	D ETE WUEN	2 5110	OEOON.	E READINGS A	ne unëm		1	273.024
							% TURB: +/-				
BOTTLES	FILLED	PRESERVA	ATIVE CODES	A- NONE	В-	HNO3	C - H2SO4	D - N	аОН	E- HC	L F-
NUMBER	SIZE	TYPE	PRESERVAT			NUMB		TYPE	-1	RESERVATIV	
4	250 mL	PLASTIC	В		V N						
4	250 mL	PLASTIC	А	DY [	J N						
3	125 mL	PLASTIC	Α	DY [	JN			-			
1	250 mL	AMBER	C	□ Y [	J N						
				□ Y □	] N						DY DN
HIPPING N	METHOD:		Ď	ATE SHIPPEI	D:			AIRRI	LL NUM	BFR-	
OC NUMB	ED.			IGNATURE:	_				SIGNE		

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PROJEC	T NAME:	Water	ree Station LF-	CCR		PR	EPARED		CI	HECK	ED		
PROJEC	T NUMBE	R: 41655	59.0005.0000.2	2.2	BY:	AGM	DATE:4-	1.92 BY:	YKT	C	DATE: 9-13-2		
SAMPLE	ID: AS	S-LF-01		WELL	DIAME	ETER: 🗸	2" 4" [		HER				
WELL MA	TERIAL:	✓ PVC	∏ss ∏	IRON 🗍	GAL	/ANIZED S	TEEL	ОТІ	HER				
SAMPLE T	YPE:	☑ GW	□ww □	sw 🗌	DI		LEACHATE		HER				
PUR	GING	TIME: \\	14 0	ATE:9-9-3	22	S	AMPLE	TIME: 114	5	DAT	E:9,9.22		
PURGE		PUMP	BLADDER PUN							58.0	45_ umhos/cr		
DEDTH T		32.23	CPMY RIO	اکھ حرا	151		218.2 r		7.45	mg/L			
	O BOTTOM		T/ PVC		-	NOI NOI		✓ NIU IGHT 🔲	MODERA	TF.	☐ VERY		
WELL VOL		, 40.00	LITERS	✓ GALLO	NS		RATURE: 19		OTHER:		LI VEIN		
	REMOVED	1.7	LITERS	₩ GALLO			e deac	100	ODOR:	5	ONE		
COLOR:	Lle	and a second		OR: non	_		TE (0.45 um)	☐ YES	NO NO	_67	J-10		
		7	RBIDITY			1	E COLOR:		1	ODOR	#		
NONE	SL		MODERATE	☐ VEF	RY		MPLE: MS	S/MSD	FILTRATE ODOR:  DUP-				
DISPOSA	L METHOD	: GROU	ND DRUM	✓ OTHER	3	COMM	ENTS:						
TIME	PURGE RATE	PH	CONDUCTIVITY	ORP		D.O.	TURBIDITY	TEMPERATO	LEV	EL I	CUMULATIVE PURGE VOLUME		
10 Y 22 C	(ML/MIN)	(SU)	(umhos/cm)	(mV)	-	( mg/L)	(NTU)	(°C)	(FE		(GALLONS)		
1115	225	4,33	56.55	210.1		6.30	8.45	23.57	32.	23	INITIAL		
1120	7	4.33	59.75	214.5	(	6.87	8.82	20.13	~	1			
1125		4.41	59,57	216.9	- 1	7.09	4.82	19.83					
1130		4.46	59.22	217.2		7.26	3.65	19.75					
1135		4.50	58.24	217.8		7.37	4.70	19.64					
1140		4.52	58.84	217.8	-	7.42	3.17	19.58					
1145	1	4.54	58.65	218.2		7.45	2.71	19.59					
			TEST IS COMPI							CALL			
BOTTLE			ATIVE CODES					<u> </u>			Account of the second		
NUMBER		TYPE	PRESERVATI		_	1		TYPE	PRESER		-		
2	250 mL	PLASTIC	В	□ Y		A. V.		2.7.62.1		103103			
2	250 mL	PLASTIC	A		□ ☑ N	-					ПУПИ		
1	125 mL	PLASTIC	A	ΠY	V				Y				
				□ Y		N				N N Y			
PLUIDDIALO	METHOD		1					Line		_	Ц У Ц И		
Pe volin in ner	METHOD:	_		ATE SHIPPE	D: _			AIRBILL	NUMBER:	_			
COC NUM	BER:		SI	GNATURE:				DATE SIGNED:					

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PROJEC <sup>*</sup>	T NAME:	Water	ee Station LF-	CCR		PR	EPARED			CHEC	KED
PROJEC	T NUMBE	R: 41655	9.0005.0000.2	1.2	PY:AC	M	DATE: 9.	1.22 BY:	JA	y	DATE:9.9.2
SAMPLE	ID: A	S-LF-02					2" 4"	] 6"	THER		
WELL MAT	TERIAL:	✓ PVC	∏ss ∏	IRON	GALVA	NIZED S	TEEL	0	THER		
SAMPLE T	YPE:	☑ GW	ww 🗆		DI		LEACHATE		THER		
PUR	GING	TIME: 09	71 0/	ATE: 9.9.2	2	S	AMPLE	TIME: \O	3.5	DA	TE:9.9.22
PURGE	7	PUMP	BLADDER PUN		_	PH:	4,94	SU COND	UCTIVI	TY: 34.	
METHO	D:	BAILER	CPM3 RI3	D7 25	PSI	ORP:	197.0	nV DO:	3.	15 mg/	/L
DEPTH TO	O WATER:	33.40	T/ PVC		= 1	TURBI	DITY: 41	NTU			
DEPTH TO	D BOTTON	1: 55.66	T/ PVC			□ NOI	NE X SL	IGHT [	MOE	DERATE	☐ VERY
WELL VOL			LITERS	☑ GALLON	VS	TEMPE	RATURE: 22	1.14 °C	ОТН	IER:	
VOLUME	REMOVED	1.3	LITERS	X GALLON	NS	COLOR	? hatt bro	<b>***</b> 0-	ODC	DR: n	one
COLOR:	35 hal	ut pronou	OD	OR: none		FILTRA	TE (0.45 um)	YES	X	NO	
	,		BIDITY			FILTRA	TE COLOR:		FILT	RATE ODO	R:
NONE			MODERATE	U VER		QC SA	MPLE: X MS	/MSD		DUP-	
DISPOSA	L METHOD	: GROU	ND DRUM	✓ OTHER		COMM	ENTS: Pot &	b' 15.46	Tur	b would	not decress
TIME	PURGE RATE	PH	CONDUCTIVITY	ORP		D.O.	TURBIDITY	TEMPERA	TURE	WATER	CUMULATIVE
	(ML/MIN)	(SU)	(umhos/cm)	(m) ()		ma#1	(ALTHA	(80)		LEVEL	PURGE VOLUM
	120.00	1 1 2 2 1 1		(mV)	- 1 -	mg/L)	(NTU)	(°C)		(FEET)	(GALLONS)
0945	130	4,92	32.82	156.2		1.28	13.2	23.96		33,40	INTIAL
0950	)	4.85	33.36	169.4	2	.64	41	21,4	1	34.28	
0955		4.96	34.19	בבדו	2	.83	42	21.37		34.42	
1015		4.95	34.14	194.2	3	.08	41.5	22.08		1	
1020		4.92	33.91	196.1	3	.10	39	22,01			
1025	1	4.94	34.01	197,0	3	.15	41	22.14			
1 - 1 - 1			5-11-11								
					4						
	OTE 6745		TEAT IO COMP.			250000				2.127.5	2002.52
			TEST IS COMPL 3 % ORP:								
BOTTLE	SFILLED		ATIVE CODES		- 477				- 100		
NUMBER	SIZE	TYPE	PRESERVATI			NUMBE		TYPE		ESERVATIV	
2	250 mL	PLASTIC	В	□ Y [	J N						
2	250 mL	PLASTIC	A		J N	T					DY D
1	125 mL	PLASTIC	A		N N				The state of the s		
PUIDDING	METHOD	L	-						1000		
bratar Joha	METHOD:			ATE SHIPPED	Ut			AIRBILI			
COC NUM	BER:		SI	GNATURE:				DATES	IGNED	):	

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PROJECT	NAME:	Water	ee Station LF	-CCR	PR	REPARED			CHEC	KED
PROJECT	NUMBE	R: 41655	9.0005.0000.	2.2 B	Y: BSM	DATE:9	9,22 BY:	JAI	Y	DATE:9.14.22
SAMPLE	ID: AS	S-LF-03		WELL DI	AMETER: 🗸	2"	6" 🗌 07	THER		
WELL MAT	ERIAL:	✓ PVC	SS	IRON G	ALVANIZED	STEEL	_ O1	THER		
SAMPLE T	YPE:	☑ GW	□ww □	sw 🗆 D	1	LEACHATE	O1	THER		
PURG	SING	TIME: O	930 0	ATE: 9.9.23	2 8	SAMPLE	TIME:	1015	D/	ATE: 9.9.22
PURGE METHOD	-	PUMP	PERISTALTIC	PUMP	PH: ORP:				TY: 53.8	
DEPTH TO	WATER:		T/ PVC		TURB		1 NTU			
DEPTH TO	воттом	: 38,01	T/ PVC 3	8.10	€NC	ONE SL	IGHT [	MOD	ERATE	☐ VERY
WELL VOL	UME:	1.1	LITERS	☑ GALLONS	S TEMP	ERATURE: _	21.75 °C	отн	ER:	
VOLUME F	REMOVED	1.3	LITERS	₩ GALLONS	S COLO	R: ac		ODO	R:	now
COLOR:	C	lear		DOR:	FILTR	ATE (0.45 um)	YES	0	NO	
MONE	Пе	TUR	RBIDITY MODERATE	VERY		AMPLE: MS	S/MSD		RATE ODO	
DISPOSAL						MENTS: Pos	0 1	****		22301 DU-WAT-CR-L
DIOI OUAL	PURGE				T COIVIN	1		: 0.	71	
TIME	RATE	PH	CONDUCTIVITY	ORP	D.O.	TURBIDITY	TEMPERAT	TURE	WATER LEVEL	PURGE VOLUME
	(ML/MIN)	(SU)	(umhos/cm)	(mV)	( mg/L)	(NTU)	(°C)		(FEET)	(GALLONS)
0935	130	3.97	53.49	169.5	6.57	3.59	22.6	2	28.12	INITIAL
0940	1	3.93	53.93	176.3	6.70	3.13	22.13	3		
0945		3.91	54.01	197.3	6.69	2.76	21.9			
0950		3.90	54.11	219.1	6.68	2.26	21.90	1		
0955		3.91	53.93	230.5	6.75	2.22	21.79			
1000		3.90	53.68	233.1	4.75	1.98	21.73	2		
1005		3.90	53.76	244.2	6.78	1.77	21.68			
1010		3.91	53.61	251.3	6.75	1.21	21.71	4		
1015		3.93	53.59	256.2		1.01	21.75		1	
			30				1			T 1 1
NO	TE: STAB	ILIZATION	TEST IS COMP	LETE WHEN 3	SUCCESSIV	E READINGS	ARE WITHIN	THE F	OLLOWIN	G LIMITS:
						% TURB: +/-				TEMP.: +/- 3 %
BOTTLES	FILLED	PRESERV	ATIVE CODES	A - NONE	B - HNO3	C - H2SO4	D - Na(	OH.	F - HO	L F
NUMBER	SIZE	TYPE	PRESERVAT				TYPE	-	ESERVATI	
2	250 mL	PLASTIC			N	CITY CITY	111.5	7 (82		ПУПИ
2	250 mL	PLASTIC			N					
1	125 mL	PLASTIC			אוב					
	120 (II)L	LAGIIC	A		1 N			-		
								1		
					] N		1.			N L Y
SHIPPING	METHOD:		D	ATE SHIPPED			AIRBILI	L NUME	BER:	
COC NUME	DED.		0	CNATURE-			DATE	CONED	(2)	

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PROJEC1	NAME.	Water	ee Station LF-0	CCR		PRE	PARED		CHEC	KED
PROJECT	NUMBER	R: 41655	9.0005.0000.2	.2	BY:	BIM	DATE: 9.	1.22 BY: 7	ray	DATE: 9.13.29
SAMPLE	ID: M	W-BG-73		WELL D	DIAME	TER: 🗸	2" 4" [	6" OTHE	R	
WELL MAT	ERIAL:	✓ PVC	ss	IRON	GALV	ANIZED ST	EEL	OTHE	R	
SAMPLE T	YPE:	☑ GW	□ww □	sw 🔲	DI		EACHATE	OTHE	R	
PUR	GING	TIME: ))	15 DA	TE: 9.9.	22	SA	MPLE	TIME: 1150	DA	TE: 9.7.22
PURGE	_	PUMP	PERISTALTIC F	PUMP		PH: _	4.13 s	U CONDUCT	TIVITY: 0 2	5.09 umhos/cn
METHOD	D:	BAILER				ORP:	62.4 n	V DO:	5.50 mg/	L.
DEPTH TO	WATER:	9.72	T/ PVC			TURBID	TY: 0.5	1 NTU		
DEPTH TO	воттом	23.38	T/ PVC			NON	E SL	GHT N	MODERATE	☐ VERY
WELL VOL	UME:	A	LITERS	☑ GALLO	NS	TEMPER	ATURE: 1	3.07 °C C	THER:	
VOLUME F	REMOVED:	1.2	LITERS	<b>☑</b> GALLO	NS	COLOR	Clear		DOR: M	one
COLOR:		lear	OD	OR: NO	ne	FILTRAT	E (0.45 um)	YES Z	X NO	
			BIDITY				E COLOR:		FILTRATE ODO	R:
MUONE	SL		MODERATE	☐ VER		QC SAM			DUP-	
DISPOSAL		GROU	ND DRUM	✓ OTHER		COMME	NTS: You	t turb: (	18.0	
TIME	PURGE RATE	PH	CONDUCTIVITY	ORP		D.O.	TURBIDITY	TEMPERATUR	E WATER LEVEL	CUMULATIVE PURGE VOLUME
	(ML/MIN)	(SU)	(umhos/cm)	(mV)		( mg/L)	(NTU)	(°C)	(FEET)	(GALLONS)
1100	1000	4.13		294.)	-	4.32				INITIAL
1120	160		24.57				1.27	25.20	10.30	WITTAL
1125	-	4.11	25.35	296.1	- 1	4.52	0.91	23.61	10.34	
1130	-/-	4.15	25.19	297.7		5.01	1.01	23.13	10.36	
1135		4.16	25.05	298.1		3.45	0.77	23.10	1	
1140	-	4.16	25.02	298.8	3	5.50	0.64	23.06		
1145		4.14	25.01	301.2	4	5.47	0.71	23.09		
1150	1	4.13	25.09	302.4	13	5.50	0.59	23.07	1	
-										
			F		+	-				
- 0.0	22.50%			Charling:	Davi.	- 2352.63	5.615.816.81	Suntanos Aus	as tayanan	
			TEST IS COMPL							
				277			7 - 00 - 17 - 1 - 4 - 4	and and		TEMP.: +/- 3 %
			ATIVE CODES					1		L F
NUMBER		TYPE	PRESERVATI		-		R SIZE	TYPE	PRESERVATIV	
2	250 mL	PLASTIC	В		✓ N	-				OY ON
2	250 mL	PLASTIC	Α		✓ N			1		□ Y □ N
1	125 mL	PLASTIC	A	□ Y	✓ N					□ Y □ N
		4		□ Y	□ N					OY ON
		1		□ Y	□ N					OY ON
SHIPPING	METHOD:	2	DA	TE SHIPPE	D:			AIRBILL N	JMBER:	
COC NUM	RER-		SI	GNATURE:				DATE SIGN	NED.	



1.0	ROJECT NAME:	Wateree Station Ash Pond-	CCR		MODEL:	Insitu	Aquatrott	SAMPLER:	AM / BM	
PR	ROJECT NO.:	416559.0005.0000.5.2			SERIAL#	9097	268	DATE: 9.8.	22	
	PH	CALIBRATION CHECK				SPE	CIFIC CONDU	JCTIVITY CALIBR	RATION CH	HECK
(EX	pH 7 ot #): Q1380102 (P. DATE): 4\23 PRE-CAL. READING/STANDARD	PH 4 / 18,42 (LOT #): 3,1470033 (EXP. DATE): 4 23 PRE-CAL READING STANDARD	CAL. RANGE	TIME	1	LOT#): )	READING	TEMPERATURE	CAL. RANGE	TIM
	7.05 / 7.00	4.14 / 4.00	WITHIN RANGE		1 [	4.44	14.49	24.30	WITHIN	
	6.9817.00	4.00 / 4.00	WITHIN RANGE			4.48	14,49	24.23	WITHIN RANGE	
	1	1	WITHIN RANGE			1	1		WITHIN	
-	1	1	WITHIN		1		j		WITHIN	
_	ORP	CALIBRATION CHECK	RANGE		1		D.O. CAL	IBRATION CHE	CK RANGE	
(EX	CAL. READING DT#): 21149147  (P. DATE): 4/23  PRE-CAL, READING / STANDARD	TEMPERATURE (*CELSIUS)	CAL. RANGE	TIME		C	CALIBRATION R	EADING	CAL. RANGE	TIN
	226 / 228	24.33	WITHIN			2	. 765 m	mbla	WITHIN RANGE	
	228 / 228	24.38	WITHIN		1 - 1	Daro.	71 0		WITHIN	
	0 1 220	2 1.58	WITHIN	-		lemp.	42	li -	RANGE	
-	,		RANGE			Calc:	755 m 24.15°0 8.3 mg	nali	RANGE	
	TURRID	ITY CALIBRATION CHEC	RANGE		] [	11000	8.00	COMMENTS	RANGE	
		READING (NTU)			7 1	AUTOCA	AL SOLUTION	_ eva-10101-0110-25	SOLUTION (	S)
	DT#): (P. DATE):	(LOT #): (EXP. DATE):	CAL. RANGE	TIME		LOT#): EXP. DATE):		LIST LOT NUMBERS A UNDER CALI	AND EXPIRATION CHE	
F	PRE-CAL. READING / STANDARD	POST-CAL. READING / STANDARD	C MITHER		1		D PARAMETERS	CALIBRATI	ON RANGES (1	)
	1.57 0	010	WITHIN RANGE			D, bi	Н	pH: +/- 0.2 S.	U.	
	1.10//	0.971	WITHIN RANGE		1 1	□ c	OND	COND: +/- 1% O	F CAL, STAN	DARE
1	10.781 10	9.98 / 10	X WITHIN RANGE				RP ·	ORP: +/- 25 m\		
	1	1	WITHIN RANGE			□ D	.O.	D.O.: VARIES		
		NOTES			600	□ T	URB	TURB: +/- 5% O	F CAL. STAN	DARD
	Lamoffe 16	034411						(1) CALIBRATION RAI THE MODEL OF THE		
-		ROBLEMS ENCOUNTERED					0000503	TIVE ACTIONS		
		NOBELING ENGOGNIERED					UNIVERSIT	TE ACTIONS		
	A. Misiunas		/8/2022			D M	Iayer		9/10/2	
	11. Iviisiuiius	Q/	$(\mathbf{x}/)(\mathbf{n}/)$			17. 17	lavci			



P. DATE): 433  P. DATE / 4. WO  ALIBRATION CHECK  TEMPERATURE	CAL. RANGE  WITHIN RANGE  WITHIN RANGE  WITHIN RANGE  WITHIN RANGE	TIME	SERIAL #: 851425  SPECIFIC CONDUCTOR  CAL. READING (LOT #): A C (EXP. DATE): PRE-CAL. READING/STANDARD  4.23 / 4.49 4.48 / 4.49	TEMPERATURE (*CELSIUS)		HECK TIME
pH 4 NO X T#): 214 700337 P. DATE): 4133 RE-CAL READING/STANDARD 4.15 / 4.00 / 4.00 / 4.00 / ALIBRATION CHECK	RANGE WITHIN RANGE RANGE WITHIN RANGE WITHIN WITHIN	TIME	SPECIFIC CONDUCATION CAL. READING (LOT #): AC (EXP. DATE): PRE-CAL. READING / STANDARD  4.33 / 4.49	TEMPERATURE (*CELSIUS)	CAL. RANGE	
pH 4 NO X T#): 214 700337 P. DATE): 4133 RE-CAL READING/STANDARD 4.15 / 4.00 / 4.00 / 4.00 / ALIBRATION CHECK	RANGE WITHIN RANGE RANGE WITHIN RANGE WITHIN WITHIN	TIME	CAL. READING (LOT#): AC (EXP. DATE): PRE-CAL. READING / STANDARD 4.33 / 4.49	TEMPERATURE (*CELSIUS)	CAL. RANGE	
4. W / Y, W	RANGE WITHIN RANGE WITHIN RANGE WITHIN					
/ / ALIBRATION CHECK	WITHIN RANGE		4.48 , 4.49			- 1
/ / ALIBRATION CHECK	RANGE WITHIN		1 1 1 1 1 1 2 1 2 1 2 1 3 1 1 1 1 1 1 1	24.28	WITHIN RANGE	
The state of the s	WITHIN		Ĺ	0,	WITHIN RANGE	
The state of the s	10,000		1		WITHIN	
TEMPEDATURE			D.O. CAI	IBRATION CHEC	1.0.0.0.0	
(°CELSIUS)	CAL. RANGE	TIME	CALIBRATION R	EADING	CAL. RANGE	TIME
24.33	WITHIN	-	B- 755 mm	Hg	WITHIN	
	WITHIN		Jenp: 24.15°(		WITHIN	
01.5.	WITHIN		Cale . 8.3 mil		WITHIN	
	WITHIN		A.L. 0: 8310	ale	WITHIN	
CALIBRATION CHEC			7.2.20	7.6	RANGE	
ADING (NTU)			AUTOCAL SOLUTION		SOLUTION (	S)
OT #): (P. DATE):	CAL. RANGE	TIME	(LOT#): (EXP. DATE):	The second secon		Contract of the
OST-CAL. READING / STANDARD			CALIBRATED PARAMETERS	CALIBRATI	ON RANGES (1	(
010	WITHIN RANGE		□ рН	pH: +/- 0.2 S.	U.	
0.83/ 1	WITHIN RANGE		COND	COND: +/- 1% OF	CAL. STANI	DARD
	WITHIN RANGE		☐ ORP	ORP: +/- 25 mV		
: 1	WITHIN		D.O.	D.O.: VARIES		
NOTES			☐ TURB	TURB: +/- 5% O	F CAL. STAN	DARD
9 40]]						
BLEMS ENCOUNTERED			CORRECT	TIVE ACTIONS		
A DIT C	24.33 24.37  CALIBRATION CHECK ADING (NTU) T#): P. DATE): DST-CAL READING / STANDARD  O / O  O.83 / )  NOTES  7 40]]  LEMS ENCOUNTERED	RANGE  24.33	RANGE  Z4.33  Within RANGE  VITHIN RANGE  WITHIN RANGE  WITHIN RANGE  WITHIN RANGE  WITHIN RANGE  CALIBRATION CHECK  ADING (NTU)  T#):  P. DATE):  DST-CAL READING / STANDARD  O / O WITHIN RANGE  O.83 / J WITHIN RANGE  O.84 / J WITHIN RANGE  DEMANDER  NOTES	RANGE TIME  24.33	RANGE   TIME   (mg/L)	RANGE    CELISIUS    RANGE   IIME   (mg/L)   RANGE     24.33

DATE

CHECKED BY

DATE



PROJECT NAME	Et .	Wateree Station AP-NPDES	3		MODEL: Insite Agentina	SAMPLER:	BM / AM	
PROJECT NO.:		416559.0005.0000.6.2			SERIAL # 909268	DATE: 9.9.	22	
	PH	CALIBRATION CHECK			SPECIFIC CONDU	JCTIVITY CALIBI	RATION CH	HECK
pH 7 (LOT#): るいろん (EXP. DATE): ム PRE-CAL READING	33 20103	PH 4/10 AC (LOT #): 2)470033 (EXP. DATE): 4 33 PRE-CAL, READING / STANDARD	CAL. RANGE	TIME	CAL. READING (LOT #): X (EXP. DATE):  PRE-CAL. READING / STANDARD	TEMPERATURE	CAL. RANGE	TIME
6.75 /	7.00	4.231 4.00	WITHIN RANGE		4.50 1 4.49	31.80	WITHIN	
6.991	7.00	4.0114.00	WITHIN RANGE		4,4914,49		WITHIN RANGE	
1	7.00	1	WITHIN				WITHIN	
1		1	WITHIN		1		WITHIN	
-	ORP	CALIBRATION CHECK	RANGE		D.O. CAI	LIBRATION CHE	RANGE	
COOK COOKS - 10	DING 3147  33	TEMPERATURE (*CELSIUS)	CAL. RANGE	TIME	CALIBRATION F		CAL. RANGE	TIME
PRE-CAL. READING		31.57	WITHIN		7 . 7545	44	WITHIN	
202 1	228		RANGE		Boro: 754.5. Tenf: 32°C Cole: 7.5 mg/L Achd: 7.4 mg	-Mg	RANGE	
2081	228	32.4	RANGE		7-7 7.5 mall		RANGE WITHIN	
1			WITHIN RANGE		Cale: 19 11/2		RANGE	
I		COLUMN TO A SEC	WITHIN		Actual 1.4 mg	<b>L</b>	WITHIN	
	1500	ITY CALIBRATION CHEC	K			COMMENTS		
	IBRATION	READING (NTU)	200		AUTOCAL SOLUTION		SOLUTION (	
(LOT #): (EXP. DATE):		(LOT #): (EXP. DATE):	CAL. RANGE	TIME	(LOT #): (EXP. DATE):	LIST LOT NUMBERS . UNDER CALI	AND EXPIRATION CHEC	
PRE-CAL, READING	/ STANDARD	POST-CAL. READING / STANDARD			CALIBRATED PARAMETERS	CALIBRATI	ON RANGES (1	)
1.25 /	0	010	WITHIN		□ pH	pH: +/- 0.2 S.	U.	
2.531	1	1.1 / 1	WITHIN RANGE		COND	COND: +/- 1% O	F CAL, STANI	DARD
9.3/1	10	9.98 1 10	WITHIN		☐ ORP	ORP: +/- 25 m\	/	
1,01		7.43	RANGE WITHIN RANGE		D.O.	D.O.: VARIES		
		Abrana I	RANGE		☐ TURB	10000	F CAL. STAN	DARD
		NOTES				(1) CALIBRATION RA	NGES ARE SPE	ECIFIC TO
						111111111111111111111111111111111111111	111111111111111111111111111111111111111	
	P	PROBLEMS ENCOUNTERED			CORREC	TIVE ACTIONS		
A. Misiu	nas	0	/9/2022		R. Mayer		9/10/2	022
SIGNED			DATE		CHECKED BY			DATE



#### WATER QUALITY METER CALIBRATION LOG

PROJECT NAME:	Wateree Station AP-NPDE	S		MODEL: (15ite Lotal	SAMPLER:	BM / AM	
PROJECT NO.:	416559.0005.0000.6.2			SERIAL #: \$51425	DATE: 9 . 9	.22	
PH	CALIBRATION CHECK			SPECIFIC CONDU	JCTIVITY CALIE	RATION CH	HECK
pH 7 (LOT #): 21380102 (EXP. DATE): 4123 PRE-CAL READING / STANDARD	PH 4/10 (LOT #): 21470057 (EXP. DATE): 4/23 PRE-CAL READING/STANDARD	CAL. RANGE	TIME	CAL. READING (LOT #):  (EXP. DATE):  PRE-CAL. READING / STANDARD	TEMPERATURE (°CELSIUS)	CAL. RANGE	TIME
6.78 1 7.00	4.28 1 4.00	WITHIN RANGE		451 1 4.49	31.57	WITHIN	
6.99 1 7.00	4.0014.00	WITHIN RANGE		4.4814.49		WITHIN RANGE	
1	1	WITHIN RANGE				WITHIN	
1	1	WITHIN		$\hat{I}$		WITHIN RANGE	1
ORI	CALIBRATION CHECK			D.O. CAI	LIBRATION CHE	CK	
CAL. READING (LOT#): 2140147 (EXP. DATE): 423 PRE-CAL. READING / STANDARD	TEMPERATURE (*CELSIUS)	CAL. RANGE	TIME	CALIBRATION F	READING	CAL. RANGE	TIME
208 / 228	21.52	WITHIN		7. 754.5	v.	WITHIN RANGE	
W 1 228		WITHIN		Ten: 32°L	-1-3	☐ WITHIN	
1 .000	3	WITHIN		Baro: 754.5 m Tenp: 32° L Che: 7.5 m		RANGE	
1		RANGE		July: 7.4 m	4/2	RANGE	
TURBI	DITY CALIBRATION CHE	RANGE		4	COMMENTS	RANGE	
	N READING (NTU)			AUTOCAL SOLUTION		SOLUTION (	S)
(LOT #): (EXP. DATE):	(LOT #): (EXP. DATE):	CAL. RANGE	TIME	(LOT #): (EXP. DATE):	LIST LOT NUMBERS UNDER CAL	AND EXPIRATION CHEC	
PRE-CAL. READING / STANDARD	POST-CAL. READING / STANDARD			CALIBRATED PARAMETERS	CALIBRA	TION RANGES (1	) =
0.611 0	0 1 0	WITHIN RANGE		□ рН	pH: +/- 0.2 \$	S.U.	
1.46 /	0.93 / 1	WITHIN RANGE		COND	COND: +/- 1% (	OF CAL. STANI	DARD
1163 / 10	9.76 / 10	WITHIN RANGE		☐ ORP	ORP: +/- 25 m	iV.	
1	1	WITHIN RANGE		□ D.O.	D.O.: VARIES		
	NOTES			☐ TURB	TURB: +/- 5% (	OF CAL. STAN	DARD
					(1) CALIBRATION R. THE MODEL OF THE		
	PROBLEMS ENCOUNTERED			CORREC	TIVE ACTIONS		
B. Medlin	9/	9/2022		R. Mayer		9/10/2	2022

DATE

CHECKED BY

DATE



PROJECT NAME:	Wateree Station LF-CCR			MODEL: In Site Agrating	SAMPLER:	BM / AM	
PROJECT NO.:	416559.0005.0000.2.2			SERIAL # 909268	DATE: 9.12	.22	
PH	CALIBRATION CHECK			SPECIFIC CONDU	JCTIVITY CALIBR	RATION CH	HECK
pH 7 LOT#): 2/3 80(02 EXP. DATE): 4/23 PRE-CAL. READING / STANDARD	PRE-CAL READING/STANDARD	CAL. RANGE	TIME	(LOT #):  (EXP. DATE):  PRE-CAL, READING / STANDARD	TEMPERATURE	CAL. RANGE	TIME
6.84 1 7.00	4.31 1 4.00	WITHIN RANGE		4.46 14.49	27.95	WITHIN RANGE	
7.00 1 7.00	4.01 / 4.00	WITHIN RANGE		4.49 14.49	27.76	WITHIN RANGE	
1	1	WITHIN RANGE			27.00	WITHIN RANGE	
j	1	WITHIN RANGE		1		WITHIN RANGE	
ORP	CALIBRATION CHECK	104100		D.O. CAI	IBRATION CHE		
CAL, READING (LOT#): 2/140/47 (EXP. DATE): 4/53 PRE-CAL, READING / STANDARD	TEMPERATURE ("CELSIUS)	CAL. RANGE	TIME	CALIBRATION R	EADING	CAL. RANGE	TIME
248 / 228	27.51	WITHIN		B 757 M	mHa	WITHIN RANGE	
228 / 228	27.16	WITHIN		Baro: 757 m Tenp: 28°C Cdc: 7.7 mg/c Add: 7.97 m		WITHIN	
1	0 1.14	WITHIN		Cde: 7.7 mg/		WITHIN	
1		RANGE		110.707	00/1	RANGE	
TURRIT	DITY CALIBRATION CHEC	RANGE		Acres 1.41	COMMENTS	RANGE	
	READING (NTU)			AUTOCAL SOLUTION	STANDARD	SOLUTION (	S)
(LOT#):	(LOT #):	CAL.	TIME	(LOT #):	LIST LOT NUMBERS	AND EXPIRATI	ON DATE
(EXP. DATE):	(EXP. DATE):	RANGE	THVIL	(EXP. DATE):		BRATION CHE	
PRE-CAL READING / STANDARD	POST-CAL. READING / STANDARD	120		CALIBRATED PARAMETERS	10.00 20.00	ON RANGES (1	Y.
1.78 / 0	1.2 1 1	WITHIN RANGE WITHIN RANGE		✓ pH ✓ COND	pH: +/- 0.2 S. COND: +/- 1% O	U. F CAL. STAN	DARD
10.20 1 10	9.94/10	WITHIN RANGE		✓ ORP	ORP: +/- 25 m\	1	
1	1	WITHIN RANGE		☑ D.O.	D.O.: VARIES		
	NOTES	1		✓ TURB	TURB: +/- 5% O	F CAL. STAN	DARD
Turbidity 160	23441				" CALIBRATION RAI THE MODEL OF THE		
	PROBLEMS ENCOUNTERED			CORRECT	TIVE ACTIONS		

DATE

CHECKED BY

DATE



PROJECT NAME:	Wateree Station LF-CCR			MODEL:	usit Agratum	SAMPLER:	BM / AM	
PROJECT NO.:	416559.0005.0000.2.2			SERIAL#:	851425	DATE: 9.12.	22	
PH	CALIBRATION CHECK				SPECIFIC COND	JCTIVITY CALIBR	RATION CH	HECK
(LOT #): PH 7 (LOT #): PH 7 (EXP. DATE): PRE-CAL READING STANDARD	PH 4/10, AK (LOT #): 21470032 (EXP. DATE): 4/23 PRE-CAL READING/STANDARD	CAL. RANGE	TIME		CAL. READING OT#): A C XP. DATE): PRE-CAL. READING / STANDARD	TEMPERATURE	CAL. RANGE	TIME
6.5617.00	4.37 1 4.00	WITHIN RANGE			4.50 1 4.47	27.42	WITHIN RANGE	
7.00 1 7.00	4.0014.00	WITHIN RANGE			4.491 4.49	27.69	WITHIN RANGE	
1	J	WITHIN			1	0,,,,	WITHIN RANGE	
Í	1	WITHIN			1		WITHIN RANGE	
ORP	CALIBRATION CHECK	KANGE			D.O. CA	LIBRATION CHEC	the second second	
CAL. READING (LOT #): 21140147 (EXP. DATE): 1/23	TEMPERATURE (*CELSIUS)	CAL. RANGE	TIME		CALIBRATION F	READING	CAL. RANGE	TIME
PRE-CAL. READING / STANDARD	40.00	WITHIN		4 +	The second second	11.	WITHIN	
288 1 228	22.57	RANGE		1	Baro: 757 " TEAP: 28°C Cold: 7.7 m	nmH9	RANGE	
2281 218	27.39	N WITHIN RANGE		1 1	Tenp: 2800	1.	RANGE	
1		WITHIN RANGE			Code: 7.7 m	9/4	WITHIN	
1		WITHIN RANGE			Adad: 7.78	mg/L	WITHIN RANGE	
TURBIC	DITY CALIBRATION CHEC	CK				COMMENTS		34
7	READING (NTU)	1.00 m		L	AUTOCAL SOLUTION	STANDARD		
(LOT#): (EXP. DATE):	(LOT #): (EXP. DATE):	CAL. RANGE	TIME		.OT #): EXP. DATE):	LIST LOT NUMBERS A	AND EXPIRATI BRATION CHE	
PRE-CAL READING / STANDARD	POST-CAL. READING / STANDARD	12.2165		1	CALIBRATED PARAMETERS	CALIBRATI	ON RANGES	1)
0.54 1 0	010	WITHIN RANGE		1 1	✓ pH	pH: +/- 0.2 S.	U.	
1.30 / 1	0.9 1 1	WITHIN		1 1	COND	COND: +/- 1% O	F CAL STAN	DARD
10.62 / 10	9.34 / 10	MITTIW T		1	✓ ORP	ORP: +/- 25 m\		
10.02 1	7.54	RANGE			☑ D.O.	D.O.: VARIES		
	иотго	RANGE		-	☑ TURB		F CAL, STAN	IDARD
Turbierly 1	NOTES 4794011					CALIBRATION RA		
	PROBLEMS ENCOUNTERED				CORREC	TIVE ACTIONS		
B. Medlin	ç	/12/2022	2		R. Mayer		9/15/	2022

DATE

CHECKED BY

DATE





gel.com

September 22, 2022

Kelly Hicks Dominion Energy Services, Inc. 120 Tredegar Street Richmond, Virginia 23219

Re: CCR Groundwater Monitoring - Level 1 Package

Work Order: 592592

Dear Kelly Hicks:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on September 09, 2022. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

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

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 1648.

