

DOMINION ENERGY SOUTH CAROLINA

COPE STATION CLASS III INDUSTRIAL LANDFILL

ORANGEBURG 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 Cope Station Class III Industrial Landfill 2022 Annual Groundwater Monitoring and Corrective Action Report

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Dominion Energy South Carolina (DESC) operates a Class III Industrial Landfill (Unit) for the disposal of coal combustion residuals (CCR) at the Cope Generating Station (Station) located near Cope, in Orangeburg County, South Carolina. The Unit receives CCR generated from the combustion of coal at the Station. Management of the CCR at 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 31st, 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:

- i. 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:
 - Chloride MW-LF-02

- Fluoride MW-LF-02
- 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 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 Cope Generating Station (Station) located near Cope, in Orangeburg 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. LF3-00028) 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 August 2022.

1.1 Site Location

The Station is operated by DESC and is located at 405 Teamwork Road in Orangeburg County, South Carolina (**Figure 1**). The Station is located approximately 2 miles southwest of Cope, South Carolina. The Unit is located on the northwest portion of the Station property approximately 3,000 feet from the generating plant.

1.2 Site History

The Station is an active coal-fired power station located in Orangeburg County, SC. The facility began operations in 1996 and operates a single 417-megawatt coal-fired unit. The Station consists of Class II and III landfills and a landfill leachate pond. The Class III Landfill is currently regulated under the CCR rule, the Class II Landfill is closed, and the Landfill Leachate Pond is monitored and permitted under a National Pollutant Discharge System (NPDES) issued by SCDHEC. Phase 1 of the Unit was placed into operation in accordance with an operation approval issued by DHEC on November 12, 2014.

1.3 Key Actions

Key actions for the Unit to date are as follows:

Permitted for management of CCR by SCDHEC under Class III Landfill Permit No. LF3-00028.

- 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 27, 2017, pursuant to the CCR Rule §257.94(b).
- Conducted the initial DMP compliance sampling event on September 25-26, 2017, pursuant to 40 CFR §257.94.
- Placed a copy of the Units 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 an 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 8-9, 2022 and completed the sample analyses on March 31, 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 August 24, 29, and 30, 2022 and completed the sample analyses on September 12, 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-01, MW-LF-02, MW-LF-03, MW-LF-04, MW-LF-05, and MW-LF-06) were installed and developed at the Unit in March 2016 to serve as the EPA CCR Compliance Monitoring Well Network. Existing monitoring wells MW-BG-06 and MW-BG-16, utilized for other monitoring programs for the Unit, were incorporated into the CCR Compliance Monitoring Well Network in November 2016. Two additional groundwater monitoring wells, AS-LF-01 and AS-LF-02, that were installed in November 2017, and one existing monitoring well, MW-40, served as ASD monitoring wells for SSIs observed during Detection Monitoring in September and October 2017. The results of the ASD, performed by others, were presented in the August 2018 *Alternate Source Demonstration Report, Cope Station Class 3 Landfill* and demonstrated the SSIs were not due to a release from the Unit at the Station and no further actions were warranted. Both AS-LF-01 and AS-LF-02 were incorporated into the CCR Compliance Monitoring Well Network in December 2017. Groundwater monitoring well MW-40 is used to support potential ASD activities.

The Compliance Monitoring Well Network currently consists of five upgradient wells (MW-LF-01, MW-BG-06, MW-BG-16, AS-LF-01, and AS-LF-02) to monitor background groundwater quality entering the surficial aquifer of the Unit and five downgradient monitoring wells (MW-LF-02, MW-LF-03, MW-LF-04, MW-LF-05, and MW-LF-06) that serve to monitor groundwater quality downgradient of the Unit. One monitoring well (MW-40) is used to support ASD evaluations. The location of the EPA CCR Rule Compliance Monitoring Well Network is presented on **Figure 2**.

2.2 Monitoring Well Installation and Decommissioning Activities

DESC did not install any new wells or decommission any existing wells in the certified groundwater monitoring system during 2022.

2.3 Groundwater Potentiometric Surface Evaluation

Current and historic 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 August 2022. Using the groundwater contours from March (**Figure 3**) and August (**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 approximately 48 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 5.40 ft/day, the average rate of groundwater flow for the uppermost aquifer beneath the Unit was calculated to be 48.59 ft/year.

Well 1	Well 2	h¹ (ft)	h² (ft)	S (ft)	i	K (ft/day) (1)	n _e	Vs (ft/day)	Vs (ft/yr.)	
MW-BG-16	MW-LF-06	171.54	158.31	2,590	0.0051			0.1379	50.33	
MW-LF-01	MW-LF-05	167.81	157.20	1,880	0.0056	F 40	0.20	0.1524	55.61	
AS-LF-01	MW-LF-04	164.00	159.81	1,300	0.0032	5.40	0.20	0.0870	31.76	
MW-LF-03	MW-LF-04	162.34	159.81	440	0.0058			0.1552	56.66	
	nductivity and eff undwater Flow Ra		-		-	Averag	ge	0.1331	48.59	

2.3.2 Second Semiannual 2022 Detection Monitoring Program

The groundwater potentiometric surface map for August 2022 is presented in **Figure 4**. Using an estimated effective porosity value of 20% and estimated average hydraulic conductivity value of 5.40 ft/day, the average rate of groundwater flow for the uppermost aquifer beneath the Unit was calculated to be 48.45 ft/year.

Well 1	Well 2	h¹ (ft)	h² (ft)	S (ft)	i	K (ft/day) (1)	n _e	Vs (ft/day)	Vs (ft/yr.)	
MW-BG-16	MW-LF-06	170.02	158.12	2,590	0.0046			0.1240	45.27	
MW-LF-01	MW-LF-05	166.78	156.81	1,880	0.0053	F 40	0.20	0.1432	52.25	
AS-LF-01	MW-LF-04	164.06	159.72	1,300	0.0033	5.40	0.20	0.0901	32.90	
MW-LF-03	MW-LF-04	162.55	159.72	440	0.0064			0.1736	63.38	
	nductivity and eff undwater Flow Ra	•	•		•	Avera	ge	0.1327	48.45	

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 completed 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 8-9, 2022	March 31, 2022						
Second Semiannual Detection Monitoring Program Event	August 24, 29, and 30, 2022	September 12, 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 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 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-05 location on March 9, 2022.
- Additional sample volume was collected at AS-LF-01 on March 9, 2022, to allow for the laboratory to conduct a matrix spike (MS) and matrix spike duplicate (MSD) quality control check.
- A field blank was collected in the area of MW-LF-01 on March 9, 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 MW-LF-06 location on August 29, 2022.
- Additional sample volume was collected at MW-LF-02 on August 30, 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-06 on August 29, 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-40 on August 30, 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**):

- Chloride (MW-LF-02)
- Fluoride (MW-LF-02)

An ASD and certification was 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-02)

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 8 - 9, 2022, with sample analyses completed on March 31, 2022. The second semiannual 2022 DMP compliance sampling event was conducted on August 24, 29, and 30, 2022, with sample analyses complete on September 12, 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 chloride and fluoride in MW-LF-02. DESC completed a successful ASD for the potential SSI identified during the first semiannual 2022 detection monitoring event. The ASD was certified by a South Carolina-registered professional engineer and presented in this Report (**Appendix B**). Monitoring results from the second semiannual 2022 event identified exceedances above the background value for chloride in MW-LF-02. 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. In addition, DESC plans to install additional observation wells in the vicinity of the Unit to further refine hydrogeologic conditions.

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].
- Garrett and Moore 2017. Groundwater Monitoring System Certification, Cope Station Class III Landfill, Orangeburg County, South Carolina: Garrett & Moore, Inc.
- Nautilus 2016. Groundwater Sampling and Analysis Plan, Cope Generating Station Class Three Landfill. Cope, South Carolina: Nautilus Geologic Consulting, PLLC.
- Nautilus 2018. Alternate Source Demonstration Report, Cope Station Class Three Landfill. Cope, 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 Cope 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: TRC Environmental Corporation Date: January 31, 2023



(SEAL)

Tables

Monitoring Well ID	Top of Casing Elevation	Date	Depth to Water	Static Water Leve Elevation		
	(ft. AMSL)		(feet)	(ft. AMSL)		
	, ,	5/12/2016	7.56	168.85		
		7/14/2016	8.82	167.59		
		9/14/2016	8.13	168.28		
		11/8/2016	8.48	167.93		
		1/25/2017	5.95	170.46		
		3/29/2017	7.08	169.33		
		5/15/2017	6.84	169.57		
		7/27/2017	9.40	167.01		
		9/25/2017	9.68	166.73		
		10/12/2017	10.51	165.90		
		10/30/2017	10.19	166.22		
		12/11/2017	9.01	167.40		
MW-LF-01	176.41	12/19/2017	8.81	167.60		
		12/28/2017	8.24	168.17		
		2/21/2018	8.29	168.12		
		3/21/2018	8.49	167.92		
		9/17/2018	8.21	168.20		
		3/20/2019	5.89	170.52		
		9/20/2019	9.88	166.53		
		3/16/2020	4.86	171.55		
		9/21/2020	7.97	168.44		
		3/15/2021	5.31			
		9/28/2021	9.92	171.10 166.49		
		3/8/2022	8.60	167.81		
		8/24/2022	9.63	166.78		
		0/24/2022	9.03	100.78		
		5/12/2016	25.38	164.70		
		7/14/2016	26.30	163.78		
		9/14/2016	25.40	164.68		
		11/8/2016	26.68	163.40		
		1/25/2017	23.82	166.26		
		3/29/2017	25.61	164.47		
		5/15/2017	24.88	165.20		
		7/27/2017	26.86	163.22		
		9/25/2017	27.00	163.08		
		10/12/2017	27.81	162.27		
		10/30/2017	27.35	162.73		
		12/11/2017	26.00	164.08		
MW-LF-02	190.08	12/19/2017	26.62	163.46		
		12/28/2017	26.65	163.43		
		2/21/2018	26.82	163.26		
		3/21/2018	27.22	162.86		
		9/18/2018	25.54	164.54		
		3/20/2019	23.53	166.55		
		9/19/2019	26.30	163.78		
		3/16/2020	21.67	168.41		
		9/21/2020	23.74	166.34		
		3/16/2021	22.12	167.96		
		9/28/2021	26.06	164.02		
		3/8/2022	26.18	163.90		
		8/24/2022	25.87	164.21		

¹⁾ ft AMSL = feet above mean sea level.

(ft. AMSL)	Static Water Level				
(R. AMSL)	Elevation				
7/14/2016	ISL)				
9/14/2016 23.60 163.50 11/8/2016 24.61 162.50 11/8/2017 22.78 164.40 3/30/2017 23.99 163.20 5/15/2017 23.25 163.90 7/27/2017 25.33 161.80 9/25/2017 25.68 161.50 10/12/2017 26.31 160.80 10/30/2017 26.14 161.00 3/21/2018 25.86 161.30 3/20/2019 22.30 164.80 9/18/2018 23.96 163.20 3/20/2019 22.30 164.80 9/19/2019 25.35 161.80 9/19/2019 25.35 161.80 9/19/2010 23.44 163.70 3/15/2021 24.95 162.20 3/8/2022 24.85 162.30 3/8/2022 24.85 162.30 3/8/2022 24.85 162.30 3/8/2022 24.85 162.30 3/8/2022 24.85 162.30 3/8/2022 24.85 162.30 3/8/2022 24.85 162.30 3/8/2021 24.95 160.90 7/14/2016 24.31 159.80 9/14/2016 24.03 160.10 11/8/2016 24.03 160.10 11/8/2016 24.03 160.10 11/8/2016 24.03 160.10 11/8/2016 24.03 160.10 11/8/2016 24.03 160.10 11/8/2016 24.03 160.10 11/25/2017 22.78 161.40 3/30/2017 23.18 161.00 7/27/2017 24.86 159.30 9/25/2017 25.44 158.70 158.30 158.30 10/30/2017 25.87 158.30 3/21/2018 25.12 159.00 9/18/2018 23.90 160.30 3/20/2019 22.53 161.60	35				
11/8/2016 24.61 162.5	56				
1/25/2017 22.78 164.4	59				
MW-LF-03 187.19 163.20	58				
MW-LF-03 187.19	11				
MW-LF-03 187.19 187.19 187.19 187.19 10/30/2017 26.31 100.8 10/12/2017 26.31 160.8 161.0 3/21/2018 25.86 161.3 9/18/2018 23.96 163.2 3/20/2019 22.30 164.8 9/19/2019 25.35 161.8 3/16/2020 19.75 167.4 9/21/2020 23.44 163.7 3/15/2021 20.45 166.7 9/28/2021 24.95 162.2 3/8/2022 24.85 162.3 8/24/2022 24.64 162.5 5/12/2016 23.29 160.9 7/14/2016 24.31 159.8 9/14/2016 24.03 160.1 11/8/2016 24.03 160.1 11/8/2016 24.03 160.1 11/8/2016 24.03 160.1 11/25/2017 22.78 161.4 3/30/2017 23.49 160.7 5/15/2017 23.18 161.0 7/27/2017 24.86 159.3 9/25/2017 25.86 158.3 MW-LF-04 184.20 10/30/2017 25.86 158.3 3/21/2018 25.12 159.0 9/18/2018 23.90 160.3 3/20/2019 22.53 161.6	20				
MW-LF-03 187.19 187.19 187.19 10/30/2017 26.31 160.8 10/12/2018 26.14 161.0 3/21/2018 25.86 161.3 9/18/2018 3/20/2019 22.30 164.8 9/19/2019 25.35 161.8 3/16/2020 19.75 167.4 9/21/2020 23.44 163.7 3/15/2021 20.45 166.7 9/28/2021 24.95 162.2 3/8/2022 24.64 162.5 5/12/2016 23.29 160.9 7/14/2016 24.31 159.8 9/14/2016 24.03 160.1 11/8/2016 24.03 160.1 11/8/2016 24.03 160.1 11/8/2017 22.78 161.4 3/30/2017 23.49 160.7 5/15/2017 23.18 161.0 7/27/2017 24.86 159.3 9/25/2017 25.86 158.3 MW-LF-04 184.20 10/30/2017 25.86 158.3 3/21/2018 25.12 159.0 9/18/2018 23.90 160.3 3/20/2019 22.53 161.6	163.94				
MW-LF-03 187.19 187.19 10/12/2017	36				
MW-LF-03 187.19 10/30/2017 26.14 161.0 3/21/2018 25.86 161.3 9/18/2018 23.96 163.2 3/20/2019 22.30 164.8 9/19/2019 25.35 161.8 3/16/2020 19.75 167.4 9/21/2020 23.44 163.7 3/15/2021 20.45 166.7 9/28/2021 24.95 162.2 3/8/2022 24.85 162.3 8/24/2022 24.64 162.5 5/12/2016 23.29 160.9 7/14/2016 24.03 160.1 11/8/2016 24.03 160.1 11/8/2016 24.03 160.1 11/8/2017 22.78 161.4 3/30/2017 23.49 160.7 5/15/2017 23.18 161.0 7/27/2017 24.86 159.3 9/25/2017 25.86 158.3 MW-LF-04 184.20 10/30/2017 25.86 158.3 3/21/2018 25.12 159.0 9/18/2018 23.90 160.3 3/20/2019 22.53 161.6	51				
3/21/2018 25.86 161.3	38				
9/18/2018 23.96 163.2)5				
3/20/2019 22.30 164.8	33				
9/19/2019 25.35 161.8	23				
3/16/2020	39				
9/21/2020 23.44 163.7 3/15/2021 20.45 166.7 9/28/2021 24.95 162.2 3/8/2022 24.85 162.3 8/24/2022 24.64 162.5 5/12/2016 23.29 160.9 7/14/2016 24.31 159.8 9/14/2016 24.03 160.1 11/8/2016 24.03 160.1 11/8/2016 24.03 160.1 11/8/2017 22.78 161.4 3/30/2017 23.49 160.7 5/15/2017 23.18 161.0 7/27/2017 24.86 159.3 9/25/2017 25.86 158.3 10/12/2017 25.86 158.3 10/30/2017 25.87 158.3 3/21/2018 25.12 159.0 9/18/2018 23.90 160.3 3/20/2019 22.53 161.6	34				
3/15/2021 20.45 166.7- 9/28/2021 24.95 162.2- 3/8/2022 24.85 162.3- 8/24/2022 24.64 162.5-	14				
9/28/2021	163.75				
3/8/2022 24.85 162.3 8/24/2022 24.64 162.5 	74				
S/24/2022 24.64 162.5	24				
S/24/2022 24.64 162.5	34				
7/14/2016 24.31 159.8 9/14/2016 24.03 160.1 11/8/2016 24.03 160.1 1/25/2017 22.78 161.4 3/30/2017 23.49 160.7 5/15/2017 23.18 161.0 7/27/2017 24.86 159.3 9/25/2017 25.44 158.7 10/12/2017 25.86 158.3 MW-LF-04 184.20 10/30/2017 25.87 158.3 3/21/2018 25.12 159.0 9/18/2018 23.90 160.3 3/20/2019 22.53 161.6	55				
7/14/2016 24.31 159.8 9/14/2016 24.03 160.1 11/8/2016 24.03 160.1 1/25/2017 22.78 161.4 3/30/2017 23.49 160.7 5/15/2017 23.18 161.0 7/27/2017 24.86 159.3 9/25/2017 25.44 158.7 10/12/2017 25.86 158.3 MW-LF-04 184.20 10/30/2017 25.87 158.3 3/21/2018 25.12 159.0 9/18/2018 23.90 160.3 3/20/2019 22.53 161.6					
9/14/2016 24.03 160.1 11/8/2016 24.03 160.1 1/25/2017 22.78 161.4 3/30/2017 23.49 160.7 5/15/2017 23.18 161.0 7/27/2017 24.86 159.3 9/25/2017 25.44 158.7 10/12/2017 25.86 158.3 10/30/2017 25.87 158.3 3/21/2018 25.12 159.0 9/18/2018 23.90 160.3 3/20/2019 22.53 161.6) 1				
MW-LF-04 11/8/2016 24.03 160.1 1/25/2017 22.78 161.4 3/30/2017 23.49 160.7 5/15/2017 23.18 161.0 7/27/2017 24.86 159.3 9/25/2017 25.44 158.7 10/12/2017 25.86 158.3 3/21/2018 25.12 159.0 9/18/2018 23.90 160.3 3/20/2019 22.53 161.6	159.89				
1/25/2017 22.78 161.4 3/30/2017 23.49 160.7 5/15/2017 23.18 161.0 7/27/2017 24.86 159.3 9/25/2017 25.44 158.7 10/12/2017 25.86 158.3 10/30/2017 25.87 158.3 3/21/2018 25.12 159.0 9/18/2018 23.90 160.3 3/20/2019 22.53 161.6	160.17				
3/30/2017 23.49 160.7 5/15/2017 23.18 161.0 7/27/2017 24.86 159.3 9/25/2017 25.44 158.7 10/12/2017 25.86 158.3 10/30/2017 25.87 158.3 3/21/2018 25.12 159.0 9/18/2018 23.90 160.3 3/20/2019 22.53 161.6	17				
3/30/2017 23.49 160.7 5/15/2017 23.18 161.0 7/27/2017 24.86 159.3 9/25/2017 25.44 158.7 10/12/2017 25.86 158.3 10/30/2017 25.87 158.3 3/21/2018 25.12 159.0 9/18/2018 23.90 160.3 3/20/2019 22.53 161.6	12				
5/15/2017 23.18 161.0 7/27/2017 24.86 159.3 9/25/2017 25.44 158.7 10/12/2017 25.86 158.3 10/30/2017 25.87 158.3 3/21/2018 25.12 159.0 9/18/2018 23.90 160.3 3/20/2019 22.53 161.6	160.71				
MW-LF-04 184.20 7/27/2017 24.86 159.3 9/25/2017 25.44 158.7 10/12/2017 25.86 158.3 10/30/2017 25.87 158.3 3/21/2018 25.12 159.0 9/18/2018 23.90 160.3 3/20/2019 22.53 161.6)2				
9/25/2017 25.44 158.7 10/12/2017 25.86 158.3 MW-LF-04 184.20 10/30/2017 25.87 158.3 3/21/2018 25.12 159.0 9/18/2018 23.90 160.3 3/20/2019 22.53 161.6					
MW-LF-04 184.20 10/12/2017 25.86 158.3 10/30/2017 25.87 158.3 3/21/2018 25.12 159.0 9/18/2018 23.90 160.3 3/20/2019 22.53 161.6					
MW-LF-04 184.20 10/30/2017 25.87 158.3 3/21/2018 25.12 159.0 9/18/2018 23.90 160.3 3/20/2019 22.53 161.6					
3/21/2018 25.12 159.0 9/18/2018 23.90 160.3 3/20/2019 22.53 161.6					
9/18/2018 23.90 160.3 3/20/2019 22.53 161.6					
3/20/2019 22.53 161.6					
3/13/2013 25:22 150:3					
3/16/2020 20.77 163.4	163.43				
	159.97				
	163.19				
	159.55				
3/8/2022 24.39 159.8					
8/24/2022 24.48 159.7					

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)			(ft. AMSL)			
		5/12/2016	20.36	157.59			
		7/14/2016	21.25	156.70			
		9/14/2016	20.83	157.12			
		11/8/2016	20.75	157.20			
		1/25/2017	19.41	158.54			
		3/30/2017	20.18	157.77			
		5/15/2017	20.08	157.87			
		7/27/2017	21.28	156.67			
		9/25/2017	21.84	156.11			
		10/12/2017	22.10	155.85			
MW-LF-05	177.95	10/30/2017	21.94	156.01			
		3/21/2018	21.00	156.95			
		9/18/2018	21.67	156.28			
		3/20/2019	19.61	158.34			
		9/19/2019	21.85	156.10			
		3/16/2020	18.64	159.31			
		9/18/2020	20.87	157.08			
		3/15/2021	18.74	159.21			
		9/28/2021	21.20	156.75			
		3/8/2022	20.75	157.20			
		8/24/2022	21.14	156.81			
		9/ = 1/ = 0==					
		5/12/2016	19.12	159.45			
		7/14/2016	20.07	158.50			
		9/15/2016	20.41	158.16			
		11/8/2016	19.88	158.69			
		1/25/2017	18.76	159.81			
		3/30/2017	19.18	159.39			
		5/15/2017	19.01	159.56			
		7/27/2017	20.40	158.17			
		9/26/2017	21.19	157.38			
		10/12/2017	21.39	157.18			
MW-LF-06	178.57	10/30/2017	21.41	157.16			
IVIVV-LI-OO	170.57	3/21/2018	20.59	157.10			
		9/18/2018					
			19.85	158.72			
		3/20/2019	18.59	159.98			
		9/19/2019	21.00	157.57			
		3/16/2020	17.22	161.35			
		9/18/2020	20.39	158.18			
		3/16/2021	17.53	161.04			
		9/28/2021	20.49	158.08			
		3/8/2022	20.26	158.31			
		8/24/2022	20.45	158.12			

¹⁾ 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)			
	•	11/8/2016	12.82	175.13			
		1/26/2017	10.76	177.19			
		3/29/2017	12.55	175.40			
		5/16/2017	12.93	175.02			
		7/28/2017	15.88	172.07			
		9/26/2017	16.28	171.67			
		10/10/2017	16.72	171.23			
		10/30/2017	16.15	171.80			
		2/22/2018	13.48	174.47			
MW-BG-06	187.95	3/21/2018	13.48	174.47			
		9/17/2018	14.49	173.46			
		3/21/2019	12.44	175.51			
		9/19/2019	16.75	171.20			
		3/16/2020	11.45	176.50			
		9/18/2020	13.79	174.16			
		3/15/2021	11.59	176.36			
		9/28/2021	16.30	171.65			
		3/8/2022	14.48	173.47			
		8/24/2022	16.93	171.02			
		11/8/2016	9.06	173.46			
		1/26/2017	7.63	174.89			
		3/29/2017	8.22	174.30			
		5/16/2017	8.63	173.89			
		7/28/2017	10.60	171.92			
		9/26/2017	11.24	171.28			
		10/10/2017	11.72	170.80			
		10/30/2017	11.36	171.16			
		2/22/2018	10.27	172.25			
MW-BG-16	182.52	3/21/2018	10.25	172.27			
		9/17/2018	10.45	172.07			
		3/21/2019	8.49	174.03			
		9/19/2019	12.25	170.27			
		3/16/2020	8.28	174.24			
		9/18/2020	9.92	172.60			
		3/16/2021	8.33	174.19			
		9/28/2021	12.01	170.51			
		3/8/2022	10.98	171.54			
		8/24/2022	12.50	170.02			

Notes:

1) 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)			
		12/11/2017	11.50	163.25			
		12/19/2017	14.15	160.60			
		12/28/2017	13.81	160.94			
		2/21/2018	13.77	160.98			
		3/22/2018	14.08	160.67			
		9/18/2018	12.73	162.02			
AS-LF-01	174.75	3/21/2019	11.48	163.27			
A3-LF-U1	174.73	9/20/2019	10.13	164.62			
		3/17/2020	8.11	166.64			
		9/18/2020	10.69	164.06			
		3/15/2021	7.65	167.10			
		9/28/2021	10.81	163.94			
		3/8/2022	10.75	164.00			
		8/24/2022	10.69	164.06			
		12/11/2017	10.91	164.47			
		12/19/2017	11.14	164.24			
		12/28/2017	10.67	164.71			
		2/21/2018	10.80	164.58			
		3/22/2018	10.98	164.40			
		9/18/2018	9.94	165.44			
46.15.00	475.00	3/21/2019	7.89	167.49			
AS-LF-02	175.38	9/20/2019	10.41	164.97			
		3/17/2020	7.36	168.02			
		9/18/2020	8.77	166.61			
		3/16/2021	7.66	167.72			
		9/28/2021	10.54	164.84			
		3/8/2022	10.41	164.97			
		8/24/2022	10.46	164.92			
		9/2:/2022					
		12/11/2017	12.03	165.25			
		12/19/2017	12.11	165.17			
		12/28/2017	11.82	165.46			
		2/21/2018	11.82	165.46			
		3/21/2018	12.13	165.15			
		9/17/2018	10.75	166.53			
		3/21/2019	11.57	165.71			
MW-40	177.28	9/20/2019	11.13	166.15			
40	1,7,20	9/20/2019	11.13	166.15			
		3/17/2020	7.46	169.82			
		9/18/2020	9.7	†			
		3/16/2021	7.95	167.58 169.33			
		9/28/2021	11.21	166.07			
			11.18	166.10			
		3/8/2022	†				
		8/24/2022	11.04	166.24			

¹⁾ ft AMSL = feet above mean sea level.

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

				Background Wells									ASD Support Well													
		Sample ID:		MW-	LF-01			MW-	BG-06		MW-BG-16 AS-LF-01							AS-LF-02				MW-40				
		Sample Date:		03/09	9/2022		03/08/2022				03/08/2022			03/09/2022				03/09/2022				03/09/2022				
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	Result	Qual	MDL	QL
CCR Appendix III																										
Boron	μg/L	1000	6.98	J	4.00	15.0	8.61	J	4.00	15.0	9.64	J	4.00	15.0	12.3	J	4.00	15.0	16.3		4.00	15.0	37.7		4.00	15.0
Calcium	mg/L	15.8	2.200		0.030	0.100	9.780		0.030	0.100	2.040		0.030	0.100	4.010		0.030	0.100	4.540		0.030	0.100	31.700		0.030	0.100
Chloride	mg/L	21.9	8.90		0.0670	0.200	17.6		0.335	1.00	3.54		0.0670	0.200	5.27		0.0670	0.200	13.0		0.134	0.400	44.5		1.34	4.00
Fluoride	mg/L	0.165	0.0330	U	0.0330	0.100	0.0584	J	0.0330	0.100	0.0330	U	0.0330	0.100	0.113		0.0330	0.100	0.0630	J	0.0330	0.100	0.891		0.0330	0.100
рН	SU	3.4 - 6.2	4.42		0.01	0.01	4.31		0.01	0.01	4.31		0.01	0.01	4.52		0.01	0.01	4.45		0.01	0.01	4.13		0.01	0.01
Sulfate	mg/L	21.6	0.312	J	0.133	0.400	0.133	U	0.133	0.400	1.73		0.133	0.400	15.1		0.133	0.400	10.1		0.133	0.400	160		0.133	0.400
Total Dissolved Solids	mg/L	295.3	10.0	J	3.40	14.3	101		3.40	14.3	4.29	J	3.40	14.3	24.3	J	3.40	14.3	42.9	J	3.40	14.3	301	J	3.40	14.3
Field Parameters																										
Conductivity	μS/cm		48.32		0.1	0.1	181.72		0.1	0.1	45.54		0.1	0.1	67.95		0.1	0.1	96.69		0.1	0.1	510.09		0.1	0.1
Dissolved Oxygen	mg/L		3.57		0.01	0.01	7.18		0.01	0.01	7.45		0.01	0.01	5.02		0.01	0.01	4.39		0.01	0.01	0.33		0.01	0.01
Temperature	С		20.22		0.01	0.01	17.72		0.01	0.01	17.53		0.01	0.01	19.61		0.01	0.01	20.55		0.01	0.01	20.72		0.01	0.01
Turbidity	NTU		3.39		0.1	0.1	0.56		0.1	0.1	1.61		0.1	0.1	0.21		0.1	0.1	1.23		0.1	0.1	0.43		0.1	0.1
Depth to Water	ft btoc		8.60		0.01	0.01	14.48		0.01	0.01	10.98		0.01	0.01	10.75		0.01	0.01	10.41		0.01	0.01	11.18		0.01	0.01
Groundwater Elevation	ft msl		167.81		0.01	0.01	173.47		0.01	0.01	171.54		0.01	0.01	164.00		0.01	0.01	164.97		0.01	0.01	166.10		0.01	0.01
Oxidation Reduction Potential	millivolts		222.2		0.1	0.1	139.9		0.1	0.1	105.5		0.1	0.1	106.1		0.1	0.1	108.2		0.1	0.1	191.9		0.1	0.1

Notes:

MDL = Method Detection Limit
QL = Quantification 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 March 8, 2022

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

													D	owngrad	lient Well	ls										
		Sample ID:		MW-	LF-02			MW-	LF-03			MW-	LF-04			MW-	LF-05			MW-LF	-05 DUP			MW-	-LF-06	
		Sample Date:	03/09/2022			03/09/2022			03/09/2022					03/09	9/2022		03/09/2022				03/09/2022					
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	Result	Qual	MDL	QL
CCR Appendix III																										
Boron	μg/L	1000	17.1		4.00	15.0	8.19	J	4.00	15.0	9.69	J	4.00	15.0	10.2	J	4.00	15.0	10.6	J	4.00	15.0	9.02	J	4.00	15.0
Calcium	mg/L	15.8	5.720		0.030	0.100	1.070		0.030	0.100	1.860		0.030	0.100	2.840		0.030	0.100	2.790		0.030	0.100	2.150		0.030	0.100
Chloride	mg/L	21.9	39.9		0.0670	2.00	3.57		0.0670	0.200	4.66		0.0670	0.200	9.14		0.134	0.400	9.26		0.134	0.400	8.12		0.0670	0.200
Fluoride	mg/L	0.165	0.171		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	0.0330	U	0.0330	0.100
рН	SU	3.4 - 6.2	4.21		0.01	0.01	4.55		0.01	0.01	4.51		0.01	0.01	4.40		0.01	0.01	4.40		0.01	0.01	4.41		0.01	0.01
Sulfate	mg/L	21.6	6.26		0.133	0.400	0.570		0.133	0.400	0.620		0.133	0.400	0.583		0.133	0.400	0.575		0.133	0.400	0.638		0.133	0.400
Total Dissolved Solids	mg/L	295.3	77.1	J	3.40	14.3	8.57	J	3.40	14.3	17.1	J	3.40	14.3	32.9	J	3.40	14.3	42.9	J	3.40	14.3	30.0	J	3.40	14.3
Field Parameters																										
Conductivity	μS/cm		178.86		0.1	0.1	34.32		0.1	0.1	47.95		0.1	0.1	74.90		0.1	0.1	74.90		0.1	0.1	58.78		0.1	0.1
Dissolved Oxygen	mg/L		0.54		0.01	0.01	2.72		0.01	0.01	4.70		0.01	0.01	4.63		0.01	0.01	4.63		0.01	0.01	4.48		0.01	0.01
Temperature	С		22.24		0.01	0.01	22.45		0.01	0.01	22.99		0.01	0.01	21.42		0.01	0.01	21.42		0.01	0.01	22.53		0.01	0.01
Turbidity	NTU		2.08		0.1	0.1	1.48		0.1	0.1	4.41		0.1	0.1	0.45		0.1	0.1	0.45		0.1	0.1	3.31		0.1	0.1
Depth to Water	ft btoc		26.18		0.01	0.01	24.85		0.01	0.01	24.39		0.01	0.01	20.75		0.01	0.01	20.75		0.01	0.01	20.26		0.01	0.01
Groundwater Elevation	ft msl		163.90		0.01	0.01	162.34		0.01	0.01	159.81		0.01	0.01	157.20		0.01	0.01	157.20		0.01	0.01	158.31		0.01	0.01
Oxidation Reduction Potential	millivolts		422.8		0.1	0.1	195.8		0.1	0.1	190.2		0.1	0.1	109.6		0.1	0.1	109.6		0.1	0.1	248.1		0.1	0.1

Notes:

MDL = Method Detection Limit
QL = Quantification 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
J+ = Potentially high value

U = Samples reported below their respective MDL

= Concentration greater than Background Threshold Values

Bold font = Detected constituent

* - Groundwater Elevation data collected on March 8, 2022

Table 3

Summary of Second Semiannual 2022 Detection Monitoring Program Sampling Event Data Dominion Energy South Carolina - Cope Station Class III Landfill Cope, Orangeburg County, South Carolina

				Background Wells														ASD Support Well								
		Sample ID:	'					-BG-06			BG-16			LF-01			LF-02			MV	V-40					
		Sample Date:				08/29/2022			08/29/2022				08/30/2022				08/30/2022				08/30/2022					
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	Result	Qual	MDL	QL
CCR Appendix III																										
Boron	μg/L	1000	11.2	J	4.00	15.0	7.70	J	4.00	15.0	9.26	J	4.00	15.0	19.5		4.00	15.0	31.7		4.00	15.0	48.6		4.00	15.0
Calcium	mg/L	15.8	2.040		0.030	0.100	9.630		0.030	0.030	1.890		0.030	0.030	1.810		0.030	0.030	3.620		0.030	0.030	30.100		0.030	0.030
Chloride	mg/L	21.9	9.52		0.0670	0.200	18.0		0.335	1.00	3.09		0.0670	0.200	2.62		0.0670	0.200	5.34		0.0670	0.200	45.9		0.067	0.200
Fluoride	mg/L	0.165	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	0.0375	J	0.0330	0.100	0.589		0.0330	0.100
рН	SU	3.4 - 6.2	4.43		0.01	0.01	4.23		0.01	0.01	4.66		0.01	0.01	4.30		0.01	0.01	4.41		0.01	0.01	4.01		0.01	0.01
Sulfate	mg/L	21.6	0.371	J	0.133	0.400	0.284	J	0.133	0.400	2.26		0.133	0.400	12.0		0.133	0.400	16.4		0.133	0.400	139		1.33	4.00
Total Dissolved Solids	mg/L	295.3	2.38	U	2.38	10.0	87.0		2.38	10.0	10.0		2.38	10.0	9.00	J	2.38	10.0	36.0		2.38	10.0	263		2.38	10.0
Field Parameters	•																									
Conductivity	μS/cm		52.90		0.1	0.1	183.56		0.1	0.1	41.46		0.1	0.1	57.68		0.1	0.1	82.10		0.1	0.1	480.97		0.1	0.1
Dissolved Oxygen	mg/L		2.25		0.01	0.01	6.26		0.01	0.01	6.91		0.01	0.01	4.06		0.01	0.01	3.29		0.01	0.01	0.17		0.01	0.01
Temperature	С		25.40		0.01	0.01	21.18		0.01	0.01	21.48		0.01	0.01	25.51		0.01	0.01	25.29		0.01	0.01	24.44		0.01	0.01
Turbidity	NTU		2.17		0.1	0.1	1.95		0.1	0.1	2.05		0.1	0.1	1.58		0.1	0.1	2.06		0.1	0.1	1.84		0.1	0.1
Depth to Water	ft btoc		9.63		0.01	0.01	16.93		0.01	0.01	12.50		0.01	0.01	10.69		0.01	0.01	10.46		0.01	0.01	11.04		0.01	0.01
Groundwater Elevation	ft msl		166.78		0.01	0.01	171.02		0.01	0.01	170.02		0.01	0.01	164.06		0.01	0.01	164.92		0.01	0.01	166.24		0.01	0.01
Oxidation Reduction Potential	millivolts		70.1		0.1	0.1	80.1		0.1	0.1	91.3		0.1	0.1	73.4		0.1	0.1	91.9		0.1	0.1	111.7		0.1	0.1

Notes:

MDL = Method Detection Limit QL = Quantification Limit

mg/L = Milligram per liter μg/L = Microgram per liter

 μ 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 August 24, 2022

Table 3

Summary of Second 2022 Semiannual Detection Monitoring Program Sampling Event Data Dominion Energy South Carolina - Cope Station Class III Landfill Cope, Orangeburg County, South Carolina

													D	owngrac	lient Well	ls										
	Sample ID:			MW-LF-02				MW-	-LF-03		MW-LF-04					MW-LF-05					LF-06		MW-LF-06-DUP			
		Sample Date:	08/30/2022			08/30/2022				08/29/2022					08/2	9/2022		08/29/2022				08/29/2022				
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	Result	Qual	MDL	QL
CCR Appendix III																										
Boron	μg/L	1000	16.4		4.00	15.0	7.62	J	4.00	15.0	9.88	J	4.00	15.0	10.2	J	4.00	15.0	10.6	J	4.00	15.0	10.4	J	4.00	15.0
Calcium	mg/L	15.8	4.870		0.030	0.100	1.220		0.030	0.100	1.730		0.030	0.100	2.680		0.030	0.030	2.410		0.030	0.030	2.290		0.030	0.030
Chloride	mg/L	21.9	30.1		0.335	1.00	3.34		0.0670	0.200	4.87		0.0670	0.200	9.74		0.0670	0.200	8.62		0.0670	0.200	8.58		0.0670	0.200
Fluoride	mg/L	0.165	0.124		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	0.0330	U	0.0330	0.100
рН	SU	3.4 - 6.2	3.88		0.01	0.01	4.03		0.01	0.01	4.13		0.01	0.01	4.01		0.01	0.01	4.01		0.01	0.01	4.01		0.01	0.01
Sulfate	mg/L	21.6	7.34		0.133	0.400	0.491		0.133	0.400	0.682		0.133	0.400	0.656		0.133	0.400	0.592		0.133	0.400	0.571		0.133	0.400
Total Dissolved Solids	mg/L	295.3	55.0		2.38	10.0	2.38	U	2.38	10.0	14.0		2.38	10.0	32.0		2.38	10.0	17.0		2.38	10.0	14.0		2.38	10.0
Field Parameters																										
Conductivity	μS/cm		163.77		0.1	0.1	38.19		0.1	0.1	49.89		0.1	0.1	76.91		0.1	0.1	60.75		0.1	0.1	60.75		0.1	0.1
Dissolved Oxygen	mg/L		0.50		0.01	0.01	2.66		0.01	0.01	4.63		0.01	0.01	4.45		0.01	0.01	4.10		0.01	0.01	4.10		0.01	0.01
Temperature	С		24.37		0.01	0.01	24.72		0.01	0.01	24.06		0.01	0.01	27.01		0.01	0.01	26.42		0.01	0.01	26.42		0.01	0.01
Turbidity	NTU		0.75		0.1	0.1	0.14		0.1	0.1	2.15		0.1	0.1	0.35		0.1	0.1	0.57		0.1	0.1	0.57		0.1	0.1
Depth to Water	ft btoc		25.87		0.01	0.01	24.64		0.01	0.01	24.48		0.01	0.01	21.14		0.01	0.01	20.45		0.01	0.01	20.45		0.01	0.01
Groundwater Elevation	ft msl		164.21		0.01	0.01	162.55		0.01	0.01	159.72		0.01	0.01	156.81		0.01	0.01	158.12		0.01	0.01	158.12		0.01	0.01
Oxidation Reduction Potential	millivolts		146.4		0.1	0.1	112.3		0.1	0.1	195.4		0.1	0.1	191.6		0.1	0.1	161.9		0.1	0.1	161.9		0.1	0.1

Notes:

MDL = Method Detection Limit QL = Quantification Limit

mg/L = Milligram per liter

 μ g/L = Microgram per liter μ 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

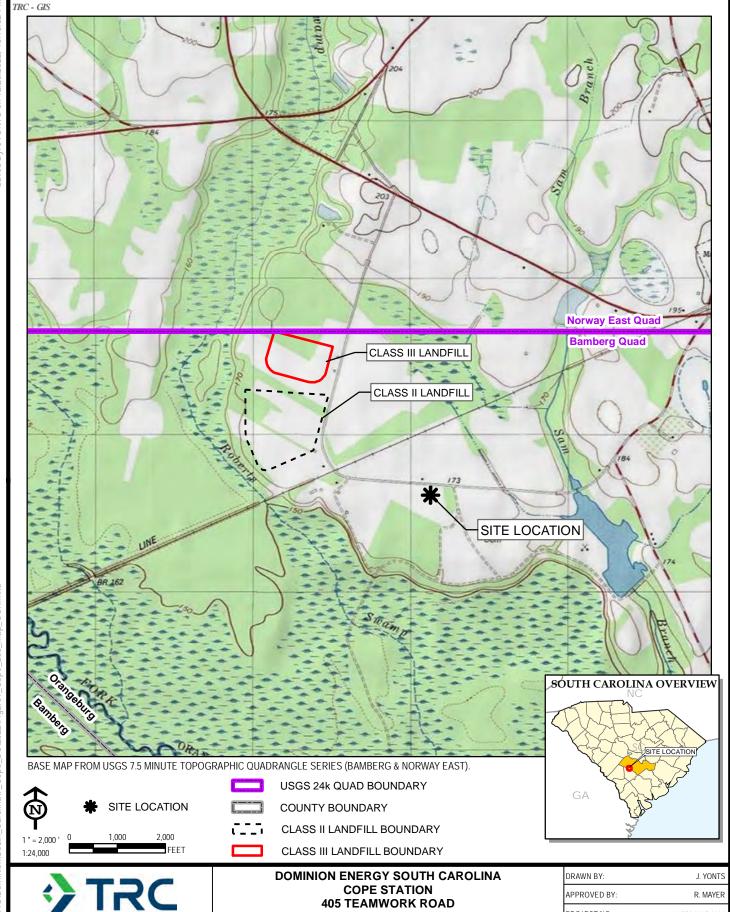
U = Samples reported below their respective MDL

= Concentration greater than Background Threshold Values

Bold font = Detected constituent

* - Groundwater Elevation data collected on August 24, 2022

Figures





Phone: 864.281.0030

COPE, SOUTH CAROLINA 29038

FIGURE 1 SITE LOCATION MAP

DRAWN BY:	J. YONIS
APPROVED BY:	R. MAYER
PROJECT NO:	416559.0007.0000
FILE NO.	Figure1_Cope_Loc_Map_CCR.mxd
DATE:	DECEMBER 2022



CCR Downgradient Monitoring Well

CCR Background ASD Monitoring Well

Class III Landfill Boundary

Class II Landfill

NOTE: Aerial Image from ESRI World Imagery dated January 2020.

MONITORING WELL NETWORK

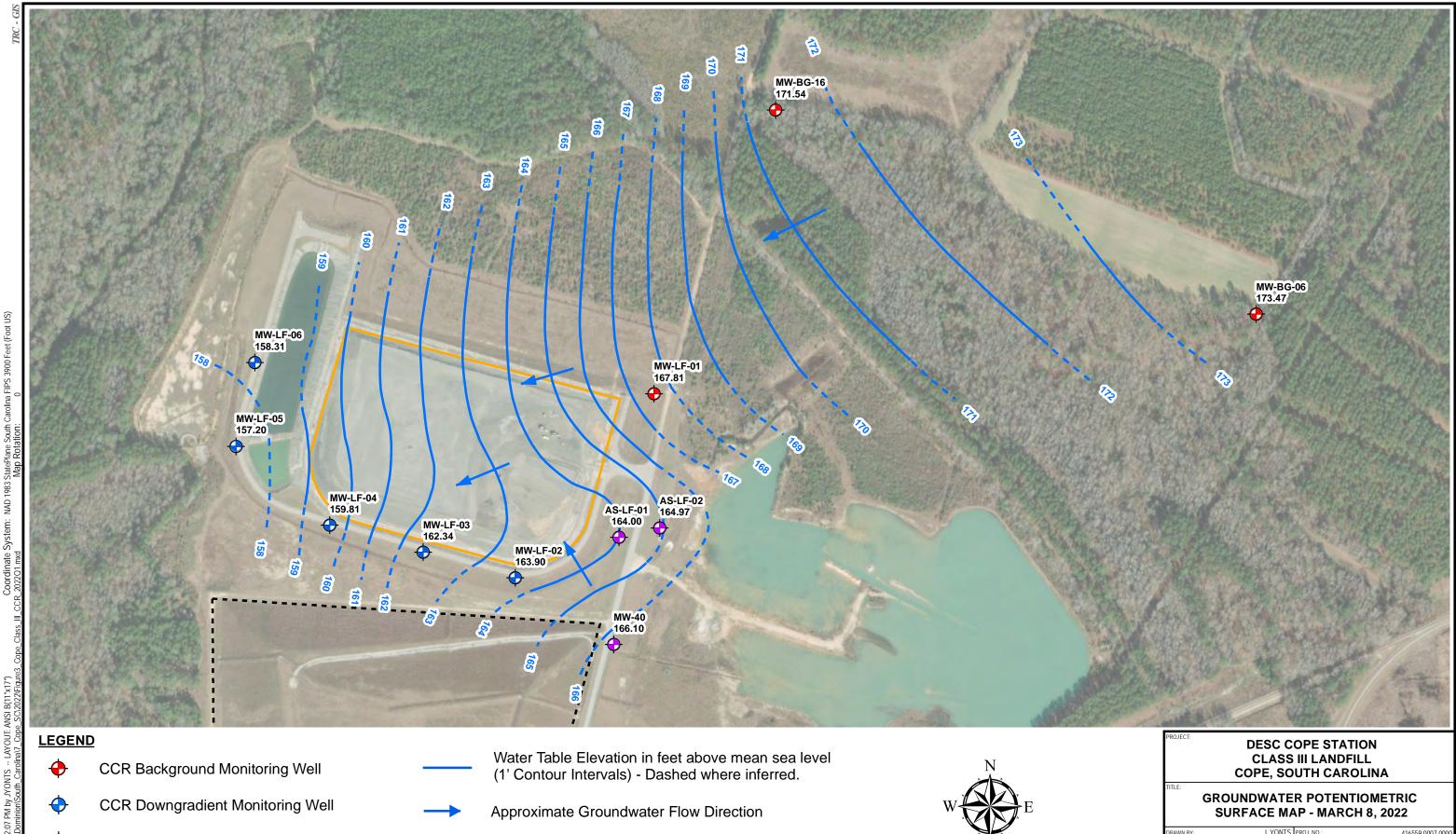
DRAWN BY:	J. YONTS	PROJ. I
CHECKED BY:	R. MAYER	
APPROVED BY:	R. MAYER	
DATE:	DECEMBER 2022	

FIGURE 2



800

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



CCR Background ASD Monitoring Well

Class III Landfill Boundary

Class II Landfill

173.47 Water Elevation (FT MSL)



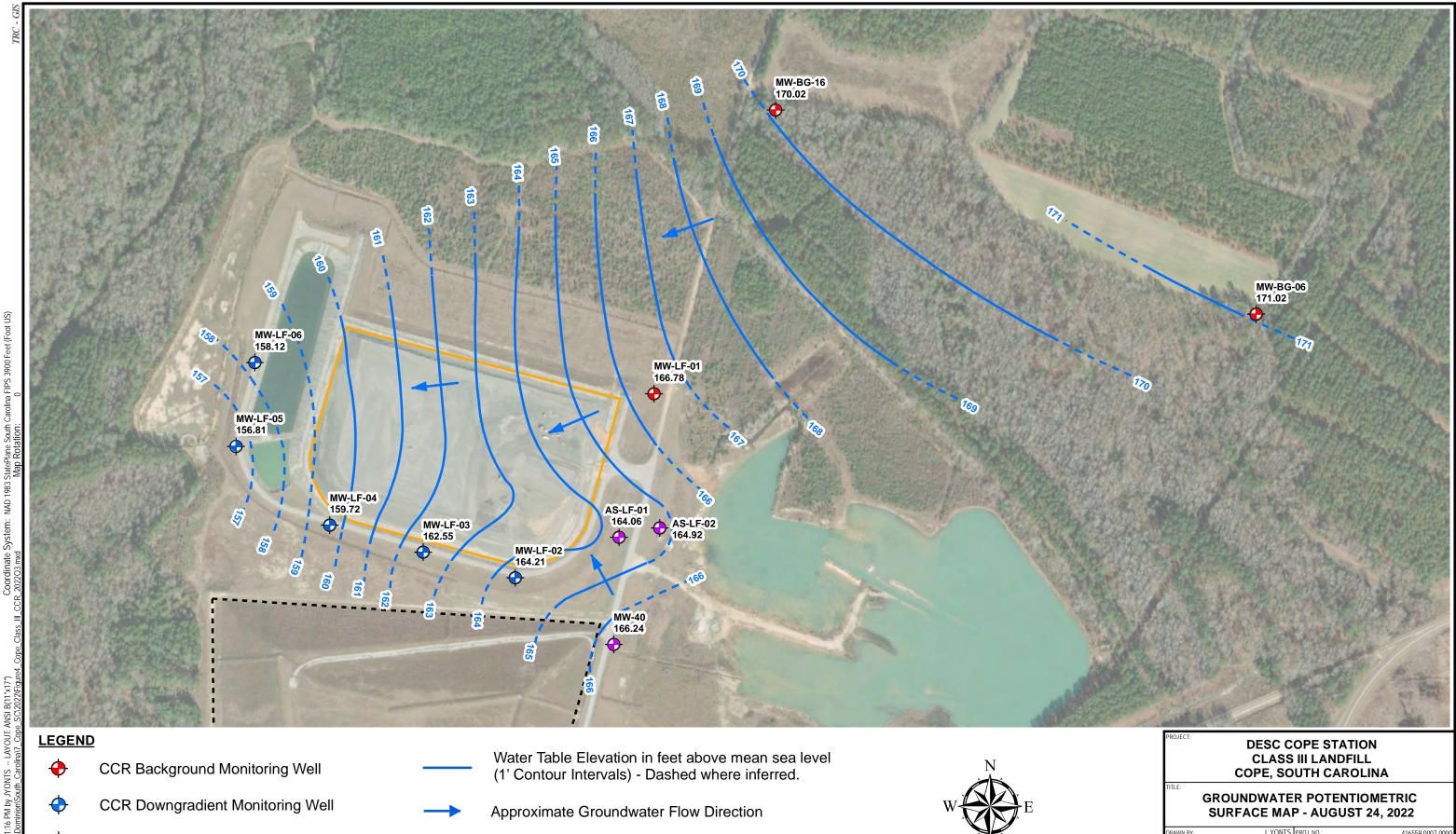
800

DRAWN BY:	J. YONIS
CHECKED BY:	J. BRADLEY
APPROVED BY:	R. MAYER
DATE:	DECEMBER 2022

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FIGURE 3

NOTE: Aerial Image from ESRI World Imagery dated January 2020.



CCR Background ASD Monitoring Well

Class III Landfill Boundary

Class II Landfill

166.24 Water Elevation (FT MSL)



800

DRAWN BY:	J. YONTS	PF
CHECKED BY:	J. BRADLEY	Г
APPROVED BY:	R. MAYER	
DATE	DECEMBED 2022	ı

50 International Drive, Suite 150 Patewood Plaza Three Greenville, SC 29615 Phone: 864.281.0030 www.TRCcompanies.com Figure4_Cope_Class_III_CCR_2022Q3.mx

FIGURE 4

NOTE: Aerial Image from ESRI World Imagery dated January 2020.

Appendix A September 2021 Alternate Source Demonstration



DOMINION ENERGY SOUTH CAROLINA

COPE STATION CLASS III INDUSTRIAL LANDFILL

ORANGEBURG 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 Cope Station Class III Industrial Landfill Alternate Source Demonstration © 2022 TRC All Rights Reserved

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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 Cope 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 the 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 background concentrations were identified based on direct comparisons made between the statistically derived background threshold value (95 percent upper prediction limit) and the downgradient monitoring results:

- Chloride (MW-LF-02),
- Fluoride (MW-LF-02).

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.

Alternate Source Demonstration

1.1 Background

Dominion Energy South Carolina, Inc. (DESC) operates the Cope Generating Station (Station), a coal-fired power plant, to generate electricity. The Station is located at 405 Teamwork Drive in Cope, Orangeburg 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 on-site in a coal ash disposal landfill (Unit) since it began operations in 1996. 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-3-00038.

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 1×10^{-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 10 wells installed into the subsurface to monitor shallow groundwater as follows:

- Five wells were installed as background monitoring wells and include MW-LF-01, MW-BG-06, MW-BG-16, AS-LF-01, and AS-LF-02.
- Five wells were installed as compliance monitoring wells and include MW-LF-02, MW-LF-03, MW-LF-04, MW-LF-05, and MW-LF-06.
- Additionally, monitoring well MW-40 was installed to support alternate source demonstration activities.

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 Rule 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**. Two SSIs were identified for chloride and fluoride at MW-LF-02.

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 Edisto River Subbasin (Ace 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 Huber-Congaree geologic formation. This formation consists of thinly layered, well-sorted, fine-grained sand with minimal interstitial clay and thin, laterally continuous clay interlayers (SCDNR 2009). Hydraulic conductivity values in the surficial aquifer at the Station range from 9.87×10^{-5} cm/s to 8.61×10^{-3} cm/s with an estimated groundwater flow velocities of between 0.002 to 0.84 feet/day (Nautilus 2021a).

1.5 General Groundwater Quality

Regionally, groundwater quality in the Edisto River Subbasin consists of a sodium bicarbonate water type grading to a sodium chloride water type with depth and proximity to the coast (SCDNR 2009). As such, the regional groundwater quality contains higher levels of specific constituents, such as chloride and fluoride, than in other regions in South Carolina. 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.

Edisto River Subbasin Groundwater Water Quality

	Concentrat	tion Range	USEPA
Constituent	Low	High	MCL
Chloride (mg/L)	1.0	1,000	250 (Secondary)
Fluoride (mg/L)	2.0	11	4.0 (Primary)

Note: mg/L = milligram per liter

As noted in the table above, the natural range of chloride and fluoride within the Edisto River Subbasin, exceeds the primary and/or secondary drinking water MCLs established by the USEPA for drinking water (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 SSIs were identified:

- Chloride (MW-LF-02).
- Fluoride (MW-LF-02).

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 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 Chloride at MW-LF-02

The chloride SSI identified at MW-LF-02 is a result of natural variation in groundwater quality from areas upgradient from the Unit. The following evidence supports this determination:

This concentration exceeds the background threshold value of 21.9 mg/L. Based on review of potentiometric surface mapping (Figure 3), shallow groundwater flow in the Unit is generally to the west-southwest. The location of MW-LF-02 is hydraulically cross-gradient of the southeastern corner of the Unit, consistent with historical delineation of groundwater flow made at the site. Dissolved solutes in groundwater travel by advection and dispersion. In advection, the movement of dissolved solutes in groundwater is dominated by changes in hydraulic head while movement through dispersion is due to changes in solute concentrations. Given the cross-gradient location of MW-LF-02, advection is unlikely to have carried chloride or other solutes from the Unit. Although dispersion of chloride from the Unit remains a possibility, given the distribution of groundwater flow in the MW-LF-02 area, it is more likely that the source of chloride is from upgradient areas of the Unit such as AS-LF-01, AS-LF-02, and MW-40.

- To further evaluate the potential source of chloride in the Unit area, an isoconcentration map was prepared for the September 2021 data and presented as **Figure 4**. Monitoring wells AS-LF-01, AS-LF-02, MW-40, MW-LF-01, and MW-BG-06 are all located upgradient from MW-LF-02 with chloride concentrations ranging from 3.31 mg/L (AS-LF-01) to 47.6 mg/L (MW-40) based on the September 2021 data. The chloride concentration at MW-LF-02 from September 2021 (31.0 mg/L) falls within this range. Historically, the highest chloride concentrations have been detected at MW-40 with a range of between 45.8 mg/L (December 2017) to 140 mg/L (September 2018) (Nautilus 2021a). The distribution of chloride in groundwater depicted by the isoconcentration map suggests that the source for chloride at MW-LF-02 is to the south-southeast of the monitoring well and the Unit.
- There are several constituents which are good indicators of coal ash impacts with lithium being one of them. Previous analysis of leachate from the Unit have indicated detections of lithium between 3,350 micrograms per liter (μg/L) and 6,254 μg/L (Nautilus 2021a). Total lithium was analyzed during the September 2021 event and was not detected above the laboratory method detection limit (MDL) of 2.00 μg/L at all locations sampled. Historically, lithium has not been detected above the laboratory MDL within the Unit monitoring well network with the exception of MW-LF-03 (2.4 μg/L in March 2019 and 2.02 μg/L in March 2021) and AS-LF-01 (2.41 μg/L in February 2018) (Nautilus 2021b). The general absence of lithium within the Unit monitoring well network suggests that a release of leachate from the Unit has not occurred.
- Most natural waters contain cations and anions found in equilibrium (Piper 1944). Evaluation of the geochemistry of groundwater can assist in understanding the source(s) of the dissolved constituents. A geochemical analysis of major cations (calcium, magnesium, sodium, and potassium) and anions (total alkalinity, chloride, fluoride, and sulfate) was conducted during the September 2021 sampling event and presented in **Table 2**. A useful tool to graph the major distribution of the dissolved constituents in groundwater is through the use of a Piper diagram (Piper 1944). A Piper diagram was prepared using the September 2021 geochemical data and presented as **Figure 5**. The following observations were noted:
 - With respect to anions (bottom right triangle of Piper diagram), MW-LF-02 plotted closely (within the 80 to 100% chloride distribution) with background wells MW-LF-01 and MW-BG-06, along with downgradient wells MW-LF-04, MW-LF-05, and MW-LF-06.
 - With respect to cations (bottom left triangle of Piper diagram), MW-LF-02 plotted closely (within the 40 to 60% sodium + potassium distribution) with background well MW-LF-01 and downgradient well MW-LF-03.
 - With respect to the overall hydrochemical distribution (diamond in Piper diagram),
 MW-LF-02 plotted within the same area of the diamond as background wells MW-LF-01 within the calcium chloride and sodium chloride mixed type water hydrochemical facies.

Evaluation of the geochemical distribution of cations and anions in the groundwater samples suggests that the water type for MW-LF-02 has similarities to that of background wells MW-LF-01, MW-BG-06, and AS-LF-01. This observation suggests that the source for chloride at MW-02-LF is

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not from the Unit. The similar geochemical signature of MW-LF-02 with background wells MW-LF-01 and MW-BG-06 further suggests that the SSI for chloride is the result of natural variations of chloride in the groundwater at the site.

2.2 Fluoride at MW-LF-02

The fluoride SSI identified at MW-LF-02 is also 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-02 at a concentration of 0.203 mg/L in the September 2021 sample. This concentration exceeds the background threshold value of 0.165 mg/L. Based on review of potentiometric surface mapping (Figure 3), shallow groundwater flow in the Unit is generally to the west-southwest. The location of MW-LF-02 is hydraulically cross-gradient of the southeastern corner of the Unit, consistent with historical delineation of groundwater flow made at the site. Dissolved solutes in groundwater travel by advection and dispersion. In advection, the movement of dissolved solutes in groundwater is dominated by changes in hydraulic head while movement through dispersion is due to changes in solute concentrations. Given the cross-gradient location of MW-LF-02, advection is unlikely to have carried fluoride or other solutes from the Unit. Although dispersion of fluoride from the Unit remains a possibility, given the distribution of groundwater flow in the MW-LF-02 area, it is more likely that the source of fluoride is from upgradient areas of the Unit such as AS-LF-01, AS-LF-02, and MW-40.
- To further evaluate the potential source of fluoride in the Unit area, an isoconcentration map was prepared for the September 2021 data and presented as **Figure 6**. Monitoring wells AS-LF-01, AS-LF-02, MW-40, MW-LF-01, and MW-BG-06 are all located upgradient from MW-LF-02 with fluoride concentrations ranging from < 0.0330 mg/L (AS-LF-01) to 0.679 mg/L (MW-40) based on the September 2021 data. The fluoride concentration at MW-LF-02 from September 2021 (0.203 mg/L) falls within this range. Fluoride was first detected in MW-40 in March 2020 at a concentration of 0.5 mg/L. Fluoride was again detected in MW-40 in March 2021 (0.625 mg/L) and September 2021 (0.679 mg/L). The distribution of fluoride in groundwater depicted by the isoconcentration map suggests that the source for fluoride at MW-LF-02 is to the south-southeast of the monitoring well and the Unit.
- There are several constituents which are good indicators of coal ash impacts with lithium being one of them. Previous analysis of leachate from the Unit have indicated detections of lithium between 3,350 μg/L and 6,254 μg/L (Nautilus 2021a). Total lithium was analyzed during the September 2021 event and was not detected above the laboratory method detection limit (MDL) of 2.00 μg/L at all locations sampled. Historically, lithium has not been detected above the laboratory MDL within the Unit monitoring well network with the exception of MW-LF-03 (2.4 μg/L in March 2019 and 2.02 μg/L in March 2021) and AS-LF-01 (2.41 μg/L in February 2018) (Nautilus 2021b). The general

- absence of lithium within the Unit monitoring well network suggests that a release of leachate from the Unit has not occurred.
- Most natural waters contain cations and anions found in equilibrium (Piper 1944). Evaluation of the geochemistry of groundwater can assist in understanding the source(s) of the dissolved constituents. A geochemical analysis of major cations (calcium, magnesium, sodium, and potassium) and anions (total alkalinity, chloride, fluoride, and sulfate) was conducted during the September 2021 sampling event and presented in **Table 2**. A useful tool to graph the major distribution of the dissolved constituents in groundwater is through the use of a Piper diagram (Piper 1944). A Piper diagram was prepared using the September 2021 geochemical data and presented as **Figure 5**. The following observations were noted:
 - With respect to anions (bottom right triangle of Piper diagram), MW-LF-02 plotted closely (within the 80 to 100% chloride distribution) with background wells MW-LF-01 and MW-BG-06, along with downgradient wells MW-LF-04, MW-LF-05, and MW-LF-06.
 - With respect to cations (bottom left triangle of Piper diagram), MW-LF-02 plotted closely (within the 40 to 60% sodium + potassium distribution) with background well MW-LF-01 and downgradient well MW-LF-03.
 - With respect to the overall hydrochemical distribution (diamond in Piper diagram),
 MW-LF-02 plotted within the same area of the diamond as background wells MW-LF-01 within the calcium chloride and sodium chloride mixed type water hydrochemical facies.

Evaluation of the geochemical distribution of cations and anions in the groundwater samples suggests that the water type for MW-LF-02 has similarities to that of background wells MW-LF-01, MW-BG-06, and AS-LF-01. This observation suggests that the source for fluoride at MW-02-LF is not from the Unit. The similar geochemical signature of MW-LF-02 with background wells MW-LF-01 and MW-BG-06 further suggests that the SSI for fluoride is the result of natural variations of chloride in the groundwater at the site.

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 were not due to a release from the Unit to the subsurface.

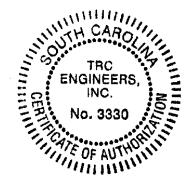
Based on the information provided in this ASD report, DESC will continue to conduct semiannual detection monitoring in accordance with 40 CFR §257.94 at the Certified Monitoring Well Network for the Unit.