Sincerely,

Meredith Boddiford Project Manager

Meredith Boldiford

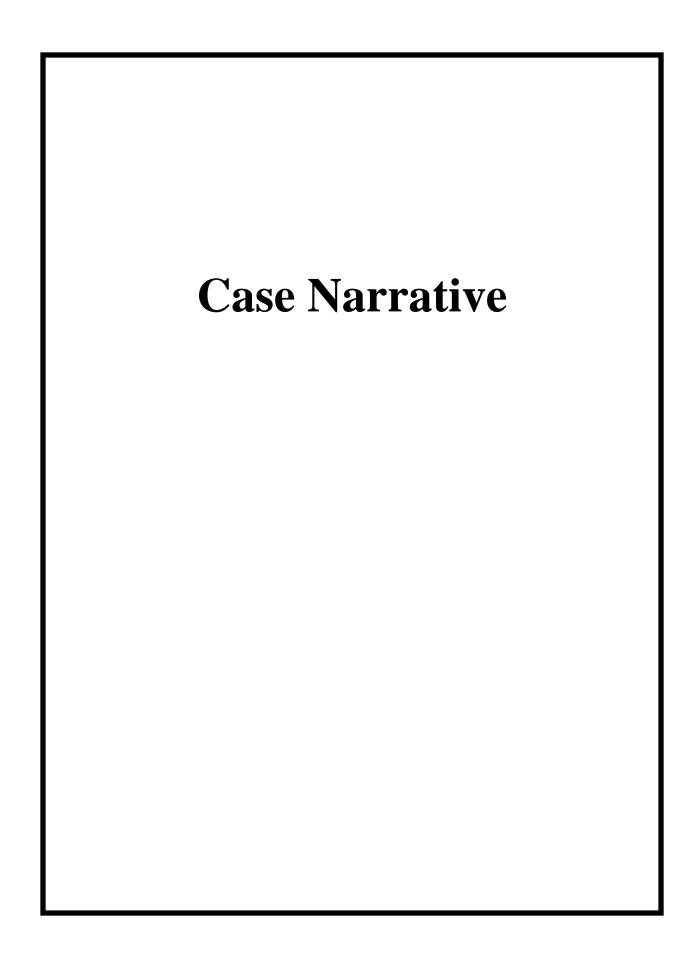
Purchase Order: 50149867 Chain of Custody: 206945

Enclosures



## **Table of Contents**

Case Narrative	1
Chain of Custody and Supporting Documentation	3
Laboratory Certifications	6
Metals Analysis	8
Case Narrative	9
Sample Data Summary	12
Quality Control Summary	14
General Chem Analysis	26
Case Narrative	27
Sample Data Summary	32
Ouality Control Summary	34



#### Receipt Narrative for Dominion Energy (50149867) SDG: 592592

**September 22, 2022** 

#### **Laboratory Identification:**

GEL Laboratories LLC 2040 Savage Road Charleston, South Carolina 29407 (843) 556-8171

#### **Summary:**

<u>Sample receipt:</u> The sample arrived at GEL Laboratories LLC, Charleston, South Carolina on September 09, 2022 for analysis. The sample was 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.

**Sample Identification:** The laboratory received the following sample:

**Laboratory ID** Client ID 592592001 MW-LF-22-2022Q3

#### **Case Narrative:**

Sample analyses were conducted using methodology as outlined in GEL's Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are contained in the analytical case narratives in the enclosed data package.

The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Data Package Qualifier Definitions and data from the following fractions: General Chemistry and Metals.

Meredith Boddiford Project Manager

Meredith Borldiford

Page 2 of 37 SDG: 592592



100													GEL La	GEL Laboratories, LLC	CLC		0
Poect # 416559.0005.0000.2.2		U		<u>a</u>	bore	<b>DOPATORIES LLC</b>	SLLC						2040 Sa	2040 Savage Road			5
GFL Quote #:	592597	000		in Of Chen	istry   Radic	get.com Chemistry   Radiochemistry   Radiobioassay   Specialty Analytics	diobioassay	Specialt	y Analytics				Charlest	Charleston, SC 29407	07		
O 50149867	GEL Work Order Number: 206945	r Number.	206945	5	GEL	GEL Project Manager: Meredith Boddiford	nager: M	Feredith	Boddife	rd			Fax: (84	Fax: (843) 766-1178	. 8		
Clicht Name: Dominion Energy			Phone # 803-258-1528	3-258-152	8:		S	Sample Analysis Requested (5)	Analysis	Reque		(Fill in t	he numb	(Fill in the number of containers for each test)	iners for e	ach test)	
Propect/Site Name: Wateree Station Class 3 Landfill CCR 2022Q3	CCR 2022Q3		Fax#			Sho	Should this	SJ		IN					1	< Preservative Type (6)	(9) ac
Address: Wateree, South Carolina						san	sample be considered:			P;							
ected By: B. Medlin / A. Misiunas	Send Results To: AReed@envstd.com	AReed@e	nvstd.com			II)	ırds	9 6 8 1	******						ž	Comments Note: extra sample is	ole is
Sample ID * For composites - indicate start and stop date/time		*Date Collected (mm-dd-yy)	*Time Collected (Military)	QC Code (2) Fi	Field Sa Filtered (3) Mau	Sample Matrix 3 Radioactive yes, please sup	isotopic info.) (7) Known or possible Haza	Total number	CI' EI' 2O	, El latoT 0208					ar er	required for sample specific QC	ıple
MW-LF-01-2022Q3				z	z												
MW-LF-06-2022Q3				z	Z	GW N						10.10			See	See attached work	×
MW-LF-07-2022Q3				z	z	N MD									orde	order for details	
MW-LF-08-2022Q3				z	N	GW N									10		'n
MW-LF-10-2022Q3				z	z	GW N											
MW-LF-10A-2022Q3				z	Z	GW N									9 1		
MW-LF-11-2022Q3				z	z	R N											
DU-WAT-CCR-LF-22301				FD	Z	GW N											
FBLK-WAT-CCR-LF-22301				FB	Z	AQ N											
MW-LF-22-2022Q3	8.6	77.8.	5001	z	Z	GW N		3	1								
	Chain of Custody Signatures	gnatures						Addition	TAT	TAT Requested:		Normal:	K Rush:		Specify:		
Relinquished By (Signed) Date Time	Recei	Received by (signed)		Date	Time		Fax Res	Fax Results: [   Yes		0N   X							
19 25.6.6	53 10	101	63	33		153	Select D	Select Deliverable: [ ] C of A	e: [ ] C	fA []	[ ] QC Summary	nmary	[X] level 1	1 [ ] Level 2	el 2 [ ] Level 3	vel 3 [   Level 4	4
2 000 6.9.3, 14	141 28	X	16/6	11	1	146	Addition	Additional Remarks	rks:					1 1	1 1		
3	3 1	1					For Lab	For Lab Receiving Use Only: Custody Seal Intact? [ ] Yes	ng Use C	nly: Cu	tody Sea	d Intact?	[ ] Yes	[ ] No	Cooler Temp:	$J_{\circ}$ : $d_{\bullet}$	
> For sample shipping and delivery details, see Sample Receipt & Review form (SRR.)	ole Receipt & Rev	iew form (S	RR.)			Sample	Sample Collection Time Zone: [X] Eastern	ı Time Z	one: [X	] Easterr	1	[ ] Pacific	[ ] Central		[ ] Mountain [ ] Other:	] Other:	
1.) Chain of Custody Number = Client Determined 2.) OC Codes: N = Normal Sample. TB = Trin Blank. FD = Field Duplicate. EB = Fournment Blank. MS = Matrix Spike Sample. MSD = Matrix Spike Duplicate Sample. G = Grab. C = Composite	Duplicate. E <b>B</b> = Equir	oment Blank.	MS = Matrix	onike Samu	e. MSD = M	urix Spike Dun	icate Sample	. G = Grab	C = Com	osite							
3.) Field Filtered: For liquid matrices, indicate with a - Y - for yes the sample was field filtered or - N - for sample was not field filtered.	the sample was field f	Iltered or - N	· for sample wa	is not field	iltered.												
4.) Marrix Codes: DW=Drinking Water, GW=Groundwater, SW=Surface Water, WW=Water, WE-Water, ML=Misc Liquid, SO=Soil, SD=Sediment, SL=Sludge, SS=Solid Waste, O=Oil, F=Filter, P=Wipe, U=Urine, F=Fecal, N=Nasal	Surface Water, WW=	Waste Water,	W=Water, MI	=Misc Liq	iid, SO=Soil,	SD=Sediment,	SL=Sludge,	V biloS=SS	Vaste, O=C	il, F=Filte	, P=Wipe,	U=Urine,	F=Fecal, N=	=Nasal			
5.) Sample Analysis Requested: Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1).	8260B, 6010B/7470A	) and number	of containers p	provided for	each (i.e. 82	50B - 3, 6010B	74704 - 1).										
6.) Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate, If no preservative is added = leave field blank	SH = Sodium Hydrox	ide, SA = Sulf	uric Acid, AA	= Ascorbic	Acid, HX = I	lexane, ST = Sc	odium Thiosu	ılfate, If no	preservativ	e is added	= leave fie	ld blank					
7.) KNOWN OR POSSIBLE HAZARDS CI	Characteristic Hazards FL = Flammable/Ignitable	ards	Listed Waste	Listed Waste LW= Listed Waste	62		Other OT= Of	Other OT= Other / Unknown	nown					Please p	provide any	Please provide any additional details below regarding handling and/or disposal	Is
RCRA Metals As = Arsenic Hg= Mercury Ba = Barium Se= Selenium	CO = Corrosive RE = Reactive		(F,K,P and U-Waste code(s).	nd U-liste de(s):	(F.K,P and U-listed wastes.) Waste code(s):		(i.e.: High/lo misc. health Description:	(i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.) Description:	1, asbest rds, etc.)	os, beryll	ium, irri	tants, oth	ier.	concern of site co	s. (i.e.: Or ollected fro	concerns. (i.e.: Origin of sample(s), type of site collected from, odd marrices, etc.)	, type etc.)
$Cd = Cadmium \qquad Ag = Silver$ $Cr = Chromium \qquad MR = Misc. RCRA metals \qquad \overline{PQ}$	TSCA Regulated  PCB = Polychlorinated	ted															
	biphenyls																

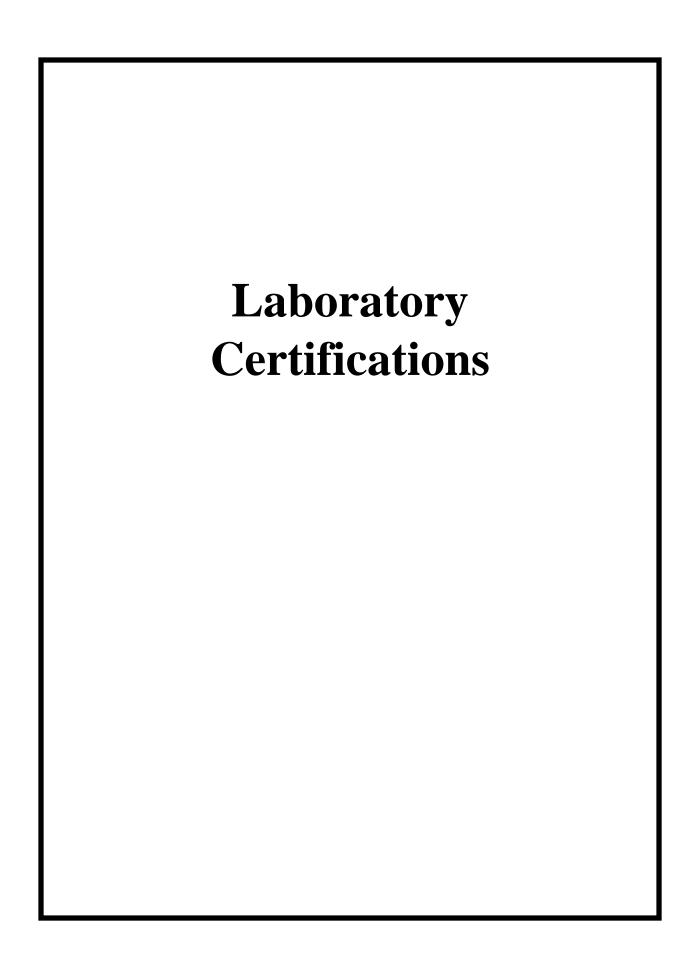
Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: DMNN		SDG/AR/COC/Work Order: S 9 2 59 2			
Received By: MK		Date Received: 9/1/12	$\dashv$		
Received by:		IR temperature gun # Daily Calibration performed N N	$\dashv$		
Enter one tracking number per line below.		IZ422	_		
Enter courier if applicable and no tracking available.		Uncorrected temperature readings are to the 0.1 degree with final recorded tepmeratures rounded to the 0.5 degree. Provide individual container details when a cooler requiring 0 ≤=60C is identified as out of specification.			
Cooler 1		Uncorrected Temp: O.S IR Correction Factor: +/ - O Final Recorded Temp: Within 0.0-6.0C7 N			
(00/er 2		Uncorrected Temp: 1.2 IR Correction Factor: + / - O Final Recorded Temp: 1.0 Within 0.0-6.0C? CO/N	_		
Cooler 3		Uncorrected Temp: O TR Correction Factor: + / - O Final Recorded Temp: O Within 0.0-6.0C? (V) N	_		
		Uncorrected Temp: IR Correction Factor: + / - Final Recorded Temp: Within 0.0-6.0C? Y / N	_		
		Uncorrected Temp: R Correction Factor: + / - Final Recorded Temp: Within 6.0-6.0C? Y / N	4		
·		Uncorrected Temp: IR Correction Factor: + / - Final Recorded Temp: Within 6.0-6.0C? Y / N			
Suspected Hazard Information	Y Kg	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.			
A)Shipped as a DOT Hazardous?		Huzard Class Shipped: UN2910, Is the Radioactive Shipment Survey Compliant? Yes No	ıı		
B) Did the client designate the samples are to be received as radioactive?		COC notation or radioactive stickers on containers equal client designation.	7		
C) Did the RSO classify the samples as		Maximum Net Counts Observed* (Observed Counts - Area Background Counts):	$\dashv$		
radioactive?  D) Did the client designate samples are	<del>                                     </del>	Cinssified as: Rad 1 Rad 2 Rad 3	$\dashv$		
b) Did the chent designate samples are hazardous?		COC notation or hazard labels on containers equal client designation.  If D or E is yes, select Hazards below.  FCR's			
E) Did the RSO identify possible hazards?		Flammable Fereign Soil RCRA Asbestos Beryllium Other:			
Sample Receipt Critaria	S	Z   Comments/Qualifiers (Required for Non-Conforming Herrs)	==		
Shipping containers received intact and scales?		(Circle Application Scals broken Damaged container Leaking container Other (describe)	-		
2. Chain of custody documents included with shiproent?		Circle Applicable: Client contacted and provided COC COC created upon receipt			
3 Santiple containers intact and scaled?		(Circle supplicable: Seats broken Daringed container Leaking container Other (describs)	-		
Samples to uiring chemical preservation at proper par?	1	Single ID's and Continues & Notice:	-		
the brokes been		If Freservation added, Lett:  If Yes, are Encores or Soli Kite present for solids? Yes No NA (if yes, take to VCA Preoger)	_{-		
Do any samples require Voiatile		20 liquid VOA visis contain acid preservation? Yes No NA (if unknown, select No)			
Analysis?		Are liquid VCA vials free of headspace? YesNoNA Sample ID's and containers affected:	-1		
		iD's and tests affected:	_		
6 Samples received within holding time?					
7 Sample ID's on COC match ID's on bottles?		ID's and containers affected:			
B Date & time on COC match date & time on bottles?	1	Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)			
Number of containers received match number indicated on COC?		Circle Applicable: No container count on COC Other (describe)			
Are sample containers identifiable as GEL provided by use of GEL labels?			$\dashv$		
COC form is properly signed in relinquished/received sections?	1	Circle Applicable: Not relinquished Other (describe)	ᅦ		
Comments (Use Continuation Form if needed):					
•					
•	,				
	PM (or )	VIA) review: Initials A M Date 9 1/4 21 Page of			

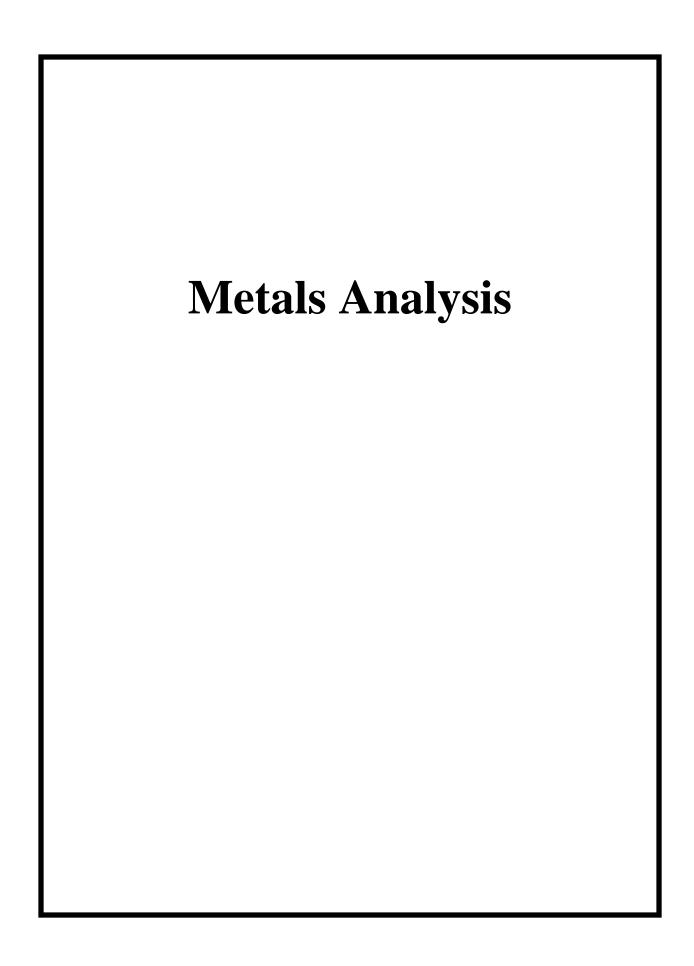
Page 5 of 37 SDG: 592592 ·

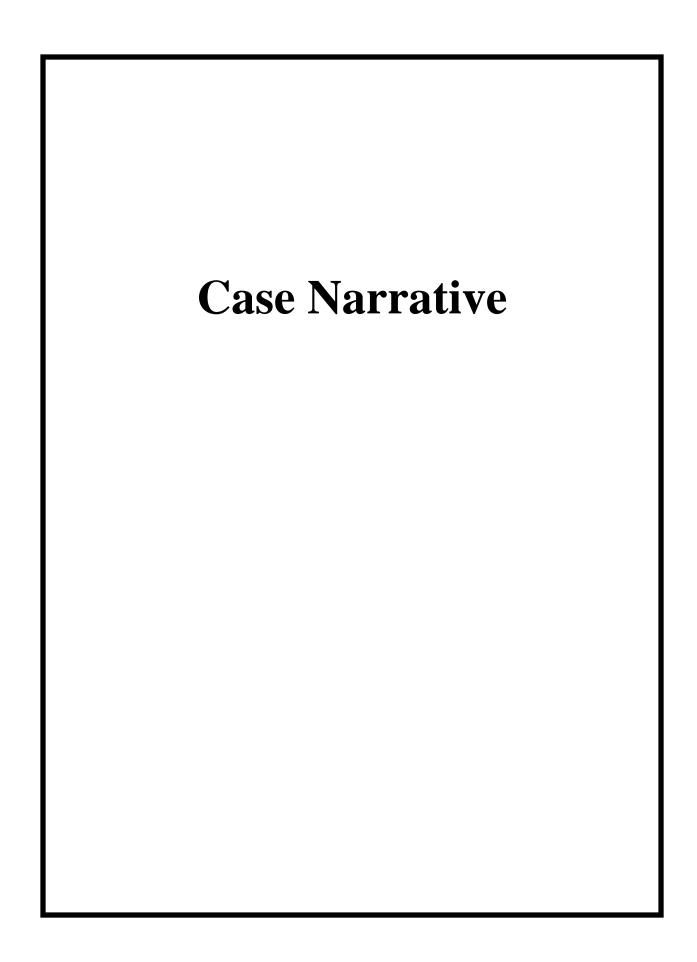
GL-CHL-SR-001A GL-CHL-SR-001A



List of current GEL Certifications as of 22 September 2022

State	Certification
Alabama	42200
Alaska	17-018
Alaska Drinking Water	SC00012
Arkansas	88-0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH-0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-15-00283, P330-15-00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2019020
Maryland	270
Massachusetts	M-SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE-OS-26-13
Nevada	SC000122023-3
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	2022–137
Pennsylvania NELAP	68–00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-22-20
Utah NELAP	SC000122021–36
Vermont	VT87156
Vermont Virginia NELAP	460202
Washington	C780
11 doining toll	C / 00





#### Metals Technical Case Narrative Dominion Energy SDG #: 592592

<u>Product:</u> Determination of Metals by ICP-MS <u>Analytical Method:</u> SW846 3005A/6020B <u>Analytical Procedure:</u> GL-MA-E-014 REV# 35

**Analytical Batch:** 2314755

**Preparation Method:** SW846 3005A

Preparation Procedure: GL-MA-E-006 REV# 14

**Preparation Batch:** 2314752

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

GEL Sample ID#	Client Sample Identification
592592001	MW-LF-22-2022Q3
1205187508	Method Blank (MB)ICP-MS
1205187509	Laboratory Control Sample (LCS)
1205187512	592592001(MW-LF-22-2022Q3L) Serial Dilution (SD)
1205187510	592592001(MW-LF-22-2022Q3D) Sample Duplicate (DUP)
1205187511	592592001(MW-LF-22-2022Q3S) Matrix Spike (MS)

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.

#### **Calibration Information**

#### **ICSA/ICSAB Statement**

For the ICP-MS analysis, the ICSA solution contains analyte concentrations which are verified trace impurities indigenous to the purchased standard.

#### **Miscellaneous Information**

#### **Additional Comments**

All method-driven specifications are followed for these analyses except where client-specific SOW requirements are required to be met.

#### **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 10 of 37 SDG: 592592

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

# Qualifier Definition Report for

DMNN001 Dominion Energy (50149867)

Client SDG: 592592 GEL Work Order: 592592

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

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

#### Review/Validation

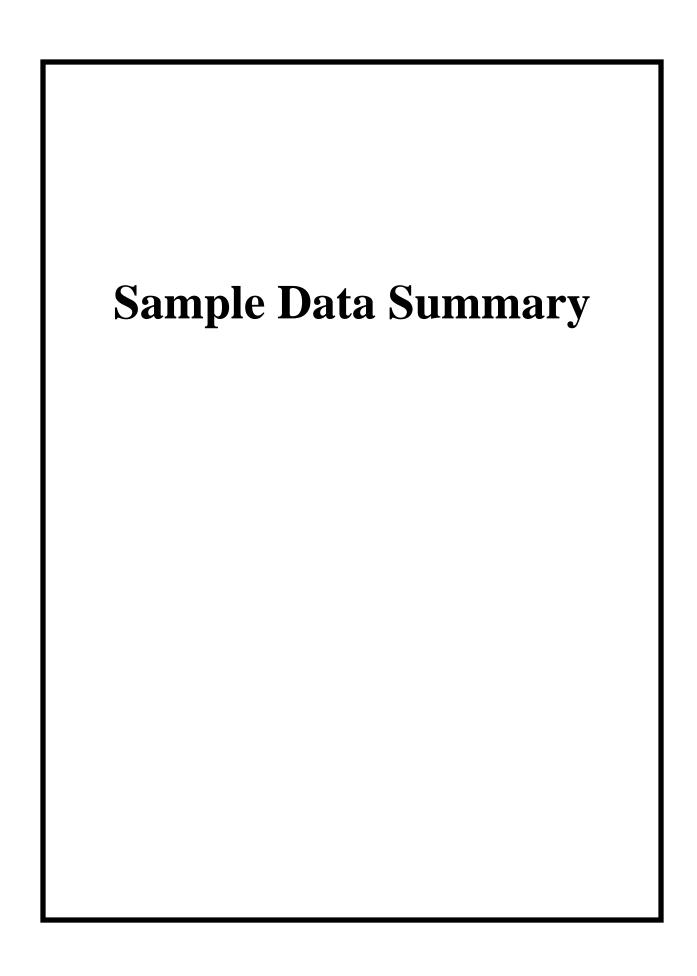
GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature: Name: Alan Stanley

Date: 21 SEP 2022 Title: Team Leader

Page 11 of 37 SDG: 592592



#### **METALS**

#### -1-

#### INORGANICS ANALYSIS DATA PACKAGE

SDG No: 592592 CONTRACT: DMNN00101 METHOD TYPE: SW846

SAMPLE ID:592592001 BASIS: As Received DATE COLLECTED 08-SEP-22

CLIENT ID: MW-LF-22-2022Q3 LEVEL: Low DATE RECEIVED 09-SEP-22

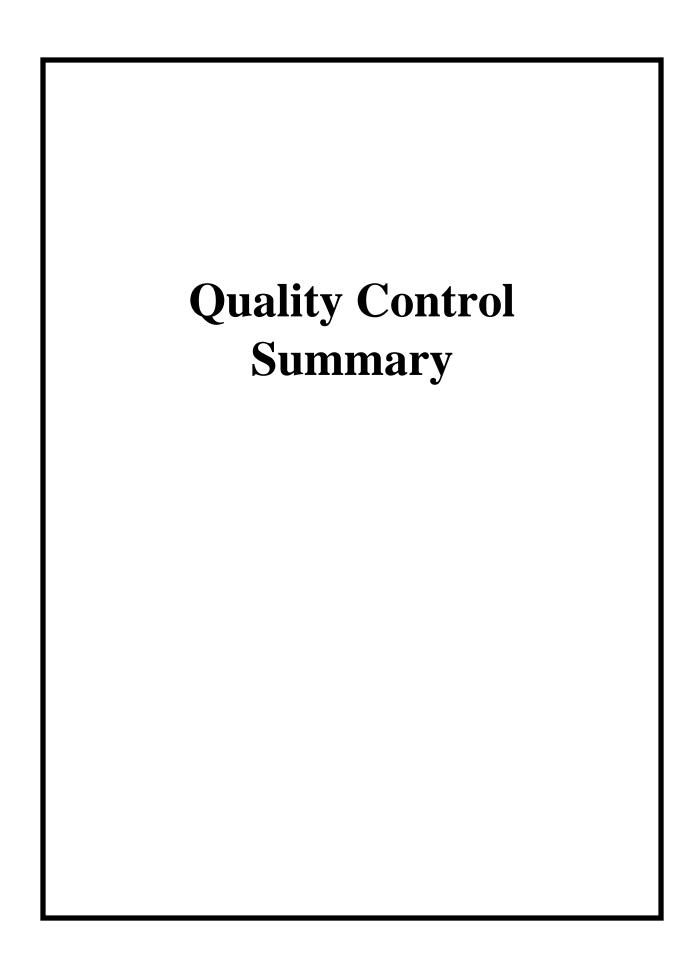
MATRIX: GW %SOLIDS: 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7440-42-8	Boron	15.1	ug/L		5.20	15.0	15.0	1	MS	SKJ	09/20/22 09:58	220920-2	2314755
7440-70-2	Calcium	2060	ug/L		80.0	200	200	1	MS	SKJ	09/17/22 20:03	220917-1	2314755

#### **Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2314755	2314752	SW846 3005A	50	mL	50	mL	09/12/22	CD3

<sup>\*</sup>Analytical Methods:



# $\begin{array}{c} {\bf METALS} \\ -2a- \\ \\ {\bf Initial\ and\ Continuing\ Calibration\ Verification} \end{array}$

**SDG No:** 592592

Contract: DMNN00101 Lab Code: GEL

**Instrument ID:** ICPMS14

Sample ID	<u>Analyte</u>	Result	<u>Units</u>	<u>True</u> <u>Value</u>	<u>Units</u>	% Recovery	Acceptance Window (%R)	<u>M*</u>	Analysis Date/Time	<u>Run</u> <u>Number</u>
ICV01										
	Calcium	5160	ug/L	5000	ug/L	103.2	90.0 - 110.0	MS	17-SEP-22 18:37	220917-1
	Boron	97.5	ug/L	100	ug/L	97.5	90.0 - 110.0	MS	20-SEP-22 09:38	220920-2
CCV01										
	Calcium	5160	ug/L	5000	ug/L	103.2	90.0 - 110.0	MS	17-SEP-22 18:55	220917-1
	Boron	96.1	ug/L	100	ug/L	96.1	90.0 - 110.0	MS	20-SEP-22 09:47	220920-2
CCV02										
	Calcium	5150	ug/L	5000	ug/L	103	90.0 - 110.0	MS	17-SEP-22 19:05	220917-1
	Boron	101	ug/L	100	ug/L	101.1	90.0 - 110.0	MS	20-SEP-22 10:12	220920-2
CCV03										
	Calcium	5220	ug/L	5000	ug/L	104.4	90.0 - 110.0	MS	17-SEP-22 19:48	220917-1
CCV04										
	Calcium	5260	ug/L	5000	ug/L	105.1	90.0 - 110.0	MS	17-SEP-22 20:32	220917-1

<sup>\*</sup>Analytical Methods:

# METALS -2bCRDL Standard for ICP & ICPMS

**SDG No:** 592592

Contract: DMNN00101 Lab Code: GEL

**Instrument ID:** ICPMS14

Sample ID	<u>Analyte</u>	Result	<u>Units</u>	<u>True</u> <u>Value</u>	<u>Units</u>	<u>%</u> Recovery	Advisory Limits (%R)	<u>M*</u>	Analysis Date/Time	<u>Run</u> Number
CRDL01										
	Calcium	256	ug/L	200	ug/L	128.1	80.0 - 120.0 *	MS	17-SEP-22 18:44	220917-1
	Boron	16.7	ug/L	15	ug/L	111.4	80.0 - 120.0	MS	20-SEP-22 09:42	220920-2
CRDL02										
	Calcium	246	ug/L	200	ug/L	122.9	80.0 - 120.0 *	MS	17-SEP-22 19:38	220917-1
	Boron	18.1	ug/L	15	ug/L	120.9	80.0 - 120.0 *	MS	20-SEP-22 10:06	220920-2
CRDL03										
	Calcium	238	ug/L	200	ug/L	119.1	80.0 - 120.0	MS	17-SEP-22 20:21	220917-1

\*Analytical Methods:

Metals
-3aInitial and Continuing Calibration Blank Summary

**SDG No.:** 592592

Contract: DMNN00101

Lab Code: GEL

Sample ID	<u>Analyte</u>	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	<u>M*</u>	Analysis Date/Time	Run
ICB01										
	Calcium	80.0	+/-100	U	80.0	200	LIQ	MS	17-SEP-22 18:40	220917-1
	Boron	5.2	+/-7.5	U	5.2	15.0	LIQ	MS	20-SEP-22 09:40	220920-2
CCB01										
	Calcium	80.0	+/-100	U	80.0	200	LIQ	MS	17-SEP-22 18:58	220917-1
	Boron	5.2	+/-7.5	U	5.2	15.0	LIQ	MS	20-SEP-22 09:49	220920-2
CCB02										
	Calcium	80.0	+/-100	U	80.0	200	LIQ	MS	17-SEP-22 19:09	220917-1
	Boron	5.2	+/-7.5	U	5.2	15.0	LIQ	MS	20-SEP-22 10:14	220920-2
CCB03										
	Calcium	80.0	+/-100	U	80.0	200	LIQ	MS	17-SEP-22 19:52	220917-1
CCB04										
	Calcium	80.0	+/-100	U	80.0	200	LIQ	MS	17-SEP-22 20:35	220917-1

\*Analytical Methods:

# METALS -3bPREPARATION BLANK SUMMARY

**SDG NO.** 592592

Contract: DMNN00101

Matrix: GW

Sample ID	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	Acceptance Window	Conc Qual	<u>M*</u>	<u>MDL</u>	RDL
1205187508								
	Boron	5.20	ug/L	+/-7.5	U	MS	5.20	15.0
	Calcium	80.0	ug/L	+/-100	U	MS	80.0	200

<sup>\*</sup>Analytical Methods:

#### **METALS**

#### -4-

### **Interference Check Sample**

**SDG No:** 592592

Contract: DMNN00101 Lab Code: GEL

**Instrument:** ICPMS14

Sample ID	<u>Analyte</u>	Result	<u>Units</u>	<u>True</u> <u>Value</u>	<u>Units</u>	% Recovery	Acceptance Window (%R)	Analysis Date/Time	<u>Run</u> <u>Number</u>
ICSA01	Calcium	107000	ug/L	100000	ug/L	107	80.0 - 120.0	17-SEP-22 18:47	220917-1
ICSAB01	Calcium	105000	ug/L	100000	ug/L	105	80.0 - 120.0	17-SEP-22 18:51	220917-1
ICSA02	Calcium	103000	ug/L	100000	ug/L	103	80.0 - 120.0	17-SEP-22 19:41	220917-1
ICSAB02	Calcium	107000	ug/L	100000	ug/L	107	80.0 - 120.0	17-SEP-22 19:45	220917-1
ICSA03	Calcium	107000	ug/L	100000	ug/L	107	80.0 - 120.0	17-SEP-22 20:24	220917-1
ICSAB03	Calcium	106000	ug/L	100000	ug/L	106	80.0 - 120.0	17-SEP-22 20:28	220917-1

#### **METALS**

#### -4-

### **Interference Check Sample**

**SDG No:** 592592

Contract: DMNN00101 Lab Code: GEL

**Instrument:** ICPMS14

Sample ID	<u>Analyte</u>	Result	<u>Units</u>	<u>True</u> <u>Value</u>	<u>Units</u>	% Recovery	Acceptance Window (%R)	Analysis Date/Time	<u>Run</u> <u>Number</u>
ICSA01	Boron	5.01	ug/L					20-SEP-22 09:44	220920–2
ICSAB01	Boron	23.7	ug/L	20	ug/L	119	80.0 – 120.0	20-SEP-22 09:45	220920-2
ICSA02	Boron	4.7	ug/L					20-SEP-22 10:08	220920–2
ICSAB02	Boron	23.3	ug/L	20	ug/L	116	80.0 – 120.0	20-SEP-22 10:10	220920-2

METALS -5a-

**Matrix Spike Summary** 

**SDG NO.** 592592

Client ID

MW-LF-22-2022Q3S

**Contract:** 

DMNN00101

Level:

Low

Matrix:

GROUND WATER

% Solids:

Sample ID:

592592001

**Spike ID:** 1205187511

Analyte	<u>Units</u>	Acceptance Limit	Spiked Result	<u>C</u>	Sample Result	<u>C</u>	Spike Added	% Recovery	Qual	<u>M*</u>
Boron	ug/L	75–125	129		15.1		100	114		MS
Calcium	ug/L	75–125	4320		2060		2000	113		MS

<sup>\*</sup>Analytical Methods:

MS

# Metals -6Duplicate Sample Summary

**SDG No.:** 592592

Lab Code: GEL

Contract: DMNN00101

Client ID: MW-LF-22-2022Q3D

Matrix:

GROUND WATER

Level: Low

**Sample ID:** 592592001

**Duplicate ID:** 1205187510

**Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result C	Duplicate Result C	RPD	Qual	M*
Boron	ug/L	+/-30	15.1	14.7 B	2.36		MS
Calcium	ug/L	+/-20%	2060	2040	.942		MS

<sup>\*</sup>Analytical Methods:

#### **METALS**

-7-

#### **Laboratory Control Sample Summary**

**SDG NO.** 592592

Contract: DMNN00101

Aqueous LCS Source: Environmental Express

#### **Solid LCS Source:**

Sample ID 1205187509	<u>Analyte</u>	<u>Units</u>	<u>True</u> <u>Value</u>	Result	<u>C</u>	% Recovery	Acceptance <u>Limit</u>	<u>M*</u>
	Boron Calcium	ug/L ug/L	100 2000	113 2180		113 109	80–120 80–120	MS MS

<sup>\*</sup>Analytical Methods:

# METALS -9Social Dilution Social Summ

**Serial Dilution Sample Summary** 

**SDG NO.** 592592

Client ID: MW-LF-22-2022Q3L

**Contract:** 

DMNN00101

**Matrix:** 

LIQUID

Level: Low

Sample ID:

592592001

Serial Dilution ID: 1205187512

Analyte	Initial Yalue <u>C</u> ug/L	<u>Serial</u> <u>Value</u> ug/L	<u>C</u>	<u>%</u> <u>Difference</u>	<u>Qual</u>	Acceptance Limit	<u>M*</u>
Boron	15.1	26	U	70.719			MS
Calcium	2060	2060		.049			MS

<sup>\*</sup>Analytical Methods:

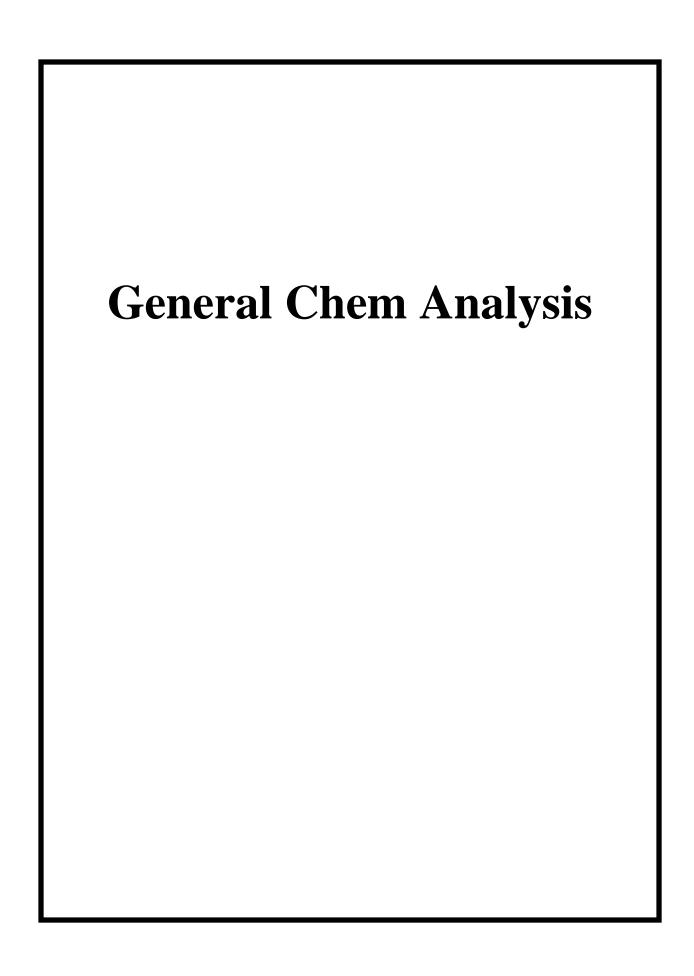
MS

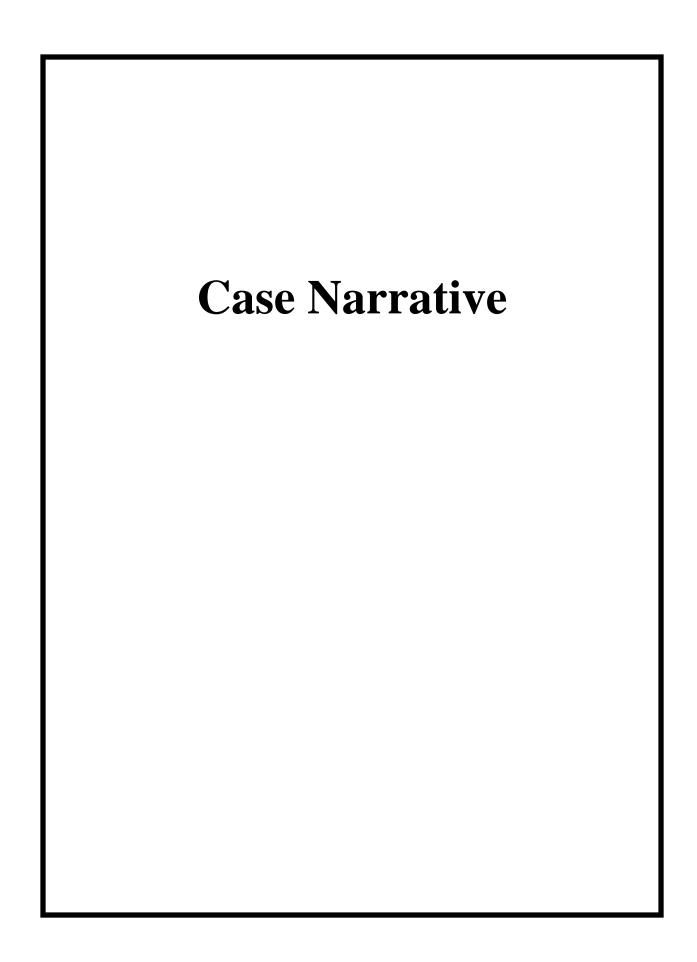
# METALS -13SAMPLE PREPARATION SUMMARY

SDG No: 592592 Method Type MS

Contract: DMNN00101 Lab Code: GEL

Sample ID Batch Number	<u>Client ID</u> er 2314752	<u>Sample</u> Type	<u>Matrix</u>	<u>Prep</u> <u>Date</u>	_	Final Sample Volume Solids
1205187508	MB for batch 2314752	MB	G	12-SEP-22	50mL	50mL
1205187509	LCS for batch 2314752	LCS	G	12-SEP-22	50mL	50mL
1205187511	MW-LF-22-2022Q3S	MS	G	12-SEP-22	50mL	50mL
1205187510	MW-LF-22-2022Q3D	DUP	G	12-SEP-22	50mL	50mL
592592001	MW-LF-22-2022Q3	SAMPLE	G	12-SEP-22	50mL	50mL





#### General Chemistry Technical Case Narrative Dominion Energy SDG #: 592592

**Product: Ion Chromatography Analytical Method:** EPA 300.0

**Analytical Procedure:** GL-GC-E-086 REV# 30

**Analytical Batch:** 2315794

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

GEL Sample ID#	Client Sample Identification
592592001	MW-LF-22-2022Q3
1205189764	Method Blank (MB)
1205189765	Laboratory Control Sample (LCS)
1205189766	592607004(MW-FGD-04-2022Q3) Sample Duplicate (DUP)
1205189767	592607004(MW-FGD-04-2022Q3) Post Spike (PS)
1205189768	592592001(MW-LF-22-2022Q3) Sample Duplicate (DUP)
1205189769	592592001(MW-LF-22-2022Q3) Post Spike (PS)

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

#### **Data Summary:**

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

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

#### Matrix Spike (MS)/Post Spike (PS) Recovery Statement

The percent recoveries (%R) obtained from the spike analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The matrix spike recovered outside of the established acceptance limits due to matrix interference and/or non-homogeneity.

Analyte	Sample	Value
Chloride	1205189767 (MW-FGD-04-2022Q3PS)	114* (90%-110%)

#### **Technical Information**

#### **Sample Dilutions**

The following samples 1205189768 (MW-LF-22-2022Q3DUP), 1205189769 (MW-LF-22-2022Q3PS) and 592592001 (MW-LF-22-2022Q3) were diluted because target analyte concentrations exceeded the calibration range. Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range.

Page 28 of 37 SDG: 592592

A 1 4 .	592592			
Analyte	001			
Chloride	2X			

#### Sample Re-analysis

Samples 1205189764 (MB), 1205189765 (LCS), 1205189768 (MW-LF-22-2022Q3DUP), 1205189769 (MW-LF-22-2022Q3PS) and 592592001 (MW-LF-22-2022Q3) were re-analyzed due to CCB failure. The reanalysis data with passing instrument QC was reported. Sample 1205189764 (MB) was re-analyzed due to (its) proximity to an overrange sample. The results from the reanalysis are reported. Sample 1205189764 (MB) was re-analyzed to verify the result.

#### **Miscellaneous Information**

#### **Manual Integrations**

Sample 1205189766 (MW-FGD-04-2022Q3DUP) was manually integrated to correctly position the baseline as set in the calibration standards.

#### **Additional Comments**

All method-driven specifications are followed for these analyses except where client-specific SOW requirements are required to be met.

Page 29 of 37 SDG: 592592

**Product: Solids, Total Dissolved Analytical Method:** SM 2540C

Analytical Procedure: GL-GC-E-001 REV# 19

**Analytical Batch:** 2316241

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

GEL Sample ID#	Client Sample Identification
592592001 M	IW-LF-22-2022Q3
1205190598 M	Method Blank (MB)
1205190599 L	aboratory Control Sample (LCS)
1205190600 59	92605003(MW-3-2022Q3) Sample Duplicate (DUP)
1205190601 59	92850001(NonSDG) Sample Duplicate (DUP)
1205190602 59	92885002(NonSDG) Sample Duplicate (DUP)

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

#### **Data Summary:**

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

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

#### **Duplicate Relative Percent Difference (RPD) Statement**

The Relative Percent Difference (RPD) between the sample and duplicate falls outside of the established acceptance limits because of the heterogeneous matrix of the sample:

Analyte	Sample	Value
Total Dissolved Solids	1205190602 (Non SDG 592885002DUP)	5.18* (0%-5%)

#### **Miscellaneous Information**

#### **Additional Comments**

All method-driven specifications are followed for these analyses except where client-specific SOW requirements are required to be met.

#### **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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# Qualifier Definition Report for

DMNN001 Dominion Energy (50149867) Client SDG: 592592 GEL Work Order: 592592

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

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

#### Review/Validation

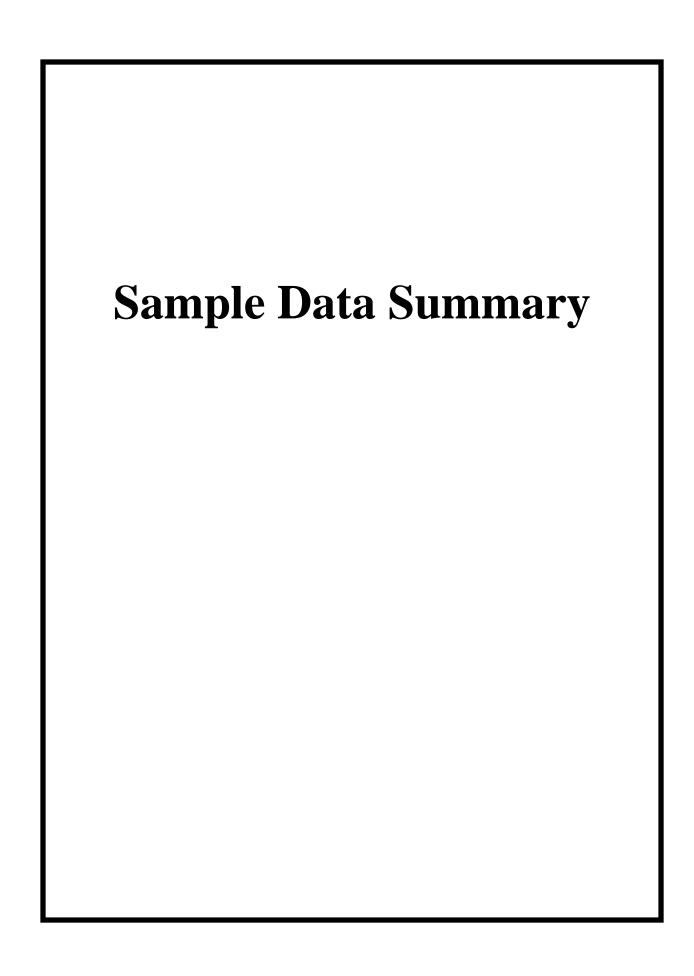
GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature: Name: Aubrey Kingsbury

Date: 22 SEP 2022 Title: Team Leader

Page 31 of 37 SDG: 592592



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## **Certificate of Analysis**

Project:

Client ID:

Report Date: September 22, 2022

DMNN00101

DMNN001

Company: Dominion Energy Services, Inc.

Address: 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks

Project: CCR Groundwater Monitoring - Level 1 Package

Client Sample ID: MW-LF-22-2022Q3

Sample ID: 592592001

Matrix: GW

Collect Date: 08-SEP-22 10:05
Receive Date: 09-SEP-22
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Anal	yst Date	Time Batch	Method
Ion Chromatography										
EPA 300.0 Anions Liq	uid "As Recei	ved"								
Fluoride	J	0.0707	0.0330	0.100	mg/L		1 JLD1	09/15/22	2059 2315794	1
Sulfate		1.06	0.133	0.400	mg/L		1			
Chloride		9.99	0.134	0.400	mg/L		2 JLD1	09/14/22	0905 2315794	2
Solids Analysis										
SM2540C TDS "As Re	eceived"									
Total Dissolved Solids		21.0	2.38	10.0	mg/L		CH6	09/14/22	1048 2316241	3

The following Analytical Methods were performed:

Method Description Analyst Comments

1 EPA 300.0 2 EPA 300.0 3 SM 2540C

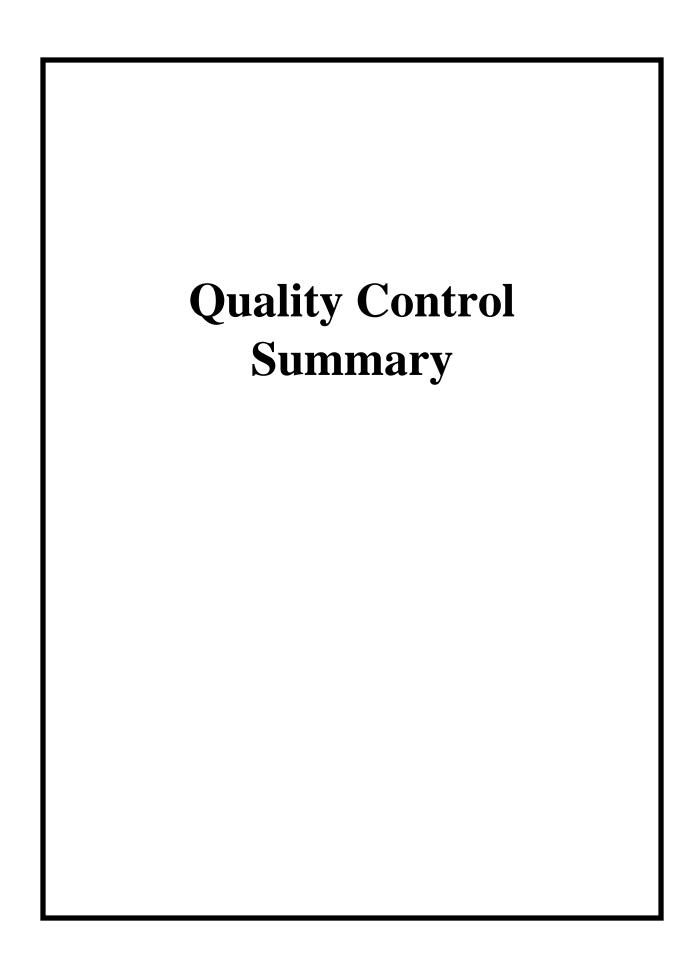
#### **Notes:**

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 33 of 37 SDG: 592592



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**QC Summary** 

Report Date: September 22, 2022

Page 1 of 3

Dominion Energy Services, Inc.

120 Tredegar Street Richmond, Virginia

Contact: Kelly Hicks

Workorder: 592592

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Ion Chromatography Batch 2315794										
QC1205189766 592607004 DUP Chloride		8.27		8.14	mg/L	1.56		(0%-20%)	JLD1	09/14/22 01:22
Fluoride	J	0.0556	J	0.0526	mg/L	5.55 ^		(+/2	)	
Sulfate		3.27		3.31	mg/L	1.39		(0%-20%)	)	
QC1205189768 592592001 DUP Chloride		9.99		10.1	mg/L	0.752		(0%-20%)	)	09/14/22 09:36
Fluoride	J	0.0707	J	0.0660	mg/L	6.88 ^		(+/2)	)	09/15/22 21:30
Sulfate		1.06		1.05	mg/L	1.51 ^		(+/8	)	
QC1205189765 LCS Chloride	5.00			4.78	mg/L		95.6	(90%-110%)	)	09/15/22 20:28
Fluoride	2.50			2.61	mg/L		104	(90%-110%)	)	
Sulfate	10.0			10.9	mg/L		109	(90%-110%)	)	
QC1205189764 MB Chloride			U	ND	mg/L					09/14/22 08:03
Fluoride			U	ND	mg/L					
Sulfate			J	0.202	mg/L					
QC1205189767 592607004 PS Chloride	5.00	8.27		14.0	mg/L		114*	(90%-110%)	)	09/14/22 01:53

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## **QC Summary**

Workorder: 592592 Page 2 of 3

Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range A	nlst	Date Time
<b>Ion Chromatography</b> Batch 2315794									
Fluoride	2.50 J	0.0556	2.67	mg/L		105	(90%-110%)	JLD1	09/14/22 01:53
Sulfate	10.0	3.27	13.1	mg/L		98.3	(90%-110%)		
QC1205189769 592592001 PS Chloride	5.00	5.00	10.5	mg/L		110	(90%-110%)		09/14/22 10:07
Fluoride	2.50 J	0.0707	2.67	mg/L		104	(90%-110%)		09/15/22 22:00
Sulfate	10.0	1.06	10.5	mg/L		94.1	(90%-110%)		
Solids Analysis Batch 2316241 ———									
QC1205190600 592605003 DUP Total Dissolved Solids		513	516	mg/L	0.583		(0%-5%)	СН6	09/14/22 10:48
QC1205190601 592850001 DUP Total Dissolved Solids		367	359	mg/L	2.2		(0%-5%)		09/14/22 10:48
QC1205190602 592885002 DUP Total Dissolved Solids		99.0	94.0	mg/L	5.18*		(0%-5%)		09/14/22 10:48
QC1205190599 LCS Total Dissolved Solids	300		301	mg/L		100	(95%-105%)		09/14/22 10:48
QC1205190598 MB Total Dissolved Solids		U	ND	mg/L					09/14/22 10:48

#### **Notes:**

The Qualifiers in this report are defined as follows:

- < Result is less than value reported
- > Result is greater than value reported
- B The target analyte was detected in the associated blank.

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## **QC Summary**

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

- E General Chemistry--Concentration of the target analyte exceeds the instrument calibration range
- H Analytical holding time was exceeded

592592

- J See case narrative for an explanation
- J Value is estimated

Workorder:

- N/A RPD or %Recovery limits do not apply.
- N1 See case narrative
- ND Analyte concentration is not detected above the detection limit
- NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Q One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
- R Per section 9.3.4.1 of Method 1664 Revision B, due to matrix spike recovery issues, this result may not be reported or used for regulatory compliance purposes.
- R Sample results are rejected
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.
- X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Z Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
- ^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
- d 5-day BOD--The 2:1 depletion requirement was not met for this sample
- e 5-day BOD--Test replicates show more than 30% difference between high and low values. The data is qualified per the method and can be used for reporting purposes
- h Preparation or preservation holding time was exceeded

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

- ^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where the 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 37 of 37 SDG: 592592





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September 27, 2022

Kelly Hicks Dominion Energy Services, Inc. 120 Tredegar Street Richmond, Virginia 23219

Re: CCR Groundwater Monitoring - Level 1 Package

Work Order: 593105

Dear Kelly Hicks:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on September 14, 2022. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

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

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 1648.

Sincerely,

Meredith Boddiford Project Manager

Meredith Boldiford

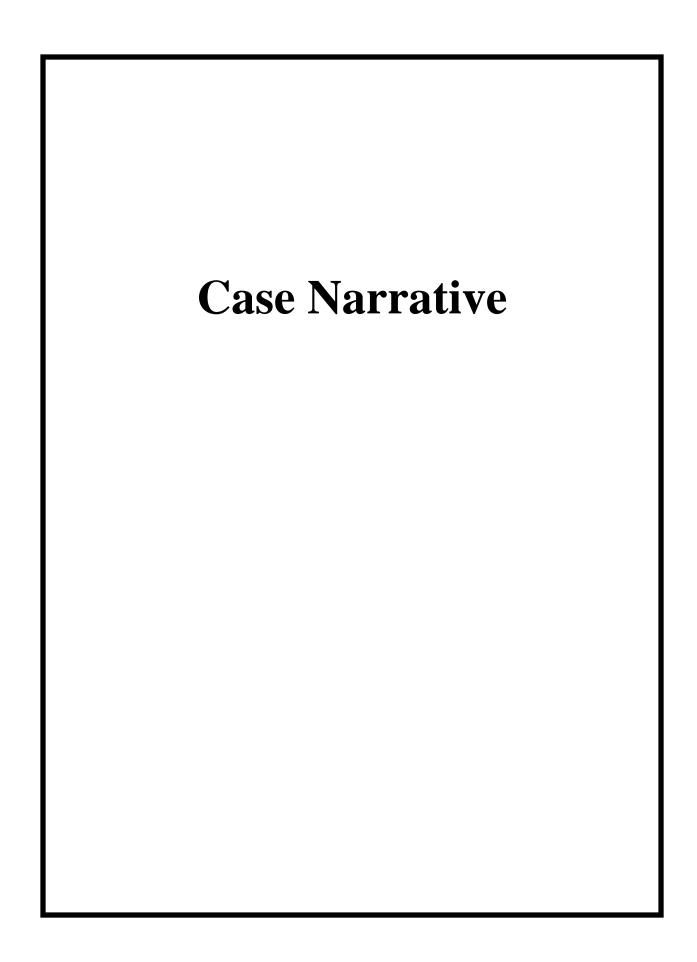
Purchase Order: 50149867 Chain of Custody: 20221143

Enclosures



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#### Receipt Narrative for Dominion Energy (50149867) SDG: 593105

**September 27, 2022** 

#### **Laboratory Identification:**

GEL Laboratories LLC 2040 Savage Road Charleston, South Carolina 29407 (843) 556-8171

#### **Summary:**

Sample receipt: The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on September 14, 2022 for analysis. 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.

**Sample Identification:** The laboratory received the following samples:

<b>Laboratory ID</b>	Client ID
593105001	MW-LF-01-2022Q3
593105002	MW-LF-06-2022Q3
593105003	MW-LF-07-2022Q3
593105004	MW-LF-08-2022Q3
593105005	MW-LF-10-2022Q3
593105006	MW-LF-10A-2022Q3
593105007	MW-LF-11-2022Q3
593105008	DU-WAT-CCR-LF-22301
593105009	FBLK-WAT-CCR-LF-22301
593105010	AS-LF-01-2022Q3
593105011	AS-LF-02-2022Q3
593105012	AS-LF-03-2022Q3
593105013	MW-BG-73-2022Q3
593105014	FBLK-WAT-CCR-LF-22302

#### **Case Narrative:**

Sample analyses were conducted using methodology as outlined in GEL's Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are contained in the analytical case narratives in the enclosed data package.

Page 2 of 72 SDG: 593105

The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Data Package Qualifier Definitions and data from the following fractions: General Chemistry and Metals.

Meredith Boddiford Project Manager

Meredith Boldiford

Page 3 of 72 SDG: 593105



CEL Note Order National Signatures   Control of States   Control	Jo 2 Paa		ī	-	7	0+0		(					0 6	GEL Laboratories, LLC	ries, LLC	CH
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	Wateree Station Class 3 Landfi	II CCR 2022Q3	Fax#				Should this	SJ			IN				< Pr	eservative Type (6)
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X   Rush:	/ MS/MSD	6.6		z			z			1	2					
X   Rush:		2	1025	Z	z	GW	z	3	-	-	-				See att	ached work
X   Rush:		0	1015	z	z	GW	z	3	1	1	_				order f	or details
X   Rush:	(33	2	1150	z	z	GW	z	3	-	1	-					
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c, F=Fecal, N=Nas		8					For	Lab Rec	eiving	Use O	nly: Cu	stody Sea	Intact? [	-	Cooler 7	
c, F=Fccal, N=Nas	ong and detivery details, see Sa umber = Client Determined rmal Sample, TB = Trip Blank, FD = Fi	impte Keceipt & Keview Jorn eld Duplicate, EB = Equipment Blai	r (SKK.) nk, MS = Matrix	Spike San	ple, MSD =	Matrix Spil	se Duplicate Sar	nple, G =	Grab, C	= Comp	osite	7	<del>2</del> 1			
other	liquid matrices, indicate with a - Y - for = Drinking Water, GW=Groundwater, S	yes the sample was field filtered or . W=Surface Water, WW=Waste Wa	- N - for sample ter, W=Water, N	was not fiel 1L=Misc L	d filtered. iquid, SO=Se	oil, SD=Sed	liment, SL=Slud	lge, SS=S	olid Wa	ste, <b>0</b> =0	ıl, F=Filte	r, P=Wipe,	U=Urine, F=	Fecal, N=Nasal		
other	equested: Analytical method requested ( HA = Hydrochloric Acid, NI = Nitric Av	i.e. <b>8260B</b> , <b>6010B/7470A</b> ) and num cid, <b>SH</b> = Sodium Hydroxide, <b>SA</b> =	ber of container Sulfuric Acid, A	s provided A = Ascorb	or each (i.e.	8260B - 3, = Hexane,	6010B/7470A - ST = Sodium Th	<ol> <li>iosulfate,</li> </ol>	If no pr	eservativ	e is addec	= leave fiel	d blank			
FL = Flammable/Ignitable  CO = Corrosive  RE = Reactive  Waste code(s):  TSCA Regulated  PCB = Polychlorinated  biphenyls	OSSIBLE HAZARDS	Characteristic Hazards	Listed	Waste		П	Othe	10						PI	ease provide any a	dditional details
	Tg= Mercury Se= Selenium Ag= Silver	FL = Flammable/Ignitable CO = Corrosive RE = Reactive TSCA Regulated	LW= LW=   (F,K,P) Waste	and U-li code(s):	iste sted waste.	S.	OI= (i.e.: misc.	Other / High/lo health ription:	Unkno w pH, hazara	asbesta's, etc.)	s, beryi	lium, irrit	ants, other		tow regarang nan ncerns. (i.e.: Origi site collected from,	ding andor disposal in of sample(s), type odd matrices, etc.)
	MK= Misc. RCKA metals	PCB = Polychlorinated biphenyls							Ш					11		

Jo Joan James Jame	1			_	7	10+0		(					5	GEL Laboratories, LLC	LLC	さって
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Client Name: Dominion Energy			Phone # 803-258-	3-258-1528	82			Sam	ple An	alysis	Sample Analysis Requested (5)		ll in the n	number of cont	(Fill in the number of containers for each test)	
Profect/Site Name: Wateree Station Class 3 Landfill CCR 2022Q3	fill CCR 2022	Q3	Fax#				Should this				IN				< Preservative Type (6)	Type (6)
Addiess: Wateree, South Carolina							sample be considered:			0.00	BC				C	
Cofected By: B. Medlin / A. Misiunas	Send Resu	Send Results To: AReed@envstd.com	envstd.com			ħŊ.	) bbj3	ards		)6 - 40	and C				Note: extra sample is	nts imple is
Sample ID * For composites - indicate start and stop date/time	e/time	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC (P) F	Field S Filtered (3) M	Sample Matrix (4)	yes, please su isotopic info.)	zaH əldizzoq ədmun latoT	IDS - SI	CI' EI' 2C	.e. lstoT 208			,	required for sample specific QC	sample QC
MW-LF-01-2022Q3		22.6.6	ozhl	z	z	GW	Z	w	-	1	1					
MW-LF-06-2022Q3		9.9.22	1320	Z	Z	GW	z	3	-	1	1				See attached work	vork
MW-LF-07-2022Q3		9.9.22	1400	z	z	GW	z	3	-	-	1				order for details	ils
MW-LF-08-2022Q3	- 20	9.11.11	1250	Z	Z	GW	Z	3	1	-		r e e				
MW-LF-10-2022Q3		9.11.22	1435	Z	z	GW	Z	3	1		1					
MW-LF-10A-2022Q3		27.71.6	0541	Z	z	GW	Z	3	-	-						
MW-LF-11-2022Q3		22.21.6	0421	Z	Z	GW	Z	3	1	-	1					
DU-WAT-CCR-LF-22301		77.6.6	1	ED	z	GW	Z	a	1	1	1					
FBLK-WAT-CCR-LF-22301		9.9.22	1020	FB	z	AQ	Z	3	1	1	-					
MW-LF-22-2022Q3				z	Z	GW	z									
	hain of Cust	Chain of Custody Signatures								TATR	TAT Requested:	Normal:	I: X	Rush:	Specify:	
Relinquished By (Signed) Date Time	пе	Received by (signed)		Date	Time		Fax	Fax Results:     Yes	1 1 1		No X					
15/1.22 15	1535	Jupaso	DO CO	Total Bar	Q Z Z	100	53 Select Deliverable: [ ] C of A   ] QC Summary	ect Deliv	erable:	1100	fA []0	C Summ		[X] level 1     Level 2	[]Level3 [	Level 4
2		2			-		Ado	Additional Remarks	Remark	S:						
3		3					For	· Lab Re	ceiving	Use O	nly: Cust	For Lab Receiving Use Only: Custody Seal Intact? [		] Yes [ ] No	Cooler Temp: °C	
> For sample shipping and delivery details, see S.	Sample Receip	see Sample Receipt & Review form (SRR.)	(SRR.)			Sa	Sample Collection Time Zone: [X] Eastern	ction Ti	me Zon	ie: [X	] Eastern	[ ] Pacific	100	[ ] Central [ ] M	[ ] Mountain [ ] Other:	
1.) Chain of Custody Number = Client Determined 2.) QC Codes: N = Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite 3.) Field Filtered: For liquid matrices, indicate with a - Y - for yes the sample was field filtered or - N - for sample was not field filtered.	Field Duplicate, F	:B = Equipment Blank was field filtered or - P	, MS = Matrix :	Spike Samp as not field	le, MSD = l filtered.	Matrix Spik	e Duplicate S	ample, G	Grab, C	Comp	osite					
4.) Matrix Codes; DW=Drinking Water, GW=Groundwater, SW=Surface Water, WW=Waste Water, W=Water, ML=Misc Liquid, SO=Soil, SD=Sediment, SL=Sludge, SS=Soild Waste, O=Oil, F=Filter, P=Wipe, U=Urine, F=Fecal, N=Nasal	SW=Surface Wa	ler, WW=Waste Wate	r, W=Water, M	L=Misc Liq	luid, SO=Sc	oil, <b>SD</b> =Sedi	ment, SL=Slı	ndge, SS=	Solid Wa	ste, <b>0</b> =0	il, F=Filter,	P=Wipe, U=	Urine, F=Fe	ccal, N=Nasal		
5.) Sample Analysis Requested: Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. 8260B • 3, 6010B/7470A • 1).  6.) Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate, If no preservative is added = leave field blank	I (i.e. <b>8260B</b> , <b>601</b> Acid, SH = Sodiu	0B/7470A) and numbe m Hydroxide, SA = Su	er of containers	provided for = Ascorbic	r each (i.e. Acid; HX	8260B - 3, 6 = Hexane, S	5010B/7470A T = Sodium 7	- 1). Thiosulfate	i, If no pi	eservativ	e is added =	leave field b	lank			
7.) KNOWN OR POSSIBLE HAZARDS	Characteri	Characteristic Hazards	Listed Waste	Vaste			Other	ier						Please	Please provide any additional details	letails
RCRA Metals As = Arsenic Hg= Mercury Ba = Barium Se= Selenium	FL = Flammable CO = Corrosive RE = Reactive	FL = Flammable/Ignitable CO = Corrosive RE = Reactive	LW= Listed W (F,K,P and U-) Waste code(s):	LW= Listed Waste (F,K,P and U-listed Waste code(s):	/aste listed wastes.)	3	OT (i.e. miss	OT= Other / Unknown (i.e.: High/low pH, asbest misc. health hazards, etc.) Description:	/ Unkn ow pH, hazare	asbeste ts, etc.)	os, berylli	OT=Other / Unknown (i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.) Description:	ts, other	below concer	below regarding handling and/or disposal concerns. (i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)	or disposal le(s), type ices, etc.)
Cd = Cadmium $Ag = SilverCr = Chromium$ $MR = Misc.$ RCRA metals Pb = Lead	TSCA Regulated PCB = Polychlorinated biphenyls	Regulated Polychlorinated biphenyls					11.									
			1													