Section 4 Certification

I hereby certify that the alternative source demonstration presented within this document for the DESC Cope Generating Station Coal Ash Disposal 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



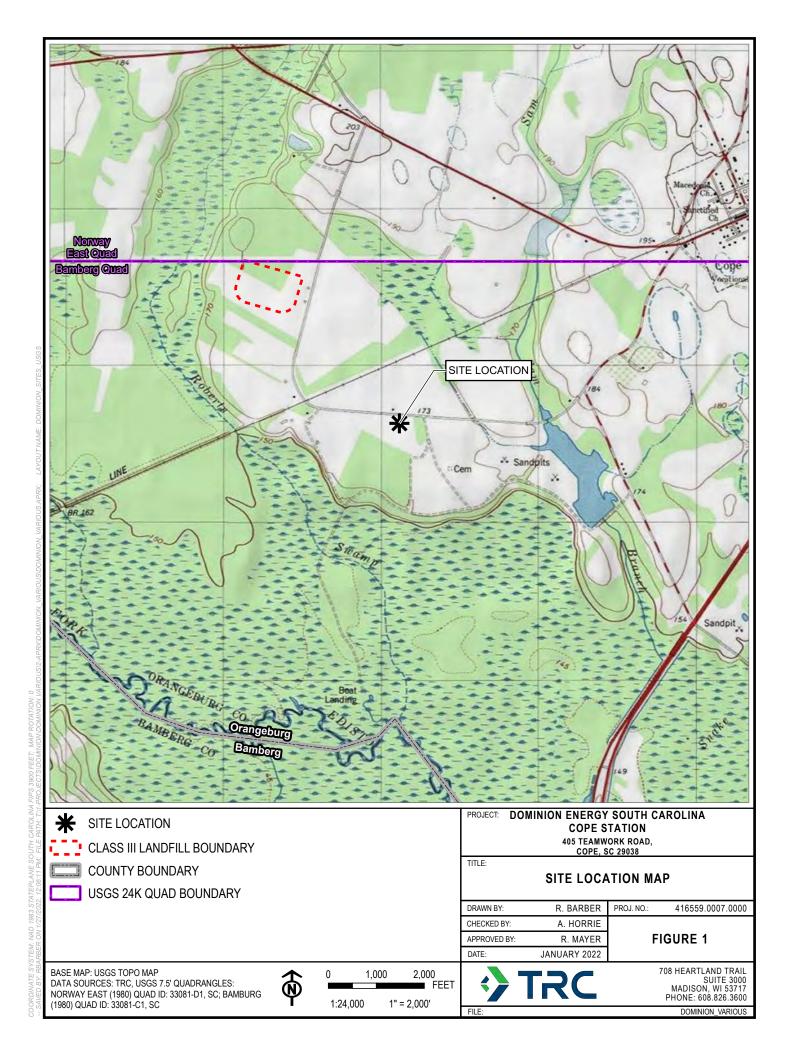
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Figures



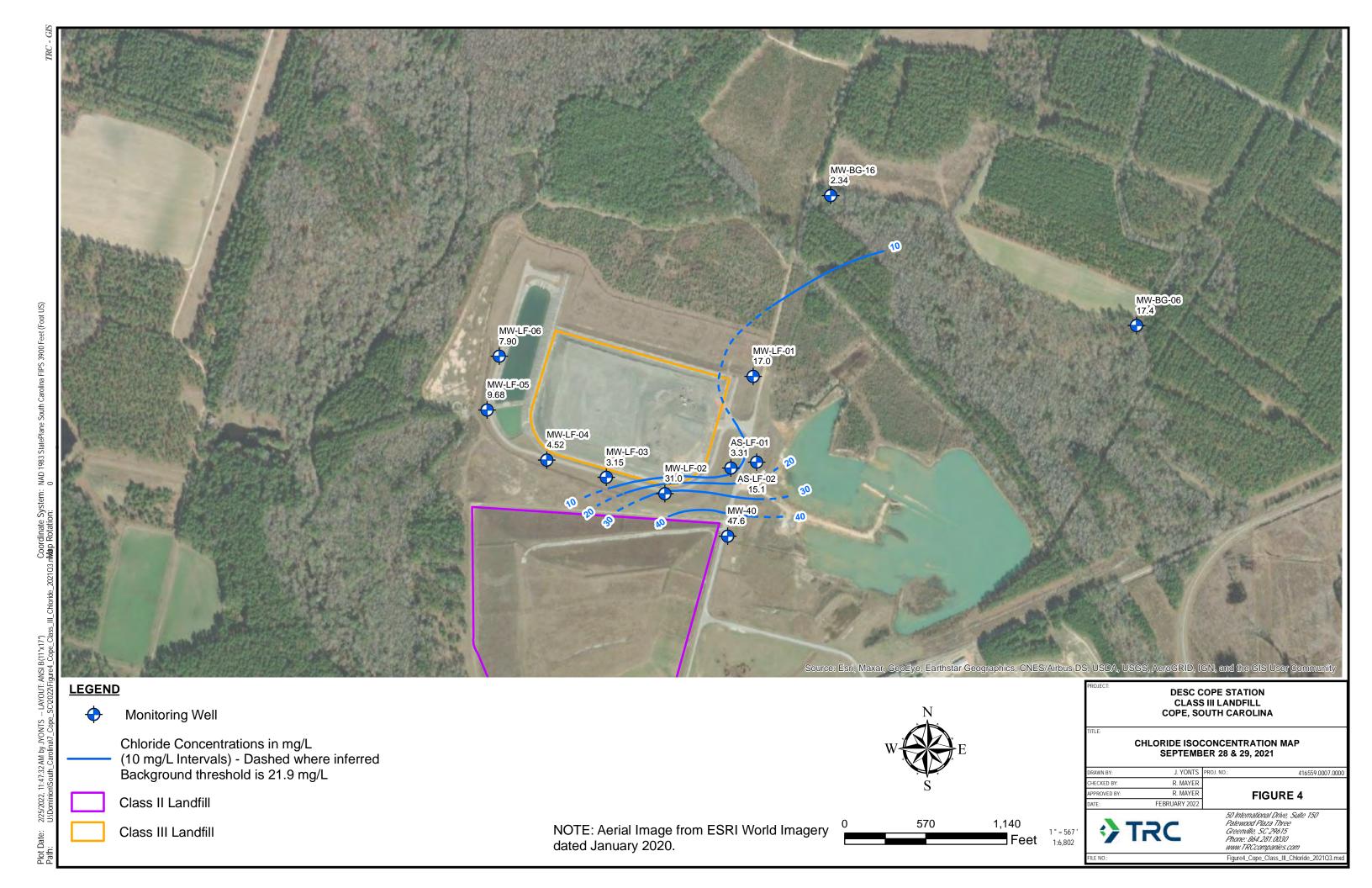
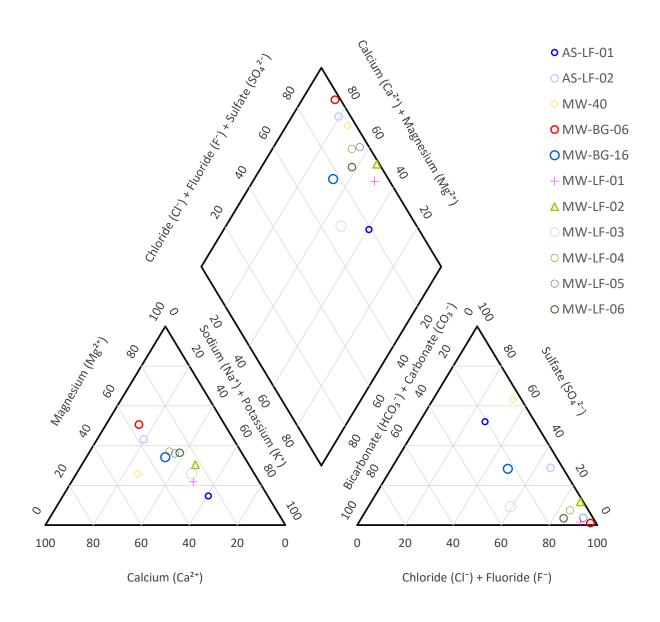
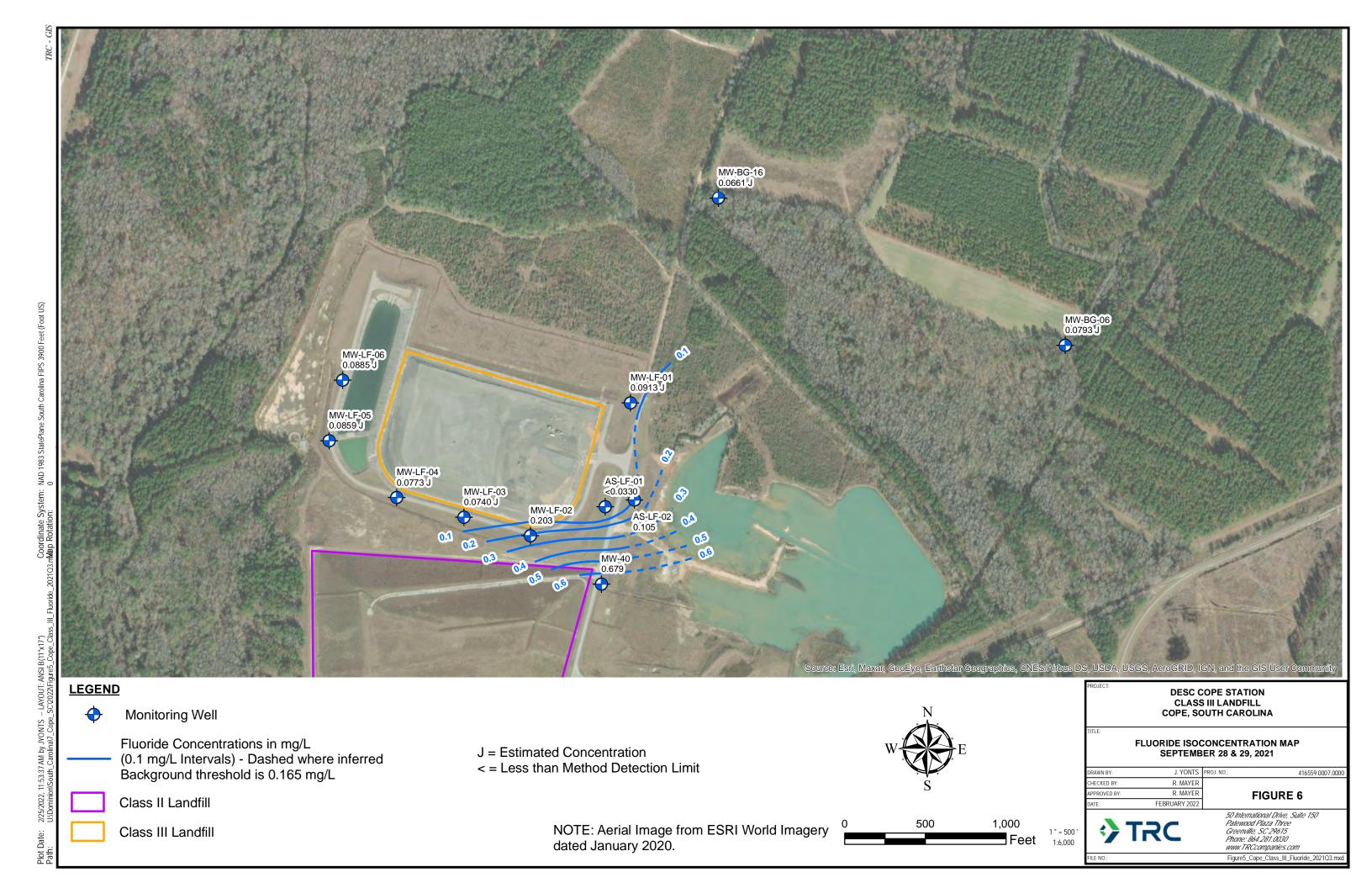


FIGURE 5 DESC Cope Station Class III Landfill Piper Diagram - September 2021





Tables

Table 1 Summary of Second Semiannual 2021 Detection Monitoring Program Sampling Event Data Dominion Energy South Carolina - Cope Station Class III Landfill

Cope, Orangeburg County, South Carolina

												o oleano	und Mal	<u> </u>								
		Commis ID:		BASA/	I F 04		I	BA\A/	BG-06		D		und Well	15		A C .	LF-01			A C I	_F-02	
		Sample ID:			LF-01								BG-16									
	Samp				09/28/2021				09/29/2021				9/2021			3/2021		09/28/2021				
Parameter Name	Units	Background	Result	Qual	MDL	RL	Result	Qual	MDL	RL	Result	Qual	MDL	RL	Result	Qual	MDL	RL	Result	Qual	MDL	RL
		Threshold																				
		Values																				
CCR Appendix III																						
Boron	μg/L	1000	10.6	J	4.00	4.00	8.58	J	4.00	4.00	10.6	J	4.00	4.00	18.6		4.00	4.00	19.1		4.00	4.00
Calcium	mg/L	15.8	3.13		0.030	0.030	9.42		0.030	0.030	1.62		0.030	0.030	1.68		0.030	0.030	5.63		0.030	0.030
Chloride	mg/L	21.9	17.0		0.335	0.335	17.4		0.335	0.335	2.34		0.0670	0.0670	3.31		0.0670	0.0670	15.1		0.134	0.134
Fluoride	mg/L	0.165	0.0913	J	0.0330	0.0330	0.0793	J	0.0330	0.0330	0.0661	J	0.0330	0.0330	< 0.0330	U	0.0330	0.0330	0.105		0.0330	0.0330
рН	SU	3.4 - 6.2	4.27				4.19				4.64				4.56				4.35			
Sulfate	mg/L	21.6	0.418		0.133	0.133	0.273	J	0.133	0.133	1.95		0.133	0.133	8.71		0.133	0.133	9.07		0.133	0.133
Total Dissolved Solids	mg/L	295.3	32.9	J	3.40	3.40	88.6	J	3.40	3.40	12.9	J	3.40	3.40	25.7	J	3.40	3.40	41.4	J	3.40	3.40
Field Parameters																						
Conductivity	μS/cm		86.57		0.1	0.1	192.65		0.1	0.1	40.15		0.1	0.1	49.78		0.1	0.1	110.17		0.1	0.1
Dissolved Oxygen	mg/L		2.17		0.01	0.01	6.09		0.01	0.01	6.76		0.01	0.01	2.98		0.01	0.01	2.84		0.01	0.01
Temperature	С		27.29		0.01	0.01	21.35		0.01	0.01	21.01		0.01	0.01	26.97		0.01	0.01	24.82		0.01	0.01
Turbidity	NTU		1.18		0.1	0.1	0.79		0.1	0.1	0.79		0.1	0.1	0.83		0.1	0.1	1.42		0.1	0.1
Depth to Water	ft btoc		9.92		0.01	0.01	16.3		0.01	0.01	12.01		0.01	0.01	10.81		0.01	0.01	10.54		0.01	0.01
Groundwater Elevation	ft msl		166.49		0.01	0.01	171.65		0.01	0.01	170.51		0.01	0.01	166.54		0.01	0.01	167.29		0.01	0.01
Oxidation Reduction Potential	millivolts		269.2		0.1	0.1	191.8		0.1	0.1	186.1		0.1	0.1	200.8		0.1	0.1	191.3		0.1	0.1

Notes:

MDL = Method Detection Limit

RL = Reporting 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

-- = Not applicable.

Qualifiers (Qual)

J = Estimated Results

J+ = Potentially high value

U = Samples reported below their respective MDL

= Concentration greater than Background Threshold Values

Bold font = Detected constituent

* - Groundwater Elevation data collected on September 28, 2021

Table 1

Summary of Second 2021 Semiannual Detection Monitoring Program Sampling Event Data Dominion Energy South Carolina - Cope Station Class III Landfill Cope, Orangeburg County, South Carolina

													D	owngrac	lient Well	s										
		Sample ID:		MW	-LF-02			MW-	-LF-03			MW-	LF-04				LF-05			MW-LF	-06 DUF)		MW.	-LF-06	
		Sample	09/29/2021			09/29/2021			09/29/2021					9/2021			09/2	8/2021		09/28/2021						
Parameter Name	Units	Background Threshold Values	Result	Qual	MDL	RL	Result	Qual	MDL	RL	Result	Qual	MDL	RL	Result	Qual	MDL	RL	Result	Qual	MDL	RL	Result	Qual	MDL	RL
CCR Appendix III																										
Boron	μg/L	1000	17.0		4.00	4.00	9.29	J	4.00	4.00	9.97	J	4.00	4.00	10.4	J	4.00	4.00	11.9	J	4.00	4.00	11.3	J	4.00	4.00
Calcium	mg/L	15.8	4.39		0.030	0.030	1.09		0.030	0.030	1.78		0.030	0.030	2.71		0.030	0.030	2.06		0.030	0.030	2.00		0.030	0.030
Chloride	mg/L	21.9	31.0		0.335	0.335	3.15		0.0670	0.0670	4.52		0.0670	0.0670	9.68		0.0670	0.0670	7.96		0.0670	0.0670	7.90		0.0670	0.0670
Fluoride	mg/L	0.165	0.203		0.0330	0.0330	0.0740	J	0.0330	0.0330	0.0773	J	0.0330	0.0330	0.0859	J	0.0330	0.0330	0.0868	J	0.0330	0.0330	0.0885	J	0.0330	0.0330
рН	SU	3.4 - 6.2	4.05				4.46				4.41				4.3				4.38				4.38			
Sulfate	mg/L	21.6	5.70		0.133	0.133	0.698		0.133	0.133	0.558		0.133	0.133	0.541		0.133	0.133	0.615		0.133	0.133	0.457		0.133	0.133
Total Dissolved Solids	mg/L	295.3	97.1	J	3.40	3.40	5.71	J	3.40	3.40	18.6	J	3.40	3.40	18.6		3.40	3.40	25.7	J	3.40	3.40	35.7	J	3.40	3.40
Field Parameters																										
Conductivity	μS/cm		164.08		0.1	0.1	37.78		0.1	0.1	49.81		0.1	0.1	79.23		0.1	0.1	60.51		0.1	0.1	60.51		0.1	0.1
Dissolved Oxygen	mg/L		0.22		0.01	0.01	2.01		0.01	0.01	4.38		0.01	0.01	4.43		0.01	0.01	4.37		0.01	0.01	4.37		0.01	0.01
Temperature	С		25.55		0.01	0.01	25.96		0.01	0.01	24.86		0.01	0.01	23.92		0.01	0.01	26.56		0.01	0.01	26.56		0.01	0.01
Turbidity	NTU		0.88		0.1	0.1	0.63		0.1	0.1	2.49		0.1	0.1	0.89		0.1	0.1	0.96		0.1	0.1	0.96		0.1	0.1
Depth to Water	ft btoc		26.06		0.01	0.01	24.95		0.01	0.01	24.65		0.01	0.01	21.2		0.01	0.01	20.49		0.01	0.01	20.49		0.01	0.01
Groundwater Elevation	ft msl		164.02		0.01	0.01	162.24		0.01	0.01	159.55		0.01	0.01	156.75		0.01	0.01	158.08		0.01	0.01	158.08		0.01	0.01
Oxidation Reduction Potential	millivolts		332.6		0.1	0.1	203.4		0.1	0.1	215.7		0.1	0.1	238		0.1	0.1	194.9		0.1	0.1	194.9		0.1	0.1

Notes:

MDL = Method Detection Limit

RL = Reporting Limit mg/L = Milligram per liter

μg/L = Microgram per liter

 μ 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 DUP = Duplicate sample.

-- = Not applicable.

Qualifiers (Qual)

J = Estimated Results

J+ = Potentially high value

U = Samples reported below their respective MDL

= Concentration greater than Background Threshold Values

Bold font = Detected constituent

* - Groundwater Elevation data collected on September 28, 2021

Table 2

Summary of Alternate Source Demonstration Parameters Dominion Energy South Carolina - Cope Station Class III Landfill Cope, Orangeburg County, South Carolina

			Background Wells																			
	Sample ID							MW-	BG-06			MW-	BG-16			AS-	LF-01			AS-	LF-02	
	Sample	09/28/2021				09/29/2021					09/2	9/2021			8/2021		09/28/2021					
Parameter Name	Units	Background Threshold Values	Result	Qual	MDL	RL	Result	Qual	MDL	RL	Result	Qual	MDL	RL	Result	Qual	MDL	RL	Result	Qual	MDL	RL
ASD Support Parameters																						
Calcium	mg/L	15.8	3.13		0.030	0.030	9.42		0.030	0.030	1.62		0.030	0.030	1.68		0.030	0.030	5.63		0.030	0.030
Chloride	mg/L	21.9	17.0		0.335	0.335	17.4		0.335	0.335	2.34		0.0670	0.0670	3.31		0.0670	0.0670	15.1		0.134	0.134
Fluoride	mg/L	0.165	0.0913	J	0.0330	0.0330	0.0793	J	0.0330	0.0330	0.0661	J	0.0330	0.0330	<0.0330	U	0.0330	0.0330	0.105		0.0330	0.0330
Sulfate	mg/L	21.6	0.418		0.133	0.133	0.273	J	0.133	0.133	1.95		0.133	0.133	8.71		0.133	0.133	9.07		0.133	0.133
Total Dissolved Solids	mg/L	295.3	32.9	J	3.40	3.40	88.6	J	3.40	3.40	12.9	J	3.40	3.40	25.7	J	3.40	3.40	41.4	J	3.40	3.40
Alkalinity, Total as CaCO3	mg/L		2.01	J	1.45	1.45	<1.45	U	1.45	1.45	2.01	J	1.45	1.45	4.42	J+	1.45	1.45	2.01	J	1.45	1.45
Lithium	ug/L		<2.00	U	2.00	2.00	<2.00	U	2.00	2.00	<2.00	U	2.00	2.00	<2.00	U	2.00	2.00	<2.00	U	2.00	2.00
Magnesium	ug/L		1510		10.0	10.0	8100		10.0	10.0	1020		10.0	10.0	605		10.0	10.0	3940		10.0	10.0
Potassium	ug/L		740		80.0	80.0	1700		80.0	80.0	1510		80.0	80.0	2020		80.0	80.0	1830		80.0	80.0
Sodium	ug/L		6200		80.0	80.0	3170		80.0	80.0	969		80.0	80.0	3540		80.0	80.0	2280		80.0	80.0

Notes: Qualifiers (Qual)

MDL = Method Detection Limit J = Estimated Results
RL = Reporting Limit J+ = Potentially high value

mg/L = Milligram per liter U = Samples reported below their respective MDL

μg/L = Microgram per liter = Concentration greater than Background Threshold Values

-- = Not applicable. Bold font = Detected constituent

Table 2

Summary of Alternate Source Demonstration Parameters Dominion Energy South Carolina - Cope Station Class III Landfill Cope, Orangeburg County, South Carolina

													D	owngrad	lient Well	S										
		Sample ID:		MW-	LF-02			MW-	LF-03			MW-	LF-04			MW-	LF-05			MW-LF	-06 DUP			MW-	LF-06	
	Sample		09/29	9/2021		09/29/2021				9/2021			9/2021			09/2	8/2021		09/28/2021							
Parameter Name	Units	Background Threshold Values	Result	Qual	MDL	RL	Result	Qual	MDL	RL	Result	Qual	MDL	RL	Result	Qual	MDL	RL	Result	Qual	MDL	RL	Result	Qual	MDL	RL
ASD Support Parameters																										
Calcium	mg/L	15.8	4.39		0.030	0.030	1.09		0.030	0.030	1.78		0.030	0.030	2.71		0.030	0.030	2.06		0.030	0.030	2.00		0.030	0.030
Chloride	mg/L	21.9	31.0		0.335	0.335	3.15		0.0670	0.0670	4.52		0.0670	0.0670	9.68		0.0670	0.0670	7.96		0.0670	0.0670	7.90		0.0670	0.0670
Fluoride	mg/L	0.165	0.203		0.0330	0.0330	0.0740	J	0.0330	0.0330	0.0773	J	0.0330	0.0330	0.0859	J	0.0330	0.0330	0.0868	J	0.0330	0.0330	0.0885	J	0.0330	0.0330
Sulfate	mg/L	21.6	5.70		0.133	0.133	0.698		0.133	0.133	0.558		0.133	0.133	0.541		0.133	0.133	0.615		0.133	0.133	0.457		0.133	0.133
Total Dissolved Solids	mg/L	295.3	97.1	J	3.40	3.40	5.71	J	3.40	3.40	18.6	J	3.40	3.40	18.6		3.40	3.40	25.7	J	3.40	3.40	35.7	J	3.40	3.40
Alkalinity, Total as CaCO3	mg/L		<1.45	U	1.45	1.45	3.02	J	1.45	1.45	<1.45	U	1.45	1.45	<1.45	U	1.45	1.45	2.01	J	1.45	1.45	2.01	J	1.45	1.45
Lithium	ug/L		<2.00	U	2.00	2.00	<2.00	U	2.00	2.00	<2.00	U	2.00	2.00	<2.00	U	2.00	2.00	<2.00	U	2.00	2.00	<2.00	U	2.00	2.00
Magnesium	ug/L		3640		10.0	10.0	656		10.0	10.0	1340		10.0	10.0	2120		10.0	10.0	1780		10.0	10.0	1710		10.0	10.0
Potassium	ug/L		4880		80.0	80.0	1170		80.0	80.0	439		80.0	80.0	966		80.0	80.0	355		80.0	80.0	345		80.0	80.0
Sodium	ug/L		7850		80.0	80.0	1610		80.0	80.0	2010		80.0	80.0	3430		80.0	80.0	3240		80.0	80.0	3150		80.0	80.0

Notes:

MDL = Method Detection Limit RL = Reporting Limit

mg/L = Milligram per liter μg/L = Microgram per liter

DUP = Duplicate sample.
-- = Not applicable.

Qualifiers (Qual)

J = Estimated Results
J+ = Potentially high value

U = Samples reported below their respective MDL

= Concentration greater than Background Threshold Values

Bold font = Detected constituent

Appendix B March 2022 Alternate Source Demonstration



DOMINION ENERGY SOUTH CAROLINA

COPE STATION CLASS III LANDFILL

ORANGEBURG 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 Cope Station Class III Landfill Alternate Source Demonstration © 2022 TRC All Rights Reserved

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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 Cope 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 background concentrations were identified based on direct comparisons made between the statistically derived background threshold value (95 percent upper prediction limit) and the downgradient monitoring results:

- Chloride (MW-LF-02).
- Fluoride (MW-LF-02).

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.

1.1 Background

Dominion Energy South Carolina, Inc. (DESC) operates the Cope Generating Station (Station), a coal-fired power plant, to generate electricity. The Station is located at 405 Teamwork Drive in Cope, Orangeburg 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 on-site in a coal ash disposal landfill (Unit) since it began operations in 1996. 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-3-00038.

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 1×10^{-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 10 wells installed into the subsurface to monitor shallow groundwater as follows:

- Five wells were installed as background monitoring wells and include MW-LF-01, MW-BG-06, MW-BG-16, AS-LF-01, and AS-LF-02.
- Five wells were installed as compliance monitoring wells and include MW-LF-02, MW-LF-03, MW-LF-04, MW-LF-05, and MW-LF-06.
- Additionally, monitoring well MW-40 was installed to support alternate source demonstration activities.

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 Rule 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 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 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 first semiannual 2022 detection monitoring event. Data from the first semiannual 2022 detection monitoring event is presented in **Table 1**. Two SSIs were identified for chloride and fluoride at MW-LF-02.

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 Edisto River Subbasin (Ace 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 Huber-Congaree geologic formation. This formation consists of thinly layered, well-sorted, fine-grained sand with minimal interstitial clay and thin, laterally continuous clay interlayers (SCDNR 2009). Hydraulic conductivity values in the surficial aquifer at the Station range from 9.87×10^{-5} cm/s to 8.61×10^{-3} cm/s with an estimated groundwater flow velocities of between 0.002 to 0.84 feet/day (Nautilus 2021a).

1.5 General Groundwater Quality

Regionally, groundwater quality in the Edisto River Subbasin consists of a sodium bicarbonate water type grading to a sodium chloride water type with depth and proximity to the coast (SCDNR 2009). As such, the regional groundwater quality contains higher levels of specific constituents, such as chloride and fluoride, than in other regions in South Carolina. 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.

Edisto River Subbasin Groundwater Water Quality

	Concentrat	ion Range	USEPA
Constituent	Low	High	MCL
Chloride (mg/L)	1.0	1,000	250 (Secondary)
Fluoride (mg/L)	2.0	11	4.0 (Primary)

Note: mg/L = milligram per liter

As noted in the table above, the natural range of chloride and fluoride within the Edisto River Subbasin, exceeds the primary and/or secondary drinking water MCLs established by the USEPA for drinking water (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. 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:

- Chloride (MW-LF-02).
- Fluoride (MW-LF-02).

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 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 Chloride at MW-LF-02

The chloride SSI identified at MW-LF-02 is a result of natural variation in groundwater quality from areas upgradient from the Unit. The following evidence supports this determination:

This concentration exceeds the background threshold value of 21.9 mg/L. Based on review of potentiometric surface mapping (Figure 3), shallow groundwater flow in the Unit is generally to the west-southwest, with local flow to MW-LF-02 to the north-northwest. The location of MW-LF-02 is hydraulically cross-gradient of the southeastern corner of the Unit, consistent with historical delineation of groundwater flow made at the site. Dissolved solutes in groundwater travel by advection and dispersion. In advection, the movement of dissolved solutes in groundwater is dominated by changes in hydraulic head while movement through dispersion is due to changes in solute concentrations. Given the location of MW-LF-02, advection is unlikely to have carried chloride or other solutes from the Unit. Although dispersion of chloride from the Unit remains a possibility, given the distribution of groundwater flow in the MW-LF-02 area, it is more likely that the source of chloride is from upgradient areas of the Unit such as AS-LF-01, AS-LF-02, and MW-40.

- To further evaluate the potential source of chloride in the Unit area, an isoconcentration map was prepared for the March 2022 data and presented as **Figure 4**. Monitoring wells AS-LF-01, AS-LF-02, MW-40, and MW-BG-06 are all located upgradient from MW-LF-02 with chloride concentrations ranging from 5.27 mg/L (AS-LF-01) to 44.5 mg/L (MW-40) based on the March 2022 data. The chloride concentration at MW-LF-02 from March 2022 (39.9 mg/L) falls within this range. Historically, the highest chloride concentrations have been detected at MW-40 with a range of between 45.8 mg/L (December 2017) to 140 mg/L (September 2018) (Nautilus 2021a). The distribution of chloride in groundwater depicted by the isoconcentration map suggests that the source for chloride at MW-LF-02 is to the south-southeast of the monitoring well and the Unit.
- There are several constituents which are good indicators of coal ash impacts with lithium being one of them. Previous analysis of leachate from the Unit have indicated detections of lithium between 3,350 micrograms per liter (μg/L) and 6,254 μg/L (Nautilus 2021a). Total lithium was analyzed during the March 2022 event and was not detected above the laboratory method detection limit (MDL) of 2.00 μg/L at all locations sampled. Historically, lithium has not been detected above the laboratory MDL within the Unit monitoring well network with the exception of MW-LF-03 (2.4 μg/L in March 2019 and 2.02 μg/L in March 2021) and AS-LF-01 (2.41 μg/L in February 2018) (Nautilus 2021b). The general absence of lithium within the Unit monitoring well network suggests that a release of leachate from the Unit has not occurred.
- Most natural waters contain cations and anions found in equilibrium (Piper 1944). Evaluation of the geochemistry of groundwater can assist in understanding the source(s) of the dissolved constituents. A geochemical analysis of major cations (calcium, magnesium, sodium, and potassium) and anions (total alkalinity, chloride, fluoride, and sulfate) was conducted during the March 2022 sampling event and presented in **Table 2**. A useful tool to graph the major distribution of the dissolved constituents in groundwater is through the use of a Piper diagram (Piper 1944). A Piper diagram was prepared using the March 2022 geochemical data and presented as **Figure 5**. The following observations were noted:
 - With respect to anions (bottom right triangle of Piper diagram), MW-LF-02 plotted closely (within the 80 to 100% chloride distribution) with background wells MW-LF-01 and MW-BG-06, along with downgradient wells MW-LF-05 and MW-LF-06.
 - With respect to cations (bottom left triangle of Piper diagram), MW-LF-02 plotted closely (within the 30 to 50% sodium + potassium distribution) with background well AS-LF-01, MW-BG-16, MW-LF-01 and downgradient well MW-LF-03, MW-LF-04, MW-LF-05, MW-LF-06.
 - With respect to the overall hydrochemical distribution (diamond in Piper diagram),
 MW-LF-02 plotted within the same area of the diamond as background wells AS-LF-01,
 MW-BG-16, and MW-LF-01 and downgradient wells MW-LF-04, MW-LF-05, and MW-LF-06 within the calcium chloride and sodium chloride mixed type water hydrochemical facies.

Evaluation of the geochemical distribution of cations and anions in the groundwater samples suggests that the water type for MW-LF-02 has similarities to that of background wells MW-LF-01, MW-BG-06, and AS-LF-01. This observation suggests that the source for chloride at MW-02-LF is not from the Unit. The similar geochemical signature of MW-LF-02 with background wells MW-LF-01 and MW-BG-06 further suggests that the SSI for chloride is the result of natural variations of chloride in the groundwater at the site.

2.2 Fluoride at MW-LF-02

The fluoride SSI identified at MW-LF-02 is also 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-02 at a concentration of 0.171 mg/L in the March 2022 sample. This concentration exceeds the background threshold value of 0.165 mg/L. Based on review of potentiometric surface mapping (Figure 3), shallow groundwater flow in the Unit is generally to the west-southwest. The location of MW-LF-02 is hydraulically cross-gradient of the southeastern corner of the Unit, consistent with historical delineation of groundwater flow made at the site. Dissolved solutes in groundwater travel by advection and dispersion. In advection, the movement of dissolved solutes in groundwater is dominated by changes in hydraulic head while movement through dispersion is due to changes in solute concentrations. Given the cross-gradient location of MW-LF-02, advection is unlikely to have carried fluoride or other solutes from the Unit. Although dispersion of fluoride from the Unit remains a possibility, given the distribution of groundwater flow in the MW-LF-02 area, it is more likely that the source of fluoride is from upgradient areas of the Unit such as AS-LF-01, AS-LF-02, and MW-40.
- To further evaluate the potential source of fluoride in the Unit area, an isoconcentration map was prepared for the March 2022 data and presented as **Figure 6**. Monitoring wells AS-LF-01, AS LF-02, MW-40, and MW-BG-06 are all located upgradient from MW-LF-02 with fluoride concentrations ranging from 0.0630 mg/L (estimated; AS-LF-01) to 0.891 mg/L (MW-40) based on the March 2022 data. The fluoride concentration at MW-LF-02 from March 2022 (0.171 mg/L) falls within this range. Fluoride was first detected in MW-40 in March 2020 at a concentration of 0.5 mg/L. Fluoride was again detected in MW-40 in March 2021 (0.625 mg/L) and September 2021 (0.679 mg/L). The distribution of fluoride in groundwater depicted by the isoconcentration map suggests that the source for fluoride at MW-LF-02 is to the south-southeast of the monitoring well and the Unit.
- There are several constituents which are good indicators of coal ash impacts with lithium being one of them. Previous analysis of leachate from the Unit have indicated detections of lithium between 3,350 μg/L and 6,254 μg/L (Nautilus 2021a). Total lithium was analyzed during the March 2022 event and was not detected above the laboratory method detection limit (MDL) of 2.00 μg/L at all locations sampled. Historically, lithium has not been detected above the laboratory MDL within the Unit monitoring well network with the exception of MW-LF-03 (2.4 μg/L in March 2019 and 2.02 μg/L in March 2021) and AS-LF-01 (2.41 μg/L in February 2018) (Nautilus 2021b). The general absence of

2-3

- lithium within the Unit monitoring well network suggests that a release of leachate from the Unit has not occurred.
- Most natural waters contain cations and anions found in equilibrium (Piper 1944). Evaluation of the geochemistry of groundwater can assist in understanding the source(s) of the dissolved constituents. A geochemical analysis of major cations (calcium, magnesium, sodium, and potassium) and anions (total alkalinity, chloride, fluoride, and sulfate) was conducted during the March 2022 sampling event and presented in Table 2. A useful tool to graph the major distribution of the dissolved constituents in groundwater is through the use of a Piper diagram (Piper 1944). A Piper diagram was prepared using the March 2022 geochemical data and presented as Figure 5. The following observations were noted:
 - With respect to anions (bottom right triangle of Piper diagram), MW-LF-02 plotted closely (within the 80 to 100% chloride distribution) with background wells MW-LF-01 and MW-BG-06, along with downgradient wells MW-LF-05 and MW-LF-06.
 - With respect to cations (bottom left triangle of Piper diagram), MW-LF-02 plotted closely (within the 30 to 50% sodium + potassium distribution) with background well AS-LF-01, MW-BG-16, MW-LF-01 and downgradient well MW-LF-03, MW-LF-04, MW-LF-05, MW-LF-06.
 - With respect to the overall hydrochemical distribution (diamond in Piper diagram),
 MW-LF-02 plotted within the same area of the diamond as background wells AS-LF-01,
 MW-BG-16, and MW-LF-01 and downgradient wells MW-LF-04, MW-LF-05, and MW-LF-06 within the calcium chloride and sodium chloride mixed type water hydrochemical facies.

Evaluation of the geochemical distribution of cations and anions in the groundwater samples suggests that the water type for MW-LF-02 has similarities to that of background wells MW-LF-01, MW-BG-06, and AS-LF-01. This observation suggests that the source for fluoride at MW-02-LF is not from the Unit. The similar geochemical signature of MW-LF-02 with background wells MW-LF-01 and MW-BG-06 further suggests that the SSI for fluoride is the result of natural variations of chloride in the groundwater at the site.

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 of 2022 were 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 Unit.

Section 4 Certification

I hereby certify that the alternative source demonstration presented within this document for the DESC Cope Generating Station Coal Ash Disposal 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
	State of the first
Company: TRC Engineers, Inc.	Date: 9/16/2022



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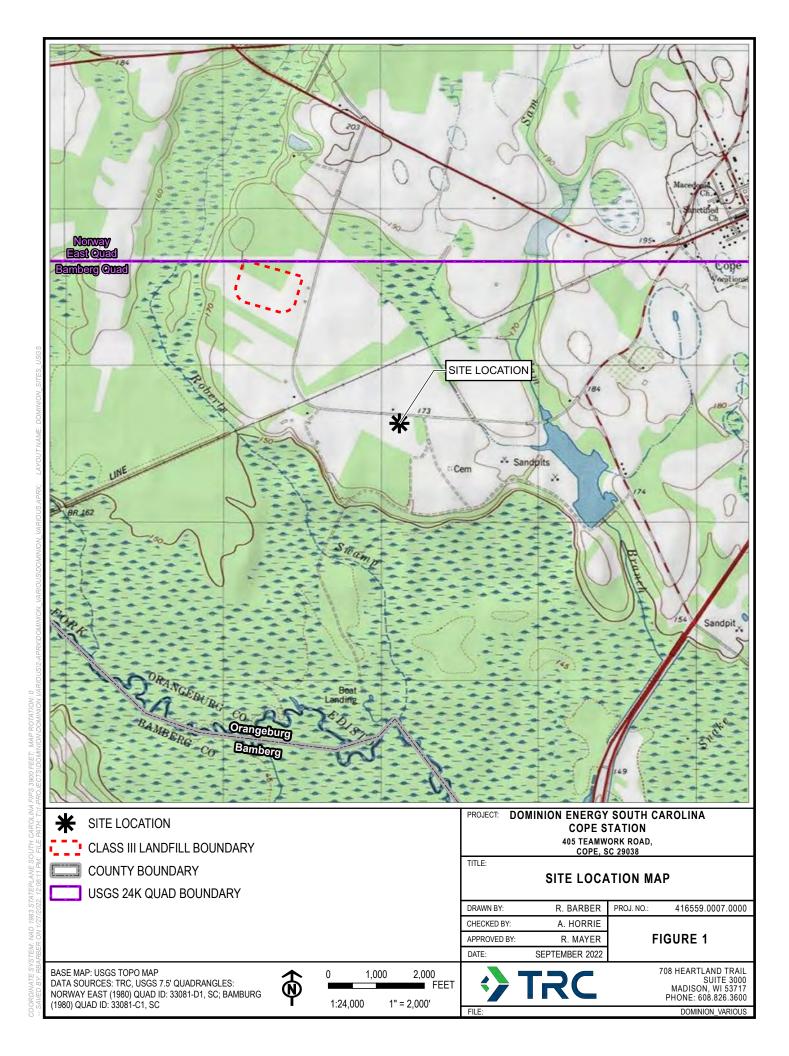
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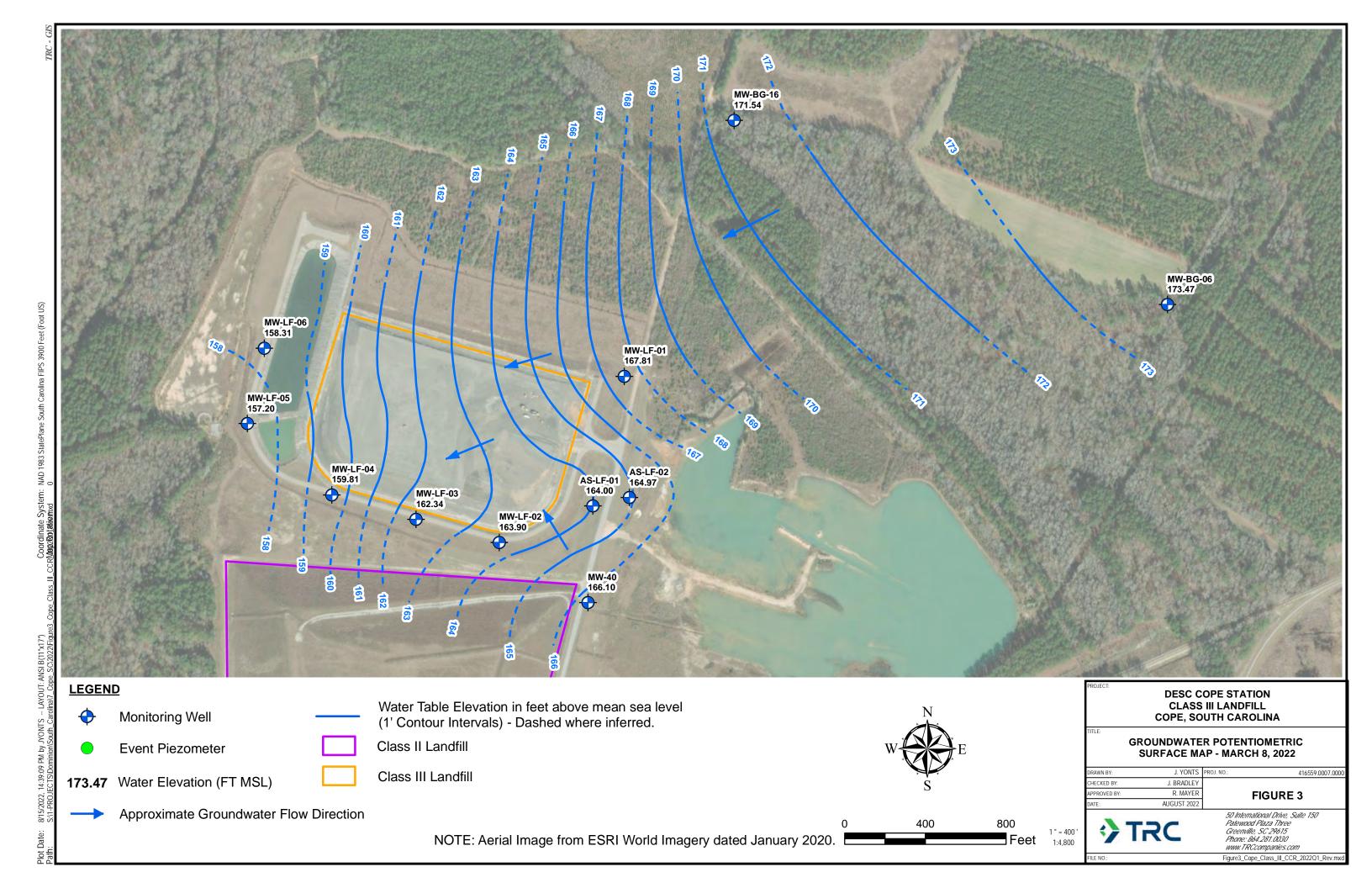
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Figures





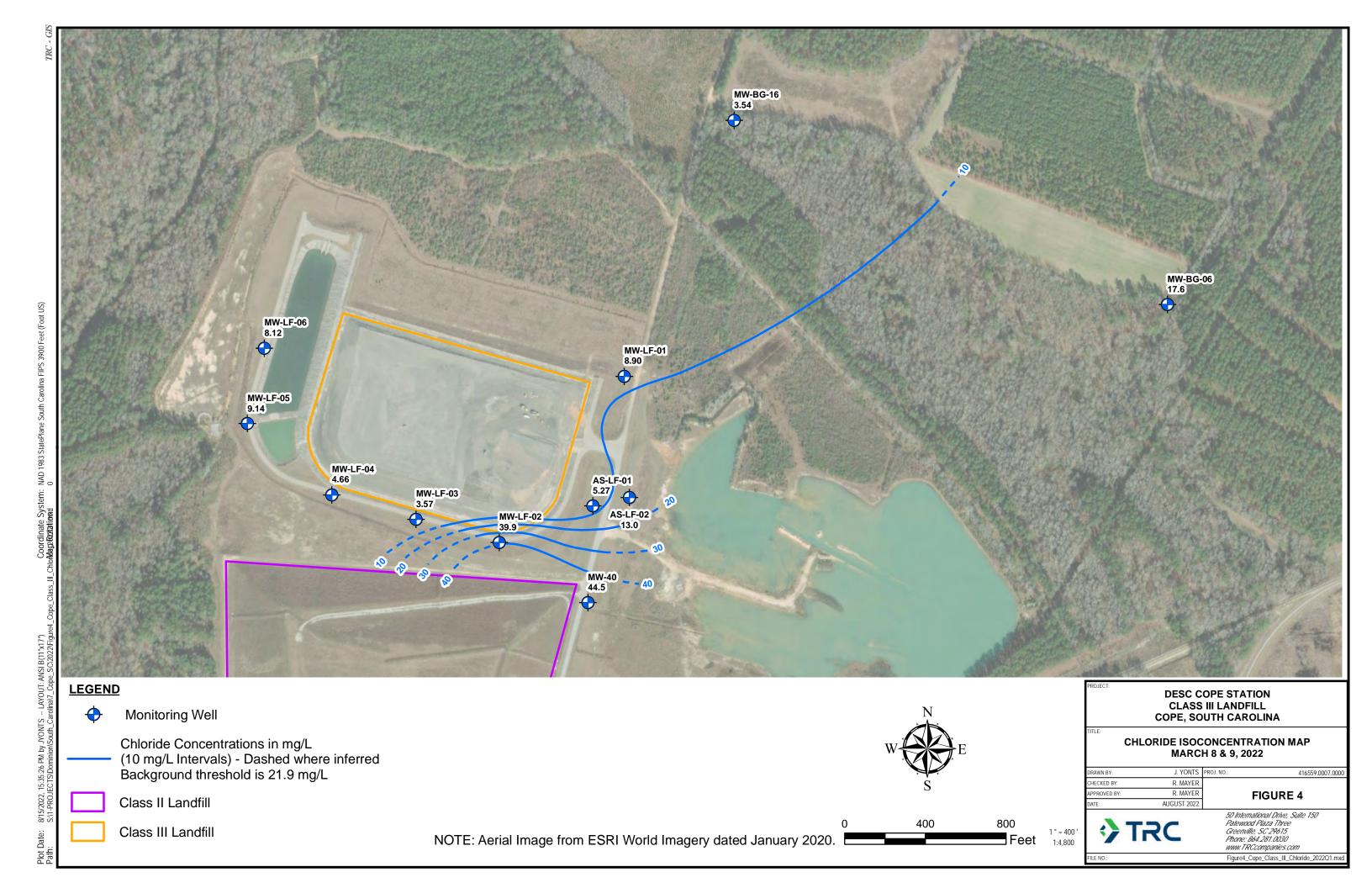
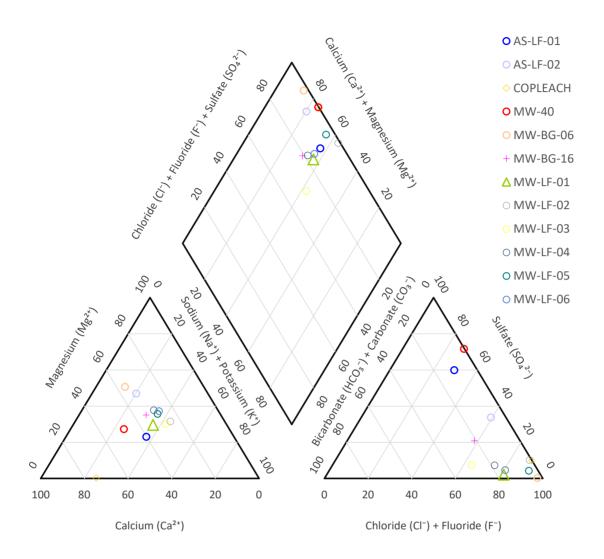
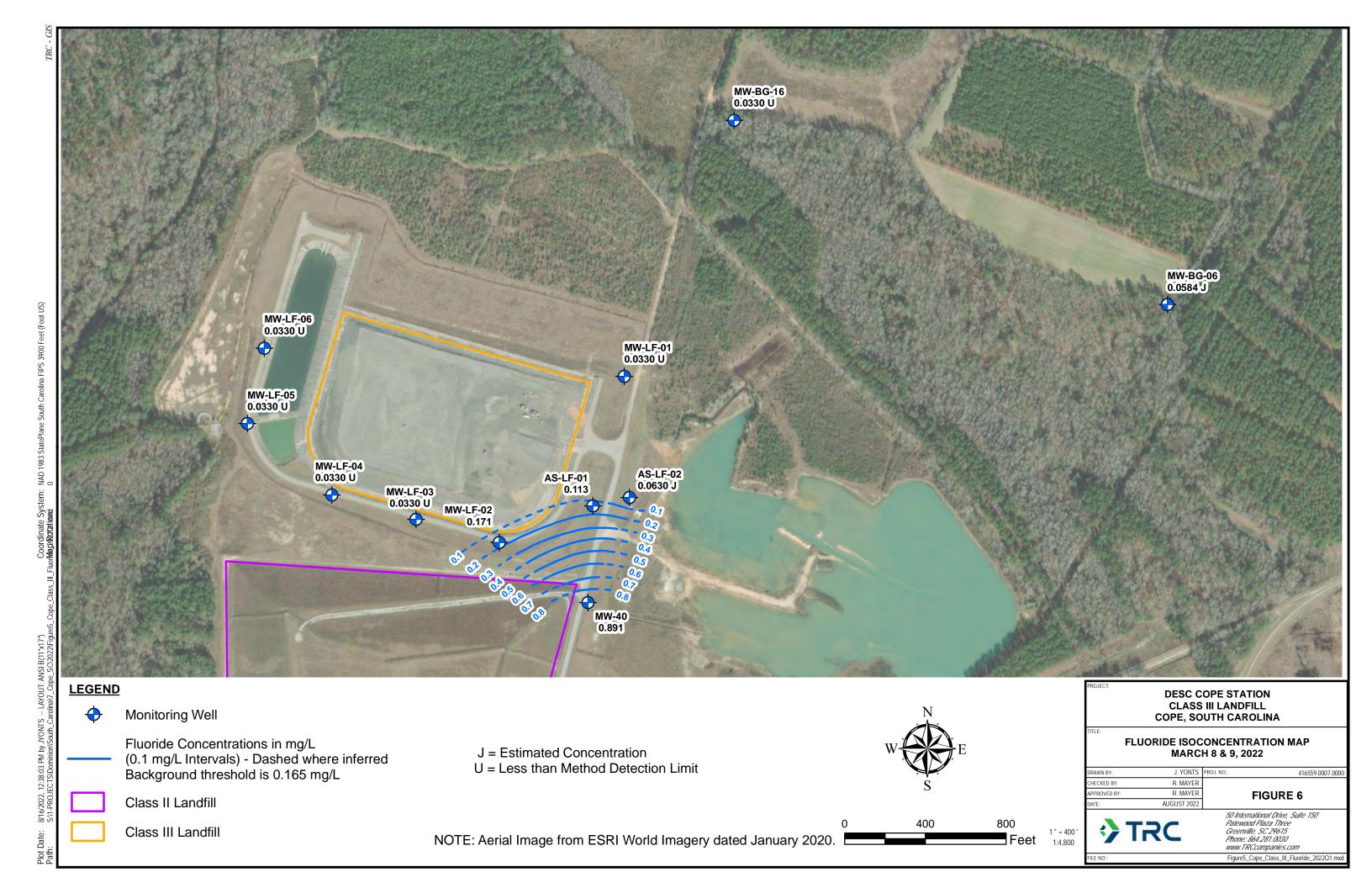


FIGURE 5 DESC Cope Station Class III Landfill Piper Diagram - March 2022





Tables

Table 1 Summary of First Semiannual 2022 Detection Monitoring Program Sampling Event Data Dominion Energy South Carolina - Cope Station Class III Landfill

Cope, Orangeburg County, South Carolina

											Ва		ınd Well	S								
		Sample ID:		MW-I	_F-01			MW-E	3G-06			MW-E	3G-16			AS-L	.F-01			AS-L	.F-02	
		Sample		03/09	/2022			03/08	/2022			03/08	/2022			03/09	/2022			03/09	/2022	
Parameter Name	Units	Background	Result	Qual	MDL	RL	Result	Qual	MDL	RL	Result	Qual	MDL	RL	Result	Qual	MDL	RL	Result	Qual	MDL	RL
		Threshold																				
		Values																				
CCR Appendix III																						
Boron	μg/L	1000	6.98	J	4.00	4.00	8.61	J	4.00	4.00	9.64	J	4.00	4.00	12.3	J	4.00	4.00	16.3		4.00	4.00
Calcium	mg/L	15.8	2.20		0.030	0.030	9.78		0.030	0.030	2.04		0.030	0.030	4.01		0.030	0.030	4.54		0.030	0.030
Chloride	mg/L	21.9	8.90		0.0670	0.0670	17.6		0.335	0.335	3.54		0.0670	0.0670	5.27		0.0670	0.0670	13.0		0.134	0.134
Fluoride	mg/L	0.165	0.0330	U	0.0330	0.0330	0.0584	J	0.0330	0.0330	0.0330	U	0.0330	0.0330	0.113		0.0330	0.0330	0.0630	J	0.0330	0.0330
рН	SU	3.4 - 6.2	4.42		0.01	0.01	4.31		0.01	0.01	4.31		0.01	0.01	4.52		0.01	0.01	4.45		0.01	0.01
Sulfate	mg/L	21.6	0.312	J	0.133	0.133	0.133	U	0.133	0.133	1.73		0.133	0.133	15.1		0.133	0.133	10.1		0.133	0.133
Total Dissolved Solids	mg/L	295.3	10.0	J	3.40	3.40	101		3.40	3.40	4.29	J	3.40	3.40	24.3		3.40	3.40	42.9	J	3.40	3.40
Field Parameters																						
Conductivity	μS/cm		48.32		0.1	0.1	181.72		0.1	0.1	45.54		0.1	0.1	67.95		0.1	0.1	96.69		0.1	0.1
Dissolved Oxygen	mg/L		3.57		0.01	0.01	7.18		0.01	0.01	7.45		0.01	0.01	5.02		0.01	0.01	4.39		0.01	0.01
Temperature	С		20.22		0.01	0.01	17.72		0.01	0.01	17.53		0.01	0.01	19.61		0.01	0.01	20.55		0.01	0.01
Turbidity	NTU		3.39		0.1	0.1	0.56		0.1	0.1	1.61		0.1	0.1	0.21		0.1	0.1	1.23		0.1	0.1
Depth to Water	ft btoc		8.60		0.01	0.01	14.48		0.01	0.01	10.98		0.01	0.01	10.75		0.01	0.01	10.41		0.01	0.01
Groundwater Elevation ^(*)	ft msl		167.81		0.01	0.01	173.47		0.01	0.01	171.54		0.01	0.01	164.00		0.01	0.01	164.97		0.01	0.01
Oxidation Reduction Potential	millivolts		222.2		0.1	0.1	139.9		0.1	0.1	105.5		0.1	0.1	106.1		0.1	0.1	108.2		0.1	0.1

Notes:

MDL = Method Detection Limit

RL = Reporting Limit mg/L = Milligram per liter

μg/L = Microgram per liter

 μ 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

-- = Not applicable.

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 8, 2022

Table 1

Summary of First Semiannual 2022 Detection Monitoring Program Sampling Event Data Dominion Energy South Carolina - Cope Station Class III Landfill Cope, Orangeburg County, South Carolina

													D	owngrac	lient Wells	3										
		Sample ID:		MW-I	_F-02			MW-L	_F-03			MW-I	_F-04				_F-05		N	/W-LF-	05 DUP			MW-L	_F-06	
		Sample		03/09	/2022			03/09	/2022			03/09	/2022			03/09	/2022			03/09	/2022			03/09	/2022	
Parameter Name	Units	Background Threshold Values	Result	Qual	MDL	RL	Result	Qual	MDL	RL	Result	Qual	MDL	RL	Result	Qual	MDL	RL	Result	Qual	MDL	RL	Result	Qual	MDL	RL
CCR Appendix III																										
Boron	μg/L	1000	17.1		4.00	4.00	8.19	J	4.00	4.00	9.69	J	4.00	4.00	10.2	J	4.00	4.00	10.6	J	4.00	4.00	9.02	J	4.00	4.00
Calcium	mg/L	15.8	5.72		0.030	0.030	1.07		0.030	0.030	1.86		0.030	0.030	2.84		0.030	0.030	2.79		0.030	0.030	2.15		0.030	0.030
Chloride	mg/L	21.9	39.9		0.0670	0.0670	3.57		0.0670	0.0670	4.66		0.0670	0.0670	9.14		0.134	0.134	9.26		0.134	0.134	8.12		0.0670	0.0670
Fluoride	mg/L	0.165	0.171		0.0330	0.0330	0.0330	U	0.0330	0.0330	0.0330	U	0.0330	0.0330	0.0330	U	0.0330	0.0330	0.0330	U	0.0330	0.0330	0.0330	U	0.0330	0.0330
рН	SU	3.4 - 6.2	4.21		0.01	0.01	4.55		0.01	0.01	4.51		0.01	0.01	4.40		0.01	0.01	4.40		0.01	0.01	4.41		0.01	0.01
Sulfate	mg/L	21.6	6.26		0.133	0.133	0.570		0.133	0.133	0.620		0.133	0.133	0.583		0.133	0.133	0.575		0.133	0.133	0.638		0.133	0.133
Total Dissolved Solids	mg/L	295.3	77.1	J	3.40	3.40	8.57	7	3.40	3.40	17.1	J	3.40	3.40	32.9	J	3.40	3.40	42.9	J	3.40	3.40	30.0	J	3.40	3.40
Field Parameters																										
Conductivity	μS/cm		178.86		0.1	0.1	34.32		0.1	0.1	47.95		0.1	0.1	74.90		0.1	0.1	-		0.1	0.1	58.78		0.1	0.1
Dissolved Oxygen	mg/L		0.54		0.01	0.01	2.72		0.01	0.01	4.7		0.01	0.01	4.63		0.01	0.01	-		0.01	0.01	4.48		0.01	0.01
Temperature	С		22.24		0.01	0.01	22.45		0.01	0.01	22.99		0.01	0.01	21.42		0.01	0.01	-		0.01	0.01	22.53		0.01	0.01
Turbidity	NTU		2.08		0.1	0.1	1.48		0.1	0.1	4.41		0.1	0.1	0.45		0.1	0.1			0.1	0.1	3.31		0.1	0.1
Depth to Water	ft btoc		26.18		0.01	0.01	24.85		0.01	0.01	24.39		0.01	0.01	20.75		0.01	0.01	1		0.01	0.01	20.26		0.01	0.01
Groundwater Elevatior ^(*)	ft msl		163.90		0.01	0.01	162.34		0.01	0.01	159.81		0.01	0.01	157.20		0.01	0.01	-		0.01	0.01	158.31		0.01	0.01
Oxidation Reduction Potential	millivolts		422.8		0.1	0.1	195.8		0.1	0.1	190.2		0.1	0.1	109.6		0.1	0.1			0.1	0.1	248.1		0.1	0.1

Notes:

MDL = Method Detection Limit

RL = Reporting Limit mg/L = Milligram per liter

μg/L = Microgram per liter

 μ 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

DUP = Duplicate sample.

-- = Not applicable.

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 8, 2022

Table 2

Summary of Alternate Source Demonstration Parameters Dominion Energy South Carolina - Cope Station Class III Landfill Cope, Orangeburg County, South Carolina

											Ва	ackgrou	ınd Well	S								
		Sample ID:		MW-L	_F-01			MW-E	3G-06			MW-E	3G-16			AS-L	.F-01			AS-L	_F-02	
		Sample		03/09	/2022			03/08	/2022			03/08	/2022			03/09/	/2022			03/09	/2022	
Parameter Name	Units	Background Threshold Values	Result	Qual	MDL	RL	Result	Qual	MDL	RL	Result	Qual	MDL	RL	Result	Qual	MDL	RL	Result	Qual	MDL	RL
ASD Support Parameters																						
Calcium	mg/L	15.8	2.20		0.030	0.030	9.78		0.030	0.030	2.04		0.030	0.030	4.01		0.030	0.030	4.54		0.030	0.030
Chloride	mg/L	21.9	8.9		0.0670	0.0670	17.6		0.335	0.335	3.54		0.0670	0.0670	5.27		0.0670	0.0670	13.0		0.134	0.134
Fluoride	mg/L	0.165	0.0330	U	0.0330	0.0330	0.0584	J	0.0330	0.0330	0.0330	U	0.0330	0.0330	0.113		0.0330	0.0330	0.0630	J	0.0330	0.0330
Sulfate	mg/L	21.6	0.312	J	0.133	0.133	0.133	U	0.133	0.133	1.73		0.133	0.133	15.1		0.133	0.133	10.1		0.133	0.133
Total Dissolved Solids	mg/L	295.3	10.0	J	3.40	3.40	101		3.40	3.40	4.29	J	3.40	3.40	24.3		3.40	3.40	42.9	J	3.40	3.40
Alkalinity, Total as CaCO3	mg/L		3.20	J	1.45	1.45	1.45	U	1.45	1.45	2.20	J	1.45	1.45	3.40	J	1.45	1.45	2.60	J	1.45	1.45
Lithium	ug/L		2.00	U	2.00	2.00	2.00	U	2.00	2.00	2.00	U	2.00	2.00	2.00	U	2.00	2.00	2.00	U	2.00	2.00
Magnesium	ug/L		1170		10.0	10.0	8340		10.0	10.0	1270		10.0	10.0	1410		10.0	10.0	3940		10.0	10.0
Potassium	ug/L		413		80.0	80.0	1750		80.0	80.0	1570		80.0	80.0	932		80.0	80.0	1630		80.0	80.0
Sodium	ug/L		2500		80.0	80.0	3070		80.0	80.0	1180		80.0	80.0	3670		80.0	80.0	2250		80.0	80.0

Notes:

MDL = Method Detection Limit

RL = Reporting Limit

mg/L = Milligram per liter

 μ g/L = Microgram per liter -- = Not applicable.

Qualifiers (Qual)

J = Estimated Results

U = Samples reported below their respective MDL

= Concentration greater than Background Threshold Values

Bold font = Detected constituent

Table 2

Summary of Alternate Source Demonstration Parameters Dominion Energy South Carolina - Cope Station Class III Landfill Cope, Orangeburg County, South Carolina

													D	owngrad	lient Wells	5										
		Sample ID:		MW-I	_F-02			MW-I	_F-03			MW-I	_F-04			MW-I	-F-05		N	/IW-LF-	05 DUP			MW-I	LF-06	
		Sample		03/09	/2022			03/09	/2022			03/09	/2022			03/09	/2022			03/09/	/2022			03/09	/2022	
Parameter Name	Units	Background Threshold Values	Result	Qual	MDL	RL	Result	Qual	MDL	RL	Result	Qual	MDL	RL	Result	Qual	MDL	RL	Result	Qual	MDL	RL	Result	Qual	MDL	RL
ASD Support Parameters																										
Calcium	mg/L	15.8	5.72		0.030	0.030	1.07		0.030	0.030	1.86		0.030	0.030	2.84		0.030	0.030	2.79		0.030	0.030	2.15		0.030	0.030
Chloride	mg/L	21.9	39.9		0.0670	0.0670	3.57		0.0670	0.0670	4.66		0.0670	0.0670	9.14		0.134	0.134	9.26		0.134	0.134	8.12		0.0670	0.0670
Fluoride	mg/L	0.165	0.171		0.0330	0.0330	0.0330	U	0.0330	0.0330	0.0330	U	0.0330	0.0330	0.0330	U	0.0330	0.0330	0.0330	U	0.0330	0.0330	0.0330	U	0.0330	0.0330
Sulfate	mg/L	21.6	6.26		0.133	0.133	0.570		0.133	0.133	0.620		0.133	0.133	0.583		0.133	0.133	0.575		0.133	0.133	0.638		0.133	0.133
Total Dissolved Solids	mg/L	295.3	77.1	J	3.40	3.40	8.57	J	3.40	3.40	17.1	J	3.40	3.40	32.9	J	3.40	3.40	42.9	J	3.40	3.40	30.0	J	3.40	3.40
Alkalinity, Total as CaCO3	mg/L		1.45	U	1.45	1.45	2.80	J	1.45	1.45	2.00	J	1.45	1.45	1.45	U	1.45	1.45	1.80	J	1.45	1.45	2.60	J	1.45	1.45
Lithium	ug/L		2.00	U	2.00	2.00	2.00	U	2.00	2.00	2.00	U	2.00	2.00	2.00	U	2.00	2.00	2.00	U	2.00	2.00	2.00	U	2.00	2.00
Magnesium	ug/L		4410		10.0	10.0	708		10.0	10.0	1450		10.0	10.0	2150		10.0	10.0	2200		10.0	10.0	1780		10.0	10.0
Potassium	ug/L		5450		80.0	80.0	904		80.0	80.0	433		80.0	80.0	1020		80.0	80.0	1040		80.0	80.0	319		80.0	80.0
Sodium	ug/L		8290		80.0	80.0	1340		80.0	80.0	2140		80.0	80.0	3450		80.0	80.0	3490		80.0	80.0	3030		80.0	80.0

Notes:

MDL = Method Detection Limit
RL = Reporting Limit
mg/L = Milligram per liter
µg/L = Microgram per liter
DUP = Duplicate sample.
-- = Not applicable.