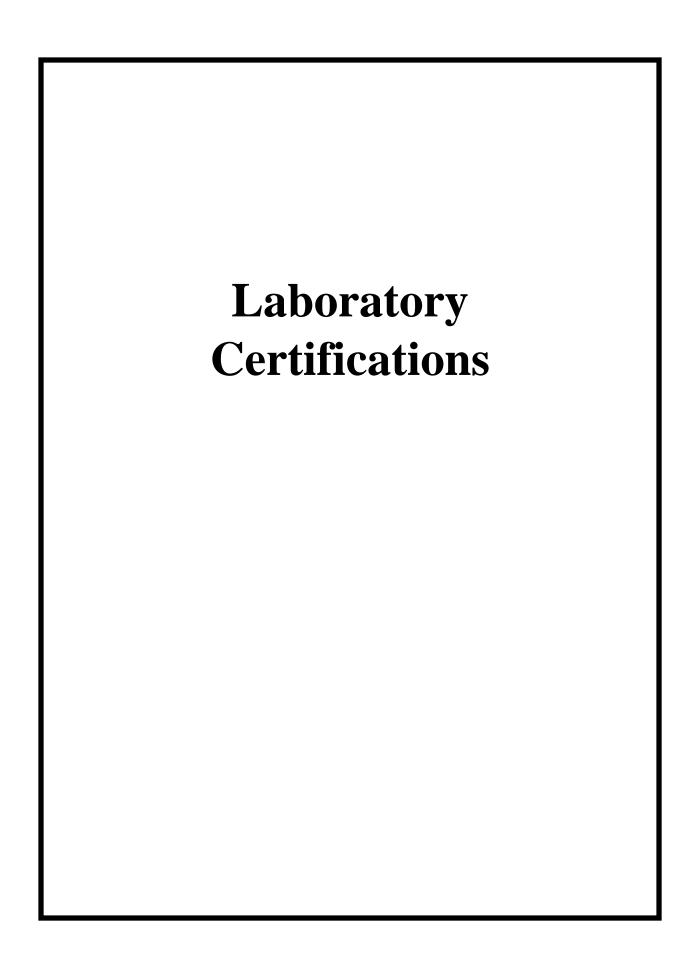
SAMPLE RECEIPT & REVIEW FORM

Client: DMNN			SD	G/AR/COC/Work Order:
Received By: Wasla lat	W	1	Dat	e Received: 4-14-33
Enter one tracking number per line below.				IR temperature gun # Daily Calibration performed Y/ N
			U	ncorrected temperature readings are to the 0.1 degree with final recorded tepmeratures rounded to the 0.5 degree. Provide individual container details when a cooler requiring 0 <=60C is identified as out of specification.
Enter courier if applicable and no tracking available				
CWEV 3	-			orrected Temp: 5- IR Correction Factor: +/- Final Recorded Temp: 5 Within 0.0-6.0C! Y N
Carlos 3		-	Unc	orrected Temp: 5 TR Correction Factor: + / - Final Recorded Temp: 5 Within 0.0-6.0C? Y N
COOPER 5		-	Uno	orrected Temp: TR Correction Factor: + / - Final Recorded Temp: Within 0.0-6.0C! Y N
Cooler 4			Unc	orrected Temp: A Recorded Temp: Within 0.0-6.0C? Y N
Coolers			Unc	orrected Temp: 4.0 IR Correction Factor: + / - Final Recorded Temp: 4.0 Within 0.0-6.0C3 Y N
Cooler Q			Unc	orrected Temp: 4.2 IR Correction Factor: + / - Final Recorded Temp: 4.0 Within 0.0-6.0C? Y N
Suspected Hazard Information	Yes	No	*1C1	let Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
				ard Class Shipped: UN#:
A)Shipped as a DOT Hazardous?			UN:	1910, Is the Radioactive Shipment Survey Compliant? Yes No
B) Did the client designate the samples are to be received as radioactive?		V	eo	2 notation or radioactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?				imum Net Counts Observed* (Observed Counts - Area Background Counts):CPM / mR/Hr ssified as: Rad 1
D) Did the client designate samples are			CO	2 notation or hazard labels on containers equal client designation.
Imzardous?			IrD	or E is yes, select Hazards below.  PCB's  Immable Foreign Soil RCRA Asbestos Beryllium Other:
E) Did the RSO identify possible hazards?  Sample Receipt Criteria	Yes	N.A.	No	Comments/Qualifiers (Required for Non-Conforming Items)
Shipping containers received intact and	2		_	Circle Applicable: Seals broken Danuaged container Leaking container Other (describe)
scaled? Chain of custody documents included	V		_	Circle Applicable: Client contacted and provided COC COC created upon receipt
with shipment?	V		L	
3 Sample containers intact and sealed?	V			Circle Applicable: Seals broken Danaged container Leaking container Other (describe)
4 Samples requiring chemical preservation	1/		C. June 4	Sample ID's and Containers Affected:
at preper pH?	V		_	If Preservation added, Lot#:  If Yes, are Encores or Soil Kits present for soilds? YesNoNA (If yes, take to VOA Freezer)
Do any samples require Volatile	The same of			Do liquid VOA vials contain acid preservation? Yes No NA(If unknown, select No)
5 Analysis?	Steller		L	Are liquid VOA vials free of headspace? Yes No NA Sample ID's and containers affected:
			H	ID's and tests affected:
6 Samples received within holding time?			Ц	ID. J.
7 Sample ID's on COC match ID's on bottles?	V			ID's and containers affected:
8 Date & time on COC match date & time on bottles?	V	are training		Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
9 Number of containers received match number indicated on COC?	V			Circle Applicable: No container count on COC Other (describe)
Are sample containers identifiable as GEL provided by use of GEL labels?	V		,	
COC form is properly signed in	V			Circle Applicable: Not relinquished Other (describe)
relinquished/received sections?  Comments (Use Continuation Form if needed):				
17.4				

or PMA) review: Initials \_\_\_\_\_\_ Date \_\_\_\_\_

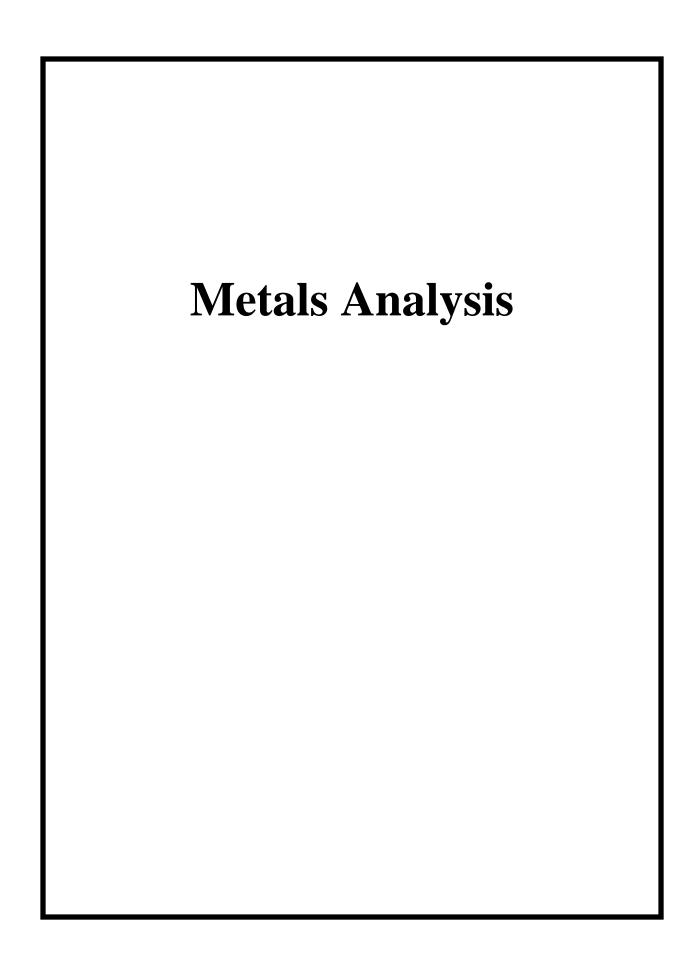
Page \_\_\_\_ of \_\_\_

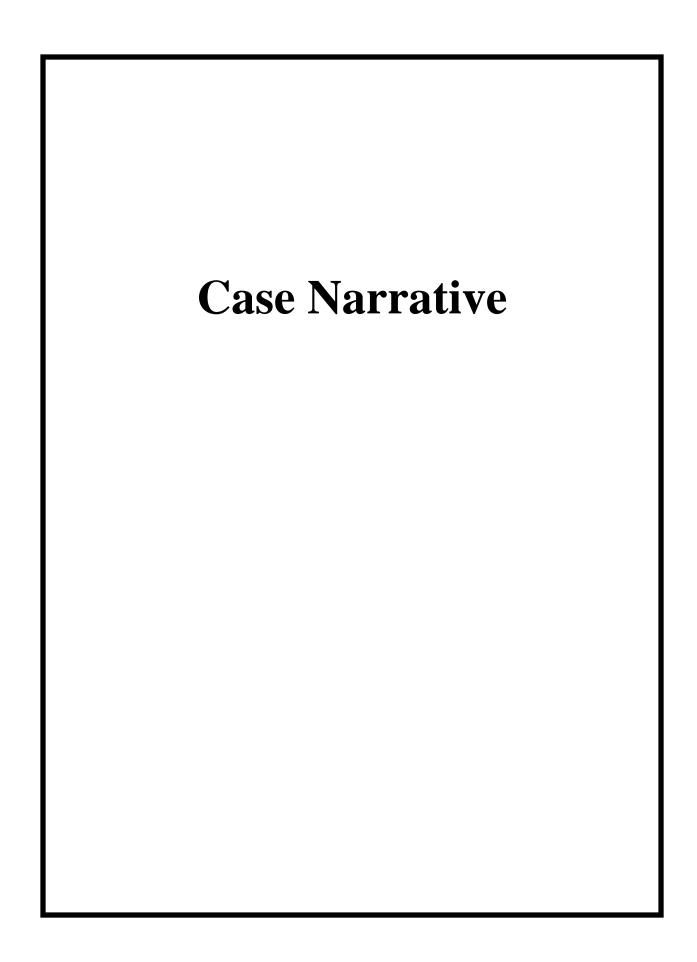
GL-CHL-SR-001A



List of current GEL Certifications as of 27 September 2022

State	Certification
Alabama	42200
Alaska	17-018
Alaska Drinking Water	SC00012
Arkansas	88-0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH-0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-15-00283, P330-15-00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2019020
Maryland	270
Massachusetts	M-SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE-OS-26-13
Nevada	SC000122023-3
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	2022–137
Pennsylvania NELAP	68–00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-22-20
Utah NELAP	SC000122021–36
Vermont	VT87156
Vermont Virginia NELAP	460202
Washington	C780
w asinington	C/80





# Metals Technical Case Narrative Dominion Energy SDG #: 593105

<u>Product:</u> Determination of Metals by ICP-MS <u>Analytical Method:</u> SW846 3005A/6020B <u>Analytical Procedure:</u> GL-MA-E-014 REV# 35

**Analytical Batch:** 2316655

**Preparation Method:** SW846 3005A

Preparation Procedure: GL-MA-E-006 REV# 14

**Preparation Batch:** 2316654

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

<b>GEL Sample ID#</b>	Client Sample Identification
593105001	MW-LF-01-2022Q3
593105002	MW-LF-06-2022Q3
593105003	MW-LF-07-2022Q3
593105004	MW-LF-08-2022Q3
593105005	MW-LF-10-2022Q3
593105006	MW-LF-10A-2022Q3
593105007	MW-LF-11-2022Q3
593105008	DU-WAT-CCR-LF-22301
593105009	FBLK-WAT-CCR-LF-22301
593105010	AS-LF-01-2022Q3
593105011	AS-LF-02-2022Q3
593105012	AS-LF-03-2022Q3
593105013	MW-BG-73-2022Q3
593105014	FBLK-WAT-CCR-LF-22302
1205191446	Method Blank (MB)ICP-MS
1205191447	Laboratory Control Sample (LCS)
1205191450	593105011(AS-LF-02-2022Q3L) Serial Dilution (SD)
1205194414	593105013(MW-BG-73-2022Q3L) Serial Dilution (SD)
1205191448	593105011(AS-LF-02-2022Q3D) Sample Duplicate (DUP)
1205191451	593105013(MW-BG-73-2022Q3D) Sample Duplicate (DUP)
1205191449	593105011(AS-LF-02-2022Q3S) Matrix Spike (MS)
1205191452	593105013(MW-BG-73-2022Q3S) Matrix Spike (MS)

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.

#### **Calibration Information**

Page 12 of 72 SDG: 593105

# **ICSA/ICSAB Statement**

For the ICP-MS analysis, the ICSA solution contains analyte concentrations which are verified trace impurities indigenous to the purchased standard.

#### **Miscellaneous Information**

#### **Additional Comments**

All method-driven specifications are followed for these analyses except where client-specific SOW requirements are required to be met.

#### **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 13 of 72 SDG: 593105

# **GEL LABORATORIES LLC**

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

# Qualifier Definition Report for

DMNN001 Dominion Energy (50149867) Client SDG: 593105 GEL Work Order: 593105

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

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

#### Review/Validation

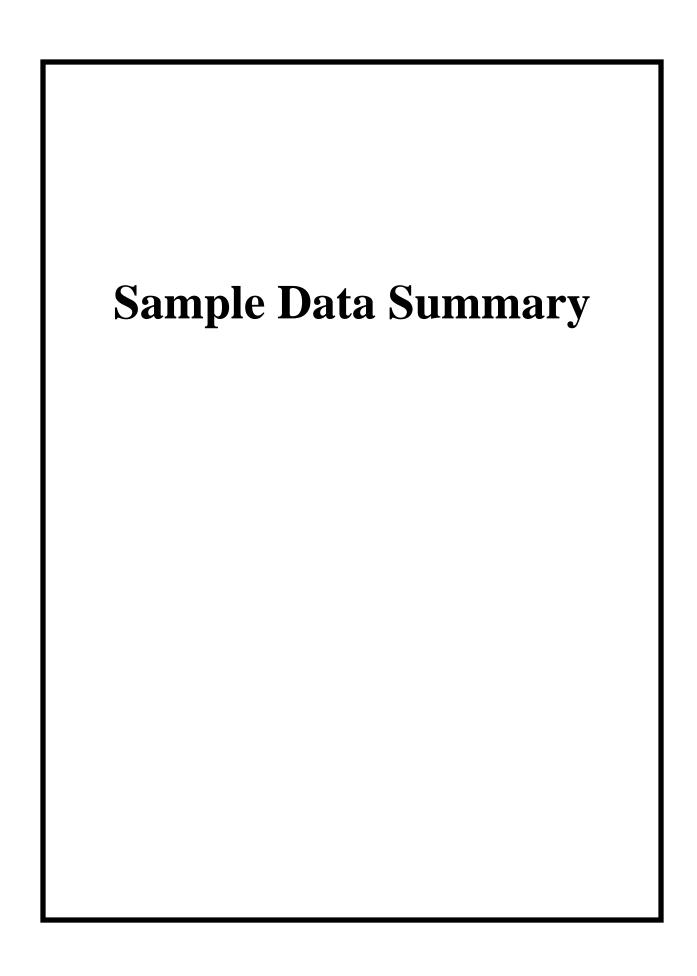
GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature: Edmund Frampton

Date: 19 SEP 2022 Title: Group Leader

Page 14 of 72 SDG: 593105



#### -1-

# INORGANICS ANALYSIS DATA PACKAGE

SDG No: 593105 CONTRACT: DMNN00101 METHOD TYPE: SW846

SAMPLE ID:593105001 BASIS: As Received DATE COLLECTED 09–SEP–22

CLIENT ID: MW-LF-01-2022Q3 LEVEL: Low DATE RECEIVED 14-SEP-22

MATRIX: GW %SOLIDS: 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7440-42-8	Boron	11.5	ug/L	J	5.20	15.0	15.0	1	MS	PRB	09/17/22 18:19	220917-1	2316655
7440-70-2	Calcium	125	ug/L	J	80.0	200	200	1	MS	PRB	09/17/22 18:19	220917-1	2316655

#### **Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2316655	2316654	SW846 3005A	50	mL	50	mL	09/15/22	LG2

<sup>\*</sup>Analytical Methods:

#### -1-

# INORGANICS ANALYSIS DATA PACKAGE

SDG No: 593105 CONTRACT: DMNN00101 METHOD TYPE: SW846

SAMPLE ID:593105002 BASIS: As Received DATE COLLECTED 09–SEP–22

CLIENT ID: MW-LF-06-2022Q3 LEVEL: Low DATE RECEIVED 14-SEP-22

MATRIX: GW %SOLIDS: 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7440-42-8	Boron	7.41	ug/L	J	5.20	15.0	15.0	1	MS	PRB	09/17/22 18:22	220917-1	2316655
7440-70-2	Calcium	925	ug/L		80.0	200	200	1	MS	PRB	09/17/22 18:22	220917-1	2316655

#### **Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2316655	2316654	SW846 3005A	50	mL	50	mL	09/15/22	LG2

<sup>\*</sup>Analytical Methods:

#### -1-

# INORGANICS ANALYSIS DATA PACKAGE

SDG No: 593105 CONTRACT: DMNN00101 METHOD TYPE: SW846

SAMPLE ID:593105003 BASIS: As Received DATE COLLECTED 09–SEP–22

CLIENT ID: MW-LF-07-2022Q3 LEVEL: Low DATE RECEIVED 14-SEP-22

MATRIX: GW %SOLIDS: 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7440-42-8	Boron	8.83	ug/L	J	5.20	15.0	15.0	1	MS	PRB	09/17/22 18:26	220917-1	2316655
7440-70-2	Calcium	1010	ug/L		80.0	200	200	1	MS	PRB	09/17/22 18:26	220917-1	2316655

#### **Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2316655	2316654	SW846 3005A	50	mL	50	mL	09/15/22	LG2

\*Analytical Methods:

#### -1-

# INORGANICS ANALYSIS DATA PACKAGE

SDG No: 593105 CONTRACT: DMNN00101 METHOD TYPE: SW846

SAMPLE ID:593105004 BASIS: As Received DATE COLLECTED 12–SEP–22

CLIENT ID: MW-LF-08-2022Q3 LEVEL: Low DATE RECEIVED 14-SEP-22

MATRIX: GW %SOLIDS: 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7440-42-8	Boron	9.02	ug/L	J	5.20	15.0	15.0	1	MS	PRB	09/17/22 18:29	220917-1	2316655
7440-70-2	Calcium	850	ug/L		80.0	200	200	1	MS	PRB	09/17/22 18:29	220917-1	2316655

#### **Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2316655	2316654	SW846 3005A	50	mL	50	mL	09/15/22	LG2

\*Analytical Methods:

#### -1-

# INORGANICS ANALYSIS DATA PACKAGE

SDG No: 593105 CONTRACT: DMNN00101 METHOD TYPE: SW846

SAMPLE ID:593105005 BASIS: As Received DATE COLLECTED 12–SEP–22

CLIENT ID: MW-LF-10-2022Q3 LEVEL: Low DATE RECEIVED 14-SEP-22

MATRIX: GW %SOLIDS: 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7440-42-8	Boron	11.3	ug/L	J	5.20	15.0	15.0	1	MS	PRB	09/17/22 18:33	220917-1	2316655
7440-70-2	Calcium	2890	ug/L		80.0	200	200	1	MS	PRB	09/17/22 18:33	220917-1	2316655

#### **Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2316655	2316654	SW846 3005A	50	mL	50	mL	09/15/22	LG2

<sup>\*</sup>Analytical Methods:

#### -1-

# INORGANICS ANALYSIS DATA PACKAGE

SDG No: 593105 CONTRACT: DMNN00101 METHOD TYPE: SW846

SAMPLE ID:593105006 BASIS: As Received DATE COLLECTED 12–SEP–22

CLIENT ID: MW-LF-10A-2022Q3 LEVEL: Low DATE RECEIVED 14-SEP-22

MATRIX: GW %SOLIDS: 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7440-42-8	Boron	8.61	ug/L	J	5.20	15.0	15.0	1	MS	PRB	09/17/22 18:36	220917-1	2316655
7440-70-2	Calcium	332	ug/L		80.0	200	200	1	MS	PRB	09/17/22 18:36	220917-1	2316655

#### **Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2316655	2316654	SW846 3005A	50	mL	50	mL	09/15/22	LG2

<sup>\*</sup>Analytical Methods:

#### -1-

# INORGANICS ANALYSIS DATA PACKAGE

SDG No: 593105 CONTRACT: DMNN00101 METHOD TYPE: SW846

SAMPLE ID:593105007 BASIS: As Received DATE COLLECTED 12–SEP–22

CLIENT ID: MW-LF-11-2022Q3 LEVEL: Low DATE RECEIVED 14-SEP-22

MATRIX: GW %SOLIDS: 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7440-42-8	Boron	9.57	ug/L	J	5.20	15.0	15.0	1	MS	PRB	09/17/22 18:46	220917-1	2316655
7440-70-2	Calcium	379	ug/L		80.0	200	200	1	MS	PRB	09/17/22 18:46	220917-1	2316655

#### **Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2316655	2316654	SW846 3005A	50	mL	50	mL	09/15/22	LG2

\*Analytical Methods:

#### -1-

# INORGANICS ANALYSIS DATA PACKAGE

SDG No: 593105 CONTRACT: DMNN00101 METHOD TYPE: SW846

SAMPLE ID:593105008 BASIS: As Received DATE COLLECTED 09–SEP–22

CLIENT ID: DU-WAT-CCR-LF-22301 LEVEL: Low DATE RECEIVED 14-SEP-22

MATRIX: GW %SOLIDS: 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7440-42-8	Boron	8.56	ug/L	J	5.20	15.0	15.0	1	MS	PRB	09/17/22 18:50	220917-1	2316655
7440-70-2	Calcium	639	ug/L		80.0	200	200	1	MS	PRB	09/17/22 18:50	220917-1	2316655

#### **Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2316655	2316654	SW846 3005A	50	mL	50	mL	09/15/22	LG2

<sup>\*</sup>Analytical Methods:

#### -1-

# INORGANICS ANALYSIS DATA PACKAGE

SDG No: 593105 CONTRACT: DMNN00101 METHOD TYPE: SW846

SAMPLE ID:593105009 BASIS: As Received DATE COLLECTED 09–SEP–22

CLIENT ID: FBLK-WAT-CCR-LF-2230 LEVEL: Low DATE RECEIVED 14-SEP-22

MATRIX: GW %SOLIDS: 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7440-42-8	Boron	5.20	ug/L	U	5.20	15.0	15.0	1	MS	PRB	09/17/22 18:53	220917-1	2316655
7440-70-2	Calcium	80.0	ug/L	Ü	80.0	200	200	1	MS	PRB	09/17/22 18:53	220917-1	2316655

#### **Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2316655	2316654	SW846 3005A	50	mL	50	mL	09/15/22	LG2

<sup>\*</sup>Analytical Methods:

#### -1-

# INORGANICS ANALYSIS DATA PACKAGE

SDG No: 593105 CONTRACT: DMNN00101 METHOD TYPE: SW846

SAMPLE ID:593105010 BASIS: As Received DATE COLLECTED 09–SEP–22

CLIENT ID: AS-LF-01-2022Q3 LEVEL: Low DATE RECEIVED 14-SEP-22

MATRIX: GW %SOLIDS: 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7440-42-8	Boron	8.99	ug/L	J	5.20	15.0	15.0	1	MS	PRB	09/17/22 18:57	220917-1	2316655
7440-70-2	Calcium	1200	ug/L		80.0	200	200	1	MS	PRB	09/17/22 18:57	220917-1	2316655

#### **Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2316655	2316654	SW846 3005A	50	mL	50	mL	09/15/22	LG2

\*Analytical Methods:

#### -1-

# INORGANICS ANALYSIS DATA PACKAGE

SDG No: 593105 CONTRACT: DMNN00101 METHOD TYPE: SW846

SAMPLE ID:593105011 BASIS: As Received DATE COLLECTED 09–SEP–22

CLIENT ID: AS-LF-02-2022Q3 LEVEL: Low DATE RECEIVED 14-SEP-22

MATRIX: GW %SOLIDS: 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	М*	Analyst	Run Date	Analytical Run	Analytical Batch
7440-42-8	Boron	8.97	ug/L	J	5.20	15.0	15.0	1	MS	PRB	09/17/22 19:00	220917-1	2316655
7440-70-2	Calcium	1220	ug/L		80.0	200	200	1	MS	PRB	09/17/22 19:00	220917-1	2316655

#### **Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2316655	2316654	SW846 3005A	50	mL	50	mL	09/15/22	LG2

<sup>\*</sup>Analytical Methods:

#### -1-

# INORGANICS ANALYSIS DATA PACKAGE

SDG No: 593105 CONTRACT: DMNN00101 METHOD TYPE: SW846

SAMPLE ID:593105012 BASIS: As Received DATE COLLECTED 09–SEP–22

CLIENT ID: AS-LF-03-2022Q3 LEVEL: Low DATE RECEIVED 14-SEP-22

MATRIX: GW %SOLIDS: 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7440-42-8	Boron	9.14	ug/L	J	5.20	15.0	15.0	1	MS	PRB	09/17/22 19:24	220917-1	2316655
7440-70-2	Calcium	658	ug/L		80.0	200	200	1	MS	PRB	09/17/22 19:24	220917-1	2316655

#### **Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2316655	2316654	SW846 3005A	50	mL	50	mL	09/15/22	LG2

<sup>\*</sup>Analytical Methods:

#### -1-

# INORGANICS ANALYSIS DATA PACKAGE

SDG No: 593105 CONTRACT: DMNN00101 METHOD TYPE: SW846

SAMPLE ID:593105013 BASIS: As Received DATE COLLECTED 09–SEP–22

CLIENT ID: MW-BG-73-2022Q3 LEVEL: Low DATE RECEIVED 14-SEP-22

MATRIX: GW %SOLIDS: 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7440-42-8	Boron	10.9	ug/L	J	5.20	15.0	15.0	1	MS	PRB	09/17/22 19:28	220917-1	2316655
7440-70-2	Calcium	280	ug/L		80.0	200	200	1	MS	PRB	09/17/22 19:28	220917-1	2316655

#### **Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2316655	2316654	SW846 3005A	50	mL	50	mL	09/15/22	LG2

<sup>\*</sup>Analytical Methods:

#### -1-

# INORGANICS ANALYSIS DATA PACKAGE

SDG No: 593105 CONTRACT: DMNN00101 METHOD TYPE: SW846

SAMPLE ID:593105014 BASIS: As Received DATE COLLECTED 12–SEP–22

CLIENT ID: FBLK-WAT-CCR-LF-2230 LEVEL: Low DATE RECEIVED 14-SEP-22

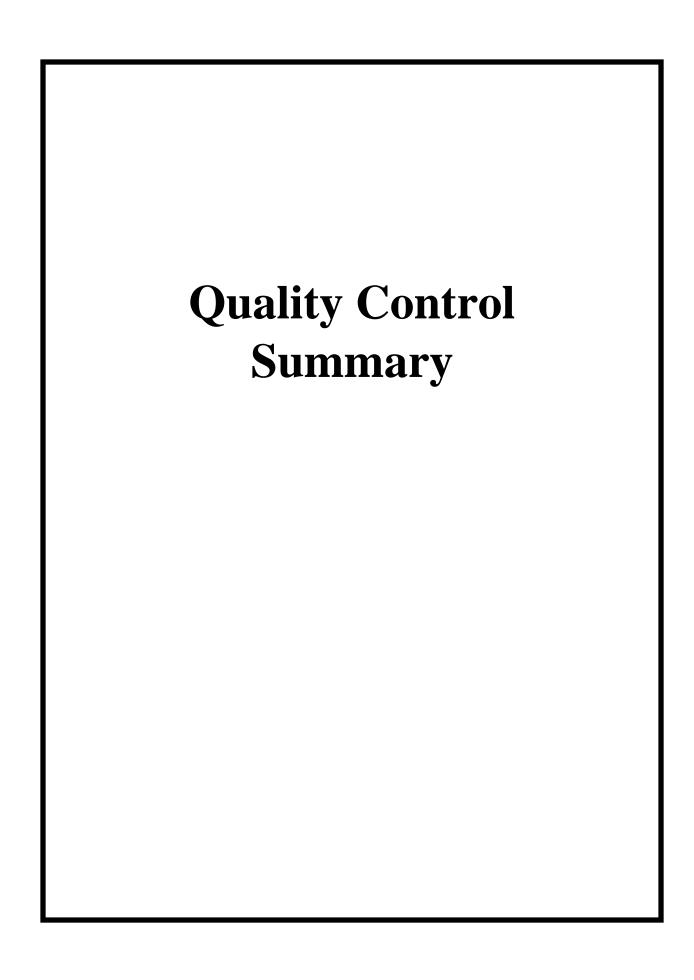
MATRIX: GW %SOLIDS: 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7440-42-8	Boron	5.20	ug/L	U	5.20	15.0	15.0	1	MS	PRB	09/17/22 19:45	220917-1	2316655
7440-70-2	Calcium	80.0	ug/L	U	80.0	200	200	1	MS	PRB	09/17/22 19:45	220917-1	2316655

#### **Prep Information:**

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2316655	2316654	SW846 3005A	50	mL	50	mL	09/15/22	LG2

<sup>\*</sup>Analytical Methods:



# $\begin{array}{c} {\bf METALS} \\ -2a- \\ \\ {\bf Initial\ and\ Continuing\ Calibration\ Verification} \end{array}$

**SDG No:** 593105

Contract: DMNN00101 Lab Code: GEL

**Instrument ID:** ICPMS15

Sample ID	<u>Analyte</u>	Result	<u>Units</u>	True Value	<u>Units</u>	% Recovery	Acceptance Window (%R)	<u>M*</u>	Analysis Date/Time	<u>Run</u> Number
ICV01										
10,01	Boron	105	ug/L	100	ug/L	105.4	90.0 - 110.0	MS	17-SEP-22 16:22	220917-1
	Calcium	4930	ug/L	5000	ug/L	98.6	90.0 - 110.0	MS	17-SEP-22 16:22	220917-1
CCV01										
	Boron	100	ug/L	100	ug/L	100.2	90.0 - 110.0	MS	17-SEP-22 16:39	220917-1
	Calcium	4930	ug/L	5000	ug/L	98.6	90.0 - 110.0	MS	17-SEP-22 16:39	220917-1
CCV02										
	Boron	103	ug/L	100	ug/L	103.5	90.0 - 110.0	MS	17-SEP-22 16:49	220917-1
	Calcium	4970	ug/L	5000	ug/L	99.4	90.0 - 110.0	MS	17-SEP-22 16:49	220917-1
CCV03										
	Boron	101	ug/L	100	ug/L	100.7	90.0 - 110.0	MS	17-SEP-22 18:02	220917-1
	Calcium	4910	ug/L	5000	ug/L	98.2	90.0 - 110.0	MS	17-SEP-22 18:02	220917-1
CCV04										
	Boron	97.4	ug/L	100	ug/L	97.4	90.0 - 110.0	MS	17-SEP-22 18:39	220917-1
	Calcium	4920	ug/L	5000	ug/L	98.5	90.0 - 110.0	MS	17-SEP-22 18:39	220917-1
CCV05										
	Boron	96.8	ug/L	100	ug/L	96.8	90.0 - 110.0	MS	17-SEP-22 19:17	220917-1
	Calcium	5010	ug/L	5000	ug/L	100.3	90.0 - 110.0	MS	17-SEP-22 19:17	220917-1
CCV06										
	Boron	101	ug/L	100	ug/L	101	90.0 - 110.0	MS	17-SEP-22 19:55	220917-1
	Calcium	5010	ug/L	5000	ug/L	100.3	90.0 - 110.0	MS	17-SEP-22 19:55	220917-1

\*Analytical Methods:

# METALS -2bCRDL Standard for ICP & ICPMS

**SDG No:** 593105

Contract: DMNN00101 Lab Code: GEL

**Instrument ID:** ICPMS15

Sample ID	<u>Analyte</u>	Result	<u>Units</u>	<u>True</u> <u>Value</u>	<u>Units</u>	<u>%</u> Recovery	Advisory Limits (%R)	<u>M*</u>	Analysis Date/Time	<u>Run</u> <u>Number</u>
CRDL01										
	Boron	15.4	ug/L	15	ug/L	102.5	80.0 - 120.0	MS	17-SEP-22 16:29	220917-1
	Calcium	236	ug/L	200	ug/L	117.9	80.0 - 120.0	MS	17-SEP-22 16:29	220917-1
CRDL02										
	Boron	17.9	ug/L	15	ug/L	119	80.0 - 120.0	MS	17-SEP-22 18:05	220917-1
	Calcium	239	ug/L	200	ug/L	119.6	80.0 - 120.0	MS	17-SEP-22 18:05	220917-1
CRDL03										
	Boron	18.4	ug/L	15	ug/L	122.4	80.0 - 120.0 *	MS	17-SEP-22 19:59	220917-1
	Calcium	242	ug/L	200	ug/L	120.9	80.0 - 120.0 *	MS	17-SEP-22 19:59	220917-1

\*Analytical Methods:

Metals
-3aInitial and Continuing Calibration Blank Summary

**SDG No.:** 593105

Contract: DMNN00101

Lab Code: GEL

Sample ID	<u>Analyte</u>	Result ug/L	Acceptance	Conc Qual	MDL	RDL	<u>Matrix</u>	<u>M*</u>	Analysis Date/Time	Run
ICB01	T)	5.0		**	<i>5.</i> 2	15.0	1.10	3.40	17 SED 22 14 25	220017 1
	Boron	5.2	+/-7.5	U	5.2	15.0	LIQ		17-SEP-22 16:25	220917–1
	Calcium	80.0	+/-100	U	80.0	200	LIQ	MS	17-SEP-22 16:25	220917-1
CCB01										
	Boron	5.2	+/-7.5	U	5.2	15.0	LIQ	MS	17-SEP-22 16:42	220917-1
	Calcium	80.0	+/-100	U	80.0	200	LIQ	MS	17-SEP-22 16:42	220917-1
CCB02										
ССВ02	Boron	5.2	+/-7.5	U	5.2	15.0	LIQ	MS	17-SEP-22 16:53	220917-1
	Calcium	80.0	+/-100	U	80.0	200	LIQ	MS	17-SEP-22 16:53	220917-1
CCD02										
CCB03	Boron	5.2	+/-7.5	U	5.2	15.0	LIQ	MS	17-SEP-22 18:08	220917-1
	Calcium	80.0	+/-100	U	80.0	200	LIQ	MS	17-SEP-22 18:08	220917-1
	Curcium	00.0	., 100	Č	00.0	200	222	1.10	17 SEI <b>22</b> 10100	
CCB04	Boron	5.2	+/-7.5	U	5.2	15.0	LIQ	MS	17-SEP-22 18:43	220917-1
	Calcium	80.0	+/-100	U	80.0	200	LIQ	MS	17-SEP-22 18:43	220917–1
CCB05	_									
	Boron	5.2	+/-7.5	U	5.2	15.0	LIQ	MS	17-SEP-22 19:21	220917–1
	Calcium	80.0	+/-100	U	80.0	200	LIQ	MS	17-SEP-22 19:21	220917-1
CCB06										
	Boron	5.2	+/-7.5	U	5.2	15.0	LIQ	MS	17-SEP-22 20:02	220917-1
	Calcium	80.0	+/-100	U	80.0	200	LIQ	MS	17-SEP-22 20:02	220917-1

\*Analytical Methods:

# METALS -3bPREPARATION BLANK SUMMARY

**SDG NO.** 593105

Contract: DMNN00101

Matrix: GW

Sample ID	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	Acceptance Window	Conc Qual	<u>M*</u>	MDL	RDL
1205191446								
	Boron	5.20	ug/L	+/-7.5	U	MS	5.20	15.0
	Calcium	80.0	ug/L	+/-100	U	MS	80.0	200

<sup>\*</sup>Analytical Methods:

# METALS -4-

# **Interference Check Sample**

**SDG No:** 593105

Contract: DMNN00101 Lab Code: GEL

**Instrument:** ICPMS15

Sample ID	<u>Analyte</u>	Result	<u>Units</u>	<u>True</u> <u>Value</u>	<u>Units</u>	% Recovery	Acceptance Window (%R)	<u>Analysis</u> <u>Date/Time</u>	<u>Run</u> <u>Number</u>
ICSA01									
	Boron	2.87	ug/L					17-SEP-22 16:32	220917-1
	Calcium	93700	ug/L	100000	ug/L	93.7	80.0 - 120.0	17-SEP-22 16:32	220917-1
ICSAB01									
	Boron	21.4	ug/L	20	ug/L	107	80.0 - 120.0	17-SEP-22 16:36	220917-1
	Calcium	94100	ug/L	100000	ug/L	94.1	80.0 - 120.0	17-SEP-22 16:36	220917-1
ICSA02									
	Boron	1.44	ug/L					17-SEP-22 17:55	220917-1
	Calcium	93900	ug/L	100000	ug/L	93.9	80.0 - 120.0	17-SEP-22 17:55	220917-1
ICSAB02									
	Boron	18.2	ug/L	20	ug/L	90.8	80.0 - 120.0	17-SEP-22 17:58	220917-1
	Calcium	94200	ug/L	100000	ug/L	94.2	80.0 - 120.0	17-SEP-22 17:58	220917-1
ICSA03									
	Boron	1.29	ug/L					17-SEP-22 19:48	220917-1
	Calcium	93900	ug/L	100000	ug/L	93.9	80.0 - 120.0	17-SEP-22 19:48	220917-1
ICSAB03									
	Boron	18.3	ug/L	20	ug/L	91.7	80.0 - 120.0	17-SEP-22 19:52	220917-1
	Calcium	92800	ug/L	100000	ug/L	92.8	80.0 - 120.0	17-SEP-22 19:52	220917-1

METALS -5a-

**Matrix Spike Summary** 

**SDG NO.** 593105

Client ID

AS-LF-02-2022Q3S

**Contract:** 

DMNN00101

Level: Low

Matrix:

GROUND WATER

% Solids:

Sample ID:

593105011

**Spike ID:** 1205191449

<u>Analyte</u>	<u>Units</u>	Acceptance Limit	Spiked Result	<u>C</u>	Sample Result	<u>C</u>	<u>Spike</u> <u>Added</u>	% Recovery Qual	<u>M*</u>
Boron	ug/L	75–125	125		8.97	В	100	116	MS
Calcium	ug/L	75–125	3370		1220		2000	108	MS

<sup>\*</sup>Analytical Methods:

MS SW846

METALS -5a-

**Matrix Spike Summary** 

**SDG NO.** 593105

Client ID

MW-BG-73-2022Q3S

**Contract:** 

DMNN00101

Level:

Low

Matrix:

GROUND WATER

% Solids:

**Sample ID:** 

593105013

**Spike ID:** 1205191452

<u>Analyte</u>	<u>Units</u>	Acceptance Limit	Spiked Result	<u>C</u>	Sample Result	<u>C</u>	Spike Added	% Recovery	Qual	<u>M*</u>
Boron	ug/L	75–125	120		10.9	В	100	109		MS
Calcium	ug/L	75–125	2440		280		2000	108		MS

<sup>\*</sup>Analytical Methods:

MS

# Metals -6Duplicate Sample Summary

**SDG No.:** 593105

Lab Code: GEL

Contract: DMNN00101

Client ID: AS-LF-02-2022Q3D

**Matrix:** 

GROUND WATER

Level: Low

**Sample ID:** 593105011

**Duplicate ID:** 1205191448

**Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result C	Duplicate Result C	RPD	Qual	M*
Boron	ug/L	+/-30	8.97 B	10.8 B	18.6		MS
Calcium	ug/L	+/-20%	1220	1240	2.1		MS

<sup>\*</sup>Analytical Methods:

# Metals -6Duplicate Sample Summary

**SDG No.:** 593105

Lab Code: GEL

Contract: DMNN00101

Client ID: MW-BG-73-2022Q3D

**Matrix:** 

GROUND WATER

Level: Low

**Sample ID:** 593105013

**Duplicate ID:** 1205191451

**Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result C	Duplicate Result C	RPD	Qual	M*
Boron	ug/L	+/-30	10.9 B	10.5 B	3.81		MS
Calcium	ug/L	+/-400	280	269	4.25		MS

<sup>\*</sup>Analytical Methods:

-7-

# **Laboratory Control Sample Summary**

**SDG NO.** 593105

Contract: DMNN00101

Aqueous LCS Source: Environmental Express

# **Solid LCS Source:**

Sample ID 1205191447	<u>Analyte</u>	<u>Units</u>	<u>True</u> <u>Value</u>	Result	<u>C</u>	% Recovery	Acceptance Limit	<u>M*</u>
	Boron Calcium	ug/L ug/L	100 2000	108 2090		108 105	80–120 80–120	MS MS

<sup>\*</sup>Analytical Methods:

# METALS -9Social Dilution Sample Supple

**Serial Dilution Sample Summary** 

**SDG NO.** 593105 **Client ID** AS-LF-02-2022Q3L

Contract: DMNN00101

Matrix: LIQUID Level: Low

**Sample ID:** 593105011 **Serial Dilution ID:** 1205191450

Analyte	Initial Yalue ug/L	<u>C</u>	Serial Value ug/L	<u>C</u>	<u>%</u> Difference	Qual	Acceptance Limit	<u>M*</u>
Boron	8.97	В	26	U	159.779			MS
Calcium	1220		1230		1.189			MS

<sup>\*</sup>Analytical Methods:

# METALS -9Social Dilution Sample Sumr

#### **Serial Dilution Sample Summary**

**SDG NO.** 593105 **Client ID** MW-BG-73-2022Q3L

Contract: DMNN00101

Matrix: LIQUID Level: Low

**Sample ID:** 593105013 **Serial Dilution ID:** 1205194414

Analyte	Initial Yalue ug/L	<u>C</u>	<u>Serial</u> <u>Value</u> ug/L	<u>C</u>	<u>%</u> Difference	Qual	Acceptance Limit	<u>M*</u>
Boron	10.9	В	620		5594.039			MS
Calcium	280		12100		4200.974			MS

<sup>\*</sup>Analytical Methods:

MS SW846 3005A/6020B

# METALS -13SAMPLE PREPARATION SUMMARY

SDG No: 593105 Method Type MS

Contract: DMNN00101 Lab Code: GEL

Sample ID	Client ID	<u>Sample</u> Type	<u>Matrix</u>	Prep Date	<u>Initial</u> <u>Sample</u> <u>Size</u>	Final Sample Volume Percent Solids
Batch Number	er 2316654					
1205191446	MB for batch 2316654	MB	G	15-SEP-22	50mL	50mL
1205191447	LCS for batch 2316654	LCS	G	15-SEP-22	50mL	50mL
1205191449	AS-LF-02-2022Q3S	MS	G	15-SEP-22	50mL	50mL
1205191452	MW-BG-73-2022Q3S	MS	G	15-SEP-22	50mL	50mL
1205191448	AS-LF-02-2022Q3D	DUP	G	15-SEP-22	50mL	50mL
1205191451	MW-BG-73-2022Q3D	DUP	G	15-SEP-22	50mL	50mL
593105001	MW-LF-01-2022Q3	SAMPLE	G	15-SEP-22	50mL	50mL
593105002	MW-LF-06-2022Q3	SAMPLE	G	15-SEP-22	50mL	50mL
593105003	MW-LF-07-2022Q3	SAMPLE	G	15-SEP-22	50mL	50mL
593105004	MW-LF-08-2022Q3	SAMPLE	G	15-SEP-22	50mL	50mL
593105005	MW-LF-10-2022Q3	SAMPLE	G	15-SEP-22	50mL	50mL
593105006	MW-LF-10A-2022Q3	SAMPLE	G	15-SEP-22	50mL	50mL
593105007	MW-LF-11-2022Q3	SAMPLE	G	15-SEP-22	50mL	50mL
593105008	DU-WAT-CCR-LF-22301	SAMPLE	G	15-SEP-22	50mL	50mL
593105009	FBLK-WAT-CCR-LF-22301	SAMPLE	G	15-SEP-22	50mL	50mL
593105010	AS-LF-01-2022Q3	SAMPLE	G	15-SEP-22	50mL	50mL
593105011	AS-LF-02-2022Q3	SAMPLE	G	15-SEP-22	50mL	50mL
593105012	AS-LF-03-2022Q3	SAMPLE	G	15-SEP-22	50mL	50mL
593105013	MW-BG-73-2022Q3	SAMPLE	G	15-SEP-22	50mL	50mL

SW846

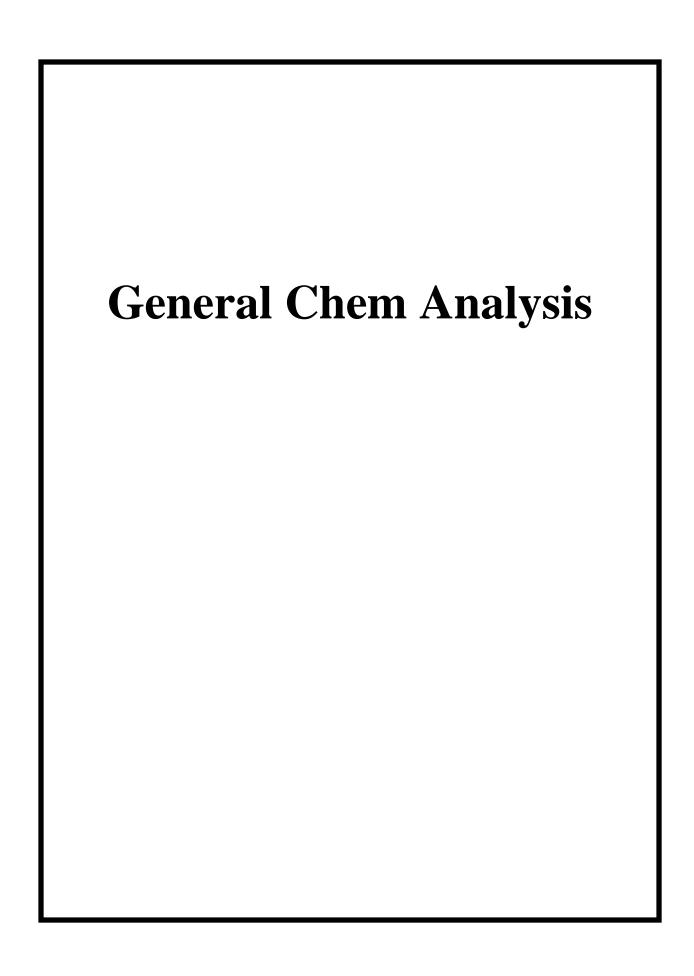
# METALS -13SAMPLE PREPARATION SUMMARY

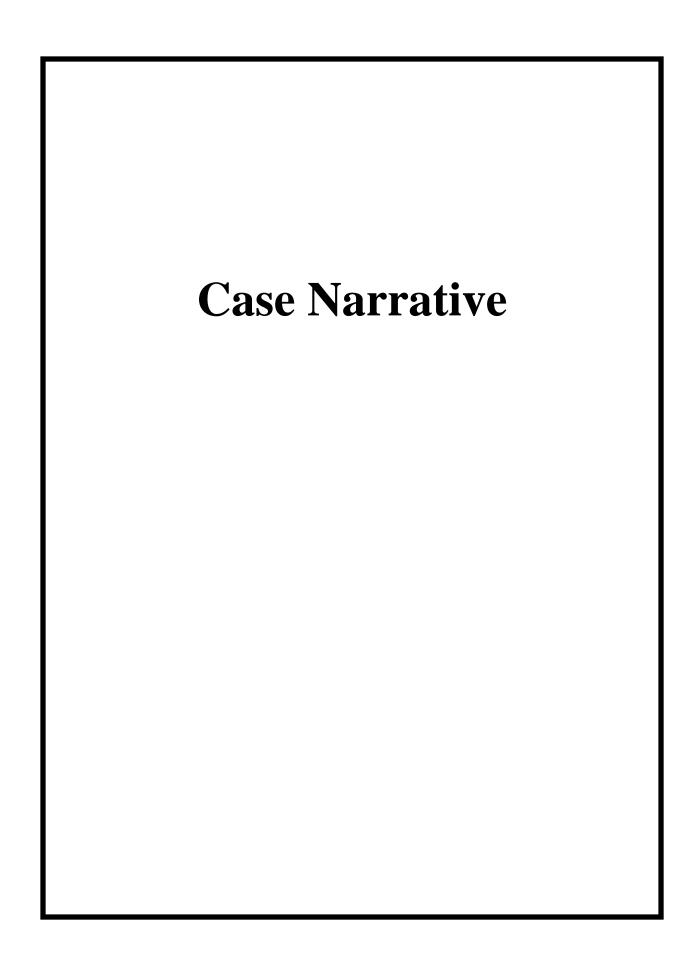
SDG No: 593105 Method Type MS

Contract: DMNN00101 Lab Code: GEL

Sample ID	<u>Client ID</u>	<u>Sample</u> Type	<u>Matrix</u>	<u>Prep</u> <u>Date</u>	<u>Initial</u> <u>Sample</u> <u>Size</u>	Final Sample Volume  Solids
593105014	FBLK-WAT-CCR-LF-22302	SAMPLE	G	15-SEP-22	50mL	50mL

SW846





# General Chemistry Technical Case Narrative Dominion Energy SDG #: 593105

**Product: Ion Chromatography Analytical Method:** EPA 300.0

Analytical Procedure: GL-GC-E-086 REV# 30 Analytical Batches: 2317683 and 2317984

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

<b>GEL Sample ID#</b>	Client Sample Identification
593105001	MW-LF-01-2022Q3
593105002	MW-LF-06-2022Q3
593105003	MW-LF-07-2022Q3
593105004	MW-LF-08-2022Q3
593105005	MW-LF-10-2022Q3
593105006	MW-LF-10A-2022Q3
593105007	MW-LF-11-2022Q3
593105008	DU-WAT-CCR-LF-22301
593105009	FBLK-WAT-CCR-LF-22301
593105010	AS-LF-01-2022Q3
593105011	AS-LF-02-2022Q3
593105012	AS-LF-03-2022Q3
593105013	MW-BG-73-2022Q3
593105014	FBLK-WAT-CCR-LF-22302
1205193505	Method Blank (MB)
1205193506	Laboratory Control Sample (LCS)
1205193507	592528001(NonSDG) Sample Duplicate (DUP)
1205193508	593105001(MW-LF-01-2022Q3) Sample Duplicate (DUP)
1205193509	592528001(NonSDG) Post Spike (PS)
1205193510	593105001(MW-LF-01-2022Q3) Post Spike (PS)
1205194183	Method Blank (MB)
1205194184	Laboratory Control Sample (LCS)
1205194185	593105011(AS-LF-02-2022Q3) Sample Duplicate (DUP)
1205194186	593105011(AS-LF-02-2022Q3) Post Spike (PS)
1205194188	593108007(MW-AP-08-2022Q3) Sample Duplicate (DUP)
1205194189	593108007(MW-AP-08-2022Q3) Post Spike (PS)

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

#### **Data Summary:**

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

#### **Technical Information**

#### **Sample Dilutions**

The following samples 1205193507 (Non SDG 592528001DUP), 1205193509 (Non SDG 592528001PS), 1205194188 (MW-AP-08-2022Q3DUP) and 1205194189 (MW-AP-08-2022Q3PS) were diluted because target analyte concentrations exceeded the calibration range. Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range.

#### **Miscellaneous Information**

#### **Additional Comments**

All method-driven specifications are followed for these analyses except where client-specific SOW requirements are required to be met.

Page 48 of 72 SDG: 593105

**Product:** Solids, Total Dissolved **Analytical Method:** SM 2540C

Analytical Procedure: GL-GC-E-001 REV# 19 Analytical Batches: 2316771 and 2316796

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

GEL Sample ID#	Client Sample Identification
593105001	MW-LF-01-2022Q3
593105002	MW-LF-06-2022Q3
593105003	MW-LF-07-2022Q3
593105004	MW-LF-08-2022Q3
593105005	MW-LF-10-2022Q3
593105006	MW-LF-10A-2022Q3
593105007	MW-LF-11-2022Q3
593105008	DU-WAT-CCR-LF-22301
593105009	FBLK-WAT-CCR-LF-22301
593105010	AS-LF-01-2022Q3
593105011	AS-LF-02-2022Q3
593105012	AS-LF-03-2022Q3
593105013	MW-BG-73-2022Q3
593105014	FBLK-WAT-CCR-LF-22302
1205191692	Method Blank (MB)
1205191693	Laboratory Control Sample (LCS)
1205191694	592720001(NonSDG) Sample Duplicate (DUP)
1205191695	592878002(NonSDG) Sample Duplicate (DUP)
1205191696	593105011(AS-LF-02-2022Q3) Sample Duplicate (DUP)
1205191743	Method Blank (MB)
1205191744	Laboratory Control Sample (LCS)
1205191745	592878006(NonSDG) Sample Duplicate (DUP)
1205191746	592969002(NonSDG) Sample Duplicate (DUP)
1205191747	592975005(NonSDG) Sample Duplicate (DUP)
1205191748	593103004(MW-04LF-2022Q3) Sample Duplicate (DUP)

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

#### **Data Summary:**

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

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

#### **Duplicate Relative Percent Difference (RPD) Statement**

The Relative Percent Difference (RPD) between the sample and duplicate falls outside of the established acceptance limits because of the heterogeneous matrix of the sample:

Analyte	Sample	Value
Total Dissolved Solids	1205191695 (Non SDG 592878002DUP)	15.7* (0%-5%)
	1205191746 (Non SDG 592969002DUP)	12.4* (0%-5%)
	1205191748 (MW-04LF-2022Q3DUP)	abs(19 - 33)* (+/-10 mg/L)

#### **Miscellaneous Information**

#### **Additional Comments**

All method-driven specifications are followed for these analyses except where client-specific SOW requirements are required to be met.

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

# Qualifier Definition Report for

DMNN001 Dominion Energy (50149867) Client SDG: 593105 GEL Work Order: 593105

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

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

#### Review/Validation

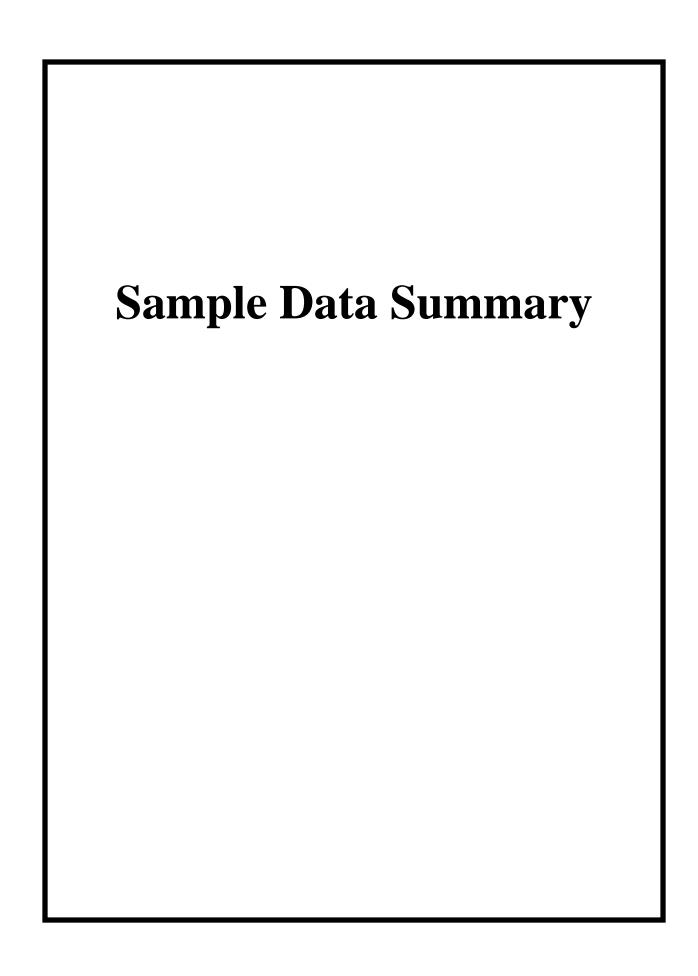
GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature: Name: Aubrey Kingsbury

Date: 27 SEP 2022 Title: Team Leader

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

**Certificate of Analysis** 

Project:

Client ID:

Report Date: September 27, 2022

DMNN00101

DMNN001

Company: Dominion Energy Services, Inc.

Address: 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks

Project: CCR Groundwater Monitoring - Level 1 Package

Client Sample ID: MW-LF-01-2022Q3

Sample ID: 593105001

Matrix: GW

Collect Date: 09-SEP-22 14:20 Receive Date: 14-SEP-22 Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Analyst Dat	Time Batch	Method
Ion Chromatography									
EPA 300.0 Anions Li	quid "As Recei	ved"							
Chloride	•	6.69	0.0670	0.200	mg/L		1 HXC1 09/16/2	22 1435 2317683	1
Fluoride	U	ND	0.0330	0.100	mg/L		1		
Sulfate	U	ND	0.133	0.400	mg/L		1		
Solids Analysis									
SM2540C TDS "As F	Received"								
Total Dissolved Solids	J	9.00	2.38	10.0	mg/L		CH6 09/15/2	22 1034 2316771	2
The following Analy	tical Methods v	vere performed:							
Method	Description				,	Analys	st Comments		

1 EPA 300.0 2 SM 2540C

#### **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

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

**Certificate of Analysis** 

Project:

Client ID:

Report Date: September 27, 2022

DMNN00101

DMNN001

Company: Dominion Energy Services, Inc.

Address: 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks

Project: CCR Groundwater Monitoring - Level 1 Package

Client Sample ID: MW-LF-06-2022Q3

Sample ID: 593105002

Matrix: GW

Collect Date: 09-SEP-22 13:20 Receive Date: 14-SEP-22 Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Analyst Dat	e Time Batch	Method
Ion Chromatography									
EPA 300.0 Anions Liqu	uid "As Recei	ved"							
Chloride		6.46	0.0670	0.200	mg/L		1 HXC1 09/16/	22 1506 2317683	1
Fluoride	U	ND	0.0330	0.100	mg/L		1		
Sulfate		0.590	0.133	0.400	mg/L		1		
Solids Analysis									
SM2540C TDS "As Re	ceived"								
Total Dissolved Solids		11.0	2.38	10.0	mg/L		CH6 09/15/	22 1034 2316771	2

The following Analytical Methods were performed:

Method Description Analyst Comments

EPA 300.0 SM 2540C

#### **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

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

# **Certificate of Analysis**

Project:

Client ID:

Report Date: September 27, 2022

DMNN00101

DMNN001

Company: Dominion Energy Services, Inc.

Address: 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks

Project: CCR Groundwater Monitoring - Level 1 Package

Client Sample ID: MW-LF-07-2022Q3

Sample ID: 593105003

Matrix: GW

Collect Date: 09-SEP-22 14:00 Receive Date: 14-SEP-22 Client Collector:

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Analyst Date	Time Batch	Method
Ion Chromatography									
EPA 300.0 Anions Li	quid "As Recei	ved"							
Chloride		7.79	0.0670	0.200	mg/L		1 HXC1 09/16/2	2 1537 2317683	1
Fluoride	J	0.0448	0.0330	0.100	mg/L		1		
Sulfate		1.41	0.133	0.400	mg/L		1		
Solids Analysis									
SM2540C TDS "As I	Received"								
Total Dissolved Solids	J	3.00	2.38	10.0	mg/L		CH6 09/15/2	2 1034 2316771	2
The following Analy	tical Methods v	vere performed:							
Mathad	Description					A 2017	et Commonts		

Description Analyst Comments EPA 300.0

SM 2540C

#### **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

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

**Certificate of Analysis** 

Project:

Client ID:

Report Date: September 27, 2022

DMNN00101

DMNN001

Company: Dominion Energy Services, Inc.

Address: 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks

Project: CCR Groundwater Monitoring - Level 1 Package

Client Sample ID: MW-LF-08-2022Q3

Sample ID: 593105004

Matrix: GW

Collect Date: 12-SEP-22 12:50
Receive Date: 14-SEP-22
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Analy	yst Date	Time Batch	Method
Ion Chromatography										
EPA 300.0 Anions Li	iquid "As Recei	ved"								
Chloride	-	5.07	0.0670	0.200	mg/L		1 JLD1	09/16/22	1846 2317984	1
Fluoride	U	ND	0.0330	0.100	mg/L		1			
Sulfate		0.563	0.133	0.400	mg/L		1			
Solids Analysis										
SM2540C TDS "As I	Received"									
Total Dissolved Solids	J	7.00	2.38	10.0	mg/L		CH6	09/15/22	1119 2316796	2
The following Analy	tical Methods v	vere performed:								
Method	Description					Analy	st Comment	·s		

 Method
 Description

 1
 EPA 300.0

 2
 SM 2540C

#### **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

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

**Certificate of Analysis** 

Project:

Client ID:

Report Date: September 27, 2022

DMNN00101

DMNN001

Dominion Energy Services, Inc. Company:

Address: 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks

Project: CCR Groundwater Monitoring - Level 1 Package

Client Sample ID: MW-LF-10-2022Q3

Sample ID: 593105005

Matrix: GW

Collect Date: 12-SEP-22 14:35 Receive Date: 14-SEP-22 Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Analys	st Date	Time Batch	Method
Ion Chromatography										
EPA 300.0 Anions Li	quid "As Recei	ved"								
Chloride	•	7.01	0.0670	0.200	mg/L		1 JLD1	09/16/22	1915 2317984	1
Fluoride	U	ND	0.0330	0.100	mg/L		1			
Sulfate		9.79	0.133	0.400	mg/L		1			
Solids Analysis										
SM2540C TDS "As R	Received"									
Total Dissolved Solids		33.0	2.38	10.0	mg/L		CH6	09/15/22	1119 2316796	2
The following Analy	tical Methods v	vere performed:								
Method	Description	Į.			I	Analys	st Comments	}		

EPA 300.0

SM 2540C

#### **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

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**Certificate of Analysis** 

Project:

Client ID:

Report Date: September 27, 2022

DMNN00101

DMNN001

Company: Dominion Energy Services, Inc.

Address: 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks

Project: CCR Groundwater Monitoring - Level 1 Package

Client Sample ID: MW-LF-10A-2022Q3

Sample ID: 593105006

Matrix: GW

Collect Date: 12-SEP-22 14:30
Receive Date: 14-SEP-22
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Ana	lyst Date	Time Batch	Method
Ion Chromatography										
EPA 300.0 Anions Li	iquid "As Recei	ived"								
Chloride	•	4.17	0.0670	0.200	mg/L		1 JLD1	09/16/22	1945 231798	4 1
Fluoride	U	ND	0.0330	0.100	mg/L		1			
Sulfate		0.791	0.133	0.400	mg/L		1			
Solids Analysis										
SM2540C TDS "As I	Received"									
Total Dissolved Solids		10.0	2.38	10.0	mg/L		CH6	09/15/22	1119 231679	5 2
The following Analy	tical Methods v	were performed:								
Method	Description					\ nolve	et Commer	te		

Method Description Analyst Comments

EPA 300.0

#### **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

SM 2540C

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: September 27, 2022

DMNN00101

DMNN001

Company: Dominion Energy Services, Inc.

Address: 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks

Project: CCR Groundwater Monitoring - Level 1 Package

Client Sample ID: MW-LF-11-2022Q3

Sample ID: 593105007

Matrix: GW

Collect Date: 12-SEP-22 12:40
Receive Date: 14-SEP-22
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Ana	alyst Date	Time Batch	Method
Ion Chromatograph	у									
EPA 300.0 Anions l	Liquid "As Recei	ved"								
Chloride	-	5.75	0.0670	0.200	mg/L		1 JLD	1 09/16/22	2015 2317984	1
Fluoride	U	ND	0.0330	0.100	mg/L		1			
Sulfate		0.499	0.133	0.400	mg/L		1			
Solids Analysis										
SM2540C TDS "As	Received"									
Total Dissolved Solids		11.0	2.38	10.0	mg/L		CHe	09/15/22	1119 2316796	2
The following Ana	lytical Methods v	vere performed:								
Mathad	Description					A noli	et Commo	ntc		

Method Description Analyst Comments

EPA 300.0

SM 2540C

#### **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

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

Project:

Client ID:

**Certificate of Analysis** 

Report Date: September 27, 2022

DMNN00101

DMNN001

Company: Dominion Energy Services, Inc.

Address: 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks

Project: CCR Groundwater Monitoring - Level 1 Package

Client Sample ID: DU-WAT-CCR-LF-22301

Sample ID: 593105008

Matrix: GW

Collect Date: 09-SEP-22 12:00
Receive Date: 14-SEP-22
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Analy	yst Date	Time Batch	Method
Ion Chromatography										
EPA 300.0 Anions Li	iquid "As Recei	ved"								
Chloride	-	5.50	0.0670	0.200	mg/L		1 JLD1	09/16/22	2045 2317984	1
Fluoride	U	ND	0.0330	0.100	mg/L		1			
Sulfate		0.870	0.133	0.400	mg/L		1			
Solids Analysis										
SM2540C TDS "As F	Received"									
Total Dissolved Solids	J	8.00	2.38	10.0	mg/L		CH6	09/15/22	1034 2316771	2
The following Analy	tical Methods v	vere performed:								
Mathad	Docomintion					A m a 1 - 1	t Commont			

Method Description Analyst Comments

EPA 300.0

Analyst Comments

SM 2540C

#### **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

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

# **Certificate of Analysis**

Project:

Client ID:

Report Date: September 27, 2022

DMNN00101

DMNN001

Dominion Energy Services, Inc. Company:

Address: 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks

CCR Groundwater Monitoring - Level 1 Package Project:

Client Sample ID: FBLK-WAT-CCR-LF-22301

Sample ID: 593105009

Matrix: GW

Collect Date: 09-SEP-22 10:20 Receive Date: 14-SEP-22 Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Analy	yst Date	Time Batch	Method
Ion Chromatography										
EPA 300.0 Anions Lic	quid "As Recei	ved"								
Chloride	J	0.171	0.0670	0.200	mg/L		1 JLD1	09/16/22	2115 2317984	1
Fluoride	U	ND	0.0330	0.100	mg/L		1			
Sulfate	U	ND	0.133	0.400	mg/L		1			
Solids Analysis										
SM2540C TDS "As R	eceived"									
Total Dissolved Solids	U	ND	2.38	10.0	mg/L		CH6	09/15/22	1034 2316771	2
The following Analyt	ical Methods v	vere performed:								
Method	Description	l			1	Analys	st Comment	S		

EPA 300.0

SM 2540C

#### **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

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

# **Certificate of Analysis**

Project:

Client ID:

Report Date: September 27, 2022

DMNN00101

DMNN001

Company: Dominion Energy Services, Inc.

Address: 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks

Project: CCR Groundwater Monitoring - Level 1 Package

Client Sample ID: AS-LF-01-2022Q3

Sample ID: 593105010

Matrix: GW

Collect Date: 09-SEP-22 11:45
Receive Date: 14-SEP-22
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Analy	yst Date	Time Batch	Method
Ion Chromatography										
EPA 300.0 Anions Li	iquid "As Recei	ved"								
Chloride	-	8.91	0.0670	0.200	mg/L		1 JLD1	09/16/22	2145 2317984	1
Fluoride	U	ND	0.0330	0.100	mg/L		1			
Sulfate		0.891	0.133	0.400	mg/L		1			
Solids Analysis										
SM2540C TDS "As F	Received"									
Total Dissolved Solids		17.0	2.38	10.0	mg/L		CH6	09/15/22	1034 2316771	2
The following Analy	tical Methods v	were performed:								
Method	Description				1	Analy	st Comment	S		

1 EPA 300.0 2 SM 2540C

#### **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

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

# **Certificate of Analysis**

Project:

Client ID:

Report Date: September 27, 2022

DMNN00101

DMNN001

Company: Dominion Energy Services, Inc.

Address: 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks

Project: CCR Groundwater Monitoring - Level 1 Package

Client Sample ID: AS-LF-02-2022Q3

Sample ID: 593105011

Matrix: GW

Collect Date: 09-SEP-22 10:25
Receive Date: 14-SEP-22
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Analy	yst Date	Time Batch	Method
Ion Chromatography										
EPA 300.0 Anions Li	iquid "As Recei	ved"								
Chloride		2.82	0.0670	0.200	mg/L		1 JLD1	09/16/22	2215 2317984	1
Fluoride	U	ND	0.0330	0.100	mg/L		1			
Sulfate		3.25	0.133	0.400	mg/L		1			
Solids Analysis										
SM2540C TDS "As I	Received"									
Total Dissolved Solids	J	7.00	2.38	10.0	mg/L		CH6	09/15/22	1034 2316771	2
The following Analy	tical Methods v	were performed:								
M . /1 1	D					A 1				

Method Description Analyst Comments

EPA 300.0

2 SM 2540C

#### **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

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

**Certificate of Analysis** 

Project:

Client ID:

Report Date: September 27, 2022

DMNN00101

DMNN001

Company: Dominion Energy Services, Inc.

Address: 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks

Project: CCR Groundwater Monitoring - Level 1 Package

Client Sample ID: AS-LF-03-2022Q3

Sample ID: 593105012

Matrix: GW

Collect Date: 09-SEP-22 10:15
Receive Date: 14-SEP-22
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Analy	st Date	Time Batch	Method
Ion Chromatography										
EPA 300.0 Anions Lie	quid "As Recei	ved"								
Chloride	-	5.48	0.0670	0.200	mg/L		1 JLD1	09/17/22	0214 2317984	1
Fluoride	U	ND	0.0330	0.100	mg/L		1			
Sulfate		0.587	0.133	0.400	mg/L		1			
Solids Analysis										
SM2540C TDS "As R	leceived"									
Total Dissolved Solids		10.0	2.38	10.0	mg/L		CH6	09/15/22	1034 2316771	2
The following Analyt	ical Methods v	vere performed:								
Method	Description	ı			I	Analys	st Comments	S		

#### **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

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

**Certificate of Analysis** 

Project:

Client ID:

Report Date: September 27, 2022

DMNN00101

DMNN001

Company: Dominion Energy Services, Inc.

Address: 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks

Project: CCR Groundwater Monitoring - Level 1 Package

Client Sample ID: MW-BG-73-2022Q3

Sample ID: 593105013

Matrix: GW

Collect Date: 09-SEP-22 11:50 Receive Date: 14-SEP-22 Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Anal	yst Date	Time Batch	Method
Ion Chromatography										
EPA 300.0 Anions Li	iquid "As Recei	ved"								
Chloride	•	2.52	0.0670	0.200	mg/L		1 JLD1	09/17/22	0244 2317984	1
Fluoride	U	ND	0.0330	0.100	mg/L		1			
Sulfate	J	0.398	0.133	0.400	mg/L		1			
Solids Analysis										
SM2540C TDS "As F	Received"									
Total Dissolved Solids	U	ND	2.38	10.0	mg/L		CH6	09/15/22	1034 2316771	2
The following Analy	tical Methods v	vere performed:								
3.6.4.1	D '					A 1				

Method Description Analyst Comments

EPA 300.0

EPA 300.0 SM 2540C

#### **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

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

**Certificate of Analysis** 

Project:

Client ID:

Report Date: September 27, 2022

DMNN00101

DMNN001

Company: Dominion Energy Services, Inc.