Qualifiers (Qual)

J = Estimated Results

U = Samples reported below their respective MDL

= Concentration greater than Background Threshold Values

Bold font = Detected constituent

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

COPE STATION - Class 3 Landfill - CCR

Well

Diameter

(inches)

2

2

2

2

2

2

2

2

2

2

2

Well ID

MW-LF-01

MW-LF-02

MW-LF-03

MW-LF-04

MW-LF-05

MW-LF-06

MW-BG-06

MW-BG-16

AS-LF-01

AS-LF-02

MW-40

Well Total

Depth (ft

BTOC) 77.96 17.9 B

32.40

31.25

29.15

22.44

22.65

28.14

31.40.31.46

28.20.28.22 30.30 3D 31

29.25 29.80

Stickup

Stickup

3/0/2

10

10

	Date(s) Measured:	38/26	-
Well Completion	Screen Length (ft)	Depth to Water (ft below TOC)	Pump Type
Stickup	10	8.40	Peristaltic
Stickup	10	26.18	Peristaltic
5 Stickup	10	24.85	Peristaltic
Stickup	10	24.39	Peristaltic
Stickup	10	20.75	Peristaltic
2. Stickup	10	213.26	Peristaltic
>/ Stickup	10	14.48	Peristaltic
Stickup	10	10.98	Peristaltic
Stickup	10	10.75	Peristaltic
			

10.4

11.18

Peristaltic

Peristaltic

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PAGE\	<u>`</u>	OF	

PROJEC	ΓNAME:	Domin	ion - Cope S	Station		PRE	EPARED			С	HEC	KED			
PROJECT	T NUMBER	R: 41655	9.0007.0000	0.2.2	BY: Z	YA	DATE:3	3ϵ	BY:	241		DATE: 3-14-12			
SAMPLE	ID: W	w-LF-	ار اد	WELL E	DIAMET	ER: 💢	2"	6"	ОТНІ	ER					
WELL MAT	ERIAL:	X PVC	□ss [RON	GALVAI	NIZED S	TEEL		ОТН	ΞR					
SAMPLE T	YPE:	√ GW	□ww [sw 🗌	DI		LEACHATE		□ отн	ER					
PUR	GING	TIME:)나		DATE:39	38	S/	AMPLE	TIM	1E: 144(DA	TE: 3922			
PURGE		PUMP	<u>Pecistalt</u>	ñC		PH:	<u>4.42</u> s	υ	CONDUC	TIVITY: _	<u> 18∴</u>	umhos/cm			
METHO	D:	BAILER		<u> </u>		ORP:	<u> ププン、ス</u> m	ı۷	خ کی DO:	5.57	mg/	'L			
DEPTH TO	O WATER:	8.51	T/ PVC			TURBIE	DITY: 3.39		NTU						
DEPTH TO	ВОТТОМ:	1798	T/ PVC	220		<u>М</u> иои	•	— GHT		MODERA	TE	☐ VERY			
WELL VOL	.UME:	1.6	LITERS	Z-GALLO	NS	TEMPE	RATURE: 20	G, (<u>Ω</u> •c	OTHER:					
VOLUME I	REMOVED:	,93	LITERS	GALLO	NS	COLOR	: Clar			ODOR:	N	176			
COLOR:	<u> </u>		(ODOR: More	,	FILTRA	TE (0.45 um)		YES	ОИ 📆					
			BIDITY	*****			E COLOR:		-	FILTRATI	ODO	R: —			
NONE	NONE SLIGHT MODERATE VERY QC SAMPLE: MS/MSD DUP-														
DISPOSAL	DISPOSAL METHOD: GROUND DRUM OTHER COMMENTS: FBLK-COP-LF-22101 61438														
DISPOSAL METHOD: GROUND DRUM OTHER COMMENTS: FBLK-COP-LF-22101 61438															
TIME PURGE PH CONDUCTIVITY ORP D.O. TURRIDITY TEMPERATURE WATER CUMULATIVE															
1411	100	4.48	48.26	2213	5	92	3.65	5	£8,E4	8.5	5 7	INITIAL			
1421	100	4.43	47.52	241.5	3	(a).	3,63)	9.96	8.0	01	["			
1426	100		47,92	235.8	3	.65	3.74	Q	0.05		03				
1431	100	4,43	47.74	231.2	3	.56	3,85		20.12	8.0	3				
1436	100	4,42	42:71	222.4	3	.51	3.88	C^{1}	0.17	8.6	94				
1441	100	4.42	4893	224,7	.3	.58	3.58	2	(O. G)	8.0	ol1				
1446	100	4.42	48.32	255.5	3	.57	3.39	J	0.22		64	0.9			
1504						-	2.86								
NC	OTE: STABI	LIZATION	TEST IS COM	IPLETE WHEN	3 SUC	CESSIVE	READINGS A	RE	WITHIN TI	HE FOLL	OWING	G LIMITS:			
pH: +/-	10 %	COND.: +/-	10 % OR	RP: +/- 10 %	D.O.:	+/- 10 %	6 TURB: +/-	10 %	% or	= 5</td <td></td> <td>TEMP.: +/- 0.5°C</td>		TEMP.: +/- 0.5°C			
BOTTLES	S FILLED	PRESERVA	ATIVE CODE	S A - NONE	В-	HNO3	C - H2SO4		D - NaOH	E	- HC	L F			
NUMBER	SIZE	TYPE	PRESERVA	ATIVE FILTE	ERED	NUMBE	R SIZE		TYPE	PRESER	RVATI\				
				□ Y	□ N							□Y □N			
					□N							□Y □N			
				□ Y	□N							□Y □N			
					_ N										
CHIDDING	METUOD		<u> </u>	DATE CLUBES		L		<u> </u>	AIDDU : **						
SHIPPING	.			DATE SHIPPE	.D;				AIRBILL N						
COC NUM	DEK:			SIGNATURE:					DATE SIG	NED:					

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PAGE		_ OF _	L

TRC

	PROJEC1	NAME:	Domin	ion - Cope S	tation		PRI	EPARED			CHEC	KED			
	PROJEC1	NUMBER	R: 41655	9.0007.0000	.2.2	BY: 🞵	755	DATE:3/9	<i>12</i> z	ву: {С	71	DATE: 3-14-27			
	SAMPLE	ID: M\	V-LF-02	,	WELL	DIAMET	ΓER: 🗸	2"	6" 🗸	OTHER					
	WELL MAT	ERIAL:	✓ PVC	ss [] IRON [GALVA	NIZED S	TEEL		OTHER					
	SAMPLE T	YPE:	☑ GW	□ ww []sw 🗌	DI		LEACHATE		OTHER					
	PUR	GING	TIME: \5	25	DATE: 3/9/2	12	S	AMPLE	TIME:)	557	7 DA	ATE: 3/9/22			
	PURGE METHOD	· =	PUMP BAILER	PERISTALTIC	PUMP				U COI			<u>? 8b</u> umhos/cm /L			
	DEPTH TO) WATER:	26.18	T/ PVC				DITY: 2,0							
		воттом:		T/ PVC			1014	~.	GHT		DERATE	☐ VERY			
	WELL VOL	UME:	1.0	LITERS	✓ GALLO	NS	TEMPE	RATURE: 22	24	°С ОТН	HER:				
	VOLUME F	REMOVED:	1.18	LITERS	☑ GALLO	NS	COLOF	R Clear		ODO	OR: <u>и</u>	on e			
	COLOR:		ear	C	DOR: <u>Vicu</u>	<u>e</u>	FILTRA	TE (0.45 um)	YES	V	NO				
		_		BIDITY				TE COLOR:	.سمعد،	FIL	TRATE ODO	R:			
	NONE	SLI		MODERATE	VEI		QC SAI		/MSD		DUP-				
	DISPOSAL METHOD: ☐ GROUND ☐ DRUM ☑ OTHER COMMENTS: Post Justicity = 2.06 TIME PURGE RATE PH CONDUCTIVITY ORP D.O. TURBIDITY TEMPERATURE WATER CUMULATIVE PURGE VOLUME														
	TIME		PH	CONDUCTIVIT	Y ORP		D.O.	TURBIDITY	TEMPE	RATURE					
	****	(ML/MIN)	(SU)	(umhos/cm)	(mV)	(mg/L)	(NTU)	('	°C)	(FEET)	(GALLONS)			
	1527	150	4.18	210.39	285.8	? 1	.10	5.85	22	.85	26.18	INITIAL			
	1532	150	4.18	207.57	7 408.5	5 0	. 78	4.81	22.	58_	26.20	1			
	1537	150	4.18	201,67	420,0	0.	71	4.37	22,	5 Y	26.18				
	1542	150	4.21	189.09	423,0	0	.63	3,42	22.	39	26.18				
	1547	150	4.21	190.83	426.0	0	.59	2.81	22.3	? b	26.18	W			
	1552	150	4.22	183.83	424.6	O	.56	2.69	22.	27	26.18				
	1557	150	4.21	178,86	422.8		54	2,08	22	24	26.18	1.2			
post	1604	150						2.06	ب		26.18	<i></i>			
<i>V</i> *															
ę.	NC	TE: STABI	LIZATION	TEST IS COM	PLETE WHEN	1 3 SUC	CESSIVE	E READINGS A	RE WITI	HIN THE F	OLLOWING	G LIMITS:			
	pH: +/-	0.1	COND.: +/-	3% ORI	P: +/- 10	D.O.:	: +/- 10 %	% TURB: +/-	10 %	or =</th <th>5</th> <th>TEMP.: +/- 3 %</th>	5	TEMP.: +/- 3 %			
	BOTTLES	SFILLED	PRESERV/	ATIVE CODES	A - NONE	В-	- HNO3	C - H2SO4	D -	NaOH	E - HC	L F			
	NUMBER	SIZE	TYPE	PRESERVA [*]	TIVE FILTI	ERED	NUMBE	ER SIZE	TYP	E PR	RESERVATI	VE FILTERED			
	2	250 mL	PLASTIC	В	Y	☑ N						□ Y □ N			
	2	250 mL	PLASTIC	А	ΠY	✓ N						Y N			
	1	125 mL	PLASTIC	A	☐ Y	✓ N						□ Y □ N			
					☐ Y	□ N						☐ Y ☐ N			
					Y	□ N	<u> </u>					□ Y □ N			
	SHIPPING	METHOD:			DATE SHIPPE	ED:			AIRI	BILL NUM	BER:				
	COC NUM	BFR:		,	SIGNATURE:				DAT	E SIGNE	D·				

PROJEC	T NAME:	Domir	ion - Cope Sta	ation		PR	EPARED			CHEC	KED				
PROJEC ⁻	T NUMBEI	R: 41655	9.0007.0000.2	2 BY	/: D	755	DATE: 3/9	122	BY: (C	41	DATE: 3-14-22				
SAMPLE	ID: M\	W-LF-03		WELL DIA	MET	ER: 🗸	2" 4"	6" [OTHER						
WELL MAT	ΓERIAL:	✓ PVC	ss	IRON GA	ALVA	NIZED S	STEEL		OTHER						
SAMPLE T	YPE:	☑ GW	ww	SW 🗌 DI			LEACHATE	L	OTHER						
PUR	GING	TIME: 3	19/22 01	ATE: 1424		s	AMPLE	TIME:	1457	DA	TE: 3/9/27				
PURGE METHOI		PUMP	PERISTALTIC	PUMP							32 umhos/cm				
.*		BAILER						V DO		?. 22 mg/	<u>(L</u>				
	O WATER:			14.		TURBI									
-	D BOTTOM:	, ,	T/ PVC 3).	·		Z NO		GHT		DERATE	VERY				
WELL VOL		1.18	LITERS	✓ GALLONS ✓ GALLONS			RATURE: 2	7, 45 -		HER:	0				
-	REMOVED:	ear				COLO			ODO		n e				
COLOR:		-		OR: <u>иои</u>	<u> </u>		TE (0.45 um)	YE		NO					
MONE	SLI	TUR GHT	BIDITY MODERATE	☐ VERY			TE COLOR: MPLE:	/MSD	FIL'	TRATE ODO DUP-	R:				
DISPOSAL	DISPOSAL METHOD: GROUND DRUM OTHER COMMENTS: Pas + Lub. J. + 1, 47 TIME PURGE PH CONDUCTIVITY ORP DO THERDITY TEMPERATURE WATER CUMULATIVE														
TIME	TIME PURGE RATE PH CONDUCTIVITY ORP D.O. TURBIDITY TEMPERATURE LEVEL PURGE VOLUME														
I TIME I I PH ICONDUCTIVITYI ORP I D.O. I THRRIDITY I TEMPERATURE I """ " I SSMSSSS I I															
1427	150	4.52	34.25	236.2	2.	42	1.94	23	2.52	24.85	INITIAL				
1432	150	4.53	34.44	203, 7	٦,	39	1.74	_	1.77	24,88	1				
1437	150	4.54	34.42	204.3		41	1.56		56	24.87					
1442	150	4.54	34, 36	200, 6	2	.38	1.51			24.85					
1447	150	4.54	34.38	199 0	2.	55	1,46	22	72	24.85					
1452	150	4.54	34.34	196.5	2	47	1.48	22		24.85	4				
1457	150	4.55	34.32	195.8	a .	72	1:48	22.	45	24.85	1.7				
1502	150			Partners			1.47			24.85					
NC	OTE: STABI	LIZATION T	TEST IS COMPL	ETE WHEN 3	SUC	CESSIV	E READINGS A	RE WI	THIN THE F	FOLLOWING	G LIMITS:				
pH: +/-	0.1	COND.: +/-	3 % ORP:	+/- 10	D.O.:	+/- 10 9	% 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 - HC	L F				
NUMBER	SIZE	TYPE	PRESERVATI	VE FILTERI	ED	NUMB	ER SIZE	TY	PE PR	RESERVATIV	/E FILTERED				
2	250 mL	PLASTIC	В	□ Y 🗸	N			La			□Y □N				
2	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:		DA	ATE SHIPPED:				Alf	RBILL NUM	BER:					
COC NUMI	 BER:		Sid	GNATURE:	_			DA	ATE SIGNEI						

PROJECT	NAME:	Domin	ion - Cope St	ation		PR	EPARED			CHEC	KED				
PROJECT	NUMBER	R: 41655	9.0007.0000.	2.2	BY:	755	DATE: 3/	9/22	BY: RA	1	DATE:3/	14/22			
SAMPLE	ID: MV	V-LF-04		WELL	DIAMET	ER: 🗸	2"	6" 🗸	OTHER		•				
WELL MAT	ERIAL:	✓ PVC	ss [] IRON 🔲	GALVA	NIZED S	STEEL		OTHER	-					
SAMPLE T	YPE:	✓ GW	ww]sw 🗌	DI		LEACHATE		OTHER						
PUR	GING	TIME: 12	50 0	DATE: 3/9	122		AMPLE		1352		TE: 3/9	122			
PURGE METHOD	_		PERISTALTIC	PUMP				_		ITY: <u>47, '</u>		mhos/cm			
		BAILER				1		V DO:		<u>' Ø</u> mg/	<u>'L</u>				
	D WATER: D BOTTOM:	<u> 24.26</u> 31.25	T/ PVC			TURBI	-	NTU GHT		DERATE	Пν	ŒRY			
WELL VOL	*	1. 7-	LITERS	✓ GALLO	NS	J =	RATURE: 26			HER:					
	REMOVED:	<u> </u>	LITERS	✓ GALLO		COLO			OD		D				
COLOR:		eac		DOR: <u>196</u> 1		 	TE (0.45 um)			NO	<u>и v</u>				
COLOIN.	<u></u>			DOIN											
MONE	SLI		BIDITY MODERATE	☐ VEI	RY		TE COLOR: MPLE: MS	/MSD	FIL	TRATE ODO DUP-	K:				
DISPOSAL	DISPOSAL METHOD: GROUND DRUM OTHER COMMENTS: past turbility = 3.86														
TIME	TIME PURGE RATE PH CONDUCTIVITY ORP D.O. TURBIDITY TEMPERATURE WATER CUMULATIVE PURGE VOLUME														
	(ML/MIN)	(SU)	(umhos/cm)	(mV)		mg/L)	(NTU)	('	°C)	(FEET)	(GAL	LONS)			
1252	150	4.58	58.80	195.0	Ч	.95	52.7	21.	10	24.26	INI ⁻	TIAL			
1257	150	4.54	48, 80	232.1	4	.91	39.8	21	46	24.77	1				
1302	150	4.53	48.54	225.5		1,96	34.2	21.	•	24.42					
1307	150	4.53	48.23	219.1	4	.86	20,10	21.	69	24.26					
1312	156	4.52	47. 85	214.8	4	. 81	14.20	21.	32	24.26					
1317	15a	4.52	47.67	212.5	4	. 87	11,24	21.9	16	24.26					
1322	150	4.53	47.95	210.4		.78	9.86	23.		24.26					
1327	150	4.53	47, 84	209.5	4	.78	8, 70	22.0	18	24,26					
1332		4.52	48.76	208.7	4	.79	7.52	22.	-	24.26	1	,			
1337	150	4.51	48.42	208.6	4	. 83	6.99	22.	41	24.26		<i>y</i>			
NC	TE: STAB	LIZATION 7	TEST IS COMF	PLETE WHEN	1 3 SUC	CESSIV	E READINGS A	RE WIT	HIN THE	FOLLOWIN	G LIMITS	:			
pH: +/-	0.1	COND.: +/-	3 % ORF	P: +/- 10	D.O.	+/- 10 '	% TURB: +/-	10 %	or =</td <td>5</td> <td>TEMP.: +</td> <td>-/- 3%</td>	5	TEMP.: +	-/- 3%			
BOTTLES	S FILLED	PRESERV	ATIVE CODES	A - NONE	В-	HNO3	C - H2SO4	D -	NaOH	E - HC	L F				
NUMBER	SIZE	TYPE	PRESERVAT	TIVE FILT	ERED	NUMB	ER SIZE	TYP	E PF	RESERVATI	VE FIL	TERED			
2	250 mL	PLASTIC	В	Y	✓ N							/ N			
2	250 mL	PLASTIC	Α	Y	N							/			
1	125 mL	PLASTIC	А	□ Y	N							/			
				Y	N							/ 🔲 N			
				Y	N							/ N			
SHIPPING	METHOD:			DATE SHIPPE	ED:			AIR	BILL NUM	IBER:					
COC NUM	BER:			SIGNATURE:				DAT	E SIGNE						



WATER SAMPLE LOG

(CONTINUED FROM PREVIOUS PAGE)

PROJEC1	NAME:	Domir	nion - Cope Stat	ion	PREPARED CHECKED						KED
PROJEC1	NUMBER	R: 41655	9.0002.0000	2 94	BY:	: JY/JB/	DSDATE:3/4	1/22	BY: A	AM	DATE:3/14/27
				්ව]						'
SAMPLE	ID: <u>/</u>	NW-	LF-04								
TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)		D.O. (mg/L)	TURBIDITY (NTU)	l	RATURE °C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL)OR L)
1342		4.52	48.32	207.3		4. 73	4.97		63	24.26	
1347	150	4.52		207,1		4.72	4.13	23.		24.26	
1352	150	4.51	47. 95	190. 2	1	4.70	4.41		99	24.26	2.4
-		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~									
1358	150		And the second second second second second second				3.86	-		24.26	4 consistent special property and the
		-									

SIGNATURE:	DATE SIGNED:	
	_	

TRC

WATER SAMPLE LOG

PROJECT	NAME:	Domin	ion - Cope Sta	tion		PRI	EPARED			CHEC	KED	
PROJEC1	NUMBER	R: 41655	9.0007.0000.2.	2 8	3Y: J	MB	DATE: 3/9	/2022 BY:	2AV	\	DATE:3/	4/27
SAMPLE	ID: MV	V-LF-05		WELL D	IAMET	ER: 🗸	2"	6" 🗸 OTH	IER			
WELL MAT	ERIAL:	✓ PVC	SS	IRON 🗌 G	BALVAI	NIZED S	TEEL	□ отн	HER .			
SAMPLE T	YPE:	✓ GW	□ ww □	SW 🔲 [Ol		LEACHATE	□ отн	IER _		-	
PUR	GING	TIME: (15	52 DA	TE: 3/9/20	33		AMPLE	TIME: 128			TE: 3/9	12022
PURGE METHOD	· _	PUMP BAILER	PERISTALTIC F	PUMP				U CONDU	4,4	Y: <u>74,°</u> <u>23</u> mg/		nhos/cm
DEPTH TO	WATER:	20.69	T/ PVC			TURBII	DITY: <u>0.4</u>	<u>5</u> NTU			-	
DEPTH TO	BOTTOM:	29.15	T/ PVC			MOI	NE SLI	GНТ 🗌	MODE	RATE	U VE	≣RY
WELL VOL	UME:	1.4	LITERS	☑ GALLON	IS	TEMPE	RATURE: 2	1.42 °C	OTHE	R:		
VOLUME I	REMOVED:	1.1	LITERS	☑ GALLON	IS	COLOF	e: clear		ODOF	₹:	none	
COLOR:	_ch	car	OD	OR: <u>None</u>		FILTRA	TE (0.45 um)	YES	√ N	0	***************************************	
		TUR	BIDITY			FILTRAT	ΓE COLOR:	-	FILTR	ATE ODO	R:	
X NONE	SLI	GHT 🗌	MODERATE	☐ VER`	Υ	QC SAI	MPLE: 🗌 MS	/MSD	X) D	UP- CO	P-LE-8	ialol
DISPOSAL	METHOD:	GROU	ND DRUM	✓ OTHER		COMM	ENTS:					
TIME	PURGE RATE	PH	CONDUCTIVITY	ORP		D.O.	TURBIDITY	TEMPERATI	JRE	WATER LEVEL	CUMUL PURGE V	
	(ML/MIN)	(SU)	(umhos/cm)	(mV)	(mg/L)	(NTU)	(°C)		(FEET)	(GALL	ONS)
1152	120	4.63	187.72	150.6	4.	93	0.99	22.53	6	20.69	INIT	IAL
1210		4,41	75.08	116.6	4.	. 55	0.54	21,78	1	20,69		
1215		4.41	75.17	105.0	> 4	,64	0.57	21.77	- ;	20.69		
1220		4.40	75.01	109.5	5 4	.71	0.55	21.59	7	20.69		
1332		4.40	74.90	109.0	6 4	1.63	0.45	21.4	2 2	20,69		
1250	ļ ,						0.53			20.69	1.1	
<u></u>												
N (pH: +/-		COND.: +/-	TEST IS COMPL 3 % ORP:	ETE WHEN : +/- 10			E READINGS A % TURB: +/-		THE FO 5 =/>		G LIMITS: TEMP.: +/	
BOTTLE	S FILLED	PRESERVA	ATIVE CODES	A - NONE	В-	HNO3	C - H2SO4	D - NaO	Н	E - HC	L F	
NUMBER	SIZE	TYPE	PRESERVATIV	/E FILTE	RED	NUMB	ER SIZE	TYPE	PRE	SERVATI	VE FIL	TERED
2	250 mL	PLASTIC	В	□ Y [✓ N						ΠY	N
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	SHIPPING METHOD: DATE SHIPPED: AIRBILL NUMBER:											

SIGNATURE:

DATE SIGNED:

COC NUMBER:

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PAGE	J	OF	(

TRC

PROJECT	ΓNAME:	Domin	ion - Cope Sta	ation	PREPARED			CHECKED			
PROJECT	r number	R: 41655	9.0007.0000.2	2.2	BY: J	ΆΥ	DATE:'3	122	BY:	RAY	DATE: 3/14/27
SAMPLE	ID: M\	W-LF-06	7.2	WELL (DIAMET	ER: 🏋	2" 4"	6" [OTHE	ER	
WELL MAT	ERIAL:	Ŋ PVC	SS	IRON	GALVA	NIZED S	STEEL		OTHE	ER	
SAMPLE T	YPE:	⊠ GW	□ww □	SW 🗌	DI		LEACHATE		OTHE	ΞR	
PUR	GING	TIME: \2	247 DA	ATE: 3/9/9	93	s	AMPLE	TIME	ाउउर	'e [DATE: 3 9 20
PURGE METHOD	,	PUMP BAILER	PERISTALTIC	PUMP				U C		TIVITY: <u>58</u> 448_ m	2.78 umhos/cm
DEPTH TO) WATER:	20:13	T/ PVC			TURBI	DITY: 3.3)				
	D BOTTOM:			3,22 3		⊠ NO		— GHT		MODERATE	☐ VERY
WELL VOL	····	7.4	LITERS	√ ✓ GALLO	NS		RATURE: 🕰			OTHER:	
	REMOVED:	1.23	LITERS	☑ GALLO	NS	1	R: Glar	-			nore
COLOR:	SLIA		OD	00R: <u>008</u>			TE (0.45 um)			√ NO	
			BIDITY			FILTRA	TE COLOR:	*****		FILTRATE OF	OOR:
NONE	SLI	GHT 🔲	MODERATE	VEF	RY	QC SA	MPLE: MS	MSD		DUP	
DISPOSAL METHOD: GROUND DRUM OTHER COMMENTS:											
TIME	PURGE RATE	PH	CONDUCTIVITY	ORP		D.O.	TURBIDITY	TEMI	PERATUR	RE WATER	CUMULATIVE PURGE VOLUME
-	(ML/MIN)	(SU)	(umhos/cm)	(mV)	(mg/L)	(NTU)		(°C)	(FEET)	(GALLONS)
1251	150	4.62	87.74	236.7	۵	.43	3.69	21	.82	20,14	INITIAL
1301	150	4.49	59.21	2837	4	.49	2.70	20	2.26	8015	·
1304	150	4.46	59,47	g75.9	4	.48	2,63	$\mathcal{C}\mathcal{Q}$.28	20.15	5
1311	150	445	59.31	268.9	24	1.49	2.86	20	227	20.15	5
1316	150	4.45	58.81	262.6	0 4	OD	2.93	び	2.36	80.14	š \
1321	150	라.H5	£9,62	257.	64	,64	3.11	\mathcal{Z}	2,40	20.10	0 1
1396	150	4.42	58.63	253.	3 각	.45	351		7.44	20.14	
1331	150	4.42	58.50	249.5	4	.44	.3.43	$\mathcal{J}_{\mathcal{C}}$	1.48	20.10	
1336	(50	4.41	58.78	2481	4	.48	3.31	\mathcal{L}	2.53	20.16	1.7
1350							5.82				
NC	OTE: STABI	LIZATION 1	TEST IS COMPI	LETE WHEN	3 SUC	CESSIV		RE W	THIN TH	HE FOLLOWI	NG LIMITS:
pH: +/-	0.1	COND.: +/-	3 % ORP:	+/- 10	D.O.:	+/- 10 9	% TURB: +/-	10 %	or <	= 5</td <td>TEMP.: +/- 3 %</td>	TEMP.: +/- 3 %
BOTTLES	S FILLED	PRESERV	ATIVE CODES	A - NONE	В-	HNO3	C - H2SO4	D	- NaOH	E - H	CL F
NUMBER	SIZE	TYPE	PRESERVATI	VE FILTE	ERED	NUMBI	ER SIZE	TY	/PE	PRESERVA ⁻	TIVE FILTERED
2	250 mL	PLASTIC	В	ΠY	✓ N						□ Y □ N
2	250 mL	PLASTIC	А	Y	✓ N						□ Y □ N
1	125 mL	PLASTIC	А	Y	✓ N						□ Y □ N
				Y	N						□ Y □ N
					N						□ Y □ N
SHIPPING	METHOD:		D/	ATE SHIPPE	D:			Al	RBILL N	UMBER:	
COC NILIMI	COC NI IMBED: DATE SIGNED:										

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PAGE	ı	OF .	1

WATER SAMPLE LOG

PROJECT NAME: Deminion - Cope Station PREPARED CHECKED												
SAMPLE ID: MW-06	PROJEC1	ΓNAME:	Domin	ion - Cope St	ation	PREPARED				CHECKED		
WELL MATERIAL:	PROJECT	T NUMBER	R: 41655	9.0007.0000.	3.2	BY:	JMB	DATE: 3/8	12022	BY: PA	n	DATE3-14-27
SAMPLE TYPE:	SAMPLE	ID: M\	N-06/B	6-06	WELL	DIAME	TER: 🗸	2"	6" 🗸	OTHER		
PURGING TIME: 0459	WELL MAT	ERIAL:	PVC	ss [IRON	GALV	'ANIZED (STEEL		OTHER		
PURGE	SAMPLE T	YPE:	☑ GW	□ww □	sw 🗌	DI		LEACHATE		OTHER		
PURGE	PUR	GING	TIME: 09	159	ATE: 3/8/	12026) S	SAMPLE				DATE: 3/8/2022
DEPTH TO WATER:			PUMP	PERISTALTIC	PUMP		PH:	<u>4.31</u> s	iu cc	·	TY: _ 18	31.72 umhos/cm
DEPTH TO BOTTOM: 30.3 T/ PVC									t		18 1	mg/L
WELL VOLUME: 2.7							_					
VOLUME REMOVED: D												Ŭ VERY
COLOR:	——			'								
NONE SUGHT MODERATE VERY VERY OC SAMPLE: MSAMSD DUP-												
NONE SLIGHT MODERATE VERY QC SAMPLE: MS/MSD DUP-	COLOR:				DOK: <u>N 0</u>	ne			☐ YES			
TIME PURGE PH CONDUCTIVITY ORP D.O. TURBIDITY TEMPERATURE LEVEL CUMULATIVE PURGE VOLUME (ML/MIN) (SU) (umhos/cm) (mV) (mg/L) (NTU) (**C*) (**FET*) (GALLONS) (GALLONS) (OO3 I3O	NONE	X SLI			☐ VEI	RY			/MSD			DOR:
TIME RATE RATE RATE RATE RATE RATE RATE RAT	DISPOSAL	METHOD:	☐ GROUI	ND DRUM	OTHER	₹	COMM	MENTS:	» RC	RA		
1003 130	TIME		PH	CONDUCTIVITY	ORP		D.O.		l			
1020		(ML/MIN)	ML/MIN) (SU) (umhos/cm) (mV)					(NTU)		(°C)	(FEET	(GALLONS)
	1003	120	4.51	199.84	185,4	<u> </u>	6,74	3,34	20	0.35	14.49	8 INITIAL
1030	1020		4.31	182.37	134.1	(6.75	1.94	17,	45		1
1040	1025		4.32	182.09	125.5	(6.90	0.68	17,	55		
1040	1030		4.31	182,44	137.9		7,05	0,74	17.	41		
NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS: pH: +/- 0.1	1035	}	4.31	183.36	138.9		7.19	6.72	17.	46		
NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS: pH: +/- 0.1	, ,	 	4.31	181.72	139.9	-	7.18	0.56	17.	72		
NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS: pH: +/- 0.1 COND.: +/- 3% ORP: +/- 10 D.O.: +/- 10% TURB: +/- 10% or or 5 TEMP.: +/- 3% BOTTLES FILLED PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F												- 1
pH: +/- 0.1 COND.: +/- 3 % ORP: +/- 10 D.O.: +/- 10 % TURB: +/- 10 % or TEMP.: +/- 3 % BOTTLES FILLED PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F	1105					_		0.56				1.0
pH: +/- 0.1 COND.: +/- 3% ORP: +/- 10 D.O.: +/- 10% TURB: +/- 10% or TEMP.: +/- 3% BOTTLES FILLED PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - L NUMBER SIZE TYPE PRESERVATIVE FILTERED NUMBER SIZE TYPE PRESERVATIVE FILTERED 1 250 mL PLASTIC B Y N Y N Y N 1 125 mL PLASTIC A Y N Y N Y N 1 125 mL PLASTIC A Y N Y N Y N 1 Y Y N Y N Y N Y N 1 Y Y N Y N Y N Y N 1 Y Y Y N Y N Y N Y												
pH: +/- 0.1 COND.: +/- 3% ORP: +/- 10 D.O.: +/- 10% TURB: +/- 10% or TEMP.: +/- 3% BOTTLES FILLED PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - L NUMBER SIZE TYPE PRESERVATIVE FILTERED NUMBER SIZE TYPE PRESERVATIVE FILTERED 1 250 mL PLASTIC B Y N Y N Y N 1 125 mL PLASTIC A Y N Y N Y N 1 125 mL PLASTIC A Y N Y N Y N 1 Y Y N Y N Y N Y N 1 Y Y N Y N Y N Y N 1 Y Y Y N Y N Y N Y												
BOTTLES FILLED PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F	NC	TE: STAB	LIZATION	TEST IS COMP	LETE WHEN	N 3 SU	CCESSIV	E READINGS A	RE WIT	THIN THE F	OLLOW	ING LIMITS:
NUMBER SIZE TYPE PRESERVATIVE FILTERED NUMBER SIZE TYPE PRESERVATIVE FILTERED 1 250 mL PLASTIC B Y N Y N 1 250 mL PLASTIC A Y N Y N 1 125 mL PLASTIC A Y N Y N Y N Y N Y N Y N Y N SHIPPING METHOD: DATE SHIPPED: AIRBILL NUMBER:	pH: +/-	0.1	COND.: +/-	3 % ORF	: +/- 10	D.O).: +/- 10	% TURB: +/-	10 %	or =</td <td>5</td> <td>TEMP.: +/- 3 %</td>	5	TEMP.: +/- 3 %
1 250 mL PLASTIC B Y N Y N 1 250 mL PLASTIC A Y N Y N 1 125 mL PLASTIC A Y N Y N Y N Y N Y N Y N Y N Y N	BOTTLES	S FILLED	PRESERV	ATIVE CODES	A - NONE	В	- HNO3	C - H2SO4	D -	NaOH	E - I	HCL F
1 250 mL PLASTIC A Y N Y N 1 125 mL PLASTIC A Y N Y N Y N Y N Y N SHIPPING METHOD: DATE SHIPPED: AIRBILL NUMBER:	NUMBER							ER SIZE	TYF	PE PR		
1 125 mL PLASTIC A □ Y □ N □ Y □ N □ Y □ N □ Y □ N □ Y □ N SHIPPING METHOD: □ DATE SHIPPED: □ AIRBILL NUMBER: □ Y □ N	1	250 mL	PLASTIC	В		☑ N	1					□ Y □ N
□ Y □ N □ Y □ N □ Y □ N □ Y □ N SHIPPING METHOD: □ DATE SHIPPED: AIRBILL NUMBER:	1	250 mL	PLASTIC	А	□ Y	✓ N						□Y □N
SHIPPING METHOD: DATE SHIPPED: AIRBILL NUMBER:	1	125 mL	PLASTIC	А	□ Y	☑ N						□ Y □ N
SHIPPING METHOD: DATE SHIPPED: AIRBILL NUMBER:					Y	☑ N	1					□ Y □ N
					Y	N						□ Y □ N
	SHIPPING	METHOD:		D	ATE SHIPPE	ED:			AIR	RBILL NUMI	BER:	
IOOG NOWDER: IDATE SIGNED:	COC NUME	OC NUMBER: DATE SIGNED:										

post

ſ	PROJECT NAME: Dominion - Cope Station PREPARED CHECKED											
ŀ	PROJECT	Г NUMBE		9.0007.0000		BY:J			8/22 BY: (<u></u>		DATE: 3-14-17
_ [SAMPLE	ID· M\	N-16 / m	V - 184 - 1				2"	0 000			74900
ŀ	WELL MAT		□ PVC	16-186-11 □ss [NIZED S	•	10 ♥ 011 1TO □		-	
ŀ	SAMPLE T		<u></u> GW	□ ww [DI		LEACHATE				
[PUR	GING	TIME: 95	<u> </u>	DATE: 3/8/2	<u> </u>		SAMPLE	TIME: VS	36		TE: 3/8/22
ŀ	PURGE		PUMP	PERISTALTIC		a ch	 		<u> </u>			
l	METHOD		BAILER				PH: 4.31 SU CONDUCTIVITY: 45.54 umhos/cm ORP: 105.5 mV DO: 7.45 mg/L					
ľ	DEPTH TO	WATER:	10.98	T/ PVC			TURB	DITY: 1.60	NTU 🕏			
	DEPTH TO	ВОТТОМ	29.30	T/ PVC			MO	MONE ☐ SLIGHT ☐ MODERATE ☐ VERY				
ŀ	WELL VOL		3.1	LITERS	✓ GALLO	NS	TEMPERATURE: 17.53 °C OTHER:					
ŀ	VOLUME I	REMOVED:	77700	LITERS	☑ GALLO	NS	COLOR: CLOC ODOR:				DR: <u>0</u>	ionl
ŀ	COLOR:	<u>_cle</u>	ar		DOR: <u>non(</u>	<u> </u>	FILTRA	ATE (0.45 um)	YES	X	NO	
l	#ZNONE			BIDITY				TE COLOR:	4400		RATE ODO	R:
ŀ		METHOD:		MODERATE	VEF VEF OTHER		 	MPLE: MS	/MSD	Ш.	DUP-	
L		PURGE					COIVIIV	I			MATER	CUBALIL A TIVE
l	TIME	RATE	PH	CONDUCTIVIT	Y ORP		D.O.	TURBIDITY	TEMPERATU	IRE	WATER LEVEL	CUMULATIVE PURGE VOLUME
		(ML/MIN)	(SU)	(umhos/cm)	(mV)	(mg/L)	(NTU)	(°C)		(FEET)	(GALLONS)
l	1001	125	4.49	51.15	98.8	,	7.01	9.11	18.96		11.01	INITIAL
ļ	1004	125	4.32	47.24	88.3		.24	1.54	17.76		11.02	
ŀ	1011	125	4:30	<u>76.29</u>	90.8		136	1.45	17.53		11.02	
ŀ	1016	150	4.31	46.00	93.3	<u>,</u> າ	·35	120	17.55		11.02	
ļ	1021	150	4.30	46.96	96.8	ן י	.50	1.33	17.50		11.02	, \
	109Le	150	43)	45.34	99.5		.45	1.74	77.57		11.02	
l	109)	150	4.3	45.25	102.5		.48	1.65	17.54		11.02	
l	1036	150	4.31	45.54	105.5	-	1.45	1.61	17.53		11.02	2.2
L	1057						-	1.63				-
	`			<u> </u>								
	NC	TE: STABI	LIZATION -	TEST IS COM	PLETE WHEN	3 SUC	CESSIV	E READINGS A	RE WITHIN T	HE F	OLLOWING	G LIMITS:
_	pH: +/-	0.1	COND.: +/-	3 % ORI	⊃: +/- 10	D.O.:	+/- 10	% 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 - NaOl	1	E - HC	L F
	NUMBER	SIZE	TYPE	PRESERVA	TIVE FILTE	RED	NUMB	ER SIZE	TYPE	PR	ESERVATI	VE FILTERED
ŀ	31	250 mL	PLASTIC	В	□ Y	✓ N						☐ Y ☐ N
ŀ	3 /	250 mL	PLASTIC	А	Y	✓ N						☐ Y ☐ N
-	3 4	425 mL	PLASTIC	A		☑ N						☐ Y ☐ N
-	• • • • • • • • • • • • • • • • • • • •		96D.			✓ N						OY ON
		9414	اعجسا	,	Y	N	<u>L.</u>					
1	SHIPPING	METHOD:			DATE SHIPPE	D:			AIRBILL I	NUME	BER:	
1	COC NUME	SER.		9	SIGNATURE:		DATE SIGNED:					

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	PAGE	l	OF	1

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PROJECT	ΓNAME:	Domin	ion - Cope Sta	ation		PR	EPARED		CHECKED		
PROJEC1	NUMBER	R: 41655	9.0007.0000.2	2.2	ال BA:	MB	DATE: 3/9	12022	BY: RA	N	DATE: 3/14/12
SAMPLE	ID: AS	S-LF-01		WELL (DIAMET	ER: 🗸	2"	6" -	OTHER		
WELL MAT	ERIAL:	✓ PVC	SS	IRON	GALVA	NIZED S	STEEL		OTHER		
SAMPLE T	YPE:	☑ GW	□ ww □	SW 🗌	DI		LEACHATE		OTHER		
PUR	GING	TIME: 13	06 DA	ATE: 3 /9 /2	2023	s	AMPLE	TIME:	1340	DA	TE: 3/9/2022
PURGE METHOE		PUMP BAILER	PERISTALTIC	PUMP			<u>4.52</u> s	U C	·		95 umhos/cm
DEPTH TO) WATER:	10.64	T/ PVC			TURBI		<u>, </u>			
DEPTH TO	BOTTOM:	22.44	T/ PVC			⊠ ио	NE 🗌 SLI	GHT	□ мог	DERATE	☐ VERY
WELL VOL	UME:	2.0	LITERS	✓ GALLO	NS	TEMPE	RATURE:	1.61	_°С ОТ⊦	HER:	
VOLUME F	REMOVED:	1.2	LITERS	☑ GALLO	NS_	COLO	R: clear		ODG	OR:	none
COLOR:		lear	OE	OR: <u>1060</u>	e	FILTRA	TE (0.45 um)	YE	s 🗸	NO	
			BIDITY				TE COLOR:		FIL	TRATE ODO	R:
NONE		GHT 🗌	MODERATE	VEF			MPLE: 🔀 MS	MSD		DUP-	
DISPOSAL	. METHOD:	GROU	ND DRUM	✓ OTHER	₹	СОММ	IENTS:				
TIME	PURGE RATE	PH	CONDUCTIVITY	ORP		D.O.	TURBIDITY	TEM	PERATURE	WATER LEVEL	CUMULATIVE PURGE VOLUME
	(ML/MIN)	(SU)	(umhos/cm)	(mV)	(mg/L)	(NTU)		(°C)	(FEET)	(GALLONS)
1309	125	4.54	64.43	103.7	5	.22	0.39	20	.60	10,80	INITIAL
1325	1	4.53	67.54	104.8	5	1,22	0.3]	19.	33	10.80	
1330		4.52	67.42	105,7	7 5	22	0.35	19.	33	10.80	
1335		4.51	67.87	106.2	2 5	5.10	0.43	19.	46	10.80	
1340		4.52	67,95	106.1	5	.02	0.21	19.	61	10.80)
1401							0.27			10.80	1.2
				-							
NC	OTE: STAB	LIZATION	TEST IS COMPI	LETE WHEN	I 3 SUC	CESSIV	E READINGS A	RE WI	THIN THE F	OLLOWING	G LIMITS:
pH: +/-	0.1	COND.: +/-	3 % ORP:	+/- 10	D.O.:	+/- 10	% TURB: +/-	10 %	or =</td <td>5</td> <td>TEMP.: +/- 3 %</td>	5	TEMP.: +/- 3 %
BOTTLES	S FILLED	PRESERV.	ATIVE CODES	A - NONE	В-	ниоз	C - H2SO4	D	- NaOH	E - HC	L F
NUMBER SIZE TYPE PRESERVATIVE FILTERED					ERED	NUMB	ER SIZE	TY	PE PR	RESERVATI	VE FILTERED
2	250 mL PLASTIC B Y V			✓ N						YN	
2 250 mL PLASTIC A Y V N			✓ N						□ Y □ N		
1 125 mL PLASTIC A Y N			N						□ Y □ N		
				□ Y	Пи						☐ Y ☐ N
				□ Y	Z						□ Y □ N
SHIPPING	METHOD:		D/	ATE SHIPPE	:D:			Al	RBILL NUM	BER:	
COC NUM	COC NUMBER: SIGNATURE: DATE SIGNED:										

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PAGE	ι	OF	- 1

	PROJECT NAME: Dominion - Cope Station					1	DD	EPARED		CHECKED		
				9.0007.0000		DV:			10 10 BV:		21 1	
	<u></u>			9.0007.0000		BY: ر			12022 BY: (- 11 \	DATE: 3/ 14/27	
	SAMPLE		S-LF-02				IAMETER: 🗸 2" 🗌 4" 📗 6" 📝 OTHER					
	WELL MAT		PVC	SS [IRON [ANIZED S	-	∐ ОТН			
	SAMPLE T		✓ GW	ww	SW [] DI		LEACHATE	∐ ОТН			
	PUR		TIME: 14		DATE: 3/9/	2002		AMPLE	TIME: 14	15 DA	TE: 3/9/2022	
	PURGE METHOD	· _	PUMP BAILER	PERISTALTIO	C PUMP		PH: ORP:			TIVITY: <u>96.</u> 4.39 mg		
	DEPTH TO	WATER:	10.30	T/ PVC			TURBI		NTU			
	DEPTH TO	BOTTOM:		T/ PVC			NONE ☐ SLIGHT ☐ MODERATE ☐ VERY				☐ VERY	
	WELL VOL		211	LITERS		ALLONS TEMPERATURE: 20.5				OTHER: _		
		REMOVED:	_	LITERS	✓ GALLO		COLO			ODOR:	none	
	COLOR:	<u>cle</u>			DDOR: NO	<u>re</u> _		TE (0.45 um)	YES	✓ NO		
	NONE		GНТ 🗌	BIDITY MODERATE		:RY	QC SA	FILTRATE COLOR: FILTRATE ODOR: COLOR: DUP-				
	DISPOSAL	. METHOD:	GROU	ND L DRUI	M 🗸 OTHE	R	COMM	IENTS:				
	TIME	PURGE RATE	PH ·	CONDUCTIVIT	Y ORP		D.O.	TURBIDITY	TEMPERATU	RE LEVEL	CUMULATIVE PURGE VOLUME	
		(ML/MIN)	(SU)	(umhos/cm)	(mV)		(mg/L)	(NTU)	. (°C)	(FEET)	(GALLONS)	
	1412	115	4.53	76.52	. 113.0		4.56	0.78	24,42	10.35	INITIAL	
	1430		4,48	87.89	105.8	3	4.35	0.91	20,37	· ·	1	
	1435		4,47	91.63	104.	5	4.37	1.43	20,25			
	1440 4.46 93.1				107.	1	4.35	1.01	20.25			
	1445		4.45	96.69	108.	2	4.39	1,23	20.55			
,												
05+	1300	E						0.79		-	1,1	
					<u> </u>					B c		
	NC pH: +/-		LIZATION TO		PLETE WHE P: +/- 10			E READINGS A % TURB: +/-		HE FOLLOWIN	G LIMITS: TEMP.: +/- 3 %	
	BOTTLES	ES FILLED PRESERVATIVE CODES A - NONE E						C - H2SO4	D - NaOl	H E-HC	L F	
	NUMBER	SIZE	TYPE	PRESERVA	TIVE FILT	ERED	NUMB	ER SIZE	TYPE	PRESERVATI	VE FILTERED	
	2 250 mL PLASTIC B				□ Y	IJ N	1				□ Y □ N	
	2 250 mL PLASTIC A			Α	□ Y	V	1				□ Y □ N	
	1 125 mL PLASTIC A			□ Y	V	1				Y N		
				☐ Y		1				□ Y □ N		
				,	Y		١				□ Y □ N	
	SHIPPING	METHOD:			DATE SHIPP	ED:	AIRBILL NUMBER:					
	COC NUMBER: SIGNATURE:							DATE SIGNED:				

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PROJEC1	NAME:	Domin	ion - Cope Sta	ntion		PR	EPARED			CHEC	KED	
PROJEC1	NUMBER	R: 41655	9.0007.0000.2	2.2	BY: د	JMB	DATE: 3/9	12022 BY:	2A	Ν	DATE	3/14/22
SAMPLE	ID: M\	N-40		WELL	DIAME	TER: 🗸	2"	6" 🗸 OTI	HER			
WELL MAT	ERIAL:	✓ PVC	ss	IRON 🗌	GALV	ANIZED S	STEEL	□ от	HER			
SAMPLE T	YPE:	☑ GW	□ ww □	sw 🗌	DI		LEACHATE	□ отг	HER			
PUR	GING	TIME: /5	108 D	ATE: 3-9	-22		AMPLE	TIME: 15	10	DA	ATE: 3	19/2022
PURGE METHOE):	PUMP	PERISTALTIC	PUMP						TY: <u>510</u>	.09	umhos/cm
DEPTH TO	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	BAILER	T/ PVC	5			DITY: 0.43	V DO:	0:	33 mg	/L	
	BOTTOM:		T/ PVC					J NTO GHT □	MOI	DERATE		VERY
WELL VOL		2.9	LITERS	✓ GALLO	NS		RATURE: _&		ОТН			,
		0.8	LITERS	☑ GALLO	NS	COLO			ODO		nor	
COLOR:		ear	OE	OR: <u>nor</u>	<u>で</u>	-	TE (0.45 um)	 YES	<u> </u>			
			BIDITY				TE COLOR:	<u></u>	FILT	TRATE ODO	PR:	
NONE	SLI	GHT 🗌	MODERATE	☐ VEI	RY	QC SA	MPLE: MS	/MSD		DUP-		_
DISPOSAL	METHOD:	GROU	ND 🗌 DRUM	✓ OTHER	₹	COMM	IENTS:					
TIME	PURGE RATE	PH	CONDUCTIVITY	ORP		D.O.	TURBIDITY	TEMPERAT	JRE	WATER LEVEL		MULATIVE SE VOLUME
	(ML/MIN)	(SU)	(umhos/cm)	(mV)		(mg/L)	(NTU)	(°C)		(FEET)	(G	ALLONS)
1511	115	4.68	514.35	179.4		0.45	0.45	21.57		11.11	I	NITIAL
1525		4.09	520.00	188.5	. (0.37	0.49	20.58		11.11		<u> </u>
1530		4.10	513.46	192.9		0.35	0,54	20.95		11.11		<u> </u>
1535		4.11	509,63	193,5) (3,34	0.38	20.87	2	11.11		
1540		4.12	540.09	191,9	(3.33	0.43	20.72)	11.11	;	
	_											
1556							0.35			11.11	0	.4
										-		
								•			<u> </u>	
NC pH: +/-		LIZATION COND.: +/-	TEST IS COMPI	LETE WHEN +/- 10			E READINGS A					TS: : +/- 3%
воттие		I	ATIVE CODES				C - H2SO4			***		
NUMBER	SIZE	TYPE	PRESERVATI		ERED	- HNO3		D - NaO	1	E - HC		FILTERED
3 8	250 mL	PLASTIC	B	VE FILT	N EKED		LIN OILL	TIPE	1 17		<u> </u>	Y N
3 3	250 mL	PLASTIC	A		N D	-			-			Y N
1	125 mL	PLASTIC	A		N [C]				-]
			,,							1] Y N
]
SHIPPING	METHOD:			ATE SHIPPE				AIRBILL	NI INA	RED.		11. Imil.
		-			ـ <u>ل</u>							
COC NUM	DEK:		SI	GNATURE:				DATE SI	GNE	J:		

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WATER QUALITY METER CALIBRATION LOG

							
PROJECT NAME:	Dominion - Cope Station			MODEL: AQUA TROLL 400	SAMPLER:	(JY)) UB / I	DS
PROJECT NO.: 4165	59,7.0			SERIAL#: 251425	DATE: 3/8/8	32	
PH (CALIBRATION CHECK	AC		SPECIFIC CONDU	ICTIVITY CALIB	RATION CI	HECK
pH 7	pH 4 /(10)			CAL READING	TEMPERATURE	· · · · · · · · · · · · · · · · · · ·	
(LOT#): 19450117	(LOT#): 21280189	CAL.		(LOT #): A		CAL.	
(EXP. DATE): 4/22	(EXP. DATE): しっつ	RANGE	TIME	(EXP. DATE): 8 22	(°CELSIUS)	RANGE	TIME
PRE-CAL, READING / STANDARD	PRE-CAL. READING / STANDARD	1		PRE-CAL. READING / STANDARD	(5225.55)		
6.48 17.00	7.02 / 7.60	WITHIN RANGE	912	44421/4490	20,03	WITHIN RANGE	
995 / 10.00	1	X WITHIN RANGE	916	4 474.8/ 4490	20.03	WITHIN RANGE	919
4.68 / 4.00	3.99 /4,00	WITHIN RANGE	- 0	1		WITHIN RANGE	
1	1	WITHIN RANGE		1 ,		WITHIN RANGE	
ORP	CALIBRATION CHECK	104102	l	D.O. CAL	IBRATION CHE		
CAL. READING	TEMPERATURE			CALIBRATION R			
(LOT#): 21140141		CAL.				CAL,	
(EXP. DATE): 8) 22	(°CELSIUS)	RANGE	TIME	(mg/L)	1	RANGE	TIME
PRE-CAL. READING / STANDARD		1					
226.81228	21,75	WITHIN RANGE	901	Baco: 1014,7 mb)Ar	WITHIN	911
1		WITHIN	725	Temp: 20.03°C	=	WITHIN	
1		WITHIN		Act: 8.49 mg/L		WITHIN	
	(RANGE		Calc: 9.1 mg		RANGE	
TURBID	ITY CALIBRATION CHEC	RANGE			COMMENTS	RANGE	li
	READING (NTU)	<u> </u>	T	AUTOCAL SOLUTION		SOLUTION (S)
(LOT#): 1/1	(LOT #): "N(/Å.	1		(LOT#): 21070193	LIST LOT NUMBERS		
(EXP. DATE):	(EXP. DATE):	CAL. RANGE	TIME	(EXP. DATE): 8/22		BRATION CHE	
PRE-CAL. READING / STANDARD	POST-CAL. READING / STANDARD			CALIBRATED PARAMETERS	CALIBRAT	ION RANGES (1)
0.00 /0.00	1	X WITHIN RANGE	910	I ✓ pH	pH: +/- 0.2 S	.U.	
1.01 / 1.00	/	WITHIN RANGE	9බුටු	COND	COND: +/- 1% C	F CAL. STAN	IDARD
9.90 / 10.00	1	WITHIN RANGE	924	ORP	ORP: +/- 25 m	V	
1	1 .	WITHIN	,	D.O.	D.O.: VARIES		
	NOTES	:	•	TURB	TURB: +/- 5% C	F CAL. STAN	IDARD
] _	l		
					(1) CALIBRATION RA		
	<u></u>			,			
P	ROBLEMS ENCOUNTERED			CORRECT	IVE ACTIONS		
Noce				None		·····	
1000	r			INDIN .			
	;						
	, ,	1		1	<u></u>	1 /	
(/ Mar	3/2/	50		(-1 AAA	2 m	2 hila	つ

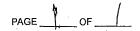
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		WATERQ	UALITY	Y IVIE I	ER C	ALIBKA	TION LOG			
	PROJECT NAME:	Dominion - Cope Station			1	AQUA TRO		SAMPLER:	JY /@ / !	DS
	PROJECT NO.: 4)	6559.7.0			SERIAL#: 728566			DATE: 3/8/2022		
	PH (CALIBRATION CHECK		,		SP	ECIFIC CONDU	ICTIVITY CALIBR		HECK
	pH 7 (LOT #): 14150 117 (EXP. DATE): 4/22 PRE-CAL. READING/STANDARD	pH 4 (1) (LOT #): 2 D 8 (1) 29 (EXP. DATE): 4 2 2 PRE-CAL. READING STANDARD	CAL. RANGE	TIME		(LOT #):	READING C 8/22 EADING/STANDARD	TEMPERATURE (°CELSIUS)	CAL. RANGE	TIME
pre	6.87 17.00	9.90 / 10.00	WITHIN RANGE	0910	pre	4500	14490	22.18	WITHIN RANGE	0918
pre	. /	4.29 / 4.00		0916	post	4485	14490	22, 29	G WITHIN	0919
Post	7.02 - 1 7.00	10.06 / 10.00		0914	<u> </u>		1	7 , 00 (WITHIN	- 111
post	1	4.00 / 4.00	[7] WITHIN	0917			1		WITHIN RANGE	
	ORP	CALIBRATION CHECK			-1		D.O. CAL	IBRATION CHEC	K	
	CAL. READING	TEMPERATURE			1		CALIBRATION R			
	(LOT #): (EXP. DATE): PRE-CAL. READING / STANDARD	(°CELSIUS)	CAL. RANGE	TIME			(mg/k)	, - , , , .	CAL. RANGE	TIME
pre	a27.2 / a28	22.04	X WITHIN	0001	-	7	02 0001		WITHIN	0905
post	927.6 / 228	22.04	RANGE WITHIN RANGE	0921	-	Baro!	22.90°C 1.013.7 mb	9 C	RANGE	0105
Post	1	00.01	WITHIN	O IDEA		Act: 8	8.7 mg/L	•	RANGE WITHIN RANGE	
	/		WITHIN		-	calc:	8.7 mm/	<u>/</u>	☐ WITHIN	
	TURBID	TY CALIBRATION CHEC						COMMENTS	RANGE	
		READING (NTU) SN 29149			1	X AUTOC	AL SOLUTION	STANDARD	SOLUTION (<u></u>
	(LOT#): (EXP. DATE): N/A	(LOT #): (EXP. DATE): N/A	CAL. RANGE	TIME			070193	LIST LOT NUMBERS A UNDER CALIE	ND EXPIRATI	ON DATES
	PRE-CAL. READING / STANDARD	POST-CAL, READING / STANDARD				CALIBRAT	ED PARAMETERS	CALIBRATIO	N RANGES (1)
	0.02 / 0.00	0.01 10.00	WITHIN RANGE	०१२४		K)	ЭН	pH: +/- 0.2 S.U	J.	
	1.61 / 1.00	1.60 / 1.00	WITHIN RANGE	0928		X (COND	COND: +/- 1% OF	CAL. STAN	DARD
	8.75 / 10.00	10.02 / 10.00	WITHIN RANGE	17'1Ur'1 4			ORP	ORP: +/- 25 mV		
	1	1	WITHIN RANGE				D.O.	D.O.: VARIES		
	J.	NOTES			7		TURB	TURB: +/- 5% OF	CAL, STAN	DARD
					-			(1) CALIBRATION RAN THE MODEL OF THE V		
	X									
	Р	ROBLEMS ENCOUNTERED					CORRECT	IVE ACTIONS		
	None				1		Vone			*****
	, to the									
										1
	Jacob Beadly	3/8	12022	-			Indle		3/14	22
//	SIGNED		DATE	-		CHEC	KED BY		11	DATE





) IRC	WATER Q	UALIT	MET	ER C	ALIBR	ATION LOG			
PROJECT NAME:	Dominion - Cope Station			MODEL:	AQUA TF	ROLL 400	SAMPLER:	JY / JB /(6s)
PROJECT NO.: 416	559.7.0			SERIAL	#: 72 E	3550	DATE: 3/8	123	
PH	CALIBRATION CHECK				s	PECIFIC CONDU	ICTIVITY CALIBR	RATION C	HECK
pH 7 (LOT #): 2 0 6 6 (EXP. DATE): 8/22 PRE-CAL, READING/STANDARD	pH 4 (10) (LOT #): 2 0 06 6 7 (EXP. DATE): 2 2 2 PRE-CAL, READING / STANDARD	CAL. RANGE	TIME	,	(LOT#): 2	1070193	TEMPERATURE	CAL. RANGE	TIME
7.0817	9.68/10	WITHIN RANGE	1300		5,08	1 449 45/4	n	WITHIN	1300
1	1at #21070193	WITHIN		-		1		WITHIN	
1	4.21/4		1300	1		1	THE STATE OF THE S	WITHIN	
1	/	WITHIN				1		WITHIN RANGE	
ORP	CALIBRATION CHECK			_		D.O. CAL	IBRATION CHEC	K	
CAL. READING	TEMPERATURE					CALIBRATION R	EADING		
(LOT #);21 90 4 3 (EXP. DATE): 4 / 23 PRE-CAL. READING / STANDARD	(°CELSIUS)	CAL. RANGE	TIME		-	(mg/L)		CAL. RANGE	TIME
234,71 228	23.59	WITHIN	1800	1	1320	1.013.9 m	1 bac/760.m.Ho	WITHIN	<u> </u>
1	0,7,7	WITHIN			Temp	25,9606		WITHIN	
1		WITHIN		-	ROO	8,54 ma	12	WITHIN	
/	:	WITHIN			a ctu	11 8,2 m	5/4	WITHIN	
TURBID	ITY CALIBRATION CHEC		<u> </u>		L		COMMENTS	INNOL	<u> </u>
	READING (NTU)			1 .	AUTO	CAL SOLUTION	STANDARD	SOLUTION ((S)
(LOT#):	(LOT #): (EXP. DATE):	CAL. RANGE	TIME						
PRE-CAL. READING / STANDARD	POST-CAL. READING / STANDARD				CALIBR	ATED PARAMETERS	CALIBRATI	ON RANGES ((1)
0.21 O.D	1	WITHIN	1300		4	pH	pH: +/- 0.2 S.	U.	
1.3 / 1.0	1	WITHIN RANGE	1300		D	COND	COND: +/- 1% OI	F CAL, STAN	IDARD
9.8/10.0	1	WITHIN RANGE				ORP ,	ORP: +/- 25 m\	,	
1	1	WITHIN RANGE	SPECIFIC CONDUCTIVITY CALIBRAT CAL. READING CAL. READING TEMPERATURE (CELSIUS) REPLACE READING ISTANDARD J HIN 1300 HIN 1300 HIN 1300 J HIN 1300 HIN 1300 HIN 1300 TO CALIBRATION CHECK CALIBRATION READING TO CALIBRATION RANGE THE MODEL OF THE WAY TO CALIBRATION RANGE TO CORRECTIVE ACTIONS TO CALIBRATION RANGE THE MODEL OF THE WAY TO CALIBRATION RANGE TO CRECTIVE ACTIONS TO CALIBRATION RANGE TO CRECTIVE ACTIONS						
	NOTES		I			TURB	TURB: +/- 5% O	F CAL. STAN	IDARD.
		,		1					
					L				
· F	PROBLEMS ENCOUNTERED		ī			CORRECT	IVE ACTIONS		
Non	l					None			
	\mathcal{L}						· !		
9)/A	31	18/22		•	1	On Mis	· 3,	14/2:	
SIGNED		DATE	-	•	СН	CKED BY		-/	DATE

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WATER QUALITY METER CALIBRATION LOG

-			 -							
PROJECT NAME:	Dominion - Cope Station			MODEL:	AQUA TF	ROLL 400	SAMPLE	R:	JY JB / I	os
PROJECT NO.: 4)65	59,7.0			SERIAL:	#: 85	1425	DATE:	39	82	
PH (CALIBRATION CHECK	1		Del		PECIFIC CONDU	JCTIVITY	CALIBE	RATION CI	HECK
pH 7 (LOT#): 19450117 (EXP. DATE): 4/22 PRE-CAL, READING/STANDARD	ph 4/10 (LOT#): コロののほう (EXP. DATE): ムココ PRE-CAL. READING/STANDARD	CAL. RANGE	TIME		CA (LOT#): 2 (EXP. DATE	NL. READING ストレフロタラ E): 名りな READING/STANDARD	TEMPE	RATURE .sius)		TIME
6.44 / 7.00	7.03 /7.00	WITHIN RANGE WITHIN RANGE	U-P	-		1.2/4490 166/4490	0.5	90	WITHIN RANGE WITHIN	0.32
4.77 /4.00	3.93 /4,00	RANGE WITHIN RANGE WITHIN RANGE				/ /		72	RANGE WITHIN RANGE WITHIN RANGE	843
ORP	CALIBRATION CHECK			_		D.O. CAL	IBRATIC	N CHEC		
CAL. READING (LOT#): 21140141 (EXP. DATE): 833 PRE-CAL. READING/STANDARD	TEMPERATURE (*CELSIUS)	CAL. RANGE	TIME			CALIBRATION R			CAL. RANGE	TIME
228.4 / 228	20.86 20.85	WITHIN RANGE WITHIN RANGE	હ ્યમ		Baro: 1007.9 mbac Temp: 2048°C				WITHIN RANGE WITHIN RANGE	ষ ্টি 3
<i>l</i>		WITHIN RANGE WITHIN RANGE		_	Act: 9.04 mg/L 843 mg/L Calc: 9.1 mg/L				WITHIN RANGE WITHIN RANGE	
	ITY CALIBRATION CHEC	K		-9	<u></u>		COMM	ENTS		
	READING (NTU)	_			<i>y</i> •	CAL SOLUTION	ST	ANDARD	SOLUTION (S)
(LOT#): $\bigwedge A_i$	(LOT #): NA: (EXP. DATE):	CAL. RANGE	TIME		(LOT#): Ĉ	21070193 == 8/22	1		AND EXPIRATI BRATION CHE	
PRE-CAL. READING / STANDARD	POST-CAL. READING / STANDARD				CALIBR	ATED PARAMETERS		CALIBRATI	ON RANGES (1)
70:05 D:00	1	X WITHIN RANGE		_	M	pН	рН:	+/- 0.2 S.	U.	
1.10 / 1.00	1	WITHIN RANGE		_	X	COND	COND:	+/- 1% OI	F CAL. STAN	DARD
9.94 / 10.00	/	WITHIN RANGE		_		ORP	ORP:	+/- 25 m\		
		RANGE		_		D.O.	D.O.:	VARIËS		
	NOTES			٦		TURB	TURB:	+/- 5% OI	F CAL. STAN	DARD
						:			NGES ARE SP WATER QUAL	
Р	ROBLEMS ENCOUNTERED					CORRECT	IVE ACTION	s		
None						None				
			,		-		·····			
	7	1			<u> </u>		, 		-	-)
SIGNED	3/9/	<u>22</u>	_		Class	COVED BY	R.	Moj	53/14	1/27

REVISED 06/2011

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PROJECT N	NAME:	Dominion - Cope Station			MODEL:	AQUA TR	OLL 400	SAMPLER:	JY /33/1	os
PROJECT N	NO.:				SERIAL	#: 7285	Colo	DATE: 3/4/20	322	
	PH (CALIBRATION CHECK				SF	PECIFIC CONDU	JCTIVITY CALIBR	RATION C	HEC
(LOT #): (EXP. DATE):	pH 7	pH 4 / 10 (LOT #): (EXP. DATE): PRE-CAL. READING / STANDARD	CAL. RANGE	TIME		CAL (LOT#): ఏ } (EXP. DATE)	READING 470039 OH 23 READING/STANDARD	TEMPERATURE (*CELSIUS)	CAL. RANGE	TIM
6.86	1 7.00	9.88 100.00	WITHIN RANGE	1117	pre	4488	14490	21.68	WITHIN RANGE	1120
	1	4.37 1 4.00		1119	post	4488	14496	21.68	WITHIN RANGE	
7.02	17.00	10.04 / 10.00		1120	1 '		1		WITHIN RANGE	1,00
	1	3.98 14.00	WITHIN RANGE	UNE	-}		1		WITHIN RANGE	
L	(I	_		D.O. CAI	IBRATION CHEC	1			
CAL.	READING	TEMPERATURE			1		CALIBRATION F	EADING		
(LOT #): (EXP, DATE): PRE-CAL, RE/	ADING / STANDARD	(°CELSIUS)	CAL. RANGE	TIME			(mg/L)		CAL. RANGE	TIM
229,3	3/228	21.39	WITHIN RANGE	1130		Temp:	28.97		WITHIN RANGE	Ш
	Ĩ	00.0	WITHIN RANGE		-	Baro: H	28,97 006,1 754.0 ,73	ilmm Ha	WITHIN	
	1.		WITHIN		-			ð	WITHIN	
	1		WITHIN		1	Calc:	7. 7		WITHIN	
L	TURBID	ITY CALIBRATION CHE	RANGE ECK	•	_]			COMMENTS	RANGE	l
		READING (NTU)			7		CAL SOLUTION	STANDARD	SOLUTION (S)
(LOT#): (EXP. DATE):	NA	(LOT#): (EXP. DATE):	CAL. RANGE	TIME		(LOT#): 'Q (EXP. DATE	147003a 1:4/a3	LIST LOT NUMBERS A UNDER CALIE		
PRE-CAL. REA	ADING / STANDARD	POST-CAL. READING / STANDARD	D X		;	CALIBRA	TED PARAMETERS	CALIBRATIO	ON RANGES ⁽	1)
0.06	10.00	0.06 / 0.00	WITHIN RANGE		•	[Z	рН	pH: +/- 0.2 S.	U.	
2.12	11.00	1.95 / 1.00	WITHIN RANGE	1122		中	COND	COND: +/- 1% OF	F CAL. STAN	DARI
8.85	1 10.00	10.02 / 10.00	WITHIN RANGE	1118			ORP	ORP: +/- 25 mV	′	
,	1	. /	WITHIN			□ .	D.O.	D.O.: VARIES		
		NOTES	4		-		TURB	TURB: +/- 5% OI	F CAL. STAN	IDARI
	-		-				· ·	(1) CALIBRATION RAI THE MODEL OF THE		
			· · · · · · · · · · · · · · · · · · ·					:		
	F	PROBLEMS ENCOUNTERED			1		CORREC	TIVE ACTIONS		
	N)syl				R.	lone			
<i>j</i>		78 70		•		<u>, , , , , , , , , , , , , , , , , , , </u>	1 () 1 A_			
				No. of		/	<u> </u>			
7	Budly	ę	- / /			7	1 11.		1	1

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" IRC	WATER Q	UALIT	Y MET	ER C	ALIBR	RATION LOG				
PROJECT NAME: Dominion - Cope Station			MODEL: AQUA TROLL 400			SAMPLER: JY / JB / OS				
ROJECT NO.: 416559.7.0				SERIAL #: 728550			DATE: 3/9/22			
PH (CALIBRATION CHECK					SPECIFIC CONDL	ICTIVITY CALIBE		HECK	
pH 7	pH 4 (10) (LOT #): 21010067 (EXP. DATE): 2/22 PRE-CAL. READING/STANDARD	CAL. RANGE	TIME		C. (LOT #): (EXP. DAT	AL. READING 21070193 (E): 8/22 L. READING/STANDARD	TEMPERATURE (*CELSIUS)	CAL. RANGE	TIME	
6.781 7	9.79 / 10	WITHIN	0830		4.4	501 4.49	21.32	WITHIN	0835	
7 1 7	10 / 10							WITHIN RANGE		
7	21070931 8/22	WITHIN				1		WITHIN		
1	41/4		0885			1		WITHIN		
ORP	CALIBRATION CHECK	7 - KANGE	P 495	J.		D.O. CAL	IBRATION CHEC	RANGE		
CAL. READING	TEMPERATURE]		CALIBRATION R				
(LOT #): 21140143 (EXP. DATE): 4/23 PRE-CAL READING/STANDARD	(°CELSIUS)	CAL. RANGE	TIME		(mg(L)		e e	CAL. RANGE	TIME	
2331228	21.32	WITHIN	0835	ĺ	RDO	8.80 Mg1	IL.	WITHIN RANGE		
1		WITHIN	0,55		13950	8, 80 Mg/ 756,04 mm 22,43 06	ng	WITHIN		
1		WITHIN			Temp	22, 93° l		WITHIN	,	
	,	WITHIN			acti	19(8,70;	ng/L	RANGE WITHIN		
TURBIDITY CALIBRATION CHECK				J			COMMENTS	RANGE	· · · · · · · · · · · · · · · · · · ·	
CALIBRATION READING (NTU)]					S)		
(LOT #): (EXP. DATE): NA		CAL. RANGE	TIME		(LOT#): 2 1070 A3 (EXP. DATE): 8 22		LIST LOT NUMBERS AND EXPIRATION DATES UNDER CALIBRATION CHECK			
PRE-CAL. READING / STANDARD	POST-CAL. READING / STANDARD	·	,		CALIB	RATED PARAMETERS	CALIBRATIO	N RANGES ⁽¹	1)	
0.1 / 0.0	1	WITHIN	0835		` ∑ pH		pH: +/- 0.2 S.U.			
0.9 / 1.0	. /	X WITHIN RANGE			Ø	COND	COND: +/- 1% OF	CAL. STAN	DARD	
10 / 10.0	1	WITHIN	0835	1		ORP	ORP: +/- 25 mV			
1	1	WITHIN RANGE				D.O.	D.O.: VARIES			
NOTES				1		TURB	TURB: +/- 5% OF	CAL. STAN	DARD	
							(1) CALIBRATION RAN THE MODEL OF THE V			
PROBLEMS ENCOUNTERED						CORRECT	IVE ACTIONS	 		
Nove					Norre					
'			<i>1</i> -			·····	·.			
SIGNED	3	/9/22 DATE		<u> </u>	(C)H	D. Mys		3/14/2	.2 DATE	





gel.com

March 31, 2022

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

Re: CCR Groundwater Monitoring - Level 1 Package

Work Order: 572610

Dear Kelly Hicks:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on March 09, 2022. This revised data report has been prepared and reviewed in accordance with GEL's standard operating procedures. REV 1: The client requested a revised report due to Barium being reported instead of Boron.