Address: 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks

Project: CCR Groundwater Monitoring - Level 1 Package

Client Sample ID: FBLK-WAT-CCR-LF-22302

Sample ID: 593105014

Matrix: GW

Collect Date: 12-SEP-22 14:20
Receive Date: 14-SEP-22
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Analy	yst Date	Time Batch	Method
Ion Chromatography										
EPA 300.0 Anions Li	quid "As Recei	ved"								
Chloride	-	0.287	0.0670	0.200	mg/L		1 JLD1	09/17/22	0314 2317984	1
Fluoride	U	ND	0.0330	0.100	mg/L		1			
Sulfate	U	ND	0.133	0.400	mg/L		1			
Solids Analysis										
SM2540C TDS "As F	Received"									
Total Dissolved Solids	U	ND	2.38	10.0	mg/L		CH6	09/15/22	1119 2316796	2
The following Analy	tical Methods v	were performed:								
Method	Description	1				Analys	st Comment	S		

1 EPA 300.0 2 SM 2540C

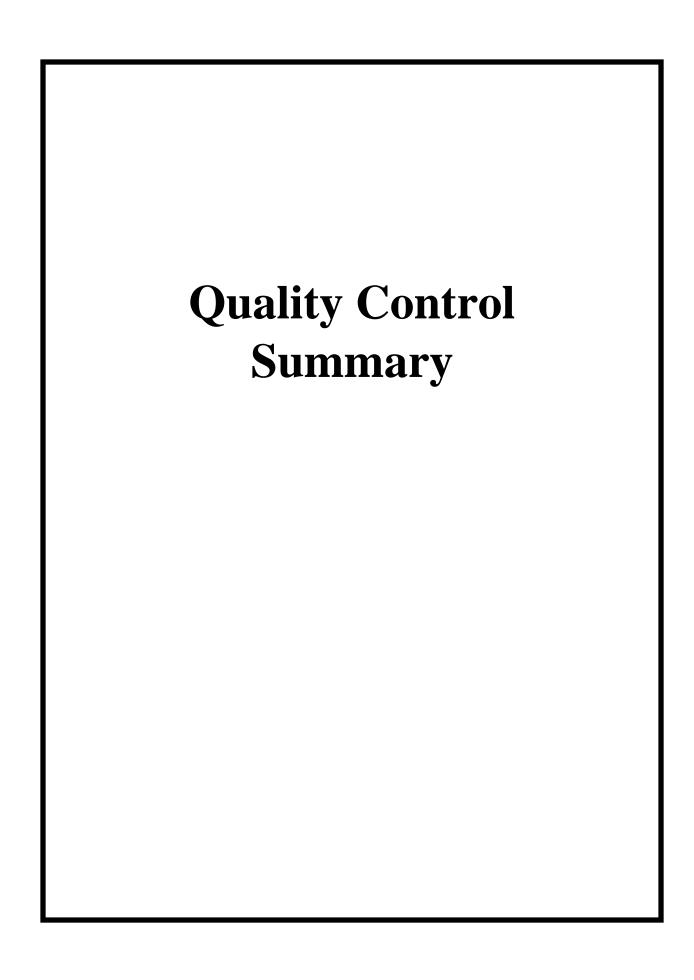
#### **Notes:**

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

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

**QC Summary** 

Report Date: September 27, 2022

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**Dominion Energy Services, Inc.** 

120 Tredegar Street Richmond, Virginia

**Kelly Hicks Contact:** 

Workorder: 593105

Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	6 Range Anlst	Date Time
Ion Chromatography Batch 2317683								
QC1205193507 592528001 DUP Chloride		1.45	1.40	mg/L	3.38		(0%-20%) HXC1	09/16/22 21:47
Fluoride		0.173	0.180	mg/L	3.63 ^		(+/2)	
Sulfate		52.3	52.2	mg/L	0.107		(0%-20%)	09/17/22 01:53
QC1205193508 593105001 DUP Chloride		6.69	6.57	mg/L	1.79		(0%-20%)	09/16/22 22:48
Fluoride	U	ND J	0.0353	mg/L	200 ^			
Sulfate	U	ND J	0.360	mg/L	200 ^			
QC1205193506 LCS Chloride	5.00		4.64	mg/L		92.8	(90%-110%)	09/16/22 21:16
Fluoride	2.50		2.57	mg/L		103	(90%-110%)	
Sulfate	10.0		9.88	mg/L		98.8	(90%-110%)	
QC1205193505 MB Chloride		U	ND	mg/L				09/16/22 20:45
Fluoride		U	ND	mg/L				
Sulfate		U	ND	mg/L				
QC1205193509 592528001 PS Chloride	5.00	1.45	6.12	mg/L		93.4	(90%-110%)	09/16/22 22:18

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# **QC Summary**

Workorder: 593105 Page 2 of 5 Sample Qual **Parmname** NOM  $\mathbf{QC}$ Units RPD% REC% Range Anlst Date Time Ion Chromatography Batch 2317683 Fluoride 2.50 0.173 2.64 mg/L 98.6 (90%-110%) HXC1 09/16/22 22:18 Sulfate 10.0 10.5 20.7 mg/L 103 (90%-110%) 09/17/22 02:24 QC1205193510 593105001 PS Chloride 104 09/16/22 23:19 5.00 6.69 11.9 (90%-110%) mg/L Fluoride 2.50 U ND 2.67 mg/L 107 (90%-110%) Sulfate 10.0 U ND 9.96 99.6 (90%-110%) mg/L2317984 Batch QC1205194185 593105011 DUP 2.82 2.81 0.0462 (0%-20%) JLD1 09/16/22 22:45 Chloride mg/L U ND U ND Fluoride mg/L N/A Sulfate 3.25 3.21 mg/L 1.18 (0%-20%)QC1205194188 593108007 DUP Chloride 17.3 17.3 mg/L 0.081 ^ (+/-8)09/17/22 17:58 Fluoride 0.975 0.975 mg/L 0.0205 09/17/22 08:43 (0%-20%)Sulfate 145 146 mg/L 0.364 (0%-20%)09/17/22 17:58 QC1205194184 LCS Chloride 5.00 4.85 mg/L 97 (90%-110%) 09/17/22 01:44 2.50 Fluoride 2.38 95.3 (90%-110%) mg/L Sulfate 10.0 10.0 mg/L 100 (90%-110%)

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# **QC Summary**

Page 3 of 5 NOM QC Units RPD% REC% Date Time **Parmname** Sample Qual Range Anlst Ion Chromatography 2317984 Batch QC1205194183 MB U ND JLD1 09/17/22 01:14 Chloride mg/L U Fluoride ND mg/LU Sulfate ND mg/LQC1205194186 593105011 PS

8.11

2.46

mg/L

mg/L

106

98.2

(90%-110%)

(90%-110%)

09/16/22 23:15

2.82

ND

3.25	13.3	mg/L	101 (90%-110%)
0.864	5.83	mg/L	99.3 (90%-110%) 09/17/22 18:27
0.975	3.56	mg/L	103 (90%-110%) 09/17/22 09:13
	0.864	0.864 5.83	0.864 5.83 mg/L

Sulfate	10.0	7.27	17.7	mg/L	105	(90%-110%)	09/17/22 18:27

Batch	2316771								
-	01694 592720001 D	DUP							
Total Dissolv	ed Solids		443	437	mg/L	1.36	(0%-5%)	CH6	09/15/22 10:34

QC1205191695 592878002 DUP Total Dissolved Solids	110	94.0	mg/L	15.7*	(0%-5%)	09/15/22 10:34
			8	-2.1	(0.000,0)	027.007.00

QC1205191696 593105011 DUP								
Total Dissolved Solids	J	7.00	J	5.00	mg/L	33.3 ^	(+/-20)	09/15/22 10:34

Workorder:

Chloride

Fluoride

**Solids Analysis** 

593105

5.00

2.50 U

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# **QC Summary**

Workorder: 593105 Page 4 of 5 QC **Parmname NOM** Sample Qual Units RPD% REC% Range Anlst Date Time Solids Analysis 2316771 Batch OC1205191693 LCS 300 302 101 **Total Dissolved Solids** mg/L (95%-105%) CH6 09/15/22 10:34 QC1205191692 MB **Total Dissolved Solids** U ND 09/15/22 10:34 mg/L Batch 2316796 QC1205191745 592878006 DUP 107 CH6 09/15/22 11:19 Total Dissolved Solids 111 mg/L 3.67 (0%-5%)OC1205191746 592969002 DUP 68.0 77.0 Total Dissolved Solids mg/L 12.4\* (0%-5%)09/15/22 11:19 QC1205191747 592975005 DUP **Total Dissolved Solids** 297 296 mg/L 0.337 (0%-5%)09/15/22 11:19 QC1205191748 593103004 DUP Total Dissolved Solids 33.0 19.0 mg/L 53.8 ^ (+/-20)09/15/22 11:19 QC1205191744 LCS Total Dissolved Solids 300 302 mg/L 101 (95%-105%) 09/15/22 11:19 QC1205191743 MB U ND 09/15/22 11:19 **Total Dissolved Solids** mg/L

#### **Notes:**

The Qualifiers in this report are defined as follows:

- < Result is less than value reported
- > Result is greater than value reported
- B The target analyte was detected in the associated blank.
- E General Chemistry--Concentration of the target analyte exceeds the instrument calibration range
- H Analytical holding time was exceeded
- J See case narrative for an explanation
- J Value is estimated

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## **QC Summary**

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

N/A RPD or %Recovery limits do not apply.

593105

N1 See case narrative

Workorder:

- 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.
- Per section 9.3.4.1 of Method 1664 Revision B, due to matrix spike recovery issues, this result may not be reported or used for regulatory compliance R purposes.
- R Sample results are rejected
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.
- X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Z Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
- RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
- 5-day BOD--The 2:1 depletion requirement was not met for this sample d
- 5-day BOD--Test replicates show more than 30% difference between high and low values. The data is qualified per the method and can be used for reporting purposes
- Preparation or preservation holding time was exceeded h

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

- ^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where the 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 72 of 72 SDG: 593105



This quality assurance (QA) review is based upon an examination of the data generated from the analyses of the samples collected as part of:

# Wateree Power Station Groundwater Sampling Samples Collected between: 9/7/2022 and 9/14/2022

This review was performed with guidance from the associated US EPA data validation guidelines and in accordance with the Quality Assurance Program Plan. These validation guidance documents specifically address analyses performed in accordance with the Contract Laboratory Program (CLP) analytical methods and are not completely applicable to the type of analyses and analytical protocols performed for the US EPA, SW-846, and Standard Methods utilized by the laboratory for these samples. Environmental Standards, Inc. (Environmental Standards) used professional judgment to determine the usability of the analytical results and compliance relative to the US EPA, SW-846, and Standard Methods utilized by the laboratory. This QA review was performed on the data associated with Job Number:

#### 592592

The findings offered in this report are based on a review of holding times and preservation, method blank results, field blank results, filter blank results, equipment blank results, tubing blank results, matrix spike/matrix spike duplicate recoveries and precision, laboratory control sample/laboratory control sample duplicate recoveries and precision, laboratory and field duplicate precision, total and dissolved results comparisons, and/or positive results between the method detection limit and quantitation limit.

The following results were qualified based on the data verification effort:

Sample	Location	Sample Type	Method	Anayte	T/D	Result	Qual	Reason Code(s)	MDL	QL	Uncertainty	Unit
MW-LF-22-2022Q3	MW-LF-22	N	EPA 300.0	Fluoride	N	0.0707	J	RL	0.0330	0.100		mg/L

Data Qua	<u>lifiers</u>
U	The analyte was not detected above the level of the sample reporting limit.
J	Quantitation is approximate due to limitations identified during data validation.
J+	The result is an estimated quantity; the result may be biased high.
J-	The result is an estimated quantity; the result may be biased low.
UJ	The analyte was not detected; the reporting limit is approximate and may be inaccurate or imprecise.
R	Unreliable positive result; analyte may or may not be present in sample.
Reason C	Codes and Explanations
BE	Equipment blank contamination.
BF	Field blank contamination.
BL	Laboratory blank contamination.
BN	Negative laboratory blank contamination.
FD	Field duplicate imprecision.
FG	Total versus Dissolved Imprecision.
Н	Holding time exceeded.
L	LCS and LCSD recoveries outside of acceptance limits
LD	Laboratory duplicate imprecision.
LP	LCS/LCSD imprecision.
M	MS and MSD recoveries outside of acceptance limits
MP	MS/MSD imprecision.
Q	Chemical Preservation issue.
RL	Reported Results between the MDL and QL.
S	Radium-226+228 flagged due to reporting protocol for combined results

Т	Temperature preservation issue.
Х	Percent solids < 50%.
Υ	Chemical yield outside of acceptance limits
ZZ	Other

Facility: Wateree Generating Station SDG: 592592

**Chemical Name** 

Total Dissolved Solids

7440-70-2

ug/L

2060

Chloride

Fluoride Sulfate

Boron

Calcium

**Analytic Method** 

EPA 300.0

EPA 300.0

SM 2540C

SW-846 6020B

			1										
		Lab Sample ID	592592001	92592001									
		Sys Sample Code	MW-LF-22-20	22Q3									
		Sample Name	MW-LF-22-20	22Q3									
		Sample Date	9/8/2022 10:0	5:00 AM									
		Location	WAT-MW-LF-	22 / MW	-LF-22								
		Sample Type	N										
		Matrix	GW										
		Parent Sample											
CAS Rn	Fraction	Result Unit	Final Result	Final Qual	Reason code	Uncertainty	Final MDL	Final RL	Final QL	Final Detect	Final Report	DF	Basis
16887-00-6	N	mg/L	9.99				0.134	0.134	0.400	Υ	Yes	2	NA
16984-48-8	N	mg/L	0.0707	J	RL		0.0330	0.0330	0.100	Υ	Yes	1	NA
14808-79-8	N	mg/L	1.06				0.133	0.133	0.400	Υ	Yes	1	NA
TDS	N	mg/L	21.0				2.38	2.38	10.0	Υ	Yes	1	NA
7440-42-8	т	ug/L	15.1				5.20	5.20	15.0	Υ	Yes	1	NA

80.0

80.0

200

Υ

Yes

NA

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This quality assurance (QA) review is based upon an examination of the data generated from the analyses of the samples collected as part of:

# Wateree Power Station Groundwater Sampling Samples Collected between: 9/7/2022 and 9/14/2022

This review was performed with guidance from the associated US EPA data validation guidelines and in accordance with the Quality Assurance Program Plan. These validation guidance documents specifically address analyses performed in accordance with the Contract Laboratory Program (CLP) analytical methods and are not completely applicable to the type of analyses and analytical protocols performed for the US EPA, SW-846, and Standard Methods utilized by the laboratory for these samples. Environmental Standards, Inc. (Environmental Standards) used professional judgment to determine the usability of the analytical results and compliance relative to the US EPA, SW-846, and Standard Methods utilized by the laboratory. This QA review was performed on the data associated with Job Number:

#### 593105

The findings offered in this report are based on a review of holding times and preservation, method blank results, field blank results, filter blank results, equipment blank results, tubing blank results, matrix spike/matrix spike duplicate recoveries and precision, laboratory control sample/laboratory control sample duplicate recoveries and precision, laboratory and field duplicate precision, total and dissolved results comparisons, and/or positive results between the method detection limit and quantitation limit.

The following results were qualified based on the data verification effort:

Sample	Location	Sample Type	Method	Anayte	T/D	Result	Qual	Reason Code(s)	MDL	QL	Uncertainty	Unit
MW-LF-01-2022Q3	MW-01LF	N	SM 2540C	Total Dissolved Solids	N	9.00	J	RL	2.38	10.0		mg/L
MW-LF-01-2022Q3	MW-01LF	N	SW-846 6020B	Boron	Т	11.5	J	RL	5.20	15.0		ug/L
MW-LF-01-2022Q3	MW-01LF	N	SW-846 6020B	Calcium	Т	125	J	RL	80.0	200		ug/L
MW-LF-06-2022Q3	MW-06LF	N	SW-846 6020B	Boron	Т	7.41	J	RL	5.20	15.0		ug/L
MW-LF-07-2022Q3	MW-LF-07	N	EPA 300.0	Fluoride	N	0.0448	J	RL	0.0330	0.100		mg/L
MW-LF-07-2022Q3	MW-LF-07	N	SM 2540C	Total Dissolved Solids	N	3.00	J	RL	2.38	10.0		mg/L
MW-LF-07-2022Q3	MW-LF-07	N	SW-846 6020B	Boron	Т	8.83	J	RL	5.20	15.0		ug/L
MW-LF-08-2022Q3	MW-LF-08	N	SM 2540C	Total Dissolved Solids	N	7.00	J	RL	2.38	10.0		mg/L
MW-LF-08-2022Q3	MW-LF-08	N	SW-846 6020B	Boron	Т	9.02	J	RL	5.20	15.0		ug/L
MW-LF-10-2022Q3	MW-LF-10	N	SW-846 6020B	Boron	Т	11.3	J	RL	5.20	15.0		ug/L
MW-LF-10A-2022Q3	MW-LF-10A	N	SW-846 6020B	Boron	Т	8.61	J	RL	5.20	15.0		ug/L
MW-LF-11-2022Q3	MW-LF-11	N	SW-846 6020B	Boron	Т	9.57	J	RL	5.20	15.0		ug/L
DU-WAT-CCR-LF-22301	AS-LF-03	FD	SM 2540C	Total Dissolved Solids	N	8.00	J	RL	2.38	10.0		mg/L
DU-WAT-CCR-LF-22301	AS-LF-03	FD	SW-846 6020B	Boron	Т	8.56	J	RL	5.20	15.0		ug/L
FBLK-WAT-CCR-LF-22301	Field Blank	FB	EPA 300.0	Chloride	N	0.171	J	RL	0.0670	0.200		mg/L
AS-LF-01-2022Q3	AS-LF-01	N	SW-846 6020B	Boron	Т	8.99	J	RL	5.20	15.0		ug/L
AS-LF-02-2022Q3	AS-LF-02	N	SM 2540C	Total Dissolved Solids	N	7.00	J	RL	2.38	10.0		mg/L
AS-LF-02-2022Q3	AS-LF-02	N	SW-846 6020B	Boron	Т	8.97	J	RL	5.20	15.0		ug/L
AS-LF-03-2022Q3	AS-LF-03	N	SW-846 6020B	Boron	Т	9.14	J	RL	5.20	15.0		ug/L
MW-BG-73-2022Q3	MW-BG-73	N	EPA 300.0	Sulfate	N	0.398	J	RL	0.133	0.400		mg/L
MW-BG-73-2022Q3	MW-BG-73	N	SW-846 6020B	Boron	Т	10.9	J	RL	5.20	15.0		ug/L

Data Qualifie	<u>rs</u>
U	The analyte was not detected above the level of the sample reporting limit.
J	Quantitation is approximate due to limitations identified during data validation.
J+	The result is an estimated quantity; the result may be biased high.
J-	The result is an estimated quantity; the result may be biased low.
UJ	The analyte was not detected; the reporting limit is approximate and may be inaccurate or imprecise.

Unreliable positive result; analyte may or may not be present in sample.  des and Explanations  Equipment blank contamination.
•
Equipment blank contamination.
Field blank contamination.
Laboratory blank contamination.
Negative laboratory blank contamination.
Field duplicate imprecision.
Total versus Dissolved Imprecision.
Holding time exceeded.
LCS and LCSD recoveries outside of acceptance limits
Laboratory duplicate imprecision.
LCS/LCSD imprecision.
MS and MSD recoveries outside of acceptance limits
MS/MSD imprecision.
Chemical Preservation issue.
Reported Results between the MDL and QL.
Radium-226+228 flagged due to reporting protocol for combined results
Temperature preservation issue.
Percent solids < 50%.
Chemical yield outside of acceptance limits
Other

				Lab Sample ID	593105001										
				Sys Sample Code	MW-LF-01-20	22Q3									
				Sample Name	MW-LF-01-20	22Q3									
				Sample Date	9/9/2022 2:20:	00 PM									
				Location	WAT-MW-01L	F/MW-	01LF								
				Sample Type	N										
				Matrix	GW										
				Parent Sample											
Analytic Method	Chemical Name	CAS Rn	Fraction	Result Unit	Final Result	Final Qual	Reason code	Uncertainty	Final MDL	Final RL	Final QL	Final Detect	Final Report		Basis
EPA 300.0	Chloride	16887-00-6	N	mg/L	6.69				0.0670	0.0670	0.200	Υ	Yes	1	NA
	Fluoride	16984-48-8	N	mg/L		U			0.0330	0.0330	0.100	N	Yes	1	NA
	Sulfate	14808-79-8	N	mg/L		U			0.133	0.133	0.400	N	Yes	1	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	9.00	J	RL		2.38	2.38	10.0	Υ	Yes	1	NA
SW-846 6020B	Boron	7440-42-8	Т	ug/L	11.5	J	RL		5.20	5.20	15.0	Υ	Yes	1	NA
	Calcium	7440-70-2	Т	ug/L	125	J	RL		80.0	80.0	200	Υ	Yes	1	NA

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Boron Calcium

7440-70-2

ug/L

925

Analytic Method

EPA 300.0

SM 2540C

SW-846 6020B

			Lab Sample ID	593105002										
			Sys Sample Code	MW-LF-06-20	22Q3									
			Sample Name	MW-LF-06-20	22Q3									
			Sample Date	9/9/2022 1:20	:00 PM									
			Location	WAT-MW-06L	F/MW-	06LF								
			Sample Type	N										
			Matrix	GW										
			Parent Sample									-		
Chemical Name	CAS Rn	Fraction	Result Unit	Final Result	Final Qual	Reason code	Uncertainty	Final MDL	Final RL	Final QL	Final Detect	Final Report	DF	Basis
Chloride	16887-00-6	N	mg/L	6.46				0.0670	0.0670	0.200	Υ	Yes	1	NA
Fluoride	16984-48-8	N	mg/L		U			0.0330	0.0330	0.100	N	Yes	1	NA
Sulfate	14808-79-8	N	mg/L	0.590				0.133	0.133	0.400	Υ	Yes	1	NA
Total Dissolved Solids	TDS	N	mg/L	11.0				2.38	2.38	10.0	Υ	Yes	1	NA
Boron	7440-42-8	Т	ug/L	7.41	J	RL		5.20	5.20	15.0	Υ	Yes	1	NA

80.0

80.0

200

Υ

Yes

NA

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				Lab Sample ID	593105003										
				Sys Sample Code	MW-LF-07-20	22Q3									
				Sample Name	MW-LF-07-20										
				Sample Date	9/9/2022 2:00:										
				Location	WAT-MW-LF-		-LF-07								
				Sample Type	N										
				Matrix	GW										
				Parent Sample											
Analytic Method	Chemical Name	CAS Rn	Fraction	Result Unit	Final Result	Final Qual	Reason code	Uncertainty	Final MDL	Final RL	Final QL	Final Detect	Final Report		Basis
EPA 300.0	Chloride	16887-00-6	N	mg/L	7.79				0.0670	0.0670	0.200	Υ	Yes	1	NA
	Fluoride	16984-48-8	N	mg/L	0.0448	J	RL		0.0330	0.0330	0.100	Υ	Yes	1	NA
	Sulfate	14808-79-8	N	mg/L	1.41				0.133	0.133	0.400	Υ	Yes	1	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	3.00	J	RL		2.38	2.38	10.0	Υ	Yes	1	NA
SW-846 6020B	Boron	7440-42-8	Т	ug/L	8.83	J	RL		5.20	5.20	15.0	Υ	Yes	1	NA
	Calcium	7440-70-2	ĪΤ	ug/L	1010				80.0	80.0	200	Υ	Yes	1	NA

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				Lab Sample ID	593105004										
				Sys Sample Code	MW-LF-08-202	22Q3									
				Sample Name	MW-LF-08-202	22Q3									
				Sample Date	9/12/2022 12:5	50:00 PN	1								
				Location	WAT-MW-LF-(	08 / MW-	LF-08								
				Sample Type	N										
				Matrix	GW										
				Parent Sample											
Analytic Method	Chemical Name	CAS Rn	Fraction	Result Unit	Final Result	Final Qual	Reason code	Uncertainty	Final MDL	Final RL	Final QL	Final Detect	Final Report	DF	Basis
EPA 300.0	Chloride	16887-00-6	N	mg/L	5.07				0.0670	0.0670	0.200	Υ	Yes	1	NA
	Fluoride	16984-48-8	N	mg/L		U			0.0330	0.0330	0.100	N	Yes	1	NA
	Sulfate	14808-79-8	N	mg/L	0.563				0.133	0.133	0.400	Υ	Yes	1	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	7.00	J	RL		2.38	2.38	10.0	Υ	Yes	1	NA
SW-846 6020B	Boron	7440-42-8	Т	ug/L	9.02	J	RL		5.20	5.20	15.0	Υ	Yes	1	NA
	Calcium	7440-70-2	Т	ug/L	850				80.0	80.0	200	Υ	Yes	1	NA

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				Lab Sample ID	593105005										
				Sys Sample Code	MW-LF-10-202	22Q3									
				Sample Name	MW-LF-10-202	22Q3									
				Sample Date	9/12/2022 2:35	5:00 PM									
				Location	WAT-MW-LF-	10 / MW-	LF-10								
				Sample Type	N										
				Matrix	GW										
				Parent Sample											
Analytic Method	Chemical Name	CAS Rn	Fraction	Result Unit	Final Result	Final Qual	Reason code	Uncertainty	Final MDL	Final RL	Final QL	Final Detect	Final Report		Basis
EPA 300.0	Chloride	16887-00-6	N	mg/L	7.01				0.0670	0.0670	0.200	Υ	Yes	1	NA
	Fluoride	16984-48-8	N	mg/L		U			0.0330	0.0330	0.100	N	Yes	1	NA
	Sulfate	14808-79-8	N	mg/L	9.79				0.133	0.133	0.400	Υ	Yes	1	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	33.0				2.38	2.38	10.0	Υ	Yes	1	NA
SW-846 6020B	Boron	7440-42-8	Т	ug/L	11.3	J	RL		5.20	5.20	15.0	Υ	Yes	1	NA
	Calcium	7440-70-2	Т	ug/L	2890				80.0	80.0	200	Υ	Yes	1	NA

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				Lab Sample ID											
				Sys Sample Code	MW-LF-10A-2	022Q3									
				Sample Name	MW-LF-10A-2	022Q3									
				Sample Date	9/12/2022 2:3	0:00 PM									
				Location	WAT-MW-LF-	10A / M\	V-LF-10A								
				Sample Type	N										
				Matrix	GW										
				Parent Sample											
Analytic Method	Chemical Name	CAS Rn	Fraction	Result Unit	Final Result	Final Qual	Reason code	Uncertainty	Final MDL	Final RL	Final QL	Final Detect	Final Report		Basis
EPA 300.0	Chloride	16887-00-6	N	mg/L	4.17				0.0670	0.0670	0.200	Υ	Yes	1	NA
	Fluoride	16984-48-8	N	mg/L		U			0.0330	0.0330	0.100	N	Yes	1	NA
	Sulfate	14808-79-8	N	mg/L	0.791				0.133	0.133	0.400	Υ	Yes	1	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	10.0				2.38	2.38	10.0	Y	Yes	1	NA
SW-846 6020B	Boron	7440-42-8	Т	ug/L	8.61	J	RL		5.20	5.20	15.0	Υ	Yes	1	NA
	Calcium	7440-70-2	Т	ua/L	332				80.0	80.0	200	Υ	Yes	1	NA

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				Lab Sample ID	593105007										
				Sys Sample Code	MW-LF-11-20	22Q3									
				Sample Name	MW-LF-11-20	22Q3									
				Sample Date	9/12/2022 12:	40:00 PI	Л								
				Location	WAT-MW-LF-	11 / MW	-LF-11								
				Sample Type	N										
				Matrix	GW										
				Parent Sample											
Analytic Method	Chemical Name	CAS Rn	Fraction	Result Unit	Final Result	Final Qual	Reason code	Uncertainty	Final MDL	Final RL	Final QL	Final Detect	Final Report		Basis
EPA 300.0	Chloride	16887-00-6	N	mg/L	5.75				0.0670	0.0670	0.200	Υ	Yes	1	NA
	Fluoride	16984-48-8	N	mg/L		U			0.0330	0.0330	0.100	N	Yes	1	NA
	Sulfate	14808-79-8	N	mg/L	0.499				0.133	0.133	0.400	Υ	Yes	1	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	11.0				2.38	2.38	10.0	Υ	Yes	1	NA
SW-846 6020B	Boron	7440-42-8	Т	ug/L	9.57	J	RL		5.20	5.20	15.0	Υ	Yes	1	NA
	Calcium	7440-70-2	Т	ug/L	379				80.0	80.0	200	Υ	Yes	1	NA

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Lab Sample ID	593105008													
Sys Sample Code	DU-WAT-CCR	R-LF-223	01											
Sample Name	DU-WAT-CCR	R-LF-223	01											
Sample Date	9/9/2022 12:00	0:00 PM												
Location	WAT-AS-LF-0	-AS-LF-03 / AS-LF-03												
Sample Type	FD													
Matrix	GW													
Parent Sample	AS-LF-03-202	2Q3												
Result Unit	Final Result	Final Qual	Reason code	Uncertainty	Final MDL	Final RL	Final QL	Final Detect	Final Report	DF	Basis			
1														

				I aront bampio	710 El 00 E0E	_ ~~									
Analytic Method	Chemical Name	CAS Rn	Fraction	Result Unit	Final Result	Final Qual	Reason code	Uncertainty	Final MDL	Final RL	Final QL	Final Detect	Final Report		Basis
EPA 300.0	Chloride	16887-00-6	N	mg/L	5.50				0.0670	0.0670	0.200	Υ	Yes	1	NA
	Fluoride	16984-48-8	N	mg/L		J			0.0330	0.0330	0.100	N	Yes	1	NA
	Sulfate	14808-79-8	N	mg/L	0.870				0.133	0.133	0.400	Υ	Yes	1	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	8.00	J	RL		2.38	2.38	10.0	Υ	Yes	1	NA
SW-846 6020B	Boron	7440-42-8	Т	ug/L	8.56	J	RL		5.20	5.20	15.0	Υ	Yes	1	NA
	Calcium	7440-70-2	Т	ug/L	639				80.0	80.0	200	Y	Yes	1	NA

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Analytic Method

EPA 300.0

SM 2540C

SW-846 6020B

				Lab Sample ID	593105009										
				Sys Sample Code	FBLK-WAT-C	CR-LF-2	2301								
				Sample Name	FBLK-WAT-C	CR-LF-2	2301								
				Sample Date	9/9/2022 10:20	0:00 AM									
				Location	WAT-CCRLF-	FB / Fiel	d Blank								
				Sample Type	FB										
				Matrix	AQ										
				Parent Sample											
d	Chemical Name	CAS Rn	Fraction	Result Unit	Final Result	Final Qual	Reason code	Uncertainty	Final MDL	Final RL	Final QL	Final Detect	Final Report	DF	Basis
	Chloride	16887-00-6	N	mg/L	0.171	J	RL		0.0670	0.0670	0.200	Υ	Yes	1	NA
	Fluoride	16984-48-8	N	mg/L		U			0.0330	0.0330	0.100	N	Yes	1	NA
	Sulfate	14808-79-8	N	mg/L		U			0.133	0.133	0.400	N	Yes	1	NA
	Total Dissolved Solids	TDS	N	mg/L		U			2.38	2.38	10.0	N	Yes	1	NA
	Boron	7440-42-8	Т	ug/L		U			5.20	5.20	15.0	N	Yes	1	NA
	Calcium	7440-70-2	T	ug/L		U			80.0	80.0	200	N	Yes	1	NA

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				Lab Sample ID											
				Sys Sample Code	AS-LF-01-202	2Q3									
				Sample Name	AS-LF-01-202	2Q3									
				Sample Date	9/9/2022 11:4	5:00 AM									
				Location	WAT-AS-LF-0	1 / AS-L	F-01								
				Sample Type	N										
				Matrix	GW										
				Parent Sample											
Analytic Method	Chemical Name	CAS Rn	Fraction	Result Unit	Final Result	Final Qual	Reason code	Uncertainty	Final MDL	Final RL	Final QL	Final Detect	Final Report		Basis
EPA 300.0	Chloride	16887-00-6	N	mg/L	8.91				0.0670	0.0670	0.200	Υ	Yes	1	NA
	Fluoride	16984-48-8	N	mg/L		U			0.0330	0.0330	0.100	N	Yes	1	NA
	Sulfate	14808-79-8	N	mg/L	0.891				0.133	0.133	0.400	Υ	Yes	1	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	17.0				2.38	2.38	10.0	Y	Yes	1	NA
SW-846 6020B	Boron	7440-42-8	Т	ug/L	8.99	J	RL		5.20	5.20	15.0	Υ	Yes	1	NA
	Calcium	7440-70-2	Т	ug/L	1200				80.0	80.0	200	Υ	Yes	1	NA

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				Lab Sample ID											
				Sys Sample Code	AS-LF-02-202	2Q3									
				Sample Name	AS-LF-02-202	2Q3									
				Sample Date	9/9/2022 10:2	5:00 AM									
				Location	WAT-AS-LF-0	2 / AS-L	F-02								
				Sample Type	N										
				Matrix	GW										
				Parent Sample											
Analytic Method	Chemical Name	CAS Rn	Fraction	Result Unit	Final Result	Final Qual	Reason code	Uncertainty	Final MDL	Final RL	Final QL	Final Detect	Final Report	DF	Basis
EPA 300.0	Chloride	16887-00-6	N	mg/L	2.82				0.0670	0.0670	0.200	Υ	Yes	1	NA
	Fluoride	16984-48-8	N	mg/L		U			0.0330	0.0330	0.100	N	Yes	1	NA
	Sulfate	14808-79-8	N	mg/L	3.25				0.133	0.133	0.400	Υ	Yes	1	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	7.00	J	RL		2.38	2.38	10.0	Y	Yes	1	NA
SW-846 6020B	Boron	7440-42-8	Т	ug/L	8.97	J	RL		5.20	5.20	15.0	Υ	Yes	1	NA
	Calcium	7440-70-2	Т	ug/L	1220				80.0	80.0	200	Υ	Yes	1	NA

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				Lab Sample ID	593105012												
				Sys Sample Code	AS-LF-03-202	2Q3											
				Sample Name	AS-LF-03-202	2Q3											
				Sample Date	9/9/2022 10:15	5:00 AM											
				Location	WAT-AS-LF-03 / AS-LF-03												
				Sample Type	N GW												
				Matrix													
				Parent Sample													
Analytic Method	Chemical Name	CAS Rn	Fraction	Result Unit	Final Result	Final Qual	Reason code	Uncertainty	Final MDL	Final RL	Final QL	Final Detect	Final Report		Basis		
EPA 300.0	Chloride	16887-00-6	N	mg/L	5.48				0.0670	0.0670	0.200	Υ	Yes	1	NA		
	Fluoride	16984-48-8	N	mg/L		U			0.0330	0.0330	0.100	N	Yes	1	NA		
	Sulfate	14808-79-8	N	mg/L	0.587				0.133	0.133	0.400	Υ	Yes	1	NA		
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	10.0				2.38	2.38	10.0	Y	Yes	1	NA		
SW-846 6020B	Boron	7440-42-8	Т	ug/L	9.14	J	RL		5.20	5.20	15.0	Υ	Yes	1	NA		
	Calcium	7440-70-2	Т	ug/L	658				80.0	80.0	200	Υ	Yes	1	NA		

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Calcium

7440-70-2

ug/L

					1										
				Lab Sample ID	593105013										
				Sys Sample Code	MW-BG-73-20	)22Q3									
				Sample Name	MW-BG-73-20	)22Q3									
				Sample Date	9/9/2022 11:50	0:00 AM									
				Location	WAT-MW-BG	-73 / MV	/-BG-73								
				Sample Type	N										
				Matrix	GW										
				Parent Sample											
Analytic Method	Chemical Name	CAS Rn	Fraction	Result Unit	Final Result	Final Qual	Reason code	Uncertainty	Final MDL	Final RL	Final QL	Final Detect	Final Report	DF	Basis
EPA 300.0	Chloride	16887-00-6	N	mg/L	2.52				0.0670	0.0670	0.200	Υ	Yes	1	NA
	Fluoride	16984-48-8	N	mg/L		U			0.0330	0.0330	0.100	N	Yes	1	NA
	Sulfate	14808-79-8	N	mg/L	0.398	J	RL		0.133	0.133	0.400	Υ	Yes	1	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L		U			2.38	2.38	10.0	N	Yes	1	NA
SW-846 6020B	Boron	7440-42-8	т	ug/L	10.9		RL		5.20	5.20	15.0	Υ	Yes	1	NA
O11 010 0020B	DOIGH	7440-42-0	'	ug/L	10.9	J	KL		3.20	5.20	13.0	ı	165	' '	INA

80.0

80.0

200

Yes

NA

280

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CAS Rn

16887-00-6

16984-48-8

14808-79-8

7440-42-8

7440-70-2

TDS

ug/L

**Chemical Name** 

Total Dissolved

Chloride

Fluoride

Sulfate

Solids

Boron

Calcium

Analytic Method

EPA 300.0

SM 2540C

SW-846 6020B

	Lab Sample ID	593105014											
	Sys Sample Code	FBLK-WAT-CO	SLK-WAT-CCR-LF-22302										
	Sample Name	FBLK-WAT-CO	BLK-WAT-CCR-LF-22302										
	Sample Date	9/12/2022 2:20	/12/2022 2:20:00 PM										
	Location	WAT-CCRLF-	AT-CCRLF-FB / Field Blank										
	Sample Type	FB											
	Matrix	AQ											
	Parent Sample												
Fraction	Result Unit	Final Result	Final Qual	Reason code	Uncertainty	Final MDL	Final RL	Final QL	Final Detect	Final Report	DF	Basis	
N	mg/L	0.287				0.0670	0.0670	0.200	Υ	Yes	1	NA	
N	mg/L		U			0.0330	0.0330	0.100	N	Yes	1	NA	
N	mg/L		U			0.133	0.133	0.400	N	Yes	1	NA	
N	mg/L		U			2.38	2.38	10.0	N	Yes	1	NA	
Т	ug/L		U			5.20	5.20	15.0	N	Yes	1	NA	

80.0

80.0

200

N

Yes

NA

U

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# Appendix E First Semiannual Detection Monitoring Program Statistical Evaluation



#### DOMINION ENERGY SOUTH CAROLINA

#### WATEREE STATION CLASS III LANDFILL

SEMIANNUAL DETECTION MONITORING

RICHLAND COUNTY, SOUTH CAROLINA

# CCR GROUNDWATER DETECTION MONITORING STATISTICAL ANALYSIS REPORT

For the

March 2022 Sampling Event

July 2022



Joyce Peterson, P.E.

Senior Environmental Engineer

Richard A. Mayer Jr., P.G.

Project Manager

TRC Environmental Corporation | Dominion Energy South Carolina Wateree Station Class III Landfill – Detection Monitoring

 $\verb|\GREENVILLE-FP1| WPGVL | PJT2 | 416559 | 0005 | WATEREE | R4165590005-014 | WATEREE | LF | CCR | DETECTION. DOCK | DCC | D$ 

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\\GREENVILLE-FP1\WPGVL\PJT2\416559\0005 WATEREE\R4165590005-014 WATEREE LF CCR DETECTION.DOCX

### Statistical Analysis Report

#### **Groundwater Sampling**

TRC Environmental Corporation (TRC) is providing this Statistically Significant Increases (SSI) notification for the Wateree Station Class III Landfill for the tenth semiannual detection monitoring event. Samples were collected on March 13<sup>th</sup> and 14<sup>th</sup>, 2022. The final laboratory analytical data packages for the event were received on March 22<sup>nd</sup>, 2022, and the data validation reports were received on April 1<sup>st</sup>, 2022. A verification resampling event for MW-LF-10 (calcium, chloride, and sulfate) was conducted on June 2<sup>nd</sup>, 2022. The final laboratory analytical package for the verification sampling event was received on June 16<sup>th</sup>, 2022, and the data validation report was received on June 23<sup>rd</sup>, 2022. This report addresses results from Detection Monitoring wells MW-LF-07, MW-LF-08, MW-LF-10, MW-LF-10A, MW-LF-11, and MW-LF-22. Background wells for the Class III Landfill include MW-BG-73, MW-LF-01, AS-LF-01, AS-LF-02, AS-LF-03, and MW-LF-06.

#### Statistical Analysis

Statistically Significant Level (SSL) exceedances above background concentrations include the following:

- MW-LF-07: none.
- MW-LF-08: none.
- MW-LF-10: calcium, chloride, fluoride, sulfate, and total dissolved solids (TDS).
- MW-LF-10A: none.
- MW-LF-11: none.
- MW-LF-22: chloride.

As has been done since the initiation of detection monitoring at the Wateree Station, the evaluation of potential SSIs was conducted using prediction limits to compare data from the background set of monitoring wells to the most recent results from the downgradient monitoring wells. The statistical calculations to generate prediction limits were conducted using United States Environmental Protection Agency's (USEPA's) ProUCL (v.5.1) software. TRC is currently evaluating the existing monitoring well network and updates to the Site's Statistical Analysis Plan (StAP) will be forthcoming which will formally establish and describe the statistical methods being employed. The prediction limits used for the first monitoring event in 2021 were calculated to be used for four semiannual sampling events, of which this is the third.

**Appendix A** presents the background data used for the prediction limit calculations. **Table 1** presents the BTVs calculated based on the background data. **Table 2** presents the data set for the tenth detection monitoring event and highlights results that are potential SSIs. **Appendix B** includes ProUCL outputs for

\\GREENVILLE-FP1\WPGVL\PJT2\416559\0005 WATEREE\R4165590005-014 WATEREE LF CCR DETECTION.DOCX

the trend tests used to evaluate potential SSI for calcium and chloride because the background data set has a statistically significant upward trend. An Alternative Source Demonstration (ASD) should be prepared for these potential SSIs.

# Table 1 Background Threshold Values for 2021 and 2022

# Table 1 Background Threshold Values for 2021 and 2022 Dominion Energy South Carolina Wateree Station Class III Landfill

CONSTITUENT	NUMBER of RESULTS	PERCENT DETECTED	DISTRIBUTION	TREND	BACKGROUND THRESHOLD VALUE	BASIS
Boron (μg/L)	55	16	Nonparametric	N/A	140	95% USL
Calcium (μg/L)	54 <sup>[1]</sup>	96	Nonparametric	Increasing	1.063 <sup>[2]</sup>	95% UCL of slope
Chloride (mg/L)	55	100	Nonparametric	Decreasing	-7.03E-5 <sup>[2]</sup>	95% UCL of slope
Fluoride (mg/L)	55	15	Nonparametric	N/A	0.1	95% USL
pH (s.u.)	55	100	Nonparametric	None	2.5 – 6.2	95% USL
Sulfate (mg/L	55	25	Nonparametric	N/A	7.89	95% USL
TDS (mg/L)	54 <sup>[1]</sup>	100	Gamma	None	111	95% HW UPL (k = 28)

<sup>[1]</sup> Outlier excluded from data set.

N/A Not Applicable – trend test not conducted for data sets with fewer than 50 percent detections.

<sup>[2]</sup> BTV for calcium and chloride are the UCL of the trend slope.

## Table 2 March 2022 Downgradient Results and Potential SSIs

Table 2

March 2022 Downgradient Results and Potential SSIs

Dominion Energy South Carolina

Wateree Station Class III Landfill

		CONSTITUENT / BTV / RESULT (mg/L except as noted) <sup>[1]</sup>									
WELL	BORON	CALCIUM	CHLORIDE	FLUORIDE	рН	SULFATE	TDS				
	140	1.063 <sup>[2]</sup> (6,670)	9.14	0.1	2.5 - 6.2	7.89	111				
BACKGROUND WELL	.s										
MW-BG-73	9.18 J	304	2.27	0.0330 U	4.56	0.377 J	4.29 J				
MW-LF-01	12.7 J	126 J	7.18	0.0330 U	4.41	0.301 J	11.4 J				
AS-LF-01	10.3 J	772	8.89	0.0330 U	4.50	0.752	22.9				
AS-LF-02	11.3 J	943	2.74	0.0330 U	5.00	3.43	12.9 J				
AS-LF-03	8.98 J	606	5.28	0.0330 U	4.37	0.433	3.40 U				
MW-LF-06	9.16 J	887	6.73	0.0330 U	4.91	0.604	10.0 J				
DOWNGRADIENT WE	LLS										
MW-LF-07	8.97 J	-0.831 (981)	8.91	0.0330 U	4.41	1.18	4.29 J				
MW-LF-08	8.16 J	-0.0748 (897)	5.57	0.0330 U	4.75	0.424	15.7				
MW-LF-10	21.7	3.092 (10,400) <sup>[3]</sup>	9.22 <sup>[3]</sup>	0.351	4.21	36.0 <sup>[3]</sup>	117				
MW-LF-10A	10.2 J	-7.441 (395)	4.14	0.0330 U	4.72	0.742	3.40 U				
MW-LF-11	10.5 J	-0398 (378)	5.89	0.0330 U	4.62	0.285 J	18.6				
MW-LF-22	15.8	-0.314 (1,950)	10.3	0.0330 U	4.34	1.11	7.14 J				

Shaded cells indicate an SSI.

<sup>[1]</sup> Boron and calcium concentration expressed in µg/L; pH expressed in standard units (s.u.).

<sup>[2]</sup> BTV for calcium is the UCL of the trend. Downgradient values for calcium are the LCLs of the trend for the well with the March 2022 concentrations in parentheses.

<sup>[3]</sup> Verification resample conducted on 6/2/2022; result of verification resample data used.

U The analyte was not detected above the level of the sample reporting limit.

J Estimated concentration.

# Appendix A Background Data Set for 2021 and 2022 Semiannual Detection Monitoring Events

#### Appendix A

### Background Data Set for 2021 and 2022 Semiannual Detection Monitoring Events

#### **Dominion Energy South Carolina**

#### Wateree Station Class III Landfill

			CONSTITUENT/RESULT (mg/L except as noted) [1]								
EVENT	WELL	BORON	CALCIUM	CHLORIDE	FLUORIDE	рН	SULFATE	TDS			
DM-2	MW-BG-73	44.2 U	266	2.14	0.025 U	4.82	0.129 U	25			
DM-3	MW-BG-73	21.9 U	161	2.16	0.025 U	4.84	0.129 U	22			
DM-4	MW-BG-73	21.9 U	338	2.54	0.008 U	4.41	0.129 U	20			
DM-5	MW-BG-73	38.458 U	343	2.62	0.008 U	3.69	0.063 U	18			
DM-6	MW-BG-73	38.458 U	335	2.39	0.008 U	4.51	0.063 U	10			
DM-7	MW-BG-73	38.458 U	245	2.25	0.008 U	4.98	0.063 U	51			
BL-1	MW-LF-01	55.7 U	93.7	5.33	0.033 U	3.64	0.129 U	19			
BL-2	MW-LF-01	55.7 U	74	5.3	0.033 U	4.25	0.129 U	24			
BL-3	MW-LF-01	55.7 U	79.4	5.83	0.044	3.56	0.129 U	35			
BL-4	MW-LF-01	55.7 U	116	5.99	0.033 U	4.85	0.129 U	33			
BL-5	MW-LF-01	44.2 U	90.8	6.05	0.033 U	4.74	0.129 U	22			
BL-6	MW-LF-01	44.2 U	48.1	5.3	0.033 U	4.02	0.129 U	40			
BL-7	MW-LF-01	44.2 U	60.2	5.16	0.041	4.37	0.129 U	34			
BL-8	MW-LF-01	44.2 U	1,440	5.09	0.038	4.53	0.87	32			
DM-1	MW-LF-01	63.7	52.8	5.85	0.033 U	4.53	0.129 U	33			
DM-2	MW-LF-01	44.2 U	54.4 U	5.71	< 0.025	4.6	0.129 U	35			
DM-3	MW-LF-01	21.9 U	59 U	5.49	0.025 U	2.48	0.129 U	65			
DM-4	MW-LF-01	60.2	87.9	5.96	0.008 U	5.47	0.129 U	54			
DM-5	MW-LF-01	38.458 U	74.1 [4]	5.85	0.008 U	4.44	0.063 U	33			
DM-6	MW-LF-01	38.458 U	102	6.47	0.008 U	4.41	0.063 U	29			
DM-7	MW-LF-01	75.9	372	6.31	0.008 U	4.38	0.063 U	56			
BL-4	MW-LF-06	55.7 U	714	6.81	0.033 U	5.08	0.129 U	38			
BL-5	MW-LF-06	44.2 U	739	6.9	0.033 U	4.8	0.129 U	28			

<sup>[1]</sup> Boron and calcium concentrations expressed in µg/L; pH expressed in standard units (s.u.).

 $<sup>\</sup>label{eq:continuous} \mbox{[2] Outlier with no verification resample-removed from data set.}$ 

<sup>[3]</sup> Missing data replaced by verification resample result (value shown on table).

<sup>[4]</sup> ND value replaced by verification resampling detection.

 $<sup>\</sup>ensuremath{\mathsf{U}}$  The analyte was not detected above the level of the sample reporting limit.

#### Appendix A (Continued)

#### Background Data Set for 2021 and 2022 Semiannual Detection Monitoring Events

#### **Dominion Energy South Carolina**

#### Wateree Station Class III Landfill

EVENT	WELL		CONSTITUENT/RESULT (mg/L except as noted) [1]								
EVENT	WELL	BORON	CALCIUM	CHLORIDE	FLUORIDE	рН	SULFATE	TDS			
BL-6	MW-LF-06	44.2 U	997	6.31	0.033 U	4.27	0.129 U	39			
BL-7	MW-LF-06	44.2 U	786	6.07	0.034	4.33	0.129 U	39			
BL-8	MW-LF-06	44.2 U	2,100	6.67	0.039	4.58	0.129 U	36			
DM-1	MW-LF-06	44.2 U	770	6.98	0.033 U	4.73	0.129 U	36			
DM-2	MW-LF-06	44.2 U	777	6.18	0.025 U	4.71	0.129 U	35			
DM-4	MW-LF-06	21.9 U	592	6.31	0.008 U	4.9	0.129 U	27			
DM-6	MW-LF-06	38.458 U	866	6.3	0.008 U	4.54	0.063 U	31			
DM-7	MW-LF-06	140	746	6.23	0.008 U	4.72	0.063 U	75			
BL-8	AS-LF-01	44.2 U	898	7.2	0.04	4.47	1.79	18			
DM-1	AS-LF-01	44.2 U	554	7.07 [3]	0.1 U	4.65	1.4 [3]	37 [3]			
DM-2	AS-LF-01	44.2 U	539	8.07	0.025 U	4.58	1.22	43			
DM-3	AS-LF-01	21.9 U	535	8.45	0.025 U	3.71	0.129 U	45			
DM-4	AS-LF-01	38.458 U	926	8.7	0.008 U	4.58	0.129 U	373 [2]			
DM-5	AS-LF-01	38.458 U	858	8.94	0.008 U	4.46	0.7	48			
DM-6	AS-LF-01	38.458 U	1,330	9.14	0.008 U	4.58	0.58	38			
DM-7	AS-LF-01	38.458 U	804	8.29	0.008 U	4.25	0.063 U	42			
BL-8	AS-LF-02	44.2 U	1,660	2.67	0.045	5.74	7.89	39			
DM-1	AS-LF-02	44.2 U	921	2.7 [3]	0.1 U [3]	5.16	2.9 [3]	28 [3]			
DM-2	AS-LF-02	44.2 U	24,800 [2]	2.82	0.025 U	6.2	4.6	102			
DM-3	AS-LF-02	21.9	1,180	2.73	0.025 U	5.12	2.29	43			
DM-4	AS-LF-02	38.458 U	6,300	2.73	0.008 U	5.67	3.61	62			
DM-5	AS-LF-02	38.7	738	2.78	0.008 U	4.94	2.17	47			
DM-6	AS-LF-02	38.458 U	6,670	2.82	0.008 U	5.78	2.94	91			

<sup>[1]</sup> Boron and calcium concentrations expressed in µg/L; pH expressed in standard units (s.u.).

<sup>[2]</sup> Outlier with no verification resample – removed from data set.

<sup>[3]</sup> Missing data replaced by verification resample result (value shown on table).

<sup>[4]</sup> ND value replaced by verification resampling detection.

 $<sup>\</sup>ensuremath{\mathsf{U}}$  The analyte was not detected above the level of the sample reporting limit.

#### Appendix A (Continued)

#### Background Data Set for 2021 and 2022 Semiannual Detection Monitoring Events

#### **Dominion Energy South Carolina**

#### Wateree Station Class III Landfill

EVENT	WELL		CONSTITUENT/RESULT (mg/L except as noted) [1]									
EVENT	WELL	BORON	CALCIUM	CHLORIDE	FLUORIDE	рН	SULFATE	TDS				
DM-7	AS-LF-02	77.3	769	2.78	0.008 U	5.01	2.09	47				
BL-8	AS-LF-03	44.2 U	777	5.44	0.041	4.68	0.129 U	22				
DM-1	AS-LF-03	44.2 U	557	5.49 [3]	0.1 U [3]	4.47	0.129 U [3]	24 [3]				
DM-2	AS-LF-03	44.2 U	520	5.73	0.025 U	4.5	0.129 U	32				
DM-3	AS-LF-03	21.9 U	562	5.95	0.025 U	3.75	0.129 U	54				
DM-4	AS-LF-03	25.7	519	6.08	0.008 U	4.13	0.129 U	39				
DM-5	AS-LF-03	38.458 U	575	5.64	0.008 U	4.35	0.063 U	38				
DM-6	AS-LF-03	38.458 U	689	5.77	0.008 U	4.27	0.063 U	19				
DM-7	AS-LF-03	47.9	665	5.4	0.008 U	4.32	0.063 U	57				

<sup>[1]</sup> Boron and calcium concentrations expressed in µg/L; pH expressed in standard units (s.u.).

<sup>[2]</sup> Outlier with no verification resample – removed from data set.

<sup>[3]</sup> Missing data replaced by verification resample result (value shown on table).

<sup>[4]</sup> ND value replaced by verification resampling detection.

U The analyte was not detected above the level of the sample reporting limit.

# Appendix B Trend Test Outputs

#### **Theil-Sen Trend Test Analysis**

**User Selected Options** 

Date/Time of Computation ProUCL 5.15/10/2022 4:46:02 PM

From File WorkSheet\_a.xls

Full Precision OFF

Average Replicates Replicates at sampling events will be averaged!

Confidence Coefficient 0.95 Level of Significance 0.05

#### Calcium-mw-lf-07

**General Statistics** 

General Statistics	
Number of Events	17
Number of Values Reported (n)	17
Number of Values After Averaging	17
Number of Replicates	0
Minimum	637
Maximum	2190
Mean	1377
Geometric Mean	1288
Median	1370
Standard Deviation	501.5
Coefficient of Variation	0.364
Mann-Kendall Statistics	
M-K Test Value (S)	-51
Tabulated p-value	0.021
Standard Deviation of S	24.26
Standardized Value of S	-2.061
Approximate p-value	0.0196
Approximate inference for Theil-Sen Trend Test	
Number of Slopes	136
Theil-Sen Slope	-0.514
Theil-Sen Intercept	23464

Statistically significant evidence of a decreasing trend at the specified level of significance.

One-sided 95% upper limit of Slope

95% LCL of Slope (0.025)

95% UCL of Slope (0.975)

87.95

-0.0653

-0.831

-0.0346

Theil-Sen Ti	rend Test Es	timates and	d Residuals						
#	Events	Values	Estimates	Residuals					
1	42503	1110	1628	-518.2					
2	42564	893	1597	-703.8					
3	42634	1110	1561	-450.9					
4	42691	1610	1532	78.43					
5	1499	690.8							
6	42816	1960	1467	492.6					
7	42879	2040	1435	605					
8	42941	2010	1403	606.9					
9	43005	1830	1370	460					
10	43354	1630	1191	439.3					
11	43529	1380	1101	279.2					
12	43706	1370	1010	360.1					
13	43901	1070	909.7	160.3					
14	44089	769	813.1	-44.1					
15	44263	817	723.7	93.29					
16	44454	637	625.7	11.25					
17	44635	981	532.6	448.4					
Calcium-m	w-lf-08								
General Sta	tistics								
Number of				17					
	Values Repo	orted (n)		17					
	Values Afte			17					
Number of		0 0		0					
Minimum	•			798					
Maximum				1760					
Mean				920.2					
Geometric	Mean			903					
Median				849					
Standard D	eviation			222.7					
Coefficient	0.242								
Mann-Kendall Statistics									
M-K Test Va	alue (S)			-4					
Tabulated p				0.452					
Standard D	eviation of S	5		24.28					
Standardize	ed Value of S	5		-0.124 0.451					
Approximate p-value									

#### Approximate inference for Theil-Sen Trend Test

Number of Slopes	136
Theil-Sen Slope	-0.00775
Theil-Sen Intercept	1182
M1	44.21
M2	91.79
95% LCL of Slope (0.025)	-0.0748
95% UCL of Slope (0.975)	0.0441

# Insufficient evidence to identify a significant trend at the specified level of significance.

#### Theil-Sen Trend Test Estimates and Residuals

#		Events	Values	Estimates	Residuals
	1	42503	974	852.9	121.1
	2	42564	950	852.4	97.58
	3	42634	841	851.9	-10.88
	4	42691	849	851.4	-2.439
	5	42754	816	851	-34.95
	6	42816	1760	850.5	909.5
	7	42879	847	850	-2.981
	8	42942	830	849.5	-19.49
	9	43005	798	849	-51
	10	43164	819	847.8	-28.77
	11	43354	817	846.3	-29.29
	12	43706	906	843.6	62.44
	13	43901	867	842.1	24.95
	14	44089	825	840.6	-15.59
	15	44263	908	839.2	68.75
	16	44454	939	837.8	101.2
	17	44635	897	836.4	60.64

#### Calcium-mw-lf-10

#### **General Statistics**

Number of Events	18
Number of Values Reported (n)	18
Number of Values After Averaging	18
Number of Replicates	0
Minimum	255
Maximum	20000
Mean	4589
Geometric Mean	1917

Median	1765
Standard Deviation	5457
Coefficient of Variation	1.189
Mann-Kendall Statistics	
M-K Test Value (S)	107
Tabulated p-value	0
Standard Deviation of S	26.4
Standardized Value of S	4.015
Approximate p-value	2.97E-05
Approximate inference for Theil-Sen Trend 1	Test
Number of Slopes	153
Theil-Sen Slope	5.323
Theil-Sen Intercept	-227595
M1'	54.79
One-sided 95% lower limit of Slope	3.408
95% LCL of Slope (0.025)	3.092
95% UCL of Slope (0.975)	6.604

# Statistically significant evidence of an increasing trend at the specified level of significance.

Theil-Sen Trend Test Estimates and Residuals

#		Events	Values	Estimates	Residuals
	1	42503	268	-1333	1601
	2	42564	294	-1009	1303
	3	42634	259	-635.9	894.9
	4	42691	255	-332.5	587.5
	5	42754	363	2.925	360.1
	6	42815	1790	327.7	1462
	7	42878	1320	663	657
	8	42942	1000	1004	-3.741
	9	43005	678	1342	-663.8
	10	43164	4810	2188	2622
	11	43354	12300	3200	9100
	12	43528	5460	4126	1334
	13	43706	1740	5074	-3334
	14	43901	4860	6112	-1252
	15	44088	9030	7107	1923
	16	44263	9780	8039	1741

17 18	44454 44635	8390 20000	9054 10019	-663.8 9981
Calcium-mw		20000	10019	9901
General Stat				
Number of E				8
	/alues Repor			8
	/alues After /	Averaging		8
Number of F	Replicates			0
Minimum				395
Maximum Mean				9770 3123
Geometric N	/lean			1782
Median	/ICall			1745
Standard De	viation			3289
Coefficient o				1.053
Mann-Kenda	all Statistics			
M-K Test Va	lue (S)			-4
Tabulated p-	-value			0.36
Standard De	viation of S			8.083
Standardized	d Value of S			-0.371
Approximate	e p-value			0.355
Approximate	e inference fo	or Theil-Sen	Trend Test	
Number of S	Slopes			28
Theil-Sen Slo	ре			-1.049
Theil-Sen Int	ercept			47899
M1				6.079
M2				21.92
	Slope (0.025)			-7.441 8.929
95% UCL of Slope (0.975)				

# Insufficient evidence to identify a significant trend at the specified level of significance.

#### Theil-Sen Trend Test Estimates and Residuals

#		Events	Values	Estimates	Residuals
	1	43445	5588	2321	3267
	2	43528	935	2234	-1299
	3	43706	403	2048	-1645

	4	43901	2190	1843	346.9
	5	44088	4400	1647	2753
	6	44263	9770	1463	8307
	7	44454	1300	1263	36.71
	8	44635	395	1073	-678.1
Calcium-	_		333	10/3	-076.1
Calcium	·111vv-11	-11			
General	Statict	ics			
Number					20
		s Observat	tions		20
		s Missing	LIOIIS		20
		ues Repor	ted (n)		18
		ues After <i>i</i>			18
Number			Averaging		2
Minimur		meates			182
Maximu					1180
Mean					387.1
Geometi	ric Me	an			316.6
Median	ic ivic	ari			264.5
Standard	314.9				
Coefficie	0.814				
000111010		· arracion			0.01
Mann-Ke	endall	Statistics			
M-K Test					24
Tabulate					0.184
	•	ation of S			26.38
Standard	lized V	alue of S			0.872
Approxir	nate p	-value			0.192
Approxir	nate ir	nference f	or Theil-Sen	Trend Test	
Number					153
Theil-Ser					0.0448
Theil-Ser	•				-1666
M1		•			50.65
M2					102.4
95% LCL	of Slo	pe (0.025)			-0.0398
		pe (0.975			0.216

Insufficient evidence to identify a significant trend at the specified level of significance.

# Events Values Estimates Residuals  1 42503 273 238.4 34.57 2 42564 242 241.2 0.84 3 42634 279 244.3 34.7 4 42691 239 246.8 -7.849 5 42753 278 249.6 28.37 6 42815 767 252.4 514.6 7 42878 198 255.2 -57.23 8 42942 195 258.1 -63.09 9 43005 200 260.9 -60.94 10 43164 279 268.1 10.94 11 43354 420 276.6 143.4 12 43528 218 284.4 -66.37 13 43705 256 292.3 -36.3 14 43901 245 301.1 -56.08 15 44089 182 309.5 -127.5 16 44263 352 317.3 34.7 19 44454 1180 325.8 854.2 20 44635 1164 334 830  Calcium-mw-If-22  General Statistics Number of Values Reported (n) Number of Values Reported (n) Number of Replicates 0 Minimum 979 Maximum 2240 Mean 1745 Geometric Mean 1689 Median 1820 Standard Deviation Coefficient of Variation 5 22.21  Mann-Kendall Statistics M-K Test Value (S) 10 Tabulated p-value 5 5 22.21  Standard Deviation of S 22.21  Standard Deviation of S 22.21  Standard Deviation of S 22.21  Standardized Value of S 5 22.21  Standard Deviation of S 22.21  Standard Deviation of S 22.21  Standard Deviation of S 22.21	Theil-Sen T	rend Test Es	timates and	d Residuals	
2 42564 242 241.2 0.84 3 42634 279 244.3 34.7 4 42691 239 246.8 -7.849 5 42753 278 249.6 28.37 6 42815 767 252.4 514.6 7 42878 198 255.2 -57.23 8 42942 195 258.1 -63.09 9 43005 200 260.9 -60.94 10 43164 279 268.1 10.94 11 43354 420 276.6 143.4 12 43528 218 284.4 -66.37 13 43705 256 292.3 -36.3 14 43901 245 301.1 -56.08 15 44089 182 309.5 -127.5 16 44263 352 317.3 34.7 19 44454 1180 325.8 854.2 20 44635 1164 334 830  Calcium-mw-lf-22  General Statistics Number of Events 16 Number of Values Reported (n) 16 Number of Values After Averaging 16 Number of Replicates 0 Minimum 979 Maximum 2240 Mean 1745 Geometric Mean 1689 Median 1920 Standard Deviation 0 0.247  Mann-Kendall Statistics M-K Test Value (S) 10 Tabulated p-value 0.3345 Standard Deviation of S 22.21	#	Events	Values	Estimates	Residuals
3 42634 279 244.3 34.7 4 42691 239 246.8 -7.849 5 42753 278 249.6 28.37 6 42815 767 252.4 514.6 7 42878 198 255.2 -57.23 8 42942 195 258.1 -63.09 9 43005 200 260.9 -60.94 10 43164 279 268.1 10.94 11 43354 420 276.6 143.4 12 43528 218 284.4 -66.37 13 43705 256 292.3 -36.3 14 43901 245 301.1 -56.08 15 44089 182 309.5 -127.5 16 44263 352 317.3 34.7 19 44454 1180 325.8 854.2 20 44635 1164 334 830  Calcium-mw-lf-22  General Statistics Number of Values Reported (n) 16 Number of Values After Averaging 16 Number of Replicates 0 Minimum 979 Maximum 2240 Mean 1745 Geometric Mean 1689 Median 1745 Geometric Mean 1689 Median 1820 Standard Deviation 0.247  Mann-Kendall Statistics M-K Test Value (S) 10 Tabulated p-value 0.345 Standard Deviation of S 22.21	1	42503	273	238.4	34.57
4       42691       239       246.8       -7.849         5       42753       278       249.6       28.37         6       42815       767       252.4       514.6         7       42878       198       255.2       -57.23         8       42942       195       258.1       -63.09         9       43005       200       260.9       -60.94         10       43164       279       268.1       10.94         11       43354       420       276.6       143.4         12       43528       218       284.4       -66.37         13       43705       256       292.3       -36.3         14       43901       245       301.1       -56.08         15       44089       182       309.5       -127.5         16       44263       352       317.3       34.7         19       44454       1180       325.8       854.2         20       44635       1164       334       830         Calcium-mw-lf-22         General Statistics         Number of Values Reported (n)       16         Number of Replicates </td <td>2</td> <td>42564</td> <td>242</td> <td>241.2</td> <td>0.84</td>	2	42564	242	241.2	0.84
5       42753       278       249.6       28.37         6       42815       767       252.4       514.6         7       42878       198       255.2       -57.23         8       42942       195       258.1       -63.09         9       43005       200       260.9       -60.94         10       43164       279       268.1       10.94         11       43354       420       276.6       143.4         12       43528       218       284.4       -66.37         13       43705       256       292.3       -36.3         14       43901       245       301.1       -56.08         15       44089       182       309.5       -127.5         16       44263       352       317.3       34.7         19       44454       1180       325.8       854.2         20       44635       1164       334       830         Calcium-mw-If-22     General Statistics  Number of Events  Number of Replicates  O  Minimum  979  Maximum  2240  Mean  1745  Geometric Mean  1689  Median  1745  Geometric Mean  1689  Median  1745  Geometric Mean  1689  Mann-Kendall Statistics  M-K Test Value (S)  10       10 <tr< td=""><td>3</td><td>42634</td><td>279</td><td>244.3</td><td>34.7</td></tr<>	3	42634	279	244.3	34.7
6 42815 767 252.4 514.6 7 42878 198 255.2 -57.23 8 42942 195 258.1 -63.09 9 43005 200 260.9 -60.94 10 43164 279 268.1 10.94 11 43354 420 276.6 143.4 12 43528 218 284.4 -66.37 13 43705 256 292.3 -36.3 14 43901 245 301.1 -56.08 15 44089 182 309.5 -127.5 16 44263 352 317.3 34.7 19 44454 1180 325.8 854.2 20 44635 1164 334 830  Calcium-mw-If-22  General Statistics Number of Values Reported (n) 16 Number of Values After Averaging 16 Number of Replicates 0 Minimum 979 Maximum 2240 Mean 1745 Geometric Mean 1689 Median 1745 Geometric Mean 1689 Median 1820 Standard Deviation 0.247  Mann-Kendall Statistics M-K Test Value (S) 10 Tabulated p-value 0.345 Standard Deviation of S 22.21	4	42691	239	246.8	-7.849
7       42878       198       255.2       -57.23         8       42942       195       258.1       -63.09         9       43005       200       260.9       -60.94         10       43164       279       268.1       10.94         11       43354       420       276.6       143.4         12       43528       218       284.4       -66.37         13       43705       256       292.3       -36.3         14       43901       245       301.1       -56.08         15       44089       182       309.5       -127.5         16       44263       352       317.3       34.7         19       44454       1180       325.8       854.2         20       44635       1164       334       830         Calcium-mw-lf-22         General Statistics         Number of Values Reported (n)       16         Number of Values After Averaging       16         Number of Replicates       0         Minimum       979         Maximum       2240         Mean       1745         Geometric Mean       1689 <td>5</td> <td>42753</td> <td>278</td> <td>249.6</td> <td>28.37</td>	5	42753	278	249.6	28.37
8       42942       195       258.1       -63.09         9       43005       200       260.9       -60.94         10       43164       279       268.1       10.94         11       43354       420       276.6       143.4         12       43528       218       284.4       -66.37         13       43705       256       292.3       -36.3         14       43901       245       301.1       -56.08         15       44089       182       309.5       -127.5         16       44263       352       317.3       34.7         19       44454       1180       325.8       854.2         20       44635       1164       334       830         Calcium-mw-If-22         General Statistics         Number of Values Reported (n)       16         Number of Values After Averaging       16         Number of Replicates       0         Minimum       979         Maximum       2240         Mean       1745         Geometric Mean       1689         Median       1820         Standard Deviation	6	42815	767	252.4	514.6
9 43005 200 260.9 -60.94 10 43164 279 268.1 10.94 11 43354 420 276.6 143.4 12 43528 218 284.4 -66.37 13 43705 256 292.3 -36.3 14 43901 245 301.1 -56.08 15 44089 182 309.5 -127.5 16 44263 352 317.3 34.7 19 44454 1180 325.8 854.2 20 44635 1164 334 830  Calcium-mw-If-22  General Statistics Number of Events Number of Values Reported (n) Number of Values After Averaging Number of Replicates O Minimum Maximum 979 Maximum 979 Maximum 1745 Geometric Mean Median 1745 Geometric Mean Median Standard Deviation Coefficient of Variation  Mann-Kendall Statistics M-K Test Value (S) Tabulated p-value Standard Deviation of S  222.21	7	42878	198	255.2	-57.23
10       43164       279       268.1       10.94         11       43354       420       276.6       143.4         12       43528       218       284.4       -66.37         13       43705       256       292.3       -36.3         14       43901       245       301.1       -56.08         15       44089       182       309.5       -127.5         16       44263       352       317.3       34.7         19       44454       1180       325.8       854.2         20       44635       1164       334       830         Calcium-mw-lf-22         General Statistics         Number of Events       16         Number of Values Reported (n)       16         Number of Values After Averaging       16         Number of Replicates       0         Minimum       979         Maximum       2240         Mean       1745         Geometric Mean       1689         Median       1820         Standard Deviation       431.6         Coefficient of Variation       0.247         Mann-Kendall Statistics	8	42942	195	258.1	-63.09
11       43354       420       276.6       143.4         12       43528       218       284.4       -66.37         13       43705       256       292.3       -36.3         14       43901       245       301.1       -56.08         15       44089       182       309.5       -127.5         16       44263       352       317.3       34.7         19       44454       1180       325.8       854.2         20       44635       1164       334       830         Calcium-mw-lf-22         General Statistics         Number of Events       16         Number of Values Reported (n)       16         Number of Values After Averaging       16         Number of Replicates       0         Minimum       979         Maximum       2240         Mean       1745         Geometric Mean       1689         Median       1820         Standard Deviation       431.6         Coefficient of Variation       0.247         Mann-Kendall Statistics         M-K Test Value (S)       10         Tabulated p-value <td< td=""><td>9</td><td>43005</td><td>200</td><td>260.9</td><td>-60.94</td></td<>	9	43005	200	260.9	-60.94
12       43528       218       284.4       -66.37         13       43705       256       292.3       -36.3         14       43901       245       301.1       -56.08         15       44089       182       309.5       -127.5         16       44263       352       317.3       34.7         19       44454       1180       325.8       854.2         20       44635       1164       334       830         Calcium-mw-If-22         General Statistics         Number of Events       16         Number of Values Reported (n)       16         Number of Values After Averaging       16         Number of Replicates       0         Minimum       979         Maximum       2240         Mean       1745         Geometric Mean       1689         Median       1820         Standard Deviation       431.6         Coefficient of Variation       0.247         Mann-Kendall Statistics         M-K Test Value (S)       10         Tabulated p-value       0.345         Standard Deviation of S       22.21 <td>10</td> <td>43164</td> <td>279</td> <td>268.1</td> <td>10.94</td>	10	43164	279	268.1	10.94
13       43705       256       292.3       -36.3         14       43901       245       301.1       -56.08         15       44089       182       309.5       -127.5         16       44263       352       317.3       34.7         19       44454       1180       325.8       854.2         20       44635       1164       334       830         Calcium-mw-If-22         General Statistics         Number of Events       16         Number of Values Reported (n)       16         Number of Values After Averaging       16         Number of Replicates       0         Minimum       979         Maximum       2240         Mean       1745         Geometric Mean       1689         Median       1820         Standard Deviation       0.247         Mann-Kendall Statistics       31.6         M-K Test Value (S)       10         Tabulated p-value       0.345         Standard Deviation of S       22.21	11	43354	420	276.6	143.4
14       43901       245       301.1       -56.08         15       44089       182       309.5       -127.5         16       44263       352       317.3       34.7         19       44454       1180       325.8       854.2         20       44635       1164       334       830         Calcium-mw-lf-22         General Statistics         Number of Events       16         Number of Values Reported (n)       16         Number of Values After Averaging       16         Number of Replicates       0         Minimum       979         Maximum       2240         Mean       1745         Geometric Mean       1689         Median       1820         Standard Deviation       0.247         Mann-Kendall Statistics       N-K Test Value (S)       10         Tabulated p-value       0.345         Standard Deviation of S       22.21	12	43528	218	284.4	-66.37
15       44089       182       309.5       -127.5         16       44263       352       317.3       34.7         19       44454       1180       325.8       854.2         20       44635       1164       334       830         Calcium-mw-lf-22         General Statistics         Number of Events       16         Number of Values Reported (n)       16         Number of Values After Averaging       16         Number of Replicates       0         Minimum       979         Maximum       2240         Mean       1745         Geometric Mean       1689         Median       1820         Standard Deviation       431.6         Coefficient of Variation       0.247         Mann-Kendall Statistics       M-K Test Value (S)       10         Tabulated p-value       0.345         Standard Deviation of S       22.21	13	43705	256	292.3	-36.3
16       44263       352       317.3       34.7         19       44454       1180       325.8       854.2         20       44635       1164       334       830         Calcium-mw-If-22         General Statistics         Number of Events       16         Number of Values Reported (n)       16         Number of Values After Averaging       16         Number of Replicates       0         Minimum       979         Maximum       2240         Mean       1745         Geometric Mean       1689         Median       1820         Standard Deviation       0.247         Mann-Kendall Statistics       M-K Test Value (S)       10         Tabulated p-value       0.345         Standard Deviation of S       22.21	14	43901	245	301.1	-56.08
19       44454       1180       325.8       854.2         20       44635       1164       334       830         Calcium-mw-If-22         General Statistics         Number of Events       16         Number of Values Reported (n)       16         Number of Values After Averaging       16         Number of Replicates       0         Minimum       979         Maximum       2240         Mean       1745         Geometric Mean       1689         Median       1820         Standard Deviation       0.247         Mann-Kendall Statistics       0.247         Mann-Kendall Statistics       10         Tabulated p-value       0.345         Standard Deviation of S       22.21	15	44089	182	309.5	-127.5
20       44635       1164       334       830         Calcium-mw-If-22         General Statistics         Number of Events       16         Number of Values Reported (n)       16         Number of Values After Averaging       16         Number of Replicates       0         Minimum       979         Maximum       2240         Mean       1745         Geometric Mean       1689         Median       1820         Standard Deviation       431.6         Coefficient of Variation       0.247         Mann-Kendall Statistics       10         M-K Test Value (S)       10         Tabulated p-value       0.345         Standard Deviation of S       22.21	16	44263	352	317.3	34.7
Calcium-mw-lf-22  General Statistics Number of Events 16 Number of Values Reported (n) 16 Number of Values After Averaging 16 Number of Replicates 0 Minimum 979 Maximum 2240 Mean 1745 Geometric Mean 1689 Median 1820 Standard Deviation 431.6 Coefficient of Variation 0.247  Mann-Kendall Statistics M-K Test Value (S) 10 Tabulated p-value 5tandard Deviation of S 22.21	19	44454	1180	325.8	854.2
General Statistics Number of Events 16 Number of Values Reported (n) 16 Number of Values After Averaging 16 Number of Replicates 0 Minimum 979 Maximum 2240 Mean 1745 Geometric Mean 1689 Median 1820 Standard Deviation 431.6 Coefficient of Variation  Mann-Kendall Statistics M-K Test Value (S) 10 Tabulated p-value Standard Deviation of S 22.21	20	44635	1164	334	830
Number of Events16Number of Values Reported (n)16Number of Values After Averaging16Number of Replicates0Minimum979Maximum2240Mean1745Geometric Mean1689Median1820Standard Deviation431.6Coefficient of Variation0.247Mann-Kendall StatisticsM-K Test Value (S)Tabulated p-value0.345Standard Deviation of S22.21	Calcium-m	w-lf-22			
Number of Values Reported (n)16Number of Values After Averaging16Number of Replicates0Minimum979Maximum2240Mean1745Geometric Mean1689Median1820Standard Deviation431.6Coefficient of Variation0.247Mann-Kendall StatisticsM-K Test Value (S)10Tabulated p-value0.345Standard Deviation of S22.21	General Sta	atistics			
Number of Values After Averaging  Number of Replicates  Minimum  979  Maximum  2240  Mean  1745  Geometric Mean  1689  Median  Standard Deviation  Coefficient of Variation  Mann-Kendall Statistics  M-K Test Value (S)  Tabulated p-value  Standard Deviation of S  22.21	Number of	Events			16
Number of Replicates 0 Minimum 979 Maximum 2240 Mean 1745 Geometric Mean 1689 Median 1820 Standard Deviation 431.6 Coefficient of Variation 0.247  Mann-Kendall Statistics M-K Test Value (S) 10 Tabulated p-value 0.345 Standard Deviation of S 22.21	Number of	Values Repo	orted (n)		16
Minimum979Maximum2240Mean1745Geometric Mean1689Median1820Standard Deviation431.6Coefficient of Variation0.247Mann-Kendall StatisticsVariationM-K Test Value (S)10Tabulated p-value0.345Standard Deviation of S22.21	Number of	Values After	r Averaging		16
Maximum2240Mean1745Geometric Mean1689Median1820Standard Deviation431.6Coefficient of Variation0.247Mann-Kendall StatisticsVariationM-K Test Value (S)10Tabulated p-value0.345Standard Deviation of S22.21	Number of	Replicates			0
Mean1745Geometric Mean1689Median1820Standard Deviation431.6Coefficient of Variation0.247Mann-Kendall StatisticsVariationM-K Test Value (S)10Tabulated p-value0.345Standard Deviation of S22.21	Minimum				979
Geometric Mean1689Median1820Standard Deviation431.6Coefficient of Variation0.247Mann-Kendall StatisticsM-K Test Value (S)10Tabulated p-value0.345Standard Deviation of S22.21	Maximum				2240
Median1820Standard Deviation431.6Coefficient of Variation0.247Mann-Kendall StatisticsM-K Test Value (S)10Tabulated p-value0.345Standard Deviation of S22.21	Mean				1745
Standard Deviation 431.6 Coefficient of Variation 0.247  Mann-Kendall Statistics M-K Test Value (S) 10 Tabulated p-value 0.345 Standard Deviation of S 22.21	Geometric	Mean			1689
Coefficient of Variation 0.247  Mann-Kendall Statistics  M-K Test Value (S) 10  Tabulated p-value 0.345  Standard Deviation of S 22.21	Median				1820
Mann-Kendall Statistics M-K Test Value (S) 10 Tabulated p-value 0.345 Standard Deviation of S 22.21	Standard D	431.6			
M-K Test Value (S) 10 Tabulated p-value 0.345 Standard Deviation of S 22.21	Coefficient	0.247			
M-K Test Value (S) 10 Tabulated p-value 0.345 Standard Deviation of S 22.21	Mann-Kend	dall Statistics	5		
Tabulated p-value 0.345 Standard Deviation of S 22.21					
Standard Deviation of S 22.21		` ,			_
		•	5		
01.100	Standardize	ed Value of S	5		0.405