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

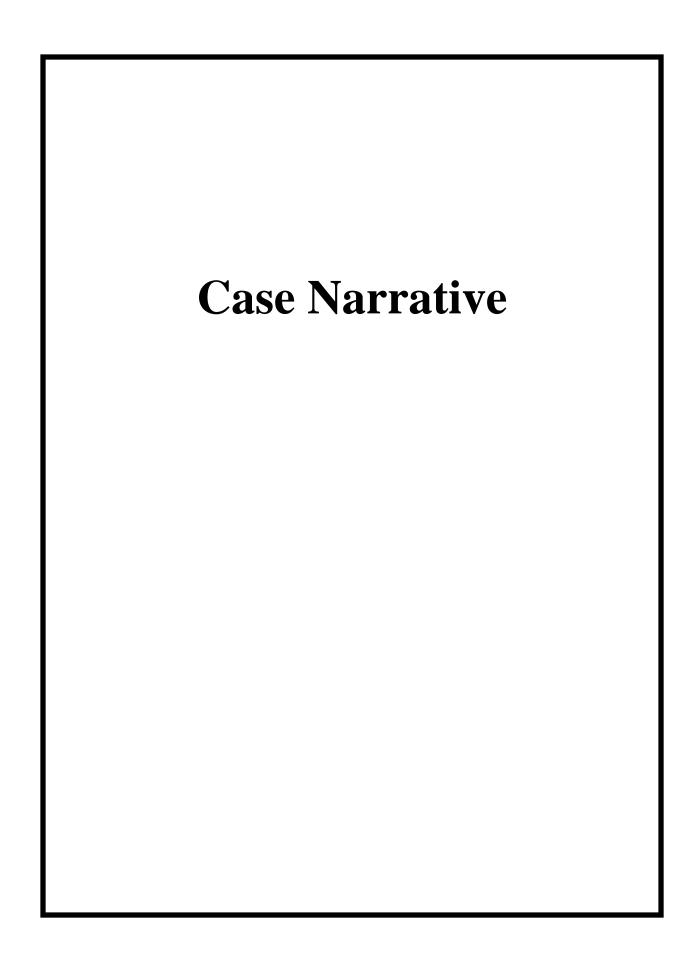
Purchase Order: 50149867 Chain of Custody: 2021133

Enclosures



Table of Contents

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General Chem Analysis	26
Case Narrative	27
Sample Data Summary	31
Quality Control Summary	34



REV 1: The client requested a revised report due to Barium being reported instead of Boron.

Receipt Narrative for Dominion Energy (50149867) SDG: 572610

March 31, 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 09, 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:

Laboratory ID	Client ID
572610001	MW-BG-06-2022Q1
572610002	MW-BG-16-2022Q1

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 Boldiford

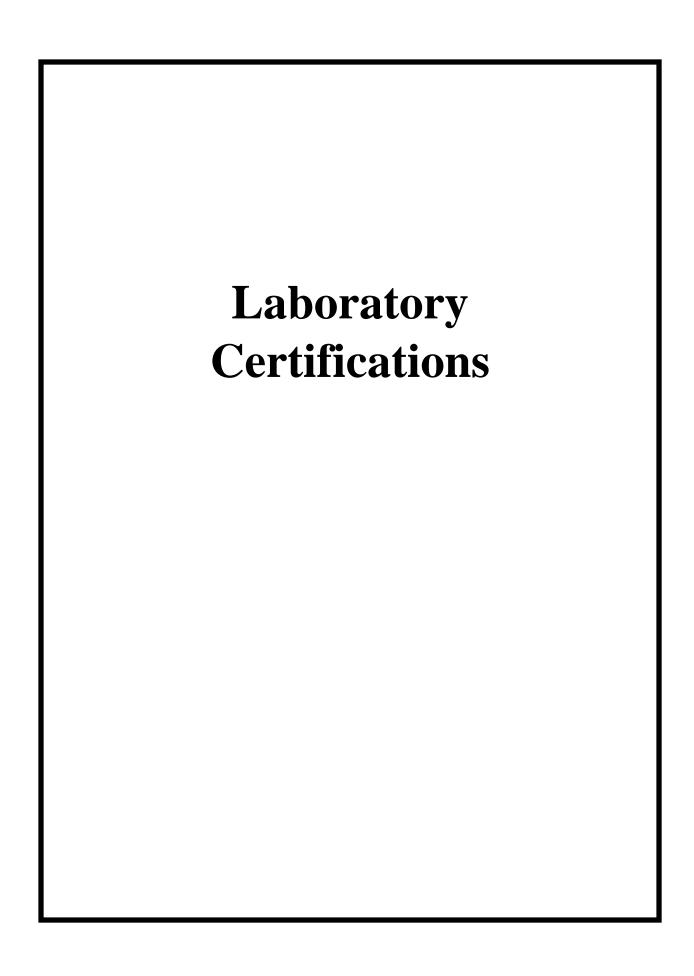
Page 2 of 37 SDG: 572610 Rev1



i age.					-						GEL Laboratories 1.1 C	ries I.I.C	
Project # 416559.0007.0000.2.2				pora	tories	CC			(coad coad	
GOC Number (1).		gel.c	om Chemis	stry Radioc	Chair of Circles Analytics	bioassay I &	pecialty An	alytics	2	2770		29407	
20 Number: PO 50149867	GEL Work Order Number: 203881		5	GEI P	GEI Project Manage: Mandith Paddie	Mar. Mar.	isanha	J. Com				56-8171	
Quent Name: Dominion Energy		Phone # 8	Phone # 803-258-1528		a)cc: mawa	jer. mer	ann Dua	arjora	9.		Fax: (843) 766-1178	-1178	
Project/Site Name: Cope Station Landfill CCR 202201	202201	Eav #					Zallibie:	vuanysis	Kednested		Sampie Analysis Requested (Fill in the number of containers for each test)	amers for ea	ich test)
S		1 00 1			Should this		L2	\dashv	IN				< Preservative Type (6)
duress: Cope, South Carolina					considered:		ouis:		Ca				
Sollected By: J. Bradley	Send Results To: AReed@envstd.com	envstd.com			JI)	sp		\$OS	s B, (Comments
Sample ID * For composition, inclinate stant and stone deconduction	•	*Time Collected (Military)		Field Sample	adioactive s, please supp Dopic info.)	ssiple Hazar Solole Hazar	SM254 J.DS	CI' EF'	Fotal Metal EPA 20				Note: extra sample is required for sample specific QC
NAV-117-01-2022Q1—	(mn-dd-yy)	(uuuu)	ep 7	Filtered Watrix W	И Хо	bo) T						
MW-EF-02-2022Q1			1	***************************************				-					
MW-LF-03-2022Q1			1	N									
MW-LF-04-2022Q1			2	₩D N	k								
MW-LF-05-2022Q1				#5 #	Z			-					
FBLK-COP-LF-22101			l e	N YO	\mathbb{H}							000	Juon hadrette ees
WW-EF-06-2022Q+				N CW	2							3	attaciled work
MW-BG-06-2022Q1	3/R/S	50					\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\					ord	order for details
MW-RG-16-2022O1	3000	2 7	-		4	· (, .						
TATACOLI EL CONTRE	2 2 000	3	-	1		N	-	_					
			C.	5	Z								
	in of Custod							TATR	TAT Requested: N	Normal: X	Rush: S	Specify:	
Kelinquished By (Signed) Date	Time Received by (signed)		Date	Time	17	ax Results	Fax Results: [] Yes	X X					
1 goed bushly 5/4/2022	0180MP 0060	B	228Q	8	3	elect Deli	verable: [C of A	Select Deliverable: C of A QC Summary	ary [] level 1		fX 11 evel 3	I II evel 4
2.1	2 6	>	chu	_	V	Additional Remarks.	Remarks:			1	1		
3	3				F	or Lab Re	ceiving U	se Only:	For Lab Receiving Use Only: Custody Seal Intact? Yes	ntact?] Y	1No	Cooler Temp:	\mathcal{J}_{o}
> For sample shipping and delivery details, see Sample Receipt & Review form (SRR.) 1.) Chain of Custody Number = Client Determined	Sample Receipt & Review form	SRR.)			Sample Co	Hection T	me Zone	[X] Ea	Sample Collection Time Zone: [X] Eastern [] Pacific	fic [] Central	4600	[] Mountain [] Other:	
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 ves the sample was field filtered or - N - for cample was field filtered or - N - for cample was field filtered or - N - for very liquid matrices, indicate with a - Y - for ves the sample was field filtered or - N - for cample was field filtered or - N - for cample was field filtered or - N - for very liquid matrices, indicate with a - Y - for vest the sample was field filtered or - N - for cample was field filtered or - N - for very liquid matrices.	= Field Duplicate, EB = Equipment Blank for wes the sample was field filtered or - N	. MS = Matrix :	spike Sample, N	(SD = Matrix	Spike Duplicate	Sample, G =	Grab, C = C	omposite					
4.) Matrix Codes: DW=Drinking Water, GW=Groundwater, SW=Surface Water, WW=Water, W=Water, ML=Mise Liquid, SO=Soil, SD=Sediment, SL=Sludge, SS=Soild Waste, O=Oil, F=Filter, P=Wine. U=Urine. F=Fersal N=Nassal	, SW=Surface Water, WW=Waste Water	W=Water, ML	Misc Liquid, S	.c.; 3O=Soil, SD =	Sediment, SL=Sl	udge, SS∺Sc	lid Waste, O	=0il, F=Fi	ter, P=Wipe, U=[rine. F≈Recal.	N=N		
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).	ed (i.e. 8260B, 6010B/7470A) and numbe	of containers p	rovided for each	ı (i.e. <i>8260B</i>	-3,60108/7470/	- 1) .	of pulls of Buildin decrease point per	death of the second sec	to the database photodoxy	project and the second second second	(And State (1) to the Andrews of the	in) -) — elp i pili (Pin) desari i sibi n (qin) (Pin qi n) (Pin	te and of plan is planted by the public and the control of the public and the pub
6.) Preservative Type: Ha = Hydrochloric Acid, NI = Nitric Acid, SII = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate, If no preservative is added = leave field blank	Acid, SII = Sodium Hydroxide, SA = Su	furic Acid, AA	- Ascorbic Acid	l, HX = Hexa	ne, ST = Sodium	Thiosulfate,	If no preserv	rative is add	ed = leave field b	ink			
ANOWN OR POSSIBLE HAZARDS	Characteristic Hazards	Listed Waste	Vaste			Other					Ple	rse provide an	Please provide any additional details
1 1	CO = Corrosive RE = Reactive	LW = Listed W (F.K.P and U-l. Waste code(s):	LW= Listed waste (F.K.P and U-listed wastes.) Waste code(s):	wastes.)	0 % % Q	OT= Other / (i.e.: High/lo misc. health Description:	OT= Other / Unknown (i.e.: High/low pH, asbest misc. health hazards, etc.) Descripton:	n Sestos, be etc.)	OI=Other / Unknown (i.e.: High/lov pH, asbestos, beryllium, irritants, other misc. health hazards, etc.) Descriation:	is, other	belo com site	nw regarding . cerns. (i.e.: O collected from	below regarding handling andor disposal concerns. (i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)
Cd = Cadmium Ag= Silver Cr = Chromium MR= Misc. RCRA metals	TSCA Regulated PCB = Polychlorinated				1								
Pb ≠ Lead	biphenyls										1		

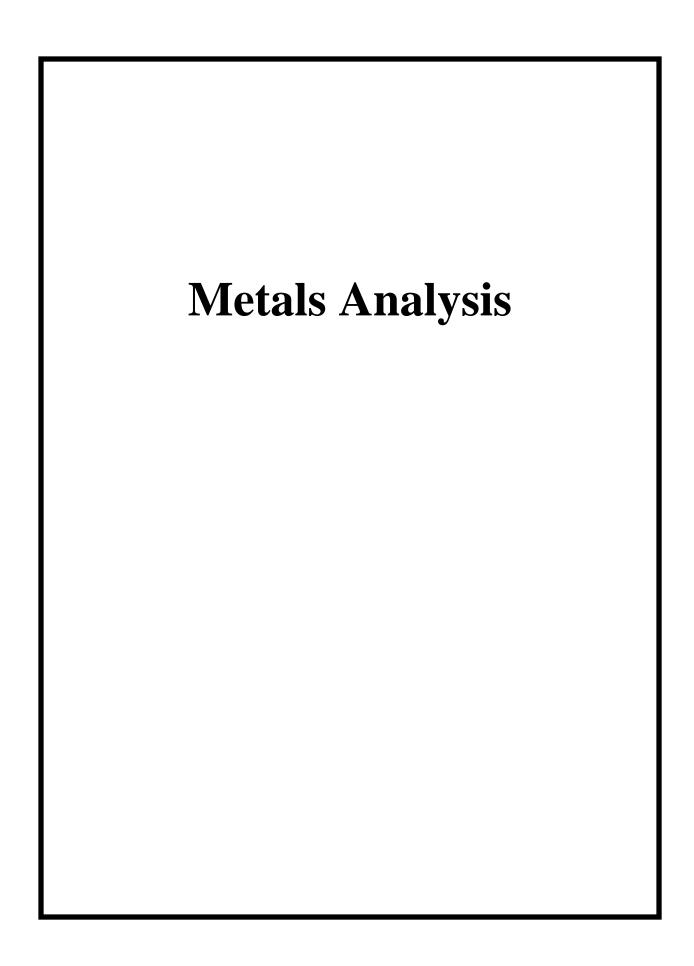
_aboratories LLC SAMPLE RECEIPT & REVIEW FORM Client: SDG/AR/COC/Work Order: 610 Received By: Date Received: 3-9-22 IR temperature gun # Enfer one tracking number per line below. Daily Calibration performed? Y / N IR1- 22 Uncorrected temperature readings are to the 0.1 degree with final recorded tepmeratures rounded to the 0.5 degree. Provide individual Enter courier if applicable and no tracking available. container details when a cooler requiring 0 = 60C is identified as out of specification. Uncorrected Temp: IR Correction Factor: + / . Final Recorded Temp: Within 0.0-6.0C? (Y) N Uncorrected Temp: IR Correction Foctor: + / . Final Recorded Temp: Within 0.0-6.0C? (Y) N Uncorrected Temp: C IR Correction Factor: + / Final Recorded Temp: Within 0.0-6.0C? (Y) N Uncorrected Temp: IR Correction Factor: + / . Final Recorded Temp: Within 0.0-6.0C? Y / N Uncorrected Temp: IR Correction Factor: + / -Final Recorded Temp: Within 0.0-6.0C? Y / N Uncorrected Temp: IR Correction Factor: + / -Suspected Hazard Information Final Recorded Temp: ង elf Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation. Within 0.0-6.0C? Y / N å Hazard Class Shipped: A)Shipped as a DOT Hazardous? UN2910, Is the Radioactive Shipment Survey Compliant? Yes, B) Did the client designate the samples are to be COC notation or radioactive stickers on containers equal elient designation. received as radioactive? C) Did the RSO classify the sumples as Maximum Net Counts Observed • (Observed Counts - Area Background Counts); Classified as: Rad 1 Rad 2 CPM / mR/Hr. Rad 3 D) Did the client designate samples are COC notation or huzard labels on containers equal client designation. liazardous? CD or E is yes, select Hazards below. E) Did the RSO identify possible hazards? Flammable Foreign Soil RCRA Asbestos Beryllium Other: PCB's Sample Receipt Criterin ž £ Comments/Qualifiers (Required for Non-Conforming Items) Shipping containers received intact and Circle Applicable: Seals broken Damaged container Leaking cuntainer Other (describe) Chain of custody documents included 2 Circle Applicable: Client contacted and provided COC with shipment? COC created upon receipt Circle Applicable: Seals broken Danuaged container Leaking container Other (describe) Sample containers intact and scaled? Samples requiring chemical preservation Sample ID's and Containers Affected: at proper pH? If Preservation added, Lutti If Yes, are Encores or Soil Kits present for solids? Yes___No___NA__(If yes, take to VOA Freezer) Do liquid VOA vials contain acid preservation? Yes_ Do any samples require Volatile Are liquid VOA vials free of headspace? Yes___ No. No_ __ NA__(Il'unknown, select No) Analysis? Sample ID's and containers affected: Samples received within holding time? ID's and tests affected: Sample ID's on COC match ID's on ID's and containers affected: bottles? Date & time on COC match date & time Circle Applicable: No dates on containers No times on containers COC missing info Other (describe) on bottles? Number of containers received match Circle Applicable: No container count on COC Other (describe) number indicated on COC? Are sample containers identifiable as GEL provided by use of GEL labels? COC form is properly signed in Circle Applicable: Not relinquished Other (describe) relinquished/received sections? Comments (Use Continuation Form if needed):

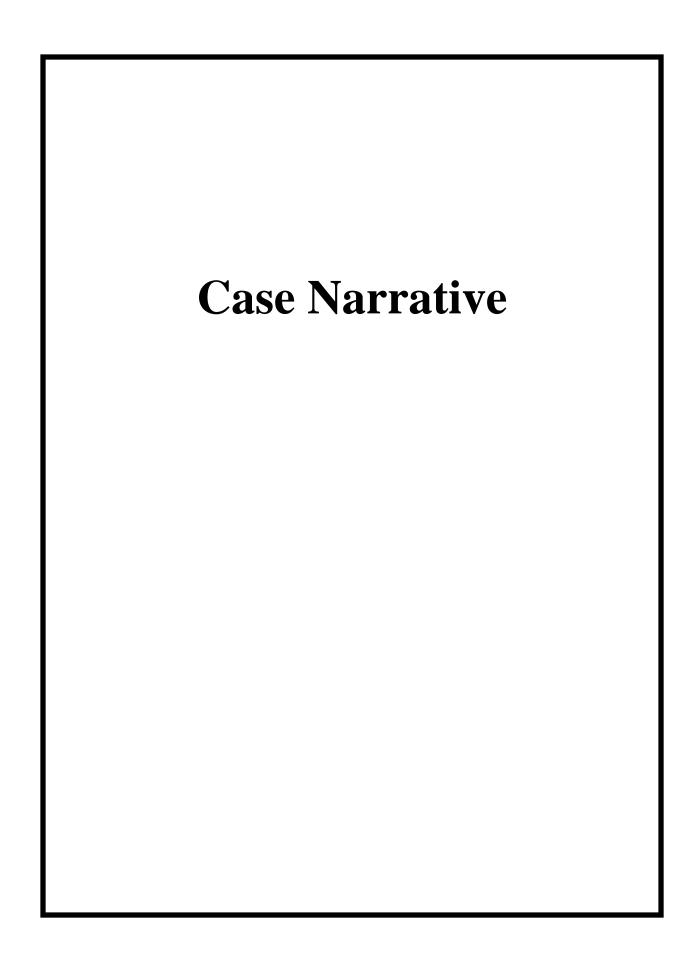
Page 5 of 37 SDG: 572616 Melegyiew: Initials Am Date 3 15 22 Page 1 of



List of current GEL Certifications as of 31 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 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	SC0021
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
vv asinington	C/80





Metals Technical Case Narrative Dominion Energy SDG #: 572610

<u>Product:</u> Determination of Metals by ICP-MS <u>Analytical Method:</u> EPA 200.8 SC_NPDES <u>Analytical Procedure:</u> GL-MA-E-014 REV# 35

Analytical Batch: 2239024

Preparation Method: EPA 200.2

Preparation Procedure: GL-MA-E-016 REV# 18

Preparation Batch: 2239022

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

GEL Sample ID#	Client Sample Identification
572610001	MW-BG-06-2022Q1
572610002	MW-BG-16-2022Q1
1205037441	Method Blank (MB)ICP-MS
1205037442	Laboratory Control Sample (LCS)
1205037445	572613001(NonSDGL) Serial Dilution (SD)
1205037443	572613001(NonSDGD) Sample Duplicate (DUP)
1205037444	572613001(NonSDGS) 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: 572610 Rev1

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

Qualifier Definition Report for

DMNN001 Dominion Energy (50149867) Client SDG: 572610 GEL Work Order: 572610

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

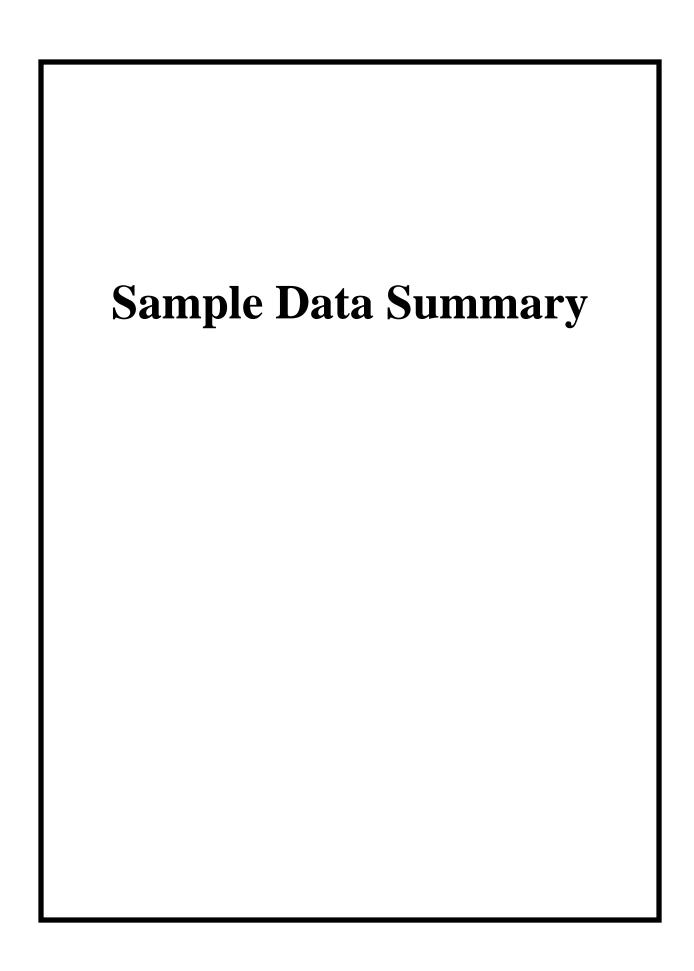
GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

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

Signature: Name: Alan Stanley

Date: 18 MAR 2022 Title: Team Leader

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METALS

-1-

INORGANICS ANALYSIS DATA PACKAGE

SDG No: 572610 CONTRACT: DMNN00101 METHOD TYPE: EPA

SAMPLE ID: 572610001 BASIS: As Received DATE COLLECTED 08-MAR-22

CLIENT ID: MW–BG–06–2022Q1 LEVEL: Low DATE RECEIVED 09–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	8.61	ug/L	J	4.00	15.0	15.0	1	MS	PRB	03/15/22 23:23	220315-1	2239024
7440-70-2	Calcium	9780	ug/L		30.0	100	100	1	MS	PRB	03/15/22 23:23	220315-1	2239024

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2239024	2239022	EPA 200.2	50	mL	50	mL	03/09/22	RG1

*Analytical Methods:

METALS

-1-

INORGANICS ANALYSIS DATA PACKAGE

SDG No: 572610 CONTRACT: DMNN00101 METHOD TYPE: EPA

SAMPLE ID: 572610002 BASIS: As Received DATE COLLECTED 08-MAR-22

CLIENT ID: MW-BG-16-2022Q1 LEVEL: Low DATE RECEIVED 09-MAR-22

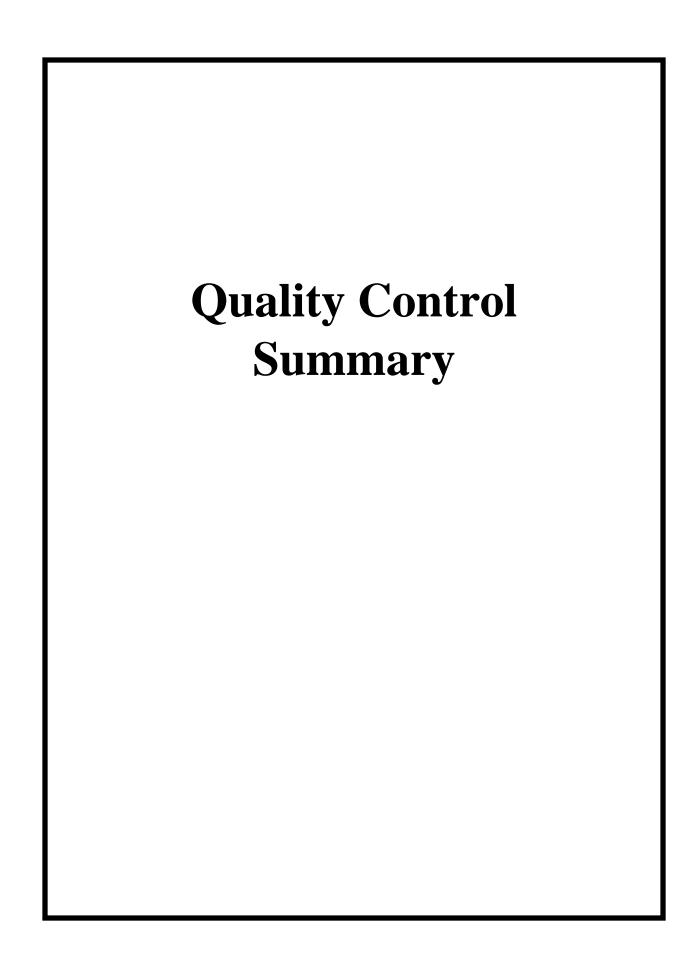
MATRIX: GW %SOLIDS: 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7440-42-8	Boron	9.64	ug/L	J	4.00	15.0	15.0	1	MS	PRB	03/15/22 23:27	220315-1	2239024
7440-70-2	Calcium	2040	ug/L		30.0	100	100	1	MS	PRB	03/15/22 23:27	220315-1	2239024

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2239024	2239022	EPA 200.2	50	mL	50	mL	03/09/22	RG1

*Analytical Methods:



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

SDG No: 572610

Contract: DMNN00101 Lab Code: GEL

Instrument ID: ICPMS15

Sample ID	Analyte	<u>Result</u>	<u>Units</u>	True Value	<u>Units</u>	% Recovery	Acceptance Window (%R)	<u>M*</u>	Analysis Date/Time	<u>Run</u> Number
ICV01										
	Boron	101	ug/L	100	ug/L	100.8	90.0 - 110.0	MS	15-MAR-22 20:58	220315-1
	Calcium	5130	ug/L	5000	ug/L	102.6	90.0 - 110.0	MS	15-MAR-22 20:58	220315-1
CCV01										
	Boron	99.4	ug/L	100	ug/L	99.4	90.0 - 110.0	MS	15-MAR-22 21:19	220315-1
	Calcium	5010	ug/L	5000	ug/L	100.2	90.0 - 110.0	MS	15-MAR-22 21:19	220315-1
CCV02										
	Boron	99.1	ug/L	100	ug/L	99.1	90.0 - 110.0	MS	15-MAR-22 21:31	220315-1
	Calcium	5100	ug/L	5000	ug/L	102.1	90.0 - 110.0	MS	15-MAR-22 21:31	220315-1
CCV03										
	Boron	99.9	ug/L	100	ug/L	99.9	90.0 - 110.0	MS	15-MAR-22 22:35	220315-1
	Calcium	4980	ug/L	5000	ug/L	99.7	90.0 - 110.0	MS	15-MAR-22 22:35	220315-1
CCV04										
	Boron	96.7	ug/L	100	ug/L	96.7	90.0 - 110.0	MS	15-MAR-22 23:15	220315-1
	Calcium	4930	ug/L	5000	ug/L	98.5	90.0 - 110.0	MS	15-MAR-22 23:15	220315-1
CCV05										
	Boron	98.4	ug/L	100	ug/L	98.4	90.0 - 110.0	MS	15-MAR-22 23:56	220315-1
	Calcium	4820	ug/L	5000	ug/L	96.4	90.0 - 110.0	MS	15-MAR-22 23:56	220315-1

^{*}Analytical Methods:

$\begin{array}{c} {\bf METALS} \\ {\bf -2b-} \\ {\bf CRDL~Standard~for~ICP~\&~ICPMS} \end{array}$

SDG No: 572610

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	15.2	ug/L	15	ug/L	101.2	70.0 - 130.0	MS	15-MAR-22 21:07	220315-1
	Calcium	232	ug/L	200	ug/L	115.8	70.0 - 130.0	MS	15-MAR-22 21:07	220315-1
CRDL02										
	Boron	15.6	ug/L	15	ug/L	103.7	70.0 - 130.0	MS	15-MAR-22 22:23	220315-1
	Calcium	223	ug/L	200	ug/L	111.6	70.0 - 130.0	MS	15-MAR-22 22:23	220315-1

*Analytical Methods:

Metals -3aInitial and Continuing Calibration Blank Summary

SDG No.: 572610

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										
	Boron	4.0	+/-7.5	U	4.0	15.0	LIQ	MS	15-MAR-22 21:02	220315-1
	Calcium	30.0	+/-50	U	30.0	100	LIQ	MS	15-MAR-22 21:02	220315-1
CCB01										
CCB01	Boron	4.0	+/-7.5	U	4.0	15.0	LIQ	MS	15-MAR-22 21:23	220315-1
	Calcium	30.0	+/-50	U	30.0	100	LIQ	MS	15-MAR-22 21:23	220315-1
CCB02										
CCB02	Boron	4.0	+/-7.5	U	4.0	15.0	LIQ	MS	15-MAR-22 21:35	220315-1
	Calcium	30.0	+/-50	U	30.0	100	LIQ	MS	15-MAR-22 21:35	220315-1
ССВ03										
ССБОЗ	Boron	4.0	+/-7.5	U	4.0	15.0	LIQ	MS	15-MAR-22 22:39	220315-1
	Calcium	30.0	+/-50	U	30.0	100	LIQ	MS	15-MAR-22 22:39	220315-1
CCD04										
CCB04	Boron	4.0	+/-7.5	U	4.0	15.0	LIQ	MS	15-MAR-22 23:19	220315-1
	Calcium	30.0	+/-50	U	30.0	100	LIQ	MS	15-MAR-22 23:19	220315-1
CCP0#										
CCB05	Boron	4.0	+/-7.5	U	4.0	15.0	LIQ	MS	16-MAR-22 00:00	220315-1
	Calcium	30.0	+/-50	U	30.0	100	LIQ	MS	16-MAR-22 00:00	220315-1

*Analytical Methods:

METALS -3bPREPARATION BLANK SUMMARY

SDG NO. 572610

Contract: DMNN00101

Matrix: GW

Sample ID	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	Acceptance Window	Conc Qual	<u>M*</u>	MDL	RDL
1205037441								
	Boron	4.00	ug/L	+/-7.5	U	MS	4.00	15.0
	Calcium	30.0	ug/L	+/-50	U	MS	30.0	100

^{*}Analytical Methods:

METALS -4-

Interference Check Sample

SDG No: 572610

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)	Analysis Date/Time	<u>Run</u> <u>Number</u>
ICSA01									
	Boron	2.07	ug/L					15-MAR-22 21:11	220315-1
	Calcium	98100	ug/L	100000	ug/L	98.1	80.0 - 120.0	15-MAR-22 21:11	220315-1
ICSAB01									
	Boron	19.4	ug/L	20	ug/L	97.2	80.0 - 120.0	15-MAR-22 21:15	220315-1
	Calcium	96500	ug/L	100000	ug/L	96.5	80.0 – 120.0	15-MAR-22 21:15	220315-1
ICSA02									
	Boron	2.17	ug/L					15-MAR-22 22:27	220315-1
	Calcium	94500	ug/L	100000	ug/L	94.5	80.0 - 120.0	15-MAR-22 22:27	220315-1
ICSAB02									
	Boron	20.1	ug/L	20	ug/L	101	80.0 - 120.0	15-MAR-22 22:31	220315-1
	Calcium	92500	ug/L	100000	ug/L	92.5	80.0 - 120.0	15-MAR-22 22:31	220315-1

METALS -5a-

Matrix Spike Summary

SDG NO. 572610

GW-03B-2022Q1S

Contract:

DMNN00101

Level: Low

Client ID

% Solids:

Matrix:

GROUND WATER

Sample ID:

572613001

Spike ID: 1205037444

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	105		6.81	В	100	98.3		MS
Calcium	ug/L		25900		24500		2000	73.2	N/A	MS

^{*}Analytical Methods:

Metals -6Duplicate Sample Summary

SDG No.: 572610

Lab Code: GEL

Contract:

DMNN00101

Client ID: GW-03B-2022Q1D

Matrix:

GROUND WATER

Level:

Low

Sample ID: 572613001

Duplicate ID: 1205037443

Percent Solids for Dup: N/A

Analyte	Units	Acceptance Limit	Sample Result C	Duplicate Result C	RPD	Qual	M*
Boron	ug/L	+/-30	6.81 B	6.41 B	6.13		MS
Calcium	ug/L	+/-20%	24500	23600	3.53		MS

^{*}Analytical Methods:

METALS

-7-

Laboratory Control Sample Summary

SDG NO. 572610

Contract: DMNN00101

Aqueous LCS Source: Environmental Express

Solid LCS Source:

Sample ID 1205037442	<u>Analyte</u>	<u>Units</u>	<u>True</u> <u>Value</u>	<u>Result</u>	<u>C</u>	% Recovery	Acceptance Limit	<u>M*</u>
	Boron Calcium	ug/L ug/L	100 2000	101 2180		101 109	85–115 85–115	MS MS

^{*}Analytical Methods:

METALS -9Social Dilution Sample Sums

Serial Dilution Sample Summary

SDG NO. 572610 **Client ID** GW-03B-2022Q1L

Contract: DMNN00101

Matrix: LIQUID Level: Low

Sample ID: 572613001 **Serial Dilution ID:** 1205037445

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	6.81	В	20	U	15.221			MS
Calcium	24500		24400		.393		10	MS

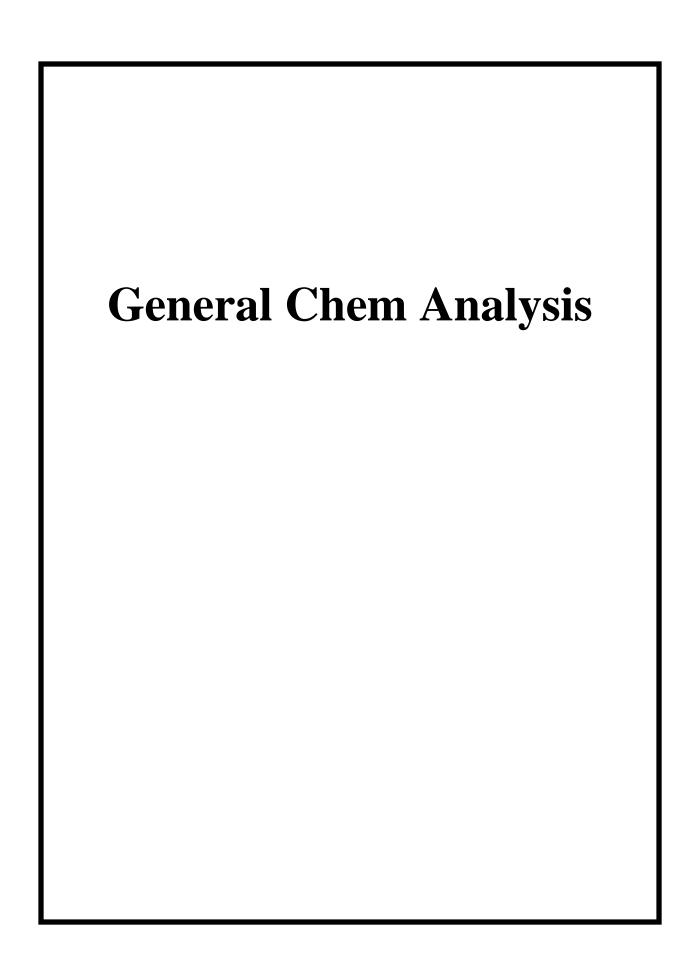
^{*}Analytical Methods:

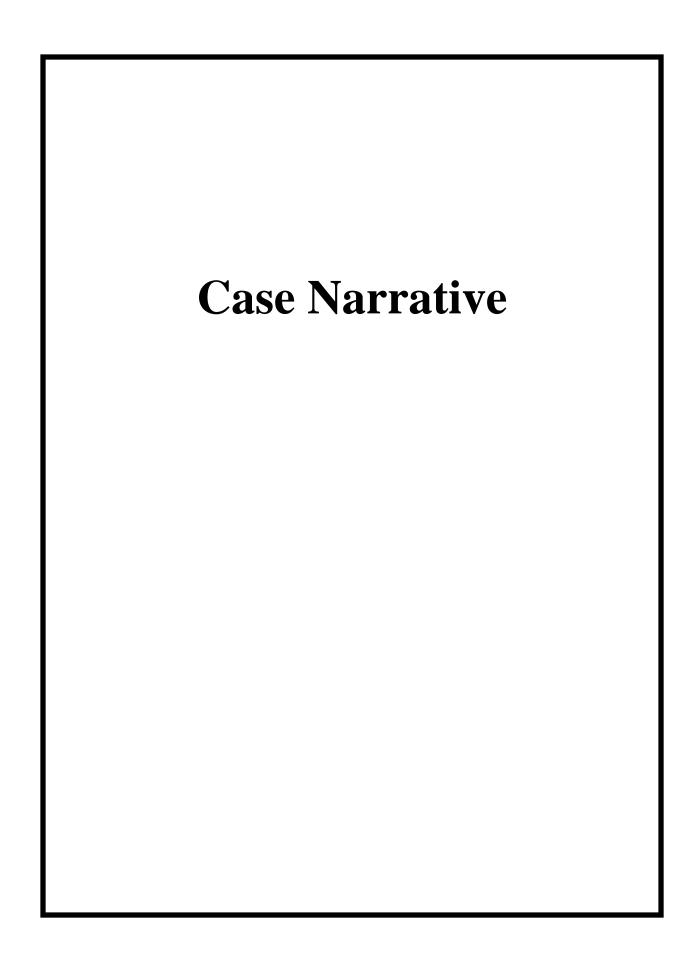
METALS -13SAMPLE PREPARATION SUMMARY

SDG No: 572610 Method Type MS

Contract: DMNN00101 Lab Code: GEL

Sample ID Batch Number	<u>Client ID</u> er 2239022	<u>Sample</u> <u>Type</u>	<u>Matrix</u>	<u>Prep</u> <u>Date</u>	Initial Sample Size	Final Sample Volume Solids
1205037441	MB for batch 2239022	MB	G	09-MAR-22	50mL	50mL
1205037442	LCS for batch 2239022	LCS	G	09-MAR-22	50mL	50mL
1205037444	GW-03B-2022Q1S	MS	G	09-MAR-22	50mL	50mL
1205037443	GW-03B-2022Q1D	DUP	G	09-MAR-22	50mL	50mL
572610001	MW-BG-06-2022Q1	SAMPLE	W	09-MAR-22	50mL	50mL
572610002	MW-BG-16-2022Q1	SAMPLE	W	09-MAR-22	50mL	50mL





General Chemistry Technical Case Narrative Dominion Energy SDG #: 572610

Product: Ion Chromatography Analytical Method: EPA 300.0

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

Analytical Batch: 2239054

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

GEL Sample ID#	Client Sample Identification
572610001	MW-BG-06-2022Q1
572610002	MW-BG-16-2022Q1
1205037525	Method Blank (MB)
1205037526	Laboratory Control Sample (LCS)
1205037527	572613001(GW-03B-2022Q1) Sample Duplicate (DUP)
1205037528	572613001(GW-03B-2022Q1) 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 sample 572610001 (MW-BG-06-2022Q1) was 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.

A14-	572610
Analyte	001
Chloride	5X

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 28 of 37 SDG: 572610 Rev1

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

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

Analytical Batch: 2241213

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

GEL Sample ID#	Client Sample Identification
572610001	MW-BG-06-2022Q1
572610002	MW-BG-16-2022Q1
1205041526	Method Blank (MB)
1205041527	Laboratory Control Sample (LCS)
1205041528	572616003(MW-06-2022Q1) Sample Duplicate (DUP)
1205041529	572686001(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.

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 29 of 37 SDG: 572610 Rev1

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Qualifier Definition Report for

DMNN001 Dominion Energy (50149867) Client SDG: 572610 GEL Work Order: 572610

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

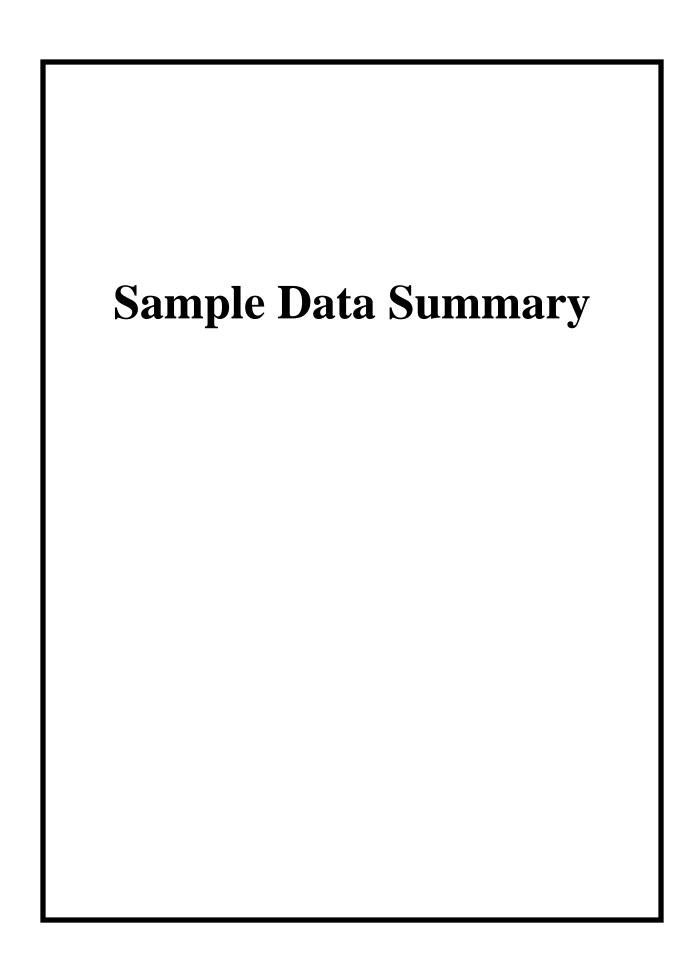
GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

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

Signature: Name: Aubrey Kingsbury

Date: 18 MAR 2022 Title: Team Leader

Page 30 of 37 SDG: 572610 Rev1



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Certificate of Analysis

Project:

Client ID:

Analyst Comments

Report Date: March 18, 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-06-2022Q1

Sample ID: 572610001

Matrix: GW

Collect Date: 08-MAR-22 10:40
Receive Date: 09-MAR-22
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Analyst I	Date	Time Batch	Method
Ion Chromatography										
EPA 300.0 Anions Liq	uid "As Recei	ved"								
Fluoride	J	0.0584	0.0330	0.100	mg/L		1 HXC1 03/	09/22	1503 2239054	1
Sulfate	U	ND	0.133	0.400	mg/L		1			
Chloride		17.6	0.335	1.00	mg/L		5 HXC1 03/	09/22	2230 2239054	2
Solids Analysis										
SM2540C TDS "As Re	eceived"									
Total Dissolved Solids		101	3.40	14.3	mg/L		KLP1 03/	15/22	1422 2241213	3
The following Analyti	The following Analytical Methods were 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

Page 32 of 37 SDG: 572610 Rev1

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Certificate of Analysis

Project:

Client ID:

Report Date: March 18, 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-16-2022Q1

Sample ID: 572610002 Matrix: GW

Collect Date: 08-MAR-22 10:36 Receive Date: 09-MAR-22

Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Analyst Date	Time Batch	Method
Ion Chromatography									
EPA 300.0 Anions Lie	quid "As Recei	ved"							
Chloride	•	3.54	0.0670	0.200	mg/L		1 HXC1 03/09/2	2 1533 2239054	1
Fluoride	U	ND	0.0330	0.100	mg/L		1		
Sulfate		1.73	0.133	0.400	mg/L		1		
Solids Analysis									
SM2540C TDS "As R	eceived"								
Total Dissolved Solids	J	4.29	3.40	14.3	mg/L		KLP1 03/15/2	2 1422 2241213	2
The following Analyt	ical Methods v	vere performed:							
Method	Description	Į.			1	Analys	st Comments		

Method Description
1 EPA 300.0

2 SM 2540C

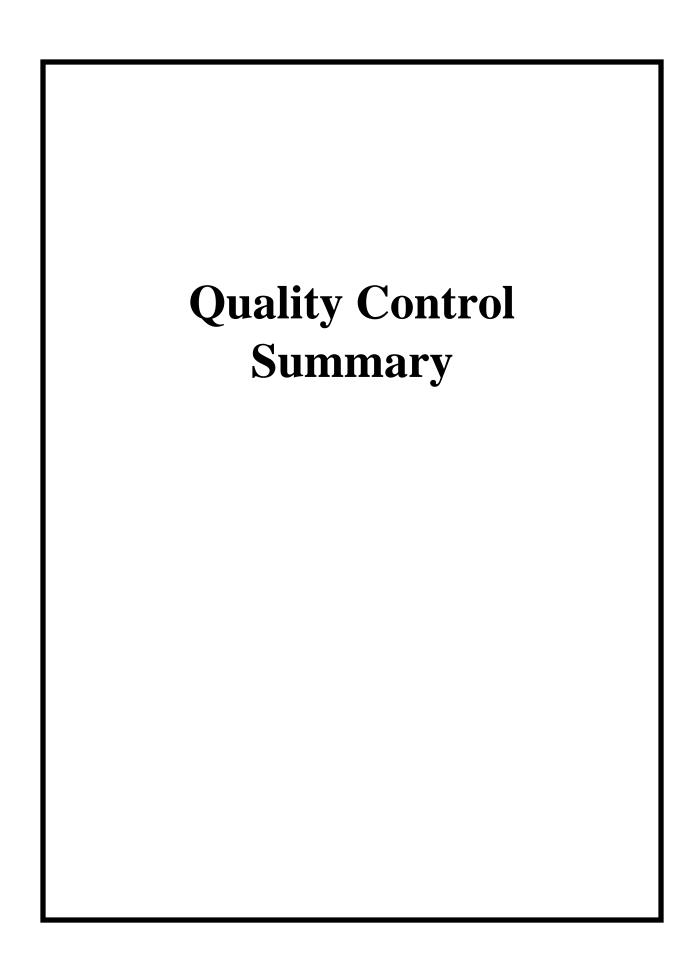
Notes:

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

Page 33 of 37 SDG: 572610 Rev1



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QC Summary

Report Date: March 18, 2022

Page 1 of 3

Dominion Energy Services, Inc.

120 Tredegar Street Richmond, Virginia

Contact: Kelly Hicks

Workorder: 572610

Parmname	NOM	Sample Qual	QC	Units	RPD% REC%	Range Anlst	Date Time
Ion Chromatography Batch 2239054 ———							
QC1205037527 572613001 DUP Chloride		7.10	7.04	mg/L	0.853	(0%-20%) HXC1	03/09/22 21:01
Fluoride		0.203	0.194	mg/L	4.44 ^	(+/2)	
Sulfate		8.46	8.40	mg/L	0.651	(0%-20%)	
QC1205037526 LCS Chloride	5.00		4.82	mg/L	96.3	(90%-110%)	03/09/22 20:31
Fluoride	2.50		2.35	mg/L	94	(90%-110%)	
Sulfate	10.0		9.93	mg/L	99.3	(90%-110%)	
QC1205037525 MB Chloride		U	ND	mg/L			03/09/22 20:01
Fluoride		U	ND	mg/L			
Sulfate		U	ND	mg/L			
QC1205037528 572613001 PS Chloride	5.00	7.10	12.4	mg/L	107	(90%-110%)	03/09/22 21:31
Fluoride	2.50	0.203	2.54	mg/L	93.4	(90%-110%)	
Sulfate	10.0	8.46	18.9	mg/L	104	(90%-110%)	

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QC Summary

Workorder: 572610 Page 2 of 3 Parmname **NOM** Sample Qual QC Units RPD% REC% Range Anlst Date Time Solids Analysis 2241213 Batch QC1205041528 572616003 DUP 75.7 77.1 Total Dissolved Solids (0%-5%) KLP1 03/15/22 14:22 mg/L 1.87 QC1205041529 572686001 DUP 374 371 0.766 03/15/22 14:22 **Total Dissolved Solids** mg/L (0%-5%)QC1205041527 LCS 300 300 mg/L 100 03/15/22 14:22 **Total Dissolved Solids** (95%-105%) OC1205041526 ND mg/L 03/15/22 14:22 **Total Dissolved Solids**

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
- 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

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GEL LABORATORIES LLC

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QC Summary

Workorder: 572610

Page 3 of 3

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

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 either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

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

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

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

Page 37 of 37 SDG: 572610 Rev1





gel.com

March 31, 2022

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

Re: CCR Groundwater Monitoring - Level 3 Package

Work Order: 572838

Dear Kelly Hicks:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on March 10, 2022. This revised data report has been prepared and reviewed in accordance with GEL's standard operating procedures. The client requested a revised report due to the WO being reported under the incorrect project.

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

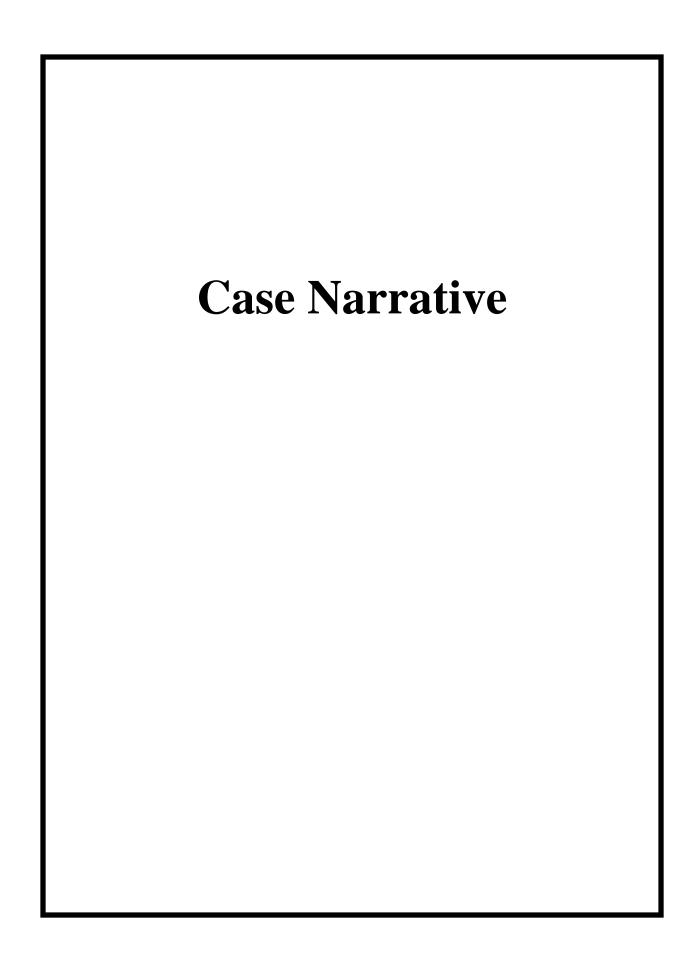
Meredith Borldiford

Purchase Order: 50149867

Enclosures

Table of Contents

Case Narrative	1
Chain of Custody and Supporting Documentation	4
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Metals Analysis	10
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Sample Data Summary	15
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Case Narrative	42
Sample Data Summary	48
Ouality Control Summary	60



Receipt Narrative for Dominion Energy (50149867) SDG: 572838

March 31, 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 10, 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:

Laboratory ID	Client ID
572838001	MW-LF-01-2022Q1
572838002	MW-LF-02-2022Q1
572838003	MW-LF-03-2022Q1
572838004	MW-LF-04-2022Q1
572838005	MW-LF-05-2022Q1
572838006	FBLK-COP-LF-22101
572838007	MW-LF-06-2022Q1
572838008	DU-COP-LF-22101
572838009	AS-LF-01-2022Q1
572838010	AS-LF-02-2022Q1
572838011	MW-40-2022Q1

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 63 SDG: 572838 Rev1

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

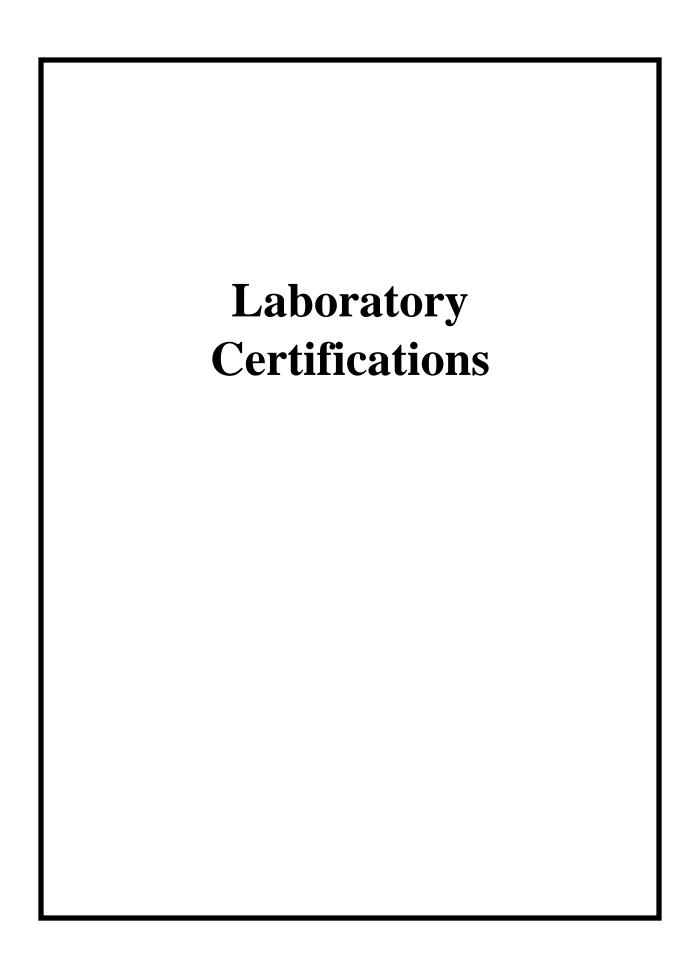


GEL Work Order Number: 203881 Phone # 803-258-1528	LADOI ALOTHES LLC gel.com Chemistry Radiochemistry			LCLUUL CLUITES LLC Chemistry I Radiochemistry I Radiobioassay I Specialty Analytics n of Custody and Analytical Request	LLC bioassay 1 fical R	Specialty	Analytics		\$ C \$ C C C	7		2040 Sav	2040 Savage Road Charleston SC 29407	107		
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				3))		Shone: (6	Dhone: (842) 556-9171	407		
		3	T. Froje	GEL Project Manager: Meredith Boddiford	zer: Mer	edith B	oddifor				Τ	ax. (843	Fax: (843) 766-1178	2007		
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.) Field Filtered: For liquid matrices, indicate with a - Y - for yes the sample was field filtered or - N - for sample was not field	was not field	filtered.		and and a	, contribute,	o de la compo		216								
'=Waste Water, W=Water, M	L=Misc Liq	uid, SO≃Sc	oil, SD=Sed	iment, SL≓	Sludge, SS=	Solid Was	te, 0=0il,	F=Filter, I	'=Wipe, U≃	:Urine, F=[Fecal, N≕	Vasal				·····
9A)•and-number of containers oxide, SA ≈ Sulfuric Acid, A.	rprovided-fo A = Ascorbio	reach (i.e. Acid, IIX	8260B - 3, = Hexane,	<i>6010B/747</i> 0 ST = Sodiur	M - I). n Thiosulfa	te, If no pr	eservative	is added ==	leave field	blank		After (c), makes to the growth of the		mail () determined (Libbariones)	elekse sabologicznie kolonia warde spiece konzelekse w w wywona i jedy polonia konzelekse konzelekse konzeleks	
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Chent Name: Dominion Energy			Phone # 803-258-1528	3-258-15	1				Samp	Sample Analysis Requested (5)	sis Red	uested		in the	number	of conta	iners for	(Fill in the number of containers for each test)	
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1.) Chain of Custody Number = Client Determined 2.) OC Codes: N = Normal Sample TB = Trip Blank FD = Field Dimiticate FB = Fruitment Blank MS = Marrix Suite Sample MS = Marrix Saite Sample Dimiticate Sample C = Carlx C = Commerciae	Field Dunlicate F	R = Faniament Rlank	MS = Matrix	boiko Samo	. MCD =	Matrix Sails	a Dundicate	Comple	1	ا ا									
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5) Sample Analysis Requested:-Analytical method-requested (i.e. 8260B; 6010B7/470A) and number of containers provided for each (i.e. 8260B; 3, 6010B7/470A; 1); moreover, and the servative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, IX = Hexane, ST = Sodium Thiosulfate. If no preservative is added = leave field blank	(i.e. 8260B, 6010 Acid, SH = Sodiun	B/7470A) and numbe 1 Hydroxide, SA = Sul	r of containers p funic Acid, AA	rovided-for	each (f.e.:δ Acid, IIX	# Hexane, S	010B/7470. T = Sodium	4~-1);	ite. If no p	reservative	is added =	leave field	hlank	of Emelope, September 1981 November 1985	Christian de la Company de la		ACT CONTRACTOR OF THE PROPERTY	(Secretaries estimations destinated as a secretario (secretario de secretario de secretario (secretario de sec	
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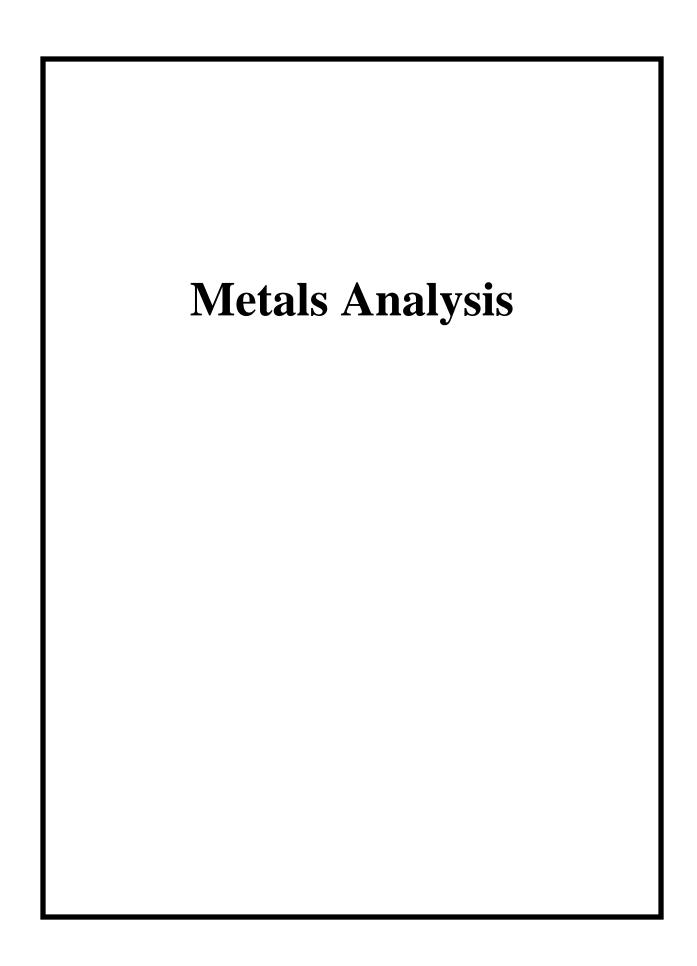
SAMPLE RECEIPT & REVIEW FORM

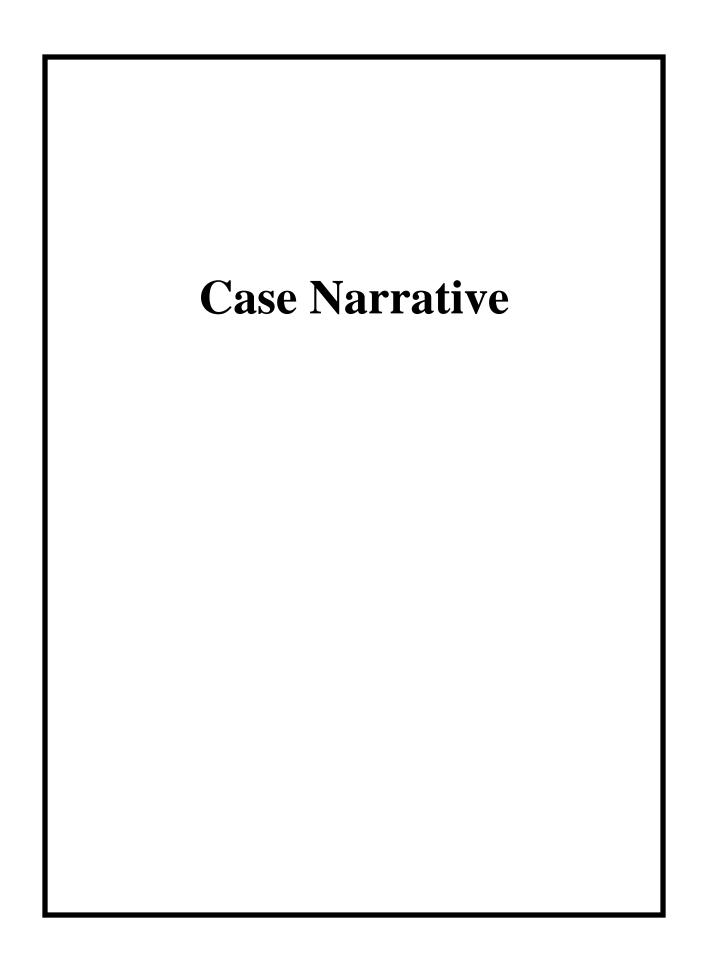
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Su	pected Hazard Information	, Kg	2	T-	Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.	
H		+	├	+-		Ng si S Anna S
<u>A):</u>	hipped as a DOT Hazardous?		/		12910, Is the Radioactive Shipment Survey Compliant? Yes No	i Ir
в)	Did the client designate the samples are to be		1	co	Ocnotation or radioactive stickers on containers equal client designation.	
Г	ived as radionetive?	╁	 	1	Mar Court Obs. 44 (Obs. 46)	. · · ·
C)	Did the RSO classify the samples as loaetive?		/	Cir	ixinium Net Counts Observed * (Observed Counts - Area Background Counts):CPM / mR/Hr nssified as: Rnd 1	
D)	Did the client designate samples are ordous?		/	сo	C'notalton or hazard labels on containers equal client designation.	
Γ		╁			Or E is yes, select Hazards below. Annuable Foreign Soil RCRA Aspestos Republium Others	B's
(E)	Did the RSO identify possible hazards?	<u></u>	<u> </u>	<u></u>	J. J	
<u> </u>	Sample Receipt Criteria	75		2	t in the state of	
1	Shipping containers received intact and scaled?	/			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)	
2	Chain of custody documents included with shipment?			-	Circle Applicable: Client contacted and provided COC COC created upon receipt	
3	Sample containers intact and scaled?	Ĺ			Circle Applicable: Seals broken Dannaged container Leaking container Other (describe)	
3		Ľ				
4	Samples requiring chemical preservation at proper pH?	/	,		Sample 10's and Containers Affected: If Preservation added, Lord:	
		I			If Yes, are Encores or Soil Kits present for solids? YesNoNA(If yes, take to YOA 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 vials free of headspace? Yes No NA	
					Sample (D's and containers affected:	1
G	Samples received within holding time?	7			ID's and tests uffected:	
	Sample ID's on COC match ID's on	<u> </u>			ID's and containers affected:	
7	bottles?	/	邈			
8	Date & time on COC match date & time on bottles?				Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)	
y	Number of containers received match number indicated on COC?		30		Circle Applicable: No container count on COC Other (describe)	
10	Are sample containers identifiable as GEL provided by use of GEL labels?	/				—
11	COC form is properly signed in	/			Circle Applicable: Not relinquished Other (describe)	—
	relinquished/received sections? ments (Use Continuation Form if needed):	<u> </u>				
CON	ments (Ose Continuation Point It needed);					
	er. Ser ritagget e s					
	e 7 of 63 SDG: 572838	PNDY	or RN	6 Λ) :	review: Initials AM Date 3/14/22 Page 1 of (



List of current GEL Certifications as of 31 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
asimigion	2.00





Metals Technical Case Narrative Dominion Energy SDG #: 572838

Product: Determination of Metals by ICP-MS
Analytical Method: EPA 200.8 SC_NPDES
Analytical Procedure: GL-MA-E-014 REV# 35

Analytical Batch: 2241762

Preparation Method: EPA 200.2

Preparation Procedure: GL-MA-E-016 REV# 18

Preparation Batch: 2241761

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

GEL Sample ID#	Client Sample Identification
572838001	MW-LF-01-2022Q1
572838002	MW-LF-02-2022Q1
572838003	MW-LF-03-2022Q1
572838004	MW-LF-04-2022Q1
572838005	MW-LF-05-2022Q1
572838006	FBLK-COP-LF-22101
572838007	MW-LF-06-2022Q1
572838008	DU-COP-LF-22101
572838009	AS-LF-01-2022Q1
572838010	AS-LF-02-2022Q1
572838011	MW-40-2022Q1
1205042339	Method Blank (MB) ICP-MS
1205042340	Laboratory Control Sample (LCS)
1205042343	572838009(AS-LF-01-2022Q1L) Serial Dilution (SD)
1205042346	572838011(MW-40-2022Q1L) Serial Dilution (SD)
1205042341	572838009(AS-LF-01-2022Q1D) Sample Duplicate (DUP)
1205042344	572838011(MW-40-2022Q1D) Sample Duplicate (DUP)
1205042342	572838009(AS-LF-01-2022Q1S) Matrix Spike (MS)
1205042345	572838011(MW-40-2022Q1S) 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 indigenous to the purchased standard.