Approximate p-value

0.343

#### Approximate inference for Theil-Sen Trend Test

Number of Slopes	120
Theil-Sen Slope	0.0546
Theil-Sen Intercept	-524.9
M1	38.23
M2	81.77
95% LCL of Slope (0.025)	-0.314
95% UCL of Slope (0.975)	0.634

# Insufficient evidence to identify a significant trend at the specified level of significance.

Theil-Sen Trend Test Estimates and Residuals

#		Events	Values	Estimates	Residuals
	1	42503	2180	1794	385.7
	2	42564	1420	1798	-377.7
	3	42634	1580	1801	-221.5
	4	42691	2190	1805	385.4
	5	42754	979	1808	-829
	6	42815	1760	1811	-51.36
	7	42879	2240	1815	425.1
	8	42942	1310	1818	-508.3
	9	43004	2090	1822	268.3
	10	43164	1320	1830	-510.4
	11	43354	1040	1841	-800.8
	12	43528	2230	1850	379.7
	13	43706	1640	1860	-220
	14	43901	1910	1871	39.35
	15	44089	1880	1881	-0.911
	16	44263	2150	1890	259.6

#### **Theil-Sen Trend Test Analysis**

**User Selected Options** 

Date/Time of Computation ProUCL 5.15/10/2022 4:49:55 PM

From File WorkSheet\_a.xls

Full Precision OFF

Average Replicates Replicates at sampling events will be averaged!

Confidence Coefficient 0.95 Level of Significance 0.05

#### Chloride-mw-lf-07

General Statistics	
Number of Events	17
Number of Values Reported (n)	17
Number of Values After Averaging	17
Number of Replicates	0
Minimum	4.55
Maximum	11
Mean	9.331
Geometric Mean	9.197
Median	9.59
Standard Deviation	1.375
Coefficient of Variation	0.147

Mann-Kendall Statistics	
M-K Test Value (S)	16
Tabulated p-value	0.271
Standard Deviation of S	24.28
Standardized Value of S	0.618
Approximate p-value	0.268

#### Approximate inference for Theil-Sen Trend Test

Number of Slopes	136
Theil-Sen Slope	1.85E-04
Theil-Sen Intercept	1.631
M1	44.21
M2	91.79
95% LCL of Slope (0.025)	-4.79E-04
95% UCL of Slope (0.975)	9.33E-04

Insufficient evidence to identify a significant trend at the specified level of significance.

Theil-Sen Trend Test Estimates and Residuals					
#	Events	Values	Estimates	Residuals	
1	42503	9.11	9.497	-0.387	
2	42564	9.3	9.508	-0.208	
3	42634	9.9	9.521	0.379	
4	42691	10.1	9.532	0.568	
5	42754	10.06	9.543	0.517	
6	42816	9.16	9.555	-0.395	
7	42879	4.55	9.567	-5.017	
8	42941	9.62	9.578	0.0419	
9	43005	9.59	9.59	0	
10	43354	8.9	9.655	-0.755	
11	43529	9.14	9.687	-0.547	
12	43706	8.78	9.72	-0.94	
13	43901	10.2	9.756	0.444	
14	44089	9.91	9.791	0.119	
15	44263	11	9.823	1.177	
16	44454	10.4	9.858	0.542	
17	44635	8.91	9.892	-0.982	
Chloride-m	w-lf-08				
General Sta	itistics				
Number of	Events			17	
Number of	Values Repo	orted (n)		17	
Number of	Values Afte	r Averaging		17	
Number of	Replicates			0	
Minimum				1	
Maximum				16.7	
Mean				5.502	
Geometric	Mean			4.927	
Median				5.08	
Standard D	eviation			3.055	
Coefficient	of Variation			0.555	
Mann-Kend	Mann-Kendall Statistics				
M-K Test Value (S)				43	
Tabulated p	o-value			0.046	
Standard D	24.26				
Standardize	ed Value of S	5		1.732	

Approximate p-value

0.0417

#### Approximate inference for Theil-Sen Trend Test

Number of Slopes	136
Theil-Sen Slope	1.65E-04
Theil-Sen Intercept	-2.006
M1	44.23
M2	91.77
95% LCL of Slope (0.025)	-3.60E-05
95% UCL of Slope (0.975)	3.75E-04

# Insufficient evidence to identify a significant trend at the specified level of significance.

#### Theil-Sen Trend Test Estimates and Residuals

#		Events	Values	Estimates	Residuals
	1	42503	5.07	4.997	0.0728
	2	42564	1	5.007	-4.007
	3	42634	5.05	5.019	0.0312
	4	42691	16.7	5.028	11.67
	5	42754	5.13	5.039	0.0914
	6	42816	4.75	5.049	-0.299
	7	42879	4.61	5.059	-0.449
	8	42942	4.92	5.07	-0.15
	9	43005	5.13	5.08	0.05
	10	43164	5.19	5.106	0.0838
	11	43354	4.88	5.138	-0.258
	12	43706	5.2	5.196	0.00449
	13	43901	4.96	5.228	-0.268
	14	44089	5.09	5.259	-0.169
	15	44263	5.08	5.287	-0.207
	16	44454	5.21	5.319	-0.109
	17	44635	5.57	5.349	0.221

#### Chloride-mw-lf-10

#### **General Statistics**

Number of Events	17
Number Values Observations	18
Number Values Missing	1
Number of Values Reported (n)	17
Number of Values After Averaging	17
Number of Replicates	0
Minimum	5.69
Maximum	13.3

Mean	7.587
Geometric Mean	7.331
Median	6.55
Standard Deviation	2.25
Coefficient of Variation	0.297
Mann-Kendall Statistics	
M-K Test Value (S)	36
Tabulated p-value	0.076
Standard Deviation of S	24.28
Standardized Value of S	1.442
Approximate p-value	0.0747
Approximate inference for Theil-Sen Trend	Test
Number of Slopes	136
Theil-Sen Slope	0.00123
Theil-Sen Intercept	-46.41
M1	44.21
M2	91.79
95% LCL of Slope (0.025)	-2.30E-04
95% UCL of Slope (0.975)	0.00249

# Insufficient evidence to identify a significant trend at the specified level of significance.

#### Theil-Sen Trend Test Estimates and Residuals

#		Events	Values	Estimates	Residuals
	1	42503	6.13	5.738	0.392
	2	42634	6.19	5.899	0.291
	3	42691	6.63	5.969	0.661
	4	42754	6.29	6.046	0.244
	5	42815	6.9	6.121	0.779
	6	42878	6.2	6.198	0.00153
	7	42942	6.07	6.277	-0.207
	8	43005	6.01	6.355	-0.345
	9	43164	9.57	6.55	3.02
	10	43354	12.1	6.783	5.317
	11	43528	6.55	6.997	-0.447
	12	43706	5.69	7.215	-1.525
	13	43901	5.94	7.454	-1.514
	14	44088	7.95	7.684	0.266

15	44263	8.9	7.898	1.002
16	44454	8.56	8.132	0.428
17	44635	13.3	8.355	4.945
Chloride-mw	/-lf-10a			
General Stati				_
Number of Ev				8
Number of V	•			8
Number of V		veraging		8
Number of R	eplicates			0
Minimum				3.83
Maximum				10.4
Mean				6.579
Geometric M	lean			6.143
Median				6.05
Standard Dev				2.592
Coefficient o	r variation			0.394
Mann-Kenda	II Statistics			
M-K Test Val	ue (S)			-2
Tabulated p-	value			0.452
Standard Dev	iation of S			8.083
Standardized	Value of S			-0.124
Approximate	p-value			0.451
Approximate		r Theil-Sen	Trend Test	
Number of SI	•			28
Theil-Sen Slo	pe		-	4.80E-04
Theil-Sen Inte	ercept			27.14
M1				6.079
M2				21.92
95% LCL of S			,	-0.00924
95% UCL of S	lope (0.975)			0.00832

#### Insufficient evidence to identify a significant trend at the specified level of significance.

#### Theil-Sen Trend Test Estimates and Residuals

#		Events	Values	Estimates	Residuals
	1	43445	4.88	6.313	-1.433
	2	43528	7 22	6 274	0 946

3	43706	3.83	6.188	-2.358	
4	43901	10.4	6.095	4.305	
5	44088	7.94	6.005	1.935	
6	44263	9.68	5.921	3.759	
7	44454	4.54	5.83	-1.29	
8	44635	4.14	5.743	-1.603	
Chloride-m	w-lf-11				
General Sta	itistics				
Number of	Events			20	
Number Va	lues Observat	tions		20	
Number Va	lues Missing			2	
Number of	Values Repor	ted (n)		18	
Number of	Values After	Averaging		18	
Number of	Replicates			2	
Minimum				4.52	
Maximum				10.9	
Mean				5.731	
Geometric	Mean			5.545	
Median		4.925			
Standard D		1.702			
Coefficient		0.297			
Mann-Kend	lall Statistics				
M-K Test Va	alue (S)			94	
Tabulated p	o-value			0	
Standard D	eviation of S			26.38	
Standardize	ed Value of S			3.525	
Approximate p-value 2.12E-					
Approximate inference for Theil-Sen Trend Test					
Number of	Slopes			153	
Theil-Sen Sl	ope			0.00122	
Theil-Sen In		-47.75			
M1'		54.8			
One-sided 9		5.24E-04			
	Slope (0.025)			4.62E-04	
95% UCL of	Slope (0.975	5)		0.002	

Statistically significant evidence of an increasing trend at the specified level of significance.

Theil-Sen T	rend Test Es	timates and	d Residuals	
#	Events	Values	Estimates	Residuals
1	42503	4.67	4.213	0.457
2	42564	4.6	4.288	0.312
3	42634	4.74	4.374	0.366
4	42691	5.08	4.443	0.637
5	42753	5.02	4.519	0.501
6	42815	4.58	4.595	-0.0149
7	42878	4.52	4.672	-0.152
8	42942	4.8	4.75	0.0498
9	43005	4.71	4.828	-0.118
10	43164	4.83	5.022	-0.192
11	43354	4.83	5.255	-0.425
12	43528	6.94	5.467	1.473
13	43705	5.15	5.684	-0.534
14	43901	6.56	5.923	0.637
15	44089	5.47	6.153	-0.683
16	44263	10.9	6.366	4.534
19	44454	7.665	6.599	1.066
20	44635	8.095	6.821	1.274
Chloride-m	w-lf-22			
General Sta	atistics			
Number of	Events			16
Number of	Values Repo	orted (n)		16
Number of	Values Afte	r Averaging		16
Number of	Replicates			0
Minimum				8.34
Maximum				12
Mean				10.06
Geometric	Mean			9.995
Median				10.05
Standard D	eviation			1.181
Coefficient	of Variation	ı		0.117
Mann-Kend	dall Statistics	5		
M-K Test V	alue (S)			0
Tabulated p	o-value			0.518
Standard D	eviation of S	5		22.21
Standardize	ed Value of S	5		N/A

#### Approximate inference for Theil-Sen Trend Test

Number of Slopes	120
Theil-Sen Slope	5.52E-05
Theil-Sen Intercept	7.672
M1	38.23
M2	81.77
95% LCL of Slope (0.025)	-0.00145
95% UCL of Slope (0.975)	0.00107

# Insufficient evidence to identify a significant trend at the specified level of significance.

Theil-Sen Trend Test Estimates and Residuals

#		Events	Values	Estimates	Residuals
	1	42503	12	10.02	1.981
	2	42564	9	10.02	-1.022
	3	42634	10.31	10.03	0.284
	4	42691	11.4	10.03	1.371
	5	42754	8.34	10.03	-1.693
	6	42815	9.42	10.04	-0.616
	7	42879	10.39	10.04	0.35
	8	42942	8.85	10.04	-1.193
	9	43004	11.6	10.05	1.553
	10	43164	9.41	10.06	-0.646
	11	43354	8.41	10.07	-1.656
	12	43528	11.9	10.08	1.824
	13	43706	9.53	10.09	-0.555
	14	43901	10.1	10.1	0.00375
	15	44089	9.99	10.11	-0.117
	16	44263	10.3	10.12	0.184

# Appendix F Second Semiannual Detection Monitoring Statistical Evaluation



#### **DOMINION ENERGY SOUTH CAROLINA**

#### **WATEREE STATION CLASS III LANDFILL**

SEMIANNUAL DETECTION MONITORING

RICHLAND COUNTY, SOUTH CAROLINA

# CCR GROUNDWATER DETECTION MONITORING STATISTICAL ANALYSIS REPORT

For the

September 2022 Sampling Event

November 2022



Joyce Peterson, P.E.

Senior Environmental Engineer

Richard A. Mayer Jr., P.G

Project Manager

TRC Environmental Corporation | Dominion Energy South Carolina Wateree Station Class III Landfill – Detection Monitoring

 $\verb|\GREENVILLE-FP1| WPGVL | PJT2 | 416559 | 0005 | WATEREE | R4165590005-019 | WATEREE | LF | CCR | DETECTION. DOCK | DO$ 

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Appendix B Trend Test Outputs

# **Statistical Analysis Report**

#### **Groundwater Sampling**

TRC Environmental Corporation (TRC) is providing this Statistically Significant Increases (SSI) notification for the Wateree Station Class III Landfill for the eleventh semiannual detection monitoring event. Samples were collected on September 8<sup>th</sup>, 9<sup>th</sup>, and 12<sup>th</sup>, 2022. The final laboratory analytical data packages for the event were received on September 27<sup>th</sup>, 2022, and the data validation reports were received on September 30<sup>th</sup>, 2022. This report addresses results from Detection Monitoring wells MW-LF-07, MW-LF-08, MW-LF-10, MW-LF-10A, MW-LF-11, and MW-LF-22. Background wells for the Class III Landfill include MW-BG-73, MW-LF-01, AS-LF-01, AS-LF-03, AS-LF-03, and MW-LF-06.

#### **Statistical Analysis**

Statistically Significant Level (SSL) exceedances above background concentrations include the following:

- MW-LF-07: none.
- MW-LF-08: none.
- MW-LF-10: sulfate.
- MW-LF-10A: none.
- MW-LF-11: none.
- MW-LF-22: chloride.

As has been done since the initiation of detection monitoring at the Wateree Station, the evaluation of potential SSIs was conducted using prediction limits to compare data from the background set of monitoring wells to the most recent results from the downgradient monitoring wells. The statistical calculations to generate prediction limits were conducted using United States Environmental Protection Agency's (USEPA's) ProUCL (v.5.1) software. TRC is currently evaluating the existing monitoring well network and updates to the Site's Statistical Analysis Plan (StAP) will be forthcoming which will formally establish and describe the statistical methods being employed. The prediction limits used for the first monitoring event in 2021 were calculated to be used for four semiannual sampling events, of which this is the fourth. The prediction limits will be updated prior to the first semiannual event in 2023.

**Appendix A** presents the background data used for the prediction limit calculations. **Table 1** presents the BTVs calculated based on the background data. **Table 2** presents the data set for the eleventh detection monitoring event and highlights results that are potential SSIs. **Appendix B** includes ProUCL outputs for the trend test used to evaluate potential SSI for calcium because the initial background data set had a statistically significant upward trend. The background data set updated to the current sampling event

does not have a statistically significant trend for calcium, so the evaluation for potential SSIs was based on the UPL calculated for calcium during the first semiannual event in 2021.

DESC conducted a Well Network Evaluation in July 2022 to reevaluate the monitoring system for this CCR unit. The following recommendations were presented based on the Evaluation:

- Remove monitoring wells MW-LF-01, MW-LF-06, AS-LF-01, AS-LF-02, and MW-BG-73 from the background monitoring well network.
- Install two new background monitoring wells along the northwestern side of the landfill to replace wells MW-LF-01 and MW-BG-73 that appear to be screened in perched water.
- Add well AS-LF-02 to the downgradient monitoring well network.
- Install one new downgradient monitoring well between AS-LF-02 and MW-LF-07.
- Remove MW-LF-10 from the downgradient monitoring well network. This well was previously damaged and should be properly abandoned. MW-LF-10A has previously been installed to serve as the replacement well for MW-LF-10.

The new wells will be installed during December 2022. Meanwhile, an Alternative Source Demonstration (ASD) should be prepared for these potential SSIs.

# Table 1 Background Threshold Values for 2021 and 2022

# Table 1 Background Threshold Values for 2021 and 2022 Dominion Energy South Carolina Wateree Station Class III Landfill

CONSTITUENT	NUMBER of RESULTS	PERCENT DETECTED	DISTRIBUTION	TREND	BACKGROUND THRESHOLD VALUE	BASIS
Boron (μg/L)	55	16	Nonparametric	N/A	140	95% USL
Calcium (μg/L)	54 <sup>[1]</sup>	96	Nonparametric	Increasing	1.063 <sup>[2]</sup>	95% UCL of slope
Chloride (mg/L)	55	100	Nonparametric	Decreasing	-7.03E-5 <sup>[2]</sup>	95% UCL of slope
Fluoride (mg/L)	55	15	Nonparametric	N/A	0.1	95% USL
pH (s.u.)	55	100	Nonparametric	None	2.5 – 6.2	95% USL
Sulfate (mg/L	55	25	Nonparametric	N/A	7.89	95% USL
TDS (mg/L)	54 <sup>[1]</sup>	100	Gamma	None	111	95% HW UPL (k = 28)

<sup>[1]</sup> Outlier excluded from data set.

N/A Not Applicable – trend test not conducted for data sets with fewer than 50 percent detections.

<sup>[2]</sup> BTV for calcium and chloride are the UCL of the trend slope.

# Table 2 September 2022 Downgradient Results and Potential SSIs

Table 2
September 2022 Downgradient Results and Potential SSIs
Dominion Energy South Carolina
Wateree Station Class III Landfill

			CONSTITUENT	/ BTV / RESULT (r	ng/L except as noted) <sup>[1]</sup>		
WELL	BORON	CALCIUM	CHLORIDE	FLUORIDE	рН	SULFATE	TDS
	140	6,670	9.14	0.1	2.5 - 6.2	7.89	111
BACKGROUND WELL	.s						
MW-BG-73	10.9 J	280	2.52	0.0330 U	4.13	0.398 J	2.38 U
MW-LF-01	11.5 J	125 J	6.69	0.0330 U	4.38	0.133 U	9.00 J
AS-LF-01	8.99 J	1,200	8.91	0.0330 U	4.54	0.891	17.0
AS-LF-02	8.97 J	1,220	2.82	0.0330 U	4.94	3.25	7.00 J
AS-LF-03	9.14 J	658	5.48	0.0330 U	3.93	0.587	10.0
MW-LF-06	7.41 J	925	6.46	0.0330 U	4.79	0.59	11.0
DOWNGRADIENT WE	LLS						
MW-LF-07	8.83 J	1,010	7.79	0.0448 J	3.97	1.41	3.00 J
MW-LF-08	9.02 J	850	5.07	0.0330 U	4.37	0.563	7.00 J
MW-LF-10	11.3 J	2,890	7.01	0.0330 U	4.10	9.79	33.0
MW-LF-10A	8.61 J	332	4.17	0.0330 U	4.26	0.791	10.0
MW-LF-11	9.57 J	379	5.75	0.0330 U	4.14	0.499	11.0
MW-LF-22	15.1	2,060	9.99	0.0707 J	4.15	1.06	21.0

Shaded cells indicate an SSI.

<sup>[1]</sup> Boron and calcium concentration expressed in µg/L; pH expressed in standard units (s.u.).

U The analyte was not detected above the level of the sample reporting limit.

J Estimated concentration.

# Appendix A Background Data Set for 2021 and 2022 Semiannual Detection Monitoring Events

# Appendix A

# Background Data Set for 2021 and 2022 Semiannual Detection Monitoring Events

# **Dominion Energy South Carolina**

## Wateree Station Class III Landfill

				CONSTITUENT/F	RESULT (mg/L ex	cept as noted) [1]		
EVENT	WELL	BORON	CALCIUM	CHLORIDE	FLUORIDE	рН	SULFATE	TDS
DM-2	MW-BG-73	44.2 U	266	2.14	0.025 U	4.82	0.129 U	25
DM-3	MW-BG-73	21.9 U	161	2.16	0.025 U	4.84	0.129 U	22
DM-4	MW-BG-73	21.9 U	338	2.54	0.008 U	4.41	0.129 U	20
DM-5	MW-BG-73	38.458 U	343	2.62	0.008 U	3.69	0.063 U	18
DM-6	MW-BG-73	38.458 U	335	2.39	0.008 U	4.51	0.063 U	10
DM-7	MW-BG-73	38.458 U	245	2.25	0.008 U	4.98	0.063 U	51
BL-1	MW-LF-01	55.7 U	93.7	5.33	0.033 U	3.64	0.129 U	19
BL-2	MW-LF-01	55.7 U	74	5.3	0.033 U	4.25	0.129 U	24
BL-3	MW-LF-01	55.7 U	79.4	5.83	0.044	3.56	0.129 U	35
BL-4	MW-LF-01	55.7 U	116	5.99	0.033 U	4.85	0.129 U	33
BL-5	MW-LF-01	44.2 U	90.8	6.05	0.033 U	4.74	0.129 U	22
BL-6	MW-LF-01	44.2 U	48.1	5.3	0.033 U	4.02	0.129 U	40
BL-7	MW-LF-01	44.2 U	60.2	5.16	0.041	4.37	0.129 U	34
BL-8	MW-LF-01	44.2 U	1,440	5.09	0.038	4.53	0.87	32
DM-1	MW-LF-01	63.7	52.8	5.85	0.033 U	4.53	0.129 U	33
DM-2	MW-LF-01	44.2 U	54.4 U	5.71	< 0.025	4.6	0.129 U	35
DM-3	MW-LF-01	21.9 U	59 U	5.49	0.025 U	2.48	0.129 U	65
DM-4	MW-LF-01	60.2	87.9	5.96	0.008 U	5.47	0.129 U	54
DM-5	MW-LF-01	38.458 U	74.1 [4]	5.85	0.008 U	4.44	0.063 U	33
DM-6	MW-LF-01	38.458 U	102	6.47	0.008 U	4.41	0.063 U	29
DM-7	MW-LF-01	75.9	372	6.31	0.008 U	4.38	0.063 U	56
BL-4	MW-LF-06	55.7 U	714	6.81	0.033 U	5.08	0.129 U	38
BL-5	MW-LF-06	44.2 U	739	6.9	0.033 U	4.8	0.129 U	28

<sup>[1]</sup> Boron and calcium concentrations expressed in µg/L; pH expressed in standard units (s.u.).

 $<sup>\</sup>label{eq:continuous} \mbox{[2] Outlier with no verification resample-removed from data set.}$ 

<sup>[3]</sup> Missing data replaced by verification resample result (value shown on table).

<sup>[4]</sup> ND value replaced by verification resampling detection.

 $<sup>\</sup>ensuremath{\mathsf{U}}$  The analyte was not detected above the level of the sample reporting limit.

# Appendix A (Continued)

# Background Data Set for 2021 and 2022 Semiannual Detection Monitoring Events

# **Dominion Energy South Carolina**

## Wateree Station Class III Landfill

EVENT	WELL			CONSTITUENT/F	RESULT (mg/L ex	cept as noted) [1]		
EVENT	WELL	BORON	CALCIUM	CHLORIDE	FLUORIDE	рН	SULFATE	TDS
BL-6	MW-LF-06	44.2 U	997	6.31	0.033 U	4.27	0.129 U	39
BL-7	MW-LF-06	44.2 U	786	6.07	0.034	4.33	0.129 U	39
BL-8	MW-LF-06	44.2 U	2,100	6.67	0.039	4.58	0.129 U	36
DM-1	MW-LF-06	44.2 U	770	6.98	0.033 U	4.73	0.129 U	36
DM-2	MW-LF-06	44.2 U	777	6.18	0.025 U	4.71	0.129 U	35
DM-4	MW-LF-06	21.9 U	592	6.31	0.008 U	4.9	0.129 U	27
DM-6	MW-LF-06	38.458 U	866	6.3	0.008 U	4.54	0.063 U	31
DM-7	MW-LF-06	140	746	6.23	0.008 U	4.72	0.063 U	75
BL-8	AS-LF-01	44.2 U	898	7.2	0.04	4.47	1.79	18
DM-1	AS-LF-01	44.2 U	554	7.07 [3]	0.1 U	4.65	1.4 [3]	37 [3]
DM-2	AS-LF-01	44.2 U	539	8.07	0.025 U	4.58	1.22	43
DM-3	AS-LF-01	21.9 U	535	8.45	0.025 U	3.71	0.129 U	45
DM-4	AS-LF-01	38.458 U	926	8.7	0.008 U	4.58	0.129 U	373 [2]
DM-5	AS-LF-01	38.458 U	858	8.94	0.008 U	4.46	0.7	48
DM-6	AS-LF-01	38.458 U	1,330	9.14	0.008 U	4.58	0.58	38
DM-7	AS-LF-01	38.458 U	804	8.29	0.008 U	4.25	0.063 U	42
BL-8	AS-LF-02	44.2 U	1,660	2.67	0.045	5.74	7.89	39
DM-1	AS-LF-02	44.2 U	921	2.7 [3]	0.1 U [3]	5.16	2.9 [3]	28 [3]
DM-2	AS-LF-02	44.2 U	24,800 [2]	2.82	0.025 U	6.2	4.6	102
DM-3	AS-LF-02	21.9	1,180	2.73	0.025 U	5.12	2.29	43
DM-4	AS-LF-02	38.458 U	6,300	2.73	0.008 U	5.67	3.61	62
DM-5	AS-LF-02	38.7	738	2.78	0.008 U	4.94	2.17	47
DM-6	AS-LF-02	38.458 U	6,670	2.82	0.008 U	5.78	2.94	91

<sup>[1]</sup> Boron and calcium concentrations expressed in µg/L; pH expressed in standard units (s.u.).

<sup>[2]</sup> Outlier with no verification resample – removed from data set.

<sup>[3]</sup> Missing data replaced by verification resample result (value shown on table).

<sup>[4]</sup> ND value replaced by verification resampling detection.

 $<sup>\</sup>ensuremath{\mathsf{U}}$  The analyte was not detected above the level of the sample reporting limit.

### Appendix A (Continued)

## Background Data Set for 2021 and 2022 Semiannual Detection Monitoring Events

### **Dominion Energy South Carolina**

#### Wateree Station Class III Landfill

EVENT	WELL	CONSTITUENT/RESULT (mg/L except as noted) [1]								
EVENT	WELL	BORON	CALCIUM	CHLORIDE	FLUORIDE	рН	SULFATE	TDS		
DM-7	AS-LF-02	77.3	769	2.78	0.008 U	5.01	2.09	47		
BL-8	AS-LF-03	44.2 U	777	5.44	0.041	4.68	0.129 U	22		
DM-1	AS-LF-03	44.2 U	557	5.49 [3]	0.1 U [3]	4.47	0.129 U [3]	24 [3]		
DM-2	AS-LF-03	44.2 U	520	5.73	0.025 U	4.5	0.129 U	32		
DM-3	AS-LF-03	21.9 U	562	5.95	0.025 U	3.75	0.129 U	54		
DM-4	AS-LF-03	25.7	519	6.08	0.008 U	4.13	0.129 U	39		
DM-5	AS-LF-03	38.458 U	575	5.64	0.008 U	4.35	0.063 U	38		
DM-6	AS-LF-03	38.458 U	689	5.77	0.008 U	4.27	0.063 U	19		
DM-7	AS-LF-03	47.9	665	5.4	0.008 U	4.32	0.063 U	57		

<sup>[1]</sup> Boron and calcium concentrations expressed in µg/L; pH expressed in standard units (s.u.).

<sup>[2]</sup> Outlier with no verification resample – removed from data set.

<sup>[3]</sup> Missing data replaced by verification resample result (value shown on table).

<sup>[4]</sup> ND value replaced by verification resampling detection.

U The analyte was not detected above the level of the sample reporting limit.

# Appendix B Trend Test Outputs

	Α	В	С	D	Е	F	G	Н		
1				Theil-Sen Ti	rend Test Ar	nalysis				
2		User Select								
3	Dat	e/Time of Co		ProUCL 5.2 11/3/2022 4:43:44 PM						
4			From File	WorkSheet.xls						
5			I Precision	OFF						
6		Average	Replicates	Replicates a	t sampling e	vents will be	averaged!			
7		Confidence	Coefficient	0.95						
8		Level of S	ignificance	0.05						
9										
10		C	alcium OL R	em						
11										
12		Ge	eneral Statist	tics						
13			Numb	er of Events	11					
14				Reported (n)	11					
15		Number of	of Values Afte	er Averaging	11					
16			Number o	of Replicates	0					
17				Minimum	431.3					
18				Maximum	1665					
19				Mean	943.2					
20			Geo	metric Mean	838.1					
21				Median	734.7					
22			Standa	rd Deviation	473.4					
23			Coefficient	t of Variation	0.502					
24										
25		Mann	-Kendall Sta							
26			M-K Te	est Value (S)	13					
27				ated p-value	0.179					
28			Standard D	eviation of S	12.85					
29			Standardize	d Value of S	0.934					
30			Approxir	nate p-value	0.175					
31										
32	Appro	oximate infe		eil-Sen Trend						
33				er of Slopes	55					
34				il-Sen Slope	0.145					
35			Theil-S	Sen Intercept	-5614					
36				M1	14.91					
37				M2	40.09					
38			95% LCL of S		-0.575					
39		9	5% UCL of S	Slope (0.975)	0.469					
40										
41			identify a sig							
42	trend at the	specified le	evel of signifi	cance.						
43										
44				es and Resid						
45	#		Values	Estimates	Residuals					
46	1		1375	623.6	751.4					
47	2	43005	571	633	-62.03					

	Α	В	С	D	Е	F	G	Н
48	3	43165	431.3	656.2	-224.9			
49	4	43353	499.4	683.5	-184.1			
50	5	43529	1460	709.1	751.4			
51	6	43705	519.6	734.7	-215.1			
52	7	43901	1665	763.1	902.2			
53	8	44089	600.2	790.4	-190.3			
54	9	44265	1512	816	695.9			
55	10	44454	1007	843.4	163.1			
56	11	44813	734.7	895.7	-161			