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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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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: 572838 GEL Work Order: 572838

The Qualifiers in this report are defined as follows:

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

Review/Validation

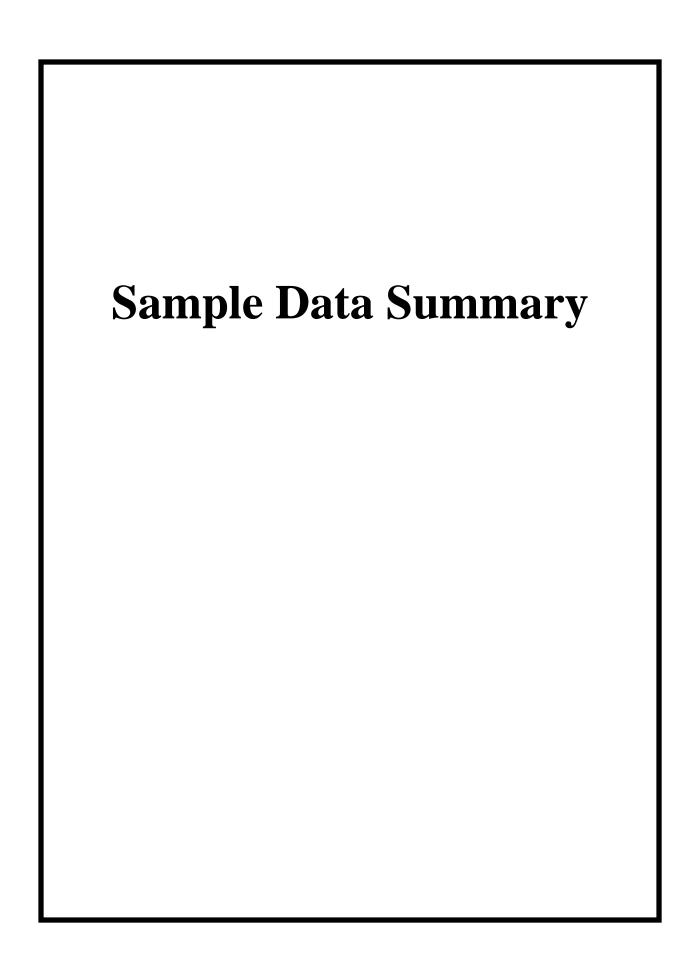
GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

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

Signature: Edmund Frampton

Date: 21 MAR 2022 Title: Group Leader

Page 14 of 63 SDG: 572838 Rev1



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INORGANICS ANALYSIS DATA PACKAGE

SDG No: 572838 CONTRACT: DMNN00102 METHOD TYPE: EPA

SAMPLE ID: 572838001 BASIS: As Received DATE COLLECTED 09-MAR-22

CLIENT ID: MW-LF-01-2022Q1 LEVEL: Low DATE RECEIVED 10-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	6.98	ug/L	J	4.00	15.0	15.0	1	MS	PRB	03/18/22 20:04	220318-1	2241762
7440-70-2	Calcium	2200	ug/L		30.0	100	100	1	MS	PRB	03/18/22 20:04	220318-1	2241762

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
								I
2241762	2241761	EPA 200.2	50	mL	50	mL	03/16/22	RG1

^{*}Analytical Methods:

-1-

INORGANICS ANALYSIS DATA PACKAGE

SDG No: 572838 CONTRACT: DMNN00102 METHOD TYPE: EPA

SAMPLE ID: 572838002 BASIS: As Received DATE COLLECTED 09-MAR-22

CLIENT ID: MW-LF-02-2022Q1 LEVEL: Low DATE RECEIVED 10-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	17.1	ug/L		4.00	15.0	15.0	1	MS	PRB	03/18/22 20:08	220318-1	2241762
7440-70-2	Calcium	5720	ug/L		30.0	100	100	1	MS	PRB	03/18/22 20:08	220318-1	2241762

Prep Information:

	Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
[2241762	2241761	EPA 200.2	50	mL	50	mL	03/16/22	RG1
	2241/62	2241/61	EPA 200.2	50	mL	50	mL	03/16/22	KGI

^{*}Analytical Methods:

-1-

INORGANICS ANALYSIS DATA PACKAGE

SDG No: 572838 CONTRACT: DMNN00102 METHOD TYPE: EPA

SAMPLE ID: 572838003 BASIS: As Received DATE COLLECTED 09-MAR-22

CLIENT ID: MW-LF-03-2022Q1 LEVEL: Low DATE RECEIVED 10-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	8.19	ug/L	J	4.00	15.0	15.0	1	MS	PRB	03/18/22 20:11	220318-1	2241762
7440-70-2	Calcium	1070	ug/L		30.0	100	100	1	MS	PRB	03/18/22 20:11	220318-1	2241762

Prep Information:

	Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
Γ	2241762	2241761	EDA 200.2	50	T	50	T	02/16/22	P.C.I
	2241762	2241761	EPA 200.2	50	mL	50	mL	03/16/22	RG1

^{*}Analytical Methods:

-1-

INORGANICS ANALYSIS DATA PACKAGE

SDG No: 572838 CONTRACT: DMNN00102 METHOD TYPE: EPA

SAMPLE ID: 572838004 BASIS: As Received DATE COLLECTED 09-MAR-22

CLIENT ID: MW-LF-04-2022Q1 LEVEL: Low DATE RECEIVED 10-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	9.69	ug/L	J	4.00	15.0	15.0	1	MS	PRB	03/18/22 20:14	220318-1	2241762
7440-70-2	Calcium	1860	ug/L		30.0	100	100	1	MS	PRB	03/18/22 20:14	220318-1	2241762

Prep Information:

Analytical Batch	Prep Prep Batch Method		Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2241762	2241761	EPA 200.2	50	mL	50	mL	03/16/22	RG1

^{*}Analytical Methods:

-1-

INORGANICS ANALYSIS DATA PACKAGE

SDG No: 572838 CONTRACT: DMNN00102 METHOD TYPE: EPA

SAMPLE ID: 572838005 BASIS: As Received DATE COLLECTED 09-MAR-22

CLIENT ID: MW-LF-05-2022Q1 LEVEL: Low DATE RECEIVED 10-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	4.00	15.0	15.0	1	MS	PRB	03/18/22 20:17	220318-1	2241762
7440-70-2	Calcium	2840	ug/L		30.0	100	100	1	MS	PRB	03/18/22 20:17	220318-1	2241762

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
								I
2241762	2241761	EPA 200.2	50	mL	50	mL	03/16/22	RG1

^{*}Analytical Methods:

-1-

INORGANICS ANALYSIS DATA PACKAGE

SDG No: 572838 CONTRACT: DMNN00102 METHOD TYPE: EPA

SAMPLE ID: 572838006 BASIS: As Received DATE COLLECTED 09-MAR-22

CLIENT ID: FBLK-COP-LF-22101 LEVEL: Low DATE RECEIVED 10-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	4.00	ug/L	U	4.00	15.0	15.0	1	MS	PRB	03/18/22 20:27	220318-1	2241762
7440-70-2	Calcium	30.0	ug/L	U	30.0	100	100	1	MS	PRB	03/18/22 20:27	220318-1	2241762

Prep Information:

	Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
[2241762	2241761	EPA 200.2	50	mL	50	mL	03/16/22	RG1
	2241/62	2241/61	EPA 200.2	50	mL	50	mL	03/16/22	KGI

^{*}Analytical Methods:

-1-

INORGANICS ANALYSIS DATA PACKAGE

SDG No: 572838 CONTRACT: DMNN00102 METHOD TYPE: EPA

SAMPLE ID: 572838007 BASIS: As Received DATE COLLECTED 09-MAR-22

CLIENT ID: MW-LF-06-2022Q1 LEVEL: Low DATE RECEIVED 10-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	9.02	ug/L	J	4.00	15.0	15.0	1	MS	PRB	03/18/22 20:31	220318-1	2241762
7440-70-2	Calcium	2150	ug/L		30.0	100	100	1	MS	PRB	03/18/22 20:31	220318-1	2241762

Prep Information:

F								
Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2241762	2241761	EPA 200.2	50	mL	50	mL	03/16/22	RG1

^{*}Analytical Methods:

-1-

INORGANICS ANALYSIS DATA PACKAGE

SDG No: 572838 CONTRACT: DMNN00102 METHOD TYPE: EPA

SAMPLE ID: 572838008 BASIS: As Received DATE COLLECTED 09-MAR-22

CLIENT ID: DU-COP-LF-22101 LEVEL: Low DATE RECEIVED 10-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	10.6	ug/L	J	4.00	15.0	15.0	1	MS	PRB	03/18/22 20:34	220318-1	2241762
7440-70-2	Calcium	2790	ug/L		30.0	100	100	1	MS	PRB	03/18/22 20:34	220318-1	2241762

Prep Information:

	Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
Γ	2241762	2241761	EDA 200.2	50	T	50	T	02/16/22	P.C.I
	2241762	2241761	EPA 200.2	50	mL	50	mL	03/16/22	RG1

^{*}Analytical Methods:

-1-

INORGANICS ANALYSIS DATA PACKAGE

SDG No: 572838 CONTRACT: DMNN00102 METHOD TYPE: EPA

SAMPLE ID: 572838009 BASIS: As Received DATE COLLECTED 09-MAR-22

CLIENT ID: AS-LF-01-2022Q1 LEVEL: Low DATE RECEIVED 10-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	12.3	ug/L	J	4.00	15.0	15.0	1	MS	PRB	03/18/22 20:37	220318-1	2241762
7440-70-2	Calcium	4010	ug/L		30.0	100	100	1	MS	PRB	03/18/22 20:37	220318-1	2241762

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
								I
2241762	2241761	EPA 200.2	50	mL	50	mL	03/16/22	RG1

^{*}Analytical Methods:

-1-

INORGANICS ANALYSIS DATA PACKAGE

SDG No: 572838 CONTRACT: DMNN00102 METHOD TYPE: EPA

SAMPLE ID: 572838010 BASIS: As Received DATE COLLECTED 09-MAR-22

CLIENT ID: AS-LF-02-2022Q1 LEVEL: Low DATE RECEIVED 10-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	16.3	ug/L		4.00	15.0	15.0	1	MS	PRB	03/18/22 20:57	220318-1	2241762
7440-70-2	Calcium	4540	ug/L		30.0	100	100	1	MS	PRB	03/18/22 20:57	220318-1	2241762

Prep Information:

Analytical Prep Batch Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2241762 2241761	EPA 200.2	50	mL	50	mL	03/16/22	RG1

^{*}Analytical Methods:

-1-

INORGANICS ANALYSIS DATA PACKAGE

SDG No: 572838 CONTRACT: DMNN00102 METHOD TYPE: EPA

SAMPLE ID: 572838011 BASIS: As Received DATE COLLECTED 09-MAR-22

CLIENT ID: MW-40-2022Q1 LEVEL: Low DATE RECEIVED 10-MAR-22

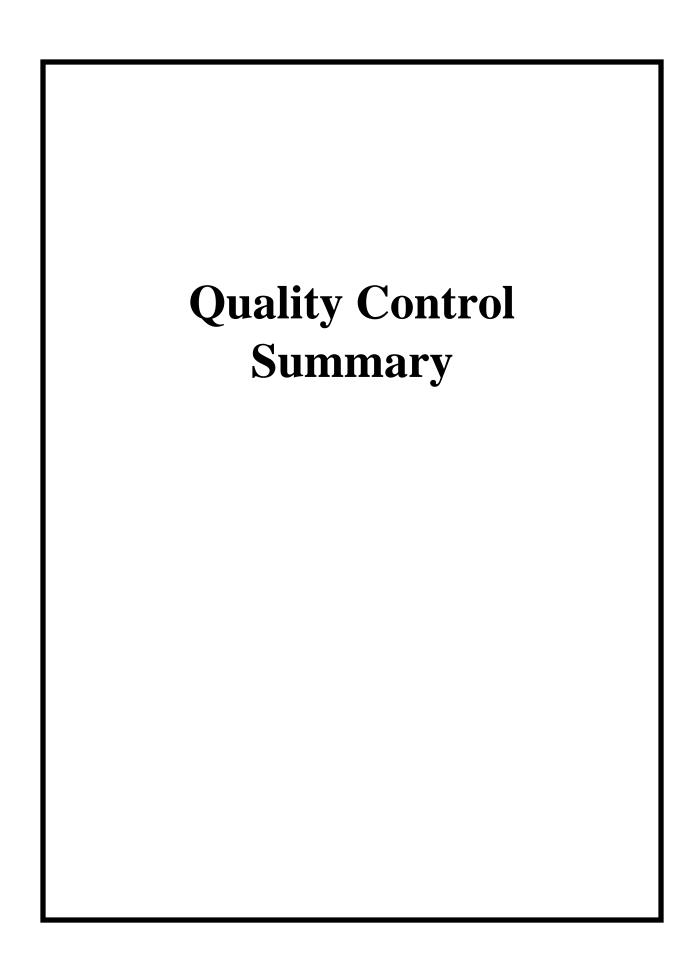
MATRIX: GW %SOLIDS: 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7440-42-8	Boron	37.7	ug/L		4.00	15.0	15.0	1	MS	PRB	03/18/22 21:00	220318-1	2241762
7440-70-2	Calcium	31700	ug/L		30.0	100	100	1	MS	PRB	03/18/22 21:00	220318-1	2241762

Prep Information:

		Batch	Method		Units	Final wt./vol.	Units	Date	Analyst
2241762 2241761 EPA 200.2 50 mL 50 mL 03/16/	2241762	2241761	EPA 200.2	50	mL	50	mL	03/16/22	RG1

^{*}Analytical Methods:



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

SDG No: 572838

Contract: DMNN00102 Lab Code: GEL

Instrument ID: ICPMS15

Sample ID	Analyte	Result	<u>Units</u>	True Value	<u>Units</u>	<u>%</u> Recovery	Acceptance Window (%R)	<u>M*</u>	Analysis Date/Time	<u>Run</u> Number
ICV01										
	Boron	97.3	ug/L	100	ug/L	97.3	90.0 - 110.0	MS	18-MAR-22 19:25	220318-1
	Calcium	4960	ug/L	5000	ug/L	99.2	90.0 - 110.0	MS	18-MAR-22 19:25	220318-1
CCV01										
	Boron	101	ug/L	100	ug/L	100.5	90.0 - 110.0	MS	18-MAR-22 19:41	220318-1
	Calcium	5000	ug/L	5000	ug/L	100.1	90.0 - 110.0	MS	18-MAR-22 19:41	220318-1
CCV02										
	Boron	98.9	ug/L	100	ug/L	98.9	90.0 - 110.0	MS	18-MAR-22 19:51	220318-1
	Calcium	4920	ug/L	5000	ug/L	98.3	90.0 - 110.0	MS	18-MAR-22 19:51	220318-1
CCV03										
	Boron	96.8	ug/L	100	ug/L	96.8	90.0 - 110.0	MS	18-MAR-22 20:21	220318-1
	Calcium	5010	ug/L	5000	ug/L	100.1	90.0 - 110.0	MS	18-MAR-22 20:21	220318-1
CCV04			C		C					
CC 104	Boron	98.6	ug/L	100	ug/L	98.6	90.0 - 110.0	MS	18-MAR-22 20:50	220318-1
	Calcium	4900	ug/L	5000	ug/L	98	90.0 - 110.0	MS	18-MAR-22 20:50	220318-1
CCV05	Curerum	.,,,,	u _B , 2	2000	46/2	,,	y 0.10 110.10	1.10	10 1/11/11 22 20.00	220010 1
CCV03	Boron	97.2	ug/L	100	ug/L	97.2	90.0 - 110.0	MS	18-MAR-22 21:23	220318-1
			_							
	Calcium	4860	ug/L	5000	ug/L	97.2	90.0 - 110.0	MS	18-MAR-22 21:23	220318-1

^{*}Analytical Methods:

METALS -2bCRDL Standard for ICP & ICPMS

SDG No: 572838

Contract: DMNN00102 Lab Code: GEL

Instrument ID: ICPMS15

Sample ID	<u>Analyte</u>	Result	<u>Units</u>	True Value	<u>Units</u>	<u>%</u> Recovery	Advisory Limits (%R)	<u>M*</u>	Analysis Date/Time	<u>Run</u> <u>Number</u>
CRDL01										
	Boron	14.6	ug/L	15	ug/L	97.6	70.0 - 130.0	MS	18-MAR-22 19:31	220318-1
	Calcium	220	ug/L	200	ug/L	110.1	70.0 – 130.0	MS	18-MAR-22 19:31	220318-1
CRDL02										
	Boron	13.8	ug/L	15	ug/L	91.8	70.0 - 130.0	MS	18-MAR-22 21:13	220318-1
	Calcium	216	ug/L	200	ug/L	107.8	70.0 - 130.0	MS	18-MAR-22 21:13	220318-1

*Analytical Methods:

Metals
-3aInitial and Continuing Calibration Blank Summary

SDG No.: 572838

Contract: DMNN00102

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										
	Boron	4.0	+/-7.5	U	4.0	15.0	LIQ	MS	18-MAR-22 19:28	220318-1
	Calcium	30.0	+/-50	U	30.0	100	LIQ	MS	18-MAR-22 19:28	220318-1
CCB01										
00201	Boron	4.0	+/-7.5	U	4.0	15.0	LIQ	MS	18-MAR-22 19:45	220318-1
	Calcium	30.0	+/-50	U	30.0	100	LIQ	MS	18-MAR-22 19:45	220318-1
CCB02										
ССВ02	Boron	4.0	+/-7.5	U	4.0	15.0	LIQ	MS	18-MAR-22 19:54	220318-1
	Calcium	30.0	+/-50	U	30.0	100	LIQ	MS	18-MAR-22 19:54	220318-1
CCD02										
CCB03	Boron	4.0	+/-7.5	U	4.0	15.0	LIQ	MS	18-MAR-22 20:24	220318-1
	Calcium	30.0	+/-50	U	30.0	100	LIQ	MS	18-MAR-22 20:24	220318-1
CCB04	Boron	4.0	+/-7.5	U	4.0	15.0	LIQ	MS	18-MAR-22 20:54	220318-1
	Calcium	30.0	+/-50	U	30.0	100	LIO	MS	18-MAR-22 20:54	220318-1
	Culcium	30.0	17 30	O	30.0	100	LiQ	1115	10 MIR 22 20.54	220310 1
CCB05	Boron	4.0	+/-7.5	U	4.0	15.0	LIQ	мс	18-MAR-22 21:26	220318-1
	Calcium	30.0	+/-50	U	30.0	100	LIQ	MS	18-MAR-22 21:26	220318-1

*Analytical Methods:

METALS -3bPREPARATION BLANK SUMMARY

SDG NO. 572838

Contract: DMNN00102

Matrix: GW

Sample ID	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	Acceptance Window	Conc Qual	<u>M*</u>	MDL	RDL
1205042339		4.00	~		••	3.60	4.00	450
	Boron	4.00	ug/L	+/-7.5	U	MS	4.00	15.0
	Calcium	30.0	ug/L	+/-50	U	MS	30.0	100

^{*}Analytical Methods:

-4-

Interference Check Sample

SDG No: 572838

Contract: DMNN00102 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	1.87	ug/L					18-MAR-22 19:35	220318-1
	Calcium	95100	ug/L	100000	ug/L	95.1	80.0 - 120.0	18-MAR-22 19:35	220318-1
ICSAB01									
	Boron	19.8	ug/L	20	ug/L	98.9	80.0 - 120.0	18-MAR-22 19:38	220318-1
	Calcium	95600	ug/L	100000	ug/L	95.6	80.0 - 120.0	18-MAR-22 19:38	220318-1
ICSA02									
	Boron	1.74	ug/L					18-MAR-22 21:16	220318-1
	Calcium	92400	ug/L	100000	ug/L	92.4	80.0 - 120.0	18-MAR-22 21:16	220318-1
ICSAB02									
	Boron	19.2	ug/L	20	ug/L	95.9	80.0 - 120.0	18-MAR-22 21:20	220318-1
	Calcium	93200	ug/L	100000	ug/L	93.2	80.0 - 120.0	18-MAR-22 21:20	220318-1

METALS -5a-

Matrix Spike Summary

SDG NO. 572838

Client ID

Level:

AS-LF-01-2022Q1S

Contract:

DMNN00102

Low

Matrix:

GROUND WATER

~ ---

% Solids:

Sample ID: 572838009

Spike ID: 1205042342

<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	113		12.3	В	100	101	MS
Calcium	ug/L	75–125	6090		4010		2000	104	MS

^{*}Analytical Methods:

METALS -5a-

Matrix Spike Summary

SDG NO. 572838

Client ID: MW-40-2022Q1S

Contract:

DMNN00102

Level: Low

Matrix:

GROUND WATER

% Solids:

Sample ID:

572838011

Spike ID: 1205042345

<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	<u>Qual</u>	<u>M*</u>
Calcium	ug/L		34200		31700		2000	123	N/A	MS
Boron	ug/L	75–125	135		37.7		100	97.4		MS

^{*}Analytical Methods:

Metals -6-**Duplicate Sample Summary**

572838 SDG No.:

Lab Code: GEL

Contract:

DMNN00102

Client ID: AS-LF-01-2022Q1D

Matrix:

GROUND WATER

Level:

Low

Sample ID: 572838009

Duplicate ID: 1205042341

Percent Solids for Dup: N/A

Analyte	Units	Acceptance Limit	Sample Result C	Duplicate Result C	RPD	Qual	M*
Boron	ug/L	+/-30	12.3 B	11.8 B	3.79		MS
Calcium	ug/L	+/-20%	4010	3940	1.72		MS

^{*}Analytical Methods:

Metals -6-**Duplicate Sample Summary**

572838 SDG No.:

Lab Code: GEL

Contract:

DMNN00102

Client ID: MW-40-2022Q1D

Matrix:

GROUND WATER

Level:

Low

Sample ID: 572838011

Duplicate ID: 1205042344

Percent Solids for Dup: N/A

Analyte	Units	Acceptance Limit	Sample Result C		Duplicate Result	С	RPD	Qual	M*
Boron	ug/L	+/-30	37.7		38.8		2.68		MS
Calcium	ug/L	+/-20%	31700		32100		1.17		MS

^{*}Analytical Methods:

METALS

-7-

Laboratory Control Sample Summary

SDG NO. 572838

Contract: DMNN00102

Aqueous LCS Source: Environmental Express

Solid LCS Source:

Sample ID 1205042340	<u>Analyte</u>	<u>Units</u>	<u>True</u> <u>Value</u>	<u>Result</u>	<u>C</u>	% Recovery	Acceptance Limit	<u>M*</u>
	Calcium Boron	ug/L ug/L	2000 100	2150 101		108 101	85–115 85–115	MS MS

^{*}Analytical Methods:

METALS -9Serial Dilution Sample Summary

SDG NO. 572838 **Client ID** AS-LF-01-2022Q1L

Contract: DMNN00102

Matrix: LIQUID Level: Low

Sample ID: 572838009 **Serial Dilution ID:** 1205042343

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	12.3	В	20	U	22.378			MS
Calcium	4010		3750		6.413			MS

^{*}Analytical Methods:

METALS -9Serial Dilution Sample Summary

SDG NO. 572838 **Client ID** MW-40-2022Q1L

Contract: DMNN00102

Matrix: LIQUID Level: Low

Sample ID: 572838011 **Serial Dilution ID:** 1205042346

Analyte	Initial C Yalue C ug/L	Serial <u>Value</u> ug/L	<u>C</u>	<u>%</u> Difference	Qual	Acceptance Limit	<u>M*</u>
Boron	37.7	41.9	В	11.054			MS
Calcium	31700	31700		.187		10	MS

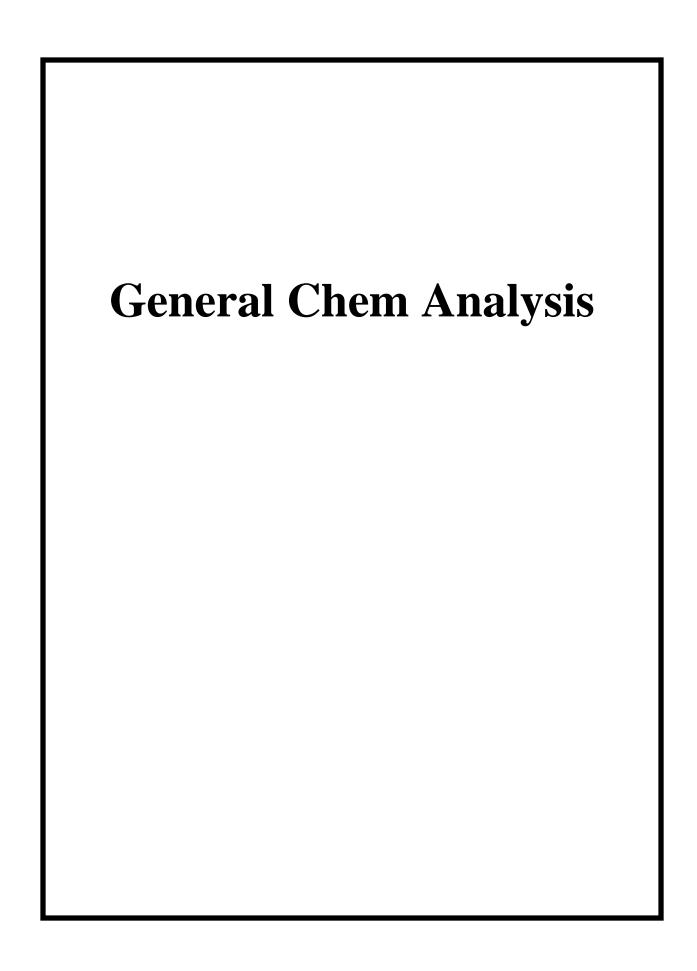
^{*}Analytical Methods:

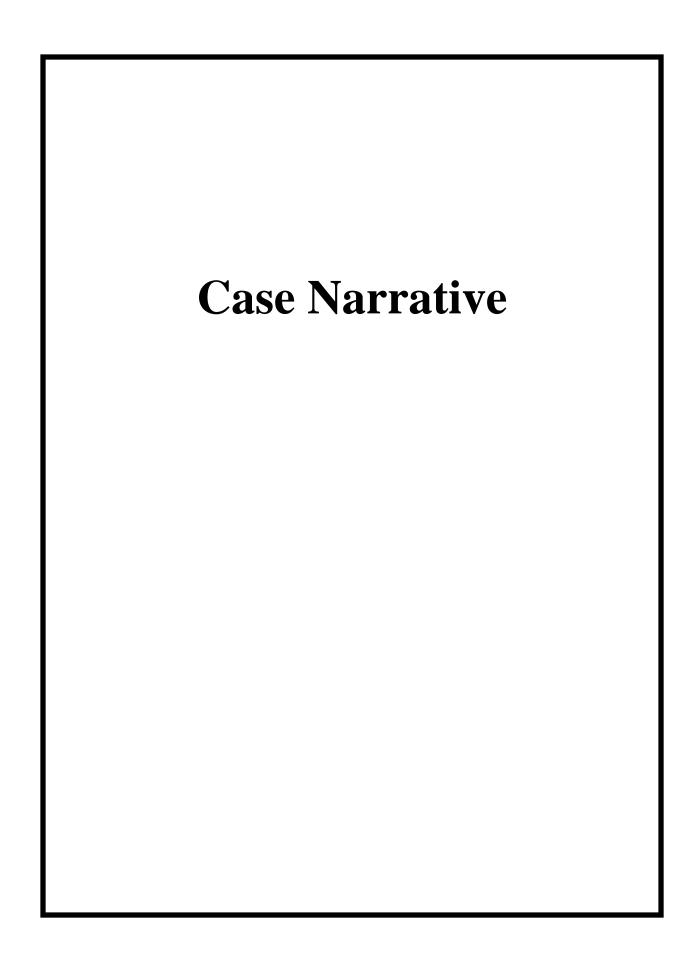
METALS -13SAMPLE PREPARATION SUMMARY

SDG No: 572838 Method Type MS

Contract: DMNN00102 Lab Code: GEL

Sample ID Batch Numbe	<u>Client ID</u> er 2241761	<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
1205042339	MB for batch 2241761	MB	G	16-MAR-22	50mL	50mL
1205042339	LCS for batch 2241761	LCS	G	16-MAR-22	50mL	50mL
1205042342	AS-LF-01-2022Q1S	MS	G	16-MAR-22	50mL	50mL
1205042345	MW-40-2022Q1S	MS	G	16-MAR-22	50mL	50mL
1205042341	AS-LF-01-2022Q1D	DUP	G	16-MAR-22	50mL	50mL
1205042344	MW-40-2022Q1D	DUP	G	16-MAR-22	50mL	50mL
572838001	MW-LF-01-2022Q1	SAMPLE	G	16-MAR-22	50mL	50mL
572838002	MW-LF-02-2022Q1	SAMPLE	G	16-MAR-22	50mL	50mL
572838003	MW-LF-03-2022Q1	SAMPLE	G	16-MAR-22	50mL	50mL
572838004	MW-LF-04-2022Q1	SAMPLE	G	16-MAR-22	50mL	50mL
572838005	MW-LF-05-2022Q1	SAMPLE	G	16-MAR-22	50mL	50mL
572838006	FBLK-COP-LF-22101	SAMPLE	G	16-MAR-22	50mL	50mL
572838007	MW-LF-06-2022Q1	SAMPLE	G	16-MAR-22	50mL	50mL
572838008	DU-COP-LF-22101	SAMPLE	G	16-MAR-22	50mL	50mL
572838009	AS-LF-01-2022Q1	SAMPLE	G	16-MAR-22	50mL	50mL
572838010	AS-LF-02-2022Q1	SAMPLE	G	16-MAR-22	50mL	50mL
572838011	MW-40-2022Q1	SAMPLE	G	16-MAR-22	50mL	50mL





General Chemistry Technical Case Narrative Dominion Energy SDG #: 572838

Product: Ion Chromatography Analytical Method: EPA 300.0

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

Analytical Batch: 2240214

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

GEL Sample ID#	Client Sample Identification
572838001	MW-LF-01-2022Q1
572838002	MW-LF-02-2022Q1
572838003	MW-LF-03-2022Q1
572838004	MW-LF-04-2022Q1
572838005	MW-LF-05-2022Q1
572838006	FBLK-COP-LF-22101
572838007	MW-LF-06-2022Q1
572838008	DU-COP-LF-22101
572838009	AS-LF-01-2022Q1
572838010	AS-LF-02-2022Q1
572838011	MW-40-2022Q1
1205039461	Method Blank (MB)
1205039462	Laboratory Control Sample (LCS)
1205039463	572838009(AS-LF-01-2022Q1) Sample Duplicate (DUP)
1205039464	572838009(AS-LF-01-2022Q1) Post Spike (PS)
1205039465	572838011(MW-40-2022Q1) Sample Duplicate (DUP)
1205039466	572838011(MW-40-2022Q1) 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 1205039465 (MW-40-2022Q1DUP), 1205039466 (MW-40-2022Q1PS), 572838002 (MW-LF-02-2022Q1), 572838005 (MW-LF-05-2022Q1), 572838008 (DU-COP-LF-22101), 572838010 (AS-LF-02-2022Q1) and 572838011 (MW-40-2022Q1) 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.

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Analyte	572838								
Analyte	002	005	008	010	011				
Chloride	10X	2X	2X	2X	20X				
Sulfate	1X	1X	1X	1X	20X				

Miscellaneous Information

Manual Integrations

Sample 572838009 (AS-LF-01-2022Q1) 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.

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

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

Analytical Batch: 2241802

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

GEL Sample ID#	Client Sample Identification
572838001	MW-LF-01-2022Q1
572838002	MW-LF-02-2022Q1
572838003	MW-LF-03-2022Q1
572838004	MW-LF-04-2022Q1
572838005	MW-LF-05-2022Q1
572838006	FBLK-COP-LF-22101
572838007	MW-LF-06-2022Q1
572838008	DU-COP-LF-22101
572838009	AS-LF-01-2022Q1
572838010	AS-LF-02-2022Q1
572838011	MW-40-2022Q1
1205042415	Method Blank (MB)
1205042416	Laboratory Control Sample (LCS)
1205042417	572735001(NonSDG) Sample Duplicate (DUP)
1205042418	572742009(NonSDG) Sample Duplicate (DUP)
1205042419	572752005(NonSDG) Sample Duplicate (DUP)
1205042420	572838009(AS-LF-01-2022Q1) Sample Duplicate (DUP)
1205042421	572948002(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	1205042420 (AS-LF-01-2022Q1DUP)	abs(47.1 - 24.3)* (+/-14.3 mg/L)				

Miscellaneous Information

Additional Comments

All method-driven specifications are followed for these analyses except where client-specific SOW requirements are

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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: 572838 GEL Work Order: 572838

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

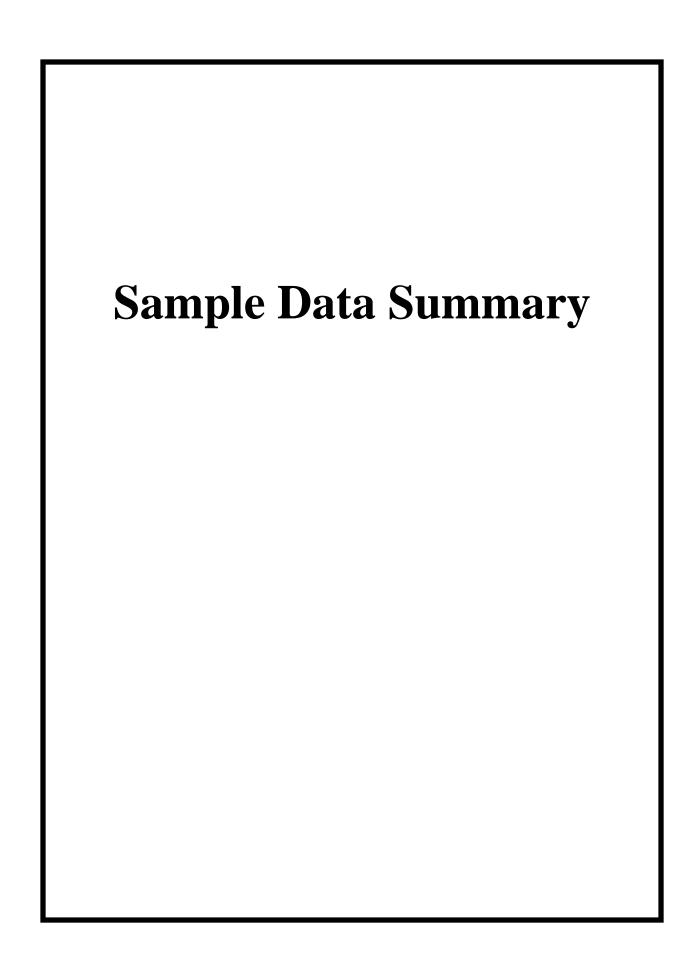
GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

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

Signature: Küsten Muyell Name: Kristen Mizzell

Date: 24 MAR 2022 Title: Group 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: March 31, 2022

DMNN00102

DMNN001

Company: Dominion Energy Services, Inc.

Address: 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks

Project: CCR Groundwater Monitoring - Level 3 Package

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

Sample ID: 572838001

Matrix: GW

Collect Date: 09-MAR-22 14:46 Receive Date: 10-MAR-22 Collector: Client

Parameter	Oualifier	Result	DL	RL	Units	PF	DF Analyst	t Date	Time Batch	Method
	Qualifier	Result	DL	KL	Cinto		DI / marys	Dute	Time Baten	Wichiou
Ion Chromatography										
EPA 300.0 Anions Li	iquid "As Recei	ved"								
Chloride		8.90	0.0670	0.200	mg/L		1 JLD1 (03/11/22	1051 2240214	1
Fluoride	U	ND	0.0330	0.100	mg/L		1			
Sulfate	J	0.312	0.133	0.400	mg/L		1			
Solids Analysis										
SM2540C Dissolved	Solids "As Rec	eived"								
Total Dissolved Solids	J	10.0	3.40	14.3	mg/L		KLP1 (03/16/22	1545 2241802	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:

Analyst Comments

Report Date: March 31, 2022

DMNN00102

DMNN001

Company: Dominion Energy Services, Inc.

Address: 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks

Project: CCR Groundwater Monitoring - Level 3 Package

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

Sample ID: 572838002

Matrix: GW

Collect Date: 09-MAR-22 15:57
Receive Date: 10-MAR-22
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Anal	yst Date	Time Batch	Method
Ion Chromatography	,									
EPA 300.0 Anions L	iquid "As Recei	ved"								
Fluoride	_	0.171	0.0330	0.100	mg/L		1 JLD1	03/11/22	1121 2240214	1
Sulfate		6.26	0.133	0.400	mg/L		1			
Chloride		39.9	0.670	2.00	mg/L		10 JLD1	03/11/22	2019 2240214	2
Solids Analysis										
SM2540C Dissolved	Solids "As Rec	eived"								
Total Dissolved Solids		77.1	3.40	14.3	mg/L		KLP1	03/16/22	1545 2241802	3
The following Analytical Methods were performed:										

Method	Description	
1	EPA 300.0	
2	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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Certificate of Analysis

Project:

Client ID:

Report Date: March 31, 2022

DMNN00102

DMNN001

Company: Dominion Energy Services, Inc.

Address: 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks

Project: CCR Groundwater Monitoring - Level 3 Package

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

Sample ID: 572838003

Matrix: GW

Collect Date: 09-MAR-22 14:57
Receive Date: 10-MAR-22
Collector: Client

	0 1:0	D 1	DI	DI	TT *,	DE	DE A 1 (D	T' D 1	3.6.4.1
Parameter	Qualifier	Result	DL	RL	Units	PF	DF Analyst Da	e Time Batch	Method
Ion Chromatography									
EPA 300.0 Anions Li	iquid "As Recei	ved"							
Chloride	_	3.57	0.0670	0.200	mg/L		1 JLD1 03/11	22 1151 2240214	1
Fluoride	U	ND	0.0330	0.100	mg/L		1		
Sulfate		0.570	0.133	0.400	mg/L		1		
Solids Analysis									
SM2540C Dissolved	Solids "As Rec	eived"							
Total Dissolved Solids	J	8.57	3.40	14.3	mg/L		KLP1 03/16	22 1545 2241802	2 2
The following Analy	tical Methods v	vere performed:							
Method Description					1	Analy	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:

Report Date: March 31, 2022

DMNN00102

DMNN001

Dominion Energy Services, Inc. Company:

Address: 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks

Project: CCR Groundwater Monitoring - Level 3 Package

Client Sample ID: MW-LF-04-2022Q1

Sample ID: 572838004

Matrix: GW

Collect Date: 09-MAR-22 13:52 Receive Date: 10-MAR-22 Client Collector:

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	•	4.66	0.0670	0.200	mg/L		1 JLD1 03/11/2	22 1221 2240214	1
Fluoride	U	ND	0.0330	0.100	mg/L		1		
Sulfate		0.620	0.133	0.400	mg/L		1		
Solids Analysis									
SM2540C Dissolved	Solids "As Rec	eived"							
Total Dissolved Solids		17.1	3.40	14.3	mg/L		KLP1 03/16/2	22 1545 2241802	2 2
The following Analy	tical Methods v	vere 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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Certificate of Analysis

Project:

Client ID:

Analyst Comments

Report Date: March 31, 2022

DMNN00102

DMNN001

Company: Dominion Energy Services, Inc.

Address: 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks

Project: CCR Groundwater Monitoring - Level 3 Package

Client Sample ID: MW-LF-05-2022Q1

Sample ID: 572838005

Matrix: GW

Collect Date: 09-MAR-22 12:25
Receive Date: 10-MAR-22
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Anal	yst 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 JLD1	03/11/22	1251 2240214	1
Sulfate		0.583	0.133	0.400	mg/L		1			
Chloride		9.14	0.134	0.400	mg/L		2 JLD1	03/11/22	2049 2240214	1 2
Solids Analysis										
SM2540C Dissolved	Solids "As Rec	eived"								
Total Dissolved Solids		32.9	3.40	14.3	mg/L		KLP1	03/16/22	1545 2241802	2 3
The following Analytical Methods were performed:										

Method	Description	
1	EPA 300.0	
2	EPA 300.0	

2 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: March 31, 2022

DMNN00102

DMNN001

Dominion Energy Services, Inc. Company:

Address: 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks

Project: CCR Groundwater Monitoring - Level 3 Package

Client Sample ID: FBLK-COP-LF-22101

Sample ID: 572838006

Matrix: AQ

Collect Date: 09-MAR-22 14:38 Receive Date: 10-MAR-22 Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Anal	yst Date	Time Batch	Method
Ion Chromatography										
EPA 300.0 Anions Lic	quid "As Recei	ved"								
Chloride	U	ND	0.0670	0.200	mg/L		1 JLD1	03/11/22	1320 2240214	1
Fluoride	U	ND	0.0330	0.100	mg/L		1			
Sulfate	U	ND	0.133	0.400	mg/L		1			
Solids Analysis										
SM2540C Dissolved S	Solids "As Rec	eived"								
Total Dissolved Solids	U	ND	3.40	14.3	mg/L		KLP1	03/16/22	1545 2241802	2
The following Analyt	ical Methods v	vere performed:								
Method	Description	ļ	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: March 31, 2022

DMNN00102

DMNN001

Dominion Energy Services, Inc. Company:

Address: 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks

Project: CCR Groundwater Monitoring - Level 3 Package

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

Sample ID: 572838007

Matrix: GW

Collect Date: 09-MAR-22 13:36 Receive Date: 10-MAR-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	•	8.12	0.0670	0.200	mg/L		1 JLD1 03/11/2	22 1350 2240214	. 1
Fluoride	U	ND	0.0330	0.100	mg/L		1		
Sulfate		0.638	0.133	0.400	mg/L		1		
Solids Analysis									
SM2540C Dissolved	Solids "As Rec	eived"							
Total Dissolved Solids		30.0	3.40	14.3	mg/L		KLP1 03/16/2	22 1545 2241802	2
The following Analy	tical Methods v	vere performed:							
Method	Description	<u> </u>	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: March 31, 2022

DMNN00102

DMNN001

Company: Dominion Energy Services, Inc.

Address: 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks

Project: CCR Groundwater Monitoring - Level 3 Package

Client Sample ID: DU-COP-LF-22101

Sample ID: 572838008

Matrix: GW

Collect Date: 09-MAR-22 12:00
Receive Date: 10-MAR-22
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Analy	yst Date	Time Batch	Method
Ion Chromatography										
EPA 300.0 Anions L	iquid "As Recei	ved"								
Fluoride	U	ND	0.0330	0.100	mg/L		1 JLD1	03/11/22	1420 2240214	1
Sulfate		0.575	0.133	0.400	mg/L		1			
Chloride		9.26	0.134	0.400	mg/L		2 JLD1	03/11/22	2248 2240214	2
Solids Analysis										
SM2540C Dissolved	Solids "As Rec	eived"								
Total Dissolved Solids		42.9	3.40	14.3	mg/L		KLP1	03/16/22	1545 2241802	3
The following Analy	rtical Methods v	vere performed:								

Method	Description	Analyst Comments
1	EPA 300.0	•
2	EDA 200 0	

2 EPA 500.0 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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2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Project:

Client ID:

Report Date: March 31, 2022

DMNN00102

DMNN001

Company: Dominion Energy Services, Inc.

Address: 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks

Project: CCR Groundwater Monitoring - Level 3 Package

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

Sample ID: 572838009

Matrix: GW

Collect Date: 09-MAR-22 13:40
Receive Date: 10-MAR-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	ived"								
Chloride	•	5.27	0.0670	0.200	mg/L		1 JLD1	03/11/22	1620 2240214	1
Fluoride		0.113	0.0330	0.100	mg/L		1			
Sulfate		15.1	0.133	0.400	mg/L		1			
Solids Analysis										
SM2540C Dissolved	Solids "As Rec	eived"								
Total Dissolved Solids		24.3	3.40	14.3	mg/L		KLP1	03/16/22	1545 2241802	2
The following Analy	tical Methods v	were performed:								
Method Description						Analys	st Comment	S		

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:

Analyst Comments

Report Date: March 31, 2022

DMNN00102

DMNN001

Company: Dominion Energy Services, Inc.

Address: 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks

Project: CCR Groundwater Monitoring - Level 3 Package

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

Sample ID: 572838010

Matrix: GW

Collect Date: 09-MAR-22 14:45
Receive Date: 10-MAR-22
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Analy	yst Date	Time Batch	Method
Ion Chromatography	,									
EPA 300.0 Anions L	iquid "As Recei	ved"								
Fluoride	J	0.0630	0.0330	0.100	mg/L		1 JLD1	03/11/22	1749 2240214	1
Sulfate		10.1	0.133	0.400	mg/L		1			
Chloride		13.0	0.134	0.400	mg/L		2 JLD1	03/11/22	2318 2240214	2
Solids Analysis										
SM2540C Dissolved	Solids "As Rec	eived"								
Total Dissolved Solids		42.9	3.40	14.3	mg/L		KLP1	03/16/22	1545 2241802	3
The following Analy	ytical 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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2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: March 31, 2022

DMNN00102

DMNN001

Company: Dominion Energy Services, Inc.

Address: 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks

Project: CCR Groundwater Monitoring - Level 3 Package

Client Sample ID: MW-40-2022Q1 Sample ID: 572838011

Matrix: GW

Collect Date: 09-MAR-22 15:40 Receive Date: 10-MAR-22 Collector: Client

R-22 15:40 R-22

Project:

Client ID:

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Anal	yst Date	Time Batch	Method
Ion Chromatography	7									
EPA 300.0 Anions I	Liquid "As Recei	ved"								
Fluoride		0.891	0.0330	0.100	mg/L		1 JLD1	03/11/22	1819 2240214	1
Chloride		44.5	1.34	4.00	mg/L		20 JLD1	03/11/22	2348 2240214	2
Sulfate		160	2.66	8.00	mg/L		20			
Solids Analysis										
SM2540C Dissolved	d Solids "As Rec	eived"								
Total Dissolved Solids		301	3.40	14.3	mg/L		KLP1	03/16/22	1545 2241802	3
The following Anal	ytical Methods v	vere performed:								

MethodDescriptionAnalyst Comments1EPA 300.0

2 EPA 300.0 3 SM 2540C

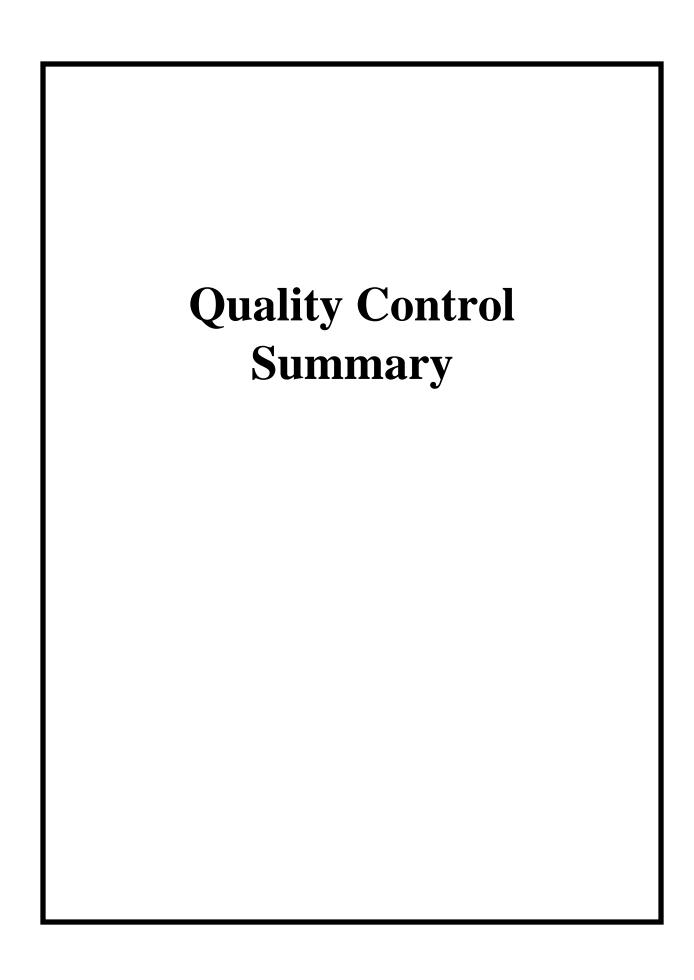
Notes:

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

QC Summary

Report Date: March 31, 2022

Page 1 of 3

Dominion Energy Services, Inc.

120 Tredegar Street Richmond, Virginia

Contact: Kell

Kelly Hicks

Workorder:	572838	
Parmname		

Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range Anlst	Date Time
Ion Chromatography Batch 2240214								
QC1205039463 572838009 Chloride	DUP	5.27	5.21	mg/L	1.26		(0%-20%) JLD1	03/11/22 16:50
Fluoride		0.113	0.102	mg/L	10.7		(+/2)	
Sulfate		15.1	15.0	mg/L	0.625		(0%-20%)	
QC1205039465 572838011 Chloride	DUP	44.5	44.5	mg/L	0.0675		(0%-20%)	03/12/22 00:18
Fluoride		0.891	0.882	mg/L	0.993		(0%-20%)	03/11/22 18:49
Sulfate		160	160	mg/L	0.0751		(0%-20%)	03/12/22 00:18
QC1205039462 LCS Chloride	5.00		4.73	mg/L		94.5	(90%-110%)	03/11/22 10:22
Fluoride	2.50		2.29	mg/L		91.4	(90%-110%)	
Sulfate	10.0		9.68	mg/L		96.8	(90%-110%)	
QC1205039461 MB Chloride		U	ND	mg/L				03/11/22 09:52
Fluoride		U	ND	mg/L				
Sulfate		U	ND	mg/L				
QC1205039464 572838009 Chloride	PS 5.00	5.27	10.7	mg/L		108	(90%-110%)	03/11/22 17:20

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

QC Summary

Workorder: 572838 Page 2 of 3 **Parmname** NOM Sample Qual \mathbf{QC} Units RPD% REC% Range Anlst Date Time Ion Chromatography 2240214 Batch (90%-110%) JLD1 03/11/22 17:20 Fluoride 2.50 0.113 2.54 mg/L 97.1 Sulfate 10.0 15.1 24.9 98 (90%-110%) mg/L QC1205039466 572838011 PS Chloride 2.22 7.14 03/12/22 00:48 5.00 98.3 (90%-110%) mg/L Fluoride 2.50 0.891 3.44 mg/L 102 (90%-110%) 03/11/22 19:19 Sulfate 10.0 7.98 17.4 93.9 (90%-110%) 03/12/22 00:48 mg/L **Solids Analysis** 2241802 QC1205042417 572735001 DUP 451 **Total Dissolved Solids** 451 mg/L 0 (0%-5%) KLP1 03/16/22 15:45 QC1205042418 572742009 DUP 297 299 03/16/22 15:45 **Total Dissolved Solids** mg/L 0.48 (0%-5%)QC1205042419 572752005 DUP 226 221 Total Dissolved Solids mg/L 1.92 (0%-5%)03/16/22 15:45 QC1205042420 572838009 DUP **Total Dissolved Solids** 24.3 47.1 64 ^ (+/-28.6)03/16/22 15:45 mg/L QC1205042421 572948002 DUP 140 136 03/16/22 15:45 **Total Dissolved Solids** mg/L 3.11 (0%-5%)QC1205042416 LCS 300 286 Total Dissolved Solids 95.2 (95%-105%) 03/16/22 15:45 mg/L OC1205042415 Total Dissolved Solids ND 03/16/22 15:45 mg/L

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

QC Summary

572838 Page 3 of 3 Parmname **NOM** Sample Qual OC Units RPD% REC% Range Anlst Date Time

Notes:

Workorder:

The Qualifiers in this report are defined as follows:

- Result is less than value reported
- > Result is greater than value reported
- В The target analyte was detected in the associated blank.
- Е General Chemistry--Concentration of the target analyte exceeds the instrument calibration range
- Η Analytical holding time was exceeded
- J See case narrative for an explanation
- J Value is estimated
- 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.
- Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier X
- Z Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
- Λ 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.

Page 63 of 63 SDG: 572838 Rev1



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

Cope Power Station Groundwater Sampling Samples Collected between: 3/8/2022 and 3/10/2022

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:

572610

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
ŀ	MW-BG-06-2022Q1	MW-06	N	EPA 200.8	Boron	Т	8.61	J	RL	4.00	15.0		ug/L
Ī	MW-BG-06-2022Q1	MW-06	N	EPA 300.0	Fluoride	N	0.0584	J	RL	0.0330	0.100		mg/L
Ī	MW-BG-16-2022Q1	MW-BG-16	N	EPA 200.8	Boron	Т	9.64	J	RL	4.00	15.0		ug/L
Ī	MW-BG-16-2022Q1	MW-BG-16	N	SM 2540C	Total Dissolved Solids	N	4.29	J	RL	3.40	14.3		mg/L

Data Qua	<u>lifiers</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

Facility: Cope Generating Station SDG: 572610

				Lab Sample ID	572610001										
				Sys Sample Code	MW-BG-06-20	22Q1									
				Sample Name	MW-BG-06-20	22Q1									
				Sample Date	3/8/2022 10:40	0:00 AM									
				Location	COP-MW-06 /	MW-06									
				Sample Type	N										
				Matrix	GW	sW									
				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 200.8	Boron	7440-42-8	Т	ug/L	8.61	J	RL		4.00	4.00	15.0	Υ	Yes	1	NA
	Calcium	7440-70-2	Т	ug/L	9780				30.0	30.0	100	Υ	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	17.6				0.335	0.335	1.00	Υ	Yes	5	NA
EPA 300.0	Fluoride	16984-48-8	N	mg/L	0.0584	J	RL		0.0330	0.0330	0.100	Υ	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	101				3.40	3.40	14.3	Y	Yes	1	NA

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Facility: Cope Generating Station SDG: 572610

				Lab Sample ID	572610002										
				Sys Sample Code	MW-BG-16-20	N-BG-16-2022Q1									
				Sample Name	MW-BG-16-20	V-BG-16-2022Q1									
				Sample Date	3/8/2022 10:36	6:00 AM									
				Location	COP-MW-BG-	-16 / MW	'-BG-16								
				Sample Type	N										
				Matrix	GW	W									
				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 200.8	Boron	7440-42-8	Т	ug/L	9.64	J	RL		4.00	4.00	15.0	Υ	Yes	1	NA
	Calcium	7440-70-2	Т	ug/L	2040				30.0	30.0	100	Υ	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	3.54				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	1.73				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	Y	Yes	1	NA

Report Generated: 4/4/2022 10:43:05 AM Page: 2 of 2



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

Cope Power Station Groundwater Sampling Samples Collected between: 3/8/2022 and 3/10/2022

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:

572838

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-LF-01	N	EPA 200.8	Boron	Т	6.98	J	RL	4.00	15.0		ug/L
MW-LF-01-2022Q1	MW-LF-01	N	EPA 300.0	Sulfate	N	0.312	J	RL	0.133	0.400		mg/L
MW-LF-01-2022Q1	MW-LF-01	N	SM 2540C	Total Dissolved Solids	N	10.0	J	LD	3.40	14.3		mg/L
MW-LF-02-2022Q1	MW-LF-02	N	SM 2540C	Total Dissolved Solids	N	77.1	J	LD	3.40	14.3		mg/L
MW-LF-03-2022Q1	MW-LF-03	N	EPA 200.8	Boron	Т	8.19	J	RL	4.00	15.0		ug/L
MW-LF-03-2022Q1	MW-LF-03	N	SM 2540C	Total Dissolved Solids	N	8.57	J	LD	3.40	14.3		mg/L
MW-LF-04-2022Q1	MW-LF-04	N	EPA 200.8	Boron	Т	9.69	J	RL	4.00	15.0		ug/L
MW-LF-04-2022Q1	MW-LF-04	N	SM 2540C	Total Dissolved Solids	N	17.1	J	LD	3.40	14.3		mg/L
MW-LF-05-2022Q1	MW-LF-05	N	EPA 200.8	Boron	Т	10.2	J	RL	4.00	15.0		ug/L
MW-LF-05-2022Q1	MW-LF-05	N	SM 2540C	Total Dissolved Solids	N	32.9	J	LD	3.40	14.3		mg/L
MW-LF-06-2022Q1	MW-LF-06	N	EPA 200.8	Boron	Т	9.02	J	RL	4.00	15.0		ug/L
MW-LF-06-2022Q1	MW-LF-06	N	SM 2540C	Total Dissolved Solids	N	30.0	J	LD	3.40	14.3		mg/L
DU-COP-LF-22101	MW-LF-05	FD	EPA 200.8	Boron	Т	10.6	J	RL	4.00	15.0		ug/L
DU-COP-LF-22101	MW-LF-05	FD	SM 2540C	Total Dissolved Solids	N	42.9	J	LD	3.40	14.3		mg/L
AS-LF-01-2022Q1	MW-AS-01	N	EPA 200.8	Boron	Т	12.3	J	RL	4.00	15.0		ug/L
AS-LF-01-2022Q1	MW-AS-01	N	SM 2540C	Total Dissolved Solids	N	24.3	J	LD	3.40	14.3		mg/L
AS-LF-02-2022Q1	MW-AS-02	N	EPA 300.0	Fluoride	N	0.0630	J	RL	0.0330	0.100		mg/L
AS-LF-02-2022Q1	MW-AS-02	N	SM 2540C	Total Dissolved Solids	N	42.9	J	LD	3.40	14.3		mg/L
MW-40-2022Q1	MW-40	N	SM 2540C	Total Dissolved Solids	N	301	J	LD	3.40	14.3		mg/L

Data Qua	alifiers
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	odes 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.
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

				Lab Sample ID	572838001										
				Sys Sample Code	MW-LF-01-20	22Q1									
				Sample Name	MW-LF-01-20	22Q1									
				Sample Date	3/9/2022 2:46:	:00 PM									
				Location	COP-MW-LF-	01 / MW	-LF-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 200.8	Boron	7440-42-8	Т	ug/L	6.98	J	RL		4.00	4.00	15.0	Υ	Yes	1	NA
	Calcium	7440-70-2	Т	ug/L	2200				30.0	30.0	100	Υ	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	8.90				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	0.312	J	RL		0.133	0.133	0.400	Υ	Yes	1	NA
SM 2540C	Total Dissolved	TDS	N	mg/L	10.0	J	LD		3.40	3.40	14.3	Y	Yes	1	NA

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				Lab Sample ID	572838002										
				Sys Sample Code	MW-LF-02-202	22Q1									
				Sample Name	MW-LF-02-202	22Q1									
				Sample Date	3/9/2022 3:57:	00 PM									
				Location	COP-MW-LF-0)2 / MW-	-LF-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		Basis
EPA 200.8	Boron	7440-42-8	Т	ug/L	17.1				4.00	4.00	15.0	Υ	Yes	1	NA
	Calcium	7440-70-2	Т	ug/L	5720				30.0	30.0	100	Y	Yes	1	NA
EPA 300.0	Fluoride	16984-48-8	N	mg/L	0.171				0.0330	0.0330	0.100	Υ	Yes	1	NA
	Sulfate	14808-79-8	N	mg/L	6.26				0.133	0.133	0.400	Υ	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	39.9				0.670	0.670	2.00	Υ	Yes	10	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	77.1	J	LD		3.40	3.40	14.3	Υ	Yes	1	NA

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				Lab Sample ID	572838003										
				Sys Sample Code	MW-LF-03-20	22Q1									
				Sample Name	MW-LF-03-20	22Q1									
				Sample Date	3/9/2022 2:57:	:00 PM									
				Location	COP-MW-LF-	03 / MW-	LF-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 200.8	Boron	7440-42-8	Т	ug/L	8.19	J	RL		4.00	4.00	15.0	Υ	Yes	1	NA
	Calcium	7440-70-2	Т	ug/L	1070				30.0	30.0	100	Υ	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	3.57				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	0.570				0.133	0.133	0.400	Υ	Yes	1	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	8.57	J	LD		3.40	3.40	14.3	Y	Yes	1	NA

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Sulfate

SM 2540C

Total Dissolved Solids

14808-79-8

TDS

				Lab Sample ID	572838004										
				Sys Sample Code	MW-LF-04-20	22Q1									
				Sample Name	MW-LF-04-20	22Q1									
				Sample Date	3/9/2022 1:52	:00 PM									
				Location	COP-MW-LF-	04 / MW	-LF-04								
				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 200.8	Boron	7440-42-8	Т	ug/L	9.69	J	RL		4.00	4.00	15.0	Υ	Yes	1	NA
	Calcium	7440-70-2	Т	ug/L	1860				30.0	30.0	100	Υ	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	4.66				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

J

LD

0.133

3.40

0.133

3.40

0.400

14.3

Υ

Υ

Yes

Yes

NA

NA

0.620

17.1

mg/L

mg/L

Ν

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				Lab Sample ID	572838005										
				Sys Sample Code	MW-LF-05-20	22Q1									
				Sample Name	MW-LF-05-20	22Q1									
				Sample Date	3/9/2022 12:2	5:00 PM									
				Location	COP-MW-LF-	05 / MW	-LF-05								
				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 200.8	Boron	7440-42-8	Т	ug/L	10.2	J	RL		4.00	4.00	15.0	Υ	Yes	1	NA
	Calcium	7440-70-2	Т	ug/L	2840				30.0	30.0	100	Υ	Yes	1	NA
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	0.583				0.133	0.133	0.400	Υ	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	9.14				0.134	0.134	0.400	Υ	Yes	2	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	32.9	J	LD		3.40	3.40	14.3	Y	Yes	1	NA

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				Lab Sample ID	572838006										
				Sys Sample Code	FBLK-COP-LF	-22101_	_1438								
				Sample Name	FBLK-COP-LF	-22101									
				Sample Date	3/9/2022 2:38	:00 PM									
				Location	COP-FB / Fiel	d Blank									
				Sample Type	FB										
				Matrix	AQ										
				Parent Sample											
Analytic Method	Chemical Name	CAS Rn	Fraction	Result Unit	Final Result	Final	Reason	Uncertainty	Final MDL	Final RL	Final QL	Final	Final	DF	Basis
						Qual	code						Report		
EPA 200.8	Boron	7440-42-8	Т	ug/L					4.00	4.00	15.0		Report Yes	1	NA
EPA 200.8	Boron Calcium	7440-42-8 7440-70-2	T T	ug/L ug/L		Qual				4.00		Detect		1	NA NA
EPA 200.8			'			Qual U			4.00		15.0	Detect N	Yes	1 1 1	
	Calcium	7440-70-2	T	ug/L		Qual U U			4.00 30.0	30.0	15.0 100	N N	Yes Yes	1 1 1	NA
	Calcium Chloride	7440-70-2 16887-00-6	T N	ug/L mg/L		Qual U U U			4.00 30.0 0.0670	30.0 0.0670	15.0 100 0.200	N N N	Yes Yes Yes	1 1 1 1	NA NA

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				Lab Sample ID	572838007										
				Sys Sample Code	MW-LF-06-20	22Q1									
				Sample Name	MW-LF-06-20	22Q1									
				Sample Date	3/9/2022 1:36:	:00 PM									
				Location	COP-MW-LF-	06 / MW	-LF-06								
				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 200.8	Boron	7440-42-8	Т	ug/L	9.02	J	RL		4.00	4.00	15.0	Υ	Yes	1	NA
	Calcium	7440-70-2	Т	ug/L	2150				30.0	30.0	100	Υ	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	8.12				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	0.638				0.133	0.133	0.400	Υ	Yes	1	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	30.0	J	LD		3.40	3.40	14.3	Y	Yes	1	NA

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Lab Sample ID	572838008													
Sys Sample Code	DU-COP-LF-2	2101												
Sample Name	DU-COP-LF-2	2101												
Sample Date	3/9/2022 12:0	0:00 PM												
Location	COP-MW-LF-	MW-LF-05 / MW-LF-05												
Sample Type	FD													
Matrix	GW													
Parent Sample	MW-LF-05-20	22Q1												
Result Unit	Final Result	Final Qual	Reason code	Uncertainty	Final MDL	Final RL	Final QL	Final Detect	Final Report	DF	Basis			
ug/L	10.6	J	RL		4.00	4.00	15.0	Υ	Yes	1	NA			

					2. 00 20.										
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 200.8	Boron	7440-42-8	Т	ug/L	10.6	J	RL		4.00	4.00	15.0	Υ	Yes	1	NA
	Calcium	7440-70-2	Т	ug/L	2790				30.0	30.0	100	Υ	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	9.26				0.134	0.134	0.400	Υ	Yes	2	NA
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	0.575				0.133	0.133	0.400	Υ	Yes	1	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	42.9	J	LD		3.40	3.40	14.3	Υ	Yes	1	NA

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				Lab Sample ID	572838009										
				Sys Sample Code	AS-LF-01-202	2Q1									
				Sample Name	AS-LF-01-202	2Q1									
				Sample Date	3/9/2022 1:40	:00 PM									
				Location	COP-MW-AS-	01 / MW	-AS-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 200.8	Boron	7440-42-8	Т	ug/L	12.3	J	RL		4.00	4.00	15.0	Υ	Yes	1	NA
	Calcium	7440-70-2	Т	ug/L	4010				30.0	30.0	100	Υ	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	5.27				0.0670	0.0670	0.200	Υ	Yes	1	NA
	Fluoride	16984-48-8	N	mg/L	0.113				0.0330	0.0330	0.100	Υ	Yes	1	NA
	Sulfate	14808-79-8	N	mg/L	15.1				0.133	0.133	0.400	Υ	Yes	1	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	24.3	J	LD		3.40	3.40	14.3	Υ	Yes	1	NA

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				Lab Sample ID	572838010										
				Sys Sample Code	AS-LF-02-202	2Q1									
				Sample Name	AS-LF-02-202	2Q1									
				Sample Date	3/9/2022 2:45:	00 PM									
				Location	COP-MW-AS-	02 / MW	-AS-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		Basis
EPA 200.8	Boron	7440-42-8	Т	ug/L	16.3				4.00	4.00	15.0	Υ	Yes	1	NA
	Calcium	7440-70-2	Т	ug/L	4540				30.0	30.0	100	Υ	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	13.0				0.134	0.134	0.400	Υ	Yes	2	NA
EPA 300.0	Fluoride	16984-48-8	N	mg/L	0.0630	J	RL		0.0330	0.0330	0.100	Υ	Yes	1	NA
	Sulfate	14808-79-8	N	mg/L	10.1				0.133	0.133	0.400	Υ	Yes	1	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	42.9	J	LD		3.40	3.40	14.3	Y	Yes	1	NA

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				Lab Sample ID	572838011										
				Sys Sample Code	MW-40-2022C	Q 1									
				Sample Name	MW-40-2022C	Q1									
				Sample Date	3/9/2022 3:40:	:00 PM									
				Location	COP-MW-40 /	MW-40									
				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 200.8	Boron	7440-42-8	Т	ug/L	37.7				4.00	4.00	15.0	Υ	Yes	1	NA
	Calcium	7440-70-2	Т	ug/L	31700				30.0	30.0	100	Υ	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	44.5				1.34	1.34	4.00	Υ	Yes	20	NA
	Sulfate	14808-79-8	N	mg/L	160				2.66	2.66	8.00	Υ	Yes	20	NA
EPA 300.0	Fluoride	16984-48-8	N	mg/L	0.891				0.0330	0.0330	0.100	Υ	Yes	1	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	301	J	LD		3.40	3.40	14.3	Υ	Yes	1	NA

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

COPE STATION - Class 3 Landfill - CCR

Date(s) Measured:

8	24	22

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	77:98\7	Stickup	10	9.63	Peristaltic
MW-LF-02	2	32.40	Stickup	10	25.87	Peristaltic
MW-LF-03	2	31.45	Stickup	10	24.64	Peristaltic
MW-LF-04	2	31.25	Stickup	10	24,48	Peristaltic
MW-LF-05	2	29.15	Stickup	10	21.14	Peristaltic
MW-LF-06	2	28.22	Stickup	10	20:45	Peristaltic
MW-BG-06	2	39.31 30	33 Stickup	10	16.93	Peristaltic
MW-BG-16	2	Z9:80 2c).分が Stickup	10	12,50	Peristaltic
AS-LF-01	2		ムムろ Stickup	10	10.49	Peristaltic
AS-LF-02	2	22.65	Stickup	10	10.46	Peristaltic
MW-40	2	28.14	Stickup	10	11.04	Peristaltic

♪ TRC

PROJECT NAME: Dominion - Cope Station				ation	PREPARED				CHECKED			
PROJECT	NUMBER	R: 41655	9.0007.0000.	2.2	BY:5	イグ	DATE: 8 2	9/22	BY: D	55	DATE:9/1/22	
SAMPLE	ID: M\	N-LF-01		WELL	DIAME	TER: 🔀	2"	6" 🗸	OTHER			
WELL MAT	ERIAL:	X PVC	ss [] IRON _	GALV	'ANIZED S	STEEL		OTHER			
SAMPLE T	YPE:	⊠ GW	□ww □]sw 🔲	DI		LEACHATE		OTHER			
PUR	GING	TIME:)L	139 0	DATE: 8/29	22	S	AMPLE		1532			
PURGE METHOD		PUMP BAILER	PERISTALTIC	PUMP			<u> </u>	U CO		ITY: 52.5		
DEPTH TO	WATER:		T/ PVC				<u> </u>			mg/	<u> </u>	
DEPTH TO			T/ PVC			□⊠ ио	· · · · · · · · · · · · · · · · · · ·	GHT		DERATE	☐ VERY	
WELL VOL	UME:		LITERS	✓ GALLO	NS	TEMPE	RATURE: 29	5.40	°С ОТН	HER:		
VOLUME F	REMOVED:	0.7	LITERS	X GALLO	NS	COLO	r: clear		ODO	OR: 140	<u> </u>	
COLOR:	_c\e	AC		DOR: NOV	NL	FILTRA	TE (0.45 um)	YES	X	NO		
		TUR	BIDITY			FILTRA	TE COLOR:		FIL	TRATE ODO	R:	
NONE	SLI		MODERATE	U VEI		QC SA	MPLE: MS	/MSD		DUP-		
DISPOSAL	. METHOD:	GROU	ND DRUM	1 义 OTHER	₹	COMM	ENTS: Post	turbic	Sity 2	33 NTU	Q 1 1554	
TIME	PURGE RATE	РН	CONDUCTIVITY	Y ORP		D.O.	TURBIDITY	TEMPE	RATURE	WATER LEVEL	CUMULATIVE PURGE VOLUME	
	(ML/MIN)	(SU)	(umhos/cm)	(mV)		(mg/L)	(NTU)	(°C)	(FEET)	(GALLONS)	
1442	75	4.39	48.78	65.8	c.	2.6D	3.80	ച്ചു.	43	9.38	INITIAL	
1447	50	4.40	48.44	64.2	6	3.32	4.95	27.	89	9.40		
1457	50	4.40	51.50	63.1		2.19	2.29	್ಷಾ ೨	32	9.40		
1502	50	4.40	52.11	64.7	6	J.000	2.41	ລ7.	D	9.40	DD=2.20mg/L	
1507	50	4.4)	52.3 <i>5</i>	65.4	6	ටු.ටු)	2.29	a/1,	12	9.41		
1512	50_	4.41	52.03	67.3	9	2.19	2.44	258	?7	9.41		
1517	50	4.41	52.29	67.6	9	2.19	2.15	25.8	3(9.41		
1522	50	4.42	5 <u>9</u> . 25	47.9		ರ್.೧೦	2.31	25.	15	9.41		
1527	50	41.43	53.05	74.7	É	2.25	2.21	25.	51	9.41		
1532	50	4.43	52.90	70.1	5	2.25	2.17	25.	40	9.41		
NC	TE: STABI	LIZATION	TEST IS COMF	LETE WHEN	1 3 SU	CCESSIV	E READINGS A	RE WIT	HIN THE F	OLLOWING	G LIMITS:	
pH: +/-	0.1	COND.: +/-	3 % ORF	P: +/- 10	D.O).: +/- 10 '	% TURB: +/-	10 %	or =</td <td>5</td> <td>TEMP.: +/- 3%</td>	5	TEMP.: +/- 3%	
BOTTLES	SFILLED	PRESERV	ATIVE CODES	A - NONE	В	- HNO3	C - H2SO4	D-	NaOH	E - HC	L F	
NUMBER	SIZE	TYPE	PRESERVAT	IVE FILT	ERED	NUMB	ER SIZE	TYP	E PR	RESERVATIV	/E FILTERED	
2	250 mL	PLASTIC	В	□ Y	IJ N	ı					YN	
2	250 mL	PLASTIC	А	□ Y	IJ N	ı					□ Y □ N	
1	125 mL	PLASTIC	Α	□ Y	☑ N	ı					□Y □N	
				□ Y	□N	ı					Y N	
				□ Y	□ N						Y N	
SHIPPING	METHOD:			ATE SHIPPE	 D:			AIRI	BILL NUM	BER:		
				IGNATURE:				DAT	DATE SIGNED:			

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PAGE	1	OF .	ŧ

♦ T	RC		1	WATER	S	АМР	LE LOG	ì			
PROJEC1	NAME:	Domin	ion - Cope Sta	ation		PR	EPARED			CHEC	KED
PROJEC1	NUMBER	R: 41655	9.0007.0000.2	2.2 B	ر: ۶۱	MB	DATE:8-	30-22 BY:	\overline{C}	<u> </u>	DATE:9/11/22
SAMPLE	ID: MV	V-LF-02	,	WELL DIA	AMET	ER: 🗸	2"	6"	IER		
WELL MAT	ERIAL:	✓ PVC	ss 🗆	IRON G	ALVA	NIZED 8	STEEL	П ОТН	IER		
SAMPLE T	YPE:	✓ GW	□ ww □	SW D	I		LEACHATE	П ОТН	IER		
PUR	SING	TIME: 10	20 D	ATE: 8-30-	22	S	AMPLE	TIME: 100			TE: 8-30-22
PURGE METHOD		PUMP BAILER	PERISTALTIC	PUMP			146.4 m	ıV DO:		ITY: <u>143.</u> 50 mg	<u>TT</u> umhos/cm /L
DEPTH TO	WATER:	25.66	T/ PVC			TURBI	DITY: <u>6.7</u>	5 NTU			
DEPTH TO	ВОТТОМ:	32.40	T/ PVC			X .no		GHT 🗌	MOI	DERATE	☐ VERY
WELL VOL	UME:		LITERS	☑ GALLONS	3	TEMPE	RATURE: 2	4.37°C	ОТН	IER:	
VOLUME	REMOVED:	\rightarrow	LITERS	☑ GALLONS	3	COLO	r: <u>Clear</u>		ODO	OR:	none.
COLOR:	Clea	- Wig	mides OE	OR: MANE		FILTRA	NTE (0.45 um)	YES	V	NO	
		TUR	BIDITY			FILTRA	TE COLOR:		FIL	TRATE ODO	R:
NONE	X SLI	GHT 🗌	MODERATE	☐ VERY		QC SA	MPLE: 💢 MS	/MSD		DUP-	
DISPOSAL	METHOD:	GROU	ND DRUM	✓ OTHER		СОММ	IENTS:				
TIME	PURGE RATE	PH	CONDUCTIVITY	ORP		D.O.	TURBIDITY	TEMPERATU	JRE	WATER LEVEL	CUMULATIVE PURGE VOLUME
	(ML/MIN)	(SU)	(umhos/cm)	(mV)	(mg/L)	(NTU)	(°C)		(FEET)	(GALLONS)
1023	125	3.77	225.54	148.Ce	0	.87	6.36	26.00	ာ	25.72	INITIAL
1040	1	3.85	174,65	145.4		,48	4.03	24.50)	25.79	1
1045		3.85	177.91	145.5		.48	2.46	24.37	7	25.79	
1050		3.88	163.92	145.5		,49	1,79	24,33		25.79	
1055		3.86	164.41	146.2	- i	.50	1.21	24.41		25.79	
1100		3.88	163.77	146.4	\neg	, භ	0.75	24.34		25.79	[,]
		<u> </u>		101	1				-	1	
1125	1					_	0.57				
		-									
NC	TE: STABI	LIZATION 1	TEST IS COMP	LETE WHEN 3	suc	CESSIV	E READINGS A	RE WITHIN T	HEF	OLLOWING	G LIMITS:
pH: +/-	0.1	COND.: +/-	3 % ORP:	+/- 10	D.O.:	+/- 10 9	% TURB: +/-	10 % ог	=</td <td>5</td> <td>TEMP.: +/- 3 %</td>	5	TEMP.: +/- 3 %
BOTTLES	6 FILLED	PRESERV	ATIVE CODES	A - NONE	В-	HNO3	C - H2SO4	D - NaOl	1	E - HC	L F
NUMBER	SIZE	TYPE	PRESERVATI	VE FILTER	ED	NUMB	ER SIZE	TYPE	PR	ESERVATI	VE FILTERED
2	250 mL	PLASTIC	В '	□ Y] N				L		☐ Y ☐ N
2	250 mL	PLASTIC	Α	□ Y ☑] N						
1	125 mL	PLASTIC	Α	□ Y [] N						☐ Y ☐ N
				□ Y □] N						□ Y □ N
				□ Y □] N					·	□ Y □ N
SHIPPING	METHOD:		D/	ATE SHIPPED:				AIRBILL I	NUM	BER:	
COC NUMI	BER:		SI	GNATURE:				DATE SIG	GNE	 D:	

	1		,
PAGE	- 1	OF	(

PROJEC1	NAME:	Domin	ion - Cope S	Station	PREPARED				CHECKED		
PROJECT	T NUMBE	R: 41655	9.0007.0000).2.2	BY: 7	MB	DATE: 8-	30-22	BY: D	<u>J</u> S	DATE: 9/1/22
SAMPLE	ID: M	W-LF-03		WELL	DIAME	ΓER: 🗸	2"	6" 🗸	OTHER		
WELL MAT	ERIAL:	✓ PVC	ss [IRON [GALVA	NIZED S	STEEL		OTHER		
SAMPLE T	YPE:	☑ GW	□ ww [] sw 🔲	DI		LEACHATE		OTHER		
PUR	GING	TIME: 09	10	DATE: %-3 (5-22	-	AMPLE		0950		ATE: 8-30-22
PURGE METHOD			PERISTALTI	C PUMP						4.4	19 umhos/cm
DEPTH TO	 D WATER:	BAILER 24.62	T/ PVC			TURBI		IV DO:		.GG mg	J/L
	BOTTOM:		T/ PVC			⊠ , NO		GHT		DERATE	VERY
WELL VOL	UME:		LITERS	✓ GALLO	NS	TEMPE	RATURE: 2	4.72	с от	HER:	
VOLUME F	REMOVED:	0.6	LITERS	✓ GALLO	NS	COLO				OR: _	none
COLOR:	_cle	ear		DDOR: _^6/\dagger	<u>e_</u>	FILTRA	NTE (0.45 um)	YES	<i>y</i>	NO .	
	. 5	TUR	BIDITY			FILTRA	TE COLOR:		FIL	TRATE ODO	DR:
NONE	SLI	GНТ 🗌	MODERATE	☐ VE	₹Y	QC SA	MPLE: MS	/MSD		DUP-	
DISPOSAL	METHOD:	GROU	ND 🗌 DRU	M 🔽 OTHER		COMM	IENTS:				
TIME	PURGE RATE	PH	CONDUCTIVIT	TY ORP		D.O.	TURBIDITY	TEMPE	RATURE	WATER LEVEL	CUMULATIVE PURGE VOLUME
	(ML/MIN)	(SU)	(umhos/cm)	(mV)		(mg/L)	(NTU))	C)	(FEET)	(GALLONS)
0914	125	3.90	39.19	101.1	2	1.40	0.56	24,	38	24,74	INITIAL
0930	125	3,97	39,20	99,7	2	1.82	0.51	24.	26	25.21	1
0935	70	4.00	38.81	105.2	2	.70	0.47	24	.59	25.31	
0940		4.02	38.54	107.5	2	.61	0.39	24.	55	25.38	
0945		4.02	38,30	110.3	2	.64	0.22	24.	53	25.40	
0950		4.03	38.19	112.3		1.66	0,14	24.	_	25,42	
											\
1014							0.16			25.42	
											0.6
NC pH: +/-		COND.: +/-		PLETE WHEN P: +/- 10			E READINGS A		or =</td <td></td> <td>G LIMITS: TEMP.: +/- 3 %</td>		G LIMITS: TEMP.: +/- 3 %
BOTTLES	S FILLED	PRESERV	ATIVE CODES	A - NONE	В-	· HNO3	C - H2SO4	D - I	NaOH	E - HC	L F
NUMBER	SIZE	TYPE	PRESERVA	TIVE FILTI	ERED	NUMB	ER SIZE	TYP	E PF	RESERVATI	VE FILTERED
2	250 mL	PLASTIC	В	□ Y	☑ N						□Y □N
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	METHOD:			DATE SHIPPE	.D:			AIRE	BILL NUM	IBER:	
COC NUME	BFR:			SIGNATURE:				DAT	E SIGNE		

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PROJECT	NAME:	Domin	ion - Cope St	ation		PR	EPARED		CHECKE		KED
PROJECT	NUMBER	R: 41655	9.0007.0000.	2.2	BY: J	MB	DATE: 8-	2 9-33 BY	ולן דלו	5	DATE:9/1/22
SAMPLE	ID: MV	V-LF-04		WELL (DIAMET	ER: 🗸	2"	6" 🗸 O	THER		
WELL MAT	ERIAL:	✓ PVC	ss [] IRON [GALVA	NIZED S	STEEL	O	THER		
SAMPLE T	YPE:	☑ GW	ww]sw 🗌	DI		LEACHATE	O	ΓHER		
PUR	SING	TIME:	140 0	ATE: 8-2 9	1-22	S	AMPLE	TIME: J			TE:8-29-22
PURGE METHOD	_	PUMP BAILER	PERISTALTIC	PUMP		PH: ORP:		U COND		1TY: 49, 63 mg/	
DEPTH TO	WATER:	24.41	T/ PVC			TURBI	DITY: Q. 1	<u>5</u> ити			
DEPTH TO	ВОТТОМ:	31.25	T/ PVC			⊠ ио	NE 🗌 SLI	GHT [] MOI	DERATE	☐ VERY
WELL VOL	UME:		LITERS	✓ GALLO	NS	TEMPE	RATURE: $\frac{2}{2}$	4.06°C	ОТН	IER:	
VOLUME F	REMOVED:	6.8	LITERS	☑ GALLO	NS	COLO	R: clear		ODO	OR:	NOTIC
COLOR:	ડા	hazy	0	DOR: NO	1e	FILTRA	TE (0.45 um)	YES	V	NO	
			BIDITY			FILTRA	TE COLOR:	·	FIL.	TRATE ODO	R:
NONE	X SLI		MODERATE	VEF		QC SA	MPLE: MS	/MSD		DUP-	
DISPOSAL	METHOD:	GROUN	ND DRUM	1 V OTHER		СОММ	ENTS:				
TIME	PURGE RATE	PH	CONDUCTIVIT	Y ORP		D.O.	TURBIDITY	TEMPERA	TURE	WATER LEVEL	CUMULATIVE PURGE VOLUME
	(ML/MIN)	(SU)	(umhos/cm)	(mV)	(mg/L)	(NTU)	(°C)		(FEET)	(GALLONS)
1443	115	4.08	46.05	189.0			13.5	28.0	00	24.45	INITIAL
1500	\	4.14	48.35	191.8	<u> </u>	.59	5,08	24.5		24,45	
1505		4.15	49.38	192.4	4	.61	3,57	24.3	7	24.45	
1510	1	4.151	49.90	193.3	4	,62	2,35	24.18	3	24.45	
1515	}	4.13	49.89	195.4	4	.63	2.15	24.00	'o	24.45	0.8
1523		_					1.30			24.45	
										<u>ر، ۱۰ م</u>	
NC.	TF: STARI	I IZATION T	FST IS COME	DI ETE WHEN	3 800	CESSIV	E READINGS A	DE WITHIN	TUE		
pH: +/-		COND.: +/-		P: +/- 10			% TURB: +/-				TEMP.: +/- 3%
BOTTLES	S FILLED	PRESERVA	ATIVE CODES	A - NONE	В-	HNO3	C - H2SO4	D - Na	ЭН	E - HC	L F
NUMBER	SIZE	TYPE	PRESERVAT	TIVE FILTE	ERED	NUMB	ER SIZE	TYPE	PR	ESERVATI	/E FILTERED
2	250 mL	PLASTIC	В	□ Y	✓ N						□Y □N
2	250 mL	PLASTIC	Α	ΠY	✓ N						□Y □N
1	125 mL	PLASTIC	Α	□ Y	✓ N						□Y □N
				□Y	□N					•	□ Y □ N
				ΠY	□N						Y N
SHIPPING	METHOD:	1		DATE SHIPPE	D.	•		AIRBIL	NIIM	BER:	
COC NUME				BIGNATURE:							
OCC NOM	JL11.		3	NOINA I UKE:				DATE :	ו⊐ווטוכ	J.	

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PAGE	OF	

PROJECT	NAME:	Domin	ion - Cope S	Station		PR	EPARED			CHEC	KED	
PROJECT	ROJECT NUMBER: 416559.0007.0000.2.2 BY: JMB DATE: 8-21-12BY: DJ DATE: 9/1/2								/1/22			
SAMPLE	ID: MV	N-LF-05		WELL 0	DIAMET	ER: 🗸	2" 4"	6" 🗸 O1	HER			
WELL MAT	ERIAL:	✓ PVC	ss [IRON	GALVA	NIZED S	STEEL	O1	HER			
SAMPLE T	YPE:	☑ GW	□ww [sw 🗌	DI		LEACHATE	01	HER			
PUR	SING	TIME: 13	42	DATE: 8-2 9	4-22	S	AMPLE	<u> </u>	20			29-22
PURGE METHOD		PUMP BAILER	PERISTALTI	C PUMP		PH: ORP:		U CONDI		1TY: <u>74</u> 45 mg		mhos/cm
DEPTH TO) WATER:	20.85	T/ PVC			TURBI	DITY: <u>0.3</u>	5 NTU				
DEPTH TO	ВОТТОМ:	29.15	T/ PVC			🔀 ио	NE 🗌 SLI	GНТ □] MOI	DERATE	□ V	ERY
WELL VOL	UME:		LITERS	✓ GALLO	NS	TEMPE	RATURE: 2	ন.০ _{°c}	OTH	HER:		
VOLUME F	REMOVED:		LITERS	✓ GALLO	NS	COLO	R: Clear		ODO	OR:	none	ع
COLOR:		ear		DDOR: 10	ne	FILTRA	TE (0.45 um)	YES	<u></u>	NO		
	_		BIDITY	_		FILTRA	TE COLOR:		FIL ⁻	TRATE ODO	R:	
NONE	SLI		MODERATE	VEF		QC SA	MPLE: MS	/MSD		DUP-		
DISPOSAL	DISPOSAL METHOD: GROUND DRUM OTHER COMMENTS:											
TIME	PURGE RATE	PH	CONDUCTIVI	TY ORP		D.O.	TURBIDITY	TEMPERAT	TURE	WATER LEVEL		LATIVE VOLUME
	(ML/MIN)	(SU)	(umhos/cm)	(mV)	(mg/L)	(NTU)	(°C)		(FEET)	(GAL	LONS)
1344	125	3.91	72.56	185.9	7 4	1.19	0.92	30.2	9	20.88		ΓIAL
1400		3,99	76.50	187,3	2 4	1.37	0.57	26.8	9	20.88		
1405		4.00	76.65	188.8	4	.36	0.46	26.5	5	20,88		
1410		4.00	76. Col	189,5	5 4.	39	0.34	26.78	,	20.88		
1415		4.01	76,32	190.8	4	.31	0.36	26,8	šl	20.88		
1420	ł	4.01	76.91	191,6		.45	0.35	27.0		20,88	ζ Ι	. l
1432	Į.						0.32					
11070							0.00					
:												
NO	TE: STABI	LIZATION 1	TEST IS COM	PLETE WHEN	3 SUC	CESSIV	E READINGS A	RE WITHIN	THE F	OLLOWING	GLIMITS	
pH: +/-		COND.: +/-		P: +/- 10			% TURB: +/-		=</td <td></td> <td>TEMP.: +</td> <td></td>		TEMP.: +	
BOTTLES	FILLED	PRESERVA	ATIVE CODES	S A - NONE	В-	HNO3	C - H2SO4	D - Na()H	E - HC	L F	
NUMBER	SIZE	TYPE	PRESERVA	TIVE FILTE	RED	NUMB	ER SIZE	TYPE	PR	ESERVATI	√E FIL	TERED
2	250 mL	PLASTIC	В	□ Y	✓ N						Y	. Пи
2	250 mL	PLASTIC	А	□Y	☑ N						Y	′
1	125 mL	PLASTIC	А	□ Y	☑ N						□ Y	′ □ N
				□ Y	□ N						Y	′ □ N
				□ Y	□ N						Y	′
SHIPPING	METHOD.			DATE SHIPPE	D:			AIRBILL	NIIM	BFR·		
												
COC NUME	DEK.			SIGNATURE:				DATES	IGNE	J:		

◆ TRC

PROJECT	NAME:	Domin	ion - Cope Sta	ation		PREPARED				CHECKED		
PROJECT	NUMBER	R: 41655	9.0007.0000.2	2.2	BY: 🔾	MB	DATE: 🖔 🗸	29-2	BY: D	JS	DATE:	9/1/22
SAMPLE	ID: MV	V-LF-06		WELL	DIAMET	ER: 🗸	2"	6" [OTHE	R		
WELL MAT	ERIAL:	✓ PVC	ss [IRON 🗌	GALVA	NIZED S	TEEL		OTHE	R		
SAMPLE T	YPE:	☑ GW	ww	SW 🗌	DI		LEACHATE		OTHE	R	. ,	
PURC	GING	TIME: /)	53 0	ATE: 8-29	- 22	S	AMPLE		1259	_		-29-22
PURGE METHOD	. =	PUMP BAILER	PERISTALTIC	PUMP		<u> </u>		U C		1VITY: <u>6</u> 1		umhos/cm
DEPTH TO	WATER:	20.41	T/ PVC			TURBII		7 N				
	ВОТТОМ:		T/ PVC			10и 💢	NE SLI	GHT		ODERATE	: 🗆	VERY
WELL VOL	UME:		LITERS	✓ GALLO	NS	TEMPE	RATURE: 🔌	1.40	<u>}</u> ℃ o	THER:		
VOLUME F	REMOVED:	2.9	LITERS	☑ GALLO	NS	COLOF	e clea	<u> </u>	0	DOR:	nor	<u> </u>
COLOR:	ha		OI	OR: <u> </u>	ne_	FILTRA	TE (0.45 um)	☐ YE	s [√ NO		
		TUR	BIDITY			FILTRA	TE COLOR:		F	ILTRATE C	DOR:	/
NONE	X SLI		MODERATE	U VE	RY		MPLE: MS	/MSD				22301
DISPOSAL	METHOD:	GROU	ND 🗌 DRUM	✓ OTHER	₹	сомм	ENTS: FBL	K-C	OP-LF	- 2230	2 001	1320
TIME	PURGE RATE	PH	CONDUCTIVITY	ORP		D.O.	TURBIDITY	TEMI	PERATURI	E WATE		IULATIVE E VOLUME
	(ML/MIN)	(SU)	(umhos/cm)	(mV)	(mg/L)	(NTU)		(°C)	(FEET	T) (G/	ALLONS)
1156	160	4.16	63.54	111.7	(5.14	14.0	a	8.91	20.4	2 "	NITIAL
1210	\ \ \	3.98	61.04	110.6	, 4	. 33	7.07	2	6,23	20,4	12	
1215		3.98	61.02	116.5	4	.26	3.55	ລ	6.23	3 20,1	12	
1220		4.04	61.11	121.0) 4	1.21	2.72	a	5.98	20.	42	
1225		3.94	60.85	131.0		.18	1.54	2	6.05			
1230		4.03	61.08	133.9			1.31		6.25			
1235		4.00	60.87	142.			1.08	i	9,30			
1240			60.83	143.8			0.82		20	20.4	T	
1245			60.93		1 .	.)	0.74	l .	,23	20.4	1	1
1250		_		157, 1			0.61		28	20.4	_	
			60.92				•					
NС pH: +/-		COND.: +/-	TEST IS COMP 3 % ORP	LETE WHE! : +/- 10			E READINGS A % TURB: +/-					
BOTTLES	S FILLED	PRESERV	ATIVE CODES	A - NONE	В-	- HNO3	C - H2SO4	D	- NaOH	E-	HCL F-	
NUMBER	SIZE	TYPE	PRESERVAT	IVE FILT	ERED	NUMBI	ER SIZE	T	/PE	PRESERV	ATIVE I	FILTERED
2	250 mL	PLASTIC	В	□ Y	✓ N							Y N
2	250 mL	PLASTIC	А	□ Y	☑ N							Y N
1	125 mL	PLASTIC	Α	□ Y	✓ N	 						Y N
				□ Y	□N							Y N
					□ N							Y N
SHIDDING	METHOD:			VIE SPIDD	<u> </u>	<u></u>			DBII I NII	IMDED:		
SHIPPING				ATE SHIPPE	ـــ.				RBILL NU			
COC NUMI	BER:		S	IGNATURE:				D,	ATE SIGN	NED:		



WATER SAMPLE LOG (CONTINUED FROM PREVIOUS PAGE)

PROJECT NAME:	Dominion - Cope Station		PREPA	RED	CHECKED			
PROJECT NUMBER:	416559.0007.0000.3.2	BY:	J. A. 👰	DATE: 8-29-22	BY: D 35	DATE: 9/1/22		

SAMPLE ID: MW-LF-06

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY	TEMPERATURE	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
1255		4.01	60.75	161.9	4.10	(NTU) 0.57	26.42	20.42	
13[7						0.43			2.9
· · · · · · · · · · · · · · · · · · ·									
	,								
		-							
			,						
			-						
-									

SIGNATURE:	DATE SIGNED	D:

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WATER SAMPLE LOG

PROJECT NAME: Dominion - Cope Station					PREPARED				CHECKED			
PROJECT	NUMBER	R: 41655	9.0007.0000.2	2.2	BY: J	STC :YB CC/CC/8 : 3TAD YAT :				3	DATE: 9 1 1/22	
SAMPLE	ID: M\	N -BG-06		WELL	DIAME	TER: 📝	2"	6" 🗸	OTHER			
WELL MAT	ERIAL:	PVC	ss	IRON _	GALV	ANIZED S	STEEL		OTHER			
SAMPLE T	YPE:	⊠ gw	□ ww □	sw 🗌	DI		LEACHATE		OTHER			
PUR	GING	TIME:)り)D D	ATE:8 29	P3	s	AMPLE	<u> </u>	E: 1247 DATE: 8/29/22			
PURGE ☑ PUMP PERISTALTIC PUMP METHOD: ☐ BAILER					•			U CON	اDUCTIV ی ئ	1TY: <u>183 :</u> Lemg.		
DEPTH TO	WATER:	16.72	T/ PVC			TURBI					-	
DEPTH TO	воттом	30.30	T/ PVC 30:	33		🛛 🗷 ио	NE 🗌 SLI	GHT	□ мо	DERATE	☐ VERY	
WELL VOL	UME:		LITERS	☑ GALLO	NS	TEMPE	RATURE: <u>21</u>	.18 .	с отн	HER:		
VOLUME F	REMOVED:	1.2	LITERS	K GALLO	NS	COLO	R: CLEAR		OD	OR: <u>(</u>	10nc	
COLOR:	dea	<u> </u>		OOR: 100	<u>ı. </u>	FILTRA	TE (0.45 um)	YES	X	NO		
		TUR	BIDITY			FILTRA	TE COLOR:		FiL	TRATE ODO	PR:	
NONE	SLI	GНТ 🗌	MODERATE	☐ VEI	RY	QC SA	MPLE: MS	/MSD		DUP-		
DISPOSAL	METHOD:	GROU	ND DRUM	✓ OTHER	₹	COMM	IENTS:					
TIME	PURGE RATE	PH	CONDUCTIVITY	ORP		D.O.	TURBIDITY	TEMPE	RATURE	WATER LEVEL	CUMULATIVE PURGE VOLUME	
	(ML/MIN)	(SU)	(umhos/cm)	(mV)		(mg/L)	(NTU)	(°	C)	(FEET)	(GALLONS)	
1912	10D	4.13	176.80	80.9	Ē	5.84	1.95	23,	19	16.72	INITIAL	
スリフ	125	4.15	181.66	78.6	L	21.0	1.88	2).8	30	16.73		
1222	125	4.19	184,22	784	4	o.28	2.23	21,9	22	16.74		
1227	125	4.21	184,36	78.0	6	<u>.</u> ञ	2.34	21.2	39	16.74		
1232	125	4.22	182.45	ココ・コ	نا	01.0	2.51	21.3	3	16.74		
1237	125	4.23	184.89	77.2	ما	,. <u>28</u>	2.30	21.5	۱.)	16.74		
1242	125	4,24	184.10	79.2	L	علا.ه	1.99	21.5	O	16,74		
西山	125	4.23	183.54	80.1	Ŀ	26	1.95	2).1	8	16.74		
1300	125					_	1.51			16.74	Post	
NC	TE: STAB	LIZATION	TEST IS COMP	LETE WHEN	1 3 SUC	CCESSIV	E READINGS A	RE WITH	IIN THE I	FOLLOWING	G LIMITS:	
pH: +/-	0.1	COND.: +/-	3 % ORP:	: +/- 10	D.O.	.: +/- 10	% TURB: +/-	10 %	or =</td <td>5</td> <td>TEMP.: +/- 3 %</td>	5	TEMP.: +/- 3 %	
BOTTLES	SFILLED	PRESERVA	ATIVE CODES	A - NONE	В	- HNO3	C - H2SO4	D - 1	laOH	E - HC	L F	
NUMBER	SIZE	TYPE	PRESERVAT	IVE FILTI	ERED	NUMB	ER SIZE	TYPE	PF	RESERVATI	VE FILTERED	
2	250 mL	PLASTIC	В	☐ Y	✓ N						□Y □N	
2	250 mL	PLASTIC	А	- Y	☑ N						□ Y □ N	
1	125 mL	PLASTIC	А	□ Y	☑ N						□ Y □ N	
				□ Y	□и						Y N	
				Y	□ N	1					□ Y □ N	
SHIPPING	METHOD:		D	ATE SHIPPE	D:	•		AIRE	ILL NUM	BER:	· · · · · · · · · · · · · · · · · · ·	
COC NUMBER: SIGNATURE: DATE SIGNED:												

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PROJECT	NAME:	Domin	ion - Cope St		PREPARED			CHECKED				
PROJECT	NUMBE	R: 41655	9.0007.0000.	2.2	BY:JA	41	DATE:8/24	9/22 E	55	DATE: 9/1122		
SAMPLE	ID: M	N- BG-16		WELL	DIAMET	ER: 🔀	2"	6" 🗸	OTHER			
WELL MAT	ERIAL:	PVC	ss [IRON 🗌	GALVA	ALVANIZED STEEL OTHER						
SAMPLE T	YPE:	⊠ GW	□ww □	sw 🗌	DI		LEACHATE		OTHER			
PUR	GING	TIME: 13	18 D	ATE: 8/29	33	<u> </u>	AMPLE	TIME: }			ATE: 8/29/22	
PURGE PUMP PERISTALTIC PUMP METHOD: BAILER								U CON	IDUCTIV ج ما	117: <u>41.</u> 4	-	
DEPTH TO	 WATER:	12.3D	T/ PVC						<u> </u>	<u>71</u> mg	//L	
DEPTH TO			T/ PVC 🥱	1.28		Мио		GHT	мо	DERATE	☐ VERY	
WELL VOL	UME:		LITERS	✓ GALLO	NS	TEMPE	RATURE: 2)	.48 .	с отн	HER:		
VOLUME F	REMOVED:	1.10	LITERS	☑ GALLO	NS	COLO	R: deac		OD	OR:	None	
COLOR:	Clea	ц _с	O	00R: <u>∩め</u> h	<u>e</u>	FILTRA	ATE (0.45 um)	YES	X	NO		
			BIDITY			FILTRA	TE COLOR:		FIL	TRATE ODG	DR:	
NONE			MODERATE	VEI		QC SA	MPLE: MS	/MSD		DUP		
DISPOSAL	METHOD:	GROU	ND DRUM	OTHER	₹	COMM	IENTS:					
TIME	PURGE RATE	PH	CONDUCTIVITY	ORP		D.O.	TURBIDITY	TEMPE	RATURE	WATER LEVEL	CUMULATIVE PURGE VOLUME	
	(ML/MIN)	(SU)	(umhos/cm)	(mV)	(mg/L)	(NTU)	(°	C)	(FEET)	(GALLONS)	
1322	100	4.61	38.95	84.8 6.2		.45	1.77	ವಚ.	30	12:33	INITIAL	
1327	125	4.62	40.09	87.9	87.9 6.		1.59	22.0)4	12.33		
1332	125	4.62	40.44	89.8	ره:	וכ	1.46	21.8	21.83			
1337	125	4.63	40.63	89.1	ھا	.85	2.65	21.51		12:33		
1342	125	4.63	40.75	89.7	. کا	82	2.31	21.46		10.33		
1347	125	4.66	41.01	90.5	6	.84	196	21.51		12:33		
1352	125	4.65	41.23	90.5	b	.88	1.89	21.5	6	12.33		
1357	125	4.66	41.45	91.4	6	તુરૂ	1.97	21.5	4	12.33		
1402	125	4.66	41.46	91.3	ك	.9)	2.05	21.4	8	12.33		
1417	125						1.53			12.33	Post	
NC	TE: STAB	LIZATION	TEST IS COMP	LETE WHEN	ı 3 SUC	CESSIV	E READINGS A	RE WITH	IIN THE I	FOLLOWIN	G LIMITS:	
pH: +/-	0.1	COND.: +/-	3 % ORP	: +/- 10	D.O.:	+/- 10	% TURB: +/-	10 %	or =</td <td>5</td> <td>TEMP.: +/- 3%</td>	5	TEMP.: +/- 3%	
BOTTLES	SFILLED	PRESERV	ATIVE CODES	A - NONE	В-	HNO3	C - H2SO4	D - N	NaOH	E - HC	CL F	
NUMBER	SIZE	TYPE	PRESERVAT	IVE FILT	ERED	NUMB	ER SIZE	TYPE	PF	RESERVAT	VE FILTERED	
2	250 mL	PLASTIC	В	☐ Y	N						Y N N	
2	250 mL	PLASTIC	А		☑ N						☐ Y ☐ N	
1	125 mL	PLASTIC	А	· 🔲 Y	✓ N						□ Y □ N	
					□ N						☐ Y ☐ N	
				□ Y	□N						☐ Y ☐ N	
SHIPPING	METHOD:			ATE SHIPPE	D:			AIRE	BILL NUM	BER:		
COC NUME	COC NUMBER: SIGNATURE: DATE SIGNED:											

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PAGE	1	OF	1
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PROJECT NAME: Dominion - Cope Station							PREPARED			CHECKED			
PROJECT NUMBER: 416559.0007.0000.2.2 BY:							5AY DATE: 8 30 22 BY: D75				DATE:9/1172		
SAMPLE	ID: AS	S-LF-01		WELL [DIAMET	ER: 💢	2"	6" 🗸	OTHER	,, -			
WELL MAT	ERIAL:	X PVC	SS [IRON	GALVA	NIZED S	TEEL		OTHER	1505			
SAMPLE T	SAMPLE TYPE: GW WW SW DI LEACHATE OTHER												
PUR	GING	TIME: 9	D4 D	ATE: 8/3	0/22	SA	AMPLE		C4P0		TE: 8)30)22		
PURGE METHOD		PUMP BAILER	PERISTALTIC	PUMP	•			U COI		ITY: <u>5つい</u> ************************************			
DEPTH TO) WATER:	16.21	T/ PVC			TURBIC	OITY: <u>).5名</u>	NTU					
DEPTH TO	DEPTH TO BOTTOM: 22.44. T/ PVC つないは NONE SLIGHT MODERATE VERY												
WELL VOL	UME:		LITERS	☑ GALLO	NS	TEMPER	RATURE: 29	5.51	C OTH	HER:			
VOLUME F	REMOVED:	0.8	LITERS	☑ GALLO	NS	COLOR	: dear		ODO	OR: <u></u>	Jone		
COLOR:	clea	ኒ ና	OI	DOR: Non	<u> </u>	FILTRA	TE (0.45 um)	YES	K	NO			
			BIDITY			FILTRAT	E COLOR:		FIL	TRATE ODO	R:		
X NONE	SLI		MODERATE	☐ VEF		QC SAM	MPLE: MS	/MSD		DUP-			
DISPOSAL	METHOD:	GROU	ND DRUM	OTHER	1	COMME	ENTS:						
TIME	PURGE RATE	PH	CONDUCTIVITY	ORP		D.O.	TURBIDITY	TEMPE	RATURE	WATER LEVEL	CUMULATIVE PURGE VOLUME		
	(ML/MIN)	(SU)	(umhos/cm)	(mV)	(mg/L)	(NTU)	('	'C)	(FEET)	(GALLONS)		
9107-	75	4.88	60.98	105.3	105.3 5.1		<i>ፕ</i> ・ሜጉ	23	93	10.30	INITIAL		
912	75	4.80	55.55	99.9	99.9 4.		2.54	25.	30	10.30			
ЯП	75	4.53	51.59	86.3	4	.24	2.30	256	اه'	10.30			
8922	つら	4.337	54.33	80.3	4	.04	1.83	25.2	18	10:30			
0927	75	4.30	57,66	77.9		.08	1,88	25.51		10:30			
D 9 32	75	4.31	57.74	74.9	1	1.05	1.71	25.	59	10.30			
0937	75	4.3)	57.55	73.9		.07	1.64	25.2	19	10.30			
0942	つぢ	4.30	57.68	73.4		.06	1.58	25.5		10.30			
0957	76				<u> </u>		1,47			10:30	Post		
	•									10.20	-1034		
NC.	TE: STARI	LIZATION	TEST IS COMP	I ETE WUEN	2 8110	CESSIVE	DEADINGS A	DE WITI	UNI THE E	COLL COMINI	C. LIMITO.		
pH: +/-		COND.: +/-		: +/- 10			TURB: +/-		or =</td <td></td> <td>JEMP.: +/- 3%</td>		JEMP.: +/- 3%		
BOTTLES	FILLED	PRESERVA	ATIVE CODES	A - NONE	В-	HNO3	C - H2SO4	D - 1	NaOH	E - HC	L F		
NUMBER	SIZE	TYPE	PRESERVAT	IVE FILTE	RED	NUMBE	R SIZE	TYP	E PR	ESERVATI	/E FILTERED		
2	250 mL	PLASTIC	В	□ Y	☑ N						□Y □N		
2	250 mL	PLASTIC	А	□ Y	✓ N						□Y □N		
1	125 mL	PLASTIC	А	□Y	☑ N						□Y □N		
□Y □ N											Y N		
				□ Y	ПИ			,			Y N		
SHIPPING	METHOD:		D	ATE SHIPPE	D:		-	AIRF	BILL NI IM	BER.			
SHIPPING METHOD: DATE SHIPPED: AIRBILL NUMBER: COC NUMBER: DATE SIGNED:													

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PROJECT	ΓNAME:	Domin	nion - Cope Sta	ition	PREPARED				CHECKED			
PROJECT	r numbei	R: 41655	9.0007.0000.2	2	BY: 37	41	DATE:83	D S BY:	Dī	5	DATE: 9///22	
SAMPLE	ID: AS	S-LF-02		WELL	DIAMET	ER: 📉	2"	6" 🗸 O	THER	••		
WELL MAT	ERIAL:	 ▶ PVC	SS	IRON _	GALVA	NIZED S	STEEL	o	THER			
SAMPLE T	YPE:	⊠ GW	ww	SW 🗌	DI		LEACHATE	O	THER			
PUR	GING	TIME:)C	04 04	ATE: 8-30)-DB	S	AMPLE	TIME: \	J47	DA	ATE: 8/30/27	
PURGE		PUMP	PERISTALTIC					U COND	JCTIV	/ITY: <u>82.</u>		
METHOD): <u></u>	BAILER						V DO:	<u> </u>	<u>9</u> mg	/L	
DEPTH TO WATER: 9.78 T/ PVC TURBIDITY: 2.00 NTU								_				
DEPTH TO	ВОТТОМ	22.65	T/ PVC			NOI 🔀		GHT [МО	DERATE	☐ VERY	
WELL VOL			LITERS	☑ GALLO			RATURE: 25	<u>১.১৭</u> ℃	ОТІ	HER:		
	REMOVED:		LITERS	⅓ GALLO	NS		R: <u>C1806</u>		OD		ioni	
COLOR:	dear		OD	OR: Mone		FILTRA	TE (0.45 um)	YES	×	NO		
 			BIDITY				TE COLOR:			TRATE ODC)R:	
NONE			MODERATE	VEI				/MSD	Ш	DUP-		
DISPOSAL		: GROUI	ND DRUM	T OTHER	₹	СОММ	ENTS:					
TIME	PURGE RATE	PH	CONDUCTIVITY	ORP		D.O.	TURBIDITY	TEMPERA	TURE	WATER LEVEL	CUMULATIVE PURGE VOLUME	
	(ML/MIN)	(SU)	(umhos/cm)	(mV)	(mg/L)	(NTU)	(°C)		(FEET)	(GALLONS)	
1012	ๅଟ	4.79	86.21	<i>જ</i> ે.4	3	.95	2.64	25.97	3	9.82	INITIAL	
1022	75	4.40	શ્રેઝ.શ્રેઇ	9),1	3	3.30	2.21	25.0	4	9.83		
1027	75	4.40	82.76	90.6	3	82.0	1.81	25.00	_ م	9.83		
1032	75	4.39	82.6G	91.4	3	P.C.	1.94	25.06	,	9.83		
1037	75	4,40	82.60	91.8	3	.58	2.01	25.30		9.83		
1042	75	4.41	81.98	91.7	3	.30	2.14	26.33		9.83		
1047	75	4.41	82.10	91.9	3	.D9	2.06	25.20		9.83		
1103	75						1.93			9.83	Post	
NC	TE: STAB	ILIZATION	TEST IS COMPI	ETE WHEN	I 3 SUC	CESSIV	E READINGS A	RE WITHIN	THE	FOLLOWIN	G LIMITS:	
pH: +/-	0.1	COND.: +/-	3 % ORP:	+/- 10	D.O.:	+/- 10 %	% 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 - Na	DΗ	E - HC	L F	
NUMBER	SIZE	TYPE	PRESERVATI	VE FILTI	ERED	NUMBI	ER SIZE	TYPE	PF	RESERVATI	VE FILTERED	
2	250 mL	PLASTIC	В	□ Y	N						☐ Y ☐ N	
2	250 mL	PLASTIC	А	☐ Y	N						☐ Y ☐ N	
1	125 mL PLASTIC A Y N				N						☐ Y ☐ N	
				□ Y	N					<u>i</u>	□У□И	
				Y	Пи					· · · · · · · · · · · · · · · · · · ·	Y N	
SHIPPING	METHOD:		DA	ATE SHIPPE	D:		·	AIRBILI	_ NUM	IBER:		
COC NUMBER: SIGNATURE: DATE SIGNED:												

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◆ TRC

PROJECT NAME: Dominion - Cope Station						PR	EPARED		CHECKED			
PROJECT NUMBER: 416559.0007.0000.2.2					BY:	ΣΆ\	DATE: 8	30/22 B	Y: D	55	DATE: 9(1127	
SAMPLE	ID: M\	N-40		WELL	DIAMET	ER: 🔀	2" 4"	6" 🗸	OTHER			
WELL MAT	ERIAL:	X PVC	□ss [] IRON [GALVA	NIZED S	STEEL		OTHER			
SAMPLE T	YPE:	≰ GW	□ww [] sw 🔲	DI		LEACHATE		OTHER			
PUR	GING	TIME: \[Po	DATE:8/30	33	S	AMPLE	TIME: 11	52	DA	TE: 8/30/22	
PURGE → PUMP PERISTALTIC PUMP METHOD: □ BAILER								U CON	DUCTIV	ITY: <u>480.</u> 17mg/		
DEPTH TO	WATER:	10.64	T/ PVC			TURBI	DITY: 1.84	NTU				
DEPTH TO	ВОТТОМ:	28.14	T/ PVC			ION K	NE 🗌 SLI	GHT	MOI	DERATE	☐ VERY	
WELL VOL	UME:		LITERS	✓ GALLO	NS	TEMPE	RATURE: 2	<u> 144 °</u>	ОТН	HER:		
VOLUME F	REMOVED:		LITERS	✓ GALLC	NS	COLO	R: Clear		ODO	OR:	one	
COLOR:	<u>Je</u>	(A)C	(DDOR: NOOL	<u> </u>	FILTRA	TE (0.45 um)	YES	X	NO		
		TUR	BIDITY			FILTRA	TE COLOR:		FIL	TRATE ODO	R:	
MONE.	SLI	GHT 🗌	MODERATE	☐ VEI	RY		MPLE: MS	/MSD		DUP-		
DISPOSAL	METHOD:	GROU	ND 🗌 DRU	И 🛛 ОТНЕР	₹	СОММ	ENTS: FBL	K- 609	-LF-g	2303 o	4 1200	
TIME	PURGE RATE	PH	CONDUCTIVI	ORP		D.O.	TURBIDITY	TEMPER	ATURE	WATER LEVEL	CUMULATIVE PURGE VOLUME	
	(ML/MIN)	(SU)	(umhos/cm)	(mV)	(mg/L)	(NTU)	(°(C)	(FEET)	(GALLONS)	
1112	100	391	49).62	90.1	٥	.ઇઇ	2.00	25.5	17	1D.66	INITIAL	
1117	100	3.90	496.61	90.4	D	.30	1.85	25.33	7	10.67		
1122	100	391	数よりかい	3 92.7	3 0	.24	1.94	25.1	J	10.68		
บา	100	3.93	484.41	97.5	0	.23	1.89	249	14	10.68		
1132	100	3.96	479.28	104.0) (.18	1.94	26.t	26.08			
1137	100	3.98	477.00	107.3	0	.17	1.98	25.11		10.68		
1142	100	3.99	479.92	109.4	0	.17	2.03	24.	6 5	10.68		
1147	100	4.00	482.88	111.7	C	1.17	1.86	243	3	10.68		
1152	100	4.01	480.97	ロルフ	2	רו.כ	1.84	24.4	44	10.68		
1209	100						1.72			1068	Post	
NC	TE: STABI	LIZATION 1	TEST IS COM	PLETE WHEN	N 3 SUC	CESSIV	E READINGS A	RE WITH	IN THE I	FOLLOWING	G LIMITS:	
pH: +/-	0.1	COND.: +/-	3 % OR	P: +/- 10	D.O.:	+/- 10 %	% TURB: +/-	10 %	or =</td <td>5</td> <td>TEMP.: +/- 3%</td>	5	TEMP.: +/- 3%	
BOTTLES	SFILLED	PRESERV	ATIVE CODE	A - NONE	В-	HNO3	C - H2SO4	D-N	aOH	E - HC	L F	
NUMBER	SIZE	TYPE	PRESERVA	TIVE FILT	ERED	NUMBI	ER SIZE	TYPE	PF	RESERVATI	VE FILTERED	
38	250 mL	PLASTIC	В		✓ N						Y N	
2	250 mL	PLASTIC	А	Y	☑ N						Y N	
1	125 mL	PLASTIC	А	□ Y	✓ N						□Y □N	
				□ Y	□N						□Y □N	
				ΠY	□ N						□Y □N	
SHIPPING	METHOD:			DATE SHIPPE	ED:			AIRB	LL NUM	IBER:		
COC NUMBER: SIGNATURE: DATE SIGNED:												

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WATER QUALITY METER CALIBRATION LOG

	WAIERQ	UALII	V	ER CALIBRATION LOG	,
PROJECT NAME:	Dominion - Cope Station			MODEL: 909820	SAMPLER: (JY) JB
PROJECT NO.:	416559.0007.0000.2.2			1	DATE: 8 27 22
PH	CALIBRATION CHECK			•	CTIVITY CALIBRATION CHECK
pH 7 (LOT#): 21380102 (EXP. DATE): 4133 PRE-CAL. READING / STANDARD	PH 4/10 (LOT#): 2080056 (EXP. DATE): 4123 PRE-SAL READING/STANDARD	CAL. RANGE	TIME	CAL. READING (LOT#): A) C (EXP. DATE): PRE-CAL. READING / STANDARD	TEMPERATURE CAL. (°CELSIUS) RANGE
6.27 /7.00	7.00 /7.00	X WITHIN	มาย	4452.3/4490	27.44 A WITHIN 1/26
9.82 / 10.00	9.98 /10.00	IN LAUTIUM			WITHIN RANGE
4:24 /24.00	3.99 / 4.00	WITHIN	15.2.	,	WITHIN
1	1	WITHIN	1,00	,	WITHIN
ORP	CALIBRATION CHECK	IVANOL		DO CAL	IBRATION CHECK
CAL. READING	TEMPERATURE	ī	ſ	CALIBRATION RE	
(LOT#): 21140143 (EXP. DATE): 423 PRE-CAL. READING/STANDARD	(°CELSIUS)	CAL. RANGE	TIME	(mg/L)	CAL. RANGE
219.0/223	27.42	WITHIN		Baro: 761.03 mm	oHg WITHIN RANGE 1115
227.9/228	27.65	WITHIN RANGE	1129	Temp: 27,25 °C	WITHIN
. 1		WITHIN RANGE		Actual: 8.00 mg)	∑ WITHIN RANGE
1		WITHIN RANGE		(Calc: 7.9 mg)2	WITHIN
TURBID	ITY CALIBRATION CHEC	K			COMMENTS
CALIBRATION	READING (NTU)			AUTOCAL SOLUTION	STANDARD SOLUTION (S)
(LOT#): 2138013A(0.19)	(LOT #): 21320048(1.0)	CAL.	TIME		LIST LOT NUMBERS AND EXPIRATION DAT
(EXP. DATE): 4)なる	(EXP. DATE): コラ3	RANGE	I IIVIE	(EXP. DATE): 4/23	UNDER CALIBRATION CHECK
PRE-CAL. READING / STANDARD	POST-CAL. READING / STANDARD			CALIBRATED PARAMETERS	CALIBRATION RANGES (1)
0.02 10.00	1	WITHIN RANGE	1133	Ж рН	pH: +/- 0.2 S.U.
1.14 / 1.00	1		1134	Z COND	COND: +/- 1% OF CAL. STANDARD
9.92 /10.00	1	WITHIN RANGE	1)34	ORP	ORP: +/- 25 mV
1	/	WITHIN RANGE		☐ D.O.	D.O.: VARIES
	NOTES			☐ TURB	TURB: +/- 5% OF CAL. STANDARD
10 NTU Lot# 214	C8/4:4/33				⁽¹⁾ CALIBRATION RANGES ARE SPECIFIC T THE MODEL OF THE WATER QUALITY MET
P	ROBLEMS ENCOUNTERED			CORRECTION	VE ACTIONS
SIGNED SIGNED	3/:	31/22 DATE		CHECKED BY	9/1/z

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PROJECT NAME:	Dominion - Cope Station			MODEL: Agua Trell 400	SAMPLER: JY/(B)
PROJECT NO.:	416559.0007.0000.2.2			SERIAL #: 851425	DATE:8-29-2022
Pi	A)Z				ICTIVITY CALIBRATION CHECK
pH 7	pH 4 / 10	Ţ	<u> </u>	CAL. READING	TEMPERATURE
(LOT#): ユバラション	(LOT #): 200 800 86	CAL.		(LOT#):	CAL.
(EXP. DATE): 4)つろ	(EXP. DATE): 4 23	RANGE	TIME	(EXP. DATE):	(°CELSIUS) RANGE TIME
PRE-CAL. READING / STANDARD	PRE-CAL. READING / STANDARD			PRE-CAL. READING / STANDARD	
6.61 17.00	9.66 10.00	WITHIN RANGE	1114	4464 1 4490	27.98 WITHIN 1124
1	4.39 14.00	WITHIN RANGE	1121	4495 14490	28.27 X WITHIN 1127
6.98 17.00	9.96 110.00		1119	1	WITHIN
1	4.01 14.00	+	1122	/	WITHIN
OR	P CALIBRATION CHECK	1		D.O. CAL	IBRATION CHECK
CAL. READING	TEMPERATURE			CALIBRATION R	EADING
(LOT#):21140143	(°CELSIUS)	CAL.	 TIME		CAL. TIME
(EXP. DATE): 4)な3	(GELGIUS)	RANGE	'''	(mg/L).	RANGE RANGE
PRE-CAL, READING / STANDARD					
226 1228	28.82	WITHIN RANGE	102	Baro! 760.25 m	m (tg WITHIN 1135
227.81228	28.85	WITHIN RANGE	1130	Baro! 760.25 m Temp! 29.50°C Act: 7.67 mg/L	WITHIN RANGE
1		WITHIN RANGE		Act: 7.67 mg/L	WITHIN
1		WITHIN		Calci. 7.6 mg/L	WITHIN
TURB	DITY CALIBRATION CHEC	СК	I		COMMENTS
	N READING (NTU)			AUTOCAL SOLUTION	STANDARD SOLUTION (S)
	6) (LOT#):2) 320048 (1.5)	CAL.	 TIME	(гот #): お)カムベンプ	LIST LOT NUMBERS AND EXPIRATION DATE
(EXP. DATE): 山)の3	(EXP. DATE): ユスタ	RANGE	''''	(EXP. DATE): リロろ	UNDER CALIBRATION CHECK
PRE-CAL. READING / STANDARD	POST-CAL. READING / STANDARD	1		CALIBRATED PARAMETERS	CALIBRATION RANGES (1)
0.01/0.00	0.01 10.00	WITHIN RANGE	 	На 🔀 📗	pH: +/- 0.2 S.U.
1.12/1.00	0.98 / 1.00	WITHIN RANGE	1134	M COND	COND: +/- 1% OF CAL. STANDARD
8.86 110.00	10.00/10.00	☐ WITHIN RANGE	1136	☐ ORP	ORP: +/- 25 mV
	1	WITHIN RANGE		□ D.O.	D.O.: VARIES
	NOTES			TURB	TURB: +/- 5% OF CAL. STANDARD
10 NTU LOT#	21400081 Exp. 4/3	3			(1) CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE WATER QUALITY METE
					THE MODEL OF THE WATER GOALITY METE
	PROBLEMS ENCOUNTERED			CORRECT	IVE ACTIONS
		·			
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PROJECT NAME:	Dominion - Cope Station			MODEL:	Λ	Tall 400	SAMPLE		JY/JB	
PROJECT NO.:	416559.0007.0000,2,2			SERIAL#	174219	Troll 400	DATE: 4		,	··
	- Alc	- -		OLI WILL			· · ·	- + -	133	
	CALIBRATION CHECK	T		1 .		SPECIFIC CONDU				HECK
рН 7 (LOT #): Д 138 D1 <i>D</i> G	pH 4 / 10 (LOT #): 2 \infty \gegin{array}{c} \lambda \text{SOOSL} \rightarrow \text{SOOSL} \righ				СА (LOT#): (AL. READING	TEMPER	ATURE		
(EXP. DATE): 4) 23	(EXP. DATE): 4/33	CAL. RANGE	TIME		(EXP. DATI	•	(°CEL	SIUS)	CAL. RANGE	TIME
PRE-CAL, READING / STANDARD	RRE-CAL. READING / STANDARD				•	READING / STANDARD	(322	3.00,		
7.03 /7.00	1000	WITHIN RANGE	825	1 [4448	39 14490	23.5	કુર 	WITHIN	
9.80 / 10.00	10.01 / 10.00	WITHIN RANGE		1 1		19 / 4490	23.9		WITHIN	832
4.25 / 4.00	4.00 /4.00	WITHIN RANGE				/ .	2.2.20	24	WITHIN	0 2
1	7.00	WITHIN	0 90	-					RANGE WITHIN	
ORP	CALIBRATION CHECK	RANGE		[」]		, DO CAI	IBRATIO	N CHE	RANGE	<u> </u>
CAL. READING	TEMPERATURE			1 h		CALIBRATION R		II OIIE	T	
(LOT#): 21149143	(°CELSIUS)	CAL.	 TIME						CAL.	TIME
(EXP. DATE): 4 23	(0213.55)	RANGE	111111			(mg/L)			RANGE	I IIVIL
PRE-CAL. READING / STANDARD		WITHIN		-		260 41	11		WITHIN	0.0
233.6/228	23.76	RANGE			BARO	: 759.56 mr : 33.26 °C \; 8.55 mg/L	nng		WITHIN RANGE	383
227.8/228	23.79	RANGE			Temp	: 23,25 2			☐ RANGE	
		WITHIN RANGE			Actua	11. 8.22 welr			WITHIN RANGE	
1		WITHIN RANGE] [<u> Ca/c:</u>	8.6 mg/L			WITHIN RANGE	
	ITY CALIBRATION CHEC	K			ker-1		COMME			
	READING (NTU) (LOT #): 2 13 2002 48 (1.9)			1 1		DCAL SOLUTION L)りつつつつ			SOLUTION (
(EXP. DATE): 4/can	(EXP. DATE): 2/23	CAL. RANGE	TIME	1 1		E): 4/23			AND EXPIRATI BRATION CHE	
PRE-CAL. READING / STANDARD	POST-CAL. READING / STANDARD					ATED PARAMETERS	С	ALIBRATI	ON RANGES (1)
0.00 / 0.00	1	WITHIN RANGE	839] [<u> 2</u>	pН	pH:	+/- 0.2 S.	U.	
1.09 /1.00	1	WITHIN RANGE		1	7	COND	COND:	+/- 1% O	F CAL. STAN	DARD
9.91 / 10.00	1	WITHIN RANGE	840	-		ORP	ORP:	+/- 25 m\	/	
1	1	WITHIN	- ,0	1		D.O.	D.O.:	VARIES		
	NOTES	104102		J		TURB	TURB:	+/- 5% O	F CAL. STAN	DARD
10 NTU LOT# 21				1	П					4
10 NTU LOT# 21	140081 Exp: 4 23								NGES ARE SP WATER QUAL	
										
				j						
P	ROBLEMS ENCOUNTERED					CORRECT	IVE ACTIONS			
			-							
			-				1			
						$\overline{}$	$-/\!\!\!/-$			
1/1//	p/-	acho			U	1	$\int_{\mathbb{R}} \int_{\mathbb{R}} dt$		01	/
					,	1.2/. [/	24/		,,,,	



	WATERQ	UALII	T IVIC I	ER CA	LIBKA	HON LOG			
PROJECT NAME:	Dominion - Cope Station			MODEL: /	Aqua Tri	N 400	SAMPLER:	JY /B	
PROJECT NO.:	416559.0007.0000.2.2			SERIAL#:	85142	5	DATE: 8-30-	2022	
PH	CALIBRATION CHECK				SPE	CIFIC CONDL	JCTIVITY CALIBI		HECK
pH 7 (LOT#): スパスのつつ (EXP. DATE): りかっ PRE-CAL. READING / STANDARD	PH 4/10 (LOT #): 20080056 (EXP. DATE): 4/23 PRE-CAL. READING / STANDARD	CAL. RANGE	TIME	I I'	.OT #): A	READING C ADING / STANDARD	TEMPERATURE (°CELSIUS)	CAL. RANGE	TIME
7.20 / 7.00	9.62 / 10.00	WITHIN	0829		4364	14490	24.55	WITHIN	0836
1	4,41 /4.00	-		1	4484	14490	24.63	~	0837
6.98 17.00	10.00 / 10.00	WITHIN RANGE	0028		•	1		WITHIN	
1	3.99 / 4.00	WITHIN RANGE	ا. صبح کا			1		WITHIN	
ORP	CALIBRATION CHECK		10021	' 		D.O. CAL	IBRATION CHE		I
CAL. READING	TEMPERATURE			1	C	ALIBRATION R	EADING		
(LOT#): スパントリップ (EXP. DATE): サンジ PRE-CAL. READING / STANDARD	(°CELSIUS)	CAL. RANGE	TIME			(mg/L)	₹	CAL. RANGE	TIME
231.4 / 228	24.76	WITHIN	0839	-	Q01 7	58.78mm t	39	WITHIN	0\23
228.7/228	24,78	RANGE WITHIN	100,41	.	tempi a	13.51°C	8	WITHIN	02343
1	201,10	WITHIN	00.11		Act: 8.8	50		RANGE	
1		RANGE WITHIN		(Calc: 8.	60		RANGE WITHIN	
TURRID	ITY CALIBRATION CHEC	RANGE		l L			COMMENTS	RANGE	
	READING (NTU)	<u> </u>			AUTOCA	L SOLUTION	STANDARD	SOLUTION A	(6)
(LOT #): 21390129 (CA)		CAL.	<i>t</i>		.от#): 🕰) Ч				
(EXP. DATE): 4) 23	(EXP. DATE): ユ)なっ	RANGE	TIME	1 1	:XP. DATE):	1	LIST LOT NUMBERS A		
PRE-CAL. READING / STANDARD	POST-CAL, READING / STANDARD			<u> </u>		D PARAMETERS	ļ	ON RANGES (
0.01 /0.00	0.01 / 0.00	WITHIN	084()		ØAZIBIGATE p⊢		pH: +/- 0.2 S.		
1.55 / 1.00	1.02 / 1.00	EZI MITHIN	0845		÷	OND	COND: +/- 1% OF	CAL. STAN	DARD
10.5% / 10.00	10.00 / 10.00	NITHIN			, OF	RP	ORP: +/- 25 mV	,	
/	1	WITHIN			D.	O.	D.O.: VARIES		
	NOTES			'	□ ті	JRB	TURB: +/- 5% OF	CAL. STAN	DARD
10 NTU Lot#9	21400081 EXP:4/2	3					(1) CALIBRATION RAN THE MODEL OF THE		
		j.		L			1		
Р	ROBLEMS ENCOUNTERED			<u> </u>		CORRECT	IVE ACTIONS		, . , -
				. •					
				k				-	
							$\overline{}$		
Quest Bushly	L 8-	-31-20	22		9			9	1/1/2.
SIGNED		DATE	•		CHECKI	ED BY N			DATE





gel.com

September 12, 2022

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

Re: CCR Groundwater Monitoring - Level 3 Package

Work Order: 591443

Dear Kelly Hicks:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on August 30, 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

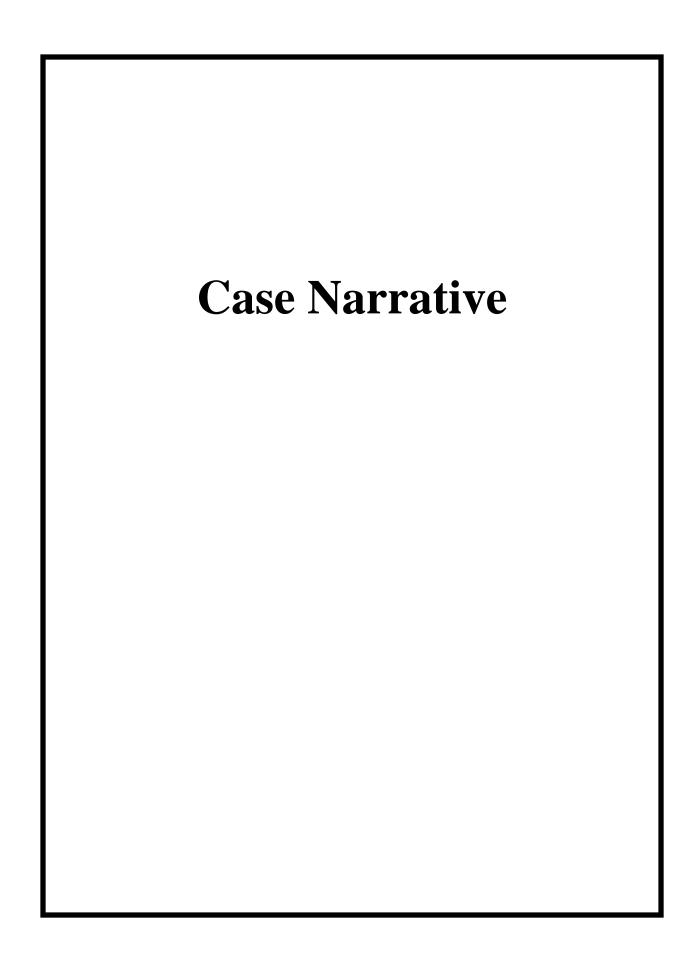
Meredith Boldiford

Purchase Order: 50149867 Chain of Custody: 206609

Enclosures

Table of Contents

Case Narrative	1
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Metals Analysis	10
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Case Narrative	46
Sample Data Summary	51
Quality Control Summary	66



Receipt Narrative for Dominion Energy (50149867) SDG: 591443

September 12, 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 August 30, 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:

Laboratory ID	Client ID
591443001	MW-LF-01-2022Q3
591443002	MW-LF-02-2022Q3
591443003	MW-LF-03-2022Q3
591443004	MW-LF-04-2022Q3
591443005	MW-LF-05-2022Q3
591443006	FBLK-COP-LF-22302
591443007	MW-LF-06-2022Q3
591443008	MW-BG-06-2022Q3
591443009	MW-BG-16-2022Q3
591443010	DU-COP-LF-22302
591443011	AS-LF-01-2022Q3
591443012	AS-LF-02-2022Q3
591443013	MW-40-2022Q3
591443014	FBLK-COP-LF-22303

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 69 SDG: 591443

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

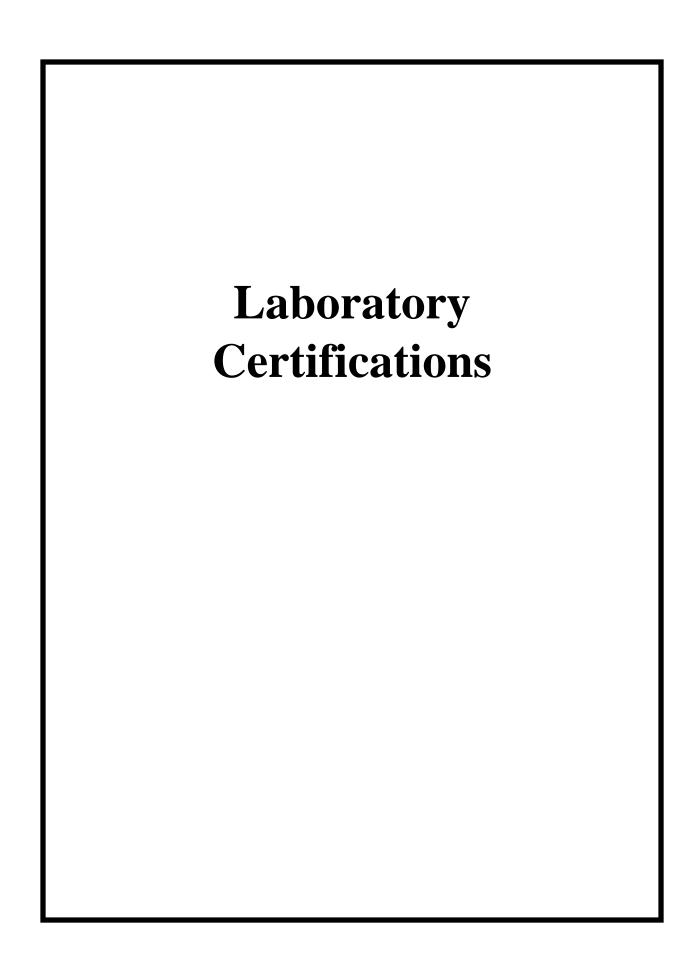
Meredith Boldiford



	5612	2	Chain of	Chemistr	Chemistry Radiochemistry Radiobioassay Specialty Analytics of Custody and Analytical Request	mistry i kadiochemistry i kadiobioassay i speciatry Custody and Analytical Reduest	rical R	Specian	y Analytics			Charlest	Charleston, SC 29407	
O 50149867	GEL Work Order Number: 206609	mber: 2066	4 00.	3	GEL Pro	GEL Project Manager: Meredith Boddiford	ger: Me	redith !	3oddiford	1		Fax: (84	Fax: (843) 766-1178	
Client Name: Dominion Energy		Phone	Phone # 803-258-1528	**				Samp	Sample Analysis Requested (5)	is Reque	sted (5) (Fill in	n the number of	(Fill in the number of containers for each test)	or each test)
Proscu'Site Name: Cope Station Landfill CCR 2022Q3	Q3	Fax #				Should this	this	S		IN				< Preservative Type (6)
Adapess: Cope, South Carolina						sample be considered:	e be	tainer						
Competed By:	Send Results To: AReed@envstd.com	ed@envstd.	com	l II		Дdd Л)	rds		20te	9.008 48 sls	8,002			Comments Note: extra sample is
Sample ID * For composites - indicate start and stop date/time	*Date Collected	*Time cted Collected (Military)	ne sted QC mry) Code (2)	Field (3)	Sample (3) Matrix (4)	Radioactive yes, please sup isotopic info.)	(7) Known or possible Haza	госяј пишрег	CI' ET	EPA E	Eby 3			required for sample specific QC
MW-LF-01-2022Q3	80	-		z	GW	Z		X	×	×				
MW-LF-02-2022Q3 MS-LF-02-2022Q3	08-30-32		Z	z	GW	z			×	×				
MW-LF-03-2022Q3	08-30-32		N OS	Z	GW	z		N N	×	メ				
MW-LF-04-2022Q3	G-22-30	20 1516	Z	Ż	GW	z		8	X	×				
MW-LF-05-2022Q3	18-22-33	OCH CE	Z Q	z	GW	z		X	×	X				
FBIK-COP-LE-22301- FBLK-COP-LF-28	-2530 08-29-22	22 1320	E Q	z	AQ	Z		2 ×	X	×				see attached work
MW-LF-06-2022Q3	08-29-23	22 1255	z S	Z	GW	z			×	X				order for details
MW-BG-06-2022Q3	3-15-80	THE 1247	N C	z	GW	z		W	X	X				
MW-BG-16-2022Q3	28-27-32	23 1402	Z	z	GW	z		× ×	X	×				
00-60P-LF-22301- DU-COP-LF-22302	22-92-22	1	E	z	GW	z		3	*	×				
Chai	Chain of Custody Signatures	nres							TAT	FAT Requested:	d: Normal:	X Rush:	Specify:	
Relinquished By (Signed) Date Time	Received	Received by (signed)	Date	Time			Fax Results: [Yes [X No	No				
(Just Budly 8-30-22 142)	25 chim	CRESION	mit of	18/30	CEP	79°	Select Deliverable: [liverable	:[]CofA] QC Summary []	[] level 1] Le	Level 2 [X Level	vel 3 [Level 4
	200	A	St 30	井上	_	*	Additional Remarks.	d Remari	ts:					
	<u>0</u>					7	For Lab	Receiving	g Use On	y: Custoa	For Lab Receiving Use Only: Custody Seal Intact? [] Yes	-	o Cooler Temp:	p:oC
> For sample shipping and delivery details, see Sample Receipt & Review form (SRR.) Chain of Custody Number = Client Determined Cocodes: 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	ple Receipt & Review f. Duplicate, EB = Equipment	orm (SRR.) Blank, MS = M	atrix Spike Si	unple, MSE) = Matrix S ₁	Sample Collection Time Zone: [X] Eastern sike Duplicate Sample, G = Grab, C = Composite	ollection Sample, G	Time Zo	me: [X]	astern	[] Pacific [[] Central []	[] Mountain [] Other:] Other:
.) Field Filtered: For liquid matrices, indicate with a - Y - for yes the sample was field filtered or - N - for sample was not field filtered. .) Matrix Codes: DW-Drinking Water, GW-Groundwater, SW-Surface Water, WW-Water, W-Water, ML-Mise Liquid, SO.	the sample was field filtered Surface Water, WW=Waste	or - N - for samy	ple was not fi	eld filtered. Liquid, SO=	Soil, SD=Se	diment, SL=S	ludge, SS=	Solid Wast	e, 0=0il, F	=Filter, P=W	reed. SO=Soil, SD=Sediment, SL=Sludge, SS=Soild Waste, O=Oil, F=Filter, P=Wipc, U=Urine, F=Fecal, N=Nasal	ecal, N=Nasal		
.) 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). • Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, HA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate, If no preservative is added = leave field blank	8260B, 6010B/7470A) and t SH = Sodium Hydroxide, SA	umber of contai	iners provided I, AA = Ascol	d for each (i.	e. 8260B - : X = Hexane	1, 6010B/747t. ST = Sodiun	7A - 1). n Thiosulfat	te, If no pre	sservative is	added = leav	ve field blank			
) KNOWN OR POSSIBLE HAZARDS	Characteristic Hazards	Ī	Listed Waste				Other		1000				Please provi	Please provide any additional details
	FL = Flammable/Ignitable CO = Corrosive RE = Reactive TSCA Regulated	Г	LW= Listed Waste (F,K,P and U-listed Waste code(s):		wastes.)		OT= Other / Unknown (i.e.: High/low pH, asbest misc. health hazards, etc.) Description:	er / Unkr v/low pH tth hazar m:	own , asbestos, ds, etc.)	, berylliun	OT= Other / Unknown (i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.) Description:		below regar concerns. (i site collectec	below regarding handling and/or disposal concerns, (i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)
MR= Misc. RCRA metals	PCB = Polychlorinated biphenyls	1				11								

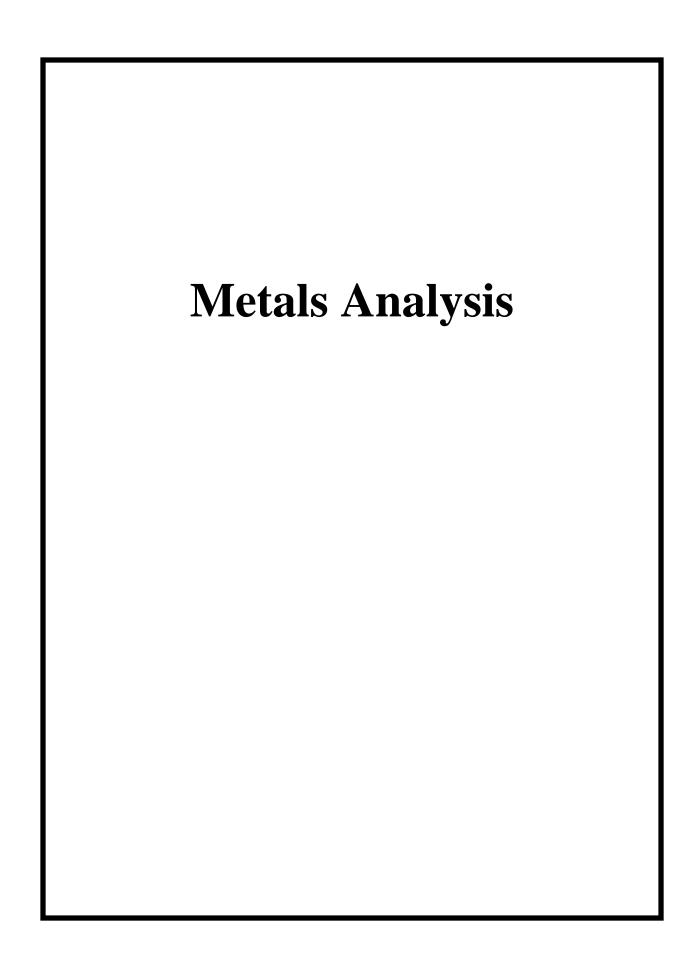
Pieter # 416559.0007.0000.2.2	1				ADOP nistry I Ra	ato diochemi	Laboratories LLC Chemistry I Radiochemistry I Radiobioassay I Specialty Analytics	LC Jassay I t	Specialty	Analytics					GEL Lab 2040 Sav Charleste	GEL Laboratories, LLC 2040 Savage Road Charleston, SC 29407	JLC 07		
COC Number (1). PO Number PO 50149867	GEI. Wor	GEL Work Order Number: 206609		Chain of	ᇙ	ody an	Custody and Analytical Request	cal R	equest	oddiford					Phone: (8	Phone: (843) 556-8171	171		
Control Name: Dominion Energy			Phone # 803-258-152	-258-15	∞		0		Sample	Sample Analysis Requested (5)	is Requ	ested ((Fill i	n the m	imber o	(Fill in the number of containers for each test)	rs for eacl	1 test)	
Project/Site Name: Cope Station Landfill CCR 2022Q3	2022Q3		Fax#				Should this	iis	S		IIX.	IN					V	< Preservative Type (6)	(9) ad/
Access: Cope, South Carolina							sample be considered:	d:	rainer:		Ca								
Confected By:	Send Resu	Send Results To: AReed@envstd.com	nvstd.com				N)	sp.ii	10.79								Z	Comments Note: extra sample is	s ple is
Sample ID * For composites - indicate start and stop date/time	ate/time	*Date Collected (mm-dd-yy)	*Time Collected (Military) (thmm)	QC Code (2)	Field Filtered (3)	Sample Matrix ⁽⁴⁾	Radioactive yes, please sur isotopic info.)	(7) Known or possible Haza	Total number TT	CI' ET	EPA 3	Eb¥ 3					Ā	required for sample specific QC	mple
AS-LF-01-2022Q3		28-30-22	CH60	z	z	GW	z		×	*	×								
AS-LF-02-2022Q3		08-30-30	C401	z	z	GW	z		×	×	×				6				
MW-40-2022Q3		08-30-30	1152	z	z	GW	z	, ,	× ×	*	×								
FBLK COPLESSIBL FRLK-CSP-LF-35838	F-22803	C&-30-30	1306	FB	z	AQ	z		X	*	X								
					1					H	-		-				see	see attached work	X
														L			orde	order for details	
	Chain of Cust	Chain of Custody Signatures			Ī					TAT	TAT Requested:	-	Normal:	×	Rush:	Specify:	fy:		
Relinquished By (Signed) Date T.	Time	Received by (signed)	ned) Date	te	Time		Fa	k Result	Fax Results: [] Yes	es [X] No	No No								
local Bearley 8-30-22	1425	The state of the s	SLCA VII-	34	X Pacs	88	405	ect Del	Select Deliverable: [_		[] QC Summary		[] level 1	[] Level 2	11.7	[X] Level 3	[] Level 4	
2/		2			1		Аа	ditional	Additional Remarks	·:-									
		3					For Lab Receiving Use Only: Custody Seal Intact	r Lab R	eceiving	For Lab Receiving Use Only: Custody Seal Intact? Yes	y: Custo	dy Seal		[] Yes		Cooler Temp:	emp:	Ç	
Sumpte Suppring and aetwery aetatis, see Sample Keeetpt & Keytery Jorn (SKK.) 1.) Chain of Custody Number = Client Determined 2.) QC Codes: N = Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Marrix Spike Sample, MSD = Marrix Spike Duplicate Sample, G = Grab, C = Composite	Sample Keceup Field Duplicate, E	B = Equipment Blank,	SKK.) MS = Matrix Sp	ike Sampl	2, MSD = 1	Matrix Spi	ke Duplicate S	ample, G	= Grab, C	= Composi	ie castelli	8 1			11.7	l J.Mountain [] Ottor.	anor 1	2	
Principal French Function: For requirement, marked with a * 1 * 10 fyes the sample was need intered or * 1 * 10 fyes the sample was need intered or * 1 * 10 fyes the sample was need intered or * 1 * 10 fyes the sample was need intered or * 1 * 10 fyes the sample was need intered or * 1 * 10 fyes the sample was need intered or * 1 * 10 fyes the sample was need intered or * 1 * 10 fyes the sample was need or * 1 * 10 fyes the sample was need or * 1 * 10 fyes the sample was need or * 1 * 10 fyes the sample was need or * 1 * 10 fyes the sample was need or * 1 * 10 fyes the sample was need or * 1 * 10 fyes the sample was need or * 1 * 10 fyes the sample was need or * 1 * 10 fyes the sample was need to * 1 fy	or yes the sample w SW=Surface Wate d (i.e. 8260B, 6010	r, WW=Waste Water, B/7470A) and number	W=Water, ML=1 of containers pro	Misc Liqui vided for	d, SO=Soil asch (i.e. 8.	, SD=Sed	ment, SL-Slu 6010B/7470A	lge, SS=S	solid Waste	, O-Oil, F	Filter, P=	Wipe, U=	Urine, F=F	ecal, N=N	iasal				
3.) Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfunc Acid, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate, If no preservative is added = leave field blank	Acid, SH = Sodiun	Hydroxide, SA = Sulf	uric Acid, AA =	Ascorbic	Acid, HX =	Hexane,	ST = Sodium 1	hiosulfate	e, If no pre	servative is	added = le	ave field	lank						
S S	Characteristic I FL = Flammable CO = Corrosive	Characteristic Hazards FL = Flammable/Ignitable CO = Corrosive	Listed Waste LW=Listed Waste (F, K, P and U-listed wastes.)	aste ed Was d U-list	e ed wastes	٦ _	<u>5</u>]5 ::	Other OT= Other (i.e.: High	Other OT= Other / Unknown (i.e.: High/low pH, asb	Other OT= Other / Unknown (i.e.: High/low pH, asbestos, beryllium, irritants, other	 berylliu	m, irrito	nts, othe	7.		Please p below re concern	rovide any garding h s. (i.e.: O)	Please provide any additional details below regarding handling and/or disposal concerns. (i.e.: Origin of sample(s), type of	ils disposal), type of
	RE = Reactive	Ive	Waste code(s):	te(s):			mi	misc. health Description:	misc. health hazards, etc.) Description:	s, etc.)						site colle	cted from	site collected from, odd matrices, etc.)	tc.)
Cd = Cadmium Ag= Silver Cr = Chromium MR= Misc. RCRA metals Pb = Lead	TSCA Regulated PCB = Polychlorinated biphenyls	Regulated Polychlorinated biphenyls					111								111				
																			T (

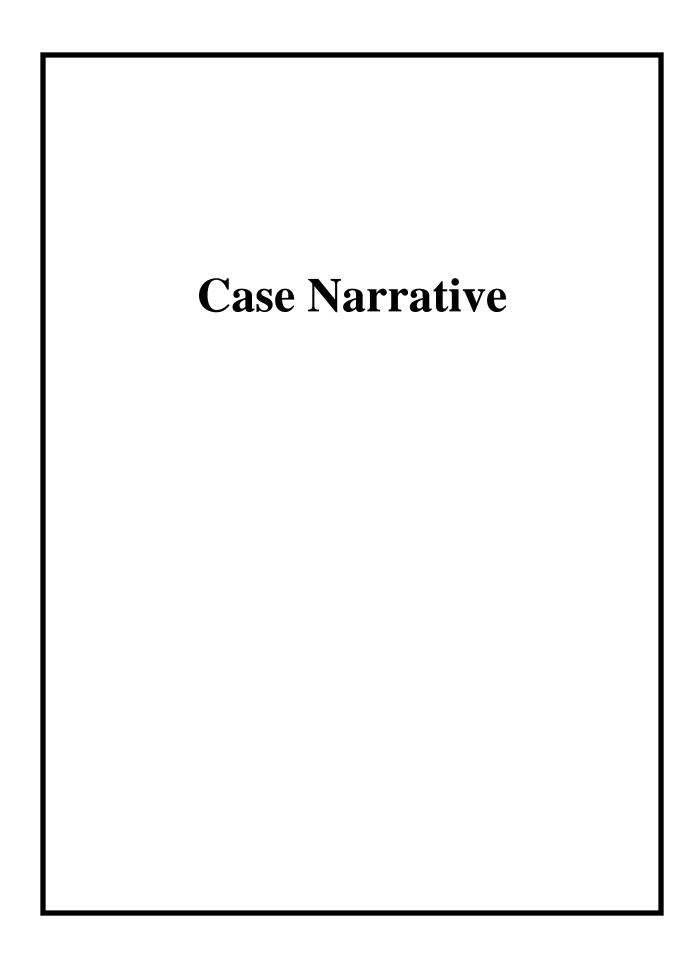
			1	SAMPLE RECEIPT & REVIEW FORM
Hent:			SDG/AR	UCOC/Work Order: 591437 \ 591443 \ 59 (445
occived By:			Date Re	
nfer one tracking aumber per line below.			Uncor	IR temperature gun # Daily Calibration performed?Y/N rected temperature readings are to the 0.1 degree with final recorded temperatures rounded to the 0.5 degree.
nter courter if applicable and no tracking available.			<u> </u>	Provide individual container details when a cooler requiring 0 =60C is identified as out of specification.</td
5741 2069 36	<u> 33</u>		Uncorre	cted Temp: 3.1 IR Correction Factor: + 00 Final Recorded Temp: 3.0 Within 0.0-6.0C7 @
5741 2069 361	44		Uncorre	cted Temp: Z. 1/2 R Correction Factor: +/O·OFinal Recorded Temp: 2-5 Within 0.0-6.0C? &
			Uncorre	cted Temp: IR Correction Factor: +/- Final Recorded Temp: Within 0.0-6.0C? Y/
			Uncorre	cted Temp: 1R Correction Factor: +/- Final Recorded Temp: Within 0.0-6.0C? Y/
			Uncorre	eted Temp: IR Correction Factor: +/- Final Recorded Temp: Within 0.0-6.0C? Y/
			Uncorre	ceted Temp: IR Correction Factor: +/- Final Recorded Temp: Within 0.0-6.0C? Y/
uspected Hazard Information	, S	å	*If Net 0	Counts > 100cpm on sumples not marked "radioactive", contact the Radiation Safety Group for further investigation.
		,	Hazard (Class Shipped; UN#:
) Shipped as a DOT Hazardous?	·	1	-	If UN2910, is the Radioactive Shipment Survey Compliant? YesNo
) Did the client designate the samples are to be ceived as radioactive?		X	COC no	tation or radioautive stickers on containers equal olient designation.
		~	Maximu	m Net Counts Observed* (Observed Counts - Area Background Counts): CPM / mR/Hr Classified as: Red 1 Rad 2 Rad 3
Did the RSO classify the samples as radioactive?		,		
) Did the client designate samples are hazardous?		1	<u> </u>	tation or hazard labels on centainers equal client designation.
) Did the RSO identify possible hazards?		X	lu n ar	is yes, select Hezards below. PCB's Flammable Foreign Soil RCRA Asbestos Deryllium Other:
Sample Receipt Criteria	ž,	ž	g	Comments/Qualiflers (Required for Non-Conforming Items)
Shipping containers received intact and	1	100		Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
scaled?	1		<u> </u>	All the state of t
Chain of custody documents included with shipment?	1			Circle Applicable: Client contacted and provided COC COC created upon receipt
3 Sample containers intact and scaled?	X			Circle Applicable: Seals broken Darmaged container Leaking container Other (describe)
, Samples requiring cold preservation were	V		mi.	Uncorrected Temp: Li, A Correction Factor: +- O. C Final Recorded Temp: 4.5 Within 0.0-6.0C? (VI)
unpacked directly into cold storage?	~	*	1362	
5 Samples requiring chemical preservation at proper pH?	1			Sample ID's and Containers Affected:
proper pre-		\$17.8%		If Preservative added. Loth: If Yes, are Encores or Soil Kits present for solids? YesNoNA(If yes, take to VOA Freezer)
6 Do any samples require Volatile Analysis?	1		-/	Do liquid VOA vials contain acid preservation? Yes No NA (If unknown, select No) Are liquid VOA vials free of headspace? Yes No NA.
Do any samples require volume values and	· ·		{	Sample ID's and containers a ffected:
			<u>'</u> -	ID's and tests affected:
7 Samples received within holding time?		100		The state of the s
8 Sample ID's on COC match ID's on bottles?	X		<u> </u>	ID's and containers affected:
		100		Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
Date & time on COC match date & time on bottles?	X			
Number of containers received match number indicated on COC?	X			Circle Applicable: No container count on COC Other (describe)
	Ť			
Are sample containers identifiable as GEL) A	E4266	4	Circle Applicable: Not relinquished Other (describe)
Are sample containers identifiable as GEL provided by use of GEL labels? COC form is properly signed in relinquished/received sections?	1		3	Chee Application for terraquisited Other (describe)



List of current GEL Certifications as of 12 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	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	T104704235-22-20
Utah NELAP	SC000122021–36
Vermont	VT87156
Virginia NELAP	460202
Washington	C780
11 45111151011	2700





Metals Technical Case Narrative Dominion Energy SDG #: 591443

<u>Product:</u> Determination of Metals by ICP-MS <u>Analytical Method:</u> EPA 200.8 SC_NPDES <u>Analytical Procedure:</u> GL-MA-E-014 REV# 35

Analytical Batch: 2310684

Preparation Method: EPA 200.2

Preparation Procedure: GL-MA-E-016 REV# 18

Preparation Batch: 2310683

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

GEL Sample ID#	Client Sample Identification
591443001	MW-LF-01-2022Q3
591443002	MW-LF-02-2022Q3
591443003	MW-LF-03-2022Q3
591443004	MW-LF-04-2022Q3
591443005	MW-LF-05-2022Q3
591443006	FBLK-COP-LF-22302
591443007	MW-LF-06-2022Q3
591443008	MW-BG-06-2022Q3
591443009	MW-BG-16-2022Q3
591443010	DU-COP-LF-22302
591443011	AS-LF-01-2022Q3
591443012	AS-LF-02-2022Q3
591443013	MW-40-2022Q3
591443014	FBLK-COP-LF-22303
1205179563	Method Blank (MB)ICP-MS
1205179564	Laboratory Control Sample (LCS)
1205179567	591443002(MW-LF-02-2022Q3L) Serial Dilution (SD)
1205179570	591443013(MW-40-2022Q3L) Serial Dilution (SD)
1205179565	591443002(MW-LF-02-2022Q3D) Sample Duplicate (DUP)
1205179568	591443013(MW-40-2022Q3D) Sample Duplicate (DUP)
1205179566	591443002(MW-LF-02-2022Q3S) Matrix Spike (MS)
1205179569	591443013(MW-40-2022Q3S) 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 69 SDG: 591443

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 69 SDG: 591443

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: 591443 GEL Work Order: 591443

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

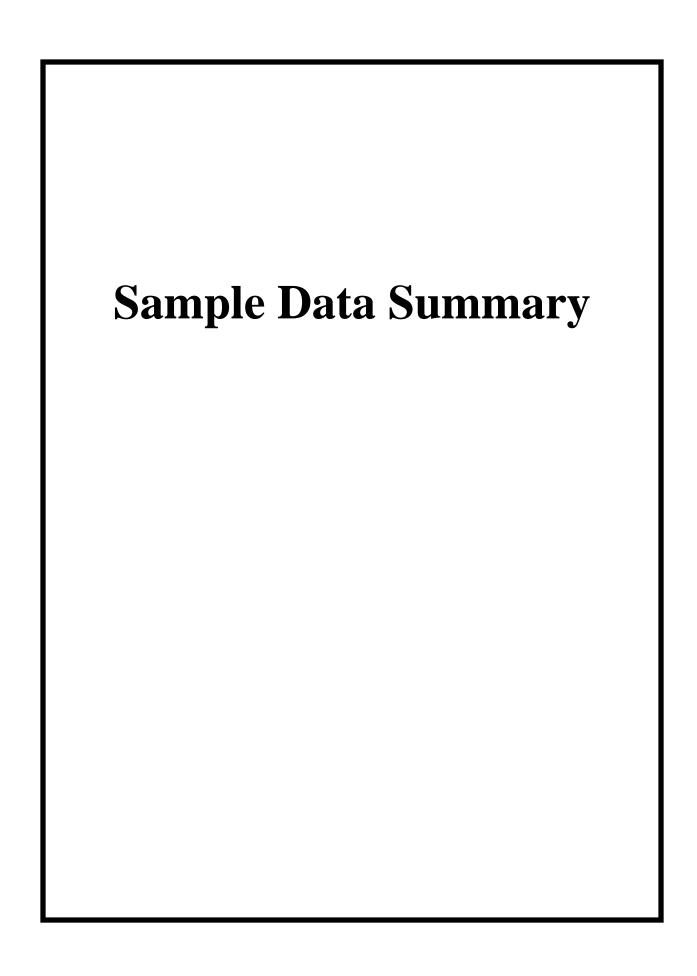
GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

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

Signature: Name: Alan Stanley

Date: 12 SEP 2022 Title: Team Leader

Page 14 of 69 SDG: 591443



-1-

INORGANICS ANALYSIS DATA PACKAGE

SDG No: 591443 CONTRACT: DMNN00102 METHOD TYPE: EPA

SAMPLE ID:591443001 BASIS: As Received DATE COLLECTED 29-AUG-22

CLIENT ID: MW-LF-01-2022Q3 LEVEL: Low DATE RECEIVED 30-AUG-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	11.2	ug/L	J	4.00	15.0	15.0	1	MS	PRB	09/11/22 10:28	220911-1	2310684
7440-70-2	Calcium	2040	ug/L		30.0	100	100	1	MS	PRB	09/11/22 10:28	220911-1	2310684

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2310684	2310683	EPA 200.2	50	mL	50	mL	08/31/22	EM2

*Analytical Methods:

-1-

INORGANICS ANALYSIS DATA PACKAGE

SDG No: 591443 CONTRACT: DMNN00102 METHOD TYPE: EPA

SAMPLE ID:591443002 BASIS: As Received DATE COLLECTED 30-AUG-22

CLIENT ID: MW-LF-02-2022Q3 LEVEL: Low DATE RECEIVED 30-AUG-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	16.4	ug/L		4.00	15.0	15.0	1	MS	PRB	09/11/22 10:31	220911-1	2310684
7440-70-2	Calcium	4870	ug/L		30.0	100	100	1	MS	PRB	09/11/22 10:31	220911-1	2310684

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2310684	2310683	EPA 200.2	50	mL	50	mL	08/31/22	EM2

*Analytical Methods:

-1-

INORGANICS ANALYSIS DATA PACKAGE

SDG No: 591443 CONTRACT: DMNN00102 METHOD TYPE: EPA

SAMPLE ID:591443003 BASIS: As Received DATE COLLECTED 30-AUG-22

CLIENT ID: MW-LF-03-2022Q3 LEVEL: Low DATE RECEIVED 30-AUG-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	7.62	ug/L	J	4.00	15.0	15.0	1	MS	PRB	09/11/22 10:55	220911-1	2310684
7440-70-2	Calcium	1220	ug/L		30.0	100	100	1	MS	PRB	09/11/22 10:55	220911-1	2310684

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2310684	2310683	EPA 200.2	50	mL	50	mL	08/31/22	EM2

^{*}Analytical Methods:

-1-

INORGANICS ANALYSIS DATA PACKAGE

SDG No: 591443 CONTRACT: DMNN00102 METHOD TYPE: EPA

SAMPLE ID:591443004 BASIS: As Received DATE COLLECTED 29-AUG-22

CLIENT ID: MW-LF-04-2022Q3 LEVEL: Low DATE RECEIVED 30-AUG-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	9.88	ug/L	J	4.00	15.0	15.0	1	MS	PRB	09/11/22 10:58	220911-1	2310684
7440-70-2	Calcium	1730	ug/L		30.0	100	100	1	MS	PRB	09/11/22 10:58	220911-1	2310684

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2310684	2310683	EPA 200.2	50	mL	50	mL	08/31/22	EM2

*Analytical Methods:

-1-

INORGANICS ANALYSIS DATA PACKAGE

SDG No: 591443 CONTRACT: DMNN00102 METHOD TYPE: EPA

SAMPLE ID:591443005 BASIS: As Received DATE COLLECTED 29-AUG-22

CLIENT ID: MW-LF-05-2022Q3 LEVEL: Low DATE RECEIVED 30-AUG-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	4.00	15.0	15.0	1	MS	PRB	09/11/22 11:01	220911-1	2310684
7440-70-2	Calcium	2680	ug/L		30.0	100	100	1	MS	PRB	09/11/22 11:01	220911-1	2310684

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2310684	2310683	EPA 200.2	50	mL	50	mL	08/31/22	EM2

*Analytical Methods:

-1-

INORGANICS ANALYSIS DATA PACKAGE

SDG No: 591443 CONTRACT: DMNN00102 METHOD TYPE: EPA

SAMPLE ID:591443006 BASIS: As Received DATE COLLECTED 29-AUG-22

CLIENT ID: FBLK-COP-LF-22302 LEVEL: Low DATE RECEIVED 30-AUG-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	4.00	ug/L	U	4.00	15.0	15.0	1	MS	PRB	09/11/22 11:05	220911-1	2310684
7440-70-2	Calcium	30.0	ug/L	U	30.0	100	100	1	MS	PRB	09/11/22 11:05	220911-1	2310684

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2310684	2310683	EPA 200.2	50	mL	50	mL	08/31/22	EM2

^{*}Analytical Methods:

-1-

INORGANICS ANALYSIS DATA PACKAGE

SDG No: 591443 CONTRACT: DMNN00102 METHOD TYPE: EPA

SAMPLE ID:591443007 BASIS: As Received DATE COLLECTED 29-AUG-22

CLIENT ID: MW-LF-06-2022Q3 LEVEL: Low DATE RECEIVED 30-AUG-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	10.6	ug/L	J	4.00	15.0	15.0	1	MS	PRB	09/11/22 11:09	220911-1	2310684
7440-70-2	Calcium	2140	ug/L		30.0	100	100	1	MS	PRB	09/11/22 11:09	220911-1	2310684

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2310684	2310683	EPA 200.2	50	mL	50	mL	08/31/22	EM2

*Analytical Methods:

-1-

INORGANICS ANALYSIS DATA PACKAGE

SDG No: 591443 CONTRACT: DMNN00102 METHOD TYPE: EPA

SAMPLE ID:591443008 BASIS: As Received DATE COLLECTED 29-AUG-22

CLIENT ID: MW-BG-06-2022Q3 LEVEL: Low DATE RECEIVED 30-AUG-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	7.70	ug/L	J	4.00	15.0	15.0	1	MS	PRB	09/11/22 11:12	220911-1	2310684
7440-70-2	Calcium	9630	ug/L		30.0	100	100	1	MS	PRB	09/11/22 11:12	220911-1	2310684

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2310684	2310683	EPA 200.2	50	mL	50	mL	08/31/22	EM2

*Analytical Methods:

-1-

INORGANICS ANALYSIS DATA PACKAGE

SDG No: 591443 CONTRACT: DMNN00102 METHOD TYPE: EPA

SAMPLE ID:591443009 BASIS: As Received DATE COLLECTED 29-AUG-22

CLIENT ID: MW-BG-16-2022Q3 LEVEL: Low DATE RECEIVED 30-AUG-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	9.26	ug/L	J	4.00	15.0	15.0	1	MS	PRB	09/11/22 11:15	220911-1	2310684
7440-70-2	Calcium	1890	ug/L		30.0	100	100	1	MS	PRB	09/11/22 11:15	220911-1	2310684

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2310684	2310683	EPA 200.2	50	mL	50	mL	08/31/22	EM2

^{*}Analytical Methods:

-1-

INORGANICS ANALYSIS DATA PACKAGE

SDG No: 591443 CONTRACT: DMNN00102 METHOD TYPE: EPA

SAMPLE ID:591443010 BASIS: As Received DATE COLLECTED 29-AUG-22

CLIENT ID: DU-COP-LF-22302 LEVEL: Low DATE RECEIVED 30-AUG-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	10.4	ug/L	J	4.00	15.0	15.0	1	MS	PRB	09/11/22 11:20	220911-1	2310684
7440-70-2	Calcium	2290	ug/L		30.0	100	100	1	MS	PRB	09/11/22 11:20	220911-1	2310684

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2310684	2310683	EPA 200.2	50	mL	50	mL	08/31/22	EM2

*Analytical Methods:

-1-

INORGANICS ANALYSIS DATA PACKAGE

SDG No: 591443 CONTRACT: DMNN00102 METHOD TYPE: EPA

SAMPLE ID:591443011 BASIS: As Received DATE COLLECTED 30-AUG-22

CLIENT ID: AS-LF-01-2022Q3 LEVEL: Low DATE RECEIVED 30-AUG-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	19.5	ug/L		4.00	15.0	15.0	1	MS	PRB	09/11/22 11:24	220911-1	2310684
7440-70-2	Calcium	1810	ug/L		30.0	100	100	1	MS	PRB	09/11/22 11:24	220911-1	2310684

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2310684	2310683	EPA 200.2	50	mL	50	mL	08/31/22	EM2

^{*}Analytical Methods:

-1-

INORGANICS ANALYSIS DATA PACKAGE

SDG No: 591443 CONTRACT: DMNN00102 METHOD TYPE: EPA

SAMPLE ID:591443012 BASIS: As Received DATE COLLECTED 30-AUG-22

CLIENT ID: AS-LF-02-2022Q3 LEVEL: Low DATE RECEIVED 30-AUG-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	31.7	ug/L		4.00	15.0	15.0	1	MS	PRB	09/11/22 11:27	220911-1	2310684
7440-70-2	Calcium	3620	ug/L		30.0	100	100	1	MS	PRB	09/11/22 11:27	220911-1	2310684

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2310684	2310683	EPA 200.2	50	mL	50	mL	08/31/22	EM2

*Analytical Methods:

-1-

INORGANICS ANALYSIS DATA PACKAGE

SDG No: 591443 CONTRACT: DMNN00102 METHOD TYPE: EPA

SAMPLE ID:591443013 BASIS: As Received DATE COLLECTED 30-AUG-22

CLIENT ID: MW-40-2022Q3 LEVEL: Low DATE RECEIVED 30-AUG-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	48.6	ug/L		4.00	15.0	15.0	1	MS	PRB	09/11/22 11:41	220911-1	2310684
7440-70-2	Calcium	30100	ug/L		30.0	100	100	1	MS	PRB	09/11/22 11:41	220911-1	2310684

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2310684	2310683	EPA 200.2	50	mL	50	mL	08/31/22	EM2

*Analytical Methods:

-1-

INORGANICS ANALYSIS DATA PACKAGE

SDG No: 591443 CONTRACT: DMNN00102 METHOD TYPE: EPA

SAMPLE ID:591443014 BASIS: As Received DATE COLLECTED 30-AUG-22

CLIENT ID: FBLK-COP-LF-22303 LEVEL: Low DATE RECEIVED 30-AUG-22

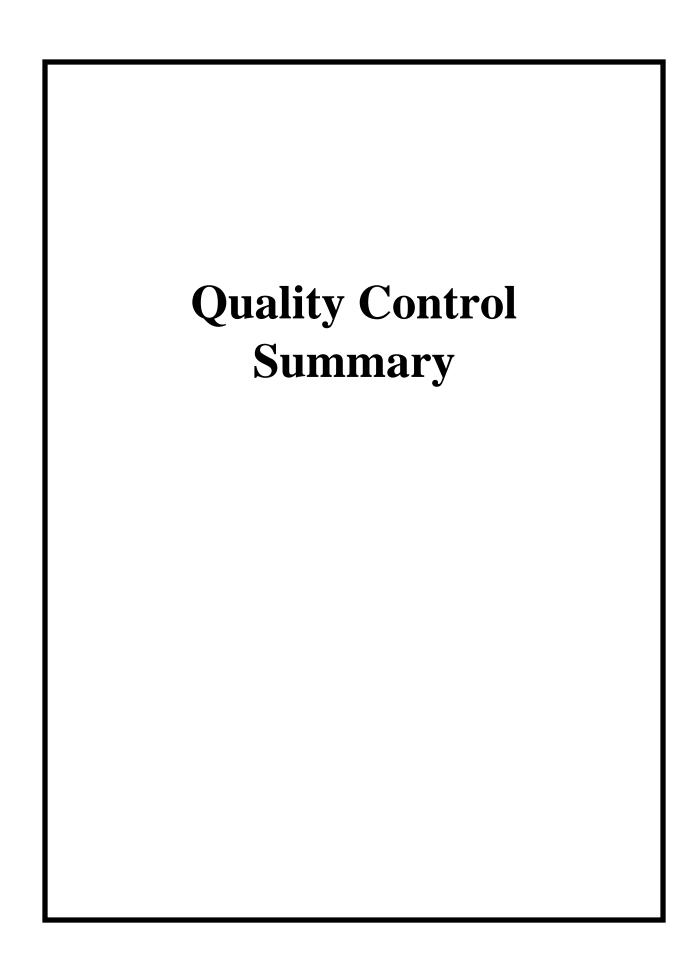
MATRIX: AQ %SOLIDS: 0

CAS	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7440-42-8	Boron	4.00	ug/L	U	4.00	15.0	15.0	1	MS	PRB	09/11/22 11:37	220911-1	2310684
7440-70-2	Calcium	30.0	ug/L	U	30.0	100	100	1	MS	PRB	09/11/22 11:37	220911-1	2310684

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
2310684	2310683	EPA 200.2	50	mL	50	mL	08/31/22	EM2

*Analytical Methods:



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

SDG No: 591443

Contract: DMNN00102 Lab Code: GEL

Instrument ID: ICPMS15

Sample ID	<u>Analyte</u>	Result	<u>Units</u>	True Value	<u>Units</u>	<u>%</u> Recovery	Acceptance Window (%R)	<u>M*</u>	Analysis Date/Time	<u>Run</u> Number
ICV01										
	Boron	99.8	ug/L	100	ug/L	99.8	90.0 - 110.0	MS	11-SEP-22 09:47	220911-1
	Calcium	4950	ug/L	5000	ug/L	99.1	90.0 - 110.0	MS	11-SEP-22 09:47	220911-1
CCV01										
	Boron	97.6	ug/L	100	ug/L	97.6	90.0 - 110.0	MS	11-SEP-22 10:04	220911-1
	Calcium	5010	ug/L	5000	ug/L	100.1	90.0 - 110.0	MS	11-SEP-22 10:04	220911-1
CCV02										
	Boron	96.1	ug/L	100	ug/L	96.1	90.0 - 110.0	MS	11-SEP-22 10:14	220911-1
	Calcium	4930	ug/L	5000	ug/L	98.6	90.0 - 110.0	MS	11-SEP-22 10:14	220911-1
CCV03										
	Boron	94.2	ug/L	100	ug/L	94.2	90.0 - 110.0	MS	11-SEP-22 10:48	220911-1
	Calcium	4990	ug/L	5000	ug/L	99.8	90.0 - 110.0	MS	11-SEP-22 10:48	220911-1
CCV04										
	Boron	95.7	ug/L	100	ug/L	95.7	90.0 - 110.0	MS	11-SEP-22 11:30	220911-1
	Calcium	4960	ug/L	5000	ug/L	99.1	90.0 - 110.0	MS	11-SEP-22 11:30	220911-1
CCV05										
22,00	Boron	94.2	ug/L	100	ug/L	94.2	90.0 - 110.0	MS	11-SEP-22 12:04	220911-1
	Calcium	4930	ug/L	5000	ug/L	98.7	90.0 - 110.0	MS	11-SEP-22 12:04	220911-1

^{*}Analytical Methods:

METALS -2bCRDL Standard for ICP & ICPMS

SDG No: 591443

Contract: DMNN00102 Lab Code: GEL

Instrument ID: ICPMS15

Sample ID	<u>Analyte</u>	Result	<u>Units</u>	True Value	<u>Units</u>	<u>%</u> Recovery	Advisory Limits (%R)	<u>M*</u>	Analysis Date/Time	<u>Run</u> <u>Number</u>
CRDL01										
	Boron	13.6	ug/L	15	ug/L	90.8	70.0 - 130.0	MS	11-SEP-22 09:54	220911-1
	Calcium	220	ug/L	200	ug/L	109.9	70.0 - 130.0	MS	11-SEP-22 09:54	220911-1
CRDL02										
	Boron	14	ug/L	15	ug/L	93.5	70.0 - 130.0	MS	11-SEP-22 12:07	220911-1
	Calcium	252	ug/L	200	ug/L	125.8	70.0 - 130.0	MS	11-SEP-22 12:07	220911-1

*Analytical Methods:

Metals
-3aInitial and Continuing Calibration Blank Summary

SDG No.: 591443

Contract: DMNN00102

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										
	Boron	4.0	+/-7.5	U	4.0	15.0	LIQ	MS	11-SEP-22 09:51	220911-1
	Calcium	30.0	+/-50	U	30.0	100	LIQ	MS	11-SEP-22 09:51	220911-1
CCB01										
CCB01	Boron	4.0	+/-7.5	U	4.0	15.0	LIQ	MS	11-SEP-22 10:08	220911-1
	Calcium	30.0	+/-50	U	30.0	100	LIQ	MS	11-SEP-22 10:08	220911-1
CCB02										
00202	Boron	4.0	+/-7.5	U	4.0	15.0	LIQ	MS	11-SEP-22 10:18	220911-1
	Calcium	30.0	+/-50	U	30.0	100	LIQ	MS	11-SEP-22 10:18	220911-1
CCB03										
ССВОЗ	Boron	4.0	+/-7.5	U	4.0	15.0	LIQ	MS	11-SEP-22 10:51	220911-1
	Calcium	30.0	+/-50	U	30.0	100	LIQ	MS	11-SEP-22 10:51	220911-1
CCB04										
ССВОЧ	Boron	4.0	+/-7.5	U	4.0	15.0	LIQ	MS	11-SEP-22 11:34	220911-1
	Calcium	30.0	+/-50	U	30.0	100	LIQ	MS	11-SEP-22 11:34	220911-1
CCB05										
00200	Boron	4.0	+/-7.5	U	4.0	15.0	LIQ	MS	11-SEP-22 12:11	220911-1
	Calcium	30.0	+/-50	U	30.0	100	LIQ	MS	11-SEP-22 12:11	220911-1

*Analytical Methods:

METALS -3bPREPARATION BLANK SUMMARY

SDG NO. 591443

Contract: DMNN00102

Matrix: GW

Sample ID	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	Acceptance Window	Conc Qual	<u>M*</u>	MDL	RDL
1205179563								
	Boron	4.00	ug/L	+/-7.5	U	MS	4.00	15.0
	Calcium	30.0	ug/L	+/-50	U	MS	30.0	100

^{*}Analytical Methods:

METALS -4-

Interference Check Sample

SDG No: 591443

Contract: DMNN00102 Lab Code: GEL

Instrument: ICPMS15

Sample ID	<u>Analyte</u>	<u>Result</u>	<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	2.46	ug/L					11-SEP-22 09:57	220911-1
	Calcium	96900	ug/L	100000	ug/L	96.9	80.0 - 120.0	11-SEP-22 09:57	220911-1
ICSAB01									
	Boron	19.1	ug/L	20	ug/L	95.5	80.0 - 120.0	11-SEP-22 10:01	220911-1
	Calcium	96500	ug/L	100000	ug/L	96.5	80.0 - 120.0	11-SEP-22 10:01	220911-1
ICSA02									
	Boron	1.88	ug/L					11-SEP-22 11:57	220911-1
	Calcium	97700	ug/L	100000	ug/L	97.7	80.0 - 120.0	11-SEP-22 11:57	220911-1
ICSAB02									
	Boron	19.7	ug/L	20	ug/L	98.3	80.0 - 120.0	11-SEP-22 12:01	220911-1
	Calcium	97000	ug/L	100000	ug/L	97	80.0 - 120.0	11-SEP-22 12:01	220911-1

METALS -5a-

Matrix Spike Summary

591443 SDG NO.

Client ID

MW-LF-02-2022Q3S

Contract:

Level:

DMNN00102

Low

Matrix:

GROUND WATER

% Solids:

Sample ID:

591443002

Spike ID: 1205179566

<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	<u>Qual</u>	<u>M*</u>
Boron	ug/L	75–125	112		16.4		100	95.2		MS
Calcium	ug/L	75–125	6890		4870		2000	101		MS

^{*}Analytical Methods:

-5a-

Matrix Spike Summary

SDG NO. 591443

Client ID: MW-40-2022Q3S

Contract:

DMNN00102

Level: Low

Matrix:

GROUND WATER

OROUND WIL

% Solids:

Sample ID:

591443013

Spike ID: 1205179569

<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	<u>Qual</u>	<u>M*</u>
Boron	ug/L	75–125	145		48.6		100	96.1		MS
Calcium	ug/L		32900		30100		2000	138	N/A	MS

^{*}Analytical Methods:

Metals -6Duplicate Sample Summary

SDG No.: 591443

Lab Code: GEL

Contract: DMNN00102

Client ID: MW-LF-02-2022Q3D

Matrix:

GROUND WATER

Level: Low

Sample ID: 591443002

Duplicate ID: 1205179565

Percent Solids for Dup: N/A

Analyte	Units	Acceptance Limit	Sample Result C	Duplicate Result C	RPD	Qual	M*
Boron	ug/L	+/-30	16.4	16.9	2.97		MS
Calcium	ug/L	+/-20%	4870	4760	2.38		MS

^{*}Analytical Methods:

Metals -6Duplicate Sample Summary

SDG No.: 591443

Lab Code: GEL

Contract: DMNN00102

Client ID: MW-40-2022Q3D

Matrix:

GROUND WATER

Level: Low

Sample ID: 591443013

Duplicate ID: 1205179568

Percent Solids for Dup: N/A

Analyte	Units	Acceptance Limit	Sample Result C	Duplicate Result C	RPD	Qual	M*
Boron	ug/L	+/-30	48.6	50.9	4.66		MS
Calcium	ug/L	+/-20%	30100	31100	3.06		MS

^{*}Analytical Methods:

-7-

Laboratory Control Sample Summary

SDG NO. 591443

Contract: DMNN00102

Aqueous LCS Source: Environmental Express

Solid LCS Source:

Sample ID 1205179564	<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	97.1 2080		97.1 104	85–115 85–115	MS MS

^{*}Analytical Methods:

METALS -9-**Serial Dilution Sample Summary**

591443 Client ID MW-LF-02-2022Q3LSDG NO.

DMNN00102 **Contract:**

Matrix: LIQUID Low Level:

Sample ID: 591443002**Serial Dilution ID:** 1205179567

Analyte	Initial Yalue ug/L	Serial Value ug/L	<u>C</u>	<u>%</u> Difference	Qual	Acceptance Limit	<u>M*</u>
Boron	16.4	20	U	21.388			MS
Calcium	4870	4780		1.847			MS

^{*}Analytical Methods:

METALS -9-

Serial Dilution Sample Summary

591443 SDG NO.

Client ID MW-40-2022Q3L

Contract:

DMNN00102

Matrix:

LIQUID

Level: Low

Sample ID:

591443013

Serial Dilution ID: 1205179570

Analyte	Initial Yalue ug/L	<u>Serial</u> <u>Value</u> ug/L	<u>C</u>	<u>%</u> Difference	<u>Qual</u>	Acceptance Limit	<u>M*</u>
Boron	48.6	58.2	В	19.811			MS
Calcium	30100	29200		3.002		10	MS

^{*}Analytical Methods:

MS

EPA 200.8 SC_NPDES

METALS -13SAMPLE PREPARATION SUMMARY

SDG No: 591443 Method Type MS

Contract: DMNN00102 Lab Code: GEL

Sample ID	Client ID	<u>Sample</u> Type			<u>Initial</u> <u>Sample</u> <u>Size</u>	Final Sample Volume Percent Solids
Batch Number	er 2310683					
1205179563	MB for batch 2310683	MB	G	31-AUG-22	50mL	50mL
1205179564	LCS for batch 2310683	LCS	G	31-AUG-22	50mL	50mL
1205179566	MW-LF-02-2022Q3S	MS	G	31-AUG-22	50mL	50mL
1205179569	MW-40-2022Q3S	MS	G	31-AUG-22	50mL	50mL
1205179565	MW-LF-02-2022Q3D	DUP	G	31-AUG-22	50mL	50mL
1205179568	MW-40-2022Q3D	DUP	G	31-AUG-22	50mL	50mL
591443001	MW-LF-01-2022Q3	SAMPLE	G	31-AUG-22	50mL	50mL
591443002	MW-LF-02-2022Q3	SAMPLE	G	31-AUG-22	50mL	50mL
591443003	MW-LF-03-2022Q3	SAMPLE	G	31-AUG-22	50mL	50mL
591443004	MW-LF-04-2022Q3	SAMPLE	G	31-AUG-22	50mL	50mL
591443005	MW-LF-05-2022Q3	SAMPLE	G	31-AUG-22	50mL	50mL
591443006	FBLK-COP-LF-22302	SAMPLE	G	31-AUG-22	50mL	50mL
591443007	MW-LF-06-2022Q3	SAMPLE	G	31-AUG-22	50mL	50mL
591443008	MW-BG-06-2022Q3	SAMPLE	G	31-AUG-22	50mL	50mL
591443009	MW-BG-16-2022Q3	SAMPLE	G	31-AUG-22	50mL	50mL
591443010	DU-COP-LF-22302	SAMPLE	G	31-AUG-22	50mL	50mL
591443011	AS-LF-01-2022Q3	SAMPLE	G	31-AUG-22	50mL	50mL
591443012	AS-LF-02-2022Q3	SAMPLE	G	31-AUG-22	50mL	50mL
591443013	MW-40-2022Q3	SAMPLE	G	31-AUG-22	50mL	50mL

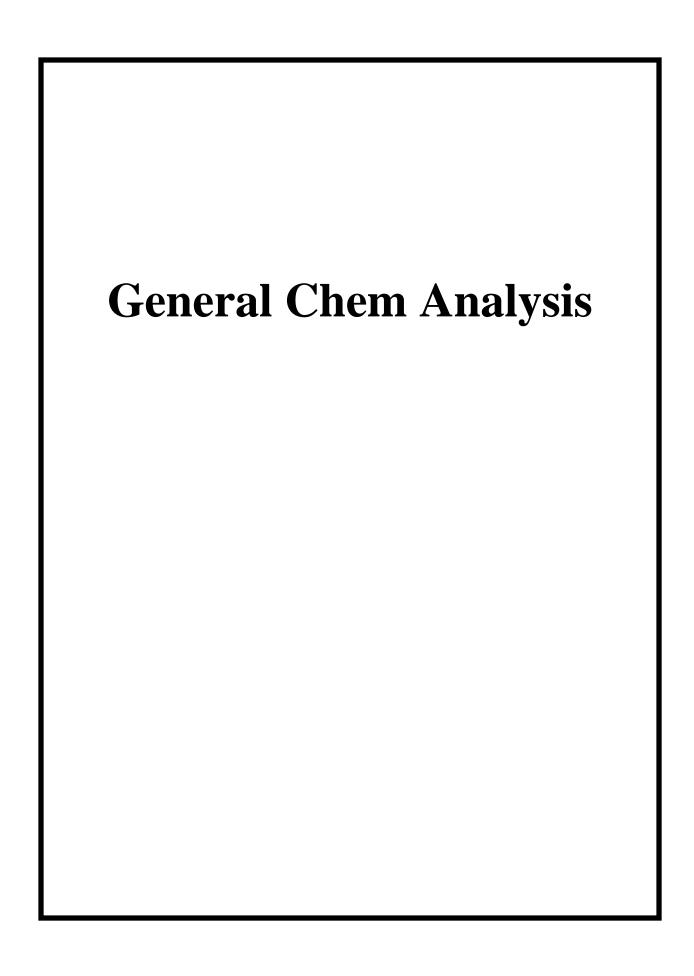
EPA

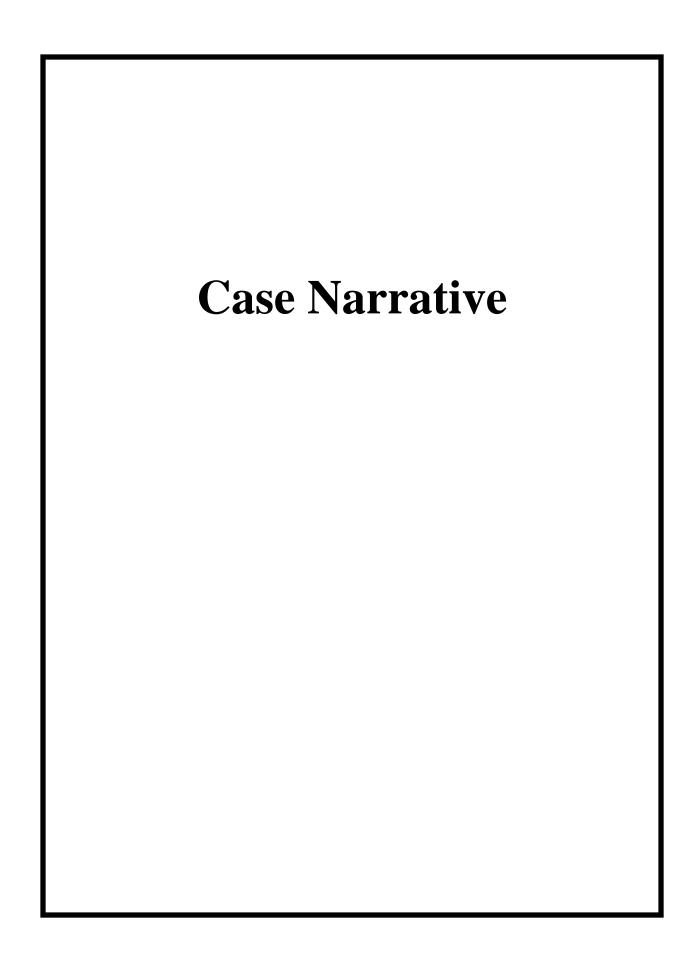
METALS -13SAMPLE PREPARATION SUMMARY

SDG No: 591443 Method Type MS

Contract: DMNN00102 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
591443014	FBLK-COP-LF-22303	SAMPLE	G	31-AUG-22	50mL	50mL





General Chemistry Technical Case Narrative Dominion Energy SDG #: 591443

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

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

Analytical Batch: 2311042

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

GEL Sample ID#	Client Sample Identification
591443001	MW-LF-01-2022Q3
591443002	MW-LF-02-2022Q3
591443003	MW-LF-03-2022Q3
591443004	MW-LF-04-2022Q3
591443005	MW-LF-05-2022Q3
591443006	FBLK-COP-LF-22302
591443007	MW-LF-06-2022Q3
591443008	MW-BG-06-2022Q3
591443009	MW-BG-16-2022Q3
591443010	DU-COP-LF-22302
591443011	AS-LF-01-2022Q3
591443012	AS-LF-02-2022Q3
591443013	MW-40-2022Q3
591443014	FBLK-COP-LF-22303
1205180228	Method Blank (MB)
1205180229	Laboratory Control Sample (LCS)
1205180230	591443002(MW-LF-02-2022Q3) Sample Duplicate (DUP)
1205180231	591443002(MW-LF-02-2022Q3) Post Spike (PS)
1205180232	591443013(MW-40-2022Q3) Sample Duplicate (DUP)
1205180233	591443013(MW-40-2022Q3) 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.

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Analyte	Sample	Value
Chloride	1205180231 (MW-LF-02-2022Q3PS)	116* (90%-110%)
	1205180233 (MW-40-2022Q3PS)	111* (90%-110%)

Technical Information

Sample Dilutions

The following samples 1205180230 (MW-LF-02-2022Q3DUP), 1205180231 (MW-LF-02-2022Q3PS), 1205180232 (MW-40-2022Q3DUP), 1205180233 (MW-40-2022Q3PS), 591443002 (MW-LF-02-2022Q3), 591443008 (MW-BG-06-2022Q3) and 591443013 (MW-40-2022Q3) 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.

Amalasta	591443							
Analyte	002	008	013					
Chloride	5X	5X	10X					
Sulfate	1X	1X	10X					

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 69 SDG: 591443

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

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

Analytical Batch: 2311293

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

GEL Sample ID#	Client Sample Identification
591443001	MW-LF-01-2022Q3
591443002	MW-LF-02-2022Q3
591443003	MW-LF-03-2022Q3
591443004	MW-LF-04-2022Q3
591443005	MW-LF-05-2022Q3
591443006	FBLK-COP-LF-22302
591443007	MW-LF-06-2022Q3
591443008	MW-BG-06-2022Q3
591443009	MW-BG-16-2022Q3
591443010	DU-COP-LF-22302
591443011	AS-LF-01-2022Q3
591443012	AS-LF-02-2022Q3
591443013	MW-40-2022Q3
591443014	FBLK-COP-LF-22303
1205180738	Method Blank (MB)
1205180739	Laboratory Control Sample (LCS)
1205180740	591366001(NonSDG) Sample Duplicate (DUP)
1205180741	591443002(MW-LF-02-2022Q3) 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.

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: 591443 GEL Work Order: 591443

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

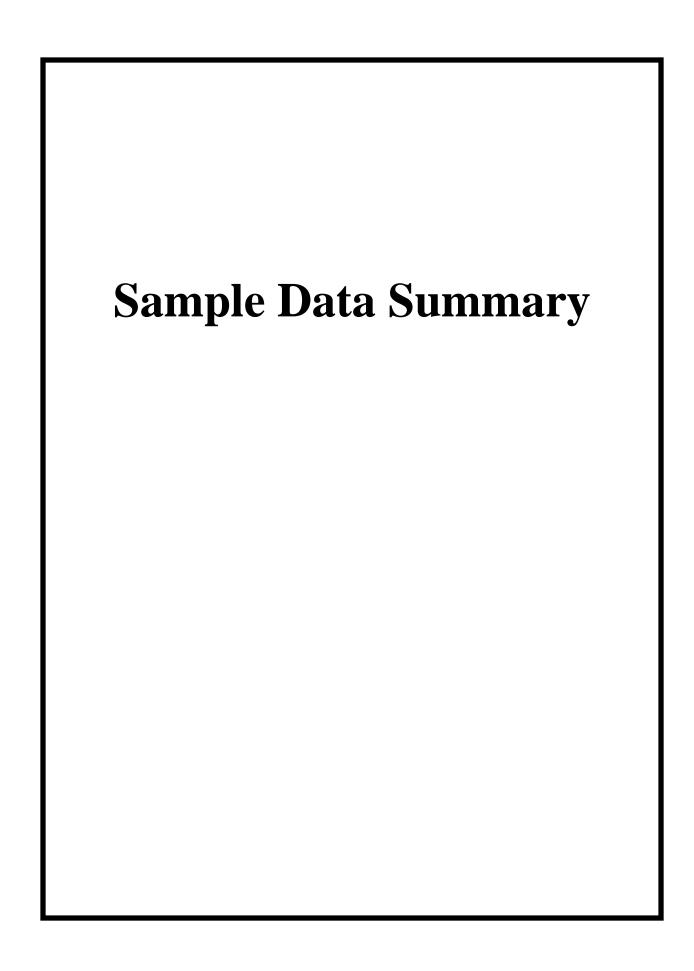
GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

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

Signature: Name: Aubrey Kingsbury

Date: 09 SEP 2022 Title: Team Leader

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Certificate of Analysis

Project:

Client ID:

Report Date: September 9, 2022

DMNN00102

DMNN001

Dominion Energy Services, Inc. Company:

Address: 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks

Project: CCR Groundwater Monitoring - Level 3 Package

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

Sample ID: 591443001

Matrix: GW

Collect Date: 29-AUG-22 15:32 30-AUG-22 Receive Date: 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	•	9.52	0.0670	0.200	mg/L		1 JLD1	08/31/22	1732 2311042	1
Fluoride	U	ND	0.0330	0.100	mg/L		1			
Sulfate	J	0.371	0.133	0.400	mg/L		1			
Solids Analysis										
SM2540C Dissolved	Solids "As Rec	eived"								
Total Dissolved Solids	U	ND	2.38	10.0	mg/L		CH6	09/01/22	1553 2311293	2
The following Analy	tical Methods v	vere performed:								
Method	Description				1	Analy	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:

Analyst Comments

Report Date: September 9, 2022

DMNN00102

DMNN001

Company: Dominion Energy Services, Inc.

Address: 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks

Project: CCR Groundwater Monitoring - Level 3 Package

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

Sample ID: 591443002

Matrix: GW

Collect Date: 30-AUG-22 11:00
Receive Date: 30-AUG-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		0.124	0.0330	0.100	mg/L		1 JLD1	08/31/22	1802 2311042	1
Sulfate		7.34	0.133	0.400	mg/L		1			
Chloride		30.1	0.335	1.00	mg/L		5 JLD1	09/01/22	0529 2311042	2
Solids Analysis										
SM2540C Dissolved	Solids "As Rec	eived"								
Total Dissolved Solids		55.0	2.38	10.0	mg/L		CH6	09/01/22	1553 2311293	3
The following Analy	ytical 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: September 9, 2022

DMNN00102

DMNN001

Dominion Energy Services, Inc. Company:

Address: 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks

Project: CCR Groundwater Monitoring - Level 3 Package

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

Sample ID: 591443003

Matrix: GW

Collect Date: 30-AUG-22 09:50 Receive Date: 30-AUG-22 Client Collector:

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Anal	yst Date	Time Batch	Method
Ion Chromatography										
EPA 300.0 Anions Li	quid "As Recei	ved"								
Chloride	-	3.34	0.0670	0.200	mg/L		1 JLD1	08/31/22	1931 2311042	1
Fluoride	U	ND	0.0330	0.100	mg/L		1			
Sulfate		0.491	0.133	0.400	mg/L		1			
Solids Analysis										
SM2540C Dissolved	Solids "As Rec	eived"								
Total Dissolved Solids	U	ND	2.38	10.0	mg/L		CH6	09/01/22	1553 2311293	2
The following Analy	tical Methods v	vere performed:								
Method	Description				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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Certificate of Analysis

Project:

Client ID:

Report Date: September 9, 2022

DMNN00102

DMNN001

Company: Dominion Energy Services, Inc.

Address: 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks

Project: CCR Groundwater Monitoring - Level 3 Package

Client Sample ID: MW-LF-04-2022Q3

Sample ID: 591443004

Matrix: GW

Collect Date: 29-AUG-22 15:15 Receive Date: 30-AUG-22

Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Analy	yst Date	Time Batch	Method
Ion Chromatography										
EPA 300.0 Anions Lie	quid "As Recei	ved"								
Chloride	•	4.87	0.0670	0.200	mg/L		1 JLD1	08/31/22	2001 2311042	1
Fluoride	U	ND	0.0330	0.100	mg/L		1			
Sulfate		0.682	0.133	0.400	mg/L		1			
Solids Analysis										
SM2540C Dissolved	Solids "As Rec	eived"								
Total Dissolved Solids		14.0	2.38	10.0	mg/L		CH6	09/01/22	1553 2311293	2
The following Analys	tical Methods v	vere performed:								
Method	Description	[1	Analy	st Comment	S		
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

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Certificate of Analysis

Project:

Client ID:

Report Date: September 9, 2022

DMNN00102

DMNN001

Dominion Energy Services, Inc. Company:

Address: 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks

Project: CCR Groundwater Monitoring - Level 3 Package

Client Sample ID: MW-LF-05-2022Q3

Sample ID: 591443005

Matrix: GW

Collect Date: 29-AUG-22 14:20 Receive Date: 30-AUG-22 Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Analyst I	Date	Time Batch	Method
Ion Chromatography										
EPA 300.0 Anions Li	quid "As Recei	ved"								
Chloride	•	9.74	0.0670	0.200	mg/L		1 JLD1 08/	31/22	2031 2311042	1
Fluoride	U	ND	0.0330	0.100	mg/L		1			
Sulfate		0.656	0.133	0.400	mg/L		1			
Solids Analysis										
SM2540C Dissolved	Solids "As Rec	eived"								
Total Dissolved Solids		32.0	2.38	10.0	mg/L		CH6 09/	01/22	1553 2311293	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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Certificate of Analysis

Project:

Client ID:

Report Date: September 9, 2022

DMNN00102

DMNN001

Company: Dominion Energy Services, Inc.

Address: 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks

Project: CCR Groundwater Monitoring - Level 3 Package

Client Sample ID: FBLK-COP-LF-22302

Sample ID: 591443006

Matrix: AQ

Collect Date: 29-AUG-22 13:20 Receive Date: 30-AUG-22 Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Anal	yst Date	Time Batch	Method
Ion Chromatography	,						•	<u> </u>		
EPA 300.0 Anions L		ved"								
Chloride	•	0.218	0.0670	0.200	mg/L		1 JLD1	08/31/22	2231 2311042	1
Fluoride	U	ND	0.0330	0.100	mg/L		1			
Sulfate	U	ND	0.133	0.400	mg/L		1			
Solids Analysis										
SM2540C Dissolved	Solids "As Rec	eived"								
Total Dissolved Solids	U	ND	2.38	10.0	mg/L		CH6	09/01/22	1553 2311293	2
The following Analy	ytical Methods v	vere performed:								
Method	Description				1	Analys	st Comment	ts		

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 9, 2022

09/01/22 1553 2311293

DMNN00102

DMNN001

CH6

Company: Dominion Energy Services, Inc.

Address: 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks

Project: CCR Groundwater Monitoring - Level 3 Package

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

Sample ID: 591443007

Matrix: GW

Collect Date: 29-AUG-22 12:55
Receive Date: 30-AUG-22
Collector: Client

Collec	0101.									
Parameter	Qualifier	Result	DL	RL	Units	PF	DF Ana	alyst Date	Time Batch	Method
Ion Chromatograp	hy									
EPA 300.0 Anions	s Liquid "As Recei	ved"								
Chloride	_	8.62	0.0670	0.200	mg/L		1 JLD	1 08/31/22	2301 2311042	2 1
Fluoride	U	ND	0.0330	0.100	mg/L		1			
Sulfate		0.592	0.133	0.400	mg/L		1			
Solids Analysis										

10.0

mg/L

2.38

The following Analytical Methods were performed:

Method Description Analyst Comments

1 EPA 300.0

EPA 300.0 SM 2540C

Notes:

Total Dissolved Solids

Column headers are defined as follows:

SM2540C Dissolved Solids "As Received"

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

MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

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

Certificate of Analysis

Report Date: September 9, 2022

Company: Dominion Energy Services, Inc.

Address: 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks

Project: CCR Groundwater Monitoring - Level 3 Package

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

Sample ID: 591443008

Matrix: GW

Collect Date: 29-AUG-22 12:47
Receive Date: 30-AUG-22
Collector: Client

Project: DMNN00102 Client ID: DMNN001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analy	st Date	Time	Batch	Method
Ion Chromatography												_
EPA 300.0 Anions Lic	quid "As Recei	ved"										
Fluoride	U	ND	0.0330	0.100	mg/L		1	JLD1	08/31/22	2331	2311042	1
Sulfate	J	0.284	0.133	0.400	mg/L		1					
Chloride		18.0	0.335	1.00	mg/L		5	JLD1	09/01/22	1037	2311042	2
Solids Analysis												
SM2540C Dissolved S	Solids "As Rec	eived"										
Total Dissolved Solids		87.0	2.38	10.0	mg/L			CH6	09/01/22	1553	2311293	3
The following Analyt	ical Methods v	vere performed:										
Method	Description				I	Analys	t Co	mment	s			

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

Certificate of Analysis

Project:

Client ID:

Report Date: September 9, 2022

DMNN00102

DMNN001

Company: Dominion Energy Services, Inc.

Address: 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks

Project: CCR Groundwater Monitoring - Level 3 Package

Client Sample ID: MW-BG-16-2022Q3

Sample ID: 591443009

Matrix: GW

Collect Date: 29-AUG-22 14:02 Receive Date: 30-AUG-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	-	3.09	0.0670	0.200	mg/L		1 JLD1	09/01/22	0000 2311042	. 1
Fluoride	U	ND	0.0330	0.100	mg/L		1			
Sulfate		2.26	0.133	0.400	mg/L		1			
Solids Analysis										
SM2540C Dissolved	Solids "As Rec	eived"								
Total Dissolved Solids		10.0	2.38	10.0	mg/L		CH6	09/01/22	1553 2311293	2
The following Analy	tical Methods v	vere performed:								
Method	Description					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 9, 2022

DMNN00102

DMNN001

Company: Dominion Energy Services, Inc.

Address: 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks

Project: CCR Groundwater Monitoring - Level 3 Package

Client Sample ID: DU-COP-LF-22302

Sample ID: 591443010

Matrix: GW

Collect Date: 29-AUG-22 12:00
Receive Date: 30-AUG-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"								
Chloride	•	8.58	0.0670	0.200	mg/L		1 JLD1	09/01/22	0030 2311042	1
Fluoride	U	ND	0.0330	0.100	mg/L		1			
Sulfate		0.571	0.133	0.400	mg/L		1			
Solids Analysis										
SM2540C Dissolved	Solids "As Rec	eived"								
Total Dissolved Solids		14.0	2.38	10.0	mg/L		CH6	09/01/22	1553 2311293	2
The following Analy	tical Methods v	vere performed:								
Method	Description				1	Analys	st Comments	3		

Method Description Analyst Comm

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 9, 2022

DMNN00102

DMNN001

Company: Dominion Energy Services, Inc.

Address: 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks

Project: CCR Groundwater Monitoring - Level 3 Package

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

Sample ID: 591443011

Matrix: GW

Collect Date: 30-AUG-22 09:42
Receive Date: 30-AUG-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	•	2.62	0.0670	0.200	mg/L		1 JLD1	09/01/22	0100 2311042	1
Fluoride	U	ND	0.0330	0.100	mg/L		1			
Sulfate		12.0	0.133	0.400	mg/L		1			
Solids Analysis										
SM2540C Dissolved	Solids "As Rec	eived"								
Total Dissolved Solids	J	9.00	2.38	10.0	mg/L		CH6	09/01/22	1553 2311293	2
The following Analy	tical Methods v	vere performed:								
Method	Description				1	Analys	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 9, 2022

DMNN00102

DMNN001

Company: Dominion Energy Services, Inc.

Address: 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks

Project: CCR Groundwater Monitoring - Level 3 Package

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

Sample ID: 591443012

Matrix: GW

Collect Date: 30-AUG-22 10:47
Receive Date: 30-AUG-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	•	5.34	0.0670	0.200	mg/L		1 JLD1	09/01/22	0130 2311042	1
Fluoride	J	0.0375	0.0330	0.100	mg/L		1			
Sulfate		16.4	0.133	0.400	mg/L		1			
Solids Analysis										
SM2540C Dissolved	Solids "As Rec	eived"								
Total Dissolved Solids		36.0	2.38	10.0	mg/L		CH6	09/01/22	1553 2311293	2
The following Analy	tical Methods v	vere performed:								
Method	Description					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 9, 2022

DMNN00102

DMNN001

Company: Dominion Energy Services, Inc.

Address: 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks

Project: CCR Groundwater Monitoring - Level 3 Package

Client Sample ID: MW-40-2022Q3 Sample ID: 591443013

Matrix: GW

Collect Date: 30-AUG-22 11:52 Receive Date: 30-AUG-22 Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Ana	alyst Date	Time Batch	Method
Ion Chromatography										
EPA 300.0 Anions L	iquid "As Recei	ved"								
Fluoride	-	0.589	0.0330	0.100	mg/L		1 JLD	1 09/01/22	0200 2311042	1
Chloride		45.9	0.670	2.00	mg/L		10 JLD	1 09/01/22	1106 2311042	2
Sulfate		139	1.33	4.00	mg/L		10			
Solids Analysis										
SM2540C Dissolved	Solids "As Rec	eived"								
Total Dissolved Solids		263	2.38	10.0	mg/L		CHe	09/01/22	1553 2311293	3
The following Analy	vtical Methods v	were performed:								

MethodDescriptionAnalyst Comments1EPA 300.02EPA 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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2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Project:

Client ID:

Report Date: September 9, 2022

DMNN00102

DMNN001

Company: Dominion Energy Services, Inc.

Address: 120 Tredegar Street

Richmond, Virginia 23219

Contact: Kelly Hicks

Project: CCR Groundwater Monitoring - Level 3 Package

Client Sample ID: FBLK-COP-LF-22303

Sample ID: 591443014

Matrix: AQ

Collect Date: 30-AUG-22 12:00
Receive Date: 30-AUG-22
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF Analy	st Date	Time Batch	Method
Ion Chromatography										
EPA 300.0 Anions Li	iquid "As Recei	ved"								
Chloride	J	0.148	0.0670	0.200	mg/L		1 JLD1	09/01/22	0459 2311042	1
Fluoride	U	ND	0.0330	0.100	mg/L		1			
Sulfate	U	ND	0.133	0.400	mg/L		1			
Solids Analysis										
SM2540C Dissolved	Solids "As Rec	eived"								
Total Dissolved Solids	U	ND	2.38	10.0	mg/L		CH6	09/01/22	1553 2311293	2
The following Analy	tical Methods v	vere performed:								
Method	Description				1	Analys	st Comment	S		

1 EPA 300.0 2 SM 2540C

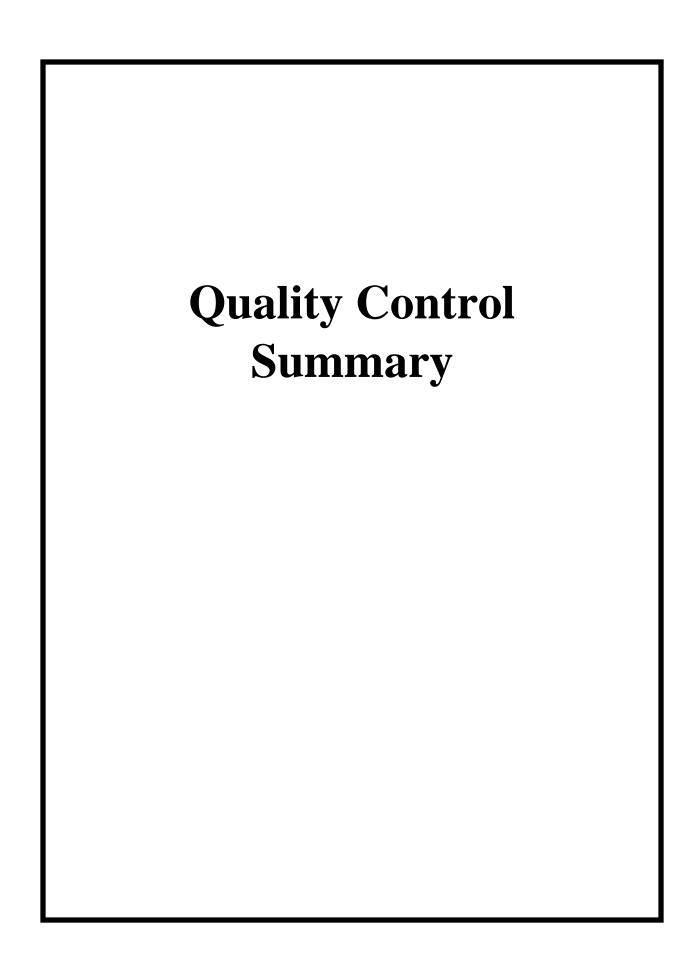
Notes:

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 9, 2022

Page 1 of 3

Dominion Energy Services, Inc.

120 Tredegar Street Richmond, Virginia

Kelly Hicks Contact:

Workorder:	591443

Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range Anlst	Date Time
Ion Chromatography Batch 2311042 -								
QC1205180230 591443002 DU Chloride	P	30.1	30.1	mg/L	0.0449		(0%-20%) JLD1	09/01/22 05:59
Fluoride		0.124	0.125	mg/L	0.723 ^		(+/2)	08/31/22 18:32
Sulfate		7.34	7.47	mg/L	1.65		(0%-20%)	
QC1205180232 591443013 DU Chloride	P	45.9	45.8	mg/L	0.244		(0%-20%)	09/01/22 11:36
Fluoride		0.589	0.588	mg/L	0.153		(0%-20%)	09/01/22 02:30
Sulfate		139	139	mg/L	0.425		(0%-20%)	09/01/22 11:36
QC1205180229 LCS Chloride	5.00		4.87	mg/L		97.3	(90%-110%)	08/31/22 17:02
Fluoride	2.50		2.38	mg/L		95.1	(90%-110%)	
Sulfate	10.0		10.1	mg/L		101	(90%-110%)	
QC1205180228 MB Chloride		U	ND	mg/L				08/31/22 16:32
Fluoride		U	ND	mg/L				
Sulfate		U	ND	mg/L				
QC1205180231 591443002 PS Chloride	5.00	6.02	11.8	mg/L		116*	(90%-110%)	09/01/22 06:29

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

QC Summary

591443 Page 2 of 3 NOM QC Units RPD% REC% **Parmname** Sample Qual Range Anlst Date Time

Ion Chromatography Batch 2311042									
Fluoride	2.50	0.124	2.80	mg/L		107	(90%-110%)	JLD1	08/31/22 19:02
Sulfate	10.0	7.34	16.4	mg/L		90.1	(90%-110%)		
QC1205180233 591443013 PS Chloride	5.00	4.59	10.1	mg/L		111*	(90%-110%)		09/01/22 12:06
Fluoride	2.50	0.589	3.29	mg/L		108	(90%-110%)		09/01/22 03:00
Sulfate	10.0	13.9	23.2	mg/L		92.9	(90%-110%)		09/01/22 12:06
Solids Analysis Batch 2311293									
QC1205180740 591366001 DUP Total Dissolved Solids		246	237	mg/L	3.73		(0%-5%)	СН6	09/01/22 15:53
QC1205180741 591443002 DUP Total Dissolved Solids		55.0	45.0	mg/L	20 ^		(+/-20)		09/01/22 15:53
QC1205180739 LCS Total Dissolved Solids	300		301	mg/L		100	(95%-105%)		09/01/22 15:53
QC1205180738 MB Total Dissolved Solids		U	ND	mg/L					09/01/22 15:53

Notes:

Workorder:

The Qualifiers in this report are defined as follows:

- Result is less than value reported <
- > Result is greater than value reported
- В The target analyte was detected in the associated blank.
- Е General Chemistry--Concentration of the target analyte exceeds the instrument calibration range
- Η Analytical holding time was exceeded
- J See case narrative for an explanation

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

QC Summary

Page 3 of 3 Sample Qual Parmname **NOM** OC Units RPD% REC% Range Anlst Date Time

J Value is estimated

Workorder:

N/A RPD or %Recovery limits do not apply.

591443

- 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
- 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.
- ٨ 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 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 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.

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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:

Cope Power Station Groundwater Sampling Samples Collected between: 8/24/2022 and 8/30/2022

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:

591443

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-LF-01	N	EPA 200.8	Boron	Т	11.2	J	RL	4.00	15.0		ug/L
MW-LF-01-2022Q3	MW-LF-01	N	EPA 300.0	Sulfate	N	0.371	J	RL	0.133	0.400		mg/L
MW-LF-03-2022Q3	MW-LF-03	N	EPA 200.8	Boron	Т	7.62	J	RL	4.00	15.0		ug/L
MW-LF-04-2022Q3	MW-LF-04	N	EPA 200.8	Boron	Т	9.88	J	RL	4.00	15.0		ug/L
MW-LF-05-2022Q3	MW-LF-05	N	EPA 200.8	Boron	Т	10.2	J	RL	4.00	15.0		ug/L
MW-LF-06-2022Q3	MW-LF-06	N	EPA 200.8	Boron	Т	10.6	J	RL	4.00	15.0		ug/L
MW-BG-06-2022Q3	MW-06	N	EPA 200.8	Boron	Т	7.70	J	RL	4.00	15.0		ug/L
MW-BG-06-2022Q3	MW-06	N	EPA 300.0	Sulfate	N	0.284	J	RL	0.133	0.400		mg/L
MW-BG-16-2022Q3	MW-BG-16	N	EPA 200.8	Boron	Т	9.26	J	RL	4.00	15.0		ug/L
DU-COP-LF-22302	MW-LF-06	FD	EPA 200.8	Boron	Т	10.4	J	RL	4.00	15.0		ug/L
AS-LF-01-2022Q3	MW-AS-01	N	SM 2540C	Total Dissolved Solids	N	9.00	J	RL	2.38	10.0		mg/L
AS-LF-02-2022Q3	MW-AS-02	N	EPA 300.0	Fluoride	N	0.0375	J	RL	0.0330	0.100		mg/L
FBLK-COP-LF-22303	Field Blank	FB	EPA 300.0	Chloride	N	0.148	J	RL	0.0670	0.200		mg/L

Data Qualif	iers
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 Co	des 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

				Lab Sample ID	591443001										
				Sys Sample Code	MW-LF-01-20	22Q3									
				Sample Name	MW-LF-01-20	22Q3									
				Sample Date	8/29/2022 3:3	2:00 PM									
				Location	COP-MW-LF-	01 / MW	-LF-01								
				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 200.8	Boron	7440-42-8	Т	ug/L	11.2	J	RL		4.00	4.00	15.0	Υ	Yes	1	NA
	Calcium	7440-70-2	Т	ug/L	2040				30.0	30.0	100	Υ	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	9.52				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 Yes 1 Yes 1 Yes 1 Yes 1 Yes 1	NA	
	Sulfate	14808-79-8	N	mg/L	0.371	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

Report Generated: 9/16/2022 2:26:49 PM Page: 1 of 14

				Lab Sample ID	591443002										
				Sys Sample Code	MW-LF-02-202	22Q3									
				Sample Name	MW-LF-02-202	22Q3									
				Sample Date	8/30/2022 11:0	00:00 AN	Л								
				Location	COP-MW-LF-(02 / MW-	-LF-02								
				Sample Type	N										
				Matrix	GW										
	Parent Sa														
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 200.8	Boron	7440-42-8	Т	ug/L	16.4				4.00	4.00	15.0	Υ	Yes	1	NA
	Calcium	7440-70-2	Т	ug/L	4870				30.0	30.0	100	Υ	Yes	1	NA
EPA 300.0	Fluoride	16984-48-8	N	mg/L	0.124				0.0330	0.0330	0.100	Υ	Yes	1	NA
	Sulfate	14808-79-8	N	mg/L	7.34				0.133	0.133	0.400	Υ	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	30.1				0.335	0.335	1.00	Υ	Yes	5	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	55.0				2.38	2.38	10.0	Y	Yes	1	NA

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				Lab Sample ID	591443003										
				Sys Sample Code	MW-LF-03-20	22Q3									$\overline{}$
				Sample Name	MW-LF-03-20										$\overline{}$
				Sample Date	8/30/2022 9:5										
				Location	COP-MW-LF-	03 / MW	-LF-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	DF	Basis
EPA 200.8	Boron	7440-42-8	Т	ug/L	7.62	J	RL		4.00	4.00	15.0	Υ	Yes	1	NA
	Calcium	7440-70-2	Т	ug/L	1220				30.0	30.0	100	Υ	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	3.34				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	0.491				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

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				Lab Sample ID	591443004										
				Sys Sample Code	MW-LF-04-20	22Q3									
				Sample Name	MW-LF-04-20	22Q3									
				Sample Date	8/29/2022 3:1	5:00 PM									
				Location	COP-MW-LF-	04 / MW	-LF-04								
				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 200.8	Boron	7440-42-8	Т	ug/L	9.88	J	RL		4.00	4.00	15.0	Υ	Yes	1	NA
	Calcium	7440-70-2	Т	ug/L	1730				30.0	30.0	100	Υ	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	4.87				0.0670	0.0670	0.200	Υ	Yes	1	NA
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	0.682				0.133	0.133	0.400	Υ	Yes	1	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	14.0				2.38	2.38	10.0	Y	Yes	1	NA

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				Lab Sample ID	591443005										
				Sys Sample Code	MW-LF-05-202	22Q3									
				Sample Name	MW-LF-05-202	22Q3									
				Sample Date	8/29/2022 2:20	0:00 PM									
				Location	COP-MW-LF-0	05 / MW-	LF-05								
				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 200.8	Boron	7440-42-8	Т	ug/L	10.2	J	RL		4.00	4.00	15.0	Υ	Yes	1	NA
	Calcium	7440-70-2	Т	ug/L	2680				30.0	30.0	100	Υ	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	9.74				0.0670	0.0670	0.200	Υ	Yes	1	NA
H	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	0.656				0.133	0.133	0.400	Υ	Yes	1	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	32.0				2.38	2.38	10.0	Y	Yes	1	NA

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				Lab Sample ID	591443006										
				Sys Sample Code	FBLK-COP-LF	-22302									
				Sample Name	FBLK-COP-LF	-22302									
				Sample Date	8/29/2022 1:20	0:00 PM									
				Location	COP-FB / Field	d 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		Basis
EPA 200.8	Boron	7440-42-8	Т	ug/L		U			4.00	4.00	15.0	N	Yes	1	NA
	Calcium	7440-70-2	Т	ug/L		U			30.0	30.0	100	N	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	0.218				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		U			2.38	2.38	10.0	N	Yes	1	NA

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				Lab Sample ID	591443007										
				Sys Sample Code	MW-LF-06-202	22Q3									
				Sample Name	MW-LF-06-202	22Q3									
				Sample Date	8/29/2022 12:5	55:00 PN	Л								
				Location	COP-MW-LF-(06 / MW-	·LF-06								
				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 200.8	Boron	7440-42-8	Т	ug/L	10.6	J	RL		4.00	4.00	15.0	Υ	Yes	1	NA
	Calcium	7440-70-2	Т	ug/L	2140				30.0	30.0	100	Υ	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	8.62				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	0.592				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

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				Lab Sample ID	591443008										
				Sys Sample Code	MW-BG-06-20)22Q3									
				Sample Name	MW-BG-06-20)22Q3									
				Sample Date	8/29/2022 12:4	47:00 PI	M								
				Location	COP-MW-06 /	MW-06									
				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 200.8	Boron	7440-42-8	Т	ug/L	7.70	J	RL		4.00	4.00	15.0	Υ	Yes	1	NA
	Calcium	7440-70-2	Т	ug/L	9630				30.0	30.0	100	Υ	Yes	1	NA
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	0.284	J	RL		0.133	0.133	0.400	Υ	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	18.0				0.335	0.335	1.00	Υ	Yes	5	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	87.0				2.38	2.38	10.0	Υ	Yes	1	NA

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				Lab Sample ID	591443009										
				Sys Sample Code	MW-BG-16-20)22Q3									
				Sample Name	MW-BG-16-20)22Q3									
				Sample Date	8/29/2022 2:02	2:00 PM									
				Location	COP-MW-BG-	-16 / MW	/-BG-16								
				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 200.8	Boron	7440-42-8	Т	ug/L	9.26	J	RL		4.00	4.00	15.0	Υ	Yes	1	NA
	Calcium	7440-70-2	Т	ug/L	1890				30.0	30.0	100	Υ	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	3.09				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	2.26				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

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Lab Sample ID	591443010										
Sys Sample Code	DU-COP-LF-2	2302									
Sample Name	DU-COP-LF-2	2302									
Sample Date	8/29/2022 12:	00:00 A	Л								
Location	COP-MW-LF-	06 / MW	-LF-06								
Sample Type	FD										
Matrix	GW										
Parent Sample	MW-LF-06-20	22Q3									
Result Unit	Final Result	Final Qual	Reason code	Uncertainty	Final MDL	Final RL	Final QL	Final Detect	Final Report	DF	Basis
ug/l	10.4		DI		4.00	4.00	15.0	V	Voc	1	NΙΛ

				I aront bampio	10111 21 00 202										
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 200.8	Boron	7440-42-8	Т	ug/L	10.4	J	RL		4.00	4.00	15.0	Υ	Yes	1	NA
	Calcium	7440-70-2	Т	ug/L	2290				30.0	30.0	100	Υ	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	8.58				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	0.571				0.133	0.133	0.400	Υ	Yes	1	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	14.0				2.38	2.38	10.0	Υ	Yes	1	NA

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				Lab Sample ID	591443011										
				Sys Sample Code	AS-LF-01-202	2Q3									
				Sample Name	AS-LF-01-202	2Q3									
				Sample Date	8/30/2022 9:4	2:00 AM									
				Location	COP-MW-AS-	01 / MW	/-AS-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	DF	Basis
EPA 200.8	Boron	7440-42-8	Т	ug/L	19.5				4.00	4.00	15.0	Υ	Yes	1	NA
	Calcium	7440-70-2	Т	ug/L	1810				30.0	30.0	100	Υ	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	2.62				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	12.0				0.133	0.133	0.400	Υ	Yes	1	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	9.00	J	RL		2.38	2.38	10.0	Y	Yes	1	NA

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				Lab Sample ID	591443012										
				Sys Sample Code	AS-LF-02-202	2Q3									
				Sample Name	AS-LF-02-202	2Q3									
				Sample Date	8/30/2022 10:4	17:00 AN	Л								
				Location	COP-MW-AS-	02 / MW	-AS-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 200.8	Boron	7440-42-8	Т	ug/L	31.7				4.00	4.00	15.0	Υ	Yes	1	NA
	Calcium	7440-70-2	Т	ug/L	3620				30.0	30.0	100	Υ	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	5.34				0.0670	0.0670	0.200	Υ	Yes	1	NA
	Fluoride	16984-48-8	N	mg/L	0.0375	J	RL		0.0330	0.0330	0.100	Υ	Yes	1	NA
	Sulfate	14808-79-8	N	mg/L	16.4				0.133	0.133	0.400	Υ	Yes	1	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	36.0				2.38	2.38	10.0	Y	Yes	1	NA

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				Lab Sample ID	591443013										
				Sys Sample Code	MW-40-2022C)3									
				Sample Name	MW-40-2022C)3									
				Sample Date	8/30/2022 11:5	52:00 AN	Л								
				Location	COP-MW-40 /	MW-40									
				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 200.8	Boron	7440-42-8	Т	ug/L	48.6				4.00	4.00	15.0	Υ	Yes	1	NA
	Calcium	7440-70-2	Т	ug/L	30100				30.0	30.0	100	Υ	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	45.9				0.670	0.670	2.00	Υ	Yes	10	NA
	Sulfate	14808-79-8	N	mg/L	139				1.33	1.33	4.00	Υ	Yes	10	NA
EPA 300.0	Fluoride	16984-48-8	N	mg/L	0.589				0.0330	0.0330	0.100	Υ	Yes	1	NA
SM 2540C	Total Dissolved Solids	TDS	N	mg/L	263				2.38	2.38	10.0	Υ	Yes	1	NA

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				Lab Sample ID	591443014										
				Sys Sample Code	FBLK-COP-LF	-22303									
				Sample Name	FBLK-COP-LF	-22303									
				Sample Date	8/30/2022 12:0	00:00 PI	M								
				Location	COP-FB / Fiel	d 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 200.8	Boron	7440-42-8	Т	ug/L		U			4.00	4.00	15.0	N	Yes	1	NA
	Calcium	7440-70-2	Т	ug/L		U			30.0	30.0	100	N	Yes	1	NA
EPA 300.0	Chloride	16887-00-6	N	mg/L	0.148	J	RL		0.0670	0.0670	0.200	Y	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

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Appendix E First Semiannual Detection Monitoring Program Statistical Evaluation



DOMINION ENERGY SOUTH CAROLINA

COPE STATION CLASS III LANDFILL

SEMIANNUAL DETECTION MONITORING

ORANGEBURG 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 Cope Station Class III Landfill – Detection Monitoring

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Statistical Analysis Report

Groundwater Sampling

TRC Environmental Corporation (TRC) is providing this Statistically Significant Increases (SSI) notification for the Cope Station Class III Landfill for the tenth semiannual detection monitoring event. Samples were collected on March 8th – 9th, 2022. The final laboratory analytical data packages for the event were received on March 31st, 2022, and the data validation report was received on April 12th, 2022. This report addresses results from Detection Monitoring wells MW-LF-02, MW-LF-03, MW-LF-04, MW-LF-05, and MW-LF-06. Background wells for the Class III Landfill include MW-LF-01, MW-BG-06, MW-BG-16, AS-LF-01, AS-LF-02, and MW-40 (not used in background concentration calculations).

Statistical Analysis

Statistically Significant Level (SSL) exceedances above background concentrations include the following:

■ MW-LF-02: chloride and fluoride

MW-LF-03: noneMW-LF-04: none

■ MW-LF-05: none

■ MW-LF-06: none

As has been done since the initiation of detection monitoring at the Cope 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 have been conducted using United States Environmental Protection Agency's (USEPA's) ProUCL (v.5.1) software. Updates to the Site's Statistical Analysis Plan (StAP) are in progress to 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 the trend tests used to evaluate potential SSI for sulfate because the background data set has a statistically significant upward trend. An Alternative Source Demonstration (ASD) should be prepared for these potential SSIs.

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Table 1 Background Threshold Values for 2021 and 2022

Table 1 Background Threshold Values for 2021 and 2022 Dominion Energy South Carolina Cope Station Class III Landfill

CONSTITUENT	NUMBER of RESULTS	PERCENT DETECTED	DISTRIBUTION	TREND	BACKGROUND THRESHOLD VALUE	BASIS
Boron (mg/L)	53	8	Nonparametric	N/A	1.0	95% USL
Calcium (mg/L)	51 ^[1]	100	Nonparametric	None	15.8	95% USL
Chloride (mg/L)	53	100	Nonparametric	None	21.9	95% USL
Fluoride (mg/L)	53	40	Nonparametric	N/A	0.165	95% USL
pH (s.u.)	53	100	Gamma	None	3.4 - 6.2	95% HW UPL (k = 20); LCL is the minimum background result
Sulfate (mg/L	53	60	Nonparametric	Increasing	0.00562 (21.6) ^[2]	95% UCL of trend (95% USL)
TDS (mg/L)	53	98	Gamma	None	295.3	95% HW UPL (k = 20)

^[1] Outlier excluded from data set.

N/A Not Applicable – trend test not conducted for data sets with fewer than 50 percent detections.

^[2] BTV for sulfate is the UCL of the trend slope. 95% UPL follows in parentheses.

Table 2 March 2022 Downgradient Results and Potential SSIs

Table 2

March 2022 Downgradient Results and Potential SSIs

Dominion Energy South Carolina

Cope Station Class III Landfill

			CONSTITUEN	NT / BTV / RESULT	(mg/L except as noted) ^[1]		
WELL	BORON	CALCIUM	CHLORIDE	FLUORIDE	рН	SULFATE ^[3]	TDS
	1.0	15.8	21.9	0.165	3.4 - 6.2	0.00562 ^[2] (21.6)	295.3
BACKGROUND WELL	S						
MW-LF-01	0.00698 J	2.2	8.90	0.033 U	4.42	0.312 J	10.0 J
MW-BG-06	0.00861 J	9.78	17.6	0.0584 J	4.31	0.133 U	101
MW-BG-16	0.00964 J	2.04	3.54	0.033 U	4.31	1.73	4.29 J
AS-LF-01	0.0123 J	4.01	5.27	0.113	4.52	15.1	24.3 J
AS-LF-02	0.0163	4.54	13.0	0.0630 J	4.45	10.1	42.9 J
MW-40 ^[4]	0.0377	31.7	44.5	0.891	4.13	160	301 J
DOWNGRADIENT WEI	LLS						
MW-LF-02	0.0171	5.72	39.9	0.171	4.21	0.00106 (6.26)	77.1 J
MW-LF-03	0.00819 J	1.07	3.57	0.033 U	4.55	0 (0.570)	8.57 J
MW-LF-04	0.00969 J	1.86	4.66	0.033 U	4.51	0 (0.620)	17.1 J
MW-LF-05	0.0102 J	2.84	9.14	0.033 U	4.40	0 (0.583)	32.9 J
MW-LF-06	0.00902 J	2.15	8.12	0.033 U	4.41	0 (0.638)	30.0 J

Shaded cells indicate an SSI.

^[1] pH expressed in standard units (s.u.).

^[2] Sulfate had an increasing trend in background concentrations; comparison value is UCL of background slope (95% UPL in parentheses).

^[3] Values for sulfate are LCL of trend followed by concentration in parentheses.

^[4] Upgradient well not used in background concentration calculations.

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

EVENT	WELL	CONSTITUENT/RESULT (mg/L except as noted) [1]							
EVENT	WELL	BORON	CALCIUM	CHLORIDE	FLUORIDE	рН	SULFATE	TDS	
BL-1	MW-LF-01	0.0557 U	4.84	13.7	0.0679	5.4	2.72	72	
BL-2	MW-LF-01	0.0557 U	3.77	19	0.14	4.2	1.9	56	
BL-3	MW-LF-01	0.0557 U	2.35	6.67	0.033 U	5.0	0.69	24	
BL-4	MW-LF-01	0.0557 U	2.63	11.23	0.0548	4.2	0.63	30	
BL-5	MW-LF-01	0.0442 U	2	7.92	0.044	5.4	0.5 U	130	
BL-6	MW-LF-01	0.0442 U	2.805	12.48	0.0865	4.6	0.5 U	41	
BL-7	MW-LF-01	0.0442 U	2.66	10.87	0.0364	4.4	0.5 U	45	
BL-8	MW-LF-01	0.0442 U	2.47	16.03	0.0624	4.2	0.5 U	70	
DM-1	MW-LF-01	0.0442 U	1.818	9.06	0.033 U	4.8	0.5 U	32	
DM-2	MW-LF-01	0.0442 U	1.93	7.14	0.033 U	4.6	0.129 U	23	
DM-3	MW-LF-01	0.0219 U	2.56	15.4	0.025 U	4.3	0.75	41	
DM-4	MW-LF-01	0.2 U	2.75	13.2	0.1 U	4.7	0.5 U	46	
DM-5	MW-LF-01	0.2 U	2.68	20.6	0.1 U	4.4	0.5 U	51	
DM-6	MW-LF-01	0.0545	2.42	9.21	0.1 U	4.6	0.5 U	39	
DM-7	MW-LF-01	0.2 U	1.76	7.04	0.1 U	4.1	0.5 U	36	
BL-4	MW-BG-06	0.0557 U	9.49	18.69	0.0624	3.9	1	106	
BL-5	MW-BG-06	0.0442 U	8.86	19.28	0.0631	4.4	0.5 U	84	
BL-6	MW-BG-06	0.0442 U	10.02	18.12	0.0883	4.3	0.5 U	118	
BL-7	MW-BG-06	0.0442 U	10.1	17.96	0.0621	3.8	0.5 U	103	
BL-8	MW-BG-06	0.0442 U	10.6	19.72	0.165	4.1	0.5 U	123	
DM-1	MW-BG-06	0.0442 U	9.973	18.3	0.033 U	4.0	0.5 U	109	
DM-2	MW-BG-06	0.0442 U	10.9	19.8	0.0571	4.7	0.129 U	82	

^[1] pH expressed in standard units (s.u.).

 $[\]label{eq:continuous} \ensuremath{\text{[2]}}\xspace \ensuremath{\text{Outlier}}\xspace \ensuremath{\text{with no verification resample}} - \ensuremath{\text{removed from data set.}} \\$

^[3] Outlier data replaced by verification resample result (value shown on table).

Appendix A (Continued)

Background Data Set for 2021 and 2022 Semiannual Detection Monitoring Events Dominion Energy South Carolina

EVENT	WELL	CONSTITUENT/RESULT (mg/L except as noted) [1]						
EVENT	WELL	BORON	CALCIUM	CHLORIDE	FLUORIDE	рН	SULFATE	TDS
DM-3	MW-BG-06	0.0219 U	9.15	18.3	0.025 U	3.98	0.129 U	110
DM-4	MW-BG-06	0.2 U	8.84	18.7	0.1 U	4.40	0.5 U	101
DM-5	MW-BG-06	0.176	9.42	18.6	0.1 U	4.10	0.5 U	109
DM-6	MW-BG-06	0.2 U	11.4	18.9	0.1 U	4.40	0.5 U	143
DM-7	MW-BG-06	0.2 U	10.2	18.3	0.1 U	3.40	0.5 U	125
BL-4	MW-BG-16	0.0557 U	2.06	4.11	0.0356	4.10	1.09	14
BL-5	MW-BG-16	0.0442 U	1.87	3.98	0.0598	5.00	1.35	15
BL-6	MW-BG-16	0.0442 U	1.711	3.37	0.0495	4.60	1.31	23
BL-7	MW-BG-16	0.0442 U	1.78	3.03	0.033 U	4.20	1.16	24
BL-8	MW-BG-16	0.0442 U	1.97	3.38	0.033 U	4.10	1.03	43
DM-1	MW-BG-16	0.0442 U	2.145	3.81	0.033 U	4.20	0.79	31
DM-2	MW-BG-16	0.0442 U	2.54	5.22	0.034	4.70	0.83	28
DM-3	MW-BG-16	0.0219 U	1.81	3.75	0.025 U	4.14	1.13	26
DM-4	MW-BG-16	0.2 U	1.7	4.12	0.1 U	4.80	1.48	12
DM-5	MW-BG-16	0.2 U	1.58	3.29	0.1 U	4.50	1.41	2 U
DM-6	MW-BG-16	0.2 U	1.93	4.17	0.1 U	4.80	0.87	43
DM-7	MW-BG-16	0.2 U	1.78	2.86	0.1 U	3.80	1.43	31
DM-1	AS-LF-01	1 U	7.872	6.29	0.0854	5.30	4.65	59
DM-2	AS-LF-01	0.0442 U	4.03	7.07	0.0804	5.00	2.08	40
DM-3	AS-LF-01	0.0219 U	2.69	7.19	0.025 U ^[3]	4.28	2.85	33
DM-4	AS-LF-01	0.2 U	3.12	4.5	0.1 U	4.70	8.86	28
DM-5	AS-LF-01	0.0745	2.09	5.2	0.1 U	4.40	5.35	22
DM-6	AS-LF-01	0.2 U	3.09	3.02	0.1 U	4.70	12.8	38

^[1] pH expressed in standard units (s.u.).

^[2] Outlier with no verification resample – removed from data set.

^[3] Outlier data replaced by verification resample result (value shown on table).

Appendix A (Continued)

Background Data Set for 2021 and 2022 Semiannual Detection Monitoring Events

Dominion Energy South Carolina

EVENT	WELL	CONSTITUENT/RESULT (mg/L except as noted) [1]							
EVENT		BORON	CALCIUM	CHLORIDE	FLUORIDE	рН	SULFATE	TDS	
DM-7	AS-LF-01	0.2 U	2.19	2.14	0.1 U	4.1	13.4	45	
DM-1	AS-LF-02	1 U	24.06 ^[4]	21.9	0.025 ^[3]	6.3	14.3	203	
DM-2	AS-LF-02	0.0442 U	24.4 ^[2]	20.3	0.108	5.8	3.35	107	
DM-3	AS-LF-02	0.0219 U	15.8	19.1	0.025 U	5.3	4.7	104	
DM-4	AS-LF-02	0.2 U	5.74	14.4	0.1 U	5.0	14.5	76	
DM-5	AS-LF-02	0.2 U	6.98	16.1	0.1 U	4.8	7.02	64	
DM-6	AS-LF-02	0.2 U	4.22	9.67	0.1 U	4.7	16.1	75	
DM-7	AS-LF-02	0.0577	4.63	5.71	0.1 U	4.2	21.6	64	

^[1] pH expressed in standard units (s.u.).

^[2] Outlier with no verification resample – removed from data set.

^[3] Outlier data replaced by verification resample result (value shown on table).

Appendix B Trend Test Outputs

Theil-Sen Trend Test Analysis

User Selected Options

Date/Time of Computation ProUCL 5.15/10/2022 3:26:49 PM

From File WorkSheet.xls

Full Precision OFF

Average Replicates Replicates at sampling events will be averaged!

Confidence Coefficient 0.95 Level of Significance 0.05

Sulfate-mw-lf-02

Number of Events	18
Number of Values Reported (n)	18
Number of Values After Averaging	18
Number of Replicates	0
Minimum	1.73
Maximum	7.19
Mean	3.672
Geometric Mean	3.392
Median	3.535
Standard Deviation	1.526
Coefficient of Variation	0.415
Mann-Kendall Statistics	
M-K Test Value (S)	89
Tabulated p-value	0
Standard Deviation of S	26.4

Approximate inference for Theil-Sen Trend Test

Standardized Value of S

Approximate p-value

Number of Slopes	153
Theil-Sen Slope	0.00181
Theil-Sen Intercept	-74.59
M1'	54.79

One-sided 95% lower limit of Slope 0.00121 95% LCL of Slope (0.025) 0.00106

Slope Exceed? 95% LCL of Slope (0.025) 0.00193 No

BG

95% UCL of Slope (0.975) 0.0024 95% UCL of Slope (0.975) 0.00503

3.333

4.29E-04

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	1.81	2.467	-0.657
	2	42566	3.1	2.581	0.519
	3	42628	3.25	2.694	0.556

	4	42683	2.63	2.793	-0.163		
	5	42761	3.82	2.935	0.885		
	6	42824	1.86	3.049	-1.189		
	7	42871	1.73	3.134	-1.404		
	8	42944	2.62	3.267	-0.647		
	9	43003	2.8	3.375	-0.575		
	10	43180	2.61	3.695	-1.085		
	11	43361	4.08	4.024	0.0564		
	12	43544	4.07	4.355	-0.285		
	13	43727	4.03	4.687	-0.657		
	14	43906	4.06	5.012	-0.952		
	15	44095	4.48	5.354	-0.874		
	16	44271	7.19	5.673	1.517		
	17	44469	5.7	6.032	-0.332		
	18	44628	6.26	6.321	-0.0607		
Sul	ulfate-mw-lf-03						

Sulfate-mw-lf-03	
General Statistics	
Number of Events	18
Number of Values Reported (n)	18
Number of Values After Averaging	18
Number of Replicates	0
Minimum	0.129
Maximum	4.2
Mean	0.802
Geometric Mean	0.61
Median	0.5
Standard Deviation	0.892
Coefficient of Variation	1.112
Mann-Kendall Statistics	
M-K Test Value (S)	34
Tabulated p-value	0.1
Standard Deviation of S	23.92
Standardized Value of S	1.38
Approximate p-value	0.0838
Approximate inference for Theil-Sen Trend Tes	t
Number of Slopes	153
Theil-Sen Slope	0
Theil-Sen Intercept	0.5
M1	53.06
M2	99.94
95% LCL of Slope (0.025)	0
95% UCL of Slope (0.975)	1.07E-04

Insufficient evidence to identify a significant

trend at the specified level of significance.

Theil-Sen Trend Test Estimates and Residuals

men-sen mend rest Estimates and Nesiduals								
#	Events	Values	Estimates	Residuals				
1	42503	1.43	0.5	0.93				
2	42566	0.5	0.5	0				
3	42628	0.5	0.5	0				
4	42683	0.5	0.5	0				
5	42761	0.5	0.5	0				
6	42825	0.5	0.5	0				
7	42871	0.5	0.5	0				
8	42944	0.5	0.5	0				
9	43003	0.5	0.5	0				
10	43180	0.129	0.5	-0.371				
11	43361	0.55	0.5	0.05				
12	43544	0.76	0.5	0.26				
13	43727	0.5	0.5	0				
14	43906	4.2	0.5	3.7				
15	44095	0.5	0.5	0				
16	44271	1.1	0.5	0.6				
17	44468	0.698	0.5	0.198				
18	44628	0.57	0.5	0.07				
Sulfate-m	w-lf-04							

Sulfate-mw-lf-0	4
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General Statistics	
Number of Events	18
Number of Values Reported (n)	18
Number of Values After Averaging	18
Number of Replicates	0
Minimum	0.129
Maximum	8.05
Mean	1.091
Geometric Mean	0.595
Median	0.5
Standard Deviation	1.9
Coefficient of Variation	1.741
Mann-Kendall Statistics	
M-K Test Value (S)	11
Tabulated p-value	0.354
Standard Deviation of S	23.9
Standardized Value of S	0.418
Approximate p-value	0.338
Approximate inference for Theil-Sen Trend Test	
Number of Slopes	153
Theil-Sen Slope	0

Theil-Sen Intercept	0.5
M1	53.08
M2	99.92
95% LCL of Slope (0.025)	0
95% UCL of Slope (0.975)	3.79E-05

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	0.63	0.5	0.13
	2	42566	0.83	0.5	0.33
	3	42628	0.5	0.5	0
	4	42683	0.5	0.5	0
	5	42761	0.5	0.5	0
	6	42825	0.5	0.5	0
	7	42871	0.5	0.5	0
	8	42944	0.5	0.5	0
	9	43003	0.5	0.5	0
	10	43180	0.129	0.5	-0.371
	11	43361	0.129	0.5	-0.371
	12	43544	0.5	0.5	0
	13	43727	0.5	0.5	0
	14	43906	8.05	0.5	7.55
	15	44095	0.5	0.5	0
	16	44270	3.7	0.5	3.2
	17	44468	0.558	0.5	0.058
	18	44628	0.62	0.5	0.12

Sulfate-mw-If-05	
General Statistics	
Number of Events	18
Number of Values Reported (n)	18
Number of Values After Averaging	18
Number of Replicates	0
Minimum	0.129
Maximum	0.821
Mean	0.484
Geometric Mean	0.448
Median	0.5
Standard Deviation	0.15
Coefficient of Variation	0.31
Mann-Kendall Statistics	
M-K Test Value (S)	34
Tabulated p-value	0.1

Standard Deviation of S	20.67
Standardized Value of S	1.596
Approximate p-value	0.0552
Approximate inference for Theil-Sen Trend Test	
Number of Slopes	153
Theil-Sen Slope	0
Theil-Sen Intercept	0.5
M1	56.24
M2	96.76
95% LCL of Slope (0.025)	0
95% UCL of Slope (0.975)	0

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	0.5	0.5	0
	2	42566	0.5	0.5	0
	3	42628	0.5	0.5	0
	4	42683	0.5	0.5	0
	5	42761	0.5	0.5	0
	6	42825	0.5	0.5	0
	7	42871	0.5	0.5	0
	8	42944	0.5	0.5	0
	9	43003	0.5	0.5	0
	10	43180	0.129	0.5	-0.371
	11	43361	0.129	0.5	-0.371
	12	43544	0.5	0.5	0
	13	43727	0.5	0.5	0
	14	43906	0.5	0.5	0
	15	44092	0.5	0.5	0
	16	44270	0.821	0.5	0.321
	17	44468	0.541	0.5	0.041
	18	44628	0.583	0.5	0.083

General Statistics Number of Events 18 Number of Values Reported (n) 18 Number of Values After Averaging 18 Number of Replicates 0 Minimum 0.129 Maximum 0.821 Mean 0.482

0.446

Sulfate-mw-lf-06

Geometric Mean

Median	0.5
Standard Deviation	0.152
Coefficient of Variation	0.316
Mann-Kendall Statistics	
M-K Test Value (S)	8
Tabulated p-value	0.383
Standard Deviation of S	20.67
Standardized Value of S	0.339
Approximate p-value	0.367
Approximate inference for Theil-Sen Trend Test	
Number of Slopes	153
Theil-Sen Slope	0
Theil-Sen Intercept	0.5
M1	56.24
M2	96.76
95% LCL of Slope (0.025)	0
95% UCL of Slope (0.975)	0

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	0.5	0.5	0	
	2	42566	0.5	0.5	0	
	3	42629	0.5	0.5	0	
	4	42683	0.5	0.5	0	
	5	42761	0.5	0.5	0	
	6	42825	0.5	0.5	0	
	7	42871	0.5	0.5	0	
	8	42944	0.5	0.5	0	
	9	43004	0.5	0.5	0	
	10	43180	0.129	0.5	-0.371	
	11	43361	0.129	0.5	-0.371	
	12	43544	0.5	0.5	0	
	13	43727	0.5	0.5	0	
	14	43906	0.5	0.5	0	
	15	44092	0.5	0.5	0	
	16	44270	0.821	0.5	0.321	
	17	44468	0.457	0.5	-0.043	
	18	44628	0.638	0.5	0.138	

Appendix F Second Semiannual Detection Monitoring Program Statistical Evaluation



DOMINION ENERGY SOUTH CAROLINA

COPE STATION CLASS III LANDFILL

SEMIANNUAL DETECTION MONITORING

ORANGEBURG COUNTY, SOUTH CAROLINA

CCR GROUNDWATER DETECTION MONITORING STATISTICAL ANALYSIS REPORT

For the

August 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 Cope Station Class III Landfill – Detection Monitoring

 $\verb|\GREENVILLE-FP1| WPGVL | PJT2 | 416559 | 0007 | COPE | R4165590007-008 | COPE | LF | CCR | DETECTION. DOCX | DOCK | D$

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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 Cope Station Class III Landfill for the tenth semiannual detection monitoring event. Samples were collected on August 29th – 30th, 2022. The final laboratory analytical data packages for the event were received on September 12th, 2022, and the data validation report was received on September 16th, 2022. This report addresses results from Detection Monitoring wells MW-LF-02, MW-LF-03, MW-LF-04, MW-LF-05, and MW-LF-06. Background wells for the Class III Landfill include MW-LF-01, MW-BG-06, MW-BG-16, AS-LF-01, AS-LF-02, and MW-40 (not used in background concentration calculations).

Statistical Analysis

Statistically Significant Level (SSL) exceedances above background concentrations include the following:

■ MW-LF-02: chloride

■ MW-LF-03: none

■ MW-LF-04: none

■ MW-LF-05: none

MW-LF-06: none

As has been done since the initiation of detection monitoring at the Cope 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 have been conducted using United States Environmental Protection Agency's (USEPA's) ProUCL (v.5.1) software. Updates to the Site's Statistical Analysis Plan (StAP) are in progress to 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 tests used to evaluate potential SSI for sulfate because the background data set has a statistically significant upward trend.

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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:

- Revise the background monitoring wells for the CCR Unit to include MW-LF-01, AS-LF-01, and AS-LF-02 (excluding MW-BG-06 and MW-BG-16).
- Install three new downgradient monitoring wells along the western edge of the CCR Unit boundary to replace existing downgradient monitoring wells MW-LF-05 and MW-LF-06.
- Install two new side-gradient monitoring wells along the north side of the CCR unit.
- Remove MW-LF-02 from the existing CCR well network as this well does not appear to monitor groundwater passing beneath the CCR Unit.

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 Cope Station Class III Landfill

CONSTITUENT	NUMBER of RESULTS	PERCENT DETECTED	DISTRIBUTION	TREND	BACKGROUND THRESHOLD VALUE	BASIS	
Boron (mg/L)	53	8	Nonparametric	N/A	1.0	95% USL	
Calcium (mg/L)	51 ^[1]	100	Nonparametric	None	15.8	95% USL	
Chloride (mg/L)	53	100	Nonparametric	None	21.9	95% USL	
Fluoride (mg/L)	53	40	Nonparametric	N/A	0.165	95% USL	
pH (s.u.)	53	100	Gamma	None	3.4 - 6.2	95% HW UPL (k = 20); LCL is the minimum background result	
Sulfate (mg/L	53	60	Nonparametric	Increasing	0.00562 (21.6) ^[2]	95% UCL of trend (95% USL)	
TDS (mg/L)	53	98	Gamma	None	295.3	95% HW UPL (k = 20)	

^[1] Outlier excluded from data set.

N/A Not Applicable – trend test not conducted for data sets with fewer than 50 percent detections.

^[2] BTV for sulfate is the UCL of the trend slope. 95% UPL follows in parentheses.

Table 2 August 2022 Downgradient Results and Potential SSIs

Table 2
August 2022 Downgradient Results and Potential SSIs
Dominion Energy South Carolina
Cope Station Class III Landfill

	CONSTITUENT / BTV / RESULT (mg/L except as noted) ^[1]										
WELL	BORON	CALCIUM	CHLORIDE	FLUORIDE	рН	SULFATE ^[3]	TDS				
	1.0	15.8	21.9	0.165	3.4 - 6.2	0.00427 ^[2] (21.6)	295.3				
BACKGROUND WELLS	S										
MW-LF-01	0.0112 J	2.04	9.52	0.0330 U	4.43	0.371 J	< 2.38				
MW-BG-06	0.0077 J	9.63	18.0	0.0330 U	4.23	0.284	87.0				
MW-BG-16	0.00926 J	1.89	3.09	0.0330 U	4.66	2.26	10.0				
AS-LF-01	0.0195	1.81	2.62	0.0330 U	4.30	12.0	9.0				
AS-LF-02	0.0317	3.62	5.34	0.0375 J	4.41	16.4	36.0				
MW-40 ^[4]	0.0486	30.1	45.9	0.589	4.01	139	263				
DOWNGRADIENT WEL	LS										
MW-LF-02	0.0164	4.87	30.1	0.124	3.88	0.00127 (7.34)	55.0				
MW-LF-03	0.00762 J	1.22	3.34	0.0330 U	4.03	0 (0.491)	< 10.0				
MW-LF-04	0.00988 J	1.73	4.87	0.0330 U	4.13	0 (0.682)	14.0				
MW-LF-05	0.0102 J	2.68	9.74	0.0330 U	4.01	0 (0.656)	32.0				
MW-LF-06	0.0106 J	2.14	8.62	0.0330 U	4.01	0 (0.592)	17.0				

Shaded cells indicate an SSI.

^[1] pH expressed in standard units (s.u.).

^[2] Sulfate had an increasing trend in background concentrations; comparison value is UCL of background slope (95% UPL in parentheses).

^[3] Values for sulfate are LCL of trend followed by concentration in parentheses.

^[4] Upgradient well not used in background concentration calculations.

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

EVENT	CONSTITUENT/RESULT (mg/L except as noted) [1] WELL							
EVENT	WELL	BORON	CALCIUM	CHLORIDE	FLUORIDE	рН	SULFATE	TDS
BL-1	MW-LF-01	0.0557 U	4.84	13.7	0.0679	5.4	2.72	72
BL-2	MW-LF-01	0.0557 U	3.77	19	0.14	4.2	1.9	56
BL-3	MW-LF-01	0.0557 U	2.35	6.67	0.033 U	5.0	0.69	24
BL-4	MW-LF-01	0.0557 U	2.63	11.23	0.0548	4.2	0.63	30
BL-5	MW-LF-01	0.0442 U	2	7.92	0.044	5.4	0.5 U	130
BL-6	MW-LF-01	0.0442 U	2.805	12.48	0.0865	4.6	0.5 U	41
BL-7	MW-LF-01	0.0442 U	2.66	10.87	0.0364	4.4	0.5 U	45
BL-8	MW-LF-01	0.0442 U	2.47	16.03	0.0624	4.2	0.5 U	70
DM-1	MW-LF-01	0.0442 U	1.818	9.06	0.033 U	4.8	0.5 U	32
DM-2	MW-LF-01	0.0442 U	1.93	7.14	0.033 U	4.6	0.129 U	23
DM-3	MW-LF-01	0.0219 U	2.56	15.4	0.025 U	4.3	0.75	41
DM-4	MW-LF-01	0.2 U	2.75	13.2	0.1 U	4.7	0.5 U	46
DM-5	MW-LF-01	0.2 U	2.68	20.6	0.1 U	4.4	0.5 U	51
DM-6	MW-LF-01	0.0545	2.42	9.21	0.1 U	4.6	0.5 U	39
DM-7	MW-LF-01	0.2 U	1.76	7.04	0.1 U	4.1	0.5 U	36
BL-4	MW-BG-06	0.0557 U	9.49	18.69	0.0624	3.9	1	106
BL-5	MW-BG-06	0.0442 U	8.86	19.28	0.0631	4.4	0.5 U	84
BL-6	MW-BG-06	0.0442 U	10.02	18.12	0.0883	4.3	0.5 U	118
BL-7	MW-BG-06	0.0442 U	10.1	17.96	0.0621	3.8	0.5 U	103
BL-8	MW-BG-06	0.0442 U	10.6	19.72	0.165	4.1	0.5 U	123
DM-1	MW-BG-06	0.0442 U	9.973	18.3	0.033 U	4.0	0.5 U	109
DM-2	MW-BG-06	0.0442 U	10.9	19.8	0.0571	4.7	0.129 U	82

^[1] pH expressed in standard units (s.u.).

 $[\]label{eq:continuous} \ensuremath{\text{[2]}}\xspace \ensuremath{\text{Outlier}}\xspace \ensuremath{\text{with no verification resample}} - \ensuremath{\text{removed from data set.}} \\$

^[3] Outlier data replaced by verification resample result (value shown on table).

Appendix A (Continued)

Background Data Set for 2021 and 2022 Semiannual Detection Monitoring Events Dominion Energy South Carolina

EVENT	WELL	CONSTITUENT/RESULT (mg/L except as noted) [1]						
EVENT	WELL	BORON	CALCIUM	CHLORIDE	FLUORIDE	рН	SULFATE	TDS
DM-3	MW-BG-06	0.0219 U	9.15	18.3	0.025 U	3.98	0.129 U	110
DM-4	MW-BG-06	0.2 U	8.84	18.7	0.1 U	4.40	0.5 U	101
DM-5	MW-BG-06	0.176	9.42	18.6	0.1 U	4.10	0.5 U	109
DM-6	MW-BG-06	0.2 U	11.4	18.9	0.1 U	4.40	0.5 U	143
DM-7	MW-BG-06	0.2 U	10.2	18.3	0.1 U	3.40	0.5 U	125
BL-4	MW-BG-16	0.0557 U	2.06	4.11	0.0356	4.10	1.09	14
BL-5	MW-BG-16	0.0442 U	1.87	3.98	0.0598	5.00	1.35	15
BL-6	MW-BG-16	0.0442 U	1.711	3.37	0.0495	4.60	1.31	23
BL-7	MW-BG-16	0.0442 U	1.78	3.03	0.033 U	4.20	1.16	24
BL-8	MW-BG-16	0.0442 U	1.97	3.38	0.033 U	4.10	1.03	43
DM-1	MW-BG-16	0.0442 U	2.145	3.81	0.033 U	4.20	0.79	31
DM-2	MW-BG-16	0.0442 U	2.54	5.22	0.034	4.70	0.83	28
DM-3	MW-BG-16	0.0219 U	1.81	3.75	0.025 U	4.14	1.13	26
DM-4	MW-BG-16	0.2 U	1.7	4.12	0.1 U	4.80	1.48	12
DM-5	MW-BG-16	0.2 U	1.58	3.29	0.1 U	4.50	1.41	2 U
DM-6	MW-BG-16	0.2 U	1.93	4.17	0.1 U	4.80	0.87	43
DM-7	MW-BG-16	0.2 U	1.78	2.86	0.1 U	3.80	1.43	31
DM-1	AS-LF-01	1 U	7.872	6.29	0.0854	5.30	4.65	59
DM-2	AS-LF-01	0.0442 U	4.03	7.07	0.0804	5.00	2.08	40
DM-3	AS-LF-01	0.0219 U	2.69	7.19	0.025 U ^[3]	4.28	2.85	33
DM-4	AS-LF-01	0.2 U	3.12	4.5	0.1 U	4.70	8.86	28
DM-5	AS-LF-01	0.0745	2.09	5.2	0.1 U	4.40	5.35	22
DM-6	AS-LF-01	0.2 U	3.09	3.02	0.1 U	4.70	12.8	38

^[1] pH expressed in standard units (s.u.).

^[2] Outlier with no verification resample – removed from data set.

^[3] Outlier data replaced by verification resample result (value shown on table).

Appendix A (Continued)

Background Data Set for 2021 and 2022 Semiannual Detection Monitoring Events

Dominion Energy South Carolina

EVENT	WELL			CONSTITUENT/F	RESULT (mg/L ex	cept as noted) [1]		
EVENT	WELL	BORON	CALCIUM	CHLORIDE	FLUORIDE	рН	SULFATE	TDS
DM-7	AS-LF-01	0.2 U	2.19	2.14	0.1 U	4.1	13.4	45
DM-1	AS-LF-02	1 U	24.06 ^[4]	21.9	0.025 ^[3]	6.3	14.3	203
DM-2	AS-LF-02	0.0442 U	24.4 ^[2]	20.3	0.108	5.8	3.35	107
DM-3	AS-LF-02	0.0219 U	15.8	19.1	0.025 U	5.3	4.7	104
DM-4	AS-LF-02	0.2 U	5.74	14.4	0.1 U	5.0	14.5	76
DM-5	AS-LF-02	0.2 U	6.98	16.1	0.1 U	4.8	7.02	64
DM-6	AS-LF-02	0.2 U	4.22	9.67	0.1 U	4.7	16.1	75
DM-7	AS-LF-02	0.0577	4.63	5.71	0.1 U	4.2	21.6	64

^[1] pH expressed in standard units (s.u.).

^[2] Outlier with no verification resample – removed from data set.

^[3] Outlier data replaced by verification resample result (value shown on table).

Appendix B Trend Test Outputs

	Α	В	С	D	Е	F	G	Н		l J	K	T L		
1				Theil-Sen T										
2		User Select	ed Options											
3	Dat	te/Time of Co	omputation	ProUCL 5.2	11/2/2022 2	:27:25 PM								
4			From File	WorkSheet.	kls									
5		Fu	II 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		S	ulfate-mw-lf-	02										
11														
12		Ge	eneral Statist	tics										
13			Numb	er of Events	19									
14		Numb	er of Values I	Reported (n)	19									
15		Number	of Values Afte	er Averaging	19									
16			Number o	of Replicates	0									
17				Minimum	1.73									
18				Maximum	7.34									
19				Mean	3.865									
20			Geo	metric Mean	3.532									
21				Median	3.82									
22	Standard Deviation				1.705									
23	Coefficient of Variation				0.441									
24														
25		Manr	n-Kendall Sta	tistics										
26			M-K Te	est Value (S)	107									
27	Tabulated p-value				0									
28	Standard Deviation of S				28.58									
29	Standardized Value of S				3.708									
30	Approximate p-value				1.0426E-4									
31														
32	Appro	oximate infe	rence for The	eil-Sen Trend	Test									
33			Numb	er of Slopes	171									
34			The	il-Sen Slope	0.00198									
35			Theil-S	en Intercept	-81.63									
36				M1'	61.99									
37			d 95% lower l		0.00137									
38			95% LCL of S		0.00127									
39		9	5% UCL of S	lope (0.975)	0.00242									
40														
41			evidence of a											
42	trend at the	specified le	vel of signific	ance.										
43														
44			Test Estimat											
45		Events	Values	Estimates	Residuals									
46		42503	1.81	2.479	-0.669									
47		42566	3.1	2.604	0.496									
48		42628	3.25	2.727	0.523									
49		42683	2.63	2.836	-0.206									
50		42761	3.82	2.99	0.83									
51		42824	1.86	3.115	-1.255									
52		42871	1.73	3.208	-1.478									
53		42944	2.62	3.352	-0.732									
54		43003	2.8	3.47	-0.67									
55		43180	2.61	3.82	-1.21									
56	11	43361	4.08	4.178	-0.0982									

	Α	В	С	D	Е	F	G	Н	ı	J	K	L
57		43544	4.07	4.54	-0.47							
	13	43727	4.03	4.902	-0.872							
58		43906	4.06	5.257	-1.197							
59												
60		44095	4.48	5.631	-1.151							
61	16	44271	7.19	5.979	1.211							
62	17	44469	5.7	6.37	-0.67							
63	18	44628	6.26	6.685	-0.425							
	19	44803	7.34	7.032	0.308							
64	.0		ulfate-mw-lf-(0.000							
65		31	ıllate-iliw-ii-t	<i>,</i> ,,								
66												
67		Ge	neral Statist	ics								
68			Numb	er of Events	19							
69		Numbe	er of Values F	Reported (n)	19							
		Number o	f Values Afte	r Averaging	19							
70				f Replicates	0							
71			Number o									
72				Minimum	0.129							
73				Maximum	4.2							
74				Mean	0.786							
75			Geor	metric Mean	0.603							
76				Median	0.5							
			Standa	rd Deviation	0.87							
77				of Variation	1.107							
78			Coemcient	OI Vallation	1.107							
79												
80		Mann	-Kendall Sta	tistics								
81		M-K Test Value (S) 18										
82			Tabula	ated p-value	0.267							
		Standard Deviation of S 26.31										
83		Standardized Value of S 0.646										
84	Approximate p-value 0.259											
85			Approxin	nate p-value	0.259							
86												
87	Appro	ximate infer	ence for The	il-Sen Trend	l Test							
88			Numb	er of Slopes	171							
89			The	il-Sen Slope	0							
				en Intercept	0.5							
90				M1	59.72							
91												
92				M2								
93			5% LCL of S		0							
94		95	5% UCL of S	lope (0.975)	7.4809E-5							
95												
96	Insufficient e	evidence to i	identify a sig	nificant								
30			vel of signifi									
97		F - 550 10										
98	T1 "	Con Tree of T	Fact Fat'	aa ard P'	luala							
99			Test Estimate									
100		Events	Values	Estimates	Residuals							
101	1	42503	1.43	0.5	0.93							
102	2	42566	0.5	0.5	0							
	3	42628	0.5	0.5	0							
103		42683	0.5	0.5	0							
104		42761	0.5	0.5	0							
105												
106		42825	0.5	0.5	0							
107		42871	0.5	0.5	0							
108	8	42944	0.5	0.5	0							
109	9	43003	0.5	0.5	0							
		43180	0.129	0.5	-0.371							
110		43361	0.123	0.5	0.05							
111												
112	12	43544	0.76	0.5	0.26							

	A 12	B 43727	0.5	0.5	0 0	F	G	Н	I	J	K	L
113			4.2									
114		43906		0.5	3.7							
115	15		0.5	0.5	0							
116		44271	1.1	0.5	0.6							
117		44468	0.698	0.5	0.198							
118	18		0.57	0.5	0.07							
119	19	44803	0.491	0.5	-0.009							
120		Sı	ulfate-mw-lf-	04								
121												
122		Ge	eneral Statis									
123				er of Events								
124			er of Values									
125		Number o	of Values After									
126			Number o	of Replicates	0							
127				Minimum	0.129							
128				Maximum	8.05							
129				Mean	1.07							
130			Geo	metric Mean	0.599							
131				Median	0.5							
132			Standa	rd Deviation	1.849							
133			Coefficient	t of Variation	1.728							
134												
135	Mann-Kendall Statistics											
136	M-K Test Value (S)				23							
137			Tabul	ated p-value	0.223							
138			Standard D	eviation of S	26.29							
139	Standardized Value of S				0.837							
140	Approximate p-value				0.201							
141												
142	Appro	ximate infer	ence for The	eil-Sen Trend	d Test							
143				er of Slopes								
				il-Sen Slope								
144				Sen Intercept								
145				M1	59.74							
146 147				M2	111.3							
		9	5% LCL of S		0							
148			5% UCL of S									
149				. ()								
150	Insufficient	evidence to	identify a sig	ınificant								
151			evel of signifi									
152				-								
153	Theil-	-Sen Trend	Test Estimat	es and Resid	duals							
154		Events	Values	Estimates	Residuals							
155		42503	0.63	0.5	0.13							
156		42566	0.83	0.5	0.33							
157		42628	0.5	0.5	0							
158		42683	0.5	0.5	0							
159		42761	0.5	0.5	0							
160		42825	0.5	0.5	0							
161		42871	0.5	0.5	0							
162		42944	0.5	0.5	0							
163		43003	0.5	0.5	0							
164		43003	0.5	0.5	-0.371							
165												
166		43361	0.129	0.5	-0.371							
167		43544	0.5	0.5	0							
168	13	43727	0.5	0.5	0							

	Α	В	С	D	Е	F	G	Н	I	J	K	L
169		43906	8.05	0.5	7.55							
170	15	44095	0.5	0.5	0							
		44270	3.7	0.5	3.2							
171		44468	0.558	0.5	0.058							
172												
173		44628	0.62	0.5	0.12							
174	19	44802	0.682	0.5	0.182							
175		Sı	ulfate-mw-lf-(05								
176												
177		Ge	eneral Statist	ics								
			Numb	er of Events	19							
178		Numbe	er of Values I		19							
179					19							
180		Number o	of Values Afte									
181			Number o	f Replicates	0							
182				Minimum	0.129							
183				Maximum	0.821							
184				Mean	0.493							
185			Geo	metric Mean	0.457							
				Median	0.5							
186			Standa	rd Deviation	0.151							
187				of Variation	0.306							
188			Coemcient	oi valiation	0.306							
189												
190		Mann	-Kendall Sta	tistics								
191			M-K Te	est Value (S)	50							
192		Tabulated p-value										
193		Standard Deviation of S										
			Standardize	d Value of S	2.094							
194			Approxin	nate p-value	0.0181							
195				F 1-1-1-								
196	A	vimata infan	anaa far Tha	il-Sen Trend	Tool							
197	Appro	XIIIIale IIIIei										
198				er of Slopes	171							
199		Theil-Sen Slope 0										
200		Theil-Sen Intercept 0.										
201				M1	62.57							
202				M2	108.4							
203		9	5% LCL of S	lope (0.025)	0							
				lope (0.975)	2 7353F-5							
204												
205	lma66 -! '		damate	-ifi								
206			identify a sig									
207	trend at the	specified le	vel of signifi	cance.								
208												
209			Test Estimat	es and Resid	luals							
210	#	Events	Values	Estimates	Residuals							
211	1	42503	0.5	0.5	0							
212	2	42566	0.5	0.5	0							
		42628	0.5	0.5	0							
213		42683	0.5	0.5	0							
214		42761	0.5	0.5	0							
215												
216		42825	0.5	0.5	0							
217		42871	0.5	0.5	0							
218		42944	0.5	0.5	0							
219	9	43003	0.5	0.5	0							
220	10	43180	0.129	0.5	-0.371							
221	11	43361	0.129	0.5	-0.371							
		43544	0.5	0.5	0							
222		43727	0.5	0.5	0							
223												
224	14	43906	0.5	0.5	0							

	Α	В	С	D	Е	F	G	Н	ı	J	K	L
225	15	44092	0.5	0.5	0							
226	16	44270	0.821	0.5	0.321							
227	17	44468	0.541	0.5	0.041							
	18	44628	0.583	0.5	0.083							
228		44802	0.656	0.5	0.156							
229	13		ulfate-mw-lf-		0.130							
230			ıllate-illw-ii-	J6								
231												
232		Ge	eneral Statist									
233			Numb	er of Events	19							
234		Numbe	er of Values I	Reported (n)	19							
235		Number o	of Values After	er Averaging	19							
236			Number o	f Replicates	0							
237				Minimum	0.129							
				Maximum	0.821							
238				Mean	0.488							
239			Goo	metric Mean	0.453							
240			Geo	Median								
241					0.5							
242				rd Deviation	0.15							
243			Coefficient	of Variation	0.307							
244												
245		Mann	-Kendall Sta	tistics								
246			M-K Te	est Value (S)	22							
247			Tabul	ated p-value	0.223							
		Standard Deviation of S										
248			Standardize		0.898							
249		Approximate p-value										
250			Арріоліі	nate p-value	0.185							
251												
252	Appro	ximate inter		il-Sen Trend								
253				er of Slopes	171							
254				il-Sen Slope	0							
255		Theil-Sen Intercept 0.5										
256		M1 62.57										
257				M2	108.4							
258		9	5% LCL of S	lope (0.025)	0							
				lope (0.975)	0							
259												
260	Insufficient e	vidonos to	identify a cia	nificant								
201												
262	uena at the	ърестеа le	vel of signifi	cance.								
263												
264				es and Resid								
265		Events	Values	Estimates	Residuals							
266	1	42503	0.5	0.5	0							
267	2	42566	0.5	0.5	0							
268	3	42629	0.5	0.5	0							
269	4	42683	0.5	0.5	0							
270		42761	0.5	0.5	0							
		42825	0.5	0.5	0							
271		42871	0.5	0.5	0							
272		42944	0.5	0.5	0							
273												
274		43004	0.5	0.5	0							
275		43180	0.129	0.5	-0.371							
276		43361	0.129	0.5	-0.371							
277		43544	0.5	0.5	0							
278	13	43727	0.5	0.5	0							
279	14	43906	0.5	0.5	0							
		44092	0.5	0.5	0							
280	.5		5.0	3.0	•							

	Α	В	С	D	E	F	G	Н	I	J	K	L
281	16	44270	0.821	0.5	0.321							
282	17	44468	0.457	0.5	-0.043							
283	10	44628	0.638	0.5	0.138							
284	19	47359	0.592	0.5	0.092							